


1) COUNTY: Calhoun

2) STUDY NAME: Albion, City & Twp Homer Village

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: Report



CROSS SECTION K

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.26 | 15.31 | 586.21 | 0.00 | 0.00 | 586.48 | 0.26 | 0.67 | 0.01 | 583.90 |
| 23190. | 0. | 21747. | 1441. | 2. | 5129. | 1798. | 1679. | 211. | 584.70 |
| 0.84 | 0.39 | 4.24 | 0.80 | 0.060 | 0.033 | 0.070 | 0.032 | 570.90 | 111.83 |
| 0.000346 | 1850. | 1850. | 1850. | 0 | 0 | 1 | 0.00 | 1094.32 | 1206.16 |
| 4.50 | 15.69 | 586.59 | 0.00 | 0.00 | 586.97 | 0.37 | 0.45 | 0.03 | 581.40 |
| 23190. | 47. | 21732. | 1409. | 43. | 4265. | 1576. | 1863. | 246. | 581.30 |
| 0.91 | 1.11 | 5.09 | 0.85 | 0.060 | 0.032 | 0.045 | 0.032 | 570.90 | 146.75 |
| 0.000386 | 1250. | 1250. | 1250. | 3 | 0 | 1 | 0.00 | 1319.17 | 1465.93 |

CROSS SECTION L

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.89 | 18.69 | 587.39 | 0.00 | 0.00 | 587.62 | 0.22 | 0.63 | 0.01 | 582.40 |
| 23190. | 4157. | 19032. | 0. | 3742. | 4562. | 0. | 2183. | 298. | 589.10 |
| 1.07 | 1.11 | 4.17 | 0.00 | 0.050 | 0.032 | 0.060 | 0.032 | 568.70 | 60.79 |
| 0.000259 | 2250. | 2053. | 750. | 2 | 0 | 1 | 0.00 | 1438.18 | 1498.98 |

CROSS SECTION M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.42 | 15.86 | 588.06 | 0.00 | 0.00 | 588.16 | 0.10 | 0.52 | 0.01 | 584.20 |
| 23190. | 3186. | 17452. | 2551. | 3554. | 5967. | 5109. | 2886. | 421. | 585.30 |
| 1.38 | 0.89 | 2.92 | 0.45 | 0.050 | 0.032 | 0.100 | 0.032 | 572.20 | 81.76 |
| 0.000154 | 1700. | 2800. | 3800. | 3 | 0 | 1 | 0.00 | 2763.13 | 2844.89 |

FORM 1411-3
PRINTED IN U.S.A.

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**********************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08
MODIFICATIONS 52,53,54,55,56,57,58
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T1       ST. JOSEPH RIVER W/ ENCROACHMENTS      WILLIAMS AND WORKS, INC.
T2       ST. JOSEPH TOWNSHIP                    83996
T3       ST JOSEPH RIVER  100-YR STORM          FEBRUARY, 1978
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| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0. | 3. | 0. | 0. | 0.000000 | 0.00 | -1.0 | 0. | 582.620 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2.000 | 0.000 | -3.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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 CCHV=   0.100 CEHV=   0.300
1490 NH CARD USED
 2800 NAT Q1=  14097.01  WSEL=    582.61  ENC Q1=  14321.65  WSEL=    582.71  RATIO= -0.0159
 NAT Q1=  14321.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    582.71

3265 DIVIDED FLOW

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


3470 ENCROACHMENT STATIONS=     281.0    1373.0  TYPE=     4  TARGET=       0.000

OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      585.20 ELREA=      586.00


          CROSS SECTION  A

     2.11     14.52    582.62      0.00    582.61    582.82      0.20      0.00      0.00    585.20
 23280.        0.     23279.        0.        0.      6443.       0.        0.        0.      586.00
     0.00      0.00      3.61      0.00      0.000     0.033     0.000     0.000   568.10    284.43
0.000272       0.        0.        0.        0         0         1       0.00    708.79   1366.23


1490 NH CARD USED
 2800 NAT Q1=  15112.32  WSEL=    583.07  ENC Q1=  15354.95  WSEL=    583.17  RATIO= -0.0160
 NAT Q1=  15443.  RATIOS LOB,CH,ROB=  0.0000  0.9942  0.0057  WSEL=    583.17

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=     463.0    1428.0  TYPE=     4  TARGET=       0.005

OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      583.30 ELREA=      583.10


          CROSS SECTION  B

     2.42     13.47    583.07      0.00    583.07    583.24      0.17      0.41      0.00    583.30
 23280.        0.     23279.        0.        0.      6953.       0.      253.       27.      583.10
     0.13      0.00      3.34      0.00      0.099     0.033     0.119     0.032   569.60    463.11
0.000237     1650.     1650.     1650.        4         0         1       0.00    717.97   1427.95


1490 NH CARD USED
 2800 NAT Q1=  15960.69  WSEL=    583.40  ENC Q1=  16214.58  WSEL=    583.50  RATIO= -0.0159
 NAT Q1=  16214.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    583.50

3265 DIVIDED FLOW

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
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3470 ENCRCACHMENT STATIONS= 320.0 1272.0 TYPE= 4 TARGET= 0.000

OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 584.00 ELREA= 587.50

CROSS SECTION C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.69 | 14.11 | 583.41 | 0.00 | 583.40 | 583.55 | 0.14 | 0.30 | 0.00 | 584.00 |
| 23280. | 0. | 23279. | 0. | 0. | 7596. | 0. | 483. | 51. | 587.50 |
| 0.26 | 0.00 | 3.06 | 0.00 | 0.099 | 0.032 | 0.119 | 0.032 | 569.30 | 321.85 |
| 0.000213 | 1373. | 1373. | 1373. | 3 | 0 | 1 | 0.00 | 822.99 | 1251.57 |

CCHV= 0.200 CEHV= 0.500
2800 NAT Q1= 13012.19 WSEL= 583.72 ENC Q1= 13182.03 WSEL= 583.82 RATIO= -0.0130
NAT Q1= 13182. RATIOS LOB,CH,ROB= 0.0000 0.9999 0.0000 WSEL= 583.82

3470 ENCRCACHMENT STATIONS= 311.0 767.0 TYPE= 4 TARGET= 0.000

CROSS SECTION D -IMPED. DOWNSTREAM OF NAPIER AVE. BRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.96 | 17.12 | 583.72 | 0.00 | 583.72 | 584.01 | 0.28 | 0.38 | 0.06 | 591.50 |
| 23280. | 0. | 23280. | 0. | 0. | 5457. | 0. | 707. | 73. | 583.40 |
| 0.35 | 0.00 | 4.26 | 0.00 | 0.070 | 0.033 | 0.070 | 0.032 | 566.60 | 328.57 |
| 0.000320 | 1500. | 1500. | 1500. | 4 | 0 | 1 | 0.00 | 438.42 | 767.00 |

2800 NAT Q1= 13034.74 WSEL= 583.74 ENC Q1= 13210.33 WSEL= 583.84 RATIO= -0.0134
NAT Q1= 13210. RATIOS LOB,CH,ROB= 0.0000 0.9999 0.0000 WSEL= 583.84

3470 ENCRCACHMENT STATIONS= 311.0 767.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.97 | 17.14 | 583.74 | 0.00 | 583.74 | 584.02 | 0.28 | 0.01 | 0.00 | 591.50 |
| 23280. | 0. | 23280. | 0. | 0. | 5464. | 0. | 714. | 73. | 583.40 |
| 0.36 | 0.00 | 4.25 | 0.00 | 0.070 | 0.033 | 0.070 | 0.032 | 566.60 | 328.53 |
| 0.000318 | 50. | 50. | 50. | 3 | 0 | 1 | 0.00 | 438.46 | 767.00 |

2800 NAT Q1= 11766.95 WSEL= 583.74 ENC Q1= 11909.50 WSEL= 583.84 RATIO= -0.0121
NAT Q1= 11909. RATIOS LOB,CH,ROB= 0.0000 0.9999 0.0000 WSEL= 583.84

3265 DIVIDED FLOW

NORMAL BRIDGE,NRD= 0 MIN ELTRD= 602.40 MAX ELLC= 595.50

3470 ENCRCACHMENT STATIONS= 311.0 767.0 TYPE= 4 TARGET= 0.000

CROSS SECTION E -NAPIER AVE BRIDGE -DOWNSTREAM FACE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.98 | 17.14 | 583.74 | 0.00 | 583.74 | 584.03 | 0.29 | 0.00 | 0.00 | 591.50 |
| 23280. | 0. | 23280. | 0. | 0. | 5378. | 0. | 714. | 73. | 583.40 |
| 0.36 | 0.00 | 4.32 | 0.00 | 0.070 | 0.033 | 0.070 | 0.032 | 566.60 | 328.27 |
| 0.000391 | 1. | 1. | 1. | 3 | 0 | 1 | 0.00 | 430.76 | 767.00 |

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 2800 NAT Q1=  11802.62  WSEL=    583.76  ENC Q1=  11950.79  WSEL=    583.86  RATIO= -0.0125
 NAT Q1=  11950.  RATIOS LOB,CH,RCB=  0.0000  0.9999  0.0000  WSEL=    583.86

3265 DIVIDED FLOW

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   G         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IOC       ICONT     CORAR     TOPWID      ENDST


NORMAL BRIDGE,NRD= 0 MIN ELTRD=  602.40 MAX ELLC=  595.50

3470 ENCROACHMENT STATIONS=     311.0     767.0  TYPE=     4  TARGET=     0.000

          CROSS SECTION  F -NAPIER AVE BRIDGE -UPSTREAM FACE

     2.99     17.17    583.77     0.00    583.76    584.06     0.28     0.02     0.00    591.50
 23280.        0.    23280.        0.        0.     5391.        0.     722.      74.    583.40
     0.36     0.00     4.31     0.00     0.070     0.033     0.070     0.032   566.60   328.20
0.000388      70.      70.      70.         3         0         1      0.00   430.82   767.00

 2800 NAT Q1=  13089.23  WSEL=    583.78  ENC Q1=  13271.16  WSEL=    583.88  RATIO= -0.0138
 NAT Q1=  13271.  RATIOS LOB,CH,RCB=  0.0000  0.9999  0.0000  WSEL=    583.88

3470 ENCROACHMENT STATIONS=     311.0     767.0  TYPE=     4  TARGET=     0.000

          CROSS SECTION  G -IMMED. UPSTREAM OF NAPIER AVE. BRIDGE

     2.99     17.18    583.78     0.00    583.78    584.06     0.27     0.00     0.00    591.50
 23280.        0.    23280.        0.        0.     5484.        0.     722.      74.    583.40
     0.36     0.00     4.24     0.00     0.070     0.033     0.070     0.032   566.60   328.43
0.000314       1.       1.       1.         2         0         1      0.00   438.56   767.00

 2800 NAT Q1=  13119.10  WSEL=    583.79  ENC Q1=  13299.73  WSEL=    583.89  RATIO= -0.0137
 NAT Q1=  13299.  RATIOS LOB,CH,RCB=  0.0000  0.9999  0.0000  WSEL=    583.89

3470 ENCROACHMENT STATIONS=     311.0     767.0  TYPE=     4  TARGET=     0.000
     3.00     17.19    583.79     0.00    583.79    584.07     0.27     0.01     0.00    591.50
 23280.        0.    23280.        0.        0.     5487.        0.     729.      74.    583.40
     0.37     0.00     4.24     0.00     0.070     0.033     0.070     0.032   566.60   328.41
0.000314      50.      50.      50.         3         0         1      0.00   438.56   767.00

CCHV=   0.100 CEHV=   0.300
 2800 NAT Q1=  11455.76  WSEL=    583.84  ENC Q1=  11603.21  WSEL=    583.94  RATIO= -0.0128
 NAT Q1=  11603.  RATIOS LOB,CH,RCB=  0.0000  1.0000  0.0000  WSEL=    583.94

3470 ENCROACHMENT STATIONS=     233.0     702.0  TYPE=     4  TARGET=     0.000

OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      592.50 ELREA=      586.70

          CROSS SECTION  H
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00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion City & Township

3) WATERCOURSE: Kalamazoo River, East Branch

4) DOCUMENT TYPE: 100-year

00BREAK00

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************
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RECEIVED
DEC 17 1980
WATER MANAGEMENT

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C
T1      FIS ALBION CITY & ALBION TWP., CALHOUN CO., MICHIGAN.
T2      100-YEAR FLOOD
T3      EAST BR KALAMAZOO RIVER
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0. | 4. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 939.350 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 15.000 |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 38.000 | 1.000 | 53.000 | 21.000 | 22.000 | 54.000 | 4.000 | 39.000 | 150.000 | 200.000 |
| NC | .080 | .080 | .040 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 655.000 | 1070.000 | 1200.000 | 1490.000 | 1200.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.400 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 239.000 | 13.000 | 2000.000 | 2022.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 942.060 | 1800.000 | 942.050 | 1836.000 | 939.390 | 1862.000 | 936.450 | 1900.000 | 935.910 | 2000.000 |
| GR | 933.610 | 2000.000 | 933.010 | 2010.000 | 933.830 | 2022.000 | 936.010 | 2022.000 | 937.090 | 2124.000 |
| GR | 938.480 | 2210.000 | 941.510 | 2280.000 | 941.970 | 2289.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CITY OF ALBION SECTION A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 240.000 | 0.000 | 0.000 | 0.000 | 180.000 | 180.000 | 180.000 | 0.000 | 0.000 | 0.000 |

CITY OF ALBION SECTION B

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 241.000 | 18.000 | 2000.000 | 2028.000 | 1120.000 | 1120.000 | 1120.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.110 | 1106.000 | 943.370 | 1204.000 | 941.710 | 1302.000 | 941.810 | 1404.000 | 940.770 | 1500.000 |
| GR | 940.410 | 1600.000 | 939.860 | 1608.000 | 938.840 | 1622.000 | 939.710 | 1708.000 | 939.190 | 1804.000 |
| GR | 938.550 | 1920.000 | 937.210 | 2000.000 | 934.780 | 2003.000 | 934.070 | 2013.000 | 935.870 | 2025.000 |
| GR | 937.240 | 2028.000 | 941.680 | 2038.000 | 941.900 | 2044.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1960.000 | 2040.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 241.800 | 14.000 | 1989.000 | 2037.000 | 500.000 | 500.000 | 500.000 | 0.000 | 0.000 | 0.000 |
| GR | 945.600 | 1447.000 | 944.470 | 1547.000 | 943.440 | 1647.000 | 945.470 | 1747.000 | 941.350 | 1849.000 |
| GR | 940.960 | 1951.000 | 940.760 | 1989.000 | 936.710 | 2000.000 | 934.900 | 2007.000 | 935.160 | 2017.000 |
| GR | 936.730 | 2027.000 | 940.930 | 2037.000 | 941.760 | 2055.000 | 943.110 | 2157.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 242.000 | 17.000 | 850.000 | 880.500 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 950.790 | 300.000 | 949.450 | 350.000 | 948.110 | 400.000 | 947.060 | 450.000 | 946.010 | 500.000 |
| GR | 945.020 | 550.000 | 944.290 | 600.000 | 943.500 | 650.000 | 943.450 | 700.000 | 943.700 | 750.000 |
| GR | 943.950 | 800.000 | 944.130 | 850.000 | 936.000 | 850.000 | 936.000 | 880.500 | 944.330 | 880.500 |
| GR | 944.450 | 900.000 | 944.700 | 950.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 0.000 | 1.670 | 3.000 | 0.000 | 30.500 | 0.000 | 174.500 | 0.000 | 0.000 | 0.000 |
| X1 | 242.100 | 0.000 | 0.000 | 0.000 | 48.000 | 48.000 | 48.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 941.720 | 943.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 17.000 | 300.000 | 950.790 | 0.000 | 350.000 | 949.450 | 0.000 | 400.000 | 948.110 | 0.000 |
| BT | 450.000 | 947.060 | 0.000 | 500.000 | 946.010 | 0.000 | 550.000 | 945.020 | 0.000 | 600.000 |
| BT | 944.290 | 0.000 | 650.000 | 943.500 | 0.000 | 700.000 | 943.450 | 0.000 | 750.000 | 943.700 |
| BT | 0.000 | 800.000 | 943.950 | 0.000 | 850.000 | 944.130 | 0.000 | 850.000 | 944.130 | 941.720 |
| BT | 880.500 | 944.330 | 941.720 | 880.500 | 944.330 | 0.000 | 900.000 | 944.450 | 0.000 | 950.000 |
| BT | 944.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 695.000 | 1190.000 | 1340.000 | 1720.000 | 1340.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 1.400 | 0.000 | 0.000 | 1860.000 | 2170.000 |

CITY OF ALBION SECTION C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 42.300 | 44.000 | 2054.000 | 2065.000 | 140.000 | 140.000 | 140.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 1114.000 | 960.000 | 1178.000 | 958.900 | 1200.000 | 955.000 | 1296.000 | 952.100 | 1398.000 |
| GR | 949.400 | 1500.000 | 946.900 | 1602.000 | 945.900 | 1648.000 | 943.500 | 1680.000 | 942.800 | 1774.000 |
| GR | 941.800 | 1832.000 | 939.200 | 1914.000 | 938.600 | 2000.000 | 937.300 | 2054.000 | 934.700 | 2059.000 |
| GR | 936.000 | 2065.000 | 941.200 | 2066.000 | 941.100 | 2086.000 | 939.200 | 2088.000 | 937.200 | 2088.000 |
| GR | 936.700 | 2096.000 | 934.900 | 2104.000 | 934.700 | 2118.000 | 935.100 | 2132.000 | 936.400 | 2142.000 |
| GR | 939.100 | 2156.000 | 942.300 | 2168.000 | 943.300 | 2190.000 | 944.100 | 2206.000 | 945.900 | 2302.000 |
| GR | 947.600 | 2402.000 | 949.700 | 2504.000 | 951.300 | 2598.000 | 952.100 | 2698.000 | 952.700 | 2798.000 |
| GR | 953.700 | 2900.000 | 954.400 | 2932.000 | 957.600 | 3021.000 | 957.200 | 3034.000 | 956.900 | 3044.000 |
| GR | 960.300 | 3094.000 | 966.100 | 3200.000 | 970.400 | 3400.000 | 969.800 | 3488.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.400 | 0.000 | 0.000 | 0.000 | 0.000 |

CITY OF ALBION SECTION D

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 42.500 | 16.000 | 2040.000 | 2203.000 | 580.000 | 700.000 | 680.000 | 0.000 | 0.000 | 0.000 |
| GR | 955.000 | 1157.000 | 953.100 | 1226.000 | 949.000 | 1449.000 | 946.400 | 1816.000 | 944.600 | 1948.000 |
| GR | 941.100 | 2000.000 | 939.600 | 2040.000 | 938.600 | 2040.000 | 936.100 | 2067.000 | 936.700 | 2095.000 |
| GR | 936.600 | 2122.000 | 939.400 | 2151.000 | 944.800 | 2203.000 | 946.900 | 2245.000 | 952.100 | 2560.000 |
| GR | 954.500 | 2835.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CITY OF ALBION SECTION E

ALBION TOWNSHIP SECTION A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 43.000 | 22.000 | 2000.000 | 2084.000 | 900.000 | 1100.000 | 1030.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.100 | 804.000 | 955.300 | 870.000 | 950.400 | 1104.000 | 949.400 | 1194.000 | 947.900 | 1414.000 |
| GR | 943.100 | 1425.000 | 951.700 | 1588.000 | 953.900 | 1818.000 | 953.200 | 1946.000 | 939.400 | 2000.000 |
| GR | 937.000 | 2024.000 | 935.800 | 2046.000 | 937.400 | 2064.000 | 939.400 | 2084.000 | 943.700 | 2496.000 |
| GR | 943.300 | 2564.000 | 947.200 | 2822.000 | 944.900 | 3030.000 | 953.700 | 3104.000 | 953.600 | 3178.000 |
| GR | 956.900 | 3338.000 | 961.700 | 3390.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1942.000 | 2092.000 |
| X1 | 43.700 | 19.000 | 2014.000 | 2092.000 | 3680.000 | 3680.000 | 3680.000 | 0.000 | 0.000 | 0.000 |
| GR | 955.580 | 1431.000 | 950.750 | 1516.000 | 947.530 | 1681.000 | 946.970 | 1732.000 | 949.320 | 1836.000 |
| GR | 944.880 | 1892.000 | 942.550 | 2000.000 | 940.770 | 2014.000 | 940.130 | 2014.000 | 938.200 | 2030.000 |
| GR | 939.280 | 2039.000 | 940.150 | 2053.000 | 942.340 | 2059.000 | 940.130 | 2063.000 | 938.980 | 2072.000 |
| GR | 939.890 | 2085.000 | 944.780 | 2092.000 | 946.550 | 2197.000 | 948.690 | 2335.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1982.000 | 2100.000 |
| X1 | 43.800 | 0.000 | 0.000 | 0.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 43.900 | 66.000 | 2036.000 | 2128.000 | 49.000 | 49.000 | 49.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 947.450 | 947.450 | 0.000 |
| GR | 965.920 | 1147.000 | 965.450 | 1279.000 | 962.420 | 1377.000 | 952.260 | 1633.000 | 948.960 | 1839.000 |
| GR | 948.530 | 2000.000 | 948.530 | 2036.000 | 943.110 | 2036.000 | 942.110 | 2036.000 | 940.610 | 2037.000 |
| GR | 940.110 | 2038.000 | 940.110 | 2040.000 | 940.610 | 2041.000 | 942.110 | 2042.000 | 943.110 | 2042.000 |
| GR | 943.240 | 2045.000 | 942.240 | 2045.000 | 940.740 | 2046.000 | 940.240 | 2047.000 | 940.240 | 2049.000 |
| GR | 940.740 | 2050.000 | 942.240 | 2051.000 | 943.240 | 2051.000 | 943.210 | 2054.000 | 942.210 | 2054.000 |
| GR | 940.710 | 2055.000 | 940.210 | 2056.000 | 940.210 | 2058.000 | 940.710 | 2059.000 | 942.210 | 2060.000 |
| GR | 943.210 | 2060.000 | 943.140 | 2063.000 | 942.140 | 2063.000 | 940.640 | 2064.000 | 940.140 | 2065.000 |
| GR | 940.140 | 2067.000 | 940.640 | 2068.000 | 942.140 | 2069.000 | 943.140 | 2069.000 | 943.340 | 2072.000 |
| GR | 942.340 | 2072.000 | 940.840 | 2073.000 | 940.340 | 2074.000 | 940.340 | 2076.000 | 940.840 | 2077.000 |
| GR | 942.340 | 2078.000 | 943.340 | 2078.000 | 943.500 | 2081.000 | 942.500 | 2081.000 | 941.000 | 2082.000 |
| GR | 940.500 | 2083.000 | 940.500 | 2085.000 | 941.000 | 2086.000 | 942.500 | 2087.000 | 943.500 | 2087.000 |
| GR | 942.960 | 2122.000 | 941.960 | 2122.000 | 940.460 | 2123.000 | 939.960 | 2124.000 | 939.960 | 2126.000 |
| GR | 940.460 | 2127.000 | 941.960 | 2128.000 | 942.960 | 2128.000 | 948.530 | 2128.000 | 949.220 | 2203.000 |
| GR | 950.460 | 2295.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 44.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 50.000 | 1147.000 | 965.920 | 0.000 | 1279.000 | 965.450 | 0.000 | 1377.000 | 962.420 | 0.000 |
| BT | 1633.000 | 952.260 | 0.000 | 1839.000 | 948.960 | 0.000 | 2000.000 | 948.530 | 0.000 | 2036.000 |
| BT | 948.530 | 943.110 | 2037.000 | 948.530 | 945.610 | 2038.000 | 948.530 | 946.110 | 2040.000 | 948.530 |
| BT | 946.110 | 2041.000 | 948.530 | 945.610 | 2042.000 | 948.530 | 943.110 | 2045.000 | 948.530 | 943.240 |
| BT | 2046.000 | 948.530 | 945.740 | 2047.000 | 948.530 | 946.250 | 2049.000 | 948.530 | 946.250 | 2050.000 |
| BT | 948.530 | 945.740 | 2051.000 | 948.530 | 943.240 | 2054.000 | 948.530 | 943.210 | 2055.000 | 948.530 |
| BT | 945.710 | 2056.000 | 948.530 | 946.210 | 2058.000 | 948.530 | 946.210 | 2059.000 | 948.530 | 945.710 |
| BT | 2060.000 | 948.530 | 943.210 | 2063.000 | 948.530 | 943.140 | 2064.000 | 948.530 | 945.640 | 2065.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BT | 948.530 | 946.140 | 2067.000 | 948.530 | 946.140 | 2068.000 | 948.530 | 945.640 | 2069.000 | 948.530 |
| BT | 943.140 | 2072.000 | 948.530 | 943.340 | 2073.000 | 948.530 | 945.840 | 2074.000 | 948.530 | 946.340 |
| BT | 2076.000 | 948.530 | 946.340 | 2077.000 | 948.530 | 945.840 | 2078.000 | 948.530 | 943.340 | 2081.000 |
| BT | 948.530 | 943.500 | 2082.000 | 948.530 | 946.100 | 2083.000 | 948.530 | 946.500 | 2085.000 | 948.530 |
| BT | 946.500 | 2086.000 | 948.530 | 946.100 | 2087.000 | 948.530 | 943.500 | 2122.000 | 948.530 | 942.960 |
| BT | 2123.000 | 948.530 | 945.460 | 2124.000 | 948.530 | 945.960 | 2126.000 | 948.530 | 945.960 | 2127.000 |
| BT | 948.530 | 945.460 | 2128.000 | 948.530 | 942.960 | 2203.000 | 949.220 | 0.000 | 2295.000 | 950.460 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 44.100 | 0.000 | 0.000 | 0.000 | 39.000 | 39.000 | 39.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 948.530 | 948.530 | 0.000 |
| X1 | 44.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 948.530 | 948.530 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1962.000 | 2154.000 |

ALBION TOWNSHIP SECTION B

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 44.300 | 21.000 | 1980.000 | 2154.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.420 | 1377.000 | 952.260 | 1633.000 | 948.960 | 1839.000 | 946.210 | 1915.000 | 943.890 | 1954.000 |
| GR | 945.860 | 1980.000 | 941.760 | 2000.000 | 941.690 | 2010.000 | 942.310 | 2029.000 | 942.830 | 2036.000 |
| GR | 942.770 | 2059.000 | 941.830 | 2062.000 | 942.610 | 2082.000 | 945.870 | 2095.000 | 942.910 | 2115.000 |
| GR | 941.550 | 2128.000 | 942.650 | 2141.000 | 948.260 | 2154.000 | 948.360 | 2213.000 | 950.460 | 2295.000 |
| GR | 953.700 | 2413.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.400 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 44.400 | 0.000 | 0.000 | 0.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |

ALBION TOWNSHIP SECTION C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 45.000 | 15.000 | 2000.000 | 2031.000 | 3720.000 | 3720.000 | 3720.000 | 0.000 | 0.000 | 0.000 |
| GR | 950.200 | 1300.000 | 948.300 | 1400.000 | 947.200 | 1536.000 | 946.000 | 1836.000 | 942.010 | 1894.000 |
| GR | 944.720 | 2000.000 | 943.280 | 2005.000 | 939.550 | 2012.000 | 941.050 | 2019.000 | 941.390 | 2031.000 |
| GR | 943.580 | 2031.000 | 944.970 | 2176.000 | 944.350 | 2340.000 | 953.540 | 2360.000 | 955.970 | 2380.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| SECNO / G / TIME / SLOPE | DEPTH / QLOB / VLOB / XLOBL | CWSEL / GCH / VCH / XLCH | CRIWS / QROB / VROB / XLOBR | WSELK / ALOB / XNL / ITRIAL | EG / ACH / XNCH / IDC | HV / AROB / XNR / ICONT | HL / VOL / WTN / CORAR | OLOSS / TWA / ELMIN / TOPWID | BANK ELEV LEFT/RIGHT / SSTA / ENDST |
|---|---|---|---|---|---|---|---|---|---|
| *PROF 1 | | | | | | | | | |
| CCHV= .100 CEHV= .300 | | | | | | | | | |
| *SECNO 239.000 | | | | | | | | | |
| 239.00 | 6.34 | 939.35 | 0.00 | 939.35 | 939.41 | .06 | 0.00 | 0.00 | 935.91 |
| 1200. | 358. | 404. | 398. | 371. | 132. | 429. | 0. | 0. | 936.01 |
| 0.00 | 1.07 | 3.07 | .93 | .080 | .040 | .080 | 0.000 | 933.01 | 1862.52 |
| .000808 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 367.58 | 2230.10 |
| FLOW DISTRIBUTION FOR SECNO= 239.00 CWSEL= 939.35 | | | | | | | | | |
| STA= 1863. | 1900. | 2000. | 2022. | 2124. | 2210. | 2230. | | | |
| PER Q= 3.1 | 30.1 | 33.7 | 25.0 | 8.0 | .2 | | | | |
| AREA= 54.4 | 317.0 | 131.6 | 285.6 | 134.6 | 8.7 | | | | |
| VEL= .7 | 1.1 | 3.1 | 1.0 | .7 | .3 | | | | |
| *SECNO 240.000 CITY OF ALBION SECTION A | | | | | | | | | |
| 240.00 | 6.48 | 939.49 | 0.00 | 0.00 | 939.55 | .05 | .13 | .00 | 935.91 |
| 1200. | 401. | 390. | 409. | 391. | 135. | 459. | 4. | 2. | 936.01 |
| .03 | 1.02 | 2.90 | .89 | .080 | .040 | .080 | .040 | 933.01 | 1860.97 |
| .000695 | 180. | 180. | 180. | 0 | 0 | 0 | 0.00 | 372.49 | 2233.46 |
| FLOW DISTRIBUTION FOR SECNO= 240.00 CWSEL= 939.49 | | | | | | | | | |
| STA= 1861. | 1900. | 2000. | 2022. | 2124. | 2210. | 2233. | | | |
| PER Q= 3.3 | 30.1 | 32.5 | 25.2 | 8.6 | .3 | | | | |
| AREA= 59.9 | 331.5 | 134.8 | 300.4 | 147.1 | 11.9 | | | | |
| VEL= .7 | 1.1 | 2.9 | 1.0 | .7 | .3 | | | | |
| *SECNO 241.000 CITY OF ALBION SECTION B | | | | | | | | | |
| 241.00 | 6.40 | 940.47 | 0.00 | 0.00 | 940.60 | .13 | 1.03 | .02 | 937.21 |
| 1200. | 586. | 604. | 10. | 613. | 152. | 12. | 27. | 12. | 937.24 |
| .16 | .96 | 3.98 | .86 | .080 | .040 | .080 | .040 | 934.07 | 1582.79 |
| .001285 | 1120. | 1120. | 1120. | 2 | 0 | 0 | 0.00 | 452.48 | 2035.28 |

```
SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
Q        QLOE     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
TIME     VLOE     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
SLOPE    XLOEL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST

FLOW DISTRIBUTICN FOR SECNO=    241.00          CWSEL=    940.47
STA=    1583.    1608.    1622.    1708.    1804.    1920.    2000.    2028.    2035.
 PER Q=      .1       .9      6.4      5.5     14.1     21.7     50.4       .8
  AREA=     3.2     15.7    102.9     98.1    185.8    207.4    151.7     11.8
   VEL=      .3       .7       .8       .7       .9      1.3      4.0       .9

*SECNO 241.800

3470 ENCROACHMENT STATIONS=    1960.0    2040.0  TYPE=     1  TARGET=      80.000
   241.80     6.32   941.22     0.00     0.00   941.75      .53     1.03      .12   940.76
    1200.       7.    1193.       0.      11.     204.       1.      32.      15.   940.93
      .18      .60     5.85      .41     .080     .040     .080     .040   934.90  1960.00
  .003799     500.     500.     500.        2        0        0     0.00    80.00  2040.00

FLOW DISTRIBUTICN FOR SECNO=    241.80          CWSEL=    941.22
STA=    1960.    1989.    2037.    2040.
 PER Q=      .6     99.4       .0
  AREA=    11.2    203.9       .7
   VEL=      .6      5.9       .4

CCHV=    .300 CEHV=    .500
*SECNO 242.000
   242.00     5.55   941.55     0.00     0.00   942.33      .78      .46      .13   944.13
    1200.       0.    1200.       0.       0.     169.       0.      33.      15.   944.33
      .18     0.00     7.09     0.00     .080     .040     .080     .040   936.00   850.00
  .005597     100.     100.     100.        2        0        0     0.00    30.50   880.50

FLOW DISTRIBUTICN FOR SECNO=    242.00          CWSEL=    941.55
STA=     850.     881.
 PER Q=    100.0
  AREA=    169.4
   VEL=      7.1
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

SPECIAL BRIDGE

5070.VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.67 | 3.00 | 0.00 | 30.50 | 0.00 | 174.50 | 0.00 | 936.00 | 936.00 |

*SECNO 242.100
PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 942.78 | 942.33 | 0.00 | 0. | 1200. | 175. | 174. | 941.72 | 943.50 |
| 242.10 | 6.14 | 942.14 | 0.00 | 0.00 | 942.78 | .63 | .45 | 0.00 | 944.13 |
| 1200. | 0. | 1200. | 0. | 0. | 188. | 0. | 33. | 15. | 944.33 |
| .19 | 0.00 | 6.39 | 0.00 | .080 | .040 | .080 | .040 | 936.00 | 850.00 |
| .004128 | 48. | 48. | 48. | 2 | 0 | 0 | 0.00 | 30.50 | 880.50 |

FLOW DISTRIBUTION FOR SECNO= 242.10 CWSEL= 942.14

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 850. | 881. | | | | | | | | | | | | |
| PER Q= | 100.0 | | | | | | | | | | | | | |
| AREA= | 187.7 | | | | | | | | | | | | | |
| VEL= | 6.4 | | | | | | | | | | | | | |

*SECNO 42.300

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 1860.0 2170.0 TYPE= 1 TARGET= 310.000
CITY OF ALBION SECTION C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.30 | 8.33 | 943.03 | 0.00 | 0.00 | 943.05 | .02 | .09 | .18 | 937.30 |
| 1340. | 606. | 174. | 560. | 790. | 81. | 559. | 36. | 16. | 936.00 |
| .22 | .77 | 2.14 | 1.00 | .080 | .040 | .080 | .040 | 934.70 | 1860.00 |
| .000254 | 140. | 140. | 140. | 2 | 0 | 0 | 0.00 | 310.00 | 2170.00 |

FLOW DISTRIBUTION FOR SECNO= 42.30 CWSEL= 943.03

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 1860. | 1914. | 2000. | 2054. | 2065. | 2096. | 2104. | 2118. | 2132. | 2142. | 2156. | 2170. | | |
| PER Q= | 7.1 | 20.2 | 17.9 | 13.0 | 4.6 | 4.7 | 10.4 | 10.2 | 6.0 | 4.9 | 1.1 | | | |
| AREA= | 160.5 | 355.1 | 274.2 | 81.2 | 96.4 | 57.8 | 115.2 | 113.8 | 72.8 | 73.9 | 29.3 | | | |
| VEL= | .6 | .8 | .9 | 2.1 | .6 | 1.1 | 1.2 | 1.2 | 1.1 | .9 | .5 | | | |

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| G | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .100 CEHV= .300

*SECNO 42.500

CITY OF ALBION SECTION D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.50 | 7.08 | 943.18 | 0.00 | 0.00 | 943.22 | .04 | .16 | .01 | 939.60 |
| 1340. | 75. | 1265. | 0. | 145. | 742. | 0. | 53. | 20. | 944.80 |
| .34 | .52 | 1.70 | 0.00 | .080 | .040 | .080 | .040 | 936.10 | 1969.18 |
| .000247 | 580. | 680. | 700. | 2 | 0 | 0 | 0.00 | 218.17 | 2187.35 |

FLOW DISTRIBUTION FOR SECNO= 42.50 CWSEL= 943.18

| STA= | 1969. | 2000. | 2040. | 2203. |
|---|---|---|---|---|
| PER Q= | .7 | 4.9 | 94.4 | |
| AREA= | 32.0 | 113.0 | 741.8 | |
| VEL= | .3 | .6 | 1.7 | |

*SECNO 43.000

3265 DIVIDED FLOW

CITY OF ALBION SECTION E

ALBION TOWNSHIP SECTION A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.00 | 7.63 | 943.43 | 0.00 | 0.00 | 943.48 | .04 | .25 | .00 | 939.40 |
| 1340. | 15. | 964. | 361. | 33. | 504. | 780. | 79. | 29. | 939.40 |
| .53 | .44 | 1.91 | .46 | .080 | .040 | .080 | .040 | 935.80 | 1424.24 |
| .000245 | 900. | 1030. | 1100. | 0 | 0 | 0 | 0.00 | 523.83 | 2572.64 |

FLOW DISTRIBUTION FOR SECNO= 43.00 CWSEL= 943.43

| STA= | 1424. | 2000. | 2084. | 2470. | 2573. |
|---|---|---|---|---|---|
| PER Q= | 1.1 | 72.0 | 26.9 | .0 | |
| AREA= | 32.9 | 503.8 | 778.3 | 2.0 | |
| VEL= | .4 | 1.9 | .5 | .0 | |

*SECNO 43.700

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.70 | 6.69 | 944.89 | 0.00 | 0.00 | 945.03 | .13 | 1.52 | .03 | 940.77 |
| 1340. | 130. | 1210. | 0. | 172. | 393. | 0. | 159. | 60. | 944.78 |
| .88 | .75 | 3.08 | .08 | .080 | .040 | .080 | .040 | 938.20 | 1891.84 |
| .000844 | 3680. | 3680. | 3680. | 2 | 0 | 0 | 0.00 | 206.83 | 2098.67 |

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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

FLOW DISTRIBUTICN FOR SECNO=      43.70          CWSEL=     944.89

STA=     1892.     2000.     2014.     2092.     2099.
  PER Q=       5.7       4.0      90.3        .0
   AREA=     127.2      45.3     392.9        .4
    VEL=        .6       1.2       3.1        .1

*SECNO 43.800

3470 ENCROACHMENT STATIONS=     1982.0     2100.0  TYPE=      1  TARGET=      118.000
    43.80      6.77    944.97      0.00      0.00    945.11       .14       .08       .00    940.77
    1340.       90.     1250.        0.       86.      399.        1.      160.       60.    944.78
      .89      1.04      3.13       .13      .080      .040      .080      .040    938.20   1982.00
  .000855      100.      100.      100.         2         0         0      0.00    118.00   2100.00

FLOW DISTRIBUTICN FOR SECNO=      43.80          CWSEL=     944.97

STA=     1982.     2000.     2014.     2092.     2100.
  PER Q=       2.6       4.1      93.3        .0
   AREA=      40.1      46.3     398.9       1.0
    VEL=        .9       1.2       3.1        .1

CCHV=     .300 CEHV=     .500
*SECNO 43.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       947.45 ELREA=       947.45

    43.90      4.97    944.93      0.00      0.00    945.34       .41       .09       .13    948.53
    1340.        0.     1340.        0.        0.      262.        0.      160.       60.    948.53
      .90      0.00      5.12      0.00      .080      .040      .080      .040    939.96   2036.00
  .006909       49.       49.       49.         2         0         0      0.00     92.00   2128.00

FLOW DISTRIBUTICN FOR SECNO=      43.90          CWSEL=     944.93

STA=     2036.     2128.
  PER Q=     100.0
   AREA=     261.8
    VEL=       5.1

*SECNO 44.000
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| G | QLOB | GCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOEL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 50 MIN ELTRD= 948.53 MAX ELLC= 946.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.00 | 4.62 | 944.58 | 943.81 | 0.00 | 945.71 | 1.13 | .01 | .36 | 948.53 |
| 1340. | 0. | 1340. | 0. | 0. | 157. | 0. | 160. | 60. | 948.53 |
| .90 | 0.00 | 8.52 | 0.00 | .080 | .040 | .080 | .040 | 939.96 | 2036.00 |
| .024794 | 1. | 1. | 1. | 4 | 12 | 0 | -72.98 | 92.00 | 2128.00 |

FLOW DISTRIBUTION FOR SECNO= 44.00 CWSEL= 944.58

STA= 2036. 2128.
PER Q= 100.0
AREA= 157.4
VEL= 8.5

*SECNO 44.100

3370 NORMAL BRIDGE,NRD= 50 MIN ELTRD= 948.53 MAX ELLC= 946.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.53 ELREA= 948.53

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.10 | 5.91 | 945.87 | 0.00 | 0.00 | 946.59 | .72 | .77 | .12 | 948.53 |
| 1340. | 0. | 1340. | 0. | 0. | 196. | 0. | 160. | 60. | 948.53 |
| .90 | 0.00 | 6.82 | 0.00 | .080 | .040 | .080 | .040 | 939.96 | 2036.00 |
| .015926 | 39. | 39. | 39. | 2 | 0 | 0 | -152.54 | 92.00 | 2128.00 |

FLOW DISTRIBUTION FOR SECNO= 44.10 CWSEL= 945.87

STA= 2036. 2128.
PER Q= 100.0
AREA= 196.5
VEL= 6.8

*SECNO 44.200

3301 HV CHANGED MORE THAN HVINS

```
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOE      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOE      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOEL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=      948.53 ELREA=      948.53

    44.20      6.65    946.61      0.00      0.00    946.77       .16       .00       .17    948.53
    1340.        0.     1340.        0.        0.      416.        0.      160.       60.    948.53
      .90      0.00      3.22      0.00      .080      .040      .080      .040    939.96   2036.00
  .001531        1.        1.        1.         3         0         0      0.00     92.00   2128.00

FLOW DISTRIBUTICN FOR SECNO=      44.20          CWSEL=     946.61

STA=     2036.     2128.
  PER Q=     100.0
   AREA=     415.9
    VEL=       3.2

*SECNO 44.300

3470 ENCROACHMENT STATIONS=     1962.0     2154.0  TYPE=      1  TARGET=      192.000
        ALBION TOWNSHIP  SECTION B

    44.30      5.22    946.77      0.00      0.00    946.84       .06       .04       .03    945.86
    1340.       15.     1325.        0.       29.      646.        0.      161.       60. 100000.00
      .91       .54      2.05      0.00      .080      .040      .080      .040    941.55   1962.00
  .000525       50.       50.       50.         2         0         0      0.00    188.55   2150.55

FLOW DISTRIBUTICN FOR SECNO=      44.30          CWSEL=     946.77

STA=     1962.     1980.     2154.
  PER Q=       1.1      98.9
   AREA=      28.7     645.8
    VEL=        .5       2.1

CCHV=     .100 CEHV=     .300
*SECNO 44.400
    44.40      5.26    946.81      0.00      0.00    946.86       .06       .02       .00    945.86
    1340.       72.     1268.        0.      124.      653.        0.      162.       61.    948.26
      .91       .58      1.94      0.00      .080      .040      .080      .040    941.55   1898.26
  .000464       50.       50.       50.         1         0         0      0.00    252.40   2150.65
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

FLOW DISTRIBUTION FOR SECNO= 44.40 CWSEL= 946.81

| STA= | 1898. | 1915. | 1954. | 1980. | 2154. |
|---|---|---|---|---|---|
| PER Q= | .1 | 3.0 | 2.3 | 94.6 | |
| AREA= | 5.1 | 68.9 | 50.5 | 653.1 | |
| VEL= | .2 | .6 | .6 | 1.9 | |

*SECNO 45.000
ALBION TOWNSHIP SECTION C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 45.00 | 8.24 | 947.79 | 0.00 | 0.00 | 947.80 | .01 | .94 | .00 | 944.72 |
| 1340. | 516. | 289. | 536. | 1069. | 195. | 1037. | 293. | 109. | 943.58 |
| 2.37 | .48 | 1.48 | .52 | .080 | .040 | .080 | .040 | 939.55 | 1462.60 |
| .000158 | 3720. | 3720. | 3720. | 3 | 0 | 0 | 0.00 | 884.89 | 2347.49 |

FLOW DISTRIBUTION FOR SECNO= 45.00 CWSEL= 947.79

| STA= | 1463. | 1536. | 1836. | 1894. | 2000. | 2031. | 2176. | 2340. | 2347. |
|---|---|---|---|---|---|---|---|---|---|
| PER Q= | .2 | 7.0 | 9.3 | 22.0 | 21.5 | 20.5 | 19.1 | .3 | |
| AREA= | 21.8 | 358.1 | 219.7 | 469.4 | 195.0 | 510.2 | 513.9 | 12.9 | |
| VEL= | .1 | .3 | .6 | .6 | 1.5 | .5 | .5 | .3 | |

# BRIDGE SECTIONS IN EAST BRANCH KALAMAZOO RIVER

CALCULATION SHEET REV.

| CLIENT/OWNER | FILING CODE / JOB NO. |
|---|---|
| CALC. BY/DATE (SIGNATURE) / CHECKED BY/DATE (SIGNATURE) | SUBJECT: SECTION 242 |
| | SHEET OF / BOOK NO. |

East Branch Kalamazoo River @
Hannah Road.

Proposed Bridge

Adjusted for Skew — 30.5' x 5.72' Box

$n \approx 0.02$

length of Bridge ~~along normal to~~ flow lines = 48'

$$K_f = \frac{29.1 n^2 L}{R^{4/3}}$$

$A = 174.5 \text{ ft}^2$

$R = 2.41 \text{ ft}$

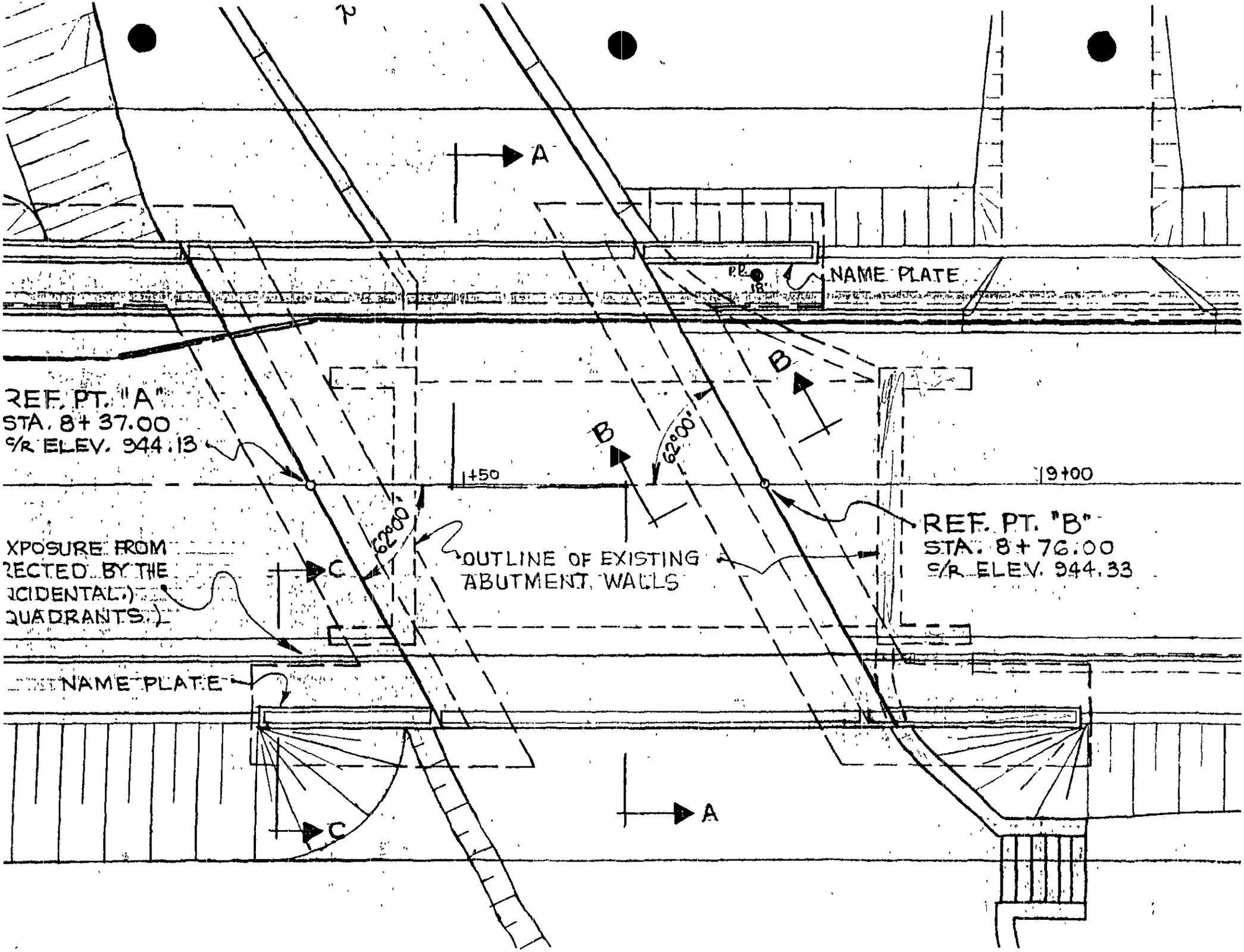
$= 0.17$

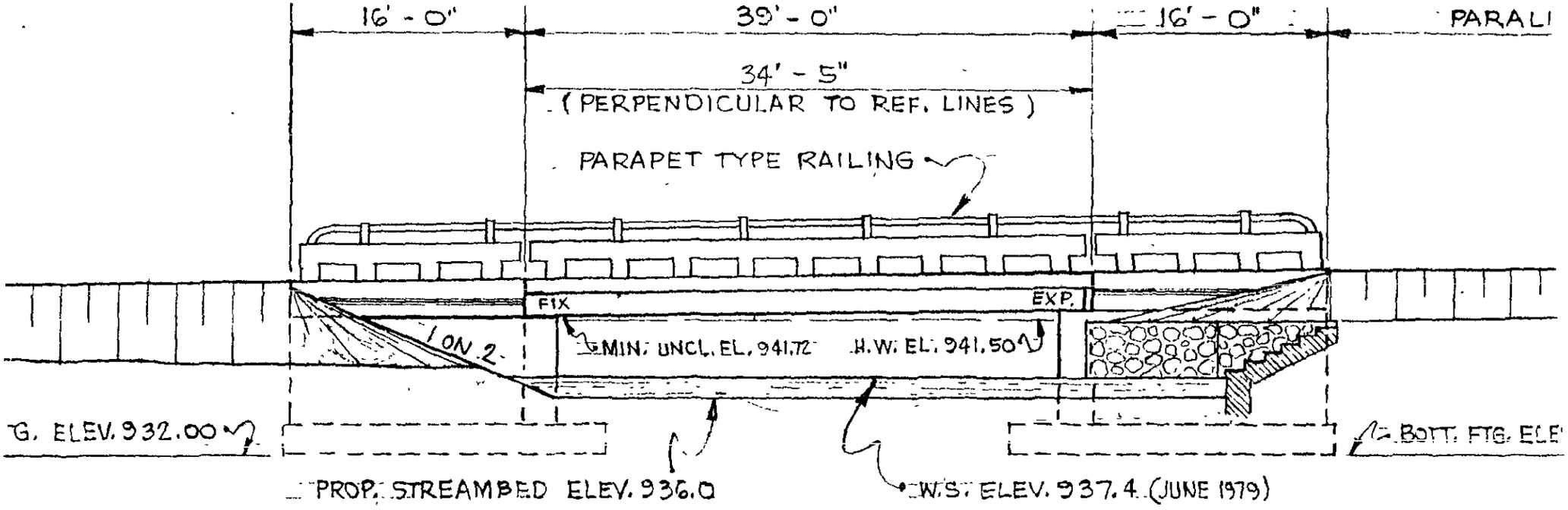
$\Sigma K_{OR} = 1.0 + 0.5 + 0.17 = 1.67$

Weir Flow

Paved surface $\frac{h}{L} < 0.15$ $C = 3.0$

$B = 30.5$


A
NAME PLATE
B
B
62°00'
REF. PT. "A"
STA. 8+37.00
S/R ELEV. 944.13
1+50
9+00
62°00'
REF. PT. "B"
STA. 8+76.00
S/R ELEV. 944.33
OUTLINE OF EXISTING
ABUTMENT WALLS
XPOSURE FROM
ECTED BY THE
CIDENTAL)
QUADRANTS.)
C
NAME PLATE
A
C


16' - 0"
39' - 0"
16' - 0"
PARALI
34' - 5"
( PERPENDICULAR TO REF. LINES )
PARAPET TYPE RAILING
FIX
EXP.
1 ON 2
MIN. UNCL. EL. 941.72
H.W. EL. 941.50
G. ELEV. 932.00
BOTT. FTG. ELE
PROP. STREAMBED ELEV. 936.0
W.S. ELEV. 937.4 (JUNE 1979)

# BRIDGE NO. 1

General Fieldnote Form S-12

COMMONWEALTH ASSOCIATES INC.

CREW: BEARINGER, SHEAR, McNALLY

DATE: 5-21-79

INSTRUMENTS:

TEMP (DRY BULB)

WET BULB

RH %

BAR.

PROJECT: HUD

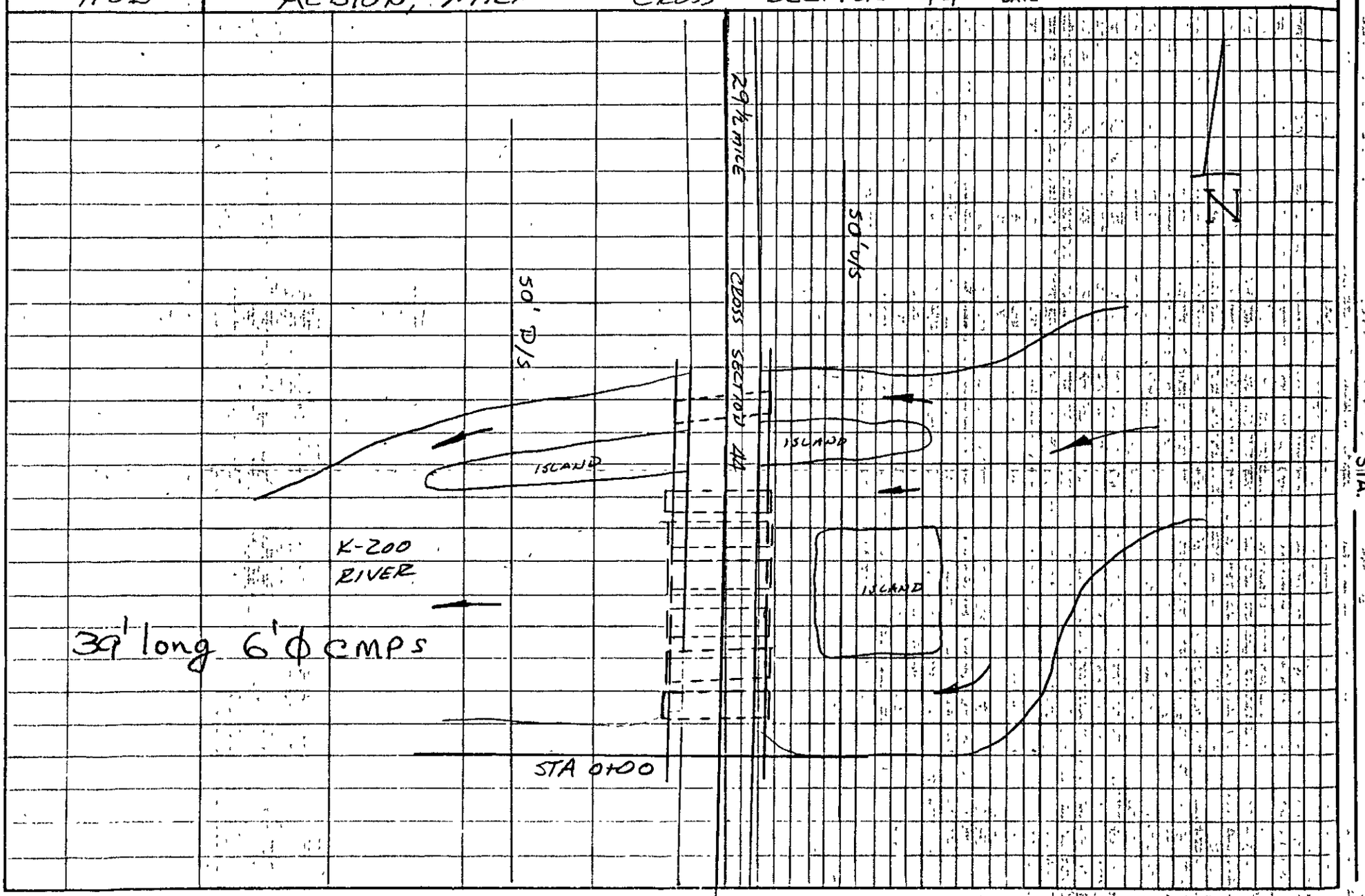
LOCATION: ALBION, MICH. CROSS SECTION 44

CHECKED BY

DATE

ACTIVITY Cross Section 44 BOOK 2-1-19 PAGE 54

STA.



00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion City & Township

3) WATERCOURSE: Kalamazoo River, E. Br, Mill Race

4) DOCUMENT TYPE: Report

00BREAK00

13

HYDRAULIC ANALYSIS REPORT

EAST (NORTH) BRANCH KALAMAZOO RIVER
(INCLUDING MILL RACE)
AT ALBION CITY AND ALBION TOWNSHIP

CALHOUN COUNTY, MICHIGAN

Prepared by

COMMONWEALTH ASSOCIATES INC.
209 EAST WASHINGTON AVENUE
JACKSON, MICHIGAN 49201

SEPTEMBER, 1980

- Hydraulic Report
- Bridge Sketches
- Profiles
- Flood Boundary Floodway Map
- X-Sect Plots

Packet

1) HL 2 i/o
A) E. Br Kzoo River
1) 100 yr NAT & Encroached
2) Summary Run 10, 50, 100, 500

B) Mill Race
1) 100 yr NAT & Encroached
2) Summary Run 10, 50, 100, 500

## INTRODUCTION

Hydraulic calculations were performed for the East Branch Kalamazoo River (or North Branch Kalamazoo River) within the entire corporate boundaries of Albion City and Albion Township. Field cross section data were surveyed by Commonwealth survey crews in November, 1978, and May, 1979. The flood flows for 10-, 50-, 100-, and 500-year recurrence intervals were approved by the Michigan DNR. An enlarged 7-1/2' U.S.G.S. topographic map (preliminary) with a 10' contour interval was used. This study was performed by Commonwealth Associates Inc., Jackson, Michigan, and the Project Manager was V. Danushkodi, P.E.

## METHOD OF ANALYSIS

The HEC-2 computer program was utilized for the entire hydraulic analysis.

## VARIABLES AND COEFFICIENTS

### Manning's Roughness Coefficients

| | |
|---|---|
| For channel | 0.04 |
| For overbanks | 0.08 |

### Coefficients for Floodway

| | |
|---|---|
| Contraction | 0.10 |
| Expansion | 0.30 |

### Coefficients for Bridges

| | |
|---|---|
| Contraction | 0.30 |
| Expansion | 0.50 |

### Ratios

| | |
|---|---|
| Contraction | 1:1 |
| Expansion | 1:4 |

## HIGH-WATER MARKS

A high-water elevation of 941.5 was reported at Hannah Street Bridge in the Bridge Site Plan prepared by R. S. Scott Associates, Alpena, Michigan. The bridges at Hannah Street crossing both East Branch and Mill Race are due to be replaced shortly. The proposed bridges had been incorporated in the model. The proposed 100-year flood level at the upstream of that bridge is 0.33 feet higher than the high-water mark. However, the 100-year level at Section 42.3, just 140 feet upstream of the bridge, is 1.15 feet higher than the high-water mark.

STARTING CONDITIONS

The East Branch Kalamazoo River carries a larger portion of the flow of the Kalamazoo River than the South Branch Kalamazoo River. Therefore, the flood levels of the Kalamazoo River were used as starting conditions for Mill Race and East Branch Kalamazoo River.

SPECIAL PROBLEMS

The Mill Race divides from the East Branch Kalamazoo River just upstream of Hannah Street. The floodgates to control the East Branch Kalamazoo River elevations are located near its mouth at Porter Street. Both floodgates are supposed to be operated by the Physical Plant Manager of Albion College. Discussions with the physical plant manager revealed the following conditions:

1) The floodgates at Hannah Street are not in operable condition. The dikes are breached. A major portion of the flow goes through the East Branch Kalamazoo River.

2) Two floodgates in the Mill Race at Porter Street can be operated and one cannot be raised. However, there is no definite operating policy to open the gates. The physical plant manager said that they may not open at the time of floods. Therefore, it was assumed that the gates will not be opened.

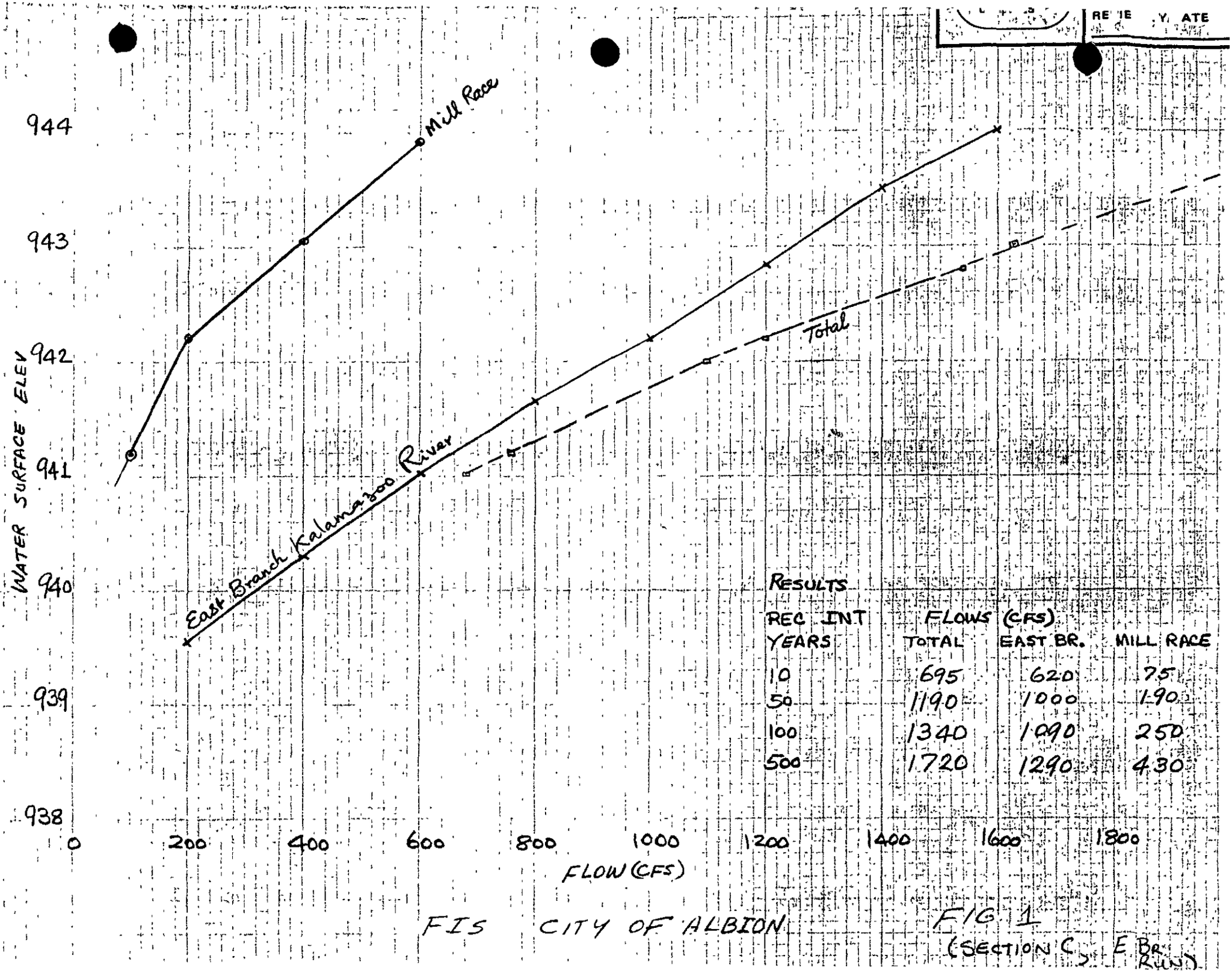
In order to divide the flows between Mill Race and East Branch Kalamazoo River, stage-discharge curves were generated by HEC-2 model (Figure 1). The results of flow division calculations were as follows:

| Recurrence Interval (Years) | Flow (cfs) Total | East Branch Kalamazoo River | Mill Race |
|---|---|---|---|
| 10 | 695 | 620 | 75 |
| 50 | 1,190 | 1,000 | 190 |
| 100 | 1,340 | 1,090 | 250 |
| 500 | 1,720 | 1,290 | 430 |

For flows exceeding 200 cfs (or elevation above 942) there will be some weir flow between sections 40 and 41 from Mill Race into East Branch Kalamazoo River. Such a condition had been ignored in the flow determinations.

REFERENCES

None




RESULTS

| REC INT YEARS | FLOWS (CFS) TOTAL | EAST BR. | MILL RACE |
|---|---|---|---|
| 10 | 695 | 620 | 75 |
| 50 | 1190 | 1000 | 190 |
| 100 | 1340 | 1090 | 250 |
| 500 | 1720 | 1290 | 430 |

FIS CITY OF ALBION

FIG 1

(SECTION C, E BR RUN)

# CROSS SECTION REFERENCES

| Cross Section ID in Profile/Table | Sec. No. in HEC-2 Program | Description |
|---|---|---|
| **Mill Race Cross Sections** | | |
| - | 119.2 | Surveyed Valley Section at mouth |
| A | 119.3 | Surveyed Bridge Sections at Porter Street floodgates |
| - | 119.5 | |
| - | 119.6 | |
| - | 119.9 | Surveyed Valley Section |
| - | 120.0 | |
| - | 120.1 | Surveyed Bridge Sections at Erie Street |
| - | 120.2 | |
| - | 121.0 | |
| B | 140.0 | Surveyed Valley Section |
| C | 141.0 | Surveyed Valley Section |
| - | 141.8 | Surveyed Bridge Sections at Hannah Street (the proposed bridge dimensions were included) |
| - | 141.9 | |
| - | 142.0 | |
| - | 142.3 | Surveyed Valley Section at the Branching of Mill Race from East Branch |
| **East Branch Kalamazoo River Cross Sections** | | |
| - | 239.0 | Repeated Valley Section at mouth. Same as Section 240.0 |
| A | 240.0 | Surveyed Valley Section |
| B | 241.0 | Surveyed Valley Section |
| - | 241.8 | Surveyed Bridge Sections at Hannah Street. The proposed bridge dimensions were included |
| - | 242.0 | |
| - | 242.1 | |
| C | 42.3 | Surveyed Valley Section at the branching of Mill Race from East Branch Kalamazoo River |

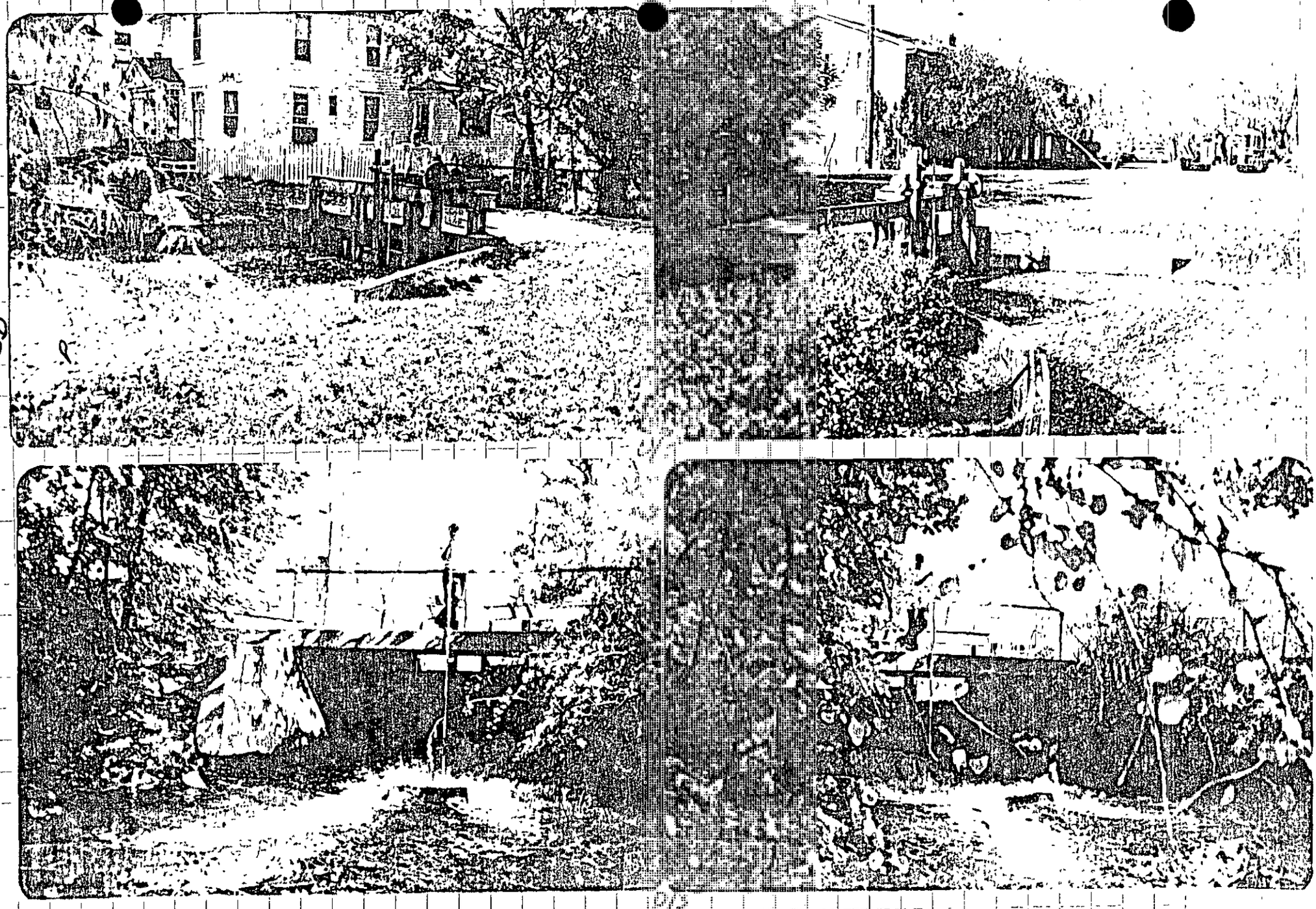
CROSS SECTION REFERENCE (Continued)

| Cross Section ID in Profile/Table | Sec. No. in HEC-2 Program | Description |
|---|---|---|
| D | 42.5 | Surveyed Valley Section |
| E | 43.0 | Surveyed Valley Section at Albion City corporate boundary |
| A | 43.0 | Surveyed Valley Section at boundary for Albion Township |
| - | 43.7 | Surveyed Valley Section |
| - | 43.8 | Repeated Section. Same as 43.7 |
| - | 43.9 | Surveyed Bridge Sections |
| - | 44.0 | |
| - | 44.1 | |
| - | 44.2 | |
| B | 44.3 | |
| - | 44.4 | Repeated Valley Section. Same as 44.3 |
| C | 45.0 | Surveyed Valley Section at township boundary line |

BRIDGE NOTES AND SKETCHES

BRIDGE SECTIONS IN

MILL RACE



SECTION 119.5 FLOOD GATES AT PORTER STREET IN MILL RACE

Gilbert/Commonwealth
209 E. Washington Avenue, Jackson, MI 49201

CALCULATION SHEET REV.

| CLIENT/OWNER | | FILING CODE / JOB NO. |
|---|---|---|
| CALC BY/DATE (SIGNATURE) | SUBJECT | SHEET OF |
| CHECKED BY/DATE (SIGNATURE) | | BOOK NO. |

Bridge Section 120

35' x 6' Box 44' long

$n \approx 0.03$

$A = 210\ ft^2$

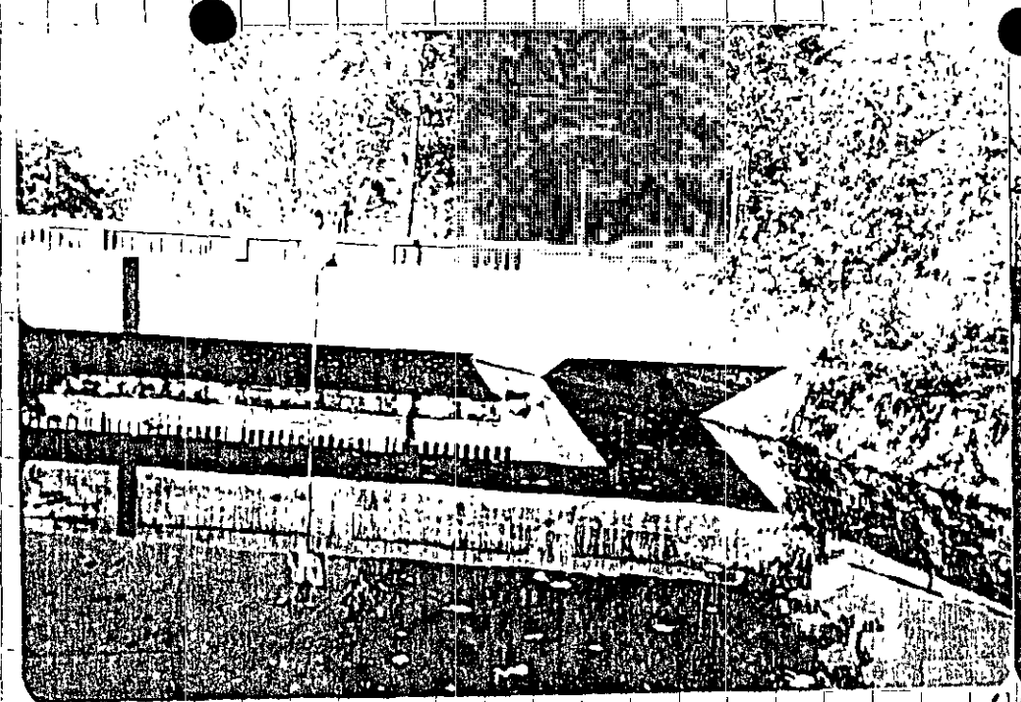
$R = 2.56\ ft$

$$K_f = \frac{29.1 n^2 L}{R^{4/3}} = 0.33$$

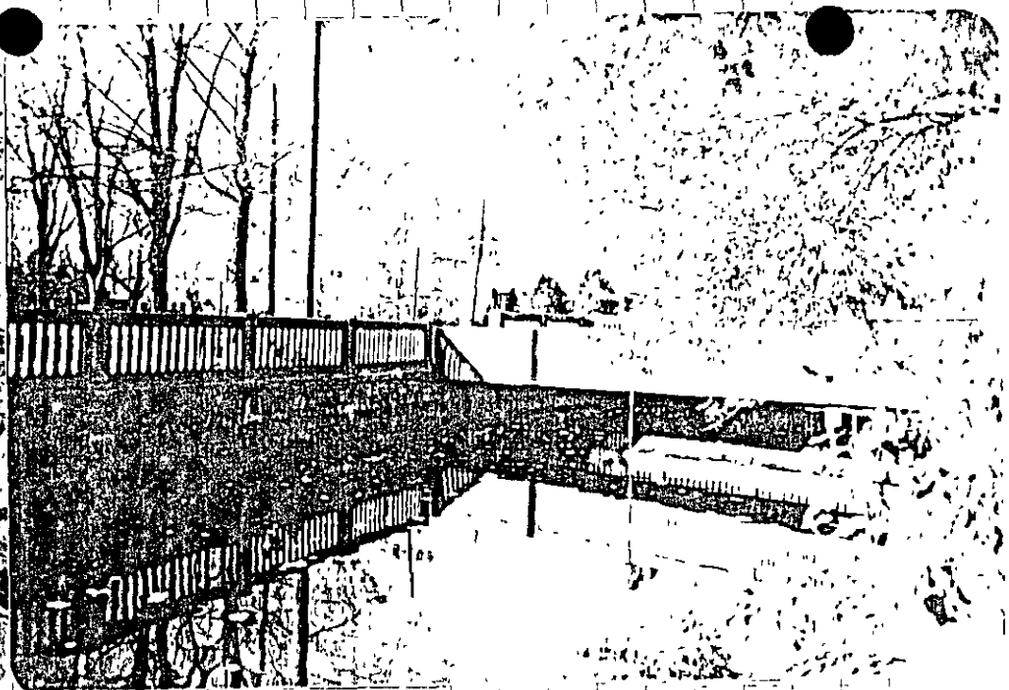
$XKOR = 1.0 + 0.5 + 0.33 = \underline{1.83}$

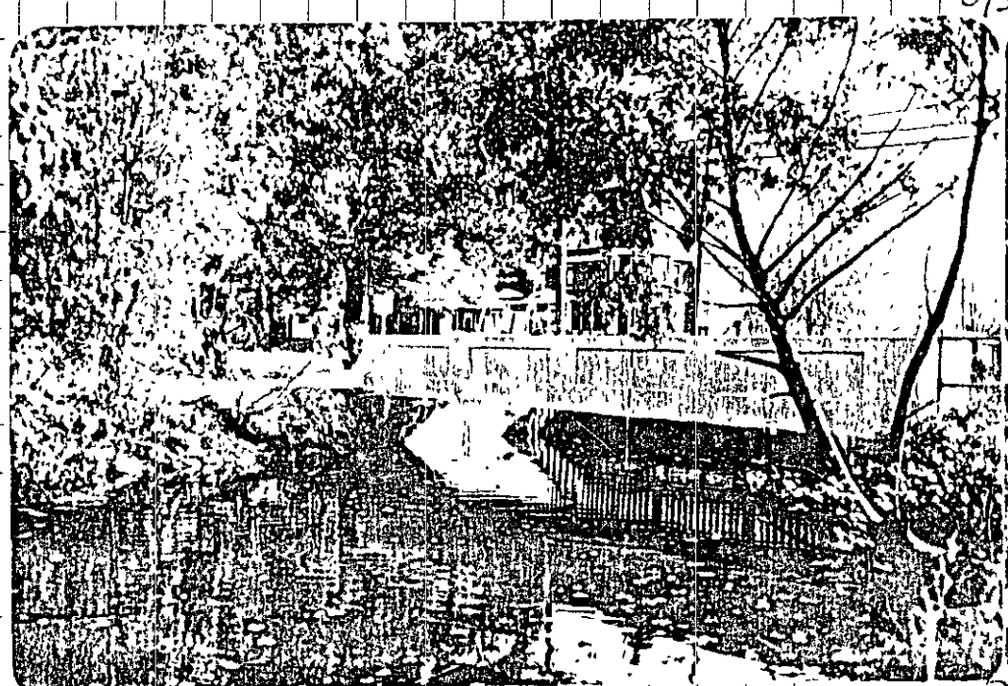
Paved Surface $C \approx 3.0$

$B = 35\ ft$

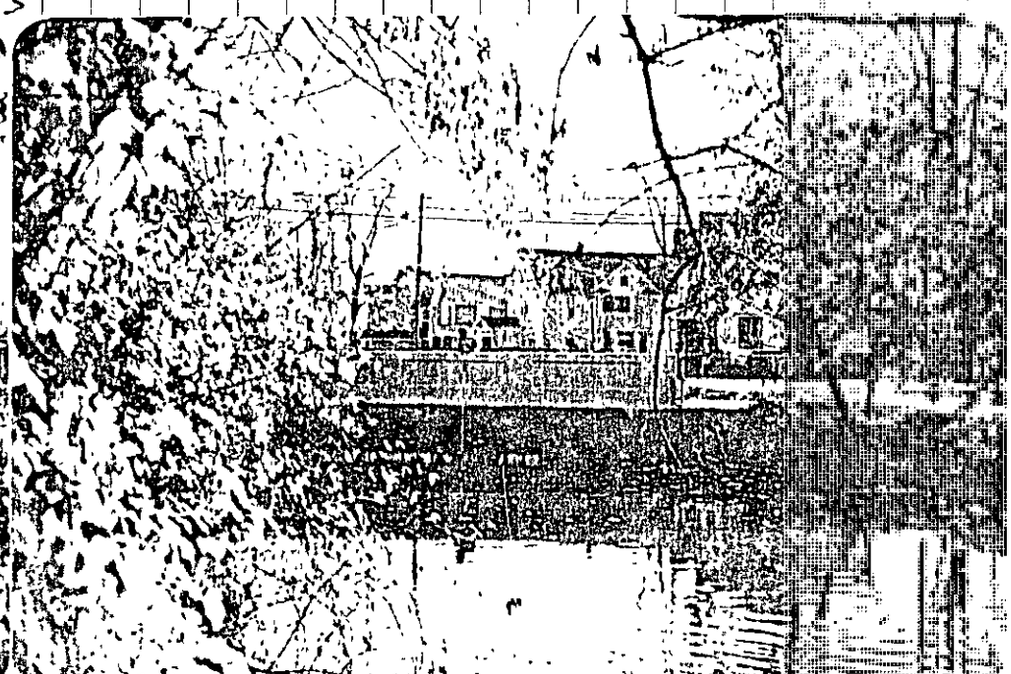


U/S





D/S



SECTION 120 — ERIE ST BRIDGE

| CLIENT/OWNER | FILING CODE / JOB NO. |
|---|---|
| CALC. BY/DATE (SIGNATURE) / CHECKED BY/DATE (SIGNATURE) | SUBJECT: SECTION 1420 |
| | SHEET OF / BOOK NO. |

Hannah St Bridge (Proposed Bridge)

35' x 4.5' Box (8° skew - negligible effect)
43' long

$n = 0.02$

$A = 157.5\ ft^2$

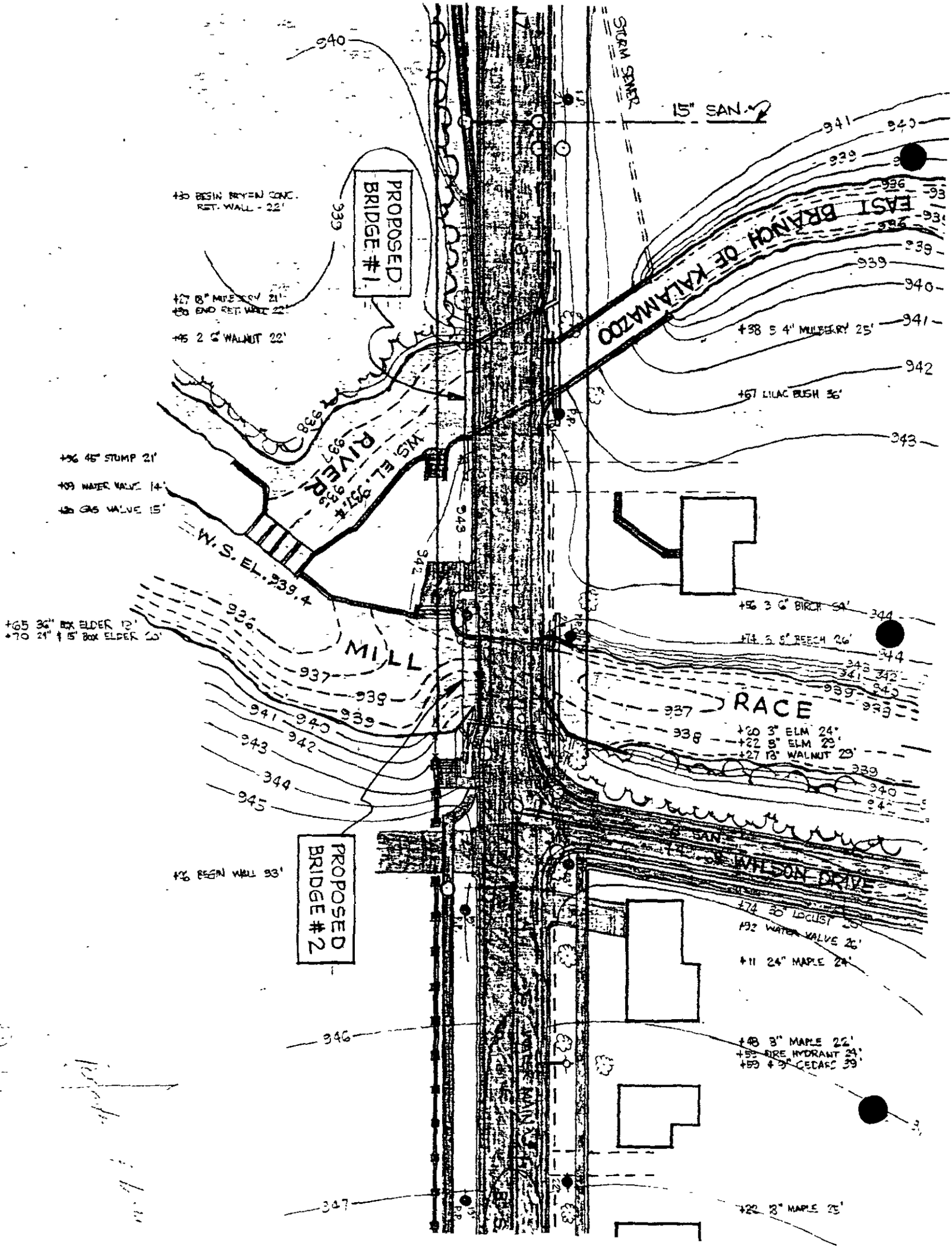
$R = 1.99\ ft$

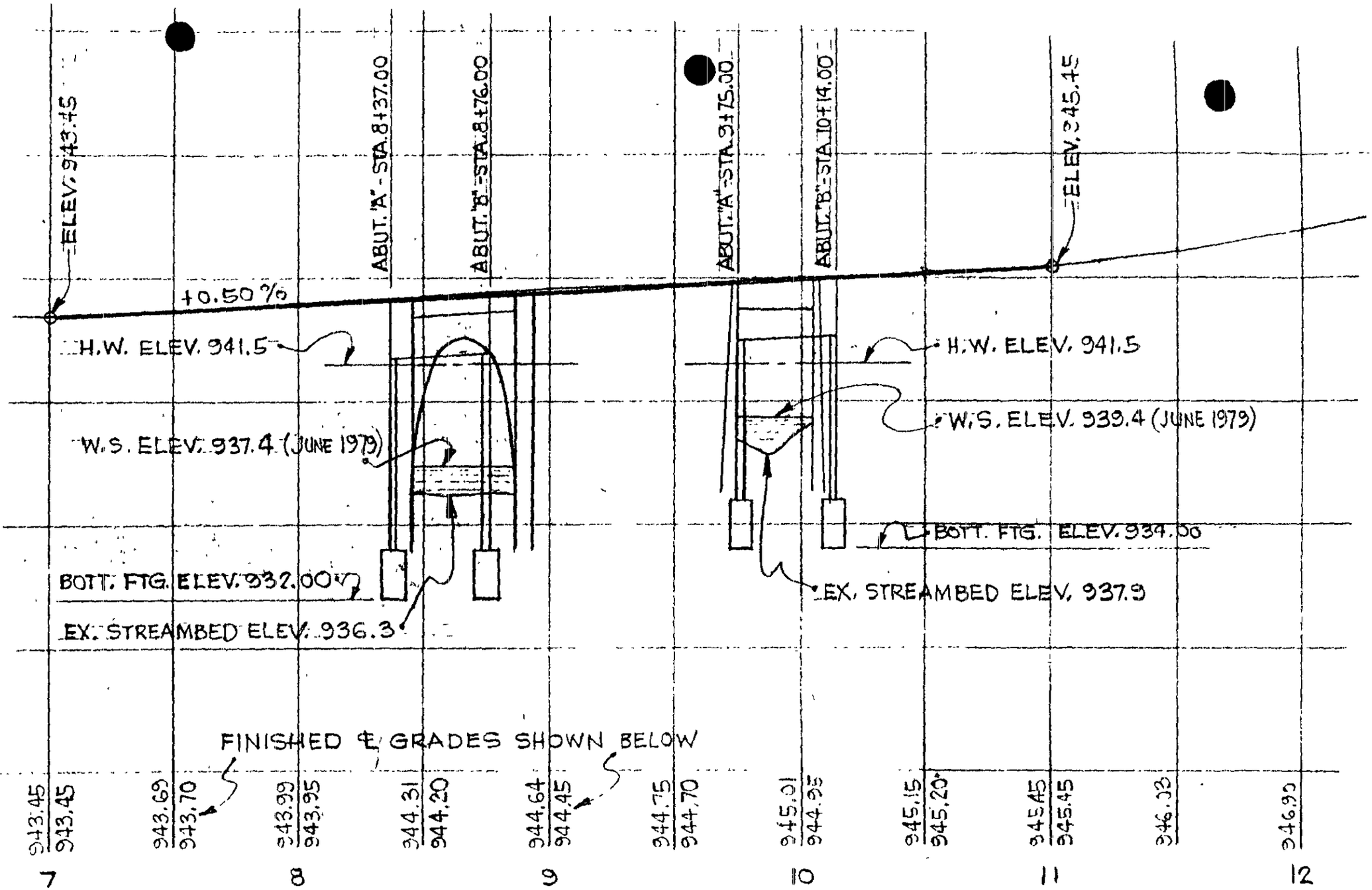
$$K_f = \frac{29.1\, n^2 L}{R^{4/3}} = 0.2$$

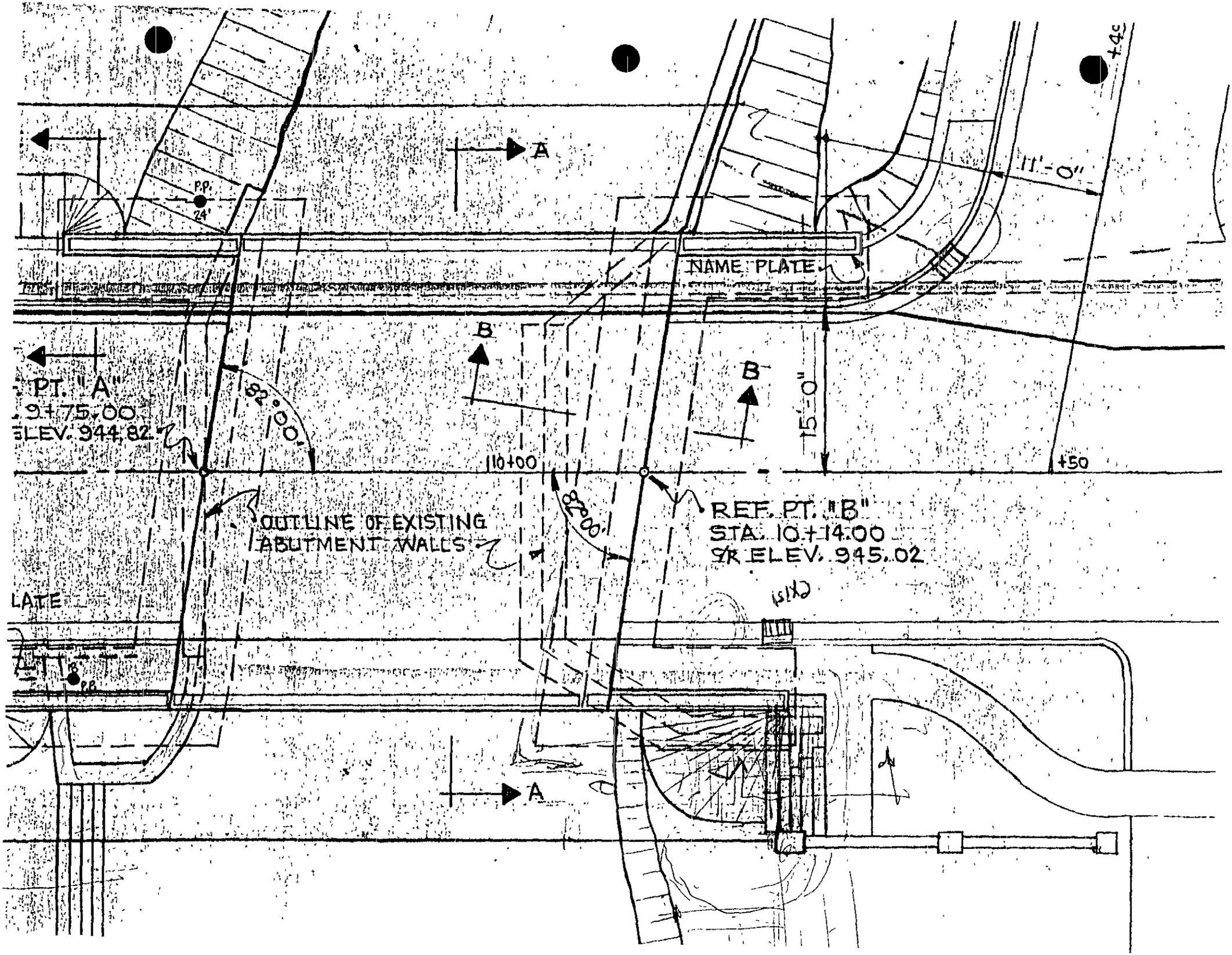
$XKCR = 1.0 + 0.5 + 0.2 = 1.7$

C for weir (Paved Surface) = 3

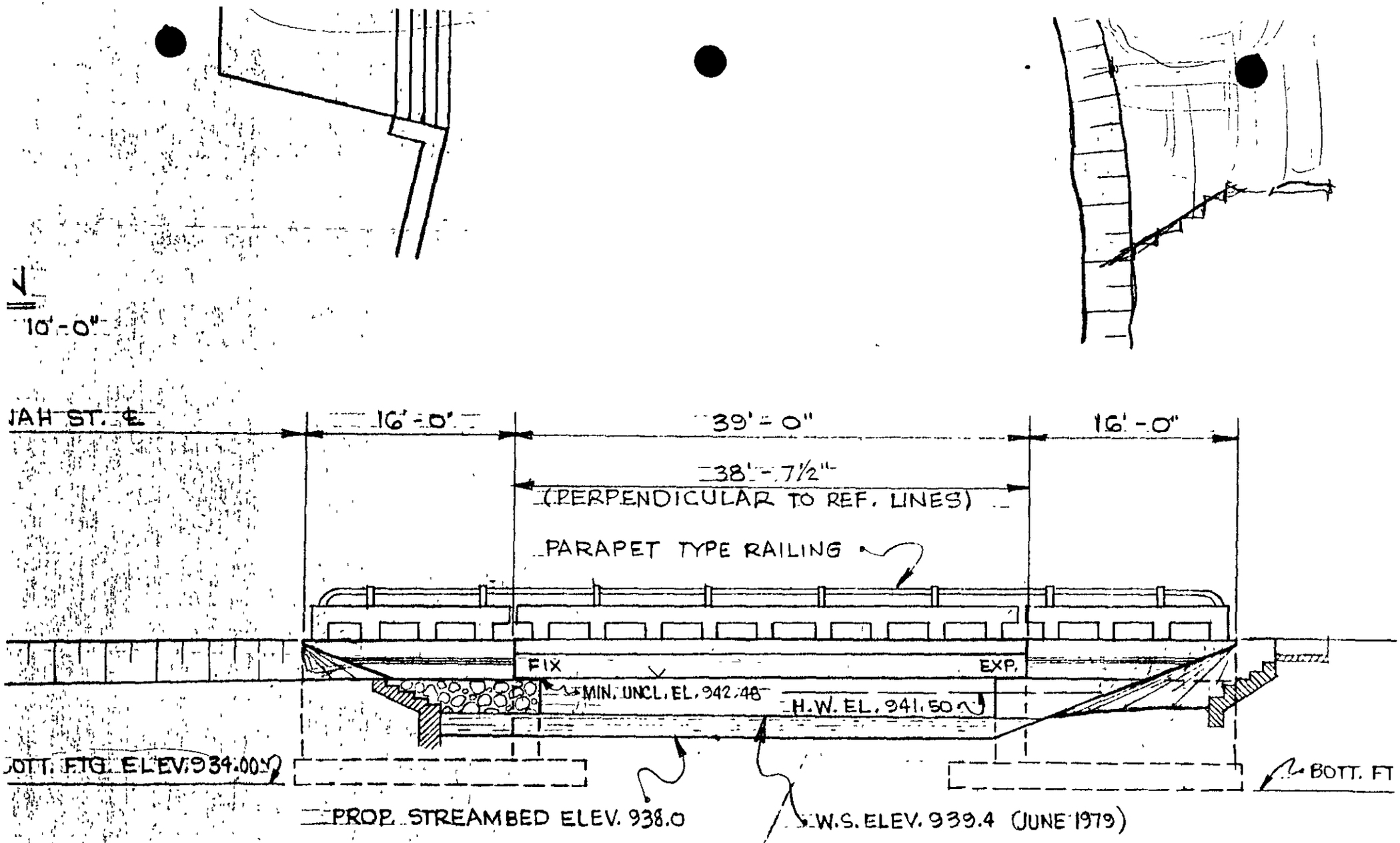
$B = 35$


940
939
938
937
936
941
942
943
944
945
946
947
STORM SEWER
15" SAN.
PROPOSED BRIDGE #1
PROPOSED BRIDGE #2
EAST BRANCH OF KALAMAZOO RIVER
W.S. EL. 939.4
W.S. EL. 937.4
MILL RACE
WILSON DRIVE
MAIN ST.
+35 BEGIN BRYEN CONC. RET. WALL - 22'
+27 8" MULBERRY 21'
+30 END RET. WALL 22'
+45 2 6" WALNUT 22'
+36 45" STUMP 21'
+39 WATER VALVE 14'
+46 GAS VALVE 15'
+65 36" BOX ELDER 12'
+70 21" & 15" BOX ELDER 20'
+38 5 4" MULBERRY 25'
+67 LILAC BUSH 36'
+56 3 6" BIRCH 54'
+74 5 5" BEECH 26'
+20 3" ELM 24'
+22 8" ELM 29'
+27 18" WALNUT 29'
+76 BEGIN WALL 93'
+74 20" LOCUST 20'
+92 WATER VALVE 26'
+11 24" MAPLE 24'
+48 8" MAPLE 22'
+55 FIRE HYDRANT 24'
+59 4 9" CEDARS 39'
+22 8" MAPLE 25'


ELEV. 943.45
+0.50 %
ABUT. "A" - STA. 8+37.00
ABUT. "B" = STA. 8+76.00
ABUT. "A" = STA. 9+75.00
ABUT. "B" = STA. 10+14.00
ELEV. 945.45
H.W. ELEV. 941.5
W.S. ELEV. 937.4 (JUNE 1979)
BOTT. FTG. ELEV. 932.00
EX. STREAMBED ELEV. 936.3
H.W. ELEV. 941.5
W.S. ELEV. 939.4 (JUNE 1979)
BOTT. FTG. ELEV. 934.00
EX. STREAMBED ELEV. 937.9
FINISHED ℄ GRADES SHOWN BELOW
943.45
943.45
943.69
943.70
943.99
943.95
944.31
944.20
944.64
944.45
944.75
944.70
945.01
944.95
945.15
945.20
945.45
945.45
946.03
946.00
7
8
9
10
11
12



A
P.P.
24'
11'-0"
NAME PLATE
B
B
PT. "A"
9+75.00
ELEV. 944.82
82°00'
15'-0"
110+00
+50
OUTLINE OF EXISTING
ABUTMENT WALLS
82°00'
REF. PT. "B"
STA. 10+14.00
S/R ELEV. 945.02
LATE
A




## BRIDGE NO. 2

TION

10'-0"

## NOTE -

THE DESIGN OF THESE STRUCTURES IS BASED ON THE OF STATE HIGHWAYS' SPECIFICATIONS FOR THE DESIGN 1958 EDITION, AND CURRENT AASHTO STANDARD SPECI HIGHWAY BRIDGES H S 20 - 44 LOADING, LIVE LOAD

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1      FIS ALBION CITY & ALBION TWP., CALHOUN CO., MICHIGAN.
T2      100-YEAR FLOOD     ENCROACHED FLOODWAY
T3      EAST BR KALAMAZOO RIVER

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       6.        0.        0.  0.000000      0.00      0.0       0.    939.350     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

MOORE BUSINESS FORMS INC 27

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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
     G        QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
    TIME      VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID      ENDST

*PROF 2

CCHV=    .100 CEHV=    .300
*SECNO 239.000
 2800 NAT Q1=     422.14  WSEL=     939.35  ENC Q1=     422.14  WSEL=     939.45  RATIO=  0.0000
 NAT Q1=    445.  RATIOS LOB,CH,ROB=    .3332    .3287    .3381  WSEL=     939.45

3470 ENCROACHMENT STATIONS=     1896.7     2172.8  TYPE=      4  TARGET=          .051
   239.00       6.34     939.35       0.00     939.35     939.42        .07       0.00       0.00     935.91
    1200.       386.       424.       390.       326.       132.       377.         0.         0.     936.01
     0.00       1.18       3.23       1.03       .080       .040       .080      0.000     933.01    1896.75
  .000891         0.         0.         0.          0          0          0       0.00     276.08    2172.83

*SECNO 240.000
 2800 NAT Q1=     455.07  WSEL=     939.49  ENC Q1=     455.07  WSEL=     939.59  RATIO=  0.0000
 NAT Q1=    478.  RATIOS LOB,CH,ROB=    .3355    .3178    .3467  WSEL=     939.59

3470 ENCROACHMENT STATIONS=     1894.8     2178.6  TYPE=      4  TARGET=          .048
        CITY OF ALBION  SECTION A

   240.00       6.50     939.51       0.00     939.49     939.57        .06        .15        .00     935.91
    1200.       390.       408.       402.       348.       135.       410.         4.         1.     936.01
      .03       1.12       3.02        .98       .080       .040       .080       .040     933.01    1894.82
  .000754       180.       180.       180.          2          0          0       0.00     283.77    2178.59

*SECNO 241.000
 2800 NAT Q1=     334.76  WSEL=     940.47  ENC Q1=     334.76  WSEL=     940.57  RATIO=   .0000
 NAT Q1=    357.  RATIOS LOB,CH,ROB=    .5045    .4869    .0086  WSEL=     940.57

3470 ENCROACHMENT STATIONS=     1662.2     2028.0  TYPE=      4  TARGET=          .062
        CITY OF ALBION  SECTION B

   241.00       6.51     940.58       0.00     940.47     940.70        .13       1.12        .02     937.21
    1200.       599.       601.         0.       571.       155.         0.         24.        10.     937.24
      .15       1.05       3.89       0.00       .080       .040       .080       .040     934.07    1662.21
  .001381       1120.      1120.      1120.          1          0          0       0.00     365.79    2028.00

*SECNO 241.800

3470 ENCROACHMENT STATIONS=     1960.0     2040.0  TYPE=      1  TARGET=        80.000
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | GCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 241.80 | 6.45 | 941.35 | 0.00 | 941.22 | 941.85 | .49 | 1.03 | .11 | 940.76 |
| 1200. | 10. | 1189. | 1. | 15. | 210. | 1. | 30. | 12. | 940.93 |
| .18 | .69 | 5.66 | .51 | .080 | .040 | .080 | .040 | 934.90 | 1960.00 |
| .003409 | 500. | 500. | 500. | 2 | 0 | 0 | 0.00 | 80.00 | 2040.00 |

CCHV= .300 CEHV= .500

*SECNO 242.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 242.00 | 5.64 | 941.64 | 0.00 | 941.55 | 942.40 | .75 | .42 | .13 | 944.13 |
| 1200. | 0. | 1200. | 0. | 0. | 172. | 0. | 30. | 12. | 944.33 |
| .18 | 0.00 | 6.97 | 0.00 | .080 | .040 | .080 | .040 | 936.00 | 850.00 |
| .005333 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 30.50 | 880.50 |

SPECIAL BRIDGE

5070.VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.67 | 3.00 | 0.00 | 30.50 | 0.00 | 174.50 | 0.00 | 936.00 | 936.00 |

*SECNO 242.100

PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 942.87 | 942.40 | 0.00 | 0. | 1200. | 175. | 174. | 941.72 | 943.50 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 242.10 | 6.26 | 942.26 | 0.00 | 942.14 | 942.87 | .61 | .47 | 0.00 | 944.13 |
| 1200. | 0. | 1200. | 0. | 0. | 191. | 0. | 30. | 12. | 944.33 |
| .19 | 0.00 | 6.28 | 0.00 | .080 | .040 | .080 | .040 | 936.00 | 850.00 |
| .003914 | 48. | 48. | 48. | 2 | 0 | 0 | 0.00 | 30.50 | 880.50 |

*SECNO 42.300

2800 NAT Q1= 841.48 WSEL= 943.03 ENC Q1= 841.48 WSEL= 943.13 RATIO= 0.0000

NAT Q1= 890. RATIOS LOB,CH,ROB= .4680 .1256 .4064 WSEL= 943.13

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 1864.4 2153.1 TYPE= 4 TARGET= .055

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| G | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CITY OF ALBION SECTION C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.30 | 8.41 | 943.11 | 0.00 | 943.03 | 943.13 | .02 | .09 | .18 | 937.30 |
| 1340. | 623. | 178. | 539. | 796. | 82. | 525. | 33. | 13. | 936.00 |
| .22 | .78 | 2.17 | 1.03 | .080 | .040 | .080 | .040 | 934.70 | 1864.40 |
| .000256 | 140. | 140. | 140. | 2 | 0 | 0 | 0.00 | 288.69 | 2153.09 |

CCHV= .100 CEHV= .300
*SECNO 42.500
2800 NAT Q1= 852.19 WSEL= 943.18 ENC Q1= 852.19 WSEL= 943.28 RATIO= 0.0000
NAT Q1= 880. RATIOS LOB,CH,ROB= .0584 .9416 0.0000 WSEL= 943.28

3470 ENCROACHMENT STATIONS= 2020.8 2203.0 TYPE= 4 TARGET= .031

CITY OF ALBION SECTION D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.50 | 7.16 | 943.26 | 0.00 | 943.18 | 943.31 | .05 | .17 | .01 | 939.60 |
| 1340. | 37. | 1303. | 0. | 63. | 755. | 0. | 50. | 16. | 944.80 |
| .33 | .55 | 1.72 | 0.00 | .080 | .040 | .080 | .040 | 936.10 | 2020.83 |
| .000249 | 580. | 680. | 700. | 1 | 0 | 0 | 0.00 | 167.40 | 2188.23 |

*SECNO 43.000
2800 NAT Q1= 856.24 WSEL= 943.43 ENC Q1= 856.24 WSEL= 943.53 RATIO= 0.0000
NAT Q1= 891. RATIOS LOB,CH,ROB= .0112 .7116 .2772 WSEL= 943.53

3470 ENCROACHMENT STATIONS= 2000.0 2255.7 TYPE= 4 TARGET= .039

CITY OF ALBION SECTION E

ALBION TOWNSHIP SECTION A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.00 | 7.73 | 943.53 | 0.00 | 943.43 | 943.57 | .04 | .26 | .00 | 939.40 |
| 1340. | 0. | 982. | 358. | 0. | 512. | 554. | 72. | 21. | 939.40 |
| .51 | 0.00 | 1.92 | .64 | .080 | .040 | .080 | .040 | 935.80 | 2000.00 |
| .000257 | 900. | 1030. | 1100. | 2 | 0 | 0 | 0.00 | 255.70 | 2255.70 |

*SECNO 43.700

3470 ENCROACHMENT STATIONS= 1942.0 2092.0 TYPE= 1 TARGET= 150.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.70 | 6.80 | 945.00 | 0.00 | 944.89 | 945.12 | .13 | 1.53 | .03 | 940.77 |
| 1340. | 135. | 1205. | 0. | 152. | 401. | 0. | 141. | 38. | 100000.00 |
| .88 | .88 | 3.01 | 0.00 | .080 | .040 | .080 | .040 | 938.20 | 1942.00 |
| .000784 | 3680. | 3680. | 3680. | 2 | 0 | 0 | 0.00 | 150.00 | 2092.00 |

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 43.800

3470 ENCROACHMENT STATIONS= 1982.0 2100.0 TYPE= 1 TARGET= 118.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.80 | 6.87 | 945.07 | 0.00 | 944.97 | 945.21 | .14 | .08 | .00 | 940.77 |
| 1340. | 92. | 1247. | 0. | 90. | 407. | 2. | 142. | 39. | 944.78 |
| .89 | 1.03 | 3.07 | .19 | .080 | .040 | .080 | .040 | 938.20 | 1982.00 |
| .000799 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 118.00 | 2100.00 |

CCHV= .300 CEHV= .500

*SECNO 43.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 947.45 ELREA= 947.45

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.90 | 5.07 | 945.03 | 0.00 | 944.93 | 945.41 | .38 | .08 | .12 | 948.53 |
| 1340. | 0. | 1340. | 0. | 0. | 271. | 0. | 142. | 39. | 948.53 |
| .89 | 0.00 | 4.94 | 0.00 | .080 | .040 | .080 | .040 | 939.96 | 2036.00 |
| .006148 | 49. | 49. | 49. | 2 | 0 | 0 | 0.00 | 92.00 | 2128.00 |

*SECNO 44.000

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 50 MIN ELTRD= 948.53 MAX ELLC= 946.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.00 | 4.74 | 944.70 | 943.81 | 944.58 | 945.77 | 1.07 | .01 | .35 | 948.53 |
| 1340. | 0. | 1340. | 0. | 0. | 161. | 0. | 142. | 39. | 948.53 |
| .89 | 0.00 | 8.31 | 0.00 | .080 | .040 | .080 | .040 | 939.96 | 2036.00 |
| .023446 | 1. | 1. | 1. | 4 | 12 | 0 | -79.59 | 92.00 | 2128.00 |

*SECNO 44.100

3370 NORMAL BRIDGE,NRD= 50 MIN ELTRD= 948.53 MAX ELLC= 946.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.53 ELREA= 948.53

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.10 | 5.94 | 945.90 | 0.00 | 945.87 | 946.62 | .72 | .75 | .11 | 948.53 |
| 1340. | 0. | 1340. | 0. | 0. | 197. | 0. | 142. | 39. | 948.53 |
| .89 | 0.00 | 6.80 | 0.00 | .080 | .040 | .080 | .040 | 939.96 | 2036.00 |
| .015905 | 39. | 39. | 39. | 2 | 0 | 0 | -154.65 | 92.00 | 2128.00 |

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| G | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 44.200

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 948.53 ELREA= 948.53

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.20 | 6.67 | 946.63 | 0.00 | 946.61 | 946.79 | .16 | .00 | .17 | 948.53 |
| 1340. | 0. | 1340. | 0. | 0. | 419. | 0. | 142. | 39. | 948.53 |
| .89 | 0.00 | 3.20 | 0.00 | .080 | .040 | .080 | .040 | 939.96 | 2036.00 |
| .001500 | 1. | 1. | 1. | 3 | 0 | 0 | 0.00 | 92.00 | 2128.00 |

*SECNO 44.300

3470 ENCROACHMENT STATIONS= 1962.0 2154.0 TYPE= 1 TARGET= 192.000
ALBION TOWNSHIP SECTION B

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.30 | 5.25 | 946.80 | 0.00 | 946.77 | 946.86 | .06 | .04 | .03 | 945.86 |
| 1340. | 16. | 1324. | 0. | 29. | 650. | 0. | 143. | 39. | 100000.00 |
| .90 | .54 | 2.04 | 0.00 | .080 | .040 | .080 | .040 | 941.55 | 1962.00 |
| .000513 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 188.61 | 2150.61 |

CCHV= .100 CEHV= .300

*SECNO 44.400

2800 NAT Q1= 622.27 WSEL= 946.81 ENC Q1= 622.27 WSEL= 946.91 RATIO= 0.0000
NAT Q1= 648. RATIOS LOB,CH,ROB= .0565 .9435 0.0000 WSEL= 946.91

3470 ENCROACHMENT STATIONS= 1958.4 2154.0 TYPE= 4 TARGET= .040

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.40 | 5.28 | 946.83 | 0.00 | 946.81 | 946.89 | .06 | .03 | .00 | 945.86 |
| 1340. | 22. | 1318. | 0. | 38. | 654. | 0. | 144. | 39. | 948.26 |
| .91 | .56 | 2.02 | 0.00 | .080 | .040 | .080 | .040 | 941.55 | 1958.42 |
| .000499 | 50. | 50. | 50. | 0 | 0 | 0 | 0.00 | 192.25 | 2150.67 |

*SECNO 45.000

2800 NAT Q1= 1067.56 WSEL= 947.79 ENC Q1= 1067.56 WSEL= 947.89 RATIO= 0.0000
NAT Q1= 1120. RATIOS LOB,CH,ROB= .3889 .2107 .4004 WSEL= 947.89

3470 ENCROACHMENT STATIONS= 1679.4 2327.0 TYPE= 4 TARGET= .047
ALBION TOWNSHIP SECTION C

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| G | QLOB | GCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| | | | | | | | | | |
| 45.00 | 8.31 | 947.86 | 0.00 | 947.79 | 947.87 | .01 | .98 | .01 | 944.72 |
| 1340. | 513. | 298. | 529. | 942. | 197. | 999. | 265. | 75. | 943.58 |
| 2.28 | .54 | 1.51 | .53 | .080 | .040 | .080 | .040 | 939.55 | 1679.38 |
| .000162 | 3720. | 3720. | 3720. | 2 | 0 | 0 | 0.00 | 647.58 | 2326.96 |

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  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

EAST BR KALAMAZOO RIVER

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 239.000 | 939.35 | 1862.52 | 2000.00 | 2022.00 | 2230.10 | 367.58 | 0.00 |
| 239.000 | 939.35 | 1896.75 | 2000.00 | 2022.00 | 2172.83 | 276.08 | 0.00 |
| 240.000 | 939.49 | 1860.97 | 2000.00 | 2022.00 | 2233.46 | 372.49 | 180.00 |
| 240.000 | 939.51 | 1894.82 | 2000.00 | 2022.00 | 2178.59 | 283.77 | 180.00 |
| 241.000 | 940.47 | 1582.79 | 2000.00 | 2028.00 | 2035.28 | 452.48 | 1120.00 |
| 241.000 | 940.58 | 1662.21 | 2000.00 | 2028.00 | 2028.00 | 365.79 | 1120.00 |
| 241.800 | 941.22 | 1960.00 | 1989.00 | 2037.00 | 2040.00 | 80.00 | 500.00 |
| 241.800 | 941.35 | 1960.00 | 1989.00 | 2037.00 | 2040.00 | 80.00 | 500.00 |
| 242.000 | 941.55 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 100.00 |
| 242.000 | 941.64 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 100.00 |
| 242.100 | 942.14 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 48.00 |
| 242.100 | 942.26 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 48.00 |
| 42.300 | 943.03 | 1860.00 | 2054.00 | 2065.00 | 2170.00 | 310.00 | 140.00 |
| 42.300 | 943.11 | 1864.40 | 2054.00 | 2065.00 | 2153.09 | 288.69 | 140.00 |
| 42.500 | 943.18 | 1969.18 | 2040.00 | 2203.00 | 2187.35 | 218.17 | 680.00 |
| 42.500 | 943.26 | 2020.83 | 2040.00 | 2203.00 | 2188.23 | 167.40 | 680.00 |
| 43.000 | 943.43 | 1424.24 | 2000.00 | 2084.00 | 2572.64 | 523.83 | 1030.00 |
| 43.000 | 943.53 | 2000.00 | 2000.00 | 2084.00 | 2255.70 | 255.70 | 1030.00 |
| 43.700 | 944.89 | 1891.84 | 2014.00 | 2092.00 | 2098.67 | 206.83 | 3680.00 |
| 43.700 | 945.00 | 1942.00 | 2014.00 | 2092.00 | 2092.00 | 150.00 | 3680.00 |
| 43.800 | 944.97 | 1982.00 | 2014.00 | 2092.00 | 2100.00 | 118.00 | 100.00 |
| 43.800 | 945.07 | 1982.00 | 2014.00 | 2092.00 | 2100.00 | 118.00 | 100.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 43.900 | 944.93 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 49.00 |
| 43.900 | 945.03 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 49.00 |
| 44.000 | 944.58 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.000 | 944.70 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.100 | 945.87 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 39.00 |
| 44.100 | 945.90 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 39.00 |
| 44.200 | 946.61 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.200 | 946.63 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.300 | 946.77 | 1962.00 | 1980.00 | 2154.00 | 2150.55 | 188.55 | 50.00 |
| 44.300 | 946.80 | 1962.00 | 1980.00 | 2154.00 | 2150.61 | 188.61 | 50.00 |
| 44.400 | 946.81 | 1898.26 | 1980.00 | 2154.00 | 2150.65 | 252.40 | 50.00 |
| 44.400 | 946.83 | 1958.42 | 1980.00 | 2154.00 | 2150.67 | 192.25 | 50.00 |
| 45.000 | 947.79 | 1462.60 | 2000.00 | 2031.00 | 2347.49 | 884.89 | 3720.00 |
| 45.000 | 947.86 | 1679.38 | 2000.00 | 2031.00 | 2326.96 | 647.58 | 3720.00 |

EAST BR KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 239.000 | 0.00 | 0.00 | 0.00 | 933.01 | 1200.00 | 939.35 | 0.00 | 939.41 | 8.08 | 3.07 | 931.84 | 422.14 |
| 239.000 | 0.00 | 0.00 | 0.00 | 933.01 | 1200.00 | 939.35 | 0.00 | 939.42 | 8.91 | 3.23 | 834.27 | 401.96 |
| 240.000 | 180.00 | 0.00 | 0.00 | 933.01 | 1200.00 | 939.49 | 0.00 | 939.55 | 6.95 | 2.90 | 985.67 | 455.07 |
| 240.000 | 180.00 | 0.00 | 0.00 | 933.01 | 1200.00 | 939.51 | 0.00 | 939.57 | 7.54 | 3.02 | 892.37 | 437.01 |
| 241.000 | 1120.00 | 0.00 | 0.00 | 934.07 | 1200.00 | 940.47 | 0.00 | 940.60 | 12.85 | 3.98 | 776.60 | 334.76 |
| 241.000 | 1120.00 | 0.00 | 0.00 | 934.07 | 1200.00 | 940.58 | 0.00 | 940.70 | 13.81 | 3.89 | 725.52 | 322.96 |
| 241.800 | 500.00 | 0.00 | 0.00 | 934.90 | 1200.00 | 941.22 | 0.00 | 941.75 | 37.99 | 5.85 | 215.75 | 194.68 |
| 241.800 | 500.00 | 0.00 | 0.00 | 934.90 | 1200.00 | 941.35 | 0.00 | 941.85 | 34.09 | 5.66 | 226.31 | 205.54 |
| 242.000 | 100.00 | 0.00 | 0.00 | 936.00 | 1200.00 | 941.55 | 0.00 | 942.33 | 55.97 | 7.09 | 169.35 | 160.40 |
| 242.000 | 100.00 | 0.00 | 0.00 | 936.00 | 1200.00 | 941.64 | 0.00 | 942.40 | 53.33 | 6.97 | 172.12 | 164.32 |
| 242.100 | 48.00 | 943.50 | 941.72 | 936.00 | 1200.00 | 942.14 | 0.00 | 942.78 | 41.28 | 6.39 | 187.68 | 186.78 |
| 242.100 | 48.00 | 943.50 | 941.72 | 936.00 | 1200.00 | 942.26 | 0.00 | 942.87 | 39.14 | 6.28 | 191.10 | 191.82 |
| 42.300 | 140.00 | 0.00 | 0.00 | 934.70 | 1340.00 | 943.03 | 0.00 | 943.05 | 2.54 | 2.14 | 1430.25 | 841.48 |
| 42.300 | 140.00 | 0.00 | 0.00 | 934.70 | 1340.00 | 943.11 | 0.00 | 943.13 | 2.56 | 2.17 | 1402.59 | 837.56 |
| 42.500 | 680.00 | 0.00 | 0.00 | 936.10 | 1340.00 | 943.18 | 0.00 | 943.22 | 2.47 | 1.70 | 886.72 | 852.19 |
| 42.500 | 680.00 | 0.00 | 0.00 | 936.10 | 1340.00 | 943.26 | 0.00 | 943.31 | 2.49 | 1.72 | 818.67 | 849.24 |
| 43.000 | 1030.00 | 0.00 | 0.00 | 935.80 | 1340.00 | 943.43 | 0.00 | 943.48 | 2.45 | 1.91 | 1317.03 | 856.24 |
| 43.000 | 1030.00 | 0.00 | 0.00 | 935.80 | 1340.00 | 943.53 | 0.00 | 943.57 | 2.57 | 1.92 | 1066.13 | 835.64 |
| 43.700 | 3680.00 | 0.00 | 0.00 | 938.20 | 1340.00 | 944.89 | 0.00 | 945.03 | 8.44 | 3.08 | 565.69 | 461.35 |
| 43.700 | 3680.00 | 0.00 | 0.00 | 938.20 | 1340.00 | 945.00 | 0.00 | 945.12 | 7.84 | 3.01 | 553.23 | 478.42 |
| 43.800 | 100.00 | 0.00 | 0.00 | 938.20 | 1340.00 | 944.97 | 0.00 | 945.11 | 8.55 | 3.13 | 486.32 | 458.34 |
| 43.800 | 100.00 | 0.00 | 0.00 | 938.20 | 1340.00 | 945.07 | 0.00 | 945.21 | 7.99 | 3.07 | 498.07 | 474.19 |
| 43.900 | 49.00 | 0.00 | 0.00 | 939.96 | 1340.00 | 944.93 | 0.00 | 945.34 | 69.09 | 5.12 | 261.82 | 161.21 |
| 43.900 | 49.00 | 0.00 | 0.00 | 939.96 | 1340.00 | 945.03 | 0.00 | 945.41 | 61.48 | 4.94 | 271.32 | 170.89 |
| 44.000 | 1.00 | 948.53 | 946.50 | 939.96 | 1340.00 | 944.58 | 943.81 | 945.71 | 247.94 | 8.52 | 157.36 | 85.10 |
| 44.000 | 1.00 | 948.53 | 946.50 | 939.96 | 1340.00 | 944.70 | 943.81 | 945.77 | 234.46 | 8.31 | 161.24 | 87.51 |
| 44.100 | 39.00 | 948.53 | 946.50 | 939.96 | 1340.00 | 945.87 | 0.00 | 946.59 | 159.26 | 6.82 | 196.45 | 106.18 |
| 44.100 | 39.00 | 948.53 | 946.50 | 939.96 | 1340.00 | 945.90 | 0.00 | 946.62 | 159.05 | 6.80 | 197.15 | 106.25 |
| 44.200 | 1.00 | 0.00 | 0.00 | 939.96 | 1340.00 | 946.61 | 0.00 | 946.77 | 15.31 | 3.22 | 415.93 | 342.49 |
| 44.200 | 1.00 | 0.00 | 0.00 | 939.96 | 1340.00 | 946.63 | 0.00 | 946.79 | 15.00 | 3.20 | 418.56 | 346.00 |
| 44.300 | 50.00 | 0.00 | 0.00 | 941.55 | 1340.00 | 946.77 | 0.00 | 946.84 | 5.25 | 2.05 | 674.53 | 584.66 |
| 44.300 | 50.00 | 0.00 | 0.00 | 941.55 | 1340.00 | 946.80 | 0.00 | 946.86 | 5.13 | 2.04 | 679.47 | 591.38 |

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44.400 | 50.00 | 0.00 | 0.00 | 941.55 | 1340.00 | 946.81 | 0.00 | 946.86 | 4.64 | 1.94 | 777.52 | 622.27 |
| 44.400 | 50.00 | 0.00 | 0.00 | 941.55 | 1340.00 | 946.83 | 0.00 | 946.89 | 4.99 | 2.02 | 692.67 | 599.99 |
| 45.000 | 3720.00 | 0.00 | 0.00 | 939.55 | 1340.00 | 947.79 | 0.00 | 947.80 | 1.58 | 1.48 | 2301.06 | 1067.56 |
| 45.000 | 3720.00 | 0.00 | 0.00 | 939.55 | 1340.00 | 947.86 | 0.00 | 947.87 | 1.62 | 1.51 | 2138.26 | 1052.22 |

EAST BR KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 239.000 | 1200.00 | 939.35 | 0.00 | 0.00 | 0.00 | 367.58 | 0.00 |
| 239.000 | 1200.00 | 939.35 | 0.00 | 0.00 | 0.00 | 276.08 | 0.00 |
| 240.000 | 1200.00 | 939.49 | 0.00 | .14 | 0.00 | 372.49 | 180.00 |
| 240.000 | 1200.00 | 939.51 | .02 | .16 | .02 | 283.77 | 180.00 |
| 241.000 | 1200.00 | 940.47 | 0.00 | .98 | 0.00 | 452.48 | 1120.00 |
| 241.000 | 1200.00 | 940.58 | .11 | 1.07 | .11 | 365.79 | 1120.00 |
| 241.800 | 1200.00 | 941.22 | 0.00 | .75 | 0.00 | 80.00 | 500.00 |
| 241.800 | 1200.00 | 941.35 | .13 | .77 | .13 | 80.00 | 500.00 |
| 242.000 | 1200.00 | 941.55 | 0.00 | .33 | 0.00 | 30.50 | 100.00 |
| 242.000 | 1200.00 | 941.64 | .09 | .29 | .09 | 30.50 | 100.00 |
| 242.100 | 1200.00 | 942.14 | 0.00 | .59 | 0.00 | 30.50 | 48.00 |
| 242.100 | 1200.00 | 942.26 | .11 | .61 | .11 | 30.50 | 48.00 |
| 42.300 | 1340.00 | 943.03 | 0.00 | .88 | 0.00 | 310.00 | 140.00 |
| 42.300 | 1340.00 | 943.11 | .08 | .85 | .08 | 288.69 | 140.00 |
| 42.500 | 1340.00 | 943.18 | 0.00 | .15 | 0.00 | 218.17 | 680.00 |
| 42.500 | 1340.00 | 943.26 | .08 | .15 | .08 | 167.40 | 680.00 |
| 43.000 | 1340.00 | 943.43 | 0.00 | .26 | 0.00 | 523.83 | 1030.00 |
| 43.000 | 1340.00 | 943.53 | .09 | .26 | .09 | 255.70 | 1030.00 |
| 43.700 | 1340.00 | 944.89 | 0.00 | 1.46 | 0.00 | 206.83 | 3680.00 |
| 43.700 | 1340.00 | 945.00 | .11 | 1.47 | .11 | 150.00 | 3680.00 |
| 43.800 | 1340.00 | 944.97 | 0.00 | .08 | 0.00 | 118.00 | 100.00 |
| 43.800 | 1340.00 | 945.07 | .10 | .07 | .10 | 118.00 | 100.00 |
| 43.900 | 1340.00 | 944.93 | 0.00 | -.04 | 0.00 | 92.00 | 49.00 |
| 43.900 | 1340.00 | 945.03 | .10 | -.04 | .10 | 92.00 | 49.00 |
| 44.000 | 1340.00 | 944.58 | 0.00 | -.35 | 0.00 | 92.00 | 1.00 |
| 44.000 | 1340.00 | 944.70 | .12 | -.34 | .12 | 92.00 | 1.00 |
| 44.100 | 1340.00 | 945.87 | 0.00 | 1.29 | 0.00 | 92.00 | 39.00 |
| 44.100 | 1340.00 | 945.90 | .03 | 1.21 | .03 | 92.00 | 39.00 |
| 44.200 | 1340.00 | 946.61 | 0.00 | .73 | 0.00 | 92.00 | 1.00 |
| 44.200 | 1340.00 | 946.63 | .03 | .73 | .03 | 92.00 | 1.00 |
| 44.300 | 1340.00 | 946.77 | 0.00 | .17 | 0.00 | 188.55 | 50.00 |
| 44.300 | 1340.00 | 946.80 | .03 | .16 | .03 | 188.61 | 50.00 |

| SECNO | G | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 44.400 | 1340.00 | 946.81 | 0.00 | .03 | 0.00 | 252.40 | 50.00 |
| 44.400 | 1340.00 | 946.83 | .02 | .03 | .02 | 192.25 | 50.00 |
| 45.000 | 1340.00 | 947.79 | 0.00 | .99 | 0.00 | 884.89 | 3720.00 |
| 45.000 | 1340.00 | 947.86 | .07 | 1.03 | .07 | 647.58 | 3720.00 |

SUMMARY OF ERRORS

FLOODWAY DATA, EAST BR KALAMAZOO RIVER
PROFILE NO. 2

| STATION | FLOODWAY WIDTH | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 239.000 | 276. | 834. | 1.4 | 939.4 | 939.4 | 0.0 |
| 240.000 | 284. | 892. | 1.3 | 939.5 | 939.5 | 0.0 |
| 241.000 | 366. | 726. | 1.7 | 940.6 | 940.5 | .1 |
| 241.800 | 80. | 226. | 5.3 | 941.3 | 941.2 | .1 |
| 242.000 | 31. | 172. | 7.0 | 941.7 | 941.6 | .1 |
| 242.100 | 31. | 191. | 6.3 | 942.2 | 942.1 | .1 |
| 42.300 | 289. | 1403. | 1.0 | 943.1 | 943.0 | .1 |
| 42.500 | 167. | 819. | 1.6 | 943.3 | 943.2 | .1 |
| 43.000 | 256. | 1066. | 1.3 | 943.5 | 943.4 | .1 |
| 43.700 | 150. | 553. | 2.4 | 945.0 | 944.9 | .1 |
| 43.800 | 118. | 498. | 2.7 | 945.1 | 945.0 | .1 |
| 43.900 | 92. | 271. | 4.9 | 945.0 | 944.9 | .1 |
| 44.000 | 92. | 161. | 8.3 | 944.7 | 944.6 | .1 |
| 44.100 | 92. | 197. | 6.8 | 945.9 | 945.9 | 0.0 |
| 44.200 | 92. | 419. | 3.2 | 946.6 | 946.6 | 0.0 |
| 44.300 | 189. | 679. | 2.0 | 946.8 | 946.8 | 0.0 |
| 44.400 | 192. | 693. | 1.9 | 946.8 | 946.8 | 0.0 |
| 45.000 | 648. | 2138. | .6 | 947.9 | 947.8 | .1 |

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion City & Township

3) WATERCOURSE: Kalamazoo River, East Branch

4) DOCUMENT TYPE: Summary

00BREAK00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

EAST BR KALAMAZOO RIVER

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 239.000 | 937.60 | 1885.14 | 2000.00 | 2022.00 | 2155.55 | 270.42 | 0.00 |
| 239.000 | 938.86 | 1868.85 | 2000.00 | 2022.00 | 2218.78 | 349.93 | 0.00 |
| 239.000 | 939.35 | 1862.52 | 2000.00 | 2022.00 | 2230.10 | 367.58 | 0.00 |
| 239.000 | 940.26 | 1853.50 | 2000.00 | 2022.00 | 2251.12 | 397.63 | 0.00 |
| 240.000 | 937.99 | 1880.12 | 2000.00 | 2022.00 | 2179.55 | 299.43 | 180.00 |
| 240.000 | 939.05 | 1866.28 | 2000.00 | 2022.00 | 2223.38 | 357.10 | 180.00 |
| 240.000 | 939.49 | 1860.97 | 2000.00 | 2022.00 | 2233.46 | 372.49 | 180.00 |
| 240.000 | 940.35 | 1852.57 | 2000.00 | 2022.00 | 2253.31 | 400.73 | 180.00 |
| 241.000 | 939.50 | 1612.93 | 2000.00 | 2028.00 | 2033.09 | 360.96 | 1120.00 |
| 241.000 | 940.23 | 1602.65 | 2000.00 | 2028.00 | 2034.73 | 432.08 | 1120.00 |
| 241.000 | 940.47 | 1582.79 | 2000.00 | 2028.00 | 2035.28 | 452.48 | 1120.00 |
| 241.000 | 941.06 | 1473.47 | 2000.00 | 2028.00 | 2036.60 | 563.12 | 1120.00 |
| 241.800 | 940.36 | 1990.10 | 1989.00 | 2037.00 | 2035.63 | 45.53 | 500.00 |
| 241.800 | 941.06 | 1960.00 | 1989.00 | 2037.00 | 2039.91 | 79.91 | 500.00 |
| 241.800 | 941.22 | 1960.00 | 1989.00 | 2037.00 | 2040.00 | 80.00 | 500.00 |
| 241.800 | 941.55 | 1960.00 | 1989.00 | 2037.00 | 2040.00 | 80.00 | 500.00 |
| 242.000 | 940.57 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 100.00 |
| 242.000 | 941.37 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 100.00 |
| 242.000 | 941.55 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 100.00 |
| 242.000 | 941.92 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 100.00 |
| 242.100 | 940.76 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 48.00 |
| 242.100 | 941.77 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 48.00 |
| 242.100 | 942.14 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 48.00 |
| 242.100 | 942.95 | 850.00 | 850.00 | 880.50 | 880.50 | 30.50 | 48.00 |
| 42.300 | 941.24 | 1860.00 | 2054.00 | 2065.00 | 2164.01 | 304.01 | 140.00 |
| 42.300 | 942.58 | 1860.00 | 2054.00 | 2065.00 | 2170.00 | 310.00 | 140.00 |
| 42.300 | 943.03 | 1860.00 | 2054.00 | 2065.00 | 2170.00 | 310.00 | 140.00 |
| 42.300 | 944.00 | 1860.00 | 2054.00 | 2065.00 | 2170.00 | 310.00 | 140.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 42.500 | 941.39 | 1995.71 | 2040.00 | 2203.00 | 2170.15 | 174.44 | 680.00 |
| 42.500 | 942.74 | 1975.74 | 2040.00 | 2203.00 | 2183.10 | 207.36 | 680.00 |
| 42.500 | 943.18 | 1969.18 | 2040.00 | 2203.00 | 2187.35 | 218.17 | 680.00 |
| 42.500 | 944.14 | 1954.87 | 2040.00 | 2203.00 | 2196.62 | 241.75 | 680.00 |
| 43.000 | 941.67 | 1991.17 | 2000.00 | 2084.00 | 2300.20 | 309.03 | 1030.00 |
| 43.000 | 943.01 | 1985.90 | 2000.00 | 2084.00 | 2429.28 | 443.38 | 1030.00 |
| 43.000 | 943.43 | 1424.24 | 2000.00 | 2084.00 | 2572.64 | 523.83 | 1030.00 |
| 43.000 | 944.37 | 1422.08 | 2000.00 | 2084.00 | 2635.01 | 681.52 | 1030.00 |
| 43.700 | 943.38 | 1961.94 | 2014.00 | 2092.00 | 2089.98 | 128.05 | 3680.00 |
| 43.700 | 944.58 | 1906.01 | 2014.00 | 2092.00 | 2091.71 | 185.70 | 3680.00 |
| 43.700 | 944.89 | 1891.84 | 2014.00 | 2092.00 | 2098.67 | 206.83 | 3680.00 |
| 43.700 | 945.56 | 1883.38 | 2014.00 | 2092.00 | 2138.46 | 255.07 | 3680.00 |
| 43.800 | 943.46 | 1982.00 | 2014.00 | 2092.00 | 2090.11 | 108.11 | 100.00 |
| 43.800 | 944.66 | 1982.00 | 2014.00 | 2092.00 | 2091.83 | 109.83 | 100.00 |
| 43.800 | 944.97 | 1982.00 | 2014.00 | 2092.00 | 2100.00 | 118.00 | 100.00 |
| 43.800 | 945.63 | 1982.00 | 2014.00 | 2092.00 | 2100.00 | 118.00 | 100.00 |
| 43.900 | 943.33 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 78.07 | 49.00 |
| 43.900 | 944.62 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 49.00 |
| 43.900 | 944.93 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 49.00 |
| 43.900 | 945.59 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 49.00 |
| 44.000 | 943.31 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 76.35 | 1.00 |
| 44.000 | 944.33 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.000 | 944.58 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.000 | 945.05 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.100 | 944.09 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 39.00 |
| 44.100 | 945.47 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 39.00 |
| 44.100 | 945.87 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 39.00 |
| 44.100 | 946.85 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 39.00 |
| 44.200 | 944.38 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.200 | 946.09 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.200 | 946.61 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.200 | 948.10 | 2036.00 | 2036.00 | 2128.00 | 2128.00 | 92.00 | 1.00 |
| 44.300 | 944.60 | 1962.00 | 1980.00 | 2154.00 | 2145.52 | 147.17 | 50.00 |
| 44.300 | 946.26 | 1962.00 | 1980.00 | 2154.00 | 2149.38 | 187.38 | 50.00 |
| 44.300 | 946.77 | 1962.00 | 1980.00 | 2154.00 | 2150.55 | 188.55 | 50.00 |
| 44.300 | 948.25 | 1962.00 | 1980.00 | 2154.00 | 2153.98 | 191.98 | 50.00 |
| 44.400 | 944.69 | 1940.60 | 1980.00 | 2154.00 | 2145.72 | 171.20 | 50.00 |
| 44.400 | 946.30 | 1912.39 | 1980.00 | 2154.00 | 2149.47 | 237.08 | 50.00 |
| 44.400 | 946.81 | 1898.26 | 1980.00 | 2154.00 | 2150.65 | 252.40 | 50.00 |
| 44.400 | 948.28 | 1857.72 | 1980.00 | 2154.00 | 2167.35 | 309.63 | 50.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 45.000 | 946.37 | 1746.05 | 2000.00 | 2031.00 | 2344.37 | 598.32 | 3720.00 |
| 45.000 | 947.45 | 1504.08 | 2000.00 | 2031.00 | 2346.76 | 842.69 | 3720.00 |
| 45.000 | 947.79 | 1462.60 | 2000.00 | 2031.00 | 2347.49 | 884.89 | 3720.00 |
| 45.000 | 948.87 | 1370.27 | 2000.00 | 2031.00 | 2349.83 | 979.56 | 3720.00 |

EAST BR KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 239.000 | 0.00 | 0.00 | 0.00 | 933.01 | 655.00 | 937.60 | 0.00 | 937.76 | 23.40 | 4.15 | 358.75 | 135.39 |
| 239.000 | 0.00 | 0.00 | 0.00 | 933.01 | 1070.00 | 938.86 | 0.00 | 938.94 | 11.06 | 3.39 | 756.05 | 321.80 |
| 239.000 | 0.00 | 0.00 | 0.00 | 933.01 | 1200.00 | 939.35 | 0.00 | 939.41 | 8.08 | 3.07 | 931.84 | 422.14 |
| 239.000 | 0.00 | 0.00 | 0.00 | 933.01 | 1490.00 | 940.26 | 0.00 | 940.30 | 5.25 | 2.72 | 1280.07 | 650.04 |
| 240.000 | 180.00 | 0.00 | 0.00 | 933.01 | 655.00 | 937.99 | 0.00 | 938.08 | 12.95 | 3.27 | 469.28 | 182.03 |
| 240.000 | 180.00 | 0.00 | 0.00 | 933.01 | 1070.00 | 939.05 | 0.00 | 939.12 | 8.80 | 3.10 | 826.40 | 360.77 |
| 240.000 | 180.00 | 0.00 | 0.00 | 933.01 | 1200.00 | 939.49 | 0.00 | 939.55 | 6.95 | 2.90 | 985.67 | 455.07 |
| 240.000 | 180.00 | 0.00 | 0.00 | 933.01 | 1490.00 | 940.35 | 0.00 | 940.39 | 4.85 | 2.64 | 1317.82 | 676.63 |
| 241.000 | 1120.00 | 0.00 | 0.00 | 934.07 | 655.00 | 939.50 | 0.00 | 939.67 | 15.15 | 3.79 | 366.69 | 168.28 |
| 241.000 | 1120.00 | 0.00 | 0.00 | 934.07 | 1070.00 | 940.23 | 0.00 | 940.37 | 14.14 | 4.05 | 670.20 | 284.54 |
| 241.000 | 1120.00 | 0.00 | 0.00 | 934.07 | 1200.00 | 940.47 | 0.00 | 940.60 | 12.85 | 3.98 | 776.60 | 334.76 |
| 241.000 | 1120.00 | 0.00 | 0.00 | 934.07 | 1490.00 | 941.06 | 0.00 | 941.15 | 9.63 | 3.69 | 1081.82 | 480.11 |
| 241.800 | 500.00 | 0.00 | 0.00 | 934.90 | 655.00 | 940.36 | 0.00 | 940.61 | 22.50 | 4.02 | 162.92 | 138.10 |
| 241.800 | 500.00 | 0.00 | 0.00 | 934.90 | 1070.00 | 941.06 | 0.00 | 941.52 | 34.51 | 5.44 | 203.10 | 182.15 |
| 241.800 | 500.00 | 0.00 | 0.00 | 934.90 | 1200.00 | 941.22 | 0.00 | 941.75 | 37.99 | 5.85 | 215.75 | 194.68 |
| 241.800 | 500.00 | 0.00 | 0.00 | 934.90 | 1490.00 | 941.55 | 0.00 | 942.23 | 45.06 | 6.69 | 241.68 | 221.96 |
| 242.000 | 100.00 | 0.00 | 0.00 | 936.00 | 655.00 | 940.57 | 0.00 | 940.91 | 29.96 | 4.70 | 139.32 | 119.66 |
| 242.000 | 100.00 | 0.00 | 0.00 | 936.00 | 1070.00 | 941.37 | 0.00 | 942.03 | 49.24 | 6.54 | 163.70 | 152.48 |
| 242.000 | 100.00 | 0.00 | 0.00 | 936.00 | 1200.00 | 941.55 | 0.00 | 942.33 | 55.97 | 7.09 | 169.35 | 160.40 |
| 242.000 | 100.00 | 0.00 | 0.00 | 936.00 | 1490.00 | 941.92 | 0.00 | 942.98 | 71.36 | 8.25 | 180.55 | 176.39 |
| 242.100 | 48.00 | 943.50 | 941.72 | 936.00 | 655.00 | 940.76 | 0.00 | 941.07 | 35.17 | 4.51 | 145.18 | 110.45 |
| 242.100 | 48.00 | 943.50 | 941.72 | 936.00 | 1070.00 | 941.77 | 0.00 | 942.34 | 39.55 | 6.07 | 176.21 | 170.15 |
| 242.100 | 48.00 | 943.50 | 941.72 | 936.00 | 1200.00 | 942.14 | 0.00 | 942.78 | 41.28 | 6.39 | 187.68 | 186.78 |
| 242.100 | 48.00 | 943.50 | 941.72 | 936.00 | 1490.00 | 942.95 | 0.00 | 943.72 | 44.50 | 7.03 | 212.02 | 223.35 |
| 42.300 | 140.00 | 0.00 | 0.00 | 934.70 | 695.00 | 941.24 | 0.00 | 941.25 | 2.63 | 1.81 | 879.11 | 428.41 |
| 42.300 | 140.00 | 0.00 | 0.00 | 934.70 | 1190.00 | 942.58 | 0.00 | 942.60 | 2.70 | 2.12 | 1290.37 | 724.20 |
| 42.300 | 140.00 | 0.00 | 0.00 | 934.70 | 1340.00 | 943.03 | 0.00 | 943.05 | 2.54 | 2.14 | 1430.25 | 841.48 |
| 42.300 | 140.00 | 0.00 | 0.00 | 934.70 | 1720.00 | 944.00 | 0.00 | 944.02 | 2.35 | 2.24 | 1731.61 | 1120.99 |
| 42.500 | 680.00 | 0.00 | 0.00 | 936.10 | 695.00 | 941.39 | 0.00 | 941.42 | 2.37 | 1.38 | 536.15 | 451.41 |
| 42.500 | 680.00 | 0.00 | 0.00 | 936.10 | 1190.00 | 942.74 | 0.00 | 942.78 | 2.59 | 1.67 | 792.78 | 740.07 |
| 42.500 | 680.00 | 0.00 | 0.00 | 936.10 | 1340.00 | 943.18 | 0.00 | 943.22 | 2.47 | 1.70 | 886.72 | 852.19 |
| 42.500 | 680.00 | 0.00 | 0.00 | 936.10 | 1720.00 | 944.14 | 0.00 | 944.18 | 2.33 | 1.79 | 1108.14 | 1127.69 |
| 43.000 | 1030.00 | 0.00 | 0.00 | 935.80 | 695.00 | 941.67 | 0.00 | 941.71 | 3.10 | 1.71 | 608.63 | 394.52 |
| 43.000 | 1030.00 | 0.00 | 0.00 | 935.80 | 1190.00 | 943.01 | 0.00 | 943.05 | 2.71 | 1.92 | 1115.44 | 722.81 |
| 43.000 | 1030.00 | 0.00 | 0.00 | 935.80 | 1340.00 | 943.43 | 0.00 | 943.48 | 2.45 | 1.91 | 1317.03 | 856.24 |
| 43.000 | 1030.00 | 0.00 | 0.00 | 935.80 | 1720.00 | 944.37 | 0.00 | 944.40 | 1.89 | 1.85 | 1909.29 | 1250.87 |

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 43.700 | 3680.00 | 0.00 | 0.00 | 938.20 | 695.00 | 943.38 | 0.00 | 943.47 | 8.14 | 2.44 | 315.24 | 243.56 |
| 43.700 | 3680.00 | 0.00 | 0.00 | 938.20 | 1190.00 | 944.58 | 0.00 | 944.71 | 8.48 | 2.97 | 504.53 | 408.66 |
| 43.700 | 3680.00 | 0.00 | 0.00 | 938.20 | 1340.00 | 944.89 | 0.00 | 945.03 | 8.44 | 3.08 | 565.69 | 461.35 |
| 43.700 | 3680.00 | 0.00 | 0.00 | 938.20 | 1720.00 | 945.56 | 0.00 | 945.71 | 8.32 | 3.33 | 720.58 | 596.18 |
| 43.800 | 100.00 | 0.00 | 0.00 | 938.20 | 695.00 | 943.46 | 0.00 | 943.54 | 7.50 | 2.38 | 320.51 | 253.78 |
| 43.800 | 100.00 | 0.00 | 0.00 | 938.20 | 1190.00 | 944.66 | 0.00 | 944.79 | 8.36 | 2.98 | 451.38 | 411.45 |
| 43.800 | 100.00 | 0.00 | 0.00 | 938.20 | 1340.00 | 944.97 | 0.00 | 945.11 | 8.55 | 3.13 | 486.32 | 458.34 |
| 43.800 | 100.00 | 0.00 | 0.00 | 938.20 | 1720.00 | 945.63 | 0.00 | 945.81 | 9.22 | 3.53 | 563.19 | 566.32 |
| 43.900 | 49.00 | 0.00 | 0.00 | 939.96 | 695.00 | 943.33 | 0.00 | 943.89 | 228.10 | 5.99 | 116.04 | 46.02 |
| 43.900 | 49.00 | 0.00 | 0.00 | 939.96 | 1190.00 | 944.62 | 0.00 | 945.02 | 79.75 | 5.11 | 233.07 | 133.26 |
| 43.900 | 49.00 | 0.00 | 0.00 | 939.96 | 1340.00 | 944.93 | 0.00 | 945.34 | 69.09 | 5.12 | 261.82 | 161.21 |
| 43.900 | 49.00 | 0.00 | 0.00 | 939.96 | 1720.00 | 945.59 | 0.00 | 946.03 | 57.58 | 5.33 | 322.59 | 226.67 |
| 44.000 | 1.00 | 948.53 | 946.50 | 939.96 | 695.00 | 943.31 | 0.00 | 943.94 | 164.43 | 6.38 | 109.00 | 54.20 |
| 44.000 | 1.00 | 948.53 | 946.50 | 939.96 | 1190.00 | 944.33 | 943.58 | 945.33 | 223.41 | 8.01 | 148.62 | 79.62 |
| 44.000 | 1.00 | 948.53 | 946.50 | 939.96 | 1340.00 | 944.58 | 943.81 | 945.71 | 247.94 | 8.52 | 157.36 | 85.10 |
| 44.000 | 1.00 | 948.53 | 946.50 | 939.96 | 1720.00 | 945.05 | 944.33 | 946.59 | 330.99 | 9.96 | 172.74 | 94.54 |
| 44.100 | 39.00 | 948.53 | 946.50 | 939.96 | 695.00 | 944.09 | 0.00 | 944.48 | 88.93 | 4.99 | 139.32 | 73.70 |
| 44.100 | 39.00 | 948.53 | 946.50 | 939.96 | 1190.00 | 945.47 | 0.00 | 946.11 | 136.11 | 6.42 | 185.37 | 102.00 |
| 44.100 | 39.00 | 948.53 | 946.50 | 939.96 | 1340.00 | 945.87 | 0.00 | 946.59 | 159.26 | 6.82 | 196.45 | 106.18 |
| 44.100 | 39.00 | 948.53 | 946.50 | 939.96 | 1720.00 | 946.85 | 944.33 | 947.96 | 304.83 | 8.46 | 203.23 | 98.51 |
| 44.200 | 1.00 | 0.00 | 0.00 | 939.96 | 695.00 | 944.38 | 0.00 | 944.55 | 37.06 | 3.28 | 212.10 | 114.16 |
| 44.200 | 1.00 | 0.00 | 0.00 | 939.96 | 1190.00 | 946.09 | 0.00 | 946.25 | 17.85 | 3.23 | 368.68 | 281.66 |
| 44.200 | 1.00 | 0.00 | 0.00 | 939.96 | 1340.00 | 946.61 | 0.00 | 946.77 | 15.31 | 3.22 | 415.93 | 342.49 |
| 44.200 | 1.00 | 0.00 | 0.00 | 939.96 | 1720.00 | 948.10 | 0.00 | 948.25 | 10.04 | 3.11 | 553.46 | 542.81 |
| 44.300 | 50.00 | 0.00 | 0.00 | 941.55 | 695.00 | 944.60 | 0.00 | 944.69 | 16.17 | 2.37 | 293.62 | 172.83 |
| 44.300 | 50.00 | 0.00 | 0.00 | 941.55 | 1190.00 | 946.26 | 0.00 | 946.33 | 6.67 | 2.11 | 578.94 | 460.73 |
| 44.300 | 50.00 | 0.00 | 0.00 | 941.55 | 1340.00 | 946.77 | 0.00 | 946.84 | 5.25 | 2.05 | 674.53 | 584.66 |
| 44.300 | 50.00 | 0.00 | 0.00 | 941.55 | 1720.00 | 948.25 | 0.00 | 948.30 | 2.90 | 1.87 | 955.75 | 1010.57 |
| 44.400 | 50.00 | 0.00 | 0.00 | 941.55 | 695.00 | 944.69 | 0.00 | 944.77 | 14.14 | 2.26 | 315.45 | 184.80 |
| 44.400 | 50.00 | 0.00 | 0.00 | 941.55 | 1190.00 | 946.30 | 0.00 | 946.37 | 6.01 | 2.02 | 652.35 | 485.49 |
| 44.400 | 50.00 | 0.00 | 0.00 | 941.55 | 1340.00 | 946.81 | 0.00 | 946.86 | 4.64 | 1.94 | 777.52 | 622.27 |
| 44.400 | 50.00 | 0.00 | 0.00 | 941.55 | 1720.00 | 948.28 | 0.00 | 948.32 | 2.44 | 1.73 | 1180.09 | 1101.07 |
| 45.000 | 3720.00 | 0.00 | 0.00 | 939.55 | 695.00 | 946.37 | 0.00 | 946.38 | 2.06 | 1.43 | 1206.18 | 483.76 |
| 45.000 | 3720.00 | 0.00 | 0.00 | 939.55 | 1190.00 | 947.45 | 0.00 | 947.47 | 1.74 | 1.50 | 2011.28 | 901.47 |
| 45.000 | 3720.00 | 0.00 | 0.00 | 939.55 | 1340.00 | 947.79 | 0.00 | 947.80 | 1.58 | 1.48 | 2301.06 | 1067.56 |
| 45.000 | 3720.00 | 0.00 | 0.00 | 939.55 | 1720.00 | 948.87 | 0.00 | 948.88 | 1.00 | 1.31 | 3309.89 | 1716.56 |

MOORE BUSINESS FORMS, INC.

EAST BR KALAMAZCO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 239.000 | 655.00 | 937.60 | 0.00 | 0.00 | 0.00 | 270.42 | 0.00 |
| 239.000 | 1070.00 | 938.86 | 1.26 | 0.00 | 0.00 | 349.93 | 0.00 |
| 239.000 | 1200.00 | 939.35 | .49 | 0.00 | 0.00 | 367.58 | 0.00 |
| 239.000 | 1490.00 | 940.26 | .91 | 0.00 | 0.00 | 397.63 | 0.00 |
| 240.000 | 655.00 | 937.99 | 0.00 | .39 | 0.00 | 299.43 | 180.00 |
| 240.000 | 1070.00 | 939.05 | 1.07 | .19 | 0.00 | 357.10 | 180.00 |
| 240.000 | 1200.00 | 939.49 | .44 | .14 | 0.00 | 372.49 | 180.00 |
| 240.000 | 1490.00 | 940.35 | .86 | .09 | 0.00 | 400.73 | 180.00 |
| 241.000 | 655.00 | 939.50 | 0.00 | 1.52 | 0.00 | 360.96 | 1120.00 |
| 241.000 | 1070.00 | 940.23 | .73 | 1.17 | 0.00 | 432.08 | 1120.00 |
| 241.000 | 1200.00 | 940.47 | .24 | .98 | 0.00 | 452.48 | 1120.00 |
| 241.000 | 1490.00 | 941.06 | .59 | .70 | 0.00 | 563.12 | 1120.00 |
| 241.800 | 655.00 | 940.36 | 0.00 | .85 | 0.00 | 45.53 | 500.00 |
| 241.800 | 1070.00 | 941.06 | .71 | .83 | .71 | 79.91 | 500.00 |
| 241.800 | 1200.00 | 941.22 | .16 | .75 | .87 | 80.00 | 500.00 |
| 241.800 | 1490.00 | 941.55 | .32 | .49 | 1.19 | 80.00 | 500.00 |
| 242.000 | 655.00 | 940.57 | 0.00 | .21 | 0.00 | 30.50 | 100.00 |
| 242.000 | 1070.00 | 941.37 | .80 | .31 | .80 | 30.50 | 100.00 |
| 242.000 | 1200.00 | 941.55 | .19 | .33 | .98 | 30.50 | 100.00 |
| 242.000 | 1490.00 | 941.92 | .37 | .37 | 1.35 | 30.50 | 100.00 |
| 242.100 | 655.00 | 940.76 | 0.00 | .19 | 0.00 | 30.50 | 48.00 |
| 242.100 | 1070.00 | 941.77 | 1.01 | .40 | 1.01 | 30.50 | 48.00 |
| 242.100 | 1200.00 | 942.14 | .37 | .59 | 1.39 | 30.50 | 48.00 |
| 242.100 | 1490.00 | 942.95 | .81 | 1.03 | 2.19 | 30.50 | 48.00 |
| 42.300 | 695.00 | 941.24 | 0.00 | .48 | 0.00 | 304.01 | 140.00 |
| 42.300 | 1190.00 | 942.58 | 1.34 | .81 | 1.34 | 310.00 | 140.00 |
| 42.300 | 1340.00 | 943.03 | .45 | .88 | 1.79 | 310.00 | 140.00 |
| 42.300 | 1720.00 | 944.00 | .97 | 1.05 | 2.76 | 310.00 | 140.00 |
| 42.500 | 695.00 | 941.39 | 0.00 | .16 | 0.00 | 174.44 | 680.00 |
| 42.500 | 1190.00 | 942.74 | 1.34 | .16 | 1.34 | 207.36 | 680.00 |
| 42.500 | 1340.00 | 943.18 | .44 | .15 | 1.78 | 218.17 | 680.00 |
| 42.500 | 1720.00 | 944.14 | .96 | .14 | 2.74 | 241.75 | 680.00 |
| 43.000 | 695.00 | 941.67 | 0.00 | .27 | 0.00 | 309.03 | 1030.00 |
| 43.000 | 1190.00 | 943.01 | 1.34 | .27 | 1.34 | 443.38 | 1030.00 |
| 43.000 | 1340.00 | 943.43 | .42 | .26 | 1.77 | 523.83 | 1030.00 |
| 43.000 | 1720.00 | 944.37 | .93 | .23 | 2.70 | 681.52 | 1030.00 |

| SECNO | C | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 43.700 | 695.00 | 943.38 | 0.00 | 1.71 | 0.00 | 128.05 | 3680.00 |
| 43.700 | 1190.00 | 944.58 | 1.20 | 1.57 | 1.20 | 185.70 | 3680.00 |
| 43.700 | 1340.00 | 944.89 | .31 | 1.46 | 1.51 | 206.83 | 3680.00 |
| 43.700 | 1720.00 | 945.56 | .67 | 1.20 | 2.19 | 255.07 | 3680.00 |
| 43.800 | 695.00 | 943.46 | 0.00 | .08 | 0.00 | 108.11 | 100.00 |
| 43.800 | 1190.00 | 944.66 | 1.20 | .08 | 1.20 | 109.83 | 100.00 |
| 43.800 | 1340.00 | 944.97 | .31 | .08 | 1.51 | 118.00 | 100.00 |
| 43.800 | 1720.00 | 945.63 | .66 | .07 | 2.17 | 118.00 | 100.00 |
| 43.900 | 695.00 | 943.33 | 0.00 | -.13 | 0.00 | 78.07 | 49.00 |
| 43.900 | 1190.00 | 944.62 | 1.29 | -.04 | 1.29 | 92.00 | 49.00 |
| 43.900 | 1340.00 | 944.93 | .31 | -.04 | 1.60 | 92.00 | 49.00 |
| 43.900 | 1720.00 | 945.59 | .66 | -.04 | 2.26 | 92.00 | 49.00 |
| 44.000 | 695.00 | 943.31 | 0.00 | -.02 | 0.00 | 76.35 | 1.00 |
| 44.000 | 1190.00 | 944.33 | 1.02 | -.28 | 1.02 | 92.00 | 1.00 |
| 44.000 | 1340.00 | 944.58 | .25 | -.35 | 1.27 | 92.00 | 1.00 |
| 44.000 | 1720.00 | 945.05 | .47 | -.54 | 1.74 | 92.00 | 1.00 |
| 44.100 | 695.00 | 944.09 | 0.00 | .78 | 0.00 | 92.00 | 39.00 |
| 44.100 | 1190.00 | 945.47 | 1.38 | 1.13 | 1.38 | 92.00 | 39.00 |
| 44.100 | 1340.00 | 945.87 | .41 | 1.29 | 1.78 | 92.00 | 39.00 |
| 44.100 | 1720.00 | 946.85 | .97 | 1.79 | 2.76 | 92.00 | 39.00 |
| 44.200 | 695.00 | 944.38 | 0.00 | .29 | 0.00 | 92.00 | 1.00 |
| 44.200 | 1190.00 | 946.09 | 1.71 | .63 | 1.71 | 92.00 | 1.00 |
| 44.200 | 1340.00 | 946.61 | .51 | .73 | 2.22 | 92.00 | 1.00 |
| 44.200 | 1720.00 | 948.10 | 1.49 | 1.25 | 3.72 | 92.00 | 1.00 |
| 44.300 | 695.00 | 944.60 | 0.00 | .22 | 0.00 | 147.17 | 50.00 |
| 44.300 | 1190.00 | 946.26 | 1.66 | .17 | 1.66 | 187.38 | 50.00 |
| 44.300 | 1340.00 | 946.77 | .51 | .17 | 2.17 | 188.55 | 50.00 |
| 44.300 | 1720.00 | 948.25 | 1.48 | .15 | 3.65 | 191.98 | 50.00 |
| 44.400 | 695.00 | 944.69 | 0.00 | .08 | 0.00 | 171.20 | 50.00 |
| 44.400 | 1190.00 | 946.30 | 1.62 | .04 | 1.62 | 237.08 | 50.00 |
| 44.400 | 1340.00 | 946.81 | .50 | .03 | 2.12 | 252.40 | 50.00 |
| 44.400 | 1720.00 | 948.28 | 1.47 | .03 | 3.59 | 309.63 | 50.00 |
| 45.000 | 695.00 | 946.37 | 0.00 | 1.68 | 0.00 | 598.32 | 3720.00 |
| 45.000 | 1190.00 | 947.45 | 1.09 | 1.15 | 1.09 | 842.69 | 3720.00 |
| 45.000 | 1340.00 | 947.79 | .34 | .99 | 1.42 | 884.89 | 3720.00 |
| 45.000 | 1720.00 | 948.87 | 1.08 | .59 | 2.50 | 979.56 | 3720.00 |

FLOOD INSURANCE ZONE DATA FOR EAST BR KALAMAZOO RIVER

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10 | 2 | 0.2 |
|---|---|---|---|---|
| 239.000 | 0. | -1.75 | -.49 | .91 |
| 240.000 | 180. | -1.51 | -.44 | .86 |
| 241.000 | 1300. | -.97 | -.24 | .59 |
| 241.800 | 1800. | -.87 | -.16 | .32 |
| 242.000 | 1900. | -.98 | -.19 | .37 |
| 242.100 | 1948. | -1.39 | -.37 | .81 |
| 42.300 | 2088. | -1.79 | -.45 | .97 |
| 42.500 | 2768. | -1.78 | -.44 | .96 |
| 43.000 | 3798. | -1.77 | -.42 | .93 |
| 43.700 | 7478. | -1.51 | -.31 | .67 |
| 43.800 | 7578. | -1.51 | -.31 | .66 |
| 43.900 | 7627. | -1.60 | -.31 | .66 |
| 44.000 | 7628. | -1.27 | -.25 | .47 |
| 44.100 | 7667. | -1.78 | -.41 | .97 |
| 44.200 | 7668. | -2.22 | -.51 | 1.49 |
| 44.300 | 7718. | -2.17 | -.51 | 1.48 |
| 44.400 | 7768. | -2.12 | -.50 | 1.47 |
| 45.000 | 11488. | -1.42 | -.34 | 1.08 |
| WEIGHTED AVG FOR REACH | | -1.63 | -.39 | .96 |

FHF FOR THE REACH = 015 WITH 93.9 PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 3

MOORE BUSINESS FORMS INC 27

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion City & Township

3) WATERCOURSE: Mill Race

4) DOCUMENT TYPE: 100-year

00BREAK00

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

C
T1      FIS CITY OF ALBION, CALHOUN CO., MICHIGAN
T2      100-YEAR FLOOD
T3      MILL RACE
```

RECEIVED
DEC 17 1980
WATER MANAGEMENT

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0. | 4. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 937.250 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 38.000 | 1.000 | 53.000 | 21.000 | 22.000 | 54.000 | 4.000 | 39.000 | 150.000 | 200.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| QT | 5.000 | 40.000 | 120.000 | 140.000 | 230.000 | 140.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .040 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 119.200 | 20.000 | 1984.000 | 2035.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 943.740 | 1760.000 | 941.860 | 1876.000 | 936.820 | 1984.000 | 935.210 | 1984.000 | 933.860 | 1990.000 |
| GR | 931.360 | 1995.000 | 931.820 | 2000.000 | 932.150 | 2005.000 | 932.310 | 2010.000 | 932.550 | 2015.000 |
| GR | 933.880 | 2022.000 | 939.720 | 2035.000 | 942.030 | 2062.000 | 942.740 | 2099.000 | 942.120 | 2198.000 |
| GR | 942.100 | 2296.000 | 942.130 | 2392.000 | 943.580 | 2486.000 | 948.430 | 2604.000 | 948.440 | 2619.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 119.250 | 16.000 | 2000.000 | 2016.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| GR | 943.740 | 1760.000 | 941.860 | 1876.000 | 941.860 | 2000.000 | 935.240 | 2000.000 | 934.100 | 2005.000 |
| GR | 934.060 | 2010.000 | 934.040 | 2016.000 | 941.880 | 2016.000 | 942.030 | 2062.000 | 942.740 | 2099.000 |
| GR | 942.120 | 2198.000 | 942.100 | 2226.000 | 942.130 | 2392.000 | 943.580 | 2486.000 | 948.430 | 2604.000 |
| GR | 948.440 | 2619.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MILL RACE SECTION A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.300 | 15.000 | 2000.000 | 2016.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 2000.000 | 0.000 | 2016.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 2000.000 | 941.860 | 0.000 | 2000.000 | 938.770 | 0.000 | 2005.000 | 938.740 | 0.000 |
| BT | 2005.500 | 939.860 | 0.000 | 2010.000 | 940.080 | 0.000 | 2010.500 | 939.630 | 0.000 | 2015.000 |
| BT | 939.570 | 0.000 | 2016.000 | 941.880 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 943.740 | 1760.000 | 941.860 | 1876.000 | 941.860 | 2000.000 | 934.680 | 2000.000 | 934.250 | 2005.000 |
| GR | 935.880 | 2010.000 | 934.190 | 2016.000 | 941.880 | 2016.000 | 942.030 | 2062.000 | 942.740 | 2099.000 |
| GR | 942.120 | 2198.000 | 942.100 | 2226.000 | 942.130 | 2392.000 | 943.580 | 2486.000 | 948.430 | 2604.000 |

MOORE BUSINESS FORMS INC 27

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.400 | 0.000 | 0.000 | 0.000 | 6.000 | 6.000 | 6.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 2000.000 | 0.000 | 2016.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 119.500 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 2000.000 | 0.000 | 2016.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 119.600 | 0.000 | 0.000 | 0.000 | 44.000 | 44.000 | 44.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1950.000 | 0.000 | 2054.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 119.900 | 13.000 | 2577.000 | 2612.000 | 230.000 | 230.000 | 230.000 | 0.000 | 0.000 | 0.000 |
| GR | 943.750 | 2402.000 | 943.600 | 2563.000 | 935.990 | 2577.000 | 935.120 | 2584.000 | 935.080 | 2596.000 |
| GR | 935.570 | 2605.000 | 936.490 | 2612.000 | 942.040 | 2633.000 | 944.600 | 2673.000 | 944.190 | 2685.000 |
| GR | 945.710 | 2789.000 | 946.370 | 2825.000 | 948.080 | 2917.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 120.000 | 15.000 | 2577.000 | 2612.000 | 8.000 | 8.000 | 8.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 942.400 | 942.400 | 0.000 |
| GR | 943.750 | 2402.000 | 943.600 | 2563.000 | 943.600 | 2577.000 | 935.990 | 2577.000 | 935.120 | 2584.000 |
| GR | 935.080 | 2596.000 | 935.570 | 2605.000 | 936.490 | 2612.000 | 943.600 | 2612.000 | 942.040 | 2633.000 |
| GR | 944.600 | 2673.000 | 944.190 | 2685.000 | 945.710 | 2789.000 | 946.370 | 2825.000 | 948.080 | 2917.000 |
| SB | 0.000 | 1.830 | 3.000 | 0.000 | 35.000 | 0.000 | 210.000 | 0.000 | 0.000 | 0.000 |
| X1 | 120.100 | 0.000 | 0.000 | 0.000 | 44.000 | 44.000 | 44.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 941.200 | 943.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 943.600 | 943.600 | 0.000 |
| BT | 10.000 | 2402.000 | 943.750 | 0.000 | 2563.000 | 943.600 | 0.000 | 2577.000 | 943.600 | 0.000 |
| BT | 2577.000 | 943.600 | 941.200 | 2612.000 | 943.600 | 941.200 | 2612.000 | 943.600 | 0.000 | 2685.000 |
| BT | 944.200 | 0.000 | 2789.000 | 945.710 | 0.000 | 2825.000 | 946.370 | 0.000 | 2917.000 | 948.080 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 120.200 | 0.000 | 0.000 | 0.000 | 8.000 | 8.000 | 8.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 943.600 | 943.600 | 0.000 |
| X1 | 121.000 | 10.000 | 2588.000 | 2626.000 | 66.000 | 66.000 | 66.000 | 0.000 | 0.000 | 0.000 |
| GR | 943.750 | 2402.000 | 943.600 | 2563.000 | 942.610 | 2588.000 | 936.850 | 2588.000 | 935.690 | 2626.000 |
| GR | 942.040 | 2626.000 | 944.600 | 2673.000 | 944.190 | 2685.000 | 945.710 | 2789.000 | 946.370 | 2825.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MILL RACE SECTION B

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 140.000 | 15.000 | 2302.000 | 2340.000 | 800.000 | 600.000 | 680.000 | 0.000 | 0.000 | 0.000 |
| GR | 941.970 | 2289.000 | 941.970 | 2289.000 | 941.970 | 2289.000 | 941.810 | 2298.000 | 938.990 | 2302.000 |
| GR | 935.980 | 2312.000 | 935.310 | 2322.000 | 939.050 | 2340.000 | 940.480 | 2344.000 | 941.890 | 2400.000 |
| GR | 943.750 | 2494.000 | 946.270 | 2594.000 | 951.750 | 2696.000 | 954.660 | 2816.000 | 953.660 | 2924.000 |
| NH | 2.000 | .040 | 2092.000 | .080 | 2299.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MILL RACE SECTION C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 141.000 | 15.000 | 2044.000 | 2092.000 | 875.000 | 850.000 | 850.000 | 0.000 | 0.000 | 0.000 |
| GR | 941.900 | 2044.000 | 941.900 | 2044.000 | 941.900 | 2044.000 | 939.140 | 2047.000 | 937.760 | 2052.000 |
| GR | 936.690 | 2062.000 | 936.660 | 2067.000 | 936.610 | 2074.000 | 937.120 | 2081.000 | 939.140 | 2088.000 |
| GR | 943.300 | 2092.000 | 943.530 | 2102.000 | 943.980 | 2113.000 | 944.420 | 2194.000 | 946.010 | 2299.000 |
| NC | .080 | .080 | .040 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 141.800 | 10.000 | 2211.000 | 2249.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 943.110 | 2157.000 | 942.670 | 2205.000 | 939.260 | 2211.000 | 937.100 | 2221.000 | 936.830 | 2233.000 |
| GR | 937.460 | 2243.000 | 939.100 | 2249.000 | 943.790 | 2270.000 | 943.820 | 2279.000 | 944.580 | 2383.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 141.900 | 8.000 | 977.000 | 1012.000 | 99.000 | 99.000 | 99.000 | 0.000 | 0.000 | 0.000 |
| GR | 944.450 | 900.000 | 944.700 | 950.000 | 944.950 | 977.000 | 938.000 | 977.000 | 938.000 | 1012.000 |
| GR | 944.950 | 1012.000 | 945.200 | 1050.000 | 945.450 | 1100.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 0.000 | 1.700 | 3.000 | 0.000 | 35.000 | 0.000 | 157.500 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 142.000 | 0.000 | 0.000 | 0.000 | 43.000 | 43.000 | 43.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 942.480 | 944.450 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 900.000 | 944.450 | 0.000 | 950.000 | 944.700 | 0.000 | 977.000 | 944.950 | 0.000 |
| BT | 977.000 | 944.950 | 942.480 | 1012.000 | 944.950 | 942.480 | 1012.000 | 944.950 | 0.000 | 1050.000 |
| BT | 945.200 | 0.000 | 1100.000 | 945.450 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 142.300 | 11.000 | 2086.000 | 2168.000 | 140.000 | 140.000 | 140.000 | 0.000 | 0.000 | 0.000 |
| GR | 941.210 | 2066.000 | 941.070 | 2086.000 | 937.150 | 2088.000 | 935.670 | 2096.000 | 934.870 | 2104.000 |
| GR | 934.430 | 2118.000 | 935.120 | 2132.000 | 936.370 | 2142.000 | 939.120 | 2156.000 | 942.280 | 2168.000 |
| GR | 944.110 | 2206.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 119.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.20 | 5.89 | 937.25 | 0.00 | 937.25 | 937.26 | .01 | 0.00 | 0.00 | 936.82 |
| 140. | 0. | 140. | 0. | 2. | 184. | 0. | 0. | 0. | 939.72 |
| 0.00 | .06 | .76 | 0.00 | .080 | .040 | .080 | 0.000 | 931.36 | 1974.79 |
| .000071 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 54.72 | 2029.50 |

CCHV= .300 CEHV= .500

*SECNO 119.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.25 | 3.16 | 937.20 | 0.00 | 0.00 | 937.34 | .14 | .01 | .06 | 941.86 |
| 140. | 0. | 140. | 0. | 0. | 47. | 0. | 0. | 0. | 941.88 |
| .01 | 0.00 | 2.97 | 0.00 | .080 | .040 | .080 | .039 | 934.04 | 2000.00 |
| .002211 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 16.00 | 2016.00 |

*SECNO 119.300

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 938.74 MAX ELLC= 0.00

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 2000.0 2016.0 TYPE= 1 TARGET= 16.000
MILL RACE SECTION A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.30 | 7.30 | 941.49 | 941.49 | 0.00 | 942.27 | .78 | .01 | .32 | 941.86 |
| 140. | 0. | 140. | 0. | 0. | 20. | 0. | 0. | 0. | 100000.00 |
| .01 | 0.00 | 7.07 | 0.00 | .080 | .040 | .080 | .039 | 934.19 | 2000.00 |
| .038578 | 1. | 1. | 1. | 20 | 15 | 0 | -86.20 | 16.00 | 2016.00 |

*SECNO 119.400

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 938.74 MAX ELLC= 0.00

```
    SECNO       DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
      Q         QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
    TIME        VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
    SLOPE       XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID      ENDST

3470 ENCROACHMENT STATIONS=     2000.0     2016.0  TYPE=      1  TARGET=        16.000
     119.40       7.98     942.17       0.00       0.00     942.50        .33        .10        .13     941.86
      140.          0.      140.          0.         0.       30.          0.         0.         0.  100000.00
        .01       0.00       4.62       0.00       .080       .040       .080       .038     934.19    2000.00
   .009528          6.         6.         6.          4          0          0     -86.56      16.00    2016.00

*SECNO 119.500

3470 ENCROACHMENT STATIONS=     2000.0     2016.0  TYPE=      1  TARGET=        16.000
     119.50       8.39     942.58       0.00       0.00     942.60        .02        .00        .09     941.86
      140.          0.      140.          0.         0.       123.         0.         0.         0.  100000.00
        .01       0.00       1.13       0.00       .080       .040       .080       .038     934.19    2000.00
   .000159          1.         1.         1.          2          0          0       0.00      16.00    2016.00

*SECNO 119.600

3470 ENCROACHMENT STATIONS=     1950.0     2054.0  TYPE=      1  TARGET=       104.000
     119.60       8.40     942.59       0.00       0.00     942.61        .02        .01        .00     941.86
      140.          6.      130.          4.        36.       124.         25.         0.         0.     941.88
        .02        .17       1.05        .16       .080       .040       .080       .038     934.19    1950.00
   .000129         44.        44.        44.          2          0          0       0.00     104.00    2054.00

CCHV=     .100 CEHV=     .300
*SECNO 119.900
     119.90       7.53     942.61       0.00       0.00     942.61        .00        .01        .00     935.99
      140.          5.      124.         10.        40.       251.         73.         2.         1.     936.49
        .16        .14        .49        .14       .080       .040       .080       .039     935.08    2564.81
   .000013        230.       230.       230.          1          0          0       0.00      77.19    2642.00

CCHV=     .300 CEHV=     .500
*SECNO 120.000

3265 DIVIDED FLOW

     120.00       7.53     942.61       0.00       0.00     942.61        .00        .00        .00     943.60
      140.          0.      140.          0.         0.       251.         5.         2.         1.     943.60
        .16       0.00        .56        .04       .080       .040       .080       .039     935.08    2577.00
   .000025          8.         8.         8.          0          0          0       0.00      51.59    2641.91
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOEL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.83 | 3.00 | 0.00 | 35.00 | 0.00 | 210.00 | 0.00 | 935.08 | 935.08 |

*SECNO 120.100
PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 942.62 | 942.61 | 0.00 | 0. | 140. | 210. | 214. | 941.20 | 943.60 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.60 ELREA= 943.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 120.10 | 7.54 | 942.62 | 0.00 | 0.00 | 942.62 | .00 | .01 | 0.00 | 943.60 |
| 140. | 0. | 140. | 0. | 0. | 252. | 0. | 2. | 1. | 943.60 |
| .19 | 0.00 | .56 | 0.00 | .080 | .040 | .080 | .039 | 935.08 | 2577.00 |
| .000025 | 44. | 44. | 44. | 0 | 0 | 0 | 0.00 | 35.00 | 2612.00 |

*SECNO 120.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.60 ELREA= 943.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 120.20 | 7.54 | 942.62 | 0.00 | 0.00 | 942.62 | .00 | .00 | .00 | 943.60 |
| 140. | 0. | 140. | 0. | 0. | 251. | 0. | 2. | 1. | 943.60 |
| .19 | 0.00 | .56 | 0.00 | .080 | .040 | .080 | .039 | 935.08 | 2577.00 |
| .000025 | 8. | 8. | 8. | 0 | 0 | 0 | 0.00 | 35.00 | 2612.00 |

*SECNO 121.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 121.00 | 6.93 | 942.62 | 0.00 | 0.00 | 942.62 | .01 | .00 | .00 | 942.61 |
| 140. | 0. | 140. | 0. | 0. | 241. | 3. | 3. | 1. | 942.04 |
| .22 | .00 | .58 | .04 | .080 | .040 | .080 | .039 | 935.69 | 2587.77 |
| .000030 | 66. | 66. | 66. | 0 | 0 | 0 | 0.00 | 48.85 | 2636.63 |

CCHV= .100 CEHV= .300
*SECNO 140.000

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3280 CROSS SECTION 140.00 EXTENDED .67 FEET

MILL RACE SECTION B

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 140.00 | 7.33 | 942.64 | 0.00 | 0.00 | 942.64 | .00 | .02 | .00 | 938.99 |
| 140. | 2. | 126. | 12. | 16. | 220. | 107. | 7. | 2. | 939.05 |
| .58 | .11 | .57 | .11 | .080 | .040 | .080 | .040 | 935.31 | 2289.00 |
| .000024 | 800. | 680. | 600. | 0 | 0 | 0 | 0.00 | 148.79 | 2437.79 |

1490 NH CARD USED
*SECNO 141.000
3280 CROSS SECTION 141.00 EXTENDED .76 FEET

MILL RACE SECTION C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 141.00 | 6.05 | 942.66 | 0.00 | 0.00 | 942.67 | .01 | .02 | .00 | 941.90 |
| 140. | 0. | 140. | 0. | 0. | 232. | 0. | 13. | 4. | 943.30 |
| .97 | 0.00 | .60 | 0.00 | .080 | .040 | .080 | .040 | 936.61 | 2044.00 |
| .000035 | 875. | 850. | 850. | 0 | 0 | 0 | 0.00 | 47.39 | 2091.39 |

*SECNO 141.800

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 141.80 | 5.85 | 942.68 | 0.00 | 0.00 | 942.68 | .01 | .01 | .00 | 939.26 |
| 140. | 2. | 134. | 5. | 10. | 195. | 29. | 15. | 5. | 939.10 |
| 1.14 | .15 | .69 | .17 | .080 | .040 | .080 | .040 | 936.83 | 2204.68 |
| .000039 | 400. | 400. | 400. | 0 | 0 | 0 | 0.00 | 60.32 | 2265.00 |

*SECNO 141.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 141.90 | 4.68 | 942.68 | 0.00 | 0.00 | 942.69 | .01 | .01 | .00 | 944.95 |
| 140. | 0. | 140. | 0. | 0. | 164. | 0. | 15. | 5. | 944.95 |
| 1.17 | 0.00 | .85 | 0.00 | .080 | .040 | .080 | .040 | 938.00 | 977.00 |
| .000053 | 99. | 99. | 99. | 0 | 0 | 0 | 0.00 | 35.00 | 1012.00 |

CCHV= .300 CEHV= .500

SPECIAL BRIDGE

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COEQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.70 | 3.00 | 0.00 | 35.00 | 0.00 | 157.50 | 0.00 | 938.00 | 938.00 |

*SECNO 142.000
PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 942.70 | 942.69 | 0.00 | 0. | 140. | 158. | 157. | 942.48 | 944.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 142.00 | 4.69 | 942.69 | 0.00 | 0.00 | 942.70 | .01 | .01 | 0.00 | 944.95 |
| 140. | 0. | 140. | 0. | 0. | 164. | 0. | 15. | 5. | 944.95 |
| 1.18 | 0.00 | .85 | 0.00 | .080 | .040 | .080 | .040 | 938.00 | 977.00 |
| .000092 | 43. | 43. | 43. | 1 | 0 | 0 | 0.00 | 35.00 | 1012.00 |

*SECNO 142.300
3280 CROSS SECTION 142.30 EXTENDED 1.49 FEET

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 142.30 | 8.27 | 942.70 | 0.00 | 0.00 | 942.70 | .00 | .00 | .00 | 941.07 |
| 140. | 2. | 138. | 0. | 31. | 504. | 2. | 16. | 5. | 942.28 |
| 1.33 | .05 | .27 | .01 | .080 | .040 | .080 | .040 | 934.43 | 2066.00 |
| .000005 | 140. | 140. | 140. | 0 | 0 | 0 | 0.00 | 110.72 | 2176.72 |

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion City & Township

3) WATERCOURSE: Mill Race

4) DOCUMENT TYPE: Floodway

00BREAK00

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

I1      FIS CITY OF ALBION, CALHOUN CO., MICHIGAN
I2      100-YEAR FLOOD   ENCROACHED FLOODWAY
I3      MILL RACE

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
     -10.       6.        0.        0.   0.000000     0.00      0.0       0.    937.250    0.000
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000    0.000    -1.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

MOORE BUSINESS FORMS, INC. 27

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOEL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*PROF 2

CCHV= .100 CEHV= .300
*SECNO 119.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.20 | 5.89 | 937.25 | 0.00 | 937.25 | 937.26 | .01 | 0.00 | 0.00 | 936.82 |
| 140. | 0. | 140. | 0. | 2. | 184. | 0. | 0. | 0. | 939.72 |
| 0.00 | .06 | .76 | 0.00 | .080 | .040 | .080 | 0.000 | 931.36 | 1974.79 |
| .000071 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 54.72 | 2029.50 |

CCHV= .300 CEHV= .500
*SECNO 119.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.25 | 3.16 | 937.20 | 0.00 | 0.00 | 937.34 | .14 | .01 | .06 | 941.86 |
| 140. | 0. | 140. | 0. | 0. | 47. | 0. | 0. | 0. | 941.88 |
| .01 | 0.00 | 2.97 | 0.00 | .080 | .040 | .080 | .039 | 934.04 | 2000.00 |
| .002211 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 16.00 | 2016.00 |

*SECNO 119.300

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 938.74 MAX ELLC= 0.00

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 2000.0 2016.0 TYPE= 1 TARGET= 16.000
MILL RACE SECTION A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.30 | 7.30 | 941.49 | 941.49 | 0.00 | 942.27 | .78 | .01 | .32 | 941.86 |
| 140. | 0. | 140. | 0. | 0. | 20. | 0. | 0. | 0. | 100000.00 |
| .01 | 0.00 | 7.07 | 0.00 | .080 | .040 | .080 | .039 | 934.19 | 2000.00 |
| .038578 | 1. | 1. | 1. | 20 | 15 | 0 | -86.20 | 16.00 | 2016.00 |

*SECNO 119.400

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 938.74 MAX ELLC= 0.00

```
    SECNO       DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS     BANK ELEV
    Q           QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
    TIME        VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
    SLOPE       XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID      ENDST

3470 ENCROACHMENT STATIONS=     2000.0     2016.0  TYPE=      1  TARGET=        16.000
     119.40       7.98     942.17       0.00       0.00     942.50        .33        .10        .13     941.86
      140.          0.      140.          0.         0.       30.          0.         0.         0.  100000.00
        .01       0.00       4.62       0.00       .080       .040       .080       .038     934.19    2000.00
    .009528         6.         6.         6.          4          0          0     -86.56      16.00    2016.00

*SECNO 119.500

3470 ENCROACHMENT STATIONS=     2000.0     2016.0  TYPE=      1  TARGET=        16.000
     119.50       8.39     942.58       0.00       0.00     942.60        .02        .00        .09     941.86
      140.          0.      140.          0.         0.       123.         0.         0.         0.  100000.00
        .01       0.00       1.13       0.00       .080       .040       .080       .038     934.19    2000.00
    .000159         1.         1.         1.          2          0          0       0.00      16.00    2016.00

*SECNO 119.600

3470 ENCROACHMENT STATIONS=     1950.0     2054.0  TYPE=      1  TARGET=       104.000
     119.60       8.40     942.59       0.00       0.00     942.61        .02        .01        .00     941.86
      140.          6.      130.          4.        36.       124.        25.         0.         0.     941.88
        .02        .17       1.05        .16       .080       .040       .080       .038     934.19    1950.00
    .000129        44.        44.        44.          2          0          0       0.00     104.00    2054.00

CCHV=    .100 CEHV=     .300
*SECNO 119.900
 2800 NAT Q1=      390.86  WSEL=      942.61  ENC Q1=      390.86  WSEL=      942.71  RATIO=   0.0000
 NAT Q1=      400.  RATIOS LOB,CH,ROB=    .0396    .8847    .0756  WSEL=      942.71

3470 ENCROACHMENT STATIONS=     2571.5     2625.5  TYPE=      4  TARGET=         .024
     119.90       7.53     942.61       0.00     942.61     942.61        .00        .01        .00     935.99
      140.          4.      127.          9.        28.       251.        58.         2.         1.     936.49
        .15        .14        .51        .16       .080       .040       .080       .039     935.08    2571.52
    .000013        230.       230.       230.          0          0          0       0.00      53.93    2625.45

CCHV=    .300 CEHV=     .500
*SECNO 120.000
 2800 NAT Q1=      282.10  WSEL=      942.61  ENC Q1=      287.43  WSEL=      942.71  RATIO=  -.0189
 NAT Q1=      288.  RATIOS LOB,CH,ROB=  0.0000    .9980    .0020  WSEL=      942.71
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| G | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | IWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 2577.0 2612.0 TYPE= 4 TARGET= .002

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 120.00 | 7.53 | 942.61 | 0.00 | 942.61 | 942.61 | .00 | .00 | .00 | 943.60 |
| 140. | 0. | 140. | 0. | 0. | 251. | 0. | 2. | 1. | 943.60 |
| .16 | 0.00 | .56 | 0.00 | .080 | .040 | .080 | .039 | 935.08 | 2577.00 |
| .000025 | 8. | 8. | 8. | 0 | 0 | 0 | 0.00 | 35.00 | 2612.00 |

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.83 | 3.00 | 0.00 | 35.00 | 0.00 | 210.00 | 0.00 | 935.08 | 935.08 |

*SECNO 120.100
3700. BRIDGE STENCL= 2577.00 STENCR= 2612.00
2800 NAT Q1= 282.39 WSEL= 942.62 ENC Q1= 287.89 WSEL= 942.72 RATIO= -.0195
NAT Q1= 288. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 942.72
PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 942.62 | 942.61 | 0.00 | 0. | 140. | 210. | 214. | 941.20 | 943.60 |

3470 ENCROACHMENT STATIONS= 2577.0 2612.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.60 ELREA= 943.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 120.10 | 7.54 | 942.62 | 0.00 | 942.62 | 942.62 | .00 | .01 | 0.00 | 943.60 |
| 140. | 0. | 140. | 0. | 0. | 251. | 0. | 2. | 1. | 943.60 |
| .18 | 0.00 | .56 | 0.00 | .080 | .040 | .080 | .039 | 935.08 | 2577.00 |
| .000025 | 44. | 44. | 44. | 2 | 0 | 0 | 0.00 | 35.00 | 2612.00 |

*SECNO 120.200
2800 NAT Q1= 282.12 WSEL= 942.62 ENC Q1= 287.90 WSEL= 942.72 RATIO= -.0205
NAT Q1= 288. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 942.72

3470 ENCROACHMENT STATIONS= 2577.0 2612.0 TYPE= 4 TARGET= 0.000

```
    SECNO      DEPTH     CWSEL     CRIWS     WSELK      EG         HV         HL        OLOSS    BANK ELEV
    G          QLOB      QCH       QROB      ALOB       ACH        AROB       VOL       TWA    LEFT/RIGHT
    TIME       VLOB      VCH       VROB      XNL        XNCH       XNR        WTN       ELMIN      SSTA
    SLOPE      XLOBL     XLCH      XLOBR     ITRIAL     IDC        ICONT      CORAR     TOPWID     ENDST

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=      943.60 ELREA=      943.60

     120.20      7.54    942.62      0.00    942.62    942.62       .00       .00       .00    943.60
       140.        0.      140.        0.        0.      251.        0.        2.        1.    943.60
        .18       0.00       .56       0.00      .080      .040      .080      .039    935.08   2577.00
    .000025         8.        8.        8.         0         0         0      0.00     35.00   2612.00

 *SECNO 121.000
  2800 NAT Q1=     255.76  WSEL=     942.62  ENC Q1=     262.25  WSEL=     942.72  RATIO=   -.0254
  NAT Q1=     263.  RATIOS LOB,CH,ROB=    .0000    .9985    .0015  WSEL=     942.72

 3470 ENCROACHMENT STATIONS=     2588.0     2626.0  TYPE=      4  TARGET=         .001
     121.00      6.93    942.62      0.00    942.62    942.62       .01       .00       .00    942.61
       140.        0.      140.        0.        0.      241.        0.        2.        1.    942.04
        .22       0.00       .58       0.00      .080      .040      .080      .039    935.69   2588.00
    .000030        66.       66.       66.         0         0         0      0.00     38.00   2626.00

 CCHV=     .100 CEHV=     .300
 *SECNO 140.000
  2800 NAT Q1=     287.43  WSEL=     942.64  ENC Q1=     287.43  WSEL=     942.74  RATIO=   -.0000
  NAT Q1=     298.  RATIOS LOB,CH,ROB=    .0130    .8934    .0936  WSEL=     942.74
 3280 CROSS SECTION     140.00 EXTENDED         .67 FEET

 3470 ENCROACHMENT STATIONS=     2302.0     2377.0  TYPE=      4  TARGET=         .037
         MILL RACE  SECTION B

     140.00      7.33    942.64      0.00    942.64    942.64       .01       .02       .00    938.99
       140.        0.      130.       10.        0.      220.       69.        7.        1.    939.05
        .55       0.00       .59       .15      .080      .040      .080      .040    935.31   2302.00
    .000028       800.      680.      600.         0         0         0      0.00     75.02   2377.02

 1490 NH CARD USED
 *SECNO 141.000
  2800 NAT Q1=     236.11  WSEL=     942.66  ENC Q1=     243.49  WSEL=     942.76  RATIO=   -.0313
  NAT Q1=     243.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     942.76
 3280 CROSS SECTION     141.00 EXTENDED         .77 FEET
```

```
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3470 ENCROACHMENT STATIONS=     2044.0     2092.0  TYPE=      4  TARGET=        0.000
        MILL RACE  SECTION C

   141.00      6.06    942.67      0.00    942.66    942.67       .01       .03       .00    941.90
     140.        0.      140.        0.        0.      232.        0.       12.        3.    943.30
      .94      0.00       .60      0.00      .080      .040      .080      .040    936.61   2044.00
  .000036      875.      850.      850.         0         0         0      0.00     47.39   2091.39

*SECNO 141.800
 2800 NAT Q1=     224.04  WSEL=     942.68  ENC Q1=     224.04  WSEL=     942.78  RATIO=  0.0000
 NAT Q1=     232.  RATIOS LOB,CH,ROB=    .0118    .9524    .0357  WSEL=     942.78

3470 ENCROACHMENT STATIONS=     2211.0     2251.7  TYPE=      4  TARGET=         .034
   141.80      5.85    942.68      0.00    942.68    942.69       .01       .02       .00    939.26
     140.        0.      138.        2.        0.      195.        9.       14.        3.    939.10
     1.10      0.00       .71       .17      .080      .040      .080      .040    936.83   2211.00
  .000047      400.      400.      400.         0         0         0      0.00     40.72   2251.72

*SECNO 141.900
 2800 NAT Q1=     145.32  WSEL=     942.68  ENC Q1=     150.03  WSEL=     942.78  RATIO=  -.0324
 NAT Q1=     150.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     942.78

3470 ENCROACHMENT STATIONS=      977.0     1012.0  TYPE=      4  TARGET=        0.000
   141.90      4.68    942.68      0.00    942.68    942.70       .01       .01       .00    944.95
     140.        0.      140.        0.        0.      164.        0.       14.        3.    944.95
     1.13      0.00       .85      0.00      .080      .040      .080      .040    938.00    977.00
  .000092       99.       99.       99.         0         0         0      0.00     35.00   1012.00

CCHV=     .300 CEHV=     .500
SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED
SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.00      1.70      3.00      0.00     35.00      0.00    157.50      0.00    938.00    938.00

*SECNO 142.000
     3700.   BRIDGE STENCL=     977.00    STENCR=    1012.00
 2800 NAT Q1=     145.99  WSEL=     942.69  ENC Q1=     150.49  WSEL=     942.79  RATIO=  -.0308
 NAT Q1=     150.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     942.79
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| G | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 942.71 | 942.70 | 0.00 | 0. | 140. | 158. | 157. | 942.48 | 944.45 |

3470 ENCROACHMENT STATIONS= 977.0 1012.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 142.00 | 4.69 | 942.69 | 0.00 | 942.69 | 942.71 | .01 | .01 | 0.00 | 944.95 |
| 140. | 0. | 140. | 0. | 0. | 164. | 0. | 14. | 3. | 944.95 |
| 1.15 | 0.00 | .85 | 0.00 | .080 | .040 | .080 | .040 | 938.00 | 977.00 |
| .000092 | 43. | 43. | 43. | 2 | 0 | 0 | 0.00 | 35.00 | 1012.00 |

*SECNO 142.300
2800 NAT Q1= 618.30 WSEL= 942.70 ENC Q1= 627.77 WSEL= 942.80 RATIO= -.0153
NAT Q1= 636. RATIOS LOB,CH,ROB= .0129 .9867 .0003 WSEL= 942.80
3280 CROSS SECTION 142.30 EXTENDED 1.49 FEET

3470 ENCROACHMENT STATIONS= 2086.0 2168.0 TYPE= 4 TARGET= .013

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 142.30 | 8.28 | 942.71 | 0.00 | 942.70 | 942.71 | .00 | .00 | .00 | 941.07 |
| 140. | 0. | 140. | 0. | 0. | 504. | 0. | 15. | 3. | 942.28 |
| 1.29 | 0.00 | .28 | 0.00 | .080 | .040 | .080 | .040 | 934.43 | 2086.00 |
| .000005 | 140. | 140. | 140. | 0 | 0 | 0 | 0.00 | 82.00 | 2168.00 |

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MILL RACE
SUMMARY PRINTOUT

| | SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 119.200 | 937.25 | 1974.79 | 1984.00 | 2035.00 | 2029.50 | 54.72 | 0.00 |
| | 119.200 | 937.25 | 1974.79 | 1984.00 | 2035.00 | 2029.50 | 54.72 | 0.00 |
| | 119.250 | 937.20 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 60.00 |
| | 119.250 | 937.20 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 60.00 |
| * | 119.300 | 941.49 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| * | 119.300 | 941.49 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.400 | 942.17 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 6.00 |
| | 119.400 | 942.17 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 6.00 |
| | 119.500 | 942.58 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.500 | 942.58 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.600 | 942.59 | 1950.00 | 2000.00 | 2016.00 | 2054.00 | 104.00 | 44.00 |
| | 119.600 | 942.59 | 1950.00 | 2000.00 | 2016.00 | 2054.00 | 104.00 | 44.00 |
| | 119.900 | 942.61 | 2564.81 | 2577.00 | 2612.00 | 2642.00 | 77.19 | 230.00 |
| | 119.900 | 942.61 | 2571.52 | 2577.00 | 2612.00 | 2625.45 | 53.93 | 230.00 |
| | 120.000 | 942.61 | 2577.00 | 2577.00 | 2612.00 | 2641.91 | 51.59 | 8.00 |
| | 120.000 | 942.61 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| | 120.100 | 942.62 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 44.00 |
| | 120.100 | 942.62 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 44.00 |
| | 120.200 | 942.62 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| | 120.200 | 942.62 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| | 121.000 | 942.62 | 2587.77 | 2588.00 | 2626.00 | 2636.63 | 48.85 | 66.00 |
| | 121.000 | 942.62 | 2588.00 | 2588.00 | 2626.00 | 2626.00 | 38.00 | 66.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 140.000 | 942.64 | 2289.00 | 2302.00 | 2340.00 | 2437.79 | 148.79 | 680.00 |
| 140.000 | 942.64 | 2302.00 | 2302.00 | 2340.00 | 2377.02 | 75.02 | 680.00 |
| 141.000 | 942.66 | 2044.00 | 2044.00 | 2092.00 | 2091.39 | 47.39 | 850.00 |
| 141.000 | 942.67 | 2044.00 | 2044.00 | 2092.00 | 2091.39 | 47.39 | 850.00 |
| 141.800 | 942.68 | 2204.68 | 2211.00 | 2249.00 | 2265.00 | 60.32 | 400.00 |
| 141.800 | 942.68 | 2211.00 | 2211.00 | 2249.00 | 2251.72 | 40.72 | 400.00 |
| 141.900 | 942.68 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 99.00 |
| 141.900 | 942.68 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 99.00 |
| 142.000 | 942.69 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 43.00 |
| 142.000 | 942.69 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 43.00 |
| 142.300 | 942.70 | 2066.00 | 2086.00 | 2168.00 | 2176.72 | 110.72 | 140.00 |
| 142.300 | 942.71 | 2086.00 | 2086.00 | 2168.00 | 2168.00 | 82.00 | 140.00 |

MILL RACE

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 119.200 | 0.00 | 0.00 | 0.00 | 931.36 | 140.00 | 937.25 | 0.00 | 937.26 | .71 | .76 | 186.18 | 166.17 |
| | 119.200 | 0.00 | 0.00 | 0.00 | 931.36 | 140.00 | 937.25 | 0.00 | 937.26 | .71 | .76 | 186.18 | 166.17 |
| | 119.250 | 60.00 | 0.00 | 0.00 | 934.04 | 140.00 | 937.20 | 0.00 | 937.34 | 22.11 | 2.97 | 47.12 | 29.77 |
| | 119.250 | 60.00 | 0.00 | 0.00 | 934.04 | 140.00 | 937.20 | 0.00 | 937.34 | 22.11 | 2.97 | 47.12 | 29.77 |
| * | 119.300 | 1.00 | 938.74 | 0.00 | 934.19 | 140.00 | 941.49 | 941.49 | 942.27 | 385.78 | 7.07 | 19.79 | 7.13 |
| * | 119.300 | 1.00 | 938.74 | 0.00 | 934.19 | 140.00 | 941.49 | 941.49 | 942.27 | 385.78 | 7.07 | 19.79 | 7.13 |
| | 119.400 | 6.00 | 938.74 | 0.00 | 934.19 | 140.00 | 942.17 | 0.00 | 942.50 | 95.28 | 4.62 | 30.27 | 14.34 |
| | 119.400 | 6.00 | 938.74 | 0.00 | 934.19 | 140.00 | 942.17 | 0.00 | 942.50 | 95.28 | 4.62 | 30.27 | 14.34 |
| | 119.500 | 1.00 | 0.00 | 0.00 | 934.19 | 140.00 | 942.58 | 0.00 | 942.60 | 1.59 | 1.13 | 123.38 | 110.87 |
| | 119.500 | 1.00 | 0.00 | 0.00 | 934.19 | 140.00 | 942.58 | 0.00 | 942.60 | 1.59 | 1.13 | 123.38 | 110.87 |
| | 119.600 | 44.00 | 0.00 | 0.00 | 934.19 | 140.00 | 942.59 | 0.00 | 942.61 | 1.29 | 1.05 | 184.63 | 123.29 |
| | 119.600 | 44.00 | 0.00 | 0.00 | 934.19 | 140.00 | 942.59 | 0.00 | 942.61 | 1.29 | 1.05 | 184.63 | 123.29 |
| | 119.900 | 230.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.61 | 0.00 | 942.61 | .13 | .49 | 364.70 | 390.86 |
| | 119.900 | 230.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.61 | 0.00 | 942.61 | .13 | .51 | 337.40 | 381.54 |
| | 120.000 | 8.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.61 | 0.00 | 942.61 | .25 | .56 | 255.88 | 282.10 |
| | 120.000 | 8.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.61 | 0.00 | 942.61 | .25 | .56 | 251.13 | 281.70 |
| | 120.100 | 44.00 | 943.60 | 941.20 | 935.08 | 140.00 | 942.62 | 0.00 | 942.62 | .25 | .56 | 251.55 | 282.39 |
| | 120.100 | 44.00 | 943.60 | 941.20 | 935.08 | 140.00 | 942.62 | 0.00 | 942.62 | .25 | .56 | 251.38 | 282.12 |
| | 120.200 | 8.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.62 | 0.00 | 942.62 | .25 | .56 | 251.39 | 282.12 |
| | 120.200 | 8.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.62 | 0.00 | 942.62 | .25 | .56 | 251.39 | 282.13 |
| | 121.000 | 66.00 | 0.00 | 0.00 | 935.69 | 140.00 | 942.62 | 0.00 | 942.62 | .30 | .58 | 244.34 | 255.76 |
| | 121.000 | 66.00 | 0.00 | 0.00 | 935.69 | 140.00 | 942.62 | 0.00 | 942.62 | .30 | .58 | 241.27 | 253.54 |
| | 140.000 | 680.00 | 0.00 | 0.00 | 935.31 | 140.00 | 942.64 | 0.00 | 942.64 | .24 | .57 | 342.36 | 287.43 |
| | 140.000 | 680.00 | 0.00 | 0.00 | 935.31 | 140.00 | 942.64 | 0.00 | 942.64 | .28 | .59 | 288.67 | 263.19 |
| | 141.000 | 850.00 | 0.00 | 0.00 | 936.61 | 140.00 | 942.66 | 0.00 | 942.67 | .35 | .60 | 232.18 | 236.11 |
| | 141.000 | 850.00 | 0.00 | 0.00 | 936.61 | 140.00 | 942.67 | 0.00 | 942.67 | .36 | .60 | 232.41 | 231.87 |
| | 141.800 | 400.00 | 0.00 | 0.00 | 936.83 | 140.00 | 942.68 | 0.00 | 942.68 | .39 | .69 | 233.89 | 224.04 |
| | 141.800 | 400.00 | 0.00 | 0.00 | 936.83 | 140.00 | 942.68 | 0.00 | 942.69 | .47 | .71 | 204.27 | 204.78 |
| | 141.900 | 99.00 | 0.00 | 0.00 | 938.00 | 140.00 | 942.68 | 0.00 | 942.69 | .93 | .85 | 163.75 | 145.32 |
| | 141.900 | 99.00 | 0.00 | 0.00 | 938.00 | 140.00 | 942.68 | 0.00 | 942.70 | .92 | .85 | 164.06 | 145.73 |
| | 142.000 | 43.00 | 944.45 | 942.48 | 938.00 | 140.00 | 942.69 | 0.00 | 942.70 | .92 | .85 | 164.25 | 145.99 |
| | 142.000 | 43.00 | 944.45 | 942.48 | 938.00 | 140.00 | 942.69 | 0.00 | 942.71 | .92 | .85 | 164.30 | 146.06 |

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 142.300 | 140.00 | 0.00 | 0.00 | 934.43 | 140.00 | 942.70 | 0.00 | 942.70 | .05 | .27 | 536.56 | 618.30 |
| 142.300 | 140.00 | 0.00 | 0.00 | 934.43 | 140.00 | 942.71 | 0.00 | 942.71 | .05 | .28 | 503.59 | 601.29 |

MILL RACE

SUMMARY PRINTOUT TABLE 150

| | SECNO | C | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 119.200 | 140.00 | 937.25 | 0.00 | 0.00 | 0.00 | 54.72 | 0.00 |
| | 119.200 | 140.00 | 937.25 | 0.00 | 0.00 | 0.00 | 54.72 | 0.00 |
| | 119.250 | 140.00 | 937.20 | 0.00 | -.05 | 0.00 | 16.00 | 60.00 |
| | 119.250 | 140.00 | 937.20 | 0.00 | -.05 | 0.00 | 16.00 | 60.00 |
| * | 119.300 | 140.00 | 941.49 | 0.00 | 4.29 | 0.00 | 16.00 | 1.00 |
| * | 119.300 | 140.00 | 941.49 | 0.00 | 4.29 | 0.00 | 16.00 | 1.00 |
| | 119.400 | 140.00 | 942.17 | 0.00 | .68 | 0.00 | 16.00 | 6.00 |
| | 119.400 | 140.00 | 942.17 | 0.00 | .68 | 0.00 | 16.00 | 6.00 |
| | 119.500 | 140.00 | 942.58 | 0.00 | .41 | 0.00 | 16.00 | 1.00 |
| | 119.500 | 140.00 | 942.58 | 0.00 | .41 | 0.00 | 16.00 | 1.00 |
| | 119.600 | 140.00 | 942.59 | 0.00 | .01 | 0.00 | 104.00 | 44.00 |
| | 119.600 | 140.00 | 942.59 | 0.00 | .01 | 0.00 | 104.00 | 44.00 |
| | 119.900 | 140.00 | 942.61 | 0.00 | .02 | 0.00 | 77.19 | 230.00 |
| | 119.900 | 140.00 | 942.61 | -.00 | .02 | -.00 | 53.93 | 230.00 |
| | 120.000 | 140.00 | 942.61 | 0.00 | -.00 | 0.00 | 51.59 | 8.00 |
| | 120.000 | 140.00 | 942.61 | .00 | -.00 | .00 | 35.00 | 8.00 |
| | 120.100 | 140.00 | 942.62 | 0.00 | .01 | 0.00 | 35.00 | 44.00 |
| | 120.100 | 140.00 | 942.62 | .00 | .01 | .00 | 35.00 | 44.00 |
| | 120.200 | 140.00 | 942.62 | 0.00 | .00 | 0.00 | 35.00 | 8.00 |
| | 120.200 | 140.00 | 942.62 | .00 | .00 | .00 | 35.00 | 8.00 |
| | 121.000 | 140.00 | 942.62 | 0.00 | .00 | 0.00 | 48.85 | 66.00 |
| | 121.000 | 140.00 | 942.62 | .00 | .00 | .00 | 38.00 | 66.00 |
| | 140.000 | 140.00 | 942.64 | 0.00 | .02 | 0.00 | 148.79 | 680.00 |
| | 140.000 | 140.00 | 942.64 | .00 | .02 | .00 | 75.02 | 680.00 |
| | 141.000 | 140.00 | 942.66 | 0.00 | .02 | 0.00 | 47.39 | 850.00 |
| | 141.000 | 140.00 | 942.67 | .00 | .03 | .00 | 47.39 | 850.00 |
| | 141.800 | 140.00 | 942.68 | 0.00 | .01 | 0.00 | 60.32 | 400.00 |
| | 141.800 | 140.00 | 942.68 | .01 | .01 | .01 | 40.72 | 400.00 |
| | 141.900 | 140.00 | 942.68 | 0.00 | .00 | 0.00 | 35.00 | 99.00 |
| | 141.900 | 140.00 | 942.68 | .01 | .00 | .01 | 35.00 | 99.00 |
| | 142.000 | 140.00 | 942.69 | 0.00 | .01 | 0.00 | 35.00 | 43.00 |
| | 142.000 | 140.00 | 942.69 | .01 | .01 | .01 | 35.00 | 43.00 |

| SECNO | C | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 142.300 | 140.00 | 942.70 | 0.00 | .02 | 0.00 | 110.72 | 140.00 |
| 142.300 | 140.00 | 942.71 | .01 | .02 | .01 | 82.00 | 140.00 |

SUMMARY OF ERRORS

```
CAUTION  SECNO=  119.300  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=  119.300  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=  119.300  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=  119.300  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=  119.300  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=  119.300  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL
```

FLOODWAY DATA, MILL RACE
PROFILE NO. 2

| STATION | FLOODWAY WIDTH | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 119.200 | 55. | 186. | .8 | 937.3 | 937.3 | 0.0 |
| 119.250 | 16. | 47. | 3.0 | 937.2 | 937.2 | 0.0 |
| 119.300 | 16. | 20. | 7.1 | 941.5 | 941.5 | 0.0 |
| 119.400 | 16. | 30. | 4.6 | 942.2 | 942.2 | 0.0 |
| 119.500 | 16. | 123. | 1.1 | 942.6 | 942.6 | 0.0 |
| 119.600 | 104. | 185. | .8 | 942.6 | 942.6 | 0.0 |
| 119.900 | 54. | 337. | .4 | 942.6 | 942.6 | 0.0 |
| 120.000 | 35. | 251. | .6 | 942.6 | 942.6 | 0.0 |
| 120.100 | 35. | 251. | .6 | 942.6 | 942.6 | 0.0 |
| 120.200 | 35. | 251. | .6 | 942.6 | 942.6 | 0.0 |
| 121.000 | 38. | 241. | .6 | 942.6 | 942.6 | 0.0 |
| 140.000 | 75. | 289. | .5 | 942.6 | 942.6 | 0.0 |
| 141.000 | 47. | 232. | .6 | 942.7 | 942.7 | 0.0 |
| 141.800 | 41. | 204. | .7 | 942.7 | 942.7 | 0.0 |
| 141.900 | 35. | 164. | .9 | 942.7 | 942.7 | 0.0 |
| 142.000 | 35. | 164. | .9 | 942.7 | 942.7 | 0.0 |
| 142.300 | 82. | 504. | .3 | 942.7 | 942.7 | 0.0 |




1) COUNTY: Calhoun

2) STUDY NAME: Albion City & Township

3) WATERCOURSE: Mill Race

4) DOCUMENT TYPE: Summary



**********
HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
ERROR CORR - 01,02,03,04
MODIFICATION - 50,51,52,53,54
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MILL RACE

SUMMARY PRINTOUT

| | SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 119.200 | 935.77 | 1984.00 | 1984.00 | 2035.00 | 2026.21 | 42.21 | 0.00 |
| | 119.200 | 937.04 | 1979.29 | 1984.00 | 2035.00 | 2029.03 | 49.75 | 0.00 |
| | 119.200 | 937.54 | 1968.57 | 1984.00 | 2035.00 | 2030.15 | 61.58 | 0.00 |
| | 119.200 | 938.17 | 1955.07 | 1984.00 | 2035.00 | 2031.55 | 76.48 | 0.00 |
| | 119.250 | 935.75 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 60.00 |
| | 119.250 | 937.00 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 60.00 |
| | 119.250 | 937.50 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 60.00 |
| | 119.250 | 938.09 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 60.00 |
| * | 119.300 | 940.40 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| * | 119.300 | 941.36 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| * | 119.300 | 941.49 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| * | 119.300 | 942.12 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.400 | 940.91 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 6.00 |
| | 119.400 | 941.96 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 6.00 |
| | 119.400 | 942.17 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 6.00 |
| | 119.400 | 942.79 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 6.00 |
| | 119.500 | 941.12 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.500 | 942.34 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.500 | 942.58 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.500 | 943.39 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 1.00 |
| | 119.600 | 941.12 | 2000.00 | 2000.00 | 2016.00 | 2016.00 | 16.00 | 44.00 |
| | 119.600 | 942.35 | 1950.00 | 2000.00 | 2016.00 | 2054.00 | 104.00 | 44.00 |
| | 119.600 | 942.59 | 1950.00 | 2000.00 | 2016.00 | 2054.00 | 104.00 | 44.00 |
| | 119.600 | 943.43 | 1950.00 | 2000.00 | 2016.00 | 2054.00 | 104.00 | 44.00 |
| | 119.900 | 941.12 | 2567.56 | 2577.00 | 2612.00 | 2629.52 | 61.97 | 230.00 |
| | 119.900 | 942.37 | 2565.25 | 2577.00 | 2612.00 | 2638.29 | 73.04 | 230.00 |
| | 119.900 | 942.61 | 2564.81 | 2577.00 | 2612.00 | 2642.00 | 77.19 | 230.00 |
| | 119.900 | 943.46 | 2563.26 | 2577.00 | 2612.00 | 2655.16 | 91.90 | 230.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 120.000 | 941.12 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| 120.000 | 942.37 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| 120.000 | 942.61 | 2577.00 | 2577.00 | 2612.00 | 2641.91 | 51.59 | 8.00 |
| 120.000 | 943.46 | 2577.00 | 2577.00 | 2612.00 | 2655.18 | 76.29 | 8.00 |
| 120.100 | 941.12 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 44.00 |
| 120.100 | 942.37 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 44.00 |
| 120.100 | 942.62 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 44.00 |
| 120.100 | 943.48 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 44.00 |
| 120.200 | 941.12 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| 120.200 | 942.37 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| 120.200 | 942.62 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| 120.200 | 943.48 | 2577.00 | 2577.00 | 2612.00 | 2612.00 | 35.00 | 8.00 |
| 121.000 | 941.12 | 2588.00 | 2588.00 | 2626.00 | 2626.00 | 38.00 | 66.00 |
| 121.000 | 942.38 | 2588.00 | 2588.00 | 2626.00 | 2632.16 | 44.16 | 66.00 |
| 121.000 | 942.62 | 2587.77 | 2588.00 | 2626.00 | 2636.63 | 48.85 | 66.00 |
| 121.000 | 943.48 | 2565.92 | 2588.00 | 2626.00 | 2652.52 | 86.60 | 66.00 |
| 140.000 | 941.12 | 2298.97 | 2302.00 | 2340.00 | 2369.56 | 70.58 | 680.00 |
| 140.000 | 942.39 | 2289.00 | 2302.00 | 2340.00 | 2425.33 | 136.33 | 680.00 |
| 140.000 | 942.64 | 2289.00 | 2302.00 | 2340.00 | 2437.79 | 148.79 | 680.00 |
| 140.000 | 943.52 | 2289.00 | 2302.00 | 2340.00 | 2482.32 | 193.32 | 680.00 |
| 141.000 | 941.13 | 2044.84 | 2044.00 | 2092.00 | 2089.91 | 45.07 | 850.00 |
| 141.000 | 942.41 | 2044.00 | 2044.00 | 2092.00 | 2091.15 | 47.15 | 850.00 |
| 141.000 | 942.66 | 2044.00 | 2044.00 | 2092.00 | 2091.39 | 47.39 | 850.00 |
| 141.000 | 943.55 | 2044.00 | 2044.00 | 2092.00 | 2102.55 | 58.55 | 850.00 |
| 141.800 | 941.13 | 2207.70 | 2211.00 | 2249.00 | 2258.10 | 50.40 | 400.00 |
| 141.800 | 942.42 | 2205.44 | 2211.00 | 2249.00 | 2263.88 | 58.44 | 400.00 |
| 141.800 | 942.68 | 2204.68 | 2211.00 | 2249.00 | 2265.00 | 60.32 | 400.00 |
| 141.800 | 943.57 | 2157.00 | 2211.00 | 2249.00 | 2269.01 | 112.01 | 400.00 |
| 141.900 | 941.14 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 99.00 |
| 141.900 | 942.43 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 99.00 |
| 141.900 | 942.68 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 99.00 |
| 141.900 | 943.57 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 99.00 |
| 142.000 | 941.14 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 43.00 |
| 142.000 | 942.43 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 43.00 |
| 142.000 | 942.69 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 43.00 |
| 142.000 | 943.61 | 977.00 | 977.00 | 1012.00 | 1012.00 | 35.00 | 43.00 |
| 142.300 | 941.14 | 2075.95 | 2086.00 | 2168.00 | 2163.67 | 87.73 | 140.00 |
| 142.300 | 942.44 | 2066.00 | 2086.00 | 2168.00 | 2171.39 | 105.39 | 140.00 |
| 142.300 | 942.70 | 2066.00 | 2086.00 | 2168.00 | 2176.72 | 110.72 | 140.00 |
| 142.300 | 943.64 | 2066.00 | 2086.00 | 2168.00 | 2196.02 | 130.02 | 140.00 |

MILL RACE

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 119.200 | 0.00 | 0.00 | 0.00 | 931.36 | 40.00 | 935.77 | 0.00 | 935.77 | .22 | .34 | 119.30 | 86.07 |
| | 119.200 | 0.00 | 0.00 | 0.00 | 931.36 | 120.00 | 937.04 | 0.00 | 937.05 | .61 | .69 | 175.21 | 153.10 |
| | 119.200 | 0.00 | 0.00 | 0.00 | 931.36 | 140.00 | 937.54 | 0.00 | 937.55 | .57 | .71 | 203.04 | 185.22 |
| | 119.200 | 0.00 | 0.00 | 0.00 | 931.36 | 230.00 | 938.17 | 0.00 | 938.19 | .99 | 1.00 | 246.53 | 231.04 |
| | 119.250 | 60.00 | 0.00 | 0.00 | 934.04 | 40.00 | 935.75 | 0.00 | 935.80 | 13.80 | 1.66 | 24.15 | 10.77 |
| | 119.250 | 60.00 | 0.00 | 0.00 | 934.04 | 120.00 | 937.00 | 0.00 | 937.11 | 20.06 | 2.73 | 43.89 | 26.79 |
| | 119.250 | 60.00 | 0.00 | 0.00 | 934.04 | 140.00 | 937.50 | 0.00 | 937.61 | 16.62 | 2.70 | 51.90 | 34.34 |
| | 119.250 | 60.00 | 0.00 | 0.00 | 934.04 | 230.00 | 938.09 | 0.00 | 938.30 | 27.61 | 3.75 | 61.32 | 43.77 |
| * | 119.300 | 1.00 | 938.74 | 0.00 | 934.19 | 40.00 | 940.40 | 940.40 | 940.86 | 445.89 | 5.45 | 7.35 | 1.89 |
| * | 119.300 | 1.00 | 938.74 | 0.00 | 934.19 | 120.00 | 941.36 | 941.36 | 942.05 | 367.82 | 6.69 | 17.95 | 6.26 |
| * | 119.300 | 1.00 | 938.74 | 0.00 | 934.19 | 140.00 | 941.49 | 941.49 | 942.27 | 385.78 | 7.07 | 19.79 | 7.13 |
| * | 119.300 | 1.00 | 938.74 | 0.00 | 934.19 | 230.00 | 942.12 | 942.12 | 943.06 | 280.74 | 7.82 | 29.43 | 13.73 |
| | 119.400 | 6.00 | 938.74 | 0.00 | 934.19 | 40.00 | 940.91 | 0.00 | 941.07 | 110.14 | 3.23 | 12.38 | 3.81 |
| | 119.400 | 6.00 | 938.74 | 0.00 | 934.19 | 120.00 | 941.96 | 0.00 | 942.27 | 100.09 | 4.45 | 26.98 | 11.99 |
| | 119.400 | 6.00 | 938.74 | 0.00 | 934.19 | 140.00 | 942.17 | 0.00 | 942.50 | 95.28 | 4.62 | 30.27 | 14.34 |
| | 119.400 | 6.00 | 938.74 | 0.00 | 934.19 | 230.00 | 942.79 | 0.00 | 943.29 | 108.12 | 5.73 | 40.17 | 22.12 |
| | 119.500 | 1.00 | 0.00 | 0.00 | 934.19 | 40.00 | 941.12 | 0.00 | 941.12 | .23 | .40 | 99.98 | 83.11 |
| | 119.500 | 1.00 | 0.00 | 0.00 | 934.19 | 120.00 | 942.34 | 0.00 | 942.36 | 1.27 | 1.00 | 119.63 | 106.33 |
| | 119.500 | 1.00 | 0.00 | 0.00 | 934.19 | 140.00 | 942.58 | 0.00 | 942.60 | 1.59 | 1.13 | 123.38 | 110.87 |
| | 119.500 | 1.00 | 0.00 | 0.00 | 934.19 | 230.00 | 943.39 | 0.00 | 943.44 | 3.29 | 1.69 | 136.40 | 126.89 |
| | 119.600 | 44.00 | 0.00 | 0.00 | 934.19 | 40.00 | 941.12 | 0.00 | 941.12 | .23 | .40 | 100.00 | 83.14 |
| | 119.600 | 44.00 | 0.00 | 0.00 | 934.19 | 120.00 | 942.35 | 0.00 | 942.36 | 1.13 | .96 | 159.86 | 113.06 |
| | 119.600 | 44.00 | 0.00 | 0.00 | 934.19 | 140.00 | 942.59 | 0.00 | 942.61 | 1.29 | 1.05 | 184.63 | 123.29 |
| | 119.600 | 44.00 | 0.00 | 0.00 | 934.19 | 230.00 | 943.43 | 0.00 | 943.45 | 1.86 | 1.35 | 271.97 | 168.59 |
| | 119.900 | 230.00 | 0.00 | 0.00 | 935.08 | 40.00 | 941.12 | 0.00 | 941.12 | .02 | .18 | 263.84 | 255.66 |
| | 119.900 | 230.00 | 0.00 | 0.00 | 935.08 | 120.00 | 942.37 | 0.00 | 942.37 | .11 | .44 | 346.86 | 367.09 |
| | 119.900 | 230.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.61 | 0.00 | 942.61 | .13 | .49 | 364.70 | 390.86 |
| | 119.900 | 230.00 | 0.00 | 0.00 | 935.08 | 230.00 | 943.46 | 0.00 | 943.47 | .23 | .71 | 435.92 | 482.11 |
| | 120.000 | 8.00 | 0.00 | 0.00 | 935.08 | 40.00 | 941.12 | 0.00 | 941.12 | .04 | .20 | 198.97 | 199.48 |
| | 120.000 | 8.00 | 0.00 | 0.00 | 935.08 | 120.00 | 942.37 | 0.00 | 942.37 | .20 | .49 | 242.71 | 267.94 |
| | 120.000 | 8.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.61 | 0.00 | 942.61 | .25 | .56 | 255.88 | 282.10 |
| | 120.000 | 8.00 | 0.00 | 0.00 | 935.08 | 230.00 | 943.46 | 0.00 | 943.47 | .47 | .81 | 310.16 | 335.97 |
| | 120.100 | 44.00 | 943.60 | 941.20 | 935.08 | 40.00 | 941.12 | 0.00 | 941.12 | .05 | .20 | 198.97 | 174.95 |
| | 120.100 | 44.00 | 943.60 | 941.20 | 935.08 | 120.00 | 942.37 | 0.00 | 942.38 | .20 | .49 | 243.01 | 268.42 |
| | 120.100 | 44.00 | 943.60 | 941.20 | 935.08 | 140.00 | 942.62 | 0.00 | 942.62 | .25 | .56 | 251.55 | 282.39 |
| | 120.100 | 44.00 | 943.60 | 941.20 | 935.08 | 230.00 | 943.48 | 0.00 | 943.49 | .48 | .82 | 281.79 | 333.25 |

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120.200 | 8.00 | 0.00 | 0.00 | 935.08 | 40.00 | 941.12 | 0.00 | 941.12 | .04 | .20 | 198.98 | 199.48 |
| 120.200 | 8.00 | 0.00 | 0.00 | 935.08 | 120.00 | 942.37 | 0.00 | 942.38 | .20 | .49 | 242.88 | 268.21 |
| 120.200 | 8.00 | 0.00 | 0.00 | 935.08 | 140.00 | 942.62 | 0.00 | 942.62 | .25 | .56 | 251.39 | 282.12 |
| 120.200 | 8.00 | 0.00 | 0.00 | 935.08 | 230.00 | 943.48 | 0.00 | 943.49 | .48 | .82 | 281.63 | 332.96 |
| 121.000 | 66.00 | 0.00 | 0.00 | 935.69 | 40.00 | 941.12 | 0.00 | 941.12 | .06 | .22 | 184.31 | 168.56 |
| 121.000 | 66.00 | 0.00 | 0.00 | 935.69 | 120.00 | 942.38 | 0.00 | 942.38 | .25 | .52 | 233.05 | 240.20 |
| 121.000 | 66.00 | 0.00 | 0.00 | 935.69 | 140.00 | 942.62 | 0.00 | 942.62 | .30 | .58 | 244.34 | 255.76 |
| 121.000 | 66.00 | 0.00 | 0.00 | 935.69 | 230.00 | 943.48 | 0.00 | 943.50 | .52 | .83 | 302.96 | 320.06 |
| 140.000 | 680.00 | 0.00 | 0.00 | 935.31 | 40.00 | 941.12 | 0.00 | 941.13 | .06 | .24 | 179.04 | 158.62 |
| 140.000 | 680.00 | 0.00 | 0.00 | 935.31 | 120.00 | 942.39 | 0.00 | 942.40 | .21 | .53 | 307.20 | 261.73 |
| 140.000 | 680.00 | 0.00 | 0.00 | 935.31 | 140.00 | 942.64 | 0.00 | 942.64 | .24 | .57 | 342.36 | 287.43 |
| 140.000 | 680.00 | 0.00 | 0.00 | 935.31 | 230.00 | 943.52 | 0.00 | 943.52 | .34 | .75 | 493.09 | 395.94 |
| 141.000 | 850.00 | 0.00 | 0.00 | 936.61 | 40.00 | 941.13 | 0.00 | 941.13 | .09 | .25 | 161.07 | 135.54 |
| 141.000 | 850.00 | 0.00 | 0.00 | 936.61 | 120.00 | 942.41 | 0.00 | 942.42 | .30 | .54 | 220.38 | 218.15 |
| 141.000 | 850.00 | 0.00 | 0.00 | 936.61 | 140.00 | 942.66 | 0.00 | 942.67 | .35 | .60 | 232.18 | 236.11 |
| 141.000 | 850.00 | 0.00 | 0.00 | 936.61 | 230.00 | 943.55 | 0.00 | 943.56 | .57 | .84 | 276.18 | 305.71 |
| 141.800 | 400.00 | 0.00 | 0.00 | 936.83 | 40.00 | 941.13 | 0.00 | 941.14 | .11 | .29 | 148.90 | 120.26 |
| 141.800 | 400.00 | 0.00 | 0.00 | 936.83 | 120.00 | 942.42 | 0.00 | 942.43 | .34 | .62 | 219.05 | 205.11 |
| 141.800 | 400.00 | 0.00 | 0.00 | 936.83 | 140.00 | 942.68 | 0.00 | 942.68 | .39 | .69 | 233.89 | 224.04 |
| 141.800 | 400.00 | 0.00 | 0.00 | 936.83 | 230.00 | 943.57 | 0.00 | 943.58 | .58 | .93 | 321.93 | 303.18 |
| 141.900 | 99.00 | 0.00 | 0.00 | 938.00 | 40.00 | 941.14 | 0.00 | 941.14 | .26 | .36 | 109.73 | 78.24 |
| 141.900 | 99.00 | 0.00 | 0.00 | 938.00 | 120.00 | 942.43 | 0.00 | 942.44 | .81 | .77 | 154.96 | 133.55 |
| 141.900 | 99.00 | 0.00 | 0.00 | 938.00 | 140.00 | 942.68 | 0.00 | 942.69 | .93 | .85 | 163.75 | 145.32 |
| 141.900 | 99.00 | 0.00 | 0.00 | 938.00 | 230.00 | 943.57 | 0.00 | 943.60 | 1.47 | 1.18 | 195.21 | 189.67 |
| 142.000 | 43.00 | 944.45 | 942.48 | 938.00 | 40.00 | 941.14 | 0.00 | 941.14 | .32 | .36 | 109.73 | 71.20 |
| 142.000 | 43.00 | 944.45 | 942.48 | 938.00 | 120.00 | 942.43 | 0.00 | 942.44 | 1.03 | .77 | 154.93 | 118.11 |
| 142.000 | 43.00 | 944.45 | 942.48 | 938.00 | 140.00 | 942.69 | 0.00 | 942.70 | .92 | .85 | 164.25 | 145.99 |
| 142.000 | 43.00 | 944.45 | 942.48 | 938.00 | 230.00 | 943.61 | 0.00 | 943.63 | 1.45 | 1.17 | 196.31 | 191.29 |
| 142.300 | 140.00 | 0.00 | 0.00 | 934.43 | 40.00 | 941.14 | 0.00 | 941.14 | .01 | .11 | 378.44 | 392.72 |
| 142.300 | 140.00 | 0.00 | 0.00 | 934.43 | 120.00 | 942.44 | 0.00 | 942.44 | .04 | .25 | 508.82 | 574.35 |
| 142.300 | 140.00 | 0.00 | 0.00 | 934.43 | 140.00 | 942.70 | 0.00 | 942.70 | .05 | .27 | 536.56 | 618.30 |
| 142.300 | 140.00 | 0.00 | 0.00 | 934.43 | 230.00 | 943.64 | 0.00 | 943.64 | .08 | .39 | 648.40 | 790.87 |

MILL RACE

SUMMARY PRINTOUT TABLE 150

| | SECNO | G | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 119.200 | 40.00 | 935.77 | 0.00 | 0.00 | 0.00 | 42.21 | 0.00 |
| | 119.200 | 120.00 | 937.04 | 1.27 | 0.00 | 0.00 | 49.75 | 0.00 |
| | 119.200 | 140.00 | 937.54 | .50 | 0.00 | 0.00 | 61.58 | 0.00 |
| | 119.200 | 230.00 | 938.17 | .63 | 0.00 | 0.00 | 76.48 | 0.00 |
| | 119.250 | 40.00 | 935.75 | 0.00 | -.02 | 0.00 | 16.00 | 60.00 |
| | 119.250 | 120.00 | 937.00 | 1.24 | -.04 | 0.00 | 16.00 | 60.00 |
| | 119.250 | 140.00 | 937.50 | .50 | -.04 | 0.00 | 16.00 | 60.00 |
| | 119.250 | 230.00 | 938.09 | .59 | -.08 | 0.00 | 16.00 | 60.00 |
| * | 119.300 | 40.00 | 940.40 | 0.00 | 4.65 | 0.00 | 16.00 | 1.00 |
| * | 119.300 | 120.00 | 941.36 | .96 | 4.36 | 0.00 | 16.00 | 1.00 |
| * | 119.300 | 140.00 | 941.49 | .13 | 3.99 | 0.00 | 16.00 | 1.00 |
| * | 119.300 | 230.00 | 942.12 | .62 | 4.03 | 0.00 | 16.00 | 1.00 |
| | 119.400 | 40.00 | 940.91 | 0.00 | .51 | 0.00 | 16.00 | 6.00 |
| | 119.400 | 120.00 | 941.96 | 1.06 | .61 | 0.00 | 16.00 | 6.00 |
| | 119.400 | 140.00 | 942.17 | .21 | .68 | 0.00 | 16.00 | 6.00 |
| | 119.400 | 230.00 | 942.79 | .61 | .67 | 0.00 | 16.00 | 6.00 |
| | 119.500 | 40.00 | 941.12 | 0.00 | .21 | 0.00 | 16.00 | 1.00 |
| | 119.500 | 120.00 | 942.34 | 1.23 | .38 | 0.00 | 16.00 | 1.00 |
| | 119.500 | 140.00 | 942.58 | .23 | .41 | 0.00 | 16.00 | 1.00 |
| | 119.500 | 230.00 | 943.39 | .81 | .61 | 0.00 | 16.00 | 1.00 |
| | 119.600 | 40.00 | 941.12 | 0.00 | .00 | 0.00 | 16.00 | 44.00 |
| | 119.600 | 120.00 | 942.35 | 1.23 | .01 | 0.00 | 104.00 | 44.00 |
| | 119.600 | 140.00 | 942.59 | .24 | .01 | 0.00 | 104.00 | 44.00 |
| | 119.600 | 230.00 | 943.43 | .84 | .04 | 0.00 | 104.00 | 44.00 |
| | 119.900 | 40.00 | 941.12 | 0.00 | .00 | 0.00 | 61.97 | 230.00 |
| | 119.900 | 120.00 | 942.37 | 1.25 | .02 | 0.00 | 73.04 | 230.00 |
| | 119.900 | 140.00 | 942.61 | .24 | .02 | 0.00 | 77.19 | 230.00 |
| | 119.900 | 230.00 | 943.46 | .85 | .03 | 0.00 | 91.90 | 230.00 |
| | 120.000 | 40.00 | 941.12 | 0.00 | -.00 | 0.00 | 35.00 | 8.00 |
| | 120.000 | 120.00 | 942.37 | 1.25 | -.00 | 0.00 | 35.00 | 8.00 |
| | 120.000 | 140.00 | 942.61 | .24 | -.00 | 0.00 | 51.59 | 8.00 |
| | 120.000 | 230.00 | 943.46 | .85 | -.00 | 0.00 | 76.29 | 8.00 |
| | 120.100 | 40.00 | 941.12 | 0.00 | .00 | 0.00 | 35.00 | 44.00 |
| | 120.100 | 120.00 | 942.37 | 1.25 | .01 | 0.00 | 35.00 | 44.00 |
| | 120.100 | 140.00 | 942.62 | .24 | .01 | 0.00 | 35.00 | 44.00 |
| | 120.100 | 230.00 | 943.48 | .86 | .02 | 0.00 | 35.00 | 44.00 |

| SECNO | G | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 120.200 | 40.00 | 941.12 | 0.00 | .00 | 0.00 | 35.00 | 8.00 |
| 120.200 | 120.00 | 942.37 | 1.25 | .00 | 0.00 | 35.00 | 8.00 |
| 120.200 | 140.00 | 942.62 | .24 | .00 | 0.00 | 35.00 | 8.00 |
| 120.200 | 230.00 | 943.48 | .86 | .00 | 0.00 | 35.00 | 8.00 |
| 121.000 | 40.00 | 941.12 | 0.00 | .00 | 0.00 | 38.00 | 66.00 |
| 121.000 | 120.00 | 942.38 | 1.26 | .00 | 0.00 | 44.16 | 66.00 |
| 121.000 | 140.00 | 942.62 | .24 | .00 | 0.00 | 48.85 | 66.00 |
| 121.000 | 230.00 | 943.48 | .87 | .00 | 0.00 | 86.60 | 66.00 |
| 140.000 | 40.00 | 941.12 | 0.00 | .00 | 0.00 | 70.58 | 680.00 |
| 140.000 | 120.00 | 942.39 | 1.27 | .02 | 0.00 | 136.33 | 680.00 |
| 140.000 | 140.00 | 942.64 | .25 | .02 | 0.00 | 148.79 | 680.00 |
| 140.000 | 230.00 | 943.52 | .88 | .03 | 0.00 | 193.32 | 680.00 |
| 141.000 | 40.00 | 941.13 | 0.00 | .01 | 0.00 | 45.07 | 850.00 |
| 141.000 | 120.00 | 942.41 | 1.28 | .02 | 0.00 | 47.15 | 850.00 |
| 141.000 | 140.00 | 942.66 | .25 | .02 | 0.00 | 47.39 | 850.00 |
| 141.000 | 230.00 | 943.55 | .89 | .03 | 0.00 | 58.55 | 850.00 |
| 141.800 | 40.00 | 941.13 | 0.00 | .00 | 0.00 | 50.40 | 400.00 |
| 141.800 | 120.00 | 942.42 | 1.29 | .01 | 0.00 | 58.44 | 400.00 |
| 141.800 | 140.00 | 942.68 | .25 | .01 | 0.00 | 60.32 | 400.00 |
| 141.800 | 230.00 | 943.57 | .90 | .02 | 0.00 | 112.01 | 400.00 |
| 141.900 | 40.00 | 941.14 | 0.00 | .00 | 0.00 | 35.00 | 99.00 |
| 141.900 | 120.00 | 942.43 | 1.29 | .00 | 0.00 | 35.00 | 99.00 |
| 141.900 | 140.00 | 942.68 | .25 | .00 | 0.00 | 35.00 | 99.00 |
| 141.900 | 230.00 | 943.57 | .90 | .00 | 0.00 | 35.00 | 99.00 |
| 142.000 | 40.00 | 941.14 | 0.00 | .00 | 0.00 | 35.00 | 43.00 |
| 142.000 | 120.00 | 942.43 | 1.29 | .00 | 0.00 | 35.00 | 43.00 |
| 142.000 | 140.00 | 942.69 | .26 | .01 | 0.00 | 35.00 | 43.00 |
| 142.000 | 230.00 | 943.61 | .92 | .03 | 0.00 | 35.00 | 43.00 |
| 142.300 | 40.00 | 941.14 | 0.00 | .00 | 0.00 | 87.73 | 140.00 |
| 142.300 | 120.00 | 942.44 | 1.30 | .01 | 0.00 | 105.39 | 140.00 |
| 142.300 | 140.00 | 942.70 | .26 | .02 | 0.00 | 110.72 | 140.00 |
| 142.300 | 230.00 | 943.64 | .93 | .03 | 0.00 | 130.02 | 140.00 |

SUMMARY OF ERRORS

```
CAUTION  SECNO=  119.300  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=  119.300  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=  119.300  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=  119.300  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=  119.300  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=  119.300  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=  119.300  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=  119.300  PROFILE= 3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=  119.300  PROFILE= 3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=  119.300  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=  119.300  PROFILE= 4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=  119.300  PROFILE= 4  20 TRIALS ATTEMPTED TO BALANCE WSEL
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FLOOD INSURANCE ZONE DATA FOR MILL RACE

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10 | 2 | 0.2 |
|---|---|---|---|---|
| 119.200 | 0. | -1.77 | -.50 | .63 |
| 119.250 | 60. | -1.74 | -.50 | .59 |
| 119.300 | 61. | -1.09 | -.13 | .62 |
| 119.400 | 67. | -1.26 | -.21 | .61 |
| 119.500 | 68. | -1.46 | -.23 | .81 |
| 119.600 | 112. | -1.47 | -.24 | .84 |
| 119.900 | 342. | -1.49 | -.24 | .85 |
| 120.000 | 350. | -1.49 | -.24 | .85 |
| 120.100 | 394. | -1.50 | -.24 | .86 |
| 120.200 | 402. | -1.50 | -.24 | .86 |
| 121.000 | 468. | -1.50 | -.24 | .87 |
| 140.000 | 1148. | -1.51 | -.25 | .88 |
| 141.000 | 1998. | -1.53 | -.25 | .89 |
| 141.800 | 2398. | -1.54 | -.25 | .90 |
| 141.900 | 2497. | -1.54 | -.25 | .90 |
| 142.000 | 2540. | -1.55 | -.26 | .92 |
| 142.300 | 2680. | -1.56 | -.26 | .93 |
| WEIGHTED AVG FOR REACH | | -1.52 | -.25 | .87 |

FHF FOR THE REACH = 015 WITH 100.0 PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 3

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************
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00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Unnamed Creek

4) DOCUMENT TYPE: 100-year

00BREAK00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**************************************************

C
T1      FIS ALBION TWP, CALHOUN CO, MICHIGAN
T2      100-YEAR FLOOD
T3      UNNAMED CREEK

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.       4.        0.        0.   .001500      0.00      0.0       0.   943.000     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    1.000      0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
   38.000      1.000    53.000    21.000    22.000    54.000     4.000    39.000   150.000   200.000

NC      .100      .100      .050      .100      .300    0.000     0.000     0.000     0.000     0.000
QT     5.000   44.000    88.000   104.000   142.000   104.000     0.000     0.000     0.000     0.000

X1   341.000    17.000  2000.000  2005.000     0.000     0.000     0.000     0.000    -1.000     0.000
GR   949.600  1904.000   949.600  1904.000   949.600  1904.000   948.900  1928.000   948.000  1972.000
GR   948.000  1982.000   947.600  1989.000   946.100  1991.000   944.500  1997.000   943.000  2000.000
GR   942.300  2003.000   942.600  2005.000   944.600  2010.000   946.700  2015.000   947.300  2020.000
GR   949.500  2056.000   951.400  2128.000     0.000     0.000     0.000     0.000     0.000     0.000

X1   341.800     0.000     0.000     0.000   620.000   620.000   620.000     0.000     1.000     0.000

X1   341.900     0.000     0.000     0.000    50.000    50.000    50.000     0.000     0.000     0.000
NC     0.000     0.000     0.000      .300      .500     0.000     0.000     0.000     0.000     0.000
SB     0.000     2.320     2.800     0.000     3.200     0.000    12.600     0.000     0.000     0.000

X1   342.000     0.000     0.000     0.000    37.000    37.000    37.000     0.000     0.000     0.000
X2     0.000     0.000     1.000   945.600   948.000     0.000     0.000     0.000     0.000     0.000
BT     7.000  1904.000   949.600     0.000  1928.000   948.900     0.000  1972.000   948.000     0.000
BT  2000.000   948.000     0.000  2008.000   948.100     0.000  2056.000   949.500     0.000  2128.000
BT   951.400     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 342.100 | 0.000 | 0.000 | 0.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

UNNAMED CREEK SECTION A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 343.000 | 10.000 | 1414.000 | 1436.000 | 120.000 | 120.000 | 120.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.100 | 804.000 | 955.300 | 870.000 | 950.400 | 1104.000 | 949.400 | 1194.000 | 947.900 | 1414.000 |
| GR | 943.100 | 1420.000 | 943.100 | 1425.000 | 946.700 | 1436.000 | 951.700 | 1588.000 | 953.900 | 1818.000 |
| X1 | 343.800 | 11.000 | 2000.000 | 2048.000 | 2750.000 | 2750.000 | 2750.000 | 0.000 | 0.000 | 0.000 |
| GR | 953.200 | 1679.000 | 950.400 | 1679.000 | 949.800 | 1757.000 | 949.700 | 1875.000 | 949.200 | 2000.000 |
| GR | 947.800 | 2033.000 | 947.300 | 2035.000 | 947.700 | 2040.000 | 950.900 | 2048.000 | 951.800 | 2151.000 |
| GR | 953.200 | 2384.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 29.000 | 59.000 | 70.000 | 95.000 | 70.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 343.900 | 14.000 | 2000.000 | 2003.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 953.200 | 1679.000 | 950.400 | 1679.000 | 949.800 | 1757.000 | 949.700 | 1875.000 | 949.200 | 2000.000 |
| GR | 947.500 | 2000.000 | 946.800 | 2000.500 | 946.500 | 2001.500 | 946.800 | 2002.500 | 947.500 | 2003.000 |
| GR | 949.200 | 2003.000 | 950.900 | 2048.000 | 951.800 | 2151.000 | 953.200 | 2384.000 | 0.000 | 0.000 |
| SB | 0.000 | 3.400 | 3.000 | 0.000 | 2.460 | 0.000 | 7.070 | 0.000 | 0.000 | 0.000 |

UNNAMED CREEK SECTION B

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 344.000 | 0.000 | 0.000 | 0.000 | 69.000 | 69.000 | 69.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 949.500 | 953.400 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 15.000 | 1017.000 | 956.700 | 0.000 | 1246.000 | 955.800 | 0.000 | 1489.000 | 954.300 | 0.000 |
| BT | 1633.000 | 953.600 | 0.000 | 2000.000 | 953.400 | 0.000 | 2000.000 | 953.400 | 948.500 | 2000.500 |
| BT | 953.400 | 949.200 | 2001.500 | 953.400 | 949.500 | 2002.500 | 953.400 | 949.200 | 2003.000 | 953.400 |
| BT | 948.500 | 2003.000 | 953.400 | 0.000 | 2220.000 | 953.400 | 0.000 | 2443.000 | 954.700 | 0.000 |
| BT | 2751.000 | 963.900 | 0.000 | 2862.000 | 968.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1850.000 | 2050.000 |
| X1 | 344.200 | 11.000 | 2000.000 | 2048.000 | 50.000 | 50.000 | 50.000 | 0.000 | .500 | 0.000 |
| GR | 953.200 | 1679.000 | 950.400 | 1679.000 | 949.800 | 1757.000 | 949.700 | 1875.000 | 949.200 | 2000.000 |
| GR | 947.800 | 2033.000 | 947.300 | 2035.000 | 947.700 | 2040.000 | 950.900 | 2048.000 | 951.800 | 2151.000 |
| GR | 953.200 | 2384.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1944.000 | 2044.000 |
| X1 | 344.300 | 0.000 | 0.000 | 0.000 | 1000.000 | 1000.000 | 1000.000 | 0.000 | 3.500 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 357.000 | 457.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 345.000 | 6.000 | 410.000 | 415.000 | 750.000 | 750.000 | 750.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 0.000 | 955.000 | 410.000 | 954.000 | 410.000 | 954.000 | 415.000 | 955.000 | 415.000 |
| GR | 960.000 | 780.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 8.000 | 19.000 | 23.000 | 32.000 | 23.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 420.000 | 560.000 |
| X1 | 346.000 | 6.000 | 480.000 | 485.000 | 830.000 | 830.000 | 830.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 0.000 | 957.000 | 480.000 | 956.000 | 480.000 | 956.000 | 485.000 | 957.000 | 485.000 |
| GR | 960.000 | 1100.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *PROF 1 | | | | | | | | | |
| CCHV= .100 CEHV= .300 | | | | | | | | | |
| *SECNO 341.000 | | | | | | | | | |
| 341.00 | 4.52 | 945.82 | 0.00 | 943.00 | 945.92 | .09 | 0.00 | 0.00 | 942.00 |
| 104. | 17. | 64. | 23. | 19. | 21. | 22. | 0. | 0. | 941.60 |
| 0.00 | .93 | 2.99 | 1.04 | .100 | .050 | .100 | 0.000 | 941.30 | 1990.03 |
| .001512 | 0. | 0. | 0. | 0 | 0 | 5 | 0.00 | 26.00 | 2016.04 |
| *SECNO 341.800 | | | | | | | | | |
| 341.80 | 4.48 | 946.78 | 0.00 | 0.00 | 946.88 | .09 | .96 | .00 | 943.00 |
| 104. | 17. | 64. | 23. | 18. | 21. | 22. | 1. | 0. | 942.60 |
| .08 | .94 | 3.05 | 1.06 | .100 | .050 | .100 | .050 | 942.30 | 1990.10 |
| .001591 | 620. | 620. | 620. | 1 | 0 | 0 | 0.00 | 25.53 | 2015.63 |
| *SECNO 341.900 | | | | | | | | | |
| 341.90 | 4.57 | 946.87 | 0.00 | 0.00 | 946.95 | .09 | .08 | .00 | 943.00 |
| 104. | 18. | 63. | 23. | 19. | 21. | 22. | 1. | 0. | 942.60 |
| .08 | .92 | 2.95 | 1.03 | .100 | .050 | .100 | .050 | 942.30 | 1989.99 |
| .001457 | 50. | 50. | 50. | 0 | 0 | 0 | 0.00 | 26.35 | 2016.34 |

CCHV= .300 CEHV= .500

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 2.32 | 2.80 | 0.00 | 3.20 | 0.00 | 12.60 | 0.00 | 942.30 | 942.30 |

Riverside Drive

*SECNO 342.000

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 949.32 | 946.95 | 0.00 | 24. | 81. | 13. | 11. | 945.60 | 948.00 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 342.00 | 6.01 | 948.31 | 0.00 | 0.00 | 948.34 | .03 | 1.39 | 0.00 | 943.00 |
| 104. | 23. | 52. | 29. | 44. | 29. | 52. | 1. | 0. | 942.60 |
| .09 | .52 | 1.82 | .56 | .100 | .050 | .100 | .050 | 942.30 | 1956.63 |
| .000374 | 37. | 37. | 37. | 2 | 0 | 5 | 0.00 | 79.96 | 2036.60 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV LEFT/RIGHT |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | SSTA |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | ENDST |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | |

*SECNO 342.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 342.10 | 6.03 | 948.33 | 0.00 | 0.00 | 948.36 | .03 | .02 | .00 | 943.00 |
| 104. | 23. | 52. | 29. | 45. | 29. | 52. | 1. | 1. | 942.60 |
| .10 | .51 | 1.81 | .55 | .100 | .050 | .100 | .050 | 942.30 | 1955.70 |
| .000367 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 81.21 | 2036.91 |

CCHV= .100 CEHV= .300

*SECNO 343.000

UNNAMED CREEK SECTION A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 343.00 | 5.28 | 948.38 | 0.00 | 0.00 | 948.40 | .02 | .04 | .00 | 947.90 |
| 104. | 2. | 93. | 10. | 17. | 82. | 43. | 2. | 1. | 946.70 |
| .14 | .10 | 1.13 | .22 | .100 | .050 | .100 | .050 | 943.10 | 1343.90 |
| .000287 | 120. | 120. | 120. | 0 | 0 | 0 | 0.00 | 143.11 | 1487.01 |

*SECNO 343.800

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 343.80 | 2.53 | 949.83 | 0.00 | 0.00 | 949.86 | .02 | 1.46 | .00 | 949.20 |
| 104. | 14. | 90. | 0. | 58. | 66. | 0. | 10. | 15. | 950.90 |
| .77 | .25 | 1.36 | 0.00 | .100 | .050 | .100 | .050 | 947.30 | 1752.65 |
| .001286 | 2750. | 2750. | 2750. | 3 | 0 | 0 | 0.00 | 292.69 | 2045.33 |

CCHV= .300 CEHV= .500

*SECNO 343.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 343.90 | 3.43 | 949.93 | 0.00 | 0.00 | 949.96 | .03 | .10 | .00 | 949.20 |
| 70. | 44. | 22. | 4. | 82. | 9. | 7. | 10. | 15. | 949.20 |
| .78 | .54 | 2.40 | .51 | .100 | .050 | .100 | .050 | 946.50 | 1740.18 |
| .004608 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 282.12 | 2022.31 |

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 3.40 | 3.00 | 0.00 | 2.46 | 0.00 | 7.07 | 0.00 | 946.50 | 946.50 |

*SECNO 344.000

3280 CROSS SECTION 344.00 EXTENDED .26 FEET

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 955.10 | 949.96 | 0.00 | 13. | 58. | 7. | 7. | 949.50 | 953.40 |

29½ Mile Road

UNNAMED CREEK SECTION B

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 344.00 | 6.96 | 953.46 | 0.00 | 0.00 | 953.46 | .00 | 3.50 | 0.00 | 949.20 |
| 70. | 52. | 1. | 17. | 1202. | 20. | 596. | 12. | 16. | 949.20 |
| 1.26 | .04 | .07 | .03 | .100 | .050 | .100 | .050 | 946.50 | 1679.00 |
| .000001 | 69. | 69. | 69. | 0 | 0 | 8 | 0.00 | 705.00 | 2384.00 |
| *SECNO 344.200 | | | | | | | | | |
| 344.20 | 5.66 | 953.46 | 0.00 | 0.00 | 953.46 | .00 | .00 | .00 | 949.70 |
| 70. | 43. | 22. | 6. | 1042. | 215. | 279. | 13. | 16. | 951.40 |
| 1.50 | .04 | .10 | .02 | .100 | .050 | .100 | .050 | 947.80 | 1679.00 |
| .000002 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 665.56 | 2344.56 |
| CCHV= .100 CEHV= .300 | | | | | | | | | |
| *SECNO 344.300 | | | | | | | | | |
| 344.30 | 2.15 | 953.45 | 0.00 | 0.00 | 953.48 | .03 | .01 | .01 | 953.20 |
| 70. | 1. | 69. | 0. | 8. | 49. | 0. | 32. | 25. | 954.90 |
| 1.70 | .17 | 1.40 | 0.00 | .100 | .050 | .100 | .050 | 951.30 | 1935.86 |
| .001970 | 1000. | 1000. | 1000. | 1 | 0 | 0 | 0.00 | 108.53 | 2044.39 |
| *SECNO 345.000 | | | | | | | | | |
| 345.00 | 1.89 | 955.89 | 955.65 | 0.00 | 955.95 | .06 | 2.46 | .01 | 955.00 |
| 70. | 22. | 28. | 20. | 32. | 9. | 29. | 33. | 28. | 955.00 |
| 1.83 | .70 | 2.93 | .70 | .100 | .050 | .100 | .050 | 954.00 | 337.40 |
| .006533 | 750. | 750. | 750. | 15 | 14 | 0 | 0.00 | 142.24 | 479.63 |
| *SECNO 346.000 | | | | | | | | | |
| 346.00 | 1.77 | 957.77 | 0.00 | 0.00 | 957.77 | .00 | 1.81 | .01 | 957.00 |
| 23. | 7. | 6. | 9. | 46. | 9. | 59. | 35. | 32. | 957.00 |
| 2.58 | .16 | .71 | .16 | .100 | .050 | .100 | .050 | 956.00 | 358.55 |
| .000419 | 830. | 830. | 830. | 4 | 0 | 0 | 0.00 | 282.06 | 640.61 |

U/S Limits

MOORE BUSINESS FORMS, INC. 23

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Unnamed Creek

4) DOCUMENT TYPE: Floodway

00BREAK00

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1      FIS ALBION TWP, CALHOUN CO, MICHIGAN
T2      100-YEAR FLOOD   ENCROACHED FLOODWAY
T3      UNNAMED CREEK

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       6.        0.        0.  0.000000      0.00      0.0       0.    945.920     0.000
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *PROF 2 | | | | | | | | | |
| CCHV= .100 CEHV= .300 | | | | | | | | | |
| *SECNO 341.000 | | | | | | | | | |
| 341.00 | 4.62 | 945.92 | 0.00 | 945.92 | 946.00 | .08 | 0.00 | 0.00 | 942.00 |
| 104. | 18. | 63. | 23. | 20. | 22. | 23. | 0. | 0. | 941.60 |
| 0.00 | .91 | 2.89 | 1.00 | .100 | .050 | .100 | 0.000 | 941.30 | 1989.91 |
| .001371 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 26.93 | 2016.83 |
| *SECNO 341.800 | | | | | | | | | |
| 341.80 | 4.51 | 946.81 | 0.00 | 0.00 | 946.90 | .09 | .90 | .00 | 943.00 |
| 104. | 17. | 64. | 23. | 19. | 21. | 22. | 1. | 0. | 942.60 |
| .08 | .93 | 3.01 | 1.04 | .100 | .050 | .100 | .050 | 942.30 | 1990.05 |
| .001531 | 620. | 620. | 620. | 2 | 0 | 0 | 0.00 | 25.89 | 2015.94 |
| *SECNO 341.900 | | | | | | | | | |
| 341.90 | 4.59 | 946.89 | 0.00 | 0.00 | 946.98 | .09 | .07 | .00 | 943.00 |
| 104. | 18. | 63. | 23. | 19. | 22. | 23. | 1. | 0. | 942.60 |
| .08 | .91 | 2.93 | 1.02 | .100 | .050 | .100 | .050 | 942.30 | 1989.95 |
| .001421 | 50. | 50. | 50. | 0 | 0 | 0 | 0.00 | 26.59 | 2016.54 |
| CCHV= .300 CEHV= .500 | | | | | | | | | |
| SPECIAL BRIDGE | | | | | | | | | |
| 5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED | | | | | | | | | |
| SB XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
| 0.00 | 2.32 | 2.80 | 0.00 | 3.20 | 0.00 | 12.60 | 0.00 | 942.30 | 942.30 |
| *SECNO 342.000 | | | | | | | | | |
| PRESSURE AND WEIR FLOW | | | | | | | | | |
| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD | |
| 949.35 | 946.98 | 0.00 | 24. | 80. | 13. | 11. | 945.60 | 948.00 | |
| 342.00 | 6.02 | 948.32 | 0.00 | 0.00 | 948.35 | .03 | 1.37 | 0.00 | 943.00 |
| 104. | 23. | 52. | 29. | 44. | 29. | 52. | 1. | 0. | 942.60 |
| .09 | .52 | 1.82 | .56 | .100 | .050 | .100 | .050 | 942.30 | 1956.39 |
| .000372 | 37. | 37. | 37. | 2 | 0 | 5 | 0.00 | 80.28 | 2036.68 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV LEFT/RIGHT |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *SECNO 342.100 | | | | | | | | | |
| 342.10 | 6.04 | 948.34 | 0.00 | 0.00 | 948.37 | .03 | .02 | .00 | 943.00 |
| 104. | 23. | 52. | 29. | 45. | 29. | 53. | 1. | 1. | 942.60 |
| .10 | .51 | 1.80 | .55 | .100 | .050 | .100 | .050 | 942.30 | 1955.46 |
| .000366 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 81.53 | 2036.99 |
| CCHV= .100 CEHV= .300 | | | | | | | | | |
| *SECNO 343.000 | | | | | | | | | |
| 2800 NAT Q1= 61.41 WSEL= 948.38 ENC Q1= 61.41 WSEL= 948.48 RATIO= 0.0000 | | | | | | | | | |
| NAT Q1= 66. RATIOS LOB,CH,ROB= .0248 .8740 .1012 WSEL= 948.48 | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= 1414.0 1449.8 TYPE= 4 TARGET= .065 | | | | | | | | | |
| UNNAMED CREEK SECTION A | | | | | | | | | |
| 343.00 | 5.29 | 948.39 | 0.00 | 948.38 | 948.41 | .02 | .04 | .00 | 947.90 |
| 104. | 0. | 98. | 6. | 0. | 82. | 20. | 2. | 1. | 946.70 |
| .13 | 0.00 | 1.19 | .32 | .100 | .050 | .100 | .050 | 943.10 | 1414.00 |
| .000324 | 120. | 120. | 120. | 1 | 0 | 0 | 0.00 | 35.76 | 1449.76 |
| *SECNO 343.800 | | | | | | | | | |
| 2800 NAT Q1= 29.00 WSEL= 949.83 ENC Q1= 29.00 WSEL= 949.93 RATIO= 0.0000 | | | | | | | | | |
| NAT Q1= 34. RATIOS LOB,CH,ROB= .1919 .8081 0.0000 WSEL= 949.93 | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= 1984.8 2048.0 TYPE= 4 TARGET= .157 | | | | | | | | | |
| 343.80 | 2.65 | 949.95 | 0.00 | 949.83 | 949.98 | .03 | 1.57 | .00 | 949.20 |
| 104. | 4. | 100. | 0. | 11. | 71. | 0. | 7. | 4. | 950.90 |
| .70 | .41 | 1.40 | 0.00 | .100 | .050 | .100 | .050 | 947.30 | 1984.84 |
| .001250 | 2750. | 2750. | 2750. | 2 | 0 | 0 | 0.00 | 60.77 | 2045.62 |
| CCHV= .300 CEHV= .500 | | | | | | | | | |
| *SECNO 343.900 | | | | | | | | | |
| 2800 NAT Q1= 10.31 WSEL= 949.93 ENC Q1= 10.31 WSEL= 950.03 RATIO= 0.0000 | | | | | | | | | |
| NAT Q1= 14. RATIOS LOB,CH,ROB= .6955 .2505 .0540 WSEL= 950.03 | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= 1900.5 2003.0 TYPE= 4 TARGET= .257 | | | | | | | | | |
| 343.90 | 3.54 | 950.04 | 0.00 | 949.93 | 950.07 | .03 | .10 | .00 | 949.20 |
| 70. | 48. | 22. | 0. | 64. | 10. | 0. | 7. | 4. | 949.20 |
| .71 | .75 | 2.28 | 0.00 | .100 | .050 | .100 | .050 | 946.50 | 1900.54 |
| .004624 | 50. | 50. | 50. | 0 | 0 | 0 | 0.00 | 102.46 | 2003.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 3.40 | 3.00 | 0.00 | 2.46 | 0.00 | 7.07 | 0.00 | 946.50 | 946.50 |

*SECNO 344.000
3700. BRIDGE STENCL= 1900.54 STENCR= 2003.00
2800 NAT Q1= 578.96 WSEL= 953.46 ENC Q1= 578.96 WSEL= 953.56 RATIO= .0000
NAT Q1= 611. RATIOS LOB,CH,ROB= .7348 .0196 .2456 WSEL= 953.56
3280 CROSS SECTION 344.00 EXTENDED .35 FEET

"PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 955.22 | 950.05 | 0.00 | 12. | 58. | 7. | 7. | 949.50 | 953.40 |

3470 ENCROACHMENT STATIONS= 1900.5 2003.0 TYPE= 4 TARGET= .053
UNNAMED CREEK SECTION B

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 344.00 | 7.04 | 953.54 | 0.00 | 953.46 | 953.54 | .00 | 3.47 | 0.00 | 949.20 |
| 70. | 66. | 4. | 0. | 413. | 20. | 0. | 8. | 4. | 949.20 |
| .83 | .16 | .18 | 0.00 | .100 | .050 | .100 | .050 | 946.50 | 1900.54 |
| .000018 | 69. | 69. | 69. | 1 | 0 | 6 | 0.00 | 102.46 | 2003.00 |

*SECNO 344.200
3280 CROSS SECTION 344.20 EXTENDED .34 FEET

3470 ENCROACHMENT STATIONS= 1850.0 2050.0 TYPE= 1 TARGET= 200.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 344.20 | 5.74 | 953.54 | 0.00 | 953.46 | 953.54 | .00 | .00 | .00 | 949.70 |
| 70. | 35. | 34. | 0. | 533. | 219. | 4. | 8. | 4. | 951.40 |
| .95 | .07 | .16 | .03 | .100 | .050 | .100 | .050 | 947.80 | 1850.00 |
| .000004 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 200.00 | 2050.00 |

CCHV= .100 CEHV= .300
*SECNO 344.300

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | OCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 3470 ENCROACHMENT STATIONS= | | 1944.0 | 2044.0 | TYPE= | 1 | TARGET= | | 100.000 | |
| 344.30 | 2.24 | 953.54 | 0.00 | 953.45 | 953.57 | .02 | .01 | .01 | 953.20 |
| 70. | 3. | 67. | 0. | 13. | 53. | 0. | 18. | 8. | 100000.00 |
| 1.18 | .22 | 1.27 | 0.00 | .100 | .050 | .100 | .050 | 951.30 | 1944.00 |
| .001442 | 1000. | 1000. | 1000. | 1 | 0 | 0 | 0.00 | 100.00 | 2044.00 |
| *SECNO 345.000 | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= | | 357.0 | 457.0 | TYPE= | 1 | TARGET= | | 100.000 | |
| 345.00 | 1.77 | 955.77 | 955.65 | 955.89 | 955.86 | .09 | 2.28 | .02 | 955.00 |
| 70. | 21. | 31. | 19. | 24. | 9. | 20. | 19. | 9. | 955.00 |
| 1.28 | .87 | 3.49 | .91 | .100 | .050 | .100 | .050 | 954.00 | 357.00 |
| .010084 | 750. | 750. | 750. | 18 | 16 | 0 | 0.00 | 100.00 | 457.00 |
| *SECNO 346.000 | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= | | 420.0 | 560.0 | TYPE= | 1 | TARGET= | | 140.000 | |
| 346.00 | 1.81 | 957.81 | 0.00 | 957.77 | 957.81 | .00 | 1.94 | .01 | 957.00 |
| 23. | 8. | 6. | 10. | 37. | 9. | 47. | 20. | 12. | 957.00 |
| 2.00 | .20 | .66 | .20 | .100 | .050 | .100 | .050 | 956.00 | 420.00 |
| .000352 | 830. | 830. | 830. | 6 | 0 | 0 | 0.00 | 140.00 | 560.00 |

MOORE BUSINESS FORMS, INC 23

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**************************************************
```

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

UNNAMED CREEK

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 341.000 | 945.82 | 1990.03 | 2000.00 | 2005.00 | 2016.04 | 26.00 | 0.00 |
| 341.000 | 945.92 | 1989.91 | 2000.00 | 2005.00 | 2016.83 | 26.93 | 0.00 |
| 341.800 | 946.78 | 1990.10 | 2000.00 | 2005.00 | 2015.63 | 25.53 | 620.00 |
| 341.800 | 946.81 | 1990.05 | 2000.00 | 2005.00 | 2015.94 | 25.89 | 620.00 |
| 341.900 | 946.87 | 1989.99 | 2000.00 | 2005.00 | 2016.34 | 26.35 | 50.00 |
| 341.900 | 946.89 | 1989.95 | 2000.00 | 2005.00 | 2016.54 | 26.59 | 50.00 |
| 342.000 | 948.31 | 1956.63 | 2000.00 | 2005.00 | 2036.60 | 79.96 | 37.00 |
| 342.000 | 948.32 | 1956.39 | 2000.00 | 2005.00 | 2036.68 | 80.28 | 37.00 |
| 342.100 | 948.33 | 1955.70 | 2000.00 | 2005.00 | 2036.91 | 81.21 | 50.00 |
| 342.100 | 948.34 | 1955.46 | 2000.00 | 2005.00 | 2036.99 | 81.53 | 50.00 |
| 343.000 | 948.38 | 1343.90 | 1414.00 | 1436.00 | 1487.01 | 143.11 | 120.00 |
| 343.000 | 948.39 | 1414.00 | 1414.00 | 1436.00 | 1449.76 | 35.76 | 120.00 |
| 343.800 | 949.83 | 1752.65 | 2000.00 | 2048.00 | 2045.33 | 292.69 | 2750.00 |
| 343.800 | 949.95 | 1984.84 | 2000.00 | 2048.00 | 2045.62 | 60.77 | 2750.00 |
| 343.900 | 949.93 | 1740.18 | 2000.00 | 2003.00 | 2022.31 | 282.12 | 50.00 |
| 343.900 | 950.04 | 1900.54 | 2000.00 | 2003.00 | 2003.00 | 102.46 | 50.00 |
| 344.000 | 953.46 | 1679.00 | 2000.00 | 2003.00 | 2384.00 | 705.00 | 69.00 |
| 344.000 | 953.54 | 1900.54 | 2000.00 | 2003.00 | 2003.00 | 102.46 | 69.00 |
| 344.200 | 953.46 | 1679.00 | 2000.00 | 2048.00 | 2344.56 | 665.56 | 50.00 |
| 344.200 | 953.54 | 1850.00 | 2000.00 | 2048.00 | 2050.00 | 200.00 | 50.00 |
| 344.300 | 953.45 | 1935.86 | 2000.00 | 2048.00 | 2044.39 | 108.53 | 1000.00 |
| 344.300 | 953.54 | 1944.00 | 2000.00 | 2048.00 | 2044.00 | 100.00 | 1000.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 345.000 | 955.89 | 337.40 | 410.00 | 415.00 | 479.63 | 142.24 | 750.00 |
| 345.000 | 955.77 | 357.00 | 410.00 | 415.00 | 457.00 | 100.00 | 750.00 |
| 346.000 | 957.77 | 358.55 | 480.00 | 485.00 | 640.61 | 282.06 | 830.00 |
| 346.000 | 957.81 | 420.00 | 480.00 | 485.00 | 560.00 | 140.00 | 830.00 |

MOORE BUSINESS FORMS, INC 23

UNNAMED CREEK

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | IOK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 341.000 | 0.00 | 0.00 | 0.00 | 941.30 | 104.00 | 945.82 | 0.00 | 945.92 | 15.12 | 2.99 | 62.05 | 26.75 |
| 341.000 | 0.00 | 0.00 | 0.00 | 941.30 | 104.00 | 945.92 | 0.00 | 946.00 | 13.71 | 2.89 | 64.58 | 28.08 |
| 341.800 | 620.00 | 0.00 | 0.00 | 942.30 | 104.00 | 946.78 | 0.00 | 946.88 | 15.91 | 3.05 | 60.79 | 26.08 |
| 341.800 | 620.00 | 0.00 | 0.00 | 942.30 | 104.00 | 946.81 | 0.00 | 946.90 | 15.31 | 3.01 | 61.74 | 26.58 |
| 341.900 | 50.00 | 0.00 | 0.00 | 942.30 | 104.00 | 946.87 | 0.00 | 946.95 | 14.57 | 2.95 | 63.00 | 27.25 |
| 341.900 | 50.00 | 0.00 | 0.00 | 942.30 | 104.00 | 946.89 | 0.00 | 946.98 | 14.21 | 2.93 | 63.64 | 27.59 |
| 342.000 | 37.00 | 948.00 | 945.60 | 942.30 | 104.00 | 948.31 | 0.00 | 948.34 | 3.74 | 1.82 | 124.47 | 53.78 |
| 342.000 | 37.00 | 948.00 | 945.60 | 942.30 | 104.00 | 948.32 | 0.00 | 948.35 | 3.72 | 1.82 | 124.86 | 53.90 |
| 342.100 | 50.00 | 0.00 | 0.00 | 942.30 | 104.00 | 948.33 | 0.00 | 948.36 | 3.67 | 1.81 | 126.01 | 54.27 |
| 342.100 | 50.00 | 0.00 | 0.00 | 942.30 | 104.00 | 948.34 | 0.00 | 948.37 | 3.66 | 1.80 | 126.41 | 54.39 |
| 343.000 | 120.00 | 0.00 | 0.00 | 943.10 | 104.00 | 948.38 | 0.00 | 948.40 | 2.87 | 1.13 | 141.46 | 61.41 |
| 343.000 | 120.00 | 0.00 | 0.00 | 943.10 | 104.00 | 948.39 | 0.00 | 948.41 | 3.24 | 1.19 | 102.00 | 57.77 |
| 343.800 | 2750.00 | 0.00 | 0.00 | 947.30 | 104.00 | 949.83 | 0.00 | 949.86 | 12.86 | 1.36 | 123.79 | 29.00 |
| 343.800 | 2750.00 | 0.00 | 0.00 | 947.30 | 104.00 | 949.95 | 0.00 | 949.98 | 12.50 | 1.40 | 81.92 | 29.42 |
| 343.900 | 50.00 | 0.00 | 0.00 | 946.50 | 70.00 | 949.93 | 0.00 | 949.96 | 46.08 | 2.40 | 98.55 | 10.31 |
| 343.900 | 50.00 | 0.00 | 0.00 | 946.50 | 70.00 | 950.04 | 0.00 | 950.07 | 46.24 | 2.28 | 73.55 | 10.29 |
| 344.000 | 69.00 | 953.40 | 949.50 | 946.50 | 70.00 | 953.46 | 0.00 | 953.46 | .01 | .07 | 1817.60 | 578.96 |
| 344.000 | 69.00 | 953.40 | 949.50 | 946.50 | 70.00 | 953.54 | 0.00 | 953.54 | .18 | .18 | 433.44 | 163.35 |
| 344.200 | 50.00 | 0.00 | 0.00 | 947.80 | 70.00 | 953.46 | 0.00 | 953.46 | .02 | .10 | 1535.00 | 556.12 |
| 344.200 | 50.00 | 0.00 | 0.00 | 947.80 | 70.00 | 953.54 | 0.00 | 953.54 | .04 | .16 | 755.60 | 359.57 |
| 344.300 | 1000.00 | 0.00 | 0.00 | 951.30 | 70.00 | 953.45 | 0.00 | 953.48 | 19.70 | 1.40 | 57.25 | 15.77 |
| 344.300 | 1000.00 | 0.00 | 0.00 | 951.30 | 70.00 | 953.54 | 0.00 | 953.57 | 14.42 | 1.27 | 66.32 | 18.44 |
| 345.000 | 750.00 | 0.00 | 0.00 | 954.00 | 70.00 | 955.89 | 955.65 | 955.95 | 65.33 | 2.93 | 70.18 | 8.66 |
| 345.000 | 750.00 | 0.00 | 0.00 | 954.00 | 70.00 | 955.77 | 955.65 | 955.86 | 100.84 | 3.49 | 52.77 | 6.97 |
| 346.000 | 830.00 | 0.00 | 0.00 | 956.00 | 23.00 | 957.77 | 0.00 | 957.77 | 4.19 | .71 | 113.95 | 11.23 |
| 346.000 | 830.00 | 0.00 | 0.00 | 956.00 | 23.00 | 957.81 | 0.00 | 957.81 | 3.52 | .66 | 93.13 | 12.26 |

MOORE BUSINESS FORMS, INC. 23

UNNAMED CREEK

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 341.000 | 104.00 | 945.82 | 0.00 | 0.00 | 2.82 | 26.00 | 0.00 |
| 341.000 | 104.00 | 945.92 | .10 | 0.00 | 0.00 | 26.93 | 0.00 |
| 341.800 | 104.00 | 946.78 | 0.00 | .96 | 0.00 | 25.53 | 620.00 |
| 341.800 | 104.00 | 946.81 | .03 | .89 | 0.00 | 25.89 | 620.00 |
| 341.900 | 104.00 | 946.87 | 0.00 | .08 | 0.00 | 26.35 | 50.00 |
| 341.900 | 104.00 | 946.89 | .03 | .08 | 0.00 | 26.59 | 50.00 |
| 342.000 | 104.00 | 948.31 | 0.00 | 1.45 | 0.00 | 79.96 | 37.00 |
| 342.000 | 104.00 | 948.32 | .00 | 1.43 | 0.00 | 80.28 | 37.00 |
| 342.100 | 104.00 | 948.33 | 0.00 | .02 | 0.00 | 81.21 | 50.00 |
| 342.100 | 104.00 | 948.34 | .00 | .02 | 0.00 | 81.53 | 50.00 |
| 343.000 | 104.00 | 948.38 | 0.00 | .05 | 0.00 | 143.11 | 120.00 |
| 343.000 | 104.00 | 948.39 | .00 | .05 | .00 | 35.76 | 120.00 |
| 343.800 | 104.00 | 949.83 | 0.00 | 1.45 | 0.00 | 292.69 | 2750.00 |
| 343.800 | 104.00 | 949.95 | .11 | 1.56 | .11 | 60.77 | 2750.00 |
| 343.900 | 70.00 | 949.93 | 0.00 | .09 | 0.00 | 282.12 | 50.00 |
| 343.900 | 70.00 | 950.04 | .11 | .09 | .11 | 102.46 | 50.00 |
| 344.000 | 70.00 | 953.46 | 0.00 | 3.53 | 0.00 | 705.00 | 69.00 |
| 344.000 | 70.00 | 953.54 | .08 | 3.50 | .08 | 102.46 | 69.00 |
| 344.200 | 70.00 | 953.46 | 0.00 | .00 | 0.00 | 665.56 | 50.00 |
| 344.200 | 70.00 | 953.54 | .08 | .00 | .08 | 200.00 | 50.00 |
| 344.300 | 70.00 | 953.45 | 0.00 | -.01 | 0.00 | 108.53 | 1000.00 |
| 344.300 | 70.00 | 953.54 | .09 | -.00 | .09 | 100.00 | 1000.00 |
| 345.000 | 70.00 | 955.89 | 0.00 | 2.44 | 0.00 | 142.24 | 750.00 |
| 345.000 | 70.00 | 955.77 | -.12 | 2.23 | -.12 | 100.00 | 750.00 |
| 346.000 | 23.00 | 957.77 | 0.00 | 1.87 | 0.00 | 282.06 | 830.00 |
| 346.000 | 23.00 | 957.81 | .04 | 2.04 | .04 | 140.00 | 830.00 |

MOORE BUSINESS FORMS, INC 23

FLOODWAY DATA. UNNAMED CREEK
PROFILE NO. 2

| STATION | FLOODWAY WIDTH | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 341.000 | 27. | 65. | 1.6 | 945.9 | 945.8 | .1 |
| 341.800 | 26. | 62. | 1.7 | 946.8 | 946.8 | 0.0 |
| 341.900 | 27. | 64. | 1.6 | 946.9 | 946.9 | 0.0 |
| 342.000 | 80. | 125. | .8 | 948.3 | 948.3 | 0.0 |
| 342.100 | 82. | 126. | .8 | 948.3 | 948.3 | 0.0 |
| 343.000 | 36. | 102. | 1.0 | 948.4 | 948.4 | 0.0 |
| 343.800 | 61. | 82. | 1.3 | 949.9 | 949.8 | .1 |
| 343.900 | 102. | 74. | 1.0 | 950.0 | 949.9 | .1 |
| 344.000 | 102. | 433. | .2 | 953.6 | 953.5 | .1 |
| 344.200 | 200. | 756. | .1 | 953.6 | 953.5 | .1 |
| 344.300 | 100. | 66. | 1.1 | 953.5 | 953.4 | .1 |
| 345.000 | 100. | 53. | 1.3 | 955.9 | 955.9 | 0.0 |
| 346.000 | 140. | 93. | .2 | 957.8 | 957.8 | 0.0 |

MOORE BUSINESS FORMS, INC 23

SUMMARY OF ERRORS

MOORE BUSINESS FORMS, INC 23

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Unnamed Creek

4) DOCUMENT TYPE: Report

00BREAK00

13

RECEIVED
OCT 1 1980
WATER MANAGEMENT

# HYDRAULIC ANALYSIS REPORT

# UNNAMED CREEK AT ALBION TOWNSHIP

# CALHOUN COUNTY, MICHIGAN

Prepared by

COMMONWEALTH ASSOCIATES INC.
209 EAST WASHINGTON AVENUE
JACKSON, MICHIGAN 49203

SEPTEMBER, 1980

Hydraulic Report
- Bridge Computations
- Profile
- Flood Boundary Floodway Map

Packet
1) Hec 2 I/O
A) 100 yr WSEL & Encroached
B) Summary runs 10, 50, 100, 500

## INTRODUCTION

Hydraulic calculations were performed for an unnamed creek within the entire corporate boundaries of Albion Township starting from the East Branch Kalamazoo River. Field cross section data were surveyed by Commonwealth survey crews in November, 1978, and May, 1979. The flood flows for 10-, 50-, 100-, and 500-year recurrence intervals were approved by the Michigan DNR. An enlarged 7-1/2' U.S.G.S. topographic map (preliminary) with 10' contour interval was used. This study was performed by Commonwealth Associates Inc., of Jackson, Michigan, and the Project Manager was V. Danushkodi, P.E.

## METHOD OF ANALYSIS

The HEC-2 computer program was utilized for the entire hydraulic analysis.

## VARIABLES AND COEFFICIENTS

Manning's Roughness Coefficient

| | |
|---|---|
| For channel | 0.05 |
| For overbanks | 0.10 |

Coefficients for Floodway

| | |
|---|---|
| Contraction | 0.10 |
| Expansion | 0.30 |

Coefficients for Bridges

| | |
|---|---|
| Contraction | 0.30 |
| Expansion | 0.50 |

Ratios

| | |
|---|---|
| Contraction | 1:1 |
| Expansion | 1:4 |

## HIGH-WATER MARKS

None

## STARTING CONDITIONS

In order to determine valid starting conditions, the culvert located about 200 feet downstream of the township limit was surveyed and the hydraulic calculations were performed from the East Branch Kalamazoo River. At the mouth, the slope area method was employed with a water surface slope of 0.0015. However, the controlling factor in the analysis was the weir flow over the culvert located downstream of the township line.

SPECIAL PROBLEMS

None

REFERENCES

None

| Cross Section ID in Profile/Table | Sec. No. in HEC-2 Program | Description |
|---|---|---|
| - | 341.0 | Repeated Section Same as Section 342.1 lowered by 1 foot |
| - | 341.8<br>341.9<br>342.0<br>342.1 | Surveyed Bridge Sections at the culvert downstream of township line |
| A | 343.0 | Surveyed Valley Section |
| - | 343.8 | Surveyed Valley Section |
| -<br>B<br>- | 343.9<br>344.0<br>344.2 | Surveyed Bridge Sections |
| - | 344.3 | Repeated Section Same as Section 344.2 raised by 3.5 feet |
| - | 345.0 | Manufactured Section from topographic map |
| - | 346.0 | Manufactured Section from topographic map |

BRIDGE NOTES AND SKETCHES

Gilbert/Commonwealth
209 E. Washington Avenue, Jackson MI 49201

CALCULATION SHEET

REV.

| CLIENT/OWNER | FILING CODE / JOB NO. |
|---|---|
| CALC. BY/DATE (SIGNATURE) / CHECKED BY/DATE (SIGNATURE) | SUBJECT: SECTION 342.0 |
| | SHEET OF / BOOK NO. |

Unnamed Creek Crossing Riverside Dr.

4' ϕ CMP 37' long

$n = .024$

$A = 12.6\ ft^2$

$R = 1.0$

$$K_f = \frac{29.1\ n^2 L}{R^{4/3}} = 0.62$$

$K_{ent} = 0.7$

$\Sigma K_0 R = 1.0 + 0.7 + 0.62 = \underline{2.32}$

Dirt Road $\frac{h}{l} < 0.15$ $C = 2.8$

Width of Rectangular Channel $= \frac{12.6}{4} = 3.2$ ft

Gilbert/Commonwealth
209 E. Washington Avenue, Jackson, MI 49201

CALCULATION SHEET REV.

| CLIENT/OWNER | | FILING CODE / JOB NO. |
|---|---|---|
| CALC. BY/DATE (SIGNATURE) | SUBJECT | SHEET OF |
| CHECKED BY/DATE (SIGNATURE) | SECTION 344.0 | BOOK NO. |

Unnamed Creek

3' ϕ CMP 69 ft long

$n = 0.024$

$A = 7.07\ ft^2$

$R = 0.75\ ft$

$$K_f = \frac{29.1\, n^2 L}{R^{4/3}} = 1.7$$

$K_e = 0.7$

$\Sigma K_{OR} = 1.0 + 0.7 + 1.7 = 3.4$

Paved Road Surface $\frac{h}{l} < 0.15$ $C = 3.0$

$B = 2.36\ ft$

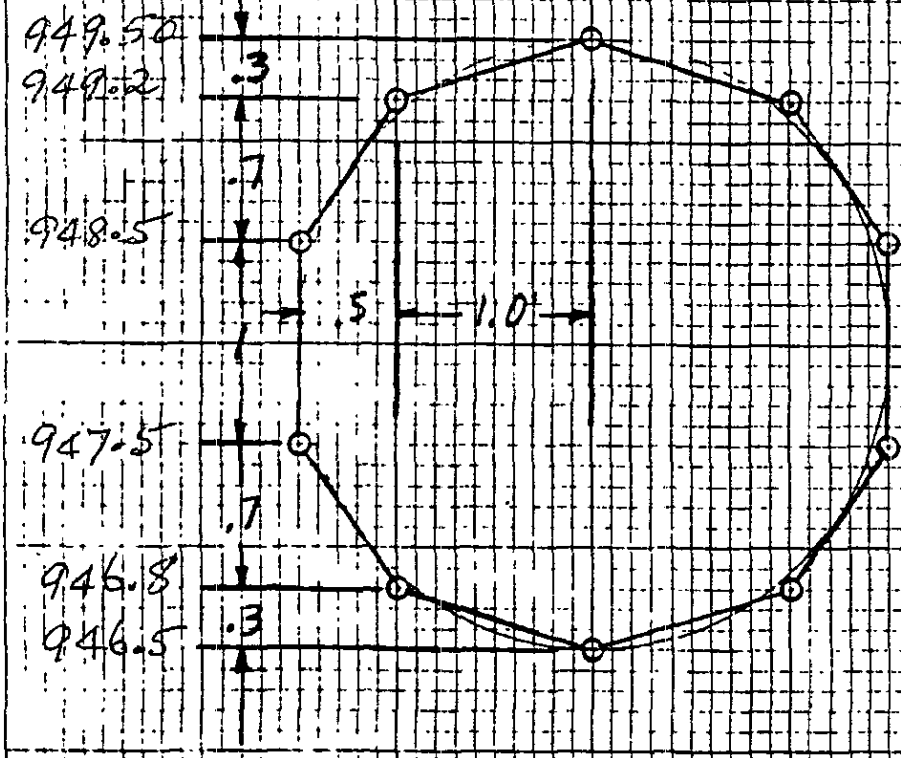
344.0 3' ϕ culvert @ Unnamed Creek crossing

36" Dia. Conduit

Area = 7.1 ft²

W.P. = 9.42 ft

Scale: 1=1'

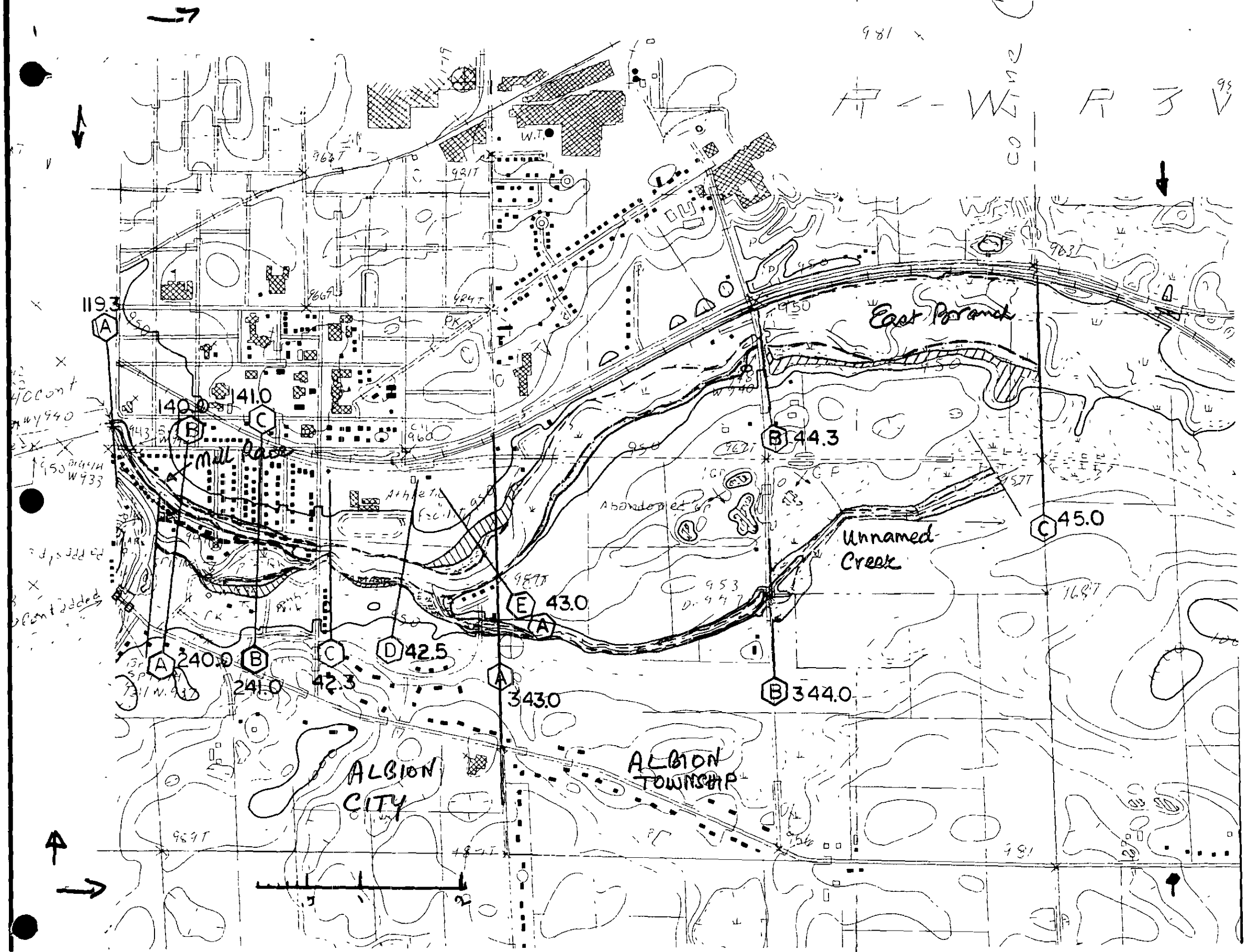



Approximation Model

A = 7.1 ft² (100%)

W.P. = 9.62 ft (98%)

R. = .74 (98)



East Branch
Mill Race
Unnamed Creek
ALBION CITY
ALBION TOWNSHIP
119.3
140.0
141.0
44.3
45.0
43.0
42.5
42.3
240.0
241.0
343.0
344.0


10' Contour




1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Unnamed Creek

4) DOCUMENT TYPE: Summary



MOORE BUSINESS FORMS, INC 23

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

UNNAMED CREEK

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 341.000 | 944.51 | 1993.21 | 2000.00 | 2005.00 | 2011.04 | 17.83 | 0.00 |
| 341.000 | 945.64 | 1990.27 | 2000.00 | 2005.00 | 2014.82 | 24.54 | 0.00 |
| 341.000 | 945.95 | 1989.87 | 2000.00 | 2005.00 | 2017.07 | 27.20 | 0.00 |
| 341.000 | 946.60 | 1988.97 | 2000.00 | 2005.00 | 2024.94 | 35.97 | 0.00 |
| 341.800 | 945.47 | 1993.40 | 2000.00 | 2005.00 | 2010.87 | 17.48 | 620.00 |
| 341.800 | 946.60 | 1990.34 | 2000.00 | 2005.00 | 2014.65 | 24.31 | 620.00 |
| 341.800 | 946.91 | 1989.92 | 2000.00 | 2005.00 | 2016.72 | 26.79 | 620.00 |
| 341.800 | 947.55 | 1989.07 | 2000.00 | 2005.00 | 2024.02 | 34.95 | 620.00 |
| 341.900 | 945.55 | 1993.07 | 2000.00 | 2005.00 | 2011.16 | 18.08 | 50.00 |
| 341.900 | 946.69 | 1990.23 | 2000.00 | 2005.00 | 2014.93 | 24.71 | 50.00 |
| 341.900 | 947.00 | 1989.81 | 2000.00 | 2005.00 | 2017.42 | 27.61 | 50.00 |
| 341.900 | 947.64 | 1988.45 | 2000.00 | 2005.00 | 2025.42 | 36.96 | 50.00 |
| 342.000 | 945.95 | 1991.57 | 2000.00 | 2005.00 | 2012.49 | 20.92 | 37.00 |
| 342.000 | 948.14 | 1964.91 | 2000.00 | 2005.00 | 2033.83 | 68.92 | 37.00 |
| 342.000 | 948.34 | 1955.61 | 2000.00 | 2005.00 | 2036.94 | 81.33 | 37.00 |
| 342.000 | 948.61 | 1942.40 | 2000.00 | 2005.00 | 2041.36 | 98.97 | 37.00 |
| 342.100 | 945.99 | 1991.38 | 2000.00 | 2005.00 | 2012.66 | 21.28 | 50.00 |
| 342.100 | 948.16 | 1964.04 | 2000.00 | 2005.00 | 2034.12 | 70.08 | 50.00 |
| 342.100 | 948.36 | 1954.60 | 2000.00 | 2005.00 | 2037.28 | 82.68 | 50.00 |
| 342.100 | 948.64 | 1940.93 | 2000.00 | 2005.00 | 2041.85 | 100.93 | 50.00 |
| 343.000 | 946.11 | 1416.25 | 1414.00 | 1436.00 | 1434.16 | 17.91 | 120.00 |
| 343.000 | 948.21 | 1369.38 | 1414.00 | 1436.00 | 1481.73 | 112.34 | 120.00 |
| 343.000 | 948.41 | 1340.08 | 1414.00 | 1436.00 | 1487.80 | 147.72 | 120.00 |
| 343.000 | 948.71 | 1296.15 | 1414.00 | 1436.00 | 1496.91 | 200.75 | 120.00 |
| 343.800 | 949.25 | 1986.66 | 2000.00 | 2048.00 | 2043.88 | 57.23 | 2750.00 |
| 343.800 | 949.65 | 1887.57 | 2000.00 | 2048.00 | 2044.87 | 157.30 | 2750.00 |
| 343.800 | 949.83 | 1752.93 | 2000.00 | 2048.00 | 2045.33 | 292.39 | 2750.00 |
| 343.800 | 950.14 | 1711.45 | 2000.00 | 2048.00 | 2046.13 | 334.68 | 2750.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 343.900 | 949.29 | 1974.07 | 2000.00 | 2003.00 | 2005.75 | 31.67 | 50.00 |
| 343.900 | 949.77 | 1789.54 | 2000.00 | 2003.00 | 2018.15 | 228.61 | 50.00 |
| 343.900 | 949.93 | 1740.37 | 2000.00 | 2003.00 | 2022.27 | 281.89 | 50.00 |
| 343.900 | 950.21 | 1703.83 | 2000.00 | 2003.00 | 2029.71 | 325.88 | 50.00 |
| 344.000 | 950.18 | 1707.19 | 2000.00 | 2003.00 | 2029.03 | 321.84 | 69.00 |
| 344.000 | 953.41 | 1679.00 | 2000.00 | 2003.00 | 2384.00 | 705.00 | 69.00 |
| 344.000 | 953.46 | 1679.00 | 2000.00 | 2003.00 | 2384.00 | 705.00 | 69.00 |
| 344.000 | 953.52 | 1679.00 | 2000.00 | 2003.00 | 2384.00 | 705.00 | 69.00 |
| 344.200 | 950.19 | 1877.62 | 2000.00 | 2048.00 | 2044.97 | 167.36 | 50.00 |
| 344.200 | 953.41 | 1679.00 | 2000.00 | 2048.00 | 2335.55 | 656.55 | 50.00 |
| 344.200 | 953.46 | 1679.00 | 2000.00 | 2048.00 | 2344.55 | 665.55 | 50.00 |
| 344.200 | 953.52 | 1679.00 | 2000.00 | 2048.00 | 2354.57 | 675.57 | 50.00 |
| * 344.300 | 952.24 | 2022.54 | 2000.00 | 2048.00 | 2041.36 | 18.82 | 1000.00 |
| 344.300 | 953.40 | 1949.13 | 2000.00 | 2048.00 | 2044.26 | 95.13 | 1000.00 |
| 344.300 | 953.45 | 1935.87 | 2000.00 | 2048.00 | 2044.39 | 108.52 | 1000.00 |
| 344.300 | 953.50 | 1925.30 | 2000.00 | 2048.00 | 2044.50 | 119.20 | 1000.00 |
| 345.000 | 955.81 | 343.23 | 410.00 | 415.00 | 474.44 | 131.22 | 750.00 |
| * 345.000 | 955.75 | 348.19 | 410.00 | 415.00 | 470.03 | 121.84 | 750.00 |
| 345.000 | 955.89 | 337.39 | 410.00 | 415.00 | 479.64 | 142.24 | 750.00 |
| 345.000 | 956.15 | 314.63 | 410.00 | 415.00 | 499.90 | 185.26 | 750.00 |
| 346.000 | 957.17 | 451.50 | 480.00 | 485.00 | 521.52 | 70.02 | 830.00 |
| 346.000 | 957.72 | 365.52 | 480.00 | 485.00 | 631.68 | 266.16 | 830.00 |
| 346.000 | 957.77 | 358.55 | 480.00 | 485.00 | 640.61 | 282.06 | 830.00 |
| 346.000 | 957.82 | 348.10 | 480.00 | 485.00 | 654.00 | 305.91 | 830.00 |

MOORE BUSINESS FORMS, INC. 23

UNNAMED CREEK

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 341.000 | 0.00 | 0.00 | 0.00 | 941.30 | 44.00 | 944.51 | 0.00 | 944.58 | 14.99 | 2.33 | 29.01 | 11.37 |
| 341.000 | 0.00 | 0.00 | 0.00 | 941.30 | 88.00 | 945.64 | 0.00 | 945.74 | 15.08 | 2.91 | 53.43 | 22.66 |
| 341.000 | 0.00 | 0.00 | 0.00 | 941.30 | 104.00 | 945.95 | 0.00 | 946.05 | 15.27 | 3.07 | 61.23 | 26.61 |
| 341.000 | 0.00 | 0.00 | 0.00 | 941.30 | 142.00 | 946.60 | 0.00 | 946.71 | 15.02 | 3.34 | 81.45 | 36.64 |
| 341.800 | 620.00 | 0.00 | 0.00 | 942.30 | 44.00 | 945.47 | 0.00 | 945.54 | 16.05 | 2.38 | 28.14 | 10.98 |
| 341.800 | 620.00 | 0.00 | 0.00 | 942.30 | 88.00 | 946.60 | 0.00 | 946.70 | 15.92 | 2.96 | 52.21 | 22.05 |
| 341.800 | 620.00 | 0.00 | 0.00 | 942.30 | 104.00 | 946.91 | 0.00 | 947.02 | 15.95 | 3.11 | 60.11 | 26.04 |
| 341.800 | 620.00 | 0.00 | 0.00 | 942.30 | 142.00 | 947.55 | 0.00 | 947.67 | 15.83 | 3.40 | 79.47 | 35.69 |
| 341.900 | 50.00 | 0.00 | 0.00 | 942.30 | 44.00 | 945.55 | 0.00 | 945.62 | 14.25 | 2.29 | 29.67 | 11.65 |
| 341.900 | 50.00 | 0.00 | 0.00 | 942.30 | 88.00 | 946.69 | 0.00 | 946.78 | 14.52 | 2.87 | 54.30 | 23.09 |
| 341.900 | 50.00 | 0.00 | 0.00 | 942.30 | 104.00 | 947.00 | 0.00 | 947.09 | 14.61 | 3.02 | 62.41 | 27.21 |
| 341.900 | 50.00 | 0.00 | 0.00 | 942.30 | 142.00 | 947.64 | 0.00 | 947.74 | 14.61 | 3.30 | 82.52 | 37.15 |
| 342.000 | 37.00 | 948.00 | 945.40 | 942.30 | 44.00 | 945.95 | 0.00 | 945.99 | 8.47 | 1.92 | 37.48 | 15.11 |
| 342.000 | 37.00 | 948.00 | 945.40 | 942.30 | 88.00 | 948.14 | 0.00 | 948.17 | 3.48 | 1.72 | 107.77 | 47.17 |
| 342.000 | 37.00 | 948.00 | 945.40 | 942.30 | 104.00 | 948.34 | 0.00 | 948.37 | 4.04 | 1.90 | 122.05 | 51.73 |
| 342.000 | 37.00 | 948.00 | 945.40 | 942.30 | 142.00 | 948.61 | 0.00 | 948.65 | 5.75 | 2.33 | 146.42 | 59.22 |
| 342.100 | 50.00 | 0.00 | 0.00 | 942.30 | 44.00 | 945.99 | 0.00 | 946.03 | 7.97 | 1.88 | 38.54 | 15.59 |
| 342.100 | 50.00 | 0.00 | 0.00 | 942.30 | 88.00 | 948.16 | 0.00 | 948.19 | 3.42 | 1.71 | 109.00 | 47.57 |
| 342.100 | 50.00 | 0.00 | 0.00 | 942.30 | 104.00 | 948.36 | 0.00 | 948.39 | 3.96 | 1.88 | 123.76 | 52.26 |
| 342.100 | 50.00 | 0.00 | 0.00 | 942.30 | 142.00 | 948.64 | 0.00 | 948.68 | 5.58 | 2.30 | 149.43 | 60.14 |
| 343.000 | 120.00 | 0.00 | 0.00 | 943.10 | 44.00 | 946.11 | 0.00 | 946.13 | 8.69 | 1.28 | 34.36 | 14.93 |
| 343.000 | 120.00 | 0.00 | 0.00 | 943.10 | 88.00 | 948.21 | 0.00 | 948.23 | 2.55 | 1.03 | 119.27 | 55.12 |
| 343.000 | 120.00 | 0.00 | 0.00 | 943.10 | 104.00 | 948.41 | 0.00 | 948.43 | 2.77 | 1.12 | 145.25 | 62.44 |
| 343.000 | 120.00 | 0.00 | 0.00 | 943.10 | 142.00 | 948.71 | 0.00 | 948.73 | 3.50 | 1.32 | 197.44 | 75.92 |
| 343.800 | 2750.00 | 0.00 | 0.00 | 947.30 | 44.00 | 949.25 | 0.00 | 949.27 | 15.61 | 1.10 | 40.41 | 11.14 |
| 343.800 | 2750.00 | 0.00 | 0.00 | 947.30 | 88.00 | 949.65 | 0.00 | 949.68 | 16.77 | 1.43 | 82.92 | 21.49 |
| 343.800 | 2750.00 | 0.00 | 0.00 | 947.30 | 104.00 | 949.83 | 0.00 | 949.86 | 12.96 | 1.36 | 123.14 | 28.89 |
| 343.800 | 2750.00 | 0.00 | 0.00 | 947.30 | 142.00 | 950.14 | 0.00 | 950.16 | 8.47 | 1.24 | 223.19 | 48.78 |
| 343.900 | 50.00 | 0.00 | 0.00 | 946.50 | 29.00 | 949.29 | 948.24 | 949.52 | 159.01 | 3.83 | 8.95 | 2.30 |
| 343.900 | 50.00 | 0.00 | 0.00 | 946.50 | 59.00 | 949.77 | 0.00 | 949.85 | 91.39 | 3.26 | 56.60 | 6.17 |
| 343.900 | 50.00 | 0.00 | 0.00 | 946.50 | 70.00 | 949.93 | 0.00 | 949.96 | 46.51 | 2.41 | 98.14 | 10.26 |
| 343.900 | 50.00 | 0.00 | 0.00 | 946.50 | 95.00 | 950.21 | 0.00 | 950.22 | 18.39 | 1.60 | 183.56 | 22.15 |
| 344.000 | 69.00 | 953.40 | 949.50 | 946.50 | 29.00 | 950.18 | 0.00 | 950.18 | 1.94 | .52 | 175.20 | 20.83 |
| 344.000 | 69.00 | 953.40 | 949.50 | 946.50 | 59.00 | 953.41 | 0.00 | 953.41 | .01 | .06 | 1779.44 | 561.94 |
| 344.000 | 69.00 | 953.40 | 949.50 | 946.50 | 70.00 | 953.46 | 0.00 | 953.46 | .01 | .07 | 1817.58 | 578.95 |
| 344.000 | 69.00 | 953.40 | 949.50 | 946.50 | 95.00 | 953.52 | 0.00 | 953.52 | .03 | .09 | 1860.02 | 598.20 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 344.200 | 50.00 | 0.00 | 0.00 | 947.80 | 29.00 | 950.19 | 0.00 | 950.19 | 1.61 | .45 | 89.38 | 22.86 |
| 344.200 | 50.00 | 0.00 | 0.00 | 947.80 | 59.00 | 953.41 | 0.00 | 953.41 | .01 | .09 | 1499.21 | 540.11 |
| 344.200 | 50.00 | 0.00 | 0.00 | 947.80 | 70.00 | 953.46 | 0.00 | 953.46 | .02 | .10 | 1534.97 | 556.11 |
| 344.200 | 50.00 | 0.00 | 0.00 | 947.80 | 95.00 | 953.52 | 0.00 | 953.52 | .03 | .13 | 1575.36 | 574.26 |
| 344.300 | 1000.00 | 0.00 | 0.00 | 951.30 | 29.00 | 952.24 | 952.24 | 952.46 | 513.78 | 3.72 | 7.80 | 1.28 |
| 344.300 | 1000.00 | 0.00 | 0.00 | 951.30 | 59.00 | 953.40 | 0.00 | 953.42 | 16.69 | 1.25 | 51.84 | 14.44 |
| 344.300 | 1000.00 | 0.00 | 0.00 | 951.30 | 70.00 | 953.45 | 0.00 | 953.48 | 19.70 | 1.40 | 57.24 | 15.77 |
| 344.300 | 1000.00 | 0.00 | 0.00 | 951.30 | 95.00 | 953.50 | 0.00 | 953.55 | 31.60 | 1.81 | 62.06 | 16.90 |
| 345.000 | 750.00 | 0.00 | 0.00 | 954.00 | 29.00 | 955.81 | 0.00 | 955.83 | 15.36 | 1.38 | 60.46 | 7.40 |
| 345.000 | 750.00 | 0.00 | 0.00 | 954.00 | 59.00 | 955.75 | 955.57 | 955.83 | 83.85 | 3.16 | 52.81 | 6.44 |
| 345.000 | 750.00 | 0.00 | 0.00 | 954.00 | 70.00 | 955.89 | 955.65 | 955.95 | 65.32 | 2.93 | 70.19 | 8.66 |
| 345.000 | 750.00 | 0.00 | 0.00 | 954.00 | 95.00 | 956.15 | 955.76 | 956.19 | 39.34 | 2.49 | 115.64 | 15.15 |
| 346.000 | 830.00 | 0.00 | 0.00 | 956.00 | 8.00 | 957.17 | 0.00 | 957.19 | 21.33 | 1.22 | 11.68 | 1.73 |
| 346.000 | 830.00 | 0.00 | 0.00 | 956.00 | 19.00 | 957.72 | 0.00 | 957.73 | 3.67 | .65 | 102.01 | 9.92 |
| 346.000 | 830.00 | 0.00 | 0.00 | 956.00 | 23.00 | 957.77 | 0.00 | 957.77 | 4.19 | .71 | 113.95 | 11.23 |
| 346.000 | 830.00 | 0.00 | 0.00 | 956.00 | 32.00 | 957.82 | 0.00 | 957.83 | 5.67 | .84 | 133.16 | 13.44 |

MOORE BUSINESS FORMS, INC 23

UNNAMED CREEK

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 341.000 | 44.00 | 944.51 | 0.00 | 0.00 | 1.51 | 17.83 | 0.00 |
| 341.000 | 88.00 | 945.64 | 1.13 | 0.00 | 2.64 | 24.54 | 0.00 |
| 341.000 | 104.00 | 945.95 | .30 | 0.00 | 2.95 | 27.20 | 0.00 |
| 341.000 | 142.00 | 946.60 | .65 | 0.00 | 3.60 | 35.97 | 0.00 |
| 341.800 | 44.00 | 945.47 | 0.00 | .96 | 0.00 | 17.48 | 620.00 |
| 341.800 | 88.00 | 946.60 | 1.13 | .96 | 0.00 | 24.31 | 620.00 |
| 341.800 | 104.00 | 946.91 | .31 | .97 | 0.00 | 26.79 | 620.00 |
| 341.800 | 142.00 | 947.55 | .64 | .95 | 0.00 | 34.95 | 620.00 |
| 341.900 | 44.00 | 945.55 | 0.00 | .08 | 0.00 | 18.08 | 50.00 |
| 341.900 | 88.00 | 946.69 | 1.13 | .08 | 0.00 | 24.71 | 50.00 |
| 341.900 | 104.00 | 947.00 | .31 | .08 | 0.00 | 27.61 | 50.00 |
| 341.900 | 142.00 | 947.64 | .64 | .08 | 0.00 | 36.96 | 50.00 |
| 342.000 | 44.00 | 945.95 | 0.00 | .40 | 0.00 | 20.92 | 37.00 |
| 342.000 | 88.00 | 948.14 | 2.20 | 1.46 | 0.00 | 68.92 | 37.00 |
| 342.000 | 104.00 | 948.34 | .19 | 1.34 | 0.00 | 81.33 | 37.00 |
| 342.000 | 142.00 | 948.61 | .27 | .97 | 0.00 | 98.97 | 37.00 |
| 342.100 | 44.00 | 945.99 | 0.00 | .04 | 0.00 | 21.28 | 50.00 |
| 342.100 | 88.00 | 948.16 | 2.17 | .02 | 0.00 | 70.08 | 50.00 |
| 342.100 | 104.00 | 948.36 | .19 | .02 | 0.00 | 82.68 | 50.00 |
| 342.100 | 142.00 | 948.64 | .28 | .03 | 0.00 | 100.93 | 50.00 |
| 343.000 | 44.00 | 946.11 | 0.00 | .12 | 0.00 | 17.91 | 120.00 |
| 343.000 | 88.00 | 948.21 | 2.10 | .05 | 0.00 | 112.34 | 120.00 |
| 343.000 | 104.00 | 948.41 | .20 | .05 | 0.00 | 147.72 | 120.00 |
| 343.000 | 142.00 | 948.71 | .30 | .08 | 0.00 | 200.75 | 120.00 |
| 343.800 | 44.00 | 949.25 | 0.00 | 3.14 | 0.00 | 57.23 | 2750.00 |
| 343.800 | 88.00 | 949.65 | .40 | 1.44 | 0.00 | 157.30 | 2750.00 |
| 343.800 | 104.00 | 949.83 | .18 | 1.42 | 0.00 | 292.39 | 2750.00 |
| 343.800 | 142.00 | 950.14 | .31 | 1.43 | 0.00 | 334.68 | 2750.00 |
| 343.900 | 29.00 | 949.29 | 0.00 | .04 | 0.00 | 31.67 | 50.00 |
| 343.900 | 59.00 | 949.77 | .47 | .11 | 0.00 | 228.61 | 50.00 |
| 343.900 | 70.00 | 949.93 | .16 | .10 | 0.00 | 281.89 | 50.00 |
| 343.900 | 95.00 | 950.21 | .28 | .07 | 0.00 | 325.88 | 50.00 |
| 344.000 | 29.00 | 950.18 | 0.00 | .89 | 0.00 | 321.84 | 69.00 |
| 344.000 | 59.00 | 953.41 | 3.23 | 3.64 | 0.00 | 705.00 | 69.00 |
| 344.000 | 70.00 | 953.46 | .05 | 3.54 | 0.00 | 705.00 | 69.00 |
| 344.000 | 95.00 | 953.52 | .06 | 3.31 | 0.00 | 705.00 | 69.00 |

MOORE BUSINESS FORMS, INC. 23

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 344.200 | 29.00 | 950.19 | 0.00 | .01 | 0.00 | 167.36 | 50.00 |
| | 344.200 | 59.00 | 953.41 | 3.22 | .00 | 0.00 | 656.55 | 50.00 |
| | 344.200 | 70.00 | 953.46 | .05 | .00 | 0.00 | 665.55 | 50.00 |
| | 344.200 | 95.00 | 953.52 | .06 | .00 | 0.00 | 675.57 | 50.00 |
| * | 344.300 | 29.00 | 952.24 | 0.00 | 2.05 | 0.00 | 18.82 | 1000.00 |
| | 344.300 | 59.00 | 953.40 | 1.15 | -.01 | 0.00 | 95.13 | 1000.00 |
| | 344.300 | 70.00 | 953.45 | .05 | -.01 | 0.00 | 108.52 | 1000.00 |
| | 344.300 | 95.00 | 953.50 | .05 | -.02 | 0.00 | 119.20 | 1000.00 |
| | 345.000 | 29.00 | 955.81 | 0.00 | 3.57 | 0.00 | 131.22 | 750.00 |
| * | 345.000 | 59.00 | 955.75 | -.06 | 2.36 | 0.00 | 121.84 | 750.00 |
| | 345.000 | 70.00 | 955.89 | .14 | 2.44 | 0.00 | 142.24 | 750.00 |
| | 345.000 | 95.00 | 956.15 | .26 | 2.66 | 0.00 | 185.26 | 750.00 |
| | 346.000 | 8.00 | 957.17 | 0.00 | 1.36 | 0.00 | 70.02 | 830.00 |
| | 346.000 | 19.00 | 957.72 | .55 | 1.97 | 0.00 | 266.16 | 830.00 |
| | 346.000 | 23.00 | 957.77 | .04 | 1.87 | 0.00 | 282.06 | 830.00 |
| | 346.000 | 32.00 | 957.82 | .06 | 1.67 | 0.00 | 305.91 | 830.00 |

MOORE BUSINESS FORMS, INC 23

SUMMARY OF ERRORS

CAUTION SECNO= 344.300 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 344.300 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 344.300 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 345.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

MOORE BUSINESS FORMS, INC 23

FLOOD INSURANCE ZONE DATA FOR UNNAMED CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10 | 2 | 0.2 |
|---|---|---|---|---|
| 341.000 | 0. | -1.44 | -.30 | .65 |
| 341.800 | 620. | -1.44 | -.31 | .64 |
| 341.900 | 670. | -1.45 | -.31 | .64 |
| 342.000 | 707. | -2.39 | -.19 | .27 |
| 342.100 | 757. | -2.36 | -.19 | .28 |
| 343.000 | 877. | -2.30 | -.20 | .30 |
| 343.800 | 3627. | -.58 | -.18 | .31 |
| 343.900 | 3677. | -.63 | -.16 | .28 |
| 344.000 | 3746. | -3.28 | -.05 | .06 |
| 344.200 | 3796. | -3.27 | -.05 | .06 |
| 344.300 | 4796. | -1.20 | -.05 | .05 |
| 345.000 | 5546. | -.08 | -.14 | .26 |
| 346.000 | 6376. | -.59 | -.04 | .06 |
| WEIGHTED AVG FOR REACH | | -1.37 | -.15 | .26 |

FHF FOR THE REACH = 015 WITH 53.6 PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 3

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | AVG ELEVATION DATA 10 | 1 | DIFF. | WTD. AVG. | FHF | PERCENT WITHIN |
|---|---|---|---|---|---|---|---|
| | 0. | | | | | SEC. 341.000 | |
| 1 | 100. | 944.59 | 946.03 | -1.44 | -1.44 | 015 | 100. |
| 2 | 200. | 944.74 | 946.18 | -1.44 | -1.44 | 015 | 100. |
| 3 | 300. | 944.90 | 946.34 | -1.44 | -1.44 | 015 | 100. |
| 4 | 400. | 945.05 | 946.49 | -1.44 | -1.44 | 015 | 100. |
| 5 | 500. | 945.21 | 946.65 | -1.44 | -1.44 | 015 | 100. |
| 6 | 600. | 945.36 | 946.80 | -1.44 | -1.44 | 015 | 100. |
| | 620. | | | | | SEC. 341.800 | |
| | 670. | | | | | SEC. 341.900 | |
| 7 | 700. | 945.66 | 947.48 | -1.82 | -1.49 | 015 | 100. |
| | 707. | | | | | SEC. 342.000 | |
| | 757. | | | | | SEC. 342.100 | |
| 8 | 800. | 945.95 | 948.23 | -2.28 | -1.59 | 015 | 88. |
| | 877. | | | | | SEC. 343.000 | |
| 9 | 900. | 946.08 | 948.40 | -2.32 | -1.67 | 015 | 78. |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | 1000. | 946.19 | 948.45 | -2.26 | -1.73 | 015 | | 70. |
| 11 | 1100. | 946.31 | 948.50 | -2.19 | -1.77 | 020 | | 82. |
| 12 | 1200. | 946.42 | 948.55 | -2.13 | -1.80 | 020 | | 92. |
| 13 | 1300. | 946.53 | 948.60 | -2.07 | -1.82 | 020 | | 100. |
| 14 | 1400. | 946.65 | 948.65 | -2.00 | -1.84 | 020 | | 100. |
| 15 | 1500. | 946.76 | 948.71 | -1.95 | -1.84 | 020 | | 100. |
| 16 | 1600. | 946.88 | 948.76 | -1.88 | -1.85 | 020 | | 100. |
| 17 | 1700. | 946.99 | 948.81 | -1.82 | -1.84 | 020 | | 100. |
| 18 | 1800. | 947.11 | 948.86 | -1.75 | -1.84 | 020 | | 100. |
| 19 | 1900. | 947.22 | 948.91 | -1.69 | -1.83 | 020 | | 100. |
| 20 | 2000. | 947.33 | 948.96 | -1.63 | -1.82 | 020 | | 100. |
| 21 | 2100. | 947.45 | 949.02 | -1.57 | -1.81 | 020 | | 95. |
| 22 | 2200. | 947.56 | 949.07 | -1.51 | -1.80 | 020 | | 95. |
| 23 | 2300. | 947.68 | 949.12 | -1.44 | -1.78 | 020 | | 96. |
| 24 | 2400. | 947.79 | 949.17 | -1.38 | -1.76 | 020 | | 92. |
| 25 | 2500. | 947.91 | 949.22 | -1.31 | -1.75 | 020 | | 88. |
| 26 | 2600. | 948.02 | 949.27 | -1.25 | -1.73 | 015 | | 88. |
| 27 | 2700. | 948.13 | 949.33 | -1.20 | -1.71 | 015 | | 85. |
| 28 | 2800. | 948.25 | 949.38 | -1.13 | -1.69 | 015 | | 86. |
| 29 | 2900. | 948.36 | 949.43 | -1.07 | -1.67 | 015 | | 79. |
| 30 | 3000. | 948.48 | 949.48 | -1.00 | -1.64 | 015 | | 77. |
| 31 | 3100. | 948.59 | 949.53 | -.94 | -1.62 | 015 | | 74. |
| 32 | 3200. | 948.71 | 949.58 | -.87 | -1.60 | 015 | | 72. |
| 33 | 3300. | 948.82 | 949.64 | -.82 | -1.57 | 015 | | 73. |
| 34 | 3400. | 948.93 | 949.69 | -.76 | -1.55 | 015 | | 68. |
| 35 | 3500. | 949.05 | 949.74 | -.69 | -1.52 | 015 | | 66. |
| 36 | 3600. | 949.16 | 949.79 | -.63 | -1.50 | 015 | | 67. |
| | 3627. | | | | | SEC. | 343.800 | |
| | 3677. | | | | | SEC. | 343.900 | |
| 37 | 3700. | 949.41 | 950.46 | -1.05 | -1.49 | 015 | | 65. |
| | 3746. | | | | | SEC. | 344.000 | |
| | 3796. | | | | | SEC. | 344.200 | |
| 38 | 3800. | 949.89 | 952.28 | -2.39 | -1.51 | 015 | | 63. |
| 39 | 3900. | 950.30 | 953.46 | -3.16 | -1.55 | 015 | | 62. |
| 40 | 4000. | 950.51 | 953.46 | -2.95 | -1.59 | 015 | | 58. |
| 41 | 4100. | 950.71 | 953.46 | -2.75 | -1.62 | 015 | | 56. |
| 42 | 4200. | 950.92 | 953.46 | -2.54 | -1.64 | 015 | | 55. |
| 43 | 4300. | 951.12 | 953.46 | -2.34 | -1.66 | 015 | | 53. |
| 44 | 4400. | 951.33 | 953.45 | -2.12 | -1.67 | 015 | | 55. |
| 45 | 4500. | 951.53 | 953.45 | -1.92 | -1.67 | 015 | | 56. |
| 46 | 4600. | 951.74 | 953.45 | -1.71 | -1.67 | 015 | | 57. |
| 47 | 4700. | 951.94 | 953.45 | -1.51 | -1.67 | 015 | | 57. |
| | 4796. | | | | | SEC. | 344.300 | |
| 48 | 4800. | 952.15 | 953.46 | -1.31 | -1.66 | 015 | | 58. |
| 49 | 4900. | 952.50 | 953.62 | -1.12 | -1.65 | 015 | | 57. |
| 50 | 5000. | 952.98 | 953.95 | -.97 | -1.64 | 015 | | 56. |
| 51 | 5100. | 953.45 | 954.28 | -.83 | -1.62 | 015 | | 57. |
| 52 | 5200. | 953.93 | 954.60 | -.67 | -1.60 | 015 | | 54. |
| 53 | 5300. | 954.41 | 954.93 | -.52 | -1.58 | 015 | | 53. |
| 54 | 5400. | 954.88 | 955.25 | -.37 | -1.56 | 015 | | 52. |
| 55 | 5500. | 955.36 | 955.58 | -.22 | -1.54 | 015 | | 53. |
| | 5546. | | | | | SEC. | 345.000 | |
| 56 | 5600. | 955.75 | 955.88 | -.13 | -1.51 | 015 | | 52. |
| 57 | 5700. | 955.98 | 956.13 | -.15 | -1.49 | 015 | | 51. |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 58 | 5800. | 956.15 | 956.35 | -.20 | -1.46 | 015 | 52. |
| 59 | 5900. | 956.31 | 956.58 | -.27 | -1.44 | 015 | 51. |
| 60 | 6000. | 956.48 | 956.80 | -.32 | -1.43 | 015 | 50. |
| 61 | 6100. | 956.64 | 957.03 | -.39 | -1.41 | 015 | 48. |
| 62 | 6200. | 956.80 | 957.26 | -.46 | -1.39 | 015 | 47. |
| 63 | 6300. | 956.97 | 957.48 | -.51 | -1.38 | 015 | 46. |
| | 6376. | | | | SEC. | 346.000 | |

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FIA REQUIREMENTS
INPUT 20N WHERE N IS THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE 202 28 63
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | WEIGHTED AVG DIFFERENCE BETWEEN BASE FLOOD AND | | |
|---|---|---|---|---|
| | | 10 | 1 | 0.2 |
| 28 | 2800. | -1.69 | -.22 | .38 |

FHF FOR REACH 1 = 015 WITH 86. PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 3

| | | | | |
|---|---|---|---|---|
| 38 | 3800. | -1.02 | -.17 | .29 |

FHF FOR REACH 2 = 010 WITH 90. PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 2

| | | | | |
|---|---|---|---|---|
| 50 | 5000. | -2.03 | -.05 | .06 |

FHF FOR REACH 3 = 020 WITH 83. PERCENT OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 4

| | | | | |
|---|---|---|---|---|
| 63 | 6300. | -.39 | -.10 | .18 |

FHF FOR REACH 4 = 005 WITH 100. PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 1

MOORE BUSINESS FORMS, INC. 23

KEY TO SYMBOLS

FLOOD BOUNDARY AND FLOODWAY DATA

500 Yr Flood Boundary

100 Yr Flood Boundary

FLOODWAY FRINGE

FLOODWAY

500 Yr Flood Boundary

Approximate 100 Yr Flood Boundary

Cross Section Line

FLOOD BOUNDARY AND FLOODWAY MAP

MAP INDEX

# CITY OF ALBION
# CALHOUN COUNTY

0 500 1000

1" = 500

N




1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100-YEAR ENCROACHED



```
*****************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
 ERROR CORR -  01.02.03
 MODIFICATION -  50.51.52.53
*****************************************************

T1  THE TOWNSHIP OF ALBION
T2  THE KALAMAZOO RIVER
T3   THE 100 YEAR ENCROACHED RUN

J1  ICHECK    INQ      NINV     IDIR     SIRT     METRIC   HVINS    Q        WSEL     FQ
     -10.       6.       0.       0.  0.000000    0.00     0.0      0.   946.270   0.000
J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     15.000    0.000   -1.000    0.000    0.000   -1.290    0.000    0.000    0.000    0.000

*PROF 2

CCHV=     .100 CEHV=     .300
*SECNO 24.000
 2800 NAT Q1=    2300.89  WSEL=     946.17  ENC Q1=    2347.78  WSEL=     946.27  RATIO=  -.0204
 NAT Q1=    2358.  RATIOS LOB.CH.ROB=    .0014    .9957    .0029  WSEL=     946.27
   SECNO     DEPTH     GWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST

3470 ENCROACHMENT STATIONS=     2000.0     2278.0  TYPE=      4  TARGET=          .004

        D/S LIMIT OF ALBION TWP.    (A)

    24.00      7.57   946.27      0.00   946.17   946.27      .00      0.00      0.00   944.00
     735.        0.     735.        0.       0.    1951.       0.        0.        0.   944.90
     0.00      0.00      .38      0.00     .060     .045     .060     0.000    938.70  2000.00
  .000010        0.       0.        0.        0        0        0      0.00    278.00  2278.00

*SECNO 24.100
 2800 NAT Q1=    1618.33  WSEL=     946.20  ENC Q1=    1628.93  WSEL=     946.30  RATIO=  -.0065
 NAT Q1=    1668.  RATIOS LOB.CH.ROB=    .0209    .9763    .0027  WSEL=     946.30

3470 ENCROACHMENT STATIONS=     2000.0     2220.0  TYPE=      4  TARGET=          .024
    24.10      6.74   946.30      0.00   946.20   946.30      .00       .03       .00   944.90
     735.        0.     735.        0.       0.    1432.       0.       89.       13.   944.60
     1.23      0.00      .51      0.00     .060     .045     .060      .045    939.56  2000.00
  .000021     2350.    2280.     2200.        0        0        0      0.00    220.00  2220.00

*SECNO 24.200
 2800 NAT Q1=    1423.70  WSEL=     946.25  ENC Q1=    1423.70  WSEL=     946.35  RATIO=  0.0000
 NAT Q1=    1534.  RATIOS LOB.CH.ROB=    .4378    .5365    .0256  WSEL=     946.35
```

D/S encroached shows 946.17

MOORE BUSINESS FORMS, INC 23

MOORE BUSINESS FORMS, INC. 23

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 1265.3 3150.0 TYPE= 4 TARGET= .072

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.20 | 5.95 | 946.35 | 0.00 | 946.25 | 946.36 | .00 | .05 | .00 | 944.00 |
| 735. | 310. | 425. | 0. | 1862. | 812. | 0. | 191. | 55. | 944.80 |
| 2.90 | .17 | .52 | 0.00 | .060 | .045 | .060 | .046 | 940.40 | 1265.28 |
| .000027 | 2000. | 2300. | 2000. | 0 | 0 | 0 | 0.00 | 1533.48 | 3150.00 |

*SECNO 25.000
2800 NAT QI= 446.63 WSEL= 946.37 ENC QI= 446.63 WSEL= 946.47 RATIO= .0000
NAT QI= 482. RATIOS LOB,CH,ROB= .1801 .7270 .0929 WSEL= 946.47

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 3055.5 4144.1 TYPE= 4 TARGET= .074

SURVEYED VALLEY SECTION (A)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.00 | 5.17 | 946.47 | 0.00 | 946.37 | 946.49 | .03 | .13 | .01 | 944.90 |
| 735. | 114. | 577. | 44. | 330. | 398. | 83. | 263. | 95. | 944.70 |
| 3.37 | .34 | 1.45 | .53 | .060 | .045 | .060 | .047 | 941.30 | 3055.49 |
| .000271 | 1500. | 2290. | 2600. | 2 | 0 | 0 | 0.00 | 673.80 | 4144.09 |

CCHV= .100 CEHV= .300

*SECNO 25.600
2800 NAT QI= 493.42 WSEL= 946.94 ENC QI= 493.42 WSEL= 947.09 RATIO= 0.0000
NAT QI= 535. RATIOS LOB,CH,ROB= .4092 .4699 .1209 WSEL= 947.09

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | IWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 3614.5 4140.6 TYPE= 4 TARGET= .078

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.60 | 5.40 | 947.10 | 0.00 | 946.99 | 947.11 | .02 | .62 | .00 | 945.72 |
| 735. | 295. | 374. | 66. | 657. | 280. | 144. | 312. | 125. | 944.92 |
| 4.15 | .45 | 1.34 | .46 | .070 | .045 | .070 | .048 | 941.70 | 3614.54 |
| .000220 | 2100. | 2850. | 1500. | 2 | 0 | 0 | 0.00 | 526.11 | 4140.64 |

*SECNO 25.800

3470 ENCROACHMENT STATIONS= 1901.0 2148.0 TYPE= 1 TARGET= 247.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.80 | 5.71 | 947.41 | 0.00 | 947.31 | 947.46 | .05 | .34 | .01 | 946.00 |
| 735. | 64. | 522. | 149. | 116. | 245. | 193. | 331. | 133. | 945.00 |
| 4.32 | .55 | 2.13 | .77 | .070 | .045 | .070 | .048 | 941.70 | 1901.00 |
| .000543 | 1080. | 1100. | 620. | 2 | 0 | 0 | 0.00 | 247.00 | 2148.00 |

*SECNO 25.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 949.90 ELREA= 949.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.90 | 5.40 | 947.60 | 0.00 | 947.53 | 947.70 | .09 | .22 | .01 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 302. | 0. | 334. | 134. | 951.50 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.35 | 0.00 | 2.44 | 0.00 | .070 | .045 | .070 | .048 | 942.20 | 2000.00 |
| .001097 | 420. | 324. | 40. | 2 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500
*SECNO 26.000

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

D/S FACE OF D DRIVE SOUTH.CONCRETE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.00 | 5.41 | 947.61 | 0.00 | 947.54 | 947.71 | .10 | .01 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 294. | 0. | 334. | 134. | 951.50 |
| 4.36 | 0.00 | 2.50 | 0.00 | .070 | .026 | .070 | .048 | 942.20 | 2000.00 |
| .000458 | 17. | 17. | 17. | 0 | 0 | 0 | -8.91 | 85.00 | 2085.00 |

*SECNO 26.100

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.10 | 7.69 | 947.69 | 0.00 | 947.62 | 947.73 | .04 | .01 | .02 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 432. | 0. | 334. | 134. | 951.50 |
| 4.36 | 0.00 | 1.70 | 0.00 | .070 | .026 | .070 | .048 | 940.00 | 2000.00 |
| .000134 | 26. | 26. | 26. | 2 | 0 | 0 | -13.32 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500
*SECNO 26.200

| SECNO | DEPTH | CWSEL | CRIWS | WSELR | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 951.50 ELREA= 951.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.20 | 7.69 | 947.69 | 0.00 | 947.63 | 947.74 | .04 | .00 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 446. | 0. | 334. | 135. | 951.50 |
| 4.36 | 0.00 | 1.65 | 0.00 | .080 | .045 | .080 | .048 | 940.00 | 2000.00 |
| .000298 | 17. | 17. | 17. | 0 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .100 CEHV= .300
*SECNO 26.400
2800 NAT QI= 385.74 WSEL= 947.68 ENC QI= 385.74 WSEL= 947.78 RATIO= 0.0000
NAT QI= 496. RATIOS LOB.CH.ROB= .2591 .5793 .1617 WSEL= 947.78

3470 ENCROACHMENT STATIONS= 1820.5 2115.4 TYPE= 4 TARGET= .222

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.40 | 5.84 | 947.74 | 0.00 | 947.68 | 947.77 | .03 | .03 | .00 | 945.50 |
| 735. | 138. | 550. | 47. | 280. | 354. | 67. | 335. | 135. | 944.50 |
| 4.38 | .45 | 1.56 | .70 | .080 | .045 | .080 | .048 | 941.90 | 1820.45 |
| .000380 | 10. | 107. | 160. | 2 | 0 | 0 | 0.00 | 294.97 | 2115.42 |

*SECNO 26.900
2800 NAT QI= 528.40 WSEL= 948.40 ENC QI= 528.40 WSEL= 948.50 RATIO= 0.0000
NAT QI= 566. RATIOS LOB.CH.ROB= .3171 .6679 .0149 WSEL= 948.50

MOORE BUSINESS FORMS, INC 23

3470 ENCROACHMENT STATIONS= 1633.3 2124.0 TYPE= 4 TARGET= .067

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.90 | 5.29 | 948.49 | 0.00 | 948.40 | 948.51 | .01 | .73 | .00 | 947.40 |
| 735. | 211. | 524. | 0. | 585. | 472. | 0. | 385. | 155. | 945.50 |
| 5.23 | .36 | 1.11 | 0.00 | .080 | .045 | .080 | .048 | 943.20 | 1633.32 |
| .000199 | 2000. | 3000. | 2250. | 2 | 0 | 0 | 0.00 | 490.68 | 2124.00 |

CCHV= .100 CEHV= .300
*SECNO 27.000
2800 NAT Q1= 342.01 WSEL= 948.40 ENC Q1= 342.01 WSEL= 948.50 RATIO= 0.0000
NAT Q1= 364. RATIOS LOB,CH,ROB= .3493 .6507 0.0000 WSEL= 948.50

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 1600.2 2090.0 TYPE= 4 TARGET= .061

SURVEYED VALLEY SECTION (D)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.00 | 6.10 | 948.50 | 0.00 | 948.40 | 948.53 | .04 | .02 | .01 | 950.70 |
| 735. | 226. | 509. | 0. | 394. | 282. | 0. | 387. | 156. | 950.20 |
| 5.25 | .58 | 1.80 | 0.00 | .070 | .045 | .070 | .048 | 942.40 | 1600.15 |
| .000460 | 72. | 72. | 72. | 1 | 0 | 0 | 0.00 | 354.80 | 2090.00 |

*SECNO 27.100
2800 NAT Q1= 500.88 WSEL= 948.44 ENC Q1= 500.88 WSEL= 948.54 RATIO= 0.0000
NAT Q1= 539. RATIOS LOB,CH,ROB= .2657 .7211 .0132 WSEL= 948.54

3470 ENCROACHMENT STATIONS= 1620.4 2143.0 TYPE= 4 TARGET= .070

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.10 | 4.53 | 948.53 | 0.00 | 948.44 | 948.55 | .02 | .01 | .00 | 948.00 |
| 735. | 166. | 569. | 0. | 431. | 508. | 0. | 387. | 156. | 946.00 |
| 5.26 | .38 | 1.12 | 0.00 | .070 | .045 | .070 | .048 | 944.00 | 1620.45 |
| .000221 | 36. | 36. | 36. | 2 | 0 | 0 | 0.00 | 522.55 | 2143.00 |

CCHV= .100 CEHV= .300
*SECNO 27.400
2800 NAT Q1= 475.80 WSEL= 948.97 ENC Q1= 475.80 WSEL= 949.07 RATIO= 0.0000
NAT Q1= 675. RATIOS LOB,CH,ROB= .5228 .4641 .0132 WSEL= 949.07

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELR | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1916.5 2169.5 TYPE= 4 TARGET= .295

SURVEYED VALLEY SECTION (F)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.40 | 4.03 | 949.08 | 0.00 | 948.97 | 949.10 | .02 | .55 | .00 | 945.20 |
| 735. | 253. | 482. | 0. | 382. | 416. | 0. | 431. | 174. | 946.95 |
| 5.93 | .66 | 1.16 | 0.00 | .070 | .045 | .070 | .049 | 945.05 | 1916.46 |
| .000240 | 1640. | 2700. | 2300. | 2 | 0 | 0 | 0.00 | 253.04 | 2169.50 |

CCHV= .300 CEHV= .500
*SECNO 27.500

MOORE BUSINESS FORMS, INC 23

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 2800 NAT Q1=    238.70  WSEL=    949.11  ENC Q1=    242.70  WSEL=    949.21  RATIO=  -.0167
 NAT Q1=    252.  RATIOS LOB,CH,ROB=   .0129   .9615   .0256  WSEL=    949.21

3470 ENCROACHMENT STATIONS=    2000.0    2100.0  TYPE=     4  TARGET=          .039
    27.50     4.02   949.22     0.00   949.11   949.29     .08      .16      .03   948.20
      735.       0.     735.       0.       0.     333.       0.     436.     176.    947.30
     5.98     0.00     2.21     0.00     .070     .045     .070     .049   945.20  2000.00
 .000945     320.     400.     550.        2        0        0     0.00   100.00  2100.00

*SECNO 27.700
 2800 NAT Q1=    331.86  WSEL=    950.14  ENC Q1=    331.86  WSEL=    950.24  RATIO=  0.0000
 NAT Q1=    349.  RATIOS LOB,CH,ROB=   .0175   .9332   .0493  WSEL=    950.24

3470 ENCROACHMENT STATIONS=    2050.0    2163.3  TYPE=     4  TARGET=          .048
    27.70     4.35   950.25     0.00   950.14   950.30     .05     1.00      .01   948.30
      735.       0.     721.      14.       0.     405.      20.     449.     179.    947.90
     6.22     0.00     1.78      .70     .070     .045     .070     .048   945.90  2050.00
 .000495    1660.    1500.    1330.        0        0        0     0.00   113.34  2163.34

*SECNO 27.800
 2800 NAT Q1=    258.25  WSEL=    950.33  ENC Q1=    268.98  WSEL=    950.43  RATIO=  -.0416
 NAT Q1=    269.  RATIOS LOB,CH,ROB=  0.0000   1.0000   0.0000  WSEL=    950.43

3470 ENCROACHMENT STATIONS=    2129.0    2221.0  TYPE=     4  TARGET=          0.000
    27.80     4.94   950.44     0.00   950.33   950.52     .07      .20      .01   950.70
      735.       0.     735.       0.       0.     340.       0.     452.     180.    951.80
     6.26     0.00     2.16     0.00     .070     .045     .070     .048   945.50  2129.50
 .000741     360.     340.     360.        2        0        0     0.00    88.62  2218.11

*SECNO 27.900
 2800 NAT Q1=    312.80  WSEL=    950.38  ENC Q1=    324.89  WSEL=    950.48  RATIO=  -.0386
 NAT Q1=    325.  RATIOS LOB,CH,ROB=  0.0000   1.0000   0.0000  WSEL=    950.48

3470 ENCROACHMENT STATIONS=    2141.0    2232.0  TYPE=     4  TARGET=          0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=     954.05 ELREA=     954.05

    27.90     4.95   950.49     0.00   950.38   950.54     .05      .02      .01   955.40
      735.       0.     735.       0.       0.     391.       0.     453.     180.    955.40
     6.27     0.00     1.88     0.00     .070     .045     .070     .048   945.50  2141.00
 .000510       32.      32.      32.        2        0        0     0.00    91.00  2232.00

CCHV=     .300 CEHV=     .500
*SECNO 28.000
    3700.  BRIDGE STENCL=    2141.00    STENCR=    2232.00
  SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS     BANK ELEV
  Q        QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
  TIME     VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
  SLOPE    XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     COPAR     TOPWID     ENDST

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD=  954.80 MAX ELLC=  952.70

        D/S FACE OF F DRIVE SOUTH.CONCRETE    (F)
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      28.00      4.99    950.49      0.00    950.39    950.54      .05       .00       .00    955.40
        690.        0.      690.        0.        0.      374.        0.      453.      180.    955.40
       6.27       0.00      1.84      0.00      .070      .026      .070      .048    945.50   2141.00
    .000209          1.        1.        1.         0         0         0    -17.08     91.00   2232.00

  *SECNO 26.100
   2800 NAT Q1=     505.30  WSEL=     950.40  ENC Q1=     522.47  WSEL=     950.50  RATIO=   -.0340
   NAT Q1=     522.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     950.50

  3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD=  954.80 MAX ELLC=  952.70

  3470 ENCROACHMENT STATIONS=    2149.0    2240.0  TYPE=      4  TARGET=       0.000
      28.10      4.80    950.50      0.00    950.40    950.55      .05       .01       .00    955.40
        690.        0.      690.        0.        0.      389.        0.      453.      180.    955.40
       6.27       0.00      1.77      0.00      .070      .026      .070      .048    945.70   2149.00
    .000174         37.       37.       37.         0         0         0     -8.68     91.00   2240.00

  CCHV=     .300 CEHV=     .500
  *SECNO 28.200
   2800 NAT Q1=     324.02  WSEL=     950.40  ENC Q1=     336.64  WSEL=     950.50  RATIO=   -.0390
   NAT Q1=     337.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     950.50
  3470 ENCROACHMENT STATIONS=    2149.0    2240.0  TYPE=      4  TARGET=       0.000
  3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=     955.40 ELREA=     955.40

      28.20      4.80    950.50      0.00    950.40    950.55      .05       .00       .00    955.40
        690.        0.      690.        0.        0.      398.        0.      453.      180.    955.40
       6.27       0.00      1.73      0.00      .070      .045      .070      .048    945.70   2149.00
    .000419          1.        1.        1.         0         0         0      0.00     91.00   2240.00

  *SECNO 28.300

  3470 ENCROACHMENT STATIONS=    2117.0    2272.0  TYPE=      1  TARGET=     155.000
      28.30      4.72    950.52      0.00    950.41    950.57      .05       .01       .00    947.20
        690.        31.      627.       31.       51.      324.       51.      453.      180.    947.20
       6.28         .61      1.93       .61      .070      .045      .070      .048    945.80   2117.00
    .000487         32.       32.       32.         0         0         0      0.00     155.00   2272.00

  CCHV=     .100 CEHV=     .300
  *SECNO 28.420
   2800 NAT Q1=     295.72  WSEL=     950.73  ENC Q1=     295.72  WSEL=     950.83  RATIO=    .0000
   NAT Q1=     330.  RATIOS LOB,CH,ROB=    .0837    .8611    .0552  WSEL=     950.83

  3265 DIVIDED FLOW

  3470 ENCROACHMENT STATIONS=    1683.8    2242.9  TYPE=      4  TARGET=       .105
      28.42      4.33    950.82      0.00    950.73    950.87      .06       .30       .00    948.40
        690.        24.      665.        1.       41.      344.        3.      459.      182.    948.12
       6.36         .57      1.93       .40      .070      .045      .070      .048    946.49   1683.79
    .000554         590.      580.      570.         2         0         0      0.00     130.73   2242.86
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CCHV=    .100 CEHV=    .300
*SECNO 28.670
 2800 NAT Q1=     294.39  WSEL=     952.20  ENC Q1=     294.39  WSEL=     952.30  RATIO=  0.0000
 NAT Q1=     310.  RATIOS LOB,CH,ROB=    .0276    .9319    .0404  WSEL=     952.30
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         QLOSS      BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

3470 ENCROACHMENT STATIONS=     2016.1     2127.4  TYPE=      4  TARGET=          .049

         SURVEYED VALLEY SECTION  (G)
      28.67      4.04    952.29      0.00    952.20    952.35      .05      1.47      .00    949.26
      690.         1.      678.       11.       3.      372.       15.      482.      190.    949.38
       6.77        .39      1.82       .76      .070      .045      .070      .048   948.25  2016.10
   .000552     2780.    2660.    2800.         2         0         0      0.00   111.30  2127.39

*SECNO 28.800
 2800 NAT Q1=     353.45  WSEL=     952.52  ENC Q1=     355.88  WSEL=     952.62  RATIO=  -.0069
 NAT Q1=     370.  RATIOS LOB,CH,ROB=    .0008    .9608    .0384  WSEL=     952.62

3470 ENCROACHMENT STATIONS=     2000.0     2126.0  TYPE=      4  TARGET=          .039
      28.80      4.33    952.63      0.00    952.52    952.67      .04       .32      .00    952.00
      690.         0.      690.       0.        0.      459.        0.      489.      192.    950.90
       6.90       0.00      1.50       0.00      .070      .045      .070      .048   948.30  2000.00
   .000383      800.     700.     400.         2         0         0      0.00   126.00  2126.00

*SECNO 28.810
 2800 NAT Q1=     109.16  WSEL=     952.47  ENC Q1=     113.15  WSEL=     952.57  RATIO=  -.0365
 NAT Q1=     117.  RATIOS LOB,CH,ROB=    .0328    .9672  0.0000  WSEL=     952.57

3470 ENCROACHMENT STATIONS=     2000.0     2100.0  TYPE=      4  TARGET=          .033
      28.81      3.28    952.58      0.00    952.47    952.78      .20       .07      .05    951.30
      690.         0.      690.       0.        0.      191.        0.      490.      192.    956.30
       6.91       0.00      3.61       0.00      .070      .045      .070      .048   949.30  2000.00
   .003754       80.      75.      15.         2         0         0      0.00    78.46  2078.46

*SECNO 28.900
 2800 NAT Q1=     138.47  WSEL=     952.61  ENC Q1=     146.02  WSEL=     952.71  RATIO=  -.0545
 NAT Q1=     146.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.71

3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=          0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=     957.10 ELREA=     957.00

      28.90      3.62    952.72      0.00    952.61    952.88      .16       .10      .00    957.70
      690.         0.      690.       0.        0.      217.        0.      490.      192.    957.60
       6.91       0.00      3.19       0.00      .070      .045      .070      .048   949.10  2000.00
   .002208       34.      34.      34.         2         0         0      0.00    70.00  2070.00

CCHV=    .300 CEHV=    .500
*SECNO 29.000
     3700.   PRIDGE STENCL=    2000.00     STENCR=    2070.00
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2800 NAT Q1=     208.08  WSEL=     952.61  ENC Q1=     214.28  WSEL=     952.71  RATIO=  -.0298
NAT Q1=     214.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.71

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD=  957.10 MAX ELLC=  956.40

3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=        0.000
        D/S FACE OF CONDUIT RD. BRIDGE.CONCRETE    (H)

    29.00      3.62    952.72      0.00    952.61    952.89       .17       .00       .01    957.70
     690.        0.      690.        0.        0.      209.        0.      490.      192.     957.60
     6.91      0.00      3.30      0.00      .020      .026      .020      .048    949.10   2000.00
  .001022        1.        1.        1.         0         0         0     -7.58     70.00   2070.00

*SECNO 29.100
     3700.   BRIDGE STENCL=    2000.00     STENCR=    2070.00
2800 NAT Q1=     232.42  WSEL=     952.67  ENC Q1=     242.10  WSEL=     952.77  RATIO=  -.0417
NAT Q1=     242.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.77
  SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
  TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
  SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD=  957.10 MAX ELLC=  956.40

3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=        0.000
    29.10      4.38    952.78      0.00    952.67    952.92       .15       .03       .01    957.70
     690.        0.      690.        0.        0.      225.        0.      490.      192.     957.60
     6.91      0.00      3.07      0.00      .020      .026      .020      .048    948.40   2000.00
  .000808       30.       30.       30.         2         0         0     -7.67     70.00   2070.00

CCHV=     .300 CEHV=     .500
*SECNO 29.200
2800 NAT Q1=     157.83  WSEL=     952.69  ENC Q1=     166.36  WSEL=     952.79  RATIO=  -.0541
NAT Q1=     166.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.79

3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=       957.70 ELREA=       956.60

    29.20      4.39    952.79      0.00    952.69    952.93       .14       .00       .00    957.70
     690.        0.      690.        0.        0.      233.        0.      490.      192.     957.60
     6.91      0.00      2.96      0.00      .060      .045      .060      .048    948.40   2000.00
  .001722        1.        1.        1.         1         0         0      0.00     70.00   2070.00

*SECNO 29.300
2800 NAT Q1=     127.01  WSEL=     952.74  ENC Q1=     133.19  WSEL=     952.84  RATIO=  -.0487
NAT Q1=     133.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.84

3470 ENCROACHMENT STATIONS=     1972.0     2065.0  TYPE=      4  TARGET=        0.000
    29.30      4.44    952.84      0.00    952.74    953.03       .19       .07       .03    956.20
     690.        0.      690.        0.        0.      197.        0.      490.      192.     954.70
     6.92      0.00      3.50      0.00      .060      .045      .060      .048    948.40   1990.18
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MOORE BUSINESS FORMS, INC. 23

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 .002683      34.      34.      34.       2        0        0     0.00    66.12  2056.30

CCHV=     .100 CEHV=     .300
*SECNO 29.420
 2800 NAT Q1=     157.29  WSEL=     953.50  ENC Q1=     164.77  WSEL=     953.60  RATIO=  -.0475
 NAT Q1=     165.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     953.60

3470 ENCROACHMENT STATIONS=     2000.0     2088.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       955.50 FLREA=       956.20

    29.42      4.66    953.54      0.00    953.50    953.68       .14       .65       .01    955.50
     690.        0.      690.        0.        0.      233.        0.      492.      192.    954.22
     6.94      0.00      2.96      0.00      .060      .045      .060      .048    948.88   2009.05
  .001845      220.      294.      510.         2         0         0      0.00     76.16   2085.21

*SECNO 29.550
 2800 NAT Q1=     263.59  WSEL=     954.71  ENC Q1=     265.22  WSEL=     954.81  RATIO=  -.0062
 NAT Q1=     276.  RATIOS LOB,CH,ROB=   .0058   .9605   .0337  WSEL=     954.81

3470 ENCROACHMENT STATIONS=     2000.0     2078.0  TYPE=      4  TARGET=         .039
    29.55      5.27    954.76      0.00    954.71    954.84       .07      1.15       .01    954.10
     690.        0.      690.        0.        0.      315.        0.      498.      194.    953.27
     7.08      0.00      2.19      0.00      .060      .045      .060      .047    949.49   2000.00
  .000726     1010.     1050.     1060.         2         0         0      0.00     76.00   2078.00

CCHV=     .300 CEHV=     .500
*SECNO 29.800
 2800 NAT Q1=     305.73  WSEL=     954.94  ENC Q1=     305.73  WSEL=     955.04  RATIO=   .0000
 NAT Q1=     321.  RATIOS LOB,CH,ROB=   .0347   .8967   .0686  WSEL=     955.04
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       IWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3470 ENCROACHMENT STATIONS=     1992.7     2093.7  TYPE=      4  TARGET=         .048
    29.80      5.30    955.00      0.00    954.94    955.06       .06       .22       .00    953.40
     690.        7.      651.       32.       11.      323.       39.      501.      195.    952.80
     7.13       .66      2.01       .82      .060      .045      .060      .047    949.70   1992.68
  .000523      300.      359.      390.         2         0         0      0.00    100.98   2093.66

*SECNO 29.810
 2800 NAT Q1=     342.70  WSEL=     955.02  ENC Q1=     342.70  WSEL=     955.12  RATIO=  0.0000
 NAT Q1=     358.  RATIOS LOB,CH,ROB=   .0458   .9202   .0340  WSEL=     955.12

3470 ENCROACHMENT STATIONS=     1985.4     2087.4  TYPE=      4  TARGET=         .041
    29.81      5.99    955.09      0.00    955.02    955.14       .05       .07       .00    953.10
     690.       18.      663.        9.       26.      363.       14.      503.      195.    953.10
     7.15       .69      1.83       .66      .060      .045      .060      .047    949.10   1985.39
  .000415      140.      160.      140.         2         0         0      0.00    102.05   2087.44

*SECNO 29.900
 2800 NAT Q1=     295.39  WSEL=     955.03  ENC Q1=     304.14  WSEL=     955.13  RATIO=  -.0296
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NAT Q1=     304.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     955.13

3470 ENCROACHMENT STATIONS=     2000.0     2069.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       957.50 ELREA=       957.45

    29.90      5.60    955.10      0.00    955.03    955.16       .06       .02       .01    958.10
     690.        0.      690.        0.        0.      341.        0.      503.      196.    958.10
     7.16      0.00      2.02      0.00      .060      .045      .060      .047    949.50   2000.00
  .000521       39.       39.       39.         0         0         0      0.00     69.00   2069.00

CCHV=     .300 CEHV=     .500
*SECNO 30.000
     3700.   BRIDGE STENCL=    2000.00     STENCR=    2069.00

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD=  957.70 MAX ELLC=  956.90

        D/S FACE OF H DRIVE SOUTH BRIDGE.CONCRETE    (1)

    30.00      5.60    955.10      0.00    955.03    955.17       .07       .00       .01    958.10
     690.        0.      690.        0.        0.      317.        0.      503.      196.    958.10
     7.16      0.00      2.18      0.00      .020      .026      .020      .047    949.50   2000.00
  .000346        1.        1.        1.         1         0         0    -23.70     69.00   2069.00

*SECNO 30.100
 2800 NAT Q1=     393.85  WSEL=     955.03  ENC Q1=     404.99  WSEL=     955.13  RATIO=  -.0283
 NAT Q1=     405.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     955.13

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD=  957.70 MAX ELLC=  956.90

3470 ENCROACHMENT STATIONS=     2000.0     2069.0  TYPE=      4  TARGET=        0.000
    30.10      5.11    955.11      0.00    955.03    955.18       .07       .01       .00    958.10
     690.        0.      690.        0.        0.      324.        0.      503.      196.    958.10
     7.16      0.00      2.13      0.00      .020      .026      .020      .047    950.00   2000.00
  .000295       30.       30.       30.         0         0         0     -9.65     69.00   2069.00

CCHV=     .300 CEHV=     .500
*SECNO 30.200
 2800 NAT Q1=     285.66  WSEL=     955.04  ENC Q1=     295.70  WSEL=     955.14  RATIO=  -.0352
 NAT Q1=     296.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     955.14
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOPR     ITRIAL    IDC       ICONT     CORAR     TOPWID      FNDST

3470 ENCROACHMENT STATIONS=     2000.0     2069.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       958.10 ELREA=       958.10

    30.20      5.12    955.12      0.00    955.04    955.18       .07       .00       .00    958.10
     690.        0.      690.        0.        0.      334.        0.      503.      196.    958.10
     7.16      0.00      2.06      0.00      .060      .045      .060      .047    950.00   2000.00
  .000555        1.        1.        1.         0         0         0      0.00     69.00   2069.00
```

MOORE BUSINESS FORMS, INC 23

```
*SECNO 30.300
 2800 NAT Q1=     383.25  WSEL=     955.10  ENC Q1=     383.25  WSEL=     955.20  RATIO=  0.0000
 NAT Q1=     401.  RATIOS LOB.CH.ROB=    .0398    .8939    .0664  WSEL=     955.20

3470 ENCROACHMENT STATIONS=     1993.8     2116.6  TYPE=      4  TARGET=          .043
    30.30      5.07    955.17      0.00    955.10    955.21       .04       .02       .01    952.00
     690.       12.      646.       32.       17.      396.       49.      503.      196.    951.60
     7.17       .72      1.63       .65      .060      .045      .060      .047    950.10   1993.78
  .000332       39.       39.       39.         2         0         0      0.00    122.79   2116.57

CCHV=     .100 CEHV=     .300
*SECNO 30.400
 2800 NAT Q1=     382.68  WSEL=     955.12  ENC Q1=     382.68  WSEL=     955.22  RATIO=  0.0000
 NAT Q1=     399.  RATIOS LOB.CH.ROB=    .0351    .9063    .0587  WSEL=     955.22

3470 ENCROACHMENT STATIONS=     1994.1     2115.9  TYPE=      4  TARGET=          .040
    30.40      5.09    955.19      0.00    955.12    955.23       .04       .03       .00    952.00
     690.       10.      653.       27.       17.      398.       49.      504.      196.    951.60
     7.18       .61      1.64       .56      .070      .045      .070      .047    950.10   1994.14
  .000333       76.       76.       76.         0         0         0      0.00    121.77   2115.91

*SECNO 31.000
 2800 NAT Q1=     269.37  WSEL=     956.37  ENC Q1=     269.37  WSEL=     956.47  RATIO=  0.0000
 NAT Q1=     285.  RATIOS LOB.CH.ROB=    .0221    .9223    .0556  WSEL=     956.47

3470 ENCROACHMENT STATIONS=     2006.0     2109.8  TYPE=      4  TARGET=          .055

        SURVEYED VALLEY SECTION    (J)

    31.00      4.08    956.48      0.00    956.37    956.54       .06      1.30       .01    953.60
     690.        0.      674.       16.        0.      343.       19.      531.      203.    953.70
     7.59      0.00      1.96       .85      .070      .045      .070      .047    952.40   2006.00
  .000680     2700.     2825.     2840.         1         0         0      0.00    103.84   2109.84

*SECNO 31.800
 2800 NAT Q1=     383.94  WSEL=     957.53  ENC Q1=     383.94  WSEL=     957.63  RATIO=  0.0000
 NAT Q1=     405.  RATIOS LOB.CH.ROB=    .0057    .8216    .1727  WSEL=     957.63

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=     2000.0     2317.9  TYPE=      4  TARGET=          .053
    31.80      5.37    957.67      0.00    957.53    957.70       .04      1.16       .00    954.80
     690.        0.      594.       96.        0.      368.      224.      559.      215.    955.10
     8.08      0.00      1.61       .43      .070      .045      .070      .047    952.30   2000.00
  .000324     2520.     2566.     2440.         1         0         0      0.00    314.40   2317.91

*SECNO 31.805
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       IWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
```

MOORE BUSINESS FORMS, INC 23

MOORE BUSINESS FORMS, INC. 23

3470 ENCROACHMENT STATIONS= 1982.0 2095.0 TYPE= 1 TARGET= 113.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 5.04 | 957.74 | 0.00 | 957.60 | 957.81 | .08 | .10 | .01 | 956.30 |
| 690. | 1. | 672. | 16. | 3. | 297. | 24. | 561. | 216. | 955.10 |
| 8.10 | .43 | 2.26 | .67 | .070 | .045 | .070 | .047 | 952.70 | 1995.69 |
| .000695 | 240. | 223. | 180. | 2 | 0 | 0 | 0.00 | 92.70 | 2088.39 |

*SECNO 31.810

3470 ENCROACHMENT STATIONS= 1987.0 2083.0 TYPE= 1 TARGET= 96.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 5.06 | 957.76 | 0.00 | 957.63 | 957.84 | .08 | .03 | .00 | 956.30 |
| 690. | 1. | 672. | 17. | 3. | 299. | 22. | 561. | 216. | 955.10 |
| 8.11 | .43 | 2.25 | .76 | .070 | .045 | .070 | .047 | 952.70 | 1995.63 |
| .000683 | 37. | 37. | 37. | 0 | 0 | 0 | 0.00 | 87.37 | 2083.00 |

*SECNO 31.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 960.55 ELREA= 960.55

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.90 | 5.10 | 957.80 | 0.00 | 957.67 | 957.87 | .08 | .03 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 307. | 0. | 562. | 216. | 961.20 |
| 8.12 | 0.00 | 2.25 | 0.00 | .070 | .045 | .070 | .047 | 952.70 | 2000.00 |
| .000728 | 49. | 49. | 49. | 0 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 32.000

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

D/S FACE OF J DRIVE SOUTH BRIDGE.CONCRETE (K)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.00 | 5.09 | 957.79 | 0.00 | 957.67 | 957.88 | .08 | .00 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 297. | 0. | 562. | 216. | 961.20 |
| 8.12 | 0.00 | 2.32 | 0.00 | .020 | .026 | .020 | .047 | 952.70 | 2000.00 |
| .000360 | 1. | 1. | 1. | 0 | 0 | 0 | -9.30 | 70.00 | 2070.00 |

*SECNO 32.100

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.10 | 5.21 | 957.81 | 0.00 | 957.69 | 957.89 | .08 | .01 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 310. | 0. | 562. | 216. | 961.20 |
| 8.12 | 0.00 | 2.23 | 0.00 | .020 | .026 | .020 | .047 | 952.60 | 2000.00 |
| .000319 | 30. | 30. | 30. | 0 | 0 | 0 | -9.53 | 70.00 | 2070.00 |

CCHV= .100 CEHV= .300
*SECNO 32.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | COPAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 961.10 ELREA= 961.10

```
      32.20       5.22     957.82       0.00     957.70     957.89        .07        .00        .00     961.20
        690.         0.       690.         0.         0.       319.         0.       562.       216.      961.20
       8.12       0.00       2.16       0.00       .070       .045       .070       .047     952.60    2000.00
    .000641         1.         1.         1.          0          0          0       0.00      70.00    2070.00

 *SECNO 32.300

 3470 ENCROACHMENT STATIONS=     1972.0     2142.0  TYPE=        1  TARGET=        170.000
      32.30       5.19     957.89       0.00     957.77     957.91        .02        .02        .01     955.70
        690.         6.       643.        41.        18.       523.        77.       562.       216.      954.70
       8.13        .30       1.23        .54       .070       .045       .070       .047     952.70    1983.26
    .000184        49.        49.        49.          2          0          0       0.00     156.74    2142.00

 CCHV=     .100 CEHV=     .300
 *SECNO 33.000
  2800 NAT Q1=      234.81  WSEL=      959.21  ENC Q1=      234.81  WSEL=      959.31  RATIO=  0.0000
  NAT Q1=      257.  RATIOS LOB,CH,ROB=     .0402     .5758     .3841  WSEL=      959.31

 3470 ENCROACHMENT STATIONS=     2000.0     2310.6  TYPE=        4  TARGET=         .087
         SURVEYED VALLEY SECTION    (L)
      33.00       4.27     959.27       0.00     959.21     959.33        .06       1.41        .01     958.80
        690.         0.       439.       251.         0.       190.       346.       614.       237.      958.70
       8.77       0.00       2.30        .72       .080       .045       .080       .047     955.00    2000.00
    .000924       3250.      4100.      3625.          2          (          0       0.00     310.57    2310.57

 *SECNO 33.850
  2800 NAT Q1=      230.43  WSEL=      961.29  ENC Q1=      237.69  WSEL=      961.39  RATIO=  -.0315
  NAT Q1=      238.  RATIOS LOB,CH,ROB=   0.0000   1.0000   0.0000  WSEL=      961.39

 3470 ENCROACHMENT STATIONS=     2032.0     2085.0  TYPE=        4  TARGET=          0.000
      33.85       5.95     961.37       0.00     961.29     961.47        .10       2.13        .01     962.75
        690.         0.       690.         0.         0.       268.         0.       637.       247.      963.30
       9.03       0.00       2.57       0.00       .080       .045       .080       .047     955.42    2032.00
    .000850       2390.      2390.      2410.          1          0          0       0.00      53.00    2085.00

 *SECNO 33.900
  2800 NAT Q1=      229.03  WSEL=      961.31  ENC Q1=      237.40  WSEL=      961.41  RATIO=  -.0365
  NAT Q1=      237.  RATIOS LOB,CH,ROB=   0.0000   1.0000   0.0000  WSEL=      961.41

 3470 ENCROACHMENT STATIONS=     2027.0     2085.0  TYPE=        4  TARGET=          0.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      965.20 ELREA=      965.20

      33.90       5.88     961.38       0.00     961.31     961.48        .10        .01        .00     967.30
        690.         0.       690.         0.         0.       279.         0.       637.       247.      967.30
       9.03       0.00       2.48       0.00       .080       .045       .080       .047     955.50    2027.00
    .000861        13.        13.        13.          0          0          0       0.00      58.00    2085.00

 CCHV=     .300 CEHV=     .500
 *SECNO 34.000
    3700.   BRIDGE STENCL=     2027.00    STENCR=     2085.00
     SECNO    DEPTH    CWSEL    CRIWS    WSELK     EG         HV         HL         OLOSS    BANK ELEV
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | IWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | FNDST |

3370 NORMAL BRIDGE.NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

D/S FACE OF 25 1/2 MILE ROAD BRIDGE.CONCRETE (M)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.00 | 5.88 | 961.38 | 0.00 | 961.31 | 961.48 | .10 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 267. | 0. | 637. | 247. | 967.30 |
| 9.03 | 0.00 | 2.58 | 0.00 | .020 | .026 | .020 | .047 | 955.50 | 2027.00 |
| .000411 | 1. | 1. | 1. | 2 | 0 | 0 | -11.65 | 58.00 | 2085.00 |

*SECNO 34.100
2800 NAT QI= 345.70 WSEL= 961.31 ENC QI= 356.57 WSEL= 961.41 RATIO= -.0315
NAT QI= 357. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 961.41

3370 NORMAL BRIDGE.NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

3470 ENCROACHMENT STATIONS= 2025.0 2083.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.10 | 5.39 | 961.39 | 0.00 | 961.31 | 961.50 | .10 | .01 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 266. | 0. | 637. | 247. | 967.30 |
| 9.04 | 0.00 | 2.60 | 0.00 | .020 | .026 | .020 | .047 | 956.00 | 2025.00 |
| .000379 | 29. | 29. | 29. | 0 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

CCHV= .300 CEHV= .500
*SECNO 34.200
2800 NAT QI= 213.64 WSEL= 961.31 ENC QI= 221.17 WSEL= 961.41 RATIO= -.0353
NAT QI= 221. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 961.41

3470 ENCROACHMENT STATIONS= 2025.0 2083.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 967.30 ELREA= 967.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.20 | 5.39 | 961.39 | 0.00 | 961.31 | 961.50 | .10 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 266. | 0. | 637. | 247. | 967.30 |
| 9.04 | 0.00 | 2.60 | 0.00 | .060 | .045 | .060 | .047 | 956.00 | 2025.00 |
| .000987 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

*SECNO 34.250
2800 NAT QI= 240.13 WSEL= 961.35 ENC QI= 248.69 WSEL= 961.45 RATIO= -.0356
NAT QI= 249. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 961.45

3470 ENCROACHMENT STATIONS= 2025.0 2089.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.25 | 4.97 | 961.43 | 0.00 | 961.35 | 961.51 | .09 | .01 | .01 | 963.90 |
| 690. | 0. | 690. | 0. | 0. | 291. | 0. | 637. | 247. | 963.60 |
| 9.04 | 0.00 | 2.37 | 0.00 | .060 | .045 | .060 | .047 | 956.46 | 2025.00 |
| .000762 | 13. | 13. | 13. | 2 | 0 | 0 | 0.00 | 64.00 | 2089.00 |

CCHV= .100 CEHV= .300
*SECNO 34.300

MOORE BUSINESS FORMS, INC 23

3470 ENCROACHMENT STATIONS= 1967.0 2103.0 TYPE= 1 TARGET= 136.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.30 | 5.27 | 961.47 | 0.00 | 961.40 | 961.53 | .06 | .02 | .00 | 960.50 |
| 690. | 11. | 651. | 28. | 29. | 321. | 50. | 637. | 247. | 959.90 |
| 9.04 | .38 | 2.03 | .56 | .080 | .045 | .080 | .047 | 956.20 | 1967.00 |
| .000528 | 26. | 26. | 26. | 2 | 0 | 0 | 0.00 | 136.00 | 2103.00 |

*SECNO 34.800

3265 DIVIDED FLOW

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1877.0 2226.0 TYPE= 1 TARGET= 349.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.80 | 4.79 | 961.89 | 0.00 | 961.83 | 961.92 | .04 | .39 | .00 | 963.70 |
| 690. | 105. | 578. | 7. | 186. | 349. | 31. | 646. | 251. | 966.30 |
| 9.20 | .56 | 1.66 | .24 | .080 | .045 | .080 | .047 | 957.10 | 1877.00 |
| .000419 | 1000. | 820. | 460. | 2 | 0 | 0 | 0.00 | 265.42 | 2226.00 |

*SECNO 34.810

3470 ENCROACHMENT STATIONS= 1967.0 2092.0 TYPE= 1 TARGET= 105.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.81 | 3.83 | 962.03 | 0.00 | 961.99 | 962.14 | .10 | .19 | .02 | 963.70 |
| 690. | 0. | 684. | 6. | 0. | 262. | 10. | 649. | 252. | 960.50 |
| 9.23 | 0.00 | 2.61 | .62 | .080 | .045 | .080 | .047 | 958.20 | 2002.66 |
| .001272 | 340. | 280. | 150. | 2 | 0 | 0 | 0.00 | 89.34 | 2092.00 |

*SECNO 34.900

3470 ENCROACHMENT STATIONS= 894.0 3606.0 TYPE= 1 TARGET= 2712.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 967.25 ELREA= 967.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.90 | 4.10 | 962.10 | 0.00 | 962.06 | 962.19 | .09 | .06 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 284. | 0. | 649. | 252. | 959.40 |
| 9.23 | 0.00 | 2.43 | 0.00 | .080 | .045 | .080 | .047 | 958.00 | 2000.00 |
| .001045 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 80.00 | 2080.00 |

CCHV= .300 CEHV= .500
*SECNO 35.000

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

D/S FACE OF L DRIVE SOUTH BRIDGE.CONCRETE (N)

D/S LIMIT OF ALBION TWP.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.00 | 4.11 | 962.11 | 0.00 | 962.07 | 962.20 | .08 | .00 | .00 | 968.80 |
| 690. | 0. | 649. | 41. | 0. | 277. | 19. | 649. | 252. | 959.40 |
| 9.23 | 0.00 | 2.34 | 2.17 | .017 | .022 | .017 | .047 | 958.00 | 2000.00 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .000266 | 1. | 1. | 1. | 0 | 0 | 0 | -6.93 | 88.00 | 2088.00 |

*SECNO 35.100

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.10 | 4.42 | 962.12 | 0.00 | 962.08 | 962.21 | .09 | .01 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 293. | 0. | 650. | 252. | 968.80 |
| 9.24 | 0.00 | 2.36 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 |
| .000294 | 32. | 32. | 32. | 1 | 0 | 0 | -8.36 | 88.00 | 2088.00 |

*SECNO 35.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | ULOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | APOB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WIN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 968.80 ELREA= 968.80

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.20 | 4.43 | 962.13 | 0.00 | 962.09 | 962.21 | .08 | .00 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 301. | 0. | 650. | 252. | 968.80 |
| 9.24 | 0.00 | 2.30 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 |
| .000238 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 88.00 | 2088.00 |

*SECNO 35.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.25 | 2.70 | 962.10 | 0.00 | 962.06 | 962.27 | .18 | .02 | .05 | 959.60 |
| 690. | 20. | 602. | 68. | 8. | 174. | 26. | 650. | 252. | 959.92 |
| 9.24 | 2.66 | 3.46 | 2.58 | .017 | .022 | .017 | .047 | 959.40 | 2000.93 |
| .000763 | 51. | 51. | 51. | 2 | 0. | 0 | 0.00 | 110.06 | 2110.99 |

SPECIAL BRIDGE

| SB XK | XKOK | COFQ | RDLEN | HWC | HWP | HAREA | SS | FLCHU | FLCHD |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 1.75 | 3.00 | 65.00 | 1.60 | 0.00 | 1.00 | 0.00 | 959.59 | 959.40 |

*SECNO 35.300

3265 DIVIDED FLOW

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | FLLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 13899.60 | 962.46 | 0.00 | 686. | 8. | 1. | 1. | 960.59 | 961.47 |

SPILLWAY STRUCTURE

T.W. w/s = 600ft

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.30 | 4.27 | 953.67 | 0.00 | 963.67 | 963.71 | .03 | 1.41 | 0.00 | 962.48 |
| 690. | 150. | 256. | 285. | 144. | 154. | 202. | 650. | 252. | 961.49 |
| 9.24 | 1.04 | 1.66 | 1.41 | .017 | .022 | .017 | .047 | 959.40 | 1749.10 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .000227 | 10. | 10. | 10. | 2 | 0 | A | 0.00 | 599.42 | 2361.08 |

*SECNO 35.350

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.35 | 3.92 | 963.68 | 0.00 | 963.68 | 963.71 | .03 | .00 | .00 | 962.48 |
| 690. | 104. | 386. | 199. | 151. | 251. | 194. | 650. | 252. | 962.12 |
| 9.25 | .69 | 1.54 | 1.00 | .017 | .022 | .017 | .047 | 959.76 | 1689.70 |
| .000116 | 10. | 10. | 10. | 0 | 0 | 0 | 0.00 | 660.22 | 2361.14 |

*SECNO 36.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.00 | 3.04 | 964.34 | 0.00 | 964.34 | 964.48 | .14 | .71 | .06 | 962.80 |
| 690. | 6. | 657. | 26. | 4. | 218. | 16. | 680. | 277. | 963.20 |
| 9.55 | 1.71 | 3.02 | 1.44 | .017 | .022 | .017 | .045 | 961.30 | 2001.13 |
| .000576 | 2680. | 3430. | 2600. | 2 | 0 | 0 | 0.00 | 122.49 | 2123.62 |

MOORE BUSINESS FORMS, INC 23

MOORE BUSINESS FORMS, INC. 23

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01.02.03
  MODIFICATION -  50.51.52.53
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

100 YEAR FLOW
SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 24.000 | 946.17 | 1989.28 | 2000.00 | 2278.00 | 2326.06 | 336.78 | 0.00 |
| 24.000 | 946.27 | 2000.00 | 2000.00 | 2278.00 | 2278.00 | 278.00 | 0.00 |
| 24.100 | 946.20 | 1903.29 | 2000.00 | 2220.00 | 2242.76 | 339.47 | 2280.00 |
| 24.100 | 946.30 | 2000.00 | 2000.00 | 2220.00 | 2220.00 | 220.00 | 2280.00 |
| 24.200 | 946.25 | 989.89 | 3000.00 | 3150.00 | 3337.82 | 1993.31 | 2300.00 |
| 24.200 | 946.35 | 1265.28 | 3000.00 | 3150.00 | 3150.00 | 1533.48 | 2300.00 |
| 25.000 | 946.37 | 2938.00 | 4000.00 | 4090.00 | 4251.85 | 845.34 | 2290.00 |
| 25.000 | 946.47 | 3055.49 | 4000.00 | 4090.00 | 4144.09 | 673.80 | 2290.00 |
| 25.600 | 946.99 | 3560.18 | 4000.00 | 4060.00 | 4499.81 | 939.62 | 2850.00 |
| 25.600 | 947.10 | 3614.54 | 4000.00 | 4060.00 | 4140.64 | 526.11 | 2850.00 |
| 25.800 | 947.31 | 1901.00 | 2060.00 | 2050.00 | 2148.00 | 247.00 | 1100.00 |
| 25.800 | 947.41 | 1901.00 | 2000.00 | 2050.00 | 2148.00 | 247.00 | 1100.00 |
| 25.900 | 947.53 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 324.00 |
| 25.900 | 947.60 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 324.00 |
| 26.000 | 947.54 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.000 | 947.61 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.100 | 947.62 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 26.00 |
| 26.100 | 947.69 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 26.00 |
| 26.200 | 947.63 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.200 | 947.69 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.400 | 947.68 | 1897.00 | 2000.00 | 2093.00 | 2196.00 | 299.00 | 107.00 |
| 26.400 | 947.74 | 1820.45 | 2000.00 | 2093.00 | 2115.42 | 294.97 | 107.00 |
| 26.900 | 948.40 | 1445.84 | 2000.00 | 2124.00 | 2164.93 | 719.08 | 3000.00 |
| 26.900 | 948.49 | 1633.32 | 2060.00 | 2124.00 | 2124.00 | 440.68 | 3000.00 |
| 27.000 | 948.40 | 1445.48 | 2030.00 | 2090.00 | 2090.00 | 501.16 | 72.00 |
| 27.000 | 948.50 | 1600.15 | 2030.00 | 2090.00 | 2090.00 | 354.80 | 72.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWTD | XLCF |
|---|---|---|---|---|---|---|---|
| 27.100 | 948.44 | 1444.77 | 2000.00 | 2143.00 | 2164.73 | 719.96 | 36.00 |
| 27.100 | 948.53 | 1620.45 | 2000.00 | 2143.00 | 2143.00 | 522.55 | 36.00 |
| 27.400 | 948.97 | 1896.00 | 2050.00 | 2169.50 | 2205.63 | 309.63 | 2700.00 |
| 27.400 | 949.08 | 1916.46 | 2050.00 | 2169.50 | 2169.50 | 253.04 | 2700.00 |
| 27.500 | 949.11 | 1956.70 | 2000.00 | 2100.00 | 2131.19 | 174.49 | 400.00 |
| 27.500 | 949.22 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 400.00 |
| 27.700 | 950.14 | 2021.28 | 2050.00 | 2154.00 | 2213.68 | 192.40 | 1500.00 |
| 27.700 | 950.25 | 2050.00 | 2050.00 | 2154.00 | 2163.34 | 113.34 | 1500.00 |
| 27.800 | 950.33 | 2129.71 | 2129.00 | 2221.00 | 2217.88 | 88.17 | 340.00 |
| 27.800 | 950.44 | 2129.50 | 2129.00 | 2221.00 | 2218.11 | 88.62 | 340.00 |
| 27.900 | 950.38 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 32.00 |
| 27.900 | 950.49 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 32.00 |
| 28.000 | 950.39 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 1.00 |
| 28.000 | 950.49 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 1.00 |
| 28.100 | 950.40 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 36.50 |
| 28.100 | 950.50 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 36.50 |
| 28.200 | 950.40 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 1.00 |
| 28.200 | 950.50 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 1.00 |
| 28.300 | 950.41 | 2117.00 | 2154.50 | 2229.00 | 2272.00 | 155.00 | 32.00 |
| 28.300 | 950.52 | 2117.00 | 2154.50 | 2229.00 | 2272.00 | 155.00 | 32.00 |
| 28.420 | 950.73 | 2138.48 | 2154.50 | 2241.58 | 2291.79 | 153.32 | 580.00 |
| 28.420 | 950.82 | 1683.79 | 2154.50 | 2241.58 | 2242.86 | 130.73 | 580.00 |
| 28.670 | 952.20 | 1996.59 | 2017.00 | 2120.00 | 2191.95 | 195.36 | 2660.00 |
| 28.670 | 952.29 | 2016.10 | 2017.00 | 2120.00 | 2127.39 | 111.30 | 2660.00 |
| 28.800 | 952.52 | 1992.17 | 2000.00 | 2126.00 | 2206.65 | 214.48 | 700.00 |
| 28.800 | 952.63 | 2000.00 | 2000.00 | 2126.00 | 2126.00 | 126.00 | 700.00 |
| 28.810 | 952.47 | 1964.51 | 2000.00 | 2100.00 | 2077.83 | 113.32 | 75.00 |
| 28.810 | 952.58 | 2000.00 | 2000.00 | 2100.00 | 2078.46 | 78.46 | 75.00 |
| 28.900 | 952.61 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 34.00 |
| 28.900 | 952.72 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 34.00 |
| 29.000 | 952.61 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.000 | 952.72 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.100 | 952.67 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 29.100 | 952.78 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 29.200 | 952.69 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.200 | 952.79 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.300 | 952.74 | 1990.74 | 1972.00 | 2065.00 | 2055.82 | 65.08 | 34.00 |
| 29.300 | 952.84 | 1990.18 | 1972.00 | 2065.00 | 2056.30 | 66.12 | 34.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 29.420 | 953.50 | 2009.27 | 2000.00 | 2088.00 | 2085.02 | 75.75 | 294.00 |
| 29.420 | 953.54 | 2009.05 | 2000.00 | 2088.00 | 2085.21 | 76.16 | 294.00 |
| 29.550 | 954.71 | 1968.40 | 2000.00 | 2078.00 | 2132.68 | 164.28 | 1050.00 |
| 29.550 | 954.76 | 2000.00 | 2000.00 | 2078.00 | 2078.00 | 78.00 | 1050.00 |
| 29.800 | 954.94 | 1940.86 | 2000.00 | 2073.00 | 2141.04 | 200.18 | 359.00 |
| 29.800 | 955.00 | 1992.68 | 2000.00 | 2073.00 | 2093.66 | 100.98 | 359.00 |
| 29.810 | 955.02 | 1937.97 | 2000.00 | 2080.00 | 2126.15 | 188.18 | 160.00 |
| 29.810 | 955.09 | 1985.39 | 2000.00 | 2080.00 | 2087.44 | 102.05 | 160.00 |
| 29.900 | 955.03 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 39.00 |
| 29.900 | 955.10 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 39.00 |
| 30.000 | 955.03 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.000 | 955.10 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.100 | 955.03 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 30.00 |
| 30.100 | 955.11 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 30.00 |
| 30.200 | 955.04 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.200 | 955.12 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.300 | 955.10 | 1964.29 | 2000.00 | 2088.00 | 2151.94 | 187.65 | 39.00 |
| 30.300 | 955.17 | 1993.78 | 2000.00 | 2088.00 | 2116.57 | 122.79 | 39.00 |
| 30.400 | 955.12 | 1963.64 | 2000.00 | 2088.00 | 2152.53 | 188.89 | 76.00 |
| 30.400 | 955.19 | 1994.14 | 2000.00 | 2088.00 | 2115.91 | 121.77 | 76.00 |
| 31.000 | 956.37 | 1994.94 | 2006.00 | 2102.00 | 2273.84 | 263.45 | 2825.00 |
| 31.000 | 956.48 | 2006.00 | 2006.00 | 2102.00 | 2109.84 | 103.84 | 2825.00 |
| 31.800 | 957.53 | 1993.77 | 2000.00 | 2078.00 | 2407.14 | 390.43 | 2566.00 |
| 31.800 | 957.67 | 2000.00 | 2000.00 | 2078.00 | 2317.91 | 314.40 | 2566.00 |
| 31.805 | 957.60 | 1996.09 | 2000.00 | 2070.00 | 2087.47 | 91.38 | 223.00 |
| 31.805 | 957.74 | 1995.69 | 2000.00 | 2070.00 | 2088.39 | 92.70 | 223.00 |
| 31.810 | 957.63 | 1996.03 | 2000.00 | 2070.00 | 2083.00 | 86.97 | 37.00 |
| 31.810 | 957.76 | 1995.63 | 2000.00 | 2070.00 | 2083.00 | 87.37 | 37.00 |
| 31.900 | 957.67 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 49.00 |
| 31.900 | 957.80 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 49.00 |
| 32.000 | 957.67 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.000 | 957.79 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.100 | 957.69 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 32.100 | 957.81 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 32.200 | 957.70 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.200 | 957.82 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.300 | 957.77 | 1984.17 | 2000.00 | 2114.00 | 2142.00 | 157.83 | 49.00 |
| 32.300 | 957.89 | 1983.26 | 2000.00 | 2114.00 | 2142.00 | 158.74 | 49.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 33.000 | 959.21 | 1626.43 | 2000.00 | 2052.00 | 2391.55 | 638.54 | 4100.00 |
| 33.000 | 959.27 | 2000.00 | 2000.00 | 2052.00 | 2310.57 | 310.57 | 4100.00 |
| 33.850 | 961.29 | 2032.00 | 2032.00 | 2085.00 | 2085.00 | 53.00 | 2399.00 |
| 33.850 | 961.37 | 2032.00 | 2032.00 | 2085.00 | 2085.00 | 53.00 | 2399.00 |
| 33.900 | 961.31 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 13.00 |
| 33.900 | 961.38 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 13.00 |
| 34.000 | 961.31 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 1.00 |
| 34.000 | 961.38 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 1.00 |
| 34.100 | 961.31 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 29.00 |
| 34.100 | 961.39 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 29.00 |
| 34.200 | 961.31 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 1.00 |
| 34.200 | 961.39 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 1.00 |
| 34.250 | 961.35 | 2025.00 | 2025.00 | 2089.00 | 2089.00 | 64.00 | 13.00 |
| 34.250 | 961.43 | 2025.00 | 2025.00 | 2089.00 | 2089.00 | 64.00 | 13.00 |
| 34.300 | 961.40 | 1967.00 | 2000.00 | 2070.00 | 2103.00 | 136.00 | 26.00 |
| 34.300 | 961.47 | 1967.00 | 2000.00 | 2070.00 | 2103.00 | 136.00 | 26.00 |
| 34.800 | 961.83 | 1877.00 | 2000.00 | 2104.00 | 2226.00 | 261.31 | 820.00 |
| 34.800 | 961.89 | 1877.00 | 2000.00 | 2104.00 | 2226.00 | 265.42 | 820.00 |
| 34.810 | 961.99 | 2002.73 | 2000.00 | 2081.00 | 2092.00 | 69.27 | 280.00 |
| 34.810 | 962.03 | 2002.66 | 2000.00 | 2081.00 | 2092.00 | 69.34 | 280.00 |
| 34.900 | 962.06 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 50.00 |
| 34.900 | 962.10 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 50.00 |
| 35.000 | 962.07 | 2000.00 | 2000.00 | 2080.00 | 2088.00 | 88.00 | 1.00 |
| 35.000 | 962.11 | 2000.00 | 2000.00 | 2080.00 | 2088.00 | 88.00 | 1.00 |
| 35.100 | 962.08 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 32.00 |
| 35.100 | 962.12 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 32.00 |
| 35.200 | 962.09 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 1.00 |
| 35.200 | 962.13 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 1.00 |
| 35.250 | 962.05 | 2001.03 | 2007.00 | 2076.00 | 2107.11 | 106.08 | 51.00 |
| 35.250 | 962.10 | 2000.93 | 2007.00 | 2076.00 | 2110.99 | 110.06 | 51.00 |
| 35.300 | 963.67 | 1749.56 | 2007.00 | 2076.00 | 2361.05 | 595.31 | 10.00 |
| 35.300 | 963.67 | 1749.10 | 2007.00 | 2076.00 | 2361.08 | 599.43 | 10.00 |
| 35.350 | 963.68 | 1689.76 | 2000.00 | 2081.00 | 2361.11 | 659.58 | 10.00 |
| 35.350 | 963.68 | 1689.70 | 2000.00 | 2081.00 | 2361.14 | 660.22 | 10.00 |
| 36.000 | 964.34 | 2001.13 | 2006.00 | 2092.00 | 2123.62 | 122.50 | 3430.00 |
| 36.000 | 964.34 | 2001.13 | 2006.00 | 2092.00 | 2123.62 | 122.49 | 3430.00 |

MOORE BUSINESS FORMS, INC 23

100 YEAR FLOW

SUMMARY PRINTOUT TABLE 110

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PERFNC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.000 | 946.17 | 0.00 | 946.17 | 336.78 | .96 | 732.26 | 1.78 | 0.00 | 0.00 | 2000.00 | 2278.00 | 0.00 |
| 24.000 | 946.27 | .10 | 946.27 | 278.00 | 0.00 | 735.00 | 0.00 | .00 | 2000.00 | 2000.00 | 2278.00 | 2278.00 |
| 24.100 | 946.20 | 0.00 | 946.20 | 339.47 | 13.73 | 719.52 | 1.75 | 0.00 | 0.00 | 2000.00 | 2220.00 | 0.00 |
| 24.100 | 946.30 | .10 | 946.30 | 220.00 | 0.00 | 735.00 | 0.00 | .02 | 2000.00 | 2000.00 | 2220.00 | 2220.00 |
| 24.200 | 946.25 | 0.00 | 946.26 | 1993.31 | 306.26 | 411.94 | 16.80 | 0.00 | 0.00 | 3000.00 | 3150.00 | 0.00 |
| 24.200 | 946.35 | .10 | 946.36 | 1533.48 | 310.05 | 424.95 | 0.00 | .07 | 1265.28 | 3000.00 | 3150.00 | 3150.00 |
| 25.000 | 946.37 | 0.00 | 946.39 | 845.34 | 115.67 | 555.68 | 63.65 | 0.00 | 0.00 | 4000.00 | 4090.00 | 0.00 |
| 25.000 | 946.47 | .10 | 946.49 | 673.80 | 113.59 | 577.14 | 44.27 | .07 | 3055.49 | 4000.00 | 4090.00 | 4144.09 |
| 25.600 | 946.99 | 0.00 | 947.01 | 939.62 | 294.43 | 361.00 | 79.57 | 0.00 | 0.00 | 4000.00 | 4060.00 | 0.00 |
| 25.600 | 947.10 | .11 | 947.11 | 526.11 | 295.37 | 373.63 | 66.00 | .08 | 3614.54 | 4000.00 | 4060.00 | 4140.64 |
| 25.800 | 947.31 | 0.00 | 947.37 | 247.00 | 58.55 | 531.97 | 144.49 | 247.00 | 1901.00 | 2000.00 | 2050.00 | 2148.00 |
| 25.800 | 947.41 | .10 | 947.46 | 247.00 | 63.98 | 522.05 | 148.96 | 247.00 | 1901.00 | 2000.00 | 2050.00 | 2148.00 |
| 25.900 | 947.53 | 0.00 | 947.63 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 25.900 | 947.60 | .07 | 947.70 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.000 | 947.54 | 0.00 | 947.64 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.000 | 947.61 | .07 | 947.71 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.100 | 947.62 | 0.00 | 947.66 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.100 | 947.69 | .07 | 947.73 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.200 | 947.63 | 0.00 | 947.67 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.200 | 947.69 | .07 | 947.74 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.400 | 947.68 | 0.00 | 947.71 | 299.00 | 89.48 | 523.46 | 122.06 | 299.00 | 1897.00 | 2000.00 | 2093.00 | 2196.00 |
| 26.400 | 947.74 | .06 | 947.77 | 294.97 | 137.76 | 550.34 | 46.90 | .22 | 1820.45 | 2000.00 | 2093.00 | 2115.42 |
| 26.900 | 948.40 | 0.00 | 948.41 | 719.08 | 221.46 | 503.18 | 10.34 | 0.00 | 0.00 | 2000.00 | 2124.00 | 0.00 |
| 26.900 | 948.49 | .10 | 948.51 | 490.68 | 210.67 | 524.33 | 0.00 | .07 | 1633.32 | 2000.00 | 2124.00 | 2124.00 |
| 27.000 | 948.40 | 0.00 | 948.44 | 501.16 | 241.64 | 493.36 | 0.00 | 0.00 | 0.00 | 2030.00 | 2090.00 | 0.00 |
| 27.000 | 948.50 | .09 | 948.53 | 354.80 | 226.34 | 508.66 | 0.00 | .06 | 1600.15 | 2030.00 | 2090.00 | 2090.00 |
| 27.100 | 948.44 | 0.00 | 948.45 | 719.96 | 181.96 | 543.67 | 9.37 | 0.00 | 0.00 | 2000.00 | 2143.00 | 0.00 |
| 27.100 | 948.53 | .10 | 948.55 | 522.55 | 165.72 | 569.28 | 0.00 | .07 | 1620.45 | 2000.00 | 2143.00 | 2143.00 |
| 27.400 | 948.97 | 0.00 | 948.99 | 309.63 | 262.24 | 460.70 | 12.06 | 888.00 | 1896.00 | 2050.00 | 2169.50 | 2784.00 |
| 27.400 | 949.08 | .11 | 949.10 | 253.04 | 253.28 | 481.72 | 0.00 | .30 | 1916.46 | 2050.00 | 2169.50 | 2169.50 |
| 27.500 | 949.11 | 0.00 | 949.18 | 174.45 | 7.60 | 710.14 | 17.23 | 0.00 | 0.00 | 2000.00 | 2100.00 | 0.00 |
| 27.500 | 949.22 | .11 | 949.29 | 100.00 | 0.00 | 735.00 | 0.00 | .04 | 2000.00 | 2000.00 | 2100.00 | 2100.00 |
| 27.700 | 950.14 | 0.00 | 950.18 | 152.40 | 11.71 | 689.46 | 33.83 | 0.00 | 0.00 | 2050.00 | 2154.00 | 0.00 |
| 27.700 | 950.25 | .11 | 950.30 | 113.34 | 0.00 | 720.78 | 14.22 | .05 | 2050.00 | 2050.00 | 2154.00 | 2163.34 |
| 27.800 | 950.33 | 0.00 | 950.41 | 68.17 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2129.00 | 2221.00 | 0.00 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.800 | 950.44 | .11 | 950.52 | 88.62 | 0.00 | 735.00 | 0.00 | 0.00 | 2129.00 | 2129.00 | 2221.00 | 2221.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | DIFKPS | EG | TOPWID | GLOW | WCH | DROP | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.900 | 950.38 | 0.00 | 950.44 | 91.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2141.00 | 2232.00 | 0.00 |
| 27.900 | 950.49 | .11 | 950.54 | 91.00 | 0.00 | 735.00 | 0.00 | 0.00 | 2141.00 | 2141.00 | 2232.00 | 2232.00 |
| 28.000 | 950.39 | 0.00 | 950.44 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2141.00 | 2232.00 | 0.00 |
| 28.000 | 950.49 | .10 | 950.54 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2141.00 | 2232.00 | 0.00 |
| 28.100 | 950.40 | 0.00 | 950.45 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2149.00 | 2240.00 | 0.00 |
| 28.100 | 950.50 | .11 | 950.55 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2149.00 | 2149.00 | 2240.00 | 2240.00 |
| 28.200 | 950.40 | 0.00 | 950.45 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2149.00 | 2240.00 | 0.00 |
| 28.200 | 950.50 | .11 | 950.55 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2149.00 | 2149.00 | 2240.00 | 2240.00 |
| 28.300 | 950.41 | 0.00 | 950.47 | 155.00 | 29.13 | 631.94 | 28.93 | 155.00 | 2117.00 | 2154.50 | 2229.00 | 2272.00 |
| 28.300 | 950.52 | .10 | 950.57 | 155.00 | 31.29 | 627.46 | 31.25 | 155.00 | 2117.00 | 2154.50 | 2229.00 | 2272.00 |
| 28.420 | 950.73 | 0.00 | 950.78 | 153.32 | 15.57 | 635.92 | 38.51 | 1242.00 | 2000.00 | 2154.50 | 2241.88 | 3242.00 |
| 28.420 | 950.82 | .08 | 950.87 | 130.73 | 23.74 | 665.20 | 1.05 | .10 | 1683.79 | 2154.50 | 2241.88 | 2242.86 |
| 28.670 | 952.20 | 0.00 | 952.24 | 195.36 | 18.12 | 646.62 | 25.26 | 0.00 | 0.00 | 2017.00 | 2120.00 | 0.00 |
| 28.670 | 952.29 | .10 | 952.35 | 111.30 | 1.06 | 677.75 | 11.19 | .05 | 2016.10 | 2017.00 | 2120.00 | 2127.39 |
| 28.800 | 952.52 | 0.00 | 952.56 | 214.48 | .36 | 665.82 | 23.92 | 0.00 | 0.00 | 2000.00 | 2126.00 | 0.00 |
| 28.800 | 952.63 | .11 | 952.67 | 126.00 | 0.00 | 690.00 | 0.00 | .04 | 2000.00 | 2000.00 | 2126.00 | 2126.00 |
| 28.810 | 952.47 | 0.00 | 952.67 | 113.32 | 19.51 | 670.49 | 0.00 | 0.00 | 0.00 | 2000.00 | 2100.00 | 0.00 |
| 28.810 | 952.58 | .11 | 952.78 | 78.46 | 0.00 | 690.00 | 0.00 | .03 | 2000.00 | 2000.00 | 2100.00 | 2100.00 |
| 28.900 | 952.61 | 0.00 | 952.78 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 28.900 | 952.72 | .11 | 952.88 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.000 | 952.61 | 0.00 | 952.79 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 29.000 | 952.72 | .11 | 952.89 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.100 | 952.67 | 0.00 | 952.83 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 29.100 | 952.78 | .11 | 952.92 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.200 | 952.69 | 0.00 | 952.83 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 29.200 | 952.79 | .11 | 952.93 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.300 | 952.74 | 0.00 | 952.94 | 65.08 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 1972.00 | 2065.00 | 0.00 |
| 29.300 | 952.84 | .10 | 953.03 | 66.12 | 0.00 | 690.00 | 0.00 | 0.00 | 1972.00 | 1972.00 | 2065.00 | 2065.00 |
| 29.420 | 953.50 | 0.00 | 953.64 | 75.75 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 29.420 | 953.54 | .05 | 953.68 | 76.16 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2088.00 | 2088.00 |
| 29.550 | 954.71 | 0.00 | 954.77 | 164.28 | 2.81 | 666.74 | 20.44 | 0.00 | 0.00 | 2000.00 | 2078.00 | 0.00 |
| 29.550 | 954.76 | .06 | 954.84 | 78.00 | 0.00 | 690.00 | 0.00 | .04 | 2000.00 | 2000.00 | 2078.00 | 2078.00 |
| 29.800 | 954.94 | 0.00 | 954.99 | 260.18 | 21.27 | 625.83 | 42.91 | 0.00 | 0.00 | 2000.00 | 2073.00 | 0.00 |
| 29.800 | 955.00 | .07 | 955.06 | 100.98 | 7.30 | 650.80 | 31.89 | .05 | 1992.68 | 2000.00 | 2073.00 | 2093.66 |
| 29.810 | 955.02 | 0.00 | 955.06 | 168.18 | 26.96 | 639.50 | 21.54 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 29.810 | 955.09 | .07 | 955.14 | 102.05 | 17.74 | 663.26 | 4.00 | .04 | 1985.39 | 2000.00 | 2080.00 | 2087.44 |
| 29.900 | 955.03 | 0.00 | 955.09 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 29.900 | 955.10 | .07 | 955.16 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2069.00 | 2069.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.000 | 955.03 | 0.00 | 955.09 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.000 | 955.10 | .07 | 955.17 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.100 | 955.03 | 0.00 | 955.11 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.100 | 955.11 | .08 | 955.18 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2069.00 | 2069.00 |
| 30.200 | 955.04 | 0.00 | 955.11 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.200 | 955.12 | .08 | 955.18 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2069.00 | 2069.00 |
| 30.300 | 955.10 | 0.00 | 955.13 | 167.65 | 25.94 | 621.23 | 42.83 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 30.300 | 955.17 | .07 | 955.21 | 122.79 | 12.33 | 645.88 | 31.79 | .04 | 1993.78 | 2000.00 | 2088.00 | 2116.57 |
| 30.400 | 955.12 | 0.00 | 955.16 | 168.89 | 22.94 | 629.05 | 38.01 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 30.400 | 955.19 | .07 | 955.23 | 121.77 | 10.08 | 652.54 | 27.38 | .04 | 1994.14 | 2000.00 | 2088.00 | 2115.91 |
| 31.000 | 956.37 | 0.00 | 956.43 | 253.45 | 14.85 | 641.64 | 33.49 | 0.00 | 0.00 | 2006.00 | 2102.00 | 0.00 |
| 31.000 | 956.48 | .11 | 956.54 | 103.84 | 0.00 | 673.70 | 16.30 | .05 | 2006.00 | 2006.00 | 2102.00 | 2109.84 |
| 31.800 | 957.53 | 0.00 | 957.57 | 390.43 | 3.77 | 577.24 | 108.99 | 0.00 | 0.00 | 2000.00 | 2078.00 | 0.00 |
| 31.800 | 957.67 | .13 | 957.70 | 314.40 | 0.00 | 593.60 | 96.40 | .05 | 2000.00 | 2000.00 | 2078.00 | 2317.91 |
| 31.805 | 957.60 | 0.00 | 957.69 | 91.38 | 1.10 | 673.98 | 14.92 | 113.00 | 1982.00 | 2000.00 | 2070.00 | 2095.00 |
| 31.805 | 957.74 | .13 | 957.81 | 92.70 | 1.34 | 672.46 | 16.20 | 113.00 | 1982.00 | 2000.00 | 2070.00 | 2095.00 |
| 31.810 | 957.63 | 0.00 | 957.72 | 86.97 | 1.13 | 672.98 | 15.89 | 96.00 | 1987.00 | 2000.00 | 2070.00 | 2083.00 |
| 31.810 | 957.76 | .13 | 957.84 | 87.37 | 1.38 | 671.55 | 17.07 | 96.00 | 1987.00 | 2000.00 | 2070.00 | 2083.00 |
| 31.900 | 957.67 | 0.00 | 957.75 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 31.900 | 957.80 | .13 | 957.87 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.000 | 957.67 | 0.00 | 957.76 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.000 | 957.79 | .13 | 957.88 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.100 | 957.69 | 0.00 | 957.77 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.100 | 957.81 | .12 | 957.89 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.200 | 957.70 | 0.00 | 957.77 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.200 | 957.82 | .12 | 957.89 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.300 | 957.77 | 0.00 | 957.79 | 157.83 | 5.03 | 644.73 | 40.24 | 170.00 | 1972.00 | 2000.00 | 2114.00 | 2142.00 |
| 32.300 | 957.89 | .12 | 957.91 | 158.74 | 5.57 | 643.17 | 41.25 | 170.00 | 1972.00 | 2000.00 | 2114.00 | 2142.00 |
| 33.000 | 959.21 | 0.00 | 959.26 | 638.54 | 19.30 | 415.55 | 255.14 | 0.00 | 0.00 | 2000.00 | 2052.00 | 0.00 |
| 33.000 | 959.27 | .06 | 959.33 | 310.57 | 0.00 | 438.76 | 251.24 | .09 | 2000.00 | 2000.00 | 2052.00 | 2310.57 |
| 33.850 | 961.29 | 0.00 | 961.39 | 53.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2032.00 | 2085.00 | 0.00 |
| 33.850 | 961.37 | .08 | 961.47 | 53.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2032.00 | 2032.00 | 2085.00 | 2085.00 |
| 33.900 | 961.31 | 0.00 | 961.40 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2027.00 | 2085.00 | 0.00 |
| 33.900 | 961.38 | .08 | 961.48 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2027.00 | 2027.00 | 2085.00 | 2085.00 |
| 34.000 | 961.31 | 0.00 | 961.41 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2027.00 | 2085.00 | 0.00 |
| 34.000 | 961.38 | .07 | 961.48 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2027.00 | 2085.00 | 0.00 |
| 34.100 | 961.31 | 0.00 | 961.42 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2025.00 | 2083.00 | 0.00 |
| 34.100 | 961.39 | .08 | 961.50 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2025.00 | 2025.00 | 2083.00 | 2083.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PFRENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34.200 | 961.31 | 0.00 | 961.42 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2025.00 | 2083.00 | 0.00 |
| 34.200 | 961.39 | .08 | 961.50 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2025.00 | 2025.00 | 2083.00 | 2083.00 |
| 34.250 | 961.35 | 0.00 | 961.44 | 64.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2025.00 | 2089.00 | 0.00 |
| 34.250 | 961.43 | .08 | 961.51 | 64.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2025.00 | 2025.00 | 2089.00 | 2089.00 |
| 34.300 | 961.40 | 0.00 | 961.46 | 136.00 | 9.64 | 653.92 | 26.24 | 136.00 | 1967.00 | 2000.00 | 2070.00 | 2103.00 |
| 34.300 | 961.47 | .08 | 961.53 | 136.00 | 11.09 | 651.27 | 27.64 | 136.00 | 1967.00 | 2000.00 | 2070.00 | 2103.00 |
| 34.800 | 961.83 | 0.00 | 961.87 | 261.31 | 102.29 | 581.41 | 6.29 | 349.00 | 1877.00 | 2000.00 | 2104.00 | 2226.00 |
| 34.800 | 961.89 | .05 | 961.92 | 265.42 | 104.59 | 578.13 | 7.28 | 349.00 | 1877.00 | 2000.00 | 2104.00 | 2226.00 |
| 34.810 | 961.99 | 0.00 | 962.09 | 69.27 | 0.00 | 683.95 | 6.05 | 165.00 | 1987.00 | 2000.00 | 2081.00 | 2092.00 |
| 34.810 | 962.03 | .04 | 962.14 | 89.34 | 0.00 | 683.60 | 6.39 | 165.00 | 1987.00 | 2000.00 | 2081.00 | 2092.00 |
| 34.900 | 962.06 | 0.00 | 962.16 | 80.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 34.900 | 962.10 | .04 | 962.19 | 80.00 | 0.00 | 690.00 | 0.00 | 2712.00 | 894.00 | 2000.00 | 2080.00 | 3606.00 |
| 35.000 | 962.07 | 0.00 | 962.16 | 88.00 | 0.00 | 649.49 | 40.51 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 35.000 | 962.11 | .04 | 962.20 | 88.00 | 0.00 | 649.17 | 40.83 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 35.100 | 962.08 | 0.00 | 962.17 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.100 | 962.12 | .04 | 962.21 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.200 | 962.09 | 0.00 | 962.17 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.200 | 962.13 | .04 | 962.21 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.250 | 962.06 | 0.00 | 962.24 | 106.08 | 19.92 | 604.14 | 65.94 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.250 | 962.10 | .04 | 962.27 | 110.06 | 20.18 | 601.72 | 68.10 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.300 | 963.67 | 0.00 | 963.70 | 548.31 | 149.42 | 255.98 | 284.61 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.300 | 963.67 | .00 | 963.71 | 549.42 | 149.75 | 255.58 | 284.66 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.350 | 963.68 | 0.00 | 963.71 | 659.58 | 103.97 | 386.71 | 199.32 | 0.00 | 0.00 | 2000.00 | 2081.00 | 0.00 |
| 35.350 | 963.68 | .00 | 963.71 | 660.22 | 104.31 | 386.22 | 199.47 | 0.00 | 0.00 | 2000.00 | 2081.00 | 0.00 |
| 36.000 | 964.34 | 0.00 | 964.48 | 122.50 | 6.43 | 657.47 | 26.10 | 0.00 | 0.00 | 2006.00 | 2092.00 | 0.00 |
| 36.000 | 964.34 | -.00 | 964.48 | 122.49 | 6.43 | 657.48 | 26.09 | 0.00 | 0.00 | 2006.00 | 2092.00 | 0.00 |

MOORE BUSINESS FORMS, INC 23

100 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.17 | 0.00 | 946.17 | .10 | .38 | 1965.76 | 2300.89 |
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.27 | 0.00 | 946.27 | .10 | .38 | 1951.41 | 2327.60 |
| 24.100 | 2280.00 | 0.00 | 0.00 | 939.56 | 735.00 | 946.20 | 0.00 | 946.20 | .21 | .51 | 1534.97 | 1618.33 |
| 24.100 | 2280.00 | 0.00 | 0.00 | 939.56 | 735.00 | 946.30 | 0.00 | 946.30 | .21 | .51 | 1431.66 | 1615.00 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 735.00 | 946.25 | 0.00 | 946.26 | .27 | .52 | 2945.28 | 1423.70 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 735.00 | 946.35 | 0.00 | 946.36 | .27 | .52 | 2674.10 | 1410.30 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 735.00 | 946.37 | 0.00 | 946.39 | 2.71 | 1.43 | 891.88 | 446.63 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 735.00 | 946.47 | 0.00 | 946.49 | 2.71 | 1.45 | 811.12 | 446.82 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 735.00 | 946.99 | 0.00 | 947.01 | 2.22 | 1.32 | 1230.18 | 493.42 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 735.00 | 947.10 | 0.00 | 947.11 | 2.20 | 1.34 | 1080.12 | 495.43 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.70 | 735.00 | 947.31 | 0.00 | 947.37 | 6.01 | 2.21 | 531.46 | 299.69 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.70 | 735.00 | 947.41 | 0.00 | 947.46 | 5.43 | 2.13 | 555.08 | 315.56 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 735.00 | 947.53 | 0.00 | 947.63 | 11.74 | 2.49 | 295.25 | 214.54 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 735.00 | 947.60 | 0.00 | 947.70 | 10.97 | 2.44 | 301.52 | 221.95 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 735.00 | 947.54 | 0.00 | 947.64 | 4.88 | 2.55 | 287.76 | 332.65 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 735.00 | 947.61 | 0.00 | 947.71 | 4.58 | 2.50 | 293.79 | 343.36 |
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 735.00 | 947.62 | 0.00 | 947.66 | 1.39 | 1.72 | 426.34 | 622.52 |
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 735.00 | 947.69 | 0.00 | 947.73 | 1.34 | 1.70 | 432.07 | 634.87 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 735.00 | 947.63 | 0.00 | 947.67 | 3.11 | 1.67 | 439.96 | 416.91 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 735.00 | 947.69 | 0.00 | 947.74 | 2.98 | 1.65 | 445.81 | 425.74 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 735.00 | 947.68 | 0.00 | 947.71 | 3.63 | 1.50 | 738.22 | 385.74 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 735.00 | 947.74 | 0.00 | 947.77 | 3.80 | 1.56 | 700.63 | 377.14 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 735.00 | 948.48 | 0.00 | 948.41 | 1.93 | 1.09 | 1192.41 | 528.40 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 735.00 | 948.49 | 0.00 | 948.51 | 1.99 | 1.11 | 1056.66 | 520.65 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 735.00 | 948.40 | 0.00 | 948.44 | 4.62 | 1.79 | 747.89 | 342.01 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 735.00 | 948.50 | 0.00 | 948.53 | 4.60 | 1.80 | 675.52 | 342.68 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 735.00 | 948.44 | 0.00 | 948.45 | 2.15 | 1.10 | 1051.23 | 500.88 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 735.00 | 948.53 | 0.00 | 948.55 | 2.21 | 1.12 | 938.91 | 494.83 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 735.00 | 948.97 | 0.00 | 948.99 | 2.39 | 1.14 | 852.76 | 475.80 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 735.00 | 949.08 | 0.00 | 949.10 | 2.40 | 1.16 | 798.68 | 474.47 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 735.00 | 949.11 | 0.00 | 949.18 | 9.48 | 2.21 | 369.82 | 238.70 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 735.00 | 949.22 | 0.00 | 949.29 | 9.45 | 2.21 | 332.76 | 239.08 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 735.00 | 950.14 | 0.00 | 950.18 | 4.91 | 1.76 | 485.32 | 331.86 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 735.00 | 950.25 | 0.00 | 950.30 | 4.95 | 1.78 | 424.96 | 330.28 |
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.33 | 0.00 | 950.41 | 8.10 | 2.23 | 329.85 | 258.25 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.44 | 0.00 | 950.52 | 7.41 | 2.16 | 339.54 | 270.02 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRO | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | IOK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.900 | 32.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.38 | 0.00 | 950.44 | 5.52 | 1.93 | 381.72 | 312.80 |
| 27.900 | 32.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.49 | 0.00 | 950.54 | 5.10 | 1.88 | 391.35 | 325.60 |
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 690.00 | 950.39 | 0.00 | 950.44 | 2.00 | 1.85 | 373.89 | 487.76 |
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 690.00 | 950.49 | 0.00 | 950.54 | 2.09 | 1.84 | 374.32 | 476.77 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 690.00 | 950.40 | 0.00 | 950.45 | 1.86 | 1.81 | 380.63 | 505.30 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 690.00 | 950.50 | 0.00 | 950.55 | 1.74 | 1.77 | 389.15 | 522.46 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 690.00 | 950.40 | 0.00 | 950.45 | 4.53 | 1.77 | 388.76 | 324.02 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 690.00 | 950.50 | 0.00 | 950.55 | 4.19 | 1.73 | 398.32 | 336.93 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 690.00 | 950.41 | 0.00 | 950.47 | 5.36 | 2.00 | 410.52 | 298.03 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 690.00 | 950.52 | 0.00 | 950.57 | 4.87 | 1.93 | 426.70 | 312.55 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 690.00 | 950.73 | 0.00 | 950.78 | 5.44 | 1.89 | 425.18 | 295.72 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 690.00 | 950.82 | 0.00 | 950.87 | 5.54 | 1.93 | 388.58 | 293.08 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 690.00 | 952.20 | 0.00 | 952.24 | 5.49 | 1.78 | 444.28 | 294.39 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 690.00 | 952.29 | 0.00 | 952.35 | 5.52 | 1.82 | 389.65 | 293.59 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 690.00 | 952.52 | 0.00 | 952.56 | 3.81 | 1.49 | 514.68 | 353.45 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 690.00 | 952.63 | 0.00 | 952.67 | 3.83 | 1.50 | 459.09 | 352.52 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 690.00 | 952.47 | 0.00 | 952.67 | 39.95 | 3.67 | 203.62 | 109.16 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 690.00 | 952.58 | 0.00 | 952.78 | 37.54 | 3.61 | 191.37 | 112.61 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 690.00 | 952.61 | 0.00 | 952.78 | 24.83 | 3.30 | 208.81 | 138.47 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 690.00 | 952.72 | 0.00 | 952.88 | 22.08 | 3.19 | 216.55 | 146.84 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 690.00 | 952.61 | 0.00 | 952.79 | 11.00 | 3.40 | 202.89 | 208.08 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 690.00 | 952.72 | 0.00 | 952.89 | 10.22 | 3.30 | 209.08 | 215.88 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 690.00 | 952.67 | 0.00 | 952.83 | 8.81 | 3.17 | 217.67 | 232.42 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 690.00 | 952.78 | 0.00 | 952.92 | 8.08 | 3.07 | 224.66 | 242.79 |
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.69 | 0.00 | 952.83 | 19.11 | 3.06 | 225.41 | 157.83 |
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.79 | 0.00 | 952.93 | 17.22 | 2.96 | 232.85 | 166.28 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.74 | 0.00 | 952.94 | 29.51 | 3.63 | 190.30 | 127.01 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.84 | 0.00 | 953.03 | 26.83 | 3.50 | 197.09 | 133.22 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 690.00 | 953.50 | 0.00 | 953.64 | 19.24 | 3.00 | 229.68 | 157.29 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 690.00 | 953.54 | 0.00 | 953.68 | 18.45 | 2.96 | 233.12 | 160.66 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 690.00 | 954.71 | 0.00 | 954.77 | 6.85 | 2.15 | 359.17 | 263.59 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 690.00 | 954.76 | 0.00 | 954.84 | 7.26 | 2.19 | 314.59 | 256.01 |
| 29.800 | 359.00 | 0.00 | 0.00 | 949.70 | 690.00 | 954.94 | 0.00 | 954.99 | 5.09 | 1.97 | 436.25 | 305.73 |
| 29.800 | 359.00 | 0.00 | 0.00 | 949.70 | 690.00 | 955.00 | 0.00 | 955.06 | 5.23 | 2.01 | 372.88 | 301.60 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 690.00 | 955.02 | 0.00 | 955.06 | 4.05 | 1.79 | 461.69 | 342.70 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 690.00 | 955.09 | 0.00 | 955.14 | 4.15 | 1.83 | 402.39 | 338.64 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 690.00 | 955.03 | 0.00 | 955.09 | 5.46 | 2.05 | 336.56 | 295.39 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 690.00 | 955.10 | 0.00 | 955.16 | 5.21 | 2.02 | 341.48 | 302.24 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | G | CWSFL | CRIWS | EG | TOKES | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 690.00 | 955.03 | 0.00 | 955.09 | 2.98 | 2.12 | 325.68 | 399.63 |
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 690.00 | 955.10 | 0.00 | 955.17 | 3.46 | 2.18 | 316.66 | 370.85 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 690.00 | 955.03 | 0.00 | 955.11 | 3.07 | 2.16 | 319.97 | 393.85 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 690.00 | 955.11 | 0.00 | 955.18 | 2.95 | 2.13 | 324.50 | 401.76 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 690.00 | 955.04 | 0.00 | 955.11 | 5.83 | 2.10 | 329.17 | 285.66 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 690.00 | 955.12 | 0.00 | 955.18 | 5.55 | 2.06 | 334.49 | 293.01 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.10 | 0.00 | 955.13 | 3.24 | 1.60 | 508.65 | 383.25 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.17 | 0.00 | 955.21 | 3.32 | 1.63 | 461.60 | 378.44 |
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.12 | 0.00 | 955.16 | 3.25 | 1.61 | 514.17 | 382.68 |
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.19 | 0.00 | 955.23 | 3.33 | 1.64 | 462.67 | 377.92 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 690.00 | 956.37 | 0.00 | 956.43 | 6.56 | 1.93 | 409.66 | 269.37 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 690.00 | 956.48 | 0.00 | 956.54 | 6.80 | 1.96 | 361.96 | 264.69 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 690.00 | 957.53 | 0.00 | 957.57 | 3.23 | 1.62 | 636.32 | 383.04 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 690.00 | 957.67 | 0.00 | 957.70 | 3.24 | 1.61 | 591.31 | 383.46 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.60 | 0.00 | 957.69 | 7.76 | 2.34 | 312.47 | 247.77 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.74 | 0.00 | 957.81 | 6.95 | 2.26 | 324.67 | 261.80 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.63 | 0.00 | 957.72 | 7.61 | 2.32 | 312.81 | 250.19 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.76 | 0.00 | 957.84 | 6.83 | 2.25 | 324.22 | 264.10 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.67 | 0.00 | 957.75 | 7.99 | 2.32 | 297.78 | 244.14 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.80 | 0.00 | 957.87 | 7.28 | 2.25 | 306.56 | 255.69 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 690.00 | 957.67 | 0.00 | 957.76 | 3.91 | 2.30 | 288.76 | 348.75 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 690.00 | 957.79 | 0.00 | 957.88 | 3.60 | 2.32 | 297.26 | 363.79 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 690.00 | 957.69 | 0.00 | 957.77 | 3.45 | 2.29 | 301.12 | 371.34 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 690.00 | 957.81 | 0.00 | 957.89 | 3.19 | 2.23 | 309.53 | 386.46 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 690.00 | 957.70 | 0.00 | 957.77 | 7.00 | 2.22 | 310.59 | 260.87 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 690.00 | 957.82 | 0.00 | 957.89 | 6.41 | 2.16 | 319.24 | 272.50 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.77 | 0.00 | 957.79 | 2.02 | 1.27 | 599.37 | 485.80 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.89 | 0.00 | 957.91 | 1.84 | 1.23 | 618.17 | 508.74 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 690.00 | 959.21 | 0.00 | 959.26 | 8.64 | 2.22 | 661.76 | 234.81 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 690.00 | 959.27 | 0.00 | 959.33 | 9.24 | 2.30 | 538.33 | 226.97 |
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 690.00 | 961.25 | 0.00 | 961.39 | 8.97 | 2.62 | 263.66 | 230.43 |
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 690.00 | 961.37 | 0.00 | 961.47 | 8.50 | 2.57 | 268.26 | 236.71 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 690.00 | 961.31 | 0.00 | 961.40 | 9.08 | 2.52 | 274.04 | 229.03 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 690.00 | 961.38 | 0.00 | 961.48 | 8.61 | 2.48 | 278.63 | 235.10 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 690.00 | 961.31 | 0.00 | 961.41 | 3.49 | 2.51 | 274.61 | 369.35 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 690.00 | 961.38 | 0.00 | 961.48 | 4.11 | 2.58 | 267.26 | 340.28 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 690.00 | 961.31 | 0.00 | 961.42 | 3.98 | 2.64 | 251.42 | 345.70 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 690.00 | 961.39 | 0.00 | 961.50 | 3.79 | 2.60 | 265.67 | 354.20 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRITWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 690.00 | 961.31 | 0.00 | 961.42 | 10.43 | 2.64 | 261.07 | 213.64 |
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 690.00 | 961.39 | 0.00 | 961.50 | 9.87 | 2.60 | 265.68 | 219.61 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 690.00 | 961.35 | 0.00 | 961.44 | 8.26 | 2.41 | 285.89 | 240.13 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 690.00 | 961.43 | 0.00 | 961.51 | 7.82 | 2.37 | 290.86 | 246.77 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 690.00 | 961.40 | 0.00 | 961.46 | 5.63 | 2.07 | 389.89 | 290.91 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 690.00 | 961.47 | 0.00 | 961.53 | 5.28 | 2.03 | 400.28 | 300.39 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 690.00 | 961.83 | 0.00 | 961.87 | 4.42 | 1.69 | 552.11 | 328.35 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 690.00 | 961.89 | 0.00 | 961.92 | 4.19 | 1.66 | 565.83 | 336.92 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 690.00 | 961.99 | 0.00 | 962.09 | 13.28 | 2.64 | 268.83 | 189.33 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 690.00 | 962.03 | 0.00 | 962.14 | 12.72 | 2.61 | 272.71 | 193.46 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 690.00 | 962.06 | 0.00 | 962.16 | 10.85 | 2.46 | 281.00 | 209.47 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 690.00 | 962.10 | 0.00 | 962.19 | 10.45 | 2.43 | 284.22 | 213.42 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 690.00 | 962.07 | 0.00 | 962.16 | 2.76 | 2.37 | 292.75 | 415.49 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 690.00 | 962.11 | 0.00 | 962.20 | 2.66 | 2.34 | 296.21 | 423.14 |
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 690.00 | 962.08 | 0.00 | 962.17 | 3.05 | 2.39 | 289.30 | 395.39 |
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 690.00 | 962.12 | 0.00 | 962.21 | 2.94 | 2.36 | 292.70 | 402.64 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 690.00 | 962.09 | 0.00 | 962.17 | 2.47 | 2.32 | 297.00 | 438.90 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 690.00 | 962.13 | 0.00 | 962.21 | 2.38 | 2.30 | 300.50 | 447.29 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 690.00 | 962.06 | 0.00 | 962.24 | 8.13 | 3.54 | 203.25 | 242.05 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 690.00 | 962.10 | 0.00 | 962.27 | 7.63 | 3.46 | 207.74 | 249.86 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 690.00 | 963.67 | 0.00 | 963.70 | 2.29 | 1.67 | 497.69 | 456.28 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 690.00 | 963.67 | 0.00 | 963.71 | 2.27 | 1.66 | 499.05 | 457.76 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 690.00 | 963.68 | 0.00 | 963.71 | 1.16 | 1.54 | 599.21 | 639.84 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 690.00 | 963.68 | 0.00 | 963.71 | 1.16 | 1.54 | 600.55 | 641.34 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 690.00 | 964.34 | 0.00 | 964.48 | 5.76 | 3.02 | 239.63 | 287.47 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 690.00 | 964.34 | 0.00 | 964.48 | 5.76 | 3.02 | 239.61 | 287.43 |

MOORE BUSINESS FORMS, INC. 23

100 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CLSEL | DIFWSP | DIFWSX | DIFK S | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 24.000 | 735.00 | 946.17 | 0.00 | 0.00 | 0.00 | 336.78 | 0.00 |
| 24.000 | 735.00 | 946.27 | .10 | 0.00 | .10 | 278.00 | 0.00 |
| 24.100 | 735.00 | 946.20 | 0.00 | .03 | 0.00 | 339.47 | 2280.00 |
| 24.100 | 735.00 | 946.30 | .10 | .03 | .10 | 220.00 | 2280.00 |
| 24.200 | 735.00 | 946.25 | 0.00 | .05 | 0.00 | 1993.31 | 2300.00 |
| 24.200 | 735.00 | 946.35 | .10 | .05 | .10 | 1533.48 | 2300.00 |
| 25.000 | 735.00 | 946.37 | 0.00 | .11 | 0.00 | 845.34 | 2290.00 |
| 25.000 | 735.00 | 946.47 | .10 | .11 | .10 | 673.80 | 2290.00 |
| 25.600 | 735.00 | 946.99 | 0.00 | .62 | 0.00 | 939.62 | 2850.00 |
| 25.600 | 735.00 | 947.10 | .11 | .63 | .11 | 526.11 | 2850.00 |
| 25.800 | 735.00 | 947.31 | 0.00 | .32 | 0.00 | 247.00 | 1100.00 |
| 25.800 | 735.00 | 947.41 | .10 | .31 | .10 | 247.00 | 1100.00 |
| 25.900 | 735.00 | 947.53 | 0.00 | .22 | 0.00 | 85.00 | 324.00 |
| 25.900 | 735.00 | 947.60 | .07 | .20 | .07 | 85.00 | 324.00 |
| 26.000 | 735.00 | 947.54 | 0.00 | .01 | 0.00 | 85.00 | 16.90 |
| 26.000 | 735.00 | 947.61 | .07 | .01 | .07 | 85.00 | 16.90 |
| 26.100 | 735.00 | 947.62 | 0.00 | .08 | 0.00 | 85.00 | 26.00 |
| 26.100 | 735.00 | 947.69 | .07 | .07 | .07 | 85.00 | 26.00 |
| 26.200 | 735.00 | 947.63 | 0.00 | .01 | 0.00 | 85.00 | 16.90 |
| 26.200 | 735.00 | 947.69 | .07 | .01 | .07 | 85.00 | 16.90 |
| 26.400 | 735.00 | 947.68 | 0.00 | .05 | 0.00 | 259.00 | 107.00 |
| 26.400 | 735.00 | 947.74 | .06 | .05 | .06 | 244.97 | 107.00 |
| 26.900 | 735.00 | 948.40 | 0.00 | .72 | 0.00 | 719.08 | 3000.00 |
| 26.900 | 735.00 | 948.49 | .10 | .75 | .10 | 440.68 | 3000.00 |
| 27.000 | 735.00 | 948.40 | 0.00 | .01 | 0.00 | 501.16 | 72.00 |
| 27.000 | 735.00 | 948.50 | .09 | .01 | .09 | 354.80 | 72.00 |
| 27.100 | 735.00 | 948.44 | 0.00 | .03 | 0.00 | 719.96 | 36.00 |
| 27.100 | 735.00 | 948.53 | .10 | .03 | .10 | 522.55 | 36.00 |
| 27.400 | 735.00 | 948.97 | 0.00 | .54 | 0.00 | 309.63 | 2700.00 |
| 27.400 | 735.00 | 949.08 | .11 | .55 | .11 | 253.04 | 2700.00 |
| 27.500 | 735.00 | 949.11 | 0.00 | .14 | 0.00 | 174.49 | 400.00 |
| 27.500 | 735.00 | 949.22 | .11 | .13 | .11 | 100.00 | 400.00 |
| 27.700 | 735.00 | 950.14 | 0.00 | 1.03 | 0.00 | 192.40 | 1500.00 |
| 27.700 | 735.00 | 950.25 | .11 | 1.03 | .11 | 113.34 | 1500.00 |
| 27.800 | 735.00 | 950.33 | 0.00 | .20 | 0.00 | 88.17 | 340.00 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27.800 | 735.00 | 551.44 | .11 | .15 | .11 | HH.62 | 340.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 27.900 | 735.00 | 950.38 | 0.00 | .05 | 0.00 | 91.00 | 32.00 |
| 27.900 | 735.00 | 950.49 | .11 | .04 | .11 | 91.00 | 32.00 |
| 28.000 | 690.00 | 950.39 | 0.00 | .01 | 0.00 | 91.00 | 1.00 |
| 28.000 | 690.00 | 950.49 | .10 | .00 | .10 | 91.00 | 1.00 |
| 28.100 | 690.00 | 950.40 | 0.00 | .01 | 0.00 | 91.00 | 36.50 |
| 28.100 | 690.00 | 950.50 | .11 | .01 | .11 | 91.00 | 36.50 |
| 28.200 | 690.00 | 950.40 | 0.00 | .00 | 0.00 | 91.00 | 1.00 |
| 28.200 | 690.00 | 950.50 | .11 | .00 | .11 | 91.00 | 1.00 |
| 28.300 | 690.00 | 950.41 | 0.00 | .01 | 0.00 | 155.00 | 32.00 |
| 28.300 | 690.00 | 950.52 | .10 | .01 | .10 | 155.00 | 32.00 |
| 28.420 | 690.00 | 950.73 | 0.00 | .32 | 0.00 | 153.32 | 580.00 |
| 28.420 | 690.00 | 950.82 | .08 | .30 | .08 | 130.73 | 580.00 |
| 28.670 | 690.00 | 952.20 | 0.00 | 1.47 | 0.00 | 195.36 | 2660.00 |
| 28.670 | 690.00 | 952.29 | .10 | 1.48 | .10 | 111.30 | 2660.00 |
| 28.800 | 690.00 | 952.52 | 0.00 | .33 | 0.00 | 214.48 | 700.00 |
| 28.800 | 690.00 | 952.63 | .11 | .34 | .11 | 126.00 | 700.00 |
| 28.810 | 690.00 | 952.47 | 0.00 | -.05 | 0.00 | 113.32 | 75.00 |
| 28.810 | 690.00 | 952.58 | .11 | -.05 | .11 | 78.46 | 75.00 |
| 28.900 | 690.00 | 952.61 | 0.00 | .14 | 0.00 | 70.00 | 34.00 |
| 28.900 | 690.00 | 952.72 | .11 | .14 | .11 | 70.00 | 34.00 |
| 29.000 | 690.00 | 952.61 | 0.00 | -.00 | 0.00 | 70.00 | 1.00 |
| 29.000 | 690.00 | 952.72 | .11 | -.00 | .11 | 70.00 | 1.00 |
| 29.100 | 690.00 | 952.67 | 0.00 | .06 | 0.00 | 70.00 | 30.00 |
| 29.100 | 690.00 | 952.78 | .11 | .06 | .11 | 70.00 | 30.00 |
| 29.200 | 690.00 | 952.69 | 0.00 | .01 | 0.00 | 70.00 | 1.00 |
| 29.200 | 690.00 | 952.79 | .11 | .01 | .11 | 70.00 | 1.00 |
| 29.300 | 690.00 | 952.74 | 0.00 | .05 | 0.00 | 65.08 | 34.00 |
| 29.300 | 690.00 | 952.84 | .10 | .05 | .10 | 66.12 | 34.00 |
| 29.420 | 690.00 | 953.50 | 0.00 | .76 | 0.00 | 75.75 | 294.00 |
| 29.420 | 690.00 | 953.54 | .05 | .71 | .05 | 76.16 | 294.00 |
| 29.550 | 690.00 | 954.71 | 0.00 | 1.21 | 0.00 | 164.28 | 1050.00 |
| 29.550 | 690.00 | 954.76 | .06 | 1.22 | .06 | 78.00 | 1050.00 |
| 29.800 | 690.00 | 954.94 | 0.00 | .23 | 0.00 | 200.18 | 359.00 |
| 29.800 | 690.00 | 955.00 | .07 | .24 | .07 | 100.98 | 359.00 |
| 29.810 | 690.00 | 955.02 | 0.00 | .08 | 0.00 | 188.18 | 160.00 |
| 29.810 | 690.00 | 955.09 | .07 | .09 | .07 | 102.05 | 160.00 |
| 29.900 | 690.00 | 955.05 | 0.00 | .01 | 0.00 | 69.00 | 39.00 |
| 29.900 | 690.00 | 955.10 | .07 | .01 | .07 | 69.00 | 39.00 |

MOORE BUSINESS FORMS, INC. 23

| SEL.L | G | CWSEL | DIFWSP | DIFWSX | DIFKVS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 30.000 | 690.00 | 955.03 | 0.00 | -.00 | 0.00 | 69.00 | 1.00 |
| 30.000 | 690.00 | 955.10 | .07 | -.00 | .07 | 69.00 | 1.00 |
| 30.100 | 690.00 | 955.03 | 0.00 | .01 | 0.00 | 69.00 | 30.00 |
| 30.100 | 690.00 | 955.11 | .08 | .01 | .08 | 69.00 | 30.00 |
| 30.200 | 690.00 | 955.04 | 0.00 | .01 | 0.00 | 69.00 | 1.00 |
| 30.200 | 690.00 | 955.12 | .08 | .01 | .08 | 69.00 | 1.00 |
| 30.300 | 690.00 | 955.10 | 0.00 | .06 | 0.00 | 187.65 | 39.00 |
| 30.300 | 690.00 | 955.17 | .07 | .05 | .07 | 122.79 | 39.00 |
| 30.400 | 690.00 | 955.12 | 0.00 | .02 | 0.00 | 188.89 | 76.00 |
| 30.400 | 690.00 | 955.19 | .07 | .02 | .07 | 121.77 | 76.00 |
| 31.000 | 690.00 | 956.37 | 0.00 | 1.25 | 0.00 | 253.45 | 2825.00 |
| 31.000 | 690.00 | 956.48 | .11 | 1.29 | .11 | 103.84 | 2825.00 |
| 31.800 | 690.00 | 957.53 | 0.00 | 1.16 | 0.00 | 390.43 | 2566.00 |
| 31.800 | 690.00 | 957.67 | .13 | 1.18 | .13 | 314.40 | 2566.00 |
| 31.900 | 690.00 | 957.60 | 0.00 | .07 | 0.00 | 91.38 | 223.00 |
| 31.900 | 690.00 | 957.74 | .13 | .07 | .13 | 92.70 | 223.00 |
| 31.910 | 690.00 | 957.63 | 0.00 | .03 | 0.00 | 86.97 | 37.00 |
| 31.910 | 690.00 | 957.76 | .13 | .03 | .13 | 87.37 | 37.00 |
| 31.900 | 690.00 | 957.67 | 0.00 | .04 | 0.00 | 70.00 | 49.00 |
| 31.900 | 690.00 | 957.80 | .13 | .03 | .13 | 70.00 | 49.00 |
| 32.000 | 690.00 | 957.67 | 0.00 | -.00 | 0.00 | 70.00 | 1.00 |
| 32.000 | 690.00 | 957.79 | .13 | -.00 | .13 | 70.00 | 1.00 |
| 32.100 | 690.00 | 957.69 | 0.00 | .02 | 0.00 | 70.00 | 30.00 |
| 32.100 | 690.00 | 957.81 | .12 | .02 | .12 | 70.00 | 30.00 |
| 32.200 | 690.00 | 957.70 | 0.00 | .01 | 0.00 | 70.00 | 1.00 |
| 32.200 | 690.00 | 957.82 | .12 | .01 | .12 | 70.00 | 1.00 |
| 32.300 | 690.00 | 957.77 | 0.00 | .08 | 0.00 | 157.83 | 49.00 |
| 32.300 | 690.00 | 957.89 | .12 | .07 | .12 | 158.74 | 49.00 |
| 33.000 | 690.00 | 959.21 | 0.00 | 1.44 | 0.00 | 638.54 | 4100.00 |
| 33.000 | 690.00 | 959.27 | .06 | 1.38 | .06 | 310.57 | 4100.00 |
| 33.850 | 690.00 | 961.29 | 0.00 | 2.07 | 0.00 | 53.00 | 2399.00 |
| 33.850 | 690.00 | 961.37 | .08 | 2.09 | .08 | 53.00 | 2399.00 |
| 33.900 | 690.00 | 961.31 | 0.00 | .02 | 0.00 | 58.00 | 13.00 |
| 33.900 | 690.00 | 961.38 | .08 | .02 | .08 | 58.00 | 13.00 |
| 34.000 | 690.00 | 961.31 | 0.00 | .00 | 0.00 | 58.00 | 1.00 |
| 34.000 | 690.00 | 961.38 | .07 | -.00 | .07 | 58.00 | 1.00 |
| 34.100 | 690.00 | 961.31 | 0.00 | .01 | 0.00 | 58.00 | 29.00 |
| 34.100 | 690.00 | 961.39 | .08 | .01 | .08 | 58.00 | 29.00 |

MOORE BUSINESS FORMS, INC 23

| SEC.0 | [illegible] | CWSEL | DIFWSP | DIFWSX | DIFWS | TOPWTD | XLCP |
|---|---|---|---|---|---|---|---|
| 34.200 | [illegible].00 | 961.31 | 0.00 | .00 | 0.00 | [illegible].00 | 1.00 |
| 34.200 | [illegible].00 | 961.39 | .08 | .00 | .08 | 58.00 | 1.00 |
| 34.250 | [illegible].00 | 961.35 | 0.00 | .04 | 0.00 | 64.00 | 13.00 |
| 34.250 | [illegible].00 | 961.43 | .08 | .03 | .08 | 64.00 | 13.00 |
| 34.300 | [illegible].00 | 961.40 | 0.00 | .05 | 0.00 | 136.00 | 26.00 |
| 34.300 | [illegible].00 | 961.47 | .08 | .05 | .08 | 136.00 | 26.00 |
| 34.600 | [illegible].00 | 961.83 | 0.00 | .44 | 0.00 | 261.31 | 820.00 |
| 34.600 | [illegible].00 | 961.89 | .05 | .41 | .05 | 265.42 | 820.00 |
| 34.810 | [illegible].00 | 961.99 | 0.00 | .15 | 0.00 | 89.27 | 280.00 |
| 34.810 | [illegible].00 | 962.03 | .04 | .14 | .04 | 89.34 | 280.00 |
| 34.900 | [illegible].00 | 962.06 | 0.00 | .08 | 0.00 | 80.00 | 50.00 |
| 34.900 | [illegible].00 | 962.10 | .04 | .07 | .04 | 80.00 | 50.00 |
| 35.000 | [illegible].00 | 962.07 | 0.00 | .01 | 0.00 | 88.00 | 1.00 |
| 35.000 | [illegible].00 | 962.11 | .04 | .01 | .04 | 88.00 | 1.00 |
| 35.100 | [illegible].00 | 962.08 | 0.00 | .01 | 0.00 | 88.00 | 32.00 |
| 35.100 | [illegible].00 | 962.12 | .04 | .01 | .04 | 88.00 | 32.00 |
| 35.200 | [illegible].00 | 962.09 | 0.00 | .01 | 0.00 | 88.00 | 1.00 |
| 35.200 | [illegible].00 | 962.13 | .04 | .01 | .04 | 88.00 | 1.00 |
| 35.250 | [illegible]0.00 | 962.06 | 0.00 | -.03 | 0.00 | 106.08 | 51.00 |
| 35.250 | [illegible]0.00 | 962.10 | .04 | -.03 | .04 | 110.06 | 51.00 |
| 35.300 | [illegible]0.00 | 963.67 | 0.00 | 1.61 | 0.00 | 598.31 | 10.00 |
| 35.300 | [illegible]0.00 | 963.67 | .00 | 1.58 | .00 | 599.42 | 10.00 |
| 35.350 | [illegible]0.00 | 963.68 | 0.00 | .01 | 0.00 | 659.58 | 10.00 |
| 35.350 | [illegible]0.00 | 963.68 | .00 | .01 | .00 | 660.27 | 10.00 |
| 36.000 | [illegible]0.00 | 964.34 | 0.00 | .66 | 0.00 | 122.50 | 3430.00 |
| 36.000 | [illegible]0.00 | 964.34 | -.00 | .66 | -.00 | 122.49 | 3430.00 |

SUMMARY OF ERRORS

MOORE BUSINESS FORMS, INC 23

FLOODWAY DATA — 100 YEAR FLOW
PROFILE NO. 3

| STATION | FLOODWAY WIDTH (FT.) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WATER SURFACE ELEVATION WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 24.000 | 270. | 1951. | .4 | 946.3 | 946.2 | .1 |
| 24.100 | 220. | 1432. | .5 | 946.3 | 946.2 | .1 |
| 24.200 | 190. | 2674. | .3 | 946.4 | 946.3 | .1 |
| 25.000 | 130. | 811. | .9 | 946.5 | 946.4 | .1 |
| 25.050 | 152. | 1080. | .7 | 947.1 | 947.0 | .1 |
| 25.500 | 247. | 555. | 1.3 | 947.4 | 947.3 | .1 |
| 25.700 | 85. | 302. | 2.4 | 947.6 | 947.5 | .1 |
| 26.000 | 60. | 294. | 2.5 | 947.6 | 947.5 | .1 |
| 26.100 | 90. | 432. | 1.7 | 947.7 | 947.6 | .1 |
| 26.200 | 90. | 446. | 1.6 | 947.7 | 947.6 | .1 |
| 26.400 | 205. | 701. | 1.0 | 947.8 | 947.7 | .1 |
| 26.900 | 281. | 1057. | .7 | 948.5 | 948.4 | .1 |
| 27.000 | 205. | 676. | 1.1 | 948.5 | 948.4 | .1 |
| 27.100 | 220. | 939. | .8 | 948.5 | 948.4 | .1 |
| 27.400 | 220. | 795. | .9 | 949.1 | 949.0 | .1 |
| 27.500 | 100. | 333. | 2.2 | 949.2 | 949.1 | .1 |
| 27.700 | 115. | 425. | 1.7 | 950.2 | 950.1 | .1 |
| 27.800 | 120. | 346. | 2.2 | 950.4 | 950.3 | .1 |
| 27.900 | 121. | 391. | 1.9 | 950.5 | 950.4 | .1 |
| 28.000 | 211. | 374. | 1.8 | 950.5 | 950.4 | .1 |
| 28.100 | 211. | 389. | 1.8 | 950.5 | 950.4 | .1 |
| 28.200 | 211. | 396. | 1.7 | 950.5 | 950.4 | .1 |
| 28.300 | 122. | 427. | 1.6 | 950.5 | 950.4 | .1 |
| 28.420 | 215. | 389. | 1.8 | 950.8 | 950.7 | .1 |
| 28.670 | 111. | 397. | 1.8 | 952.3 | 952.2 | .1 |
| 28.800 | 124. | 455. | 1.5 | 952.6 | 952.5 | .1 |
| 28.910 | 70. | 191. | 3.6 | 952.6 | 952.5 | .1 |
| 29.000 | 75. | 217. | 3.2 | 952.7 | 952.6 | .1 |
| 29.100 | 75. | 209. | 3.3 | 952.7 | 952.6 | .1 |
| 29.200 | 75. | 225. | 3.1 | 952.8 | 952.7 | .1 |
| 29.300 | 75. | 233. | 3.0 | 952.8 | 952.7 | .1 |
| 29.300 | 42. | 197. | 3.5 | 952.8 | 952.7 | .1 |
| 29.420 | 74. | 233. | 3.0 | 953.5 | 953.5 | 0.0 |
| 29.550 | 78. | 315. | 2.2 | 954.8 | 954.7 | .1 |
| 29.800 | 121. | 373. | 1.9 | 955.0 | 954.9 | .1 |
| 29.810 | 139. | 402. | 1.7 | 955.1 | 955.0 | .1 |
| 29.900 | 120. | 341. | 2.0 | 955.1 | 955.0 | .1 |
| 30.000 | 120. | 317. | 2.2 | 955.1 | 955.0 | .1 |
| 30.100 | 120. | 324. | 2.1 | 955.1 | 955.0 | .1 |
| 30.200 | 120. | 334. | 2.1 | 955.1 | 955.0 | .1 |
| 30.300 | 122. | 462. | 1.5 | 955.2 | 955.1 | .1 |
| 30.400 | 122. | 463. | 1.5 | 955.2 | 955.1 | .1 |
| 31.600 | 124. | 362. | 1.9 | 956.5 | 956.4 | .1 |
| 31.800 | 148. | 591. | 1.2 | 957.8 | 957.5 | .1 |
| 31.925 | 93. | 325. | 2.1 | 957.7 | 957.6 | .1 |
| 31.980 | 47. | 324. | 2.1 | 957.7 | 957.6 | .1 |
| 31.990 | 75. | 307. | 2.3 | 957.8 | 957.7 | .1 |
| 32.000 | 75. | 297. | 2.3 | 957.8 | 957.7 | .1 |
| 32.100 | 75. | 310. | 2.2 | 957.8 | 957.7 | .1 |
| 32.200 | 75. | 319. | 2.2 | 957.8 | 957.7 | .1 |

MOORE BUSINESS FORMS, INC. 23

FLOODWAY DATA. 100 YEAR FLOW
PROFILE NO. 2

| STATION | WIDTH (FT) | FLOODWAY SECTION AREA | MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 32.300 | 150. | 618. | 1.1 | 957.9 | 957.8 | .1 |
| 33.000 | 211. | 536. | 1.3 | 959.3 | 959.2 | .1 |
| 33.850 | 52. | 266. | 2.6 | 961.4 | 961.3 | .1 |
| 33.900 | 52. | 279. | 2.5 | 961.4 | 961.3 | .1 |
| 34.100 | 52. | 267. | 2.6 | 961.4 | 961.3 | .1 |
| 34.100 | 52. | 266. | 2.6 | 961.4 | 961.3 | .1 |
| 34.200 | 52. | 266. | 2.6 | 961.4 | 961.3 | .1 |
| 34.250 | 64. | 291. | 2.4 | 961.4 | 961.3 | .1 |
| 34.300 | 134. | 400. | 1.7 | 961.5 | 961.4 | .1 |
| 34.800 | 260. | 566. | 1.2 | 961.9 | 961.8 | .1 |
| 34.810 | 80. | 273. | 2.5 | 962.0 | 962.0 | 0.0 |
| 34.900 | 82. | 284. | 2.4 | 962.1 | 962.1 | 0.0 |
| 35.000 | 88. | 296. | 2.3 | 962.1 | 962.1 | 0.0 |
| 35.100 | 88. | 293. | 2.4 | 962.1 | 962.1 | 0.0 |
| 35.200 | 88. | 301. | 2.3 | 962.1 | 962.1 | 0.0 |
| 35.250 | 114. | 208. | 3.3 | 962.1 | 962.1 | 0.0 |
| 35.300 | 414. | 499. | 1.4 | 963.7 | 963.7 | 0.0 |
| 35.450 | 671. | 601. | 1.1 | 963.7 | 963.7 | 0.0 |
| 36.000 | 125. | 241. | 2.5 | 964.3 | 964.3 | 0.0 |

MOORE BUSINESS FORMS, INC 23

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion, City of

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100-year ENCROACHED ~~EXCLUDED~~

00BREAK00

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1
T2
T3        THE ENCROACHED RUN
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | -10. | 6. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 929.200 | 0.000 |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLOC | IBW | CHNIM | ITRACE |
| | 15.000 | 0.000 | -1.000 | 0.000 | 0.000 | -1.290 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*PROF 2

CCHV= .100 CEHV= .300

*SECNO 12.000
2800 NAT Q1= 500.22 WSEL= 929.10 ENC Q1= 500.22 WSEL= 929.20 RATIO= 0.0000
NAT Q1= 526. RATIOS LOB,CH,ROB= .0096 .8444 .1460 WSEL= 929.20

3470 ENCROACHMENT STATIONS= 1966.0 2227.9 TYPE= 4 TARGET= .050
D/S LIMIT OF THE CITY OF ALBION, SURVEYED SECTION (A)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.00 | 6.20 | 929.20 | 0.00 | 929.10 | 929.31 | .11 | 0.00 | 0.00 | 927.70 |
| 1600. | 0. | 1421. | 179. | 0. | 516. | 230. | 0. | 0. | 927.30 |
| 0.00 | 0.00 | 2.75 | .78 | .085 | .045 | .085 | 0.000 | 923.00 | 1966.00 |
| .001038 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 261.91 | 2227.91 |

*SECNO 12.600
2800 NAT Q1= 512.71 WSEL= 930.90 ENC Q1= 518.05 WSEL= 931.00 RATIO= -.0104
NAT Q1= 529. RATIOS LOB,CH,ROB= .0019 .9799 .0182 WSEL= 931.00

3470 ENCROACHMENT STATIONS= 2000.0 2090.0 TYPE= 4 TARGET= .020

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.60 | 6.43 | 931.03 | 0.00 | 930.90 | 931.19 | .16 | 1.87 | .02 | 934.00 |
| 1600. | 0. | 1600. | 0. | 0. | 498. | 0. | 26. | 7. | 928.00 |
| .16 | 0.00 | 3.21 | 0.00 | .085 | .045 | .085 | .045 | 924.60 | 2004.74 |
| .000983 | 1880. | 1850. | 1800. | 2 | 0 | 0 | 0.00 | 85.26 | 2090.00 |

*SECNO 12.700
2800 NAT Q1= 651.43 WSEL= 932.10 ENC Q1= 651.43 WSEL= 932.20 RATIO= .0000
NAT Q1= 675. RATIOS LOB,CH,ROB= .0213 .9075 .0712 WSEL= 932.20

3470 ENCROACHMENT STATIONS= 1993.0 2143.8 TYPE= 4 TARGET= .035

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.70 | 6.23 | 932.23 | 0.00 | 932.10 | 932.32 | .10 | 1.13 | .01 | 930.50 |
| 1600. | 6. | 1504. | 90. | 11. | 584. | 115. | 47. | 11. | 929.30 |
| .33 | .52 | 2.58 | .78 | .085 | .045 | .085 | .045 | 926.00 | 1993.01 |
| .000595 | 1570. | 1500. | 1450. | 2 | 0 | 0 | 0.00 | 150.75 | 2143.75 |

*SECNO 12.800
2800 NAT Q1= 565.93 WSEL= 933.30 ENC Q1= 565.93 WSEL= 933.40 RATIO= -.0000
NAT Q1= 585. RATIOS LOB,CH,ROB= .0042 .9624 .0334 WSEL= 933.40

3470 ENCROACHMENT STATIONS= 1988.0 2100.0 TYPE= 4 TARGET= .033

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 12.80 | 6.01 | 933.41 | 0.00 | 933.30 | 933.53 | .12 | 1.20 | .01 | 932.00 |
| 1600. | 0. | 1594. | 6. | 0. | 575. | 9. | 73. | 17. | 930.40 |
| .50 | 0.00 | 2.77 | .65 | .085 | .045 | .085 | .045 | 927.40 | 1988.00 |
| .000806 | 1700. | 1750. | 1650. | 2 | 0 | 0 | 0.00 | 112.01 | 2100.01 |

CCHV= .300 CEHV= .500
*SECNO 13.100
3470 ENCROACHMENT STATIONS= 500.0 2355.5 TYPE= 1 TARGET= 2039.000
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 940.40 ELREA= 940.20
D/S FACE OF ABANDONED RR BRIDGE (B)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.10 | 6.43 | 933.63 | 0.00 | 933.50 | 933.66 | .03 | .10 | .03 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 1066. | 0. | 77. | 17. | 941.00 |
| .55 | 0.00 | 1.50 | 0.00 | .080 | .045 | .080 | .045 | 927.20 | 1869.48 |
| .000263 | 170. | 240. | 325. | 2 | 0 | 0 | 0.00 | 224.75 | 2094.22 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.25 | 1.40 | 3.00 | 300.00 | 200.00 | 20.40 | 2488.00 | 3.00 | 928.00 | 927.20 |

*SECNO 13.200
CLASS A LOW FLOW
3420 BRIDGE W.S.= 934.02 BRIDGE VELOCITY=, 1.25 CALCULATED CHANNEL AREA=, 1190.

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 933.67 | .01 | 0. | 1600. | 2488. | 2487. | 939.60 | 940.80 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.40 ELREA= 940.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.20 | 6.33 | 933.63 | 0.00 | 933.51 | 933.67 | .04 | .01 | 0.00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 1053. | 0. | 78. | 18. | 941.00 |
| .55 | 0.00 | 1.52 | 0.00 | .080 | .065 | .080 | .045 | 927.30 | 1924.34 |
| .000559 | 12. | 12. | 12. | 0 | 0 | 0 | 0.00 | 224.87 | 2149.20 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 13.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 941.10 ELREA= 941.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.30 | 6.33 | 933.63 | 0.00 | 933.51 | 933.67 | .04 | .00 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 1053. | 0. | 78. | 18. | 941.00 |
| .55 | 0.00 | 1.52 | 0.00 | .080 | .065 | .080 | .045 | 927.30 | 1924.33 |
| .000559 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 224.87 | 2149.21 |

*SECNO 14.100

2800 NAT Q1= 325.91 WSEL= 933.73 ENC Q1= 334.18 WSEL= 933.83 RATIO= -.0254

NAT Q1= 334. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 933.83

3470 ENCROACHMENT STATIONS= 1976.0 2076.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.10 | 8.63 | 933.83 | 0.00 | 933.73 | 934.10 | .28 | .32 | .12 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 380. | 0. | 83. | 19. | 940.70 |
| .57 | 0.00 | 4.21 | 0.00 | .080 | .052 | .080 | .046 | 925.20 | 1990.61 |
| .002290 | 380. | 317. | 200. | 2 | 0 | 0 | 0.00 | 68.06 | 2058.67 |

*SECNO 14.300

2800 NAT Q1= 326.40 WSEL= 933.74 ENC Q1= 335.05 WSEL= 933.84 RATIO= -.0265

NAT Q1= 335. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 933.84

3470 ENCROACHMENT STATIONS= 1976.0 2076.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.30 | 8.64 | 933.84 | 0.00 | 933.74 | 934.11 | .27 | .01 | .00 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 381. | 0. | 83. | 19. | 940.70 |
| .57 | 0.00 | 4.20 | 0.00 | .080 | .052 | .080 | .046 | 925.20 | 1990.59 |
| .002280 | 4. | 4. | 4. | 0 | 0 | 0 | 0.00 | 68.10 | 2058.69 |

CCHV= .300 CEHV= .500

*SECNO 14.400

2800 NAT Q1= 524.29 WSEL= 933.70 ENC Q1= 539.63 WSEL= 933.80 RATIO= -.0293

NAT Q1= 540. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 933.80

3470 ENCROACHMENT STATIONS= 2000.0 2060.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 939.40 ELREA= 939.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.40 | 6.70 | 933.80 | 0.00 | 933.70 | 934.17 | .37 | .01 | .05 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 328. | 0. | 83. | 19. | 940.90 |
| .57 | 0.00 | 4.88 | 0.00 | .060 | .026 | .060 | .046 | 927.10 | 2000.00 |
| .000878 | 9. | 9. | 9. | 2 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNP | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 14.500
3700. BRIDGE STENCL= 2000.00 STENCR= 2060.00
2800 NAT Q1= 490.69 WSEL= 933.70 ENC Q1= 523.95 WSEL= 933.80 RATIO= -.0678
NAT Q1= 524. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 933.80

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 940.80 MAX ELLC= 937.60

3470 ENCROACHMENT STATIONS= 2000.0 2060.0 TYPE= 4 TARGET= 0.000

4677 BRIDGE DECK DEFINITION ERROR AT STATIONS 2000.00 2010.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 939.40 ELREA= 939.20

D/S FACE OF ALBION ST. BRIDGE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.50 | 6.70 | 933.80 | 0.00 | 933.70 | 934.17 | .37 | .00 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 328. | 0. | 83. | 19. | 940.90 |
| .57 | 0.00 | 4.88 | 0.00 | .060 | .026 | .060 | .045 | 927.10 | 2000.00 |
| .000931 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

*SECNO 14.600
2800 NAT Q1= 498.78 WSEL= 933.77 ENC Q1= 533.76 WSEL= 933.87 RATIO= -.0701
NAT Q1= 534. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 933.87

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 940.80 MAX ELLC= 937.60

3470 ENCROACHMENT STATIONS= 2000.0 2060.0 TYPE= 4 TARGET= 0.000

4677 BRIDGE DECK DEFINITION ERROR AT STATIONS 2000.00 2010.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.90 ELREA= 940.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.60 | 6.76 | 933.86 | 0.00 | 933.77 | 934.23 | .36 | .05 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 331. | 0. | 83. | 19. | 940.90 |
| .58 | 0.00 | 4.84 | 0.00 | .060 | .026 | .060 | .045 | 927.10 | 2000.00 |
| .000906 | 54. | 54. | 54. | 0 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

CCHV= .100 CEHV= .300

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 14.700
2800 NAT Q1= 305.70 WSEL= 933.77 ENC Q1= 314.68 WSEL= 933.87 RATIO= -.0294
NAT Q1= 315. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 933.87

3470 ENCROACHMENT STATIONS= 2000.0 2060.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.90 ELREA= 940.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.70 | 6.77 | 933.87 | 0.00 | 933.77 | 934.23 | .36 | .00 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 331. | 0. | 83. | 19. | 940.90 |
| .58 | 0.00 | 4.83 | 0.00 | .060 | .045 | .060 | .045 | 927.10 | 2000.00 |
| .002597 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

*SECNO 14.720
2800 NAT Q1= 306.52 WSEL= 933.78 ENC Q1= 315.78 WSEL= 933.88 RATIO= -.0302
NAT Q1= 316. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 933.88

3470 ENCROACHMENT STATIONS= 2000.0 2060.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.90 ELREA= 940.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.72 | 6.78 | 933.88 | 0.00 | 933.78 | 934.24 | .36 | .01 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 332. | 0. | 84. | 19. | 940.90 |
| .58 | 0.00 | 4.82 | 0.00 | .060 | .045 | .060 | .045 | 927.10 | 2000.00 |
| .002580 | 4. | 4. | 4. | 0 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

*SECNO 14.750
2800 NAT Q1= 429.01 WSEL= 935.38 ENC Q1= 429.01 WSEL= 935.48 RATIO= 0.0000
NAT Q1= 445. RATIOS LOB,CH,ROB= .1078 .8810 .0112 WSEL= 935.48

3470 ENCROACHMENT STATIONS= 1952.2 2050.0 TYPE= 4 TARGET= .036

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.75 | 7.97 | 935.47 | 0.00 | 935.38 | 935.73 | .26 | 1.48 | .01 | 933.00 |
| 1600. | 140. | 1460. | 0. | 95. | 343. | 0. | 90. | 20. | 933.00 |
| .63 | 1.48 | 4.25 | 0.00 | .060 | .045 | .060 | .045 | 927.50 | 1952.24 |
| .001482 | 770. | 770. | 820. | 2 | 0 | 0 | 0.00 | 97.76 | 2050.00 |

*SECNO 14.800
2800 NAT Q1= 774.84 WSEL= 935.93 ENC Q1= 774.84 WSEL= 936.03 RATIO= 0.0000
NAT Q1= 797. RATIOS LOB,CH,ROB= .0338 .9550 .0112 WSEL= 936.03

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 2146.9 2252.0 TYPE= 4 TARGET= .027
CENTER LINE OF PEARL STREET NO BRIDGE (D)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.80 | 8.24 | 936.04 | 0.00 | 935.93 | 936.13 | .09 | .38 | .02 | 932.40 |
| 1600. | 28. | 1572. | 0. | 29. | 653. | 0. | 97. | 21. | 933.10 |
| .69 | .95 | 2.41 | 0.00 | .060 | .045 | .060 | .045 | 927.80 | 2146.87 |
| .000442 | 480. | 520. | 570. | 2 | 0 | 0 | 0.00 | 105.13 | 2252.00 |

*SECNO 14.900
2800 NAT Q1= 497.69 WSEL= 936.11 ENC Q1= 508.61 WSEL= 936.21 RATIO= -.0219
NAT Q1= 509. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 936.21

3470 ENCROACHMENT STATIONS= 2044.0 2116.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.90 | 8.42 | 936.22 | 0.00 | 936.11 | 936.37 | .15 | .23 | .02 | 936.90 |
| 1600. | 0. | 1600. | 0. | 0. | 519. | 0. | 102. | 22. | 937.00 |
| .72 | 0.00 | 3.08 | 0.00 | .050 | .052 | .050 | .046 | 927.80 | 2044.00 |
| .000982 | 360. | 360. | 360. | 2 | 0 | 0 | 0.00 | 72.00 | 2116.00 |

*SECNO 15.000
2800 NAT Q1= 342.29 WSEL= 936.04 ENC Q1= 350.32 WSEL= 936.14 RATIO= -.0235
NAT Q1= 350. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 936.14

3470 ENCROACHMENT STATIONS= 1801.1 1853.6 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 937.60 ELREA= 937.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.00 | 7.66 | 936.16 | 0.00 | 936.04 | 936.46 | .30 | .04 | .05 | 939.10 |
| 1600. | 0. | 1600. | 0. | 0. | 364. | 0. | 102. | 22. | 931.00 |
| .72 | 0.00 | 4.40 | 0.00 | .050 | .052 | .050 | .046 | 928.50 | 1801.10 |
| .002310 | 31. | 31. | 31. | 2 | 0 | 0 | 0.00 | 52.54 | 1853.64 |

CCHV= .300 CEHV= .500
*SECNO 15.100
3700. BRIDGE STENCL= 1801.10 STENCR= 1853.64

3370 NORMAL BRIDGE,NRD= 23 MIN ELTRD= 938.80 MAX ELLC= 936.00

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAP | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 937.60 ELREA= 937.50

D/S FACE OF EATON ST. BRIDGE,CONCRETE (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.10 | 7.64 | 936.14 | 0.00 | 936.02 | 936.49 | .35 | .00 | .03 | 939.10 |
| 1600. | 0. | 1600. | 0. | 0. | 336. | 0. | 102. | 22. | 931.00 |
| .72 | 0.00 | 4.76 | 0.00 | .040 | .026 | .040 | .046 | 928.50 | 1801.10 |
| .001356 | 1. | 1. | 1. | 1 | 0 | 0 | -26.92 | 52.54 | 1853.64 |

*SECNO 15.200

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 938.80 MAX ELLC= 936.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 939.20 ELREA= 938.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.20 | 7.78 | 936.18 | 0.00 | 936.07 | 936.54 | .36 | .05 | .00 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 334. | 0. | 103. | 22. | 930.00 |
| .73 | 0.00 | 4.79 | 0.00 | .040 | .026 | .040 | .045 | 928.40 | 1784.77 |
| .001383 | 36. | 36. | 36. | 2 | 0 | 0 | -28.34 | 52.54 | 1837.31 |

*SECNO 15.300

2800 NAT Q1= 698.44 WSEL= 936.13 ENC Q1= 714.70 WSEL= 936.23 RATIO= -.0233

NAT Q1= 715. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 936.23

3470 ENCROACHMENT STATIONS= 1784.8 1837.3 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 939.20 ELREA= 938.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.30 | 7.86 | 936.26 | 0.00 | 936.13 | 936.56 | .30 | .00 | .02 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 366. | 0. | 103. | 22. | 930.00 |
| .73 | 0.00 | 4.37 | 0.00 | .040 | .026 | .040 | .045 | 928.40 | 1784.77 |
| .000566 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 52.54 | 1837.31 |

*SECNO 15.400

2800 NAT Q1= 1028.17 WSEL= 936.36 ENC Q1= 1049.58 WSEL= 936.46 RATIO= -.0208

NAT Q1= 1050. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 936.46

3470 ENCROACHMENT STATIONS= 2000.0 2098.0 TYPE= 4 TARGET= 0.000

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 15.40 | 8.28 | 936.48 | 0.00 | 936.36 | 936.61 | .13 | .00 | .05 | 938.00 |
| 1600. | 0. | 1600. | 0. | 0. | 551. | 0. | 103. | 22. | 938.30 |
| .73 | 0.00 | 2.90 | 0.00 | .040 | .026 | .040 | .045 | 928.20 | 2010.00 |
| .000230 | 11. | 11. | 11. | 2 | 0 | 0 | 0.00 | 80.52 | 2090.52 |

CCHV= .300 CEHV= .500
*SECNO 15.800

3470 ENCROACHMENT STATIONS= 1148.0 2196.0 TYPE= 1 TARGET= 1048.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.80 | 8.76 | 936.56 | 0.00 | 936.44 | 936.71 | .16 | .09 | .01 | 940.00 |
| 1600. | 0. | 1600. | 0. | 0. | 501. | 0. | 107. | 23. | 937.60 |
| .76 | 0.00 | 3.19 | 0.00 | .040 | .026 | .040 | .045 | 927.80 | 2116.00 |
| .000275 | 350. | 350. | 350. | 2 | 0 | 0 | 0.00 | 70.00 | 2186.00 |

*SECNO 15.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 938.40 ELREA= 938.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.90 | 7.75 | 936.55 | 0.00 | 936.44 | 936.77 | .22 | .03 | .03 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 425. | 0. | 107. | 23. | 940.30 |
| .76 | 0.00 | 3.76 | 0.00 | .050 | .045 | .050 | .045 | 928.80 | 2118.00 |
| .001228 | 56. | 56. | 56. | 1 | 0 | 0 | 0.00 | 59.50 | 2177.50 |

CCHV= .100 CEHV= .300
*SECNO 16.000

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 939.60 MAX ELLC= 936.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 938.40 ELREA= 938.40

D/S FACE OF CLINTON ST. BRIDGE.CONCRETE (F)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.00 | 7.75 | 936.55 | 0.00 | 936.44 | 936.78 | .23 | .00 | .00 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 416. | 0. | 107. | 23. | 940.30 |
| .76 | 0.00 | 3.85 | 0.00 | .040 | .045 | .040 | .045 | 928.80 | 2118.00 |
| .003317 | 1. | 1. | 1. | 0 | 0 | 0 | -9.21 | 59.50 | 2177.50 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 16.100

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 939.60 MAX ELLC= 936.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.30 ELREA= 940.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.10 | 7.73 | 936.73 | 0.00 | 936.62 | 936.96 | .24 | .18 | .00 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 410. | 0. | 108. | 23. | 940.30 |
| .77 | 0.00 | 3.90 | 0.00 | .040 | .045 | .040 | .045 | 929.00 | 2118.00 |
| .003506 | 54. | 54. | 54. | 2 | 0 | 0 | -19.54 | 59.50 | 2177.50 |

*SECNO 16.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.30 ELREA= 940.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.20 | 7.76 | 936.76 | 0.00 | 936.63 | 936.97 | .21 | .00 | .00 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 431. | 0. | 108. | 23. | 940.30 |
| .77 | 0.00 | 3.71 | 0.00 | .040 | .045 | .040 | .045 | 929.00 | 2118.00 |
| .001193 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 59.50 | 2177.50 |

*SECNO 16.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.30 | 8.05 | 936.85 | 0.00 | 936.73 | 937.01 | .16 | .04 | .01 | 943.40 |
| 1600. | 0. | 1584. | 16. | 0. | 486. | 10. | 109. | 23. | 934.70 |
| .77 | 0.00 | 3.26 | 1.57 | .040 | .032 | .020 | .044 | 928.80 | 2111.00 |
| .000421 | 56. | 56. | 56. | 2 | 0 | 0 | 0.00 | 73.60 | 2184.60 |

CCHV= .100 CEHV= .300

*SECNO 16.800

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.80 | 7.91 | 936.97 | 0.00 | 936.86 | 937.08 | .11 | .06 | .01 | 940.70 |
| 1600. | 0. | 1600. | 0. | 0. | 595. | 1. | 110. | 23. | 936.90 |
| .78 | 0.00 | 2.69 | .09 | .040 | .045 | .040 | .044 | 929.06 | 2117.00 |
| .000620 | 125. | 125. | 125. | 1 | 0 | 0 | 0.00 | 110.70 | 2227.70 |

*SECNO 16.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.90 | 7.67 | 936.99 | 0.00 | 936.88 | 937.09 | .10 | .01 | .00 | 940.60 |
| 1600. | 0. | 1600. | 0. | 0. | 620. | 2. | 110. | 23. | 936.88 |
| .79 | 0.00 | 2.58 | .12 | .040 | .045 | .040 | .044 | 929.32 | 2114.00 |
| .000576 | 19. | 19. | 19. | 1 | 0 | 0 | 0.00 | 128.35 | 2242.35 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .300 CEHV= .500
*SECNO 17.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.05

D/S FACE OF SUPERIOR ST. BRIDGE.CONCRETE (G)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.00 | 7.66 | 936.98 | 0.00 | 936.87 | 937.10 | .12 | .00 | .01 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 578. | 0. | 110. | 23. | 960.00 |
| .79 | 0.00 | 2.77 | 0.00 | .040 | .032 | .040 | .044 | 929.32 | 2114.00 |
| .000619 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 87.66 | 2207.00 |

*SECNO 17.100

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.05

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.10 | 7.72 | 937.04 | 0.00 | 936.93 | 937.16 | .12 | .06 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 582. | 0. | 112. | 23. | 960.00 |
| .79 | 0.00 | 2.75 | 0.00 | .040 | .032 | .040 | .044 | 929.32 | 2114.00 |
| .000608 | 90. | 90. | 90. | 0 | 0 | 0 | 0.00 | 87.66 | 2207.00 |

*SECNO 17.200

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.18

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.20 | 8.24 | 937.04 | 0.00 | 936.94 | 937.16 | .11 | .00 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 592. | 0. | 112. | 23. | 960.00 |
| .79 | 0.00 | 2.70 | 0.00 | .040 | .039 | .040 | .044 | 928.80 | 2114.00 |
| .000565 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 90.96 | 2208.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 17.300

3265 DIVIDED FLOW

3370 NORMAL BRIDGE.NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.18

U/S FACE OF SUPERIOR ST. BRIDGE.CONCRETE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.30 | 9.01 | 937.11 | 0.00 | 937.01 | 937.21 | .10 | .05 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 630. | 0. | 113. | 24. | 960.00 |
| .81 | 0.00 | 2.54 | 0.00 | .040 | .039 | .040 | .044 | 928.10 | 2114.00 |
| .000462 | 100. | 100. | 100. | 0 | 0 | 0 | 0.00 | 90.97 | 2207.00 |

*SECNO 17.400

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.40 | 9.01 | 937.11 | 0.00 | 937.01 | 937.21 | .10 | .00 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 631. | 0. | 113. | 24. | 960.00 |
| .81 | 0.00 | 2.54 | 0.00 | .040 | .039 | .040 | .044 | 928.10 | 2114.00 |
| .000460 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 90.97 | 2207.00 |

*SECNO 17.500

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 941.50 ELREA= 941.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.50 | 6.96 | 937.16 | 0.00 | 937.06 | 937.28 | .12 | .06 | .01 | 931.80 |
| 1600. | 0. | 1600. | 0. | 0. | 576. | 0. | 115. | 24. | 936.10 |
| .82 | 0.00 | 2.78 | 0.00 | .040 | .039 | .040 | .044 | 930.20 | 2106.00 |
| .000489 | 120. | 120. | 120. | 0 | 0 | 0 | 0.00 | 93.00 | 2199.00 |

*SECNO 17.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 937.40 ELREA= 936.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.90 | 8.24 | 937.24 | 0.00 | 937.14 | 937.32 | .09 | .04 | .01 | 941.80 |
| 1600. | 0. | 1600. | 0. | 0. | 668. | 0. | 116. | 24. | 941.30 |
| .83 | 0.00 | 2.40 | 0.00 | .040 | .039 | .040 | .044 | 929.00 | 1677.00 |
| .000405 | 20. | 79. | 120. | 2 | 0 | 0 | 0.00 | 109.65 | 1786.65 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 18.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 36 MIN ELTRD= 940.80 MAX ELLC= 939.00

D/S FACE OF W.CASS ST. BRIDGE.CONCRETE (H)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.00 | 8.21 | 937.21 | 0.00 | 937.11 | 937.35 | .14 | .00 | .02 | 941.80 |
| 1600. | 0. | 1600. | 0. | 0. | 535. | 0. | 116. | 24. | 941.30 |
| .83 | 0.00 | 2.99 | 0.00 | .040 | .039 | .040 | .044 | 929.00 | 2095.03 |
| .001234 | 1. | 1. | 1. | 2 | 0 | 0 | -176.35 | 131.62 | 2226.70 |

*SECNO 18.100

3370 NORMAL BRIDGE,NRD= 32 MIN ELTRD= 940.80 MAX ELLC= 939.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.10 | 7.96 | 937.26 | 0.00 | 937.16 | 937.40 | .14 | .05 | .00 | 941.80 |
| 1600. | 0. | 1600. | 0. | 0. | 538. | 0. | 116. | 24. | 941.30 |
| .83 | 0.00 | 2.97 | 0.00 | .040 | .039 | .040 | .044 | 929.30 | 2139.21 |
| .001093 | 40. | 40. | 40. | 1 | 0 | 0 | -106.47 | 100.44 | 2239.65 |

*SECNO 18.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 941.80 ELREA= 941.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.20 | 6.84 | 937.24 | 0.00 | 937.14 | 937.42 | .18 | .00 | .02 | 931.40 |
| 1600. | 0. | 1600. | 0. | 0. | 476. | 0. | 116. | 24. | 939.80 |
| .83 | 0.00 | 3.36 | 0.00 | .040 | .039 | .040 | .044 | 930.40 | 1832.68 |
| .000830 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 89.38 | 1922.06 |

*SECNO 18.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 941.80 ELREA= 941.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.30 | 6.89 | 937.29 | 0.00 | 937.19 | 937.46 | .17 | .04 | .00 | 931.40 |
| 1600. | 0. | 1600. | 0. | 0. | 480. | 0. | 117. | 24. | 939.80 |
| .84 | 0.00 | 3.34 | 0.00 | .040 | .039 | .040 | .044 | 930.40 | 1832.68 |
| .000813 | 49. | 49. | 49. | 0 | 0 | 0 | 0.00 | 89.57 | 1922.25 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 18.800
2800 NAT Q1= 792.09 WSEL= 937.52 ENC Q1= 814.01 WSEL= 937.62 RATIO= -.0277
NAT Q1= 814. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 937.62

3470 ENCROACHMENT STATIONS= 2000.0 2140.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.80 | 7.20 | 937.60 | 0.00 | 937.52 | 937.68 | .08 | .20 | .03 | 940.40 |
| 1600. | 0. | 1600. | 0. | 0. | 695. | 0. | 122. | 25. | 939.80 |
| .88 | 0.00 | 2.30 | 0.00 | .040 | .039 | .040 | .044 | 930.40 | 2000.00 |
| .000390 | 420. | 365. | 340. | 2 | 0 | 0 | 0.00 | 124.71 | 2124.71 |

*SECNO 18.900
2800 NAT Q1= 406.32 WSEL= 937.54 ENC Q1= 417.96 WSEL= 937.64 RATIO= -.0287
NAT Q1= 418. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 937.64

3470 ENCROACHMENT STATIONS= 2000.0 2066.6 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 939.40 ELREA= 939.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.90 | 6.52 | 937.62 | 0.00 | 937.54 | 937.94 | .32 | .14 | .12 | 932.20 |
| 1600. | 0. | 1600. | 0. | 0. | 350. | 0. | 124. | 26. | 940.20 |
| .89 | 0.00 | 4.57 | 0.00 | .040 | .039 | .040 | .044 | 931.10 | 2000.00 |
| .001484 | 195. | 200. | 215. | 2 | 0 | 0 | 0.00 | 62.95 | 2062.95 |

*SECNO 19.000
3700. BRIDGE STENCL= 2000.00 STENCR= 2066.60

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 940.10 MAX ELLC= 938.90
D/S FACE OF PORTER ST. WALK BRIDGE.CONCRETE (I)
CONFLUENCE WITH THE EAST BRANCH KALAMAZOO

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.00 | 6.48 | 937.58 | 0.00 | 937.53 | 937.99 | .40 | .01 | .04 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 314. | 0. | 124. | 26. | 940.40 |
| .89 | 0.00 | 5.09 | 0.00 | .040 | .026 | .040 | .044 | 931.10 | 2000.00 |
| .001520 | 0. | 4. | 0. | 2 | 0 | 0 | -18.03 | 56.54 | 2057.70 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 19.100
2800 NAT Q1= 495.65 WSEL= 937.54 ENC Q1= 508.01 WSEL= 937.64 RATIO= -.0249
NAT Q1= 508. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 937.64

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 2000.0 2057.7 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.10 ELREA= 940.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.10 | 6.56 | 937.66 | 0.00 | 937.54 | 938.01 | .35 | .01 | .02 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 336. | 0. | 124. | 26. | 940.40 |
| .89 | 0.00 | 4.76 | 0.00 | .040 | .026 | .040 | .044 | 931.10 | 2000.00 |
| .000981 | 6. | 6. | 6. | 2 | 0 | 0 | 0.00 | 56.55 | 2057.70 |

*SECNO 19.200
2800 NAT Q1= 547.45 WSEL= 937.52 ENC Q1= 560.88 WSEL= 937.62 RATIO= -.0245
NAT Q1= 561. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 937.62

3470 ENCROACHMENT STATIONS= 2000.0 2057.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.10 ELREA= 940.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.20 | 6.75 | 937.65 | 0.00 | 937.52 | 938.02 | .37 | .00 | .01 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 326. | 0. | 124. | 26. | 939.30 |
| .89 | 0.00 | 4.91 | 0.00 | .040 | .026 | .040 | .044 | 930.90 | 2001.75 |
| .000802 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 55.25 | 2057.00 |

*SECNO 19.300
2800 NAT Q1= 549.79 WSEL= 937.55 ENC Q1= 564.24 WSEL= 937.65 RATIO= -.0263
NAT Q1= 564. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 937.65

3470 ENCROACHMENT STATIONS= 2000.0 2057.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.30 | 6.77 | 937.67 | 0.00 | 937.55 | 938.04 | .37 | .02 | .00 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 327. | 0. | 124. | 26. | 939.30 |
| .89 | 0.00 | 4.90 | 0.00 | .040 | .026 | .040 | .044 | 930.90 | 2001.73 |
| .000796 | 24. | 24. | 24. | 0 | 0 | 0 | 0.00 | 55.27 | 2057.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .100 CEHV= .300
*SECNO 19.800
2800 NAT Q1= 317.03 WSEL= 937.84 ENC Q1= 327.04 WSEL= 937.94 RATIO= -.0316
NAT Q1= 327. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 937.94

3470 ENCROACHMENT STATIONS= 2297.0 2367.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.10 ELREA= 942.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.80 | 6.35 | 937.95 | 0.00 | 937.84 | 938.26 | .31 | .21 | .01 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 357. | 0. | 126. | 26. | 943.90 |
| .90 | 0.00 | 4.48 | 0.00 | .040 | .045 | .040 | .044 | 931.60 | 2297.00 |
| .002399 | 165. | 165. | 165. | 1 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

*SECNO 19.900
2800 NAT Q1= 331.23 WSEL= 937.98 ENC Q1= 341.42 WSEL= 938.08 RATIO= -.0308
NAT Q1= 341. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 938.08

3470 ENCROACHMENT STATIONS= 2297.0 2367.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.90 | 6.48 | 938.08 | 0.00 | 937.98 | 938.38 | .30 | .11 | .00 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 367. | 0. | 126. | 26. | 943.90 |
| .91 | 0.00 | 4.36 | 0.00 | .040 | .045 | .040 | .044 | 931.60 | 2297.00 |
| .002201 | 0. | 50. | 0. | 2 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

CCHV= .300 CEHV= .500
*SECNO 20.000
3700. BRIDGE STENCL= 2297.00 STENCR= 2367.00

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 943.60 MAX ELLC= 942.10

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.10 ELREA= 942.90

D/S FACE OF ERIE ST. BRIDGE.CONCRETE (J)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.00 | 6.41 | 938.01 | 0.00 | 937.92 | 938.45 | .44 | .00 | .07 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 301. | 0. | 126. | 26. | 943.90 |
| .91 | 0.00 | 5.31 | 0.00 | .040 | .026 | .040 | .044 | 931.60 | 2297.00 |
| .001956 | 1. | 1. | 1. | 2 | 0 | 0 | -8.11 | 62.39 | 2367.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 20.100

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 943.60 MAX ELLC= 942.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.10 | 6.62 | 938.22 | 0.00 | 938.12 | 938.63 | .40 | .17 | .01 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 313. | 0. | 127. | 26. | 943.90 |
| .91 | 0.00 | 5.10 | 0.00 | .040 | .026 | .040 | .043 | 931.60 | 2297.00 |
| .001757 | 90. | 90. | 90. | 0 | 0 | 0 | -9.11 | 62.47 | 2367.00 |

**SECNO 20.200
2800 NAT Q1= 633.86 WSEL= 938.28 ENC Q1= 652.16 WSEL= 938.38 RATIO= -.0289
NAT Q1= 652. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 938.38

3470 ENCROACHMENT STATIONS= 2297.0 2367.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 944.10 ELREA= 943.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.20 | 6.81 | 938.41 | 0.00 | 938.28 | 938.67 | .26 | .00 | .04 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 390. | 0. | 127. | 26. | 943.90 |
| .91 | 0.00 | 4.11 | 0.00 | .040 | .026 | .040 | .043 | 931.60 | 2297.00 |
| .000594 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

#SECNO 20.300
2800 NAT Q1= 723.07 WSEL= 938.38 ENC Q1= 742.10 WSEL= 938.48 RATIO= -.0263
NAT Q1= 742. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 938.48

3470 ENCROACHMENT STATIONS= 2297.0 2367.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.30 ELREA= 939.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.30 | 6.80 | 938.50 | 0.00 | 938.38 | 938.72 | .22 | .03 | .01 | 943.30 |
| 1600. | 0. | 1600. | 0. | 0. | 427. | 0. | 127. | 26. | 939.10 |
| .92 | 0.00 | 3.75 | 0.00 | .040 | .026 | .040 | .043 | 931.70 | 2297.00 |
| .000461 | 64. | 64. | 64. | 2 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

1490 NH CARD USED

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .100 CEHV= .300
*SECNO 21.000

3470 ENCROACHMENT STATIONS= 432.0 2256.0 TYPE= 1 TARGET= 1824.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.00 | 6.21 | 939.41 | 0.00 | 939.35 | 940.00 | .59 | 1.18 | .11 | 937.40 |
| 1600. | 238. | 1232. | 131. | 97. | 178. | 75. | 137. | 29. | 937.60 |
| .97 | 2.44 | 6.92 | 1.76 | .060 | .045 | .060 | .043 | 933.20 | 1929.58 |
| .005750 | 1060. | 1050. | 1040. | 3 | 0 | 0 | 0.00 | 184.73 | 2114.31 |

1490 NH CARD USED
*SECNO 21.100
2800 NAT Q1= 396.51 WSEL= 940.32 ENC Q1= 409.41 WSEL= 940.42 RATIO= -.0326
NAT Q1= 412. RATIOS LOB,CH,ROB= .0017 .9929 .0054 WSEL= 940.42

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 2026.0 2162.0 TYPE= 4 TARGET= .007

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.10 | 5.14 | 940.34 | 0.00 | 940.32 | 940.37 | .04 | .31 | .06 | 939.60 |
| 735. | 0. | 735. | 0. | 0. | 488. | 0. | 139. | 30. | 939.00 |
| 1.01 | 0.00 | 1.51 | 0.00 | .090 | .065 | .077 | .044 | 935.20 | 2026.00 |
| .000347 | 210. | 210. | 210. | 2 | 0 | 0 | 0.00 | 136.00 | 2162.00 |

*SECNO 21.200
2800 NAT Q1= 438.14 WSEL= 940.37 ENC Q1= 456.79 WSEL= 940.47 RATIO= -.0426
NAT Q1= 459. RATIOS LOB,CH,ROB= 0.0000 .9956 .0044 WSEL= 940.47

3470 ENCROACHMENT STATIONS= 2113.0 2272.0 TYPE= 4 TARGET= .004

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.20 | 4.98 | 940.38 | 0.00 | 940.37 | 940.42 | .03 | .04 | .00 | 945.50 |
| 735. | 0. | 735. | 0. | 0. | 514. | 0. | 140. | 31. | 939.40 |
| 1.03 | 0.00 | 1.43 | 0.00 | .060 | .039 | .060 | .043 | 935.40 | 2127.04 |
| .000283 | 130. | 140. | 150. | 0 | 0 | 0 | 0.00 | 144.96 | 2272.00 |

CCHV= .100 CEHV= .300
*SECNO 21.300

3470 ENCROACHMENT STATIONS= 1900.0 2700.0 TYPE= 1 TARGET= 800.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.30 | 4.81 | 940.41 | 0.00 | 940.40 | 940.45 | .04 | .03 | .00 | 939.30 |
| 735. | 0. | 711. | 23. | 2. | 430. | 79. | 142. | 31. | 939.50 |
| 1.05 | .27 | 1.65 | .30 | .060 | .039 | .060 | .043 | 935.60 | 2126.92 |
| .000276 | 110. | 125. | 130. | 0 | 0 | 0 | 0.00 | 247.88 | 2374.80 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.80 | 3.00 | 97.00 | 1.50 | 0.00 | .50 | 0.00 | 937.60 | 935.20 |

*SECNO 21.500
PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 61338.24 | 1103.42 | 0.00 | 728. | 7. | 1. | 1. | 938.00 | 944.20 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.60 ELREA= 948.60

DAM AT VICTORY PARK DAM. CREST ELEV. 944 (K)

CODED AS A VERY SMALL HOLE TO FORCE WIER FLOW

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 21.50 | 8.11 | 945.71 | 0.00 | 945.71 | 946.04 | .34 | 5.59 | 0.00 | 948.60 | |
| 735. | 0. | 735. | 0. | 0. | 158. | 0. | 142. | 31. | 948.50 | |
| 1.05 | 0.00 | 4.66 | 0.00 | .060 | .039 | .060 | .043 | 937.60 | 2210.00 | |
| .009609 | 15. | 15. | 15. | 3 | 0 | 9 | 0.00 | 98.00 | 2308.00 | |

*SECNO 21.600
2800 NAT Q1= 984.28 WSEL= 946.06 ENC Q1= 1006.15 WSEL= 946.16 RATIO= -.0222
NAT Q1= 1006. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 946.16

3470 ENCROACHMENT STATIONS= 205.0 308.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.60 ELREA= 948.60

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 21.60 | 8.06 | 946.06 | 0.00 | 946.06 | 946.08 | .02 | .01 | .03 | 948.30 | |
| 735. | 0. | 735. | 0. | 0. | 736. | 0. | 142. | 31. | 948.60 | |
| 1.06 | 0.00 | 1.00 | 0.00 | .060 | .039 | .060 | .043 | 938.00 | 205.00 | |
| .000056 | 27. | 27. | 27. | 2 | 0 | 0 | 0.00 | 103.00 | 308.00 | |

*SECNO 21.900
2800 NAT Q1= 672.95 WSEL= 946.06 ENC Q1= 692.21 WSEL= 946.16 RATIO= -.0286
NAT Q1= 692. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 946.16

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3280 CROSS SECTION 21.90 EXTENDED .07 FEET

3470 ENCROACHMENT STATIONS= 2185.0 2288.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.80 ELREA= 948.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.90 | 8.46 | 946.06 | 0.00 | 946.06 | 946.09 | .03 | .01 | .00 | 947.30 |
| 735. | 0. | 735. | 0. | 0. | 578. | 0. | 143. | 31. | 947.30 |
| 1.08 | 0.00 | 1.27 | 0.00 | .060 | .039 | .060 | .043 | 937.60 | 2185.00 |
| .000119 | 73. | 73. | 73. | 0 | 0 | 0 | 0.00 | 103.00 | 2288.00 |

CCHV= .300 CEHV= .500
*SECNO 22.000
3700. BRIDGE STENCL= 2185.00 STENCR= 2288.00
2800 NAT Q1= 820.85 WSEL= 946.06 ENC Q1= 842.80 WSEL= 946.16 RATIO= -.0267
NAT Q1= 843. RATIOS LOB,CH,ROB= .0003 .9997 0.0000 WSEL= 946.16

3265 DIVIDED FLOW

3280 CROSS SECTION 22.00 EXTENDED .06 FEET

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 947.20 MAX ELLC= 947.30

3470 ENCROACHMENT STATIONS= 2185.0 2288.0 TYPE= 4 TARGET= .000
D/S FACE OF HAVEN RD. BRIDGE.CONCRETE (L)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.00 | 8.46 | 946.06 | 0.00 | 946.06 | 946.09 | .03 | .00 | .00 | 950.20 |
| 735. | 0. | 735. | 0. | 0. | 540. | 0. | 143. | 31. | 950.10 |
| 1.08 | 0.00 | 1.36 | 0.00 | .040 | .026 | .040 | .043 | 937.60 | 2185.00 |
| .000080 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 98.32 | 2288.00 |

*SECNO 22.100
3700. BRIDGE STENCL= 2185.00 STENCR= 2288.00
2800 NAT Q1= 787.39 WSEL= 946.06 ENC Q1= 809.24 WSEL= 946.16 RATIO= -.0278
NAT Q1= 809. RATIOS LOB,CH,ROB= .0003 .9997 0.0000 WSEL= 946.16

3265 DIVIDED FLOW

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3280 CROSS SECTION 22.10 EXTENDED .06 FEET

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 947.20 MAX ELLC= 947.30

3470 ENCROACHMENT STATIONS= 2185.0 2288.0 TYPE= 4 TARGET= .000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.10 | 7.36 | 946.06 | 0.00 | 946.06 | 946.09 | .03 | .00 | .00 | 950.20 |
| 735. | 0. | 735. | 0. | 0. | 525. | 0. | 144. | 31. | 950.10 |
| 1.08 | 0.00 | 1.40 | 0.00 | .040 | .026 | .040 | .043 | 938.70 | 2185.00 |
| .000087 | 23. | 23. | 23. | 0 | 0 | 0 | 0.00 | 98.32 | 2288.00 |

*SECNO 22.200
2800 NAT Q1= 974.93 WSEL= 946.07 ENC Q1= 1005.10 WSEL= 946.17 RATIO= -.0309
NAT Q1= 1005. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 946.17
3280 CROSS SECTION 22.20 EXTENDED .06 FEET

3470 ENCROACHMENT STATIONS= 2185.0 2288.0 TYPE= 4 TARGET= 0.000
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 950.20 ELREA= 950.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.20 | 7.37 | 946.07 | 0.00 | 946.07 | 946.10 | .03 | .00 | .00 | 947.30 |
| 735. | 0. | 735. | 0. | 0. | 563. | 0. | 144. | 31. | 947.30 |
| 1.08 | 0.00 | 1.30 | 0.00 | .040 | .026 | .040 | .043 | 938.70 | 2185.00 |
| .000057 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 103.00 | 2288.00 |

*SECNO 22.300
2800 NAT Q1= 3246.70 WSEL= 946.10 ENC Q1= 3283.99 WSEL= 946.20 RATIO= -.0115
NAT Q1= 3325. RATIOS LOB,CH,ROB= .0062 .9878 .0060 WSEL= 946.20

3470 ENCROACHMENT STATIONS= 2164.0 2374.0 TYPE= 4 TARGET= .012

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.30 | 7.59 | 946.10 | 0.00 | 946.10 | 946.10 | .00 | .00 | .01 | 942.60 |
| 735. | 0. | 735. | 0. | 0. | 1504. | 0. | 146. | 32. | 943.00 |
| 1.14 | 0.00 | .49 | 0.00 | .040 | .026 | .040 | .043 | 938.51 | 2164.00 |
| .000005 | 100. | 103. | 120. | 2 | 0 | 0 | 0.00 | 210.00 | 2374.00 |

CCHV= .100 CEHV= .300
*SECNO 22.500

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

2800 NAT Q1= 1099.20 WSEL= 946.10 ENC Q1= 1145.64 WSEL= 946.20 RATIO= -.0422
NAT Q1= 1146. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 946.20

3470 ENCROACHMENT STATIONS= 2008.0 2420.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.50 | 4.90 | 946.10 | 0.00 | 946.10 | 946.11 | .01 | .01 | .00 | 947.20 |
| 735. | 0. | 735. | 0. | 0. | 1287. | 0. | 161. | 35. | 947.20 |
| 1.36 | 0.00 | .57 | 0.00 | .050 | .039 | .050 | .043 | 941.20 | 2023.57 |
| .000045 | 460. | 450. | 450. | 0 | 0 | 0 | 0.00 | 388.20 | 2411.77 |

*SECNO 22.550
2800 NAT Q1= 3641.77 WSEL= 946.11 ENC Q1= 3723.43 WSEL= 946.21 RATIO= -.0224
NAT Q1= 3725. RATIOS LOB,CH,ROB= .0004 .9996 0.0000 WSEL= 946.21

3470 ENCROACHMENT STATIONS= 2000.0 2380.0 TYPE= 4 TARGET= .000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.55 | 7.51 | 946.11 | 0.00 | 946.11 | 946.11 | .00 | .00 | .00 | 943.80 |
| 735. | 0. | 735. | 0. | 0. | 2613. | 0. | 178. | 38. | 946.70 |
| 1.75 | 0.00 | .28 | 0.00 | .050 | .039 | .050 | .043 | 938.60 | 2000.00 |
| .000004 | 390. | 392. | 380. | 0 | 0 | 0 | 0.00 | 376.81 | 2376.81 |

*SECNO 22.600
2800 NAT Q1= 3199.14 WSEL= 946.11 ENC Q1= 3199.14 WSEL= 946.21 RATIO= 0.0000
NAT Q1= 3272. RATIOS LOB,CH,ROB= .0050 .9776 .0174 WSEL= 946.21

3470 ENCROACHMENT STATIONS= 2002.0 2288.1 TYPE= 4 TARGET= .022

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.60 | 7.91 | 946.11 | 0.00 | 946.11 | 946.11 | .00 | .00 | .00 | 943.24 |
| 735. | 0. | 735. | 0. | 0. | 2137. | 0. | 189. | 40. | 943.24 |
| 1.91 | 0.00 | .34 | .02 | .050 | .039 | .050 | .043 | 938.20 | 2002.00 |
| .000006 | 200. | 196. | 190. | 0 | 0 | 0 | 0.00 | 286.13 | 2288.13 |

*SECNO 22.800
2800 NAT Q1= 1273.62 WSEL= 946.11 ENC Q1= 1273.62 WSEL= 946.21 RATIO= 0.0000
NAT Q1= 1315. RATIOS LOB,CH,ROB= 0.0000 .9061 .0939 WSEL= 946.21

3470 ENCROACHMENT STATIONS= 1992.0 2210.4 TYPE= 4 TARGET= .032

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.80 | 8.11 | 946.11 | 0.00 | 946.11 | 946.12 | .01 | .00 | .00 | 948.70 |
| 735. | 0. | 688. | 47. | 0. | 969. | 128. | 193. | 41. | 942.40 |
| 1.96 | 0.00 | .71 | .37 | .050 | .039 | .050 | .043 | 938.00 | 1995.28 |
| .000035 | 150. | 125. | 120. | 0 | 0 | 0 | 0.00 | 215.12 | 2210.40 |

MOORE BUSINESS FORMS, INC 23

MOORE BUSINESS FORMS, INC 23

```
   SECNO      DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q          QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME       VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE      XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

*SECNO 22.900
 2800 NAT Q1=     841.74  WSEL=     946.11  ENC Q1=     861.09  WSEL=     946.21  RATIO=  -.0230
 NAT Q1=    861.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     946.21

3470 ENCROACHMENT STATIONS=     2000.0     2100.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       950.40 ELREA=       950.40

    22.90      8.61    946.11      0.00    946.11    946.13       .02       .01       .00    952.60
    735.         0.     735.        0.        0.      651.         0.      196.       41.     952.50
     1.98      0.00      1.13      0.00      .050      .039      .050      .043    937.50   2000.00
 .000076        60.      108.       180.         0         0         0      0.00    100.00   2100.00

CCHV=     .300 CEHV=     .500
*SECNO 23.000
    3700.    BRIDGE STENCL=    2000.00     STENCR=    2100.00
 2800 NAT Q1=    1124.47  WSEL=     946.11  ENC Q1=    1181.17  WSEL=     946.21  RATIO=  -.0504
 NAT Q1=    1181.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     946.21

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD=  8 MIN ELTRD=  952.40 MAX ELLC=  948.40

3470 ENCROACHMENT STATIONS=     2000.0     2100.0  TYPE=      4  TARGET=        0.000
        D/S FACE OF SOUTH SUPERIOR ST. BRIDGE.CONCRETE    (M)

    23.00      8.61    946.11      0.00    946.11    946.13       .02       .00       .00    952.60
    735.         0.     735.        0.        0.      652.         0.      196.       41.     952.50
     1.98      0.00      1.13      0.00      .050      .026      .050      .043    937.50   2000.00
 .000040         1.        1.        1.         0         0         0      0.00     98.00   2100.00

*SECNO 23.100
    3700.    BRIDGE STENCL=    2000.00     STENCR=    2100.00
 2800 NAT Q1=     509.53  WSEL=     946.09  ENC Q1=     534.12  WSEL=     946.19  RATIO=  -.0483
 NAT Q1=    534.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     946.19

3265 DIVIDED FLOW
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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS     BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

3370 NORMAL BRIDGE.NRD=  8 MIN ELTRD=  952.40 MAX ELLC=  950.20

3470 ENCROACHMENT STATIONS=     2000.0     2100.0  TYPE=      4  TARGET=        0.000
      23.10       8.39     946.09       0.00     946.09     946.15       .05        .00        .02     954.30
        735.         0.       735.         0.         0.       398.         0.        196.        41.     954.30
       1.99       0.00       1.85       0.00       .050       .026       .050       .043     937.70    2000.00
    .000203         56.         56.         56.          1          0          0       0.00      98.00    2100.00

*SECNO 23.200
 2800 NAT Q1=     583.42  WSEL=     946.10  ENC Q1=     607.49  WSEL=     946.20  RATIO=   -.0413
 NAT Q1=     607.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     946.20

3470 ENCROACHMENT STATIONS=     2000.0     2100.0  TYPE=      4  TARGET=        0.000
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       954.30 ELREA=      954.30

      23.20       8.40     946.10       0.00     946.10     946.15       .05        .00        .00     954.30
        735.         0.       735.         0.         0.       410.         0.        196.        41.     954.30
       1.99       0.00       1.79       0.00       .050       .026       .050       .043     937.70    2000.00
    .000159          1.          1.          1.          0          0          0       0.00     100.00    2100.00

*SECNO 23.300
 2800 NAT Q1=    3128.33  WSEL=     946.16  ENC Q1=    3214.25  WSEL=     946.26  RATIO=   -.0275
 NAT Q1=    3216.  RATIOS LOB,CH,ROB=  0.0000   .9995   .0005  WSEL=     946.26

3470 ENCROACHMENT STATIONS=     1992.0     2280.0  TYPE=      4  TARGET=         .000
      23.30       6.40     946.16       0.00     946.16     946.16       .00        .00        .01     948.70
        735.         0.       735.         0.         0.      1668.         0.        198.        42.     944.80
       2.04       0.00        .44       0.00       .050       .026       .050       .042     939.76    1997.21
    .000006        140.         82.         20.          2          0          0       0.00     282.79    2280.00

*SECNO 23.400
 2800 NAT Q1=    3898.01  WSEL=     946.17  ENC Q1=    4000.59  WSEL=     946.27  RATIO=   -.0263
 NAT Q1=    4003.  RATIOS LOB,CH,ROB=   .0005   .9995  0.0000  WSEL=     946.27

3470 ENCROACHMENT STATIONS=     2000.0     2336.0  TYPE=      4  TARGET=         .001
      23.40       6.58     946.17       0.00     946.17     946.17       .00        .00        .00     945.20
        735.         0.       735.         0.         0.      2037.         0.        247.        50.     946.30
       2.92       0.00        .36       0.00       .050       .026       .050       .041     939.59    2000.00
    .000004       1210.       1133.       1140.          0          0          0       0.00     335.44    2335.44
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MOORE BUSINESS FORMS, INC.

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | ULOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 23.500
2800 NAT Q1= 4405.86 WSEL= 946.17 ENC Q1= 4405.86 WSEL= 946.27 RATIO= 0.0000
NAT Q1= 4520. RATIOS LOB,CH,ROB= .0138 .9725 .0137 WSEL= 946.27

3470 ENCROACHMENT STATIONS= 2135.8 2423.9 TYPE= 4 TARGET= .025

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.50 | 7.67 | 946.17 | 0.00 | 946.17 | 946.17 | .00 | .00 | .00 | 943.79 |
| 735. | 1. | 734. | 1. | 10. | 2010. | 9. | 271. | 53. | 943.80 |
| 3.31 | .07 | .37 | .07 | .050 | .026 | .050 | .041 | 938.50 | 2135.82 |
| .000003 | 380. | 516. | 640. | 0 | 0 | 0 | 0.00 | 288.05 | 2423.87 |

*SECNO 24.000
2800 NAT Q1= 3659.68 WSEL= 946.17 ENC Q1= 3733.85 WSEL= 946.27 RATIO= -.0203
NAT Q1= 3734. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 946.27

3470 ENCROACHMENT STATIONS= 1960.0 2471.0 TYPE= 4 TARGET= 0.000
U/S LIMIT OF THE CITY OF ALBION. SURVEYED SECTION (N)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.00 | 7.47 | 946.17 | 0.00 | 946.17 | 946.17 | .00 | .00 | .00 | 952.10 |
| 735. | 0. | 735. | 0. | 0. | 1966. | 0. | 281. | 55. | 950.00 |
| 3.48 | 0.00 | .37 | 0.00 | .050 | .026 | .050 | .040 | 938.70 | 1989.29 |
| .000004 | 200. | 233. | 300. | 0 | 0 | 0 | 0.00 | 336.77 | 2326.05 |

MOORE BUSINESS FORMS, INC 23

**********
HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
ERROR CORR - 01,02,03,04
MODIFICATION - 50,51,52,53,54
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

KALAMAZOO RIVER

SUMMARY PRINTOUT

| | SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 12.000 | 929.10 | 1922.44 | 1966.00 | 2087.00 | 2317.30 | 394.86 | 0.00 |
| | 12.000 | 929.20 | 1966.00 | 1966.00 | 2087.00 | 2227.91 | 261.91 | 0.00 |
| | 12.600 | 930.90 | 1936.55 | 2000.00 | 2090.00 | 2167.51 | 208.31 | 1850.00 |
| | 12.600 | 931.03 | 2004.74 | 2000.00 | 2090.00 | 2090.00 | 85.26 | 1850.00 |
| | 12.700 | 932.10 | 1897.73 | 2000.00 | 2100.00 | 2179.44 | 281.71 | 1500.00 |
| | 12.700 | 932.23 | 1993.01 | 2000.00 | 2100.00 | 2143.75 | 150.75 | 1500.00 |
| | 12.800 | 933.30 | 1964.24 | 1988.00 | 2097.00 | 2120.27 | 156.03 | 1750.00 |
| | 12.800 | 933.41 | 1988.00 | 1988.00 | 2097.00 | 2100.01 | 112.01 | 1750.00 |
| | 13.100 | 933.50 | 1869.82 | 1865.00 | 2110.70 | 2093.89 | 224.06 | 240.00 |
| | 13.100 | 933.63 | 1869.48 | 1865.00 | 2110.70 | 2094.22 | 224.75 | 240.00 |
| | 13.200 | 933.51 | 1924.68 | 1919.90 | 2165.60 | 2148.86 | 224.18 | 11.60 |
| | 13.200 | 933.63 | 1924.34 | 1919.90 | 2165.60 | 2149.20 | 224.87 | 11.60 |
| | 13.300 | 933.51 | 1924.68 | 1919.90 | 2165.60 | 2148.86 | 224.18 | 1.00 |
| | 13.300 | 933.63 | 1924.33 | 1919.90 | 2165.60 | 2149.21 | 224.87 | 1.00 |
| | 14.100 | 933.73 | 1990.85 | 1976.00 | 2076.00 | 2058.41 | 67.56 | 317.00 |
| | 14.100 | 933.83 | 1990.61 | 1976.00 | 2076.00 | 2058.67 | 68.06 | 317.00 |
| | 14.300 | 933.74 | 1990.83 | 1976.00 | 2076.00 | 2058.43 | 67.59 | 4.00 |
| | 14.300 | 933.84 | 1990.59 | 1976.00 | 2076.00 | 2058.69 | 68.10 | 4.00 |
| | 14.400 | 933.70 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 9.00 |
| | 14.400 | 933.80 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 9.00 |
| | 14.500 | 933.70 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| * | 14.500 | 933.80 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |

MOORE BUSINESS FORMS, INC 23

| | SECNO | CWSEL | SSIA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 14.600 | 933.77 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 54.00 |
| * | 14.600 | 933.86 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 54.00 |
| | 14.700 | 933.77 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| | 14.700 | 933.87 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| | 14.720 | 933.78 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 4.00 |
| | 14.720 | 933.88 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 4.00 |
| | 14.750 | 935.38 | 1889.64 | 2000.00 | 2050.00 | 2063.58 | 173.95 | 770.00 |
| | 14.750 | 935.47 | 1952.24 | 2000.00 | 2050.00 | 2050.00 | 97.76 | 770.00 |
| | 14.800 | 935.93 | 2116.69 | 2156.00 | 2252.00 | 2270.64 | 153.95 | 520.00 |
| | 14.800 | 936.04 | 2146.87 | 2156.00 | 2252.00 | 2252.00 | 105.13 | 520.00 |
| | 14.900 | 936.11 | 2044.00 | 2044.00 | 2116.00 | 2116.00 | 72.00 | 360.00 |
| | 14.900 | 936.22 | 2044.00 | 2044.00 | 2116.00 | 2116.00 | 72.00 | 360.00 |
| | 15.000 | 936.04 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 31.00 |
| | 15.000 | 936.16 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 31.00 |
| | 15.100 | 936.02 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 1.00 |
| | 15.100 | 936.14 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 1.00 |
| | 15.200 | 936.07 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 36.00 |
| | 15.200 | 936.18 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 36.00 |
| | 15.300 | 936.13 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 1.00 |
| | 15.300 | 936.26 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 1.00 |
| | 15.400 | 936.36 | 2010.00 | 2000.00 | 2098.00 | 2090.01 | 80.01 | 11.00 |
| | 15.400 | 936.48 | 2010.00 | 2000.00 | 2098.00 | 2090.52 | 80.52 | 11.00 |
| | 15.800 | 936.44 | 2116.00 | 2116.00 | 2186.00 | 2186.00 | 70.00 | 350.00 |
| | 15.800 | 936.56 | 2116.00 | 2116.00 | 2186.00 | 2186.00 | 70.00 | 350.00 |
| | 15.900 | 936.44 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 56.00 |
| | 15.900 | 936.55 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 56.00 |
| | 16.000 | 936.44 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| | 16.000 | 936.55 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| | 16.100 | 936.62 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 54.00 |
| | 16.100 | 936.73 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 54.00 |
| | 16.200 | 936.63 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| | 16.200 | 936.76 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| | 16.300 | 936.73 | 2111.00 | 2111.00 | 2175.00 | 2184.08 | 73.08 | 56.00 |
| | 16.300 | 936.85 | 2111.00 | 2111.00 | 2175.00 | 2184.60 | 73.60 | 56.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 16.800 | 936.86 | 2117.00 | 2117.00 | 2204.00 | 2204.00 | 87.00 | 125.00 |
| 16.800 | 936.97 | 2117.00 | 2117.00 | 2204.00 | 2227.70 | 110.70 | 125.00 |
| 16.900 | 936.88 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 19.00 |
| 16.900 | 936.99 | 2114.00 | 2114.00 | 2207.00 | 2242.35 | 128.35 | 19.00 |
| 17.000 | 936.87 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 1.00 |
| 17.000 | 936.98 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 1.00 |
| 17.100 | 936.93 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 90.00 |
| 17.100 | 937.04 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 90.00 |
| 17.200 | 936.94 | 2114.00 | 2114.00 | 2208.00 | 2208.00 | 90.92 | 1.00 |
| 17.200 | 937.04 | 2114.00 | 2114.00 | 2208.00 | 2208.00 | 90.96 | 1.00 |
| 17.300 | 937.01 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.93 | 100.00 |
| 17.300 | 937.11 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.97 | 100.00 |
| 17.400 | 937.01 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.93 | 1.00 |
| 17.400 | 937.11 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.97 | 1.00 |
| 17.500 | 937.06 | 2106.00 | 2106.00 | 2199.00 | 2199.00 | 93.00 | 120.00 |
| 17.500 | 937.16 | 2106.00 | 2106.00 | 2199.00 | 2199.00 | 93.00 | 120.00 |
| 17.900 | 937.14 | 1677.00 | 1677.00 | 1786.65 | 1786.65 | 109.65 | 79.00 |
| 17.900 | 937.24 | 1677.00 | 1677.00 | 1786.65 | 1786.65 | 109.65 | 79.00 |
| 18.000 | 937.11 | 2095.03 | 2095.03 | 2204.68 | 2226.31 | 131.22 | 1.00 |
| 18.000 | 937.21 | 2095.03 | 2095.03 | 2204.68 | 2226.70 | 131.62 | 1.00 |
| 18.100 | 937.16 | 2139.21 | 2139.21 | 2239.65 | 2239.65 | 100.44 | 40.00 |
| 18.100 | 937.26 | 2139.21 | 2139.21 | 2239.65 | 2239.65 | 100.44 | 40.00 |
| 18.200 | 937.14 | 1832.68 | 1832.68 | 1935.02 | 1921.51 | 88.83 | 1.00 |
| 18.200 | 937.24 | 1832.68 | 1832.68 | 1935.02 | 1922.06 | 89.38 | 1.00 |
| 18.300 | 937.19 | 1832.68 | 1832.68 | 1935.02 | 1921.76 | 89.08 | 49.00 |
| 18.300 | 937.29 | 1832.68 | 1832.68 | 1935.02 | 1922.25 | 89.57 | 49.00 |
| 18.800 | 937.52 | 2000.00 | 2000.00 | 2140.00 | 2124.11 | 124.11 | 365.00 |
| 18.800 | 937.60 | 2000.00 | 2000.00 | 2140.00 | 2124.71 | 124.71 | 365.00 |
| 18.900 | 937.54 | 2000.00 | 2000.00 | 2066.60 | 2062.84 | 62.84 | 200.00 |
| 18.900 | 937.62 | 2000.00 | 2000.00 | 2066.60 | 2062.95 | 62.95 | 200.00 |
| 19.000 | 937.53 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.53 | 4.00 |
| 19.000 | 937.58 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.54 | 4.00 |
| 19.100 | 937.54 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.53 | 6.00 |
| 19.100 | 937.66 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.55 | 6.00 |

MOORE BUSINESS FORMS, INC. 29

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 19.200 | 937.52 | 2001.88 | 2000.00 | 2057.00 | 2057.00 | 55.12 | 1.00 |
| 19.200 | 937.65 | 2001.75 | 2000.00 | 2057.00 | 2057.00 | 55.25 | 1.00 |
| 19.300 | 937.55 | 2001.87 | 2000.00 | 2057.00 | 2057.00 | 55.13 | 24.00 |
| 19.300 | 937.67 | 2001.73 | 2000.00 | 2057.00 | 2057.00 | 55.27 | 24.00 |
| 19.800 | 937.84 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 165.00 |
| 19.800 | 937.95 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 165.00 |
| 19.900 | 937.98 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 50.00 |
| 19.900 | 938.08 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 50.00 |
| 20.000 | 937.92 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.35 | 1.00 |
| 20.000 | 938.01 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.39 | 1.00 |
| 20.100 | 938.12 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.43 | 90.00 |
| 20.100 | 938.22 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.47 | 90.00 |
| 20.200 | 938.28 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 1.00 |
| 20.200 | 938.41 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 1.00 |
| 20.300 | 938.38 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 64.00 |
| 20.300 | 938.50 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 64.00 |
| 21.000 | 939.35 | 1930.28 | 2000.00 | 2032.00 | 2111.47 | 181.19 | 1050.00 |
| 21.000 | 939.41 | 1929.58 | 2000.00 | 2032.00 | 2114.31 | 184.73 | 1050.00 |
| 21.100 | 940.32 | 2014.41 | 2026.00 | 2162.00 | 2180.96 | 166.54 | 210.00 |
| 21.100 | 940.34 | 2026.00 | 2026.00 | 2162.00 | 2162.00 | 136.00 | 210.00 |
| 21.200 | 940.37 | 2127.07 | 2113.00 | 2272.00 | 2292.83 | 165.76 | 140.00 |
| 21.200 | 940.38 | 2127.04 | 2113.00 | 2272.00 | 2272.00 | 144.96 | 140.00 |
| 21.300 | 940.40 | 2126.97 | 2130.00 | 2227.00 | 2373.03 | 246.06 | 125.00 |
| 21.300 | 940.41 | 2126.92 | 2130.00 | 2227.00 | 2374.80 | 247.88 | 125.00 |
| 21.500 | 945.71 | 2210.00 | 2210.00 | 2308.00 | 2308.00 | 98.00 | 15.00 |
| 21.500 | 945.71 | 2210.00 | 2210.00 | 2308.00 | 2308.00 | 98.00 | 15.00 |
| 21.600 | 946.06 | 205.00 | 205.00 | 308.00 | 308.00 | 103.00 | 27.00 |
| 21.600 | 946.06 | 205.00 | 205.00 | 308.00 | 308.00 | 103.00 | 27.00 |
| 21.900 | 946.06 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 73.00 |
| 21.900 | 946.06 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 73.00 |
| 22.000 | 946.06 | 900.00 | 2185.00 | 2288.00 | 2288.00 | 115.60 | 1.00 |
| 22.000 | 946.06 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 98.32 | 1.00 |
| 22.100 | 946.06 | 900.00 | 2185.00 | 2288.00 | 2288.00 | 115.73 | 23.00 |
| 22.100 | 946.06 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 98.32 | 23.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 22.200 | 946.07 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 1.00 |
| 22.200 | 946.07 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 1.00 |
| 22.300 | 946.10 | 2148.00 | 2164.00 | 2374.00 | 2388.00 | 240.00 | 103.00 |
| 22.300 | 946.10 | 2164.00 | 2164.00 | 2374.00 | 2374.00 | 210.00 | 103.00 |
| 22.500 | 946.10 | 2023.52 | 2008.00 | 2420.00 | 2411.80 | 388.28 | 450.00 |
| 22.500 | 946.10 | 2023.57 | 2008.00 | 2420.00 | 2411.77 | 388.20 | 450.00 |
| 22.550 | 946.11 | 1996.22 | 2000.00 | 2380.00 | 2376.81 | 380.59 | 392.00 |
| 22.550 | 946.11 | 2000.00 | 2000.00 | 2380.00 | 2376.81 | 376.81 | 392.00 |
| 22.600 | 946.11 | 1974.61 | 2002.00 | 2288.00 | 2359.94 | 385.33 | 196.00 |
| 22.600 | 946.11 | 2002.00 | 2002.00 | 2288.00 | 2288.13 | 286.13 | 196.00 |
| 22.800 | 946.11 | 1995.29 | 1992.00 | 2170.00 | 2308.39 | 313.10 | 125.00 |
| 22.800 | 946.11 | 1995.28 | 1992.00 | 2170.00 | 2210.40 | 215.12 | 125.00 |
| 22.900 | 946.11 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 108.00 |
| 22.900 | 946.11 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 108.00 |
| 23.000 | 946.11 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 1.00 |
| 23.000 | 946.11 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 1.00 |
| 23.100 | 946.09 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 56.00 |
| 23.100 | 946.09 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 56.00 |
| 23.200 | 946.10 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 1.00 |
| 23.200 | 946.10 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 1.00 |
| 23.300 | 946.16 | 1997.21 | 1992.00 | 2280.00 | 2288.09 | 290.88 | 82.00 |
| 23.300 | 946.16 | 1997.21 | 1992.00 | 2280.00 | 2280.00 | 282.79 | 82.00 |
| 23.400 | 946.17 | 1982.04 | 2000.00 | 2336.00 | 2335.44 | 353.40 | 1133.00 |
| 23.400 | 946.17 | 2000.00 | 2000.00 | 2336.00 | 2335.44 | 335.44 | 1133.00 |
| 23.500 | 946.17 | 2001.78 | 2140.00 | 2420.00 | 2558.21 | 556.43 | 516.00 |
| 23.500 | 946.17 | 2135.82 | 2140.00 | 2420.00 | 2423.87 | 288.05 | 516.00 |
| 24.000 | 946.17 | 1989.29 | 1960.00 | 2471.00 | 2326.04 | 336.76 | 233.00 |
| 24.000 | 946.17 | 1989.29 | 1960.00 | 2471.00 | 2326.05 | 336.77 | 233.00 |

MOORE BUSINESS FORMS, INC

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12.000 | 0.00 | 0.00 | 0.00 | 923.00 | 1600.00 | 929.10 | 0.00 | 929.20 | 10.23 | 2.71 | 845.84 | 500.22 |
| | 12.000 | 0.00 | 0.00 | 0.00 | 923.00 | 1600.00 | 929.20 | 0.00 | 929.31 | 10.38 | 2.75 | 746.68 | 496.59 |
| | 12.600 | 1850.00 | 0.00 | 0.00 | 924.60 | 1600.00 | 930.90 | 0.00 | 931.06 | 9.74 | 3.23 | 545.73 | 512.71 |
| | 12.600 | 1850.00 | 0.00 | 0.00 | 924.60 | 1600.00 | 931.03 | 0.00 | 931.19 | 9.83 | 3.21 | 498.04 | 510.23 |
| | 12.700 | 1500.00 | 0.00 | 0.00 | 926.00 | 1600.00 | 932.10 | 0.00 | 932.20 | 6.03 | 2.56 | 800.35 | 651.43 |
| | 12.700 | 1500.00 | 0.00 | 0.00 | 926.00 | 1600.00 | 932.23 | 0.00 | 932.32 | 5.95 | 2.58 | 709.62 | 655.67 |
| | 12.800 | 1750.00 | 0.00 | 0.00 | 927.40 | 1600.00 | 933.30 | 0.00 | 933.41 | 7.99 | 2.74 | 634.62 | 565.93 |
| | 12.800 | 1750.00 | 0.00 | 0.00 | 927.40 | 1600.00 | 933.41 | 0.00 | 933.53 | 8.06 | 2.77 | 584.15 | 563.73 |
| | 13.100 | 240.00 | 0.00 | 0.00 | 927.20 | 1600.00 | 933.50 | 0.00 | 933.54 | 2.85 | 1.54 | 1038.99 | 947.07 |
| | 13.100 | 240.00 | 0.00 | 0.00 | 927.20 | 1600.00 | 933.63 | 0.00 | 933.66 | 2.63 | 1.50 | 1066.29 | 986.80 |
| | 13.200 | 11.60 | 940.80 | 939.60 | 927.30 | 1600.00 | 933.51 | 0.00 | 933.55 | 6.07 | 1.56 | 1026.01 | 649.32 |
| | 13.200 | 11.60 | 940.80 | 939.60 | 927.30 | 1600.00 | 933.63 | 0.00 | 933.67 | 5.59 | 1.52 | 1053.24 | 676.82 |
| | 13.300 | 1.00 | 0.00 | 0.00 | 927.30 | 1600.00 | 933.51 | 0.00 | 933.55 | 6.07 | 1.56 | 1026.11 | 649.42 |
| | 13.300 | 1.00 | 0.00 | 0.00 | 927.30 | 1600.00 | 933.63 | 0.00 | 933.67 | 5.59 | 1.52 | 1053.33 | 676.92 |
| | 14.100 | 317.00 | 0.00 | 0.00 | 925.20 | 1600.00 | 933.73 | 0.00 | 934.01 | 24.10 | 4.29 | 373.29 | 325.91 |
| | 14.100 | 317.00 | 0.00 | 0.00 | 925.20 | 1600.00 | 933.83 | 0.00 | 934.10 | 22.90 | 4.21 | 380.20 | 334.33 |
| | 14.300 | 4.00 | 0.00 | 0.00 | 925.20 | 1600.00 | 933.74 | 0.00 | 934.02 | 24.03 | 4.28 | 373.70 | 326.40 |
| | 14.300 | 4.00 | 0.00 | 0.00 | 925.20 | 1600.00 | 933.84 | 0.00 | 934.11 | 22.80 | 4.20 | 380.81 | 335.07 |
| | 14.400 | 9.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.70 | 0.00 | 934.09 | 9.31 | 4.98 | 321.56 | 524.29 |
| | 14.400 | 9.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.80 | 0.00 | 934.17 | 8.78 | 4.88 | 327.72 | 540.04 |
| | 14.500 | 1.00 | 940.80 | 937.60 | 927.10 | 1600.00 | 933.70 | 0.00 | 934.09 | 10.63 | 4.97 | 321.66 | 490.69 |
| * | 14.500 | 1.00 | 940.80 | 937.60 | 927.10 | 1600.00 | 933.80 | 0.00 | 934.17 | 9.31 | 4.88 | 327.77 | 524.27 |
| | 14.600 | 54.00 | 940.80 | 937.60 | 927.10 | 1600.00 | 933.77 | 0.00 | 934.15 | 10.29 | 4.92 | 325.25 | 498.78 |
| * | 14.600 | 54.00 | 940.80 | 937.60 | 927.10 | 1600.00 | 933.86 | 0.00 | 934.23 | 9.06 | 4.84 | 330.75 | 531.48 |
| | 14.700 | 1.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.77 | 0.00 | 934.15 | 27.39 | 4.91 | 325.75 | 305.70 |
| | 14.700 | 1.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.87 | 0.00 | 934.23 | 25.97 | 4.83 | 331.38 | 313.98 |
| | 14.720 | 4.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.78 | 0.00 | 934.16 | 27.25 | 4.90 | 326.31 | 306.52 |
| | 14.720 | 4.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.88 | 0.00 | 934.24 | 25.80 | 4.82 | 332.07 | 315.00 |
| | 14.750 | 770.00 | 0.00 | 0.00 | 927.50 | 1600.00 | 935.38 | 0.00 | 935.63 | 13.91 | 4.21 | 494.62 | 429.01 |
| | 14.750 | 770.00 | 0.00 | 0.00 | 927.50 | 1600.00 | 935.47 | 0.00 | 935.73 | 14.82 | 4.25 | 438.34 | 415.56 |
| | 14.800 | 520.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 935.93 | 0.00 | 936.01 | 4.26 | 2.39 | 737.28 | 774.84 |
| | 14.800 | 520.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 936.04 | 0.00 | 936.13 | 4.42 | 2.41 | 682.02 | 761.13 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.900 | 360.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 936.11 | 0.00 | 936.26 | 10.34 | 3.13 | 510.87 | 497.69 |
| 14.900 | 360.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 936.22 | 0.00 | 936.37 | 9.82 | 3.08 | 519.33 | 510.54 |
| 15.000 | 31.00 | 0.00 | 0.00 | 928.50 | 1600.00 | 936.04 | 0.00 | 936.35 | 21.85 | 4.48 | 357.37 | 342.29 |
| 15.000 | 31.00 | 0.00 | 0.00 | 928.50 | 1600.00 | 936.16 | 0.00 | 936.46 | 23.10 | 4.40 | 363.75 | 332.92 |
| 15.100 | 1.00 | 938.80 | 936.00 | 928.50 | 1600.00 | 936.02 | 0.00 | 936.37 | 13.56 | 4.76 | 335.87 | 434.55 |
| 15.100 | 1.00 | 938.80 | 936.00 | 928.50 | 1600.00 | 936.14 | 0.00 | 936.49 | 13.56 | 4.76 | 335.87 | 434.55 |
| 15.200 | 36.00 | 938.80 | 936.00 | 928.40 | 1600.00 | 936.07 | 0.00 | 936.42 | 13.83 | 4.79 | 334.03 | 430.25 |
| 15.200 | 36.00 | 938.80 | 936.00 | 928.40 | 1600.00 | 936.18 | 0.00 | 936.54 | 13.83 | 4.79 | 334.03 | 430.25 |
| 15.300 | 1.00 | 0.00 | 0.00 | 928.40 | 1600.00 | 936.13 | 0.00 | 936.44 | 5.25 | 4.45 | 359.58 | 698.44 |
| 15.300 | 1.00 | 0.00 | 0.00 | 928.40 | 1600.00 | 936.26 | 0.00 | 936.56 | 5.66 | 4.37 | 366.47 | 672.36 |
| 15.400 | 11.00 | 0.00 | 0.00 | 928.20 | 1600.00 | 936.36 | 0.00 | 936.50 | 2.42 | 2.96 | 541.25 | 1028.17 |
| 15.400 | 11.00 | 0.00 | 0.00 | 928.20 | 1600.00 | 936.48 | 0.00 | 936.61 | 2.30 | 2.90 | 551.06 | 1054.44 |
| 15.800 | 350.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 936.44 | 0.00 | 936.60 | 2.90 | 3.24 | 493.21 | 940.13 |
| 15.800 | 350.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 936.56 | 0.00 | 936.71 | 2.75 | 3.19 | 501.46 | 964.65 |
| 15.900 | 56.00 | 0.00 | 0.00 | 928.80 | 1600.00 | 936.44 | 0.00 | 936.66 | 12.92 | 3.83 | 418.21 | 445.19 |
| 15.900 | 56.00 | 0.00 | 0.00 | 928.80 | 1600.00 | 936.55 | 0.00 | 936.77 | 12.28 | 3.76 | 425.19 | 456.65 |
| 16.000 | 1.00 | 939.60 | 936.40 | 928.80 | 1600.00 | 936.44 | 0.00 | 936.67 | 33.17 | 3.85 | 415.53 | 277.83 |
| 16.000 | 1.00 | 939.60 | 936.40 | 928.80 | 1600.00 | 936.55 | 0.00 | 936.78 | 33.17 | 3.85 | 415.53 | 277.83 |
| 16.100 | 54.00 | 939.60 | 936.40 | 929.00 | 1600.00 | 936.62 | 0.00 | 936.85 | 35.06 | 3.90 | 409.98 | 270.22 |
| 16.100 | 54.00 | 939.60 | 936.40 | 929.00 | 1600.00 | 936.73 | 0.00 | 936.96 | 35.06 | 3.90 | 409.98 | 270.22 |
| 16.200 | 1.00 | 0.00 | 0.00 | 929.00 | 1600.00 | 936.63 | 0.00 | 936.86 | 12.60 | 3.78 | 423.47 | 450.73 |
| 16.200 | 1.00 | 0.00 | 0.00 | 929.00 | 1600.00 | 936.76 | 0.00 | 936.97 | 11.93 | 3.71 | 431.11 | 463.28 |
| 16.300 | 56.00 | 0.00 | 0.00 | 928.80 | 1600.00 | 936.73 | 0.00 | 936.90 | 4.44 | 3.31 | 487.66 | 759.58 |
| 16.300 | 56.00 | 0.00 | 0.00 | 928.80 | 1600.00 | 936.85 | 0.00 | 937.01 | 4.21 | 3.26 | 496.20 | 779.51 |
| 16.800 | 125.00 | 0.00 | 0.00 | 929.06 | 1600.00 | 936.86 | 0.00 | 936.97 | 6.53 | 2.73 | 585.37 | 626.09 |
| 16.800 | 125.00 | 0.00 | 0.00 | 929.06 | 1600.00 | 936.97 | 0.00 | 937.08 | 6.20 | 2.69 | 595.69 | 642.69 |
| 16.900 | 19.00 | 0.00 | 0.00 | 929.32 | 1600.00 | 936.88 | 0.00 | 936.99 | 6.09 | 2.62 | 610.22 | 648.53 |
| 16.900 | 19.00 | 0.00 | 0.00 | 929.32 | 1600.00 | 936.99 | 0.00 | 937.09 | 5.76 | 2.58 | 622.29 | 666.38 |
| 17.000 | 1.00 | 960.00 | 937.05 | 929.32 | 1600.00 | 936.87 | 0.00 | 936.99 | 6.49 | 2.82 | 567.91 | 628.14 |
| 17.000 | 1.00 | 960.00 | 937.05 | 929.32 | 1600.00 | 936.98 | 0.00 | 937.10 | 6.19 | 2.77 | 577.55 | 642.93 |
| 17.100 | 90.00 | 960.00 | 937.05 | 929.32 | 1600.00 | 936.93 | 0.00 | 937.05 | 6.36 | 2.80 | 572.14 | 634.63 |
| 17.100 | 90.00 | 960.00 | 937.05 | 929.32 | 1600.00 | 937.04 | 0.00 | 937.16 | 6.08 | 2.75 | 581.56 | 649.12 |
| 17.200 | 1.00 | 960.00 | 937.18 | 928.80 | 1600.00 | 936.94 | 0.00 | 937.05 | 5.94 | 2.75 | 582.13 | 656.63 |
| 17.200 | 1.00 | 960.00 | 937.18 | 928.80 | 1600.00 | 937.04 | 0.00 | 937.16 | 5.65 | 2.70 | 591.90 | 673.42 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17.300 | 100.00 | 960.00 | 937.18 | 928.10 | 1600.00 | 937.01 | 0.00 | 937.11 | 4.83 | 2.58 | 620.94 | 728.40 |
| 17.300 | 100.00 | 960.00 | 937.18 | 928.10 | 1600.00 | 937.11 | 0.00 | 937.21 | 4.62 | 2.54 | 629.98 | 744.43 |
| 17.400 | 1.00 | 0.00 | 0.00 | 928.10 | 1600.00 | 937.01 | 0.00 | 937.11 | 4.81 | 2.57 | 621.47 | 729.34 |
| 17.400 | 1.00 | 0.00 | 0.00 | 928.10 | 1600.00 | 937.11 | 0.00 | 937.21 | 4.60 | 2.54 | 630.90 | 746.08 |
| 17.500 | 120.00 | 0.00 | 0.00 | 930.20 | 1600.00 | 937.06 | 0.00 | 937.18 | 5.16 | 2.82 | 566.49 | 704.12 |
| 17.500 | 120.00 | 0.00 | 0.00 | 930.20 | 1600.00 | 937.16 | 0.00 | 937.28 | 4.89 | 2.78 | 575.91 | 723.75 |
| 17.900 | 79.00 | 0.00 | 0.00 | 929.00 | 1600.00 | 937.14 | 0.00 | 937.23 | 4.27 | 2.44 | 656.94 | 774.51 |
| 17.900 | 79.00 | 0.00 | 0.00 | 929.00 | 1600.00 | 937.24 | 0.00 | 937.32 | 4.05 | 2.40 | 667.70 | 794.91 |
| 18.000 | 1.00 | 940.80 | 939.00 | 929.00 | 1600.00 | 937.11 | 0.00 | 937.26 | 12.66 | 3.02 | 529.32 | 449.62 |
| 18.000 | 1.00 | 940.80 | 939.00 | 929.00 | 1600.00 | 937.21 | 0.00 | 937.35 | 12.34 | 2.99 | 535.42 | 455.47 |
| 18.100 | 40.00 | 940.80 | 939.00 | 929.30 | 1600.00 | 937.16 | 0.00 | 937.30 | 11.15 | 3.00 | 532.63 | 479.06 |
| 18.100 | 40.00 | 940.80 | 939.00 | 929.30 | 1600.00 | 937.26 | 0.00 | 937.40 | 10.93 | 2.97 | 538.28 | 484.03 |
| 18.200 | 1.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.14 | 0.00 | 937.33 | 8.81 | 3.43 | 466.71 | 539.01 |
| 18.200 | 1.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.24 | 0.00 | 937.42 | 8.30 | 3.36 | 476.39 | 555.45 |
| 18.300 | 49.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.19 | 0.00 | 937.37 | 8.58 | 3.40 | 471.06 | 546.38 |
| 18.300 | 49.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.29 | 0.00 | 937.46 | 8.13 | 3.34 | 479.73 | 561.15 |
| 18.800 | 365.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.52 | 0.00 | 937.61 | 4.08 | 2.34 | 684.25 | 792.09 |
| 18.800 | 365.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.60 | 0.00 | 937.68 | 3.90 | 2.30 | 694.91 | 809.94 |
| 18.900 | 200.00 | 0.00 | 0.00 | 931.10 | 1600.00 | 937.54 | 0.00 | 937.87 | 15.51 | 4.63 | 345.57 | 406.32 |
| 18.900 | 200.00 | 0.00 | 0.00 | 931.10 | 1600.00 | 937.62 | 0.00 | 937.94 | 14.84 | 4.57 | 350.46 | 415.37 |
| 19.000 | 4.00 | 940.10 | 938.90 | 931.10 | 1600.00 | 937.53 | 0.00 | 937.89 | 12.32 | 4.86 | 329.38 | 455.89 |
| 19.000 | 4.00 | 940.10 | 938.90 | 931.10 | 1600.00 | 937.58 | 0.00 | 937.99 | 15.20 | 5.09 | 314.11 | 410.44 |
| 19.100 | 6.00 | 0.00 | 0.00 | 931.10 | 1600.00 | 937.54 | 0.00 | 937.90 | 10.42 | 4.86 | 329.48 | 495.65 |
| 19.100 | 6.00 | 0.00 | 0.00 | 931.10 | 1600.00 | 937.66 | 0.00 | 938.01 | 9.81 | 4.76 | 336.34 | 510.84 |
| 19.200 | 1.00 | 0.00 | 0.00 | 930.90 | 1600.00 | 937.52 | 0.00 | 937.91 | 8.54 | 5.01 | 319.06 | 547.45 |
| 19.200 | 1.00 | 0.00 | 0.00 | 930.90 | 1600.00 | 937.65 | 0.00 | 938.02 | 8.02 | 4.91 | 325.82 | 565.06 |
| 19.300 | 24.00 | 0.00 | 0.00 | 930.90 | 1600.00 | 937.55 | 0.00 | 937.94 | 8.47 | 5.00 | 319.96 | 549.79 |
| 19.300 | 24.00 | 0.00 | 0.00 | 930.90 | 1600.00 | 937.67 | 0.00 | 938.04 | 7.96 | 4.90 | 326.56 | 566.99 |
| 19.800 | 165.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 937.84 | 0.00 | 938.17 | 25.47 | 4.57 | 350.18 | 317.03 |
| 19.800 | 165.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 937.95 | 0.00 | 938.26 | 23.99 | 4.48 | 356.87 | 326.64 |
| 19.900 | 50.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 937.98 | 0.00 | 938.29 | 23.33 | 4.44 | 360.04 | 331.23 |
| 19.900 | 50.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 938.08 | 0.00 | 938.38 | 22.01 | 4.36 | 366.75 | 341.02 |
| 20.000 | 1.00 | 943.60 | 942.10 | 931.60 | 1600.00 | 937.92 | 0.00 | 938.35 | 18.23 | 5.26 | 304.08 | 374.71 |
| 20.000 | 1.00 | 943.60 | 942.10 | 931.60 | 1600.00 | 938.01 | 0.00 | 938.45 | 19.56 | 5.31 | 301.37 | 361.78 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.100 | 90.00 | 943.60 | 942.10 | 931.60 | 1600.00 | 938.12 | 0.00 | 938.52 | 16.41 | 5.07 | 315.75 | 394.92 |
| 20.100 | 90.00 | 943.60 | 942.10 | 931.60 | 1600.00 | 938.22 | 0.00 | 938.63 | 17.57 | 5.10 | 313.45 | 381.68 |
| 20.200 | 1.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 938.28 | 0.00 | 938.56 | 6.37 | 4.20 | 381.06 | 633.86 |
| 20.200 | 1.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 938.41 | 0.00 | 938.67 | 5.94 | 4.11 | 389.71 | 656.62 |
| 20.300 | 64.00 | 0.00 | 0.00 | 931.70 | 1600.00 | 938.38 | 0.00 | 938.61 | 4.90 | 3.82 | 418.63 | 723.07 |
| 20.300 | 64.00 | 0.00 | 0.00 | 931.70 | 1600.00 | 938.50 | 0.00 | 938.72 | 4.61 | 3.75 | 426.81 | 745.31 |
| 21.000 | 1050.00 | 0.00 | 0.00 | 933.20 | 1600.00 | 939.35 | 0.00 | 939.98 | 61.36 | 7.10 | 338.36 | 204.26 |
| 21.000 | 1050.00 | 0.00 | 0.00 | 933.20 | 1600.00 | 939.41 | 0.00 | 940.00 | 57.50 | 6.92 | 349.81 | 211.00 |
| 21.100 | 210.00 | 0.00 | 0.00 | 935.20 | 735.00 | 940.32 | 0.00 | 940.35 | 3.44 | 1.50 | 503.88 | 396.51 |
| 21.100 | 210.00 | 0.00 | 0.00 | 935.20 | 735.00 | 940.34 | 0.00 | 940.37 | 3.47 | 1.51 | 488.31 | 394.59 |
| 21.200 | 140.00 | 0.00 | 0.00 | 935.40 | 735.00 | 940.37 | 0.00 | 940.40 | 2.81 | 1.43 | 522.74 | 438.14 |
| 21.200 | 140.00 | 0.00 | 0.00 | 935.40 | 735.00 | 940.38 | 0.00 | 940.42 | 2.83 | 1.43 | 514.25 | 436.96 |
| 21.300 | 125.00 | 0.00 | 0.00 | 935.60 | 735.00 | 940.40 | 0.00 | 940.44 | 2.80 | 1.66 | 506.28 | 439.05 |
| 21.300 | 125.00 | 0.00 | 0.00 | 935.60 | 735.00 | 940.41 | 0.00 | 940.45 | 2.76 | 1.65 | 510.40 | 442.36 |
| 21.500 | 15.00 | 944.20 | 938.00 | 937.60 | 735.00 | 945.71 | 0.00 | 946.04 | 96.10 | 4.66 | 157.56 | 74.98 |
| 21.500 | 15.00 | 944.20 | 938.00 | 937.60 | 735.00 | 945.71 | 0.00 | 946.04 | 96.09 | 4.66 | 157.57 | 74.98 |
| 21.600 | 27.00 | 0.00 | 0.00 | 938.00 | 735.00 | 946.06 | 0.00 | 946.08 | .56 | 1.00 | 736.34 | 984.28 |
| 21.600 | 27.00 | 0.00 | 0.00 | 938.00 | 735.00 | 946.06 | 0.00 | 946.08 | .56 | 1.00 | 736.34 | 984.28 |
| 21.900 | 73.00 | 0.00 | 0.00 | 937.60 | 735.00 | 946.06 | 0.00 | 946.09 | 1.19 | 1.27 | 577.69 | 672.95 |
| 21.900 | 73.00 | 0.00 | 0.00 | 937.60 | 735.00 | 946.06 | 0.00 | 946.09 | 1.19 | 1.27 | 578.43 | 674.32 |
| 22.000 | 1.00 | 947.20 | 947.30 | 937.60 | 735.00 | 946.06 | 0.00 | 946.09 | .80 | 1.36 | 540.36 | 820.85 |
| 22.000 | 1.00 | 947.20 | 947.30 | 937.60 | 735.00 | 946.06 | 0.00 | 946.09 | .80 | 1.36 | 539.82 | 820.84 |
| 22.100 | 23.00 | 947.20 | 947.30 | 938.70 | 735.00 | 946.06 | 0.00 | 946.09 | .87 | 1.40 | 525.12 | 787.39 |
| 22.100 | 23.00 | 947.20 | 947.30 | 938.70 | 735.00 | 946.06 | 0.00 | 946.09 | .87 | 1.40 | 524.52 | 787.28 |
| 22.200 | 1.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.07 | 0.00 | 946.10 | .57 | 1.30 | 563.23 | 974.93 |
| 22.200 | 1.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.07 | 0.00 | 946.10 | .57 | 1.30 | 563.23 | 974.93 |
| 22.300 | 103.00 | 0.00 | 0.00 | 938.51 | 735.00 | 946.10 | 0.00 | 946.10 | .05 | .48 | 1568.00 | 3246.70 |
| 22.300 | 103.00 | 0.00 | 0.00 | 938.51 | 735.00 | 946.10 | 0.00 | 946.10 | .05 | .49 | 1503.71 | 3143.65 |
| 22.500 | 450.00 | 0.00 | 0.00 | 941.20 | 735.00 | 946.10 | 0.00 | 946.11 | .45 | .57 | 1288.31 | 1099.20 |
| 22.500 | 450.00 | 0.00 | 0.00 | 941.20 | 735.00 | 946.10 | 0.00 | 946.11 | .45 | .57 | 1286.94 | 1097.39 |
| 22.550 | 392.00 | 0.00 | 0.00 | 938.60 | 735.00 | 946.11 | 0.00 | 946.11 | .04 | .28 | 2617.17 | 3641.77 |
| 22.550 | 392.00 | 0.00 | 0.00 | 938.60 | 735.00 | 946.11 | 0.00 | 946.11 | .04 | .28 | 2612.82 | 3625.75 |
| 22.600 | 196.00 | 0.00 | 0.00 | 938.20 | 735.00 | 946.11 | 0.00 | 946.11 | .05 | .34 | 2293.88 | 3199.14 |
| 22.600 | 196.00 | 0.00 | 0.00 | 938.20 | 735.00 | 946.11 | 0.00 | 946.11 | .06 | .34 | 2137.44 | 3108.59 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22.800 | 125.00 | 0.00 | 0.00 | 938.00 | 735.00 | 946.11 | 0.00 | 946.12 | .33 | .69 | 1225.84 | 1273.62 |
| 22.800 | 125.00 | 0.00 | 0.00 | 938.00 | 735.00 | 946.11 | 0.00 | 946.12 | .35 | .71 | 1097.49 | 1237.89 |
| 22.900 | 108.00 | 0.00 | 0.00 | 937.50 | 735.00 | 946.11 | 0.00 | 946.13 | .76 | 1.13 | 650.22 | 841.74 |
| 22.900 | 108.00 | 0.00 | 0.00 | 937.50 | 735.00 | 946.11 | 0.00 | 946.13 | .76 | 1.13 | 650.62 | 842.56 |
| 23.000 | 1.00 | 952.40 | 948.40 | 937.50 | 735.00 | 946.11 | 0.00 | 946.13 | .43 | 1.13 | 652.14 | 1124.47 |
| 23.000 | 1.00 | 952.40 | 948.40 | 937.50 | 735.00 | 946.11 | 0.00 | 946.13 | .40 | 1.13 | 652.20 | 1155.45 |
| 23.100 | 56.00 | 952.40 | 950.20 | 937.70 | 735.00 | 946.09 | 0.00 | 946.15 | 2.08 | 1.85 | 398.16 | 509.53 |
| 23.100 | 56.00 | 952.40 | 950.20 | 937.70 | 735.00 | 946.09 | 0.00 | 946.15 | 2.03 | 1.85 | 398.36 | 516.24 |
| 23.200 | 1.00 | 0.00 | 0.00 | 937.70 | 735.00 | 946.10 | 0.00 | 946.15 | 1.59 | 1.79 | 409.95 | 583.42 |
| 23.200 | 1.00 | 0.00 | 0.00 | 937.70 | 735.00 | 946.10 | 0.00 | 946.15 | 1.59 | 1.79 | 409.99 | 583.52 |
| 23.300 | 82.00 | 0.00 | 0.00 | 939.76 | 735.00 | 946.16 | 0.00 | 946.16 | .06 | .44 | 1673.61 | 3128.33 |
| 23.300 | 82.00 | 0.00 | 0.00 | 939.76 | 735.00 | 946.16 | 0.00 | 946.16 | .06 | .44 | 1668.19 | 3117.38 |
| 23.400 | 1133.00 | 0.00 | 0.00 | 939.59 | 735.00 | 946.17 | 0.00 | 946.17 | .04 | .36 | 2046.11 | 3898.01 |
| 23.400 | 1133.00 | 0.00 | 0.00 | 939.59 | 735.00 | 946.17 | 0.00 | 946.17 | .04 | .36 | 2037.17 | 3888.18 |
| 23.500 | 516.00 | 0.00 | 0.00 | 938.50 | 735.00 | 946.17 | 0.00 | 946.17 | .03 | .36 | 2337.90 | 4405.86 |
| 23.500 | 516.00 | 0.00 | 0.00 | 938.50 | 735.00 | 946.17 | 0.00 | 946.17 | .03 | .37 | 2028.45 | 4303.40 |
| 24.000 | 233.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.17 | 0.00 | 946.17 | .04 | .37 | 1965.59 | 3659.68 |
| 24.000 | 233.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.17 | 0.00 | 946.17 | .04 | .37 | 1965.68 | 3659.88 |

MOORE BUSINESS FORMS, INC 23

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 12.000 | 1600.00 | 929.10 | 0.00 | 0.00 | 0.00 | 394.86 | 0.00 |
| | 12.000 | 1600.00 | 929.20 | .10 | 0.00 | .10 | 261.91 | 0.00 |
| | 12.600 | 1600.00 | 930.90 | 0.00 | 1.80 | 0.00 | 208.31 | 1850.00 |
| | 12.600 | 1600.00 | 931.03 | .13 | 1.83 | .13 | 85.26 | 1850.00 |
| | 12.700 | 1600.00 | 932.10 | 0.00 | 1.20 | 0.00 | 281.71 | 1500.00 |
| | 12.700 | 1600.00 | 932.23 | .12 | 1.20 | .12 | 150.75 | 1500.00 |
| | 12.800 | 1600.00 | 933.30 | 0.00 | 1.19 | 0.00 | 156.03 | 1750.00 |
| | 12.800 | 1600.00 | 933.41 | .12 | 1.19 | .12 | 112.01 | 1750.00 |
| | 13.100 | 1600.00 | 933.50 | 0.00 | .21 | 0.00 | 224.06 | 240.00 |
| | 13.100 | 1600.00 | 933.63 | .12 | .21 | .12 | 224.75 | 240.00 |
| | 13.200 | 1600.00 | 933.51 | 0.00 | .01 | 0.00 | 224.18 | 11.60 |
| | 13.200 | 1600.00 | 933.63 | .12 | .01 | .12 | 224.87 | 11.60 |
| | 13.300 | 1600.00 | 933.51 | 0.00 | .00 | 0.00 | 224.18 | 1.00 |
| | 13.300 | 1600.00 | 933.63 | .12 | .00 | .12 | 224.87 | 1.00 |
| | 14.100 | 1600.00 | 933.73 | 0.00 | .22 | 0.00 | 67.56 | 317.00 |
| | 14.100 | 1600.00 | 933.83 | .10 | .20 | .10 | 68.06 | 317.00 |
| | 14.300 | 1600.00 | 933.74 | 0.00 | .01 | 0.00 | 67.59 | 4.00 |
| | 14.300 | 1600.00 | 933.84 | .10 | .01 | .10 | 68.10 | 4.00 |
| | 14.400 | 1600.00 | 933.70 | 0.00 | -.04 | 0.00 | 60.00 | 9.00 |
| | 14.400 | 1600.00 | 933.80 | .10 | -.04 | .10 | 60.00 | 9.00 |
| | 14.500 | 1600.00 | 933.70 | 0.00 | .00 | 0.00 | 60.00 | 1.00 |
| * | 14.500 | 1600.00 | 933.80 | .10 | .00 | .10 | 60.00 | 1.00 |
| | 14.600 | 1600.00 | 933.77 | 0.00 | .07 | 0.00 | 60.00 | 54.00 |
| * | 14.600 | 1600.00 | 933.86 | .09 | .06 | .09 | 60.00 | 54.00 |
| | 14.700 | 1600.00 | 933.77 | 0.00 | .00 | 0.00 | 60.00 | 1.00 |
| | 14.700 | 1600.00 | 933.87 | .09 | .00 | .09 | 60.00 | 1.00 |
| | 14.720 | 1600.00 | 933.78 | 0.00 | .01 | 0.00 | 60.00 | 4.00 |
| | 14.720 | 1600.00 | 933.88 | .09 | .01 | .09 | 60.00 | 4.00 |
| | 14.750 | 1600.00 | 935.38 | 0.00 | 1.60 | 0.00 | 173.95 | 770.00 |
| | 14.750 | 1600.00 | 935.47 | .08 | 1.59 | .08 | 97.76 | 770.00 |
| | 14.800 | 1600.00 | 935.93 | 0.00 | .54 | 0.00 | 153.95 | 520.00 |
| | 14.800 | 1600.00 | 936.04 | .11 | .57 | .11 | 105.13 | 520.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 14.900 | 1600.00 | 936.11 | 0.00 | .18 | 0.00 | 72.00 | 360.00 |
| 14.900 | 1600.00 | 936.22 | .12 | .19 | .12 | 72.00 | 360.00 |
| 15.000 | 1600.00 | 936.04 | 0.00 | -.07 | 0.00 | 52.54 | 31.00 |
| 15.000 | 1600.00 | 936.16 | .12 | -.06 | .12 | 52.54 | 31.00 |
| 15.100 | 1600.00 | 936.02 | 0.00 | -.02 | 0.00 | 52.54 | 1.00 |
| 15.100 | 1600.00 | 936.14 | .12 | -.02 | .12 | 52.54 | 1.00 |
| 15.200 | 1600.00 | 936.07 | 0.00 | .05 | 0.00 | 52.54 | 36.00 |
| 15.200 | 1600.00 | 936.18 | .12 | .05 | .12 | 52.54 | 36.00 |
| 15.300 | 1600.00 | 936.13 | 0.00 | .06 | 0.00 | 52.54 | 1.00 |
| 15.300 | 1600.00 | 936.26 | .13 | .08 | .13 | 52.54 | 1.00 |
| 15.400 | 1600.00 | 936.36 | 0.00 | .23 | 0.00 | 80.01 | 11.00 |
| 15.400 | 1600.00 | 936.48 | .12 | .22 | .12 | 80.52 | 11.00 |
| 15.800 | 1600.00 | 936.44 | 0.00 | .08 | 0.00 | 70.00 | 350.00 |
| 15.800 | 1600.00 | 936.56 | .12 | .07 | .12 | 70.00 | 350.00 |
| 15.900 | 1600.00 | 936.44 | 0.00 | -.00 | 0.00 | 59.50 | 56.00 |
| 15.900 | 1600.00 | 936.55 | .12 | -.00 | .12 | 59.50 | 56.00 |
| 16.000 | 1600.00 | 936.44 | 0.00 | -.00 | 0.00 | 59.50 | 1.00 |
| 16.000 | 1600.00 | 936.55 | .11 | -.01 | .11 | 59.50 | 1.00 |
| 16.100 | 1600.00 | 936.62 | 0.00 | .18 | 0.00 | 59.50 | 54.00 |
| 16.100 | 1600.00 | 936.73 | .11 | .18 | .11 | 59.50 | 54.00 |
| 16.200 | 1600.00 | 936.63 | 0.00 | .02 | 0.00 | 59.50 | 1.00 |
| 16.200 | 1600.00 | 936.76 | .12 | .03 | .12 | 59.50 | 1.00 |
| 16.300 | 1600.00 | 936.73 | 0.00 | .10 | 0.00 | 73.08 | 56.00 |
| 16.300 | 1600.00 | 936.85 | .12 | .09 | .12 | 73.60 | 56.00 |
| 16.800 | 1600.00 | 936.86 | 0.00 | .13 | 0.00 | 87.00 | 125.00 |
| 16.800 | 1600.00 | 936.97 | .11 | .12 | .11 | 110.70 | 125.00 |
| 16.900 | 1600.00 | 936.88 | 0.00 | .02 | 0.00 | 93.00 | 19.00 |
| 16.900 | 1600.00 | 936.99 | .11 | .02 | .11 | 128.35 | 19.00 |
| 17.000 | 1600.00 | 936.87 | 0.00 | -.01 | 0.00 | 87.66 | 1.00 |
| 17.000 | 1600.00 | 936.98 | .11 | -.01 | .11 | 87.66 | 1.00 |
| 17.100 | 1600.00 | 936.93 | 0.00 | .06 | 0.00 | 87.66 | 90.00 |
| 17.100 | 1600.00 | 937.04 | .11 | .06 | .11 | 87.66 | 90.00 |
| 17.200 | 1600.00 | 936.94 | 0.00 | .01 | 0.00 | 90.92 | 1.00 |
| 17.200 | 1600.00 | 937.04 | .11 | .01 | .11 | 90.96 | 1.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 17.300 | 1600.00 | 937.01 | 0.00 | .07 | 0.00 | 90.93 | 100.00 |
| 17.300 | 1600.00 | 937.11 | .10 | .07 | .10 | 90.97 | 100.00 |
| 17.400 | 1600.00 | 937.01 | 0.00 | .00 | 0.00 | 90.93 | 1.00 |
| 17.400 | 1600.00 | 937.11 | .10 | .00 | .10 | 90.97 | 1.00 |
| 17.500 | 1600.00 | 937.06 | 0.00 | .05 | 0.00 | 93.00 | 120.00 |
| 17.500 | 1600.00 | 937.16 | .10 | .05 | .10 | 93.00 | 120.00 |
| 17.900 | 1600.00 | 937.14 | 0.00 | .08 | 0.00 | 109.65 | 79.00 |
| 17.900 | 1600.00 | 937.24 | .10 | .07 | .10 | 109.65 | 79.00 |
| 18.000 | 1600.00 | 937.11 | 0.00 | -.02 | 0.00 | 131.22 | 1.00 |
| 18.000 | 1600.00 | 937.21 | .10 | -.02 | .10 | 131.62 | 1.00 |
| 18.100 | 1600.00 | 937.16 | 0.00 | .05 | 0.00 | 100.44 | 40.00 |
| 18.100 | 1600.00 | 937.26 | .10 | .05 | .10 | 100.44 | 40.00 |
| 18.200 | 1600.00 | 937.14 | 0.00 | -.02 | 0.00 | 88.83 | 1.00 |
| 18.200 | 1600.00 | 937.24 | .10 | -.02 | .10 | 89.38 | 1.00 |
| 18.300 | 1600.00 | 937.19 | 0.00 | .05 | 0.00 | 89.08 | 49.00 |
| 18.300 | 1600.00 | 937.29 | .10 | .04 | .10 | 89.57 | 49.00 |
| 18.800 | 1600.00 | 937.52 | 0.00 | .33 | 0.00 | 124.11 | 365.00 |
| 18.800 | 1600.00 | 937.60 | .08 | .32 | .08 | 124.71 | 365.00 |
| 18.900 | 1600.00 | 937.54 | 0.00 | .02 | 0.00 | 62.84 | 200.00 |
| 18.900 | 1600.00 | 937.62 | .08 | .02 | .08 | 62.95 | 200.00 |
| 19.000 | 1600.00 | 937.53 | 0.00 | -.01 | 0.00 | 56.53 | 4.00 |
| 19.000 | 1600.00 | 937.58 | .06 | -.03 | .06 | 56.54 | 4.00 |
| 19.100 | 1600.00 | 937.54 | 0.00 | .01 | 0.00 | 56.53 | 6.00 |
| 19.100 | 1600.00 | 937.66 | .12 | .07 | .12 | 56.55 | 6.00 |
| 19.200 | 1600.00 | 937.52 | 0.00 | -.01 | 0.00 | 55.12 | 1.00 |
| 19.200 | 1600.00 | 937.65 | .12 | -.01 | .12 | 55.25 | 1.00 |
| 19.300 | 1600.00 | 937.55 | 0.00 | .02 | 0.00 | 55.13 | 24.00 |
| 19.300 | 1600.00 | 937.67 | .12 | .02 | .12 | 55.27 | 24.00 |
| 19.800 | 1600.00 | 937.84 | 0.00 | .30 | 0.00 | 70.00 | 165.00 |
| 19.800 | 1600.00 | 937.95 | .10 | .28 | .10 | 70.00 | 165.00 |
| 19.900 | 1600.00 | 937.98 | 0.00 | .14 | 0.00 | 70.00 | 50.00 |
| 19.900 | 1600.00 | 938.08 | .10 | .13 | .10 | 70.00 | 50.00 |
| 20.000 | 1600.00 | 937.92 | 0.00 | -.06 | 0.00 | 62.35 | 1.00 |
| 20.000 | 1600.00 | 938.01 | .09 | -.07 | .09 | 62.39 | 1.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 20.100 | 1600.00 | 938.12 | 0.00 | .20 | 0.00 | 62.43 | 90.00 |
| 20.100 | 1600.00 | 938.22 | .10 | .21 | .10 | 62.47 | 90.00 |
| 20.200 | 1600.00 | 938.28 | 0.00 | .16 | 0.00 | 70.00 | 1.00 |
| 20.200 | 1600.00 | 938.41 | .12 | .19 | .12 | 70.00 | 1.00 |
| 20.300 | 1600.00 | 938.38 | 0.00 | .10 | 0.00 | 70.00 | 64.00 |
| 20.300 | 1600.00 | 938.50 | .12 | .09 | .12 | 70.00 | 64.00 |
| 21.000 | 1600.00 | 939.35 | 0.00 | .97 | 0.00 | 181.19 | 1050.00 |
| 21.000 | 1600.00 | 939.41 | .06 | .92 | .06 | 184.73 | 1050.00 |
| 21.100 | 735.00 | 940.32 | 0.00 | .97 | 0.00 | 166.54 | 210.00 |
| 21.100 | 735.00 | 940.34 | .02 | .92 | .02 | 136.00 | 210.00 |
| 21.200 | 735.00 | 940.37 | 0.00 | .05 | 0.00 | 165.76 | 140.00 |
| 21.200 | 735.00 | 940.38 | .02 | .05 | .02 | 144.96 | 140.00 |
| 21.300 | 735.00 | 940.40 | 0.00 | .03 | 0.00 | 246.06 | 125.00 |
| 21.300 | 735.00 | 940.41 | .02 | .03 | .02 | 247.88 | 125.00 |
| 21.500 | 735.00 | 945.71 | 0.00 | 5.31 | 0.00 | 98.00 | 15.00 |
| 21.500 | 735.00 | 945.71 | .00 | 5.29 | .00 | 98.00 | 15.00 |
| 21.600 | 735.00 | 946.06 | 0.00 | .36 | 0.00 | 103.00 | 27.00 |
| 21.600 | 735.00 | 946.06 | .00 | .36 | .00 | 103.00 | 27.00 |
| 21.900 | 735.00 | 946.06 | 0.00 | -.00 | 0.00 | 103.00 | 73.00 |
| 21.900 | 735.00 | 946.06 | .00 | -.00 | .00 | 103.00 | 73.00 |
| 22.000 | 735.00 | 946.06 | 0.00 | -.00 | 0.00 | 115.60 | 1.00 |
| 22.000 | 735.00 | 946.06 | .00 | -.00 | .00 | 98.32 | 1.00 |
| 22.100 | 735.00 | 946.06 | 0.00 | .00 | 0.00 | 115.73 | 23.00 |
| 22.100 | 735.00 | 946.06 | .00 | .00 | .00 | 98.32 | 23.00 |
| 22.200 | 735.00 | 946.07 | 0.00 | .01 | 0.00 | 103.00 | 1.00 |
| 22.200 | 735.00 | 946.07 | .00 | .01 | .00 | 103.00 | 1.00 |
| 22.300 | 735.00 | 946.10 | 0.00 | .03 | 0.00 | 240.00 | 103.00 |
| 22.300 | 735.00 | 946.10 | -.00 | .03 | -.00 | 210.00 | 103.00 |
| 22.500 | 735.00 | 946.10 | 0.00 | .00 | 0.00 | 388.28 | 450.00 |
| 22.500 | 735.00 | 946.10 | .00 | .00 | .00 | 388.20 | 450.00 |
| 22.550 | 735.00 | 946.11 | 0.00 | .01 | 0.00 | 380.59 | 392.00 |
| 22.550 | 735.00 | 946.11 | .00 | .01 | .00 | 376.81 | 392.00 |
| 22.600 | 735.00 | 946.11 | 0.00 | .00 | 0.00 | 385.33 | 196.00 |
| 22.600 | 735.00 | 946.11 | .00 | .00 | .00 | 286.13 | 196.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 22.800 | 735.00 | 946.11 | 0.00 | -.00 | 0.00 | 313.10 | 125.00 |
| 22.800 | 735.00 | 946.11 | -.00 | -.00 | -.00 | 215.12 | 125.00 |
| 22.900 | 735.00 | 946.11 | 0.00 | -.00 | 0.00 | 100.00 | 108.00 |
| 22.900 | 735.00 | 946.11 | .00 | -.00 | .00 | 100.00 | 108.00 |
| 23.000 | 735.00 | 946.11 | 0.00 | .00 | 0.00 | 98.00 | 1.00 |
| 23.000 | 735.00 | 946.11 | .00 | .00 | .00 | 98.00 | 1.00 |
| 23.100 | 735.00 | 946.09 | 0.00 | -.01 | 0.00 | 98.00 | 56.00 |
| 23.100 | 735.00 | 946.09 | .00 | -.01 | .00 | 98.00 | 56.00 |
| 23.200 | 735.00 | 946.10 | 0.00 | .00 | 0.00 | 100.00 | 1.00 |
| 23.200 | 735.00 | 946.10 | .00 | .00 | .00 | 100.00 | 1.00 |
| 23.300 | 735.00 | 946.16 | 0.00 | .06 | 0.00 | 290.88 | 82.00 |
| 23.300 | 735.00 | 946.16 | .00 | .06 | .00 | 282.79 | 82.00 |
| 23.400 | 735.00 | 946.17 | 0.00 | .01 | 0.00 | 353.40 | 1133.00 |
| 23.400 | 735.00 | 946.17 | .00 | .01 | .00 | 335.44 | 1133.00 |
| 23.500 | 735.00 | 946.17 | 0.00 | .00 | 0.00 | 556.43 | 516.00 |
| 23.500 | 735.00 | 946.17 | .00 | .00 | .00 | 288.05 | 516.00 |
| 24.000 | 735.00 | 946.17 | 0.00 | .00 | 0.00 | 336.76 | 233.00 |
| 24.000 | 735.00 | 946.17 | .00 | .00 | .00 | 336.77 | 233.00 |

MOORE BUSINESS FORMS, INC. 23

SUMMARY OF ERRORS

CAUTION SECNO= 14.500 PROFILE= 2 BRIDGE DECK DEFINITION ERROR
CAUTION SECNO= 14.600 PROFILE= 2 BRIDGE DECK DEFINITION ERROR

MOORE BUSINESS FORMS, INC 23

FLOODWAY DATA, KALAMAZOO RIVER
PROFILE NO. 2

| STATION | FLOODWAY WIDTH | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 12.000 | 262. | 747. | 2.1 | 929.2 | 929.1 | .1 |
| 12.600 | 85. | 498. | 3.2 | 931.0 | 930.9 | .1 |
| 12.700 | 151. | 710. | 2.3 | 932.2 | 932.1 | .1 |
| 12.800 | 112. | 584. | 2.7 | 933.4 | 933.3 | .1 |
| 13.100 | 225. | 1066. | 1.5 | 933.6 | 933.5 | .1 |
| 13.200 | 225. | 1053. | 1.5 | 933.6 | 933.5 | .1 |
| 13.300 | 225. | 1053. | 1.5 | 933.6 | 933.5 | .1 |
| 14.100 | 68. | 380. | 4.2 | 933.8 | 933.7 | .1 |
| 14.300 | 68. | 381. | 4.2 | 933.8 | 933.7 | .1 |
| 14.400 | 60. | 328. | 4.9 | 933.8 | 933.7 | .1 |
| 14.500 | 60. | 328. | 4.9 | 933.8 | 933.7 | .1 |
| 14.600 | 60. | 331. | 4.8 | 933.9 | 933.8 | .1 |
| 14.700 | 60. | 331. | 4.8 | 933.9 | 933.8 | .1 |
| 14.720 | 60. | 332. | 4.8 | 933.9 | 933.8 | .1 |
| 14.750 | 98. | 438. | 3.7 | 935.5 | 935.4 | .1 |
| 14.800 | 105. | 682. | 2.3 | 936.0 | 935.9 | .1 |
| 14.900 | 72. | 519. | 3.1 | 936.2 | 936.1 | .1 |
| 15.000 | 53. | 364. | 4.4 | 936.1 | 936.0 | .1 |
| 15.100 | 53. | 336. | 4.8 | 936.1 | 936.0 | .1 |
| 15.200 | 53. | 334. | 4.8 | 936.2 | 936.1 | .1 |
| 15.300 | 53. | 366. | 4.4 | 936.2 | 936.1 | .1 |
| 15.400 | 81. | 551. | 2.9 | 936.5 | 936.4 | .1 |
| 15.800 | 70. | 501. | 3.2 | 936.5 | 936.4 | .1 |
| 15.900 | 60. | 425. | 3.8 | 936.5 | 936.4 | .1 |
| 16.000 | 60. | 416. | 3.9 | 936.5 | 936.4 | .1 |
| 16.100 | 60. | 410. | 3.9 | 936.7 | 936.6 | .1 |
| 16.200 | 60. | 431. | 3.7 | 936.7 | 936.6 | .1 |
| 16.300 | 74. | 496. | 3.2 | 936.8 | 936.7 | .1 |
| 16.800 | 111. | 596. | 2.7 | 937.0 | 936.9 | .1 |
| 16.900 | 128. | 622. | 2.6 | 937.0 | 936.9 | .1 |
| 17.000 | 93. | 578. | 2.8 | 937.0 | 936.9 | .1 |
| 17.100 | 93. | 582. | 2.8 | 937.0 | 936.9 | .1 |
| 17.200 | 94. | 592. | 2.7 | 937.0 | 936.9 | .1 |
| 17.300 | 93. | 630. | 2.5 | 937.1 | 937.0 | .1 |
| 17.400 | 93. | 631. | 2.5 | 937.1 | 937.0 | .1 |
| 17.500 | 93. | 576. | 2.8 | 937.2 | 937.1 | .1 |
| 17.900 | 110. | 668. | 2.4 | 937.2 | 937.1 | .1 |
| 18.000 | 132. | 535. | 3.0 | 937.2 | 937.1 | .1 |
| 18.100 | 100. | 538. | 3.0 | 937.3 | 937.2 | .1 |
| 18.200 | 89. | 476. | 3.4 | 937.2 | 937.1 | .1 |
| 18.300 | 90. | 480. | 3.3 | 937.3 | 937.2 | .1 |
| 18.800 | 125. | 695. | 2.3 | 937.6 | 937.5 | .1 |

MOORE BUSINESS FORMS, INC 23

FLOODWAY DATA, KALAMAZOO RIVER
PROFILE NO. 2

| STATION | FLOODWAY WIDTH | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 18.900 | 63. | 350. | 4.6 | 937.6 | 937.5 | .1 |
| 19.000 | 58. | 314. | 5.1 | 937.6 | 937.5 | .1 |
| 19.100 | 58. | 336. | 4.8 | 937.6 | 937.5 | .1 |
| 19.200 | 55. | 326. | 4.9 | 937.6 | 937.5 | .1 |
| 19.300 | 55. | 327. | 4.9 | 937.6 | 937.5 | .1 |
| 19.800 | 70. | 357. | 4.5 | 937.9 | 937.8 | .1 |
| 19.900 | 70. | 367. | 4.4 | 938.1 | 938.0 | .1 |
| 20.000 | 70. | 301. | 5.3 | 938.0 | 937.9 | .1 |
| 20.100 | 70. | 313. | 5.1 | 938.2 | 938.1 | .1 |
| 20.200 | 70. | 390. | 4.1 | 938.4 | 938.3 | .1 |
| 20.300 | 70. | 427. | 3.7 | 938.5 | 938.4 | .1 |
| 21.000 | 185. | 350. | 4.6 | 939.5 | 939.4 | .1 |
| 21.100 | 136. | 488. | 1.5 | 940.3 | 940.3 | 0.0 |
| 21.200 | 145. | 514. | 1.4 | 940.4 | 940.4 | 0.0 |
| 21.300 | 248. | 510. | 1.4 | 940.4 | 940.4 | 0.0 |
| 21.500 | 98. | 158. | 4.7 | 945.7 | 945.7 | 0.0 |
| 21.600 | 103. | 736. | 1.0 | 946.1 | 946.1 | 0.0 |
| 21.900 | 103. | 578. | 1.3 | 946.1 | 946.1 | 0.0 |
| 22.000 | 103. | 540. | 1.4 | 946.1 | 946.1 | 0.0 |
| 22.100 | 103. | 525. | 1.4 | 946.1 | 946.1 | 0.0 |
| 22.200 | 103. | 563. | 1.3 | 946.1 | 946.1 | 0.0 |
| 22.300 | 210. | 1504. | .5 | 946.1 | 946.1 | 0.0 |
| 22.500 | 388. | 1287. | .6 | 946.1 | 946.1 | 0.0 |
| 22.550 | 377. | 2613. | .3 | 946.1 | 946.1 | 0.0 |
| 22.600 | 286. | 2137. | .3 | 946.1 | 946.1 | 0.0 |
| 22.800 | 215. | 1097. | .7 | 946.1 | 946.1 | 0.0 |
| 22.900 | 100. | 651. | 1.1 | 946.1 | 946.1 | 0.0 |
| 23.000 | 100. | 652. | 1.1 | 946.1 | 946.1 | 0.0 |
| 23.100 | 100. | 398. | 1.8 | 946.1 | 946.1 | 0.0 |
| 23.200 | 100. | 410. | 1.8 | 946.1 | 946.1 | 0.0 |
| 23.300 | 283. | 1668. | .4 | 946.2 | 946.2 | 0.0 |
| 23.400 | 335. | 2037. | .4 | 946.2 | 946.2 | 0.0 |
| 23.500 | 288. | 2028. | .4 | 946.2 | 946.2 | 0.0 |
| 24.000 | 337. | 1966. | .4 | 946.2 | 946.2 | 0.0 |

MOORE BUSINESS FORMS, INC 23

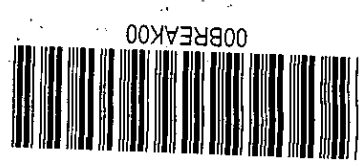



1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100-YEAR ENCROACHED



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*****************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
 ERROR CORR -  01.02.03
 MODIFICATION -  50.51.52.53
*****************************************************

T1  THE TOWNSHIP OF ALBION
T2  THE KALAMAZOO RIVER
T3   THE 100 YEAR ENCROACHED RUN
J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSFL     FQ
     -10.      6.       0.       0.  0.000000     0.00     0.0      0.   946.270   0.000
J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     15.000    0.000   -1.000    0.000    0.000   -1.290    0.000    0.000    0.000    0.000
*PROF 2
CCHV=    .100 CEHV=    .300
*SECNO 24.000
 2800 NAT Q1=   2300.89  WSEL=    946.17  ENC Q1=   2347.78  WSEL=    946.27  RATIO=  -.0204
 NAT Q1=   2358.  RATIOS LOB.CH.ROB=   .0014   .9957   .0029  WSEL=    946.27
   SECNO    DEPTH    GWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA      LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN    SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST

3470 ENCROACHMENT STATIONS=    2000.0    2278.0  TYPE=     4  TARGET=        .004
        D/S LIMIT OF ALBION TWP.   (A)
    24.00     7.57   946.27     0.00   946.17   946.27      .00     0.00     0.00   944.00
     735.      0.     735.       0.       0.    1951.       0.       0.       0.    944.90
     0.00     0.00     .38     0.00     .060     .045     .060    0.000   938.70  2000.00
  .000010      0.       0.       0.        0        0        0     0.00   278.00  2278.00

*SECNO 24.100
 2800 NAT Q1=   1618.33  WSEL=    946.20  ENC Q1=   1628.93  WSEL=    946.30  RATIO=  -.0065
 NAT Q1=   1668.  RATIOS LOB.CH.ROB=   .0209   .9763   .0027  WSFL=    946.30
3470 ENCROACHMENT STATIONS=    2000.0    2220.0  TYPE=     4  TARGET=        .024
    24.10     6.74   946.30     0.00   946.20   946.30      .00      .03      .00   944.90
     735.      0.     735.       0.       0.    1432.       0.      89.      13.    944.60
     1.23     0.00     .51     0.00     .060     .045     .060     .045   939.56  2000.00
  .000021    2350.    2280.    2200.        0        0        0     0.00   220.00  2220.00

*SECNO 24.200
 2800 NAT Q1=   1423.70  WSEL=    946.25  ENC Q1=   1423.70  WSEL=    946.35  RATIO=  0.0000
 NAT Q1=   1534.  RATIOS LOB.CH.ROB=   .4378   .5365   .0256  WSEL=    946.35
```

D/S encroached shows 946.17

MOORE BUSINESS FORMS, INC. 23

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 3265 DIVIDED FLOW

 3470 ENCROACHMENT STATIONS=     1265.3     3150.0  TYPE=      4  TARGET=          .072
      24.20      5.95    946.35      0.00    946.25    946.36      .00       .05       .00    944.00
        735.       310.      425.       0.      1862.      812.       0.       191.       55.    944.80
          2.90       .17       .52      0.00      .060      .045      .060      .046    940.40  1265.28
       .000027    2000.     2300.    2000.         0         0         0      0.00   1533.48  3150.00

 *SECNO 25.000
  2800 NAT Q1=      446.63  WSEL=     946.37  ENC Q1=     446.63  WSEL=     946.47  RATIO=     .0000
  NAT Q1=      482.  RATIOS LOB,CH,ROB=     .1801    .7270    .0929  WSEL=     946.47

 3265 DIVIDED FLOW

 3470 ENCROACHMENT STATIONS=     3055.5     4144.1  TYPE=      4  TARGET=          .074

          SURVEYED VALLEY SECTION    (B)

      25.00      5.17    946.47      0.00    946.37    946.49      .03       .13       .01    944.90
        735.       114.      577.      44.      330.      398.      83.       263.       95.    944.70
          3.37       .34      1.45      .53      .060      .045      .060      .047    941.30  3055.49
       .000271    1500.     2290.    2600.         2         0         0      0.00    673.80  4144.09

 CCHV=      .100 CEHV=      .300
 *SECNO 25.600
  2800 NAT Q1=      493.42  WSEL=     946.99  ENC Q1=     493.42  WSEL=     947.09  RATIO=     0.0000
  NAT Q1=      535.  RATIOS LOB,CH,ROB=     .4092    .4699    .1209  WSEL=     947.09
    SECNO      DEPTH      CWSEL      CRIWS      %SELK      EG         HV         HL         QLOSS      BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA     LEFT/RIGHT
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID      ENDST

 3470 ENCROACHMENT STATIONS=     3614.5     4140.6  TYPE=      4  TARGET=          .078
      25.60      5.40    947.10      0.00    946.99    947.11      .02       .62       .00    945.72
        735.       295.      374.      66.      657.      280.      144.      312.      125.    944.92
          4.15       .45      1.34      .46      .070      .045      .070      .048    941.70  3614.54
       .000220    2100.     2850.    1500.         2         0         0      0.00    526.11  4140.64

 *SECNO 25.800
 3470 ENCROACHMENT STATIONS=     1901.0     2148.0  TYPE=      1  TARGET=       247.000
      25.80      5.71    947.41      0.00    947.31    947.46      .05       .34       .01    946.00
        735.       64.      522.      149.      116.      245.      193.      331.      133.    945.00
          4.32       .55      2.13      .77      .070      .045      .070      .048    941.70  1901.00
       .000543    1080.     1100.    620.         2         0         0      0.00    247.00  2148.00

 *SECNO 25.900
 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      949.90 ELREA=      949.90

      25.90      5.40    947.60      0.00    947.53    947.70      .09       .22       .01    951.50
        735.       0.      735.       0.       0.      302.       0.       334.      134.    951.50
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MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.35 | 0.00 | 2.44 | 0.00 | .070 | .045 | .070 | .048 | 942.20 | 2000.00 |
| .001097 | 420. | 324. | 40. | 2 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500

*SECNO 26.000

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

D/S FACE OF D DRIVE SOUTH.CONCRETE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.00 | 5.41 | 947.61 | 0.00 | 947.54 | 947.71 | .10 | .01 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 294. | 0. | 334. | 134. | 951.50 |
| 4.36 | 0.00 | 2.50 | 0.00 | .070 | .026 | .070 | .048 | 942.20 | 2000.00 |
| .000458 | 17. | 17. | 17. | 0 | 0 | 0 | -8.91 | 85.00 | 2085.00 |

*SECNO 26.100

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.10 | 7.69 | 947.69 | 0.00 | 947.62 | 947.73 | .04 | .01 | .02 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 432. | 0. | 334. | 134. | 951.50 |
| 4.36 | 0.00 | 1.70 | 0.00 | .070 | .026 | .070 | .048 | 940.00 | 2000.00 |
| .000134 | 26. | 26. | 26. | 2 | 0 | 0 | -13.32 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500

*SECNO 26.200

| SECNO | DEPTH | CWSEL | CRIWS | WSELR | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNF | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 951.50 ELREA= 951.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.20 | 7.69 | 947.69 | 0.00 | 947.63 | 947.74 | .04 | .00 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 446. | 0. | 334. | 135. | 951.50 |
| 4.36 | 0.00 | 1.65 | 0.00 | .080 | .045 | .080 | .048 | 940.00 | 2000.00 |
| .000298 | 17. | 17. | 17. | 0 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .100 CEHV= .300

*SECNO 26.400

2800 NAT QI= 385.74 WSEL= 947.68 ENC QI= 385.74 WSEL= 947.76 RATIO= 0.0000

NAT QI= 496. RATIOS LOB.CH.ROB= .2591 .5793 .1617 WSEL= 947.78

3470 ENCROACHMENT STATIONS= 1820.5 2115.4 TYPE= 4 TARGET= .222

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.40 | 5.84 | 947.74 | 0.00 | 947.68 | 947.77 | .03 | .03 | .00 | 945.50 |
| 735. | 138. | 550. | 47. | 280. | 354. | 67. | 335. | 135. | 944.50 |
| 4.38 | .49 | 1.56 | .70 | .080 | .045 | .080 | .048 | 941.90 | 1820.45 |
| .000380 | 10. | 107. | 160. | 2 | 0 | 0 | 0.00 | 294.97 | 2115.42 |

*SECNO 26.900

2800 NAT QI= 526.40 WSEL= 948.40 ENC QI= 526.40 WSEL= 948.50 RATIO= 0.0000

NAT QI= 566. RATIOS LOB.CH.ROB= .3171 .6679 .0149 WSEL= 948.50

MOORE BUSINESS FORMS, INC. 23

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 3470 ENCROACHMENT STATIONS=     1633.3     2124.0  TYPE=      4  TARGET=          .067
      26.90       5.29     948.49       0.00     948.40     948.51       .01        .73        .00     947.40
        735.        211.        524.          0.        585.        472.          0.        385.        155.     945.50
       5.23        .36       1.11       0.00       .080       .045       .080       .048     943.20    1633.32
    .000199       2000.       3000.       2250.          2          0          0       0.00     490.68    2124.00

 CCHV=     .100 CEHV=     .300
 *SECNO 27.000
  2800 NAT Q1=      342.01  WSEL=      948.40  ENC Q1=      342.01  WSEL=      948.50  RATIO=  0.0000
  NAT Q1=      364.  RATIOS LOB,CH,ROB=     .3493     .6507  0.0000  WSEL=      948.50

 3265 DIVIDED FLOW

 3470 ENCROACHMENT STATIONS=     1600.2     2090.0  TYPE=      4  TARGET=          .061

          SURVEYED VALLEY SECTION    (D)

      27.00       6.10     948.50       0.00     948.40     948.53       .04        .02        .01     950.70
        735.        226.        509.          0.        394.        282.          0.        387.        156.     950.20
       5.25        .58       1.80       0.00       .070       .045       .070       .048     942.40    1600.15
    .000460         72.         72.         72.          1          0          0       0.00     354.80    2090.00

 *SECNO 27.100
  2800 NAT Q1=      500.88  WSEL=      948.44  ENC Q1=      500.88  WSEL=      948.54  RATIO=  0.0000
  NAT Q1=      539.  RATIOS LOB,CH,ROB=     .2657     .7211     .0132  WSEL=      948.54

 3470 ENCROACHMENT STATIONS=     1620.4     2143.0  TYPE=      4  TARGET=          .070
      27.10       4.53     948.53       0.00     948.44     948.55       .02        .01        .00     948.00
        735.        166.        569.          0.        431.        508.          0.        387.        156.     946.00
       5.26        .38       1.12       0.00       .070       .045       .070       .048     944.00    1620.45
    .000221         36.         36.         36.          2          0          0       0.00     522.55    2143.00

 CCHV=     .100 CEHV=     .300
 *SECNO 27.400
  2800 NAT Q1=      475.80  WSEL=      948.97  ENC Q1=      475.80  WSEL=      949.07  RATIO=  0.0000
  NAT Q1=      675.  RATIOS LOB,CH,ROB=     .5228     .4641     .0132  WSEL=      949.07
    SECNO       DEPTH      CWSEL      CRIWS      WSELK         EG         HV         HL      QLOSS     BANK ELEV
        Q        QLOB        QCH        QROB       ALOB        ACH       AROB        VOL        TWA    LEFT/RIGHT
     TIME        VLOB        VCH        VROB        XNL        XNCH        XNR        WTN      ELMIN          SSTA
    SLOPE       XLOBL       XLCH       XLOBR     ITRIAL        IDC      ICONT      CORAR     TOPWID          FNDST

 3470 ENCROACHMENT STATIONS=     1916.5     2169.5  TYPE=      4  TARGET=          .295

          SURVEYED VALLEY SECTION    (F)

      27.40       4.03     949.08       0.00     948.97     949.10       .02        .55        .00     945.20
        735.        253.        482.          0.        382.        416.          0.        431.        174.     946.95
       5.93        .66       1.18       0.00       .070       .045       .070       .049     945.05    1916.46
    .000240        1640.       2700.       2300.          2          0          0       0.00     253.04    2169.50

 CCHV=     .300 CEHV=     .500
 *SECNO 27.500
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MOORE BUSINESS FORMS, INC. 23

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 2800 NAT Q1=    238.70  WSEL=    949.11  ENC Q1=    242.70  WSEL=    949.21  RATIO=  -.0167
  NAT Q1=    252.  RATIOS LOB,CH,ROB=    .0129    .9615    .0256  WSEL=    949.21

3470 ENCROACHMENT STATIONS=    2000.0    2100.0  TYPE=       4  TARGET=          .039
    27.50      4.02    949.22      0.00    949.11    949.29       .08       .16       .03    948.20
      735.        0.      735.        0.        0.      333.        0.      436.      176.    947.30
     5.98      0.00      2.21      0.00      .070      .045      .070      .049    945.20   2000.00
  .000945       320.      400.      550.         2         0         0      0.00    100.00   2100.00

*SECNO 27.700
 2800 NAT Q1=    331.86  WSEL=    950.14  ENC Q1=    331.66  WSEL=    950.24  RATIO=  0.0000
  NAT Q1=    349.  RATIOS LOB,CH,ROB=    .0175    .9332    .0493  WSEL=    950.24

3470 ENCROACHMENT STATIONS=    2050.0    2163.3  TYPE=       4  TARGET=          .048
    27.70      4.35    950.25      0.00    950.14    950.30       .05      1.00       .01    948.30
      735.        0.      721.       14.        0.      405.       20.      449.      179.    947.90
     6.22      0.00      1.78       .70      .070      .045      .070      .048    945.90   2050.00
  .000495      1660.     1500.     1330.         0         0         0      0.00    113.34   2163.34

*SECNO 27.800
 2800 NAT Q1=    258.25  WSEL=    950.33  ENC Q1=    268.98  WSEL=    950.43  RATIO=  -.0416
  NAT Q1=    269.  RATIOS LOB,CH,ROB=  0.0000   1.0000   0.0000  WSEL=    950.43

3470 ENCROACHMENT STATIONS=    2129.0    2221.0  TYPE=       4  TARGET=          0.000
    27.80      4.94    950.44      0.00    950.33    950.52       .07       .20       .01    950.70
      735.        0.      735.        0.        0.      340.        0.      452.      180.    951.80
     6.26      0.00      2.16      0.00      .070      .045      .070      .048    945.50   2129.50
  .000741       360.      340.      360.         2         0         0      0.00     88.62   2218.11

*SECNO 27.900
 2800 NAT Q1=    312.80  WSEL=    950.38  ENC Q1=    324.89  WSEL=    950.48  RATIO=  -.0386
  NAT Q1=    325.  RATIOS LOB,CH,ROB=  0.0000   1.0000   0.0000  WSEL=    950.48

3470 ENCROACHMENT STATIONS=    2141.0    2232.0  TYPE=       4  TARGET=          0.000
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=     954.05 ELREA=     954.05

    27.90      4.99    950.49      0.00    950.38    950.54       .05       .02       .01    955.40
      735.        0.      735.        0.        0.      391.        0.      453.      180.    955.40
     6.27      0.00      1.88      0.00      .070      .045      .070      .048    945.50   2141.00
  .000510        32.       32.       32.         2         0         0      0.00     91.00   2232.00

CCHV=    .300  CEHV=    .500
*SECNO 28.000
    3700.  BRIDGE STENCL=    2141.00    STENCR=    2232.00
  SECNO     DEPTH     CWSEL     CRIWS     WSELR     EG        HV        HL        QLOSS     BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
  TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
  SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD=  954.80 MAX ELLC=  952.70

      D/S FACE OF F DRIVE SOUTH.CONCRETE    (F)
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MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.00 | 4.99 | 950.49 | 0.00 | 950.39 | 950.54 | .05 | .00 | .00 | 955.40 |
| 690. | 0. | 690. | 0. | 0. | 374. | 0. | 453. | 180. | 955.40 |
| 6.27 | 0.00 | 1.84 | 0.00 | .070 | .026 | .070 | .048 | 945.50 | 2141.00 |
| .000209 | 1. | 1. | 1. | 0 | 0 | 0 | -17.08 | 91.00 | 2232.00 |

*SECNO 28.100
2800 NAT Q1= 505.30 WSEL= 950.40 ENC Q1= 522.47 WSEL= 950.50 RATIO= +.0340
NAT Q1= 522. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 950.50

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 954.80 MAX ELLC= 952.70

3470 ENCROACHMENT STATIONS= 2149.0 2240.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.10 | 4.80 | 950.50 | 0.00 | 950.40 | 950.55 | .05 | .01 | .00 | 955.40 |
| 690. | 0. | 690. | 0. | 0. | 389. | 0. | 453. | 180. | 955.40 |
| 6.27 | 0.00 | 1.77 | 0.00 | .070 | .026 | .070 | .048 | 945.70 | 2149.00 |
| .000174 | 37. | 37. | 37. | 0 | 0 | 0 | -8.68 | 91.00 | 2240.00 |

CCHV= .300 CEHV= .500
*SECNO 28.200
2800 NAT Q1= 324.02 WSEL= 950.40 ENC Q1= 336.64 WSEL= 950.56 RATIO= +.0390
NAT Q1= 337. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 950.50

3470 ENCROACHMENT STATIONS= 2149.0 2240.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 955.40 ELREA= 955.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.20 | 4.80 | 950.50 | 0.00 | 950.40 | 950.55 | .05 | .00 | .00 | 955.40 |
| 690. | 0. | 690. | 0. | 0. | 398. | 0. | 453. | 180. | 955.40 |
| 6.27 | 0.00 | 1.73 | 0.00 | .070 | .045 | .070 | .048 | 945.70 | 2149.00 |
| .000419 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 91.00 | 2240.00 |

*SECNO 28.300

3470 ENCROACHMENT STATIONS= 2117.0 2272.0 TYPE= 1 TARGET= 155.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.30 | 4.72 | 950.52 | 0.00 | 950.41 | 950.57 | .05 | .01 | .00 | 947.20 |
| 690. | 31. | 627. | 31. | 51. | 324. | 51. | 453. | 180. | 947.20 |
| 6.28 | .61 | 1.93 | .61 | .070 | .045 | .070 | .048 | 945.80 | 2117.00 |
| .000487 | 32. | 32. | 32. | 0 | 0 | 0 | 0.00 | 155.00 | 2272.00 |

CCHV= .100 CEHV= .300
*SECNO 28.420
2800 NAT Q1= 295.72 WSEL= 950.73 ENC Q1= 295.72 WSEL= 950.83 RATIO= .0000
NAT Q1= 330. RATIOS LOB,CH,ROB= .0637 .8611 .0552 WSEL= 950.83

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 1683.8 2242.9 TYPE= 4 TARGET= .105

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.42 | 4.33 | 950.82 | 0.00 | 950.73 | 950.87 | .06 | .30 | .00 | 948.40 |
| 690. | 24. | 665. | 1. | 41. | 344. | 3. | 459. | 182. | 948.12 |
| 6.36 | .57 | 1.93 | .40 | .070 | .045 | .070 | .048 | 946.49 | 1683.79 |
| .000554 | 590. | 580. | 570. | 2 | 0 | 0 | 0.00 | 130.73 | 2242.86 |

MOORE BUSINESS FORMS, INC. 23

```
CCHV=    .100 CEHV=    .300
*SECNO 28.670
 2800 NAT Q1=     294.39  WSEL=     952.20  ENC Q1=     294.39  WSEL=     952.30  RATIO=  0.0000
 NAT Q1=     310.  RATIOS LOB,CH,ROB=    .0276    .9319    .0404  WSEL=     952.30
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT.
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3470 ENCROACHMENT STATIONS=     2016.1     2127.4  TYPE=      4  TARGET=          .049
        SURVEYED VALLEY SECTION    (G)
    28.67      4.04    952.29      0.00    952.20    952.35       .05      1.47       .00    949.26
     690.        1.      678.       11.        3.      372.       15.      482.      190.     949.38
     6.77       .39      1.82       .76      .070      .045      .070      .048    948.25   2016.10
  .000552     2780.     2660.     2800.         2         0         0      0.00    111.30   2127.39

*SECNO 28.800
 2800 NAT Q1=     353.45  WSEL=     952.52  ENC Q1=     355.88  WSEL=     952.62  RATIO=  -.0069
 NAT Q1=     370.  RATIOS LOB,CH,ROB=    .0008    .9608    .0384  WSEL=     952.62
3470 ENCROACHMENT STATIONS=     2000.0     2126.0  TYPE=      4  TARGET=          .039
    28.80      4.33    952.63      0.00    952.52    952.67       .04       .32       .00    952.00
     690.        0.      690.        0.        0.      459.        0.      489.      192.     950.90
     6.90      0.00      1.50      0.00      .070      .045      .070      .048    948.30   2000.00
  .000383      800.      700.      400.         2         0         0      0.00    126.00   2126.00

*SECNO 28.810
 2800 NAT Q1=     109.16  WSEL=     952.47  ENC Q1=     113.15  WSEL=     952.57  RATIO=  -.0365
 NAT Q1=     117.  RATIOS LOB,CH,ROB=    .0328    .9672   0.0000  WSEL=     952.57
3470 ENCROACHMENT STATIONS=     2000.0     2100.0  TYPE=      4  TARGET=          .033
    28.81      3.28    952.58      0.00    952.47    952.78       .20       .07       .05    951.30
     690.        0.      690.        0.        0.      191.        0.      490.      192.     956.30
     6.91      0.00      3.61      0.00      .070      .045      .070      .048    949.30   2000.00
  .003754       80.       75.       15.         2         0         0      0.00     78.46   2078.46

*SECNO 28.900
 2800 NAT Q1=     138.47  WSEL=     952.61  ENC Q1=     146.02  WSEL=     952.71  RATIO=  -.0545
 NAT Q1=     146.  RATIOS LOB,CH,ROB=  0.0000   1.0000   0.0000  WSEL=     952.71
3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=         0.000
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       957.10 ELREA=       957.00
    28.90      3.62    952.72      0.00    952.61    952.88       .16       .10       .00    957.70
     690.        0.      690.        0.        0.      217.        0.      490.      192.     957.60
     6.91      0.00      3.19      0.00      .070      .045      .070      .048    949.10   2000.00
  .002208       34.       34.       34.         2         0         0      0.00     70.00   2070.00

CCHV=    .300 CEHV=    .500
*SECNO 29.000
    3700.   BRIDGE STENCL=    2000.00    STENCR=    2070.00
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MOORE BUSINESS FORMS, INC. 23

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 2800 NAT Q1=     208.08  WSEL=     952.61  ENC Q1=     214.28  WSEL=     952.71  RATIO=  -.0298
 NAT Q1=     214.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.71

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD=  957.10 MAX ELLC=  956.40

3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=        0.000
        D/S FACE OF CONDUIT RD. BRIDGE.CONCRETE    (H)

     29.00      3.62    952.72      0.00    952.61    952.89       .17       .00       .01    957.70
      690.        0.      690.        0.        0.      209.        0.      490.      192.     957.60
      6.91      0.00      3.30      0.00      .020      .026      .020      .048    949.10   2000.00
   .001022        1.        1.        1.         0         0         0     -7.58     70.00   2070.00

*SECNO 29.100
     3700.   BRIDGE STENCL=    2000.00     STENCR=    2070.00
 2800 NAT Q1=     232.42  WSEL=     952.67  ENC Q1=     242.10  WSEL=     952.77  RATIO=  -.0417
 NAT Q1=     242.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.77
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD=  957.10 MAX ELLC=  956.40

3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=        0.000
     29.10      4.38    952.78      0.00    952.67    952.92       .15       .03       .01    957.70
      690.        0.      690.        0.        0.      225.        0.      490.      192.     957.60
      6.91      0.00      3.07      0.00      .020      .026      .020      .048    948.40   2000.00
   .000808       30.       30.       30.         2         0         0     -7.67     70.00   2070.00

CCHV=     .300 CEHV=     .500
*SECNO 29.200
 2800 NAT Q1=     157.83  WSEL=     952.69  ENC Q1=     166.36  WSEL=     952.79  RATIO=  -.0541
 NAT Q1=     166.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.79

3470 ENCROACHMENT STATIONS=     2000.0     2070.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       957.70 ELREA=       956.60

     29.20      4.39    952.79      0.00    952.69    952.93       .14       .00       .00    957.70
      690.        0.      690.        0.        0.      233.        0.      490.      192.     957.60
      6.91      0.00      2.96      0.00      .060      .045      .060      .048    948.40   2000.00
   .001722        1.        1.        1.         1         0         0      0.00     70.00   2070.00

*SECNO 29.300
 2800 NAT Q1=     127.01  WSEL=     952.74  ENC Q1=     133.19  WSEL=     952.84  RATIO=  -.0487
 NAT Q1=     133.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     952.84

3470 ENCROACHMENT STATIONS=     1972.0     2065.0  TYPE=      4  TARGET=        0.000
     29.30      4.44    952.84      0.00    952.74    953.03       .19       .07       .03    956.20
      690.        0.      690.        0.        0.      197.        0.      490.      192.     954.70
      6.92      0.00      3.50      0.00      .060      .045      .060      .048    948.40   1990.18
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 .002683      34.      34.      34.       2        0        0     0.00    66.12  2056.30

CCHV=     .100 CEHV=     .300
*SECNO 29.420
 2800 NAT Q1=     157.29  WSEL=     953.50  ENC Q1=     164.77  WSEL=     953.60  RATIO=  -.0475
 NAT Q1=     165.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     953.60

3470 ENCROACHMENT STATIONS=     2000.0     2088.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       955.50 FLREA=       956.20

    29.42      4.66    953.54      0.00    953.50    953.68       .14       .65       .01    955.50
     690.        0.      690.        0.        0.      233.        0.      492.      192.    954.22
     6.94      0.00      2.96      0.00      .060      .045      .060      .048    948.88   2009.05
  .001845      220.      294.      510.         2         0         0      0.00     76.16   2085.21

*SECNO 29.550
 2800 NAT Q1=     263.59  WSEL=     954.71  ENC Q1=     265.22  WSEL=     954.81  RATIO=  -.0062
 NAT Q1=     276.  RATIOS LOB,CH,ROB=   .0058   .9605   .0337  WSEL=     954.81

3470 ENCROACHMENT STATIONS=     2000.0     2078.0  TYPE=      4  TARGET=        .039
    29.55      5.27    954.76      0.00    954.71    954.84       .07      1.15       .01    954.10
     690.        0.      690.        0.        0.      315.        0.      498.      194.    953.27
     7.08      0.00      2.19      0.00      .060      .045      .060      .047    949.49   2000.00
  .000726     1010.     1050.     1060.         2         0         0      0.00     78.00   2078.00

CCHV=     .300 CEHV=     .500
*SECNO 29.800
 2800 NAT Q1=     305.73  WSEL=     954.94  ENC Q1=     305.73  WSEL=     955.04  RATIO=   .0000
 NAT Q1=     321.  RATIOS LOB,CH,ROB=   .0347   .8967   .0686  WSEL=     955.04
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

3470 ENCROACHMENT STATIONS=     1992.7     2093.7  TYPE=      4  TARGET=        .048
    29.80      5.30    955.00      0.00    954.94    955.06       .06       .22       .00    953.40
     690.        7.      651.       32.       11.      323.       39.      501.      195.    952.80
     7.13       .66      2.01       .82      .060      .045      .060      .047    949.70   1992.68
  .000523      300.      359.      390.         2         0         0      0.00    100.98   2093.66

*SECNO 29.810
 2800 NAT Q1=     342.70  WSEL=     955.02  ENC Q1=     342.70  WSEL=     955.12  RATIO=  0.0000
 NAT Q1=     358.  RATIOS LOB,CH,ROB=   .0458   .9202   .0340  WSEL=     955.12

3470 ENCROACHMENT STATIONS=     1985.4     2087.4  TYPE=      4  TARGET=        .041
    29.81      5.99    955.09      0.00    955.02    955.14       .05       .07       .00    953.10
     690.       18.      663.        9.       26.      363.       14.      503.      195.    953.10
     7.15       .69      1.83       .66      .060      .045      .060      .047    949.10   1985.39
  .000415      140.      160.      140.         2         0         0      0.00    102.05   2087.44

*SECNO 29.900
 2800 NAT Q1=     295.39  WSEL=     955.03  ENC Q1=     304.14  WSEL=     955.13  RATIO=  -.0296
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MOORE BUSINESS FORMS, INC. 23

NAT Q1= 304. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 955.13

3470 ENCROACHMENT STATIONS= 2000.0 2069.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 957.50 ELREA= 957.45

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.90 | 5.60 | 955.10 | 0.00 | 955.03 | 955.16 | .06 | .02 | .01 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 341. | 0. | 503. | 196. | 958.10 |
| 7.16 | 0.00 | 2.62 | 0.00 | .060 | .045 | .060 | .047 | 949.50 | 2000.00 |
| .000521 | 39. | 39. | 39. | 0 | 0 | 0 | 0.00 | 69.00 | 2069.00 |

CCHV= .300 CEHV= .500

*SECNO 30.000

3700. BRIDGE STENCL= 2000.00 STENCR= 2069.00

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 957.70 MAX ELLC= 956.90

D/S FACE OF H DRIVE SOUTH BRIDGE.CONCRETE (I)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.00 | 5.60 | 955.10 | 0.00 | 955.03 | 955.17 | .07 | .00 | .01 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 317. | 0. | 503. | 196. | 956.10 |
| 7.16 | 0.00 | 2.18 | 0.00 | .020 | .026 | .020 | .047 | 949.50 | 2000.00 |
| .000346 | 1. | 1. | 1. | 1 | 0 | 0 | -23.70 | 69.00 | 2069.00 |

*SECNO 30.100

2800 NAT Q1= 393.85 WSEL= 955.03 ENC Q1= 404.99 WSEL= 955.13 RATIO= -.0283

NAT Q1= 405. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 955.13

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 957.70 MAX ELLC= 956.90

3470 ENCROACHMENT STATIONS= 2000.0 2069.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.10 | 5.11 | 955.11 | 0.00 | 955.03 | 955.18 | .07 | .01 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 324. | 0. | 503. | 196. | 958.10 |
| 7.16 | 0.00 | 2.13 | 0.00 | .020 | .026 | .020 | .047 | 950.00 | 2000.00 |
| .000295 | 30. | 30. | 30. | 0 | 0 | 0 | -9.65 | 69.00 | 2069.00 |

CCHV= .300 CEHV= .500

*SECNO 30.200

2800 NAT Q1= 285.66 WSEL= 955.04 ENC Q1= 295.70 WSEL= 955.14 RATIO= -.0352

NAT Q1= 296. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 955.14

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CKSEC | CKWS | WSELK | EG | HV | HL | QLOSS | RANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICOUNT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 2000.0 2069.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 958.10 ELREA= 958.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.20 | 5.12 | 955.12 | 0.00 | 955.04 | 955.18 | .07 | .00 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 334. | 0. | 503. | 196. | 958.10 |
| 7.16 | 0.00 | 2.06 | 0.00 | .060 | .045 | .060 | .047 | 950.00 | 2000.00 |
| .000555 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 69.00 | 2069.00 |

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*SECNO 30.300
2800 NAT Q1= 383.25 WSEL= 955.10 ENC Q1= 383.25 WSEL= 955.20 RATIO= 0.0000
NAT Q1= 401. RATIOS LOB,CH,ROB= .0398 .8939 .0664 WSEL= 955.20

3470 ENCROACHMENT STATIONS= 1993.8 2116.6 TYPE= 4 TARGET= .043

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.30 | 5.07 | 955.17 | 0.00 | 955.10 | 955.21 | .04 | .02 | .01 | 952.00 |
| 690. | 12. | 646. | 32. | 17. | 396. | 49. | 503. | 196. | 951.60 |
| 7.17 | .72 | 1.63 | .65 | .060 | .045 | .060 | .047 | 950.10 | 1993.78 |
| .000332 | 39. | 39. | 39. | 2 | 0 | 0 | 0.00 | 122.79 | 2116.57 |

CCHV= .100 CEHV= .300

*SECNO 30.400
2800 NAT Q1= 382.68 WSEL= 955.12 ENC Q1= 382.68 WSEL= 955.22 RATIO= 0.0000
NAT Q1= 399. RATIOS LOB,CH,ROB= .0351 .9063 .0587 WSEL= 955.22

3470 ENCROACHMENT STATIONS= 1994.1 2115.9 TYPE= 4 TARGET= .040

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.40 | 5.09 | 955.19 | 0.00 | 955.12 | 955.23 | .04 | .03 | .00 | 952.00 |
| 690. | 10. | 653. | 27. | 17. | 398. | 49. | 504. | 196. | 951.60 |
| 7.18 | .61 | 1.64 | .56 | .070 | .045 | .070 | .047 | 950.10 | 1994.14 |
| .000333 | 76. | 76. | 76. | 0 | 0 | 0 | 0.00 | 121.77 | 2115.91 |

*SECNO 31.000
2800 NAT Q1= 269.37 WSEL= 956.37 ENC Q1= 269.37 WSEL= 956.47 RATIO= 0.0000
NAT Q1= 285. RATIOS LOB,CH,ROB= .0221 .9223 .0556 WSEL= 956.47

3470 ENCROACHMENT STATIONS= 2006.0 2109.8 TYPE= 4 TARGET= .055

SURVEYED VALLEY SECTION (J)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.00 | 4.08 | 956.48 | 0.00 | 956.37 | 956.54 | .06 | 1.30 | .01 | 953.60 |
| 690. | 0. | 674. | 16. | 0. | 343. | 19. | 531. | 203. | 953.70 |
| 7.59 | 0.00 | 1.96 | .85 | .070 | .045 | .070 | .047 | 952.40 | 2006.00 |
| .000680 | 2700. | 2825. | 2840. | 1 | 0 | 0 | 0.00 | 103.84 | 2109.84 |

*SECNO 31.800
2800 NAT Q1= 383.94 WSEL= 957.53 ENC Q1= 383.94 WSEL= 957.63 RATIO= 0.0000
NAT Q1= 405. RATIOS LOB,CH,ROB= .0057 .8216 .1727 WSEL= 957.63

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 2000.0 2317.9 TYPE= 4 TARGET= .053

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.80 | 5.37 | 957.67 | 0.00 | 957.53 | 957.70 | .04 | 1.16 | .00 | 954.80 |
| 690. | 0. | 594. | 96. | 0. | 366. | 224. | 559. | 215. | 955.10 |
| 8.08 | 0.00 | 1.61 | .43 | .070 | .045 | .070 | .047 | 952.30 | 2000.00 |
| .000324 | 2520. | 2566. | 2440. | 1 | 0 | 0 | 0.00 | 314.40 | 2317.91 |

*SECNO 31.805

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | C#SEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

MOORE BUSINESS FORMS, INC. 23

3470 ENCROACHMENT STATIONS= 1982.0 2045.0 TYPE= 1 TARGET= 113.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 5.04 | 957.74 | 0.00 | 957.60 | 957.81 | .08 | .10 | .01 | 956.30 |
| 690. | 1. | 672. | 16. | 3. | 297. | 24. | 561. | 216. | 955.10 |
| 8.10 | .43 | 2.26 | .67 | .070 | .045 | .070 | .047 | 952.70 | 1995.69 |
| .000695 | 240. | 223. | 180. | 2 | 0 | 0 | 0.00 | 92.70 | 2088.39 |

*SECNO 31.810

3470 ENCROACHMENT STATIONS= 1987.0 2083.0 TYPE= 1 TARGET= 96.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 5.06 | 957.76 | 0.00 | 957.63 | 957.84 | .08 | .03 | .00 | 956.30 |
| 690. | 1. | 672. | 17. | 3. | 299. | 22. | 561. | 216. | 955.10 |
| 8.11 | .43 | 2.25 | .76 | .070 | .045 | .070 | .047 | 952.70 | 1995.63 |
| .000683 | 37. | 37. | 37. | 0 | 0 | 0 | 0.00 | 87.37 | 2083.00 |

*SECNO 31.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 960.55 ELREA= 960.55

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.90 | 5.10 | 957.80 | 0.00 | 957.67 | 957.87 | .08 | .03 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 307. | 0. | 562. | 216. | 961.20 |
| 8.12 | 0.00 | 2.25 | 0.00 | .070 | .045 | .070 | .047 | 952.70 | 2000.00 |
| .000728 | 49. | 49. | 49. | 0 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 32.000

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

D/S FACE OF J DRIVE SOUTH BRIDGE,CONCRETE (K)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.00 | 5.09 | 957.79 | 0.00 | 957.67 | 957.86 | .08 | .00 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 297. | 0. | 562. | 216. | 961.20 |
| 8.12 | 0.00 | 2.32 | 0.00 | .020 | .026 | .020 | .047 | 952.70 | 2000.00 |
| .000360 | 1. | 1. | 1. | 0 | 0 | 0 | -9.30 | 70.00 | 2070.00 |

*SECNO 32.100

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.10 | 5.21 | 957.81 | 0.00 | 957.69 | 957.89 | .08 | .01 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 310. | 0. | 562. | 216. | 961.20 |
| 8.12 | 0.00 | 2.23 | 0.00 | .020 | .026 | .020 | .047 | 952.60 | 2000.00 |
| .000319 | 30. | 30. | 30. | 0 | 0 | 0 | -9.53 | 70.00 | 2070.00 |

CCHV= .100 CEHV= .300
*SECNO 32.200

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 961.10 ELREA= 961.10

MOORE BUSINESS FORMS, INC. 23

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    32.20      5.22    957.82      0.00    957.70    957.89       .07       .00       .00    961.20
     690.        0.      690.        0.        0.      319.        0.      562.      216.    961.20
     8.12      0.00      2.16      0.00      .070      .045      .070      .047    952.60   2000.00
  .000641        1.        1.        1.         0         0         0      0.00     70.00   2070.00

*SECNO 32.300

3470 ENCROACHMENT STATIONS=     1972.0     2142.0  TYPE=      1  TARGET=      170.000
    32.30      5.19    957.89      0.00    957.77    957.91       .02       .02       .01    955.70
     690.        6.      643.       41.       18.      523.       77.      562.      216.    954.70
     8.13       .30      1.23       .54      .070      .045      .070      .047    952.70   1983.26
  .000184       49.       49.       49.         2         0         0      0.00    158.74   2142.00

CCHV=     .100 CEHV=     .300
*SECNO 33.000
 2800 NAT Q1=     234.81  WSEL=     959.21  ENC Q1=     234.81  WSEL=     959.31  RATIO=  0.0000
 NAT Q1=     257.  RATIOS LOB,CH,ROB=    .0402    .5758    .3841  WSEL=     959.31

3470 ENCROACHMENT STATIONS=     2000.0     2310.6  TYPE=      4  TARGET=        .087

        SURVEYED VALLEY SECTION    (L)

    33.00      4.27    959.27      0.00    959.21    959.33       .06      1.41       .01    958.80
     690.        0.      439.      251.        0.      190.      348.      614.      237.    958.70
     8.77      0.00      2.30       .72      .080      .045      .080      .047    955.00   2000.00
  .000924     3250.     4100.     3625.         2         0         0      0.00    310.57   2310.57

*SECNO 33.850
 2800 NAT Q1=     230.43  WSEL=     961.29  ENC Q1=     237.69  WSEL=     961.39  RATIO=  -.0315
 NAT Q1=     238.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     961.39

3470 ENCROACHMENT STATIONS=     2032.0     2085.0  TYPE=      4  TARGET=        0.000
    33.85      5.95    961.37      0.00    961.29    961.47       .10      2.13       .01    962.75
     690.        0.      690.        0.        0.      268.        0.      637.      247.    963.30
     9.03      0.00      2.57      0.00      .080      .045      .080      .047    955.42   2032.00
  .000850     2390.     2399.     2410.         1         0         0      0.00     53.00   2085.00

*SECNO 33.900
 2800 NAT Q1=     229.03  WSEL=     961.31  ENC Q1=     237.40  WSEL=     961.41  RATIO=  -.0365
 NAT Q1=     237.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     961.41

3470 ENCROACHMENT STATIONS=     2027.0     2085.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       965.20 ELREA=       965.20

    33.90      5.88    961.38      0.00    961.31    961.48       .10       .01       .00    967.30
     690.        0.      690.        0.        0.      279.        0.      637.      247.    967.30
     9.03      0.00      2.48      0.00      .080      .045      .080      .047    955.50   2027.00
  .000861       13.       13.       13.         0         0         0      0.00     58.00   2085.00

CCHV=     .300 CEHV=     .500
*SECNO 34.000
     3700.   BRIDGE STENCL=    2027.00    STENCR=    2085.00
   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG        HV        HL        OLOSS   BANK ELEV
```

| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | IWA | LEFT/RIGHT |
|---|---|---|---|---|---|---|---|---|---|
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IOC | ICONT | CORAR | TOPWID | FNDST |

3370 NORMAL BRIDGE.NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

D/S FACE OF 25 1/2 MILE ROAD BRIDGE.CONCRETE (M)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.00 | 5.88 | 961.38 | 0.00 | 961.31 | 961.48 | .10 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 267. | 0. | 637. | 247. | 967.30 |
| 9.03 | 0.00 | 2.58 | 0.00 | .020 | .026 | .020 | .047 | 955.50 | 2027.00 |
| .000411 | 1. | 1. | 1. | 2 | 0 | 0 | -11.65 | 58.00 | 2085.00 |

*SECNO 34.100
2800 NAT QI= 345.70 WSEL= 961.31 ENC QI= 356.57 WSEL= 961.41 RATIO= -.0315
NAT QI= 357. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 961.41

3370 NORMAL BRIDGE.NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

3470 ENCROACHMENT STATIONS= 2025.0 2083.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.10 | 5.39 | 961.39 | 0.00 | 961.31 | 961.50 | .10 | .01 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 266. | 0. | 637. | 247. | 967.30 |
| 9.04 | 0.00 | 2.60 | 0.00 | .020 | .026 | .020 | .047 | 956.00 | 2025.00 |
| .000379 | 29. | 29. | 29. | 0 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

CCHV= .300 CEHV= .500
*SECNO 34.200
2800 NAT QI= 213.64 WSEL= 961.31 ENC QI= 221.17 WSEL= 961.41 RATIO= -.0353
NAT QI= 221. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 961.41

3470 ENCROACHMENT STATIONS= 2025.0 2083.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 967.30 ELREA= 967.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.20 | 5.39 | 961.39 | 0.00 | 961.31 | 961.50 | .10 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 266. | 0. | 637. | 247. | 967.30 |
| 9.04 | 0.00 | 2.60 | 0.00 | .060 | .045 | .060 | .047 | 956.00 | 2025.00 |
| .000987 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

*SECNO 34.250
2800 NAT QI= 240.13 WSEL= 961.35 ENC QI= 248.69 WSEL= 961.45 RATIO= -.0356
NAT QI= 249. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 961.45

3470 ENCROACHMENT STATIONS= 2025.0 2089.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.25 | 4.97 | 961.43 | 0.00 | 961.35 | 961.51 | .09 | .01 | .01 | 963.90 |
| 690. | 0. | 690. | 0. | 0. | 291. | 0. | 637. | 247. | 963.60 |
| 9.04 | 0.00 | 2.37 | 0.00 | .060 | .045 | .060 | .047 | 956.46 | 2025.00 |
| .000782 | 13. | 13. | 13. | 2. | 0 | 0 | 0.00 | 64.00 | 2089.00 |

CCHV= .100 CEHV= .300
*SECNO 34.300

MOORE BUSINESS FORMS, INC. 23

3470 ENCROACHMENT STATIONS= 1967.0 2103.0 TYPE= 1 TARGET= 136.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.30 | 5.27 | 961.47 | 0.00 | 961.40 | 961.53 | .06 | .02 | .00 | 960.50 |
| 690. | 11. | 651. | 28. | 29. | 321. | 50. | 637. | 247. | 959.90 |
| 9.04 | .38 | 2.03 | .55 | .080 | .045 | .080 | .047 | 956.20 | 1967.00 |
| .000528 | 26. | 26. | 26. | 2 | 0 | 0 | 0.00 | 136.00 | 2103.00 |

*SECNO 34.800

3265 DIVIDED FLOW

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNP | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1877.0 2226.0 TYPE= 1 TARGET= 349.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.80 | 4.79 | 961.89 | 0.00 | 961.83 | 961.92 | .04 | .39 | .00 | 963.70 |
| 690. | 105. | 578. | 7. | 186. | 349. | 31. | 646. | 251. | 966.30 |
| 9.20 | .56 | 1.66 | .24 | .080 | .045 | .080 | .047 | 957.10 | 1877.00 |
| .000419 | 1000. | 820. | 460. | 2 | 0 | 0 | 0.00 | 265.42 | 2226.00 |

*SECNO 34.810

3470 ENCROACHMENT STATIONS= 1987.0 2092.0 TYPE= 1 TARGET= 105.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.81 | 3.83 | 962.03 | 0.00 | 961.99 | 962.14 | .10 | .19 | .02 | 963.70 |
| 690. | 0. | 684. | 6. | 0. | 262. | 10. | 649. | 252. | 960.50 |
| 9.23 | 0.00 | 2.61 | .62 | .080 | .045 | .080 | .047 | 958.20 | 2002.66 |
| .001272 | 340. | 280. | 150. | 2 | 0 | 0 | 0.00 | 89.34 | 2092.00 |

*SECNO 34.900

3470 ENCROACHMENT STATIONS= 894.0 3606.0 TYPE= 1 TARGET= 2712.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 967.25 ELREA= 967.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.90 | 4.10 | 962.10 | 0.00 | 962.06 | 962.19 | .09 | .06 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 284. | 0. | 649. | 252. | 959.40 |
| 9.23 | 0.00 | 2.43 | 0.00 | .080 | .045 | .080 | .047 | 958.00 | 2000.00 |
| .001045 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 80.00 | 2080.00 |

CCHV= .300 CEHV= .500
*SECNO 35.000

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

D/S FACE OF L DRIVE SOUTH BRIDGE.CONCRETE (N)

U/S LIMIT OF ALBION TWP.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.00 | 4.11 | 962.11 | 0.00 | 962.07 | 962.20 | .08 | .00 | .00 | 968.80 |
| 690. | 0. | 649. | 41. | 0. | 277. | 19. | 649. | 252. | 959.40 |
| 9.23 | 0.00 | 2.34 | 2.17 | .017 | .022 | .017 | .047 | 958.00 | 2000.00 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .000266 | 1. | 1. | 1. | 0 | 0 | 0 | -6.93 | 88.00 | 2088.00 |

*SECNO 35.100

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.10 | 4.42 | 962.12 | 0.00 | 962.08 | 962.21 | .09 | .01 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 293. | 0. | 650. | 252. | 968.80 |
| 9.24 | 0.00 | 2.36 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 |
| .000294 | 32. | 32. | 32. | 1 | 0 | 0 | -8.36 | 88.00 | 2088.00 |

*SECNO 35.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 968.80 ELREA= 968.80

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.20 | 4.43 | 962.13 | 0.00 | 962.09 | 962.21 | .08 | .00 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 301. | 0. | 650. | 252. | 968.80 |
| 9.24 | 0.00 | 2.30 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 |
| .000238 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 88.00 | 2088.00 |

*SECNO 35.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.25 | 2.70 | 962.10 | 0.00 | 962.06 | 962.27 | .18 | .02 | .05 | 959.60 |
| 690. | 20. | 602. | 68. | 8. | 174. | 26. | 650. | 252. | 959.92 |
| 9.24 | 2.66 | 3.46 | 2.58 | .017 | .022 | .017 | .047 | 959.40 | 2000.93 |
| .000763 | 51. | 51. | 51. | 2 | 0. | 0 | 0.00 | 110.06 | 2110.99 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.75 | 3.00 | 69.00 | 1.00 | 0.00 | 1.00 | 0.00 | 959.59 | 959.40 |

*SECNO 35.300

3265 DIVIDED FLOW

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 13899.60 | 962.46 | 0.00 | 686. | 8. | 1. | 1. | 960.59 | 961.47 |

SPILLWAY STRUCTURE

T.W. u/s = 600 ft

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.30 | 4.27 | 963.67 | 0.00 | 963.67 | 963.71 | .03 | 1.43 | 0.00 | 962.48 |
| 690. | 150. | 256. | 285. | 144. | 154. | 202. | 650. | 252. | 961.49 |
| 9.24 | 1.04 | 1.66 | 1.41 | .017 | .022 | .017 | .047 | 959.40 | 1749.10 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .000227 | 10. | 10. | 10. | 2 | 0 | 8 | 0.00 | 599.42 | 2361.08 |

*SECNO 35.350

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.35 | 3.92 | 963.68 | 0.00 | 963.68 | 963.71 | .03 | .00 | .00 | 962.48 |
| 690. | 104. | 386. | 199. | 151. | 251. | 194. | 650. | 252. | 962.12 |
| 9.25 | .69 | 1.54 | 1.00 | .017 | .022 | .017 | .047 | 959.76 | 1689.70 |
| .000116 | 10. | 10. | 10. | 0 | 0 | 0 | 0.00 | 660.22 | 2361.14 |

*SECNO 36.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.00 | 3.04 | 964.34 | 0.00 | 964.34 | 964.48 | .14 | .71 | .06 | 962.80 |
| 690. | 6. | 657. | 26. | 4. | 218. | 18. | 680. | 277. | 963.20 |
| 9.55 | 1.71 | 3.02 | 1.44 | .017 | .022 | .017 | .045 | 961.30 | 2001.13 |
| .000576 | 2680. | 3430. | 2600. | 2 | 0 | 0 | 0.00 | 122.49 | 2123.62 |

MOORE BUSINESS FORMS, INC. 23

MOORE BUSINESS FORMS, INC. 23

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

100 YEAR FLOW
SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 24.000 | 946.17 | 1989.28 | 2000.00 | 2278.00 | 2326.06 | 336.78 | 0.00 |
| 24.000 | 946.27 | 2000.00 | 2000.00 | 2278.00 | 2278.00 | 278.00 | 0.00 |
| 24.100 | 946.20 | 1993.29 | 2000.00 | 2220.00 | 2242.76 | 339.47 | 2280.00 |
| 24.100 | 946.30 | 2000.00 | 2000.00 | 2220.00 | 2220.00 | 220.00 | 2280.00 |
| 24.200 | 946.25 | 989.89 | 3000.00 | 3150.00 | 3337.82 | 1993.31 | 2300.00 |
| 24.200 | 946.35 | 1265.28 | 3000.00 | 3150.00 | 3150.00 | 1533.48 | 2300.00 |
| 25.000 | 946.37 | 2938.00 | 4000.00 | 4090.00 | 4251.88 | 845.34 | 2290.00 |
| 25.000 | 946.47 | 3055.49 | 4000.00 | 4090.00 | 4144.09 | 673.80 | 2290.00 |
| 25.600 | 946.99 | 3560.18 | 4000.00 | 4060.00 | 4499.81 | 939.62 | 2850.00 |
| 25.600 | 947.10 | 3614.54 | 4000.00 | 4060.00 | 4140.64 | 526.11 | 2850.00 |
| 25.800 | 947.31 | 1901.00 | 2000.00 | 2050.00 | 2148.00 | 247.00 | 1100.00 |
| 25.800 | 947.41 | 1901.00 | 2000.00 | 2050.00 | 2148.00 | 247.00 | 1100.00 |
| 25.900 | 947.53 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 324.00 |
| 25.900 | 947.60 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 324.00 |
| 26.000 | 947.54 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.000 | 947.61 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.100 | 947.62 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 26.00 |
| 26.100 | 947.69 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 26.00 |
| 26.200 | 947.63 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.200 | 947.69 | 2000.00 | 2000.00 | 2085.00 | 2085.00 | 85.00 | 16.90 |
| 26.400 | 947.68 | 1897.00 | 2000.00 | 2093.00 | 2196.00 | 299.00 | 107.00 |
| 26.400 | 947.74 | 1820.45 | 2000.00 | 2093.00 | 2115.42 | 294.97 | 107.00 |
| 26.900 | 948.40 | 1445.84 | 2000.00 | 2124.00 | 2164.93 | 719.08 | 3000.00 |
| 26.900 | 948.49 | 1633.32 | 2000.00 | 2124.00 | 2124.00 | 490.68 | 3000.00 |
| 27.000 | 948.40 | 1445.48 | 2030.00 | 2090.00 | 2090.00 | 501.16 | 72.00 |
| 27.000 | 948.50 | 1600.15 | 2030.00 | 2090.00 | 2090.00 | 354.80 | 72.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWTD | XLCH |
|---|---|---|---|---|---|---|---|
| 27.100 | 948.44 | 1444.77 | 2000.00 | 2143.00 | 2164.73 | 719.96 | 36.00 |
| 27.100 | 948.53 | 1620.45 | 2000.00 | 2143.00 | 2143.00 | 522.55 | 36.00 |
| 27.400 | 948.97 | 1896.00 | 2050.00 | 2169.50 | 2205.63 | 309.63 | 2700.00 |
| 27.400 | 949.08 | 1916.46 | 2050.00 | 2169.50 | 2169.50 | 253.04 | 2700.00 |
| 27.500 | 949.11 | 1956.70 | 2000.00 | 2100.00 | 2131.19 | 174.49 | 400.00 |
| 27.500 | 949.22 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 400.00 |
| 27.700 | 950.14 | 2021.28 | 2050.00 | 2154.00 | 2213.68 | 192.40 | 1500.00 |
| 27.700 | 950.25 | 2050.00 | 2050.00 | 2154.00 | 2163.34 | 113.34 | 1500.00 |
| 27.800 | 950.33 | 2129.71 | 2129.00 | 2221.00 | 2217.88 | 88.17 | 340.00 |
| 27.800 | 950.44 | 2129.50 | 2129.00 | 2221.00 | 2218.11 | 88.62 | 340.00 |
| 27.900 | 950.38 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 32.00 |
| 27.900 | 950.49 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 32.00 |
| 28.000 | 950.39 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 1.00 |
| 28.000 | 950.49 | 2141.00 | 2141.00 | 2232.00 | 2232.00 | 91.00 | 1.00 |
| 28.100 | 950.40 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 36.50 |
| 28.100 | 950.50 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 36.50 |
| 28.200 | 950.40 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 1.00 |
| 28.200 | 950.50 | 2149.00 | 2149.00 | 2240.00 | 2240.00 | 91.00 | 1.00 |
| 28.300 | 950.41 | 2117.00 | 2154.50 | 2229.00 | 2272.00 | 155.00 | 32.00 |
| 28.300 | 950.52 | 2117.00 | 2154.50 | 2229.00 | 2272.00 | 155.00 | 32.00 |
| 28.420 | 950.73 | 2138.48 | 2154.50 | 2241.88 | 2291.79 | 153.32 | 580.00 |
| 28.420 | 950.82 | 1683.79 | 2154.50 | 2241.88 | 2242.86 | 130.73 | 580.00 |
| 28.670 | 952.20 | 1996.59 | 2017.00 | 2120.00 | 2191.95 | 195.36 | 2660.00 |
| 28.670 | 952.29 | 2016.10 | 2017.00 | 2120.00 | 2127.39 | 111.30 | 2660.00 |
| 28.800 | 952.52 | 1992.17 | 2000.00 | 2126.00 | 2206.65 | 214.48 | 700.00 |
| 28.800 | 952.63 | 2000.00 | 2000.00 | 2126.00 | 2126.00 | 126.00 | 700.00 |
| 28.810 | 952.47 | 1964.51 | 2000.00 | 2100.00 | 2077.83 | 113.32 | 75.00 |
| 28.810 | 952.58 | 2000.00 | 2000.00 | 2100.00 | 2078.46 | 78.46 | 75.00 |
| 28.900 | 952.61 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 34.00 |
| 28.900 | 952.72 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 34.00 |
| 29.000 | 952.61 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.000 | 952.72 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.100 | 952.67 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 29.100 | 952.78 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 29.200 | 952.69 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.200 | 952.79 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 29.300 | 952.74 | 1990.74 | 1972.00 | 2065.00 | 2055.82 | 65.08 | 34.00 |
| 29.300 | 952.84 | 1990.18 | 1972.00 | 2065.00 | 2056.30 | 66.12 | 34.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 29.420 | 953.50 | 2009.27 | 2000.00 | 2088.00 | 2085.02 | 75.75 | 294.00 |
| 29.420 | 953.54 | 2009.05 | 2000.00 | 2088.00 | 2085.21 | 76.16 | 294.00 |
| 29.550 | 954.71 | 1968.40 | 2000.00 | 2078.00 | 2132.68 | 164.28 | 1050.00 |
| 29.550 | 954.76 | 2000.00 | 2000.00 | 2078.00 | 2078.00 | 78.00 | 1050.00 |
| 29.800 | 954.94 | 1940.86 | 2000.00 | 2073.00 | 2141.04 | 200.18 | 359.00 |
| 29.800 | 955.00 | 1992.68 | 2000.00 | 2073.00 | 2093.66 | 100.98 | 359.00 |
| 29.810 | 955.02 | 1937.97 | 2000.00 | 2080.00 | 2126.15 | 188.18 | 160.00 |
| 29.810 | 955.09 | 1985.39 | 2000.00 | 2080.00 | 2087.44 | 102.05 | 160.00 |
| 29.900 | 955.03 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 39.00 |
| 29.900 | 955.10 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 39.00 |
| 30.000 | 955.03 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.000 | 955.10 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.100 | 955.03 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 30.00 |
| 30.100 | 955.11 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 30.00 |
| 30.200 | 955.04 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.200 | 955.12 | 2000.00 | 2000.00 | 2069.00 | 2069.00 | 69.00 | 1.00 |
| 30.300 | 955.10 | 1964.29 | 2000.00 | 2088.00 | 2151.94 | 187.65 | 39.00 |
| 30.300 | 955.17 | 1993.78 | 2000.00 | 2088.00 | 2116.57 | 122.79 | 39.00 |
| 30.400 | 955.12 | 1963.64 | 2000.00 | 2088.00 | 2152.53 | 188.89 | 76.00 |
| 30.400 | 955.19 | 1994.14 | 2000.00 | 2088.00 | 2115.91 | 121.77 | 76.00 |
| 31.000 | 956.37 | 1994.94 | 2006.00 | 2102.00 | 2273.84 | 253.45 | 2825.00 |
| 31.000 | 956.48 | 2006.00 | 2006.00 | 2102.00 | 2109.84 | 103.84 | 2825.00 |
| 31.800 | 957.53 | 1993.77 | 2000.00 | 2078.00 | 2407.14 | 390.43 | 2566.00 |
| 31.800 | 957.67 | 2000.00 | 2000.00 | 2078.00 | 2317.91 | 314.40 | 2566.00 |
| 31.805 | 957.60 | 1996.09 | 2000.00 | 2070.00 | 2087.47 | 91.38 | 223.00 |
| 31.805 | 957.74 | 1995.69 | 2000.00 | 2070.00 | 2086.39 | 92.70 | 223.00 |
| 31.810 | 957.63 | 1996.03 | 2000.00 | 2070.00 | 2083.00 | 86.97 | 37.00 |
| 31.810 | 957.76 | 1995.63 | 2000.00 | 2070.00 | 2083.00 | 87.37 | 37.00 |
| 31.900 | 957.67 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 49.00 |
| 31.900 | 957.80 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 49.00 |
| 32.000 | 957.67 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.000 | 957.79 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.100 | 957.69 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 32.100 | 957.81 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 30.00 |
| 32.200 | 957.70 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.200 | 957.82 | 2000.00 | 2000.00 | 2070.00 | 2070.00 | 70.00 | 1.00 |
| 32.300 | 957.77 | 1964.17 | 2000.00 | 2114.00 | 2142.00 | 157.83 | 49.00 |
| 32.300 | 957.89 | 1983.26 | 2000.00 | 2114.00 | 2142.00 | 158.74 | 49.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 33.000 | 959.21 | 1626.43 | 2000.00 | 2052.00 | 2391.55 | 638.54 | 4100.00 |
| 33.000 | 959.27 | 2000.00 | 2000.00 | 2052.00 | 2310.57 | 310.57 | 4100.00 |
| 33.850 | 961.29 | 2032.00 | 2032.00 | 2085.00 | 2085.00 | 53.00 | 2399.00 |
| 33.850 | 961.37 | 2032.00 | 2032.00 | 2085.00 | 2085.00 | 53.00 | 2399.00 |
| 33.900 | 961.31 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 13.00 |
| 33.900 | 961.38 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 13.00 |
| 34.000 | 961.31 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 1.00 |
| 34.000 | 961.38 | 2027.00 | 2027.00 | 2085.00 | 2085.00 | 58.00 | 1.00 |
| 34.100 | 961.31 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 29.00 |
| 34.100 | 961.39 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 29.00 |
| 34.200 | 961.31 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 1.00 |
| 34.200 | 961.39 | 2025.00 | 2025.00 | 2083.00 | 2083.00 | 58.00 | 1.00 |
| 34.250 | 961.35 | 2025.00 | 2025.00 | 2089.00 | 2089.00 | 64.00 | 13.00 |
| 34.250 | 961.43 | 2025.00 | 2025.00 | 2089.00 | 2089.00 | 64.00 | 13.00 |
| 34.300 | 961.40 | 1967.00 | 2000.00 | 2070.00 | 2103.00 | 136.00 | 26.00 |
| 34.300 | 961.47 | 1967.00 | 2000.00 | 2070.00 | 2103.00 | 136.00 | 26.00 |
| 34.800 | 961.83 | 1877.00 | 2000.00 | 2104.00 | 2226.00 | 261.31 | 820.00 |
| 34.800 | 961.89 | 1877.00 | 2000.00 | 2104.00 | 2226.00 | 265.42 | 820.00 |
| 34.810 | 961.99 | 2002.73 | 2000.00 | 2081.00 | 2092.00 | 69.27 | 280.00 |
| 34.810 | 962.03 | 2002.66 | 2000.00 | 2081.00 | 2092.00 | 69.34 | 280.00 |
| 34.900 | 962.06 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 50.00 |
| 34.900 | 962.10 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 50.00 |
| 35.000 | 962.07 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 1.00 |
| 35.000 | 962.11 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 1.00 |
| 35.100 | 962.08 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 32.00 |
| 35.100 | 962.12 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 32.00 |
| 35.200 | 962.09 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 1.00 |
| 35.200 | 962.13 | 2000.00 | 2000.00 | 2088.00 | 2088.00 | 88.00 | 1.00 |
| 35.250 | 962.06 | 2001.03 | 2007.00 | 2076.00 | 2107.11 | 106.08 | 51.00 |
| 35.250 | 962.10 | 2000.93 | 2007.00 | 2076.00 | 2110.99 | 110.06 | 51.00 |
| 35.300 | 963.67 | 1745.56 | 2007.00 | 2076.00 | 2361.05 | 598.31 | 10.00 |
| 35.300 | 963.67 | 1749.10 | 2007.00 | 2076.00 | 2361.08 | 594.43 | 10.00 |
| 35.350 | 963.68 | 1689.76 | 2000.00 | 2081.00 | 2361.11 | 659.58 | 10.00 |
| 35.350 | 963.68 | 1689.70 | 2000.00 | 2081.00 | 2361.14 | 660.22 | 10.00 |
| 36.000 | 964.34 | 2001.13 | 2006.00 | 2092.00 | 2123.62 | 122.50 | 3430.00 |
| 36.000 | 964.34 | 2001.13 | 2006.00 | 2092.00 | 2123.62 | 122.49 | 3430.00 |

MOORE BUSINESS FORMS, INC. 23

100 YEAR FLOW

SUMMARY PRINTOUT TABLE 110

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.000 | 946.17 | 0.00 | 946.17 | 336.78 | .96 | 732.26 | 1.78 | 0.00 | 0.00 | 2000.00 | 2278.00 | 0.00 |
| 24.000 | 946.27 | .10 | 946.27 | 278.00 | 0.00 | 735.00 | 0.00 | .00 | 2000.00 | 2000.00 | 2278.00 | 2278.00 |
| 24.100 | 946.20 | 0.00 | 946.20 | 339.47 | 13.73 | 719.52 | 1.75 | 0.00 | 0.00 | 2000.00 | 2220.00 | 0.00 |
| 24.100 | 946.30 | .10 | 946.30 | 220.00 | 0.00 | 735.00 | 0.00 | .02 | 2000.00 | 2000.00 | 2220.00 | 2220.00 |
| 24.200 | 946.25 | 0.00 | 946.26 | 1993.31 | 306.26 | 411.94 | 16.80 | 0.00 | 0.00 | 3000.00 | 3150.00 | 0.00 |
| 24.200 | 946.35 | .10 | 946.36 | 1533.48 | 310.05 | 424.95 | 0.00 | .07 | 1265.28 | 3000.00 | 3150.00 | 3150.00 |
| 25.000 | 946.37 | 0.00 | 946.39 | 845.34 | 115.67 | 555.68 | 63.65 | 0.00 | 0.00 | 4000.00 | 4090.00 | 0.00 |
| 25.000 | 946.47 | .10 | 946.49 | 673.80 | 113.59 | 577.14 | 44.27 | .07 | 3055.49 | 4000.00 | 4090.00 | 4144.09 |
| 25.600 | 946.99 | 0.00 | 947.01 | 939.62 | 294.43 | 361.00 | 79.57 | 0.00 | 0.00 | 4000.00 | 4060.00 | 0.00 |
| 25.600 | 947.10 | .11 | 947.11 | 526.11 | 295.37 | 373.63 | 66.00 | .08 | 3614.54 | 4000.00 | 4060.00 | 4140.64 |
| 25.800 | 947.31 | 0.00 | 947.37 | 247.00 | 58.55 | 531.97 | 144.49 | 247.00 | 1901.00 | 2000.00 | 2050.00 | 2148.00 |
| 25.800 | 947.41 | .10 | 947.46 | 247.00 | 63.98 | 522.05 | 148.96 | 247.00 | 1901.00 | 2000.00 | 2050.00 | 2148.00 |
| 25.900 | 947.53 | 0.00 | 947.63 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 25.900 | 947.60 | .07 | 947.70 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.000 | 947.54 | 0.00 | 947.64 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.000 | 947.61 | .07 | 947.71 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.100 | 947.62 | 0.00 | 947.66 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.100 | 947.69 | .07 | 947.73 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.200 | 947.63 | 0.00 | 947.67 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.200 | 947.69 | .07 | 947.74 | 85.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2085.00 | 0.00 |
| 26.400 | 947.68 | 0.00 | 947.71 | 299.00 | 89.48 | 523.46 | 122.06 | 299.00 | 1897.00 | 2000.00 | 2093.00 | 2196.00 |
| 26.400 | 947.74 | .06 | 947.77 | 294.97 | 137.76 | 550.34 | 46.90 | .22 | 1820.45 | 2000.00 | 2093.00 | 2115.42 |
| 26.900 | 948.40 | 0.00 | 948.41 | 719.08 | 221.46 | 503.18 | 10.34 | 0.00 | 0.00 | 2000.00 | 2124.00 | 0.00 |
| 26.900 | 948.49 | .10 | 948.51 | 490.68 | 210.67 | 524.33 | 0.00 | .07 | 1633.32 | 2000.00 | 2124.00 | 2124.00 |
| 27.000 | 948.40 | 0.00 | 948.44 | 501.16 | 241.64 | 493.36 | 0.00 | 0.00 | 0.00 | 2030.00 | 2090.00 | 0.00 |
| 27.000 | 948.50 | .09 | 948.53 | 354.80 | 226.34 | 508.66 | 0.00 | .06 | 1600.15 | 2030.00 | 2090.00 | 2090.00 |
| 27.100 | 948.44 | 0.00 | 948.45 | 719.96 | 181.96 | 543.67 | 9.37 | 0.00 | 0.00 | 2000.00 | 2143.00 | 0.00 |
| 27.100 | 948.53 | .10 | 948.55 | 522.55 | 165.72 | 569.28 | 0.00 | .07 | 1620.45 | 2000.00 | 2143.00 | 2143.00 |
| 27.400 | 948.97 | 0.00 | 948.99 | 309.63 | 262.24 | 460.70 | 12.06 | 888.00 | 1896.00 | 2050.00 | 2169.50 | 2784.00 |
| 27.400 | 949.08 | .11 | 949.10 | 253.04 | 253.28 | 481.72 | 0.00 | .30 | 1916.46 | 2050.00 | 2169.50 | 2169.50 |
| 27.500 | 949.11 | 0.00 | 949.18 | 174.45 | 7.60 | 710.17 | 17.23 | 0.00 | 0.00 | 2000.00 | 2100.00 | 0.00 |
| 27.500 | 949.22 | .11 | 949.29 | 100.00 | 0.00 | 735.00 | 0.00 | .04 | 2000.00 | 2000.00 | 2100.00 | 2100.00 |
| 27.700 | 950.14 | 0.00 | 950.18 | 142.40 | 11.71 | 689.46 | 33.83 | 0.00 | 0.00 | 2050.00 | 2154.00 | 0.00 |
| 27.700 | 950.25 | .11 | 950.30 | 113.34 | 0.00 | 720.78 | 14.22 | .05 | 2050.00 | 2050.00 | 2154.00 | 2163.34 |
| 27.800 | 950.33 | 0.00 | 950.41 | 68.17 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2129.00 | 2221.00 | 0.00 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.800 | 950.44 | .11 | 950.52 | 68.62 | 0.00 | 735.00 | 0.00 | 0.00 | 2129.00 | 2129.00 | 2221.00 | 2221.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.900 | 950.38 | 0.00 | 950.44 | 91.00 | 0.00 | 735.00 | 0.00 | 0.00 | 0.00 | 2141.00 | 2232.00 | 0.00 |
| 27.900 | 950.49 | .11 | 950.54 | 91.00 | 0.00 | 735.00 | 0.00 | 0.00 | 2141.00 | 2141.00 | 2232.00 | 2232.00 |
| 28.000 | 950.39 | 0.00 | 950.44 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2141.00 | 2232.00 | 0.00 |
| 28.000 | 950.49 | .10 | 950.54 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2141.00 | 2232.00 | 0.00 |
| 28.100 | 950.40 | 0.00 | 950.45 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2149.00 | 2240.00 | 0.00 |
| 28.100 | 950.50 | .11 | 950.55 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2149.00 | 2149.00 | 2240.00 | 2240.00 |
| 28.200 | 950.40 | 0.00 | 950.45 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2149.00 | 2240.00 | 0.00 |
| 28.200 | 950.50 | .11 | 950.55 | 91.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2149.00 | 2149.00 | 2240.00 | 2240.00 |
| 28.300 | 950.41 | 0.00 | 950.47 | 155.00 | 29.13 | 631.94 | 28.93 | 155.00 | 2117.00 | 2154.50 | 2229.00 | 2272.00 |
| 28.300 | 950.52 | .10 | 950.57 | 155.00 | 31.29 | 627.46 | 31.25 | 155.00 | 2117.00 | 2154.50 | 2229.00 | 2272.00 |
| 28.420 | 950.73 | 0.00 | 950.76 | 153.32 | 15.57 | 635.92 | 38.51 | 1242.00 | 2000.00 | 2154.50 | 2241.88 | 3242.00 |
| 28.420 | 950.82 | .08 | 950.87 | 130.73 | 23.74 | 665.20 | 1.05 | .10 | 1683.79 | 2154.50 | 2241.88 | 2242.86 |
| 28.670 | 952.20 | 0.00 | 952.24 | 195.36 | 18.12 | 646.62 | 25.26 | 0.00 | 0.00 | 2017.00 | 2120.00 | 0.00 |
| 28.670 | 952.29 | .10 | 952.35 | 111.30 | 1.06 | 677.75 | 11.19 | .05 | 2016.10 | 2017.00 | 2120.00 | 2127.39 |
| 28.800 | 952.52 | 0.00 | 952.56 | 214.48 | .36 | 665.82 | 23.82 | 0.00 | 0.00 | 2000.00 | 2126.00 | 0.00 |
| 28.800 | 952.63 | .11 | 952.67 | 126.00 | 0.00 | 690.00 | 0.00 | .04 | 2000.00 | 2000.00 | 2126.00 | 2126.00 |
| 28.810 | 952.47 | 0.00 | 952.67 | 113.32 | 19.51 | 670.49 | 0.00 | 0.00 | 0.00 | 2000.00 | 2100.00 | 0.00 |
| 28.810 | 952.58 | .11 | 952.78 | 78.46 | 0.00 | 690.00 | 0.00 | .03 | 2000.00 | 2000.00 | 2100.00 | 2100.00 |
| 28.900 | 952.61 | 0.00 | 952.78 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 28.900 | 952.72 | .11 | 952.88 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.000 | 952.61 | 0.00 | 952.79 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 29.000 | 952.72 | .11 | 952.89 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.100 | 952.67 | 0.00 | 952.83 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 29.100 | 952.78 | .11 | 952.92 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.200 | 952.69 | 0.00 | 952.83 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 29.200 | 952.79 | .11 | 952.93 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2070.00 | 2070.00 |
| 29.300 | 952.74 | 0.00 | 952.94 | 65.08 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 1972.00 | 2065.00 | 0.00 |
| 29.300 | 952.84 | .10 | 953.03 | 66.12 | 0.00 | 690.00 | 0.00 | 0.00 | 1972.00 | 1972.00 | 2065.00 | 2065.00 |
| 29.420 | 953.50 | 0.00 | 953.64 | 75.75 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 29.420 | 953.54 | .05 | 953.68 | 76.16 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2088.00 | 2088.00 |
| 29.550 | 954.71 | 0.00 | 954.77 | 164.28 | 2.81 | 666.74 | 20.44 | 0.00 | 0.00 | 2000.00 | 2078.00 | 0.00 |
| 29.550 | 954.76 | .06 | 954.84 | 78.00 | 0.00 | 690.00 | 0.00 | .04 | 2000.00 | 2000.00 | 2078.00 | 2078.00 |
| 29.800 | 954.94 | 0.00 | 954.99 | 260.18 | 21.27 | 625.83 | 42.91 | 0.00 | 0.00 | 2000.00 | 2073.00 | 0.00 |
| 29.800 | 955.00 | .07 | 955.06 | 100.98 | 7.30 | 650.80 | 31.89 | .05 | 1992.68 | 2000.00 | 2073.00 | 2093.66 |
| 29.810 | 955.02 | 0.00 | 955.06 | 168.18 | 28.96 | 639.50 | 21.54 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 29.810 | 955.09 | .07 | 955.14 | 102.05 | 17.74 | 663.26 | 9.00 | .04 | 1985.39 | 2000.00 | 2080.00 | 2087.44 |
| 29.900 | 955.03 | 0.00 | 955.09 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 29.900 | 955.10 | .07 | 955.16 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2069.00 | 2069.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | CWSEL | DIFRWS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.000 | 955.03 | 0.00 | 955.09 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.000 | 955.10 | .07 | 955.17 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.100 | 955.03 | 0.00 | 955.11 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.100 | 955.11 | .08 | 955.18 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2069.00 | 2069.00 |
| 30.200 | 955.04 | 0.00 | 955.11 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2069.00 | 0.00 |
| 30.200 | 955.12 | .08 | 955.18 | 69.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2069.00 | 2069.00 |
| 30.300 | 955.10 | 0.00 | 955.13 | 167.65 | 25.94 | 621.23 | 42.83 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 30.300 | 955.17 | .07 | 955.21 | 122.79 | 12.33 | 645.88 | 31.79 | .04 | 1993.78 | 2000.00 | 2088.00 | 2116.57 |
| 30.400 | 955.12 | 0.00 | 955.16 | 168.89 | 22.94 | 629.05 | 38.01 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 30.400 | 955.19 | .07 | 955.23 | 121.77 | 10.08 | 652.54 | 27.38 | .04 | 1994.14 | 2000.00 | 2088.00 | 2115.91 |
| 31.000 | 956.37 | 0.00 | 956.43 | 253.45 | 14.85 | 641.64 | 33.49 | 0.00 | 0.00 | 2006.00 | 2102.00 | 0.00 |
| 31.000 | 956.48 | .11 | 956.54 | 103.84 | 0.00 | 673.70 | 16.30 | .05 | 2006.00 | 2006.00 | 2102.00 | 2109.84 |
| 31.800 | 957.53 | 0.00 | 957.57 | 390.43 | 3.77 | 577.24 | 108.99 | 0.00 | 0.00 | 2000.00 | 2078.00 | 0.00 |
| 31.800 | 957.67 | .13 | 957.70 | 314.40 | 0.00 | 593.60 | 96.40 | .05 | 2000.00 | 2000.00 | 2078.00 | 2317.91 |
| 31.805 | 957.60 | 0.00 | 957.69 | 91.38 | 1.10 | 673.98 | 14.92 | 113.00 | 1982.00 | 2000.00 | 2070.00 | 2095.00 |
| 31.805 | 957.74 | .13 | 957.81 | 92.70 | 1.34 | 672.46 | 16.20 | 113.00 | 1982.00 | 2000.00 | 2070.00 | 2095.00 |
| 31.810 | 957.63 | 0.00 | 957.72 | 86.97 | 1.13 | 672.98 | 15.89 | 96.00 | 1987.00 | 2000.00 | 2070.00 | 2083.00 |
| 31.810 | 957.76 | .13 | 957.84 | 87.37 | 1.38 | 671.55 | 17.07 | 96.00 | 1987.00 | 2000.00 | 2070.00 | 2083.00 |
| 31.900 | 957.67 | 0.00 | 957.75 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 31.900 | 957.80 | .13 | 957.87 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.000 | 957.67 | 0.00 | 957.76 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.000 | 957.79 | .13 | 957.88 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.100 | 957.69 | 0.00 | 957.77 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.100 | 957.81 | .12 | 957.89 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.200 | 957.70 | 0.00 | 957.77 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.200 | 957.82 | .12 | 957.89 | 70.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2070.00 | 0.00 |
| 32.300 | 957.77 | 0.00 | 957.79 | 157.83 | 5.03 | 644.73 | 40.24 | 170.00 | 1972.00 | 2000.00 | 2114.00 | 2142.00 |
| 32.300 | 957.89 | .12 | 957.91 | 158.74 | 5.57 | 643.17 | 41.25 | 170.00 | 1972.00 | 2000.00 | 2114.00 | 2142.00 |
| 33.000 | 959.21 | 0.00 | 959.26 | 638.54 | 19.30 | 415.55 | 255.14 | 0.00 | 0.00 | 2000.00 | 2052.00 | 0.00 |
| 33.000 | 959.27 | .06 | 959.33 | 310.57 | 0.00 | 438.76 | 251.24 | .09 | 2000.00 | 2000.00 | 2052.00 | 2310.57 |
| 33.850 | 961.29 | 0.00 | 961.39 | 53.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2032.00 | 2085.00 | 0.00 |
| 33.850 | 961.37 | .08 | 961.47 | 53.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2032.00 | 2032.00 | 2085.00 | 2085.00 |
| 33.900 | 961.31 | 0.00 | 961.40 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2027.00 | 2085.00 | 0.00 |
| 33.900 | 961.38 | .08 | 961.48 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2027.00 | 2027.00 | 2085.00 | 2085.00 |
| 34.000 | 961.31 | 0.00 | 961.41 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2027.00 | 2085.00 | 0.00 |
| 34.000 | 961.38 | .07 | 961.48 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2027.00 | 2085.00 | 0.00 |
| 34.100 | 961.31 | 0.00 | 961.42 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2025.00 | 2083.00 | 0.00 |
| 34.100 | 961.39 | .08 | 961.50 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2025.00 | 2025.00 | 2083.00 | 2083.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34.200 | 961.31 | 0.00 | 961.42 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2025.00 | 2083.00 | 0.00 |
| 34.200 | 961.39 | .08 | 961.50 | 58.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2025.00 | 2025.00 | 2083.00 | 2083.00 |
| 34.250 | 961.35 | 0.00 | 961.44 | 64.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2025.00 | 2089.00 | 0.00 |
| 34.250 | 961.43 | .08 | 961.51 | 64.00 | 0.00 | 690.00 | 0.00 | 0.00 | 2025.00 | 2025.00 | 2089.00 | 2089.00 |
| 34.300 | 961.40 | 0.00 | 961.46 | 136.00 | 9.64 | 653.92 | 26.24 | 136.00 | 1967.00 | 2000.00 | 2070.00 | 2103.00 |
| 34.300 | 961.47 | .08 | 961.53 | 136.00 | 11.09 | 651.27 | 27.64 | 136.00 | 1967.00 | 2000.00 | 2070.00 | 2103.00 |
| 34.800 | 961.83 | 0.00 | 961.87 | 261.31 | 102.29 | 581.41 | 6.29 | 349.00 | 1877.00 | 2000.00 | 2104.00 | 2226.00 |
| 34.800 | 961.89 | .05 | 961.92 | 265.42 | 104.59 | 578.13 | 7.28 | 349.00 | 1877.00 | 2000.00 | 2104.00 | 2226.00 |
| 34.810 | 961.99 | 0.00 | 962.09 | 89.27 | 0.00 | 683.95 | 6.05 | 105.00 | 1987.00 | 2000.00 | 2081.00 | 2092.00 |
| 34.810 | 962.03 | .04 | 962.14 | 89.34 | 0.00 | 683.60 | 6.39 | 105.00 | 1987.00 | 2000.00 | 2081.00 | 2092.00 |
| 34.900 | 962.06 | 0.00 | 962.16 | 80.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 34.900 | 962.10 | .04 | 962.19 | 80.00 | 0.00 | 690.00 | 0.00 | 2712.00 | 894.00 | 2000.00 | 2080.00 | 3606.00 |
| 35.000 | 962.07 | 0.00 | 962.16 | 88.00 | 0.00 | 649.49 | 40.51 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 35.000 | 962.11 | .04 | 962.20 | 88.00 | 0.00 | 649.17 | 40.83 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 35.100 | 962.08 | 0.00 | 962.17 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.100 | 962.12 | .04 | 962.21 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.200 | 962.09 | 0.00 | 962.17 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.200 | 962.13 | .04 | 962.21 | 88.00 | 0.00 | 690.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2088.00 | 0.00 |
| 35.250 | 962.06 | 0.00 | 962.24 | 106.08 | 19.92 | 604.14 | 65.94 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.250 | 962.10 | .04 | 962.27 | 110.06 | 20.18 | 601.72 | 68.10 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.300 | 963.67 | 0.00 | 963.70 | 598.31 | 149.42 | 255.98 | 284.61 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.300 | 963.67 | .00 | 963.71 | 599.42 | 149.75 | 255.58 | 284.66 | 0.00 | 0.00 | 2007.00 | 2076.00 | 0.00 |
| 35.350 | 963.68 | 0.00 | 963.71 | 659.58 | 103.97 | 386.71 | 199.32 | 0.00 | 0.00 | 2000.00 | 2081.00 | 0.00 |
| 35.350 | 963.68 | .00 | 963.71 | 660.22 | 104.31 | 386.22 | 199.47 | 0.00 | 0.00 | 2000.00 | 2081.00 | 0.00 |
| 36.000 | 964.34 | 0.00 | 964.48 | 122.50 | 6.43 | 657.47 | 26.10 | 0.00 | 0.00 | 2006.00 | 2092.00 | 0.00 |
| 36.000 | 964.34 | -.00 | 964.48 | 122.49 | 6.43 | 657.48 | 26.09 | 0.00 | 0.00 | 2006.00 | 2092.00 | 0.00 |

MOORE BUSINESS FORMS, INC. 23

100 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | IOK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.17 | 0.00 | 946.17 | .10 | .38 | 1965.76 | 2300.89 |
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.27 | 0.00 | 946.27 | .10 | .38 | 1951.41 | 2327.60 |
| 24.100 | 2260.00 | 0.00 | 0.00 | 939.56 | 735.00 | 946.20 | 0.00 | 946.20 | .21 | .51 | 1534.97 | 1618.33 |
| 24.100 | 2280.00 | 0.00 | 0.00 | 939.56 | 735.00 | 946.30 | 0.00 | 946.30 | .21 | .51 | 1431.66 | 1615.00 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 735.00 | 946.25 | 0.00 | 946.26 | .27 | .52 | 2945.28 | 1423.70 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 735.00 | 946.35 | 0.00 | 946.36 | .27 | .52 | 2674.10 | 1410.30 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 735.00 | 946.37 | 0.00 | 946.39 | 2.71 | 1.43 | 891.88 | 446.63 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 735.00 | 946.47 | 0.00 | 946.49 | 2.71 | 1.45 | 811.12 | 446.82 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 735.00 | 946.99 | 0.00 | 947.01 | 2.22 | 1.32 | 1230.18 | 493.42 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 735.00 | 947.10 | 0.00 | 947.11 | 2.20 | 1.34 | 1080.12 | 495.43 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.76 | 735.00 | 947.31 | 0.00 | 947.37 | 6.01 | 2.21 | 531.46 | 299.69 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.70 | 735.00 | 947.41 | 0.00 | 947.46 | 5.43 | 2.13 | 555.08 | 315.56 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 735.00 | 947.53 | 0.00 | 947.63 | 11.74 | 2.49 | 295.25 | 214.54 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 735.00 | 947.60 | 0.00 | 947.70 | 10.97 | 2.44 | 301.52 | 221.95 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 735.00 | 947.54 | 0.00 | 947.64 | 4.88 | 2.55 | 287.76 | 332.65 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 735.00 | 947.61 | 0.00 | 947.71 | 4.58 | 2.50 | 293.79 | 343.36 |
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 735.00 | 947.62 | 0.00 | 947.66 | 1.39 | 1.72 | 426.34 | 622.52 |
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 735.00 | 947.69 | 0.00 | 947.73 | 1.34 | 1.70 | 432.07 | 634.87 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 735.00 | 947.63 | 0.00 | 947.67 | 3.11 | 1.67 | 439.96 | 416.91 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 735.00 | 947.69 | 0.00 | 947.74 | 2.98 | 1.65 | 445.81 | 425.74 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 735.00 | 947.68 | 0.00 | 947.71 | 3.63 | 1.50 | 738.22 | 385.74 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 735.00 | 947.74 | 0.00 | 947.77 | 3.80 | 1.56 | 700.63 | 377.14 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 735.00 | 948.40 | 0.00 | 948.41 | 1.93 | 1.09 | 1192.41 | 528.40 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 735.00 | 948.49 | 0.00 | 948.51 | 1.99 | 1.11 | 1056.66 | 520.65 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 735.00 | 948.40 | 0.00 | 948.44 | 4.62 | 1.79 | 747.89 | 342.01 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 735.00 | 948.50 | 0.00 | 948.53 | 4.60 | 1.80 | 675.52 | 342.68 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 735.00 | 948.44 | 0.00 | 948.45 | 2.15 | 1.10 | 1051.23 | 500.88 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 735.00 | 948.53 | 0.00 | 948.55 | 2.21 | 1.12 | 938.91 | 494.83 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 735.00 | 948.97 | 0.00 | 948.99 | 2.39 | 1.14 | 852.76 | 475.80 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 735.00 | 949.08 | 0.00 | 949.10 | 2.40 | 1.16 | 798.68 | 474.47 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 735.00 | 949.11 | 0.00 | 949.18 | 9.48 | 2.21 | 369.82 | 238.70 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 735.00 | 949.22 | 0.00 | 949.29 | 9.45 | 2.21 | 332.76 | 239.08 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 735.00 | 950.14 | 0.00 | 950.18 | 4.91 | 1.76 | 485.32 | 331.86 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 735.00 | 950.25 | 0.00 | 950.30 | 4.95 | 1.78 | 424.96 | 330.28 |
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.33 | 0.00 | 950.41 | 8.10 | 2.23 | 329.85 | 258.25 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.44 | 0.00 | 950.52 | 7.41 | 2.16 | 339.54 | 270.02 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CMSFL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27.900 | 32.00 | 0.00 | 0.00 | 946.50 | 735.00 | 950.38 | 0.00 | 950.44 | 5.52 | 1.93 | 381.72 | 312.80 |
| 27.900 | 32.00 | 0.00 | 0.00 | 946.50 | 735.00 | 950.49 | 0.00 | 950.54 | 5.10 | 1.88 | 391.35 | 325.60 |
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 690.00 | 950.34 | 0.00 | 950.44 | 2.00 | 1.85 | 373.89 | 487.76 |
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 690.00 | 950.49 | 0.00 | 950.54 | 2.09 | 1.84 | 374.32 | 476.77 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 690.00 | 950.40 | 0.00 | 950.45 | 1.86 | 1.81 | 380.63 | 505.30 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 690.00 | 950.50 | 0.00 | 950.55 | 1.74 | 1.77 | 389.15 | 522.46 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 690.00 | 950.40 | 0.00 | 950.45 | 4.53 | 1.77 | 388.76 | 324.02 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 690.00 | 950.50 | 0.00 | 950.55 | 4.19 | 1.73 | 398.32 | 336.93 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 690.00 | 950.41 | 0.00 | 950.47 | 5.36 | 2.00 | 410.52 | 298.03 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 690.00 | 950.52 | 0.00 | 950.57 | 4.87 | 1.93 | 426.70 | 312.55 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 690.00 | 950.73 | 0.00 | 950.78 | 5.44 | 1.89 | 425.18 | 295.72 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 690.00 | 950.82 | 0.00 | 950.87 | 5.54 | 1.93 | 388.58 | 293.08 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 690.00 | 952.20 | 0.00 | 952.24 | 5.49 | 1.78 | 444.28 | 294.39 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 690.00 | 952.29 | 0.00 | 952.35 | 5.52 | 1.82 | 389.65 | 293.59 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 690.00 | 952.52 | 0.00 | 952.56 | 3.81 | 1.49 | 514.68 | 353.45 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 690.00 | 952.63 | 0.00 | 952.67 | 3.83 | 1.50 | 459.09 | 352.52 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 690.00 | 952.47 | 0.00 | 952.67 | 39.95 | 3.67 | 203.62 | 109.16 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 690.00 | 952.58 | 0.00 | 952.78 | 37.54 | 3.61 | 191.37 | 112.61 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 690.00 | 952.61 | 0.00 | 952.78 | 24.83 | 3.30 | 208.81 | 138.47 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 690.00 | 952.72 | 0.00 | 952.88 | 22.08 | 3.19 | 216.55 | 146.84 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 690.00 | 952.61 | 0.00 | 952.79 | 11.00 | 3.40 | 202.89 | 208.08 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 690.00 | 952.72 | 0.00 | 952.89 | 10.22 | 3.30 | 209.08 | 215.88 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 690.00 | 952.67 | 0.00 | 952.83 | 8.81 | 3.17 | 217.67 | 232.42 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 690.00 | 952.78 | 0.00 | 952.92 | 8.08 | 3.07 | 224.66 | 242.79 |
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.69 | 0.00 | 952.83 | 19.11 | 3.06 | 225.41 | 157.83 |
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.79 | 0.00 | 952.93 | 17.22 | 2.96 | 232.85 | 166.28 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.74 | 0.00 | 952.94 | 29.51 | 3.63 | 190.30 | 127.01 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.84 | 0.00 | 953.03 | 26.83 | 3.50 | 197.09 | 133.22 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 690.00 | 953.50 | 0.00 | 953.64 | 19.24 | 3.00 | 229.68 | 157.29 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 690.00 | 953.54 | 0.00 | 953.68 | 18.45 | 2.96 | 233.12 | 160.66 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 690.00 | 954.71 | 0.00 | 954.77 | 6.85 | 2.15 | 359.17 | 263.59 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 690.00 | 954.76 | 0.00 | 954.84 | 7.26 | 2.19 | 314.59 | 256.01 |
| 29.800 | 359.00 | 0.00 | 0.00 | 949.70 | 690.00 | 954.94 | 0.00 | 954.99 | 5.09 | 1.97 | 436.25 | 305.73 |
| 29.800 | 359.00 | 0.00 | 0.00 | 949.70 | 690.00 | 955.00 | 0.00 | 955.06 | 5.23 | 2.01 | 372.88 | 301.60 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 690.00 | 955.02 | 0.00 | 955.08 | 4.05 | 1.79 | 461.69 | 342.70 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 690.00 | 955.09 | 0.00 | 955.14 | 4.15 | 1.83 | 402.39 | 338.64 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 690.00 | 955.03 | 0.00 | 955.09 | 5.46 | 2.05 | 336.56 | 295.39 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 690.00 | 955.10 | 0.00 | 955.16 | 5.21 | 2.02 | 341.48 | 302.24 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | G | CWSFL | CRIPS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 690.00 | 955.03 | 0.00 | 955.09 | 2.98 | 2.12 | 325.68 | 399.63 |
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 690.00 | 955.10 | 0.00 | 955.17 | 3.46 | 2.18 | 316.66 | 370.85 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 690.00 | 955.03 | 0.00 | 955.11 | 3.07 | 2.16 | 319.97 | 393.85 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 690.00 | 955.11 | 0.00 | 955.18 | 2.95 | 2.13 | 324.50 | 401.76 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 690.00 | 955.04 | 0.00 | 955.11 | 5.83 | 2.10 | 329.17 | 285.66 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 690.00 | 955.12 | 0.00 | 955.18 | 5.55 | 2.06 | 334.49 | 293.01 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.10 | 0.00 | 955.13 | 3.24 | 1.60 | 508.65 | 383.25 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.17 | 0.00 | 955.21 | 3.32 | 1.63 | 461.60 | 378.44 |
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.12 | 0.00 | 955.16 | 3.25 | 1.61 | 514.17 | 382.68 |
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.19 | 0.00 | 955.23 | 3.33 | 1.64 | 462.67 | 377.92 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 690.00 | 956.37 | 0.00 | 956.43 | 6.56 | 1.93 | 409.66 | 269.37 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 690.00 | 956.48 | 0.00 | 956.54 | 6.80 | 1.96 | 361.96 | 264.69 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 690.00 | 957.53 | 0.00 | 957.57 | 3.23 | 1.62 | 636.32 | 383.94 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 690.00 | 957.67 | 0.00 | 957.70 | 3.24 | 1.61 | 591.31 | 383.46 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.60 | 0.00 | 957.69 | 7.76 | 2.34 | 312.47 | 247.77 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.74 | 0.00 | 957.81 | 6.95 | 2.26 | 324.67 | 261.80 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.63 | 0.00 | 957.72 | 7.61 | 2.32 | 312.81 | 250.19 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.76 | 0.00 | 957.84 | 6.83 | 2.25 | 324.22 | 264.10 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.67 | 0.00 | 957.75 | 7.99 | 2.32 | 297.78 | 244.14 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.80 | 0.00 | 957.87 | 7.28 | 2.25 | 306.56 | 255.69 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 690.00 | 957.67 | 0.00 | 957.76 | 3.91 | 2.30 | 288.76 | 348.75 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 690.00 | 957.79 | 0.00 | 957.88 | 3.60 | 2.32 | 297.26 | 363.79 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 690.00 | 957.69 | 0.00 | 957.77 | 3.45 | 2.29 | 301.12 | 371.34 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 690.00 | 957.81 | 0.00 | 957.89 | 3.19 | 2.23 | 309.53 | 386.46 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 690.00 | 957.70 | 0.00 | 957.77 | 7.00 | 2.22 | 310.59 | 260.87 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 690.00 | 957.82 | 0.00 | 957.89 | 6.41 | 2.16 | 319.24 | 272.50 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.77 | 0.00 | 957.79 | 2.02 | 1.27 | 599.37 | 485.80 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.89 | 0.00 | 957.91 | 1.84 | 1.23 | 618.17 | 508.74 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 690.00 | 959.21 | 0.00 | 959.26 | 8.64 | 2.22 | 661.76 | 234.81 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 690.00 | 959.27 | 0.00 | 959.33 | 9.24 | 2.30 | 538.33 | 226.97 |
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 690.00 | 961.29 | 0.00 | 961.39 | 8.97 | 2.62 | 263.66 | 230.43 |
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 690.00 | 961.37 | 0.00 | 961.47 | 8.50 | 2.57 | 268.26 | 236.71 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 690.00 | 961.31 | 0.00 | 961.40 | 9.08 | 2.52 | 274.04 | 229.03 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 690.00 | 961.38 | 0.00 | 961.48 | 8.61 | 2.48 | 278.63 | 235.10 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 690.00 | 961.31 | 0.00 | 961.41 | 3.49 | 2.51 | 274.61 | 369.35 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 690.00 | 961.38 | 0.00 | 961.48 | 4.11 | 2.58 | 267.26 | 340.28 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 690.00 | 961.31 | 0.00 | 961.42 | 3.98 | 2.64 | 261.42 | 345.70 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 690.00 | 961.39 | 0.00 | 961.50 | 3.79 | 2.60 | 265.67 | 354.20 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRITWS | EG | TOKWS | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 690.00 | 961.31 | 0.00 | 961.42 | 10.43 | 2.64 | 261.07 | 213.64 |
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 690.00 | 961.39 | 0.00 | 961.50 | 9.87 | 2.60 | 265.68 | 219.61 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 690.00 | 961.35 | 0.00 | 961.44 | 8.26 | 2.41 | 285.89 | 240.13 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 690.00 | 961.43 | 0.00 | 961.51 | 7.82 | 2.37 | 290.86 | 246.77 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 690.00 | 961.40 | 0.00 | 961.46 | 5.63 | 2.07 | 389.89 | 290.91 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 690.00 | 961.47 | 0.00 | 961.53 | 5.28 | 2.03 | 400.28 | 300.39 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 690.00 | 961.83 | 0.00 | 961.87 | 4.42 | 1.69 | 552.11 | 328.35 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 690.00 | 961.89 | 0.00 | 961.92 | 4.19 | 1.66 | 565.83 | 336.92 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 690.00 | 961.99 | 0.00 | 962.09 | 13.28 | 2.64 | 268.83 | 189.33 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 690.00 | 962.03 | 0.00 | 962.14 | 12.72 | 2.61 | 272.71 | 193.46 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 690.00 | 962.06 | 0.00 | 962.16 | 10.85 | 2.46 | 281.00 | 209.47 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 690.00 | 962.10 | 0.00 | 962.19 | 10.45 | 2.43 | 284.22 | 213.42 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 690.00 | 962.07 | 0.00 | 962.16 | 2.76 | 2.37 | 292.75 | 415.49 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 690.00 | 962.11 | 0.00 | 962.20 | 2.66 | 2.34 | 296.21 | 423.14 |
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 690.00 | 962.08 | 0.00 | 962.17 | 3.05 | 2.39 | 289.30 | 395.39 |
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 690.00 | 962.12 | 0.00 | 962.21 | 2.94 | 2.36 | 292.70 | 402.64 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 690.00 | 962.09 | 0.00 | 962.17 | 2.47 | 2.32 | 297.00 | 438.90 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 690.00 | 962.13 | 0.00 | 962.21 | 2.38 | 2.30 | 300.50 | 447.29 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 690.00 | 962.06 | 0.00 | 962.24 | 8.13 | 3.54 | 203.25 | 242.05 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 690.00 | 962.10 | 0.00 | 962.27 | 7.63 | 3.46 | 207.74 | 249.86 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 690.00 | 963.67 | 0.00 | 963.70 | 2.29 | 1.67 | 497.69 | 456.28 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 690.00 | 963.67 | 0.00 | 963.71 | 2.27 | 1.66 | 499.05 | 457.76 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 690.00 | 963.68 | 0.00 | 963.71 | 1.16 | 1.54 | 599.21 | 639.84 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 690.00 | 963.68 | 0.00 | 963.71 | 1.16 | 1.54 | 600.55 | 641.34 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 690.00 | 964.34 | 0.00 | 964.48 | 5.76 | 3.02 | 239.63 | 287.47 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 690.00 | 964.34 | 0.00 | 964.48 | 5.76 | 3.02 | 239.61 | 287.43 |

MOORE BUSINESS FORMS, INC. 23

100 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CRSEL | DIFWSP | DIFWSX | DIFK-S | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 24.000 | 735.00 | 946.17 | 0.00 | 0.00 | 0.00 | 336.78 | 0.00 |
| 24.000 | 735.00 | 946.27 | .10 | 0.00 | .10 | 278.00 | 0.00 |
| 24.100 | 735.00 | 946.20 | 0.00 | .03 | 0.00 | 339.47 | 2280.00 |
| 24.100 | 735.00 | 946.30 | .10 | .03 | .10 | 220.00 | 2280.00 |
| 24.200 | 735.00 | 946.25 | 0.00 | .05 | 0.00 | 1993.31 | 2300.00 |
| 24.200 | 735.00 | 946.35 | .10 | .05 | .10 | 1533.48 | 2300.00 |
| 25.000 | 735.00 | 946.37 | 0.00 | .11 | 0.00 | 845.34 | 2290.00 |
| 25.000 | 735.00 | 946.47 | .10 | .11 | .10 | 673.80 | 2290.00 |
| 25.600 | 735.00 | 946.99 | 0.00 | .62 | 0.00 | 939.62 | 2850.00 |
| 25.600 | 735.00 | 947.10 | .11 | .63 | .11 | 576.11 | 2850.00 |
| 25.800 | 735.00 | 947.31 | 0.00 | .32 | 0.00 | 247.00 | 1100.00 |
| 25.800 | 735.00 | 947.41 | .10 | .31 | .10 | 247.00 | 1100.00 |
| 25.900 | 735.00 | 947.53 | 0.00 | .22 | 0.00 | 85.00 | 324.00 |
| 25.900 | 735.00 | 947.60 | .07 | .20 | .07 | 85.00 | 324.00 |
| 26.000 | 735.00 | 947.54 | 0.00 | .01 | 0.00 | 85.00 | 16.90 |
| 26.000 | 735.00 | 947.61 | .07 | .01 | .07 | 85.00 | 16.90 |
| 26.100 | 735.00 | 947.62 | 0.00 | .08 | 0.00 | 85.00 | 26.00 |
| 26.100 | 735.00 | 947.69 | .07 | .07 | .07 | 85.00 | 26.00 |
| 26.200 | 735.00 | 947.63 | 0.00 | .01 | 0.00 | 85.00 | 16.90 |
| 26.200 | 735.00 | 947.69 | .07 | .01 | .07 | 85.00 | 16.90 |
| 26.400 | 735.00 | 947.68 | 0.00 | .05 | 0.00 | 299.00 | 107.00 |
| 26.400 | 735.00 | 947.74 | .06 | .05 | .06 | 294.97 | 107.00 |
| 26.900 | 735.00 | 948.40 | 0.00 | .72 | 0.00 | 719.08 | 3000.00 |
| 26.900 | 735.00 | 948.49 | .10 | .75 | .10 | 490.68 | 3000.00 |
| 27.000 | 735.00 | 948.40 | 0.00 | .01 | 0.00 | 501.16 | 72.00 |
| 27.000 | 735.00 | 948.50 | .09 | .01 | .09 | 354.80 | 72.00 |
| 27.100 | 735.00 | 948.44 | 0.00 | .03 | 0.00 | 719.96 | 36.00 |
| 27.100 | 735.00 | 948.53 | .10 | .03 | .10 | 522.55 | 36.00 |
| 27.400 | 735.00 | 948.97 | 0.00 | .54 | 0.00 | 309.63 | 2700.00 |
| 27.400 | 735.00 | 949.08 | .11 | .55 | .11 | 253.04 | 2700.00 |
| 27.500 | 735.00 | 949.11 | 0.00 | .14 | 0.00 | 174.49 | 400.00 |
| 27.500 | 735.00 | 949.22 | .11 | .13 | .11 | 100.00 | 400.00 |
| 27.700 | 735.00 | 950.14 | 0.00 | 1.03 | 0.00 | 192.40 | 1500.00 |
| 27.700 | 735.00 | 950.25 | .11 | 1.03 | .11 | 113.34 | 1500.00 |
| 27.800 | 735.00 | 950.33 | 0.00 | .20 | 0.00 | 88.17 | 340.00 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27.800 | 735.00 | 955.44 | .11 | .16 | .11 | 88.62 | 340.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | Q | CVSEL | DIFWSP | DIFWSX | DIFKES | TOPWTD | XLCH |
|---|---|---|---|---|---|---|---|
| 27.900 | 735.00 | 950.38 | 0.00 | .05 | 0.00 | 91.00 | 32.00 |
| 27.900 | 735.00 | 950.49 | .11 | .04 | .11 | 91.00 | 32.00 |
| 28.000 | 690.00 | 950.39 | 0.00 | .01 | 0.00 | 91.00 | 1.00 |
| 28.000 | 690.00 | 950.49 | .10 | .00 | .10 | 91.00 | 1.00 |
| 28.100 | 690.00 | 950.40 | 0.00 | .01 | 0.00 | 91.00 | 36.50 |
| 28.100 | 690.00 | 950.50 | .11 | .01 | .11 | 91.00 | 36.50 |
| 28.200 | 690.00 | 950.40 | 0.00 | .00 | 0.00 | 91.00 | 1.00 |
| 28.200 | 690.00 | 950.50 | .11 | .00 | .11 | 91.00 | 1.00 |
| 28.300 | 690.00 | 950.41 | 0.00 | .01 | 0.00 | 155.00 | 32.00 |
| 28.300 | 690.00 | 950.52 | .10 | .01 | .10 | 155.00 | 32.00 |
| 28.420 | 690.00 | 950.73 | 0.00 | .32 | 0.00 | 153.32 | 580.00 |
| 28.420 | 690.00 | 950.82 | .08 | .30 | .05 | 130.73 | 580.00 |
| 28.670 | 690.00 | 952.20 | 0.00 | 1.47 | 0.00 | 195.35 | 2660.00 |
| 28.670 | 690.00 | 952.29 | .10 | 1.48 | .10 | 111.30 | 2660.00 |
| 28.800 | 690.00 | 952.52 | 0.00 | .33 | 0.00 | 214.48 | 700.00 |
| 28.800 | 690.00 | 952.63 | .11 | .34 | .11 | 126.00 | 700.00 |
| 28.810 | 690.00 | 952.47 | 0.00 | -.05 | 0.00 | 113.32 | 75.00 |
| 28.810 | 690.00 | 952.58 | .11 | -.05 | .11 | 78.46 | 75.00 |
| 28.900 | 690.00 | 952.61 | 0.00 | .14 | 0.00 | 70.00 | 34.00 |
| 28.900 | 690.00 | 952.72 | .11 | .14 | .11 | 70.00 | 34.00 |
| 29.000 | 690.00 | 952.61 | 0.00 | -.00 | 0.00 | 70.00 | 1.00 |
| 29.000 | 690.00 | 952.72 | .11 | -.00 | .11 | 70.00 | 1.00 |
| 29.100 | 690.00 | 952.67 | 0.00 | .06 | 0.00 | 70.00 | 30.00 |
| 29.100 | 690.00 | 952.78 | .11 | .06 | .11 | 70.00 | 30.00 |
| 29.200 | 690.00 | 952.69 | 0.00 | .01 | 0.00 | 70.00 | 1.00 |
| 29.200 | 690.00 | 952.79 | .11 | .01 | .11 | 70.00 | 1.00 |
| 29.300 | 690.00 | 952.74 | 0.00 | .05 | 0.00 | 65.08 | 34.00 |
| 29.300 | 690.00 | 952.84 | .10 | .05 | .10 | 66.12 | 34.00 |
| 29.420 | 690.00 | 953.50 | 0.00 | .76 | 0.00 | 75.75 | 294.00 |
| 29.420 | 690.00 | 953.54 | .05 | .71 | .05 | 76.16 | 294.00 |
| 29.550 | 690.00 | 954.71 | 0.00 | 1.21 | 0.00 | 164.28 | 1050.00 |
| 29.550 | 690.00 | 954.76 | .06 | 1.22 | .06 | 78.00 | 1050.00 |
| 29.800 | 690.00 | 954.94 | 0.00 | .23 | 0.00 | 200.18 | 359.00 |
| 29.800 | 690.00 | 955.00 | .07 | .24 | .07 | 100.98 | 359.00 |
| 29.810 | 690.00 | 955.02 | 0.00 | .08 | 0.00 | 188.18 | 160.00 |
| 29.810 | 690.00 | 955.09 | .07 | .09 | .07 | 102.05 | 160.00 |
| 29.900 | 690.00 | 955.03 | 0.00 | .01 | 0.00 | 69.00 | 39.00 |
| 29.900 | 690.00 | 955.10 | .07 | .01 | .07 | 69.00 | 39.00 |

MOORE BUSINESS FORMS, INC. 23

| SEL.L | G | CYSEL | DIFWSP | DIFWSX | DIFKVS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 30.000 | 690.00 | 955.03 | 0.00 | -.00 | 0.00 | 69.00 | 1.00 |
| 30.000 | 690.00 | 955.10 | .07 | -.00 | .07 | 69.00 | 1.00 |
| 30.100 | 690.00 | 955.03 | 0.00 | .01 | 0.00 | 69.00 | 30.00 |
| 30.100 | 690.00 | 955.11 | .08 | .01 | .08 | 69.00 | 30.00 |
| 30.200 | 690.00 | 955.04 | 0.00 | .01 | 0.00 | 69.00 | 1.00 |
| 30.200 | 690.00 | 955.12 | .08 | .01 | .08 | 69.00 | 1.00 |
| 30.300 | 690.00 | 955.10 | 0.00 | .06 | 0.00 | 187.65 | 39.00 |
| 30.300 | 690.00 | 955.17 | .07 | .05 | .07 | 122.79 | 39.00 |
| 30.400 | 690.00 | 955.12 | 0.00 | .02 | 0.00 | 188.89 | 76.00 |
| 30.400 | 690.00 | 955.19 | .07 | .02 | .07 | 121.77 | 76.00 |
| 31.000 | 690.00 | 956.37 | 0.00 | 1.25 | 0.00 | 253.45 | 2825.00 |
| 31.000 | 690.00 | 956.48 | .11 | 1.29 | .11 | 103.84 | 2825.00 |
| 31.800 | 690.00 | 957.53 | 0.00 | 1.16 | 0.00 | 390.43 | 2566.00 |
| 31.800 | 690.00 | 957.67 | .13 | 1.18 | .13 | 314.40 | 2566.00 |
| 31.900 | 690.00 | 957.60 | 0.00 | .07 | 0.00 | 91.38 | 223.00 |
| 31.900 | 690.00 | 957.74 | .13 | .07 | .13 | 92.70 | 223.00 |
| 31.910 | 690.00 | 957.63 | 0.00 | .03 | 0.00 | 86.97 | 37.00 |
| 31.910 | 690.00 | 957.76 | .13 | .03 | .13 | 87.37 | 37.00 |
| 31.900 | 690.00 | 957.67 | 0.00 | .04 | 0.00 | 70.00 | 49.00 |
| 31.900 | 690.00 | 957.80 | .13 | .03 | .13 | 70.00 | 49.00 |
| 32.000 | 690.00 | 957.67 | 0.00 | -.00 | 0.00 | 70.00 | 1.00 |
| 32.000 | 690.00 | 957.79 | .13 | -.00 | .13 | 70.00 | 1.00 |
| 32.100 | 690.00 | 957.69 | 0.00 | .02 | 0.00 | 70.00 | 30.00 |
| 32.100 | 690.00 | 957.81 | .12 | .02 | .12 | 70.00 | 30.00 |
| 32.200 | 690.00 | 957.70 | 0.00 | .01 | 0.00 | 70.00 | 1.00 |
| 32.200 | 690.00 | 957.82 | .12 | .01 | .12 | 70.00 | 1.00 |
| 32.300 | 690.00 | 957.77 | 0.00 | .08 | 0.00 | 157.83 | 49.00 |
| 32.300 | 690.00 | 957.89 | .12 | .07 | .12 | 158.74 | 49.00 |
| 33.000 | 690.00 | 959.21 | 0.00 | 1.44 | 0.00 | 638.54 | 4100.00 |
| 33.000 | 690.00 | 959.27 | .06 | 1.38 | .06 | 310.57 | 4100.00 |
| 33.850 | 690.00 | 961.29 | 0.00 | 2.07 | 0.00 | 53.00 | 2399.00 |
| 33.850 | 690.00 | 961.37 | .08 | 2.09 | .08 | 53.00 | 2399.00 |
| 33.900 | 690.00 | 961.31 | 0.00 | .02 | 0.00 | 58.00 | 13.00 |
| 33.900 | 690.00 | 961.38 | .08 | .02 | .08 | 58.00 | 13.00 |
| 34.000 | 690.00 | 961.31 | 0.00 | .00 | 0.00 | 58.00 | 1.00 |
| 34.000 | 690.00 | 961.38 | .07 | -.00 | .07 | 58.00 | 1.00 |
| 34.100 | 690.00 | 961.31 | 0.00 | .01 | 0.00 | 58.00 | 29.00 |
| 34.100 | 690.00 | 961.39 | .08 | .01 | .08 | 58.00 | 29.00 |

MOORE BUSINESS FORMS, INC. 23

| SECTO | A | CRSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 34.200 | 600.00 | 961.31 | 0.00 | .00 | 0.00 | 58.00 | 1.00 |
| 34.200 | 600.00 | 961.39 | .08 | .00 | .08 | 58.00 | 1.00 |
| 34.250 | 600.00 | 961.35 | 0.00 | .04 | 0.00 | 64.00 | 13.00 |
| 34.250 | 600.00 | 961.43 | .08 | .03 | .08 | 64.00 | 13.00 |
| 34.300 | 600.00 | 961.40 | 0.00 | .05 | 0.00 | 136.00 | 26.00 |
| 34.300 | 600.00 | 961.47 | .08 | .05 | .08 | 136.00 | 26.00 |
| 34.800 | 600.00 | 961.83 | 0.00 | .44 | 0.00 | 261.31 | 820.00 |
| 34.800 | 600.00 | 961.89 | .05 | .41 | .05 | 265.42 | 820.00 |
| 34.810 | 600.00 | 961.99 | 0.00 | .15 | 0.00 | 89.27 | 280.00 |
| 34.810 | 600.00 | 962.03 | .04 | .14 | .04 | 89.34 | 280.00 |
| 34.900 | 600.00 | 962.06 | 0.00 | .08 | 0.00 | 80.00 | 50.00 |
| 34.900 | 600.00 | 962.10 | .04 | .07 | .04 | 80.00 | 50.00 |
| 35.000 | 600.00 | 962.07 | 0.00 | .01 | 0.00 | 88.00 | 1.00 |
| 35.000 | 600.00 | 962.11 | .04 | .01 | .04 | 88.00 | 1.00 |
| 35.100 | 600.00 | 962.08 | 0.00 | .01 | 0.00 | 88.00 | 32.00 |
| 35.100 | 600.00 | 962.12 | .04 | .01 | .04 | 88.00 | 32.00 |
| 35.200 | 600.00 | 962.09 | 0.00 | .01 | 0.00 | 88.00 | 1.00 |
| 35.200 | 600.00 | 962.13 | .04 | .01 | .04 | 88.00 | 1.00 |
| 35.250 | 600.00 | 962.06 | 0.00 | -.03 | 0.00 | 106.08 | 51.00 |
| 35.250 | 600.00 | 962.10 | .04 | -.03 | .04 | 110.06 | 51.00 |
| 35.300 | 600.00 | 963.67 | 0.00 | 1.61 | 0.00 | 598.31 | 10.00 |
| 35.300 | 600.00 | 963.67 | .00 | 1.58 | .00 | 599.42 | 10.00 |
| 35.350 | 600.00 | 963.68 | 0.00 | .01 | 0.00 | 659.58 | 10.00 |
| 35.350 | 600.00 | 963.68 | .00 | .01 | .00 | 660.22 | 10.00 |
| 36.000 | 600.00 | 964.34 | 0.00 | .66 | 0.00 | 122.50 | 3430.00 |
| 36.000 | 600.00 | 964.34 | -.00 | .66 | -.00 | 122.49 | 3430.00 |

SUMMARY OF ERRORS

MOORE BUSINESS FORMS, INC. 23

FLOODWAY DATA — 100 YEAR FLOW
PROFILE NO. 3

| STATION | WIDTH (FEET) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 24.000 | 370. | 1951. | .4 | 946.3 | 946.2 | .1 |
| 24.100 | 330. | 1432. | .5 | 946.3 | 946.2 | .1 |
| 24.200 | 1800. | 2674. | .3 | 946.4 | 946.3 | .1 |
| 25.000 | 1300. | 811. | .9 | 946.5 | 946.4 | .1 |
| 25.600 | 526. | 1080. | .7 | 947.1 | 947.0 | .1 |
| 25.800 | 447. | 555. | 1.3 | 947.4 | 947.3 | .1 |
| 25.900 | 85. | 302. | 2.4 | 947.6 | 947.5 | .1 |
| 26.000 | 85. | 294. | 2.5 | 947.6 | 947.5 | .1 |
| 26.100 | 85. | 432. | 1.7 | 947.7 | 947.6 | .1 |
| 26.200 | 85. | 446. | 1.6 | 947.7 | 947.6 | .1 |
| 26.400 | 305. | 701. | 1.0 | 947.8 | 947.7 | .1 |
| 26.900 | 491. | 1057. | .7 | 948.5 | 948.4 | .1 |
| 27.000 | 400. | 676. | 1.1 | 948.5 | 948.4 | .1 |
| 27.100 | 533. | 939. | .8 | 948.5 | 948.4 | .1 |
| 27.400 | 355. | 796. | .9 | 949.1 | 949.0 | .1 |
| 27.500 | 100. | 333. | 2.2 | 949.2 | 949.1 | .1 |
| 27.700 | 115. | 425. | 1.7 | 950.2 | 950.1 | .1 |
| 27.800 | 80. | 346. | 2.2 | 950.4 | 950.3 | .1 |
| 27.900 | 91. | 391. | 1.9 | 950.5 | 950.4 | .1 |
| 28.000 | 91. | 374. | 1.8 | 950.5 | 950.4 | .1 |
| 28.100 | 91. | 369. | 1.8 | 950.5 | 950.4 | .1 |
| 28.200 | 91. | 396. | 1.7 | 950.5 | 950.4 | .1 |
| 28.300 | 101. | 427. | 1.6 | 950.5 | 950.4 | .1 |
| 28.420 | 274. | 389. | 1.8 | 950.8 | 950.7 | .1 |
| 28.670 | 111. | 397. | 1.8 | 952.3 | 952.2 | .1 |
| 28.800 | 136. | 456. | 1.5 | 952.6 | 952.5 | .1 |
| 28.810 | 70. | 191. | 3.6 | 952.6 | 952.5 | .1 |
| 28.900 | 70. | 217. | 3.2 | 952.7 | 952.6 | .1 |
| 29.000 | 70. | 209. | 3.3 | 952.7 | 952.6 | .1 |
| 29.100 | 70. | 225. | 3.1 | 952.8 | 952.7 | .1 |
| 29.200 | 70. | 233. | 3.0 | 952.8 | 952.7 | .1 |
| 29.300 | 62. | 197. | 3.5 | 952.8 | 952.7 | .1 |
| 29.420 | 74. | 233. | 3.0 | 953.5 | 953.5 | 0.0 |
| 29.550 | 78. | 315. | 2.2 | 954.8 | 954.7 | .1 |
| 29.700 | 101. | 373. | 1.9 | 955.0 | 954.9 | .1 |
| 29.810 | 133. | 402. | 1.7 | 955.1 | 955.0 | .1 |
| 29.900 | 80. | 341. | 2.0 | 955.1 | 955.0 | .1 |
| 30.000 | 80. | 317. | 2.2 | 955.1 | 955.0 | .1 |
| 30.100 | 80. | 324. | 2.1 | 955.1 | 955.0 | .1 |
| 30.200 | 80. | 334. | 2.1 | 955.1 | 955.0 | .1 |
| 30.300 | 133. | 462. | 1.5 | 955.2 | 955.1 | .1 |
| 30.400 | 133. | 463. | 1.5 | 955.2 | 955.1 | .1 |
| 31.000 | 104. | 362. | 1.9 | 956.5 | 956.4 | .1 |
| 31.300 | 118. | 391. | 1.2 | 957.6 | 957.5 | .1 |
| 31.415 | 93. | 325. | 2.1 | 957.7 | 957.6 | .1 |
| 31.510 | 47. | 324. | 2.1 | 957.7 | 957.6 | .1 |
| 31.600 | 70. | 307. | 2.3 | 957.8 | 957.7 | .1 |
| 32.000 | 70. | 297. | 2.3 | 957.8 | 957.7 | .1 |
| 32.100 | 70. | 310. | 2.2 | 957.8 | 957.7 | .1 |
| 32.200 | 70. | 319. | 2.2 | 957.8 | 957.7 | .1 |

MOORE BUSINESS FORMS, INC. 23

FLOODWAY DATA. 100 YEAR FLOW
PROFILE NO. 2

| STATION | DRAFT FEET | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 32.300 | 150. | 618. | 1.1 | 957.9 | 957.6 | .1 |
| 33.000 | 311. | 538. | 1.3 | 959.3 | 959.2 | .1 |
| 33.650 | 53. | 266. | 2.6 | 961.4 | 961.3 | .1 |
| 33.900 | 58. | 279. | 2.5 | 961.4 | 961.3 | .1 |
| 34.000 | 58. | 267. | 2.6 | 961.4 | 961.3 | .1 |
| 34.100 | 58. | 266. | 2.6 | 961.4 | 961.3 | .1 |
| 34.200 | 58. | 266. | 2.6 | 961.4 | 961.3 | .1 |
| 34.250 | 64. | 291. | 2.4 | 961.4 | 961.3 | .1 |
| 34.300 | 136. | 400. | 1.7 | 961.5 | 961.4 | .1 |
| 34.600 | 360. | 566. | 1.2 | 961.9 | 961.8 | .1 |
| 34.810 | 80. | 273. | 2.5 | 962.0 | 962.0 | 0.0 |
| 34.900 | 84. | 284. | 2.4 | 962.1 | 962.1 | 0.0 |
| 35.000 | 88. | 296. | 2.3 | 962.1 | 962.1 | 0.0 |
| 35.100 | 88. | 293. | 2.4 | 962.1 | 962.1 | 0.0 |
| 35.200 | 88. | 301. | 2.3 | 962.1 | 962.1 | 0.0 |
| 35.250 | 114. | 208. | 3.3 | 962.1 | 962.1 | 0.0 |
| 35.300 | 410. | 499. | 1.4 | 963.7 | 963.7 | 0.0 |
| 35.450 | 671. | 601. | 1.1 | 963.7 | 963.7 | 0.0 |
| 36.000 | 121. | 240. | 2.9 | 964.3 | 964.3 | 0.0 |

MOORE BUSINESS FORMS, INC. 23

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100-year Natural

00BREAK00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

C
T1   THE TOWNSHIP OF ALBION
T2   THE KALAMAZOO RIVER
T3   THE 100 YEAR FLOW
J1   ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        1.       4.        0.        0.   0.000000      0.00      0.0       0.    946.170   0.000
J2   NPROF      IPLOT     PRFVS     XSECV     XSFCH     FN        ALLDC     IBW       CHNIM     ITRACE
     1.000      0.000    -1.000     0.000     0.000    -1.290     0.000     0.000     0.000     0.000
J3   VARIABLE CODES FOR SUMMARY PRINTOUT
     150.000   200.000    38.000    1.000    53.000    21.000    22.000    54.000    4.000     39.000

     110.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
ET     0.000     0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000
QT     5.000   535.000   675.000   735.000   875.000   735.000     0.000     0.000     0.000     0.000
NC      .060      .060      .035      .100      .300     0.000     0.000     0.000     0.000     0.000

        D/S LIMIT OF ALBION TWP.   (A)

X1    24.000    26.000  2000.000  2278.000     0.000     0.000     0.000     0.000     0.000     0.000
GR   982.100   883.000   985.800  1045.000   985.500  1077.000   980.800  1185.000   976.000  1287.000
GR   972.200  1393.000   969.300  1500.000   968.100  1552.000   966.300  1656.000   962.400  1772.000
GR   956.300  1864.000   952.100  1960.000   944.000  2000.000   938.700  2025.000   938.700  2250.000
GR   944.900  2278.000   950.000  2471.000   958.100  2870.000   964.300  2922.000   972.100  3106.000
GR   968.000  3248.000   968.500  3354.000   970.000  3462.000   971.000  3542.000   972.000  3548.000
GR   972.200  3562.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1    24.100    11.000  2000.000  2220.000  2350.000  2200.000  2280.000     0.000     0.000     0.000
GR   980.000  1450.000   970.000  1580.000   960.000  1660.000   950.000  1850.000   945.000  1920.000
GR   944.900  2000.000   939.560  2010.000   939.560  2210.000   944.600  2220.000   950.200  2300.000
GR   960.200  2460.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1    24.200    15.000  3000.000  3150.000  2000.000  2000.000  2300.000     0.000     0.000     0.000
GR   960.000   800.000   950.000   900.000   945.000  1020.000   946.000  1500.000   950.800  1600.000
GR   950.000  1800.000   945.000  1880.000   945.000  2600.000   944.000  3000.000   940.400  3020.000
GR   940.400  3130.000   944.800  3150.000   946.000  3320.000   950.000  3600.000   966.000  4000.000

        SURVEYED VALLEY SECTION   (B)
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MOORE BUSINESS FORMS, INC 20

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.000 | 41.000 | 4000.000 | 4090.000 | 1500.000 | 2600.000 | 2290.000 | 0.000 | 0.000 | 0.000 |
| GR | 951.400 | 1238.000 | 951.000 | 1938.000 | 950.600 | 2230.000 | 947.400 | 2314.000 | 946.800 | 2410.000 |
| GR | 949.400 | 2500.000 | 949.700 | 2522.000 | 950.200 | 2620.000 | 950.100 | 2700.000 | 950.000 | 2810.000 |
| GR | 946.900 | 2894.000 | 945.400 | 3018.000 | 945.600 | 3298.000 | 946.600 | 3444.000 | 946.100 | 3586.000 |
| GR | 946.600 | 3631.000 | 949.200 | 3796.000 | 948.500 | 3874.000 | 946.700 | 3974.000 | 944.900 | 4000.000 |
| GR | 941.900 | 4006.000 | 941.800 | 4020.000 | 941.300 | 4026.000 | 941.300 | 4040.000 | 941.900 | 4048.000 |
| GR | 941.500 | 4064.000 | 941.600 | 4070.000 | 942.300 | 4076.000 | 944.700 | 4090.000 | 945.600 | 4194.000 |
| GR | 948.200 | 4390.000 | 950.000 | 4580.000 | 951.900 | 4658.000 | 956.900 | 4754.000 | 960.000 | 4854.000 |
| GR | 963.200 | 4958.000 | 965.000 | 4970.000 | 961.200 | 4976.000 | 962.500 | 4990.000 | 965.200 | 5292.000 |
| GR | 966.600 | 5342.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.600 | 35.000 | 4000.000 | 4064.000 | 2100.000 | 1500.000 | 2850.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 2900.000 | 952.000 | 3300.000 | 950.000 | 3500.000 | 945.000 | 3600.000 | 945.400 | 3900.000 |
| GR | 945.720 | 4000.000 | 945.720 | 4000.000 | 942.320 | 4003.160 | 942.090 | 4006.320 | 942.010 | 4009.470 |
| GR | 941.950 | 4012.630 | 941.840 | 4015.790 | 941.760 | 4018.950 | 941.730 | 4022.110 | 941.700 | 4025.260 |
| GR | 941.720 | 4028.420 | 941.780 | 4031.580 | 941.740 | 4034.740 | 941.860 | 4037.890 | 942.110 | 4041.050 |
| GR | 942.380 | 4044.210 | 942.700 | 4047.370 | 943.190 | 4050.530 | 943.770 | 4053.680 | 944.350 | 4056.840 |
| GR | 944.920 | 4060.000 | 946.900 | 4264.000 | 946.600 | 4406.000 | 947.400 | 4598.000 | 950.600 | 4652.000 |
| GR | 952.500 | 4756.000 | 951.800 | 4802.000 | 951.400 | 4902.000 | 953.000 | 5004.000 | 956.300 | 5108.000 |
| GR | 962.300 | 5214.000 | 966.800 | 5314.000 | 968.100 | 5358.000 | 968.900 | 5408.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1901.000 | 2148.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.800 | 29.000 | 2000.000 | 2050.000 | 1060.000 | 620.000 | 1100.000 | 0.000 | 0.000 | 0.000 |
| GR | 969.000 | 1342.000 | 964.600 | 1428.000 | 959.600 | 1522.000 | 955.400 | 1610.000 | 950.000 | 1710.000 |
| GR | 948.300 | 1758.000 | 952.300 | 1776.000 | 949.100 | 1788.000 | 946.400 | 1912.000 | 946.000 | 2000.000 |
| GR | 942.300 | 2001.000 | 942.000 | 2010.000 | 941.700 | 2030.000 | 943.100 | 2040.000 | 945.000 | 2050.000 |
| GR | 946.900 | 2264.000 | 946.600 | 2406.000 | 947.400 | 2598.000 | 950.600 | 2652.000 | 952.500 | 2756.000 |
| GR | 951.800 | 2602.000 | 951.400 | 2902.000 | 953.000 | 3004.000 | 956.300 | 3108.000 | 962.300 | 3212.000 |
| GR | 966.800 | 3314.000 | 968.100 | 3358.000 | 968.900 | 3408.000 | 972.800 | 3510.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.900 | 48.000 | 2000.000 | 2085.000 | 420.000 | 40.000 | 324.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 949.900 | 949.900 | 0.000 |
| GR | 977.500 | 500.000 | 972.200 | 554.000 | 965.500 | 630.000 | 958.200 | 722.000 | 954.400 | 800.000 |
| GR | 952.000 | 874.000 | 951.000 | 975.000 | 951.100 | 1078.000 | 951.300 | 1184.000 | 951.800 | 1290.000 |
| GR | 951.300 | 1392.000 | 949.400 | 1494.000 | 949.200 | 1598.000 | 948.900 | 1694.000 | 949.200 | 1805.000 |
| GR | 950.500 | 1898.000 | 951.500 | 2000.000 | 945.900 | 2000.000 | 946.000 | 2008.000 | 942.200 | 2020.000 |
| GR | 944.500 | 2032.000 | 943.300 | 2039.000 | 943.000 | 2041.500 | 943.000 | 2041.600 | 942.800 | 2043.400 |
| GR | 942.800 | 2043.500 | 942.500 | 2046.000 | 942.400 | 2058.000 | 944.700 | 2066.000 | 945.500 | 2071.000 |
| GR | 945.500 | 2085.000 | 951.500 | 2085.000 | 951.300 | 2100.000 | 950.200 | 2202.000 | 949.500 | 2302.000 |
| GR | 949.700 | 2400.000 | 950.500 | 2504.000 | 950.900 | 2602.000 | 950.900 | 2704.000 | 951.300 | 2802.000 |
| GR | 951.400 | 2902.000 | 953.000 | 3004.000 | 956.300 | 3105.000 | 962.300 | 3212.000 | 966.800 | 3314.000 |
| GR | 968.100 | 3358.000 | 968.900 | 3408.000 | 972.800 | 3510.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

O/S FACE OF O DRIVE SOUTH.CONCRETE (C)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 26.000 | 0.000 | 0.000 | 0.000 | 16.900 | 16.900 | 16.900 | 0.000 | 0.000 | 0.000 |
| RT | 10.000 | 1898.000 | 950.500 | 0.000 | 2000.000 | 951.500 | 945.900 | 2000.000 | 951.500 | 948.300 |
| RT | 2041.500 | 951.500 | 948.300 | 2041.600 | 951.500 | 943.000 | 2043.400 | 951.500 | 942.800 | 2043.500 |
| RT | 951.500 | 948.300 | 2085.000 | 951.500 | 948.300 | 2085.000 | 951.500 | 945.500 | 2100.000 | 951.300 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 26.100 | 47.000 | 2000.000 | 2085.000 | 26.000 | 26.000 | 26.000 | 0.000 | 0.000 | 0.000 |
| RT | 10.000 | 1898.000 | 950.500 | 0.000 | 2000.000 | 951.500 | 946.300 | 2000.000 | 951.500 | 948.300 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BT | 2041.500 | 951.500 | 948.300 | 2041.600 | 951.500 | 940.600 | 2043.400 | 951.500 | 940.700 | 2043.500 |
| BT | 951.500 | 948.300 | 2085.000 | 951.500 | 948.300 | 2085.000 | 951.500 | 945.500 | 2100.000 | 951.300 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 977.500 | 500.000 | 972.200 | 554.000 | 965.500 | 630.000 | 958.200 | 722.000 | 954.400 | 800.000 |
| GR | 952.000 | 874.000 | 951.000 | 975.000 | 951.100 | 1078.000 | 951.300 | 1184.000 | 951.800 | 1290.000 |
| GR | 951.300 | 1392.000 | 949.400 | 1494.000 | 949.200 | 1598.000 | 948.900 | 1694.000 | 949.200 | 1805.000 |
| GR | 950.500 | 1898.000 | 951.500 | 2000.000 | 946.300 | 2000.000 | 945.100 | 2008.000 | 941.700 | 2020.000 |
| GR | 940.000 | 2036.000 | 940.300 | 2039.000 | 940.600 | 2041.500 | 940.600 | 2041.500 | 940.700 | 2043.400 |
| GR | 940.700 | 2043.500 | 940.900 | 2046.000 | 942.100 | 2059.000 | 943.100 | 2071.000 | 944.800 | 2085.000 |
| GR | 951.500 | 2085.000 | 951.300 | 2100.000 | 950.200 | 2202.000 | 949.500 | 2302.000 | 949.700 | 2400.000 |
| GR | 950.500 | 2504.000 | 950.900 | 2602.000 | 950.900 | 2704.000 | 951.300 | 2802.000 | 951.400 | 2902.000 |
| GR | 953.000 | 3004.000 | 956.300 | 3108.000 | 962.300 | 3212.000 | 966.800 | 3314.000 | 968.100 | 3358.000 |
| GR | 968.900 | 3408.000 | 972.800 | 3510.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | | |
| X1 | 26.200 | 0.000 | 0.000 | 0.000 | 16.900 | 16.900 | 16.900 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 951.500 | 951.500 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1897.000 | 2196.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .035 | .100 | .300 | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | | |
| X1 | 26.400 | 39.000 | 2000.000 | 2043.000 | 10.000 | 160.000 | 107.000 | 0.000 | 0.000 | 0.000 |
| GR | 977.500 | 500.000 | 972.200 | 554.000 | 965.500 | 630.000 | 958.200 | 722.000 | 954.400 | 800.000 |
| GR | 952.000 | 874.000 | 951.000 | 975.000 | 951.100 | 1078.000 | 951.300 | 1184.000 | 951.800 | 1290.000 |
| GR | 951.300 | 1392.000 | 950.900 | 1453.000 | 945.600 | 1460.000 | 948.600 | 1764.000 | 946.600 | 1800.000 |
| GR | 946.400 | 1900.000 | 945.500 | 2000.000 | 945.100 | 2044.000 | 942.700 | 2052.000 | 942.400 | 2060.000 |
| GR | 942.000 | 2067.000 | 941.900 | 2073.000 | 942.500 | 2085.000 | 944.500 | 2093.000 | 946.800 | 2200.000 |
| GR | 947.400 | 2300.000 | 948.900 | 2400.000 | 950.500 | 2504.000 | 950.900 | 2602.000 | 950.900 | 2704.000 |
| GR | 951.300 | 2802.000 | 951.400 | 2902.000 | 953.000 | 3004.000 | 956.300 | 3108.000 | 962.300 | 3212.000 |
| GR | 966.800 | 3314.000 | 968.100 | 3358.000 | 968.900 | 3408.000 | 972.800 | 3510.000 | 0.000 | 0.000 |
| | | | | | | | | | | |
| X1 | 26.900 | 34.000 | 2000.000 | 2124.000 | 2000.000 | 2250.000 | 3000.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.000 | 486.000 | 962.000 | 584.000 | 959.700 | 730.000 | 959.000 | 806.000 | 959.650 | 906.000 |
| GR | 959.400 | 1028.000 | 956.600 | 1188.000 | 955.600 | 1234.000 | 951.600 | 1358.000 | 948.100 | 1454.000 |
| GR | 948.000 | 1482.000 | 947.000 | 1634.000 | 946.700 | 1774.000 | 946.700 | 1850.000 | 947.100 | 1940.000 |
| GR | 947.400 | 2000.000 | 945.400 | 2026.000 | 944.200 | 2038.000 | 943.400 | 2048.000 | 943.200 | 2062.000 |
| GR | 944.000 | 2070.000 | 945.200 | 2082.000 | 944.400 | 2090.000 | 943.700 | 2100.000 | 945.500 | 2124.000 |
| GR | 947.200 | 2132.000 | 950.400 | 2220.000 | 953.600 | 2262.000 | 956.300 | 2314.000 | 961.000 | 2414.000 |
| GR | 964.100 | 2512.000 | 965.000 | 2552.000 | 966.700 | 2618.000 | 968.700 | 2748.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | | |
| | SURVEYED VALLEY SECTION (X) | | | | | | | | | |
| X1 | 27.000 | 32.000 | 2030.000 | 2090.000 | 72.000 | 72.000 | 72.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.000 | 486.000 | 962.000 | 584.000 | 959.700 | 730.000 | 959.000 | 806.000 | 959.650 | 906.000 |
| GR | 959.400 | 1028.000 | 956.600 | 1188.000 | 955.600 | 1234.000 | 951.600 | 1358.000 | 948.100 | 1454.000 |
| GR | 948.000 | 1482.000 | 947.000 | 1634.000 | 946.700 | 1784.000 | 948.500 | 1892.000 | 948.700 | 1982.000 |
| GR | 950.700 | 2030.000 | 943.400 | 2030.000 | 942.400 | 2040.000 | 943.000 | 2050.000 | 945.400 | 2060.000 |
| GR | 944.700 | 2070.000 | 942.900 | 2080.000 | 945.500 | 2090.000 | 950.200 | 2090.000 | 950.000 | 2170.000 |
| GR | 953.200 | 2262.000 | 956.300 | 2314.000 | 961.000 | 2414.000 | 964.100 | 2512.000 | 965.000 | 2552.000 |
| GR | 966.700 | 2618.000 | 968.700 | 2748.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | | |
| X1 | 27.100 | 37.000 | 2000.000 | 2143.000 | 36.000 | 36.000 | 36.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.000 | 486.000 | 962.000 | 584.000 | 959.700 | 730.000 | 959.000 | 806.000 | 959.650 | 906.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 959.400 | 1028.000 | 956.600 | 1188.000 | 955.600 | 1234.000 | 951.600 | 1358.000 | 948.100 | 1454.000 |
| GR | 948.000 | 1482.000 | 947.000 | 1634.000 | 946.700 | 1784.000 | 948.000 | 1862.000 | 948.100 | 1930.000 |
| GR | 948.000 | 2000.000 | 945.500 | 2008.000 | 944.300 | 2026.000 | 944.000 | 2042.000 | 944.500 | 2054.000 |
| GR | 945.100 | 2066.000 | 945.300 | 2080.000 | 945.100 | 2092.000 | 945.200 | 2104.000 | 945.100 | 2118.000 |
| GR | 944.800 | 2130.000 | 945.200 | 2140.000 | 946.000 | 2143.000 | 949.700 | 2176.000 | 953.000 | 2216.000 |
| GR | 953.200 | 2262.000 | 956.300 | 2314.000 | 961.000 | 2414.000 | 964.100 | 2512.000 | 965.000 | 2552.000 |
| GR | 966.700 | 2618.000 | 968.700 | 2748.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 0.000 | 1896.000 | 2784.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (E)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.400 | 43.000 | 2050.000 | 2169.500 | 1640.000 | 2300.000 | 2700.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.400 | 518.000 | 962.000 | 584.000 | 960.800 | 730.000 | 960.600 | 806.000 | 960.900 | 906.000 |
| GR | 960.800 | 1028.000 | 959.400 | 1188.000 | 958.400 | 1278.000 | 956.400 | 1370.000 | 954.700 | 1474.000 |
| GR | 946.300 | 1580.000 | 946.200 | 1684.000 | 950.600 | 1690.000 | 946.800 | 1896.000 | 946.300 | 2000.000 |
| GR | 945.200 | 2050.000 | 945.200 | 2050.000 | 945.810 | 2056.240 | 945.320 | 2062.580 | 945.120 | 2068.870 |
| GR | 945.050 | 2075.160 | 945.190 | 2081.450 | 945.500 | 2087.740 | 945.770 | 2094.030 | 945.930 | 2100.320 |
| GR | 945.730 | 2106.610 | 945.630 | 2112.890 | 945.560 | 2119.180 | 945.510 | 2125.470 | 945.530 | 2131.760 |
| GR | 945.610 | 2138.050 | 945.660 | 2144.340 | 945.710 | 2150.630 | 945.730 | 2156.920 | 945.940 | 2163.210 |
| GR | 946.950 | 2169.500 | 952.800 | 2274.000 | 957.400 | 2360.000 | 959.800 | 2458.000 | 962.200 | 2528.000 |
| GR | 964.400 | 2614.000 | 965.200 | 2728.000 | 965.000 | 2784.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.500 | 10.000 | 2000.000 | 2100.000 | 320.000 | 550.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 954.200 | 1350.000 | 950.300 | 1900.000 | 948.200 | 2000.000 | 945.800 | 2020.000 | 945.300 | 2040.000 |
| GR | 945.200 | 2060.000 | 945.400 | 2080.000 | 947.300 | 2100.000 | 950.200 | 2150.000 | 957.000 | 3250.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.700 | 35.000 | 2050.000 | 2154.000 | 1660.000 | 1330.000 | 1500.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.000 | 518.000 | 962.200 | 1278.000 | 961.600 | 1370.000 | 961.400 | 1474.000 | 961.100 | 1580.000 |
| GR | 959.300 | 1684.000 | 954.500 | 1790.000 | 953.900 | 1896.000 | 951.500 | 2000.000 | 948.300 | 2050.000 |
| GR | 946.900 | 2052.000 | 946.000 | 2062.000 | 946.000 | 2072.000 | 946.600 | 2082.000 | 947.000 | 2092.000 |
| GR | 946.000 | 2102.000 | 945.900 | 2112.000 | 945.900 | 2122.000 | 946.200 | 2132.000 | 946.900 | 2150.000 |
| GR | 947.900 | 2154.000 | 952.400 | 2274.000 | 957.000 | 2360.000 | 957.400 | 2458.000 | 959.900 | 2528.000 |
| GR | 961.900 | 2614.000 | 962.100 | 2728.000 | 960.100 | 2784.000 | 957.900 | 2796.000 | 959.500 | 2808.000 |
| GR | 957.000 | 2870.000 | 957.100 | 2970.000 | 960.300 | 3072.000 | 974.000 | 3180.000 | 976.200 | 3200.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.800 | 38.000 | 2129.000 | 2221.000 | 360.000 | 360.000 | 340.000 | 0.000 | 0.000 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.700 | 1695.000 | 952.600 | 1745.000 | 952.100 | 1845.000 |
| GR | 951.800 | 1945.000 | 951.100 | 2045.000 | 950.700 | 2129.000 | 947.100 | 2136.000 | 945.500 | 2146.000 |
| GR | 945.800 | 2156.000 | 946.600 | 2166.000 | 946.400 | 2176.000 | 946.100 | 2186.000 | 946.200 | 2196.000 |
| GR | 946.300 | 2206.000 | 947.100 | 2211.000 | 951.800 | 2221.000 | 954.000 | 2321.000 | 959.600 | 2421.000 |
| GR | 958.800 | 2512.000 | 961.700 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 | 961.100 | 2922.000 |
| GR | 962.100 | 3027.000 | 966.900 | 3116.000 | 966.700 | 3242.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.900 | 44.000 | 2141.000 | 2232.000 | 32.000 | 32.000 | 32.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 954.050 | 954.050 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.000 | 1698.000 | 954.800 | 1798.000 | 955.000 | 1900.000 |
| GR | 954.800 | 2000.000 | 954.800 | 2100.000 | 955.400 | 2141.000 | 947.400 | 2141.000 | 945.500 | 2151.000 |
| GR | 945.700 | 2161.000 | 946.000 | 2171.000 | 946.600 | 2181.000 | 946.200 | 2186.500 | 946.200 | 2186.600 |
| GR | 946.100 | 2188.400 | 946.100 | 2188.500 | 946.000 | 2191.000 | 946.000 | 2201.000 | 946.100 | 2211.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 946.200 | 2221.000 | 947.200 | 2228.000 | 947.500 | 2232.000 | 955.400 | 2232.000 | 955.200 | 2304.000 |
| GR | 956.600 | 2408.000 | 958.800 | 2512.000 | 961.100 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 |
| GR | 961.100 | 2922.000 | 962.100 | 3027.000 | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 500.000 | 635.000 | 690.000 | 820.000 | 690.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF F DRIVE SOUTH.CONCRETE (F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 2100.000 | 954.800 | 0.000 | 2141.000 | 955.400 | 947.400 | 2141.000 | 955.400 | 952.700 |
| BT | 2186.500 | 955.400 | 952.700 | 2186.600 | 955.400 | 946.200 | 2188.400 | 955.400 | 946.100 | 2188.500 |
| BT | 955.400 | 952.700 | 2232.000 | 955.400 | 952.700 | 2232.000 | 955.400 | 947.500 | 2304.000 | 955.200 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.100 | 44.000 | 2149.000 | 2240.000 | 36.500 | 36.500 | 36.500 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 2100.000 | 954.800 | 0.000 | 2149.000 | 955.400 | 947.800 | 2149.000 | 955.400 | 952.700 |
| BT | 2194.500 | 955.400 | 952.700 | 2194.600 | 955.400 | 945.800 | 2196.400 | 955.400 | 945.900 | 2196.500 |
| BT | 955.400 | 952.700 | 2240.000 | 955.400 | 952.700 | 2240.000 | 955.400 | 948.000 | 2304.000 | 955.200 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.000 | 1698.000 | 954.800 | 1798.000 | 955.000 | 1900.000 |
| GR | 954.800 | 2000.000 | 954.800 | 2100.000 | 955.400 | 2149.000 | 947.800 | 2149.000 | 945.800 | 2159.000 |
| GR | 945.900 | 2169.000 | 945.900 | 2179.000 | 945.700 | 2189.000 | 945.800 | 2194.500 | 945.800 | 2194.600 |
| GR | 945.900 | 2196.400 | 945.900 | 2196.500 | 946.000 | 2199.000 | 946.400 | 2209.000 | 945.700 | 2219.000 |
| GR | 945.700 | 2229.000 | 947.100 | 2235.000 | 948.000 | 2240.000 | 955.400 | 2240.000 | 955.200 | 2304.000 |
| GR | 956.600 | 2408.000 | 958.800 | 2512.000 | 961.100 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 |
| GR | 961.100 | 2922.000 | 962.100 | 3027.000 | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 955.400 | 955.400 | 0.000 |
| FT | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 2117.000 | 2272.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.300 | 39.000 | 2154.500 | 2229.000 | 32.000 | 32.000 | 32.000 | 0.000 | 0.000 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.000 | 1698.000 | 954.700 | 1745.000 | 950.500 | 1845.000 |
| GR | 950.000 | 1945.000 | 950.000 | 2000.000 | 950.000 | 2045.000 | 949.400 | 2144.000 | 947.200 | 2154.500 |
| GR | 945.900 | 2164.000 | 946.100 | 2174.000 | 946.000 | 2184.000 | 946.000 | 2204.000 | 945.800 | 2214.000 |
| GR | 946.700 | 2224.000 | 947.200 | 2229.000 | 949.000 | 2239.000 | 953.200 | 2339.000 | 955.600 | 2359.000 |
| GR | 956.600 | 2408.000 | 958.800 | 2512.000 | 961.100 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 |
| GR | 961.100 | 2922.000 | 962.100 | 3027.000 | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 |
| FT | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 1.410 | 2000.000 | 3242.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.420 | 42.000 | 2154.500 | 2241.880 | 590.000 | 570.000 | 580.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 1200.000 | 955.000 | 1300.000 | 960.000 | 1400.000 | 960.000 | 1500.000 | 950.000 | 1575.000 |
| GR | 950.000 | 1700.000 | 960.000 | 1820.000 | 960.000 | 2100.000 | 949.400 | 2144.000 | 949.400 | 2144.000 |
| GR | 948.400 | 2154.500 | 948.400 | 2154.500 | 947.730 | 2159.100 | 947.070 | 2163.700 | 946.720 | 2168.300 |
| GR | 946.630 | 2172.890 | 946.660 | 2177.490 | 946.630 | 2182.090 | 946.610 | 2186.690 | 946.630 | 2191.290 |
| GR | 946.660 | 2195.890 | 946.700 | 2200.490 | 946.700 | 2205.090 | 946.690 | 2209.680 | 946.650 | 2214.280 |
| GR | 946.560 | 2218.880 | 946.490 | 2223.480 | 946.690 | 2228.080 | 947.060 | 2232.680 | 947.440 | 2237.280 |
| GR | 948.120 | 2241.880 | 953.200 | 2339.000 | 955.600 | 2359.000 | 956.600 | 2408.000 | 958.800 | 2512.000 |
| GR | 961.100 | 2618.000 | 962.300 | 2720.000 | 962.100 | 2820.000 | 961.100 | 2922.000 | 962.100 | 3027.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (G)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.670 | 22.000 | 2017.000 | 2120.000 | 2780.000 | 2800.000 | 2660.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.310 | 1606.000 | 962.280 | 1704.000 | 957.910 | 1760.000 | 958.290 | 1852.000 | 958.710 | 1900.000 |
| GR | 951.970 | 2000.000 | 949.260 | 2017.000 | 948.440 | 2027.000 | 948.250 | 2037.000 | 948.360 | 2047.000 |
| GR | 948.640 | 2057.000 | 948.760 | 2067.000 | 948.820 | 2077.000 | 948.510 | 2097.000 | 948.510 | 2097.000 |
| GR | 949.380 | 2120.000 | 950.920 | 2126.000 | 952.550 | 2210.000 | 955.350 | 2217.000 | 953.300 | 2244.000 |
| GR | 956.900 | 2368.000 | 959.210 | 2380.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.800 | 31.000 | 2000.000 | 2126.000 | 800.000 | 400.000 | 700.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.300 | 1606.000 | 962.300 | 1704.000 | 957.900 | 1760.000 | 958.300 | 1852.000 | 958.800 | 1900.000 |
| GR | 952.000 | 2000.000 | 949.300 | 2017.000 | 948.400 | 2027.000 | 948.300 | 2037.000 | 948.400 | 2047.000 |
| GR | 948.600 | 2057.000 | 948.800 | 2067.000 | 948.800 | 2077.000 | 948.700 | 2087.000 | 948.500 | 2097.000 |
| GR | 948.500 | 2107.000 | 949.400 | 2120.000 | 950.900 | 2126.000 | 952.600 | 2210.000 | 955.400 | 2217.000 |
| GR | 955.600 | 2230.000 | 953.300 | 2244.000 | 956.900 | 2368.000 | 959.200 | 2380.000 | 961.700 | 2456.000 |
| GR | 966.000 | 2530.000 | 967.600 | 2578.000 | 967.600 | 2702.000 | 975.800 | 2830.000 | 977.800 | 2934.000 |
| GR | 979.200 | 3022.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.810 | 36.000 | 2000.000 | 2100.000 | 80.000 | 15.000 | 75.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.900 | 318.000 | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 696.000 | 964.100 | 795.000 |
| GR | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 |
| GR | 962.400 | 1400.000 | 961.000 | 1502.000 | 959.600 | 1600.000 | 959.400 | 1700.000 | 959.000 | 1800.000 |
| GR | 954.600 | 1900.000 | 951.300 | 2000.000 | 950.600 | 2010.000 | 949.800 | 2020.000 | 949.700 | 2031.000 |
| GR | 949.300 | 2042.000 | 949.300 | 2052.000 | 949.900 | 2063.000 | 950.600 | 2067.000 | 956.300 | 2100.000 |
| GR | 957.000 | 2200.000 | 953.300 | 2300.000 | 953.900 | 2400.000 | 953.700 | 2500.000 | 954.400 | 2600.000 |
| GR | 955.800 | 2700.000 | 959.700 | 2800.000 | 964.800 | 2900.000 | 967.100 | 2925.000 | 971.600 | 3022.000 |
| GR | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.900 | 46.000 | 2000.000 | 2070.000 | 34.000 | 34.000 | 34.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 957.100 | 957.000 | 0.000 |
| GR | 962.900 | 318.000 | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 696.000 | 964.100 | 795.000 |
| GR | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 |
| GR | 962.400 | 1400.000 | 961.000 | 1502.000 | 959.600 | 1600.000 | 958.700 | 1700.000 | 958.500 | 1800.000 |
| GR | 958.300 | 1900.000 | 957.700 | 2000.000 | 951.400 | 2000.000 | 950.500 | 2007.000 | 949.200 | 2014.000 |
| GR | 949.600 | 2022.500 | 949.600 | 2022.600 | 949.700 | 2023.500 | 949.700 | 2023.600 | 949.700 | 2024.000 |
| GR | 949.100 | 2034.000 | 949.100 | 2044.000 | 949.100 | 2047.000 | 949.100 | 2047.100 | 949.100 | 2048.000 |
| GR | 949.100 | 2048.100 | 949.100 | 2054.000 | 949.900 | 2064.000 | 950.500 | 2067.000 | 951.200 | 2070.000 |
| GR | 957.600 | 2070.000 | 957.100 | 2168.000 | 957.100 | 2264.000 | 957.100 | 2400.000 | 957.200 | 2501.000 |
| GR | 957.800 | 2604.000 | 959.700 | 2710.000 | 963.200 | 2820.000 | 967.100 | 2925.000 | 971.600 | 3022.000 |
| GR | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF CONDUIT RD. BRIDGE.CONCRETE (H) Cass St

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| RT | 14.000 | 1900.000 | 958.300 | 0.000 | 2000.000 | 957.700 | 951.400 | 2000.000 | 957.700 | 956.400 |
| RT | 2022.500 | 957.700 | 956.400 | 2022.600 | 957.700 | 949.600 | 2023.500 | 957.700 | 949.700 | 2023.600 |
| RT | 957.700 | 956.400 | 2047.000 | 957.600 | 956.400 | 2047.100 | 957.600 | 949.100 | 2048.000 | 957.600 |
| RT | 949.100 | 2048.100 | 957.600 | 956.400 | 2070.000 | 957.600 | 956.400 | 2070.000 | 957.600 | 951.200 |
| RT | 2168.000 | 957.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.100 | 45.000 | 2000.000 | 2070.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| RT | 14.000 | 1900.000 | 958.300 | 0.000 | 2000.000 | 957.700 | 951.500 | 2000.000 | 957.700 | 956.300 |
| RT | 2022.500 | 957.700 | 956.300 | 2022.600 | 957.700 | 949.000 | 2023.500 | 957.700 | 949.000 | 2023.600 |
| RT | 957.700 | 956.300 | 2047.000 | 957.600 | 956.400 | 2047.100 | 957.600 | 949.200 | 2048.000 | 957.600 |
| RT | 949.200 | 2048.100 | 957.600 | 956.400 | 2070.000 | 957.600 | 956.400 | 2070.000 | 957.600 | 951.700 |
| RT | 2168.000 | 957.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.900 | 318.000 | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 696.000 | 964.100 | 795.000 |
| GR | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 |
| GR | 962.400 | 1400.000 | 961.000 | 1502.000 | 959.600 | 1600.000 | 958.700 | 1700.000 | 958.500 | 1800.000 |
| GR | 958.300 | 1900.000 | 957.700 | 2000.000 | 951.500 | 2000.000 | 950.500 | 2004.000 | 948.900 | 2014.000 |
| GR | 949.000 | 2022.500 | 949.000 | 2022.600 | 949.000 | 2023.500 | 949.000 | 2023.600 | 949.000 | 2024.000 |
| GR | 948.400 | 2034.000 | 949.100 | 2044.000 | 949.200 | 2047.000 | 949.200 | 2047.100 | 949.200 | 2048.000 |
| GR | 949.200 | 2048.100 | 949.200 | 2054.000 | 950.500 | 2064.000 | 951.700 | 2070.000 | 957.600 | 2070.000 |
| GR | 957.100 | 2168.000 | 957.100 | 2264.000 | 957.100 | 2400.000 | 957.200 | 2501.000 | 957.800 | 2604.000 |
| GR | 959.700 | 2710.000 | 963.200 | 2820.000 | 967.100 | 2925.000 | 971.600 | 3022.000 | 976.500 | 3120.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 957.700 | 956.600 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.300 | 36.000 | 1972.000 | 2065.000 | 34.000 | 34.000 | 34.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 696.000 | 964.100 | 795.000 | 965.000 | 897.000 |
| GR | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 | 962.400 | 1400.000 |
| GR | 961.000 | 1502.000 | 960.800 | 1600.000 | 959.000 | 1700.000 | 958.000 | 1800.000 | 956.500 | 1900.000 |
| GR | 956.200 | 1972.000 | 952.500 | 1992.000 | 950.300 | 2000.000 | 948.800 | 2010.000 | 948.600 | 2020.000 |
| GR | 948.400 | 2030.000 | 949.400 | 2040.000 | 950.200 | 2044.000 | 954.700 | 2065.000 | 956.200 | 2100.000 |
| GR | 954.600 | 2200.000 | 954.500 | 2300.000 | 955.000 | 2400.000 | 956.400 | 2500.000 | 957.400 | 2600.000 |
| GR | 957.800 | 2604.000 | 959.700 | 2710.000 | 963.200 | 2820.000 | 967.100 | 2925.000 | 971.600 | 3022.000 |
| GR | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.420 | 46.000 | 2000.000 | 2088.000 | 220.000 | 510.000 | 294.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 955.500 | 956.200 | 0.000 |
| GR | 963.000 | 696.000 | 964.100 | 795.000 | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 |
| GR | 965.200 | 1204.000 | 963.700 | 1302.000 | 962.400 | 1400.000 | 961.000 | 1502.000 | 960.800 | 1600.000 |
| GR | 959.000 | 1700.000 | 958.000 | 1800.000 | 956.500 | 1900.000 | 956.200 | 1972.000 | 952.500 | 1992.000 |
| GR | 955.500 | 2000.000 | 955.500 | 2000.000 | 954.450 | 2004.630 | 953.500 | 2009.260 | 952.730 | 2013.890 |
| GR | 952.020 | 2018.530 | 951.010 | 2023.160 | 950.080 | 2027.790 | 949.480 | 2032.420 | 949.010 | 2037.050 |
| GR | 948.980 | 2041.680 | 948.940 | 2046.320 | 948.890 | 2050.950 | 948.880 | 2055.580 | 949.250 | 2060.210 |
| GR | 949.720 | 2064.840 | 950.540 | 2069.470 | 951.390 | 2074.110 | 952.240 | 2078.740 | 953.100 | 2083.370 |
| GR | 954.220 | 2088.000 | 956.200 | 2100.000 | 954.600 | 2200.000 | 954.500 | 2300.000 | 955.000 | 2400.000 |
| GR | 956.400 | 2500.000 | 957.400 | 2600.000 | 957.800 | 2604.000 | 959.700 | 2710.000 | 963.200 | 2820.000 |
| GR | 967.100 | 2925.000 | 971.600 | 3022.000 | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.550 | 43.000 | 2000.000 | 2078.000 | 1010.000 | 1060.000 | 1050.000 | 0.000 | 0.000 | 0.000 |
| GR | 976.800 | 598.000 | 972.700 | 680.000 | 969.400 | 784.000 | 968.900 | 890.000 | 969.300 | 994.000 |
| GR | 969.600 | 1102.000 | 968.800 | 1200.000 | 967.200 | 1300.000 | 966.600 | 1302.000 | 964.000 | 1404.000 |
| GR | 961.300 | 1496.000 | 960.100 | 1600.000 | 959.000 | 1700.000 | 956.900 | 1790.000 | 956.100 | 1896.000 |
| GR | 954.100 | 2000.000 | 954.100 | 2000.000 | 952.770 | 2004.110 | 951.730 | 2008.210 | 951.210 | 2012.320 |
| GR | 950.900 | 2016.420 | 950.490 | 2020.530 | 950.060 | 2024.630 | 949.730 | 2028.740 | 949.490 | 2032.840 |
| GR | 949.580 | 2036.950 | 949.670 | 2041.050 | 949.700 | 2045.160 | 949.690 | 2049.260 | 949.820 | 2053.370 |
| GR | 950.150 | 2057.470 | 950.600 | 2061.580 | 951.070 | 2065.680 | 951.530 | 2069.790 | 951.990 | 2073.890 |
| GR | 953.270 | 2078.000 | 954.900 | 2140.000 | 957.000 | 2202.000 | 961.200 | 2278.000 | 957.800 | 2300.000 |
| GR | 965.000 | 2390.000 | 972.100 | 2502.000 | 973.800 | 2608.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.800 | 32.000 | 2000.000 | 2073.000 | 300.000 | 390.000 | 359.000 | 0.000 | 0.000 | 0.000 |
| GR | 979.600 | 496.000 | 976.800 | 598.000 | 972.700 | 680.000 | 969.400 | 784.000 | 968.900 | 890.000 |
| GR | 969.300 | 994.000 | 969.600 | 1102.000 | 968.800 | 1200.000 | 967.200 | 1300.000 | 966.600 | 1302.000 |
| GR | 964.000 | 1404.000 | 961.300 | 1496.000 | 960.100 | 1600.000 | 959.000 | 1700.000 | 956.900 | 1790.000 |
| GR | 956.100 | 1896.000 | 953.400 | 2000.000 | 951.100 | 2006.000 | 950.500 | 2010.000 | 950.200 | 2020.000 |
| GR | 949.700 | 2030.000 | 950.100 | 2040.000 | 950.100 | 2050.000 | 951.500 | 2070.000 | 952.800 | 2073.000 |
| GR | 954.900 | 2140.000 | 957.000 | 2202.000 | 961.200 | 2278.000 | 957.800 | 2300.000 | 965.000 | 2390.000 |
| GR | 972.100 | 2502.000 | 973.800 | 2608.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 29.810 | 30.000 | 2000.000 | 2080.000 | 140.000 | 140.000 | 160.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1088.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 958.900 | 1700.000 | 957.300 | 1800.000 | 956.200 | 1900.000 |
| GR | 953.100 | 2000.000 | 951.700 | 2003.000 | 950.700 | 2010.000 | 950.600 | 2020.000 | 950.200 | 2030.000 |
| GR | 949.300 | 2040.000 | 949.100 | 2050.000 | 950.000 | 2060.000 | 951.600 | 2069.000 | 953.100 | 2080.000 |
| GR | 958.100 | 2200.000 | 963.300 | 2278.000 | 969.000 | 2380.000 | 974.000 | 2438.000 | 985.400 | 2598.000 |
| X1 | 29.900 | 37.000 | 2000.000 | 2069.000 | 39.000 | 39.000 | 39.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 957.500 | 957.450 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1088.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 958.400 | 1744.000 | 957.700 | 1848.000 | 958.100 | 2000.000 |
| GR | 951.200 | 2000.000 | 950.500 | 2010.000 | 949.900 | 2020.000 | 949.900 | 2022.200 | 949.900 | 2022.300 |
| GR | 949.900 | 2023.200 | 949.900 | 2023.300 | 949.900 | 2030.000 | 949.500 | 2040.000 | 949.600 | 2046.400 |
| GR | 949.600 | 2046.500 | 949.600 | 2047.400 | 949.600 | 2047.500 | 949.600 | 2050.000 | 950.800 | 2060.000 |
| GR | 950.700 | 2069.000 | 956.100 | 2069.000 | 959.700 | 2188.000 | 963.300 | 2278.000 | 969.000 | 2380.000 |
| GR | 974.000 | 2438.000 | 985.400 | 2598.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF H DRIVE SOUTH BRIDGE.CONCRETE (1)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 30.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1848.000 | 957.700 | 0.000 | 2000.000 | 958.100 | 951.200 | 2000.000 | 958.100 | 956.900 |
| BT | 2022.200 | 958.100 | 956.900 | 2022.300 | 958.100 | 949.900 | 2023.200 | 958.100 | 949.900 | 2023.300 |
| BT | 958.100 | 956.900 | 2046.400 | 958.100 | 956.800 | 2046.500 | 958.100 | 949.600 | 2047.400 | 958.100 |
| BT | 949.600 | 2047.500 | 958.100 | 956.800 | 2069.000 | 958.100 | 956.800 | 2069.000 | 958.100 | 950.700 |
| BT | 2188.000 | 959.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 30.100 | 37.000 | 2000.000 | 2069.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1848.000 | 957.700 | 0.000 | 2000.000 | 958.100 | 951.200 | 2000.000 | 958.100 | 956.900 |
| BT | 2022.200 | 958.100 | 956.900 | 2022.300 | 958.100 | 950.100 | 2023.200 | 958.100 | 950.100 | 2023.300 |
| BT | 958.100 | 956.900 | 2046.400 | 958.100 | 956.800 | 2046.500 | 958.100 | 950.200 | 2047.400 | 958.100 |
| BT | 950.200 | 2047.500 | 958.100 | 956.800 | 2069.000 | 958.100 | 956.800 | 2069.000 | 958.100 | 951.100 |
| BT | 2188.000 | 959.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1088.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 958.400 | 1744.000 | 957.700 | 1848.000 | 958.100 | 2000.000 |
| GR | 951.200 | 2000.000 | 950.200 | 2010.000 | 950.100 | 2020.000 | 950.100 | 2022.200 | 950.100 | 2022.300 |
| GR | 950.100 | 2023.200 | 950.100 | 2023.300 | 950.100 | 2030.000 | 950.100 | 2040.000 | 950.200 | 2046.400 |
| GR | 950.200 | 2046.500 | 950.200 | 2047.400 | 950.200 | 2047.500 | 950.200 | 2050.000 | 950.000 | 2060.000 |
| GR | 951.100 | 2069.000 | 958.100 | 2069.000 | 959.700 | 2188.000 | 963.300 | 2278.000 | 969.000 | 2380.000 |
| GR | 974.000 | 2438.000 | 985.400 | 2598.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 30.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 958.100 | 958.100 | 0.000 |
| X1 | 30.300 | 32.000 | 2000.000 | 2088.000 | 39.000 | 39.000 | 39.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1068.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 960.500 | 1722.000 | 958.300 | 1822.000 | 957.000 | 1922.000 |
| GR | 954.300 | 1982.000 | 952.000 | 2000.000 | 950.900 | 2012.000 | 950.400 | 2022.000 | 950.100 | 2032.000 |
| GR | 950.200 | 2042.000 | 950.400 | 2052.000 | 950.700 | 2062.000 | 950.500 | 2072.000 | 951.600 | 2088.000 |
| GR | 953.900 | 2097.000 | 953.600 | 2122.000 | 958.600 | 2222.000 | 962.000 | 2282.000 | 969.000 | 2380.000 |
| GR | 974.000 | 2438.000 | 985.400 | 2596.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 30.400 | 0.000 | 0.000 | 0.000 | 76.000 | 76.000 | 76.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (J)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.000 | 23.000 | 2006.000 | 2102.000 | 2700.000 | 2840.000 | 2825.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 1752.000 | 979.400 | 1866.000 | 974.900 | 1930.000 | 960.900 | 1982.000 | 954.600 | 2000.000 |
| GR | 953.600 | 2006.000 | 952.800 | 2016.000 | 952.600 | 2026.000 | 952.700 | 2036.000 | 952.600 | 2046.000 |
| GR | 952.400 | 2056.000 | 952.800 | 2066.000 | 953.000 | 2076.000 | 953.700 | 2102.000 | 955.800 | 2126.000 |
| GR | 956.400 | 2192.000 | 956.300 | 2270.000 | 957.600 | 2340.000 | 958.900 | 2416.000 | 960.000 | 2538.000 |
| GR | 962.100 | 2694.000 | 965.000 | 2766.000 | 970.000 | 2816.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 31.800 | 29.000 | 2000.000 | 2078.000 | 2520.000 | 2440.000 | 2566.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.600 | 1603.000 | 983.200 | 1699.000 | 973.700 | 1803.000 | 967.800 | 1901.000 | 966.900 | 1930.000 |
| GR | 965.500 | 1948.000 | 963.200 | 1959.000 | 962.700 | 1982.000 | 954.800 | 2000.000 | 953.700 | 2001.000 |
| GR | 952.500 | 2010.000 | 952.300 | 2020.000 | 952.700 | 2032.000 | 952.800 | 2044.000 | 952.900 | 2054.000 |
| GR | 953.100 | 2066.000 | 953.800 | 2072.000 | 955.100 | 2078.000 | 956.300 | 2128.000 | 957.700 | 2216.000 |
| GR | 956.500 | 2306.000 | 956.600 | 2392.000 | 960.300 | 2452.000 | 964.900 | 2472.000 | 965.400 | 2512.000 |
| GR | 971.200 | 2610.000 | 978.700 | 2696.000 | 984.000 | 2774.000 | 988.500 | 2862.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1982.000 | 2095.000 | 0.000 | 0.000 |
| X1 | 31.805 | 31.000 | 2000.000 | 2070.000 | 240.000 | 140.000 | 223.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.500 | 1700.000 | 965.600 | 1800.000 | 963.100 | 1900.000 | 960.300 | 1988.000 |
| GR | 956.300 | 2000.000 | 954.300 | 2006.000 | 953.200 | 2010.000 | 952.800 | 2020.000 | 952.700 | 2030.000 |
| GR | 953.300 | 2040.000 | 953.200 | 2055.000 | 954.200 | 2064.000 | 955.100 | 2070.000 | 959.400 | 2100.000 |
| GR | 957.300 | 2200.000 | 957.500 | 2300.000 | 964.600 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 |
| GR | 976.400 | 2602.000 | 982.900 | 2701.000 | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 |
| GR | 998.600 | 3105.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1987.000 | 2083.000 | 0.000 | 0.000 |
| X1 | 31.810 | 0.000 | 0.000 | 0.000 | 37.000 | 37.000 | 37.000 | 0.000 | 0.000 | 0.000 |
| X1 | 31.900 | 40.000 | 2000.000 | 2070.000 | 49.000 | 49.000 | 49.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 960.550 | 960.550 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.500 | 1700.000 | 965.600 | 1800.000 | 963.200 | 1908.000 | 961.200 | 2000.000 |
| GR | 955.200 | 2000.000 | 954.300 | 2003.000 | 953.400 | 2010.000 | 953.200 | 2020.000 | 953.200 | 2022.500 |
| GR | 953.200 | 2022.600 | 953.200 | 2023.500 | 953.200 | 2023.600 | 953.200 | 2030.000 | 953.000 | 2040.000 |
| GR | 952.800 | 2046.500 | 952.800 | 2046.600 | 952.800 | 2047.500 | 952.800 | 2047.600 | 952.700 | 2050.000 |
| GR | 953.700 | 2060.000 | 954.300 | 2067.000 | 954.700 | 2070.000 | 961.200 | 2070.000 | 960.100 | 2168.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 961.300 | 2298.000 | 965.800 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 | 976.400 | 2602.000 |
| GR | 982.900 | 2701.000 | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 | 998.600 | 3105.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF J DRIVE SOUTH\BRIDGE.CONCRETE (K)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 32.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1908.000 | 963.200 | 0.000 | 2000.000 | 961.200 | 955.200 | 2000.000 | 961.200 | 959.900 |
| BT | 2022.500 | 961.200 | 959.900 | 2022.600 | 961.200 | 953.200 | 2023.500 | 961.200 | 953.200 | 2023.600 |
| BT | 961.200 | 959.900 | 2046.500 | 961.200 | 959.900 | 2046.600 | 961.200 | 952.800 | 2047.500 | 961.200 |
| BT | 952.800 | 2047.600 | 961.200 | 959.900 | 2070.000 | 961.200 | 959.900 | 2070.000 | 961.200 | 954.700 |
| BT | 2168.000 | 960.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 32.100 | 39.000 | 2000.000 | 2070.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1908.000 | 963.200 | 0.000 | 2000.000 | 961.200 | 955.100 | 2000.000 | 961.200 | 959.900 |
| BT | 2022.500 | 961.200 | 959.900 | 2022.600 | 961.200 | 953.000 | 2023.500 | 961.200 | 953.000 | 2023.600 |
| BT | 961.200 | 959.900 | 2046.500 | 961.200 | 959.900 | 2046.600 | 961.200 | 952.800 | 2047.500 | 961.200 |
| BT | 952.800 | 2047.600 | 961.200 | 959.900 | 2070.000 | 961.200 | 959.900 | 2070.000 | 961.200 | 954.300 |
| BT | 2168.000 | 960.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.500 | 1700.000 | 965.600 | 1800.000 | 963.200 | 1908.000 | 961.200 | 2000.000 |
| GR | 955.100 | 2000.000 | 954.300 | 2005.000 | 953.600 | 2010.000 | 953.200 | 2020.000 | 953.000 | 2022.500 |
| GR | 953.000 | 2022.600 | 953.000 | 2023.500 | 953.000 | 2023.600 | 952.600 | 2030.000 | 952.600 | 2040.000 |
| GR | 952.800 | 2046.500 | 952.800 | 2046.600 | 952.800 | 2047.500 | 952.800 | 2047.600 | 952.900 | 2050.000 |
| GR | 953.200 | 2060.000 | 954.300 | 2070.000 | 961.200 | 2070.000 | 960.100 | 2168.000 | 961.300 | 2298.000 |
| GR | 965.800 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 | 976.400 | 2602.000 | 982.900 | 2701.000 |
| GR | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 | 998.600 | 3105.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Effective area

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 32.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 961.100 | 961.100 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1972.000 | 2142.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 32.300 | 34.000 | 2000.000 | 2114.000 | 49.000 | 49.000 | 49.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.400 | 1700.000 | 965.700 | 1800.000 | 962.300 | 1900.000 | 959.100 | 1974.000 |
| GR | 955.700 | 2000.000 | 954.300 | 2005.000 | 953.700 | 2010.000 | 953.200 | 2020.000 | 952.700 | 2030.000 |
| GR | 952.700 | 2040.000 | 952.700 | 2050.000 | 953.000 | 2060.000 | 953.000 | 2070.000 | 953.100 | 2080.000 |
| GR | 953.600 | 2100.000 | 954.300 | 2110.000 | 954.700 | 2114.000 | 957.400 | 2200.000 | 958.600 | 2300.000 |
| GR | 965.100 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 | 976.400 | 2602.000 | 982.900 | 2701.000 |
| GR | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 | 998.600 | 3105.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (L)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 33.000 | 38.000 | 2000.000 | 2052.000 | 3250.000 | 3625.000 | 4100.000 | 0.000 | 0.000 | 0.000 |
| GR | 979.500 | 1431.000 | 977.700 | 1459.000 | 968.400 | 1551.000 | 962.700 | 1591.000 | 961.100 | 1623.000 |
| GR | 958.900 | 1627.000 | 959.000 | 1667.000 | 960.300 | 1681.000 | 959.700 | 1756.000 | 958.700 | 1838.000 |
| GR | 959.000 | 1916.000 | 958.800 | 2000.000 | 956.700 | 2002.000 | 955.100 | 2012.000 | 955.200 | 2022.000 |
| GR | 955.200 | 2032.000 | 955.000 | 2042.000 | 956.800 | 2050.000 | 958.700 | 2052.000 | 958.300 | 2130.000 |
| GR | 957.500 | 2212.000 | 957.400 | 2284.000 | 959.000 | 2390.000 | 963.400 | 2422.000 | 965.400 | 2498.000 |
| GR | 964.700 | 2594.000 | 965.500 | 2682.000 | 966.800 | 2786.000 | 966.000 | 2880.000 | 966.100 | 2970.000 |
| GR | 967.700 | 3050.000 | 968.400 | 3144.000 | 969.000 | 3236.000 | 969.700 | 3332.000 | 969.200 | 3434.000 |
| GR | 967.800 | 3534.000 | 969.500 | 3626.000 | 973.700 | 3812.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 33.850 | 53.000 | 2032.000 | 2085.000 | 2390.000 | 2410.000 | 2399.000 | 0.000 | 0.000 | 0.000 |
| GR | 976.600 | 757.000 | 975.400 | 800.000 | 974.800 | 820.000 | 974.200 | 838.000 | 970.800 | 976.000 |
| GR | 968.600 | 1062.000 | 968.100 | 1206.000 | 965.700 | 1274.000 | 964.600 | 1362.000 | 963.300 | 1458.000 |
| GR | 963.900 | 1561.000 | 964.100 | 1600.000 | 964.000 | 1696.000 | 963.900 | 1797.000 | 964.100 | 1898.000 |
| GR | 962.750 | 2032.000 | 958.050 | 2032.000 | 957.470 | 2034.790 | 956.950 | 2037.580 | 956.460 | 2040.370 |
| GR | 956.390 | 2043.160 | 956.490 | 2045.950 | 956.600 | 2048.740 | 956.350 | 2051.530 | 956.110 | 2054.320 |
| GR | 955.920 | 2057.110 | 955.900 | 2059.890 | 956.110 | 2062.680 | 956.310 | 2065.470 | 956.460 | 2068.260 |
| GR | 956.200 | 2071.050 | 955.900 | 2073.840 | 955.600 | 2076.630 | 955.420 | 2079.420 | 955.540 | 2082.210 |
| GR | 957.400 | 2085.000 | 963.300 | 2085.000 | 964.400 | 2180.000 | 964.400 | 2282.000 | 963.800 | 2382.000 |
| GR | 963.800 | 2478.000 | 963.400 | 2528.000 | 963.700 | 2658.000 | 963.500 | 2688.000 | 964.200 | 2698.000 |
| GR | 964.100 | 2786.000 | 965.600 | 2904.000 | 967.100 | 2998.000 | 968.000 | 3086.000 | 968.900 | 3202.000 |
| GR | 969.100 | 3300.000 | 968.600 | 3400.000 | 969.000 | 3490.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 33.900 | 36.000 | 2027.000 | 2085.000 | 13.000 | 13.000 | 13.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 965.200 | 965.200 | 0.000 |
| GR | 980.300 | 838.000 | 975.100 | 976.000 | 971.400 | 1062.000 | 970.300 | 1206.000 | 970.500 | 1274.000 |
| GR | 968.600 | 1362.000 | 966.300 | 1458.000 | 967.500 | 1561.000 | 967.700 | 1600.000 | 967.600 | 1696.000 |
| GR | 967.700 | 1797.000 | 967.800 | 1898.000 | 967.400 | 2000.000 | 967.300 | 2027.000 | 957.900 | 2027.000 |
| GR | 956.000 | 2037.000 | 957.600 | 2045.000 | 956.300 | 2057.000 | 957.000 | 2067.000 | 955.600 | 2077.000 |
| GR | 955.500 | 2085.000 | 967.300 | 2085.000 | 967.700 | 2180.000 | 967.800 | 2282.000 | 967.600 | 2382.000 |
| GR | 967.300 | 2478.000 | 966.900 | 2528.000 | 968.200 | 2658.000 | 967.800 | 2688.000 | 969.500 | 2698.000 |
| GR | 969.200 | 2786.000 | 969.900 | 2904.000 | 970.800 | 2998.000 | 971.400 | 3086.000 | 972.600 | 3202.000 |
| GR | 972.900 | 3300.000 | 972.000 | 3400.000 | 972.500 | 3490.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF 25 1/2 MILE ROAD BRIDGE.CONCRETE (M)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 34.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 6.000 | 2000.000 | 967.400 | 0.000 | 2027.000 | 967.300 | 957.900 | 2027.000 | 967.300 | 963.100 |
| BT | 2085.000 | 967.300 | 963.100 | 2085.000 | 967.300 | 955.500 | 2180.000 | 967.700 | 0.000 | 0.000 |
| X1 | 34.100 | 38.000 | 2025.000 | 2083.000 | 29.000 | 29.000 | 29.000 | 0.000 | 0.000 | 0.000 |
| BT | 6.000 | 2000.000 | 967.400 | 0.000 | 2025.000 | 967.300 | 958.100 | 2025.000 | 967.300 | 963.100 |
| BT | 2083.000 | 967.300 | 963.100 | 2083.000 | 967.300 | 956.000 | 2180.000 | 967.700 | 0.000 | 0.000 |
| GR | 980.300 | 838.000 | 975.100 | 976.000 | 971.400 | 1062.000 | 970.300 | 1206.000 | 970.500 | 1274.000 |
| GR | 968.600 | 1362.000 | 966.300 | 1458.000 | 967.500 | 1561.000 | 967.700 | 1600.000 | 967.600 | 1696.000 |
| GR | 967.700 | 1797.000 | 967.800 | 1898.000 | 967.400 | 2000.000 | 967.300 | 2025.000 | 958.100 | 2025.000 |
| GR | 957.700 | 2035.000 | 956.800 | 2045.000 | 956.600 | 2055.000 | 956.200 | 2065.000 | 956.400 | 2075.000 |
| GR | 956.000 | 2083.000 | 967.300 | 2083.000 | 967.700 | 2180.000 | 967.800 | 2282.000 | 967.600 | 2382.000 |
| GR | 967.300 | 2478.000 | 966.900 | 2528.000 | 968.200 | 2658.000 | 967.800 | 2688.000 | 969.500 | 2698.000 |
| GR | 969.200 | 2786.000 | 969.900 | 2904.000 | 970.800 | 2998.000 | 971.400 | 3086.000 | 972.600 | 3202.000 |
| GR | 972.900 | 3300.000 | 972.000 | 3400.000 | 972.500 | 3490.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 34.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 967.300 | 967.300 | 0.000 |
| X1 | 34.250 | 55.000 | 2025.000 | 2069.000 | 13.000 | 13.000 | 13.000 | 0.000 | 0.000 | 0.000 |
| GR | 980.300 | 838.000 | 975.100 | 976.000 | 971.400 | 1062.000 | 970.300 | 1206.000 | 970.500 | 1274.000 |
| GR | 968.600 | 1362.000 | 966.300 | 1458.000 | 966.900 | 1486.000 | 965.400 | 1606.000 | 964.400 | 1720.000 |
| GR | 964.200 | 1826.000 | 964.400 | 1916.000 | 964.000 | 2000.000 | 961.900 | 2010.000 | 961.800 | 2020.000 |
| GR | 963.900 | 2025.000 | 959.300 | 2025.000 | 957.390 | 2028.370 | 957.210 | 2031.740 | 957.060 | 2035.110 |
| GR | 956.930 | 2038.470 | 956.770 | 2041.840 | 956.610 | 2045.210 | 956.510 | 2048.580 | 956.460 | 2051.950 |

MOORE BUSINESS FORMS, INC 2

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NC | .017 | .017 | .017 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.100 | 966.000 | 3504.000 | 3606.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.500 | 966.000 | 3072.000 | 3174.000 | 3298.800 | 965.600 | 3400.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.000 | 966.000 | 2502.000 | 2606.000 | 2796.000 | 967.100 | 2970.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 965.100 | 965.800 | 2088.000 | 2088.800 | 2294.000 | 968.800 | 2198.800 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 964.400 | 964.000 | 1674.000 | 1778.000 | 1978.000 | 969.000 | 2080.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.900 | 963.000 | 1396.000 | 1500.000 | 1700.000 | 969.300 | 1802.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.600 | 963.000 | 1188.000 | 1292.000 | 1492.000 | 969.800 | 1594.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.400 | 963.000 | 1017.000 | 1121.000 | 1321.000 | 970.000 | 1423.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.300 | 963.000 | 906.000 | 1010.000 | 1210.000 | 970.200 | 1312.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 829.000 | 933.000 | 1133.000 | 970.400 | 1235.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 771.000 | 875.000 | 1075.000 | 970.600 | 1177.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 731.000 | 835.000 | 1035.000 | 970.800 | 1137.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 704.000 | 808.000 | 1008.000 | 971.000 | 1110.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 687.000 | 791.000 | 991.000 | 971.200 | 1093.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 677.000 | 781.000 | 981.000 | 971.400 | 1083.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 671.000 | 775.000 | 975.000 | 971.600 | 1077.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 668.000 | 772.000 | 972.000 | 971.800 | 1074.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 963.000 | 667.000 | 771.000 | 971.000 | 972.000 | 1073

D/S FACE OF L DRIVE SOUTH BRIDGE.CONCRETE (N)

U/S LIMIT OF ALBION TWP.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 1894.000 | 967.900 | 0.000 | 2000.000 | 968.800 | 959.800 | 2000.000 | 968.800 | 965.700 |
| BT | 2043.000 | 968.800 | 965.700 | 2043.100 | 968.800 | 958.600 | 2045.000 | 968.800 | 958.500 | 2045.100 |
| BT | 968.800 | 965.700 | 2088.000 | 968.800 | 965.600 | 2088.000 | 968.800 | 960.100 | 2192.000 | 968.800 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.100 | 42.000 | 2000.000 | 2088.000 | 32.000 | 32.000 | 32.000 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 1894.000 | 967.900 | 0.000 | 2000.000 | 968.800 | 959.800 | 2000.000 | 968.800 | 965.700 |
| BT | 2043.000 | 968.800 | 965.700 | 2043.100 | 968.800 | 957.800 | 2045.000 | 968.800 | 957.900 | 2045.100 |
| BT | 968.800 | 965.700 | 2088.000 | 968.800 | 965.600 | 2088.000 | 968.800 | 960.300 | 2192.000 | 968.800 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 965.800 | 894.000 | 980.800 | 980.000 | 977.300 | 1082.000 | 974.900 | 1186.000 | 972.700 | 1290.000 |
| GR | 970.900 | 1396.000 | 969.300 | 1500.000 | 968.800 | 1568.000 | 968.100 | 1686.000 | 967.600 | 1790.000 |
| GR | 967.900 | 1894.000 | 968.800 | 2000.000 | 959.900 | 2000.000 | 958.800 | 2010.000 | 958.400 | 2020.000 |
| GR | 958.200 | 2030.000 | 957.700 | 2040.000 | 957.800 | 2043.000 | 957.800 | 2043.100 | 957.900 | 2045.000 |
| GR | 957.900 | 2045.100 | 958.000 | 2050.000 | 959.100 | 2060.000 | 958.500 | 2070.000 | 959.800 | 2080.000 |
| GR | 960.300 | 2088.000 | 968.800 | 2088.000 | 968.800 | 2192.000 | 969.100 | 2294.000 | 968.800 | 2398.000 |
| GR | 968.000 | 2502.000 | 968.000 | 2606.000 | 968.700 | 2764.000 | 967.200 | 2866.000 | 967.100 | 2970.000 |
| GR | 966.500 | 3072.000 | 966.000 | 3174.000 | 965.800 | 3280.000 | 965.800 | 3298.000 | 965.600 | 3400.000 |
| GR | 966.100 | 3504.000 | 966.600 | 3606.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 968.800 | 968.800 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.250 | 17.000 | 2007.000 | 2076.000 | 51.000 | 51.000 | 51.000 | 0.000 | 0.000 | 0.000 |
| GR | 968.210 | 1500.000 | 966.780 | 1600.000 | 963.960 | 1692.000 | 963.350 | 1814.000 | 963.060 | 1914.000 |
| GR | 962.480 | 2000.000 | 959.600 | 2007.000 | 959.400 | 2041.000 | 959.920 | 2076.000 | 961.960 | 2098.000 |
| GR | 963.010 | 2196.000 | 963.720 | 2276.000 | 963.230 | 2356.000 | 967.080 | 2400.000 | 967.550 | 2502.000 |
| GR | 968.010 | 2526.000 | 969.570 | 2600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SR | 0.000 | 1.750 | 3.000 | 69.000 | 1.000 | 0.000 | 1.000 | 0.000 | 959.590 | 959.400 |

SPILLWAY STRUCTURE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.300 | 20.000 | 2007.000 | 2076.000 | 10.000 | 10.000 | 10.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 960.590 | 961.470 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 968.210 | 1500.000 | 966.780 | 1600.000 | 963.960 | 1692.000 | 963.350 | 1814.000 | 963.060 | 1914.000 |
| GR | 962.480 | 2000.000 | 962.480 | 2007.000 | 961.470 | 2007.000 | 961.470 | 2040.000 | 959.400 | 2040.000 |
| GR | 959.400 | 2041.000 | 961.470 | 2041.000 | 961.490 | 2076.000 | 961.960 | 2098.000 | 963.010 | 2196.000 |
| GR | 963.720 | 2276.000 | 963.230 | 2356.000 | 967.080 | 2400.000 | 967.550 | 2502.000 | 968.010 | 2526.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.350 | 22.000 | 2000.000 | 2081.000 | 10.000 | 10.000 | 10.000 | 0.000 | 0.000 | 0.000 |
| GR | 968.210 | 1500.000 | 966.780 | 1600.000 | 963.600 | 1692.000 | 963.350 | 1814.000 | 963.060 | 1914.000 |
| GR | 962.480 | 2000.000 | 962.190 | 2014.000 | 959.950 | 2024.000 | 960.130 | 2034.000 | 959.770 | 2044.000 |
| GR | 959.800 | 2054.000 | 959.760 | 2064.000 | 960.270 | 2074.000 | 962.120 | 2081.000 | 961.760 | 2098.000 |
| GR | 963.010 | 2196.000 | 963.720 | 2276.000 | 963.230 | 2356.000 | 967.080 | 2400.000 | 967.550 | 2502.000 |
| GR | 968.010 | 2526.000 | 969.570 | 2600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 36.000 | 40.000 | 2006.000 | 2092.000 | 2680.000 | 2600.000 | 3430.000 | 0.000 | 0.000 | 0.000 |
| GR | 974.600 | 495.000 | 973.900 | 578.000 | 973.000 | 680.000 | 971.900 | 784.000 | 971.400 | 886.000 |
| GR | 968.700 | 986.000 | 967.800 | 1102.000 | 969.100 | 1206.000 | 968.300 | 1304.000 | 967.100 | 1400.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 967.800 | 1450.000 | 967.500 | 1572.000 | 965.800 | 1664.000 | 965.600 | 1750.000 | 965.300 | 1882.000 |
| GR | 964.700 | 2000.000 | 962.800 | 2006.000 | 961.700 | 2022.000 | 961.600 | 2038.000 | 961.300 | 2054.000 |
| GR | 961.400 | 2067.000 | 961.500 | 2076.000 | 962.800 | 2086.000 | 963.200 | 2092.000 | 966.200 | 2175.000 |
| GR | 972.300 | 2302.000 | 972.300 | 2334.000 | 974.000 | 2378.000 | 975.100 | 2484.000 | 974.900 | 2581.000 |
| GR | 974.900 | 2684.000 | 975.000 | 2804.000 | 975.700 | 2906.000 | 976.700 | 3004.000 | 977.700 | 3100.000 |
| GR | 979.200 | 3202.000 | 981.200 | 3306.000 | 984.800 | 3414.000 | 990.300 | 3514.000 | 992.300 | 3574.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

*PROF )

CCHV= .100 CEHV= .300
*SECNO 24.000

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | ULOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

Encroached.cwn reviewed

D/S LIMIT OF ALBION TWP. (A)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.00 | 7.47 | 946.17 | 0.00 | 946.17 | 946.17 | .00 | 0.00 | 0.00 | 944.00 |
| 735. | 1. | 732. | 2. | 12. | 1924. | 31. | 0. | 0. | 944.90 |
| 0.00 | .08 | .38 | .06 | .060 | .045 | .060 | 0.000 | 938.70 | 1989.28 |
| .000010 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 336.78 | 2326.06 |

*SECNO 24.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.10 | 6.64 | 946.20 | 0.00 | 0.00 | 946.20 | .00 | .03 | .00 | 944.90 |
| 735. | 14. | 720. | 2. | 109. | 1407. | 18. | 92. | 18. | 944.60 |
| 1.26 | .13 | .51 | .10 | .060 | .045 | .060 | .045 | 939.56 | 1903.29 |
| .000021 | 2350. | 2280. | 2200. | 0 | 0 | 0 | 0.00 | 339.47 | 2242.76 |

*SECNO 24.200

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.20 | 5.85 | 946.25 | 0.00 | 0.00 | 946.26 | .00 | .05 | .00 | 944.00 |
| 735. | 306. | 412. | 17. | 2000. | 798. | 148. | 202. | 73. | 944.80 |
| 3.00 | .15 | .52 | .11 | .060 | .045 | .060 | .046 | 940.40 | 989.89 |
| .000027 | 2000. | 2300. | 2000. | 2 | 0 | 0 | 0.00 | 1993.31 | 3337.82 |

*SECNO 25.000

3265 DIVIDED FLOW

SURVEYED VALLEY SECTION (B)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.00 | 5.07 | 946.37 | 0.00 | 0.00 | 946.39 | .02 | .13 | .01 | 944.90 |
| 735. | 116. | 556. | 64. | 354. | 389. | 149. | 283. | 128. | 944.70 |
| 3.50 | .33 | 1.43 | .43 | .060 | .045 | .060 | .047 | 941.30 | 2938.00 |
| .000271 | 1500. | 2290. | 2600. | 2 | 0 | 0 | 0.00 | 845.34 | 4251.88 |

CCHV= .100 CEHV= .300
*SECNO 25.600

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | ULOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.60 | 5.29 | 946.99 | 0.00 | 0.00 | 947.01 | .01 | .61 | .00 | 945.72 |
| 735. | 294. | 361. | 80. | 684. | 273. | 273. | 337. | 168. | 944.92 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.31 | .43 | 1.32 | .29 | .070 | .045 | .070 | .048 | 941.70 | 3560.18 |
| .000222 | 2100. | 2850. | 1500. | 2 | 0 | 0 | 0.00 | 939.62 | 4499.81 |

*SECNO 25.800

3470 ENCROACHMENT STATIONS= 1901.0 2148.0 TYPE= 1 TARGET= 247.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.80 | 5.61 | 947.31 | 0.00 | 0.00 | 947.37 | .06 | .35 | .01 | 946.00 |
| 735. | 59. | 532. | 144. | 107. | 241. | 184. | 356. | 180. | 945.00 |
| 4.47 | .55 | 2.21 | .78 | .070 | .045 | .070 | .048 | 941.70 | 1901.00 |
| .000601 | 1080. | 1100. | 620. | 2 | 0 | 0 | 0.00 | 247.00 | 2148.00 |

*SECNO 25.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 949.90 ELREA= 949.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.90 | 5.33 | 947.53 | 0.00 | 0.00 | 947.63 | .10 | .25 | .01 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 295. | 0. | 359. | 181. | 951.50 |
| 4.50 | 0.00 | 2.49 | 0.00 | .070 | .045 | .070 | .048 | 942.20 | 2000.00 |
| .001174 | 420. | 324. | 40. | 2 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500

*SECNO 26.000

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

D/S FACE OF D DRIVE SOUTH.CONCRETE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.00 | 5.34 | 947.54 | 0.00 | 0.00 | 947.64 | .10 | .01 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 288. | 0. | 359. | 181. | 951.50 |
| 4.51 | 0.00 | 2.55 | 0.00 | .070 | .026 | .070 | .048 | 942.20 | 2000.00 |
| .000488 | 17. | 17. | 17. | 0 | 0 | 0 | -8.76 | 85.00 | 2085.00 |

*SECNO 26.100

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.10 | 7.62 | 947.62 | 0.00 | 0.00 | 947.66 | .05 | .01 | .02 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 426. | 0. | 359. | 181. | 951.50 |
| 4.51 | 0.00 | 1.72 | 0.00 | .070 | .026 | .070 | .048 | 940.00 | 2000.00 |
| .000139 | 26. | 26. | 26. | 2 | 0 | 0 | -13.18 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500

*SECNO 26.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 951.50 ELREA= 951.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.20 | 7.63 | 947.63 | 0.00 | 0.00 | 947.67 | .04 | .00 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 440. | 0. | 359. | 181. | 951.50 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.51 | 0.00 | 1.67 | 0.00 | .080 | .045 | .080 | .048 | 940.00 | 2000.00 |
| .000311 | 17. | 17. | 17. | 0 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .100 CEHV= .300
*SECNO 26.400

3470 ENCROACHMENT STATIONS= 1897.0 2196.0 TYPE= 1 TARGET= 299.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.40 | 5.78 | 947.68 | 0.00 | 0.00 | 947.71 | .03 | .04 | .00 | 945.50 |
| 735. | 89. | 523. | 122. | 177. | 348. | 213. | 361. | 182. | 944.50 |
| 4.54 | .51 | 1.50 | .57 | .080 | .045 | .080 | .048 | 941.90 | 1897.00 |
| .000363 | 10. | 107. | 160. | 2 | 0 | 0 | 0.00 | 299.00 | 2196.00 |

*SECNO 26.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.90 | 5.20 | 946.40 | 0.00 | 0.00 | 948.41 | .01 | .70 | .00 | 947.40 |
| 735. | 221. | 503. | 10. | 697. | 460. | 36. | 415. | 208. | 945.50 |
| 5.43 | .32 | 1.05 | .29 | .080 | .045 | .080 | .048 | 943.20 | 1445.84 |
| .000193 | 2000. | 3000. | 2250. | 2 | 0 | 0 | 0.00 | 719.08 | 2164.93 |

CCHV= .100 CEHV= .300
*SECNO 27.000

3265 DIVIDED FLOW

SURVEYED VALLEY SECTION (D)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.00 | 6.00 | 948.40 | 0.00 | 0.00 | 948.44 | .03 | .02 | .01 | 950.70 |
| 735. | 242. | 493. | 0. | 472. | 276. | 0. | 417. | 209. | 950.20 |
| 5.44 | .51 | 1.79 | 0.00 | .070 | .045 | .070 | .048 | 942.40 | 1445.48 |
| .000462 | 72. | 72. | 72. | 1 | 0 | 0 | 0.00 | 501.16 | 2090.00 |

*SECNO 27.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.10 | 4.44 | 948.44 | 0.00 | 0.00 | 948.45 | .01 | .01 | .00 | 948.00 |
| 735. | 182. | 544. | 9. | 531. | 494. | 26. | 417. | 209. | 946.00 |
| 5.45 | .34 | 1.10 | .35 | .070 | .045 | .070 | .048 | 944.00 | 1444.77 |
| .000215 | 36. | 36. | 36. | 2 | 0 | 0 | 0.00 | 719.96 | 2164.73 |

CCHV= .100 CEHV= .300
*SECNO 27.400

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1896.0 2784.0 TYPE= 1 TARGET= 888.000

SURVEYED VALLEY SECTION (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.40 | 3.92 | 948.97 | 0.00 | 0.00 | 948.99 | .01 | .54 | .00 | 945.20 |
| 735. | 262. | 461. | 12. | 413. | 403. | 37. | 465. | 232. | 946.95 |
| 6.15 | .63 | 1.14 | .33 | .070 | .045 | .070 | .049 | 945.05 | 1896.00 |
| .000239 | 1640. | 2700. | 2300. | 2 | 0 | 0 | 0.00 | 309.63 | 2205.63 |

MOORE BUSINESS FORMS, INC 23

MOORE BUSINESS FORMS, INC 23

```
 CCHV=    .300 CEHV=    .500
 *SECNO 27.500
    27.50      3.91    949.11      0.00      0.00    949.18      .07       .16       .03    948.20
     735.         8.      710.       17.       20.      322.      28.      470.      235.     947.30
     6.20       .39      2.21       .61      .070      .045      .070      .048    945.20   1956.70
  .000948       320.      400.      550.         2         0         0      0.00    174.49   2131.19

 *SECNO 27.700
    27.70      4.24    950.14      0.00      0.00    950.18      .05       .99       .01    948.30
     735.        12.      689.       34.       26.      392.      67.      484.      241.     947.90
     6.45       .44      1.76       .51      .070      .045      .070      .048    945.90   2021.28
  .000491      1660.      1500.     1330.         2         0         0      0.00    192.40   2213.68

 *SECNO 27.800
    27.80      4.83    950.33      0.00      0.00    950.41      .08       .21       .02    950.70
     735.         0.      735.       0.        0.      330.       0.      488.      242.     951.80
     6.49       0.00     2.23       0.00      .070      .045      .070      .048    945.50   2129.71
  .000810       360.      340.      360.         2         0         0      0.00     88.17   2217.88

 *SECNO 27.900
 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      954.05 ELREA=      954.05
    27.90      4.88    950.38      0.00      0.00    950.44      .06       .02       .01    955.40
     735.         0.      735.       0.        0.      382.       0.      488.      242.     955.40
     6.49       0.00     1.93       0.00      .070      .045      .070      .048    945.50   2141.00
  .000552        32.       32.       32.         2         0         0      0.00     91.00   2232.00

 CCHV=    .300 CEHV=    .500
 *SECNO 28.000
    SECNO      DEPTH     CWSEL     CRWS      WSELR     EG        HV        HL        QLOSS     BANK ELEV
      Q        QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IOC       ICONT     CORAR     TOPWID      FNDST

 3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD=  954.80 MAX ELLC=  952.70

      O/S FACE OF DRIVE SOUTH.CONCRETE  (F)
    28.00      4.89    950.39      0.00      0.00    950.44      .05       .00       .00    955.40
     690.         0.      690.       0.        0.      374.       0.      488.      242.     955.40
     6.49       0.00     1.85       0.00      .070      .026      .070      .048    945.50   2141.00
  .000200          1.        1.        1.         0         0         0     -7.89     91.00   2232.00

 *SECNO 28.100
 3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD=  954.80 MAX ELLC=  952.70
    28.10      4.70    950.40      0.00      0.00    950.45      .05       .01       .00    955.40
     690.         0.      690.       0.        0.      381.       0.      488.      242.     955.40
     6.50       0.00     1.81       0.00      .070      .026      .070      .048    945.70   2149.00
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 .000186      37.      37.      37.        0        0        0    -8.49    91.00  2240.00

CCHV=     .300 CEHV=     .500
*SECNO 28.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       955.40 ELREA=       955.40
   28.20     4.70   950.40     0.00     0.00   950.45      .05      .00      .00   955.40
    690.       0.     690.       0.       0.     389.       0.     488.     242.    955.40
    6.50     0.00     1.77     0.00     .070     .045     .070     .048   945.70  2149.00
 .000453       1.       1.       1.        0        0        0     0.00    91.00  2240.00

*SECNO 28.300

3470 ENCROACHMENT STATIONS=     2117.0     2272.0  TYPE=      1  TARGET=      155.000
   28.30     4.61   950.41     0.00     0.00   950.47      .06      .02      .00   947.20
    690.      29.     632.      29.      47.     317.      47.     489.     242.    947.20
    6.50      .62     2.00      .62     .070     .045     .070     .048   945.80  2117.00
 .000536      32.      32.      32.        0        0        0     0.00   155.00  2272.00

CCHV=     .100 CEHV=     .300
*SECNO 28.420

3470 ENCROACHMENT STATIONS=     2000.0     3242.0  TYPE=      1  TARGET=     1242.000
   28.42     4.24   950.73     0.00     0.00   950.78      .05      .31      .00   948.40
    690.      16.     636.      39.      23.     337.      65.     494.     244.    948.12
    6.59      .68     1.89      .59     .070     .045     .070     .048   946.49  2138.48
 .000544     590.     580.     570.        2        0        0     0.00   153.32  2291.79

CCHV=     .100 CEHV=     .300
*SECNO 28.670
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

        SURVEYED VALLEY SECTION    (G)

   28.67     3.95   952.20     0.00     0.00   952.24      .05     1.46      .00   949.26
    690.      18.     647.      25.      27.     362.      55.     521.     255.    949.38
    7.03      .66     1.78      .46     .070     .045     .070     .048   948.25  1996.59
 .000549    2780.    2660.    2800.        1        0        0     0.00   195.36  2191.95

*SECNO 28.800
   28.80     4.22   952.52     0.00     0.00   952.56      .03      .31      .00   952.00
    690.       0.     666.      24.       2.     447.      66.     528.     258.    950.90
    7.16      .17     1.49      .36     .070     .045     .070     .048   948.30  1992.17
 .000381     800.     700.     400.        1        0        0     0.00   214.48  2206.65

*SECNO 28.810
   28.81     3.17   952.47     0.00     0.00   952.67      .20      .07      .05   951.30
    690.      20.     670.       0.      21.     183.       0.     529.     258.    956.30
```

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.17 | .94 | 3.67 | 0.00 | .070 | .045 | .070 | .048 | 949.30 | 1964.51 |
| .003995 | 80. | 75. | 15. | 2 | 0 | 0 | 0.00 | 113.32 | 2077.83 |

*SECNO 28.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 957.10 ELREA= 957.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.90 | 3.51 | 952.61 | 0.00 | 0.00 | 952.78 | .17 | .11 | .00 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 209. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.30 | 0.00 | .070 | .045 | .070 | .048 | 949.10 | 2000.00 |
| .002483 | 34. | 34. | 34. | 2 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 29.000

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 957.10 MAX ELLC= 956.40

D/S FACE OF CONDUIT RD. BRIDGE.CONCRETE (H)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.00 | 3.51 | 952.61 | 0.00 | 0.00 | 952.79 | .18 | .00 | .01 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 203. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.40 | 0.00 | .020 | .026 | .020 | .048 | 949.10 | 2000.00 |
| .001100 | 1. | 1. | 1. | 0 | 0 | 0 | -6.13 | 70.00 | 2070.00 |

*SECNO 29.100

| SECNO | DEPTH | C*SEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 957.10 MAX ELLC= 956.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.10 | 4.27 | 952.67 | 0.00 | 0.00 | 952.83 | .16 | .03 | .01 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 218. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.17 | 0.00 | .020 | .026 | .020 | .048 | 948.40 | 2000.00 |
| .000881 | 30. | 30. | 30. | 0 | 0 | 0 | -6.77 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 29.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 957.70 ELREA= 956.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.20 | 4.29 | 952.69 | 0.00 | 0.00 | 952.83 | .15 | .00 | .00 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 225. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.06 | 0.00 | .060 | .045 | .060 | .048 | 948.40 | 2000.00 |
| .001911 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

*SECNO 29.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.30 | 4.34 | 952.74 | 0.00 | 0.00 | 952.94 | .20 | .08 | .03 | 956.20 |
| 690. | 0. | 690. | 0. | 0. | 190. | 0. | 529. | 258. | 954.70 |
| 7.18 | 0.00 | 3.63 | 0.00 | .060 | .045 | .060 | .048 | 948.40 | 1990.74 |
| .002951 | 34. | 34. | 34. | 0 | 0 | 0 | 0.00 | 65.08 | 2055.82 |

MOORE BUSINESS FORMS, INC. 23

CCHV= .100 CEHV= .300
*SECNO 29.420

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 955.50 ELREA= 956.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.42 | 4.62 | 953.50 | 0.00 | 0.00 | 953.64 | .14 | .69 | .01 | 955.50 |
| 690. | 0. | 690. | 0. | 0. | 230. | 0. | 531. | 259. | 954.22 |
| 7.20 | 0.00 | 3.60 | 0.00 | .060 | .045 | .060 | .048 | 948.88 | 2009.27 |
| .001924 | 220. | 294. | 510. | 2 | 0 | 0 | 0.00 | 75.75 | 2085.02 |

*SECNO 29.550

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.55 | 5.22 | 954.71 | 0.00 | 0.00 | 954.77 | .07 | 1.13 | .01 | 954.10 |
| 690. | 3. | 667. | 20. | 10. | 310. | 39. | 538. | 262. | 953.27 |
| 7.34 | .29 | 2.15 | .52 | .060 | .045 | .060 | .048 | 949.49 | 1968.40 |
| .000685 | 1010. | 1050. | 1060. | 3 | 0 | 0 | 0.00 | 164.28 | 2132.68 |

CCHV= .300 CEHV= .500
*SECNO 29.800

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | ARUR | VOL | IWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 29.80 | 5.24 | 954.94 | 0.00 | 0.00 | 954.99 | .05 | .21 | .00 | 953.40 |
| 690. | 21. | 626. | 43. | 45. | 318. | 73. | 541. | 263. | 952.80 |
| 7.40 | .47 | 1.97 | .59 | .060 | .045 | .060 | .048 | 949.70 | 1940.86 |
| .000509 | 300. | 359. | 390. | 2 | 0 | 0 | 0.00 | 200.18 | 2141.04 |

*SECNO 29.810

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.81 | 5.92 | 955.02 | 0.00 | 0.00 | 955.06 | .05 | .07 | .00 | 953.10 |
| 690. | 29. | 639. | 22. | 60. | 358. | 44. | 543. | 264. | 953.10 |
| 7.42 | .49 | 1.79 | .49 | .060 | .045 | .060 | .048 | 949.10 | 1937.97 |
| .000405 | 140. | 160. | 140. | 0 | 0 | 0 | 0.00 | 188.18 | 2126.15 |

*SECNO 29.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 957.50 ELREA= 957.45

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.90 | 5.53 | 955.03 | 0.00 | 0.00 | 955.09 | .07 | .02 | .01 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 337. | 0. | 543. | 264. | 958.10 |
| 7.43 | 0.00 | 2.05 | 0.00 | .060 | .045 | .060 | .048 | 949.50 | 2000.00 |
| .000546 | 39. | 39. | 39. | 0 | 0 | 0 | 0.00 | 69.00 | 2069.00 |

CCHV= .300 CEHV= .500
*SECNO 30.000

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 957.70 MAX ELLC= 956.90

D/S FACE OF H DRIVE SOUTH BRIDGE.CONCRETE (1)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.00 | 5.53 | 955.03 | 0.00 | 0.00 | 955.09 | .07 | .00 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 326. | 0. | 543. | 264. | 958.10 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.43 | 0.00 | 2.12 | 0.00 | .020 | .026 | .020 | .048 | 949.50 | 2000.00 |
| .000298 | 1. | 1. | 1. | 0 | 0 | 0 | -10.28 | 69.00 | 2069.00 |

*SECNO 30.100

3370 NORMAL BRIDGE,NRD= 14 MIN FLTHU= 957.70 MAX ELLC= 956.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.10 | 5.03 | 955.03 | 0.00 | 0.00 | 955.11 | .07 | .01 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 320. | 0. | 543. | 264. | 958.10 |
| 7.43 | 0.00 | 2.16 | 0.00 | .020 | .026 | .020 | .047 | 950.00 | 2000.00 |
| .000307 | 30. | 30. | 30. | 0 | 0 | 0 | -9.51 | 69.00 | 2069.00 |

CCHV= .300 CEHV= .500
*SECNO 30.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELR | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID. | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 958.10 ELREA= 958.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.20 | 5.04 | 955.04 | 0.00 | 0.00 | 955.11 | .07 | .00 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 329. | 0. | 543. | 264. | 958.10 |
| 7.43 | 0.00 | 2.10 | 0.00 | .060 | .045 | .060 | .047 | 950.00 | 2000.00 |
| .000583 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 69.00 | 2069.00 |

*SECNO 30.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.30 | 5.00 | 955.10 | 0.00 | 0.00 | 955.13 | .04 | .02 | .01 | 952.00 |
| 690. | 26. | 621. | 43. | 42. | 389. | 77. | 544. | 264. | 951.60 |
| 7.44 | .62 | 1.60 | .55 | .060 | .045 | .060 | .047 | 950.10 | 1964.29 |
| .000324 | 39. | 39. | 39. | 2 | 0 | 0 | 0.00 | 187.65 | 2151.94 |

CCHV= .100 CEHV= .300
*SECNO 30.400

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.40 | 5.02 | 955.12 | 0.00 | 0.00 | 955.16 | .04 | .02 | .00 | 952.00 |
| 690. | 23. | 629. | 38. | 43. | 392. | 79. | 545. | 264. | 951.60 |
| 7.45 | .53 | 1.61 | .48 | .070 | .045 | .070 | .047 | 950.10 | 1963.64 |
| .000325 | 76. | 76. | 76. | 1 | 0 | 0 | 0.00 | 188.89 | 2152.53 |

*SECNO 31.000

3265 DIVIDED FLOW

SURVEYED VALLEY SECTION (J)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.00 | 3.97 | 956.37 | 0.00 | 0.00 | 956.43 | .05 | 1.26 | .01 | 953.60 |
| 690. | 15. | 642. | 33. | 18. | 333. | 59. | 574. | 279. | 953.70 |
| 7.88 | .82 | 1.93 | .57 | .070 | .045 | .070 | .047 | 952.40 | 1994.94 |
| .000656 | 2700. | 2825. | 2840. | 2 | 0 | 0 | 0.00 | 253.45 | 2273.84 |

*SECNO 31.800

MOORE BUSINESS FORMS, INC 23

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.80 | 5.23 | 957.53 | 0.00 | 0.00 | 957.57 | .03 | 1.14 | .00 | 954.80 |
| 690. | 4. | 577. | 109. | 9. | 357. | 271. | 605. | 297. | 955.10 |
| 8.38 | .44 | 1.62 | .40 | .070 | .045 | .070 | .047 | 952.30 | 1993.77 |
| .000323 | 2520. | 2566. | 2440. | 2 | 0 | 0 | 0.00 | 390.43 | 2407.14 |

*SECNO 31.805

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | IWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1982.0 2095.0 TYPE= 1 TARGET= 113.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 4.90 | 957.60 | 0.00 | 0.00 | 957.69 | .08 | .10 | .01 | 956.30 |
| 690. | 1. | 674. | 15. | 3. | 288. | 22. | 607. | 298. | 955.10 |
| 8.40 | .43 | 2.34 | .68 | .070 | .045 | .070 | .047 | 952.70 | 1996.09 |
| .000776 | 240. | 223. | 180. | 2 | 0 | 0 | 0.00 | 91.38 | 2087.47 |

*SECNO 31.810

3470 ENCROACHMENT STATIONS= 1987.0 2083.0 TYPE= 1 TARGET= 96.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 4.93 | 957.63 | 0.00 | 0.00 | 957.72 | .08 | .03 | .00 | 956.30 |
| 690. | 1. | 673. | 16. | 3. | 289. | 21. | 607. | 298. | 955.10 |
| 8.41 | .43 | 2.32 | .77 | .070 | .045 | .070 | .047 | 952.70 | 1996.03 |
| .000761 | 37. | 37. | 37. | 0 | 0 | 0 | 0.00 | 86.97 | 2083.00 |

*SECNO 31.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 960.55 ELREA= 960.55

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.90 | 4.97 | 957.67 | 0.00 | 0.00 | 957.75 | .08 | .04 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 298. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.32 | 0.00 | .070 | .045 | .070 | .047 | 952.70 | 2000.00 |
| .000799 | 49. | 49. | 49. | 0 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 32.000

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

D/S FACE OF J DRIVE SOUTH BRIDGE.CONCRETE (K)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.00 | 4.97 | 957.67 | 0.00 | 0.00 | 957.76 | .09 | .00 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 289. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.39 | 0.00 | .020 | .025 | .020 | .047 | 952.70 | 2000.00 |
| .000391 | 1. | 1. | 1. | 0 | 0 | 0 | -9.04 | 70.00 | 2070.00 |

*SECNO 32.100

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.10 | 5.09 | 957.69 | 0.00 | 0.00 | 957.77 | .08 | .01 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 301. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.29 | 0.00 | .020 | .026 | .020 | .047 | 952.60 | 2000.00 |
| .000345 | 30. | 30. | 30. | 0 | 0 | 0 | -9.27 | 70.00 | 2070.00 |

CCHV= .100 CEHV= .300
*SECNO 32.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | FV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 961.10 ELREA= 961.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.20 | 5.10 | 957.70 | 0.00 | 0.00 | 957.77 | .08 | .00 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 311. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.22 | 0.00 | .070 | .045 | .070 | .047 | 952.60 | 2000.00 |
| .000700 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

*SECNO 32.300

3470 ENCROACHMENT STATIONS= 1972.0 2142.0 TYPE= 1 TARGET= 170.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.30 | 5.07 | 957.77 | 0.00 | 0.00 | 957.79 | .02 | .02 | .01 | 955.70 |
| 690. | 5. | 645. | 40. | 16. | 509. | 74. | 608. | 299. | 954.70 |
| 8.43 | .31 | 1.27 | .55 | .070 | .045 | .070 | .047 | 952.70 | 1984.17 |
| .000202 | 49. | 49. | 49. | 2 | 0 | 0 | 0.00 | 157.83 | 2142.00 |

CCHV= .100 CEHV= .300
*SECNO 33.000

3265 DIVIDED FLOW

SURVEYED VALLEY SECTION (L)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.00 | 4.21 | 959.21 | 0.00 | 0.00 | 959.26 | .05 | 1.46 | .01 | 958.80 |
| 690. | 19. | 416. | 255. | 76. | 187. | 398. | 664. | 331. | 958.70 |
| 9.13 | .25 | 2.22 | .64 | .080 | .045 | .080 | .047 | 955.00 | 1626.43 |
| .000864 | 3250. | 4100. | 3625. | 2 | 0 | 0 | 0.00 | 638.54 | 2391.55 |

*SECNO 33.850

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.85 | 5.87 | 961.29 | 0.00 | 0.00 | 961.39 | .11 | 2.11 | .02 | 962.75 |
| 690. | 0. | 690. | 0. | 0. | 264. | 0. | 690. | 350. | 963.30 |
| 9.39 | 0.00 | 2.62 | 0.00 | .080 | .045 | .080 | .047 | 955.42 | 2032.00 |
| .000897 | 2390. | 2399. | 2410. | 3 | 0 | 0 | 0.00 | 53.00 | 2085.00 |

*SECNO 33.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 965.20 ELREA= 965.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.90 | 5.81 | 961.31 | 0.00 | 0.00 | 961.40 | .10 | .01 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 274. | 0. | 690. | 351. | 967.30 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9.39 | 0.00 | 2.52 | 0.00 | .080 | .045 | .080 | .047 | 955.50 | 2027.00 |
| .000908 | 13. | 13. | 13. | 0 | 0 | 0 | 0.00 | 58.00 | 2085.00 |

CCHV= .300 CEHV= .500
*SECNO 34.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | C*SEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | GLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

D/S FACE OF 25 1/2 MILE ROAD BRIDGE.CONCRETE (M)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.00 | 5.81 | 961.31 | 0.00 | 0.00 | 961.41 | .10 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 275. | 0. | 690. | 351. | 967.30 |
| 9.39 | 0.00 | 2.51 | 0.00 | .020 | .026 | .020 | .047 | 955.50 | 2027.00 |
| .000349 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 58.00 | 2085.00 |

*SECNO 34.100

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.10 | 5.31 | 961.31 | 0.00 | 0.00 | 961.42 | .11 | .01 | .01 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 261. | 0. | 690. | 351. | 967.30 |
| 9.39 | 0.00 | 2.64 | 0.00 | .020 | .026 | .020 | .047 | 956.00 | 2025.00 |
| .000398 | 29. | 29. | 29. | 1 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

CCHV= .300 CEHV= .500
*SECNO 34.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 967.30 ELREA= 967.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.20 | 5.31 | 961.31 | 0.00 | 0.00 | 961.42 | .11 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 261. | 0. | 690. | 351. | 967.30 |
| 9.39 | 0.00 | 2.64 | 0.00 | .060 | .045 | .060 | .047 | 956.00 | 2025.00 |
| .001043 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

*SECNO 34.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.25 | 4.89 | 961.35 | 0.00 | 0.00 | 961.44 | .09 | .01 | .01 | 963.90 |
| 690. | 0. | 690. | 0. | 0. | 286. | 0. | 690. | 351. | 963.60 |
| 9.39 | 0.00 | 2.41 | 0.00 | .060 | .045 | .060 | .047 | 956.46 | 2025.00 |
| .000826 | 13. | 13. | 13. | 2 | 0 | 0 | 0.00 | 64.00 | 2089.00 |

CCHV= .100 CEHV= .300
*SECNO 34.300

3470 ENCROACHMENT STATIONS= 1967.0 2103.0 TYPE= 1 TARGET= 136.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.30 | 5.20 | 961.40 | 0.00 | 0.00 | 961.46 | .06 | .02 | .00 | 960.50 |
| 690. | 10. | 654. | 26. | 26. | 316. | 48. | 690. | 351. | 959.90 |
| 9.40 | .37 | 2.07 | .55 | .080 | .045 | .080 | .047 | 956.20 | 1967.00 |
| .000563 | 26. | 26. | 26. | 2 | 0 | 0 | 0.00 | 136.00 | 2103.00 |

MOORE BUSINESS FORMS, INC 23

*SECNO 34.800

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROH | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 3470 ENCROACHMENT STATIONS= | | | 1877.0 | 2226.0 | TYPE= | 1 | TARGET= | 349.000 | |
| 34.80 | 4.73 | 961.83 | 0.00 | 0.00 | 961.87 | .04 | .41 | .00 | 963.70 |
| 690. | 102. | 581. | 6. | 180. | 344. | 27. | 699. | 354. | 966.30 |
| 9.55 | .57 | 1.69 | .23 | .080 | .045 | .080 | .047 | 957.10 | 1877.00 |
| .000442 | 1000. | 820. | 460. | 2 | 0 | 0 | 0.00 | 261.31 | 2226.00 |

*SECNO 34.810

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3470 ENCROACHMENT STATIONS= | | | 1987.0 | 2092.0 | TYPE= | 1 | TARGET= | 105.000 | |
| 34.81 | 3.79 | 961.99 | 0.00 | 0.00 | 962.09 | .11 | .20 | .02 | 963.70 |
| 690. | 0. | 884. | 6. | 0. | 259. | 10. | 702. | 355. | 960.50 |
| 9.58 | 0.00 | 2.64 | .62 | .080 | .045 | .080 | .047 | 958.20 | 2002.73 |
| .001328 | 340. | 280. | 150. | 2 | 0 | 0 | 0.00 | 89.27 | 2092.00 |

*SECNO 34.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 967.25 ELREA= 967.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.90 | 4.06 | 962.06 | 0.00 | 0.00 | 962.16 | .09 | .06 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 281. | 0. | 702. | 355. | 959.40 |
| 9.58 | 0.00 | 2.46 | 0.00 | .080 | .045 | .080 | .047 | 958.00 | 2000.00 |
| .001085 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 80.00 | 2080.00 |

CCHV= .300 CEHV= .500

*SECNO 35.000

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

D/S FACE OF L DRIVE SOUTH BRIDGE.CONCRETE (N)

U/S LIMIT OF ALBION TWP.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.00 | 4.07 | 962.07 | 0.00 | 0.00 | 962.16 | .09 | .00 | .00 | 968.80 |
| 690. | 0. | 649. | 41. | 0. | 274. | 19. | 702. | 355. | 959.40 |
| 9.58 | 0.00 | 2.37 | 2.19 | .017 | .022 | .017 | .047 | 958.00 | 2000.00 |
| .000276 | 1. | 1. | 1. | 0 | 0 | 0 | -6.85 | 88.00 | 2088.00 |

*SECNO 35.100

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.10 | 4.38 | 962.08 | 0.00 | 0.00 | 962.17 | .09 | .01 | .00 | 968.80 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 690. | 0. | 690. | 0. | 0. | 289. | 0. | 703. | 355. | 968.80 | |
| 9.59 | 0.00 | 2.39 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 | |
| .000305 | 32. | 32. | 32. | 1 | 0 | 0 | -8.28 | 88.00 | 2088.00 | |

*SECNO 35.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOEL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

...3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 968.80 ELREA= 968.80

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.20 | 4.39 | 962.09 | 0.00 | 0.00 | 962.17 | .08 | .00 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 297. | 0. | 703. | 355. | 968.80 |
| 9.59 | 0.00 | 2.32 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 |
| .000247 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 88.00 | 2088.00 |

*SECNO 35.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.25 | 2.66 | 962.06 | 0.00 | 0.00 | 962.24 | .18 | .02 | .05 | 959.60 |
| 690. | 20. | 604. | 66. | 7. | 171. | 25. | 703. | 356. | 959.92 |
| 9.59 | 2.71 | 3.54 | 2.63 | .017 | .022 | .017 | .047 | 959.40 | 2001.03 |
| .000813 | 51. | 51. | 51. | 2 | 0 | 0 | 0.00 | 106.08 | 2107.11 |

SPECIAL BRIDGE

| SB | XK | XKOK | COFW | RDLEN | HWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.75 | 3.00 | 69.00 | 1.00 | 0.00 | 1.00 | 0.00 | 959.59 | 959.40 |

*SECNO 35.300

3265 DIVIDED FLOW

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 13899.56 | 962.43 | 0.00 | 686. | 8. | 1. | 1. | 960.59 | 961.47 |

SPILLWAY STRUCTURE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.30 | 4.27 | 963.67 | 0.00 | 0.00 | 963.70 | .03 | 1.46 | 0.00 | 962.48 |
| 690. | 149. | 256. | 265. | 143. | 154. | 201. | 703. | 356. | 961.49 |
| 9.59 | 1.04 | 1.67 | 1.42 | .017 | .022 | .017 | .047 | 959.40 | 1749.56 |
| .000229 | 10. | 10. | 10. | 2 | 0 | 8 | 0.00 | 598.31 | 2361.05 |

*SECNO 35.350

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.35 | 3.92 | 963.68 | 0.00 | 0.00 | 963.71 | .03 | .00 | .00 | 962.48 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 690. | 104. | 387. | 199. | 150. | 250. | 199. | 703. | 356. | 962.12 |
| 9.60 | .69 | 1.54 | 1.00 | .017 | .022 | .017 | .047 | 559.76 | 1689.76 |
| .000116 | 10. | 10. | 10. | 0 | 0 | 0 | 0.00 | 659.58 | 2361.11 |

*SECNO 36.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.00 | 3.04 | 964.34 | 0.00 | 0.00 | 964.48 | .14 | .72 | .06 | 962.80 |
| 690. | 6. | 657. | 26. | 4. | 218. | 18. | 733. | 381. | 963.20 |
| 9.90 | 1.71 | 3.02 | 1.44 | .017 | .022 | .017 | .045 | 961.30 | 2001.13 |
| .000576 | 2680. | 3430. | 2600. | 2 | 0 | 0 | 0.00 | 122.50 | 2123.62 |

MOORE BUSINESS FORMS, INC. 23

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion, City of

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100-year Natural

00BREAK00

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

C
T1      FIS  CITY OF ALBION, CALHOUN COUNTY, MICHIGAN.
T2      100-YEAR FLOOD
T3      KALAMAZOO RIVER
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | 0. | 4. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 929.100 | 0.000 |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | -1.290 | 0.000 | 0.000 | 0.000 | 0.000 |
| J3 | VARIABLE CODES FOR SUMMARY PRINTOUT | | | | | | | | | |
| | 38.000 | 1.000 | 53.000 | 21.000 | 22.000 | 54.000 | 4.000 | 39.000 | 150.000 | 200.000 |
| QT | 5.000 | 970.000 | 1430.000 | 1600.000 | 1790.000 | 1600.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .085 | .085 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S LIMIT OF THE CITY OF ALBION, SURVEYED SECTION (A)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 12.000 | 42.000 | 1966.000 | 2087.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 947.100 | 898.000 | 942.000 | 1000.000 | 937.800 | 1102.000 | 936.100 | 1204.000 | 936.300 | 1304.000 |
| GR | 936.100 | 1406.000 | 935.100 | 1500.000 | 933.200 | 1600.000 | 933.600 | 1700.000 | 932.600 | 1800.000 |
| GR | 932.200 | 1826.000 | 930.400 | 1882.000 | 927.700 | 1966.000 | 926.200 | 1970.000 | 926.600 | 2000.000 |
| GR | 925.800 | 2014.000 | 924.700 | 2022.000 | 923.500 | 2034.000 | 923.000 | 2050.000 | 923.200 | 2066.000 |
| GR | 924.000 | 2076.000 | 926.000 | 2083.000 | 927.300 | 2087.000 | 927.500 | 2100.000 | 927.600 | 2186.000 |
| GR | 927.800 | 2280.000 | 930.100 | 2346.000 | 933.100 | 2418.000 | 932.000 | 2502.000 | 935.000 | 2600.000 |
| GR | 937.800 | 2696.000 | 938.500 | 2788.000 | 939.900 | 2884.000 | 941.600 | 2998.000 | 945.300 | 3022.000 |
| GR | 946.700 | 3040.000 | 946.400 | 3056.000 | 943.500 | 3092.000 | 941.600 | 3199.000 | 942.500 | 3390.000 |
| GR | 944.300 | 3488.000 | 951.200 | 3560.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 12.600 | 13.000 | 2000.000 | 2090.000 | 1880.000 | 1800.000 | 1850.000 | 0.000 | 0.000 | 0.000 |
| GR | 950.000 | 1200.000 | 940.000 | 1365.000 | 934.000 | 1600.000 | 930.500 | 1980.000 | 934.000 | 2000.000 |
| GR | 924.600 | 2015.000 | 924.600 | 2080.000 | 928.000 | 2090.000 | 930.000 | 2100.000 | 934.000 | 2400.000 |
| GR | 939.000 | 2550.000 | 940.000 | 2630.000 | 950.000 | 2850.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 12.700 | 13.000 | 2000.000 | 2100.000 | 1570.000 | 1450.000 | 1500.000 | 0.000 | 0.000 | 0.000 |
| GR | 950.000 | 1170.000 | 940.000 | 1340.000 | 937.000 | 1790.000 | 932.000 | 1900.000 | 931.000 | 1980.000 |
| GR | 930.500 | 2000.000 | 926.000 | 2010.000 | 926.000 | 2090.000 | 929.300 | 2100.000 | 930.000 | 2150.000 |
| GR | 935.000 | 2220.000 | 940.000 | 2320.000 | 950.000 | 2750.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 12.800 | 33.000 | 1988.000 | 2097.000 | 1700.000 | 1650.000 | 1750.000 | 0.000 | 0.000 | 0.000 |
| GR | 946.700 | 1798.000 | 947.000 | 1812.000 | 945.200 | 1820.000 | 945.400 | 1847.000 | 943.000 | 1856.000 |
| GR | 941.200 | 1878.000 | 936.800 | 1900.000 | 932.000 | 1988.000 | 928.900 | 2000.000 | 927.700 | 2009.000 |
| GR | 927.600 | 2019.000 | 927.600 | 2029.000 | 927.500 | 2037.000 | 927.400 | 2047.000 | 927.600 | 2057.000 |
| GR | 928.300 | 2065.000 | 928.000 | 2073.000 | 927.900 | 2085.000 | 928.800 | 2097.000 | 930.400 | 2097.000 |
| GR | 930.900 | 2117.000 | 939.700 | 2129.000 | 939.900 | 2157.000 | 940.300 | 2174.000 | 940.600 | 2205.000 |
| GR | 940.300 | 2257.000 | 940.900 | 2353.000 | 940.600 | 2393.000 | 941.900 | 2543.000 | 942.700 | 2567.000 |
| GR | 949.200 | 2580.000 | 949.500 | 2629.000 | 952.800 | 2657.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 7.100 | 500.000 | 2539.000 | 0.000 | 0.000 |

D/S FACE OF ABANDONED RR BRIDGE (B)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 13.100 | 51.000 | 2000.000 | 2270.000 | 170.000 | 325.000 | 240.000 | .910 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.400 | 940.200 | 0.000 |
| GR | 946.900 | 500.000 | 946.900 | 530.000 | 946.400 | 600.000 | 945.600 | 700.000 | 944.700 | 818.000 |
| GR | 944.800 | 908.000 | 943.900 | 1004.000 | 944.500 | 1110.000 | 943.800 | 1212.000 | 942.500 | 1310.000 |
| GR | 942.200 | 1404.000 | 941.900 | 1500.000 | 941.700 | 1612.000 | 941.200 | 1710.000 | 941.000 | 1802.000 |
| GR | 940.800 | 1900.000 | 941.100 | 2000.000 | 935.200 | 2000.000 | 932.000 | 2010.000 | 929.400 | 2020.000 |
| GR | 929.100 | 2030.000 | 928.200 | 2040.000 | 928.000 | 2050.000 | 928.500 | 2060.000 | 928.500 | 2070.000 |
| GR | 928.100 | 2080.000 | 927.600 | 2090.000 | 927.200 | 2100.000 | 927.200 | 2110.000 | 927.800 | 2120.000 |
| GR | 927.600 | 2130.000 | 928.100 | 2140.000 | 928.100 | 2150.000 | 928.000 | 2160.000 | 927.700 | 2170.000 |
| GR | 927.400 | 2180.000 | 929.600 | 2190.000 | 929.300 | 2200.000 | 930.300 | 2210.000 | 930.400 | 2220.000 |
| GR | 930.400 | 2230.000 | 931.300 | 2240.000 | 933.000 | 2250.000 | 936.300 | 2260.000 | 936.700 | 2270.000 |
| GR | 941.000 | 2270.000 | 940.900 | 2303.000 | 940.500 | 2409.000 | 941.900 | 2459.000 | 940.800 | 2499.000 |
| GR | 942.300 | 2539.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .050 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 1.250 | 1.400 | 3.000 | 300.000 | 200.000 | 20.400 | 2488.000 | 3.000 | 928.000 | 927.200 |
| X1 | 13.200 | 40.000 | 2000.000 | 2270.000 | 11.600 | 11.600 | 11.600 | .910 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 939.600 | 940.800 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.400 | 940.200 | 0.000 |
| GR | 944.500 | 1110.000 | 943.800 | 1212.000 | 942.500 | 1310.000 | 942.200 | 1404.000 | 941.900 | 1500.000 |
| GR | 941.700 | 1612.000 | 941.200 | 1710.000 | 941.000 | 1802.000 | 940.800 | 1900.000 | 941.100 | 2000.000 |
| GR | 939.600 | 2000.000 | 934.800 | 2001.200 | 932.000 | 2010.000 | 930.800 | 2014.400 | 928.200 | 2040.000 |
| GR | 928.100 | 2050.000 | 928.500 | 2060.000 | 928.200 | 2074.400 | 927.600 | 2090.000 | 927.300 | 2104.000 |
| GR | 927.400 | 2120.000 | 927.600 | 2130.000 | 927.900 | 2135.000 | 928.700 | 2150.000 | 927.900 | 2165.000 |
| GR | 927.400 | 2180.600 | 929.300 | 2190.000 | 930.400 | 2210.000 | 930.400 | 2225.000 | 930.400 | 2230.000 |
| GR | 931.300 | 2240.000 | 933.000 | 2250.000 | 934.400 | 2254.400 | 934.800 | 2257.700 | 939.500 | 2270.000 |
| GR | 941.000 | 2270.000 | 940.800 | 2303.000 | 940.500 | 2409.000 | 941.900 | 3459.000 | 942.300 | 5539.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 13.300 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 941.100 | 941.000 | 0.000 |
| NC | .080 | .080 | .040 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 14.100 | 23.000 | 1976.000 | 2076.000 | 380.000 | 200.000 | 317.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.100 | 1800.000 | 949.000 | 1848.000 | 942.700 | 1862.000 | 941.600 | 1898.000 | 940.100 | 1976.000 |
| GR | 929.800 | 2000.000 | 929.500 | 2000.000 | 926.300 | 2006.000 | 925.200 | 2015.000 | 925.500 | 2025.000 |
| GR | 927.400 | 2035.000 | 928.700 | 2045.000 | 929.600 | 2048.000 | 940.700 | 2076.000 | 941.000 | 2102.000 |
| GR | 941.800 | 2204.000 | 941.600 | 2210.000 | 942.200 | 2258.000 | 944.100 | 2362.000 | 947.400 | 2442.000 |
| GR | 950.300 | 2486.000 | 950.700 | 2564.000 | 951.400 | 2600.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 14.300 | 23.000 | 1976.000 | 2076.000 | 4.000 | 4.000 | 4.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.100 | 1800.000 | 949.000 | 1848.000 | 942.700 | 1862.000 | 941.600 | 1898.000 | 940.100 | 1976.000 |
| GR | 929.800 | 2000.000 | 929.500 | 2000.000 | 926.300 | 2006.000 | 925.200 | 2015.000 | 925.500 | 2025.000 |
| GR | 927.400 | 2035.000 | 928.700 | 2045.000 | 929.600 | 2048.000 | 940.700 | 2076.000 | 941.000 | 2102.000 |
| GR | 941.800 | 2204.000 | 941.600 | 2210.000 | 942.200 | 2258.000 | 944.100 | 2362.000 | 947.400 | 2442.000 |
| GR | 950.300 | 2486.000 | 950.700 | 2564.000 | 951.400 | 2600.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 14.400 | 22.000 | 2000.000 | 2060.000 | 9.000 | 9.000 | 9.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 939.400 | 939.200 | 0.000 |
| GR | 954.200 | 1562.000 | 949.500 | 1686.000 | 948.200 | 1726.000 | 945.500 | 1788.000 | 941.900 | 1896.000 |
| GR | 941.100 | 2000.000 | 929.600 | 2000.000 | 928.500 | 2010.000 | 928.000 | 2020.000 | 927.600 | 2030.000 |
| GR | 927.100 | 2040.000 | 928.700 | 2050.000 | 930.700 | 2060.000 | 940.900 | 2060.000 | 940.800 | 2110.000 |
| GR | 941.600 | 2210.000 | 942.200 | 2258.000 | 944.100 | 2362.000 | 947.400 | 2442.000 | 950.300 | 2486.000 |
| GR | 950.700 | 2564.000 | 951.500 | 2600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF ALBION ST. BRIDGE (C)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 14.500 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 939.400 | 939.200 | 0.000 |
| BT | 6.000 | 1896.000 | 941.900 | 0.000 | 2000.000 | 941.100 | 0.000 | 2000.000 | 941.100 | 937.600 |
| BT | 2060.000 | 940.900 | 937.500 | 2060.000 | 940.900 | 0.000 | 2110.000 | 940.800 | 0.000 | 0.000 |
| X1 | 14.600 | 0.000 | 0.000 | 0.000 | 54.000 | 54.000 | 54.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.900 | 940.900 | 0.000 |
| NC | .060 | .060 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 14.700 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.900 | 940.900 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 14.720 | 0.000 | 0.000 | 0.000 | 4.000 | 4.000 | 4.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.900 | 940.900 | 0.000 |
| X1 | 14.750 | 11.000 | 2000.000 | 2050.000 | 770.000 | 820.000 | 770.000 | 0.000 | 0.000 | 0.000 |
| GR | 950.000 | 1380.000 | 940.000 | 1690.000 | 939.000 | 1790.000 | 935.000 | 1900.000 | 933.000 | 2000.000 |
| GR | 927.500 | 2015.000 | 927.500 | 2045.000 | 933.000 | 2050.000 | 940.000 | 2090.000 | 945.000 | 2200.000 |
| GR | 950.000 | 2290.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CENTER LINE OF PEARL STREET NO BRIDGE (D)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 14.800 | 32.000 | 2156.000 | 2252.000 | 480.000 | 570.000 | 520.000 | 0.000 | 0.000 | 0.000 |
| X4 | 2.000 | 964.300 | 2922.000 | 972.100 | 3106.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 972.500 | 1000.000 | 972.000 | 1102.000 | 972.000 | 1176.000 | 964.500 | 1256.000 | 958.700 | 1356.000 |
| GR | 953.700 | 1456.000 | 952.600 | 1498.000 | 951.600 | 1596.000 | 950.300 | 1730.000 | 946.700 | 1824.000 |
| GR | 944.600 | 1898.000 | 942.400 | 2000.000 | 937.600 | 2098.000 | 932.400 | 2156.000 | 930.400 | 2160.000 |
| GR | 929.600 | 2170.000 | 929.400 | 2182.000 | 929.100 | 2194.000 | 929.200 | 2202.000 | 928.600 | 2212.000 |
| GR | 928.100 | 2224.000 | 927.800 | 2232.000 | 928.300 | 2240.000 | 930.300 | 2246.000 | 933.100 | 2252.000 |
| GR | 943.400 | 2320.000 | 945.910 | 2428.000 | 945.910 | 2428.000 | 949.200 | 2595.000 | 958.100 | 2670.000 |
| GR | 961.000 | 2678.000 | 967.100 | 2700.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .050 | .050 | .040 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 14.900 | 24.000 | 2044.000 | 2116.000 | 360.000 | 360.000 | 360.000 | 0.000 | 0.000 | 0.000 |
| GR | 954.000 | 1226.000 | 951.200 | 1338.000 | 949.900 | 1448.000 | 948.100 | 1528.000 | 946.300 | 1622.000 |
| GR | 945.400 | 1724.000 | 942.500 | 1802.000 | 939.500 | 1895.000 | 938.300 | 2000.000 | 936.900 | 2044.000 |
| GR | 930.200 | 2044.000 | 928.500 | 2060.000 | 927.800 | 2076.000 | 928.100 | 2092.000 | 930.600 | 2108.000 |
| GR | 932.400 | 2116.000 | 937.000 | 2116.000 | 939.300 | 2134.000 | 939.100 | 2198.000 | 940.800 | 2300.000 |
| GR | 941.500 | 2316.000 | 947.400 | 2424.000 | 949.200 | 2526.000 | 952.100 | 2604.000 | 0.000 | 0.000 |
| X1 | 15.000 | 32.000 | 2036.000 | 2110.000 | 31.000 | 31.000 | 31.000 | .710 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 937.600 | 937.500 | 0.000 |
| GR | 954.000 | 1226.000 | 951.200 | 1338.000 | 949.900 | 1448.000 | 948.100 | 1528.000 | 946.300 | 1622.000 |
| GR | 944.500 | 1720.000 | 940.700 | 1824.000 | 938.900 | 1922.000 | 939.100 | 2000.000 | 939.200 | 2022.000 |
| GR | 939.100 | 2036.000 | 930.400 | 2036.010 | 929.400 | 2044.000 | 928.600 | 2054.000 | 928.900 | 2063.000 |
| GR | 929.600 | 2071.000 | 929.600 | 2071.010 | 929.700 | 2072.000 | 928.900 | 2073.000 | 928.800 | 2075.000 |
| GR | 928.800 | 2075.010 | 928.500 | 2082.000 | 928.800 | 2091.000 | 929.800 | 2101.000 | 931.000 | 2110.000 |
| GR | 938.800 | 2110.010 | 938.800 | 2112.000 | 939.100 | 2218.000 | 941.500 | 2316.000 | 947.400 | 2424.000 |
| GR | 949.200 | 2526.000 | 952.100 | 2604.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF EATON ST. BRIDGE.CONCRETE (E)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 15.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | .710 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 937.600 | 937.500 | 0.000 |
| BT | 23.000 | 1226.000 | 954.000 | 0.000 | 1338.000 | 951.200 | 0.000 | 1448.000 | 949.900 | 0.000 |
| BT | 1528.000 | 948.100 | 0.000 | 1622.000 | 946.300 | 0.000 | 1720.000 | 944.500 | 0.000 | 1824.000 |
| BT | 940.700 | 0.000 | 1922.000 | 939.100 | 0.000 | 2000.000 | 939.200 | 0.000 | 2022.000 | 939.200 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BT | 0.000 | 2022.000 | 939.200 | 0.000 | 2036.000 | 939.100 | 0.000 | 2036.010 | 939.100 | 936.000 |
| BT | 2071.000 | 939.000 | 936.000 | 2071.010 | 939.000 | 929.600 | 2072.000 | 939.000 | 929.700 | 2073.000 |
| BT | 939.000 | 928.900 | 2075.000 | 939.000 | 928.800 | 2075.010 | 939.000 | 936.000 | 2110.000 | 938.800 |
| BT | 936.000 | 2110.010 | 938.800 | 0.000 | 2112.000 | 938.800 | 0.000 | 2218.000 | 939.100 | 0.000 |
| X1 | 15.200 | 29.000 | 2013.000 | 2087.000 | 36.000 | 36.000 | 36.000 | .710 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | .710 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 939.200 | 938.900 | 0.000 |
| BT | 20.000 | 1226.000 | 954.000 | 0.000 | 1338.000 | 951.200 | 0.000 | 1448.000 | 949.900 | 0.000 |
| BT | 1528.000 | 948.100 | 0.000 | 1622.000 | 946.300 | 0.000 | 1720.000 | 944.500 | 0.000 | 1824.000 |
| BT | 940.700 | 0.000 | 1922.000 | 938.900 | 0.000 | 2000.000 | 939.100 | 0.000 | 2000.000 | 939.100 |
| BT | 0.000 | 2000.000 | 939.100 | 0.000 | 2013.000 | 939.200 | 0.000 | 2013.010 | 939.200 | 936.000 |
| BT | 2048.000 | 939.100 | 936.000 | 2048.010 | 939.100 | 929.400 | 2052.000 | 939.100 | 929.500 | 2052.010 |
| BT | 939.100 | 936.000 | 2087.000 | 938.900 | 936.000 | 2087.010 | 938.900 | 0.000 | 2112.000 | 938.800 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 954.000 | 1226.000 | 951.200 | 1338.000 | 949.900 | 1448.000 | 948.100 | 1528.000 | 946.300 | 1622.000 |
| GR | 944.500 | 1720.000 | 940.700 | 1824.000 | 938.900 | 1922.000 | 939.100 | 2000.000 | 939.200 | 2013.000 |
| GR | 931.100 | 2013.010 | 930.200 | 2021.000 | 929.100 | 2031.000 | 928.800 | 2040.000 | 929.400 | 2048.000 |
| GR | 929.400 | 2048.010 | 929.500 | 2052.000 | 929.500 | 2052.010 | 929.000 | 2060.000 | 928.400 | 2079.000 |
| GR | 929.600 | 2083.000 | 930.000 | 2087.000 | 938.900 | 2087.010 | 938.800 | 2112.000 | 939.100 | 2218.000 |
| GR | 941.500 | 2316.000 | 947.400 | 2424.000 | 949.200 | 2526.000 | 952.100 | 2604.000 | 0.000 | 0.000 |
| X1 | 15.300 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 939.200 | 938.900 | 0.000 |
| X1 | 15.400 | 26.000 | 2000.000 | 2098.000 | 11.000 | 11.000 | 11.000 | 0.000 | 0.000 | 0.000 |
| GR | 954.000 | 1226.000 | 951.200 | 1338.000 | 949.900 | 1448.000 | 948.100 | 1528.000 | 946.300 | 1622.000 |
| GR | 944.500 | 1720.000 | 941.500 | 1794.000 | 938.300 | 1896.000 | 938.000 | 2000.000 | 936.500 | 2010.000 |
| GR | 930.900 | 2010.000 | 930.800 | 2012.000 | 930.000 | 2022.000 | 928.800 | 2032.000 | 928.900 | 2050.000 |
| GR | 928.200 | 2062.000 | 928.400 | 2076.000 | 930.600 | 2084.000 | 934.900 | 2084.000 | 938.300 | 2098.000 |
| GR | 939.100 | 2206.000 | 941.300 | 2310.000 | 941.500 | 2316.000 | 947.400 | 2424.000 | 949.200 | 2526.000 |
| GR | 952.100 | 2604.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1148.000 | 2196.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 15.800 | 32.000 | 2116.000 | 2186.000 | 350.000 | 350.000 | 350.000 | 0.000 | 0.000 | 0.000 |
| GR | 955.900 | 1148.000 | 955.000 | 1294.000 | 953.600 | 1398.000 | 952.900 | 1446.000 | 951.700 | 1496.000 |
| GR | 949.300 | 1588.000 | 946.500 | 1692.000 | 946.300 | 1722.000 | 944.400 | 1800.000 | 941.600 | 1882.000 |
| GR | 939.700 | 2000.000 | 939.400 | 2076.000 | 940.000 | 2116.000 | 930.500 | 2116.000 | 930.100 | 2127.000 |
| GR | 929.900 | 2135.000 | 928.200 | 2143.000 | 927.800 | 2152.000 | 928.400 | 2160.000 | 929.600 | 2168.000 |
| GR | 930.200 | 2178.000 | 930.800 | 2186.000 | 937.600 | 2186.000 | 938.600 | 2196.000 | 938.500 | 2298.000 |
| GR | 938.300 | 2398.000 | 940.500 | 2398.000 | 942.000 | 2440.000 | 945.900 | 2440.000 | 946.000 | 2486.000 |
| GR | 946.900 | 2510.000 | 948.600 | 2602.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .050 | .050 | .035 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 15.900 | 29.000 | 2118.000 | 2177.500 | 56.000 | 56.000 | 56.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 938.400 | 938.400 | 0.000 |
| GR | 955.900 | 1148.000 | 955.000 | 1294.000 | 953.600 | 1398.000 | 952.900 | 1446.000 | 951.700 | 1496.000 |
| GR | 949.300 | 1588.000 | 946.500 | 1692.000 | 946.300 | 1722.000 | 944.400 | 1800.000 | 941.600 | 1882.000 |
| GR | 939.600 | 2000.000 | 940.300 | 2118.000 | 930.000 | 2118.000 | 929.700 | 2127.000 | 929.000 | 2135.000 |
| GR | 928.800 | 2143.000 | 928.800 | 2152.000 | 929.500 | 2160.000 | 929.700 | 2168.000 | 930.600 | 2177.500 |
| GR | 940.300 | 2177.500 | 939.800 | 2202.000 | 938.100 | 2304.000 | 939.200 | 2406.000 | 943.000 | 2496.000 |
| GR | 947.400 | 2598.000 | 948.900 | 2702.000 | 951.300 | 2806.000 | 955.800 | 2904.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF CLINTON ST. BRIDGE.CONCRETE (F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 938.400 | 938.400 | 0.000 |
| BT | 6.000 | 2000.000 | 939.600 | 0.000 | 2118.000 | 940.300 | 930.000 | 2118.000 | 940.300 | 936.400 |
| BT | 2177.500 | 940.300 | 936.400 | 2177.500 | 940.300 | 930.600 | 2202.000 | 939.800 | 0.000 | 0.000 |
| X1 | 16.100 | 29.000 | 2118.000 | 2177.500 | 54.000 | 54.000 | 54.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.300 | 940.300 | 0.000 |
| BT | 6.000 | 2000.000 | 939.600 | 0.000 | 2118.000 | 940.300 | 929.800 | 2118.000 | 940.300 | 936.400 |
| BT | 2177.500 | 940.300 | 936.400 | 2177.500 | 940.300 | 930.200 | 2202.000 | 939.800 | 0.000 | 0.000 |
| GR | 955.900 | 1148.000 | 955.000 | 1294.000 | 953.600 | 1398.000 | 952.900 | 1446.000 | 951.700 | 1496.000 |
| GR | 949.300 | 1588.000 | 946.500 | 1692.000 | 946.300 | 1722.000 | 944.400 | 1800.000 | 941.600 | 1882.000 |
| GR | 939.600 | 2000.000 | 940.300 | 2118.000 | 929.800 | 2118.000 | 929.000 | 2127.000 | 929.300 | 2135.000 |
| GR | 929.200 | 2143.000 | 929.200 | 2152.000 | 929.700 | 2160.000 | 930.100 | 2168.000 | 930.200 | 2177.500 |
| GR | 940.300 | 2177.500 | 939.800 | 2202.000 | 938.100 | 2304.000 | 939.200 | 2406.000 | 943.000 | 2496.000 |
| GR | 947.400 | 2598.000 | 948.900 | 2702.000 | 951.300 | 2806.000 | 955.800 | 2904.000 | 0.000 | 0.000 |
| X1 | 16.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.300 | 940.300 | 0.000 |
| NC | .040 | .020 | .025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 16.300 | 37.000 | 2111.000 | 2175.000 | 56.000 | 56.000 | 56.000 | 0.000 | 0.000 | 0.000 |
| GR | 955.900 | 1148.000 | 955.000 | 1294.000 | 953.600 | 1398.000 | 952.900 | 1446.000 | 951.700 | 1496.000 |
| GR | 949.300 | 1588.000 | 946.500 | 1692.000 | 946.300 | 1722.000 | 946.000 | 1726.000 | 946.000 | 1746.000 |
| GR | 944.300 | 1806.000 | 941.000 | 1851.000 | 939.600 | 1964.000 | 939.500 | 2000.000 | 940.400 | 2052.000 |
| GR | 943.000 | 2058.000 | 943.000 | 2098.000 | 940.900 | 2098.000 | 940.300 | 2110.000 | 943.400 | 2111.000 |
| GR | 929.700 | 2111.000 | 929.400 | 2127.000 | 929.100 | 2135.000 | 928.800 | 2143.000 | 929.300 | 2152.000 |
| GR | 929.100 | 2160.000 | 929.000 | 2168.000 | 930.000 | 2175.000 | 934.700 | 2175.000 | 939.400 | 2196.000 |
| GR | 940.200 | 2396.000 | 939.200 | 2406.000 | 943.000 | 2496.000 | 947.400 | 2598.000 | 948.900 | 2702.000 |
| GR | 951.300 | 2806.000 | 955.800 | 2904.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 16.800 | 38.000 | 2117.000 | 2204.000 | 125.000 | 125.000 | 125.000 | 0.000 | 0.000 | 0.000 |
| GR | 953.600 | 700.000 | 954.400 | 798.000 | 955.100 | 870.000 | 954.700 | 966.000 | 954.200 | 1070.000 |
| GR | 953.500 | 1170.000 | 953.100 | 1210.000 | 951.500 | 1298.000 | 949.900 | 1396.000 | 949.000 | 1453.000 |
| GR | 948.200 | 1504.000 | 947.700 | 1600.000 | 945.300 | 1726.000 | 942.900 | 1802.000 | 940.200 | 1842.000 |
| GR | 940.100 | 1904.000 | 940.600 | 2000.000 | 940.700 | 2114.000 | 940.700 | 2117.000 | 930.260 | 2117.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 930.560 | 2127.000 | 929.360 | 2137.000 | 929.060 | 2147.000 | 930.060 | 2157.000 | 929.760 | 2176.000 |
| GR | 930.760 | 2177.000 | 930.560 | 2187.000 | 931.060 | 2204.000 | 936.900 | 2204.000 | 937.100 | 2286.000 |
| GR | 940.100 | 2392.000 | 940.700 | 2440.000 | 947.500 | 2564.000 | 948.500 | 2670.000 | 951.100 | 2772.000 |
| GR | 953.300 | 2874.000 | 954.100 | 2900.000 | 958.100 | 3006.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 16.900 | 25.000 | 2114.000 | 2207.000 | 19.000 | 19.000 | 19.000 | 0.000 | 0.000 | 0.000 |
| GR | 948.200 | 1504.000 | 947.670 | 1600.000 | 945.250 | 1726.000 | 942.880 | 1802.000 | 940.200 | 1842.000 |
| GR | 940.140 | 1904.000 | 941.520 | 2000.000 | 940.600 | 2114.000 | 930.490 | 2114.000 | 930.770 | 2127.000 |
| GR | 929.590 | 2137.000 | 929.320 | 2147.000 | 930.320 | 2157.000 | 930.020 | 2167.000 | 929.990 | 2177.000 |
| GR | 930.800 | 2187.000 | 931.250 | 2207.000 | 936.880 | 2207.000 | 937.110 | 2286.000 | 940.140 | 2392.000 |
| GR | 940.700 | 2440.000 | 947.500 | 2564.000 | 948.500 | 2670.000 | 951.100 | 2772.000 | 953.300 | 2874.000 |
| NC | .040 | .040 | .025 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF SUPERIOR ST. BRIDGE.CONCRETE (G)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 17.000 | 21.000 | 2114.000 | 2207.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 937.050 | 960.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 2000.000 | 960.000 | 2114.000 | 930.490 | 2114.000 | 930.770 | 2128.000 | 937.050 | 2128.000 |
| GR | 937.050 | 2128.670 | 930.770 | 2128.670 | 929.320 | 2145.000 | 937.050 | 2145.000 | 937.050 | 2145.670 |
| GR | 929.320 | 2145.670 | 930.320 | 2163.000 | 937.050 | 2163.000 | 937.050 | 2165.000 | 930.020 | 2165.000 |
| GR | 930.800 | 2185.000 | 937.050 | 2185.000 | 937.050 | 2187.000 | 930.800 | 2187.000 | 931.250 | 2207.000 |
| GR | 960.000 | 2207.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 17.100 | 0.000 | 0.000 | 0.000 | 90.000 | 90.000 | 90.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 937.050 | 960.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .030 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 17.200 | 17.000 | 2114.000 | 2208.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 937.180 | 960.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 2000.000 | 960.000 | 2114.000 | 931.100 | 2114.000 | 931.300 | 2124.000 | 930.500 | 2134.000 |
| GR | 930.300 | 2144.000 | 929.900 | 2154.000 | 930.200 | 2159.000 | 937.180 | 2160.000 | 937.180 | 2163.000 |
| GR | 931.300 | 2164.000 | 931.200 | 2174.000 | 930.800 | 2184.000 | 929.700 | 2194.000 | 928.800 | 2208.000 |
| GR | 960.000 | 2208.000 | 960.000 | 2250.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE OF SUPERIOR ST. BRIDGE.CONCRETE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 17.300 | 15.000 | 2114.000 | 2207.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 937.180 | 960.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 2000.000 | 960.000 | 2114.000 | 931.900 | 2114.000 | 931.700 | 2118.000 | 930.900 | 2128.000 |
| GR | 930.400 | 2138.000 | 930.100 | 2148.000 | 929.980 | 2158.000 | 937.180 | 2159.000 | 937.180 | 2161.000 |
| GR | 930.200 | 2163.000 | 929.800 | 2184.000 | 928.100 | 2207.000 | 960.000 | 2207.000 | 960.000 | 2500.000 |
| X1 | 17.400 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 17.500 | 39.000 | 2106.000 | 2199.000 | 120.000 | 120.000 | 120.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 941.500 | 941.900 | 0.000 |
| GR | 953.600 | 700.000 | 954.400 | 798.000 | 955.100 | 870.000 | 954.700 | 966.000 | 954.200 | 1070.000 |
| GR | 953.500 | 1170.000 | 953.100 | 1210.000 | 951.500 | 1298.000 | 949.900 | 1396.000 | 949.000 | 1453.000 |
| GR | 948.200 | 1504.000 | 946.300 | 1602.000 | 944.500 | 1700.000 | 944.000 | 1726.000 | 943.000 | 1810.000 |
| GR | 942.200 | 1902.000 | 941.500 | 2000.000 | 941.400 | 2032.000 | 941.400 | 2052.000 | 940.300 | 2056.000 |
| GR | 940.000 | 2088.000 | 939.900 | 2096.000 | 931.800 | 2106.000 | 931.000 | 2124.000 | 930.500 | 2134.000 |
| GR | 930.200 | 2144.000 | 930.600 | 2154.000 | 930.900 | 2165.000 | 931.200 | 2178.000 | 931.100 | 2186.000 |
| GR | 931.900 | 2199.000 | 936.100 | 2199.000 | 937.500 | 2220.000 | 938.000 | 2296.000 | 947.200 | 2448.000 |
| GR | 947.500 | 2564.000 | 948.500 | 2670.000 | 951.100 | 2772.000 | 953.300 | 2874.000 | 0.000 | 0.000 |
| X1 | 17.900 | 60.000 | 2130.000 | 2280.000 | 20.000 | 120.000 | 79.000 | .731 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 937.400 | 936.600 | 0.000 |
| GR | 950.600 | 446.000 | 950.300 | 672.000 | 950.300 | 774.000 | 948.800 | 892.000 | 948.000 | 994.000 |
| GR | 946.300 | 1094.000 | 945.600 | 1154.000 | 943.100 | 1284.000 | 941.400 | 1390.000 | 939.900 | 1492.000 |
| GR | 939.600 | 1594.000 | 940.400 | 1798.000 | 941.500 | 2000.000 | 941.800 | 2130.000 | 933.000 | 2130.000 |
| GR | 932.000 | 2135.000 | 931.700 | 2140.000 | 931.500 | 2145.000 | 931.700 | 2150.000 | 931.700 | 2155.000 |
| GR | 931.600 | 2165.000 | 931.700 | 2170.000 | 931.100 | 2176.600 | 929.800 | 2181.600 | 929.400 | 2186.600 |
| GR | 929.500 | 2191.600 | 929.800 | 2196.600 | 931.700 | 2201.600 | 932.000 | 2206.600 | 933.000 | 2211.600 |
| GR | 932.700 | 2216.600 | 931.700 | 2228.000 | 930.300 | 2233.000 | 929.300 | 2239.000 | 929.200 | 2245.000 |
| GR | 929.000 | 2250.000 | 929.400 | 2255.000 | 931.200 | 2260.000 | 930.200 | 2262.000 | 931.900 | 2265.000 |
| GR | 932.700 | 2270.000 | 932.300 | 2275.000 | 931.800 | 2280.000 | 941.300 | 2280.000 | 940.800 | 2330.000 |
| GR | 940.600 | 2402.000 | 941.000 | 2500.000 | 941.500 | 2602.000 | 944.300 | 2690.000 | 948.400 | 2808.000 |
| GR | 948.500 | 2840.000 | 946.400 | 2940.000 | 945.600 | 3004.000 | 946.200 | 3208.000 | 946.900 | 3296.000 |
| GR | 943.600 | 3394.000 | 944.500 | 3492.000 | 945.800 | 3618.000 | 946.400 | 3678.000 | 949.000 | 3796.000 |
| NC | .040 | .040 | .030 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF W.CASS ST. BRIDGE.CONCRETE (H)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 18.000 | 58.000 | 2130.000 | 2280.000 | 1.000 | 1.000 | 1.000 | .731 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | .731 | 0.000 |
| X4 | 1.000 | 931.800 | 2204.800 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 36.000 | 2000.000 | 941.500 | 0.000 | 2130.000 | 941.800 | 0.000 | 2130.000 | 941.800 | 933.000 |
| BT | 2135.000 | 941.800 | 935.900 | 2140.000 | 941.800 | 937.700 | 2145.000 | 941.800 | 938.600 | 2150.000 |
| BT | 941.800 | 938.900 | 2153.300 | 941.800 | 939.000 | 2160.000 | 941.800 | 938.800 | 2165.000 | 941.800 |
| BT | 937.800 | 2170.000 | 941.800 | 936.300 | 2176.600 | 941.800 | 932.500 | 2181.600 | 941.700 | 932.500 |
| BT | 2186.600 | 941.700 | 935.800 | 2191.600 | 941.700 | 937.500 | 2196.600 | 941.700 | 938.400 | 2201.600 |
| BT | 941.700 | 938.900 | 2204.800 | 941.700 | 939.000 | 2206.600 | 941.700 | 938.900 | 2211.600 | 941.700 |
| BT | 938.600 | 2216.600 | 941.700 | 937.700 | 2222.500 | 941.700 | 935.900 | 2228.000 | 941.700 | 932.500 |
| BT | 2233.000 | 941.700 | 932.500 | 2239.000 | 941.600 | 936.400 | 2245.000 | 941.600 | 937.900 | 2250.000 |
| BT | 941.500 | 938.700 | 2255.000 | 941.500 | 939.000 | 2256.500 | 941.500 | 939.000 | 2260.000 | 941.400 |
| BT | 938.900 | 2265.000 | 941.400 | 938.300 | 2270.000 | 941.400 | 937.400 | 2275.000 | 941.300 | 935.600 |
| BT | 2280.000 | 941.300 | 931.800 | 2280.000 | 941.300 | 0.000 | 2330.000 | 940.800 | 0.000 | 0.000 |
| GR | 941.500 | 2000.000 | 941.500 | 2000.000 | 941.500 | 2000.000 | 941.800 | 2130.000 | 933.000 | 2130.000 |
| GR | 932.000 | 2135.000 | 931.700 | 2140.000 | 931.500 | 2145.000 | 931.700 | 2150.000 | 931.700 | 2153.300 |
| GR | 931.700 | 2155.000 | 931.600 | 2160.000 | 931.600 | 2165.000 | 931.700 | 2170.000 | 931.100 | 2176.600 |
| GR | 932.500 | 2176.600 | 932.500 | 2181.600 | 929.800 | 2181.600 | 929.400 | 2186.600 | 929.500 | 2191.600 |
| GR | 929.800 | 2196.600 | 931.700 | 2201.600 | 932.000 | 2206.600 | 933.000 | 2211.600 | 932.700 | 2216.600 |
| GR | 932.100 | 2222.500 | 931.700 | 2228.000 | 932.500 | 2228.000 | 932.500 | 2233.000 | 930.300 | 2233.000 |
| GR | 929.300 | 2239.000 | 929.200 | 2245.000 | 929.000 | 2250.000 | 929.400 | 2255.000 | 930.100 | 2256.500 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 931.200 | 2260.000 | 930.200 | 2262.000 | 931.900 | 2265.000 | 932.700 | 2270.000 | 932.300 | 2275.000 |
| GR | 931.800 | 2280.000 | 941.300 | 2280.000 | 940.800 | 2330.000 | 940.600 | 2402.000 | 941.000 | 2500.000 |
| GR | 941.500 | 2602.000 | 944.300 | 2690.000 | 948.400 | 2808.000 | 948.500 | 2840.000 | 946.400 | 2940.000 |
| GR | 945.600 | 3004.000 | 946.200 | 3208.000 | 946.900 | 3296.000 | 943.600 | 3394.000 | 944.500 | 3492.000 |
| GR | 945.800 | 3618.000 | 946.400 | 3678.000 | 949.000 | 3796.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 18.100 | 54.000 | 2142.600 | 2280.000 | 40.000 | 40.000 | 40.000 | .731 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | .731 | 0.000 | 0.000 |
| BT | 32.000 | 2130.000 | 941.800 | 0.000 | 2142.600 | 941.800 | 0.000 | 2142.600 | 941.800 | 938.100 |
| BT | 2148.200 | 941.800 | 938.800 | 2153.800 | 941.800 | 939.000 | 2159.400 | 941.800 | 938.700 | 2165.000 |
| BT | 941.800 | 937.800 | 2170.600 | 941.800 | 936.100 | 2176.600 | 941.800 | 932.500 | 2181.600 | 941.700 |
| BT | 932.500 | 2187.000 | 941.700 | 935.900 | 2192.400 | 941.700 | 937.700 | 2197.800 | 941.700 | 938.600 |
| BT | 2203.200 | 941.700 | 939.000 | 2208.600 | 941.700 | 938.900 | 2214.000 | 941.700 | 938.200 | 2219.400 |
| BT | 941.700 | 937.000 | 2225.200 | 941.700 | 934.600 | 2228.000 | 941.700 | 932.500 | 2233.000 | 941.700 |
| BT | 932.500 | 2235.300 | 941.700 | 934.100 | 2240.400 | 941.600 | 936.700 | 2245.500 | 941.600 | 938.000 |
| BT | 2250.600 | 941.500 | 938.800 | 2256.500 | 941.500 | 939.000 | 2260.800 | 941.400 | 938.800 | 2265.900 |
| BT | 941.400 | 938.200 | 2271.000 | 941.400 | 937,000 | 2276.500 | 941.300 | 934.900 | 2280.000 | 941.300 |
| BT | 931.800 | 2280.000 | 941.300 | 0.000 | 2330.000 | 940.800 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 941.800 | 2130.000 | 941.800 | 2130.000 | 941.800 | 2130.000 | 941.800 | 2130.000 | 941.800 | 2142.600 |
| GR | 933.400 | 2142.600 | 932.000 | 2148.200 | 931.900 | 2153.800 | 931.900 | 2159.400 | 931.800 | 2165.000 |
| GR | 931.600 | 2170.600 | 931.600 | 2176.600 | 932.500 | 2176.600 | 932.500 | 2181.600 | 931.100 | 2181.600 |
| GR | 931.100 | 2187.000 | 930.700 | 2192.400 | 930.300 | 2197.800 | 930.000 | 2203.200 | 929.800 | 2208.600 |
| GR | 930.000 | 2214.000 | 930.500 | 2219.400 | 930.900 | 2225.200 | 931.300 | 2228.000 | 932.500 | 2228.000 |
| GR | 932.500 | 2233.000 | 931.300 | 2233.000 | 930.900 | 2235.300 | 930.500 | 2240.400 | 929.900 | 2245.500 |
| GR | 929.800 | 2250.600 | 929.700 | 2256.500 | 929.500 | 2260.800 | 929.300 | 2265.900 | 929.500 | 2271.000 |
| GR | 930.600 | 2276.500 | 931.800 | 2280.000 | 941.300 | 2280.000 | 940.800 | 2330.000 | 940.600 | 2402.000 |
| GR | 941.000 | 2500.000 | 941.500 | 2602.000 | 944.300 | 2690.000 | 948.400 | 2808.000 | 948.500 | 2840.000 |
| GR | 946.400 | 2940.000 | 945.600 | 3004.000 | 946.200 | 3208.000 | 946.900 | 3296.000 | 943.600 | 3394.000 |
| GR | 944.500 | 3492.000 | 945.800 | 3618.000 | 946.400 | 3678.000 | 949.000 | 3796.000 | 0.000 | 0.000 |
| X1 | 18.200 | 27.000 | 2000.000 | 2140.000 | 1.000 | 1.000 | 1.000 | .731 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 941.800 | 941.300 | 0.000 |
| GR | 951.000 | 1378.000 | 943.000 | 1898.000 | 942.000 | 1946.000 | 931.400 | 2000.000 | 930.800 | 2010.000 |
| GR | 930.600 | 2020.000 | 930.400 | 2032.000 | 930.800 | 2044.000 | 930.600 | 2054.000 | 930.500 | 2066.000 |
| GR | 930.800 | 2076.000 | 932.100 | 2086.000 | 935.200 | 2108.000 | 939.800 | 2140.000 | 940.700 | 2260.000 |
| GR | 941.500 | 2304.000 | 944.300 | 2392.000 | 948.400 | 2510.000 | 948.500 | 2542.000 | 946.400 | 2642.000 |
| GR | 945.600 | 2706.000 | 946.200 | 2910.000 | 946.900 | 2998.000 | 947.900 | 3096.000 | 948.800 | 3194.000 |
| GR | 950.000 | 3320.000 | 950.700 | 3380.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 18.300 | 0.000 | 0.000 | 0.000 | 49.000 | 49.000 | 49.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 941.800 | 941.300 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 18.800 | 29.000 | 2000.000 | 2140.000 | 420.000 | 340.000 | 365.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.900 | 1378.000 | 943.000 | 1898.000 | 942.000 | 1946.000 | 940.400 | 2000.000 | 931.400 | 2000.000 |
| GR | 930.800 | 2010.000 | 930.600 | 2020.000 | 930.400 | 2032.000 | 930.800 | 2044.000 | 930.600 | 2054.000 |
| GR | 930.500 | 2066.000 | 930.800 | 2076.000 | 932.100 | 2086.000 | 935.200 | 2108.000 | 939.800 | 2140.000 |
| GR | 940.700 | 2260.000 | 941.500 | 2304.000 | 944.300 | 2392.000 | 948.400 | 2510.000 | 948.500 | 2542.000 |
| GR | 946.400 | 2642.000 | 945.600 | 2706.000 | 946.200 | 2910.000 | 946.900 | 2998.000 | 947.900 | 3096.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 948.800 | 3194.000 | 950.000 | 3320.000 | 950.700 | 3380.000 | 953.300 | 3498.000 | 0.000 | 0.000 |
| X1 | 18.900 | 30.000 | 2000.000 | 2066.600 | 195.000 | 215.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 939.400 | 939.600 | 0.000 |
| GR | 947.000 | 1550.000 | 946.400 | 1600.000 | 946.000 | 1686.000 | 940.300 | 1794.000 | 939.300 | 1902.000 |
| GR | 932.200 | 2000.000 | 931.600 | 2008.000 | 931.100 | 2016.000 | 931.600 | 2024.000 | 931.600 | 2032.000 |
| GR | 931.600 | 2040.000 | 931.700 | 2048.000 | 932.700 | 2056.000 | 940.200 | 2066.600 | 940.700 | 2096.000 |
| GR | 942.000 | 2182.000 | 942.600 | 2214.000 | 943.100 | 2296.000 | 944.500 | 2416.000 | 945.400 | 2492.000 |
| GR | 946.300 | 2588.000 | 947.500 | 2690.000 | 949.600 | 2794.000 | 950.600 | 2902.000 | 951.500 | 3002.000 |
| GR | 951.900 | 3106.000 | 952.800 | 3214.000 | 952.700 | 3242.000 | 953.100 | 3342.000 | 954.200 | 3408.000 |
| NC | .040 | .040 | .020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF PORTER ST. WALK BRIDGE.CONCRETE (I)

CONFLUENCE WITH THE EAST BRANCH KALAMAZOO

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.000 | 34.000 | 2000.000 | 2057.700 | 0.000 | 0.000 | 4.000 | 0.000 | 0.000 | 0.000 |
| BT | 11.000 | 1794.000 | 940.300 | 0.000 | 2000.000 | 940.100 | 932.200 | 2000.000 | 940.100 | 938.600 |
| BT | 2026.700 | 940.200 | 938.700 | 2027.700 | 940.300 | 938.800 | 2057.700 | 940.400 | 938.900 | 2057.700 |
| BT | 940.400 | 932.500 | 2096.000 | 940.700 | 0.000 | 2182.000 | 942.000 | 0.000 | 2214.000 | 942.600 |
| BT | 0.000 | 2296.000 | 943.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 947.000 | 1550.000 | 946.400 | 1600.000 | 946.000 | 1686.000 | 940.300 | 1794.000 | 940.100 | 2000.000 |
| GR | 932.200 | 2000.000 | 931.600 | 2008.000 | 931.100 | 2016.000 | 931.600 | 2024.000 | 931.600 | 2026.200 |
| GR | 938.700 | 2026.700 | 938.800 | 2027.700 | 931.600 | 2028.200 | 931.600 | 2032.000 | 931.600 | 2040.000 |
| GR | 931.700 | 2048.000 | 932.500 | 2057.700 | 940.400 | 2057.700 | 940.700 | 2096.000 | 942.000 | 2182.000 |
| GR | 942.600 | 2214.000 | 943.100 | 2296.000 | 944.500 | 2416.000 | 945.400 | 2492.000 | 946.300 | 2588.000 |
| GR | 947.500 | 2690.000 | 949.600 | 2794.000 | 950.600 | 2902.000 | 951.500 | 3002.000 | 951.900 | 3106.000 |
| GR | 952.800 | 3214.000 | 952.700 | 3242.000 | 953.100 | 3342.000 | 954.200 | 3408.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.100 | 0.000 | 0.000 | 0.000 | 6.000 | 6.000 | 6.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.100 | 940.400 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.200 | 32.000 | 2000.000 | 2057.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 940.100 | 940.400 | 0.000 |
| GR | 947.000 | 1550.000 | 946.400 | 1600.000 | 946.000 | 1686.000 | 940.700 | 1686.000 | 940.300 | 1794.000 |
| GR | 939.300 | 1902.000 | 939.200 | 2000.000 | 933.000 | 2007.000 | 932.000 | 2008.000 | 931.200 | 2016.000 |
| GR | 931.100 | 2024.000 | 931.000 | 2032.000 | 930.900 | 2040.000 | 931.400 | 2048.000 | 932.900 | 2057.000 |
| GR | 939.300 | 2057.000 | 940.700 | 2096.000 | 942.000 | 2182.000 | 942.600 | 2214.000 | 943.100 | 2296.000 |
| GR | 944.500 | 2416.000 | 945.400 | 2492.000 | 946.300 | 2588.000 | 947.500 | 2690.000 | 949.600 | 2794.000 |
| GR | 950.600 | 2902.000 | 951.500 | 3002.000 | 951.900 | 3106.000 | 952.800 | 3214.000 | 952.700 | 3242.000 |
| GR | 953.100 | 3342.000 | 954.200 | 3408.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.300 | 0.000 | 0.000 | 0.000 | 24.000 | 24.000 | 24.000 | 0.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.800 | 43.000 | 2297.000 | 2367.000 | 165.000 | 165.000 | 165.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 943.100 | 942.900 | 0.000 |
| GR | 960.400 | 934.000 | 958.500 | 998.000 | 956.700 | 1096.000 | 955.900 | 1200.000 | 955.400 | 1298.000 |
| GR | 954.900 | 1400.000 | 954.300 | 1496.000 | 953.600 | 1616.000 | 952.500 | 1700.000 | 951.200 | 1800.000 |
| GR | 950.000 | 1900.000 | 948.900 | 2000.000 | 947.200 | 2100.000 | 945.200 | 2201.000 | 944.100 | 2297.000 |
| GR | 934.500 | 2297.000 | 933.300 | 2307.000 | 932.400 | 2315.000 | 931.900 | 2323.000 | 931.600 | 2330.000 |
| GR | 931.800 | 2337.000 | 931.900 | 2345.000 | 933.600 | 2353.000 | 934.300 | 2361.000 | 934.800 | 2367.000 |
| GR | 943.900 | 2367.000 | 943.800 | 2402.000 | 943.600 | 2563.000 | 944.200 | 2685.000 | 945.700 | 2789.000 |
| GR | 946.400 | 2825.000 | 948.100 | 2917.000 | 949.500 | 3000.000 | 951.200 | 3105.000 | 952.900 | 3207.000 |
| GR | 953.500 | 3239.000 | 954.200 | 3337.000 | 953.900 | 3441.000 | 953.700 | 3500.000 | 953.300 | 3605.000 |
| GR | 953.100 | 3679.000 | 953.400 | 3775.000 | 954.000 | 3879.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 19.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF ERIE ST. BRIDGE.CONCRETE (J)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 20.000 | 49.000 | 2297.000 | 2367.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 943.100 | 942.900 | 0.000 |
| BT | 11.000 | 2201.000 | 945.200 | 0.000 | 2297.000 | 944.100 | 934.500 | 2297.000 | 944.100 | 942.100 |
| BT | 2318.500 | 944.100 | 942.100 | 2321.500 | 944.100 | 942.100 | 2342.500 | 944.000 | 942.000 | 2345.500 |
| BT | 944.000 | 942.100 | 2367.000 | 943.900 | 941.900 | 2367.000 | 943.900 | 934.800 | 2402.000 | 943.800 |
| BT | 0.000 | 2563.000 | 943.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.400 | 934.000 | 958.500 | 998.000 | 956.700 | 1096.000 | 955.900 | 1200.000 | 955.400 | 1298.000 |
| GR | 954.900 | 1400.000 | 954.300 | 1496.000 | 953.600 | 1616.000 | 952.500 | 1700.000 | 951.200 | 1800.000 |
| GR | 950.000 | 1900.000 | 948.900 | 2000.000 | 947.200 | 2100.000 | 945.200 | 2201.000 | 944.100 | 2297.000 |
| GR | 934.500 | 2297.000 | 933.300 | 2307.000 | 932.400 | 2315.000 | 932.200 | 2317.500 | 942.100 | 2318.500 |
| GR | 942.100 | 2321.500 | 931.900 | 2322.500 | 931.600 | 2330.000 | 931.800 | 2337.000 | 931.900 | 2341.500 |
| GR | 942.000 | 2342.500 | 942.000 | 2345.500 | 932.100 | 2346.500 | 933.600 | 2353.000 | 934.300 | 2361.000 |
| GR | 934.800 | 2367.000 | 943.900 | 2367.000 | 943.800 | 2402.000 | 943.600 | 2563.000 | 944.200 | 2685.000 |
| GR | 945.700 | 2789.000 | 946.400 | 2825.000 | 948.100 | 2917.000 | 949.500 | 3000.000 | 951.200 | 3105.000 |
| GR | 952.900 | 3207.000 | 953.500 | 3239.000 | 954.200 | 3337.000 | 953.900 | 3441.000 | 953.700 | 3500.000 |
| GR | 953.300 | 3605.000 | 953.100 | 3679.000 | 953.400 | 3775.000 | 954.000 | 3879.000 | 0.000 | 0.000 |
| X1 | 20.100 | 0.000 | 0.000 | 0.000 | 90.000 | 90.000 | 90.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X1 | 20.200 | 43.000 | 2297.000 | 2367.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 944.100 | 943.900 | 0.000 |
| GR | 960.400 | 934.000 | 958.500 | 998.000 | 956.700 | 1096.000 | 955.900 | 1200.000 | 955.400 | 1298.000 |
| GR | 954.900 | 1400.000 | 954.300 | 1496.000 | 953.600 | 1616.000 | 952.500 | 1700.000 | 951.200 | 1800.000 |
| GR | 950.000 | 1900.000 | 948.900 | 2000.000 | 947.200 | 2100.000 | 945.200 | 2201.000 | 944.100 | 2297.000 |
| GR | 934.500 | 2297.000 | 933.300 | 2307.000 | 932.400 | 2315.000 | 931.900 | 2323.000 | 931.600 | 2330.000 |
| GR | 931.800 | 2337.000 | 931.900 | 2345.000 | 933.600 | 2353.000 | 934.300 | 2361.000 | 934.800 | 2367.000 |
| GR | 943.900 | 2367.000 | 943.800 | 2402.000 | 943.600 | 2563.000 | 944.200 | 2685.000 | 945.700 | 2789.000 |
| GR | 946.400 | 2825.000 | 948.100 | 2917.000 | 949.500 | 3000.000 | 951.200 | 3105.000 | 952.900 | 3207.000 |
| GR | 953.500 | 3239.000 | 954.200 | 3337.000 | 953.900 | 3441.000 | 953.700 | 3500.000 | 953.300 | 3605.000 |
| GR | 953.100 | 3679.000 | 953.400 | 3775.000 | 954.000 | 3879.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 20.300 | 46.000 | 2297.000 | 2367.000 | 64.000 | 64.000 | 64.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.400 | 934.000 | 958.500 | 998.000 | 956.700 | 1096.000 | 955.900 | 1200.000 | 955.400 | 1298.000 |
| GR | 954.900 | 1400.000 | 954.300 | 1496.000 | 953.600 | 1616.000 | 952.500 | 1700.000 | 951.200 | 1800.000 |
| GR | 950.000 | 1900.000 | 948.900 | 2000.000 | 947.200 | 2100.000 | 945.200 | 2201.000 | 943.300 | 2297.000 |
| GR | 942.300 | 2297.000 | 933.600 | 2297.000 | 932.100 | 2327.000 | 931.700 | 2337.000 | 931.900 | 2347.000 |
| GR | 932.300 | 2357.000 | 932.600 | 2367.000 | 939.100 | 2367.000 | 942.900 | 2385.000 | 943.400 | 2419.000 |
| GR | 943.100 | 2519.000 | 942.600 | 2588.000 | 936.900 | 2588.000 | 935.700 | 2626.000 | 942.000 | 2626.000 |
| GR | 944.600 | 2673.000 | 944.200 | 2685.000 | 945.700 | 2789.000 | 946.400 | 2825.000 | 948.100 | 2917.000 |
| GR | 949.500 | 3000.000 | 951.200 | 3105.000 | 952.900 | 3207.000 | 953.500 | 3239.000 | 954.200 | 3337.000 |
| GR | 953.900 | 3441.000 | 953.700 | 3500.000 | 953.300 | 3605.000 | 953.100 | 3679.000 | 953.400 | 3775.000 |
| GR | 954.000 | 3879.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 7.000 | .060 | 2000.000 | .030 | 2032.000 | .060 | 2530.000 | .035 | 2570.000 | .070 |
| NH | 2698.000 | .035 | 2728.000 | .060 | 3748.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 432.000 | 2256.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 21.000 | 49.000 | 2000.000 | 2032.000 | 1060.000 | 1040.000 | 1050.000 | 0.000 | 0.000 | 0.000 |
| GR | 951.700 | 432.000 | 952.000 | 586.000 | 953.400 | 744.000 | 950.600 | 820.000 | 951.000 | 906.000 |
| GR | 950.400 | 1036.000 | 949.800 | 1138.000 | 949.700 | 1238.000 | 949.600 | 1302.000 | 949.200 | 1398.000 |
| GR | 948.700 | 1494.000 | 949.600 | 1630.000 | 946.700 | 1710.000 | 943.600 | 1726.000 | 941.900 | 1756.000 |
| GR | 941.500 | 1832.000 | 941.700 | 1904.000 | 938.300 | 1942.000 | 937.400 | 2000.000 | 934.100 | 2000.000 |
| GR | 933.200 | 2008.000 | 934.100 | 2022.000 | 934.500 | 2032.000 | 937.600 | 2032.000 | 939.800 | 2132.000 |
| GR | 940.200 | 2256.000 | 938.100 | 2438.000 | 938.900 | 2466.000 | 936.000 | 2530.000 | 934.200 | 2530.000 |
| GR | 933.600 | 2546.000 | 934.300 | 2570.000 | 936.600 | 2570.000 | 937.300 | 2628.000 | 936.500 | 2698.000 |
| GR | 934.300 | 2698.000 | 934.000 | 2714.000 | 934.100 | 2728.000 | 936.000 | 2728.000 | 941.100 | 2890.000 |
| GR | 940.800 | 2982.000 | 940.200 | 3080.000 | 940.600 | 3176.000 | 941.600 | 3273.000 | 942.100 | 3346.000 |
| GR | 942.300 | 3414.000 | 941.600 | 3510.000 | 943.800 | 3706.000 | 945.800 | 3748.000 | 0.000 | 0.000 |
| QT | 5.000 | 535.000 | 675.000 | 735.000 | 875.000 | 735.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 5.000 | .070 | 2026.000 | .035 | 2105.000 | .050 | 2149.000 | .035 | 2162.000 | .060 |
| NH | 2300.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 21.100 | 20.000 | 2026.000 | 2162.000 | 210.000 | 210.000 | 210.000 | 0.000 | 0.000 | 0.000 |
| GR | 945.700 | 2000.000 | 940.100 | 2015.000 | 939.600 | 2026.000 | 935.600 | 2026.000 | 935.400 | 2030.000 |
| GR | 935.300 | 2040.000 | 935.300 | 2050.000 | 935.400 | 2070.000 | 935.200 | 2080.000 | 935.500 | 2090.000 |
| GR | 936.000 | 2100.000 | 936.400 | 2105.000 | 939.200 | 2105.000 | 939.500 | 2149.000 | 936.200 | 2149.000 |
| GR | 935.600 | 2155.000 | 935.800 | 2162.000 | 939.000 | 2162.000 | 940.600 | 2185.000 | 942.700 | 2300.000 |
| NC | .060 | .060 | .030 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 21.200 | 40.000 | 2113.000 | 2272.000 | 130.000 | 150.000 | 140.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.400 | 1900.000 | 945.500 | 2000.000 | 944.500 | 2024.000 | 944.400 | 2106.000 | 945.500 | 2107.000 |
| GR | 945.500 | 2113.000 | 939.300 | 2130.000 | 937.300 | 2130.000 | 935.800 | 2130.000 | 935.500 | 2140.000 |
| GR | 935.500 | 2150.000 | 935.500 | 2160.000 | 935.400 | 2170.000 | 935.700 | 2180.000 | 936.100 | 2190.000 |
| GR | 936.400 | 2200.000 | 936.500 | 2222.000 | 939.500 | 2222.000 | 939.300 | 2250.000 | 937.700 | 2259.000 |
| GR | 936.400 | 2259.000 | 935.800 | 2265.500 | 936.500 | 2271.000 | 939.400 | 2272.000 | 940.700 | 2300.000 |
| GR | 941.200 | 2402.000 | 941.700 | 2506.000 | 942.100 | 2606.000 | 942.000 | 2708.000 | 942.200 | 2814.000 |
| GR | 943.600 | 2818.000 | 946.000 | 3000.000 | 942.300 | 3102.000 | 942.800 | 3202.000 | 944.600 | 3302.000 |
| GR | 945.600 | 3404.000 | 949.700 | 3504.000 | 952.000 | 3602.000 | 954.100 | 3698.000 | 961.100 | 3800.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | .060 | .060 | .030 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 7.100 | 1900.000 | 2700.000 | 0.000 | 0.000 |
| X1 | 21.300 | 20.000 | 2130.000 | 2227.000 | 110.000 | 130.000 | 125.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 939.300 | 939.300 | 0.000 |
| GR | 949.400 | 1900.000 | 945.500 | 2000.000 | 944.500 | 2024.000 | 945.500 | 2107.000 | 945.500 | 2113.000 |
| GR | 939.300 | 2130.000 | 936.200 | 2130.000 | 935.700 | 2140.000 | 935.600 | 2150.000 | 935.600 | 2160.000 |
| GR | 935.600 | 2170.000 | 935.700 | 2180.000 | 936.000 | 2190.000 | 936.400 | 2200.000 | 936.500 | 2210.000 |
| GR | 936.600 | 2227.000 | 939.500 | 2227.000 | 940.000 | 2330.000 | 941.600 | 2500.000 | 943.700 | 2700.000 |
| SB | 0.000 | 1.800 | 3.000 | 97.000 | 1.500 | 0.000 | .500 | 0.000 | 937.600 | 935.200 |

DAM AT VICTORY PARK DAM. CREST ELEV. 944 (K)

CODED AS A VERY SMALL HOLE TO FORCE WIER FLOW

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 21.500 | 35.000 | 2210.000 | 2308.000 | 15.000 | 15.000 | 15.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 938.000 | 944.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 948.600 | 948.600 | 0.000 |
| X4 | 4.000 | 944.200 | 2259.000 | 937.600 | 2259.000 | 937.600 | 2260.500 | 944.200 | 2260.500 | 0.000 |
| GR | 948.300 | 2000.000 | 948.500 | 2124.000 | 944.900 | 2134.000 | 943.400 | 2146.000 | 943.200 | 2178.000 |
| GR | 948.300 | 2178.000 | 948.900 | 2200.000 | 948.600 | 2210.000 | 944.200 | 2210.000 | 944.200 | 2230.000 |
| GR | 944.200 | 2252.000 | 944.200 | 2280.000 | 944.200 | 2308.000 | 948.500 | 2308.000 | 946.900 | 2310.000 |
| GR | 946.600 | 2318.000 | 942.200 | 2336.000 | 942.500 | 2440.000 | 942.800 | 2546.000 | 944.300 | 2648.000 |
| GR | 946.100 | 2750.000 | 947.400 | 2844.000 | 946.500 | 2902.000 | 945.300 | 3006.000 | 946.800 | 3110.000 |
| GR | 945.800 | 3208.000 | 947.000 | 3304.000 | 952.100 | 3408.000 | 955.000 | 3510.000 | 955.400 | 3600.000 |
| GR | 959.800 | 3700.000 | 968.200 | 3800.000 | 973.100 | 3904.000 | 976.300 | 3934.000 | 978.000 | 3976.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 21.600 | 20.000 | 205.000 | 308.000 | 27.000 | 27.000 | 27.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 948.600 | 948.600 | 0.000 |
| GR | 948.600 | 0.000 | 948.500 | 124.000 | 944.860 | 134.000 | 943.360 | 146.000 | 940.000 | 152.000 |
| GR | 943.600 | 175.000 | 948.340 | 175.000 | 948.300 | 205.000 | 939.600 | 205.000 | 938.700 | 224.000 |
| GR | 938.000 | 266.000 | 939.000 | 292.000 | 942.600 | 308.000 | 948.600 | 308.000 | 946.900 | 310.000 |
| GR | 940.000 | 336.000 | 942.530 | 440.000 | 944.260 | 648.000 | 946.080 | 750.000 | 947.410 | 844.000 |
| X1 | 21.900 | 28.000 | 2185.000 | 2288.000 | 73.000 | 73.000 | 73.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 948.800 | 948.700 | 0.000 |
| GR | 946.000 | 900.000 | 946.600 | 1062.000 | 947.400 | 1230.000 | 948.600 | 1644.000 | 947.800 | 1644.000 |
| GR | 947.600 | 1710.000 | 947.600 | 1810.000 | 947.300 | 1886.000 | 947.200 | 2104.000 | 947.300 | 2185.000 |
| GR | 943.500 | 2185.000 | 940.700 | 2196.000 | 941.200 | 2206.000 | 941.000 | 2216.000 | 940.300 | 2226.000 |
| GR | 940.100 | 2236.000 | 937.600 | 2246.000 | 939.500 | 2256.000 | 939.400 | 2266.000 | 940.700 | 2276.000 |
| GR | 943.600 | 2288.000 | 947.300 | 2288.000 | 948.600 | 2373.000 | 949.800 | 2467.000 | 951.400 | 2568.000 |
| GR | 953.600 | 2674.000 | 960.100 | 2791.000 | 964.600 | 2887.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .040 | .040 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

D/S FACE OF HAVEN RD. BRIDGE.CONCRETE (L)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 22.000 | 35.000 | 2185.000 | 2288.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 2104.000 | 947.200 | 0.000 | 2185.000 | 950.200 | 947.300 | 2218.000 | 950.200 | 947.300 |
| BT | 2220.000 | 950.200 | 947.300 | 2254.000 | 950.100 | 947.300 | 2256.000 | 950.100 | 947.300 | 2288.000 |
| BT | 950.100 | 947.300 | 2373.000 | 948.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 946.000 | 900.000 | 946.600 | 1062.000 | 947.400 | 1230.000 | 948.600 | 1644.000 | 947.800 | 1644.000 |
| GR | 947.600 | 1710.000 | 947.600 | 1810.000 | 947.300 | 1886.000 | 947.200 | 2104.000 | 950.200 | 2185.000 |
| GR | 943.500 | 2185.000 | 940.700 | 2196.000 | 941.200 | 2206.000 | 941.000 | 2216.000 | 940.900 | 2217.000 |
| GR | 947.300 | 2218.000 | 947.300 | 2220.000 | 940.600 | 2221.000 | 940.300 | 2226.000 | 940.100 | 2236.000 |
| GR | 937.600 | 2246.000 | 938.900 | 2253.000 | 947.300 | 2254.000 | 947.300 | 2256.000 | 939.500 | 2257.000 |
| GR | 939.400 | 2266.000 | 940.700 | 2276.000 | 943.600 | 2288.000 | 950.100 | 2288.000 | 948.600 | 2373.000 |
| GR | 949.800 | 2467.000 | 951.400 | 2568.000 | 953.600 | 2674.000 | 960.100 | 2791.000 | 964.600 | 2887.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 22.100 | 34.000 | 2185.000 | 2288.000 | 23.000 | 23.000 | 23.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 2104.000 | 947.200 | 0.000 | 2185.000 | 950.200 | 947.300 | 2218.000 | 950.200 | 947.300 |
| BT | 2220.000 | 950.200 | 947.300 | 2254.000 | 950.100 | 947.300 | 2256.000 | 950.100 | 947.300 | 2288.000 |
| BT | 950.100 | 947.300 | 2373.000 | 948.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 946.000 | 900.000 | 946.600 | 1062.000 | 947.400 | 1230.000 | 948.600 | 1644.000 | 947.800 | 1644.000 |
| GR | 947.600 | 1710.000 | 947.600 | 1810.000 | 947.300 | 1886.000 | 947.200 | 2104.000 | 950.200 | 2185.000 |
| GR | 944.100 | 2185.000 | 941.100 | 2196.000 | 940.700 | 2216.000 | 940.700 | 2217.000 | 947.300 | 2218.000 |
| GR | 947.300 | 2220.000 | 940.600 | 2221.000 | 940.500 | 2226.000 | 939.800 | 2236.000 | 938.700 | 2246.000 |
| GR | 939.200 | 2253.000 | 947.300 | 2254.000 | 947.300 | 2256.000 | 939.400 | 2257.000 | 939.000 | 2266.000 |
| GR | 941.200 | 2276.000 | 944.000 | 2288.000 | 950.100 | 2288.000 | 948.600 | 2373.000 | 949.800 | 2467.000 |
| GR | 951.400 | 2568.000 | 953.600 | 2674.000 | 960.100 | 2791.000 | 964.600 | 2887.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 22.200 | 27.000 | 2185.000 | 2288.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 950.200 | 950.100 | 0.000 |
| GR | 946.000 | 900.000 | 946.600 | 1062.000 | 947.400 | 1230.000 | 948.600 | 1644.000 | 947.800 | 1644.000 |
| GR | 947.600 | 1710.000 | 947.600 | 1810.000 | 947.300 | 1886.000 | 947.200 | 2104.000 | 947.300 | 2185.000 |
| GR | 944.100 | 2185.000 | 941.100 | 2196.000 | 940.700 | 2216.000 | 940.500 | 2226.000 | 939.800 | 2236.000 |
| GR | 938.700 | 2246.000 | 939.400 | 2256.000 | 939.000 | 2266.000 | 941.200 | 2276.000 | 944.000 | 2288.000 |
| GR | 947.300 | 2288.000 | 948.600 | 2373.000 | 949.800 | 2467.000 | 951.400 | 2568.000 | 953.600 | 2674.000 |
| GR | 960.100 | 2791.000 | 964.600 | 2887.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 22.300 | 23.000 | 2164.000 | 2374.000 | 100.000 | 120.000 | 103.000 | 0.000 | 0.000 | 0.000 |
| GR | 947.000 | 900.000 | 946.600 | 1062.000 | 947.400 | 1230.000 | 948.600 | 1644.000 | 947.800 | 1644.000 |
| GR | 947.600 | 1710.000 | 947.600 | 1810.000 | 947.300 | 1886.000 | 947.200 | 2104.000 | 947.200 | 2148.000 |
| GR | 945.500 | 2148.000 | 942.600 | 2164.000 | 938.510 | 2185.000 | 938.510 | 2353.000 | 943.000 | 2374.000 |
| GR | 944.700 | 2388.000 | 946.700 | 2388.000 | 947.300 | 2404.000 | 949.300 | 2472.000 | 951.500 | 2568.000 |
| GR | 953.600 | 2674.000 | 960.100 | 2791.000 | 964.600 | 2887.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .050 | .050 | .030 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 22.500 | 13.000 | 2008.000 | 2420.000 | 460.000 | 450.000 | 450.000 | 0.000 | 0.000 | 0.000 |
| GR | 947.200 | 2008.000 | 944.400 | 2048.000 | 944.400 | 2079.000 | 943.600 | 2093.000 | 943.600 | 2160.000 |
| GR | 942.200 | 2173.000 | 942.200 | 2202.000 | 941.200 | 2207.000 | 941.200 | 2357.000 | 944.000 | 2369.000 |
| GR | 944.600 | 2379.000 | 944.550 | 2400.000 | 947.200 | 2420.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 22.550 | 10.000 | 2000.000 | 2380.000 | 390.000 | 380.000 | 392.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.400 | 1906.000 | 948.700 | 1992.000 | 943.800 | 2000.000 | 938.600 | 2025.000 | 938.600 | 2313.000 |
| GR | 938.600 | 2336.000 | 946.700 | 2380.000 | 949.200 | 2416.000 | 953.800 | 2440.000 | 954.600 | 2452.000 |
| X1 | 22.600 | 7.000 | 2002.000 | 2288.000 | 200.000 | 190.000 | 196.000 | 0.000 | 0.000 | 0.000 |
| GR | 948.700 | 1950.000 | 943.240 | 2002.000 | 938.200 | 2027.000 | 938.200 | 2263.000 | 943.240 | 2288.000 |
| GR | 944.800 | 2336.000 | 949.200 | 2416.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 22.800 | 16.000 | 1992.000 | 2170.000 | 150.000 | 120.000 | 125.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.500 | 1280.000 | 962.200 | 1428.000 | 958.800 | 1560.000 | 956.000 | 1760.000 | 953.300 | 1832.000 |
| GR | 949.400 | 1906.000 | 948.700 | 1992.000 | 942.400 | 2000.000 | 942.000 | 2010.000 | 941.800 | 2035.000 |
| GR | 939.200 | 2050.000 | 938.000 | 2090.000 | 939.800 | 2110.000 | 942.000 | 2150.000 | 942.400 | 2170.000 |
| GR | 949.000 | 2416.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 22.900 | 37.000 | 2000.000 | 2100.000 | 60.000 | 180.000 | 108.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 950.400 | 950.400 | 0.000 |
| GR | 949.300 | 506.000 | 948.900 | 606.000 | 948.600 | 658.000 | 948.400 | 704.000 | 948.000 | 802.000 |
| GR | 947.700 | 874.000 | 947.600 | 900.000 | 947.600 | 1000.000 | 947.800 | 1050.000 | 948.100 | 1096.000 |
| GR | 948.500 | 1196.000 | 948.900 | 1232.000 | 949.100 | 1292.000 | 948.900 | 1390.000 | 948.600 | 1498.000 |
| GR | 948.700 | 1600.000 | 950.100 | 1736.000 | 951.200 | 1812.000 | 952.400 | 1900.000 | 952.600 | 2000.000 |
| GR | 944.100 | 2000.000 | 941.300 | 2011.000 | 939.000 | 2022.000 | 938.200 | 2033.000 | 939.300 | 2044.000 |
| GR | 938.700 | 2055.000 | 937.500 | 2066.000 | 938.000 | 2077.000 | 939.900 | 2089.000 | 945.200 | 2100.000 |
| GR | 952.500 | 2100.000 | 953.300 | 2202.000 | 953.400 | 2304.000 | 954.700 | 2398.000 | 964.300 | 2494.000 |
| GR | 965.600 | 2526.000 | 969.300 | 2552.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .050 | .050 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF SOUTH SUPERIOR ST. BRIDGE.CONCRETE (M)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 23.000 | 41.000 | 2000.000 | 2100.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 1900.000 | 952.400 | 0.000 | 2000.000 | 952.600 | 0.000 | 2000.000 | 952.600 | 948.300 |
| BT | 2048.500 | 952.600 | 948.300 | 2050.500 | 952.500 | 948.400 | 2100.000 | 952.500 | 948.400 | 2100.000 |
| BT | 952.500 | 0.000 | 2202.000 | 953.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.300 | 506.000 | 948.900 | 606.000 | 948.600 | 658.000 | 948.400 | 704.000 | 948.000 | 802.000 |
| GR | 947.700 | 874.000 | 947.600 | 900.000 | 947.600 | 1000.000 | 947.800 | 1050.000 | 948.100 | 1096.000 |
| GR | 948.500 | 1196.000 | 948.900 | 1232.000 | 949.100 | 1292.000 | 948.900 | 1390.000 | 948.600 | 1498.000 |
| GR | 948.700 | 1600.000 | 950.100 | 1736.000 | 951.200 | 1812.000 | 952.400 | 1900.000 | 952.600 | 2000.000 |
| GR | 941.100 | 2000.000 | 941.300 | 2011.000 | 939.000 | 2022.000 | 938.200 | 2033.000 | 939.300 | 2044.000 |
| GR | 939.000 | 2048.500 | 948.300 | 2048.500 | 948.400 | 2050.500 | 938.900 | 2050.500 | 938.700 | 2055.000 |
| GR | 937.500 | 2066.000 | 938.000 | 2077.000 | 939.900 | 2089.000 | 945.200 | 2100.000 | 952.500 | 2100.000 |
| GR | 953.300 | 2202.000 | 953.400 | 2304.000 | 954.700 | 2398.000 | 964.300 | 2494.000 | 965.600 | 2526.000 |
| GR | 969.300 | 2552.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 23.100 | 41.000 | 2000.000 | 2100.000 | 56.000 | 56.000 | 56.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 1900.000 | 952.400 | 0.000 | 2000.000 | 954.300 | 0.000 | 2000.000 | 954.300 | 950.200 |
| BT | 2048.500 | 954.300 | 950.200 | 2050.500 | 954.300 | 950.100 | 2100.000 | 954.300 | 950.100 | 2100.000 |
| BT | 954.300 | 0.000 | 2202.000 | 953.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.300 | 506.000 | 948.900 | 606.000 | 948.600 | 658.000 | 948.400 | 704.000 | 948.000 | 802.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 947.700 | 874.000 | 947.600 | 900.000 | 947.600 | 1000.000 | 947.800 | 1050.000 | 948.100 | 1096.000 |
| GR | 948.500 | 1196.000 | 948.900 | 1232.000 | 949.100 | 1292.000 | 948.900 | 1390.000 | 948.600 | 1498.000 |
| GR | 948.700 | 1600.000 | 950.100 | 1736.000 | 951.200 | 1812.000 | 952.400 | 1900.000 | 954.300 | 2000.000 |
| GR | 943.900 | 2000.000 | 942.300 | 2011.000 | 941.400 | 2022.000 | 940.500 | 2033.000 | 941.500 | 2044.000 |
| GR | 939.900 | 2048.500 | 950.200 | 2048.500 | 950.100 | 2050.500 | 939.100 | 2050.500 | 937.700 | 2055.000 |
| GR | 940.500 | 2066.000 | 944.600 | 2077.000 | 944.900 | 2088.000 | 944.700 | 2100.000 | 954.300 | 2100.000 |
| GR | 953.300 | 2202.000 | 953.400 | 2304.000 | 954.700 | 2398.000 | 964.300 | 2494.000 | 965.600 | 2526.000 |
| GR | 969.300 | 2552.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 23.200 | 37.000 | 2000.000 | 2100.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 954.300 | 954.300 | 0.000 |
| GR | 949.300 | 506.000 | 948.900 | 606.000 | 948.600 | 658.000 | 948.400 | 704.000 | 948.000 | 802.000 |
| GR | 947.700 | 874.000 | 947.600 | 900.000 | 947.600 | 1000.000 | 947.800 | 1050.000 | 948.100 | 1096.000 |
| GR | 948.500 | 1196.000 | 948.900 | 1232.000 | 949.100 | 1292.000 | 948.900 | 1390.000 | 948.600 | 1498.000 |
| GR | 948.700 | 1600.000 | 950.100 | 1736.000 | 951.200 | 1812.000 | 952.400 | 1900.000 | 954.300 | 2000.000 |
| GR | 943.900 | 2000.000 | 942.300 | 2011.000 | 941.400 | 2022.000 | 940.500 | 2033.000 | 941.500 | 2044.000 |
| GR | 937.700 | 2055.000 | 940.500 | 2066.000 | 944.600 | 2077.000 | 944.900 | 2088.000 | 944.700 | 2100.000 |
| GR | 954.300 | 2100.000 | 953.300 | 2202.000 | 953.400 | 2304.000 | 954.700 | 2398.000 | 964.300 | 2494.000 |
| GR | 965.600 | 2526.000 | 969.300 | 2552.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 23.300 | 10.000 | 1992.000 | 2280.000 | 140.000 | 20.000 | 82.000 | 0.000 | 0.000 | 0.000 |
| GR | 949.400 | 1906.000 | 948.700 | 1992.000 | 944.800 | 2000.000 | 939.760 | 2025.000 | 939.760 | 2255.000 |
| GR | 944.800 | 2280.000 | 952.200 | 2324.000 | 952.800 | 2398.000 | 952.900 | 2508.000 | 965.400 | 2560.000 |
| X1 | 23.400 | 9.000 | 2000.000 | 2336.000 | 1210.000 | 1140.000 | 1133.000 | 0.000 | 0.000 | 0.000 |
| GR | 956.000 | 1760.000 | 953.300 | 1832.000 | 948.000 | 1948.000 | 945.200 | 2000.000 | 939.590 | 2028.000 |
| GR | 939.590 | 2308.000 | 946.300 | 2336.000 | 950.800 | 2398.000 | 952.700 | 2500.000 | 0.000 | 0.000 |
| X1 | 23.500 | 8.000 | 2140.000 | 2420.000 | 380.000 | 640.000 | 516.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 1900.000 | 946.200 | 2000.000 | 943.790 | 2140.000 | 938.500 | 2165.000 | 938.500 | 2393.000 |
| GR | 943.800 | 2420.000 | 946.200 | 2560.000 | 960.000 | 2590.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S LIMIT OF THE CITY OF ALBION. SURVEYED SECTION (N)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 24.000 | 26.000 | 1960.000 | 2471.000 | 200.000 | 300.000 | 233.000 | 0.000 | 0.000 | 0.000 |
| GR | 982.100 | 883.000 | 985.800 | 1045.000 | 985.500 | 1077.000 | 980.800 | 1185.000 | 976.000 | 1287.000 |
| GR | 972.200 | 1393.000 | 969.300 | 1500.000 | 968.100 | 1552.000 | 966.300 | 1656.000 | 962.400 | 1772.000 |
| GR | 956.300 | 1864.000 | 952.100 | 1960.000 | 944.000 | 2000.000 | 938.700 | 2025.000 | 938.700 | 2250.000 |
| GR | 944.900 | 2278.000 | 950.000 | 2471.000 | 958.100 | 2870.000 | 964.300 | 2922.000 | 972.100 | 3106.000 |
| GR | 968.000 | 3248.000 | 968.500 | 3354.000 | 970.000 | 3462.000 | 971.000 | 3542.000 | 972.000 | 3548.000 |
| GR | 972.200 | 3562.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 12.000

D/S LIMIT OF THE CITY OF ALBION. SURVEYED SECTION (A)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.00 | 6.10 | 929.10 | 0.00 | 929.10 | 929.20 | .10 | 0.00 | 0.00 | 927.70 |
| 1600. | 13. | 1367. | 220. | 30. | 504. | 311. | 0. | 0. | 927.30 |
| 0.00 | .44 | 2.71 | .71 | .085 | .045 | .085 | 0.000 | 923.00 | 1922.44 |
| .001023 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 394.86 | 2317.30 |

*SECNO 12.600

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.60 | 6.30 | 930.90 | 0.00 | 0.00 | 931.06 | .16 | 1.84 | .02 | 934.00 |
| 1600. | 2. | 1573. | 25. | 9. | 487. | 49. | 29. | 13. | 928.00 |
| .16 | .19 | 3.23 | .51 | .085 | .045 | .085 | .045 | 924.60 | 1936.55 |
| .000974 | 1880. | 1850. | 1800. | 2 | 0 | 0 | 0.00 | 208.31 | 2167.51 |

*SECNO 12.700

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.70 | 6.10 | 932.10 | 0.00 | 0.00 | 932.20 | .09 | 1.13 | .01 | 930.50 |
| 1600. | 29. | 1461. | 110. | 75. | 571. | 154. | 52. | 21. | 929.30 |
| .34 | .38 | 2.56 | .71 | .085 | .045 | .085 | .045 | 926.00 | 1897.73 |
| .000603 | 1570. | 1500. | 1450. | 2 | 0 | 0 | 0.00 | 281.71 | 2179.44 |

*SECNO 12.800

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.80 | 5.90 | 933.30 | 0.00 | 0.00 | 933.41 | .11 | 1.21 | .01 | 932.00 |
| 1600. | 6. | 1542. | 52. | 15. | 562. | 57. | 81. | 30. | 930.40 |
| .52 | .37 | 2.74 | .91 | .085 | .045 | .085 | .045 | 927.40 | 1964.24 |
| .000799 | 1700. | 1750. | 1650. | 2 | 0 | 0 | 0.00 | 156.03 | 2120.27 |

CCHV= .300 CEHV= .500

*SECNO 13.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.40 ELREA= 940.20

D/S FACE OF ABANDONED RR BRIDGE (B)

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 13.10 | 6.30 | 933.50 | 0.00 | 0.00 | 933.54 | .04 | .11 | .02 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 1039. | 0. | 86. | 31. | 941.00 |
| .56 | 0.00 | 1.54 | 0.00 | .080 | .045 | .080 | .045 | 927.20 | 1869.82 |
| .000285 | 170. | 240. | 325. | 2 | 0 | 0 | 0.00 | 224.06 | 2093.89 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.25 | 1.40 | 3.00 | 300.00 | 200.00 | 20.40 | 2488.00 | 3.00 | 928.00 | 927.20 |

*SECNO 13.200
CLASS A LOW FLOW

3420 BRIDGE W.S.= 933.90 BRIDGE VELOCITY= 1.28 CALCULATED CHANNEL AREA= 1164.

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 933.55 | .01 | 0. | 1600. | 2488. | 2487. | 939.60 | 940.80 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 940.40 ELREA= 940.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.20 | 6.21 | 933.51 | 0.00 | 0.00 | 933.55 | .04 | .01 | 0.00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 1026. | 0. | 86. | 31. | 941.00 |
| .56 | 0.00 | 1.56 | 0.00 | .080 | .065 | .080 | .045 | 927.30 | 1924.68 |
| .000607 | 12. | 12. | 12. | 0 | 0 | 0 | 0.00 | 224.18 | 2148.86 |

*SECNO 13.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 941.10 ELREA= 941.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.30 | 6.21 | 933.51 | 0.00 | 0.00 | 933.55 | .04 | .00 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 1026. | 0. | 86. | 31. | 941.00 |
| .56 | 0.00 | 1.56 | 0.00 | .080 | .065 | .080 | .045 | 927.30 | 1924.68 |
| .000607 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 224.18 | 2148.86 |

*SECNO 14.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.10 | 8.53 | 933.73 | 0.00 | 0.00 | 934.01 | .29 | .34 | .12 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 373. | 0. | 91. | 32. | 940.70 |
| .58 | 0.00 | 4.29 | 0.00 | .080 | .052 | .080 | .046 | 925.20 | 1990.85 |
| .002410 | 380. | 317. | 200. | 2 | 0 | 0 | 0.00 | 67.56 | 2058.41 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 14.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.30 | 8.54 | 933.74 | 0.00 | 0.00 | 934.02 | .28 | .01 | .00 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 374. | 0. | 91. | 32. | 940.70 |
| .58 | 0.00 | 4.28 | 0.00 | .080 | .052 | .080 | .046 | 925.20 | 1990.83 |
| .002403 | 4. | 4. | 4. | 0 | 0 | 0 | 0.00 | 67.59 | 2058.43 |

CCHV= .300 CEHV= .500
*SECNO 14.400

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 939.40 ELREA= 939.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.40 | 6.60 | 933.70 | 0.00 | 0.00 | 934.09 | .38 | .01 | .05 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 322. | 0. | 91. | 32. | 940.90 |
| .58 | 0.00 | 4.98 | 0.00 | .060 | .026 | .060 | .046 | 927.10 | 2000.00 |
| .000931 | 9. | 9. | 9. | 2 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

*SECNO 14.500

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 940.80 MAX ELLC= 937.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 939.40 ELREA= 939.20

D/S FACE OF ALBION ST. BRIDGE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.50 | 6.60 | 933.70 | 0.00 | 0.00 | 934.09 | .38 | .00 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 322. | 0. | 91. | 32. | 940.90 |
| .58 | 0.00 | 4.97 | 0.00 | .060 | .026 | .060 | .046 | 927.10 | 2000.00 |
| .001063 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

*SECNO 14.600

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 940.80 MAX ELLC= 937.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 940.90 ELREA= 940.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.60 | 6.67 | 933.77 | 0.00 | 0.00 | 934.15 | .38 | .06 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 325. | 0. | 92. | 32. | 940.90 |
| .59 | 0.00 | 4.92 | 0.00 | .060 | .026 | .060 | .045 | 927.10 | 2000.00 |
| .001029 | 54. | 54. | 54. | 1 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .100 CEHV= .300
*SECNO 14.700

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.90 ELREA= 940.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.70 | 6.67 | 933.77 | 0.00 | 0.00 | 934.15 | .37 | .00 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 326. | 0. | 92. | 32. | 940.90 |
| .59 | 0.00 | 4.91 | 0.00 | .060 | .045 | .060 | .045 | 927.10 | 2000.00 |
| .002739 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

*SECNO 14.720

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.90 ELREA= 940.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.72 | 6.68 | 933.78 | 0.00 | 0.00 | 934.16 | .37 | .01 | .00 | 941.10 |
| 1600. | 0. | 1600. | 0. | 0. | 326. | 0. | 92. | 32. | 940.90 |
| .59 | 0.00 | 4.90 | 0.00 | .060 | .045 | .060 | .045 | 927.10 | 2000.00 |
| .002725 | 4. | 4. | 4. | 0 | 0 | 0 | 0.00 | 60.00 | 2060.00 |

*SECNO 14.750

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.75 | 7.88 | 935.38 | 0.00 | 0.00 | 935.63 | .25 | 1.46 | .01 | 933.00 |
| 1600. | 158. | 1425. | 17. | 140. | 339. | 16. | 99. | 34. | 933.00 |
| .64 | 1.13 | 4.21 | 1.03 | .060 | .045 | .060 | .045 | 927.50 | 1889.64 |
| .001391 | 770. | 770. | 820. | 2 | 0 | 0 | 0.00 | 173.95 | 2063.58 |

*SECNO 14.800
CENTER LINE OF PEARL STREET NO BRIDGE (D)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.80 | 8.13 | 935.93 | 0.00 | 0.00 | 936.01 | .09 | .37 | .02 | 932.40 |
| 1600. | 52. | 1532. | 17. | 69. | 642. | 26. | 106. | 36. | 933.10 |
| .70 | .74 | 2.39 | .64 | .060 | .045 | .060 | .045 | 927.80 | 2116.69 |
| .000426 | 480. | 520. | 570. | 2 | 0 | 0 | 0.00 | 153.95 | 2270.64 |

*SECNO 14.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.90 | 8.31 | 936.11 | 0.00 | 0.00 | 936.26 | .15 | .23 | .02 | 936.90 |
| 1600. | 0. | 1600. | 0. | 0. | 511. | 0. | 111. | 37. | 937.00 |
| .74 | 0.00 | 3.13 | 0.00 | .050 | .052 | .050 | .046 | 927.80 | 2044.00 |
| .001034 | 360. | 360. | 360. | 2 | 0 | 0 | 0.00 | 72.00 | 2116.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 15.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 937.60 ELREA= 937.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.00 | 7.54 | 936.04 | 0.00 | 0.00 | 936.35 | .31 | .04 | .05 | 939.10 |
| 1600. | 0. | 1600. | 0. | 0. | 357. | 0. | 112. | 37. | 931.00 |
| .74 | 0.00 | 4.48 | 0.00 | .050 | .052 | .050 | .046 | 928.50 | 1801.10 |
| .002185 | 31. | 31. | 31. | 2 | 0 | 0 | 0.00 | 52.54 | 1853.64 |

CCHV= .300 CEHV= .500

*SECNO 15.100

3370 NORMAL BRIDGE,NRD= 23 MIN ELTRD= 938.80 MAX ELLC= 936.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 937.60 ELREA= 937.50

D/S FACE OF EATON ST. BRIDGE.CONCRETE (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.10 | 7.52 | 936.02 | 0.00 | 0.00 | 936.37 | .35 | .00 | .02 | 939.10 |
| 1600. | 0. | 1600. | 0. | 0. | 336. | 0. | 112. | 37. | 931.00 |
| .74 | 0.00 | 4.76 | 0.00 | .040 | .026 | .040 | .046 | 928.50 | 1801.10 |
| .001356 | 1. | 1. | 1. | 2 | 0 | 0 | -20.52 | 52.54 | 1853.64 |

*SECNO 15.200

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 938.80 MAX ELLC= 936.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 939.20 ELREA= 938.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.20 | 7.67 | 936.07 | 0.00 | 0.00 | 936.42 | .36 | .05 | .00 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 334. | 0. | 112. | 37. | 930.00 |
| .74 | 0.00 | 4.79 | 0.00 | .040 | .026 | .040 | .045 | 928.40 | 1784.77 |
| .001383 | 36. | 36. | 36. | 1 | 0 | 0 | -22.62 | 52.54 | 1837.31 |

*SECNO 15.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 939.20 ELREA= 938.90

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 15.30 | 7.73 | 936.13 | 0.00 | 0.00 | 936.44 | .31 | .00 | .01 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 360. | 0. | 112. | 37. | 930.00 |
| .74 | 0.00 | 4.45 | 0.00 | .040 | .026 | .040 | .045 | 928.40 | 1784.77 |
| .000525 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 52.54 | 1837.31 |

*SECNO 15.400

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.40 | 8.16 | 936.36 | 0.00 | 0.00 | 936.50 | .14 | .00 | .05 | 938.00 |
| 1600. | 0. | 1600. | 0. | 0. | 541. | 0. | 112. | 37. | 938.30 |
| .74 | 0.00 | 2.96 | 0.00 | .040 | .026 | .040 | .045 | 928.20 | 2010.00 |
| .000242 | 11. | 11. | 11. | 2 | 0 | 0 | 0.00 | 80.01 | 2090.01 |

CCHV= .300 CEHV= .500
*SECNO 15.800

3470 ENCROACHMENT STATIONS= 1148.0 2196.0 TYPE= 1 TARGET= 1048.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.80 | 8.64 | 936.44 | 0.00 | 0.00 | 936.60 | .16 | .09 | .01 | 940.00 |
| 1600. | 0. | 1600. | 0. | 0. | 493. | 0. | 116. | 38. | 937.60 |
| .77 | 0.00 | 3.24 | 0.00 | .040 | .026 | .040 | .045 | 927.80 | 2116.00 |
| .000290 | 350. | 350. | 350. | 2 | 0 | 0 | 0.00 | 70.00 | 2186.00 |

*SECNO 15.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 938.40 ELREA= 938.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.90 | 7.64 | 936.44 | 0.00 | 0.00 | 936.66 | .23 | .03 | .03 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 418. | 0. | 117. | 38. | 940.30 |
| .78 | 0.00 | 3.83 | 0.00 | .050 | .045 | .050 | .045 | 928.80 | 2118.00 |
| .001292 | 56. | 56. | 56. | 1 | 0 | 0 | 0.00 | 59.50 | 2177.50 |

CCHV= .100 CEHV= .300
*SECNO 16.000

3370 NORMAL BRIDGE.NRD= 6 MIN ELTRD= 939.60 MAX ELLC= 936.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 938.40 ELREA= 938.40

D/S FACE OF CLINTON ST. BRIDGE.CONCRETE (F)

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV LEFT/RIGHT |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 16.00 | 7.64 | 936.44 | 0.00 | 0.00 | 936.67 | .23 | .00 | .00 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 416. | 0. | 117. | 38. | 940.30 |
| .78 | 0.00 | 3.85 | 0.00 | .040 | .045 | .040 | .045 | 928.80 | 2118.00 |
| .003317 | 1. | 1. | 1. | 0 | 0 | 0 | -2.23 | 59.50 | 2177.50 |

*SECNO 16.100

3370 NORMAL BRIDGE,NRD= 6 MIN ELTRD= 939.60 MAX ELLC= 936.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.30 ELREA= 940.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.10 | 7.62 | 936.62 | 0.00 | 0.00 | 936.85 | .24 | .18 | .00 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 410. | 0. | 117. | 38. | 940.30 |
| .78 | 0.00 | 3.90 | 0.00 | .040 | .045 | .040 | .045 | 929.00 | 2118.00 |
| .003506 | 54. | 54. | 54. | 2 | 0 | 0 | -12.86 | 59.50 | 2177.50 |

*SECNO 16.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 940.30 ELREA= 940.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.20 | 7.63 | 936.63 | 0.00 | 0.00 | 936.86 | .22 | .00 | .00 | 940.30 |
| 1600. | 0. | 1600. | 0. | 0. | 423. | 0. | 117. | 38. | 940.30 |
| .78 | 0.00 | 3.78 | 0.00 | .040 | .045 | .040 | .045 | 929.00 | 2118.00 |
| .001260 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 59.50 | 2177.50 |

*SECNO 16.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.30 | 7.93 | 936.73 | 0.00 | 0.00 | 936.90 | .17 | .04 | .01 | 943.40 |
| 1600. | 0. | 1586. | 14. | 0. | 478. | 9. | 118. | 38. | 934.70 |
| .78 | 0.00 | 3.31 | 1.56 | .040 | .032 | .020 | .044 | 928.80 | 2111.00 |
| .000444 | 56. | 56. | 56. | 2 | 0 | 0 | 0.00 | 73.08 | 2184.08 |

CCHV= .100 CEHV= .300

*SECNO 16.800

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.80 | 7.80 | 936.86 | 0.00 | 0.00 | 936.97 | .12 | .07 | .01 | 940.70 |
| 1600. | 0. | 1600. | 0. | 0. | 585. | 0. | 119. | 38. | 936.90 |
| .80 | 0.00 | 2.73 | 0.00 | .040 | .045 | .040 | .044 | 929.06 | 2117.00 |
| .000653 | 125. | 125. | 125. | 1 | 0 | 0 | 0.00 | 87.00 | 2204.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *SECNO 16.900 | | | | | | | | | |
| 16.90 | 7.56 | 936.88 | 0.00 | 0.00 | 936.99 | .11 | .01 | .00 | 940.60 |
| 1600. | 0. | 1600. | 0. | 0. | 610. | 0. | 120. | 38. | 936.88 |
| .80 | 0.00 | 2.62 | 0.00 | .040 | .045 | .040 | .044 | 929.32 | 2114.00 |
| .000609 | 19. | 19. | 19. | 1 | 0 | 0 | 0.00 | 93.00 | 2207.00 |
| CCHV= .300 CEHV= .500 | | | | | | | | | |
| *SECNO 17.000 | | | | | | | | | |
| 3265 DIVIDED FLOW | | | | | | | | | |
| 3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.05 | | | | | | | | | |
| D/S FACE OF SUPERIOR ST. BRIDGE.CONCRETE (G) | | | | | | | | | |
| 17.00 | 7.55 | 936.87 | 0.00 | 0.00 | 936.99 | .12 | .00 | .01 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 568. | 0. | 120. | 38. | 960.00 |
| .80 | 0.00 | 2.82 | 0.00 | .040 | .032 | .040 | .044 | 929.32 | 2114.00 |
| .000649 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 87.66 | 2207.00 |
| *SECNO 17.100 | | | | | | | | | |
| 3265 DIVIDED FLOW | | | | | | | | | |
| 3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.05 | | | | | | | | | |
| 17.10 | 7.61 | 936.93 | 0.00 | 0.00 | 937.05 | .12 | .06 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 572. | 0. | 121. | 38. | 960.00 |
| .81 | 0.00 | 2.80 | 0.00 | .040 | .032 | .040 | .044 | 929.32 | 2114.00 |
| .000636 | 90. | 90. | 90. | 0 | 0 | 0 | 0.00 | 87.66 | 2207.00 |
| *SECNO 17.200 | | | | | | | | | |
| 3265 DIVIDED FLOW | | | | | | | | | |
| 3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.18 | | | | | | | | | |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 17.20 | 8.14 | 936.94 | 0.00 | 0.00 | 937.05 | .12 | .00 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 582. | 0. | 121. | 38. | 960.00 |
| .81 | 0.00 | 2.75 | 0.00 | .040 | .039 | .040 | .044 | 928.80 | 2114.00 |
| .000594 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 90.92 | 2208.00 |

*SECNO 17.300

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 960.00 MAX ELLC= 937.18

U/S FACE OF SUPERIOR ST. BRIDGE.CONCRETE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.30 | 8.91 | 937.01 | 0.00 | 0.00 | 937.11 | .10 | .05 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 621. | 0. | 122. | 39. | 960.00 |
| .82 | 0.00 | 2.58 | 0.00 | .040 | .039 | .040 | .044 | 928.10 | 2114.00 |
| .000483 | 100. | 100. | 100. | 1 | 0 | 0 | 0.00 | 90.93 | 2207.00 |

*SECNO 17.400

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.40 | 8.91 | 937.01 | 0.00 | 0.00 | 937.11 | .10 | .00 | .00 | 960.00 |
| 1600. | 0. | 1600. | 0. | 0. | 621. | 0. | 122. | 39. | 960.00 |
| .82 | 0.00 | 2.57 | 0.00 | .040 | .039 | .040 | .044 | 928.10 | 2114.00 |
| .000481 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 90.93 | 2207.00 |

*SECNO 17.500

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 941.50 ELREA= 941.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.50 | 6.86 | 937.06 | 0.00 | 0.00 | 937.18 | .12 | .06 | .01 | 931.80 |
| 1600. | 0. | 1600. | 0. | 0. | 566. | 0. | 124. | 39. | 936.10 |
| .83 | 0.00 | 2.82 | 0.00 | .040 | .039 | .040 | .044 | 930.20 | 2106.00 |
| .000516 | 120. | 120. | 120. | 0 | 0 | 0 | 0.00 | 93.00 | 2199.00 |

*SECNO 17.900

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 937.40 ELREA= 936.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.90 | 8.14 | 937.14 | 0.00 | 0.00 | 937.23 | .09 | .04 | .01 | 941.80 |
| 1600. | 0. | 1600. | 0. | 0. | 657. | 0. | 125. | 39. | 941.30 |
| .84 | 0.00 | 2.44 | 0.00 | .040 | .039 | .040 | .044 | 929.00 | 1677.00 |
| .000427 | 20. | 79. | 120. | 2 | 0 | 0 | 0.00 | 109.65 | 1786.65 |

*SECNO 18.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 36 MIN ELTRD= 940.80 MAX ELLC= 939.00

D/S FACE OF W.CASS ST. BRIDGE.CONCRETE (H)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.00 | 8.11 | 937.11 | 0.00 | 0.00 | 937.26 | .14 | .00 | .02 | 941.80 |
| 1600. | 0. | 1600. | 0. | 0. | 529. | 0. | 125. | 39. | 941.30 |
| .84 | 0.00 | 3.02 | 0.00 | .040 | .039 | .040 | .044 | 929.00 | 2095.03 |
| .001266 | 1. | 1. | 1. | 2 | 0 | 0 | -169.54 | 131.22 | 2226.31 |

*SECNO 18.100

3370 NORMAL BRIDGE,NRD= 32 MIN ELTRD= 940.80 MAX ELLC= 939.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.10 | 7.86 | 937.16 | 0.00 | 0.00 | 937.30 | .14 | .05 | .00 | 941.80 |
| 1600. | 0. | 1600. | 0. | 0. | 533. | 0. | 126. | 39. | 941.30 |
| .84 | 0.00 | 3.00 | 0.00 | .040 | .039 | .040 | .044 | 929.30 | 2139.21 |
| .001115 | 40. | 40. | 40. | 1 | 0 | 0 | -102.38 | 100.44 | 2239.65 |

*SECNO 18.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 941.80 ELREA= 941.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18.20 | 6.74 | 937.14 | 0.00 | 0.00 | 937.33 | .18 | .00 | .02 | 931.40 |
| 1600. | 0. | 1600. | 0. | 0. | 467. | 0. | 126. | 39. | 939.80 |
| .84 | 0.00 | 3.43 | 0.00 | .040 | .039 | .040 | .044 | 930.40 | 1832.68 |
| .000881 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 88.83 | 1921.51 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *SECNO 18.300 | | | | | | | | | |
| 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 941.80 ELREA= 941.30 | | | | | | | | | |
| 18.30 | 6.79 | 937.19 | 0.00 | 0.00 | 937.37 | .18 | .04 | .00 | 931.40 |
| 1600. | 0. | 1600. | 0. | 0. | 471. | 0. | 126. | 39. | 939.80 |
| .85 | 0.00 | 3.40 | 0.00 | .040 | .039 | .040 | .044 | 930.40 | 1832.68 |
| .000858 | 49. | 49. | 49. | 0 | 0 | 0 | 0.00 | 89.08 | 1921.76 |
| *SECNO 18.800 | | | | | | | | | |
| 18.80 | 7.12 | 937.52 | 0.00 | 0.00 | 937.61 | .08 | .21 | .03 | 940.40 |
| 1600. | 0. | 1600. | 0. | 0. | 684. | 0. | 131. | 40. | 939.80 |
| .89 | 0.00 | 2.34 | 0.00 | .040 | .039 | .040 | .044 | 930.40 | 2000.00 |
| .000408 | 420. | 365. | 340. | 0 | 0 | 0 | 0.00 | 124.11 | 2124.11 |
| *SECNO 18.900 | | | | | | | | | |
| 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 939.40 ELREA= 939.60 | | | | | | | | | |
| 18.90 | 6.44 | 937.54 | 0.00 | 0.00 | 937.87 | .33 | .14 | .12 | 932.20 |
| 1600. | 0. | 1600. | 0. | 0. | 346. | 0. | 133. | 41. | 940.20 |
| .90 | 0.00 | 4.63 | 0.00 | .040 | .039 | .040 | .044 | 931.10 | 2000.00 |
| .001551 | 195. | 200. | 215. | 2 | 0 | 0 | 0.00 | 62.84 | 2062.84 |
| *SECNO 19.000 | | | | | | | | | |
| 3265 DIVIDED FLOW | | | | | | | | | |
| 3370 NORMAL BRIDGE,NRO= 11 MIN ELTRD= 940.10 MAX ELLC= 938.90 | | | | | | | | | |
| D/S FACE OF PORTER ST. WALK BRIDGE.CONCRETE (I) | | | | | | | | | |
| CONFLUENCE WITH THE EAST BRANCH KALAMAZOO | | | | | | | | | |
| 19.00 | 6.43 | 937.53 | 0.00 | 0.00 | 937.89 | .37 | .01 | .02 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 329. | 0. | 133. | 41. | 940.40 |
| .90 | 0.00 | 4.86 | 0.00 | .040 | .026 | .040 | .044 | 931.10 | 2000.00 |
| .001232 | 0. | 4. | 0. | 1 | 0 | 0 | 0.00 | 56.53 | 2057.70 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 19.100

3265 DIVIDED FLOW

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 940.10 ELREA= 940.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.10 | 6.44 | 937.54 | 0.00 | 0.00 | 937.90 | .37 | .01 | .00 | 940.10 |
| 1600. | 0. | 1600. | 0. | 0. | 329. | 0. | 133. | 41. | 940.40 |
| .90 | 0.00 | 4.86 | 0.00 | .040 | .026 | .040 | .044 | 931.10 | 2000.00 |
| .001042 | 6. | 6. | 6. | 0 | 0 | 0 | 0.00 | 56.53 | 2057.70 |

*SECNO 19.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 940.10 ELREA= 940.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.20 | 6.62 | 937.52 | 0.00 | 0.00 | 937.91 | .39 | .00 | .01 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 319. | 0. | 133. | 41. | 939.30 |
| .90 | 0.00 | 5.01 | 0.00 | .040 | .026 | .040 | .044 | 930.90 | 2001.88 |
| .000854 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 55.12 | 2057.00 |

*SECNO 19.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.30 | 6.65 | 937.55 | 0.00 | 0.00 | 937.94 | .39 | .02 | .00 | 939.20 |
| 1600. | 0. | 1600. | 0. | 0. | 320. | 0. | 134. | 41. | 939.30 |
| .90 | 0.00 | 5.00 | 0.00 | .040 | .026 | .040 | .044 | 930.90 | 2001.87 |
| .000847 | 24. | 24. | 24. | 0 | 0 | 0 | 0.00 | 55.13 | 2057.00 |

CCHV= .100 CEHV= .300

*SECNO 19.800

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 943.10 ELREA= 942.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.80 | 6.24 | 937.84 | 0.00 | 0.00 | 938.17 | .32 | .22 | .01 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 350. | 0. | 135. | 41. | 943.90 |
| .91 | 0.00 | 4.57 | 0.00 | .040 | .045 | .040 | .044 | 931.60 | 2297.00 |
| .002547 | 165. | 165. | 165. | 2 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

*SECNO 19.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.90 | 6.38 | 937.98 | 0.00 | 0.00 | 938.29 | .31 | .12 | .00 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 360. | 0. | 135. | 41. | 943.90 |
| .92 | 0.00 | 4.44 | 0.00 | .040 | .045 | .040 | .044 | 931.60 | 2297.00 |
| .002333 | 0. | 50. | 0. | 2 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .300 CEHV= .500
*SECNO 20.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 943.60 MAX ELLC= 942.10

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.10 ELREA= 942.90

D/S FACE OF ERIE ST. BRIDGE.CONCRETE (J)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.00 | 6.32 | 937.92 | 0.00 | 0.00 | 938.35 | .43 | .00 | .06 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 304. | 0. | 135. | 41. | 943.90 |
| .92 | 0.00 | 5.26 | 0.00 | .040 | .026 | .040 | .044 | 931.60 | 2297.00 |
| .001823 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 62.35 | 2367.00 |

*SECNO 20.100

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 943.60 MAX ELLC= 942.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.10 | 6.52 | 938.12 | 0.00 | 0.00 | 938.52 | .40 | .16 | .01 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 316. | 0. | 136. | 41. | 943.90 |
| .92 | 0.00 | 5.07 | 0.00 | .040 | .026 | .040 | .043 | 931.60 | 2297.00 |
| .001641 | 90. | 90. | 90. | 0 | 0 | 0 | 0.00 | 62.43 | 2367.00 |

*SECNO 20.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 944.10 ELREA= 943.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.20 | 6.68 | 938.28 | 0.00 | 0.00 | 938.56 | .27 | .00 | .04 | 944.10 |
| 1600. | 0. | 1600. | 0. | 0. | 381. | 0. | 136. | 41. | 943.90 |
| .92 | 0.00 | 4.20 | 0.00 | .040 | .026 | .040 | .043 | 931.60 | 2297.00 |
| .000637 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 20.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 943.30 ELREA= 939.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.30 | 6.68 | 938.38 | 0.00 | 0.00 | 938.61 | .23 | .04 | .01 | 943.30 |
| 1600. | 0. | 1600. | 0. | 0. | 419. | 0. | 136. | 41. | 939.10 |
| .93 | 0.00 | 3.82 | 0.00 | .040 | .026 | .040 | .043 | 931.70 | 2297.00 |
| .000490 | 64. | 64. | 64. | 2 | 0 | 0 | 0.00 | 70.00 | 2367.00 |

1490 NH CARD USED
CCHV= .100 CEHV= .300
*SECNO 21.000

3470 ENCROACHMENT STATIONS= 432.0 2256.0 TYPE= 1 TARGET= 1824.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.00 | 6.15 | 939.35 | 0.00 | 0.00 | 939.98 | .63 | 1.25 | .12 | 937.40 |
| 1600. | 228. | 1248. | 123. | 93. | 176. | 69. | 146. | 44. | 937.60 |
| .98 | 2.46 | 7.10 | 1.77 | .060 | .045 | .060 | .043 | 933.20 | 1930.28 |
| .006136 | 1060. | 1050. | 1040. | 3 | 0 | 0 | 0.00 | 181.19 | 2111.47 |

1490 NH CARD USED
*SECNO 21.100

3301 HV CHANGED MORE THAN HVINS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.10 | 5.12 | 940.32 | 0.00 | 0.00 | 940.35 | .03 | .32 | .06 | 939.60 |
| 735. | 1. | 731. | 3. | 5. | 486. | 13. | 148. | 45. | 939.00 |
| 1.02 | .18 | 1.50 | .27 | .090 | .062 | .077 | .044 | 935.20 | 2014.41 |
| .000344 | 210. | 210. | 210. | 2 | 0 | 0 | 0.00 | 166.54 | 2180.96 |

*SECNO 21.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.20 | 4.97 | 940.37 | 0.00 | 0.00 | 940.40 | .03 | .04 | .00 | 945.50 |
| 735. | 0. | 732. | 3. | 0. | 513. | 10. | 149. | 46. | 939.40 |
| 1.04 | 0.00 | 1.43 | .26 | .060 | .039 | .060 | .043 | 935.40 | 2127.07 |
| .000281 | 130. | 140. | 150. | 2 | 0 | 0 | 0.00 | 165.76 | 2292.83 |

CCHV= .100 CEHV= .300
*SECNO 21.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.30 | 4.80 | 940.40 | 0.00 | 0.00 | 940.44 | .04 | .04 | .00 | 939.30 |
| 735. | 0. | 712. | 22. | 2. | 428. | 76. | 151. | 46. | 939.50 |
| 1.06 | .27 | 1.66 | .29 | .060 | .039 | .060 | .043 | 935.60 | 2126.97 |
| .000280 | 110. | 125. | 130. | 0 | 0 | 0 | 0.00 | 246.06 | 2373.03 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | COPAR | TOPWID | ENDST |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.80 | 3.00 | 97.00 | 1.50 | 0.00 | .50 | 0.00 | 937.60 | 935.20 |

*SECNO 21.500
PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 61338.22 | 1104.52 | 0.00 | 728. | 7. | 1. | 1. | 938.00 | 944.20 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.60 ELREA= 948.60

DAM AT VICTORY PARK DAM. CREST ELEV. 944 (K)

CODED AS A VERY SMALL HOLE TO FORCE WIER FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.50 | 8.11 | 945.71 | 0.00 | 0.00 | 946.04 | .34 | 5.61 | 0.00 | 948.60 |
| 735. | 0. | 735. | 0. | 0. | 158. | 0. | 151. | 46. | 948.50 |
| 1.06 | 0.00 | 4.66 | 0.00 | .060 | .039 | .060 | .043 | 937.60 | 2210.00 |
| .009610 | 15. | 15. | 15. | 3 | 0 | 9 | 0.00 | 98.00 | 2308.00 |

*SECNO 21.600

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.60 ELREA= 948.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.60 | 8.06 | 946.06 | 0.00 | 0.00 | 946.08 | .02 | .01 | .03 | 948.30 |
| 735. | 0. | 735. | 0. | 0. | 736. | 0. | 151. | 46. | 948.60 |
| 1.07 | 0.00 | 1.00 | 0.00 | .060 | .039 | .060 | .043 | 938.00 | 205.00 |
| .000056 | 27. | 27. | 27. | 2 | 0 | 0 | 0.00 | 103.00 | 308.00 |

*SECNO 21.900
3280 CROSS SECTION 21.90 EXTENDED .06 FEET

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 948.80 ELREA= 948.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.90 | 8.46 | 946.06 | 0.00 | 0.00 | 946.09 | .03 | .01 | .00 | 947.30 |
| 735. | 0. | 735. | 0. | 0. | 578. | 0. | 152. | 46. | 947.30 |
| 1.09 | 0.00 | 1.27 | 0.00 | .060 | .039 | .060 | .043 | 937.60 | 2185.00 |
| .000119 | 73. | 73. | 73. | 2 | 0 | 0 | 0.00 | 103.00 | 2288.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .300 CEHV= .500
*SECNO 22.000

3265 DIVIDED FLOW

3280 CROSS SECTION 22.00 EXTENDED .06 FEET

3370 NORMAL BRIDGE.NRD= 8 MIN ELTRD= 947.20 MAX ELLC= 947.30

D/S FACE OF HAVEN RD. BRIDGE.CONCRETE (L)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.00 | 8.46 | 946.06 | 0.00 | 0.00 | 946.09 | .03 | .00 | .00 | 950.20 |
| 735. | 0. | 735. | 0. | 1. | 540. | 0. | 152. | 46. | 950.10 |
| 1.09 | .03 | 1.36 | 0.00 | .040 | .026 | .040 | .043 | 937.60 | 900.00 |
| .000080 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 115.60 | 2288.00 |

*SECNO 22.100

3265 DIVIDED FLOW

3280 CROSS SECTION 22.10 EXTENDED .06 FEET

3370 NORMAL BRIDGE.NRD= 8 MIN ELTRD= 947.20 MAX ELLC= 947.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.10 | 7.36 | 946.06 | 0.00 | 0.00 | 946.09 | .03 | .00 | .00 | 950.20 |
| 735. | 0. | 735. | 0. | 1. | 525. | 0. | 153. | 46. | 950.10 |
| 1.09 | .04 | 1.40 | 0.00 | .040 | .026 | .040 | .043 | 938.70 | 900.00 |
| .000087 | 23. | 23. | 23. | 0 | 0 | 0 | 0.00 | 115.73 | 2288.00 |

*SECNO 22.200
3280 CROSS SECTION 22.20 EXTENDED .06 FEET

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 950.20 ELREA= 950.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.20 | 7.37 | 946.07 | 0.00 | 0.00 | 946.10 | .03 | .00 | .00 | 947.30 |
| 735. | 0. | 735. | 0. | 0. | 563. | 0. | 153. | 46. | 947.30 |
| 1.09 | 0.00 | 1.30 | 0.00 | .040 | .026 | .040 | .043 | 938.70 | 2185.00 |
| .000057 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 103.00 | 2288.00 |

MOORE BUSINESS FORMS, INC.

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *SECNO 22.300 | | | | | | | | | |
| 22.30 | 7.59 | 946.10 | 0.00 | 0.00 | 946.10 | .00 | .00 | .01 | 942.60 |
| 735. | 4. | 726. | 4. | 33. | 1504. | 31. | 155. | 47. | 943.00 |
| 1.15 | .13 | .48 | .13 | .040 | .026 | .040 | .043 | 938.51 | 2148.00 |
| .000005 | 100. | 103. | 120. | 2 | 0 | 0 | 0.00 | 240.00 | 2388.00 |
| CCHV= .100 | CEHV= .300 | | | | | | | | |
| *SECNO 22.500 | | | | | | | | | |
| 22.50 | 4.90 | 946.10 | 0.00 | 0.00 | 946.11 | .01 | .01 | .00 | 947.20 |
| 735. | 0. | 735. | 0. | 0. | 1288. | 0. | 170. | 50. | 947.20 |
| 1.37 | 0.00 | .57 | 0.00 | .050 | .039 | .050 | .043 | 941.20 | 2023.52 |
| .000045 | 460. | 450. | 450. | 0 | 0 | 0 | 0.00 | 388.28 | 2411.80 |
| *SECNO 22.550 | | | | | | | | | |
| 22.55 | 7.51 | 946.11 | 0.00 | 0.00 | 946.11 | .00 | .00 | .00 | 943.80 |
| 735. | 0. | 735. | 0. | 4. | 2613. | 0. | 187. | 54. | 946.70 |
| 1.76 | .06 | .28 | 0.00 | .050 | .039 | .050 | .043 | 938.60 | 1996.22 |
| .000004 | 390. | 392. | 380. | 0 | 0 | 0 | 0.00 | 380.59 | 2376.81 |
| *SECNO 22.600 | | | | | | | | | |
| 22.60 | 7.91 | 946.11 | 0.00 | 0.00 | 946.11 | .00 | .00 | .00 | 943.24 |
| 735. | 3. | 720. | 12. | 39. | 2138. | 116. | 198. | 55. | 943.24 |
| 1.92 | .09 | .34 | .10 | .050 | .039 | .050 | .043 | 938.20 | 1974.61 |
| .000005 | 200. | 196. | 190. | 0 | 0 | 0 | 0.00 | 385.33 | 2359.94 |
| *SECNO 22.800 | | | | | | | | | |
| 22.80 | 8.11 | 946.11 | 0.00 | 0.00 | 946.12 | .01 | .00 | .00 | 948.70 |
| 735. | 0. | 668. | 67. | 0. | 969. | 257. | 203. | 56. | 942.40 |
| 1.98 | 0.00 | .69 | .26 | .050 | .039 | .050 | .043 | 938.00 | 1995.29 |
| .000033 | 150. | 125. | 120. | 0 | 0 | 0 | 0.00 | 313.10 | 2308.39 |
| *SECNO 22.900 | | | | | | | | | |
| 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 950.40 ELREA= 950.40 | | | | | | | | | |
| 22.90 | 8.61 | 946.11 | 0.00 | 0.00 | 946.13 | .02 | .01 | .00 | 952.60 |
| 735. | 0. | 735. | 0. | 0. | 650. | 0. | 206. | 57. | 952.50 |
| 2.00 | 0.00 | 1.13 | 0.00 | .050 | .039 | .050 | .043 | 937.50 | 2000.00 |
| .000076 | 60. | 108. | 180. | 0 | 0 | 0 | 0.00 | 100.00 | 2100.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .300 CEHV= .500
*SECNO 23.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 952.40 MAX ELLC= 948.40

D/S FACE OF SOUTH SUPERIOR ST. BRIDGE.CONCRETE (M)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.00 | 8.61 | 946.11 | 0.00 | 0.00 | 946.13 | .02 | .00 | .00 | 952.60 |
| 735. | 0. | 735. | 0. | 0. | 652. | 0. | 206. | 57. | 952.50 |
| 2.00 | 0.00 | 1.13 | 0.00 | .050 | .026 | .050 | .043 | 937.50 | 2000.00 |
| .000043 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 98.00 | 2100.00 |

*SECNO 23.100

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 952.40 MAX ELLC= 950.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.10 | 8.39 | 946.09 | 0.00 | 0.00 | 946.15 | .05 | .00 | .02 | 954.30 |
| 735. | 0. | 735. | 0. | 0. | 398. | 0. | 207. | 57. | 954.30 |
| 2.01 | 0.00 | 1.85 | 0.00 | .050 | .026 | .050 | .043 | 937.70 | 2000.00 |
| .000208 | 56. | 56. | 56. | 1 | 0 | 0 | 0.00 | 98.00 | 2100.00 |

*SECNO 23.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 954.30 ELREA= 954.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.20 | 8.40 | 946.10 | 0.00 | 0.00 | 946.15 | .05 | .00 | .00 | 954.30 |
| 735. | 0. | 735. | 0. | 0. | 410. | 0. | 207. | 57. | 954.30 |
| 2.01 | 0.00 | 1.79 | 0.00 | .050 | .026 | .050 | .043 | 937.70 | 2000.00 |
| .000159 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 100.00 | 2100.00 |

*SECNO 23.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.30 | 6.40 | 946.16 | 0.00 | 0.00 | 946.16 | .00 | .00 | .01 | 948.70 |
| 735. | 0. | 735. | 0. | 0. | 1668. | 6. | 209. | 57. | 944.80 |
| 2.06 | 0.00 | .44 | .05 | .050 | .026 | .050 | .042 | 939.76 | 1997.21 |
| .000006 | 140. | 82. | 20. | 2 | 0 | 0 | 0.00 | 290.88 | 2288.09 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *SECNO 23.400 | | | | | | | | | |
| 23.40 | 6.58 | 946.17 | 0.00 | 0.00 | 946.17 | .00 | .00 | .00 | 945.20 |
| 735. | 0. | 735. | 0. | 9. | 2037. | 0. | 257. | 66. | 946.30 |
| 2.94 | .03 | .36 | 0.00 | .050 | .026 | .050 | .041 | 939.59 | 1982.04 |
| .000004 | 1210. | 1133. | 1140. | 2 | 0 | 0 | 0.00 | 353.40 | 2335.44 |
| *SECNO 23.500 | | | | | | | | | |
| 23.50 | 7.67 | 946.17 | 0.00 | 0.00 | 946.17 | .00 | .00 | .00 | 943.79 |
| 735. | 9. | 717. | 9. | 164. | 2010. | 164. | 283. | 71. | 943.80 |
| 3.35 | .06 | .36 | .06 | .050 | .026 | .050 | .041 | 938.50 | 2001.78 |
| .000003 | 380. | 516. | 640. | 0 | 0 | 0 | 0.00 | 556.43 | 2558.21 |
| *SECNO 24.000 | | | | | | | | | |
| U/S LIMIT OF THE CITY OF ALBION. SURVEYED SECTION (N) | | | | | | | | | |
| 24.00 | 7.47 | 946.17 | 0.00 | 0.00 | 946.17 | .00 | .00 | .00 | 952.10 |
| 735. | 0. | 735. | 0. | 0. | 1966. | 0. | 295. | 74. | 950.00 |
| 3.52 | 0.00 | .37 | 0.00 | .050 | .026 | .050 | .040 | 938.70 | 1989.29 |
| .000004 | 200. | 233. | 300. | 0 | 0 | 0 | 0.00 | 336.76 | 2326.04 |

MOORE BUSINESS FORMS, INC 23

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100-year Natural

00BREAK00

MOORE BUSINESS FORMS, INC. 22

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01.02.03
  MODIFICATION -  50.51.52.53
**********************************************************

C
T1   THE TOWNSHIP OF ALBION
T2   THE KALAMAZOO RIVER
T3   THE 100 YEAR FLOW
J1   ICHECK     INQ      NINV      IDIR      STRT      METRIC    HVINS     0         WSEL      FQ
          1.       4.        0.        0.  0.000000      0.00      0.0        0.     946.170     0.000
J2   NPROF      IPLOT     PRFVS     XSECV     XSFCH     FN        ALLDC     IBW       CHNIM     ITRACE
     1.000      0.000    -1.000     0.000     0.000    -1.290     0.000     0.000     0.000     0.000
J3   VARIABLE CODES FOR SUMMARY PRINTOUT
     150.000   200.000    38.000     1.000    53.000    21.000    22.000    54.000     4.000    39.000

     110.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
ET     0.000     0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000
QT     5.000   535.000   675.000   735.000   875.000   735.000     0.000     0.000     0.000     0.000
NC      .060      .060      .035      .100      .300     0.000     0.000     0.000     0.000     0.000

     D/S LIMIT OF ALBION TWP.   (A)

X1    24.000    26.000  2000.000  2278.000     0.000     0.000     0.000     0.000     0.000     0.000
GR   982.100   883.000   985.800  1045.000   985.500  1077.000   980.800  1185.000   976.000  1287.000
GR   972.200  1393.000   969.300  1560.000   968.100  1552.000   966.300  1656.000   962.400  1772.000
GR   956.300  1864.000   952.100  1960.000   944.000  2000.000   938.700  2025.000   938.700  2250.000
GR   944.900  2278.000   950.000  2471.000   958.100  2870.000   964.300  2922.000   972.100  3106.000
GR   968.000  3248.000   968.500  3354.000   970.000  3462.000   971.000  3542.000   972.000  3548.000
GR   972.200  3562.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1    24.100    11.000  2000.000  2220.000  2350.000  2200.000  2280.000     0.000     0.000     0.000
GR   980.000  1450.000   970.000  1580.000   960.000  1660.000   950.000  1850.000   945.000  1920.000
GR   944.900  2000.000   939.560  2010.000   939.560  2210.000   944.600  2220.000   950.200  2300.000
GR   960.200  2460.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1    24.200    15.000  3000.000  3150.000  2000.000  2000.000  2300.000     0.000     0.000     0.000
GR   960.000   600.000   950.000   900.000   945.000  1020.000   946.000  1500.000   950.800  1600.000
GR   950.000  1800.000   945.000  1880.000   945.000  2600.000   944.000  3000.000   940.400  3020.000
GR   940.400  3130.000   944.800  3150.000   946.000  3320.000   950.000  3600.000   966.000  4000.000

     SURVEYED VALLEY SECTION   (B)
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.000 | 41.000 | 4000.000 | 4090.000 | 1500.000 | 2600.000 | 2290.000 | 0.000 | 0.000 | 0.000 |
| GR | 951.400 | 1238.000 | 951.000 | 1938.000 | 950.600 | 2230.000 | 947.400 | 2314.000 | 946.800 | 2410.000 |
| GR | 949.400 | 2500.000 | 949.700 | 2522.000 | 950.200 | 2620.000 | 950.100 | 2700.000 | 950.000 | 2810.000 |
| GR | 946.900 | 2894.000 | 945.400 | 3018.000 | 945.600 | 3298.000 | 946.600 | 3444.000 | 946.100 | 3586.000 |
| GR | 946.600 | 3631.000 | 949.200 | 3796.000 | 948.500 | 3874.000 | 946.700 | 3974.000 | 944.900 | 4000.000 |
| GR | 941.900 | 4006.000 | 941.800 | 4020.000 | 941.300 | 4026.000 | 941.300 | 4040.000 | 941.900 | 4048.000 |
| GR | 941.500 | 4064.000 | 941.600 | 4070.000 | 942.300 | 4076.000 | 944.700 | 4090.000 | 945.600 | 4194.000 |
| GR | 948.200 | 4390.000 | 950.000 | 4580.000 | 951.900 | 4658.000 | 956.900 | 4754.000 | 960.000 | 4854.000 |
| GR | 963.200 | 4958.000 | 965.000 | 4970.000 | 961.200 | 4976.000 | 962.500 | 4990.000 | 965.200 | 5292.000 |
| GR | 966.600 | 5342.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.600 | 35.000 | 4000.000 | 4060.000 | 2100.000 | 1500.000 | 2850.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 2900.000 | 952.000 | 3360.000 | 950.000 | 3500.000 | 945.000 | 3600.000 | 945.400 | 3900.000 |
| GR | 945.720 | 4000.000 | 945.720 | 4000.000 | 942.320 | 4003.160 | 942.090 | 4006.320 | 942.010 | 4009.470 |
| GR | 941.950 | 4012.630 | 941.840 | 4015.790 | 941.760 | 4018.950 | 941.730 | 4022.110 | 941.700 | 4025.260 |
| GR | 941.720 | 4028.420 | 941.780 | 4031.580 | 941.740 | 4034.740 | 941.860 | 4037.890 | 942.110 | 4041.050 |
| GR | 942.380 | 4044.210 | 942.700 | 4047.370 | 943.190 | 4050.530 | 943.770 | 4053.680 | 944.350 | 4056.840 |
| GR | 944.920 | 4060.000 | 946.900 | 4264.000 | 946.600 | 4406.000 | 947.400 | 4598.000 | 950.600 | 4652.000 |
| GR | 952.500 | 4756.000 | 951.800 | 4802.000 | 951.400 | 4902.000 | 953.000 | 5004.000 | 956.300 | 5108.000 |
| GR | 962.300 | 5212.000 | 966.600 | 5318.000 | 966.100 | 5358.000 | 968.900 | 5408.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1901.000 | 2148.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.800 | 29.000 | 2000.000 | 2050.000 | 1080.000 | 620.000 | 1100.000 | 0.000 | 0.000 | 0.000 |
| GR | 969.000 | 1342.000 | 964.600 | 1428.000 | 959.600 | 1522.000 | 955.400 | 1610.000 | 950.000 | 1710.000 |
| GR | 948.300 | 1758.000 | 952.300 | 1776.000 | 949.100 | 1788.000 | 946.400 | 1912.000 | 946.000 | 2000.000 |
| GR | 942.300 | 2001.000 | 942.000 | 2010.000 | 941.700 | 2030.000 | 943.100 | 2040.000 | 945.000 | 2050.000 |
| GR | 946.900 | 2264.000 | 946.600 | 2406.000 | 947.400 | 2598.000 | 950.600 | 2652.000 | 952.500 | 2756.000 |
| GR | 951.400 | 2802.000 | 951.400 | 2902.000 | 953.000 | 3004.000 | 956.300 | 3108.000 | 962.300 | 3212.000 |
| GR | 966.800 | 3314.000 | 968.100 | 3358.000 | 968.900 | 3408.000 | 972.800 | 3510.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.900 | 48.000 | 2000.000 | 2085.000 | 420.000 | 40.000 | 324.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 949.900 | 949.900 | 0.000 |
| GR | 977.500 | 500.000 | 972.200 | 554.000 | 965.500 | 630.000 | 958.200 | 722.000 | 954.400 | 800.000 |
| GR | 952.000 | 874.000 | 951.000 | 975.000 | 951.100 | 1078.000 | 951.300 | 1184.000 | 951.800 | 1290.000 |
| GR | 951.300 | 1392.000 | 949.400 | 1494.000 | 949.200 | 1598.000 | 948.900 | 1694.000 | 949.200 | 1805.000 |
| GR | 950.500 | 1898.000 | 951.500 | 2000.000 | 945.900 | 2000.000 | 946.000 | 2008.000 | 942.200 | 2020.000 |
| GR | 944.500 | 2032.000 | 943.300 | 2039.000 | 943.000 | 2041.500 | 943.000 | 2041.600 | 942.800 | 2043.400 |
| GR | 942.800 | 2043.500 | 942.500 | 2046.000 | 942.400 | 2058.000 | 944.700 | 2066.000 | 945.500 | 2071.000 |
| GR | 945.500 | 2085.000 | 951.500 | 2085.000 | 951.300 | 2100.000 | 950.200 | 2202.000 | 949.500 | 2302.000 |
| GR | 949.700 | 2400.000 | 950.500 | 2504.000 | 950.900 | 2602.000 | 950.900 | 2704.000 | 951.300 | 2802.000 |
| GR | 951.400 | 2902.000 | 953.000 | 3004.000 | 956.300 | 3108.000 | 962.300 | 3212.000 | 966.800 | 3314.000 |
| GR | 968.100 | 3356.000 | 968.900 | 3408.000 | 972.800 | 3610.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF O DRIVE SOUTH:CONCRETE (C)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 26.000 | 0.000 | 0.000 | 0.000 | 16.900 | 16.900 | 16.900 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 1898.000 | 950.500 | 0.000 | 2000.000 | 951.500 | 945.900 | 2000.000 | 951.500 | 948.300 |
| BT | 2041.500 | 951.500 | 948.300 | 2041.600 | 951.500 | 943.000 | 2043.400 | 951.500 | 942.800 | 2043.500 |
| BT | 951.500 | 942.300 | 2085.000 | 951.500 | 948.300 | 2085.000 | 951.500 | 945.500 | 2100.000 | 951.300 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 26.100 | 47.000 | 2000.000 | 2085.000 | 26.000 | 26.000 | 26.000 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 1898.000 | 950.500 | 0.000 | 2000.000 | 951.500 | 946.300 | 2000.000 | 951.500 | 948.300 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BT | 2041.500 | 951.500 | 948.300 | 2041.600 | 951.500 | 940.600 | 2043.400 | 951.500 | 940.700 | 2043.500 |
| BT | 951.500 | 948.300 | 2085.000 | 951.500 | 948.300 | 2085.000 | 951.500 | 945.500 | 2100.000 | 951.300 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 977.500 | 500.000 | 972.200 | 554.000 | 965.500 | 630.000 | 958.200 | 722.000 | 954.400 | 800.000 |
| GR | 952.000 | 874.000 | 951.000 | 975.000 | 951.100 | 1078.000 | 951.300 | 1184.000 | 951.800 | 1290.000 |
| GR | 951.300 | 1392.000 | 949.400 | 1494.000 | 949.200 | 1598.000 | 948.900 | 1694.000 | 949.200 | 1805.000 |
| GR | 950.500 | 1898.000 | 951.500 | 2000.000 | 946.300 | 2000.000 | 945.100 | 2008.000 | 941.700 | 2020.000 |
| GR | 940.000 | 2032.000 | 940.300 | 2039.000 | 940.600 | 2041.500 | 940.600 | 2041.600 | 940.700 | 2043.400 |
| GR | 940.700 | 2043.500 | 940.900 | 2046.000 | 942.100 | 2059.000 | 943.100 | 2071.000 | 944.800 | 2085.000 |
| GR | 951.500 | 2085.000 | 951.300 | 2100.000 | 950.200 | 2202.000 | 949.500 | 2302.000 | 949.700 | 2400.000 |
| GR | 950.500 | 2504.000 | 950.900 | 2602.000 | 950.900 | 2704.000 | 951.300 | 2802.000 | 951.400 | 2902.000 |
| GR | 953.000 | 3004.000 | 956.300 | 3108.000 | 962.300 | 3212.000 | 966.800 | 3314.000 | 968.100 | 3358.000 |
| GR | 968.900 | 3408.000 | 972.800 | 3510.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 26.200 | 0.000 | 0.000 | 0.000 | 16.900 | 16.900 | 16.900 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 951.500 | 951.500 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1897.000 | 2196.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 26.400 | 39.000 | 2000.000 | 2083.000 | 10.000 | 160.000 | 107.000 | 0.000 | 0.000 | 0.000 |
| GR | 977.500 | 500.000 | 972.200 | 554.000 | 965.500 | 630.000 | 958.200 | 722.000 | 954.400 | 800.000 |
| GR | 952.000 | 874.000 | 951.000 | 975.000 | 951.100 | 1078.000 | 951.300 | 1184.000 | 951.800 | 1290.000 |
| GR | 951.300 | 1392.000 | 950.900 | 1453.000 | 945.600 | 1460.000 | 948.600 | 1764.000 | 946.600 | 1800.000 |
| GR | 946.400 | 1900.000 | 945.500 | 2000.000 | 945.100 | 2044.000 | 942.700 | 2052.000 | 942.400 | 2060.000 |
| GR | 942.000 | 2067.000 | 941.900 | 2073.000 | 942.500 | 2085.000 | 944.500 | 2093.000 | 946.800 | 2200.000 |
| GR | 947.400 | 2300.000 | 948.900 | 2400.000 | 950.500 | 2504.000 | 950.900 | 2602.000 | 950.900 | 2704.000 |
| GR | 951.300 | 2802.000 | 951.400 | 2902.000 | 953.000 | 3004.000 | 956.300 | 3108.000 | 962.300 | 3212.000 |
| GR | 966.800 | 3314.000 | 968.100 | 3358.000 | 968.900 | 3408.000 | 972.800 | 3510.000 | 0.000 | 0.000 |
| X1 | 26.900 | 34.000 | 2000.000 | 2124.000 | 2000.000 | 2250.000 | 3000.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.000 | 486.000 | 962.000 | 584.000 | 959.700 | 730.000 | 959.000 | 806.000 | 959.650 | 906.000 |
| GR | 959.400 | 1028.000 | 956.600 | 1188.000 | 955.600 | 1234.000 | 951.600 | 1358.000 | 948.100 | 1454.000 |
| GR | 948.000 | 1482.000 | 947.000 | 1634.000 | 946.700 | 1774.000 | 946.700 | 1850.000 | 947.100 | 1940.000 |
| GR | 947.400 | 2000.000 | 945.400 | 2026.000 | 944.200 | 2038.000 | 943.400 | 2048.000 | 943.200 | 2062.000 |
| GR | 944.000 | 2070.000 | 945.200 | 2082.000 | 944.400 | 2090.000 | 943.700 | 2100.000 | 945.500 | 2124.000 |
| GR | 947.200 | 2132.000 | 950.400 | 2220.000 | 953.600 | 2262.000 | 956.300 | 2314.000 | 961.000 | 2414.000 |
| GR | 964.100 | 2512.000 | 965.000 | 2552.000 | 966.700 | 2618.000 | 968.700 | 2748.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.000 | 32.000 | 2030.000 | 2090.000 | 72.000 | 72.000 | 72.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.000 | 486.000 | 962.000 | 584.000 | 959.700 | 730.000 | 959.000 | 806.000 | 959.650 | 906.000 |
| GR | 959.400 | 1028.000 | 956.600 | 1188.000 | 955.600 | 1234.000 | 951.600 | 1358.000 | 948.100 | 1454.000 |
| GR | 948.000 | 1482.000 | 947.000 | 1634.000 | 946.700 | 1784.000 | 948.500 | 1892.000 | 948.700 | 1982.000 |
| GR | 950.700 | 2030.000 | 943.400 | 2030.000 | 942.400 | 2040.000 | 943.000 | 2050.000 | 945.400 | 2060.000 |
| GR | 944.700 | 2070.000 | 942.900 | 2080.000 | 945.500 | 2090.000 | 950.200 | 2090.000 | 950.000 | 2170.000 |
| GR | 953.200 | 2262.000 | 956.300 | 2314.000 | 961.000 | 2414.000 | 964.100 | 2512.000 | 965.000 | 2552.000 |
| GR | 966.700 | 2618.000 | 968.700 | 2748.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 27.100 | 37.000 | 2000.000 | 2143.000 | 36.000 | 36.000 | 36.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.000 | 486.000 | 962.000 | 584.000 | 959.700 | 730.000 | 959.000 | 806.000 | 959.650 | 906.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 959.400 | 1028.000 | 956.600 | 1188.000 | 955.600 | 1234.000 | 951.600 | 1358.000 | 948.100 | 1454.000 |
| GR | 948.000 | 1482.000 | 947.000 | 1634.000 | 946.700 | 1784.000 | 948.000 | 1862.000 | 948.100 | 1930.000 |
| GR | 948.000 | 2000.000 | 945.500 | 2008.000 | 944.300 | 2026.000 | 944.000 | 2042.000 | 944.500 | 2054.000 |
| GR | 945.100 | 2066.000 | 945.300 | 2080.000 | 945.100 | 2092.000 | 945.200 | 2104.000 | 945.100 | 2118.000 |
| GR | 944.800 | 2130.000 | 945.200 | 2140.000 | 946.000 | 2143.000 | 949.700 | 2176.000 | 953.000 | 2216.000 |
| GR | 953.200 | 2262.000 | 956.300 | 2314.000 | 961.000 | 2414.000 | 964.100 | 2512.000 | 965.000 | 2552.000 |
| GR | 966.700 | 2618.000 | 968.700 | 2748.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 0.000 | 1896.000 | 2784.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (E)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.400 | 43.000 | 2050.000 | 2169.500 | 1640.000 | 2300.000 | 2700.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.400 | 518.000 | 962.000 | 584.000 | 960.800 | 730.000 | 960.600 | 806.000 | 960.900 | 906.000 |
| GR | 960.800 | 1028.000 | 959.400 | 1188.000 | 958.400 | 1278.000 | 956.400 | 1370.000 | 954.700 | 1474.000 |
| GR | 946.300 | 1580.000 | 946.200 | 1684.000 | 950.600 | 1690.000 | 946.800 | 1896.000 | 946.300 | 2000.000 |
| GR | 945.200 | 2050.000 | 945.200 | 2050.000 | 945.810 | 2056.290 | 945.320 | 2062.580 | 945.120 | 2068.870 |
| GR | 945.050 | 2075.160 | 945.190 | 2081.450 | 945.500 | 2087.740 | 945.770 | 2094.030 | 945.930 | 2100.320 |
| GR | 945.730 | 2106.610 | 945.630 | 2112.890 | 945.560 | 2119.180 | 945.510 | 2125.470 | 945.530 | 2131.760 |
| GR | 945.610 | 2138.050 | 945.660 | 2144.340 | 945.710 | 2150.630 | 945.730 | 2156.920 | 945.940 | 2163.210 |
| GR | 946.950 | 2169.500 | 952.800 | 2274.000 | 957.400 | 2360.000 | 959.800 | 2458.000 | 962.200 | 2528.000 |
| GR | 964.400 | 2614.000 | 965.200 | 2728.000 | 965.000 | 2784.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.500 | 10.000 | 2000.000 | 2100.000 | 320.000 | 550.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 954.200 | 1350.000 | 950.300 | 1900.000 | 948.200 | 2000.000 | 945.800 | 2020.000 | 945.300 | 2040.000 |
| GR | 945.200 | 2060.000 | 945.400 | 2080.000 | 947.300 | 2100.000 | 950.200 | 2150.000 | 957.000 | 3250.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.700 | 35.000 | 2050.000 | 2154.000 | 1660.000 | 1330.000 | 1500.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.000 | 518.000 | 962.200 | 1278.000 | 961.600 | 1370.000 | 961.400 | 1474.000 | 961.100 | 1580.000 |
| GR | 959.300 | 1684.000 | 954.500 | 1790.000 | 953.900 | 1896.000 | 951.500 | 2000.000 | 948.300 | 2050.000 |
| GR | 946.900 | 2052.000 | 946.000 | 2062.000 | 946.000 | 2072.000 | 946.600 | 2082.000 | 947.000 | 2092.000 |
| GR | 946.000 | 2102.000 | 945.900 | 2112.000 | 945.900 | 2122.000 | 946.200 | 2132.000 | 946.900 | 2150.000 |
| GR | 947.900 | 2154.000 | 952.400 | 2274.000 | 957.000 | 2360.000 | 957.400 | 2458.000 | 959.900 | 2528.000 |
| GR | 961.900 | 2614.000 | 962.100 | 2728.000 | 960.100 | 2784.000 | 957.900 | 2796.000 | 959.500 | 2808.000 |
| GR | 957.000 | 2870.000 | 957.100 | 2970.000 | 960.300 | 3072.000 | 974.000 | 3180.000 | 976.200 | 3200.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.800 | 38.000 | 2129.000 | 2221.000 | 360.000 | 360.000 | 340.000 | 0.000 | 0.000 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.700 | 1695.000 | 952.600 | 1745.000 | 952.100 | 1845.000 |
| GR | 951.800 | 1945.000 | 951.100 | 2045.000 | 950.700 | 2129.000 | 947.100 | 2136.000 | 945.500 | 2146.000 |
| GR | 945.800 | 2156.000 | 946.600 | 2166.000 | 946.400 | 2176.000 | 946.100 | 2186.000 | 946.200 | 2196.000 |
| GR | 946.300 | 2206.000 | 947.100 | 2211.000 | 951.800 | 2221.000 | 954.000 | 2321.000 | 959.600 | 2421.000 |
| GR | 958.800 | 2512.000 | 961.700 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 | 961.100 | 2922.000 |
| GR | 962.100 | 3027.000 | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.900 | 44.000 | 2141.000 | 2232.000 | 32.000 | 32.000 | 32.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 954.050 | 954.050 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.000 | 1698.000 | 954.800 | 1798.000 | 955.000 | 1900.000 |
| GR | 954.800 | 2000.000 | 954.800 | 2100.000 | 955.400 | 2141.000 | 947.400 | 2141.000 | 945.500 | 2151.000 |
| GR | 945.700 | 2161.000 | 946.000 | 2171.000 | 946.600 | 2181.000 | 946.200 | 2186.500 | 946.200 | 2186.600 |
| GR | 946.100 | 2186.400 | 946.100 | 2186.500 | 946.000 | 2191.000 | 946.000 | 2201.000 | 946.100 | 2211.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 946.200 | 2221.000 | 947.200 | 2228.000 | 947.500 | 2232.000 | 955.400 | 2232.000 | 955.200 | 2304.000 |
| GR | 956.600 | 2408.000 | 958.800 | 2512.000 | 961.100 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 |
| GR | 961.100 | 2922.000 | 962.100 | 3027.000 | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 500.000 | 635.000 | 690.000 | 820.000 | 690.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF F DRIVE SOUTH.CONCRETE (F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 2100.000 | 954.800 | 0.000 | 2141.000 | 955.400 | 947.400 | 2141.000 | 955.400 | 952.700 |
| BT | 2186.500 | 955.400 | 952.700 | 2186.600 | 955.400 | 946.200 | 2188.400 | 955.400 | 946.100 | 2188.500 |
| BT | 955.400 | 952.700 | 2232.000 | 955.400 | 952.700 | 2232.000 | 955.400 | 947.500 | 2304.000 | 955.200 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.100 | 44.000 | 2149.000 | 2240.000 | 36.500 | 36.500 | 36.500 | 0.000 | 0.000 | 0.000 |
| BT | 10.000 | 2100.000 | 954.800 | 0.000 | 2149.000 | 955.400 | 947.800 | 2149.000 | 955.400 | 952.700 |
| BT | 2194.500 | 955.400 | 952.700 | 2194.600 | 955.400 | 945.800 | 2196.400 | 955.400 | 945.900 | 2196.500 |
| BT | 955.400 | 952.700 | 2240.000 | 955.400 | 952.700 | 2240.000 | 955.400 | 948.000 | 2304.000 | 955.200 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.000 | 1698.000 | 954.800 | 1798.000 | 955.000 | 1900.000 |
| GR | 954.800 | 2000.000 | 954.800 | 2100.000 | 955.400 | 2149.000 | 947.800 | 2149.000 | 945.800 | 2159.000 |
| GR | 945.900 | 2169.000 | 945.900 | 2179.000 | 945.700 | 2189.000 | 945.800 | 2194.500 | 945.800 | 2194.600 |
| GR | 945.900 | 2196.400 | 945.900 | 2196.500 | 946.000 | 2199.000 | 946.400 | 2209.000 | 945.700 | 2219.000 |
| GR | 945.700 | 2229.000 | 947.100 | 2235.000 | 948.000 | 2240.000 | 955.400 | 2240.000 | 955.200 | 2304.000 |
| GR | 956.600 | 2408.000 | 958.800 | 2512.000 | 961.100 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 |
| GR | 961.100 | 2922.000 | 962.100 | 3027.000 | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 955.400 | 955.400 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 2117.000 | 2272.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.300 | 39.000 | 2154.500 | 2229.000 | 32.000 | 32.000 | 32.000 | 0.000 | 0.000 | 0.000 |
| GR | 958.400 | 490.000 | 957.600 | 587.000 | 958.500 | 679.000 | 960.400 | 793.000 | 961.100 | 896.000 |
| GR | 960.200 | 983.000 | 958.200 | 1085.000 | 956.800 | 1188.000 | 956.100 | 1292.000 | 955.800 | 1392.000 |
| GR | 955.400 | 1478.000 | 955.100 | 1600.000 | 955.000 | 1698.000 | 954.700 | 1745.000 | 950.500 | 1845.000 |
| GR | 950.000 | 1945.000 | 950.000 | 2000.000 | 950.000 | 2045.000 | 949.400 | 2144.000 | 947.200 | 2154.500 |
| GR | 945.900 | 2164.000 | 946.100 | 2174.000 | 946.000 | 2184.000 | 946.000 | 2204.000 | 945.800 | 2214.000 |
| GR | 946.700 | 2224.000 | 947.200 | 2229.000 | 949.000 | 2239.000 | 953.200 | 2339.000 | 955.600 | 2359.000 |
| GR | 956.600 | 2408.000 | 958.800 | 2512.000 | 961.100 | 2616.000 | 962.300 | 2720.000 | 962.100 | 2820.000 |
| GR | 961.100 | 2922.000 | 962.100 | 3027.000 | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 1.410 | 2000.000 | 3242.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.420 | 42.000 | 2154.500 | 2241.880 | 590.000 | 570.000 | 580.000 | 0.000 | 0.000 | 0.000 |
| GR | 960.000 | 1200.000 | 955.000 | 1300.000 | 960.000 | 1400.000 | 960.000 | 1500.000 | 950.000 | 1575.000 |
| GR | 950.000 | 1700.000 | 960.000 | 1820.000 | 960.000 | 2100.000 | 949.400 | 2144.000 | 949.400 | 2144.000 |
| GR | 948.400 | 2154.500 | 948.400 | 2154.500 | 947.730 | 2159.100 | 947.070 | 2163.700 | 946.720 | 2168.300 |
| GR | 946.630 | 2172.890 | 946.660 | 2177.490 | 946.630 | 2182.090 | 946.610 | 2186.690 | 946.630 | 2191.290 |
| GR | 946.660 | 2195.890 | 946.700 | 2200.490 | 946.700 | 2205.090 | 946.690 | 2209.680 | 946.650 | 2214.280 |
| GR | 946.560 | 2218.880 | 946.490 | 2223.480 | 946.690 | 2228.080 | 947.060 | 2232.680 | 947.440 | 2237.280 |
| GR | 948.120 | 2241.880 | 953.200 | 2339.000 | 955.600 | 2359.000 | 956.600 | 2408.000 | 958.800 | 2512.000 |
| GR | 961.100 | 2618.000 | 962.300 | 2720.000 | 962.100 | 2820.000 | 961.100 | 2922.000 | 962.100 | 3027.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 966.900 | 3116.000 | 968.700 | 3242.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (G)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.670 | 22.000 | 2017.000 | 2120.000 | 2780.000 | 2800.000 | 2660.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.310 | 1606.000 | 962.280 | 1704.000 | 957.910 | 1760.000 | 958.290 | 1852.000 | 958.710 | 1900.000 |
| GR | 951.970 | 2000.000 | 949.260 | 2017.000 | 948.440 | 2027.000 | 948.250 | 2037.000 | 948.360 | 2047.000 |
| GR | 948.640 | 2057.000 | 948.760 | 2067.000 | 948.820 | 2077.000 | 948.510 | 2097.000 | 948.510 | 2097.000 |
| GR | 949.380 | 2120.000 | 950.920 | 2126.000 | 952.550 | 2210.000 | 955.350 | 2217.000 | 953.300 | 2244.000 |
| GR | 956.900 | 2368.000 | 959.210 | 2380.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.800 | 31.000 | 2000.000 | 2126.000 | 800.000 | 400.000 | 700.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.300 | 1606.000 | 962.300 | 1704.000 | 957.900 | 1760.000 | 958.300 | 1852.000 | 958.800 | 1900.000 |
| GR | 952.000 | 2000.000 | 949.300 | 2017.000 | 948.400 | 2027.000 | 948.300 | 2037.000 | 948.400 | 2047.000 |
| GR | 948.600 | 2057.000 | 948.800 | 2067.000 | 948.800 | 2077.000 | 948.700 | 2087.000 | 948.500 | 2097.000 |
| GR | 948.500 | 2107.000 | 949.400 | 2120.000 | 950.900 | 2126.000 | 952.600 | 2210.000 | 955.400 | 2217.000 |
| GR | 955.600 | 2230.000 | 953.300 | 2244.000 | 956.900 | 2368.000 | 959.200 | 2380.000 | 961.700 | 2456.000 |
| GR | 966.000 | 2530.000 | 967.600 | 2578.000 | 967.600 | 2702.000 | 975.800 | 2830.000 | 977.800 | 2934.000 |
| GR | 979.200 | 3022.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.810 | 36.000 | 2000.000 | 2100.000 | 80.000 | 15.000 | 75.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.900 | 315.000 | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 696.000 | 964.100 | 795.000 |
| GR | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 |
| GR | 962.400 | 1400.000 | 961.000 | 1502.000 | 959.600 | 1600.000 | 959.400 | 1700.000 | 959.000 | 1800.000 |
| GR | 954.600 | 1900.000 | 951.300 | 2000.000 | 950.600 | 2010.000 | 949.800 | 2020.000 | 949.700 | 2031.000 |
| GR | 949.300 | 2042.000 | 949.300 | 2052.000 | 949.900 | 2063.000 | 950.600 | 2067.000 | 956.300 | 2100.000 |
| GR | 957.000 | 2200.000 | 953.300 | 2300.000 | 953.900 | 2400.000 | 953.700 | 2500.000 | 954.400 | 2600.000 |
| GR | 955.800 | 2700.000 | 959.700 | 2800.000 | 964.800 | 2900.000 | 967.100 | 2925.000 | 971.600 | 3022.000 |
| GR | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.900 | 46.000 | 2000.000 | 2070.000 | 34.000 | 34.000 | 34.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 957.100 | 957.000 | 0.000 |
| GR | 962.900 | 315.000 | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 696.000 | 964.100 | 795.000 |
| GR | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 |
| GR | 962.400 | 1400.000 | 961.000 | 1502.000 | 959.600 | 1600.000 | 958.700 | 1700.000 | 958.500 | 1800.000 |
| GR | 958.300 | 1900.000 | 957.700 | 2000.000 | 951.400 | 2000.000 | 950.500 | 2007.000 | 949.200 | 2014.000 |
| GR | 949.600 | 2022.500 | 949.600 | 2022.600 | 949.700 | 2023.500 | 949.700 | 2023.600 | 949.700 | 2024.000 |
| GR | 949.100 | 2034.000 | 949.100 | 2044.000 | 949.100 | 2047.000 | 949.100 | 2047.100 | 949.100 | 2048.000 |
| GR | 949.100 | 2048.100 | 949.100 | 2054.000 | 949.900 | 2064.000 | 950.500 | 2067.000 | 951.200 | 2070.000 |
| GR | 957.600 | 2070.000 | 957.100 | 2168.000 | 957.100 | 2264.000 | 957.100 | 2400.000 | 957.200 | 2501.000 |
| GR | 957.800 | 2604.000 | 959.700 | 2710.000 | 963.200 | 2820.000 | 967.100 | 2925.000 | 971.600 | 3022.000 |
| GR | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF CONDUIT RD. BRIDGE.CONCRETE (H) Class 5k

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| RT | 14.000 | 1900.000 | 958.300 | 0.000 | 2010.000 | 957.700 | 951.400 | 2000.000 | 957.700 | 956.400 |
| RT | 2022.500 | 957.700 | 956.400 | 2022.600 | 957.700 | 949.600 | 2023.500 | 957.700 | 949.700 | 2023.600 |
| RT | 957.700 | 956.400 | 2047.000 | 957.600 | 956.400 | 2047.100 | 957.600 | 949.100 | 2048.000 | 957.600 |
| RT | 949.100 | 2048.100 | 957.600 | 956.400 | 2070.000 | 957.600 | 956.400 | 2070.000 | 957.600 | 951.200 |
| RT | 2168.000 | 957.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XI | 29.100 | 45.000 | 2000.000 | 2070.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1900.000 | 958.300 | 0.000 | 2000.000 | 957.700 | 951.500 | 2000.000 | 957.700 | 956.300 |
| BT | 2022.500 | 957.700 | 956.300 | 2022.600 | 957.700 | 949.000 | 2023.500 | 957.700 | 949.000 | 2023.600 |
| BT | 957.700 | 956.300 | 2047.000 | 957.600 | 956.400 | 2047.100 | 957.600 | 949.200 | 2048.000 | 957.600 |
| BT | 949.200 | 2048.100 | 957.600 | 956.400 | 2070.000 | 957.600 | 956.400 | 2070.000 | 957.600 | 951.700 |
| BT | 2168.000 | 957.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 962.900 | 318.000 | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 696.000 | 964.100 | 795.000 |
| GR | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 |
| GR | 962.400 | 1400.000 | 961.000 | 1502.000 | 959.600 | 1600.000 | 958.700 | 1700.000 | 958.500 | 1800.000 |
| GR | 958.300 | 1900.000 | 957.700 | 2000.000 | 951.500 | 2000.000 | 950.500 | 2004.000 | 948.900 | 2014.000 |
| GR | 949.000 | 2022.500 | 949.000 | 2022.600 | 949.000 | 2023.500 | 949.000 | 2023.600 | 949.000 | 2024.000 |
| GR | 948.400 | 2034.000 | 949.100 | 2044.000 | 949.200 | 2047.000 | 949.200 | 2047.100 | 949.200 | 2048.000 |
| GR | 949.200 | 2048.100 | 949.200 | 2054.000 | 950.500 | 2064.000 | 951.700 | 2070.000 | 957.600 | 2070.000 |
| GR | 957.100 | 2168.000 | 957.100 | 2264.000 | 957.100 | 2400.000 | 957.200 | 2501.000 | 957.800 | 2604.000 |
| GR | 959.700 | 2710.000 | 963.200 | 2820.000 | 967.100 | 2925.000 | 971.600 | 3022.000 | 976.500 | 3120.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 957.700 | 956.600 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.300 | 36.000 | 1972.000 | 2065.000 | 34.000 | 34.000 | 34.000 | 0.000 | 0.000 | 0.000 |
| GR | 963.200 | 494.000 | 962.700 | 592.000 | 963.000 | 646.000 | 964.100 | 795.000 | 965.000 | 897.000 |
| GR | 966.800 | 998.000 | 966.700 | 1102.000 | 965.200 | 1204.000 | 963.700 | 1302.000 | 962.400 | 1400.000 |
| GR | 961.000 | 1502.000 | 960.800 | 1600.000 | 959.000 | 1700.000 | 958.000 | 1800.000 | 956.500 | 1900.000 |
| GR | 956.200 | 1972.000 | 952.500 | 1992.000 | 950.300 | 2000.000 | 948.800 | 2010.000 | 948.600 | 2020.000 |
| GR | 948.400 | 2030.000 | 949.400 | 2040.000 | 950.200 | 2044.000 | 954.700 | 2065.000 | 956.200 | 2100.000 |
| GR | 954.600 | 2200.000 | 954.500 | 2300.000 | 955.000 | 2400.000 | 956.400 | 2500.000 | 957.400 | 2600.000 |
| GR | 957.800 | 2604.000 | 959.700 | 2710.000 | 963.200 | 2820.000 | 967.100 | 2925.000 | 971.600 | 3022.000 |
| GR | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.420 | 48.000 | 2000.000 | 2088.000 | 220.000 | 510.000 | 294.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 955.500 | 956.200 | 0.000 |
| GR | 963.000 | 696.000 | 964.100 | 795.000 | 965.000 | 897.000 | 966.800 | 998.000 | 966.700 | 1102.000 |
| GR | 965.200 | 1204.000 | 963.700 | 1302.000 | 962.400 | 1400.000 | 961.000 | 1502.000 | 960.800 | 1600.000 |
| GR | 959.000 | 1700.000 | 958.000 | 1800.000 | 956.500 | 1900.000 | 956.200 | 1972.000 | 952.500 | 1992.000 |
| GR | 955.500 | 2000.000 | 955.500 | 2000.000 | 954.450 | 2004.630 | 953.500 | 2009.260 | 952.730 | 2013.890 |
| GR | 952.020 | 2018.530 | 951.010 | 2023.160 | 950.080 | 2027.790 | 949.480 | 2032.420 | 949.010 | 2037.050 |
| GR | 948.980 | 2041.680 | 948.940 | 2046.320 | 948.890 | 2050.950 | 948.880 | 2055.580 | 949.250 | 2060.210 |
| GR | 949.720 | 2064.840 | 950.540 | 2069.470 | 951.390 | 2074.110 | 952.240 | 2078.740 | 953.100 | 2083.370 |
| GR | 954.220 | 2088.000 | 956.200 | 2100.000 | 954.600 | 2200.000 | 954.500 | 2300.000 | 955.000 | 2400.000 |
| GR | 956.400 | 2500.000 | 957.400 | 2600.000 | 957.800 | 2604.000 | 959.700 | 2710.000 | 963.200 | 2820.000 |
| GR | 967.100 | 2925.000 | 971.600 | 3022.000 | 976.500 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.550 | 43.000 | 2000.000 | 2078.000 | 1010.000 | 1060.000 | 1050.000 | 0.000 | 0.000 | 0.000 |
| GR | 976.800 | 598.000 | 972.700 | 680.000 | 969.400 | 784.000 | 968.900 | 890.000 | 969.300 | 994.000 |
| GR | 969.600 | 1102.000 | 968.800 | 1200.000 | 967.200 | 1300.000 | 966.600 | 1302.000 | 964.000 | 1404.000 |
| GR | 961.300 | 1496.000 | 960.100 | 1600.000 | 959.000 | 1700.000 | 956.900 | 1790.000 | 956.100 | 1896.000 |
| GR | 954.100 | 2000.000 | 954.100 | 2000.000 | 952.770 | 2004.110 | 951.730 | 2008.210 | 951.210 | 2012.320 |
| GR | 950.900 | 2016.420 | 950.490 | 2020.530 | 950.060 | 2024.630 | 949.730 | 2028.740 | 949.490 | 2032.840 |
| GR | 949.540 | 2036.950 | 949.670 | 2041.050 | 949.700 | 2045.160 | 949.690 | 2049.260 | 949.820 | 2053.370 |
| GR | 950.150 | 2057.470 | 950.600 | 2061.580 | 951.070 | 2065.680 | 951.530 | 2069.790 | 951.990 | 2073.890 |
| GR | 953.270 | 2078.000 | 954.900 | 2140.000 | 957.000 | 2202.000 | 961.200 | 2278.000 | 957.800 | 2300.000 |
| GR | 965.000 | 2390.000 | 972.100 | 2502.000 | 973.800 | 2608.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.800 | 32.000 | 2000.000 | 2073.000 | 300.000 | 390.000 | 359.000 | 0.000 | 0.000 | 0.000 |
| GR | 979.600 | 496.000 | 976.800 | 548.000 | 972.700 | 680.000 | 969.400 | 784.000 | 968.900 | 890.000 |
| GR | 969.300 | 994.000 | 969.600 | 1102.000 | 968.800 | 1200.000 | 967.200 | 1300.000 | 966.600 | 1302.000 |
| GR | 964.000 | 1404.000 | 961.300 | 1496.000 | 960.100 | 1600.000 | 959.000 | 1700.000 | 956.900 | 1790.000 |
| GR | 956.100 | 1896.000 | 953.400 | 2000.000 | 951.100 | 2006.000 | 950.500 | 2010.000 | 950.200 | 2020.000 |
| GR | 949.700 | 2030.000 | 950.100 | 2046.000 | 950.100 | 2050.000 | 951.500 | 2070.000 | 952.800 | 2073.000 |
| GR | 954.900 | 2140.000 | 957.000 | 2202.000 | 961.200 | 2278.000 | 957.800 | 2300.000 | 965.000 | 2390.000 |
| GR | 972.100 | 2502.000 | 973.800 | 2605.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 29.810 | 30.000 | 2000.000 | 2060.000 | 140.000 | 140.000 | 160.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1088.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 958.900 | 1700.000 | 957.300 | 1800.000 | 956.200 | 1900.000 |
| GR | 953.100 | 2000.000 | 951.700 | 2003.000 | 950.700 | 2010.000 | 950.600 | 2020.000 | 950.200 | 2030.000 |
| GR | 949.300 | 2040.000 | 949.100 | 2050.000 | 950.000 | 2060.000 | 951.600 | 2069.000 | 953.100 | 2080.000 |
| GR | 958.100 | 2200.000 | 963.300 | 2278.000 | 969.000 | 2380.000 | 974.000 | 2438.000 | 985.400 | 2598.000 |
| X1 | 29.900 | 37.000 | 2000.000 | 2069.000 | 39.000 | 39.000 | 39.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 957.500 | 957.450 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1088.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 958.400 | 1744.000 | 957.700 | 1848.000 | 958.100 | 2000.000 |
| GR | 951.200 | 2000.000 | 950.500 | 2010.000 | 949.900 | 2020.000 | 949.900 | 2022.200 | 949.900 | 2022.300 |
| GR | 949.900 | 2023.200 | 949.900 | 2023.300 | 949.900 | 2030.000 | 949.500 | 2040.000 | 949.600 | 2046.400 |
| GR | 949.600 | 2046.500 | 949.600 | 2047.400 | 949.600 | 2047.500 | 949.600 | 2050.000 | 950.800 | 2060.000 |
| GR | 950.700 | 2069.000 | 958.100 | 2069.000 | 959.700 | 2188.000 | 963.300 | 2278.000 | 969.000 | 2380.000 |
| GR | 974.000 | 2438.000 | 985.400 | 2598.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF A DRIVE SOUTH BRIDGE.CONCRETE (1)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 30.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1848.000 | 957.700 | 0.000 | 2000.000 | 958.100 | 951.200 | 2000.000 | 958.100 | 956.900 |
| BT | 2022.200 | 958.100 | 956.900 | 2022.300 | 958.100 | 949.900 | 2023.200 | 958.100 | 949.900 | 2023.300 |
| BT | 958.100 | 956.900 | 2046.400 | 958.100 | 956.800 | 2046.500 | 958.100 | 949.600 | 2047.400 | 958.100 |
| BT | 949.600 | 2047.500 | 958.100 | 956.800 | 2069.000 | 958.100 | 956.800 | 2069.000 | 958.100 | 950.700 |
| BT | 2188.000 | 959.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 30.100 | 37.000 | 2000.000 | 2069.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1848.000 | 957.700 | 0.000 | 2000.000 | 958.100 | 951.200 | 2000.000 | 958.100 | 956.900 |
| BT | 2022.200 | 958.100 | 956.900 | 2022.300 | 958.100 | 950.100 | 2023.200 | 958.100 | 950.100 | 2023.300 |
| BT | 958.100 | 956.900 | 2046.400 | 958.100 | 956.800 | 2046.500 | 958.100 | 950.200 | 2047.400 | 958.100 |
| BT | 950.200 | 2047.500 | 958.100 | 956.800 | 2069.000 | 958.100 | 956.800 | 2069.000 | 958.100 | 951.100 |
| BT | 2188.000 | 959.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1088.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 958.400 | 1744.000 | 957.700 | 1848.000 | 958.100 | 2000.000 |
| GR | 951.200 | 2000.000 | 950.200 | 2010.000 | 950.100 | 2020.000 | 950.100 | 2022.200 | 950.100 | 2022.300 |
| GR | 950.100 | 2023.200 | 950.100 | 2023.300 | 950.100 | 2030.000 | 950.100 | 2040.000 | 950.200 | 2046.400 |
| GR | 950.200 | 2046.500 | 950.200 | 2047.400 | 950.200 | 2047.500 | 950.200 | 2050.000 | 950.000 | 2060.000 |
| GR | 951.100 | 2069.000 | 958.100 | 2069.000 | 959.700 | 2188.000 | 963.300 | 2278.000 | 969.000 | 2380.000 |
| GR | 974.000 | 2438.000 | 985.400 | 2598.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 30.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 958.100 | 958.100 | 0.000 |
| X1 | 30.300 | 32.000 | 2000.000 | 2088.000 | 39.000 | 39.000 | 39.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 586.000 | 972.600 | 691.000 | 971.300 | 800.000 | 970.300 | 878.000 | 968.800 | 982.000 |
| GR | 967.100 | 1088.000 | 965.600 | 1192.000 | 964.600 | 1296.000 | 963.000 | 1402.000 | 963.000 | 1468.000 |
| GR | 962.100 | 1638.000 | 959.500 | 1642.000 | 960.500 | 1722.000 | 958.300 | 1822.000 | 957.000 | 1922.000 |
| GR | 954.300 | 1982.000 | 952.000 | 2000.000 | 950.900 | 2012.000 | 950.400 | 2022.000 | 950.100 | 2032.000 |
| GR | 950.200 | 2042.000 | 950.400 | 2052.000 | 950.700 | 2062.000 | 950.500 | 2072.000 | 951.600 | 2088.000 |
| GR | 953.900 | 2097.000 | 953.600 | 2122.000 | 958.600 | 2222.000 | 962.000 | 2282.000 | 969.000 | 2380.000 |
| GR | 974.000 | 2438.000 | 985.400 | 2598.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 30.400 | 0.000 | 0.000 | 0.000 | 76.000 | 76.000 | 76.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (J)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.000 | 23.000 | 2006.000 | 2102.000 | 2700.000 | 2840.000 | 2825.000 | 0.000 | 0.000 | 0.000 |
| GR | 975.100 | 1752.000 | 979.400 | 1866.000 | 974.900 | 1930.000 | 960.900 | 1982.000 | 954.600 | 2000.000 |
| GR | 953.600 | 2006.000 | 952.800 | 2016.000 | 952.600 | 2026.000 | 952.700 | 2036.000 | 952.600 | 2046.000 |
| GR | 952.400 | 2056.000 | 952.800 | 2066.000 | 953.000 | 2076.000 | 953.700 | 2102.000 | 955.800 | 2126.000 |
| GR | 956.400 | 2192.000 | 956.300 | 2270.000 | 957.600 | 2340.000 | 958.900 | 2416.000 | 960.000 | 2538.000 |
| GR | 962.100 | 2694.000 | 965.000 | 2766.000 | 970.000 | 2816.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 31.800 | 29.000 | 2000.000 | 2078.000 | 2520.000 | 2440.000 | 2566.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.600 | 1603.000 | 983.200 | 1699.000 | 973.700 | 1803.000 | 967.800 | 1901.000 | 966.900 | 1930.000 |
| GR | 965.500 | 1948.000 | 963.200 | 1959.000 | 962.700 | 1982.000 | 954.800 | 2000.000 | 953.700 | 2001.000 |
| GR | 952.500 | 2010.000 | 952.300 | 2020.000 | 952.700 | 2032.000 | 952.800 | 2044.000 | 952.900 | 2054.000 |
| GR | 953.100 | 2066.000 | 953.800 | 2072.000 | 955.100 | 2078.000 | 956.300 | 2128.000 | 957.700 | 2216.000 |
| GR | 956.500 | 2306.000 | 956.600 | 2392.000 | 960.300 | 2452.000 | 964.900 | 2472.000 | 965.400 | 2512.000 |
| GR | 971.200 | 2610.000 | 978.700 | 2696.000 | 984.000 | 2774.000 | 988.500 | 2862.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1982.000 | 2095.000 | 0.000 | 0.000 |
| X1 | 31.805 | 31.000 | 2000.000 | 2070.000 | 240.000 | 180.000 | 223.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.500 | 1700.000 | 965.600 | 1800.000 | 963.100 | 1900.000 | 960.300 | 1988.000 |
| GR | 956.300 | 2000.000 | 954.300 | 2006.000 | 953.200 | 2010.000 | 952.800 | 2020.000 | 952.700 | 2030.000 |
| GR | 953.300 | 2040.000 | 953.200 | 2055.000 | 954.200 | 2064.000 | 955.100 | 2070.000 | 959.400 | 2100.000 |
| GR | 957.300 | 2200.000 | 957.500 | 2300.000 | 964.600 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 |
| GR | 976.400 | 2602.000 | 982.900 | 2701.000 | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 |
| GR | 998.600 | 3105.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1987.000 | 2083.000 | 0.000 | 0.000 |
| X1 | 31.810 | 0.000 | 0.000 | 0.000 | 37.000 | 37.000 | 37.000 | 0.000 | 0.000 | 0.000 |
| X1 | 31.900 | 40.000 | 2000.000 | 2070.000 | 49.000 | 49.000 | 49.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 960.550 | 960.550 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.500 | 1700.000 | 965.600 | 1800.000 | 963.200 | 1908.000 | 961.200 | 2000.000 |
| GR | 955.200 | 2000.000 | 954.300 | 2003.000 | 953.400 | 2010.000 | 953.200 | 2020.000 | 953.200 | 2022.500 |
| GR | 953.200 | 2022.600 | 953.200 | 2023.500 | 953.200 | 2023.600 | 953.200 | 2030.000 | 953.000 | 2040.000 |
| GR | 952.800 | 2046.500 | 952.800 | 2046.600 | 952.800 | 2047.500 | 952.800 | 2047.600 | 952.700 | 2050.000 |
| GR | 953.700 | 2060.000 | 954.300 | 2067.000 | 954.700 | 2070.000 | 961.200 | 2070.000 | 960.100 | 2168.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 961.300 | 2298.000 | 965.800 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 | 976.400 | 2602.000 |
| GR | 982.900 | 2701.000 | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 | 998.600 | 3105.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF J DRIVE SOUTH\BRIDGE.CONCRETE (K)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 32.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1908.000 | 963.200 | 0.000 | 2000.000 | 961.200 | 955.200 | 2000.000 | 961.200 | 959.900 |
| BT | 2022.500 | 961.200 | 959.900 | 2022.600 | 961.200 | 953.200 | 2023.500 | 961.200 | 953.200 | 2023.600 |
| BT | 961.200 | 959.900 | 2046.500 | 961.200 | 959.900 | 2046.600 | 961.200 | 952.800 | 2047.500 | 961.200 |
| BT | 952.800 | 2047.600 | 961.200 | 959.900 | 2070.000 | 961.200 | 959.900 | 2070.000 | 961.200 | 954.700 |
| BT | 2168.000 | 960.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 32.100 | 39.000 | 2000.000 | 2070.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| BT | 14.000 | 1908.000 | 963.200 | 0.000 | 2000.000 | 961.200 | 955.100 | 2000.000 | 961.200 | 959.900 |
| BT | 2022.500 | 961.200 | 959.900 | 2022.600 | 961.200 | 953.000 | 2023.500 | 961.200 | 953.000 | 2023.600 |
| BT | 961.200 | 959.900 | 2046.500 | 961.200 | 959.900 | 2046.600 | 961.200 | 952.800 | 2047.500 | 961.200 |
| BT | 952.800 | 2047.600 | 961.200 | 959.900 | 2070.000 | 961.200 | 959.900 | 2070.000 | 961.200 | 954.300 |
| BT | 2168.000 | 960.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.500 | 1700.000 | 965.600 | 1800.000 | 963.200 | 1908.000 | 961.200 | 2000.000 |
| GR | 955.100 | 2000.000 | 954.300 | 2005.000 | 953.600 | 2010.000 | 953.200 | 2020.000 | 953.000 | 2022.500 |
| GR | 953.000 | 2022.600 | 953.000 | 2023.500 | 953.000 | 2023.600 | 952.600 | 2030.000 | 952.600 | 2040.000 |
| GR | 952.800 | 2046.500 | 952.800 | 2046.600 | 952.800 | 2047.500 | 952.800 | 2047.600 | 952.900 | 2050.000 |
| GR | 953.200 | 2060.000 | 954.300 | 2070.000 | 961.200 | 2070.000 | 960.100 | 2168.000 | 961.300 | 2298.000 |
| GR | 965.800 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 | 976.400 | 2602.000 | 982.900 | 2701.000 |
| GR | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 | 998.600 | 3105.000 | 0.000 | 0.000 |
| NC | .070 | .070 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 32.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 961.100 | 961.100 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1972.000 | 2142.000 | 0.000 | 0.000 |
| X1 | 32.300 | 34.000 | 2000.000 | 2114.000 | 49.000 | 49.000 | 49.000 | 0.000 | 0.000 | 0.000 |
| GR | 985.100 | 1099.000 | 979.800 | 1198.000 | 974.900 | 1302.000 | 979.100 | 1396.000 | 975.300 | 1498.000 |
| GR | 971.800 | 1596.000 | 968.400 | 1700.000 | 965.700 | 1800.000 | 962.300 | 1900.000 | 959.100 | 1974.000 |
| GR | 955.700 | 2000.000 | 954.300 | 2005.000 | 953.700 | 2010.000 | 953.200 | 2020.000 | 952.700 | 2030.000 |
| GR | 952.700 | 2040.000 | 952.700 | 2050.000 | 953.000 | 2060.000 | 953.000 | 2070.000 | 953.100 | 2080.000 |
| GR | 953.600 | 2100.000 | 954.300 | 2110.000 | 954.700 | 2114.000 | 957.400 | 2200.000 | 958.600 | 2300.000 |
| GR | 965.100 | 2400.000 | 967.800 | 2440.000 | 970.800 | 2502.000 | 976.400 | 2602.000 | 982.900 | 2701.000 |
| GR | 989.400 | 2805.000 | 993.400 | 2903.000 | 996.100 | 3003.000 | 998.600 | 3105.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .035 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION (L)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 33.000 | 38.000 | 2000.000 | 2052.000 | 3250.000 | 3625.000 | 4100.000 | 0.000 | 0.000 | 0.000 |
| GR | 979.500 | 1431.000 | 977.700 | 1459.000 | 968.400 | 1551.000 | 962.700 | 1591.000 | 961.100 | 1623.000 |
| GR | 958.900 | 1627.000 | 959.000 | 1667.000 | 960.300 | 1681.000 | 959.700 | 1756.000 | 958.700 | 1838.000 |
| GR | 959.000 | 1916.000 | 958.800 | 2000.000 | 956.700 | 2002.000 | 955.100 | 2012.000 | 955.200 | 2022.000 |
| GR | 955.200 | 2032.000 | 955.000 | 2042.000 | 956.800 | 2050.000 | 958.700 | 2052.000 | 958.300 | 2130.000 |
| GR | 957.500 | 2212.000 | 957.400 | 2284.000 | 959.000 | 2390.000 | 963.400 | 2422.000 | 965.400 | 2498.000 |
| GR | 964.700 | 2594.000 | 965.500 | 2682.000 | 966.800 | 2786.000 | 966.000 | 2880.000 | 966.100 | 2970.000 |
| GR | 967.700 | 3050.000 | 968.400 | 3144.000 | 969.000 | 3236.000 | 969.700 | 3332.000 | 969.200 | 3434.000 |
| GR | 967.800 | 3534.000 | 969.500 | 3626.000 | 973.700 | 3812.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 33.850 | 53.000 | 2032.000 | 2085.000 | 2390.000 | 2410.000 | 2399.000 | 0.000 | 0.000 | 0.000 |
| GR | 976.600 | 757.000 | 975.400 | 800.000 | 974.800 | 820.000 | 974.200 | 838.000 | 970.800 | 976.000 |
| GR | 968.600 | 1062.000 | 968.100 | 1206.000 | 965.700 | 1274.000 | 964.600 | 1362.000 | 963.300 | 1458.000 |
| GR | 963.900 | 1561.000 | 964.100 | 1600.000 | 964.000 | 1696.000 | 963.900 | 1797.000 | 964.100 | 1898.000 |
| GR | 962.750 | 2032.000 | 958.050 | 2032.000 | 957.470 | 2034.790 | 956.950 | 2037.580 | 956.460 | 2040.370 |
| GR | 956.390 | 2043.160 | 956.490 | 2045.950 | 956.600 | 2048.740 | 956.350 | 2051.530 | 956.110 | 2054.320 |
| GR | 955.920 | 2057.110 | 955.900 | 2059.890 | 956.110 | 2062.680 | 956.310 | 2065.470 | 956.460 | 2068.260 |
| GR | 956.200 | 2071.050 | 955.900 | 2073.840 | 955.600 | 2076.630 | 955.420 | 2079.420 | 955.540 | 2082.210 |
| GR | 957.400 | 2085.000 | 963.300 | 2085.000 | 964.400 | 2180.000 | 964.400 | 2282.000 | 963.800 | 2382.000 |
| GR | 963.800 | 2478.000 | 963.400 | 2528.000 | 963.700 | 2658.000 | 963.500 | 2688.000 | 964.200 | 2698.000 |
| GR | 964.100 | 2786.000 | 965.600 | 2904.000 | 967.100 | 2998.000 | 968.000 | 3086.000 | 968.900 | 3202.000 |
| GR | 969.100 | 3300.000 | 968.600 | 3400.000 | 969.000 | 3490.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 33.900 | 38.000 | 2027.000 | 2085.000 | 13.000 | 13.000 | 13.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 965.200 | 965.200 | 0.000 |
| GR | 980.300 | 838.000 | 975.100 | 976.000 | 971.400 | 1062.000 | 970.300 | 1206.000 | 970.500 | 1274.000 |
| GR | 968.600 | 1362.000 | 966.300 | 1458.000 | 967.500 | 1561.000 | 967.700 | 1600.000 | 967.600 | 1696.000 |
| GR | 967.700 | 1797.000 | 967.800 | 1898.000 | 967.400 | 2000.000 | 967.300 | 2027.000 | 957.900 | 2027.000 |
| GR | 956.000 | 2037.000 | 957.600 | 2045.000 | 956.300 | 2057.000 | 957.000 | 2067.000 | 955.600 | 2077.000 |
| GR | 955.500 | 2085.000 | 967.300 | 2085.000 | 967.700 | 2180.000 | 967.800 | 2282.000 | 967.600 | 2382.000 |
| GR | 967.300 | 2478.000 | 966.900 | 2528.000 | 968.200 | 2658.000 | 967.800 | 2688.000 | 969.500 | 2698.000 |
| GR | 969.200 | 2786.000 | 969.900 | 2904.000 | 970.800 | 2998.000 | 971.400 | 3086.000 | 972.600 | 3202.000 |
| GR | 972.900 | 3300.000 | 972.000 | 3400.000 | 972.500 | 3490.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .020 | .020 | .020 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE OF 25 1/2 MILE ROAD BRIDGE.CONCRETE (M)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 34.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 6.000 | 2000.000 | 967.400 | 0.000 | 2027.000 | 967.300 | 957.900 | 2027.000 | 967.300 | 963.100 |
| BT | 2085.000 | 967.300 | 963.100 | 2085.000 | 967.300 | 955.500 | 2180.000 | 967.700 | 0.000 | 0.000 |
| X1 | 34.100 | 38.000 | 2025.000 | 2083.000 | 29.000 | 29.000 | 29.000 | 0.000 | 0.000 | 0.000 |
| BT | 6.000 | 2000.000 | 967.400 | 0.000 | 2025.000 | 967.300 | 958.100 | 2025.000 | 967.300 | 963.100 |
| BT | 2083.000 | 967.300 | 963.100 | 2083.000 | 967.300 | 956.000 | 2180.000 | 967.700 | 0.000 | 0.000 |
| GR | 980.300 | 838.000 | 975.100 | 976.000 | 971.400 | 1062.000 | 970.300 | 1206.000 | 970.500 | 1274.000 |
| GR | 968.600 | 1362.000 | 966.300 | 1458.000 | 967.500 | 1561.000 | 967.700 | 1600.000 | 967.600 | 1696.000 |
| GR | 967.700 | 1797.000 | 967.800 | 1898.000 | 967.400 | 2000.000 | 967.300 | 2025.000 | 958.100 | 2025.000 |
| GR | 957.700 | 2035.000 | 956.800 | 2045.000 | 956.600 | 2055.000 | 956.200 | 2065.000 | 956.400 | 2075.000 |
| GR | 956.000 | 2083.000 | 967.300 | 2083.000 | 967.700 | 2180.000 | 967.800 | 2282.000 | 967.600 | 2382.000 |
| GR | 967.300 | 2478.000 | 966.900 | 2528.000 | 968.200 | 2658.000 | 967.800 | 2688.000 | 969.500 | 2698.000 |
| GR | 969.200 | 2786.000 | 969.900 | 2904.000 | 970.800 | 2998.000 | 971.400 | 3086.000 | 972.600 | 3202.000 |
| GR | 972.900 | 3300.000 | 972.000 | 3400.000 | 972.500 | 3490.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | .035 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 34.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 967.300 | 967.300 | 0.000 |
| X1 | 34.250 | 55.000 | 2025.000 | 2069.000 | 13.000 | 13.000 | 13.000 | 0.000 | 0.000 | 0.000 |
| GR | 980.300 | 838.000 | 975.100 | 976.000 | 971.400 | 1062.000 | 970.300 | 1206.000 | 970.500 | 1274.000 |
| GR | 968.600 | 1362.000 | 966.300 | 1458.000 | 966.900 | 1486.000 | 965.400 | 1606.000 | 964.400 | 1720.000 |
| GR | 964.200 | 1826.000 | 964.400 | 1916.000 | 964.000 | 2000.000 | 961.900 | 2010.000 | 961.800 | 2020.000 |
| GR | 963.900 | 2025.000 | 959.300 | 2025.000 | 957.390 | 2028.370 | 957.210 | 2031.740 | 957.060 | 2035.110 |
| GR | 956.930 | 2038.470 | 956.770 | 2041.840 | 956.610 | 2045.210 | 956.510 | 2048.580 | 956.460 | 2051.950 |

MOORE BUSINESS FORMS, INC. 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | .017 | .017 | .017 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.100 | 3504.000 | 966.600 | 3606.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.500 | 3072.000 | 966.000 | 3174.000 | 3280.000 | 0.000 | 3298.000 | 965.600 | 3400.000 | |
| GR | 966.009 | 2502.000 | 968.000 | 2606.000 | 968.700 | 2764.000 | 2866.000 | 967.100 | 2970.000 | |
| GR | 960.100 | 2088.000 | 968.800 | 2088.000 | 968.800 | 2192.000 | 2294.000 | 969.100 | 2398.000 | |
| GR | 958.500 | 2045.100 | 958.200 | 2050.000 | 958.800 | 2060.000 | 2070.000 | 958.400 | 2080.000 | |
| GR | 958.200 | 2030.000 | 958.300 | 2040.000 | 958.600 | 2043.100 | 2043.100 | 958.500 | 2045.000 | |
| GR | 967.900 | 1994.000 | 958.300 | 2000.000 | 958.700 | 2000.000 | 2010.000 | 958.000 | 2020.000 | |
| GR | 970.900 | 1396.000 | 958.300 | 1500.000 | 958.100 | 1554.000 | 1586.000 | 967.600 | 1790.000 | |
| GR | 985.800 | 894.000 | 960.800 | 980.000 | 977.300 | 1082.000 | 1184.000 | 972.700 | 1290.000 | |
| X1 | 34.900 | 42.000 | 2000.000 | 2080.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 967.200 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 7.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.500 | 3606.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 966.000 | 3174.000 | 965.600 | 3298.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 968.000 | 2506.000 | 968.700 | 2764.000 | 2866.000 | 967.100 | 2970.000 | 966.500 | 3072.000 | |
| GR | 967.700 | 2229.000 | 963.100 | 2345.000 | 2443.000 | 964.900 | 2533.000 | 966.800 | 2569.000 | |
| GR | 958.400 | 2069.000 | 959.300 | 2075.000 | 2081.000 | 963.300 | 2107.000 | 962.200 | 2207.000 | |
| GR | 958.400 | 2017.000 | 958.200 | 2027.000 | 2037.000 | 958.200 | 2047.000 | 958.400 | 2057.000 | |
| GR | 962.390 | 1864.000 | 962.200 | 1944.000 | 1970.000 | 963.700 | 2000.000 | 959.300 | 2007.000 | |
| X1 | 34.810 | 36.000 | 1398.000 | 1424.000 | 1502.000 | 1450.000 | 1600.000 | 1504.000 | 1778.000 | |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | |
| GR | 965.800 | 3298.000 | 966.100 | 3400.000 | 3504.000 | 966.600 | 3606.000 | 965.800 | 3709.000 | |
| GR | 967.200 | 2866.000 | 967.100 | 2970.000 | 3072.000 | 966.010 | 3174.000 | 965.800 | 3280.000 | |
| GR | 962.900 | 2564.000 | 964.900 | 2668.000 | 2772.000 | 965.900 | 2874.000 | 966.600 | 2980.000 | |
| GR | 961.300 | 2194.000 | 961.000 | 2336.000 | 2354.000 | 966.300 | 2410.000 | 961.400 | 2492.000 | |
| GR | 957.100 | 2018.000 | 957.500 | 2026.000 | 2040.000 | 957.200 | 2054.000 | 957.300 | 2066.000 | |
| GR | 969.000 | 1778.000 | 959.900 | 1812.000 | 1878.000 | 969.400 | 1970.000 | 963.700 | 2000.000 | |
| GR | 986.500 | 1406.000 | 982.300 | 1450.000 | 1514.000 | 977.000 | 1608.000 | 973.000 | 1710.000 | |
| X1 | 34.800 | 34.000 | 2000.000 | 2104.000 | 1000.000 | 460.000 | 0.000 | 820.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 7.100 | 7.100 | 7.100 | 1877.000 | 2274.000 | 0.000 | 0.000 | 0.000 |
| GR | 971.400 | 3084.000 | 972.500 | 3202.000 | 3300.000 | 972.900 | 3400.000 | 972.500 | 3490.000 | |
| GR | 967.800 | 2622.000 | 965.500 | 2692.000 | 2734.000 | 966.400 | 2904.000 | 970.800 | 2908.000 | |
| GR | 968.200 | 2222.000 | 964.400 | 2252.000 | 2348.000 | 966.300 | 2466.000 | 968.500 | 2666.000 | |
| GR | 957.800 | 2068.000 | 959.600 | 2070.000 | 2140.000 | 962.100 | 2214.000 | 968.100 | 2274.000 | |
| GR | 956.300 | 2020.000 | 956.200 | 2030.000 | 2040.000 | 957.100 | 2050.000 | 957.500 | 2060.000 | |
| GR | 960.700 | 1826.000 | 961.000 | 1916.000 | 2000.000 | 960.500 | 2002.000 | 956.400 | 2010.000 | |
| GR | 966.600 | 1362.000 | 966.300 | 1454.000 | 1486.000 | 967.100 | 1606.000 | 961.200 | 1720.000 | |
| GR | 970.500 | 1206.000 | 970.300 | 1062.000 | 1082.000 | 971.400 | 1206.000 | 970.500 | 1274.000 | |
| X1 | 34.300 | 36.000 | 2000.000 | 2070.000 | 24.000 | 24.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .035 | .080 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 7.100 | 7.100 | 7.100 | 7.100 | 7.100 | 1967.000 | 2103.000 | 0.000 | 0.000 | 0.000 |
| GR | 972.600 | 3084.000 | 972.600 | 3202.000 | 3300.000 | 972.000 | 3400.000 | 972.500 | 3490.000 | |
| GR | 965.600 | 2622.000 | 965.500 | 2692.000 | 2734.000 | 969.900 | 2904.000 | 970.800 | 2908.000 | |
| GR | 964.400 | 2222.000 | 964.400 | 2252.000 | 2348.000 | 966.600 | 2466.000 | 968.400 | 2666.000 | |
| GR | 963.400 | 2062.000 | 963.400 | 2078.000 | 2140.000 | 964.900 | 2214.000 | 968.000 | 2274.000 | |
| GR | 956.710 | 2012.190 | 956.530 | 2078.000 | 2082.260 | 956.950 | 2085.630 | 956.940 | 2085.630 | |
| GR | 956.500 | 2055.320 | 956.560 | 2058.680 | 2062.050 | 956.590 | 2065.420 | 956.600 | 2068.790 | |

MOORE BUSINESS FORMS, INC. 23

SPILLWAY STRUCTURE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.250 | 17.000 | 2007.000 | 2076.000 | 51.000 | 51.000 | 0.000 | 0.000 | 1914.000 | |
| GR | 968.210 | 1500.000 | 966.780 | 1600.000 | 963.960 | 1492.000 | 963.350 | 1914.000 | 963.060 | |
| GR | 962.480 | 2000.000 | 959.600 | 2041.000 | 959.920 | 2076.000 | 961.960 | 2098.000 | 961.960 | |
| GR | 963.010 | 2196.000 | 963.720 | 2276.000 | 963.230 | 2356.000 | 967.080 | 2400.000 | 967.550 | |
| GR | 968.010 | 2526.000 | 969.570 | 2600.000 | 969.570 | 2600.000 | 967.080 | 2400.000 | 967.550 | 2502.000 |
| X1 | 35.350 | 22.000 | 2000.000 | 2081.000 | 10.000 | 10.000 | 0.000 | 0.000 | 0.000 | |
| GR | 968.210 | 1500.000 | 966.780 | 1600.000 | 963.960 | 1492.000 | 963.350 | 1914.000 | 963.060 | |
| GR | 962.480 | 2000.000 | 959.190 | 2014.000 | 959.959 | 2074.000 | 961.960 | 2034.000 | 959.770 | 2044.000 |
| GR | 959.800 | 2054.000 | 959.760 | 2074.000 | 961.960 | 2081.000 | 961.760 | 2034.000 | 959.770 | 2098.000 |
| GR | 963.010 | 2196.000 | 963.720 | 2276.000 | 963.230 | 2356.000 | 967.080 | 2400.000 | 967.550 | 2502.000 

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 967.800 | 1450.000 | 967.500 | 1572.000 | 965.800 | 1664.000 | 965.600 | 1750.000 | 965.300 | 1882.000 |
| GR | 964.700 | 2000.000 | 962.800 | 2006.000 | 961.700 | 2022.000 | 961.600 | 2038.000 | 961.300 | 2054.000 |
| GR | 961.400 | 2067.000 | 961.500 | 2076.000 | 962.800 | 2086.000 | 963.200 | 2092.000 | 966.200 | 2175.000 |
| GR | 972.300 | 2302.000 | 972.300 | 2334.000 | 974.000 | 2378.000 | 975.100 | 2484.000 | 974.900 | 2581.000 |
| GR | 974.900 | 2684.000 | 975.000 | 2804.000 | 975.700 | 2906.000 | 976.700 | 3004.000 | 977.700 | 3100.000 |
| GR | 979.200 | 3202.000 | 981.200 | 3306.000 | 984.800 | 3414.000 | 990.300 | 3514.000 | 992.300 | 3574.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 24.000

Encroached run reviewed

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | ULOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| | D/S LIMIT OF ALBION TWP. (A) | | | | | | | | |
| 24.00 | 7.47 | 946.17 | 0.00 | 946.17 | 946.17 | .00 | 0.00 | 0.00 | 944.00 |
| 735. | 1. | 732. | 2. | 12. | 1924. | 31. | 0. | 0. | 944.90 |
| 0.00 | .08 | .38 | .06 | .060 | .045 | .060 | 0.000 | 938.70 | 1989.28 |
| .000010 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 336.78 | 2326.06 |
| *SECNO 24.100 | | | | | | | | | |
| 24.10 | 6.64 | 946.20 | 0.00 | 0.00 | 946.20 | .00 | .03 | .00 | 944.90 |
| 735. | 14. | 720. | 2. | 109. | 1407. | 18. | 92. | 18. | 944.60 |
| 1.26 | .13 | .51 | .10 | .060 | .045 | .060 | .045 | 939.56 | 1903.29 |
| .000021 | 2350. | 2280. | 2200. | 0 | 0 | 0 | 0.00 | 339.47 | 2242.76 |
| *SECNO 24.200 | | | | | | | | | |
| 3265 DIVIDED FLOW | | | | | | | | | |
| 24.20 | 5.85 | 946.25 | 0.00 | 0.00 | 946.26 | .00 | .05 | .00 | 944.00 |
| 735. | 306. | 412. | 17. | 2000. | 798. | 148. | 202. | 73. | 944.80 |
| 3.00 | .15 | .52 | .11 | .060 | .045 | .060 | .046 | 940.40 | 989.89 |
| .000027 | 2000. | 2300. | 2000. | 2 | 0 | 0 | 0.00 | 1993.31 | 3337.82 |
| *SECNO 25.000 | | | | | | | | | |
| 3265 DIVIDED FLOW | | | | | | | | | |
| | SURVEYED VALLEY SECTION (B) | | | | | | | | |
| 25.00 | 5.07 | 946.37 | 0.00 | 0.00 | 946.39 | .02 | .13 | .01 | 944.90 |
| 735. | 116. | 556. | 64. | 354. | 389. | 149. | 283. | 128. | 944.70 |
| 3.50 | .33 | 1.43 | .43 | .060 | .045 | .060 | .047 | 941.30 | 2938.00 |
| .000271 | 1500. | 2290. | 2600. | 2 | 0 | 0 | 0.00 | 845.34 | 4251.88 |

CCHV= .100 CEHV= .300

*SECNO 25.600

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | ULOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 25.60 | 5.29 | 946.99 | 0.00 | 0.00 | 947.01 | .01 | .61 | .00 | 945.72 |
| 735. | 294. | 361. | 80. | 684. | 273. | 273. | 337. | 168. | 944.92 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.31 | .43 | 1.32 | .29 | .070 | .045 | .070 | .048 | 941.70 | 3560.18 |
| .000222 | 2100. | 2850. | 1500. | 2 | 0 | 0 | 0.00 | 939.62 | 4499.81 |

*SECNO 25.800

3470 ENCROACHMENT STATIONS= 1901.0 2148.0 TYPE= 1 TARGET= 247.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.80 | 5.61 | 947.31 | 0.00 | 0.00 | 947.37 | .06 | .35 | .01 | 946.00 |
| 735. | 59. | 532. | 144. | 107. | 241. | 184. | 356. | 180. | 945.00 |
| 4.47 | .55 | 2.21 | .78 | .070 | .045 | .070 | .048 | 941.70 | 1901.00 |
| .000601 | 1080. | 1100. | 620. | 2 | 0 | 0 | 0.00 | 247.00 | 2148.00 |

*SECNO 25.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 949.90 ELREA= 949.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25.90 | 5.33 | 947.53 | 0.00 | 0.00 | 947.63 | .10 | .25 | .01 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 295. | 0. | 359. | 181. | 951.50 |
| 4.50 | 0.00 | 2.49 | 0.00 | .070 | .045 | .070 | .048 | 942.20 | 2000.00 |
| .001174 | 420. | 324. | 40. | 2 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500

*SECNO 26.000

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

D/S FACE OF D.DRIVE SOUTH.CONCRETE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.00 | 5.34 | 947.54 | 0.00 | 0.00 | 947.64 | .10 | .01 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 288. | 0. | 359. | 181. | 951.50 |
| 4.51 | 0.00 | 2.55 | 0.00 | .070 | .026 | .070 | .048 | 942.20 | 2000.00 |
| .000488 | 17. | 17. | 17. | 0 | 0 | 0 | -8.76 | 85.00 | 2085.00 |

*SECNO 26.100

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 950.50 MAX ELLC= 948.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.10 | 7.62 | 947.62 | 0.00 | 0.00 | 947.66 | .05 | .01 | .02 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 426. | 0. | 359. | 181. | 951.50 |
| 4.51 | 0.00 | 1.72 | 0.00 | .070 | .026 | .070 | .048 | 940.00 | 2000.00 |
| .000139 | 26. | 26. | 26. | 2 | 0 | 0 | -13.18 | 85.00 | 2085.00 |

CCHV= .300 CEHV= .500

*SECNO 26.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 951.50 ELREA= 951.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.20 | 7.63 | 947.63 | 0.00 | 0.00 | 947.67 | .04 | .00 | .00 | 951.50 |
| 735. | 0. | 735. | 0. | 0. | 440. | 0. | 359. | 181. | 951.50 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.51 | 0.00 | 1.67 | 0.00 | .080 | .045 | .080 | .048 | 940.00 | 2000.00 |
| .000311 | 17. | 17. | 17. | 0 | 0 | 0 | 0.00 | 85.00 | 2085.00 |

CCHV= .100 CEHV= .300
*SECNO 26.400

3470 ENCROACHMENT STATIONS= 1897.0 2196.0 TYPE= 1 TARGET= 299.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.40 | 5.78 | 947.68 | 0.00 | 0.00 | 947.71 | .03 | .04 | .00 | 945.50 |
| 735. | 89. | 523. | 122. | 177. | 348. | 213. | 361. | 182. | 944.50 |
| 4.54 | .51 | 1.50 | .57 | .080 | .045 | .080 | .048 | 941.90 | 1897.00 |
| .000363 | 10. | 107. | 160. | 2 | 0 | 0 | 0.00 | 299.00 | 2196.00 |

*SECNO 26.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.90 | 5.20 | 946.40 | 0.00 | 0.00 | 948.41 | .01 | .70 | .00 | 947.40 |
| 735. | 221. | 503. | 10. | 697. | 460. | 36. | 415. | 208. | 945.50 |
| 5.43 | .32 | 1.09 | .29 | .080 | .045 | .080 | .048 | 943.20 | 1445.84 |
| .000193 | 2000. | 3000. | 2250. | 2 | 0 | 0 | 0.00 | 719.08 | 2164.93 |

CCHV= .100 CEHV= .300
*SECNO 27.000

3265 DIVIDED FLOW

SURVEYED VALLEY SECTION (D)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.00 | 6.00 | 942.40 | 0.00 | 0.00 | 948.44 | .03 | .02 | .01 | 950.70 |
| 735. | 242. | 493. | 0. | 472. | 276. | 0. | 417. | 209. | 950.20 |
| 5.44 | .51 | 1.79 | 0.00 | .070 | .045 | .070 | .048 | 942.40 | 1445.48 |
| .000462 | 72. | 72. | 72. | 1 | 0 | 0 | 0.00 | 501.16 | 2090.00 |

*SECNO 27.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.10 | 4.44 | 948.44 | 0.00 | 0.00 | 948.45 | .01 | .01 | .00 | 948.00 |
| 735. | 182. | 544. | 9. | 531. | 494. | 26. | 417. | 209. | 946.00 |
| 5.45 | .34 | 1.10 | .35 | .070 | .045 | .070 | .048 | 944.00 | 1444.77 |
| .000215 | 36. | 36. | 36. | 2 | 0 | 0 | 0.00 | 719.96 | 2164.73 |

CCHV= .100 CEHV= .300
*SECNO 27.400

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1896.0 2784.0 TYPE= 1 TARGET= 888.000

SURVEYED VALLEY SECTION (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.40 | 3.92 | 948.97 | 0.00 | 0.00 | 948.99 | .01 | .54 | .00 | 945.20 |
| 735. | 262. | 461. | 12. | 413. | 403. | 37. | 465. | 232. | 946.95 |
| 6.15 | .63 | 1.14 | .33 | .070 | .045 | .070 | .049 | 945.05 | 1896.00 |
| .000239 | 1640. | 2700. | 2300. | 2 | 0 | 0 | 0.00 | 309.63 | 2205.63 |

MOORE BUSINESS FORMS, INC. 23

CCHV= .300 CEHV= .500
*SECNO 27.500

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.50 | 3.91 | 949.11 | 0.00 | 0.00 | 949.18 | .07 | .16 | .03 | 948.20 |
| 735. | 8. | 710. | 17. | 20. | 322. | 28. | 470. | 235. | 947.30 |
| 6.20 | .39 | 2.21 | .61 | .070 | .045 | .070 | .049 | 945.20 | 1956.70 |
| .000948 | 320. | 400. | 550. | 2 | 0. | 0 | 0.00 | 174.49 | 2131.19 |

*SECNO 27.700

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.70 | 4.24 | 950.14 | 0.00 | 0.00 | 950.18 | .05 | .99 | .01 | 948.30 |
| 735. | 12. | 689. | 34. | 26. | 392. | 67. | 484. | 241. | 947.90 |
| 6.45 | .44 | 1.76 | .51 | .070 | .045 | .070 | .048 | 945.90 | 2021.28 |
| .000491 | 1660. | 1500. | 1330. | 2 | 0 | 0 | 0.00 | 192.40 | 2213.68 |

*SECNO 27.800

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.80 | 4.83 | 950.33 | 0.00 | 0.00 | 950.41 | .08 | .21 | .02 | 950.70 |
| 735. | 0. | 735. | 0. | 0. | 330. | 0. | 488. | 242. | 951.80 |
| 6.49 | 0.00 | 2.23 | 0.00 | .070 | .045 | .070 | .048 | 945.50 | 2129.71 |
| .000810 | 360. | 340. | 360. | 2 | 0 | 0 | 0.00 | 88.17 | 2217.88 |

*SECNO 27.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 954.05 ELREA= 954.05

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.90 | 4.88 | 950.38 | 0.00 | 0.00 | 950.44 | .06 | .02 | .01 | 955.40 |
| 735. | 0. | 735. | 0. | 0. | 382. | 0. | 488. | 242. | 955.40 |
| 6.49 | 0.00 | 1.93 | 0.00 | .070 | .045 | .070 | .048 | 945.50 | 2141.00 |
| .000552 | 32. | 32. | 32. | 2 | 0 | 0 | 0.00 | 91.00 | 2232.00 |

CCHV= .300 CEHV= .500
*SECNO 28.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 954.80 MAX ELLC= 952.70

D/S FACE OF E DRIVE SOUTH,CONCRETE (F)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.00 | 4.89 | 950.39 | 0.00 | 0.00 | 950.44 | .05 | .00 | .00 | 955.40 |
| 690. | 0. | 690. | 0. | 0. | 374. | 0. | 488. | 242. | 955.40 |
| 6.49 | 0.00 | 1.85 | 0.00 | .070 | .026 | .070 | .048 | 945.50 | 2141.00 |
| .000200 | 1. | 1. | 1. | 0 | 0 | 0 | -7.89 | 91.00 | 2232.00 |

*SECNO 28.100

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 954.80 MAX ELLC= 952.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.10 | 4.70 | 950.40 | 0.00 | 0.00 | 950.45 | .05 | .01 | .00 | 955.40 |
| 690. | 0. | 690. | 0. | 0. | 381. | 0. | 488. | 242. | 955.40 |
| 6.50 | 0.00 | 1.81 | 0.00 | .070 | .026 | .070 | .048 | 945.70 | 2149.00 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .000186 | 37. | 37. | 37. | 0 | 0 | 0 | -8.49 | 91.00 | 2240.00 |

CCHV= .300 CEHV= .500
*SECNO 28.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 955.40 ELREA= 955.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.20 | 4.70 | 950.40 | 0.00 | 0.00 | 950.45 | .05 | .00 | .00 | 955.40 |
| 690. | 0. | 690. | 0. | 0. | 389. | 0. | 488. | 242. | 955.40 |
| 6.50 | 0.00 | 1.77 | 0.00 | .070 | .045 | .070 | .048 | 945.70 | 2149.00 |
| .000453 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 91.00 | 2240.00 |

*SECNO 28.300

3470 ENCROACHMENT STATIONS= 2117.0 2272.0 TYPE= 1 TARGET= 155.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.30 | 4.61 | 950.41 | 0.00 | 0.00 | 950.47 | .06 | .02 | .00 | 947.20 |
| 690. | 29. | 632. | 29. | 47. | 317. | 47. | 489. | 242. | 947.20 |
| 6.50 | .62 | 2.00 | .62 | .070 | .045 | .070 | .048 | 945.80 | 2117.00 |
| .000536 | 32. | 32. | 32. | 0 | 0 | 0 | 0.00 | 155.00 | 2272.00 |

CCHV= .100 CEHV= .300
*SECNO 28.420

3470 ENCROACHMENT STATIONS= 2000.0 3242.0 TYPE= 1 TARGET= 1242.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.42 | 4.24 | 950.73 | 0.00 | 0.00 | 950.78 | .05 | .31 | .00 | 948.40 |
| 690. | 16. | 636. | 39. | 23. | 337. | 65. | 494. | 244. | 948.12 |
| 6.59 | .68 | 1.89 | .59 | .070 | .045 | .070 | .048 | 946.49 | 2138.48 |
| .000544 | 590. | 580. | 570. | 2 | 0 | 0 | 0.00 | 153.32 | 2291.79 |

CCHV= .100 CEHV= .300
*SECNO 28.670

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

SURVEYED VALLEY SECTION (G)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.67 | 3.95 | 952.20 | 0.00 | 0.00 | 952.24 | .05 | 1.46 | .00 | 949.26 |
| 690. | 18. | 647. | 25. | 27. | 362. | 55. | 521. | 255. | 949.38 |
| 7.03 | .66 | 1.78 | .46 | .070 | .045 | .070 | .048 | 948.25 | 1996.59 |
| .000549 | 2780. | 2660. | 2800. | 1 | 0 | 0 | 0.00 | 195.36 | 2191.95 |

*SECNO 28.800

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.80 | 4.22 | 952.52 | 0.00 | 0.00 | 952.56 | .03 | .31 | .00 | 952.00 |
| 690. | 0. | 666. | 24. | 2. | 447. | 66. | 528. | 258. | 950.90 |
| 7.16 | .17 | 1.49 | .36 | .070 | .045 | .070 | .048 | 948.30 | 1992.17 |
| .000381 | 800. | 700. | 400. | 1 | 0 | 0 | 0.00 | 214.48 | 2206.65 |

*SECNO 28.810

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.81 | 3.17 | 952.47 | 0.00 | 0.00 | 952.67 | .20 | .07 | .05 | 951.30 |
| 690. | 20. | 670. | 0. | 21. | 183. | 0. | 529. | 258. | 956.30 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.17 | .94 | 3.67 | 0.00 | .070 | .045 | .070 | .048 | 949.30 | 1964.51 |
| .003995 | 80. | 75. | 15. | 2 | 0 | 0 | 0.00 | 113.32 | 2077.83 |

*SECNO 28.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 957.10 ELREA= 957.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.90 | 3.51 | 952.61 | 0.00 | 0.00 | 952.78 | .17 | .11 | .00 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 209. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.30 | 0.00 | .070 | .045 | .070 | .048 | 949.10 | 2000.00 |
| .002483 | 34. | 34. | 34. | 2 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 29.000

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 957.10 MAX ELLC= 956.40

D/S FACE OF CONDUIT RD. BRIDGE.CONCRETE (H)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.00 | 3.51 | 952.61 | 0.00 | 0.00 | 952.79 | .18 | .00 | .01 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 203. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.40 | 0.00 | .020 | .026 | .020 | .048 | 949.10 | 2000.00 |
| .001100 | 1. | 1. | 1. | 0 | 0 | 0 | -6.13 | 70.00 | 2070.00 |

*SECNO 29.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CRSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | TTRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 957.10 MAX ELLC= 956.40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.10 | 4.27 | 952.67 | 0.00 | 0.00 | 952.83 | .16 | .03 | .01 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 218. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.17 | 0.00 | .020 | .026 | .020 | .048 | 948.40 | 2000.00 |
| .000881 | 30. | 30. | 30. | 0 | 0 | 0 | -6.77 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 29.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 957.70 ELREA= 956.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.20 | 4.29 | 952.69 | 0.00 | 0.00 | 952.83 | .15 | .00 | .00 | 957.70 |
| 690. | 0. | 690. | 0. | 0. | 225. | 0. | 529. | 258. | 957.60 |
| 7.17 | 0.00 | 3.06 | 0.00 | .060 | .045 | .060 | .048 | 948.40 | 2000.00 |
| .001911 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

*SECNO 29.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.30 | 4.34 | 952.74 | 0.00 | 0.00 | 952.94 | .20 | .08 | .03 | 956.20 |
| 690. | 0. | 690. | 0. | 0. | 190. | 0. | 529. | 258. | 954.70 |
| 7.18 | 0.00 | 3.63 | 0.00 | .060 | .045 | .060 | .048 | 948.40 | 1990.74 |
| .002951 | 34. | 34. | 34. | 0 | 0 | 0 | 0.00 | 65.08 | 2055.82 |

MOORE BUSINESS FORMS, INC. 23

CCHV= .100 CEHV= .300
*SECNO 29.420

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 955.50 ELREA= 956.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.42 | 4.62 | 953.50 | 0.00 | 0.00 | 953.64 | .14 | .69 | .01 | 955.50 |
| 690. | 0. | 690. | 0. | 0. | 230. | 0. | 531. | 259. | 954.22 |
| 7.20 | 0.00 | 3.00 | 0.00 | .060 | .045 | .060 | .048 | 948.88 | 2009.27 |
| .001924 | 220. | 294. | 510. | 2 | 0 | 0 | 0.00 | 75.75 | 2085.02 |

*SECNO 29.550

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.55 | 5.22 | 954.71 | 0.00 | 0.00 | 954.77 | .07 | 1.13 | .01 | 954.10 |
| 690. | 3. | 667. | 20. | 10. | 310. | 39. | 538. | 262. | 953.27 |
| 7.34 | .29 | 2.15 | .52 | .060 | .045 | .060 | .048 | 949.49 | 1968.40 |
| .000685 | 1010. | 1050. | 1060. | 3 | 0 | 0 | 0.00 | 164.28 | 2132.68 |

CCHV= .300 CEHV= .500
*SECNO 29.800

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | HANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 29.80 | 5.24 | 954.94 | 0.00 | 0.00 | 954.99 | .05 | .21 | .00 | 953.40 |
| 690. | 21. | 626. | 43. | 45. | 318. | 73. | 541. | 263. | 952.80 |
| 7.40 | .47 | 1.97 | .59 | .060 | .045 | .060 | .048 | 949.70 | 1940.86 |
| .000509 | 300. | 359. | 390. | 2 | 0 | 0 | 0.00 | 200.18 | 2141.04 |

*SECNO 29.810

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.81 | 5.92 | 955.02 | 0.00 | 0.00 | 955.06 | .05 | .07 | .00 | 953.10 |
| 690. | 29. | 639. | 22. | 60. | 358. | 44. | 543. | 264. | 953.10 |
| 7.42 | .49 | 1.79 | .49 | .060 | .045 | .060 | .048 | 949.10 | 1937.97 |
| .000405 | 140. | 160. | 140. | 0 | 0 | 0 | 0.00 | 188.18 | 2126.15 |

*SECNO 29.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 957.50 ELREA= 957.45

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.90 | 5.53 | 955.03 | 0.00 | 0.00 | 955.09 | .07 | .02 | .01 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 337. | 0. | 543. | 264. | 958.10 |
| 7.43 | 0.00 | 2.05 | 0.00 | .060 | .045 | .060 | .048 | 949.50 | 2000.00 |
| .000546 | 39. | 39. | 39. | 0 | 0 | 0 | 0.00 | 69.00 | 2069.00 |

CCHV= .300 CEHV= .500
*SECNO 30.000

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 957.70 MAX ELLC= 956.90

D/S FACE OF H DRIVE SOUTH BRIDGE.CONCRETE (1)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.00 | 5.53 | 955.03 | 0.00 | 0.00 | 955.09 | .07 | .00 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 326. | 0. | 543. | 264. | 958.10 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.43 | 0.00 | 2.12 | 0.00 | .020 | .026 | .020 | .048 | 949.50 | 2000.00 |
| .000298 | 1. | 1. | 1. | 0 | 0 | 0 | -10.28 | 69.00 | 2069.00 |

*SECNO 30.100

3370 NORMAL BRIDGE,NRD= 14 MIN FLTRU= 957.70 MAX ELLC= 956.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.10 | 5.03 | 955.03 | 0.00 | 0.00 | 955.11 | .07 | .01 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 320. | 0. | 543. | 264. | 958.10 |
| 7.43 | 0.00 | 2.16 | 0.00 | .020 | .026 | .020 | .047 | 950.00 | 2000.00 |
| .000307 | 30. | 30. | 30. | 0 | 0 | 0 | -9.51 | 69.00 | 2069.00 |

CCHV= .300 CEHV= .500

*SECNO 30.200

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID. | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 958.10 ELREA= 958.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.20 | 5.04 | 955.04 | 0.00 | 0.00 | 955.11 | .07 | .00 | .00 | 958.10 |
| 690. | 0. | 690. | 0. | 0. | 329. | 0. | 543. | 264. | 958.10 |
| 7.43 | 0.00 | 2.10 | 0.00 | .060 | .045 | .060 | .047 | 950.00 | 2000.00 |
| .000583 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 69.00 | 2069.00 |

*SECNO 30.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.30 | 5.00 | 955.10 | 0.00 | 0.00 | 955.13 | .04 | .02 | .01 | 952.00 |
| 690. | 26. | 621. | 43. | 42. | 389. | 77. | 544. | 264. | 951.60 |
| 7.44 | .62 | 1.60 | .55 | .060 | .045 | .060 | .047 | 950.10 | 1964.29 |
| .000324 | 39. | 39. | 39. | 2 | 0 | 0 | 0.00 | 187.65 | 2151.94 |

CCHV= .100 CEHV= .300

*SECNO 30.400

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.40 | 5.02 | 955.12 | 0.00 | 0.00 | 955.16 | .04 | .02 | .00 | 952.00 |
| 690. | 23. | 629. | 38. | 43. | 392. | 79. | 545. | 264. | 951.60 |
| 7.45 | .53 | 1.61 | .48 | .070 | .045 | .070 | .047 | 950.10 | 1963.64 |
| .000325 | 76. | 76. | 76. | 1 | 0 | 0 | 0.00 | 188.89 | 2152.53 |

*SECNO 31.000

3265 DIVIDED FLOW

SURVEYED VALLEY SECTION (J)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.00 | 3.97 | 956.37 | 0.00 | 0.00 | 956.43 | .05 | 1.26 | .01 | 953.60 |
| 690. | 15. | 642. | 33. | 18. | 333. | 59. | 574. | 279. | 953.70 |
| 7.88 | .82 | 1.93 | .57 | .070 | .045 | .070 | .047 | 952.40 | 1994.94 |
| .000656 | 2700. | 2825. | 2840. | 2 | 0 | 0 | 0.00 | 253.45 | 2273.84 |

*SECNO 31.800

MOORE BUSINESS FORMS, INC. 23

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.80 | 5.23 | 957.53 | 0.00 | 0.00 | 957.57 | .03 | 1.14 | .00 | 954.80 |
| 690. | 4. | 577. | 109. | 9. | 357. | 271. | 605. | 297. | 955.10 |
| 8.38 | .44 | 1.62 | .40 | .070 | .045 | .070 | .047 | 952.30 | 1993.77 |
| .000323 | 2520. | 2566. | 2440. | 2 | 0 | 0 | 0.00 | 390.43 | 2407.14 |

*SECNO 31.805

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1982.0 2095.0 TYPE= 1 TARGET= 113.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 4.90 | 957.60 | 0.00 | 0.00 | 957.69 | .08 | .10 | .01 | 956.30 |
| 690. | 1. | 674. | 15. | 3. | 288. | 22. | 607. | 298. | 955.10 |
| 8.40 | .43 | 2.34 | .68 | .070 | .045 | .070 | .047 | 952.70 | 1996.09 |
| .000776 | 240. | 223. | 180. | 2 | 0 | 0 | 0.00 | 91.38 | 2087.47 |

*SECNO 31.810

3470 ENCROACHMENT STATIONS= 1987.0 2083.0 TYPE= 1 TARGET= 96.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.81 | 4.93 | 957.63 | 0.00 | 0.00 | 957.72 | .08 | .03 | .00 | 956.30 |
| 690. | 1. | 673. | 16. | 3. | 289. | 21. | 607. | 298. | 955.10 |
| 8.41 | .43 | 2.32 | .77 | .070 | .045 | .070 | .047 | 952.70 | 1996.03 |
| .000761 | 37. | 37. | 37. | 0 | 0 | 0 | 0.00 | 86.97 | 2083.00 |

*SECNO 31.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 960.55 ELREA= 960.55

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.90 | 4.97 | 957.67 | 0.00 | 0.00 | 957.75 | .08 | .04 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 298. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.32 | 0.00 | .070 | .045 | .070 | .047 | 952.70 | 2000.00 |
| .000799 | 49. | 49. | 49. | 0 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

CCHV= .300 CEHV= .500
*SECNO 32.000

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

D/S FACE OF J DRIVE SOUTH BRIDGE.CONCRETE (K)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.00 | 4.97 | 957.67 | 0.00 | 0.00 | 957.76 | .09 | .00 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 289. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.39 | 0.00 | .020 | .026 | .020 | .047 | 952.70 | 2000.00 |
| .000391 | 1. | 1. | 1. | 0 | 0 | 0 | -9.04 | 70.00 | 2070.00 |

*SECNO 32.100

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 960.10 MAX ELLC= 959.90

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.10 | 5.09 | 957.69 | 0.00 | 0.00 | 957.77 | .08 | .01 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 301. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.29 | 0.00 | .020 | .026 | .020 | .047 | 952.60 | 2000.00 |
| .000345 | 30. | 30. | 30. | 0 | 0 | 0 | -9.27 | 70.00 | 2070.00 |

CCHV= .100 CEHV= .300
*SECNO 32.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | FV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 961.10 ELREA= 961.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.20 | 5.10 | 957.70 | 0.00 | 0.00 | 957.77 | .08 | .00 | .00 | 961.20 |
| 690. | 0. | 690. | 0. | 0. | 311. | 0. | 608. | 298. | 961.20 |
| 8.42 | 0.00 | 2.22 | 0.00 | .070 | .045 | .070 | .047 | 952.60 | 2000.00 |
| .000700 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 70.00 | 2070.00 |

*SECNO 32.300

3470 ENCROACHMENT STATIONS= 1972.0 2142.0 TYPE= 1 TARGET= 170.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.30 | 5.07 | 957.77 | 0.00 | 0.00 | 957.79 | .02 | .02 | .01 | 955.70 |
| 690. | 5. | 645. | 40. | 16. | 509. | 74. | 608. | 299. | 954.70 |
| 8.43 | .31 | 1.27 | .55 | .070 | .045 | .070 | .047 | 952.70 | 1984.17 |
| .000202 | 49. | 49. | 49. | 2 | 0 | 0 | 0.00 | 157.83 | 2142.00 |

CCHV= .100 CEHV= .300
*SECNO 33.000

3265 DIVIDED FLOW

SURVEYED VALLEY SECTION (L)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.00 | 4.21 | 959.21 | 0.00 | 0.00 | 959.26 | .05 | 1.46 | .01 | 958.80 |
| 690. | 19. | 416. | 255. | 76. | 187. | 398. | 664. | 331. | 958.70 |
| 9.13 | .25 | 2.22 | .64 | .080 | .045 | .080 | .047 | 955.00 | 1626.43 |
| .000864 | 3250. | 4100. | 3625. | 2 | 0 | 0 | 0.00 | 638.54 | 2391.55 |

*SECNO 33.850

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.85 | 5.87 | 961.29 | 0.00 | 0.00 | 961.39 | .11 | 2.11 | .02 | 962.75 |
| 690. | 0. | 690. | 0. | 0. | 264. | 0. | 690. | 350. | 963.30 |
| 9.39 | 0.00 | 2.62 | 0.00 | .080 | .045 | .080 | .047 | 955.42 | 2032.00 |
| .000897 | 2390. | 2399. | 2410. | 3 | 0 | 0 | 0.00 | 53.00 | 2085.00 |

*SECNO 33.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 965.20 ELREA= 965.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.90 | 5.81 | 961.31 | 0.00 | 0.00 | 961.40 | .10 | .01 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 274. | 0. | 690. | 351. | 967.30 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9.39 | 0.00 | 2.52 | 0.00 | .080 | .045 | .080 | .047 | 955.50 | 2027.00 |
| .000908 | 13. | 13. | 13. | 0 | 0 | 0 | 0.00 | 58.00 | 2085.00 |

CCHV= .300 CEHV= .500

*SECNO 34.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WIN | ELMIN | SSTA |
| SLOPE | XLOFL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE.NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

D/S FACE OF 25 1/2 MILE ROAD BRIDGE.CONCRETE (M)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.00 | 5.81 | 961.31 | 0.00 | 0.00 | 961.41 | .10 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 275. | 0. | 690. | 351. | 967.30 |
| 9.39 | 0.00 | 2.51 | 0.00 | .020 | .026 | .020 | .047 | 955.50 | 2027.00 |
| .000349 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 58.00 | 2085.00 |

*SECNO 34.100

3370 NORMAL BRIDGE.NRD= 6 MIN ELTRD= 967.30 MAX ELLC= 963.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.10 | 5.31 | 961.31 | 0.00 | 0.00 | 961.42 | .11 | .01 | .01 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 261. | 0. | 690. | 351. | 967.30 |
| 9.39 | 0.00 | 2.64 | 0.00 | .020 | .026 | .020 | .047 | 956.00 | 2025.00 |
| .000398 | 29. | 29. | 29. | 1 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

CCHV= .300 CEHV= .500

*SECNO 34.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 967.30 ELREA= 967.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.20 | 5.31 | 961.31 | 0.00 | 0.00 | 961.42 | .11 | .00 | .00 | 967.30 |
| 690. | 0. | 690. | 0. | 0. | 261. | 0. | 690. | 351. | 967.30 |
| 9.39 | 0.00 | 2.64 | 0.00 | .060 | .045 | .060 | .047 | 956.00 | 2025.00 |
| .001043 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 58.00 | 2083.00 |

*SECNO 34.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.25 | 4.89 | 961.35 | 0.00 | 0.00 | 961.44 | .09 | .01 | .01 | 963.90 |
| 690. | 0. | 690. | 0. | 0. | 286. | 0. | 690. | 351. | 963.60 |
| 9.39 | 0.00 | 2.41 | 0.00 | .060 | .045 | .060 | .047 | 956.46 | 2025.00 |
| .000826 | 13. | 13. | 13. | 2 | 0 | 0 | 0.00 | 64.00 | 2089.00 |

CCHV= .100 CEHV= .300

*SECNO 34.300

3470 ENCROACHMENT STATIONS= 1967.0 2103.0 TYPE= 1 TARGET= 136.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.30 | 5.20 | 961.40 | 0.00 | 0.00 | 961.46 | .06 | .02 | .00 | 960.50 |
| 690. | 10. | 654. | 26. | 26. | 316. | 48. | 690. | 351. | 959.90 |
| 9.40 | .37 | 2.07 | .55 | .080 | .045 | .080 | .047 | 956.20 | 1967.00 |
| .000563 | 26. | 26. | 26. | 2 | 0 | 0 | 0.00 | 136.00 | 2103.00 |

MOORE BUSINESS FORMS, INC. 20

*SECNO 34.800

3265 DIVIDED FLOW

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | ARCH | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= | | 1877.0 | 2226.0 | TYPE= | 1 | TARGET= | 349.000 | | |
| 34.80 | 4.73 | 961.83 | 0.00 | 0.00 | 961.87 | .04 | .41 | .00 | 963.70 |
| 690. | 102. | 581. | 6. | 180. | 344. | 27. | 699. | 354. | 966.30 |
| 9.55 | .57 | 1.69 | .23 | .080 | .045 | .080 | .047 | 957.10 | 1877.00 |
| .000442 | 1000. | 820. | 460. | 2 | 0 | 0 | 0.00 | 261.31 | 2226.00 |

*SECNO 34.810

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3470 ENCROACHMENT STATIONS= | | 1987.0 | 2092.0 | TYPE= | 1 | TARGET= | 105.000 | | |
| 34.81 | 3.79 | 961.99 | 0.00 | 0.00 | 962.09 | .11 | .20 | .02 | 963.70 |
| 690. | 0. | 864. | 6. | 0. | 259. | 10. | 702. | 355. | 960.50 |
| 9.58 | 0.00 | 2.64 | .62 | .080 | .045 | .080 | .047 | 958.20 | 2002.73 |
| .001328 | 340. | 280. | 150. | 2 | 0 | 0 | 0.00 | 89.27 | 2092.00 |

*SECNO 34.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 967.25 ELREA= 967.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.90 | 4.06 | 962.06 | 0.00 | 0.00 | 962.16 | .09 | .06 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 281. | 0. | 702. | 355. | 959.40 |
| 9.58 | 0.00 | 2.46 | 0.00 | .080 | .045 | .080 | .047 | 958.00 | 2000.00 |
| .001085 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 80.00 | 2080.00 |

CCHV= .300 CEHV= .500

*SECNO 35.000

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

D/S FACE OF L DRIVE SOUTH BRIDGE.CONCRETE (N)

*U/S LIMIT OF ALBION TWP.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.00 | 4.07 | 962.07 | 0.00 | 0.00 | 962.16 | .09 | .00 | .00 | 968.80 |
| 690. | 0. | 649. | 41. | 0. | 274. | 19. | 702. | 355. | 959.40 |
| 9.58 | 0.00 | 2.37 | 2.19 | .017 | .022 | .017 | .047 | 958.00 | 2000.00 |
| .000276 | 1. | 1. | 1. | 0 | 0 | 0 | -6.85 | 88.00 | 2088.00 |

*SECNO 35.100

3370 NORMAL BRIDGE.NRD= 10 MIN ELTRD= 967.90 MAX ELLC= 965.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.10 | 4.38 | 962.08 | 0.00 | 0.00 | 962.17 | .09 | .01 | .00 | 968.80 |

MOORE BUSINESS FORMS, INC. 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 690. | 0. | 690. | 0. | 0. | 289. | 0. | 703. | 355. | 968.80 |
| | 9.59 | 0.00 | 2.39 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 |
| | .000305 | 32. | 32. | 32. | 1 | 0 | 0 | -8.28 | 88.00 | 2088.00 |

*SECNO 35.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELR | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOEL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 968.80 ELREA= 968.80

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.20 | 4.39 | 962.09 | 0.00 | 0.00 | 962.17 | .08 | .00 | .00 | 968.80 |
| 690. | 0. | 690. | 0. | 0. | 297. | 0. | 703. | 355. | 968.80 |
| 9.59 | 0.00 | 2.32 | 0.00 | .017 | .022 | .017 | .047 | 957.70 | 2000.00 |
| .000247 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 88.00 | 2088.00 |

*SECNO 35.250

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.25 | 2.66 | 962.06 | 0.00 | 0.00 | 962.24 | .18 | .02 | .05 | 959.60 |
| 690. | 20. | 604. | 66. | 7. | 171. | 25. | 703. | 356. | 959.92 |
| 9.59 | 2.71 | 3.54 | 2.63 | .017 | .022 | .017 | .047 | 959.40 | 2001.03 |
| .000813 | 51. | 51. | 51. | 2 | 0 | 0 | 0.00 | 106.08 | 2107.11 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFG | RDLEN | HWC | BWP | FAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.75 | 3.00 | 69.00 | 1.00 | 0.00 | 1.00 | 0.00 | 959.59 | 959.40 |

*SECNO 35.300

3265 DIVIDED FLOW

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 13899.56 | 962.43 | 0.00 | 686. | 8. | 1. | 1. | 960.59 | 961.47 |

SPILLWAY STRUCTURE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.30 | 4.27 | 963.67 | 0.00 | 0.00 | 963.70 | .03 | 1.46 | 0.00 | 962.48 |
| 690. | 149. | 256. | 285. | 143. | 154. | 201. | 703. | 356. | 961.49 |
| 9.59 | 1.04 | 1.67 | 1.42 | .017 | .022 | .017 | .047 | 959.40 | 1749.56 |
| .000229 | 10. | 10. | 10. | 2 | 0 | 8 | 0.00 | 598.31 | 2361.05 |

*SECNO 35.350

3265 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.35 | 3.92 | 963.68 | 0.00 | 0.00 | 963.71 | .03 | .00 | .00 | 962.48 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 690. | 104. | 387. | 199. | 150. | 250. | 199. | 703. | 356. | 962.12 |
| 9.60 | .69 | 1.54 | 1.00 | .017 | .022 | .017 | .047 | 959.76 | 1689.76 |
| .000116 | 10. | 10. | 10. | 0 | 0 | 0 | 0.00 | 659.58 | 2361.11 |

*SECNO 36.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.00 | 3.04 | 964.34 | 0.00 | 0.00 | 964.48 | .14 | .72 | .06 | 962.80 |
| 690. | 6. | 657. | 26. | 4. | 218. | 18. | 733. | 381. | 963.20 |
| 9.90 | 1.71 | 3.02 | 1.44 | .017 | .022 | .017 | .045 | 961.30 | 2001.13 |
| .000576 | 2680. | 3430. | 2600. | 2 | 0 | 0 | 0.00 | 122.50 | 2123.62 |

MOORE BUSINESS FORMS, INC. 23




1) COUNTY: Calhoun

2) STUDY NAME: Albion, City of

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: Summary



**********
HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
ERROR CORR - 01,02,03,04
MODIFICATION - 50,51,52,53,54
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

0 YEAR FLOW

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 12.000 | 927.80 | 1962.89 | 1966.00 | 2087.00 | 2280.00 | 317.11 | 0.00 |
| 12.000 | 928.70 | 1934.89 | 1966.00 | 2087.00 | 2305.83 | 370.94 | 0.00 |
| 12.000 | 929.00 | 1925.56 | 1966.00 | 2087.00 | 2314.43 | 388.88 | 0.00 |
| 12.000 | 929.50 | 1910.00 | 1966.00 | 2087.00 | 2328.78 | 418.78 | 0.00 |
| 12.600 | 929.80 | 2006.70 | 2000.00 | 2090.00 | 2099.02 | 92.32 | 1850.00 |
| 12.600 | 930.64 | 1964.59 | 2000.00 | 2090.00 | 2148.14 | 159.00 | 1850.00 |
| 12.600 | 930.90 | 1936.40 | 2000.00 | 2090.00 | 2167.62 | 208.57 | 1850.00 |
| 12.600 | 931.40 | 1881.41 | 2000.00 | 2090.00 | 2205.60 | 305.24 | 1850.00 |
| 12.700 | 930.80 | 1987.84 | 2000.00 | 2100.00 | 2161.26 | 173.42 | 1500.00 |
| 12.700 | 931.80 | 1916.35 | 2000.00 | 2100.00 | 2175.14 | 258.78 | 1500.00 |
| 12.700 | 932.11 | 1897.73 | 2000.00 | 2100.00 | 2179.44 | 281.71 | 1500.00 |
| 12.700 | 932.69 | 1884.84 | 2000.00 | 2100.00 | 2187.65 | 302.80 | 1500.00 |
| 12.800 | 932.00 | 1988.02 | 1988.00 | 2097.00 | 2118.49 | 130.48 | 1750.00 |
| 12.800 | 932.99 | 1969.91 | 1988.00 | 2097.00 | 2119.85 | 149.93 | 1750.00 |
| 12.800 | 933.30 | 1964.22 | 1988.00 | 2097.00 | 2120.27 | 156.05 | 1750.00 |
| 12.800 | 933.90 | 1953.19 | 1988.00 | 2097.00 | 2121.09 | 167.90 | 1750.00 |
| 13.100 | 932.17 | 1873.63 | 1865.00 | 2110.70 | 2088.04 | 214.41 | 240.00 |
| 13.100 | 933.18 | 1870.73 | 1865.00 | 2110.70 | 2093.01 | 222.28 | 240.00 |
| 13.100 | 933.50 | 1869.82 | 1865.00 | 2110.70 | 2093.89 | 224.07 | 240.00 |
| 13.100 | 934.13 | 1868.05 | 1865.00 | 2110.70 | 2095.61 | 227.55 | 240.00 |
| 13.200 | 932.18 | 1928.49 | 1919.90 | 2165.60 | 2143.01 | 214.52 | 11.60 |
| 13.200 | 933.19 | 1925.59 | 1919.90 | 2165.60 | 2147.95 | 222.35 | 11.60 |
| 13.200 | 933.51 | 1924.68 | 1919.90 | 2165.60 | 2148.86 | 224.18 | 11.60 |
| 13.200 | 934.13 | 1922.90 | 1919.90 | 2165.60 | 2150.64 | 227.74 | 11.60 |
| 13.300 | 932.18 | 1928.49 | 1919.90 | 2165.60 | 2143.01 | 214.52 | 1.00 |
| 13.300 | 933.19 | 1925.59 | 1919.90 | 2165.60 | 2147.95 | 222.35 | 1.00 |
| 13.300 | 933.51 | 1924.68 | 1919.90 | 2165.60 | 2148.86 | 224.18 | 1.00 |
| 13.300 | 934.13 | 1922.90 | 1919.90 | 2165.60 | 2150.64 | 227.75 | 1.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 14.100 | 932.43 | 1993.88 | 1976.00 | 2076.00 | 2055.13 | 61.25 | 317.00 |
| 14.100 | 933.42 | 1991.58 | 1976.00 | 2076.00 | 2057.62 | 66.05 | 317.00 |
| 14.100 | 933.73 | 1990.85 | 1976.00 | 2076.00 | 2058.41 | 67.57 | 317.00 |
| 14.100 | 934.34 | 1989.42 | 1976.00 | 2076.00 | 2059.95 | 70.53 | 317.00 |
| 14.300 | 932.43 | 1993.87 | 1976.00 | 2076.00 | 2055.14 | 61.27 | 4.00 |
| 14.300 | 933.43 | 1991.56 | 1976.00 | 2076.00 | 2057.64 | 66.08 | 4.00 |
| 14.300 | 933.74 | 1990.83 | 1976.00 | 2076.00 | 2058.43 | 67.60 | 4.00 |
| 14.300 | 934.35 | 1989.41 | 1976.00 | 2076.00 | 2059.97 | 70.56 | 4.00 |
| 14.400 | 932.41 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 9.00 |
| 14.400 | 933.39 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 9.00 |
| 14.400 | 933.70 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 9.00 |
| 14.400 | 934.30 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 9.00 |
| 14.500 | 932.41 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.500 | 933.39 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.500 | 933.70 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.500 | 934.30 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.600 | 932.46 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 54.00 |
| 14.600 | 933.46 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 54.00 |
| 14.600 | 933.77 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 54.00 |
| 14.600 | 934.38 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 54.00 |
| 14.700 | 932.47 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.700 | 933.46 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.700 | 933.77 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.700 | 934.38 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 14.720 | 932.48 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 4.00 |
| 14.720 | 933.47 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 4.00 |
| 14.720 | 933.79 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 4.00 |
| 14.720 | 934.40 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 4.00 |
| 14.750 | 933.91 | 1954.71 | 2000.00 | 2050.00 | 2055.18 | 100.47 | 770.00 |
| 14.750 | 935.03 | 1899.33 | 2000.00 | 2050.00 | 2061.57 | 162.24 | 770.00 |
| 14.750 | 935.38 | 1869.63 | 2000.00 | 2050.00 | 2063.58 | 173.95 | 770.00 |
| 14.750 | 936.08 | 1870.45 | 2000.00 | 2050.00 | 2067.57 | 197.12 | 770.00 |
| 14.800 | 934.42 | 2133.55 | 2156.00 | 2252.00 | 2260.67 | 127.12 | 520.00 |
| 14.800 | 935.57 | 2120.61 | 2156.00 | 2252.00 | 2268.32 | 147.71 | 520.00 |
| 14.800 | 935.93 | 2116.69 | 2156.00 | 2252.00 | 2270.64 | 153.95 | 520.00 |
| 14.800 | 936.61 | 2109.02 | 2156.00 | 2252.00 | 2275.19 | 166.17 | 520.00 |
| 14.900 | 934.59 | 2044.00 | 2044.00 | 2116.00 | 2116.00 | 72.00 | 360.00 |
| 14.900 | 935.75 | 2044.00 | 2044.00 | 2116.00 | 2116.00 | 72.00 | 360.00 |
| 14.900 | 936.11 | 2044.00 | 2044.00 | 2116.00 | 2116.00 | 72.00 | 360.00 |
| 14.900 | 936.80 | 2044.00 | 2044.00 | 2116.00 | 2116.00 | 72.00 | 360.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | CWSEL | SSIA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 15.000 | 934.56 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 31.00 |
| 15.000 | 935.70 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 31.00 |
| 15.000 | 936.04 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 31.00 |
| 15.000 | 936.71 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 31.00 |
| 15.100 | 934.55 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 1.00 |
| 15.100 | 935.68 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 1.00 |
| 15.100 | 936.02 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 1.00 |
| 15.100 | 936.64 | 1801.10 | 1801.10 | 1853.64 | 1853.64 | 52.54 | 1.00 |
| 15.200 | 934.56 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 36.00 |
| 15.200 | 935.70 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 36.00 |
| 15.200 | 936.07 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 36.00 |
| 15.200 | 936.71 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 36.00 |
| 15.300 | 934.59 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 1.00 |
| 15.300 | 935.74 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 1.00 |
| 15.300 | 936.13 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 1.00 |
| 15.300 | 936.93 | 1784.77 | 1784.77 | 1837.31 | 1837.31 | 52.54 | 1.00 |
| 15.400 | 934.73 | 2010.00 | 2000.00 | 2098.00 | 2084.00 | 74.00 | 11.00 |
| 15.400 | 935.95 | 2010.00 | 2000.00 | 2098.00 | 2088.31 | 78.31 | 11.00 |
| 15.400 | 936.36 | 2010.00 | 2000.00 | 2098.00 | 2090.01 | 80.01 | 11.00 |
| 15.400 | 937.21 | 2005.27 | 2000.00 | 2098.00 | 2093.51 | 88.25 | 11.00 |
| 15.800 | 934.80 | 2116.00 | 2116.00 | 2186.00 | 2186.00 | 70.00 | 350.00 |
| 15.800 | 936.02 | 2116.00 | 2116.00 | 2186.00 | 2186.00 | 70.00 | 350.00 |
| 15.800 | 936.44 | 2116.00 | 2116.00 | 2186.00 | 2186.00 | 70.00 | 350.00 |
| 15.800 | 937.29 | 2116.00 | 2116.00 | 2186.00 | 2186.00 | 70.00 | 350.00 |
| 15.900 | 934.80 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 56.00 |
| 15.900 | 936.02 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 56.00 |
| 15.900 | 936.44 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 56.00 |
| 15.900 | 937.29 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 56.00 |
| 16.000 | 934.80 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| 16.000 | 936.02 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| 16.000 | 936.44 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| 16.000 | 937.24 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| 16.100 | 934.87 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 54.00 |
| 16.100 | 936.11 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 54.00 |
| 16.100 | 936.62 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 54.00 |
| 16.100 | 937.51 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 54.00 |
| 16.200 | 934.87 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| 16.200 | 936.11 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| 16.200 | 936.63 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |
| 16.200 | 937.62 | 2118.00 | 2118.00 | 2177.50 | 2177.50 | 59.50 | 1.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 16.300 | 934.94 | 2111.00 | 2111.00 | 2175.00 | 2176.08 | 65.08 | 56.00 |
| 16.300 | 936.20 | 2111.00 | 2111.00 | 2175.00 | 2181.68 | 70.68 | 56.00 |
| 16.300 | 936.73 | 2111.00 | 2111.00 | 2175.00 | 2184.08 | 73.08 | 56.00 |
| 16.300 | 937.73 | 2111.00 | 2111.00 | 2175.00 | 2188.55 | 77.55 | 56.00 |
| 16.800 | 935.04 | 2117.00 | 2117.00 | 2204.00 | 2204.00 | 87.00 | 125.00 |
| 16.800 | 936.32 | 2117.00 | 2117.00 | 2204.00 | 2204.00 | 87.00 | 125.00 |
| 16.800 | 936.86 | 2117.00 | 2117.00 | 2204.00 | 2204.00 | 87.00 | 125.00 |
| 16.800 | 937.88 | 2117.00 | 2117.00 | 2204.00 | 2313.42 | 196.42 | 125.00 |
| 16.900 | 935.06 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 19.00 |
| 16.900 | 936.35 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 19.00 |
| 16.900 | 936.88 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 19.00 |
| 16.900 | 937.90 | 2114.00 | 2114.00 | 2207.00 | 2313.33 | 199.33 | 19.00 |
| 17.000 | 935.05 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 1.00 |
| 17.000 | 936.34 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 1.00 |
| 17.000 | 936.87 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 1.00 |
| 17.000 | 937.86 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 1.00 |
| 17.100 | 935.11 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 90.00 |
| 17.100 | 936.40 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 90.00 |
| 17.100 | 936.93 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 87.66 | 90.00 |
| 17.100 | 938.01 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 90.00 |
| 17.200 | 935.11 | 2114.00 | 2114.00 | 2208.00 | 2208.00 | 90.35 | 1.00 |
| 17.200 | 936.41 | 2114.00 | 2114.00 | 2208.00 | 2208.00 | 90.76 | 1.00 |
| 17.200 | 936.94 | 2114.00 | 2114.00 | 2208.00 | 2208.00 | 90.92 | 1.00 |
| 17.200 | 938.03 | 2114.00 | 2114.00 | 2208.00 | 2208.00 | 94.00 | 1.00 |
| 17.300 | 935.18 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.15 | 100.00 |
| 17.300 | 936.48 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.70 | 100.00 |
| 17.300 | 937.01 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.93 | 100.00 |
| 17.300 | 938.21 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 100.00 |
| 17.400 | 935.18 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.15 | 1.00 |
| 17.400 | 936.48 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.70 | 1.00 |
| 17.400 | 937.01 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 90.93 | 1.00 |
| 17.400 | 938.26 | 2114.00 | 2114.00 | 2207.00 | 2207.00 | 93.00 | 1.00 |
| 17.500 | 935.23 | 2106.00 | 2106.00 | 2199.00 | 2199.00 | 93.00 | 120.00 |
| 17.500 | 936.53 | 2106.00 | 2106.00 | 2199.00 | 2199.00 | 93.00 | 120.00 |
| 17.500 | 937.06 | 2106.00 | 2106.00 | 2199.00 | 2199.00 | 93.00 | 120.00 |
| 17.500 | 938.30 | 2106.00 | 2106.00 | 2199.00 | 2199.00 | 93.00 | 120.00 |
| 17.900 | 935.31 | 1677.00 | 1677.00 | 1786.65 | 1786.65 | 109.65 | 79.00 |
| 17.900 | 936.61 | 1677.00 | 1677.00 | 1786.65 | 1786.65 | 109.65 | 79.00 |
| 17.900 | 937.14 | 1677.00 | 1677.00 | 1786.65 | 1786.65 | 109.65 | 79.00 |
| 17.900 | 938.38 | 1677.00 | 1677.00 | 1786.65 | 1786.65 | 109.65 | 79.00 |

MOORE BUSINESS FORMS INC. 27

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 18.000 | 935.30 | 2095.03 | 2095.03 | 2204.68 | 2218.98 | 123.87 | 1.00 |
| 18.000 | 936.59 | 2095.03 | 2095.03 | 2204.68 | 2224.19 | 129.10 | 1.00 |
| 18.000 | 937.11 | 2095.03 | 2095.03 | 2204.68 | 2226.31 | 131.22 | 1.00 |
| 18.000 | 938.34 | 2095.03 | 2095.03 | 2204.68 | 2231.28 | 136.21 | 1.00 |
| 18.100 | 935.34 | 2139.21 | 2139.21 | 2239.65 | 2239.65 | 100.44 | 40.00 |
| 18.100 | 936.64 | 2139.21 | 2139.21 | 2239.65 | 2239.65 | 100.44 | 40.00 |
| 18.100 | 937.16 | 2139.21 | 2139.21 | 2239.65 | 2239.65 | 100.44 | 40.00 |
| 18.100 | 938.40 | 2139.21 | 2139.21 | 2239.65 | 2239.65 | 100.44 | 40.00 |
| 18.200 | 935.31 | 1832.68 | 1832.68 | 1935.02 | 1912.19 | 79.51 | 1.00 |
| 18.200 | 936.61 | 1832.68 | 1832.68 | 1935.02 | 1918.81 | 86.13 | 1.00 |
| 18.200 | 937.14 | 1832.68 | 1832.68 | 1935.02 | 1921.51 | 88.83 | 1.00 |
| 18.200 | 938.40 | 1832.68 | 1832.68 | 1935.02 | 1927.93 | 95.25 | 1.00 |
| 18.300 | 935.37 | 1832.68 | 1832.68 | 1935.02 | 1912.45 | 79.76 | 49.00 |
| 18.300 | 936.66 | 1832.68 | 1832.68 | 1935.02 | 1919.06 | 86.38 | 49.00 |
| 18.300 | 937.19 | 1832.68 | 1832.68 | 1935.02 | 1921.76 | 89.08 | 49.00 |
| 18.300 | 938.44 | 1832.68 | 1832.68 | 1935.02 | 1928.14 | 95.46 | 49.00 |
| 18.800 | 935.71 | 2000.00 | 2000.00 | 2140.00 | 2111.52 | 111.52 | 365.00 |
| 18.800 | 937.01 | 2000.00 | 2000.00 | 2140.00 | 2120.64 | 120.64 | 365.00 |
| 18.800 | 937.52 | 2000.00 | 2000.00 | 2140.00 | 2124.11 | 124.11 | 365.00 |
| 18.800 | 938.73 | 2000.00 | 2000.00 | 2140.00 | 2132.53 | 132.53 | 365.00 |
| 18.900 | 935.77 | 2000.00 | 2000.00 | 2066.60 | 2060.34 | 60.34 | 200.00 |
| 18.900 | 937.04 | 2000.00 | 2000.00 | 2066.60 | 2062.13 | 62.13 | 200.00 |
| 18.900 | 937.54 | 2000.00 | 2000.00 | 2066.60 | 2062.84 | 62.84 | 200.00 |
| 18.900 | 938.72 | 2000.00 | 2000.00 | 2066.60 | 2064.51 | 64.51 | 200.00 |
| 19.000 | 935.77 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.28 | 4.00 |
| 19.000 | 937.03 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.46 | 4.00 |
| 19.000 | 937.53 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.53 | 4.00 |
| 19.000 | 938.70 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.80 | 4.00 |
| 19.100 | 935.78 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.28 | 6.00 |
| 19.100 | 937.04 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.46 | 6.00 |
| 19.100 | 937.54 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.53 | 6.00 |
| 19.100 | 938.71 | 2000.00 | 2000.00 | 2057.70 | 2057.70 | 56.79 | 6.00 |
| 19.200 | 935.77 | 2003.86 | 2000.00 | 2057.00 | 2057.00 | 53.14 | 1.00 |
| 19.200 | 937.03 | 2002.45 | 2000.00 | 2057.00 | 2057.00 | 54.55 | 1.00 |
| 19.200 | 937.52 | 2001.88 | 2000.00 | 2057.00 | 2057.00 | 55.12 | 1.00 |
| 19.200 | 938.70 | 2000.56 | 2000.00 | 2057.00 | 2057.00 | 56.44 | 1.00 |
| 19.300 | 935.79 | 2003.85 | 2000.00 | 2057.00 | 2057.00 | 53.15 | 24.00 |
| 19.300 | 937.05 | 2002.43 | 2000.00 | 2057.00 | 2057.00 | 54.57 | 24.00 |
| 19.300 | 937.55 | 2001.87 | 2000.00 | 2057.00 | 2057.00 | 55.13 | 24.00 |
| 19.300 | 938.72 | 2000.54 | 2000.00 | 2057.00 | 2057.00 | 56.46 | 24.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 19.800 | 936.07 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 165.00 |
| 19.800 | 937.35 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 165.00 |
| 19.800 | 937.84 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 165.00 |
| 19.800 | 939.00 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 165.00 |
| 19.900 | 936.28 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 50.00 |
| 19.900 | 937.51 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 50.00 |
| 19.900 | 937.98 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 50.00 |
| 19.900 | 939.11 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 50.00 |
| 20.000 | 936.22 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 61.67 | 1.00 |
| 20.000 | 937.45 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.16 | 1.00 |
| 20.000 | 937.92 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.35 | 1.00 |
| 20.000 | 939.05 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.80 | 1.00 |
| 20.100 | 936.47 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 61.77 | 90.00 |
| 20.100 | 937.66 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.24 | 90.00 |
| 20.100 | 938.12 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.43 | 90.00 |
| 20.100 | 939.22 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 62.87 | 90.00 |
| 20.200 | 936.61 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 1.00 |
| 20.200 | 937.82 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 1.00 |
| 20.200 | 938.28 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 1.00 |
| 20.200 | 939.37 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 1.00 |
| 20.300 | 936.72 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 64.00 |
| 20.300 | 937.92 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 64.00 |
| 20.300 | 938.38 | 2297.00 | 2297.00 | 2367.00 | 2367.00 | 70.00 | 64.00 |
| 20.300 | 939.53 | 2297.00 | 2297.00 | 2367.00 | 2626.00 | 110.04 | 64.00 |
| 21.000 | 937.60 | 1986.56 | 2000.00 | 2032.00 | 2032.39 | 45.83 | 1050.00 |
| 21.000 | 938.86 | 1935.75 | 2000.00 | 2032.00 | 2089.24 | 153.49 | 1050.00 |
| 21.000 | 939.35 | 1930.28 | 2000.00 | 2032.00 | 2111.47 | 181.19 | 1050.00 |
| 21.000 | 940.26 | 1920.02 | 2000.00 | 2032.00 | 2256.00 | 335.98 | 1050.00 |
| 21.100 | 938.86 | 2026.00 | 2026.00 | 2162.00 | 2162.00 | 92.00 | 210.00 |
| 21.100 | 940.06 | 2015.85 | 2026.00 | 2162.00 | 2177.26 | 161.40 | 210.00 |
| 21.100 | 940.32 | 2014.41 | 2026.00 | 2162.00 | 2180.96 | 166.54 | 210.00 |
| 21.100 | 940.89 | 2012.89 | 2026.00 | 2162.00 | 2200.79 | 187.91 | 210.00 |
| 21.200 | 938.90 | 2130.00 | 2113.00 | 2272.00 | 2271.83 | 111.62 | 140.00 |
| 21.200 | 940.11 | 2127.77 | 2113.00 | 2272.00 | 2287.35 | 159.58 | 140.00 |
| 21.200 | 940.37 | 2127.07 | 2113.00 | 2272.00 | 2292.83 | 165.76 | 140.00 |
| 21.200 | 940.93 | 2125.53 | 2113.00 | 2272.00 | 2347.15 | 221.62 | 140.00 |
| 21.300 | 938.97 | 2130.00 | 2130.00 | 2227.00 | 2227.00 | 97.00 | 125.00 |
| 21.300 | 940.14 | 2127.66 | 2130.00 | 2227.00 | 2346.21 | 218.55 | 125.00 |
| 21.300 | 940.40 | 2126.97 | 2130.00 | 2227.00 | 2373.03 | 246.06 | 125.00 |
| 21.300 | 940.96 | 2125.43 | 2130.00 | 2227.00 | 2432.55 | 307.12 | 125.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 21.500 | 945.42 | 2210.00 | 2210.00 | 2308.00 | 2308.00 | 98.00 | 15.00 |
| 21.500 | 945.62 | 2210.00 | 2210.00 | 2308.00 | 2308.00 | 98.00 | 15.00 |
| 21.500 | 945.71 | 2210.00 | 2210.00 | 2308.00 | 2308.00 | 98.00 | 15.00 |
| 21.500 | 945.90 | 2210.00 | 2210.00 | 2308.00 | 2308.00 | 98.00 | 15.00 |
| 21.600 | 945.71 | 205.00 | 205.00 | 308.00 | 308.00 | 103.00 | 27.00 |
| 21.600 | 945.96 | 205.00 | 205.00 | 308.00 | 308.00 | 103.00 | 27.00 |
| 21.600 | 946.06 | 205.00 | 205.00 | 308.00 | 308.00 | 103.00 | 27.00 |
| 21.600 | 946.30 | 205.00 | 205.00 | 308.00 | 308.00 | 103.00 | 27.00 |
| 21.900 | 945.71 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 73.00 |
| 21.900 | 945.96 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 73.00 |
| 21.900 | 946.06 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 73.00 |
| 21.900 | 946.30 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 73.00 |
| 22.000 | 945.71 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 98.12 | 1.00 |
| 22.000 | 945.96 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 98.26 | 1.00 |
| 22.000 | 946.06 | 900.00 | 2185.00 | 2288.00 | 2288.00 | 115.60 | 1.00 |
| 22.000 | 946.30 | 900.00 | 2185.00 | 2288.00 | 2288.00 | 180.26 | 1.00 |
| 22.100 | 945.71 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 98.12 | 23.00 |
| 22.100 | 945.96 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 98.26 | 23.00 |
| 22.100 | 946.06 | 900.00 | 2185.00 | 2288.00 | 2288.00 | 115.73 | 23.00 |
| 22.100 | 946.30 | 900.00 | 2185.00 | 2288.00 | 2288.00 | 180.42 | 23.00 |
| 22.200 | 945.71 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 1.00 |
| 22.200 | 945.96 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 1.00 |
| 22.200 | 946.07 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 1.00 |
| 22.200 | 946.31 | 2185.00 | 2185.00 | 2288.00 | 2288.00 | 103.00 | 1.00 |
| 22.300 | 945.73 | 2148.00 | 2164.00 | 2374.00 | 2388.00 | 240.00 | 103.00 |
| 22.300 | 945.99 | 2148.00 | 2164.00 | 2374.00 | 2388.00 | 240.00 | 103.00 |
| 22.300 | 946.10 | 2148.00 | 2164.00 | 2374.00 | 2388.00 | 240.00 | 103.00 |
| 22.300 | 946.35 | 2148.00 | 2164.00 | 2374.00 | 2388.00 | 240.00 | 103.00 |
| 22.500 | 945.73 | 2028.90 | 2008.00 | 2420.00 | 2408.96 | 380.06 | 450.00 |
| 22.500 | 946.00 | 2025.08 | 2008.00 | 2420.00 | 2410.98 | 385.90 | 450.00 |
| 22.500 | 946.10 | 2023.52 | 2008.00 | 2420.00 | 2411.80 | 388.28 | 450.00 |
| 22.500 | 946.35 | 2020.00 | 2008.00 | 2420.00 | 2413.66 | 393.66 | 450.00 |
| 22.550 | 945.74 | 1996.84 | 2000.00 | 2380.00 | 2374.77 | 377.94 | 392.00 |
| 22.550 | 946.00 | 1996.40 | 2000.00 | 2380.00 | 2376.22 | 379.82 | 392.00 |
| 22.550 | 946.11 | 1996.22 | 2000.00 | 2380.00 | 2376.81 | 380.59 | 392.00 |
| 22.550 | 946.36 | 1995.81 | 2000.00 | 2380.00 | 2378.18 | 382.37 | 392.00 |
| 22.600 | 945.74 | 1978.19 | 2002.00 | 2288.00 | 2353.08 | 374.89 | 196.00 |
| 22.600 | 946.00 | 1975.64 | 2002.00 | 2288.00 | 2357.95 | 382.31 | 196.00 |
| 22.600 | 946.11 | 1974.61 | 2002.00 | 2288.00 | 2359.94 | 385.33 | 196.00 |
| 22.600 | 946.36 | 1972.20 | 2002.00 | 2288.00 | 2364.53 | 392.33 | 196.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 22.800 | 945.73 | 1995.76 | 1992.00 | 2170.00 | 2294.37 | 298.60 | 125.00 |
| 22.800 | 946.00 | 1995.42 | 1992.00 | 2170.00 | 2304.33 | 308.91 | 125.00 |
| 22.800 | 946.11 | 1995.29 | 1992.00 | 2170.00 | 2308.39 | 313.10 | 125.00 |
| 22.800 | 946.36 | 1994.96 | 1992.00 | 2170.00 | 2317.80 | 322.83 | 125.00 |
| 22.900 | 945.73 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 108.00 |
| 22.900 | 946.00 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 108.00 |
| 22.900 | 946.11 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 108.00 |
| 22.900 | 946.36 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 108.00 |
| 23.000 | 945.73 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 1.00 |
| 23.000 | 946.00 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 1.00 |
| 23.000 | 946.11 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 1.00 |
| 23.000 | 946.36 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 1.00 |
| 23.100 | 945.73 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 56.00 |
| 23.100 | 945.99 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 56.00 |
| 23.100 | 946.09 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 56.00 |
| 23.100 | 946.34 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 98.00 | 56.00 |
| 23.200 | 945.73 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 1.00 |
| 23.200 | 945.99 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 1.00 |
| 23.200 | 946.10 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 1.00 |
| 23.200 | 946.35 | 2000.00 | 2000.00 | 2100.00 | 2100.00 | 100.00 | 1.00 |
| 23.300 | 945.77 | 1998.01 | 1992.00 | 2280.00 | 2285.76 | 287.74 | 82.00 |
| 23.300 | 946.05 | 1997.44 | 1992.00 | 2280.00 | 2287.41 | 289.97 | 82.00 |
| 23.300 | 946.16 | 1997.21 | 1992.00 | 2280.00 | 2288.09 | 290.88 | 82.00 |
| 23.300 | 946.42 | 1996.67 | 1992.00 | 2280.00 | 2289.66 | 292.99 | 82.00 |
| 23.400 | 945.77 | 1989.38 | 2000.00 | 2336.00 | 2333.80 | 344.42 | 1133.00 |
| 23.400 | 946.05 | 1984.17 | 2000.00 | 2336.00 | 2334.97 | 350.80 | 1133.00 |
| 23.400 | 946.17 | 1982.04 | 2000.00 | 2336.00 | 2335.44 | 353.40 | 1133.00 |
| 23.400 | 946.43 | 1977.11 | 2000.00 | 2336.00 | 2337.83 | 360.72 | 1133.00 |
| 23.500 | 945.77 | 2024.77 | 2140.00 | 2420.00 | 2535.13 | 510.35 | 516.00 |
| 23.500 | 946.05 | 2008.45 | 2140.00 | 2420.00 | 2551.51 | 543.06 | 516.00 |
| 23.500 | 946.17 | 2001.78 | 2140.00 | 2420.00 | 2558.21 | 556.43 | 516.00 |
| 23.500 | 946.43 | 1998.29 | 2140.00 | 2420.00 | 2560.51 | 562.22 | 516.00 |
| 24.000 | 945.77 | 1991.24 | 1960.00 | 2471.00 | 2311.06 | 319.82 | 233.00 |
| 24.000 | 946.05 | 1989.85 | 1960.00 | 2471.00 | 2321.70 | 331.84 | 233.00 |
| 24.000 | 946.17 | 1989.29 | 1960.00 | 2471.00 | 2326.04 | 336.76 | 233.00 |
| 24.000 | 946.44 | 1987.97 | 1960.00 | 2471.00 | 2336.12 | 348.15 | 233.00 |

MOORE BUSINESS FORMS INC. 27

0 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.000 | 0.00 | 0.00 | 0.00 | 923.00 | 970.00 | 927.80 | 0.00 | 927.92 | 17.56 | 2.77 | 383.06 | 231.45 |
| 12.000 | 0.00 | 0.00 | 0.00 | 923.00 | 1430.00 | 928.70 | 0.00 | 928.81 | 12.59 | 2.81 | 692.68 | 403.00 |
| 12.000 | 0.00 | 0.00 | 0.00 | 923.00 | 1600.00 | 929.00 | 0.00 | 929.11 | 11.36 | 2.81 | 806.65 | 474.74 |
| 12.000 | 0.00 | 0.00 | 0.00 | 923.00 | 1970.00 | 929.50 | 0.00 | 929.61 | 10.43 | 2.91 | 1008.57 | 609.95 |
| 12.600 | 1850.00 | 0.00 | 0.00 | 924.60 | 970.00 | 929.80 | 0.00 | 929.90 | 7.17 | 2.45 | 403.05 | 362.20 |
| 12.600 | 1850.00 | 0.00 | 0.00 | 924.60 | 1430.00 | 930.64 | 0.00 | 930.79 | 9.11 | 3.04 | 498.29 | 473.78 |
| 12.600 | 1850.00 | 0.00 | 0.00 | 924.60 | 1600.00 | 930.90 | 0.00 | 931.06 | 9.73 | 3.23 | 546.02 | 512.94 |
| 12.600 | 1850.00 | 0.00 | 0.00 | 924.60 | 1970.00 | 931.40 | 0.00 | 931.59 | 10.80 | 3.57 | 676.12 | 599.46 |
| 12.700 | 1500.00 | 0.00 | 0.00 | 926.00 | 970.00 | 930.80 | 0.00 | 930.87 | 5.92 | 2.13 | 505.49 | 398.72 |
| 12.700 | 1500.00 | 0.00 | 0.00 | 926.00 | 1430.00 | 931.80 | 0.00 | 931.89 | 6.00 | 2.46 | 716.63 | 583.63 |
| 12.700 | 1500.00 | 0.00 | 0.00 | 926.00 | 1600.00 | 932.11 | 0.00 | 932.20 | 6.03 | 2.56 | 800.34 | 651.42 |
| 12.700 | 1500.00 | 0.00 | 0.00 | 926.00 | 1970.00 | 932.69 | 0.00 | 932.80 | 6.12 | 2.75 | 971.57 | 796.31 |
| 12.800 | 1750.00 | 0.00 | 0.00 | 927.40 | 970.00 | 932.00 | 0.00 | 932.07 | 8.04 | 2.27 | 448.34 | 342.04 |
| 12.800 | 1750.00 | 0.00 | 0.00 | 927.40 | 1430.00 | 932.99 | 0.00 | 933.09 | 7.93 | 2.62 | 587.24 | 507.89 |
| 12.800 | 1750.00 | 0.00 | 0.00 | 927.40 | 1600.00 | 933.30 | 0.00 | 933.41 | 7.99 | 2.74 | 634.76 | 566.10 |
| 12.800 | 1750.00 | 0.00 | 0.00 | 927.40 | 1970.00 | 933.90 | 0.00 | 934.03 | 8.21 | 2.99 | 732.20 | 687.51 |
| 13.100 | 240.00 | 0.00 | 0.00 | 927.20 | 970.00 | 932.17 | 0.00 | 932.20 | 2.99 | 1.30 | 745.37 | 561.28 |
| 13.100 | 240.00 | 0.00 | 0.00 | 927.20 | 1430.00 | 933.18 | 0.00 | 933.22 | 2.86 | 1.48 | 967.90 | 846.30 |
| 13.100 | 240.00 | 0.00 | 0.00 | 927.20 | 1600.00 | 933.50 | 0.00 | 933.54 | 2.85 | 1.54 | 1039.17 | 947.33 |
| 13.100 | 240.00 | 0.00 | 0.00 | 927.20 | 1970.00 | 934.13 | 0.00 | 934.17 | 2.90 | 1.67 | 1179.64 | 1157.61 |
| 13.200 | 11.60 | 940.80 | 939.60 | 927.30 | 970.00 | 932.18 | 0.00 | 932.21 | 6.42 | 1.32 | 733.63 | 382.71 |
| 13.200 | 11.60 | 940.80 | 939.60 | 927.30 | 1430.00 | 933.19 | 0.00 | 933.23 | 6.09 | 1.50 | 954.78 | 579.25 |
| 13.200 | 11.60 | 940.80 | 939.60 | 927.30 | 1600.00 | 933.51 | 0.00 | 933.55 | 6.07 | 1.56 | 1026.18 | 649.49 |
| 13.200 | 11.60 | 940.80 | 939.60 | 927.30 | 1970.00 | 934.13 | 0.00 | 934.18 | 6.13 | 1.69 | 1166.99 | 795.86 |
| 13.300 | 1.00 | 0.00 | 0.00 | 927.30 | 970.00 | 932.18 | 0.00 | 932.21 | 6.42 | 1.32 | 733.73 | 382.79 |
| 13.300 | 1.00 | 0.00 | 0.00 | 927.30 | 1430.00 | 933.19 | 0.00 | 933.23 | 6.09 | 1.50 | 954.88 | 579.35 |
| 13.300 | 1.00 | 0.00 | 0.00 | 927.30 | 1600.00 | 933.51 | 0.00 | 933.55 | 6.07 | 1.56 | 1026.28 | 649.59 |
| 13.300 | 1.00 | 0.00 | 0.00 | 927.30 | 1970.00 | 934.13 | 0.00 | 934.18 | 6.13 | 1.69 | 1167.09 | 795.97 |
| 14.100 | 317.00 | 0.00 | 0.00 | 925.20 | 970.00 | 932.43 | 0.00 | 932.60 | 18.07 | 3.35 | 289.43 | 228.22 |
| 14.100 | 317.00 | 0.00 | 0.00 | 925.20 | 1430.00 | 933.42 | 0.00 | 933.67 | 22.60 | 4.06 | 352.44 | 300.79 |
| 14.100 | 317.00 | 0.00 | 0.00 | 925.20 | 1600.00 | 933.73 | 0.00 | 934.01 | 24.09 | 4.29 | 373.34 | 325.96 |
| 14.100 | 317.00 | 0.00 | 0.00 | 925.20 | 1970.00 | 934.34 | 0.00 | 934.69 | 27.13 | 4.74 | 415.48 | 378.22 |
| 14.300 | 4.00 | 0.00 | 0.00 | 925.20 | 970.00 | 932.43 | 0.00 | 932.61 | 18.01 | 3.35 | 289.73 | 228.55 |
| 14.300 | 4.00 | 0.00 | 0.00 | 925.20 | 1430.00 | 933.43 | 0.00 | 933.68 | 22.53 | 4.05 | 352.82 | 301.24 |
| 14.300 | 4.00 | 0.00 | 0.00 | 925.20 | 1600.00 | 933.74 | 0.00 | 934.02 | 24.02 | 4.28 | 373.75 | 326.45 |
| 14.300 | 4.00 | 0.00 | 0.00 | 925.20 | 1970.00 | 934.35 | 0.00 | 934.70 | 27.04 | 4.74 | 415.95 | 378.81 |

MOOPE BUSINESS FORMS INC 27

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.400 | 9.00 | 0.00 | 0.00 | 927.10 | 970.00 | 932.41 | 0.00 | 932.65 | 8.16 | 3.98 | 243.99 | 339.67 |
| 14.400 | 9.00 | 0.00 | 0.00 | 927.10 | 1430.00 | 933.39 | 0.00 | 933.74 | 8.96 | 4.72 | 303.02 | 477.81 |
| 14.400 | 9.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.70 | 0.00 | 934.09 | 9.31 | 4.98 | 321.60 | 524.39 |
| 14.400 | 9.00 | 0.00 | 0.00 | 927.10 | 1970.00 | 934.30 | 0.00 | 934.77 | 10.14 | 5.51 | 357.70 | 618.78 |
| 14.500 | 1.00 | 940.80 | 937.60 | 927.10 | 970.00 | 932.41 | 0.00 | 932.65 | 8.91 | 3.97 | 244.07 | 324.93 |
| 14.500 | 1.00 | 940.80 | 937.60 | 927.10 | 1430.00 | 933.39 | 0.00 | 933.74 | 10.12 | 4.72 | 303.12 | 449.44 |
| 14.500 | 1.00 | 940.80 | 937.60 | 927.10 | 1600.00 | 933.70 | 0.00 | 934.09 | 10.63 | 4.97 | 321.70 | 490.78 |
| 14.500 | 1.00 | 940.80 | 937.60 | 927.10 | 1970.00 | 934.30 | 0.00 | 934.78 | 11.79 | 5.51 | 357.81 | 573.71 |
| 14.600 | 54.00 | 940.80 | 937.60 | 927.10 | 970.00 | 932.46 | 0.00 | 932.70 | 8.62 | 3.93 | 246.82 | 330.47 |
| 14.600 | 54.00 | 940.80 | 937.60 | 927.10 | 1430.00 | 933.46 | 0.00 | 933.79 | 9.79 | 4.67 | 306.53 | 456.95 |
| 14.600 | 54.00 | 940.80 | 937.60 | 927.10 | 1600.00 | 933.77 | 0.00 | 934.15 | 10.29 | 4.92 | 325.28 | 498.86 |
| 14.600 | 54.00 | 940.80 | 937.60 | 927.10 | 1970.00 | 934.38 | 0.00 | 934.84 | 11.42 | 5.45 | 361.80 | 583.08 |
| 14.700 | 1.00 | 0.00 | 0.00 | 927.10 | 970.00 | 932.47 | 0.00 | 932.70 | 23.91 | 3.92 | 247.37 | 198.36 |
| 14.700 | 1.00 | 0.00 | 0.00 | 927.10 | 1430.00 | 933.46 | 0.00 | 933.80 | 26.34 | 4.66 | 306.98 | 278.63 |
| 14.700 | 1.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.77 | 0.00 | 934.15 | 27.38 | 4.91 | 325.78 | 305.76 |
| 14.700 | 1.00 | 0.00 | 0.00 | 927.10 | 1970.00 | 934.38 | 0.00 | 934.84 | 29.80 | 5.44 | 362.42 | 360.85 |
| 14.720 | 4.00 | 0.00 | 0.00 | 927.10 | 970.00 | 932.48 | 0.00 | 932.71 | 23.76 | 3.91 | 247.86 | 198.98 |
| 14.720 | 4.00 | 0.00 | 0.00 | 927.10 | 1430.00 | 933.47 | 0.00 | 933.81 | 26.20 | 4.65 | 307.51 | 279.38 |
| 14.720 | 4.00 | 0.00 | 0.00 | 927.10 | 1600.00 | 933.79 | 0.00 | 934.16 | 27.24 | 4.90 | 326.34 | 306.58 |
| 14.720 | 4.00 | 0.00 | 0.00 | 927.10 | 1970.00 | 934.40 | 0.00 | 934.86 | 29.64 | 5.43 | 363.05 | 361.83 |
| 14.750 | 770.00 | 0.00 | 0.00 | 927.50 | 970.00 | 933.91 | 0.00 | 934.11 | 14.19 | 3.61 | 288.15 | 257.54 |
| 14.750 | 770.00 | 0.00 | 0.00 | 927.50 | 1430.00 | 935.03 | 0.00 | 935.27 | 14.29 | 4.11 | 435.39 | 378.35 |
| 14.750 | 770.00 | 0.00 | 0.00 | 927.50 | 1600.00 | 935.38 | 0.00 | 935.63 | 13.91 | 4.21 | 494.66 | 429.04 |
| 14.750 | 770.00 | 0.00 | 0.00 | 927.50 | 1970.00 | 936.08 | 0.00 | 936.33 | 13.06 | 4.35 | 624.10 | 545.04 |
| 14.800 | 520.00 | 0.00 | 0.00 | 927.80 | 970.00 | 934.42 | 0.00 | 934.47 | 3.91 | 1.93 | 524.91 | 490.55 |
| 14.800 | 520.00 | 0.00 | 0.00 | 927.80 | 1430.00 | 935.57 | 0.00 | 935.65 | 4.14 | 2.27 | 684.30 | 702.50 |
| 14.800 | 520.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 935.93 | 0.00 | 936.01 | 4.26 | 2.39 | 737.30 | 774.97 |
| 14.800 | 520.00 | 0.00 | 0.00 | 927.80 | 1970.00 | 936.61 | 0.00 | 936.71 | 4.51 | 2.62 | 847.41 | 928.04 |
| 14.900 | 360.00 | 0.00 | 0.00 | 927.80 | 970.00 | 934.59 | 0.00 | 934.68 | 8.06 | 2.42 | 401.52 | 341.61 |
| 14.900 | 360.00 | 0.00 | 0.00 | 927.80 | 1430.00 | 935.75 | 0.00 | 935.89 | 9.68 | 2.95 | 485.40 | 459.67 |
| 14.900 | 360.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 936.11 | 0.00 | 936.26 | 10.33 | 3.13 | 510.88 | 497.71 |
| 14.900 | 360.00 | 0.00 | 0.00 | 927.80 | 1970.00 | 936.80 | 0.00 | 936.99 | 11.75 | 3.51 | 560.64 | 574.67 |
| 15.000 | 31.00 | 0.00 | 0.00 | 928.50 | 970.00 | 934.56 | 0.00 | 934.74 | 17.64 | 3.47 | 279.38 | 230.98 |
| 15.000 | 31.00 | 0.00 | 0.00 | 928.50 | 1430.00 | 935.70 | 0.00 | 935.97 | 20.59 | 4.21 | 339.29 | 315.16 |
| 15.000 | 31.00 | 0.00 | 0.00 | 928.50 | 1600.00 | 936.04 | 0.00 | 936.35 | 21.85 | 4.48 | 357.37 | 342.30 |
| 15.000 | 31.00 | 0.00 | 0.00 | 928.50 | 1970.00 | 936.71 | 0.00 | 937.10 | 24.60 | 5.02 | 392.51 | 397.20 |
| 15.100 | 1.00 | 938.80 | 936.00 | 928.50 | 970.00 | 934.55 | 0.00 | 934.76 | 4.44 | 3.68 | 263.86 | 460.19 |
| 15.100 | 1.00 | 938.80 | 936.00 | 928.50 | 1430.00 | 935.68 | 0.00 | 935.99 | 5.05 | 4.46 | 320.42 | 636.09 |
| 15.100 | 1.00 | 938.80 | 936.00 | 928.50 | 1600.00 | 936.02 | 0.00 | 936.37 | 13.56 | 4.76 | 335.87 | 434.55 |
| 15.100 | 1.00 | 938.80 | 936.00 | 928.50 | 1970.00 | 936.64 | 0.00 | 937.17 | 20.55 | 5.87 | 335.88 | 434.57 |

MOORE BUSINESS FORMS INC 27

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | FG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.200 | 36.00 | 938.80 | 936.00 | 928.40 | 970.00 | 934.56 | 0.00 | 934.77 | 4.54 | 3.70 | 262.47 | 455.42 |
| 15.200 | 36.00 | 938.80 | 936.00 | 928.40 | 1430.00 | 935.70 | 0.00 | 936.01 | 5.15 | 4.48 | 318.98 | 630.33 |
| 15.200 | 36.00 | 938.80 | 936.00 | 928.40 | 1600.00 | 936.07 | 0.00 | 936.43 | 13.83 | 4.79 | 334.03 | 430.25 |
| 15.200 | 36.00 | 938.80 | 936.00 | 928.40 | 1970.00 | 936.71 | 0.00 | 937.25 | 20.96 | 5.90 | 334.04 | 430.26 |
| 15.300 | 1.00 | 0.00 | 0.00 | 928.40 | 970.00 | 934.59 | 0.00 | 934.78 | 4.36 | 3.48 | 278.60 | 464.76 |
| 15.300 | 1.00 | 0.00 | 0.00 | 928.40 | 1430.00 | 935.74 | 0.00 | 936.02 | 5.05 | 4.22 | 339.18 | 636.50 |
| 15.300 | 1.00 | 0.00 | 0.00 | 928.40 | 1600.00 | 936.13 | 0.00 | 936.44 | 5.25 | 4.45 | 359.59 | 698.46 |
| 15.300 | 1.00 | 0.00 | 0.00 | 928.40 | 1970.00 | 936.93 | 0.00 | 937.30 | 5.61 | 4.91 | 401.40 | 831.43 |
| 15.400 | 11.00 | 0.00 | 0.00 | 928.20 | 970.00 | 934.73 | 0.00 | 934.81 | 1.89 | 2.33 | 416.21 | 705.84 |
| 15.400 | 11.00 | 0.00 | 0.00 | 928.20 | 1430.00 | 935.95 | 0.00 | 936.07 | 2.30 | 2.81 | 508.60 | 941.95 |
| 15.400 | 11.00 | 0.00 | 0.00 | 928.20 | 1600.00 | 936.36 | 0.00 | 936.50 | 2.42 | 2.96 | 541.26 | 1028.19 |
| 15.400 | 11.00 | 0.00 | 0.00 | 928.20 | 1970.00 | 937.21 | 0.00 | 937.37 | 2.74 | 3.22 | 612.43 | 1189.54 |
| 15.800 | 350.00 | 0.00 | 0.00 | 927.80 | 970.00 | 934.80 | 0.00 | 934.90 | 2.44 | 2.56 | 378.20 | 620.66 |
| 15.800 | 350.00 | 0.00 | 0.00 | 927.80 | 1430.00 | 936.02 | 0.00 | 936.17 | 2.79 | 3.08 | 464.17 | 855.50 |
| 15.800 | 350.00 | 0.00 | 0.00 | 927.80 | 1600.00 | 936.44 | 0.00 | 936.60 | 2.90 | 3.24 | 493.22 | 940.16 |
| 15.800 | 350.00 | 0.00 | 0.00 | 927.80 | 1970.00 | 937.29 | 0.00 | 937.49 | 3.08 | 3.56 | 553.04 | 1122.24 |
| 15.900 | 56.00 | 0.00 | 0.00 | 928.80 | 970.00 | 934.80 | 0.00 | 934.94 | 10.80 | 3.02 | 320.79 | 295.18 |
| 15.900 | 56.00 | 0.00 | 0.00 | 928.80 | 1430.00 | 936.02 | 0.00 | 936.23 | 12.44 | 3.63 | 393.58 | 405.46 |
| 15.900 | 56.00 | 0.00 | 0.00 | 928.80 | 1600.00 | 936.44 | 0.00 | 936.66 | 12.92 | 3.83 | 418.22 | 445.21 |
| 15.900 | 56.00 | 0.00 | 0.00 | 928.80 | 1970.00 | 937.29 | 0.00 | 937.56 | 13.85 | 4.21 | 468.26 | 529.26 |
| 16.000 | 1.00 | 939.60 | 936.40 | 928.80 | 970.00 | 934.80 | 0.00 | 934.94 | 12.77 | 3.03 | 320.42 | 271.39 |
| 16.000 | 1.00 | 939.60 | 936.40 | 928.80 | 1430.00 | 936.02 | 0.00 | 936.23 | 15.23 | 3.64 | 393.19 | 366.48 |
| 16.000 | 1.00 | 939.60 | 936.40 | 928.80 | 1600.00 | 936.44 | 0.00 | 936.67 | 33.17 | 3.85 | 415.53 | 277.83 |
| 16.000 | 1.00 | 939.60 | 936.40 | 928.80 | 1970.00 | 937.24 | 0.00 | 937.59 | 50.28 | 4.74 | 415.53 | 277.83 |
| 16.100 | 54.00 | 939.60 | 936.40 | 929.00 | 970.00 | 934.87 | 0.00 | 935.02 | 13.33 | 3.04 | 318.67 | 265.72 |
| 16.100 | 54.00 | 939.60 | 936.40 | 929.00 | 1430.00 | 936.11 | 0.00 | 936.31 | 15.73 | 3.65 | 392.11 | 360.56 |
| 16.100 | 54.00 | 939.60 | 936.40 | 929.00 | 1600.00 | 936.62 | 0.00 | 936.85 | 35.06 | 3.90 | 409.98 | 270.22 |
| 16.100 | 54.00 | 939.60 | 936.40 | 929.00 | 1970.00 | 937.51 | 0.00 | 937.87 | 53.15 | 4.81 | 409.98 | 270.22 |
| 16.200 | 1.00 | 0.00 | 0.00 | 929.00 | 970.00 | 934.87 | 0.00 | 935.02 | 11.14 | 3.04 | 319.09 | 290.64 |
| 16.200 | 1.00 | 0.00 | 0.00 | 929.00 | 1430.00 | 936.11 | 0.00 | 936.32 | 12.70 | 3.64 | 392.68 | 401.25 |
| 16.200 | 1.00 | 0.00 | 0.00 | 929.00 | 1600.00 | 936.63 | 0.00 | 936.86 | 12.60 | 3.78 | 423.48 | 450.74 |
| 16.200 | 1.00 | 0.00 | 0.00 | 929.00 | 1970.00 | 937.62 | 0.00 | 937.88 | 12.80 | 4.08 | 482.65 | 550.55 |
| 16.300 | 56.00 | 0.00 | 0.00 | 928.80 | 970.00 | 934.94 | 0.00 | 935.05 | 4.00 | 2.67 | 364.03 | 484.73 |
| 16.300 | 56.00 | 0.00 | 0.00 | 928.80 | 1430.00 | 936.20 | 0.00 | 936.36 | 4.54 | 3.21 | 449.14 | 671.15 |
| 16.300 | 56.00 | 0.00 | 0.00 | 928.80 | 1600.00 | 936.73 | 0.00 | 936.90 | 4.44 | 3.31 | 487.67 | 759.60 |
| 16.300 | 56.00 | 0.00 | 0.00 | 928.80 | 1970.00 | 937.73 | 0.00 | 937.93 | 4.39 | 3.55 | 563.06 | 939.92 |
| 16.800 | 125.00 | 0.00 | 0.00 | 929.06 | 970.00 | 935.04 | 0.00 | 935.12 | 6.49 | 2.27 | 428.08 | 380.88 |
| 16.800 | 125.00 | 0.00 | 0.00 | 929.06 | 1430.00 | 936.32 | 0.00 | 936.43 | 6.76 | 2.65 | 539.24 | 549.93 |
| 16.800 | 125.00 | 0.00 | 0.00 | 929.06 | 1600.00 | 936.86 | 0.00 | 936.97 | 6.53 | 2.73 | 585.38 | 626.11 |
| 16.800 | 125.00 | 0.00 | 0.00 | 929.06 | 1970.00 | 937.88 | 0.00 | 938.00 | 5.85 | 2.82 | 757.36 | 814.53 |

MOORE BUSINESS FORMS, INC 27

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.900 | 19.00 | 0.00 | 0.00 | 929.32 | 970.00 | 935.06 | 0.00 | 935.13 | 6.31 | 2.20 | 440.78 | 386.10 |
| 16.900 | 19.00 | 0.00 | 0.00 | 929.32 | 1430.00 | 936.35 | 0.00 | 936.45 | 6.36 | 2.55 | 560.74 | 567.10 |
| 16.900 | 19.00 | 0.00 | 0.00 | 929.32 | 1600.00 | 936.88 | 0.00 | 936.99 | 6.09 | 2.62 | 610.24 | 648.55 |
| 16.900 | 19.00 | 0.00 | 0.00 | 929.32 | 1970.00 | 937.90 | 0.00 | 938.01 | 5.42 | 2.71 | 786.44 | 846.12 |
| 17.000 | 1.00 | 960.00 | 937.05 | 929.32 | 970.00 | 935.05 | 0.00 | 935.14 | 6.05 | 2.38 | 408.30 | 394.45 |
| 17.000 | 1.00 | 960.00 | 937.05 | 929.32 | 1430.00 | 936.34 | 0.00 | 936.46 | 6.58 | 2.74 | 521.22 | 557.50 |
| 17.000 | 1.00 | 960.00 | 937.05 | 929.32 | 1600.00 | 936.87 | 0.00 | 936.99 | 6.49 | 2.82 | 567.92 | 628.16 |
| 17.000 | 1.00 | 960.00 | 937.05 | 929.32 | 1970.00 | 937.86 | 0.00 | 938.04 | 16.67 | 3.38 | 582.87 | 482.48 |
| 17.100 | 90.00 | 960.00 | 937.05 | 929.32 | 970.00 | 935.11 | 0.00 | 935.19 | 5.87 | 2.35 | 412.63 | 400.46 |
| 17.100 | 90.00 | 960.00 | 937.05 | 929.32 | 1430.00 | 936.40 | 0.00 | 936.51 | 6.43 | 2.72 | 525.63 | 564.09 |
| 17.100 | 90.00 | 960.00 | 937.05 | 929.32 | 1600.00 | 936.93 | 0.00 | 937.05 | 6.36 | 2.80 | 572.15 | 634.65 |
| 17.100 | 90.00 | 960.00 | 937.05 | 929.32 | 1970.00 | 938.01 | 0.00 | 938.19 | 16.67 | 3.38 | 582.87 | 482.48 |
| 17.200 | 1.00 | 960.00 | 937.18 | 928.80 | 970.00 | 935.11 | 0.00 | 935.20 | 6.08 | 2.33 | 416.91 | 393.24 |
| 17.200 | 1.00 | 960.00 | 937.18 | 928.80 | 1430.00 | 936.41 | 0.00 | 936.52 | 6.17 | 2.68 | 533.86 | 575.54 |
| 17.200 | 1.00 | 960.00 | 937.18 | 928.80 | 1600.00 | 936.94 | 0.00 | 937.05 | 5.94 | 2.75 | 582.14 | 656.65 |
| 17.200 | 1.00 | 960.00 | 937.18 | 928.80 | 1970.00 | 938.03 | 0.00 | 938.20 | 17.31 | 3.26 | 604.70 | 473.55 |
| 17.300 | 100.00 | 960.00 | 937.18 | 928.10 | 970.00 | 935.18 | 0.00 | 935.25 | 4.56 | 2.13 | 455.47 | 454.03 |
| 17.300 | 100.00 | 960.00 | 937.18 | 928.10 | 1430.00 | 936.48 | 0.00 | 936.58 | 4.92 | 2.50 | 572.78 | 644.64 |
| 17.300 | 100.00 | 960.00 | 937.18 | 928.10 | 1600.00 | 937.01 | 0.00 | 937.11 | 4.82 | 2.58 | 620.95 | 728.42 |
| 17.300 | 100.00 | 960.00 | 937.18 | 928.10 | 1970.00 | 938.21 | 0.00 | 938.36 | 14.59 | 3.09 | 636.97 | 515.78 |
| 17.400 | 1.00 | 0.00 | 0.00 | 928.10 | 970.00 | 935.18 | 0.00 | 935.25 | 4.55 | 2.13 | 455.99 | 454.84 |
| 17.400 | 1.00 | 0.00 | 0.00 | 928.10 | 1430.00 | 936.48 | 0.00 | 936.58 | 4.91 | 2.49 | 573.34 | 645.60 |
| 17.400 | 1.00 | 0.00 | 0.00 | 928.10 | 1600.00 | 937.01 | 0.00 | 937.11 | 4.81 | 2.57 | 621.48 | 729.35 |
| 17.400 | 1.00 | 0.00 | 0.00 | 928.10 | 1970.00 | 938.26 | 0.00 | 938.37 | 4.35 | 2.67 | 737.63 | 944.32 |
| 17.500 | 120.00 | 0.00 | 0.00 | 930.20 | 970.00 | 935.23 | 0.00 | 935.33 | 6.17 | 2.45 | 396.21 | 390.35 |
| 17.500 | 120.00 | 0.00 | 0.00 | 930.20 | 1430.00 | 936.53 | 0.00 | 936.65 | 5.58 | 2.76 | 517.30 | 605.20 |
| 17.500 | 120.00 | 0.00 | 0.00 | 930.20 | 1600.00 | 937.06 | 0.00 | 937.18 | 5.16 | 2.82 | 566.50 | 704.14 |
| 17.500 | 120.00 | 0.00 | 0.00 | 930.20 | 1970.00 | 938.30 | 0.00 | 938.43 | 4.23 | 2.89 | 681.50 | 958.18 |
| 17.900 | 79.00 | 0.00 | 0.00 | 929.00 | 970.00 | 935.31 | 0.00 | 935.38 | 5.07 | 2.13 | 456.32 | 430.60 |
| 17.900 | 79.00 | 0.00 | 0.00 | 929.00 | 1430.00 | 936.61 | 0.00 | 936.70 | 4.58 | 2.39 | 599.18 | 668.21 |
| 17.900 | 79.00 | 0.00 | 0.00 | 929.00 | 1600.00 | 937.14 | 0.00 | 937.23 | 4.27 | 2.44 | 656.95 | 774.53 |
| 17.900 | 79.00 | 0.00 | 0.00 | 929.00 | 1970.00 | 938.38 | 0.00 | 938.47 | 3.55 | 2.48 | 793.08 | 1045.97 |
| 18.000 | 1.00 | 940.80 | 939.00 | 929.00 | 970.00 | 935.30 | 0.00 | 935.39 | 10.05 | 2.46 | 394.89 | 305.93 |
| 18.000 | 1.00 | 940.80 | 939.00 | 929.00 | 1430.00 | 936.59 | 0.00 | 936.72 | 11.85 | 2.89 | 494.58 | 415.34 |
| 18.000 | 1.00 | 940.80 | 939.00 | 929.00 | 1600.00 | 937.11 | 0.00 | 937.26 | 12.66 | 3.02 | 529.32 | 449.63 |
| 18.000 | 1.00 | 940.80 | 939.00 | 929.00 | 1970.00 | 938.34 | 0.00 | 938.51 | 15.99 | 3.32 | 593.27 | 492.62 |
| 18.100 | 40.00 | 940.80 | 939.00 | 929.30 | 970.00 | 935.34 | 0.00 | 935.43 | 7.95 | 2.38 | 407.90 | 344.05 |
| 18.100 | 40.00 | 940.80 | 939.00 | 929.30 | 1430.00 | 936.64 | 0.00 | 936.77 | 10.24 | 2.86 | 500.03 | 446.89 |
| 18.100 | 40.00 | 940.80 | 939.00 | 929.30 | 1600.00 | 937.16 | 0.00 | 937.30 | 11.15 | 3.00 | 532.64 | 479.06 |
| 18.100 | 40.00 | 940.80 | 939.00 | 929.30 | 1970.00 | 938.40 | 0.00 | 938.57 | 14.65 | 3.32 | 593.95 | 514.72 |

MOORE BUSINESS FORMS INC 27

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18.200 | 1.00 | 0.00 | 0.00 | 930.40 | 970.00 | 935.31 | 0.00 | 935.46 | 10.62 | 3.10 | 312.44 | 297.60 |
| 18.200 | 1.00 | 0.00 | 0.00 | 930.40 | 1430.00 | 936.61 | 0.00 | 936.79 | 9.57 | 3.40 | 420.35 | 462.28 |
| 18.200 | 1.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.14 | 0.00 | 937.33 | 8.81 | 3.43 | 466.71 | 539.03 |
| 18.200 | 1.00 | 0.00 | 0.00 | 930.40 | 1970.00 | 938.40 | 0.00 | 938.58 | 6.99 | 3.38 | 582.89 | 744.87 |
| 18.300 | 49.00 | 0.00 | 0.00 | 930.40 | 970.00 | 935.37 | 0.00 | 935.51 | 10.22 | 3.07 | 316.47 | 303.36 |
| 18.300 | 49.00 | 0.00 | 0.00 | 930.40 | 1430.00 | 936.66 | 0.00 | 936.84 | 9.29 | 3.37 | 424.54 | 469.07 |
| 18.300 | 49.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.19 | 0.00 | 937.37 | 8.57 | 3.40 | 471.07 | 546.40 |
| 18.300 | 49.00 | 0.00 | 0.00 | 930.40 | 1970.00 | 938.44 | 0.00 | 938.61 | 6.86 | 3.36 | 586.85 | 752.19 |
| 18.800 | 365.00 | 0.00 | 0.00 | 930.40 | 970.00 | 935.71 | 0.00 | 935.77 | 4.45 | 2.06 | 471.02 | 459.82 |
| 18.800 | 365.00 | 0.00 | 0.00 | 930.40 | 1430.00 | 937.01 | 0.00 | 937.09 | 4.27 | 2.29 | 623.26 | 692.15 |
| 18.800 | 365.00 | 0.00 | 0.00 | 930.40 | 1600.00 | 937.52 | 0.00 | 937.61 | 4.08 | 2.34 | 684.26 | 792.11 |
| 18.800 | 365.00 | 0.00 | 0.00 | 930.40 | 1970.00 | 938.73 | 0.00 | 938.81 | 3.44 | 2.35 | 839.67 | 1062.10 |
| 18.900 | 200.00 | 0.00 | 0.00 | 931.10 | 970.00 | 935.77 | 0.00 | 936.03 | 18.89 | 4.10 | 236.56 | 223.17 |
| 18.900 | 200.00 | 0.00 | 0.00 | 931.10 | 1430.00 | 937.04 | 0.00 | 937.36 | 16.69 | 4.55 | 314.27 | 350.00 |
| 18.900 | 200.00 | 0.00 | 0.00 | 931.10 | 1600.00 | 937.54 | 0.00 | 937.87 | 15.51 | 4.63 | 345.57 | 406.33 |
| 18.900 | 200.00 | 0.00 | 0.00 | 931.10 | 1970.00 | 938.72 | 0.00 | 939.06 | 12.73 | 4.68 | 420.63 | 552.25 |
| 19.000 | 4.00 | 940.10 | 938.90 | 931.10 | 970.00 | 935.77 | 0.00 | 936.04 | 12.66 | 4.22 | 229.90 | 272.60 |
| 19.000 | 4.00 | 940.10 | 938.90 | 931.10 | 1430.00 | 937.03 | 0.00 | 937.38 | 12.63 | 4.74 | 301.43 | 402.32 |
| 19.000 | 4.00 | 940.10 | 938.90 | 931.10 | 1600.00 | 937.53 | 0.00 | 937.89 | 12.32 | 4.86 | 329.38 | 455.89 |
| 19.000 | 4.00 | 940.10 | 938.90 | 931.10 | 1970.00 | 938.70 | 0.00 | 939.09 | 15.74 | 5.00 | 394.32 | 496.63 |
| 19.100 | 6.00 | 0.00 | 0.00 | 931.10 | 970.00 | 935.78 | 0.00 | 936.05 | 11.15 | 4.21 | 230.26 | 290.53 |
| 19.100 | 6.00 | 0.00 | 0.00 | 931.10 | 1430.00 | 937.04 | 0.00 | 937.39 | 10.82 | 4.74 | 301.38 | 434.65 |
| 19.100 | 6.00 | 0.00 | 0.00 | 931.10 | 1600.00 | 937.54 | 0.00 | 937.90 | 10.42 | 4.86 | 329.49 | 495.66 |
| 19.100 | 6.00 | 0.00 | 0.00 | 931.10 | 1970.00 | 938.71 | 0.00 | 939.10 | 9.27 | 4.98 | 395.86 | 646.90 |
| 19.200 | 1.00 | 0.00 | 0.00 | 930.90 | 970.00 | 935.77 | 0.00 | 936.06 | 9.23 | 4.33 | 224.18 | 319.26 |
| 19.200 | 1.00 | 0.00 | 0.00 | 930.90 | 1430.00 | 937.03 | 0.00 | 937.40 | 8.95 | 4.90 | 291.77 | 478.08 |
| 19.200 | 1.00 | 0.00 | 0.00 | 930.90 | 1600.00 | 937.52 | 0.00 | 937.91 | 8.54 | 5.01 | 319.07 | 547.46 |
| 19.200 | 1.00 | 0.00 | 0.00 | 930.90 | 1970.00 | 938.70 | 0.00 | 939.11 | 7.38 | 5.12 | 384.70 | 724.94 |
| 19.300 | 24.00 | 0.00 | 0.00 | 930.90 | 970.00 | 935.79 | 0.00 | 936.08 | 9.12 | 4.31 | 225.06 | 321.21 |
| 19.300 | 24.00 | 0.00 | 0.00 | 930.90 | 1430.00 | 937.05 | 0.00 | 937.42 | 8.86 | 4.89 | 292.73 | 480.47 |
| 19.300 | 24.00 | 0.00 | 0.00 | 930.90 | 1600.00 | 937.55 | 0.00 | 937.94 | 8.47 | 5.00 | 319.97 | 549.80 |
| 19.300 | 24.00 | 0.00 | 0.00 | 930.90 | 1970.00 | 938.72 | 0.00 | 939.13 | 7.34 | 5.11 | 385.49 | 727.15 |
| 19.800 | 165.00 | 0.00 | 0.00 | 931.60 | 970.00 | 936.07 | 0.00 | 936.35 | 37.91 | 4.29 | 225.87 | 157.55 |
| 19.800 | 165.00 | 0.00 | 0.00 | 931.60 | 1430.00 | 937.35 | 0.00 | 937.67 | 28.29 | 4.53 | 315.58 | 268.87 |
| 19.800 | 165.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 937.84 | 0.00 | 938.17 | 25.47 | 4.57 | 350.19 | 317.04 |
| 19.800 | 165.00 | 0.00 | 0.00 | 931.60 | 1970.00 | 939.00 | 0.00 | 939.32 | 20.09 | 4.57 | 431.07 | 439.48 |
| 19.900 | 50.00 | 0.00 | 0.00 | 931.60 | 970.00 | 936.28 | 0.00 | 936.53 | 30.97 | 4.03 | 240.53 | 174.29 |
| 19.900 | 50.00 | 0.00 | 0.00 | 931.60 | 1430.00 | 937.51 | 0.00 | 937.80 | 25.38 | 4.38 | 326.56 | 283.85 |
| 19.900 | 50.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 937.98 | 0.00 | 938.29 | 23.33 | 4.44 | 360.04 | 331.24 |
| 19.900 | 50.00 | 0.00 | 0.00 | 931.60 | 1970.00 | 939.11 | 0.00 | 939.42 | 19.01 | 4.49 | 438.76 | 451.79 |

FORMS INC 27
MOORE BUSINESS FORMS

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.000 | 1.00 | 943.60 | 942.10 | 931.60 | 970.00 | 936.22 | 0.00 | 936.59 | 22.75 | 4.89 | 198.34 | 203.39 |
| 20.000 | 1.00 | 943.60 | 942.10 | 931.60 | 1430.00 | 937.45 | 0.00 | 937.87 | 19.47 | 5.21 | 274.27 | 324.11 |
| 20.000 | 1.00 | 943.60 | 942.10 | 931.60 | 1600.00 | 937.92 | 0.00 | 938.35 | 18.23 | 5.26 | 304.08 | 374.72 |
| 20.000 | 1.00 | 943.60 | 942.10 | 931.60 | 1970.00 | 939.05 | 0.00 | 939.48 | 15.52 | 5.26 | 374.66 | 500.05 |
| 20.100 | 90.00 | 943.60 | 942.10 | 931.60 | 970.00 | 936.47 | 0.00 | 936.79 | 18.42 | 4.55 | 213.26 | 226.02 |
| 20.100 | 90.00 | 943.60 | 942.10 | 931.60 | 1430.00 | 937.66 | 0.00 | 938.04 | 17.16 | 4.99 | 286.82 | 345.22 |
| 20.100 | 90.00 | 943.60 | 942.10 | 931.60 | 1600.00 | 938.12 | 0.00 | 938.52 | 16.41 | 5.07 | 315.75 | 394.93 |
| 20.100 | 90.00 | 943.60 | 942.10 | 931.60 | 1970.00 | 939.22 | 0.00 | 939.62 | 14.47 | 5.12 | 384.43 | 517.91 |
| 20.200 | 1.00 | 0.00 | 0.00 | 931.60 | 970.00 | 936.61 | 0.00 | 936.82 | 7.48 | 3.67 | 264.24 | 354.58 |
| 20.200 | 1.00 | 0.00 | 0.00 | 931.60 | 1430.00 | 937.82 | 0.00 | 938.08 | 6.74 | 4.10 | 348.59 | 550.82 |
| 20.200 | 1.00 | 0.00 | 0.00 | 931.60 | 1600.00 | 938.28 | 0.00 | 938.56 | 6.37 | 4.20 | 381.06 | 633.87 |
| 20.200 | 1.00 | 0.00 | 0.00 | 931.60 | 1970.00 | 939.37 | 0.00 | 939.66 | 5.46 | 4.31 | 457.16 | 842.92 |
| 20.300 | 64.00 | 0.00 | 0.00 | 931.70 | 970.00 | 936.72 | 0.00 | 936.89 | 5.04 | 3.21 | 302.25 | 432.10 |
| 20.300 | 64.00 | 0.00 | 0.00 | 931.70 | 1430.00 | 937.92 | 0.00 | 938.13 | 5.03 | 3.70 | 386.41 | 637.58 |
| 20.300 | 64.00 | 0.00 | 0.00 | 931.70 | 1600.00 | 938.38 | 0.00 | 938.61 | 4.90 | 3.82 | 418.64 | 723.08 |
| 20.300 | 64.00 | 0.00 | 0.00 | 931.70 | 1970.00 | 939.53 | 0.00 | 939.72 | 3.56 | 3.61 | 622.34 | 1044.48 |
| 21.000 | 1050.00 | 0.00 | 0.00 | 933.20 | 970.00 | 937.60 | 0.00 | 938.61 | 131.53 | 8.06 | 121.58 | 84.58 |
| 21.000 | 1050.00 | 0.00 | 0.00 | 933.20 | 1430.00 | 938.86 | 938.59 | 939.67 | 82.16 | 7.72 | 256.52 | 157.76 |
| 21.000 | 1050.00 | 0.00 | 0.00 | 933.20 | 1600.00 | 939.35 | 0.00 | 939.98 | 61.36 | 7.10 | 338.36 | 204.26 |
| 21.000 | 1050.00 | 0.00 | 0.00 | 933.20 | 1970.00 | 940.26 | 0.00 | 940.64 | 35.71 | 6.00 | 556.66 | 329.65 |
| 21.100 | 210.00 | 0.00 | 0.00 | 935.20 | 535.00 | 938.86 | 0.00 | 938.91 | 1.76 | 1.73 | 309.47 | 403.26 |
| 21.100 | 210.00 | 0.00 | 0.00 | 935.20 | 675.00 | 940.06 | 0.00 | 940.10 | 3.56 | 1.49 | 461.57 | 357.91 |
| 21.100 | 210.00 | 0.00 | 0.00 | 935.20 | 735.00 | 940.32 | 0.00 | 940.35 | 3.44 | 1.50 | 503.88 | 396.51 |
| 21.100 | 210.00 | 0.00 | 0.00 | 935.20 | 875.00 | 940.89 | 0.00 | 940.92 | 3.18 | 1.53 | 603.19 | 491.05 |
| 21.200 | 140.00 | 0.00 | 0.00 | 935.40 | 535.00 | 938.90 | 0.00 | 938.95 | 5.26 | 1.68 | 317.98 | 233.37 |
| 21.200 | 140.00 | 0.00 | 0.00 | 935.40 | 675.00 | 940.11 | 0.00 | 940.14 | 3.03 | 1.42 | 481.34 | 387.56 |
| 21.200 | 140.00 | 0.00 | 0.00 | 935.40 | 735.00 | 940.37 | 0.00 | 940.40 | 2.81 | 1.43 | 522.74 | 438.14 |
| 21.200 | 140.00 | 0.00 | 0.00 | 935.40 | 875.00 | 940.93 | 0.00 | 940.96 | 2.43 | 1.46 | 624.96 | 561.39 |
| 21.300 | 125.00 | 0.00 | 0.00 | 935.60 | 535.00 | 938.97 | 0.00 | 939.02 | 5.87 | 1.86 | 288.02 | 220.75 |
| 21.300 | 125.00 | 0.00 | 0.00 | 935.60 | 675.00 | 940.14 | 0.00 | 940.18 | 2.97 | 1.65 | 447.64 | 391.47 |
| 21.300 | 125.00 | 0.00 | 0.00 | 935.60 | 735.00 | 940.40 | 0.00 | 940.44 | 2.80 | 1.66 | 506.28 | 439.05 |
| 21.300 | 125.00 | 0.00 | 0.00 | 935.60 | 875.00 | 940.96 | 0.00 | 941.00 | 2.42 | 1.67 | 661.23 | 562.76 |
| 21.500 | 15.00 | 944.20 | 938.00 | 937.60 | 535.00 | 945.42 | 0.00 | 945.69 | 96.16 | 4.12 | 129.95 | 54.56 |
| 21.500 | 15.00 | 944.20 | 938.00 | 937.60 | 675.00 | 945.62 | 0.00 | 945.94 | 96.14 | 4.51 | 149.61 | 68.84 |
| 21.500 | 15.00 | 944.20 | 938.00 | 937.60 | 735.00 | 945.71 | 0.00 | 946.04 | 96.10 | 4.66 | 157.56 | 74.98 |
| 21.500 | 15.00 | 944.20 | 938.00 | 937.60 | 875.00 | 945.90 | 0.00 | 946.28 | 92.95 | 4.95 | 176.94 | 90.76 |
| 21.600 | 27.00 | 0.00 | 0.00 | 938.00 | 535.00 | 945.71 | 0.00 | 945.72 | .35 | .76 | 699.45 | 907.29 |
| 21.600 | 27.00 | 0.00 | 0.00 | 938.00 | 675.00 | 945.96 | 0.00 | 945.98 | .49 | .93 | 725.70 | 961.86 |
| 21.600 | 27.00 | 0.00 | 0.00 | 938.00 | 735.00 | 946.06 | 0.00 | 946.08 | .56 | 1.00 | 736.34 | 984.28 |
| 21.600 | 27.00 | 0.00 | 0.00 | 938.00 | 875.00 | 946.30 | 0.00 | 946.32 | .71 | 1.15 | 760.99 | 1036.88 |

MOORE BUSINESS FORMS INC 27

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | FG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21.900 | 73.00 | 0.00 | 0.00 | 937.60 | 535.00 | 945.71 | 0.00 | 945.72 | .78 | .99 | 540.84 | 605.57 |
| 21.900 | 73.00 | 0.00 | 0.00 | 937.60 | 675.00 | 945.96 | 0.00 | 945.98 | 1.07 | 1.19 | 567.07 | 653.27 |
| 21.900 | 73.00 | 0.00 | 0.00 | 937.60 | 735.00 | 946.06 | 0.00 | 946.09 | 1.19 | 1.27 | 577.69 | 672.95 |
| 21.900 | 73.00 | 0.00 | 0.00 | 937.60 | 875.00 | 946.30 | 0.00 | 946.34 | 1.48 | 1.45 | 602.31 | 719.32 |
| 22.000 | 1.00 | 947.20 | 947.30 | 937.60 | 535.00 | 945.71 | 0.00 | 945.72 | .52 | 1.06 | 504.67 | 742.23 |
| 22.000 | 1.00 | 947.20 | 947.30 | 937.60 | 675.00 | 945.96 | 0.00 | 945.98 | .72 | 1.27 | 529.67 | 797.93 |
| 22.000 | 1.00 | 947.20 | 947.30 | 937.60 | 735.00 | 946.06 | 0.00 | 946.09 | .80 | 1.36 | 540.36 | 820.85 |
| 22.000 | 1.00 | 947.20 | 947.30 | 937.60 | 875.00 | 946.30 | 0.00 | 946.34 | 1.00 | 1.55 | 575.72 | 875.91 |
| 22.100 | 23.00 | 947.20 | 947.30 | 938.70 | 535.00 | 945.71 | 0.00 | 945.72 | .57 | 1.09 | 489.40 | 709.62 |
| 22.100 | 23.00 | 947.20 | 947.30 | 938.70 | 675.00 | 945.96 | 0.00 | 945.99 | .78 | 1.31 | 514.41 | 764.71 |
| 22.100 | 23.00 | 947.20 | 947.30 | 938.70 | 735.00 | 946.06 | 0.00 | 946.09 | .87 | 1.40 | 525.12 | 787.39 |
| 22.100 | 23.00 | 947.20 | 947.30 | 938.70 | 875.00 | 946.30 | 0.00 | 946.34 | 1.08 | 1.59 | 560.52 | 841.93 |
| 22.200 | 1.00 | 0.00 | 0.00 | 938.70 | 535.00 | 945.71 | 0.00 | 945.73 | .37 | 1.02 | 526.40 | 874.88 |
| 22.200 | 1.00 | 0.00 | 0.00 | 938.70 | 675.00 | 945.96 | 0.00 | 945.99 | .51 | 1.22 | 552.61 | 945.70 |
| 22.200 | 1.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.07 | 0.00 | 946.10 | .57 | 1.30 | 563.23 | 974.93 |
| 22.200 | 1.00 | 0.00 | 0.00 | 938.70 | 875.00 | 946.31 | 0.00 | 946.34 | .70 | 1.49 | 587.83 | 1043.86 |
| 22.300 | 103.00 | 0.00 | 0.00 | 938.51 | 535.00 | 945.73 | 0.00 | 945.73 | .03 | .37 | 1477.17 | 2959.00 |
| 22.300 | 103.00 | 0.00 | 0.00 | 938.51 | 675.00 | 945.99 | 0.00 | 946.00 | .05 | .45 | 1542.21 | 3163.89 |
| 22.300 | 103.00 | 0.00 | 0.00 | 938.51 | 735.00 | 946.10 | 0.00 | 946.10 | .05 | .48 | 1568.00 | 3246.70 |
| 22.300 | 103.00 | 0.00 | 0.00 | 938.51 | 875.00 | 946.35 | 0.00 | 946.35 | .06 | .55 | 1627.82 | 3442.15 |
| 22.500 | 450.00 | 0.00 | 0.00 | 941.20 | 535.00 | 945.73 | 0.00 | 945.73 | .34 | .47 | 1143.71 | 914.34 |
| 22.500 | 450.00 | 0.00 | 0.00 | 941.20 | 675.00 | 946.00 | 0.00 | 946.00 | .42 | .54 | 1246.15 | 1044.17 |
| 22.500 | 450.00 | 0.00 | 0.00 | 941.20 | 735.00 | 946.10 | 0.00 | 946.11 | .45 | .57 | 1288.31 | 1099.20 |
| 22.500 | 450.00 | 0.00 | 0.00 | 941.20 | 875.00 | 946.35 | 0.00 | 946.36 | .51 | .63 | 1384.70 | 1228.30 |
| 22.550 | 392.00 | 0.00 | 0.00 | 938.60 | 535.00 | 945.74 | 0.00 | 945.74 | .03 | .22 | 2474.74 | 3331.68 |
| 22.550 | 392.00 | 0.00 | 0.00 | 938.60 | 675.00 | 946.00 | 0.00 | 946.00 | .04 | .26 | 2575.97 | 3550.88 |
| 22.550 | 392.00 | 0.00 | 0.00 | 938.60 | 735.00 | 946.11 | 0.00 | 946.11 | .04 | .28 | 2617.17 | 3641.77 |
| 22.550 | 392.00 | 0.00 | 0.00 | 938.60 | 875.00 | 946.36 | 0.00 | 946.37 | .05 | .32 | 2713.24 | 3856.17 |
| 22.600 | 196.00 | 0.00 | 0.00 | 938.20 | 535.00 | 945.74 | 0.00 | 945.74 | .03 | .26 | 2150.62 | 2919.92 |
| 22.600 | 196.00 | 0.00 | 0.00 | 938.20 | 675.00 | 946.00 | 0.00 | 946.00 | .05 | .31 | 2252.02 | 3117.01 |
| 22.600 | 196.00 | 0.00 | 0.00 | 938.20 | 735.00 | 946.11 | 0.00 | 946.11 | .05 | .34 | 2293.88 | 3199.14 |
| 22.600 | 196.00 | 0.00 | 0.00 | 938.20 | 875.00 | 946.36 | 0.00 | 946.37 | .07 | .39 | 2392.18 | 3393.72 |
| 22.800 | 125.00 | 0.00 | 0.00 | 938.00 | 535.00 | 945.73 | 0.00 | 945.74 | .23 | .55 | 1110.80 | 1119.64 |
| 22.800 | 125.00 | 0.00 | 0.00 | 938.00 | 675.00 | 946.00 | 0.00 | 946.01 | .30 | .65 | 1191.99 | 1227.95 |
| 22.800 | 125.00 | 0.00 | 0.00 | 938.00 | 735.00 | 946.11 | 0.00 | 946.12 | .33 | .69 | 1225.84 | 1273.62 |
| 22.800 | 125.00 | 0.00 | 0.00 | 938.00 | 875.00 | 946.36 | 0.00 | 946.37 | .40 | .78 | 1306.10 | 1383.09 |
| 22.900 | 108.00 | 0.00 | 0.00 | 937.50 | 535.00 | 945.73 | 0.00 | 945.75 | .49 | .87 | 612.64 | 765.87 |
| 22.900 | 108.00 | 0.00 | 0.00 | 937.50 | 675.00 | 946.00 | 0.00 | 946.02 | .68 | 1.06 | 639.35 | 819.53 |
| 22.900 | 108.00 | 0.00 | 0.00 | 937.50 | 735.00 | 946.11 | 0.00 | 946.13 | .76 | 1.13 | 650.22 | 841.74 |
| 22.900 | 108.00 | 0.00 | 0.00 | 937.50 | 875.00 | 946.36 | 0.00 | 946.38 | .96 | 1.30 | 675.44 | 893.99 |

MOORE BUSINESS FORMS INC 27

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23.000 | 1.00 | 952.40 | 948.40 | 937.50 | 535.00 | 945.73 | 0.00 | 945.75 | .27 | .87 | 615.58 | 1033.66 |
| 23.000 | 1.00 | 952.40 | 948.40 | 937.50 | 675.00 | 946.00 | 0.00 | 946.02 | .38 | 1.05 | 641.57 | 1098.03 |
| 23.000 | 1.00 | 952.40 | 948.40 | 937.50 | 735.00 | 946.11 | 0.00 | 946.13 | .43 | 1.13 | 652.14 | 1124.47 |
| 23.000 | 1.00 | 952.40 | 948.40 | 937.50 | 875.00 | 946.36 | 0.00 | 946.38 | .54 | 1.29 | 676.63 | 1186.31 |
| 23.100 | 56.00 | 952.40 | 950.20 | 937.70 | 535.00 | 945.73 | 0.00 | 945.76 | 1.48 | 1.48 | 361.73 | 439.67 |
| 23.100 | 56.00 | 952.40 | 950.20 | 937.70 | 675.00 | 945.99 | 0.00 | 946.03 | 1.91 | 1.74 | 387.63 | 489.01 |
| 23.100 | 56.00 | 952.40 | 950.20 | 937.70 | 735.00 | 946.09 | 0.00 | 946.15 | 2.08 | 1.85 | 398.16 | 509.53 |
| 23.100 | 56.00 | 952.40 | 950.20 | 937.70 | 875.00 | 946.34 | 0.00 | 946.41 | 2.46 | 2.07 | 422.56 | 558.01 |
| 23.200 | 1.00 | 0.00 | 0.00 | 937.70 | 535.00 | 945.73 | 0.00 | 945.76 | 1.14 | 1.43 | 373.03 | 500.84 |
| 23.200 | 1.00 | 0.00 | 0.00 | 937.70 | 675.00 | 945.99 | 0.00 | 946.04 | 1.46 | 1.69 | 399.28 | 559.09 |
| 23.200 | 1.00 | 0.00 | 0.00 | 937.70 | 735.00 | 946.10 | 0.00 | 946.15 | 1.59 | 1.79 | 409.95 | 583.42 |
| 23.200 | 1.00 | 0.00 | 0.00 | 937.70 | 875.00 | 946.35 | 0.00 | 946.41 | 1.86 | 2.01 | 434.67 | 641.23 |
| 23.300 | 82.00 | 0.00 | 0.00 | 939.76 | 535.00 | 945.77 | 0.00 | 945.77 | .04 | .34 | 1559.98 | 2794.66 |
| 23.300 | 82.00 | 0.00 | 0.00 | 939.76 | 675.00 | 946.05 | 0.00 | 946.05 | .05 | .41 | 1640.53 | 3029.96 |
| 23.300 | 82.00 | 0.00 | 0.00 | 939.76 | 735.00 | 946.16 | 0.00 | 946.16 | .06 | .44 | 1673.61 | 3128.33 |
| 23.300 | 82.00 | 0.00 | 0.00 | 939.76 | 875.00 | 946.42 | 0.00 | 946.43 | .07 | .50 | 1750.71 | 3361.39 |
| 23.400 | 1133.00 | 0.00 | 0.00 | 939.59 | 535.00 | 945.77 | 0.00 | 945.77 | .02 | .28 | 1908.30 | 3496.47 |
| 23.400 | 1133.00 | 0.00 | 0.00 | 939.59 | 675.00 | 946.05 | 0.00 | 946.05 | .03 | .34 | 2005.77 | 3779.58 |
| 23.400 | 1133.00 | 0.00 | 0.00 | 939.59 | 735.00 | 946.17 | 0.00 | 946.17 | .04 | .36 | 2046.11 | 3898.01 |
| 23.400 | 1133.00 | 0.00 | 0.00 | 939.59 | 875.00 | 946.43 | 0.00 | 946.44 | .04 | .41 | 2140.87 | 4183.22 |
| 23.500 | 516.00 | 0.00 | 0.00 | 938.50 | 535.00 | 945.77 | 0.00 | 945.77 | .02 | .28 | 2126.81 | 3976.23 |
| 23.500 | 516.00 | 0.00 | 0.00 | 938.50 | 675.00 | 946.05 | 0.00 | 946.06 | .02 | .33 | 2274.78 | 4278.38 |
| 23.500 | 516.00 | 0.00 | 0.00 | 938.50 | 735.00 | 946.17 | 0.00 | 946.17 | .03 | .36 | 2337.90 | 4405.86 |
| 23.500 | 516.00 | 0.00 | 0.00 | 938.50 | 875.00 | 946.43 | 0.00 | 946.44 | .03 | .41 | 2487.15 | 4717.77 |
| 24.000 | 233.00 | 0.00 | 0.00 | 938.70 | 535.00 | 945.77 | 0.00 | 945.77 | .03 | .29 | 1835.64 | 3379.46 |
| 24.000 | 233.00 | 0.00 | 0.00 | 938.70 | 675.00 | 946.05 | 0.00 | 946.06 | .04 | .35 | 1927.19 | 3576.12 |
| 24.000 | 233.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.17 | 0.00 | 946.17 | .04 | .37 | 1965.59 | 3659.68 |
| 24.000 | 233.00 | 0.00 | 0.00 | 938.70 | 875.00 | 946.44 | 0.00 | 946.44 | .05 | .43 | 2056.76 | 3860.54 |

MOORE BUSINESS FORMS INC 27

0 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 12.000 | 970.00 | 927.80 | 0.00 | 0.00 | 0.00 | 317.11 | 0.00 |
| 12.000 | 1430.00 | 928.70 | .90 | 0.00 | 0.00 | 370.94 | 0.00 |
| 12.000 | 1600.00 | 929.00 | .30 | 0.00 | 0.00 | 388.88 | 0.00 |
| 12.000 | 1970.00 | 929.50 | .50 | 0.00 | 0.00 | 418.78 | 0.00 |
| 12.600 | 970.00 | 929.80 | 0.00 | 2.00 | 0.00 | 92.32 | 1850.00 |
| 12.600 | 1430.00 | 930.64 | .84 | 1.94 | 0.00 | 159.00 | 1850.00 |
| 12.600 | 1600.00 | 930.90 | .26 | 1.90 | 0.00 | 208.57 | 1850.00 |
| 12.600 | 1970.00 | 931.40 | .50 | 1.90 | 0.00 | 305.24 | 1850.00 |
| 12.700 | 970.00 | 930.80 | 0.00 | 1.00 | 0.00 | 173.42 | 1500.00 |
| 12.700 | 1430.00 | 931.80 | 1.00 | 1.16 | 0.00 | 258.78 | 1500.00 |
| 12.700 | 1600.00 | 932.11 | .31 | 1.20 | 0.00 | 281.71 | 1500.00 |
| 12.700 | 1970.00 | 932.69 | .58 | 1.29 | 0.00 | 302.80 | 1500.00 |
| 12.800 | 970.00 | 932.00 | 0.00 | 1.19 | 0.00 | 130.48 | 1750.00 |
| 12.800 | 1430.00 | 932.99 | .99 | 1.19 | 0.00 | 149.93 | 1750.00 |
| 12.800 | 1600.00 | 933.30 | .31 | 1.19 | 0.00 | 156.05 | 1750.00 |
| 12.800 | 1970.00 | 933.90 | .60 | 1.21 | 0.00 | 167.90 | 1750.00 |
| 13.100 | 970.00 | 932.17 | 0.00 | .18 | 0.00 | 214.41 | 240.00 |
| 13.100 | 1430.00 | 933.18 | 1.01 | .20 | 0.00 | 222.28 | 240.00 |
| 13.100 | 1600.00 | 933.50 | .32 | .21 | 0.00 | 224.07 | 240.00 |
| 13.100 | 1970.00 | 934.13 | .62 | .23 | 0.00 | 227.55 | 240.00 |
| 13.200 | 970.00 | 932.18 | 0.00 | .00 | 0.00 | 214.52 | 11.60 |
| 13.200 | 1430.00 | 933.19 | 1.01 | .01 | 0.00 | 222.35 | 11.60 |
| 13.200 | 1600.00 | 933.51 | .32 | .01 | 0.00 | 224.18 | 11.60 |
| 13.200 | 1970.00 | 934.13 | .62 | .01 | 0.00 | 227.74 | 11.60 |
| 13.300 | 970.00 | 932.18 | 0.00 | .00 | 0.00 | 214.52 | 1.00 |
| 13.300 | 1430.00 | 933.19 | 1.01 | .00 | 0.00 | 222.35 | 1.00 |
| 13.300 | 1600.00 | 933.51 | .32 | .00 | 0.00 | 224.18 | 1.00 |
| 13.300 | 1970.00 | 934.13 | .62 | .00 | 0.00 | 227.75 | 1.00 |
| 14.100 | 970.00 | 932.43 | 0.00 | .25 | 0.00 | 61.25 | 317.00 |
| 14.100 | 1430.00 | 933.42 | .99 | .22 | 0.00 | 66.05 | 317.00 |
| 14.100 | 1600.00 | 933.73 | .31 | .22 | 0.00 | 67.57 | 317.00 |
| 14.100 | 1970.00 | 934.34 | .61 | .20 | 0.00 | 70.53 | 317.00 |
| 14.300 | 970.00 | 932.43 | 0.00 | .01 | 0.00 | 61.27 | 4.00 |
| 14.300 | 1430.00 | 933.43 | .99 | .01 | 0.00 | 66.08 | 4.00 |
| 14.300 | 1600.00 | 933.74 | .31 | .01 | 0.00 | 67.60 | 4.00 |
| 14.300 | 1970.00 | 934.35 | .61 | .01 | 0.00 | 70.56 | 4.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 14.400 | 970.00 | 932.41 | 0.00 | -.03 | 0.00 | 60.00 | 9.00 |
| 14.400 | 1430.00 | 933.39 | .98 | -.03 | 0.00 | 60.00 | 9.00 |
| 14.400 | 1600.00 | 933.70 | .31 | -.04 | 0.00 | 60.00 | 9.00 |
| 14.400 | 1970.00 | 934.30 | .60 | -.05 | 0.00 | 60.00 | 9.00 |
| 14.500 | 970.00 | 932.41 | 0.00 | .00 | 0.00 | 60.00 | 1.00 |
| 14.500 | 1430.00 | 933.39 | .98 | .00 | 0.00 | 60.00 | 1.00 |
| 14.500 | 1600.00 | 933.70 | .31 | .00 | 0.00 | 60.00 | 1.00 |
| 14.500 | 1970.00 | 934.30 | .60 | .00 | 0.00 | 60.00 | 1.00 |
| 14.600 | 970.00 | 932.46 | 0.00 | .05 | 0.00 | 60.00 | 54.00 |
| 14.600 | 1430.00 | 933.46 | .99 | .06 | 0.00 | 60.00 | 54.00 |
| 14.600 | 1600.00 | 933.77 | .31 | .07 | 0.00 | 60.00 | 54.00 |
| 14.600 | 1970.00 | 934.38 | .61 | .08 | 0.00 | 60.00 | 54.00 |
| 14.700 | 970.00 | 932.47 | 0.00 | .00 | 0.00 | 60.00 | 1.00 |
| 14.700 | 1430.00 | 933.46 | .99 | .00 | 0.00 | 60.00 | 1.00 |
| 14.700 | 1600.00 | 933.77 | .31 | .00 | 0.00 | 60.00 | 1.00 |
| 14.700 | 1970.00 | 934.38 | .61 | .00 | 0.00 | 60.00 | 1.00 |
| 14.720 | 970.00 | 932.48 | 0.00 | .01 | 0.00 | 60.00 | 4.00 |
| 14.720 | 1430.00 | 933.47 | .99 | .01 | 0.00 | 60.00 | 4.00 |
| 14.720 | 1600.00 | 933.79 | .31 | .01 | 0.00 | 60.00 | 4.00 |
| 14.720 | 1970.00 | 934.40 | .61 | .01 | 0.00 | 60.00 | 4.00 |
| 14.750 | 970.00 | 933.91 | 0.00 | 1.43 | 0.00 | 100.47 | 770.00 |
| 14.750 | 1430.00 | 935.03 | 1.12 | 1.56 | 0.00 | 162.24 | 770.00 |
| 14.750 | 1600.00 | 935.38 | .35 | 1.60 | 0.00 | 173.95 | 770.00 |
| 14.750 | 1970.00 | 936.08 | .70 | 1.68 | 0.00 | 197.12 | 770.00 |
| 14.800 | 970.00 | 934.42 | 0.00 | .51 | 0.00 | 127.12 | 520.00 |
| 14.800 | 1430.00 | 935.57 | 1.16 | .55 | 0.00 | 147.71 | 520.00 |
| 14.800 | 1600.00 | 935.93 | .35 | .54 | 0.00 | 153.95 | 520.00 |
| 14.800 | 1970.00 | 936.61 | .69 | .53 | 0.00 | 166.17 | 520.00 |
| 14.900 | 970.00 | 934.59 | 0.00 | .17 | 0.00 | 72.00 | 360.00 |
| 14.900 | 1430.00 | 935.75 | 1.16 | .18 | 0.00 | 72.00 | 360.00 |
| 14.900 | 1600.00 | 936.11 | .35 | .18 | 0.00 | 72.00 | 360.00 |
| 14.900 | 1970.00 | 936.80 | .69 | .18 | 0.00 | 72.00 | 360.00 |
| 15.000 | 970.00 | 934.56 | 0.00 | -.03 | 0.00 | 52.54 | 31.00 |
| 15.000 | 1430.00 | 935.70 | 1.14 | -.06 | 0.00 | 52.54 | 31.00 |
| 15.000 | 1600.00 | 936.04 | .34 | -.07 | 0.00 | 52.54 | 31.00 |
| 15.000 | 1970.00 | 936.71 | .67 | -.09 | 0.00 | 52.54 | 31.00 |
| 15.100 | 970.00 | 934.55 | 0.00 | -.01 | 0.00 | 52.54 | 1.00 |
| 15.100 | 1430.00 | 935.68 | 1.14 | -.02 | 0.00 | 52.54 | 1.00 |
| 15.100 | 1600.00 | 936.02 | .34 | -.02 | 0.00 | 52.54 | 1.00 |
| 15.100 | 1970.00 | 936.64 | .62 | -.07 | 0.00 | 52.54 | 1.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 15.200 | 970.00 | 934.56 | 0.00 | .02 | 0.00 | 52.54 | 36.00 |
| 15.200 | 1430.00 | 935.70 | 1.14 | .02 | 0.00 | 52.54 | 36.00 |
| 15.200 | 1600.00 | 936.07 | .37 | .05 | 0.00 | 52.54 | 36.00 |
| 15.200 | 1970.00 | 936.71 | .64 | .07 | 0.00 | 52.54 | 36.00 |
| 15.300 | 970.00 | 934.59 | 0.00 | .03 | 0.00 | 52.54 | 1.00 |
| 15.300 | 1430.00 | 935.74 | 1.15 | .05 | 0.00 | 52.54 | 1.00 |
| 15.300 | 1600.00 | 936.13 | .39 | .06 | 0.00 | 52.54 | 1.00 |
| 15.300 | 1970.00 | 936.93 | .80 | .22 | 0.00 | 52.54 | 1.00 |
| 15.400 | 970.00 | 934.73 | 0.00 | .14 | 0.00 | 74.00 | 11.00 |
| 15.400 | 1430.00 | 935.95 | 1.22 | .20 | 0.00 | 78.31 | 11.00 |
| 15.400 | 1600.00 | 936.36 | .41 | .23 | 0.00 | 80.01 | 11.00 |
| 15.400 | 1970.00 | 937.21 | .85 | .28 | 0.00 | 88.25 | 11.00 |
| 15.800 | 970.00 | 934.80 | 0.00 | .07 | 0.00 | 70.00 | 350.00 |
| 15.800 | 1430.00 | 936.02 | 1.23 | .08 | 1.23 | 70.00 | 350.00 |
| 15.800 | 1600.00 | 936.44 | .41 | .08 | 1.64 | 70.00 | 350.00 |
| 15.800 | 1970.00 | 937.29 | .85 | .08 | 2.50 | 70.00 | 350.00 |
| 15.900 | 970.00 | 934.80 | 0.00 | .01 | 0.00 | 59.50 | 56.00 |
| 15.900 | 1430.00 | 936.02 | 1.22 | .00 | 1.22 | 59.50 | 56.00 |
| 15.900 | 1600.00 | 936.44 | .41 | -.00 | 1.64 | 59.50 | 56.00 |
| 15.900 | 1970.00 | 937.29 | .85 | -.01 | 2.49 | 59.50 | 56.00 |
| 16.000 | 970.00 | 934.80 | 0.00 | .00 | 0.00 | 59.50 | 1.00 |
| 16.000 | 1430.00 | 936.02 | 1.22 | .00 | 1.22 | 59.50 | 1.00 |
| 16.000 | 1600.00 | 936.44 | .41 | -.00 | 1.63 | 59.50 | 1.00 |
| 16.000 | 1970.00 | 937.24 | .80 | -.05 | 2.43 | 59.50 | 1.00 |
| 16.100 | 970.00 | 934.87 | 0.00 | .07 | 0.00 | 59.50 | 54.00 |
| 16.100 | 1430.00 | 936.11 | 1.24 | .08 | 1.24 | 59.50 | 54.00 |
| 16.100 | 1600.00 | 936.62 | .51 | .18 | 1.75 | 59.50 | 54.00 |
| 16.100 | 1970.00 | 937.51 | .89 | .27 | 2.64 | 59.50 | 54.00 |
| 16.200 | 970.00 | 934.87 | 0.00 | .00 | 0.00 | 59.50 | 1.00 |
| 16.200 | 1430.00 | 936.11 | 1.24 | .00 | 1.24 | 59.50 | 1.00 |
| 16.200 | 1600.00 | 936.63 | .52 | .02 | 1.76 | 59.50 | 1.00 |
| 16.200 | 1970.00 | 937.62 | .99 | .11 | 2.75 | 59.50 | 1.00 |
| 16.300 | 970.00 | 934.94 | 0.00 | .07 | 0.00 | 65.08 | 56.00 |
| 16.300 | 1430.00 | 936.20 | 1.26 | .09 | 1.26 | 70.68 | 56.00 |
| 16.300 | 1600.00 | 936.73 | .53 | .10 | 1.79 | 73.08 | 56.00 |
| 16.300 | 1970.00 | 937.73 | 1.00 | .11 | 2.79 | 77.55 | 56.00 |
| 16.800 | 970.00 | 935.04 | 0.00 | .10 | 0.00 | 87.00 | 125.00 |
| 16.800 | 1430.00 | 936.32 | 1.28 | .12 | 1.28 | 87.00 | 125.00 |
| 16.800 | 1600.00 | 936.86 | .53 | .13 | 1.82 | 87.00 | 125.00 |
| 16.800 | 1970.00 | 937.88 | 1.02 | .14 | 2.84 | 196.42 | 125.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 16.900 | 970.00 | 935.06 | 0.00 | .02 | 0.00 | 93.00 | 19.00 |
| 16.900 | 1430.00 | 936.35 | 1.29 | .02 | 1.29 | 93.00 | 19.00 |
| 16.900 | 1600.00 | 936.88 | .53 | .02 | 1.82 | 93.00 | 19.00 |
| 16.900 | 1970.00 | 937.90 | 1.02 | .02 | 2.84 | 199.33 | 19.00 |
| 17.000 | 970.00 | 935.05 | 0.00 | -.01 | 0.00 | 87.66 | 1.00 |
| 17.000 | 1430.00 | 936.34 | 1.29 | -.01 | 1.29 | 87.66 | 1.00 |
| 17.000 | 1600.00 | 936.87 | .53 | -.01 | 1.82 | 87.66 | 1.00 |
| 17.000 | 1970.00 | 937.86 | .99 | -.03 | 2.81 | 93.00 | 1.00 |
| 17.100 | 970.00 | 935.11 | 0.00 | .06 | 0.00 | 87.66 | 90.00 |
| 17.100 | 1430.00 | 936.40 | 1.29 | .06 | 1.29 | 87.66 | 90.00 |
| 17.100 | 1600.00 | 936.93 | .53 | .06 | 1.82 | 87.66 | 90.00 |
| 17.100 | 1970.00 | 938.01 | 1.08 | .15 | 2.91 | 93.00 | 90.00 |
| 17.200 | 970.00 | 935.11 | 0.00 | .00 | 0.00 | 90.35 | 1.00 |
| 17.200 | 1430.00 | 936.41 | 1.29 | .01 | 1.29 | 90.76 | 1.00 |
| 17.200 | 1600.00 | 936.94 | .53 | .01 | 1.83 | 90.92 | 1.00 |
| 17.200 | 1970.00 | 938.03 | 1.10 | .02 | 2.92 | 94.00 | 1.00 |
| 17.300 | 970.00 | 935.18 | 0.00 | .07 | 0.00 | 90.15 | 100.00 |
| 17.300 | 1430.00 | 936.48 | 1.30 | .07 | 1.30 | 90.70 | 100.00 |
| 17.300 | 1600.00 | 937.01 | .53 | .07 | 1.83 | 90.93 | 100.00 |
| 17.300 | 1970.00 | 938.21 | 1.20 | .18 | 3.03 | 93.00 | 100.00 |
| 17.400 | 970.00 | 935.18 | 0.00 | .00 | 0.00 | 90.15 | 1.00 |
| 17.400 | 1430.00 | 936.48 | 1.30 | .00 | 1.30 | 90.70 | 1.00 |
| 17.400 | 1600.00 | 937.01 | .53 | .00 | 1.83 | 90.93 | 1.00 |
| 17.400 | 1970.00 | 938.26 | 1.25 | .05 | 3.08 | 93.00 | 1.00 |
| 17.500 | 970.00 | 935.23 | 0.00 | .05 | 0.00 | 93.00 | 120.00 |
| 17.500 | 1430.00 | 936.53 | 1.30 | .05 | 1.30 | 93.00 | 120.00 |
| 17.500 | 1600.00 | 937.06 | .53 | .05 | 1.83 | 93.00 | 120.00 |
| 17.500 | 1970.00 | 938.30 | 1.25 | .04 | 3.07 | 93.00 | 120.00 |
| 17.900 | 970.00 | 935.31 | 0.00 | .07 | 0.00 | 109.65 | 79.00 |
| 17.900 | 1430.00 | 936.61 | 1.30 | .08 | 1.30 | 109.65 | 79.00 |
| 17.900 | 1600.00 | 937.14 | .53 | .08 | 1.83 | 109.65 | 79.00 |
| 17.900 | 1970.00 | 938.38 | 1.24 | .07 | 3.07 | 109.65 | 79.00 |
| 18.000 | 970.00 | 935.30 | 0.00 | -.01 | 0.00 | 123.87 | 1.00 |
| 18.000 | 1430.00 | 936.59 | 1.29 | -.02 | 1.29 | 129.10 | 1.00 |
| 18.000 | 1600.00 | 937.11 | .52 | -.02 | 1.82 | 131.22 | 1.00 |
| 18.000 | 1970.00 | 938.34 | 1.23 | -.04 | 3.05 | 136.21 | 1.00 |
| 18.100 | 970.00 | 935.34 | 0.00 | .04 | 0.00 | 100.44 | 40.00 |
| 18.100 | 1430.00 | 936.64 | 1.30 | .05 | 1.30 | 100.44 | 40.00 |
| 18.100 | 1600.00 | 937.16 | .52 | .05 | 1.82 | 100.44 | 40.00 |
| 18.100 | 1970.00 | 938.40 | 1.24 | .06 | 3.06 | 100.44 | 40.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 18.200 | 970.00 | 935.31 | 0.00 | -.03 | 0.00 | 79.51 | 1.00 |
| 18.200 | 1430.00 | 936.61 | 1.30 | -.03 | 1.30 | 86.13 | 1.00 |
| 18.200 | 1600.00 | 937.14 | .53 | -.02 | 1.83 | 88.83 | 1.00 |
| 18.200 | 1970.00 | 938.40 | 1.26 | -.00 | 3.09 | 95.25 | 1.00 |
| 18.300 | 970.00 | 935.37 | 0.00 | .06 | 0.00 | 79.76 | 49.00 |
| 18.300 | 1430.00 | 936.66 | 1.30 | .05 | 1.30 | 86.38 | 49.00 |
| 18.300 | 1600.00 | 937.19 | .53 | .05 | 1.82 | 89.08 | 49.00 |
| 18.300 | 1970.00 | 938.44 | 1.25 | .04 | 3.07 | 95.46 | 49.00 |
| 18.800 | 970.00 | 935.71 | 0.00 | .34 | 0.00 | 111.52 | 365.00 |
| 18.800 | 1430.00 | 937.01 | 1.30 | .34 | 1.30 | 120.64 | 365.00 |
| 18.800 | 1600.00 | 937.52 | .51 | .33 | 1.82 | 124.11 | 365.00 |
| 18.800 | 1970.00 | 938.73 | 1.21 | .29 | 3.02 | 132.53 | 365.00 |
| 18.900 | 970.00 | 935.77 | 0.00 | .06 | 0.00 | 60.34 | 200.00 |
| 18.900 | 1430.00 | 937.04 | 1.27 | .03 | 1.27 | 62.13 | 200.00 |
| 18.900 | 1600.00 | 937.54 | .50 | .02 | 1.77 | 62.84 | 200.00 |
| 18.900 | 1970.00 | 938.72 | 1.18 | -.01 | 2.95 | 64.51 | 200.00 |
| 19.000 | 970.00 | 935.77 | 0.00 | -.00 | 0.00 | 56.28 | 4.00 |
| 19.000 | 1430.00 | 937.03 | 1.26 | -.01 | 1.26 | 56.46 | 4.00 |
| 19.000 | 1600.00 | 937.53 | .50 | -.01 | 1.76 | 56.53 | 4.00 |
| 19.000 | 1970.00 | 938.70 | 1.17 | -.02 | 2.93 | 56.80 | 4.00 |
| 19.100 | 970.00 | 935.78 | 0.00 | .01 | 0.00 | 56.28 | 6.00 |
| 19.100 | 1430.00 | 937.04 | 1.26 | .01 | 1.26 | 56.46 | 6.00 |
| 19.100 | 1600.00 | 937.54 | .50 | .01 | 1.76 | 56.53 | 6.00 |
| 19.100 | 1970.00 | 938.71 | 1.18 | .01 | 2.94 | 56.79 | 6.00 |
| 19.200 | 970.00 | 935.77 | 0.00 | -.01 | 0.00 | 53.14 | 1.00 |
| 19.200 | 1430.00 | 937.03 | 1.26 | -.01 | 1.26 | 54.55 | 1.00 |
| 19.200 | 1600.00 | 937.52 | .50 | -.01 | 1.75 | 55.12 | 1.00 |
| 19.200 | 1970.00 | 938.70 | 1.18 | -.01 | 2.93 | 56.44 | 1.00 |
| 19.300 | 970.00 | 935.79 | 0.00 | .02 | 0.00 | 53.15 | 24.00 |
| 19.300 | 1430.00 | 937.05 | 1.26 | .02 | 1.26 | 54.57 | 24.00 |
| 19.300 | 1600.00 | 937.55 | .50 | .02 | 1.75 | 55.13 | 24.00 |
| 19.300 | 1970.00 | 938.72 | 1.17 | .02 | 2.93 | 56.46 | 24.00 |
| 19.800 | 970.00 | 936.07 | 0.00 | .27 | 0.00 | 70.00 | 165.00 |
| 19.800 | 1430.00 | 937.35 | 1.28 | .30 | 1.28 | 70.00 | 165.00 |
| 19.800 | 1600.00 | 937.84 | .49 | .30 | 1.77 | 70.00 | 165.00 |
| 19.800 | 1970.00 | 939.00 | 1.16 | .28 | 2.93 | 70.00 | 165.00 |
| 19.900 | 970.00 | 936.28 | 0.00 | .21 | 0.00 | 70.00 | 50.00 |
| 19.900 | 1430.00 | 937.51 | 1.23 | .16 | 1.23 | 70.00 | 50.00 |
| 19.900 | 1600.00 | 937.98 | .48 | .14 | 1.71 | 70.00 | 50.00 |
| 19.900 | 1970.00 | 939.11 | 1.12 | .11 | 2.83 | 70.00 | 50.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 20.000 | 970.00 | 936.22 | 0.00 | -.06 | 0.00 | 61.67 | 1.00 |
| 20.000 | 1430.00 | 937.45 | 1.23 | -.06 | 1.23 | 62.16 | 1.00 |
| 20.000 | 1600.00 | 937.92 | .48 | -.06 | 1.71 | 62.35 | 1.00 |
| 20.000 | 1970.00 | 939.05 | 1.13 | -.06 | 2.83 | 62.80 | 1.00 |
| 20.100 | 970.00 | 936.47 | 0.00 | .25 | 0.00 | 61.77 | 90.00 |
| 20.100 | 1430.00 | 937.66 | 1.19 | .21 | 1.19 | 62.24 | 90.00 |
| 20.100 | 1600.00 | 938.12 | .46 | .20 | 1.65 | 62.43 | 90.00 |
| 20.100 | 1970.00 | 939.22 | 1.09 | .16 | 2.75 | 62.87 | 90.00 |
| 20.200 | 970.00 | 936.61 | 0.00 | .15 | 0.00 | 70.00 | 1.00 |
| 20.200 | 1430.00 | 937.82 | 1.21 | .16 | 1.21 | 70.00 | 1.00 |
| 20.200 | 1600.00 | 938.28 | .46 | .16 | 1.67 | 70.00 | 1.00 |
| 20.200 | 1970.00 | 939.37 | 1.09 | .16 | 2.76 | 70.00 | 1.00 |
| 20.300 | 970.00 | 936.72 | 0.00 | .10 | 0.00 | 70.00 | 64.00 |
| 20.300 | 1430.00 | 937.92 | 1.20 | .10 | 1.20 | 70.00 | 64.00 |
| 20.300 | 1600.00 | 938.38 | .46 | .10 | 1.66 | 70.00 | 64.00 |
| 20.300 | 1970.00 | 939.53 | 1.15 | .16 | 2.81 | 110.04 | 64.00 |
| 21.000 | 970.00 | 937.60 | 0.00 | .89 | 0.00 | 45.83 | 1050.00 |
| 21.000 | 1430.00 | 938.86 | 1.26 | .94 | 1.26 | 153.49 | 1050.00 |
| 21.000 | 1600.00 | 939.35 | .49 | .97 | 1.75 | 181.19 | 1050.00 |
| 21.000 | 1970.00 | 940.26 | .91 | .73 | 2.66 | 335.98 | 1050.00 |
| 21.100 | 535.00 | 938.86 | 0.00 | 1.26 | 0.00 | 92.00 | 210.00 |
| 21.100 | 675.00 | 940.06 | 1.20 | 1.20 | 1.20 | 161.40 | 210.00 |
| 21.100 | 735.00 | 940.32 | .26 | .97 | 1.46 | 166.54 | 210.00 |
| 21.100 | 875.00 | 940.89 | .57 | .63 | 2.03 | 187.91 | 210.00 |
| 21.200 | 535.00 | 938.90 | 0.00 | .04 | 0.00 | 111.62 | 140.00 |
| 21.200 | 675.00 | 940.11 | 1.21 | .05 | 1.21 | 159.58 | 140.00 |
| 21.200 | 735.00 | 940.37 | .25 | .05 | 1.46 | 165.76 | 140.00 |
| 21.200 | 875.00 | 940.93 | .56 | .04 | 2.03 | 221.62 | 140.00 |
| 21.300 | 535.00 | 938.97 | 0.00 | .06 | 0.00 | 97.00 | 125.00 |
| 21.300 | 675.00 | 940.14 | 1.18 | .03 | 1.18 | 218.55 | 125.00 |
| 21.300 | 735.00 | 940.40 | .25 | .03 | 1.43 | 246.06 | 125.00 |
| 21.300 | 875.00 | 940.96 | .56 | .02 | 1.99 | 307.12 | 125.00 |
| 21.500 | 535.00 | 945.42 | 0.00 | 6.46 | 0.00 | 98.00 | 15.00 |
| 21.500 | 675.00 | 945.62 | .20 | 5.48 | .20 | 98.00 | 15.00 |
| 21.500 | 735.00 | 945.71 | .08 | 5.31 | .28 | 98.00 | 15.00 |
| 21.500 | 875.00 | 945.90 | .20 | 4.95 | .48 | 98.00 | 15.00 |
| 21.600 | 535.00 | 945.71 | 0.00 | .28 | 0.00 | 103.00 | 27.00 |
| 21.600 | 675.00 | 945.96 | .25 | .34 | .25 | 103.00 | 27.00 |
| 21.600 | 735.00 | 946.06 | .10 | .36 | .36 | 103.00 | 27.00 |
| 21.600 | 875.00 | 946.30 | .24 | .40 | .60 | 103.00 | 27.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 21.900 | 535.00 | 945.71 | 0.00 | -.00 | 0.00 | 103.00 | 73.00 |
| 21.900 | 675.00 | 945.96 | .25 | -.00 | .25 | 103.00 | 73.00 |
| 21.900 | 735.00 | 946.06 | .10 | -.00 | .36 | 103.00 | 73.00 |
| 21.900 | 875.00 | 946.30 | .24 | -.00 | .60 | 103.00 | 73.00 |
| 22.000 | 535.00 | 945.71 | 0.00 | -.00 | 0.00 | 98.12 | 1.00 |
| 22.000 | 675.00 | 945.96 | .25 | -.00 | .25 | 98.26 | 1.00 |
| 22.000 | 735.00 | 946.06 | .10 | -.00 | .36 | 115.60 | 1.00 |
| 22.000 | 875.00 | 946.30 | .24 | -.00 | .60 | 180.26 | 1.00 |
| 22.100 | 535.00 | 945.71 | 0.00 | .00 | 0.00 | 98.12 | 23.00 |
| 22.100 | 675.00 | 945.96 | .25 | .00 | .25 | 98.26 | 23.00 |
| 22.100 | 735.00 | 946.06 | .10 | .00 | .36 | 115.73 | 23.00 |
| 22.100 | 875.00 | 946.30 | .24 | .00 | .60 | 180.42 | 23.00 |
| 22.200 | 535.00 | 945.71 | 0.00 | .00 | 0.00 | 103.00 | 1.00 |
| 22.200 | 675.00 | 945.96 | .26 | .00 | .26 | 103.00 | 1.00 |
| 22.200 | 735.00 | 946.07 | .10 | .01 | .36 | 103.00 | 1.00 |
| 22.200 | 875.00 | 946.31 | .24 | .01 | .60 | 103.00 | 1.00 |
| 22.300 | 535.00 | 945.73 | 0.00 | .02 | 0.00 | 240.00 | 103.00 |
| 22.300 | 675.00 | 945.99 | .26 | .03 | .26 | 240.00 | 103.00 |
| 22.300 | 735.00 | 946.10 | .11 | .03 | .37 | 240.00 | 103.00 |
| 22.300 | 875.00 | 946.35 | .25 | .04 | .62 | 240.00 | 103.00 |
| 22.500 | 535.00 | 945.73 | 0.00 | .00 | 0.00 | 380.06 | 450.00 |
| 22.500 | 675.00 | 946.00 | .27 | .00 | .27 | 385.90 | 450.00 |
| 22.500 | 735.00 | 946.10 | .11 | .00 | .37 | 388.28 | 450.00 |
| 22.500 | 875.00 | 946.35 | .25 | .01 | .62 | 393.66 | 450.00 |
| 22.550 | 535.00 | 945.74 | 0.00 | .01 | 0.00 | 377.94 | 392.00 |
| 22.550 | 675.00 | 946.00 | .27 | .01 | .27 | 379.82 | 392.00 |
| 22.550 | 735.00 | 946.11 | .11 | .01 | .38 | 380.59 | 392.00 |
| 22.550 | 875.00 | 946.36 | .25 | .01 | .63 | 382.37 | 392.00 |
| 22.600 | 535.00 | 945.74 | 0.00 | .00 | 0.00 | 374.89 | 196.00 |
| 22.600 | 675.00 | 946.00 | .27 | .00 | .27 | 382.31 | 196.00 |
| 22.600 | 735.00 | 946.11 | .11 | .00 | .38 | 385.33 | 196.00 |
| 22.600 | 875.00 | 946.36 | .25 | .00 | .63 | 392.33 | 196.00 |
| 22.800 | 535.00 | 945.73 | 0.00 | -.00 | 0.00 | 298.60 | 125.00 |
| 22.800 | 675.00 | 946.00 | .27 | -.00 | .27 | 308.91 | 125.00 |
| 22.800 | 735.00 | 946.11 | .11 | -.00 | .38 | 313.10 | 125.00 |
| 22.800 | 875.00 | 946.36 | .25 | -.00 | .63 | 322.83 | 125.00 |
| 22.900 | 535.00 | 945.73 | 0.00 | -.00 | 0.00 | 100.00 | 108.00 |
| 22.900 | 675.00 | 946.00 | .27 | -.00 | .27 | 100.00 | 108.00 |
| 22.900 | 735.00 | 946.11 | .11 | -.00 | .37 | 100.00 | 108.00 |
| 22.900 | 875.00 | 946.36 | .25 | -.01 | .62 | 100.00 | 108.00 |

MOORE BUSINESS FORMS INC 27

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 23.000 | 535.00 | 945.73 | 0.00 | .00 | 0.00 | 98.00 | 1.00 |
| 23.000 | 675.00 | 946.00 | .27 | .00 | .27 | 98.00 | 1.00 |
| 23.000 | 735.00 | 946.11 | .11 | .00 | .37 | 98.00 | 1.00 |
| 23.000 | 875.00 | 946.36 | .25 | .00 | .62 | 98.00 | 1.00 |
| 23.100 | 535.00 | 945.73 | 0.00 | -.01 | 0.00 | 98.00 | 56.00 |
| 23.100 | 675.00 | 945.99 | .26 | -.01 | .26 | 98.00 | 56.00 |
| 23.100 | 735.00 | 946.09 | .11 | -.01 | .37 | 98.00 | 56.00 |
| 23.100 | 875.00 | 946.34 | .25 | -.01 | .62 | 98.00 | 56.00 |
| 23.200 | 535.00 | 945.73 | 0.00 | .00 | 0.00 | 100.00 | 1.00 |
| 23.200 | 675.00 | 945.99 | .26 | .00 | .26 | 100.00 | 1.00 |
| 23.200 | 735.00 | 946.10 | .11 | .00 | .37 | 100.00 | 1.00 |
| 23.200 | 875.00 | 946.35 | .25 | .00 | .62 | 100.00 | 1.00 |
| 23.300 | 535.00 | 945.77 | 0.00 | .04 | 0.00 | 287.74 | 82.00 |
| 23.300 | 675.00 | 946.05 | .28 | .06 | .28 | 289.97 | 82.00 |
| 23.300 | 735.00 | 946.16 | .11 | .06 | .39 | 290.88 | 82.00 |
| 23.300 | 875.00 | 946.42 | .26 | .08 | .66 | 292.99 | 82.00 |
| 23.400 | 535.00 | 945.77 | 0.00 | .00 | 0.00 | 344.42 | 1133.00 |
| 23.400 | 675.00 | 946.05 | .28 | .01 | .28 | 350.80 | 1133.00 |
| 23.400 | 735.00 | 946.17 | .11 | .01 | .39 | 353.40 | 1133.00 |
| 23.400 | 875.00 | 946.43 | .27 | .01 | .66 | 360.72 | 1133.00 |
| 23.500 | 535.00 | 945.77 | 0.00 | .00 | 0.00 | 510.35 | 516.00 |
| 23.500 | 675.00 | 946.05 | .28 | .00 | .28 | 543.06 | 516.00 |
| 23.500 | 735.00 | 946.17 | .11 | .00 | .40 | 556.43 | 516.00 |
| 23.500 | 875.00 | 946.43 | .27 | .00 | .66 | 562.22 | 516.00 |
| 24.000 | 535.00 | 945.77 | 0.00 | .00 | 0.00 | 319.82 | 233.00 |
| 24.000 | 675.00 | 946.05 | .28 | .00 | .28 | 331.84 | 233.00 |
| 24.000 | 735.00 | 946.17 | .11 | .00 | .40 | 336.76 | 233.00 |
| 24.000 | 875.00 | 946.44 | .27 | .00 | .66 | 348.15 | 233.00 |

MOORE BUSINESS FORMS INC 27

SUMMARY OF ERRORS

MOORE BUSINESS FORMS INC 27

FLOOD INSURANCE ZONE DATA FOR 0 YEAR FLOW

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10 | 2 | 0.2 |
|---|---|---|---|---|
| 12.000 | 0. | -1.20 | -.30 | .50 |
| 12.600 | 1850. | -1.10 | -.26 | .50 |
| 12.700 | 3350. | -1.30 | -.31 | .58 |
| 12.800 | 5100. | -1.30 | -.31 | .60 |
| 13.100 | 5340. | -1.33 | -.32 | .62 |
| 13.200 | 5352. | -1.33 | -.32 | .62 |
| 13.300 | 5353. | -1.33 | -.32 | .62 |
| 14.100 | 5670. | -1.30 | -.31 | .61 |
| 14.300 | 5674. | -1.31 | -.31 | .61 |
| 14.400 | 5683. | -1.29 | -.31 | .60 |
| 14.500 | 5684. | -1.29 | -.31 | .60 |
| 14.600 | 5738. | -1.31 | -.31 | .61 |
| 14.700 | 5739. | -1.31 | -.31 | .61 |
| 14.720 | 5743. | -1.31 | -.31 | .61 |
| 14.750 | 6513. | -1.47 | -.35 | .70 |
| 14.800 | 7033. | -1.51 | -.35 | .69 |
| 14.900 | 7393. | -1.52 | -.35 | .69 |
| 15.000 | 7424. | -1.48 | -.34 | .67 |
| 15.100 | 7425. | -1.48 | -.34 | .62 |
| 15.200 | 7461. | -1.51 | -.37 | .64 |
| 15.300 | 7462. | -1.54 | -.39 | .80 |
| 15.400 | 7473. | -1.63 | -.41 | .85 |
| 15.800 | 7823. | -1.64 | -.41 | .85 |
| 15.900 | 7879. | -1.64 | -.41 | .85 |
| 16.000 | 7880. | -1.63 | -.41 | .80 |
| 16.100 | 7934. | -1.75 | -.51 | .89 |
| 16.200 | 7935. | -1.76 | -.52 | .99 |
| 16.300 | 7991. | -1.79 | -.53 | 1.00 |
| 16.800 | 8116. | -1.82 | -.53 | 1.02 |
| 16.900 | 8135. | -1.82 | -.53 | 1.02 |
| 17.000 | 8136. | -1.82 | -.53 | .99 |
| 17.100 | 8226. | -1.82 | -.53 | 1.08 |
| 17.200 | 8227. | -1.83 | -.53 | 1.10 |
| 17.300 | 8327. | -1.83 | -.53 | 1.20 |
| 17.400 | 8328. | -1.83 | -.53 | 1.25 |
| 17.500 | 8448. | -1.83 | -.53 | 1.25 |
| 17.900 | 8527. | -1.83 | -.53 | 1.24 |
| 18.000 | 8528. | -1.82 | -.52 | 1.23 |
| 18.100 | 8568. | -1.82 | -.52 | 1.24 |
| 18.200 | 8569. | -1.83 | -.53 | 1.26 |
| 18.300 | 8618. | -1.82 | -.53 | 1.25 |
| 18.800 | 8983. | -1.82 | -.51 | 1.21 |
| 18.900 | 9183. | -1.77 | -.50 | 1.18 |
| 19.000 | 9187. | -1.76 | -.50 | 1.17 |

MOORE BUSINESS FORMS INC 27

| | | | | |
|---|---|---|---|---|
| 19.100 | 9193. | -1.76 | -.50 | 1.18 |
| 19.200 | 9194. | -1.75 | -.50 | 1.18 |
| 19.300 | 9218. | -1.75 | -.50 | 1.17 |
| 19.800 | 9383. | -1.77 | -.49 | 1.16 |
| 19.900 | 9433. | -1.71 | -.48 | 1.12 |
| 20.000 | 9434. | -1.71 | -.48 | 1.13 |
| 20.100 | 9524. | -1.65 | -.46 | 1.09 |
| 20.200 | 9525. | -1.67 | -.46 | 1.09 |
| 20.300 | 9589. | -1.66 | -.46 | 1.15 |
| 21.000 | 10639. | -1.75 | -.49 | .91 |
| 21.100 | 10849. | -1.46 | -.26 | .57 |
| 21.200 | 10989. | -1.46 | -.25 | .56 |
| 21.300 | 11114. | -1.43 | -.25 | .56 |
| 21.500 | 11129. | -.28 | -.08 | .20 |
| 21.600 | 11156. | -.36 | -.10 | .24 |
| 21.900 | 11229. | -.36 | -.10 | .24 |
| 22.000 | 11230. | -.36 | -.10 | .24 |
| 22.100 | 11253. | -.36 | -.10 | .24 |
| 22.200 | 11254. | -.36 | -.10 | .24 |
| 22.300 | 11357. | -.37 | -.11 | .25 |
| 22.500 | 11807. | -.37 | -.11 | .25 |
| 22.550 | 12199. | -.38 | -.11 | .25 |
| 22.600 | 12395. | -.38 | -.11 | .25 |
| 22.800 | 12520. | -.38 | -.11 | .25 |
| 22.900 | 12628. | -.37 | -.11 | .25 |
| 23.000 | 12629. | -.37 | -.11 | .25 |
| 23.100 | 12685. | -.37 | -.11 | .25 |
| 23.200 | 12686. | -.37 | -.11 | .25 |
| 23.300 | 12768. | -.39 | -.11 | .26 |
| 23.400 | 13901. | -.39 | -.11 | .27 |
| 23.500 | 14417. | -.40 | -.11 | .27 |
| 24.000 | 14650. | -.40 | -.11 | .27 |
| WEIGHTED AVG FOR REACH | | -1.17 | -.30 | .61 |

FHF FOR THE REACH = 010 WITH 57.6 PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 2

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | AVG ELEVATION DATA 10 | 1 | DIFF. | WTD. AVG. | FHF | PERCENT WITHIN |
|---|---|---|---|---|---|---|---|
| | 0. | | | | SEC. | | 12.000 |
| 1 | 100. | 927.85 | 929.05 | -1.20 | -1.20 | 010 | 100. |
| 2 | 200. | 927.96 | 929.15 | -1.19 | -1.19 | 010 | 100. |
| 3 | 300. | 928.07 | 929.26 | -1.19 | -1.19 | 010 | 100. |
| 4 | 400. | 928.18 | 929.36 | -1.18 | -1.19 | 010 | 100. |
| 5 | 500. | 928.29 | 929.46 | -1.17 | -1.19 | 010 | 100. |

MOORE BUSINESS FORMS INC 27

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | 600. | 928.40 | 929.57 | -1.17 | -1.18 | 010 | 100. |
| 7 | 700. | 928.50 | 929.67 | -1.17 | -1.18 | 010 | 100. |
| 8 | 800. | 928.61 | 929.77 | -1.16 | -1.18 | 010 | 100. |
| 9 | 900. | 928.72 | 929.87 | -1.15 | -1.18 | 010 | 100. |
| 10 | 1000. | 928.83 | 929.98 | -1.15 | -1.17 | 010 | 100. |
| 11 | 1100. | 928.94 | 930.08 | -1.14 | -1.17 | 010 | 100. |
| 12 | 1200. | 929.05 | 930.18 | -1.13 | -1.17 | 010 | 100. |
| 13 | 1300. | 929.15 | 930.29 | -1.14 | -1.16 | 010 | 100. |
| 14 | 1400. | 929.26 | 930.39 | -1.13 | -1.16 | 010 | 100. |
| 15 | 1500. | 929.37 | 930.49 | -1.12 | -1.16 | 010 | 100. |
| 16 | 1600. | 929.48 | 930.59 | -1.11 | -1.16 | 010 | 100. |
| 17 | 1700. | 929.59 | 930.70 | -1.11 | -1.15 | 010 | 100. |
| 18 | 1800. | 929.69 | 930.80 | -1.11 | -1.15 | 010 | 100. |
| | 1850. | | | | SEC. | 12.600 | |
| 19 | 1900. | 929.79 | 930.90 | -1.11 | -1.15 | 010 | 100. |
| 20 | 2000. | 929.87 | 930.98 | -1.11 | -1.15 | 010 | 100. |
| 21 | 2100. | 929.94 | 931.06 | -1.12 | -1.15 | 010 | 100. |
| 22 | 2200. | 930.00 | 931.14 | -1.14 | -1.15 | 010 | 100. |
| 23 | 2300. | 930.07 | 931.22 | -1.15 | -1.15 | 010 | 100. |
| 24 | 2400. | 930.14 | 931.30 | -1.16 | -1.15 | 010 | 100. |
| 25 | 2500. | 930.20 | 931.38 | -1.18 | -1.15 | 010 | 100. |
| 26 | 2600. | 930.27 | 931.46 | -1.19 | -1.15 | 010 | 100. |
| 27 | 2700. | 930.34 | 931.54 | -1.20 | -1.15 | 010 | 100. |
| 28 | 2800. | 930.40 | 931.62 | -1.22 | -1.15 | 010 | 100. |
| 29 | 2900. | 930.47 | 931.70 | -1.23 | -1.16 | 010 | 100. |
| 30 | 3000. | 930.54 | 931.78 | -1.24 | -1.16 | 010 | 100. |
| 31 | 3100. | 930.60 | 931.87 | -1.27 | -1.16 | 010 | 100. |
| 32 | 3200. | 930.67 | 931.95 | -1.28 | -1.17 | 010 | 100. |
| 33 | 3300. | 930.74 | 932.03 | -1.29 | -1.17 | 010 | 100. |
| | 3350. | | | | SEC. | 12.700 | |
| 34 | 3400. | 930.80 | 932.10 | -1.30 | -1.17 | 010 | 100. |
| 35 | 3500. | 930.87 | 932.17 | -1.30 | -1.18 | 010 | 100. |
| 36 | 3600. | 930.94 | 932.24 | -1.30 | -1.18 | 010 | 100. |
| 37 | 3700. | 931.01 | 932.31 | -1.30 | -1.18 | 010 | 100. |
| 38 | 3800. | 931.08 | 932.38 | -1.30 | -1.19 | 010 | 100. |
| 39 | 3900. | 931.14 | 932.45 | -1.31 | -1.19 | 010 | 100. |
| 40 | 4000. | 931.21 | 932.51 | -1.30 | -1.19 | 010 | 100. |
| 41 | 4100. | 931.28 | 932.58 | -1.30 | -1.20 | 010 | 100. |
| 42 | 4200. | 931.35 | 932.65 | -1.30 | -1.20 | 010 | 100. |
| 43 | 4300. | 931.42 | 932.72 | -1.30 | -1.20 | 010 | 100. |
| 44 | 4400. | 931.48 | 932.79 | -1.31 | -1.20 | 010 | 100. |
| 45 | 4500. | 931.55 | 932.85 | -1.30 | -1.21 | 010 | 100. |
| 46 | 4600. | 931.62 | 932.92 | -1.30 | -1.21 | 010 | 100. |
| 47 | 4700. | 931.69 | 932.99 | -1.30 | -1.21 | 010 | 100. |
| 48 | 4800. | 931.76 | 933.06 | -1.30 | -1.21 | 010 | 100. |
| 49 | 4900. | 931.83 | 933.13 | -1.30 | -1.21 | 010 | 100. |
| 50 | 5000. | 931.89 | 933.20 | -1.31 | -1.21 | 010 | 100. |
| | 5100. | | | | SEC. | 12.800 | |
| 51 | 5100. | 931.96 | 933.26 | -1.30 | -1.22 | 010 | 100. |
| 52 | 5200. | 932.03 | 933.34 | -1.31 | -1.22 | 010 | 100. |
| 53 | 5300. | 932.11 | 933.43 | -1.32 | -1.22 | 010 | 100. |
| | 5340. | | | | SEC. | 13.100 | |
| | 5352. | | | | SEC. | 13.200 | |
| | 5353. | | | | SEC. | 13.300 | |

MOORE BUSINESS FORMS INC 27

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 54 | 5400. | 932.18 | 933.51 | -1.33 | -1.22 | 010 | 100. |
| 55 | 5500. | 932.26 | 933.58 | -1.32 | -1.22 | 010 | 100. |
| 56 | 5600. | 932.33 | 933.65 | -1.32 | -1.23 | 010 | 100. |
| | 5670. | | | | SEC. | 14.100 | |
| | 5674. | | | | SEC. | 14.300 | |
| | 5683. | | | | SEC. | 14.400 | |
| | 5684. | | | | SEC. | 14.500 | |
| 57 | 5700. | 932.40 | 933.70 | -1.30 | -1.23 | 010 | 100. |
| | 5738. | | | | SEC. | 14.600 | |
| | 5739. | | | | SEC. | 14.700 | |
| | 5743. | | | | SEC. | 14.720 | |
| 58 | 5800. | 932.50 | 933.81 | -1.31 | -1.23 | 010 | 100. |
| 59 | 5900. | 932.68 | 934.01 | -1.33 | -1.23 | 010 | 100. |
| 60 | 6000. | 932.86 | 934.22 | -1.36 | -1.23 | 010 | 100. |
| 61 | 6100. | 933.05 | 934.42 | -1.37 | -1.23 | 010 | 100. |
| 62 | 6200. | 933.23 | 934.63 | -1.40 | -1.24 | 010 | 100. |
| 63 | 6300. | 933.42 | 934.84 | -1.42 | -1.24 | 010 | 100. |
| 64 | 6400. | 933.61 | 935.04 | -1.43 | -1.24 | 010 | 100. |
| 65 | 6500. | 933.79 | 935.25 | -1.46 | -1.25 | 015 | 100. |
| | 6513. | | | | SEC. | 14.750 | |
| 66 | 6600. | 933.94 | 935.41 | -1.47 | -1.25 | 015 | 100. |
| 67 | 6700. | 934.04 | 935.53 | -1.49 | -1.25 | 015 | 100. |
| 68 | 6800. | 934.14 | 935.63 | -1.49 | -1.26 | 015 | 100. |
| 69 | 6900. | 934.24 | 935.74 | -1.50 | -1.26 | 015 | 100. |
| 70 | 7000. | 934.34 | 935.84 | -1.50 | -1.26 | 015 | 100. |
| | 7033. | | | | SEC. | 14.800 | |
| 71 | 7100. | 934.42 | 935.93 | -1.51 | -1.27 | 015 | 100. |
| 72 | 7200. | 934.47 | 935.98 | -1.51 | -1.27 | 015 | 100. |
| 73 | 7300. | 934.52 | 936.04 | -1.52 | -1.27 | 015 | 100. |
| | 7393. | | | | SEC. | 14.900 | |
| 74 | 7400. | 934.56 | 936.08 | -1.52 | -1.28 | 015 | 100. |
| | 7424. | | | | SEC. | 15.000 | |
| | 7425. | | | | SEC. | 15.100 | |
| | 7461. | | | | SEC. | 15.200 | |
| | 7462. | | | | SEC. | 15.300 | |
| | 7473. | | | | SEC. | 15.400 | |
| 75 | 7500. | 934.66 | 936.23 | -1.57 | -1.28 | 015 | 100. |
| 76 | 7600. | 934.74 | 936.38 | -1.64 | -1.29 | 015 | 100. |
| 77 | 7700. | 934.76 | 936.40 | -1.64 | -1.29 | 015 | 100. |
| 78 | 7800. | 934.78 | 936.42 | -1.64 | -1.30 | 015 | 100. |
| | 7823. | | | | SEC. | 15.800 | |
| | 7879. | | | | SEC. | 15.900 | |
| | 7880. | | | | SEC. | 16.000 | |
| 79 | 7900. | 934.81 | 936.47 | -1.66 | -1.30 | 015 | 100. |
| | 7934. | | | | SEC. | 16.100 | |
| | 7935. | | | | SEC. | 16.200 | |
| | 7991. | | | | SEC. | 16.300 | |
| 80 | 8000. | 934.89 | 936.62 | -1.73 | -1.31 | 015 | 100. |
| 81 | 8100. | 934.99 | 936.79 | -1.80 | -1.31 | 015 | 100. |
| | 8116. | | | | SEC. | 16.800 | |
| | 8135. | | | | SEC. | 16.900 | |
| | 8136. | | | | SEC. | 17.000 | |
| 82 | 8200. | 935.06 | 936.88 | -1.82 | -1.32 | 015 | 100. |
| | 8226. | | | | SEC. | 17.100 | |

MOORE BUSINESS FORMS INC 27

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 8227. | | | | SEC. | 17.200 | |
| 83 | 8300. | 935.13 | 936.95 | -1.82 | -1.32 | 015 | 100. |
| | 8327. | | | | SEC. | 17.300 | |
| | 8328. | | | | SEC. | 17.400 | |
| 84 | 8400. | 935.19 | 937.01 | -1.82 | -1.33 | 015 | 100. |
| | 8448. | | | | SEC. | 17.500 | |
| 85 | 8500. | 935.25 | 937.08 | -1.83 | -1.34 | 015 | 100. |
| | 8527. | | | | SEC. | 17.900 | |
| | 8528. | | | | SEC. | 18.000 | |
| | 8568. | | | | SEC. | 18.100 | |
| | 8569. | | | | SEC. | 18.200 | |
| 86 | 8600. | 935.31 | 937.14 | -1.83 | -1.34 | 015 | 100. |
| | 8618. | | | | SEC. | 18.300 | |
| 87 | 8700. | 935.39 | 937.22 | -1.83 | -1.35 | 015 | 100. |
| 88 | 8800. | 935.49 | 937.31 | -1.82 | -1.35 | 015 | 100. |
| 89 | 8900. | 935.58 | 937.40 | -1.82 | -1.36 | 015 | 100. |
| | 8983. | | | | SEC. | 18.800 | |
| 90 | 9000. | 935.67 | 937.48 | -1.81 | -1.36 | 015 | 100. |
| 91 | 9100. | 935.73 | 937.53 | -1.80 | -1.37 | 015 | 100. |
| | 9183. | | | | SEC. | 18.900 | |
| | 9187. | | | | SEC. | 19.000 | |
| | 9193. | | | | SEC. | 19.100 | |
| | 9194. | | | | SEC. | 19.200 | |
| 92 | 9200. | 935.76 | 937.53 | -1.77 | -1.37 | 015 | 100. |
| | 9218. | | | | SEC. | 19.300 | |
| 93 | 9300. | 935.85 | 937.61 | -1.76 | -1.38 | 015 | 100. |
| | 9383. | | | | SEC. | 19.800 | |
| 94 | 9400. | 936.04 | 937.79 | -1.75 | -1.38 | 015 | 100. |
| | 9433. | | | | SEC. | 19.900 | |
| | 9434. | | | | SEC. | 20.000 | |
| 95 | 9500. | 936.27 | 937.98 | -1.71 | -1.38 | 015 | 100. |
| | 9524. | | | | SEC. | 20.100 | |
| | 9525. | | | | SEC. | 20.200 | |
| | 9589. | | | | SEC. | 20.300 | |
| 96 | 9600. | 936.57 | 938.23 | -1.66 | -1.39 | 015 | 100. |
| 97 | 9700. | 936.77 | 938.44 | -1.67 | -1.39 | 015 | 100. |
| 98 | 9800. | 936.85 | 938.53 | -1.68 | -1.39 | 015 | 100. |
| 99 | 9900. | 936.94 | 938.62 | -1.68 | -1.39 | 015 | 100. |
| 100 | 10000. | 937.02 | 938.71 | -1.69 | -1.40 | 015 | 100. |
| 101 | 10100. | 937.11 | 938.81 | -1.70 | -1.40 | 015 | 100. |
| 102 | 10200. | 937.19 | 938.90 | -1.71 | -1.40 | 015 | 100. |
| 103 | 10300. | 937.28 | 938.99 | -1.71 | -1.41 | 015 | 100. |
| 104 | 10400. | 937.36 | 939.08 | -1.72 | -1.41 | 015 | 100. |
| 105 | 10500. | 937.44 | 939.18 | -1.74 | -1.41 | 015 | 100. |
| 106 | 10600. | 937.53 | 939.27 | -1.74 | -1.42 | 015 | 100. |
| | 10639. | | | | SEC. | 21.000 | |
| 107 | 10700. | 937.77 | 939.47 | -1.70 | -1.42 | 015 | 100. |
| 108 | 10800. | 938.27 | 939.86 | -1.59 | -1.42 | 015 | 100. |
| | 10849. | | | | SEC. | 21.100 | |
| 109 | 10900. | 938.72 | 940.22 | -1.50 | -1.42 | 015 | 100. |
| | 10989. | | | | SEC. | 21.200 | |
| 110 | 11000. | 938.89 | 940.35 | -1.46 | -1.42 | 015 | 100. |
| 111 | 11100. | 938.94 | 940.38 | -1.44 | -1.42 | 015 | 100. |
| | 11114. | | | | SEC. | 21.300 | |

MOORE BUSINESS FORMS INC 27

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 11129. | | | | SEC. | 21.500 | |
| | 11156. | | | | SEC. | 21.600 | |
| 112 | 11200. | 942.33 | 943.23 | -.90 | -1.42 | 015 | 99. |
| | 11229. | | | | SEC. | 21.900 | |
| | 11230. | | | | SEC. | 22.000 | |
| | 11253. | | | | SEC. | 22.100 | |
| | 11254. | | | | SEC. | 22.200 | |

ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND

| | 10 | 2 | 0.2 |
|---|---|---|---|
| WEIGHTED AVG FOR REACH | -1.42 | -.36 | .72 |

FHF FOR REACH 1 = 015 WITH 99. PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 3

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 113 | 11300. | 945.71 | 946.07 | -.36 | -.36 | 005 | 100. |
| | 11357. | | | | SEC. | 22.300 | |
| 114 | 11400. | 945.72 | 946.09 | -.37 | -.36 | 005 | 100. |
| 115 | 11500. | 945.73 | 946.10 | -.37 | -.37 | 005 | 100. |
| 116 | 11600. | 945.73 | 946.10 | -.37 | -.37 | 005 | 100. |
| 117 | 11700. | 945.73 | 946.10 | -.37 | -.37 | 005 | 100. |
| 118 | 11800. | 945.73 | 946.10 | -.37 | -.37 | 005 | 100. |
| | 11807. | | | | SEC. | 22.500 | |
| 119 | 11900. | 945.73 | 946.10 | -.37 | -.37 | 005 | 100. |
| 120 | 12000. | 945.73 | 946.11 | -.38 | -.37 | 005 | 100. |
| 121 | 12100. | 945.73 | 946.11 | -.38 | -.37 | 005 | 100. |
| | 12199. | | | | SEC. | 22.550 | |
| 122 | 12200. | 945.74 | 946.11 | -.37 | -.37 | 005 | 100. |
| 123 | 12300. | 945.74 | 946.11 | -.37 | -.37 | 005 | 100. |
| | 12395. | | | | SEC. | 22.600 | |
| 124 | 12400. | 945.74 | 946.11 | -.37 | -.37 | 005 | 100. |
| 125 | 12500. | 945.74 | 946.11 | -.37 | -.37 | 005 | 100. |
| | 12520. | | | | SEC. | 22.800 | |
| 126 | 12600. | 945.73 | 946.11 | -.38 | -.37 | 005 | 100. |
| | 12628. | | | | SEC. | 22.900 | |
| | 12629. | | | | SEC. | 23.000 | |
| | 12685. | | | | SEC. | 23.100 | |
| | 12686. | | | | SEC. | 23.200 | |
| 127 | 12700. | 945.73 | 946.11 | -.38 | -.37 | 005 | 100. |
| | 12768. | | | | SEC. | 23.300 | |
| 128 | 12800. | 945.75 | 946.14 | -.39 | -.37 | 005 | 100. |
| 129 | 12900. | 945.77 | 946.16 | -.39 | -.37 | 005 | 100. |
| 130 | 13000. | 945.77 | 946.16 | -.39 | -.38 | 005 | 100. |
| 131 | 13100. | 945.77 | 946.16 | -.39 | -.38 | 005 | 100. |
| 132 | 13200. | 945.77 | 946.16 | -.39 | -.38 | 005 | 100. |
| 133 | 13300. | 945.77 | 946.16 | -.39 | -.38 | 005 | 100. |
| 134 | 13400. | 945.77 | 946.16 | -.39 | -.38 | 005 | 100. |
| 135 | 13500. | 945.77 | 946.16 | -.39 | -.38 | 005 | 100. |
| 136 | 13600. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 137 | 13700. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 138 | 13800. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 139 | 13900. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |

MOORE BUSINESS FORMS INC 27

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 13901. | | | | SEC. | 23.400 | |
| 140 | 14000. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 141 | 14100. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 142 | 14200. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 143 | 14300. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 144 | 14400. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| | 14417. | | | | SEC. | 23.500 | |
| 145 | 14500. | 945.77 | 946.17 | -.40 | -.38 | 005 | 100. |
| 146 | 14600. | 945.77 | 946.17 | -.40 | -.39 | 005 | 100. |
| | 14650. | | | | SEC. | 24.000 | |

| | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND | | |
|---|---|---|---|
| | 10 | 2 | 0.2 |
| WEIGHTED AVG FOR REACH | -.39 | -.11 | .26 |

FHF FOR REACH 2 = 005 WITH 100. PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 1

MOORE BUSINESS FORMS INC 27

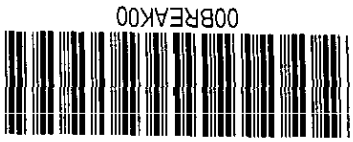



1) COUNTY: Calhoun

2) STUDY NAME: Albion Township

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: Summary



MOORE BUSINESS FORMS, INC 23

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01.02.03
  MODIFICATION -  50.51.52.53
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

10 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 535.00 | 945.77 | 0.00 | 945.77 | .07 | .29 | 1834.47 | 2079.51 |
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 675.00 | 946.05 | 0.00 | 946.05 | .09 | .36 | 1925.65 | 2233.29 |
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 735.00 | 946.17 | 0.00 | 946.17 | .10 | .38 | 1965.76 | 2300.89 |
| 24.000 | 0.00 | 0.00 | 0.00 | 938.70 | 875.00 | 946.44 | 0.00 | 946.44 | .13 | .44 | 2058.24 | 2456.75 |
| 24.100 | 2280.00 | 0.00 | 0.00 | 939.56 | 535.00 | 945.79 | 0.00 | 945.79 | .14 | .40 | 1398.77 | 1436.39 |
| 24.100 | 2280.00 | 0.00 | 0.00 | 939.56 | 675.00 | 946.08 | 0.00 | 946.08 | .19 | .48 | 1493.62 | 1562.42 |
| 24.100 | 2280.00 | 0.00 | 0.00 | 939.56 | 735.00 | 946.20 | 0.00 | 946.20 | .21 | .51 | 1534.97 | 1618.33 |
| 24.100 | 2280.00 | 0.00 | 0.00 | 939.56 | 875.00 | 946.48 | 0.00 | 946.48 | .25 | .58 | 1629.61 | 1748.35 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 535.00 | 945.83 | 0.00 | 945.84 | .27 | .49 | 2123.49 | 1023.60 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 675.00 | 946.13 | 0.00 | 946.13 | .27 | .51 | 2695.56 | 1292.40 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 735.00 | 946.25 | 0.00 | 946.26 | .27 | .52 | 2945.28 | 1423.70 |
| 24.200 | 2300.00 | 0.00 | 0.00 | 940.40 | 875.00 | 946.54 | 0.00 | 946.54 | .25 | .52 | 3494.09 | 1737.06 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 535.00 | 945.95 | 0.00 | 945.98 | 2.70 | 1.33 | 596.77 | 325.54 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 675.00 | 946.25 | 0.00 | 946.27 | 2.76 | 1.41 | 793.93 | 406.65 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 735.00 | 946.37 | 0.00 | 946.39 | 2.71 | 1.43 | 891.88 | 446.63 |
| 25.000 | 2290.00 | 0.00 | 0.00 | 941.30 | 875.00 | 946.64 | 0.00 | 946.66 | 2.51 | 1.43 | 1149.39 | 552.81 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 535.00 | 946.60 | 0.00 | 946.61 | 2.22 | 1.24 | 905.82 | 359.26 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 675.00 | 946.88 | 0.00 | 946.90 | 2.23 | 1.30 | 1129.26 | 451.68 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 735.00 | 946.99 | 0.00 | 947.01 | 2.22 | 1.32 | 1230.18 | 493.42 |
| 25.600 | 2850.00 | 0.00 | 0.00 | 941.70 | 875.00 | 947.22 | 0.00 | 947.24 | 2.19 | 1.36 | 1452.98 | 591.26 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.70 | 535.00 | 946.91 | 0.00 | 946.96 | 5.05 | 1.91 | 432.12 | 238.15 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.70 | 675.00 | 947.21 | 0.00 | 947.26 | 5.72 | 2.12 | 504.69 | 282.26 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.70 | 735.00 | 947.31 | 0.00 | 947.37 | 6.01 | 2.21 | 531.46 | 299.69 |
| 25.800 | 1100.00 | 0.00 | 0.00 | 941.70 | 875.00 | 947.55 | 0.00 | 947.61 | 6.66 | 2.40 | 588.87 | 339.05 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 535.00 | 947.10 | 0.00 | 947.17 | 9.53 | 2.07 | 258.72 | 173.26 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 675.00 | 947.41 | 0.00 | 947.50 | 11.06 | 2.37 | 285.32 | 203.00 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 735.00 | 947.53 | 0.00 | 947.63 | 11.74 | 2.49 | 295.25 | 214.54 |
| 25.900 | 324.00 | 0.00 | 0.00 | 942.20 | 875.00 | 947.78 | 0.00 | 947.90 | 13.29 | 2.76 | 316.50 | 240.01 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 535.00 | 947.11 | 0.00 | 947.18 | 3.90 | 2.12 | 251.86 | 271.05 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 675.00 | 947.42 | 0.00 | 947.52 | 4.58 | 2.43 | 277.99 | 315.51 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 735.00 | 947.54 | 0.00 | 947.64 | 4.88 | 2.55 | 287.76 | 332.65 |
| 26.000 | 16.90 | 950.50 | 948.30 | 942.20 | 875.00 | 947.79 | 0.00 | 947.92 | 5.59 | 2.83 | 308.68 | 370.23 |

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | TOK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 535.00 | 947.17 | 0.00 | 947.20 | .97 | 1.38 | 388.82 | 543.26 |
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 675.00 | 947.50 | 0.00 | 947.54 | 1.26 | 1.62 | 416.07 | 600.56 |
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 735.00 | 947.62 | 0.00 | 947.66 | 1.39 | 1.72 | 426.34 | 622.52 |
| 26.100 | 26.00 | 950.50 | 948.30 | 940.00 | 875.00 | 947.88 | 0.00 | 947.94 | 1.70 | 1.95 | 448.43 | 670.47 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 535.00 | 947.17 | 0.00 | 947.20 | 2.20 | 1.33 | 401.45 | 360.30 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 675.00 | 947.50 | 0.00 | 947.54 | 2.83 | 1.57 | 429.42 | 401.13 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 735.00 | 947.63 | 0.00 | 947.67 | 3.11 | 1.67 | 439.96 | 416.91 |
| 26.200 | 16.90 | 0.00 | 0.00 | 940.00 | 875.00 | 947.89 | 0.00 | 947.95 | 3.75 | 1.89 | 462.65 | 451.58 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 535.00 | 947.21 | 0.00 | 947.23 | 3.44 | 1.34 | 596.78 | 288.54 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 675.00 | 947.55 | 0.00 | 947.57 | 3.56 | 1.46 | 699.29 | 357.71 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 735.00 | 947.68 | 0.00 | 947.71 | 3.63 | 1.50 | 738.22 | 385.74 |
| 26.400 | 107.00 | 0.00 | 0.00 | 941.90 | 875.00 | 947.96 | 0.00 | 947.99 | 3.79 | 1.61 | 822.51 | 449.60 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 535.00 | 947.94 | 0.00 | 947.95 | 2.03 | 1.03 | 871.79 | 375.76 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 675.00 | 948.27 | 0.00 | 948.28 | 1.96 | 1.08 | 1100.82 | 482.36 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 735.00 | 948.40 | 0.00 | 948.41 | 1.93 | 1.09 | 1192.41 | 528.40 |
| 26.900 | 3000.00 | 0.00 | 0.00 | 943.20 | 875.00 | 948.68 | 0.00 | 948.69 | 1.89 | 1.13 | 1394.43 | 636.71 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 535.00 | 947.94 | 0.00 | 947.98 | 4.65 | 1.69 | 529.84 | 248.11 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 675.00 | 948.27 | 0.00 | 948.31 | 4.65 | 1.76 | 684.22 | 313.09 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 735.00 | 948.40 | 0.00 | 948.44 | 4.62 | 1.79 | 747.89 | 342.01 |
| 27.000 | 72.00 | 0.00 | 0.00 | 942.40 | 875.00 | 948.68 | 0.00 | 948.72 | 4.48 | 1.82 | 898.75 | 413.29 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 535.00 | 947.98 | 0.00 | 947.99 | 2.30 | 1.04 | 737.54 | 352.59 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 675.00 | 948.31 | 0.00 | 948.32 | 2.20 | 1.09 | 959.45 | 454.99 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 735.00 | 948.44 | 0.00 | 948.45 | 2.15 | 1.10 | 1051.23 | 500.88 |
| 27.100 | 36.00 | 0.00 | 0.00 | 944.00 | 875.00 | 948.71 | 0.00 | 948.73 | 2.08 | 1.14 | 1245.64 | 606.63 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 535.00 | 948.52 | 0.00 | 948.53 | 2.15 | .99 | 714.88 | 364.46 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 675.00 | 948.85 | 0.00 | 948.86 | 2.32 | 1.10 | 814.06 | 443.54 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 735.00 | 948.97 | 0.00 | 948.99 | 2.39 | 1.14 | 852.76 | 475.80 |
| 27.400 | 2700.00 | 0.00 | 0.00 | 945.05 | 875.00 | 949.25 | 0.00 | 949.27 | 2.53 | 1.24 | 938.90 | 550.24 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 535.00 | 948.65 | 0.00 | 948.71 | 8.70 | 1.91 | 296.56 | 181.42 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 675.00 | 948.98 | 0.00 | 949.05 | 9.26 | 2.12 | 348.01 | 221.80 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 735.00 | 949.11 | 0.00 | 949.18 | 9.48 | 2.21 | 369.82 | 238.70 |
| 27.500 | 400.00 | 0.00 | 0.00 | 945.20 | 875.00 | 949.39 | 0.00 | 949.47 | 9.88 | 2.38 | 421.24 | 278.32 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 535.00 | 949.60 | 0.00 | 949.63 | 4.58 | 1.53 | 387.48 | 249.91 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 675.00 | 949.99 | 0.00 | 950.03 | 4.81 | 1.69 | 456.72 | 307.66 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 735.00 | 950.14 | 0.00 | 950.18 | 4.91 | 1.76 | 485.32 | 331.86 |
| 27.700 | 1500.00 | 0.00 | 0.00 | 945.90 | 875.00 | 950.46 | 0.00 | 950.52 | 5.10 | 1.89 | 550.28 | 387.55 |
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 535.00 | 949.78 | 0.00 | 949.83 | 7.01 | 1.90 | 281.48 | 202.07 |
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 675.00 | 950.18 | 0.00 | 950.25 | 7.78 | 2.13 | 316.21 | 241.96 |
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.33 | 0.00 | 950.41 | 8.10 | 2.23 | 329.85 | 258.25 |
| 27.800 | 340.00 | 0.00 | 0.00 | 945.50 | 875.00 | 950.67 | 0.00 | 950.76 | 8.80 | 2.43 | 359.58 | 294.89 |
| 27.900 | 32.00 | 0.00 | 0.00 | 945.50 | 535.00 | 949.82 | 0.00 | 949.86 | 4.70 | 1.62 | 329.46 | 246.69 |
| 27.900 | 32.00 | 0.00 | 0.00 | 945.50 | 675.00 | 950.22 | 0.00 | 950.28 | 5.27 | 1.84 | 367.36 | 294.08 |
| 27.900 | 32.00 | 0.00 | 0.00 | 945.50 | 735.00 | 950.38 | 0.00 | 950.44 | 5.52 | 1.93 | 381.72 | 312.80 |
| 27.900 | 32.00 | 0.00 | 0.00 | 945.50 | 875.00 | 950.72 | 0.00 | 950.79 | 6.09 | 2.12 | 412.65 | 354.53 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRITS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 500.00 | 949.82 | 0.00 | 949.86 | 1.63 | 1.55 | 323.60 | 391.50 |
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 635.00 | 950.23 | 0.00 | 950.28 | 1.90 | 1.76 | 359.83 | 460.23 |
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 690.00 | 950.39 | 0.00 | 950.44 | 2.00 | 1.85 | 373.89 | 487.76 |
| 28.000 | 1.00 | 954.80 | 952.70 | 945.50 | 820.00 | 950.73 | 0.00 | 950.79 | 2.23 | 2.03 | 404.17 | 548.58 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 500.00 | 949.83 | 0.00 | 949.86 | 1.51 | 1.51 | 330.06 | 406.98 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 635.00 | 950.24 | 0.00 | 950.28 | 1.77 | 1.73 | 366.45 | 477.11 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 690.00 | 950.40 | 0.00 | 950.45 | 1.86 | 1.81 | 380.63 | 505.30 |
| 28.100 | 36.50 | 954.80 | 952.70 | 945.70 | 820.00 | 950.74 | 0.00 | 950.80 | 2.09 | 1.99 | 411.18 | 567.55 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 500.00 | 949.83 | 0.00 | 949.87 | 3.77 | 1.48 | 337.12 | 257.53 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 635.00 | 950.24 | 0.00 | 950.28 | 4.34 | 1.70 | 374.27 | 304.82 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 690.00 | 950.40 | 0.00 | 950.45 | 4.53 | 1.77 | 388.76 | 324.02 |
| 28.200 | 1.00 | 0.00 | 0.00 | 945.70 | 820.00 | 950.74 | 0.00 | 950.80 | 5.00 | 1.95 | 419.95 | 366.76 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 500.00 | 949.84 | 0.00 | 949.88 | 4.87 | 1.73 | 325.71 | 226.51 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 635.00 | 950.25 | 0.00 | 950.30 | 5.26 | 1.93 | 385.96 | 276.78 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 690.00 | 950.41 | 0.00 | 950.47 | 5.36 | 2.00 | 410.52 | 298.03 |
| 28.300 | 32.00 | 0.00 | 0.00 | 945.80 | 820.00 | 950.76 | 0.00 | 950.82 | 5.57 | 2.14 | 463.91 | 347.31 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 500.00 | 950.14 | 0.00 | 950.18 | 5.27 | 1.66 | 338.29 | 217.91 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 635.00 | 950.57 | 0.00 | 950.61 | 5.41 | 1.83 | 400.26 | 272.93 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 690.00 | 950.73 | 0.00 | 950.78 | 5.44 | 1.89 | 425.18 | 295.72 |
| 28.420 | 580.00 | 0.00 | 0.00 | 946.49 | 820.00 | 951.09 | 0.00 | 951.14 | 5.55 | 2.02 | 481.22 | 348.22 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 500.00 | 951.60 | 0.00 | 951.64 | 5.73 | 1.61 | 337.49 | 208.83 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 635.00 | 952.04 | 0.00 | 952.08 | 5.58 | 1.74 | 412.49 | 268.90 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 690.00 | 952.20 | 0.00 | 952.24 | 5.49 | 1.78 | 444.28 | 294.39 |
| 28.670 | 2660.00 | 0.00 | 0.00 | 948.25 | 820.00 | 952.56 | 0.00 | 952.61 | 5.39 | 1.88 | 517.92 | 353.12 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 500.00 | 951.94 | 0.00 | 951.97 | 3.81 | 1.32 | 399.64 | 256.32 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 635.00 | 952.37 | 0.00 | 952.40 | 3.80 | 1.44 | 481.70 | 325.58 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 690.00 | 952.52 | 0.00 | 952.56 | 3.81 | 1.49 | 514.68 | 353.45 |
| 28.800 | 700.00 | 0.00 | 0.00 | 948.30 | 820.00 | 952.88 | 0.00 | 952.92 | 3.79 | 1.58 | 591.03 | 420.94 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 500.00 | 951.89 | 0.00 | 952.09 | 52.04 | 3.58 | 143.80 | 69.31 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 635.00 | 952.31 | 0.00 | 952.52 | 42.40 | 3.64 | 186.39 | 97.52 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 690.00 | 952.47 | 0.00 | 952.67 | 39.95 | 3.67 | 203.62 | 109.16 |
| 28.810 | 75.00 | 0.00 | 0.00 | 949.30 | 820.00 | 952.82 | 0.00 | 953.03 | 35.17 | 3.72 | 245.91 | 138.27 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 500.00 | 952.08 | 0.00 | 952.21 | 24.69 | 2.92 | 171.40 | 100.63 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 635.00 | 952.47 | 0.00 | 952.63 | 24.66 | 3.19 | 198.76 | 127.88 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 690.00 | 952.61 | 0.00 | 952.78 | 24.83 | 3.30 | 208.81 | 138.47 |
| 28.900 | 34.00 | 0.00 | 0.00 | 949.10 | 820.00 | 952.94 | 0.00 | 953.13 | 25.19 | 3.54 | 231.40 | 163.37 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 500.00 | 952.08 | 0.00 | 952.22 | 10.50 | 3.00 | 166.57 | 154.32 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 635.00 | 952.47 | 0.00 | 952.63 | 10.80 | 3.29 | 193.13 | 193.18 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 690.00 | 952.61 | 0.00 | 952.79 | 11.00 | 3.40 | 202.89 | 208.08 |
| 29.000 | 1.00 | 957.10 | 956.40 | 949.10 | 820.00 | 952.93 | 0.00 | 953.14 | 11.42 | 3.65 | 224.82 | 242.65 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 500.00 | 952.13 | 0.00 | 952.25 | 8.02 | 2.76 | 181.33 | 176.55 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 635.00 | 952.53 | 0.00 | 952.67 | 8.57 | 3.05 | 207.89 | 216.96 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 690.00 | 952.67 | 0.00 | 952.83 | 8.81 | 3.17 | 217.67 | 232.42 |
| 29.100 | 30.00 | 957.10 | 956.40 | 948.40 | 820.00 | 953.00 | 0.00 | 953.18 | 9.35 | 3.42 | 239.65 | 268.16 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | IOK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 500.00 | 952.14 | 0.00 | 952.25 | 18.23 | 2.67 | 187.32 | 117.09 |
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 635.00 | 952.54 | 0.00 | 952.67 | 18.78 | 2.95 | 215.25 | 146.53 |
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.69 | 0.00 | 952.83 | 19.11 | 3.06 | 225.41 | 157.83 |
| 29.200 | 1.00 | 0.00 | 0.00 | 948.40 | 820.00 | 953.01 | 0.00 | 953.18 | 19.80 | 3.30 | 248.25 | 184.26 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 500.00 | 952.19 | 0.00 | 952.35 | 26.87 | 3.20 | 156.27 | 96.45 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 635.00 | 952.59 | 0.00 | 952.78 | 28.72 | 3.51 | 180.86 | 118.49 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 690.00 | 952.74 | 0.00 | 952.94 | 29.51 | 3.63 | 190.30 | 127.01 |
| 29.300 | 34.00 | 0.00 | 0.00 | 948.40 | 820.00 | 953.06 | 0.00 | 953.30 | 30.95 | 3.86 | 212.30 | 147.40 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 500.00 | 952.89 | 0.00 | 953.00 | 18.28 | 2.70 | 185.48 | 116.94 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 635.00 | 953.33 | 0.00 | 953.47 | 19.02 | 2.92 | 217.32 | 145.62 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 690.00 | 953.50 | 0.00 | 953.64 | 19.24 | 3.00 | 229.68 | 157.29 |
| 29.420 | 294.00 | 0.00 | 0.00 | 948.88 | 820.00 | 953.86 | 0.00 | 954.02 | 19.60 | 3.18 | 257.73 | 185.24 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 500.00 | 954.06 | 0.00 | 954.11 | 6.84 | 1.91 | 271.59 | 191.18 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 635.00 | 954.53 | 0.00 | 954.60 | 6.86 | 2.09 | 332.00 | 242.43 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 690.00 | 954.71 | 0.00 | 954.77 | 6.85 | 2.15 | 359.17 | 263.59 |
| 29.550 | 1050.00 | 0.00 | 0.00 | 949.49 | 820.00 | 955.08 | 0.00 | 955.15 | 6.77 | 2.27 | 426.90 | 315.12 |
| 29.600 | 359.00 | 0.00 | 0.00 | 949.70 | 500.00 | 954.28 | 0.00 | 954.33 | 5.13 | 1.77 | 320.48 | 220.91 |
| 29.800 | 359.00 | 0.00 | 0.00 | 949.70 | 635.00 | 954.76 | 0.00 | 954.81 | 5.11 | 1.92 | 402.29 | 280.80 |
| 29.800 | 359.00 | 0.00 | 0.00 | 949.70 | 690.00 | 954.94 | 0.00 | 954.99 | 5.09 | 1.97 | 436.25 | 305.73 |
| 29.800 | 359.00 | 0.00 | 0.00 | 949.70 | 820.00 | 955.31 | 0.00 | 955.37 | 5.01 | 2.06 | 515.98 | 366.38 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 500.00 | 954.37 | 0.00 | 954.40 | 3.92 | 1.58 | 350.84 | 252.45 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 635.00 | 954.84 | 0.00 | 954.89 | 4.02 | 1.73 | 429.67 | 316.66 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 690.00 | 955.02 | 0.00 | 955.06 | 4.05 | 1.79 | 461.69 | 342.70 |
| 29.810 | 160.00 | 0.00 | 0.00 | 949.10 | 820.00 | 955.39 | 0.00 | 955.44 | 4.13 | 1.90 | 535.84 | 403.28 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 500.00 | 954.38 | 0.00 | 954.42 | 4.52 | 1.72 | 291.49 | 235.10 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 635.00 | 954.85 | 0.00 | 954.91 | 5.19 | 1.96 | 324.52 | 278.82 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 690.00 | 955.03 | 0.00 | 955.09 | 5.46 | 2.05 | 336.56 | 295.39 |
| 29.900 | 39.00 | 0.00 | 0.00 | 949.50 | 820.00 | 955.40 | 0.00 | 955.48 | 6.13 | 2.27 | 361.80 | 331.13 |
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 500.00 | 954.38 | 0.00 | 954.43 | 2.36 | 1.77 | 282.23 | 325.62 |
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 635.00 | 954.85 | 0.00 | 954.92 | 2.80 | 2.02 | 314.09 | 379.55 |
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 690.00 | 955.03 | 0.00 | 955.09 | 2.98 | 2.12 | 325.68 | 399.63 |
| 30.000 | 1.00 | 957.70 | 956.90 | 949.50 | 820.00 | 955.39 | 0.00 | 955.48 | 3.43 | 2.34 | 350.33 | 443.02 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 500.00 | 954.38 | 0.00 | 954.43 | 2.45 | 1.81 | 276.40 | 319.51 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 635.00 | 954.86 | 0.00 | 954.93 | 2.89 | 2.06 | 308.34 | 373.48 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 690.00 | 955.03 | 0.00 | 955.11 | 3.07 | 2.16 | 319.97 | 393.85 |
| 30.100 | 30.00 | 957.70 | 956.90 | 950.00 | 820.00 | 955.40 | 0.00 | 955.49 | 3.51 | 2.38 | 344.71 | 437.51 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 500.00 | 954.39 | 0.00 | 954.43 | 4.88 | 1.76 | 284.29 | 226.30 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 635.00 | 954.86 | 0.00 | 954.93 | 5.56 | 2.00 | 317.19 | 269.36 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 690.00 | 955.04 | 0.00 | 955.11 | 5.83 | 2.10 | 329.17 | 285.66 |
| 30.200 | 1.00 | 0.00 | 0.00 | 950.00 | 820.00 | 955.41 | 0.00 | 955.49 | 6.51 | 2.31 | 354.65 | 321.41 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 500.00 | 954.43 | 0.00 | 954.46 | 3.23 | 1.43 | 392.14 | 278.22 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 635.00 | 954.92 | 0.00 | 954.95 | 3.23 | 1.55 | 475.54 | 353.07 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.10 | 0.00 | 955.13 | 3.24 | 1.60 | 508.65 | 383.25 |
| 30.300 | 39.00 | 0.00 | 0.00 | 950.10 | 820.00 | 955.48 | 0.00 | 955.52 | 3.28 | 1.70 | 584.16 | 453.10 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | TOPWS | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 500.00 | 954.45 | 0.00 | 954.48 | 3.18 | 1.42 | 397.07 | 280.21 |
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 635.00 | 954.94 | 0.00 | 954.98 | 3.22 | 1.55 | 481.58 | 353.94 |
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 690.00 | 955.12 | 0.00 | 955.16 | 3.25 | 1.61 | 514.17 | 382.68 |
| 30.400 | 76.00 | 0.00 | 0.00 | 950.10 | 820.00 | 955.51 | 0.00 | 955.55 | 3.31 | 1.71 | 590.44 | 450.67 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 500.00 | 955.73 | 0.00 | 955.78 | 7.20 | 1.76 | 306.34 | 186.40 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 635.00 | 956.20 | 0.00 | 956.25 | 6.73 | 1.89 | 375.37 | 244.79 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 690.00 | 956.37 | 0.00 | 956.43 | 6.56 | 1.93 | 409.66 | 269.37 |
| 31.000 | 2825.00 | 0.00 | 0.00 | 952.40 | 820.00 | 956.74 | 0.00 | 956.80 | 6.15 | 2.00 | 515.66 | 330.57 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 500.00 | 956.94 | 0.00 | 956.97 | 3.26 | 1.48 | 432.81 | 277.09 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 635.00 | 957.38 | 0.00 | 957.41 | 3.25 | 1.56 | 576.43 | 352.14 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 690.00 | 957.53 | 0.00 | 957.57 | 3.23 | 1.62 | 636.32 | 383.94 |
| 31.800 | 2566.00 | 0.00 | 0.00 | 952.30 | 820.00 | 957.86 | 0.00 | 957.90 | 3.19 | 1.69 | 770.91 | 459.07 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 500.00 | 957.02 | 0.00 | 957.08 | 6.89 | 1.99 | 261.06 | 190.52 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 635.00 | 957.45 | 0.00 | 957.53 | 7.50 | 2.24 | 298.44 | 231.83 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.60 | 0.00 | 957.69 | 7.76 | 2.34 | 312.47 | 247.77 |
| 31.805 | 223.00 | 0.00 | 0.00 | 952.70 | 820.00 | 957.92 | 0.00 | 958.02 | 8.44 | 2.57 | 342.14 | 282.18 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 500.00 | 957.05 | 0.00 | 957.11 | 6.76 | 1.98 | 262.65 | 192.32 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 635.00 | 957.48 | 0.00 | 957.55 | 7.36 | 2.23 | 299.34 | 234.13 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.63 | 0.00 | 957.72 | 7.61 | 2.32 | 312.81 | 250.19 |
| 31.810 | 37.00 | 0.00 | 0.00 | 952.70 | 820.00 | 957.96 | 0.00 | 958.05 | 8.26 | 2.55 | 341.29 | 285.35 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 500.00 | 957.08 | 0.00 | 957.14 | 6.75 | 1.95 | 256.56 | 192.45 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 635.00 | 957.51 | 0.00 | 957.59 | 7.63 | 2.21 | 286.78 | 229.93 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.67 | 0.00 | 957.75 | 7.99 | 2.32 | 297.78 | 244.14 |
| 31.900 | 49.00 | 0.00 | 0.00 | 952.70 | 820.00 | 958.00 | 0.00 | 958.10 | 8.93 | 2.56 | 320.54 | 274.45 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 500.00 | 957.08 | 0.00 | 957.14 | 3.18 | 2.01 | 248.83 | 280.28 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 635.00 | 957.51 | 0.00 | 957.59 | 3.70 | 2.28 | 278.11 | 330.11 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 690.00 | 957.67 | 0.00 | 957.76 | 3.91 | 2.39 | 288.76 | 348.75 |
| 32.000 | 1.00 | 960.10 | 959.90 | 952.70 | 820.00 | 957.99 | 0.00 | 958.10 | 4.47 | 2.64 | 310.79 | 388.05 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 500.00 | 957.10 | 0.00 | 957.16 | 2.75 | 1.92 | 261.05 | 301.38 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 635.00 | 957.53 | 0.00 | 957.61 | 3.25 | 2.19 | 290.42 | 352.32 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 690.00 | 957.69 | 0.00 | 957.77 | 3.45 | 2.29 | 301.12 | 371.34 |
| 32.100 | 30.00 | 960.10 | 959.90 | 952.60 | 820.00 | 958.02 | 0.00 | 958.12 | 3.97 | 2.54 | 323.26 | 411.46 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 500.00 | 957.10 | 0.00 | 957.16 | 5.79 | 1.86 | 269.22 | 207.73 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 635.00 | 957.54 | 0.00 | 957.61 | 6.65 | 2.12 | 299.54 | 246.27 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 690.00 | 957.70 | 0.00 | 957.77 | 7.00 | 2.22 | 310.59 | 260.87 |
| 32.200 | 1.00 | 0.00 | 0.00 | 952.60 | 820.00 | 958.02 | 0.00 | 958.12 | 7.89 | 2.46 | 333.46 | 292.00 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 500.00 | 957.16 | 0.00 | 957.17 | 1.78 | 1.08 | 504.00 | 374.73 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 635.00 | 957.61 | 0.00 | 957.63 | 1.95 | 1.21 | 573.52 | 454.79 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 690.00 | 957.77 | 0.00 | 957.79 | 2.02 | 1.27 | 599.37 | 485.80 |
| 32.300 | 49.00 | 0.00 | 0.00 | 952.70 | 820.00 | 958.11 | 0.00 | 958.14 | 2.20 | 1.39 | 654.06 | 553.42 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 500.00 | 958.64 | 0.00 | 958.71 | 12.63 | 2.40 | 365.32 | 140.68 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 635.00 | 959.07 | 0.00 | 959.12 | 9.62 | 2.28 | 568.27 | 204.77 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 690.00 | 959.21 | 0.00 | 959.26 | 8.64 | 2.22 | 661.76 | 234.91 |
| 33.000 | 4100.00 | 0.00 | 0.00 | 955.00 | 820.00 | 959.53 | 0.00 | 959.57 | 6.99 | 2.11 | 868.42 | 310.10 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 500.00 | 960.77 | 0.00 | 960.84 | 6.61 | 2.11 | 236.51 | 194.44 |
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 635.00 | 961.17 | 0.00 | 961.26 | 8.22 | 2.47 | 257.05 | 221.47 |
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 690.00 | 961.29 | 0.00 | 961.39 | 8.97 | 2.62 | 263.66 | 230.43 |
| 33.850 | 2399.00 | 0.00 | 0.00 | 955.42 | 820.00 | 961.53 | 0.00 | 961.67 | 10.88 | 2.96 | 276.82 | 248.56 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 500.00 | 960.79 | 0.00 | 960.85 | 6.84 | 2.05 | 244.44 | 191.24 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 635.00 | 961.19 | 0.00 | 961.27 | 8.32 | 2.38 | 267.23 | 220.14 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 690.00 | 961.31 | 0.00 | 961.40 | 9.08 | 2.52 | 274.04 | 229.03 |
| 33.900 | 13.00 | 0.00 | 0.00 | 955.50 | 820.00 | 961.56 | 0.00 | 961.69 | 10.86 | 2.84 | 288.87 | 248.81 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 500.00 | 960.79 | 0.00 | 960.85 | 2.60 | 2.04 | 244.54 | 310.04 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 635.00 | 961.19 | 0.00 | 961.27 | 3.19 | 2.37 | 267.68 | 355.42 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 690.00 | 961.31 | 0.00 | 961.41 | 3.49 | 2.51 | 274.61 | 369.35 |
| 34.000 | 1.00 | 967.30 | 963.10 | 955.50 | 820.00 | 961.56 | 0.00 | 961.69 | 4.21 | 2.83 | 289.37 | 399.51 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 500.00 | 960.79 | 0.00 | 960.87 | 3.03 | 2.16 | 231.43 | 287.46 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 635.00 | 961.19 | 0.00 | 961.29 | 3.66 | 2.50 | 254.42 | 331.84 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 690.00 | 961.31 | 0.00 | 961.42 | 3.98 | 2.64 | 261.42 | 345.70 |
| 34.100 | 29.00 | 967.30 | 963.10 | 956.00 | 820.00 | 961.57 | 0.00 | 961.71 | 4.76 | 2.97 | 276.31 | 375.74 |
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 500.00 | 960.79 | 0.00 | 960.87 | 8.08 | 2.17 | 230.90 | 175.93 |
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 635.00 | 961.19 | 0.00 | 961.29 | 9.62 | 2.50 | 254.10 | 204.71 |
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 690.00 | 961.31 | 0.00 | 961.42 | 10.43 | 2.64 | 261.07 | 213.64 |
| 34.200 | 1.00 | 0.00 | 0.00 | 956.00 | 820.00 | 961.57 | 0.00 | 961.71 | 12.38 | 2.97 | 275.90 | 233.05 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 500.00 | 960.82 | 0.00 | 960.88 | 6.53 | 1.99 | 251.31 | 195.73 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 635.00 | 961.23 | 0.00 | 961.31 | 7.64 | 2.28 | 277.97 | 229.69 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 690.00 | 961.35 | 0.00 | 961.44 | 8.26 | 2.41 | 285.89 | 240.13 |
| 34.250 | 13.00 | 0.00 | 0.00 | 956.46 | 820.00 | 961.61 | 0.00 | 961.73 | 9.72 | 2.71 | 302.83 | 263.00 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 500.00 | 960.85 | 0.00 | 960.89 | 4.84 | 1.76 | 314.50 | 227.16 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 635.00 | 961.27 | 0.00 | 961.32 | 5.37 | 1.98 | 370.94 | 274.05 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 690.00 | 961.40 | 0.00 | 961.46 | 5.63 | 2.07 | 389.89 | 290.91 |
| 34.300 | 26.00 | 0.00 | 0.00 | 956.20 | 820.00 | 961.68 | 0.00 | 961.75 | 6.32 | 2.28 | 427.85 | 326.28 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 500.00 | 961.24 | 0.00 | 961.27 | 4.30 | 1.53 | 411.39 | 241.20 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 635.00 | 961.69 | 0.00 | 961.72 | 4.33 | 1.64 | 514.74 | 305.12 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 690.00 | 961.83 | 0.00 | 961.87 | 4.42 | 1.69 | 552.11 | 328.35 |
| 34.800 | 820.00 | 0.00 | 0.00 | 957.10 | 820.00 | 962.15 | 0.00 | 962.20 | 4.58 | 1.79 | 639.71 | 383.36 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 500.00 | 961.40 | 0.00 | 961.49 | 13.21 | 2.34 | 217.13 | 137.55 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 635.00 | 961.84 | 0.00 | 961.94 | 13.06 | 2.55 | 255.92 | 175.74 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 690.00 | 961.99 | 0.00 | 962.09 | 13.28 | 2.64 | 268.83 | 189.33 |
| 34.810 | 280.00 | 0.00 | 0.00 | 958.20 | 820.00 | 962.30 | 0.00 | 962.43 | 13.91 | 2.86 | 296.79 | 219.82 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 500.00 | 961.47 | 0.00 | 961.54 | 10.39 | 2.14 | 233.95 | 155.08 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 635.00 | 961.91 | 0.00 | 962.00 | 10.58 | 2.36 | 269.21 | 195.26 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 690.00 | 962.06 | 0.00 | 962.16 | 10.85 | 2.46 | 281.00 | 209.47 |
| 34.900 | 50.00 | 0.00 | 0.00 | 958.00 | 820.00 | 962.38 | 0.00 | 962.49 | 11.50 | 2.67 | 306.72 | 241.76 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 500.00 | 961.45 | 0.00 | 961.55 | 2.62 | 2.08 | 242.17 | 308.98 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 635.00 | 961.92 | 0.00 | 962.00 | 2.68 | 2.28 | 280.08 | 387.83 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 690.00 | 962.07 | 0.00 | 962.16 | 2.76 | 2.37 | 292.75 | 415.49 |
| 35.000 | 1.00 | 967.90 | 965.70 | 958.00 | 820.00 | 962.40 | 0.00 | 962.50 | 2.93 | 2.57 | 320.89 | 479.02 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 500.00 | 961.49 | 0.00 | 961.56 | 2.93 | 2.10 | 238.36 | 292.05 |
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 635.00 | 961.93 | 0.00 | 962.01 | 2.97 | 2.30 | 276.50 | 368.48 |
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 690.00 | 962.08 | 0.00 | 962.17 | 3.05 | 2.39 | 289.30 | 395.39 |
| 35.100 | 32.00 | 967.90 | 965.70 | 957.70 | 820.00 | 962.41 | 0.00 | 962.51 | 3.23 | 2.58 | 317.27 | 456.26 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 500.00 | 961.49 | 0.00 | 961.56 | 2.43 | 2.04 | 244.90 | 320.99 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 635.00 | 961.94 | 0.00 | 962.02 | 2.42 | 2.24 | 283.92 | 408.02 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 690.00 | 962.09 | 0.00 | 962.17 | 2.47 | 2.32 | 297.00 | 438.90 |
| 35.200 | 1.00 | 0.00 | 0.00 | 957.70 | 820.00 | 962.41 | 0.00 | 962.51 | 2.59 | 2.52 | 325.59 | 509.15 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 500.00 | 961.46 | 0.00 | 961.64 | 11.74 | 3.53 | 146.30 | 145.93 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 635.00 | 961.91 | 0.00 | 962.09 | 8.70 | 3.51 | 188.22 | 215.24 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 690.00 | 962.06 | 0.00 | 962.24 | 8.13 | 3.54 | 203.25 | 242.05 |
| 35.250 | 51.00 | 0.00 | 0.00 | 959.40 | 820.00 | 962.39 | 0.00 | 962.57 | 7.01 | 3.57 | 243.96 | 309.67 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 500.00 | 963.19 | 0.00 | 963.25 | 5.19 | 2.13 | 268.33 | 219.57 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 635.00 | 963.54 | 0.00 | 963.58 | 2.84 | 1.78 | 423.50 | 377.10 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 690.00 | 963.67 | 0.00 | 963.70 | 2.29 | 1.67 | 497.69 | 456.28 |
| 35.300 | 10.00 | 961.47 | 960.59 | 959.40 | 820.00 | 963.97 | 0.00 | 963.99 | 1.43 | 1.43 | 687.41 | 684.91 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 500.00 | 963.23 | 0.00 | 963.26 | 1.70 | 1.68 | 364.41 | 383.69 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 635.00 | 963.55 | 0.00 | 963.58 | 1.33 | 1.61 | 516.50 | 550.36 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 690.00 | 963.68 | 0.00 | 963.71 | 1.16 | 1.54 | 599.21 | 639.84 |
| 35.350 | 10.00 | 0.00 | 0.00 | 959.76 | 820.00 | 963.97 | 0.00 | 963.99 | .84 | 1.39 | 798.58 | 896.64 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 500.00 | 964.07 | 0.00 | 964.16 | 4.63 | 2.50 | 206.78 | 232.42 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 635.00 | 964.28 | 0.00 | 964.40 | 5.36 | 2.86 | 231.98 | 274.24 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 690.00 | 964.34 | 0.00 | 964.48 | 5.76 | 3.02 | 239.63 | 287.47 |
| 36.000 | 3430.00 | 0.00 | 0.00 | 961.30 | 820.00 | 964.48 | 0.00 | 964.65 | 6.66 | 3.36 | 257.01 | 317.65 |

MOORE BUSINESS FORMS, INC 23

10 YEAR FLOW

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 24.000 | 535.00 | 945.77 | 0.00 | 0.00 | 0.00 | 314.66 | 0.00 |
| 24.000 | 675.00 | 946.05 | .28 | 0.00 | 0.00 | 331.64 | 0.00 |
| 24.000 | 735.00 | 946.17 | .12 | 0.00 | 0.00 | 336.78 | 0.00 |
| 24.000 | 875.00 | 946.44 | .27 | 0.00 | 0.00 | 348.33 | 0.00 |
| 24.100 | 535.00 | 945.79 | 0.00 | .02 | 0.00 | 327.92 | 2280.00 |
| 24.100 | 675.00 | 946.08 | .29 | .03 | 0.00 | 336.00 | 2280.00 |
| 24.100 | 735.00 | 946.20 | .12 | .03 | 0.00 | 339.47 | 2280.00 |
| 24.100 | 875.00 | 946.48 | .28 | .04 | 0.00 | 347.26 | 2280.00 |
| 24.200 | 535.00 | 945.83 | 0.00 | .04 | 0.00 | 1849.35 | 2300.00 |
| 24.200 | 675.00 | 946.13 | .30 | .05 | 0.00 | 1976.85 | 2300.00 |
| 24.200 | 735.00 | 946.25 | .13 | .05 | 0.00 | 1993.31 | 2300.00 |
| 24.200 | 875.00 | 946.54 | .28 | .06 | 0.00 | 2029.01 | 2300.00 |
| 25.000 | 535.00 | 945.95 | 0.00 | .12 | 0.00 | 613.08 | 2290.00 |
| 25.000 | 675.00 | 946.25 | .29 | .12 | 0.00 | 760.89 | 2290.00 |
| 25.000 | 735.00 | 946.37 | .12 | .11 | 0.00 | 845.34 | 2290.00 |
| 25.000 | 875.00 | 946.64 | .27 | .11 | 0.00 | 1016.07 | 2290.00 |
| 25.600 | 535.00 | 946.60 | 0.00 | .65 | 0.00 | 664.56 | 2850.00 |
| 25.600 | 675.00 | 946.88 | .28 | .64 | 0.00 | 900.70 | 2850.00 |
| 25.600 | 735.00 | 946.99 | .11 | .62 | 0.00 | 939.62 | 2850.00 |
| 25.600 | 875.00 | 947.22 | .23 | .58 | 0.00 | 969.38 | 2850.00 |
| 25.800 | 535.00 | 946.91 | 0.00 | .31 | 0.00 | 247.00 | 1100.00 |
| 25.800 | 675.00 | 947.21 | .29 | .32 | .29 | 247.00 | 1100.00 |
| 25.800 | 735.00 | 947.31 | .11 | .32 | .40 | 247.00 | 1100.00 |
| 25.800 | 875.00 | 947.55 | .23 | .32 | .63 | 247.00 | 1100.00 |
| 25.900 | 535.00 | 947.10 | 0.00 | .19 | 0.00 | 85.00 | 324.00 |
| 25.900 | 675.00 | 947.41 | .31 | .21 | .31 | 85.00 | 324.00 |
| 25.900 | 735.00 | 947.53 | .12 | .22 | .43 | 85.00 | 324.00 |
| 25.900 | 875.00 | 947.78 | .25 | .24 | .68 | 85.00 | 324.00 |
| 26.000 | 535.00 | 947.11 | 0.00 | .01 | 0.00 | 85.00 | 16.90 |
| 26.000 | 675.00 | 947.42 | .31 | .01 | .31 | 85.00 | 16.90 |
| 26.000 | 735.00 | 947.54 | .12 | .01 | .43 | 85.00 | 16.90 |
| 26.000 | 875.00 | 947.79 | .25 | .01 | .68 | 85.00 | 16.90 |
| 26.100 | 535.00 | 947.17 | 0.00 | .06 | 0.00 | 85.00 | 26.00 |
| 26.100 | 675.00 | 947.50 | .33 | .07 | .33 | 85.00 | 26.00 |
| 26.100 | 735.00 | 947.62 | .12 | .08 | .45 | 85.00 | 26.00 |
| 26.100 | 875.00 | 947.88 | .27 | .09 | .72 | 85.00 | 26.00 |
| 26.200 | 535.00 | 947.17 | 0.00 | .00 | 0.00 | 85.00 | 16.90 |
| 26.200 | 675.00 | 947.50 | .33 | .01 | .33 | 85.00 | 16.90 |
| 26.200 | 735.00 | 947.63 | .12 | .01 | .45 | 85.00 | 16.90 |
| 26.200 | 875.00 | 947.89 | .27 | .01 | .72 | 85.00 | 16.90 |
| 26.400 | 535.00 | 947.21 | 0.00 | .04 | 0.00 | 299.00 | 107.00 |
| 26.400 | 675.00 | 947.55 | .34 | .05 | .34 | 299.00 | 107.00 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26.400 | 735.00 | 947.68 | .13 | .05 | .47 | 299.00 | 107.00 |
| 26.400 | 875.00 | 947.96 | .28 | .07 | .75 | 299.00 | 107.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 26.900 | 535.00 | 947.94 | 0.00 | .73 | 0.00 | 661.09 | 3000.00 |
| 26.900 | 675.00 | 948.27 | .33 | .72 | .33 | 712.05 | 3000.00 |
| 26.900 | 735.00 | 948.40 | .13 | .72 | .46 | 719.08 | 3000.00 |
| 26.900 | 875.00 | 948.68 | .28 | .72 | .74 | 734.35 | 3000.00 |
| 27.000 | 535.00 | 947.94 | 0.00 | .01 | 0.00 | 429.83 | 72.00 |
| 27.000 | 675.00 | 948.27 | .33 | .01 | .33 | 489.93 | 72.00 |
| 27.000 | 735.00 | 948.40 | .13 | .01 | .46 | 501.16 | 72.00 |
| 27.000 | 875.00 | 948.68 | .28 | .01 | .74 | 600.03 | 72.00 |
| 27.100 | 535.00 | 947.98 | 0.00 | .03 | 0.00 | 536.26 | 36.00 |
| 27.100 | 675.00 | 948.31 | .33 | .03 | .33 | 715.31 | 36.00 |
| 27.100 | 735.00 | 948.44 | .13 | .03 | .46 | 719.96 | 36.00 |
| 27.100 | 875.00 | 948.71 | .28 | .03 | .74 | 729.71 | 36.00 |
| 27.400 | 535.00 | 948.52 | 0.00 | .54 | 0.00 | 301.57 | 2700.00 |
| 27.400 | 675.00 | 948.85 | .33 | .54 | .33 | 307.39 | 2700.00 |
| 27.400 | 735.00 | 948.97 | .13 | .54 | .46 | 309.63 | 2700.00 |
| 27.400 | 875.00 | 949.25 | .28 | .53 | .73 | 314.56 | 2700.00 |
| 27.500 | 535.00 | 948.65 | 0.00 | .13 | 0.00 | 144.72 | 400.00 |
| 27.500 | 675.00 | 948.98 | .33 | .13 | .33 | 166.19 | 400.00 |
| 27.500 | 735.00 | 949.11 | .13 | .14 | .46 | 174.49 | 400.00 |
| 27.500 | 875.00 | 949.39 | .28 | .14 | .74 | 192.66 | 400.00 |
| 27.700 | 535.00 | 949.60 | 0.00 | .95 | 0.00 | 169.53 | 1500.00 |
| 27.700 | 675.00 | 949.99 | .39 | 1.01 | .39 | 186.01 | 1500.00 |
| 27.700 | 735.00 | 950.14 | .15 | 1.03 | .54 | 192.40 | 1500.00 |
| 27.700 | 875.00 | 950.46 | .33 | 1.08 | .87 | 206.18 | 1500.00 |
| 27.800 | 535.00 | 949.78 | 0.00 | .18 | 0.00 | 55.91 | 340.00 |
| 27.800 | 675.00 | 950.18 | .40 | .19 | .40 | 87.54 | 340.00 |
| 27.800 | 735.00 | 950.33 | .16 | .20 | .56 | 88.17 | 340.00 |
| 27.800 | 875.00 | 950.67 | .33 | .20 | .89 | 89.53 | 340.00 |
| 27.900 | 535.00 | 949.82 | 0.00 | .04 | 0.00 | 91.00 | 32.00 |
| 27.900 | 675.00 | 950.22 | .41 | .04 | .41 | 91.00 | 32.00 |
| 27.900 | 735.00 | 950.38 | .16 | .05 | .56 | 91.00 | 32.00 |
| 27.900 | 875.00 | 950.72 | .34 | .05 | .90 | 91.00 | 32.00 |
| 28.000 | 500.00 | 949.82 | 0.00 | .01 | 0.00 | 91.00 | 1.00 |
| 28.000 | 635.00 | 950.23 | .41 | .01 | .41 | 91.00 | 1.00 |
| 28.000 | 690.00 | 950.39 | .16 | .01 | .57 | 91.00 | 1.00 |
| 28.000 | 820.00 | 950.73 | .34 | .01 | .91 | 91.00 | 1.00 |
| 28.100 | 500.00 | 949.83 | 0.00 | .01 | 0.00 | 91.00 | 36.50 |
| 28.100 | 635.00 | 950.24 | .41 | .01 | .41 | 91.00 | 36.50 |
| 28.100 | 690.00 | 950.40 | .16 | .01 | .57 | 91.00 | 36.50 |
| 28.100 | 820.00 | 950.74 | .34 | .01 | .91 | 91.00 | 36.50 |
| 28.200 | 500.00 | 949.83 | 0.00 | .00 | 0.00 | 91.00 | 1.00 |
| 28.200 | 635.00 | 950.24 | .41 | .00 | .41 | 91.00 | 1.00 |
| 28.200 | 690.00 | 950.40 | .16 | .00 | .57 | 91.00 | 1.00 |
| 28.200 | 820.00 | 950.74 | .34 | .00 | .91 | 91.00 | 1.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKPS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 28.300 | 500.00 | 949.84 | 0.00 | .01 | 0.00 | 141.99 | 32.00 |
| 28.300 | 635.00 | 950.25 | .41 | .01 | .41 | 151.76 | 32.00 |
| 28.300 | 660.00 | 950.41 | .16 | .01 | .57 | 155.00 | 32.00 |
| 28.300 | 820.00 | 950.76 | .35 | .01 | .92 | 155.00 | 32.00 |
| 28.420 | 500.00 | 950.14 | 0.00 | .30 | 0.00 | 139.51 | 580.00 |
| 28.420 | 635.00 | 950.57 | .43 | .32 | .43 | 149.49 | 580.00 |
| 28.420 | 690.00 | 950.73 | .16 | .32 | .59 | 153.32 | 580.00 |
| 28.420 | 820.00 | 951.09 | .36 | .33 | .95 | 161.60 | 580.00 |
| 28.670 | 500.00 | 951.60 | 0.00 | 1.47 | 0.00 | 158.37 | 2660.00 |
| 28.670 | 635.00 | 952.04 | .43 | 1.47 | .43 | 184.25 | 2660.00 |
| 28.670 | 690.00 | 952.20 | .16 | 1.47 | .59 | 195.36 | 2660.00 |
| 28.670 | 820.00 | 952.56 | .36 | 1.47 | .95 | 218.70 | 2660.00 |
| 28.800 | 500.00 | 951.94 | 0.00 | .34 | 0.00 | 177.25 | 700.00 |
| 28.800 | 635.00 | 952.37 | .43 | .33 | .43 | 204.39 | 700.00 |
| 28.800 | 690.00 | 952.52 | .16 | .33 | .59 | 214.48 | 700.00 |
| 28.800 | 820.00 | 952.88 | .35 | .32 | .94 | 223.62 | 700.00 |
| 28.810 | 500.00 | 951.89 | 0.00 | -.05 | 0.00 | 92.32 | 75.00 |
| 28.810 | 635.00 | 952.31 | .43 | -.05 | .43 | 107.69 | 75.00 |
| 28.810 | 690.00 | 952.47 | .16 | -.05 | .58 | 113.32 | 75.00 |
| 28.810 | 820.00 | 952.82 | .35 | -.05 | .94 | 126.07 | 75.00 |
| 28.900 | 500.00 | 952.08 | 0.00 | .19 | 0.00 | 70.00 | 34.00 |
| 28.900 | 635.00 | 952.47 | .39 | .16 | .39 | 70.00 | 34.00 |
| 28.900 | 690.00 | 952.61 | .14 | .14 | .53 | 70.00 | 34.00 |
| 28.900 | 820.00 | 952.94 | .32 | .11 | .86 | 70.00 | 34.00 |
| 29.000 | 500.00 | 952.08 | 0.00 | -.00 | 0.00 | 70.00 | 1.00 |
| 29.000 | 635.00 | 952.47 | .39 | -.00 | .39 | 70.00 | 1.00 |
| 29.000 | 690.00 | 952.61 | .14 | -.00 | .53 | 70.00 | 1.00 |
| 29.000 | 820.00 | 952.93 | .32 | -.00 | .86 | 70.00 | 1.00 |
| 29.100 | 500.00 | 952.13 | 0.00 | .06 | 0.00 | 70.00 | 30.00 |
| 29.100 | 635.00 | 952.53 | .39 | .06 | .39 | 70.00 | 30.00 |
| 29.100 | 690.00 | 952.67 | .14 | .06 | .54 | 70.00 | 30.00 |
| 29.100 | 820.00 | 953.00 | .33 | .06 | .86 | 70.00 | 30.00 |
| 29.200 | 500.00 | 952.14 | 0.00 | .01 | 0.00 | 70.00 | 1.00 |
| 29.200 | 635.00 | 952.54 | .40 | .01 | .40 | 70.00 | 1.00 |
| 29.200 | 690.00 | 952.69 | .15 | .01 | .54 | 70.00 | 1.00 |
| 29.200 | 820.00 | 953.01 | .33 | .02 | .87 | 70.00 | 1.00 |
| 29.300 | 500.00 | 952.19 | 0.00 | .05 | 0.00 | 60.14 | 34.00 |
| 29.300 | 635.00 | 952.59 | .40 | .05 | .40 | 63.60 | 34.00 |
| 29.300 | 690.00 | 952.74 | .15 | .05 | .54 | 65.08 | 34.00 |
| 29.300 | 820.00 | 953.06 | .33 | .05 | .87 | 68.40 | 34.00 |
| 29.420 | 500.00 | 952.89 | 0.00 | .70 | 0.00 | 69.31 | 294.00 |
| 29.420 | 635.00 | 953.33 | .44 | .74 | .44 | 74.08 | 294.00 |
| 29.420 | 690.00 | 953.50 | .16 | .76 | .61 | 75.75 | 294.00 |
| 29.420 | 820.00 | 953.86 | .36 | .80 | .97 | 79.02 | 294.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 29.550 | 500.00 | 954.06 | 0.00 | 1.17 | 0.00 | 107.91 | 1050.00 |
| 29.550 | 635.00 | 954.53 | .47 | 1.20 | .47 | 148.65 | 1050.00 |
| 29.550 | 690.00 | 954.71 | .17 | 1.21 | .65 | 164.28 | 1050.00 |
| 29.550 | 820.00 | 955.08 | .37 | 1.22 | 1.02 | 196.46 | 1050.00 |
| 29.800 | 500.00 | 954.28 | 0.00 | .22 | 0.00 | 154.27 | 359.00 |
| 29.800 | 635.00 | 954.76 | .48 | .23 | .48 | 187.94 | 359.00 |
| 29.800 | 690.00 | 954.94 | .17 | .23 | .65 | 200.18 | 359.00 |
| 29.800 | 820.00 | 955.31 | .37 | .23 | 1.03 | 225.66 | 359.00 |
| 29.810 | 500.00 | 954.37 | 0.00 | .08 | 0.00 | 151.45 | 160.00 |
| 29.810 | 635.00 | 954.84 | .48 | .08 | .48 | 178.35 | 160.00 |
| 29.810 | 690.00 | 955.02 | .17 | .08 | .65 | 188.18 | 160.00 |
| 29.810 | 820.00 | 955.39 | .37 | .08 | 1.03 | 209.17 | 160.00 |
| 29.900 | 500.00 | 954.38 | 0.00 | .01 | 0.00 | 69.00 | 39.00 |
| 29.900 | 635.00 | 954.85 | .48 | .01 | .48 | 69.00 | 39.00 |
| 29.900 | 690.00 | 955.03 | .17 | .01 | .65 | 69.00 | 39.00 |
| 29.900 | 820.00 | 955.40 | .37 | .01 | 1.02 | 69.00 | 39.00 |
| 30.000 | 500.00 | 954.38 | 0.00 | -.00 | 0.00 | 69.00 | 1.00 |
| 30.000 | 635.00 | 954.85 | .48 | -.00 | .48 | 69.00 | 1.00 |
| 30.000 | 690.00 | 955.03 | .17 | -.00 | .65 | 69.00 | 1.00 |
| 30.000 | 820.00 | 955.39 | .37 | -.00 | 1.02 | 69.00 | 1.00 |
| 30.100 | 500.00 | 954.38 | 0.00 | .01 | 0.00 | 69.00 | 30.00 |
| 30.100 | 635.00 | 954.86 | .48 | .01 | .48 | 69.00 | 30.00 |
| 30.100 | 690.00 | 955.03 | .17 | .01 | .65 | 69.00 | 30.00 |
| 30.100 | 820.00 | 955.40 | .37 | .01 | 1.02 | 69.00 | 30.00 |
| 30.200 | 500.00 | 954.39 | 0.00 | .00 | 0.00 | 69.00 | 1.00 |
| 30.200 | 635.00 | 954.86 | .48 | .01 | .48 | 69.00 | 1.00 |
| 30.200 | 690.00 | 955.04 | .17 | .01 | .65 | 69.00 | 1.00 |
| 30.200 | 820.00 | 955.41 | .37 | .01 | 1.02 | 69.00 | 1.00 |
| 30.300 | 500.00 | 954.43 | 0.00 | .04 | 0.00 | 159.29 | 39.00 |
| 30.300 | 635.00 | 954.92 | .49 | .05 | .49 | 180.05 | 39.00 |
| 30.300 | 690.00 | 955.10 | .18 | .06 | .67 | 187.65 | 39.00 |
| 30.300 | 820.00 | 955.48 | .39 | .07 | 1.06 | 203.94 | 39.00 |
| 30.400 | 500.00 | 954.45 | 0.00 | .02 | 0.00 | 160.59 | 76.00 |
| 30.400 | 635.00 | 954.94 | .49 | .02 | .49 | 181.46 | 76.00 |
| 30.400 | 690.00 | 955.12 | .18 | .02 | .67 | 188.89 | 76.00 |
| 30.400 | 820.00 | 955.51 | .39 | .02 | 1.06 | 205.23 | 76.00 |
| 31.000 | 500.00 | 955.73 | 0.00 | 1.29 | 0.00 | 128.45 | 2825.00 |
| 31.000 | 635.00 | 956.20 | .46 | 1.26 | .46 | 174.18 | 2825.00 |
| 31.000 | 690.00 | 956.37 | .17 | 1.25 | .64 | 253.45 | 2825.00 |
| 31.000 | 820.00 | 956.74 | .37 | 1.23 | 1.00 | 299.75 | 2825.00 |
| 31.800 | 500.00 | 956.94 | 0.00 | 1.21 | 0.00 | 297.99 | 2566.00 |
| 31.800 | 635.00 | 957.38 | .43 | 1.18 | .43 | 365.66 | 2566.00 |
| 31.800 | 690.00 | 957.53 | .16 | 1.16 | .59 | 390.43 | 2566.00 |
| 31.800 | 820.00 | 957.86 | .33 | 1.12 | .92 | 419.43 | 2566.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | Q | CVSEL | DIFVSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 31.805 | 500.00 | 957.02 | 0.00 | .08 | 0.00 | 85.59 | 223.00 |
| 31.805 | 635.00 | 957.45 | .43 | .07 | .43 | 89.84 | 223.00 |
| 31.805 | 690.00 | 957.60 | .15 | .07 | .58 | 91.38 | 223.00 |
| 31.805 | 820.00 | 957.92 | .32 | .06 | .90 | 94.57 | 223.00 |
| 31.810 | 500.00 | 957.05 | 0.00 | .03 | 0.00 | 65.22 | 37.00 |
| 31.810 | 635.00 | 957.48 | .43 | .03 | .43 | 66.51 | 37.00 |
| 31.810 | 690.00 | 957.63 | .16 | .03 | .58 | 66.97 | 37.00 |
| 31.810 | 820.00 | 957.96 | .32 | .03 | .91 | 67.95 | 37.00 |
| 31.900 | 500.00 | 957.08 | 0.00 | .03 | 0.00 | 70.00 | 49.00 |
| 31.900 | 635.00 | 957.51 | .43 | .04 | .43 | 70.00 | 49.00 |
| 31.900 | 690.00 | 957.67 | .16 | .04 | .59 | 70.00 | 49.00 |
| 31.900 | 820.00 | 958.00 | .32 | .04 | .91 | 70.00 | 49.00 |
| 32.000 | 500.00 | 957.08 | 0.00 | -.00 | 0.00 | 70.00 | 1.00 |
| 32.000 | 635.00 | 957.51 | .43 | -.00 | .43 | 70.00 | 1.00 |
| 32.000 | 690.00 | 957.67 | .16 | -.00 | .59 | 70.00 | 1.00 |
| 32.000 | 820.00 | 957.99 | .32 | -.00 | .91 | 70.00 | 1.00 |
| 32.100 | 500.00 | 957.10 | 0.00 | .02 | 0.00 | 70.00 | 30.00 |
| 32.100 | 635.00 | 957.53 | .43 | .02 | .43 | 70.00 | 30.00 |
| 32.100 | 690.00 | 957.69 | .16 | .02 | .59 | 70.00 | 30.00 |
| 32.100 | 820.00 | 958.02 | .33 | .02 | .92 | 70.00 | 30.00 |
| 32.200 | 500.00 | 957.10 | 0.00 | .00 | 0.00 | 70.00 | 1.00 |
| 32.200 | 635.00 | 957.54 | .43 | .01 | .43 | 70.00 | 1.00 |
| 32.200 | 690.00 | 957.70 | .16 | .01 | .59 | 70.00 | 1.00 |
| 32.200 | 820.00 | 958.02 | .33 | .01 | .92 | 70.00 | 1.00 |
| 32.300 | 500.00 | 957.16 | 0.00 | .05 | 0.00 | 153.14 | 49.00 |
| 32.300 | 635.00 | 957.61 | .45 | .07 | .45 | 156.57 | 49.00 |
| 32.300 | 690.00 | 957.77 | .16 | .08 | .61 | 157.83 | 49.00 |
| 32.300 | 820.00 | 958.11 | .34 | .09 | .96 | 160.46 | 49.00 |
| 33.000 | 500.00 | 958.64 | 0.00 | 1.48 | 0.00 | 353.61 | 4100.00 |
| 33.000 | 635.00 | 959.07 | .43 | 1.46 | .43 | 623.45 | 4100.00 |
| 33.000 | 690.00 | 959.21 | .15 | 1.44 | .58 | 638.54 | 4100.00 |
| 33.000 | 820.00 | 959.53 | .32 | 1.42 | .90 | 670.70 | 4100.00 |
| 33.850 | 500.00 | 960.77 | 0.00 | 2.14 | 0.00 | 53.00 | 2399.00 |
| 33.850 | 635.00 | 961.17 | .39 | 2.10 | .39 | 53.00 | 2399.00 |
| 33.850 | 690.00 | 961.29 | .12 | 2.07 | .51 | 53.00 | 2399.00 |
| 33.850 | 820.00 | 961.53 | .25 | 2.00 | .76 | 53.00 | 2399.00 |
| 33.900 | 500.00 | 960.79 | 0.00 | .01 | 0.00 | 58.00 | 13.00 |
| 33.900 | 635.00 | 961.19 | .40 | .02 | .40 | 58.00 | 13.00 |
| 33.900 | 690.00 | 961.31 | .12 | .02 | .52 | 58.00 | 13.00 |
| 33.900 | 820.00 | 961.56 | .25 | .03 | .77 | 58.00 | 13.00 |
| 34.000 | 500.00 | 960.79 | 0.00 | .00 | 0.00 | 58.00 | 1.00 |
| 34.000 | 635.00 | 961.19 | .40 | .00 | .40 | 58.00 | 1.00 |
| 34.000 | 690.00 | 961.31 | .12 | .00 | .52 | 58.00 | 1.00 |
| 34.000 | 820.00 | 961.56 | .25 | .00 | .77 | 58.00 | 1.00 |

MOORE BUSINESS FORMS, INC 21

| SECNO | G | CVSEL | DIFWSP | DIFWSX | DIFWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 34.100 | 500.00 | 960.79 | 0.00 | .00 | 0.00 | 58.00 | 29.00 |
| 34.100 | 635.00 | 961.19 | .40 | .01 | .40 | 58.00 | 29.00 |
| 34.100 | 690.00 | 961.31 | .12 | .01 | .52 | 58.00 | 29.00 |
| 34.100 | 820.00 | 961.57 | .26 | .01 | .78 | 58.00 | 29.00 |
| 34.200 | 500.00 | 960.74 | 0.00 | .00 | 0.00 | 58.00 | 1.00 |
| 34.200 | 635.00 | 961.19 | .40 | .00 | .40 | 58.00 | 1.00 |
| 34.200 | 690.00 | 961.31 | .12 | .00 | .52 | 58.00 | 1.00 |
| 34.200 | 820.00 | 961.57 | .26 | .00 | .78 | 58.00 | 1.00 |
| 34.250 | 500.00 | 960.82 | 0.00 | .02 | 0.00 | 64.00 | 13.00 |
| 34.250 | 635.00 | 961.23 | .41 | .03 | .41 | 64.00 | 13.00 |
| 34.250 | 690.00 | 961.35 | .12 | .04 | .53 | 64.00 | 13.00 |
| 34.250 | 820.00 | 961.61 | .26 | .04 | .80 | 64.00 | 13.00 |
| 34.300 | 500.00 | 960.85 | 0.00 | .03 | 0.00 | 136.00 | 26.00 |
| 34.300 | 635.00 | 961.27 | .42 | .04 | .42 | 136.00 | 26.00 |
| 34.300 | 690.00 | 961.40 | .13 | .05 | .55 | 136.00 | 26.00 |
| 34.300 | 820.00 | 961.68 | .28 | .06 | .83 | 136.00 | 26.00 |
| 34.800 | 500.00 | 961.24 | 0.00 | .39 | 0.00 | 189.67 | 820.00 |
| 34.800 | 635.00 | 961.69 | .45 | .42 | .45 | 249.78 | 820.00 |
| 34.800 | 690.00 | 961.83 | .15 | .44 | .59 | 261.31 | 820.00 |
| 34.800 | 820.00 | 962.15 | .32 | .48 | .91 | 286.54 | 820.00 |
| 34.810 | 500.00 | 961.40 | 0.00 | .16 | 0.00 | 85.70 | 280.00 |
| 34.810 | 635.00 | 961.84 | .44 | .15 | .44 | 89.04 | 280.00 |
| 34.810 | 690.00 | 961.99 | .15 | .15 | .59 | 89.27 | 280.00 |
| 34.810 | 820.00 | 962.30 | .32 | .15 | .90 | 89.77 | 280.00 |
| 34.900 | 500.00 | 961.47 | 0.00 | .07 | 0.00 | 80.00 | 50.00 |
| 34.900 | 635.00 | 961.91 | .44 | .07 | .44 | 80.00 | 50.00 |
| 34.900 | 690.00 | 962.06 | .15 | .08 | .59 | 80.00 | 50.00 |
| 34.900 | 820.00 | 962.38 | .32 | .08 | .91 | 80.00 | 50.00 |
| 35.000 | 500.00 | 961.48 | 0.00 | .01 | 0.00 | 88.00 | 1.00 |
| 35.000 | 635.00 | 961.92 | .44 | .01 | .44 | 88.00 | 1.00 |
| 35.000 | 690.00 | 962.07 | .15 | .01 | .59 | 88.00 | 1.00 |
| 35.000 | 820.00 | 962.40 | .32 | .01 | .92 | 88.00 | 1.00 |
| 35.100 | 500.00 | 961.49 | 0.00 | .01 | 0.00 | 88.00 | 32.00 |
| 35.100 | 635.00 | 961.93 | .44 | .01 | .44 | 88.00 | 32.00 |
| 35.100 | 690.00 | 962.08 | .15 | .01 | .59 | 88.00 | 32.00 |
| 35.100 | 820.00 | 962.41 | .32 | .01 | .92 | 88.00 | 32.00 |
| 35.200 | 500.00 | 961.49 | 0.00 | .00 | 0.00 | 88.00 | 1.00 |
| 35.200 | 635.00 | 961.94 | .44 | .01 | .44 | 88.00 | 1.00 |
| 35.200 | 690.00 | 962.09 | .15 | .01 | .59 | 88.00 | 1.00 |
| 35.200 | 820.00 | 962.41 | .33 | .01 | .92 | 88.00 | 1.00 |
| 35.250 | 500.00 | 961.46 | 0.00 | -.04 | 0.00 | 90.08 | 51.00 |
| 35.250 | 635.00 | 961.91 | .45 | -.03 | .45 | 96.03 | 51.00 |
| 35.250 | 690.00 | 962.06 | .15 | -.03 | .60 | 106.08 | 51.00 |
| 35.250 | 820.00 | 962.39 | .33 | -.02 | .93 | 137.96 | 51.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 35.300 | 500.00 | 963.19 | 0.00 | 1.74 | 0.00 | 348.13 | 10.00 |
| 35.300 | 635.00 | 963.54 | .35 | 1.63 | .35 | 534.47 | 10.00 |
| 35.300 | 690.00 | 963.67 | .13 | 1.61 | .48 | 598.31 | 10.00 |
| 35.300 | 820.00 | 963.97 | .30 | 1.58 | .78 | 672.69 | 10.00 |
| 35.350 | 500.00 | 963.23 | 0.00 | .03 | 0.00 | 363.18 | 10.00 |
| 35.350 | 635.00 | 963.55 | .33 | .01 | .33 | 593.94 | 10.00 |
| 35.350 | 690.00 | 963.68 | .13 | .01 | .46 | 659.58 | 10.00 |
| 35.350 | 820.00 | 963.97 | .29 | .01 | .75 | 663.25 | 10.00 |
| 36.000 | 500.00 | 964.07 | 0.00 | .84 | 0.00 | 113.93 | 3430.00 |
| 36.000 | 635.00 | 964.28 | .21 | .73 | .21 | 120.53 | 3430.00 |
| 36.000 | 690.00 | 964.34 | .06 | .66 | .28 | 122.50 | 3430.00 |
| 36.000 | 820.00 | 964.48 | .14 | .51 | .42 | 126.79 | 3430.00 |

SUMMARY OF ERRORS

MOORE BUSINESS FORMS, INC 23

MOORE BUSINESS FORMS, INC 23

FLOOD INSURANCE ZONE DATA FOR 10 YEAR FLOW

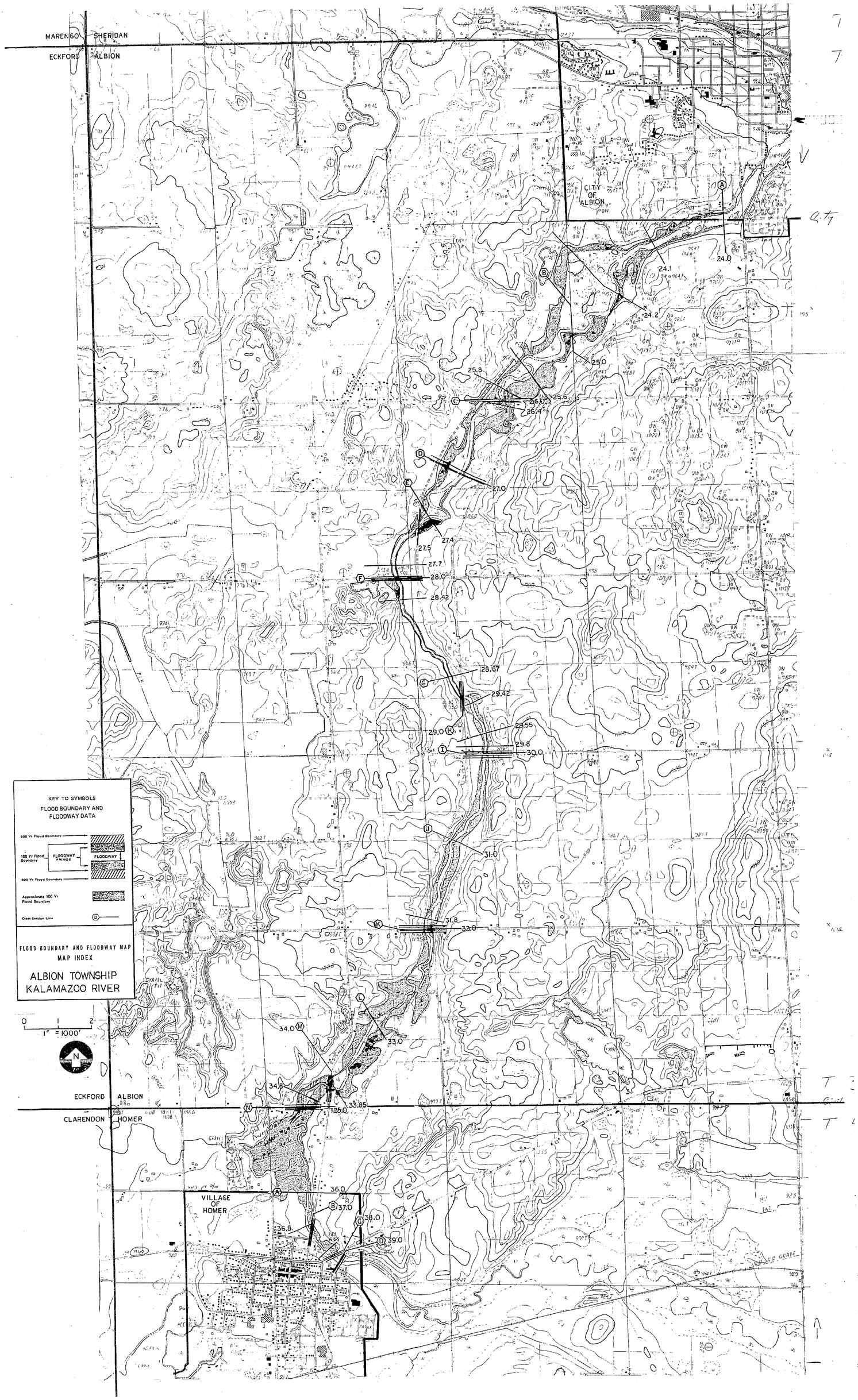
FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

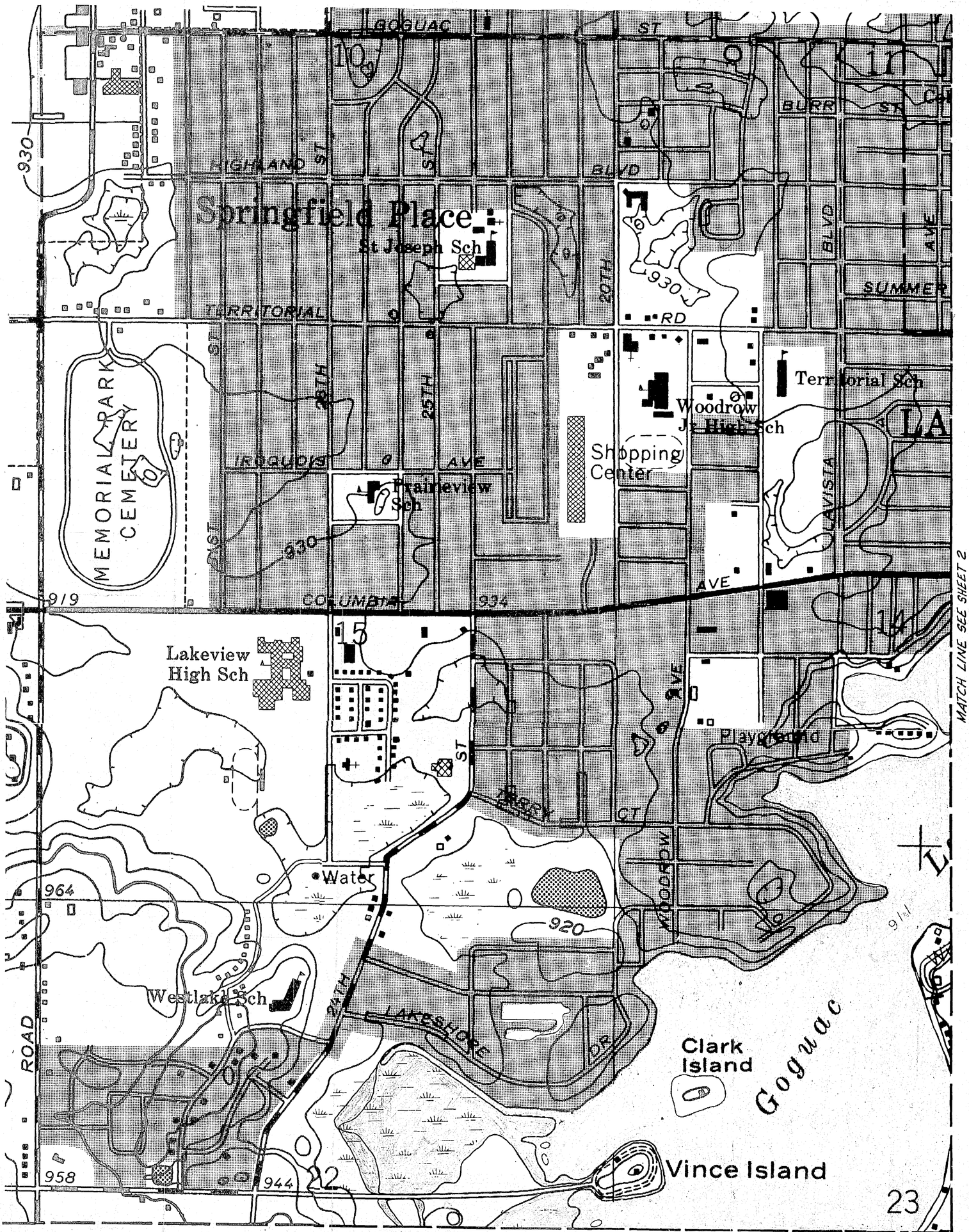
| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10 | 2 | 0.2 |
|---|---|---|---|---|
| 24.000 | 0. | -.40 | -.12 | .27 |
| 24.100 | 2280. | -.41 | -.12 | .28 |
| 24.200 | 4580. | -.42 | -.13 | .28 |
| 25.000 | 6870. | -.41 | -.12 | .27 |
| 25.600 | 9720. | -.39 | -.11 | .23 |
| 25.800 | 10820. | -.40 | -.11 | .23 |
| 25.900 | 11144. | -.43 | -.12 | .25 |
| 26.000 | 11161. | -.43 | -.12 | .25 |
| 26.100 | 11187. | -.45 | -.12 | .27 |
| 26.200 | 11204. | -.45 | -.12 | .27 |
| 26.400 | 11311. | -.47 | -.13 | .28 |
| 26.900 | 14311. | -.46 | -.13 | .28 |
| 27.000 | 14383. | -.46 | -.13 | .28 |
| 27.100 | 14419. | -.46 | -.13 | .28 |
| 27.400 | 17119. | -.45 | -.13 | .28 |
| 27.500 | 17519. | -.46 | -.13 | .28 |
| 27.700 | 19019. | -.54 | -.15 | .33 |
| 27.800 | 19359. | -.56 | -.16 | .33 |
| 27.900 | 19391. | -.56 | -.16 | .34 |
| 28.000 | 19392. | -.57 | -.16 | .34 |
| 28.100 | 19428. | -.57 | -.16 | .34 |
| 28.200 | 19429. | -.57 | -.16 | .34 |
| 28.300 | 19461. | -.57 | -.16 | .35 |
| 28.420 | 20041. | -.59 | -.16 | .36 |
| 28.670 | 22701. | -.59 | -.16 | .36 |
| 28.800 | 23401. | -.59 | -.16 | .35 |
| 28.810 | 23478. | -.58 | -.16 | .35 |
| 28.900 | 23510. | -.53 | -.14 | .32 |
| 29.000 | 23511. | -.53 | -.14 | .32 |
| 29.100 | 23541. | -.54 | -.14 | .33 |
| 29.200 | 23542. | -.54 | -.15 | .33 |
| 29.300 | 23576. | -.54 | -.15 | .33 |
| 29.420 | 23870. | -.61 | -.16 | .36 |
| 29.550 | 24920. | -.65 | -.17 | .37 |
| 29.800 | 25279. | -.65 | -.17 | .37 |
| 29.810 | 25439. | -.65 | -.17 | .37 |
| 29.900 | 25478. | -.65 | -.17 | .37 |
| 30.000 | 25479. | -.65 | -.17 | .37 |
| 30.100 | 25509. | -.65 | -.17 | .37 |
| 30.200 | 25510. | -.65 | -.17 | .37 |
| 30.300 | 25549. | -.67 | -.18 | .39 |
| 30.400 | 25625. | -.67 | -.18 | .39 |
| 31.000 | 28450. | -.64 | -.17 | .37 |
| 31.800 | 31016. | -.59 | -.16 | .33 |
| 31.805 | 31239. | -.58 | -.15 | .32 |
| 31.810 | 31276. | -.58 | -.16 | .32 |
| 31.900 | 31325. | -.59 | -.16 | .32 |
| 32.000 | 31326. | -.59 | -.16 | .32 |
| 32.100 | 31356. | -.59 | -.16 | .33 |

| | | | | |
|---|---|---|---|---|
| 32.200 | 31357. | -.54 | -.16 | .33 |
| 32.300 | 31406. | -.61 | -.16 | .34 |
| 33.000 | 35506. | -.58 | -.15 | .32 |
| 33.850 | 37905. | -.51 | -.12 | .25 |
| 33.900 | 37916. | -.52 | -.12 | .25 |
| 34.000 | 37919. | -.52 | -.12 | .25 |
| 34.100 | 37946. | -.52 | -.12 | .26 |
| 34.200 | 37949. | -.52 | -.12 | .26 |
| 34.250 | 37962. | -.53 | -.12 | .26 |
| 34.300 | 37988. | -.55 | -.13 | .28 |
| 34.800 | 38808. | -.59 | -.15 | .32 |
| 34.810 | 39086. | -.59 | -.15 | .32 |
| 34.900 | 39138. | -.59 | -.15 | .32 |
| 35.000 | 39139. | -.59 | -.15 | .32 |
| 35.100 | 39171. | -.59 | -.15 | .32 |
| 35.200 | 39172. | -.59 | -.15 | .33 |
| 35.250 | 39223. | -.60 | -.15 | .33 |
| 35.300 | 39233. | -.48 | -.13 | .30 |
| 35.350 | 39243. | -.46 | -.13 | .29 |
| 36.000 | 42673. | -.28 | -.06 | .14 |
| WEIGHTED AVG FOR REACH | | -.51 | -.14 | .30 |

FHF FOR THE REACH = 005 WITH 100.0 OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 1

MOORE BUSINESS FORMS, INC 23


MARENGO
SHERIDAN
ECKFORD
ALBION
CITY OF ALBION
24.0
24.1
24.2
25.0
25.8
26.0
25.6
26.4
27.0
27.4
27.5
27.7
28.0
28.42
28.67
29.42
28.55
29.0
29.8
30.0
31.0
31.8
32.0
33.0
34.0
34.8
33.85
25.0
ECKFORD
ALBION
CLARENDON
HOMER
VILLAGE OF HOMER
36.0
37.0
38.0
39.0
36.8
KEY TO SYMBOLS
FLOOD BOUNDARY AND FLOODWAY DATA
500 Yr Flood Boundary
100 Yr Flood Boundary
FLOODWAY FRINGE
FLOODWAY
500 Yr Flood Boundary
Approximate 100 Yr Flood Boundary
Cross Section Line
FLOOD BOUNDARY AND FLOODWAY MAP
MAP INDEX
ALBION TOWNSHIP
KALAMAZOO RIVER
0 1 2
1" = 1000'
N



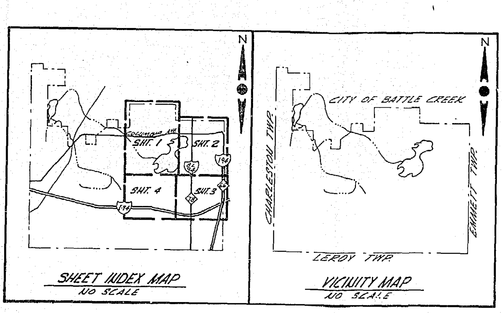

# FLOOD MAP

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

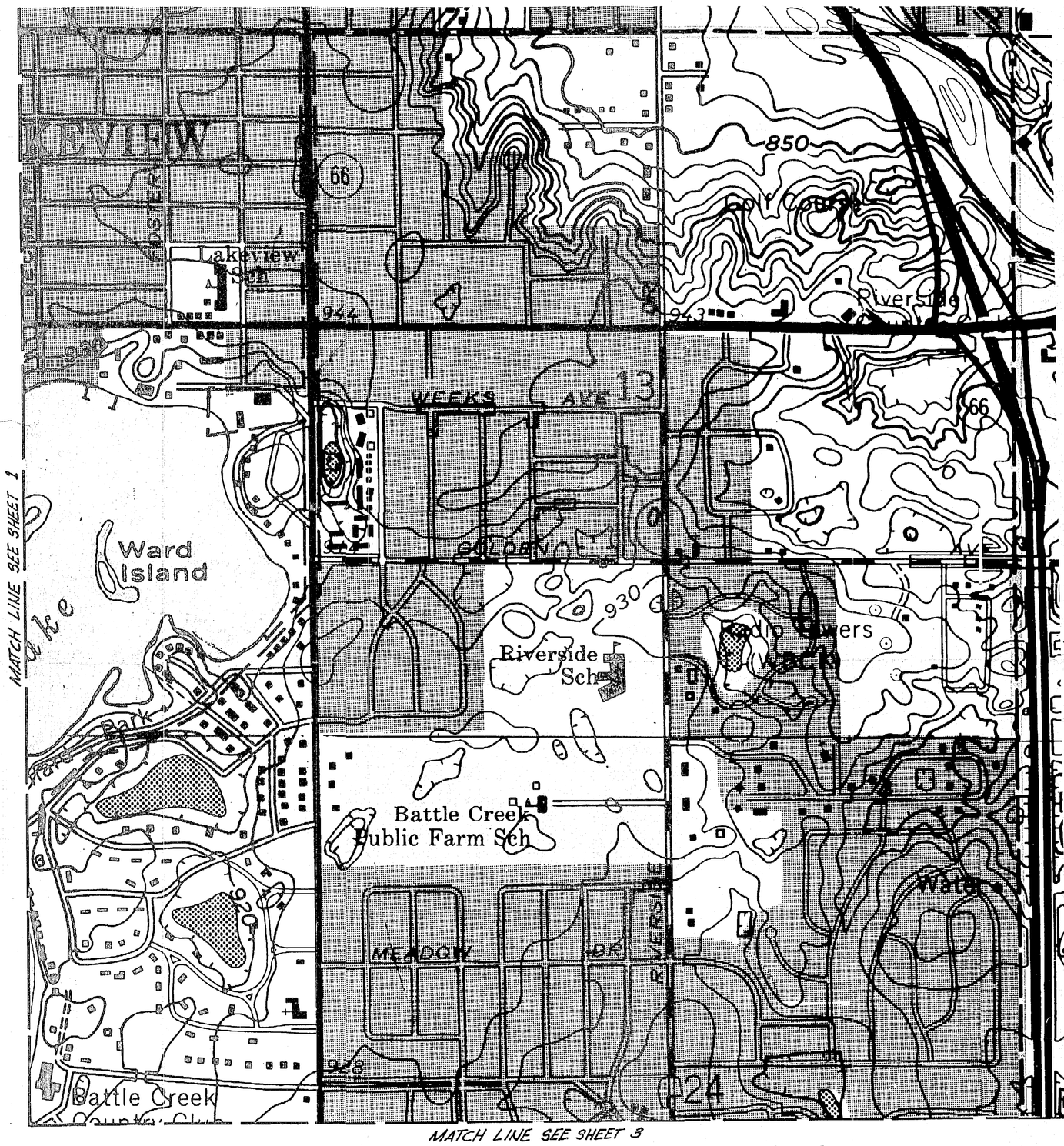
A — A CROSS SECTION

CORPORATE BOUNDARIES




N

BATTLE CREEK TOWNSHIP
CALHOUN COUNTY, MICHIGAN




# FLOOD MAP

N

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

A — A CROSS SECTION

CORPORATE BOUNDARIES

BATTLE CREEK TOWNSHIP
CALHOUN COUNTY, MICHIGAN




FLOOD MAP

N

LEGEND

FLOODWAY | 100 YEAR BOUNDARY | 500 YEAR BOUNDARY

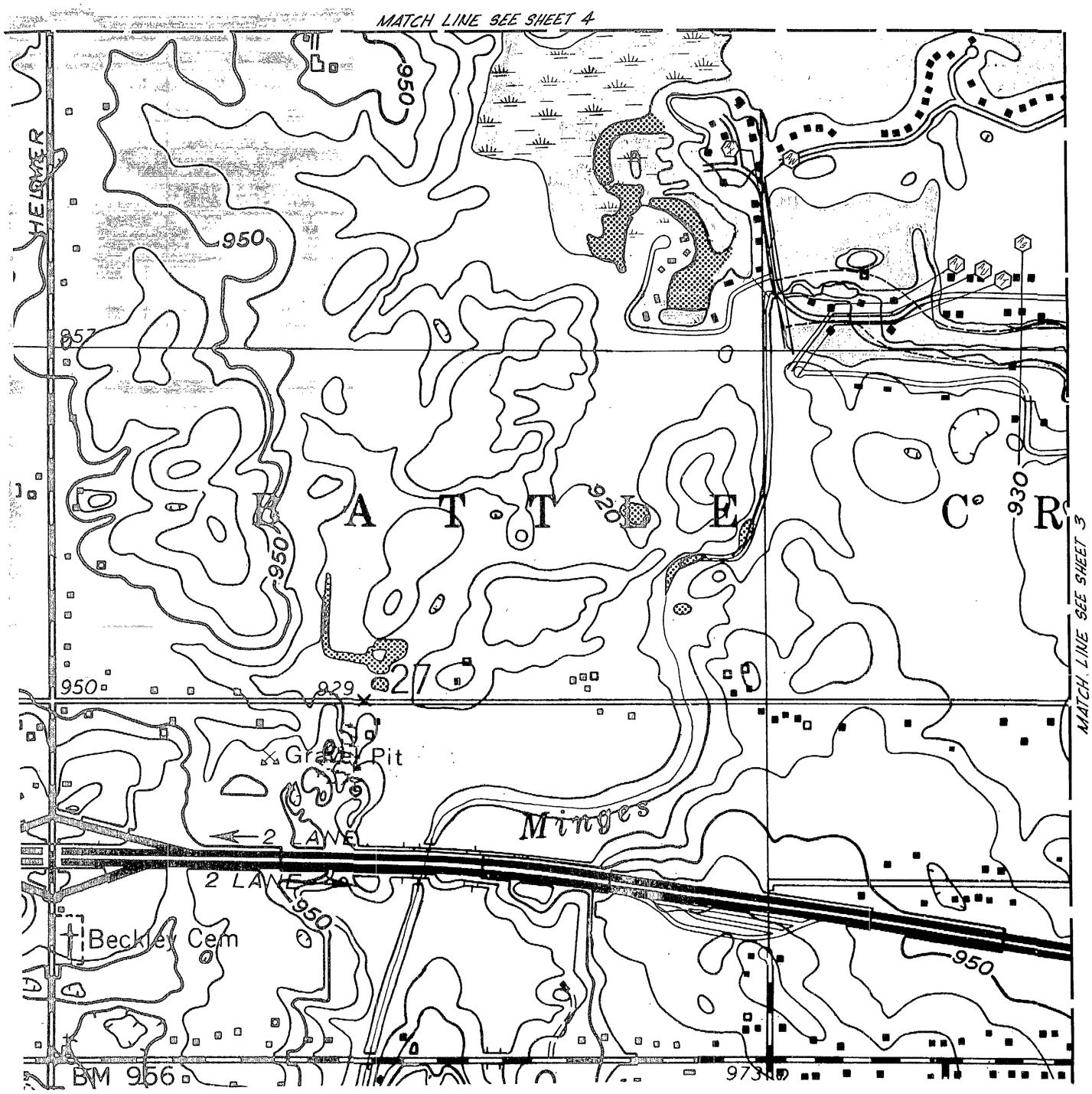
A — A CROSS SECTION

CORPORATE BOUNDARIES

RECEIVED
AUG 11 1981
WATER MANAGEMENT

BATTLE CREEK
TOWNSHIP
CALHOUN COUNTY, MICHIGAN

SHEET 3 of 4
HUD 2022




FLOOD MAP

N

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

CROSS SECTION

CORPORATE BOUNDARIES

BATTLE CREEK TOWNSHIP
CALHOUN COUNTY, MICHIGAN

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Battle Creek Twp

3) WATERCOURSE: Minges Brook

4) DOCUMENT TYPE: 10. 50. 100 500 yr profiles

00BREAK00

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**********
  RE22 RELEASE DATED NOV 78 UPDATED FOR TYPE
  FDRCT CODE =  01
  DIAGNOSTIC,TRAP =  30,51,32
**********

 T BATTLE CREEK TOWNSHIP FLOOD INSURANCE STUDY
 ID 06-23-77
 3    SINGLE BRIDGE W,C,TYP

 J1  ICHECK    INO        NINV       IDIR       STRT       METRIC     HVINS      0          LSEL       FD
          5.         2.         0.         0.    .020000      0.50       1.0        0.      1.350      0.500

 J2    IPRO       IPLOT      PTOPS      XSECV      YSECV       ZFACT      LCODE      IBW        CHNM       IBRACE
       1.000      0.300     -1.300      0.000      3.000      0.000      0.000      0.002      0.030      0.000

 J3  INRIDGE CODES FOR FOUR BRIDGES IN STUDY
       110.010    201.010      1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

 J5  NPRNT     KUNSEC                    ********REQUESTED SECTION NUMBERS********
          -1.      10.000      0.500      0.300      1.000      1.000      1.000      0.000      1.000      5.000
           5.000     30.000    325.000    350.000    360.000      0.000      0.000      0.000      0.000      0.000
           5.100      0.100      1.000      0.500      0.100      0.000      0.000      0.000      0.000      0.000
 GT        0.000      0.900      0.000      0.000      1.510      0.000      0.000      0.200      0.000      0.000

          30 FT U/S I-90                                    CROSS SECTION

 RT        0.200     11.000   1814.000   1844.000    30.000     30.000     30.000      0.000      0.000      0.000
 GR      890.300   1764.000    862.000   1765.000    861.300   1792.300    850.200   1606.300    855.900   1814.000
 GR      895.900   1814.100    855.900   1822.000    855.900   1822.100    855.900   1822.900    855.900   1825.000
 RT        0.000     11.000   1839.000   1869.000    30.000     30.000     30.000      0.000      0.000      0.000
 GR      890.000   1764.000    862.000   1765.000    861.300   1792.300    850.200   1606.300    855.900   1814.000
 GR      895.900   1814.100    855.900   1822.000    855.900   1822.100    855.900   1822.900    855.900   1825.000
 ET        0.000      1.150      0.940      2.130      2.302      0.300      0.301      0.000      2.000      2.000

 VALLEY SECTION                                     CROSS SECTION 17

 RT        0.200      5.000    370.200    390.200    360.000    360.000    360.000      0.000      0.000      0.000
 GR      870.630    790.200    870.200    790.200    867.950    776.000    767.300    790.000    850.700    814.000
 GR      858.100    820.300    856.200    813.200    855.870    837.000    854.200    836.000    859.300    838.000
 GR      857.400    842.000    871.200    842.000    873.200    846.000    867.300    820.000    865.000    790.000

 RT        0.400     10.000    908.000    930.100    885.100    865.000    845.000      0.000      0.200      0.000
 GR      856.200    919.000    856.200    925.000   1857.100    934.000    858.970    933.000   1861.000    938.000
 GR      378.800    962.000    882.400    902.000      0.000      0.000      0.000      0.000      0.000      0.000

 RT        0.400     11.000    930.000    950.100    905.100    885.000    865.000      0.000      0.200      0.000
 GR      856.200    919.000    856.200    925.000   1857.100    934.000    858.970    933.000   1861.000    938.000
 GR      378.800    962.000    882.400    902.000      0.000      0.000      0.000      0.000      0.000      0.000
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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.420 | 0.000 | 0.300 | -0.200 | 450.000 | 450.000 | 595.000 | 0.000 | 1.700 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

VALLEY SECTION CROSS SECTION 15

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 871.700 | 800.000 | 831.900 | 602.000 | 800.600 | 848.200 | 0.300 | 0.200 | 0.000 | 0.000 |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 871.200 | 834.700 | 869.600 | 726.000 | 847.400 | 795.000 | 865.300 | 806.200 | 865.000 | 811.900 |
| GR | 865.700 | 816.300 | 867.600 | 772.000 | 858.700 | 842.000 | 872.000 | 894.000 | 876.000 | 936.200 |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.750 | 0.000 | 0.000 | 0.000 | 0.000 | 30.000 | 50.000 | 0.000 | 0.000 | 0.000 |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.300 | 0.000 | 0.000 | 0.000 | 50.000 | 30.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.200 | 0.000 | 0.000 | 852.000 | 0.000 | 830.000 | 0.000 | 877.000 | 877.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 7.200 | 27.000 | 806.200 | 876.800 | 39.000 | 89.000 | 39.000 | 3.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| BT | 876.300 | 0.000 | 793.000 | 874.800 | 0.300 | 806.200 | 874.900 | 866.000 | 806.500 | 874.900 |
| BT | 867.900 | 807.000 | 874.300 | 870.300 | 909.000 | 874.900 | 871.500 | 811.000 | 874.500 | 871.900 |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| BT | 876.300 | 866.000 | 822.000 | 874.300 | 0.300 | 852.000 | 875.400 | 0.000 | 894.000 | 876.500 |
| BT | 0.300 | 972.000 | 877.000 | 0.000 | 900.000 | 879.100 | 0.000 | 901.000 | 900.200 | 0.300 |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| BT | 893.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 894.600 | 852.000 | 890.200 | 892.000 | 894.800 | 490.000 | 879.200 | 874.000 | 874.200 | 548.000 |

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| BT | 894.800 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 0.000 | 0.000 | 0.100 | 0.100 | 0.100 | 0.100 | 650.000 | 851.000 | 0.000 | 0.000 |

R

50 FT U/S RIVERSIDE DR. CROSS SECTION 13

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | 0.000 | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| GR | [illegible] | 0.000 | 0.000 | 0.000 | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| FT | 0.000 | 0.000 | 0.000 | 0.000 | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S DAM U/S RIVERSIDE DR. CROSS SECTION 12A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 7.500 | 16.000 | [illegible] | [illegible] | 550.000 | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| GR | [illegible] | 424.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 866.700 | 609.000 | 886.500 | 675.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 874.300 | 638.000 | 880.800 | 646.000 | 882.500 | 676.000 | 302.800 | 760.000 | 886.600 | 804.000 |
| GR | 890.400 | 800.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| FT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOP OF DAM CROSS SECTION 12A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 0.000 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| GR | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| FT | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

L/S OF DAM CROSS SECTION 12A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | [illegible] |
| GR | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 866.700 | 609.000 | 886.500 | 675.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 876.800 | 638.000 | 880.800 | 646.000 | 882.000 | 676.000 | 302.800 | 760.000 | 886.600 | 804.000 |
| GR | 890.400 | 800.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION CROSS SECTION 12A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 8.300 | 16.000 | 600.000 | 626.000 | 300.000 | 300.000 | 390.000 | 0.000 | 0.000 | 0.000 |
| GR | 893.600 | 424.000 | 882.600 | 450.000 | 874.100 | 670.000 | 871.600 | 578.000 | 870.800 | 596.000 |
| GR | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 876.100 | 638.000 | 882.000 | 646.000 | 882.000 | 676.000 | 302.000 | 760.000 | 886.600 | 804.000 |
| GR | [illegible] | 800.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 8.310 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 445.000 | 0.000 | 1.600 | 0.000 |
| X1 | 8.320 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 445.000 | 0.000 | 1.600 | 0.000 |
| X1 | 8.330 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 445.000 | 0.000 | 1.600 | 0.000 |

VALLEY SECTION CROSS SECTION 12A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 8.400 | 19.000 | 620.000 | 644.000 | 350.000 | 350.000 | 445.000 | 0.000 | 0.000 | 0.000 |
| GR | 903.800 | 426.000 | 893.500 | 400.000 | 894.400 | 242.000 | 893.300 | 376.000 | 892.600 | 410.000 |
| GR | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 875.000 | 628.000 | 875.800 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | 0.000 | 0.000 | 0.000 | 225.000 | 225.000 | 300.000 | 0.000 | 2.500 | 0.000 |

FORM 141 CU PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF [illegible] PRINTING CO [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ET | 0.200 | 3.000 | 0.300 | 0.300 | 3.100 | 0.300 | 0.500 | 0.300 | 401.000 | 620.000 |

D/S OF 2ND DAM D/S CAPITAL AVE. CROSS SECTION 12B

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 895.000 | 420.000 | 0.000 | 0.000 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| MC | 0.000 | 0.000 | 0.020 | 0.000 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOP OF DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 9.200 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.200 | 0.000 | 0.000 | 877.000 | 880.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 0.300 | 825.000 | 890.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| MC | 0.300 | 0.000 | 0.040 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S OF DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 9.100 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 886.000 | 275.000 | 865.000 | 320.000 | 885.500 | 380.000 | 885.500 | 400.000 | 885.500 | 885.000 |
| GR | 878.870 | 491.000 | 877.700 | 500.000 | 879.100 | 509.000 | 882.000 | 515.000 | 890.000 | 530.000 |
| MC | 0.000 | 0.000 | 0.020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOP OF DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 10.000 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 877.700 | 880.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

D/S OF DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 10.100 | 10.000 | 891.000 | 509.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 886.500 | 875.000 | 886.000 | 320.000 | 885.500 | 380.000 | 885.500 | 400.000 | 885.500 | 885.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

D/S OF FT D/S CAPITAL AVE. CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X3 | 0.000 | 0.000 | 0.000 | 320.000 | 0.000 | 325.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 886.500 | 875.000 | 886.500 | 320.000 | 885.500 | 380.000 | 885.500 | 400.000 | 885.500 | 885.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X3 | 0.000 | 0.000 | 0.000 | 320.000 | 0.000 | 325.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOURTELLOT PRINTED BY RUSSELL W. HIFORD / PRINTING COMPANY / CANTON, CONN.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 10.800 | 0.000 | 0.000 | 0.000 | 25.900 | 23.000 | 25.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 490.000 | 0.300 | 510.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE CAPTP. AVE. CROSS SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 10.900 | 21.000 | 557.000 | 556.000 | 28.000 | 25.300 | 23.000 | 0.300 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.300 | 0.300 | 690.300 | 690.000 | 0.000 |
| G1 | 905.200 | 142.000 | 920.800 | 197.000 | 898.900 | 266.000 | 896.700 | 326.000 | 894.000 | 555.000 |
| G2 | 891.000 | 593.000 | 891.200 | 419.000 | 889.100 | 484.000 | 888.700 | 900.700 | 885.000 | 533.000 |
| S1 | 901.400 | 557.000 | 911.400 | 537.100 | 887.400 | 556.000 | 901.400 | 574.000 | 681.400 | 556.000 |
| S2 | 904.200 | 554.200 | 890.700 | 573.200 | 855.000 | 537.000 | 870.200 | 875.000 | 905.000 | 627.000 |
| J1 | 907.000 | 656.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| S0 | 0.000 | 1.400 | 0.000 | 0.000 | 13.000 | 0.000 | 65.000 | 0.000 | 601.400 | 601.400 |

D/S FACE CAPITAL AVE. CROSS SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.000 | 0.000 | 0.000 | 0.000 | 12.000 | 52.000 | 52.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 836.400 | 692.400 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.100 | 0.000 | 0.000 | 0.000 | 0.300 | 0.000 | 0.000 | 392.400 | 392.400 | 0.000 |
| G1 | 896.100 | 991.900 | 0.000 | 815.000 | 906.500 | 0.000 | 958.000 | 365.400 | 0.000 | 561.000 |
| G2 | 885.100 | 0.000 | 891.000 | 893.000 | 0.300 | 0.000 | 0.000 | 1.000 | 889.000 | 0.000 |
| S1 | 901.400 | 557.000 | 892.400 | 881.400 | 887.100 | 892.400 | 881.400 | 547.000 | 892.400 | 892.400 |
| J1 | 899.900 | 892.400 | 886.400 | 892.000 | 892.400 | 881.400 | 886.000 | 892.400 | 881.400 | 892.000 |
| S1 | 893.200 | 0.000 | 892.000 | 886.000 | 0.000 | 885.200 | 900.200 | 0.200 | 887.000 | 905.000 |
| J1 | 0.000 | 0.000 | 901.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

50 FT D/S CAPITAL AVE. CROSS SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.200 | 0.000 | 535.000 | 556.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 520.000 | 0.000 | 532.000 | 0.000 | 691.200 | 0.000 | 682.000 | 0.000 |
| G1 | 710.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| S1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| G1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| S1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| G1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| S1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.240 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| G1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.280 | 20.000 | 535.000 | 556.000 | 100.000 | 100.000 | 140.000 | 0.000 | -2.500 | 0.000 |
| S1 | 906.300 | 0.000 | 892.000 | 0.000 | 910.500 | 0.000 | 900.200 | 1132.000 | 900.200 | 1234.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.290 | 0.000 | 0.000 | 0.000 | 100.000 | 100.000 | 140.000 | 0.000 | 2.150 | 0.000 |

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VALLEY SECTION — CROSS SECTION E

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 0.000 | [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] | [illegible] |
| X1 | 11.310 | 0.000 | 0.000 | 0.000 | 110.000 | 110.000 | 165.000 | 0.000 | 1.000 | 0.000 |
| ET | 0.000 | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1470.000 | 1570.000 |
| X1 | 11.320 | 0.000 | 0.000 | 0.000 | 110.000 | 110.000 | 165.000 | 0.000 | 1.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | [illegible] | [illegible] | 560.000 | 430.000 |

D/S 1ST DAM U/S CAPITAL AVE. — CROSS SECTION 7B

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 11.000 | 11.000 | 385.000 | 415.000 | 110.000 | 110.000 | 165.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.000 | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 920.000 | 0.000 | 910.000 | 170.000 | 900.000 | 310.000 | 896.400 | 385.000 | 895.800 | 389.500 |
| GR | 893.400 | 420.000 | 393.800 | 410.500 | 895.500 | 415.000 | 920.000 | 460.000 | 910.000 | 570.000 |
| GR | 920.000 | 730.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOP OF DAM — CROSS SECTION 7D

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 0.000 | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 0.000 | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 | [illegible] |
| [illegible] | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | [illegible] | [illegible] | [illegible] | 150.000 | [illegible] |
| [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] — CROSS SECTION 7[illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 12.100 | 11.000 | 385.000 | 415.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 894.400 | 894.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 894.400 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 920.000 | 0.000 | 910.000 | 170.000 | 900.000 | 310.000 | 896.400 | 385.000 | 895.800 | 389.500 |
| [illegible] | [illegible] | 400.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 920.000 | 730.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 12.200 | 0.000 | 0.000 | 0.000 | 100.000 | 100.000 | 165.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

D/S 2ND DAM U/S CAPITAL AVE. — CROSS SECTION 7[illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 12.900 | 11.000 | 270.000 | 290.000 | 100.000 | 100.000 | 170.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | [illegible] | [illegible] | 395.100 | [illegible] | [illegible] | 290.000 | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

[illegible] — CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| ET | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

U/S 2ND DAM U/S CAPITAL AVE.  CROSS SECTION 70

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 13.100 | 11.000 | 273.000 | 290.000 | 2.000 | 2.200 | 2.300 | 0.000 | 0.000 | 0.000 |
| X2 | 0.200 | 0.000 | 3.000 | 5.000 | 0.200 | 0.200 | 0.300 | 0.000 | 0.000 | 0.000 |
| X3 | 0.200 | 395.000 | 3.000 | 5.000 | 0.700 | 0.200 | 0.300 | 0.000 | 0.000 | 0.000 |
| GR | 920.200 | 0.000 | 911.000 | 140.000 | 900.200 | 230.200 | 891.000 | 270.000 | 395.400 | 270.500 |
| GR | 896.600 | 260.000 | 895.100 | 256.500 | 897.100 | 270.000 | 900.000 | 340.000 | 910.000 | 400.000 |
| GR | 920.300 | 700.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S 3RD DAM U/S CAPITAL AVE.  CROSS SECTION 71

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.900 | 11.000 | 273.200 | 287.000 | 2.000 | 2.000 | 2.300 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 395.500 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 920.300 | 0.000 | 910.200 | 140.000 | 902.000 | 230.000 | 891.000 | 273.000 | 396.000 | 273.500 |
| GR | 896.200 | 260.000 | 896.300 | 256.500 | 898.000 | 287.000 | 900.000 | 340.000 | 910.000 | 400.000 |
| GR | 920.300 | 700.000 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOP OF DAM  CROSS SECTION 72

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 0.300 | 0.000 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S 3RD DAM U/S CAPITAL AVE.  CROSS SECTION 70

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 395.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 920.000 | 0.000 | 910.000 | 140.000 | 900.000 | 230.000 | 892.000 | 270.000 | 396.000 | 272.500 |
| GR | 896.200 | 260.000 | 896.300 | 256.500 | 898.000 | 287.000 | 900.000 | 340.000 | 910.000 | 400.000 |
| GR | 920.000 | 700.000 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.200 | 0.000 | 0.200 | 0.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.200 | 25.000 | 1164.000 | 12.000 | 150.000 | 150.000 | 151.200 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.000 | 905.000 | 0.000 |
| GR | 920.200 | 78.000 | 913.100 | 516.000 | 915.200 | 628.000 | 914.200 | 758.000 | 916.200 | 848.000 |
| GR | 917.000 | 1014.000 | 916.000 | 1044.000 | 910.300 | 1044.000 | 909.800 | 1116.000 | 904.400 | 1164.000 |
| GR | 896.200 | 1164.000 | 896.600 | 1164.000 | 896.300 | 1164.000 | 896.000 | 1164.000 | 896.000 | 1164.000 |
| GR | 897.100 | 1224.000 | 899.700 | 1200.000 | 900.400 | 1212.000 | 901.100 | 1224.000 | 905.900 | 1224.000 |
| GR | 901.600 | 1320.000 | 908.600 | 1320.000 | 913.500 | 1320.000 | 914.300 | 1320.000 | 920.000 | 1320.000 |
| GR | 0.000 | 1.100 | 1.000 | 0.000 | 10.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 15.000 | 0.000 | 0.000 | 0.000 | 15.000 | 15.000 | 15.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.000 | 905.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 920.000 | 78.000 | 913.100 | 516.000 | 915.200 | 628.000 | 914.200 | 758.000 | 916.200 | 848.000 |
| GR | 917.000 | 1014.000 | 916.100 | 1044.000 | 910.300 | 1044.000 | 909.800 | 1116.000 | 904.400 | 1164.000 |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 901.200 | 1160.300 | 903.600 | 1168.000 | 859.700 | 1184.020 | 897.900 | 1191.020 | 897.700 | 1200.000 |
| GR | 897.600 | 1204.000 | 899.600 | 1208.000 | 958.400 | 1210.020 | 901.700 | 1245.020 | 905.900 | 1270.000 |
| GR | 903.600 | 1306.000 | 909.620 | 1360.000 | 912.900 | 1400.020 | 917.500 | 1428.020 | 920.000 | 1466.000 |

D/S 4TH SPAN L/S CAPITAL PKG. — CROSS SECTION 1

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.900 | 0.000 | 0.000 | 0.000 | 125.000 | 125.020 | 125.020 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOP OF DAM — CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.000 | 0.000 | 0.000 | 0.020 | 2.000 | 2.000 | 2.000 | 0.000 | 0.020 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 897.750 | 899.500 | 0.000 | 0.500 | 0.000 | 0.020 | 0.000 |
| NC | 0.000 | 0.000 | 0.040 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S 4TH SPAN U/S CAPITAL PKG. — CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.100 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 890.100 | 899.500 | 0.000 | 0.000 | 0.000 | 0.200 | 0.000 |
| [illegible] | | | | | | | | | | |
| GT | 0.000 | 1.130 | 1.000 | 0.300 | 2.100 | 2.000 | 33.000 | 1194.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.600 | 17.000 | 1035.000 | 1036.000 | 203.000 | 200.000 | 220.000 | 0.000 | -2.000 | 0.000 |
| GR | 913.600 | 452.000 | 915.000 | 922.000 | 913.500 | 617.000 | 913.500 | 738.000 | 912.400 | 842.000 |
| [illegible] | | | | | | | | | | |
| GT | 901.500 | 1053.200 | 903.100 | 1036.000 | 907.600 | 911.000 | 907.300 | 1159.000 | 915.300 | 1176.000 |
| | 912.400 | 1204.000 | 913.200 | 1204.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE HINGES ST. — CROSS SECTION 4

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.700 | 0.000 | 0.000 | 0.000 | 200.000 | 200.020 | 220.000 | 0.000 | 1.000 | 0.000 |
| [illegible] | | | | | | | | | | |

D/S FACE HINGES ST. — CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.800 | 0.000 | 0.000 | 0.000 | 200.000 | 200.020 | 220.000 | 0.000 | 1.000 | 0.000 |
| [illegible] | | | | | | | | | | |

U/S FACE HINGES ST. — CROSS SECTION 6

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.900 | 17.000 | 1055.000 | 1055.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | | | | | | | | | | |
| GR | 916.600 | 1206.000 | 918.200 | 1264.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 0.000 | 1.590 | 3.000 | 0.200 | 6.259 | 0.000 | 25.000 | 0.200 | 901.500 | 907.400 |

U/S FACE HINGES ST. — CROSS SECTION 6.5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 17.000 | 19.000 | 1045.000 | 1036.000 | 40.000 | 40.000 | 40.000 | 0.000 | 0.120 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 908.500 | 911.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | | | | | | | | | | |
| GT | 905.500 | 1054.000 | 905.000 | 1054.000 | 911.000 | 903.300 | 1059.000 | 911.000 | 0.000 | 1071.000 |

FORM 1211-01 PRINTED BY BUFFALO MANIFOLD FORMS DIVISION OF MOORE BUSINESS FORMS, INC. PRINTING COMPANY-ATTACH PRINTED IN U.S.A.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BT | 981.000 | 0.000 | 1158.000 | 913.670 | 0.000 | 1190.300 | 920.200 | 0.300 | 1.000 | 0.000 |
| GR | 920.000 | 950.000 | 910.500 | 951.200 | 910.500 | 998.000 | 909.800 | 1030.000 | 909.500 | 1057.000 |
| GT | 903.500 | 1045.000 | 902.300 | 1045.500 | 901.500 | 1047.000 | 902.200 | 1046.500 | 903.500 | 1049.000 |
| GT | 903.500 | 1051.000 | 902.000 | 1051.500 | 901.500 | 1053.000 | 902.300 | 1054.500 | 903.500 | 1055.200 |
| GT | 910.500 | 1059.200 | 910.300 | 1071.300 | 91[illegible] | [illegible] | [illegible] | 1100.000 | [illegible] | [illegible] |
| XX | 0.000 | 0.000 | [illegible] | 0.000 | [illegible] | [illegible] | 0.000 | 0.000 | [illegible] | [illegible] |
| BT | [illegible] | 0.000 | [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] | [illegible] |

D/S 1ST DAM D/S TINGES ST. CROSS SECTION 4A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 17.500 | 13.300 | 1037.000 | 1062.000 | 134.500 | 121.000 | 100.000 | 1.000 | 0.000 | 0.000 |
| GR | 920.000 | 100.300 | 912.[illegible] | 914.000 | [illegible] | [illegible] | [illegible] | 952.000 | 910.300 | 1134.000 |
| GR | 902.200 | 1041.000 | 902.100 | 1052.000 | 902.400 | 1060.000 | 904.400 | 1063.000 | 905.300 | 1072.000 |
| GR | 907.400 | 1112.000 | 909.230 | 1152.000 | 913.300 | 1184.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.020 | 0.000 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

TOE OF L[illegible] CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 18.300 | 0.000 | 0.000 | 0.000 | 2.000 | 2.300 | 2.000 | 0.200 | 0.000 | 0.000 |
| X2 | 0.300 | 0.000 | 0.200 | 902.100 | 904.100 | 0.300 | 0.000 | 0.200 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

D/S 1ST DAM D/S HINGES ST. CROSS SECTION 4A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X | 16.100 | 13.000 | 1237.000 | 1053.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 320.000 | 670.100 | 910.400 | 912.300 | 904.000 | 1[illegible] | [illegible] | 912.000 | 905.000 | 1024.000 |
| [illegible] | 902.200 | 1040.200 | 902.100 | 1050.200 | 902.400 | 1[illegible] | [illegible] | 1060.000 | 903.300 | 1071.000 |
| SR | 907.000 | 1112.200 | 909.200 | 1150.300 | 913.000 | 1184.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BT | 16.200 | 21.200 | 1176.000 | 1695.200 | 667.000 | 540.000 | 520.200 | 0.000 | 0.000 | 1.000 |
| GR | 919.000 | 1402.000 | 910.300 | 1474.300 | 910.000 | 1534.000 | 914.200 | 1730.000 | 911.000 | 1722.000 |
| GR | 909.200 | 1784.000 | 908.200 | 1862.300 | 907.400 | 1876.000 | 904.600 | 1879.000 | 904.110 | 1886.000 |
| GR | 904.600 | 1893.000 | 907.400 | 1895.000 | 908.400 | 1897.000 | 908.400 | 1904.000 | 909.400 | 1901.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 0.000 | 0.200 | [illegible] | 0.000 | 0.600 | 0.300 | 0.000 | [illegible] |
| NC | 0.000 | 0.000 | 1566.000 | [illegible] | 1691.000 | 0.150 | 1715.200 | 0.300 | 1718.000 | [illegible] |
| SR | 1730.000 | 0.000 | 1890.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.700 | 13.000 | 1698.300 | 1715.000 | 1310.000 | 1210.300 | 910.000 | 0.100 | 0.000 | 0.000 |
| GR | 920.000 | 1240.000 | 910.400 | 1247.000 | 911.100 | 1250.000 | 914.000 | 1300.000 | 910.300 | 1600.000 |
| GR | 908.900 | 1685.000 | 906.400 | 1690.000 | 903.900 | 1695.300 | 903.800 | 1700.200 | 903.800 | 1705.000 |
| GR | 906.100 | 1712.000 | 908.600 | 1718.000 | 911.000 | 1730.000 | 917.600 | 1880.000 | 920.000 | 1890.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

D/S ESTATE ROAD CROSS SECTION 3A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.800 | 0.000 | 0.200 | 0.000 | 99.000 | 99.000 | 99.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

D/S ESTATE ROAD CROSS SECTION 3A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.900 | 26.000 | 1695.300 | 1705.000 | 1.000 | 1.000 | 1.300 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 903.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X5 | 1.000 | 910.110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| DT | 25.000 | 1207.000 | 915.400 | 0.000 | [illegible] | [illegible] | [illegible] | 1505.000 | 911.000 | 0.000 |
| DT | 1666.000 | 910.500 | 0.000 | 1695.300 | 909.900 | 0.000 | 1690.300 | 909.900 | 0.000 | 1695.000 |
| DT | 909.900 | 905.300 | 1695.200 | 909.900 | [illegible] | [illegible] | [illegible] | 907.100 | 1697.000 | 909.900 |
| DT | 907.300 | 1697.900 | 909.900 | 907.100 | 1698.800 | 909.900 | 906.100 | 1699.000 | 909.900 | 905.300 |
| DT | 1701.000 | 909.900 | 905.300 | 1701.200 | 909.900 | 906.100 | 1702.100 | 909.900 | 907.100 | 1705.000 |
| DT | 909.900 | 907.300 | 1703.900 | 909.900 | 907.100 | 1704.800 | 909.900 | 906.100 | 1705.000 | 909.900 |
| [illegible] | 909.300 | 1712.000 | 909.900 | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 911.600 | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | 1206.000 | 915.400 | 1207.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 908.900 | 1685.000 | 906.400 | 1692.000 | 905.300 | 1695.000 | 904.500 | 1695.200 | 905.500 | 1696.000 |
| GR | 903.300 | 1697.000 | 903.500 | 1697.900 | 904.500 | 1698.800 | 903.500 | 1699.000 | 905.500 | 1701.000 |
| ET | 904.500 | 1701.200 | 903.500 | 1702.100 | 903.300 | 1703.000 | 903.500 | 1705.900 | 906.500 | 1704.000 |
| [illegible] | [illegible] | 1705.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | [illegible] | [illegible] | 0.000 | 0.000 |

U/S FACE ESTATE ROAD CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | [illegible] | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | [illegible] | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 904.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 909.900 | 909.900 | 0.000 |
| X5 | 1.000 | 911.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NS | 6.000 | 0.080 | 1666.000 | 10.000 | 1695.000 | 0.035 | 1705.000 | 0.080 | 1718.000 | 10.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | [illegible] | [illegible] | 0.000 | 0.000 | [illegible] |
| [illegible] | 0.000 | 7.100 | 0.000 | 0.000 | 0.000 | 0.000 | [illegible] | 1715.000 | 0.000 | [illegible] |

U/S ESTATE ROADVE CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 19.100 | 15.000 | 1695.000 | 1705.000 | 1.000 | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| [illegible] | 10.000 | 904.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 909.900 | 909.900 | 0.000 |
| [illegible] | 923.000 | 1206.000 | 915.400 | 1207.000 | 911.000 | [illegible] | 911.000 | 1306.000 | 910.500 | 1665.000 |
| GR | 908.900 | 1685.000 | 908.400 | 1692.000 | 905.900 | 1695.000 | 905.800 | 1700.000 | 905.800 | 1705.000 |
| GR | 906.100 | 1712.000 | 908.600 | 1718.000 | 911.000 | 1750.000 | 911.600 | 1888.000 | 920.000 | 1890.000 |
| NH | 6.000 | 0.080 | 1666.000 | 10.000 | 1693.000 | 0.035 | 1707.000 | 0.080 | 1711.000 | 10.000 |
| [illegible] | [illegible] | 0.080 | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.000 | 7.100 | 0.000 | 0.000 | 0.000 | 0.000 | 1600.000 | 1800.000 | 0.000 | 0.000 |

U/S DAM 90 FT U/S ESTATE ROAD CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 19.200 | 15.000 | 1695.000 | 1707.000 | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| GR | 920.000 | 1206.000 | 915.400 | 1207.000 | 911.400 | 1306.000 | 911.000 | 1506.000 | 910.500 | 1666.000 |
| GR | 909.000 | 1685.000 | 905.700 | 1693.000 | 904.700 | 1701.000 | 905.700 | 1707.000 | 909.200 | 1711.000 |
| GR | 911.000 | 1758.000 | 911.000 | 1888.000 | 920.000 | 1890.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 0.000 | 0.000 | 0.000 | 0.000 | 1600.000 | 1800.000 | 0.000 | 0.000 |

TOP OF DAM CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | 0.000 | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 904.700 | 903.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 6.000 | 0.080 | 1666.000 | 10.000 | 1693.000 | 0.035 | 1707.000 | 0.080 | 1711.000 | 10.000 |
| [illegible] | [illegible] | 0.080 | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 7.100 | 0.000 | 0.000 | 0.000 | 0.000 | 1600.000 | 1800.000 | 0.000 | 0.000 |

U/S DAM 90 FT U/S ESTATE ROAD CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.400 | 13.000 | 1693.000 | 1707.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 906.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 920.000 | 1206.000 | 915.400 | 1207.000 | 911.100 | 1306.000 | 911.000 | 1506.000 | 910.500 | 1686.000 |
| GR | 909.500 | 1605.000 | 905.700 | 1693.000 | 904.700 | 1700.000 | 905.700 | 1707.000 | 909.500 | 1711.000 |
| GR | 911.000 | 1758.000 | 911.600 | 1808.000 | 920.000 | 1390.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | 0.080 | 1325.500 | 0.033 | 1334.500 | 10.000 | 1304.000 | 0.080 | 1584.000 | 0.000 |

100 FT D/S LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 9.700 | 14.000 | 1325.500 | 1334.500 | 843.000 | 843.000 | 843.000 | 0.000 | 0.000 | 0.000 |
| BT | 920.000 | 1100.000 | 911.500 | 1101.000 | 911.600 | 1130.000 | 911.600 | 1212.000 | 911.900 | 1206.000 |
| X1 | 910.000 | 1310.000 | 907.700 | 1325.500 | 907.700 | 1330.000 | 907.700 | 1334.500 | 910.100 | 1340.000 |
| BT | 911.000 | 1384.000 | 911.800 | 1476.000 | 911.800 | 1583.000 | 920.000 | 1584.000 | 0.000 | 0.000 |

D/S LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 907.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 911.100 | 911.100 | 0.000 |
| NH | 4.000 | 0.080 | 1325.500 | 0.020 | 1334.500 | 10.000 | 1304.000 | 0.080 | 1584.000 | 0.000 |

D/S EAST LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.900 | 25.000 | 1325.500 | 1334.500 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 907.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 911.100 | 911.100 | 0.000 |
| BT | 23.000 | 1100.000 | 912.000 | 0.000 | 1130.000 | 912.000 | 0.000 | 1212.000 | 912.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| BT | 911.400 | 903.000 | 1326.100 | 911.400 | 908.500 | 1327.100 | 911.400 | 909.300 | 1328.500 | 911.400 |
| [illegible] | 908.500 | 1328.250 | 911.400 | 908.000 | 1329.000 | 911.400 | 907.000 | 1330.500 | 911.400 | 907.000 |
| BT | 1330.800 | 911.400 | 908.000 | 1331.100 | 911.400 | 908.500 | 1332.500 | 911.400 | 909.000 | 1333.900 |
| BT | 911.400 | 903.500 | 1334.250 | 911.400 | 908.000 | 1334.500 | 911.400 | 907.000 | 1340.000 | 911.400 |
| BT | 0.000 | 1384.000 | 911.800 | 0.000 | 1476.000 | 912.000 | 0.000 | 1584.000 | 912.000 | 0.000 |
| GR | 920.000 | 1100.000 | 912.000 | 1101.000 | 912.000 | 1130.000 | 912.000 | 1212.000 | 911.900 | 1206.000 |
| GR | 910.000 | 1318.000 | 907.000 | 1325.500 | 908.000 | 1325.700 | 909.500 | 1326.100 | 905.000 | 1327.500 |
| GR | 903.500 | 1328.000 | 906.000 | 1329.250 | 907.000 | 1329.900 | 907.000 | 1330.500 | 906.000 | 1331.000 |
| GR | 905.500 | 1331.100 | 905.000 | 1332.500 | 905.500 | 1333.900 | 906.000 | 1334.250 | 907.000 | 1334.500 |
| GR | 910.100 | 1348.000 | 911.800 | 1384.000 | 912.000 | 1476.000 | 912.000 | 1583.000 | 920.000 | 1584.000 |

D/S EAST LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 20.000 | 0.000 | 0.000 | 0.000 | 48.000 | 48.000 | 48.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 906.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 911.400 | 911.400 | 0.000 |
| NH | 4.000 | 0.080 | 1325.500 | 0.033 | 1334.500 | 10.000 | 1304.000 | 0.080 | 1584.000 | 0.000 |

D/S LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 20.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 906.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 911.400 | 911.400 | 0.000 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411 CU PRINTED BY ROTARY LAINFOLD FORMS DIVISION OF AFRAN PRINTING CO. INTERLAKE U.S.A.

| TRACE | IDC | ITYDC | PUSEL | EGC | USEL | HINC | HV | D1 | D2 | D3 | DCASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5310. | 83. | 2. | 909.70120 | 909.70130 | 0.00 | 0.00 | .05 | 0.00 | 0.00 | 0.00 | 7.00 |

| TRACE | IDC | ITYDC | PUSEL | EGC | USEL | HINC | HV | D1 | D2 | D3 | DCASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5310. | 81. | 4. | 909.7002 | 909.7[illegible] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.00 |

| TRACE | IDC | ITYDC | PUSEL | EGC | USEL | HINC | HV | D1 | D2 | D3 | DCASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5310. | 80. | 3. | 509.70021 | 909.7[illegible] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.00 |

| TRACE | IDC | ITYDC | PUSEL | EGC | USEL | HINC | HV | D1 | D2 | D3 | DCASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 4. | 909.70120 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] | [illegible] | 0.00 | [illegible] |

FORM 1414 U PRINTED BY VICTORY MANIFOLD FORMS DIVISION OF TAFRAN PRINTING COMPANY-DETROIT

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR - 01
  MODIFICATION - 30,31,32
**********************************************************

TIGHTLE CREEK TOWNSHIP FLOOD INSURANCE STUDY
T2 50-YEAR
T3      CHANGES BROOK D.C.T.P.

J2  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        5.        0.        0.  0.000000      0.00      0.0        0.  [illegible]  0.000
J3  MPFC      IPLOT     PRTVS     WSEL      [illegible]      [illegible]      [illegible]      [illegible]      [illegible]      STRACE
    2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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FORM 1441-CD PRINTED BY ROBERT MANIFOLD FORMS DIVISION OF [illegible] PRINTING COMPANY [illegible]

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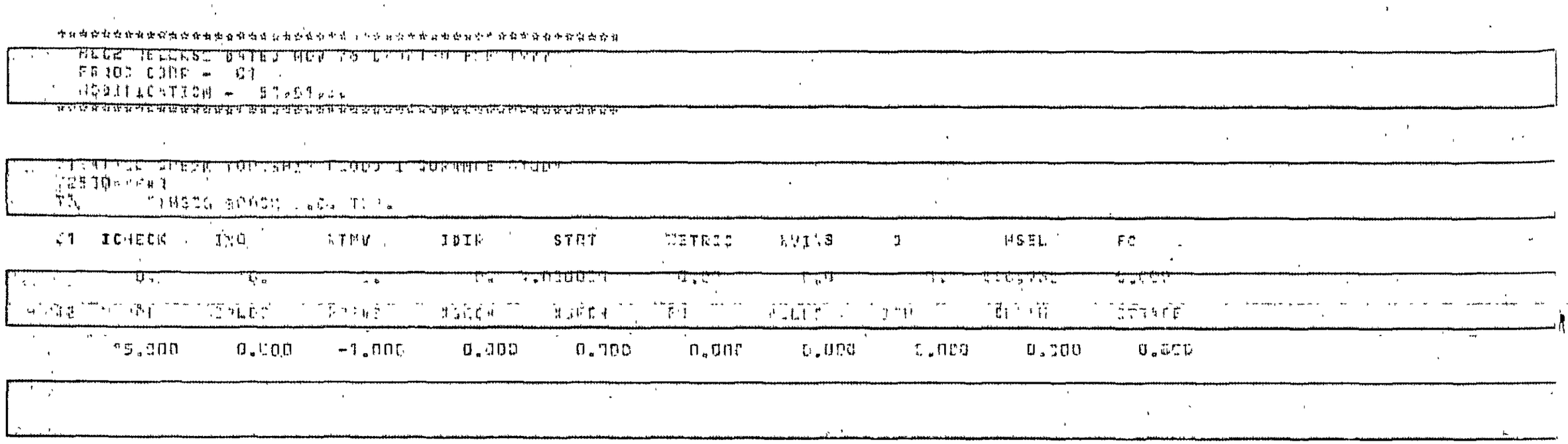
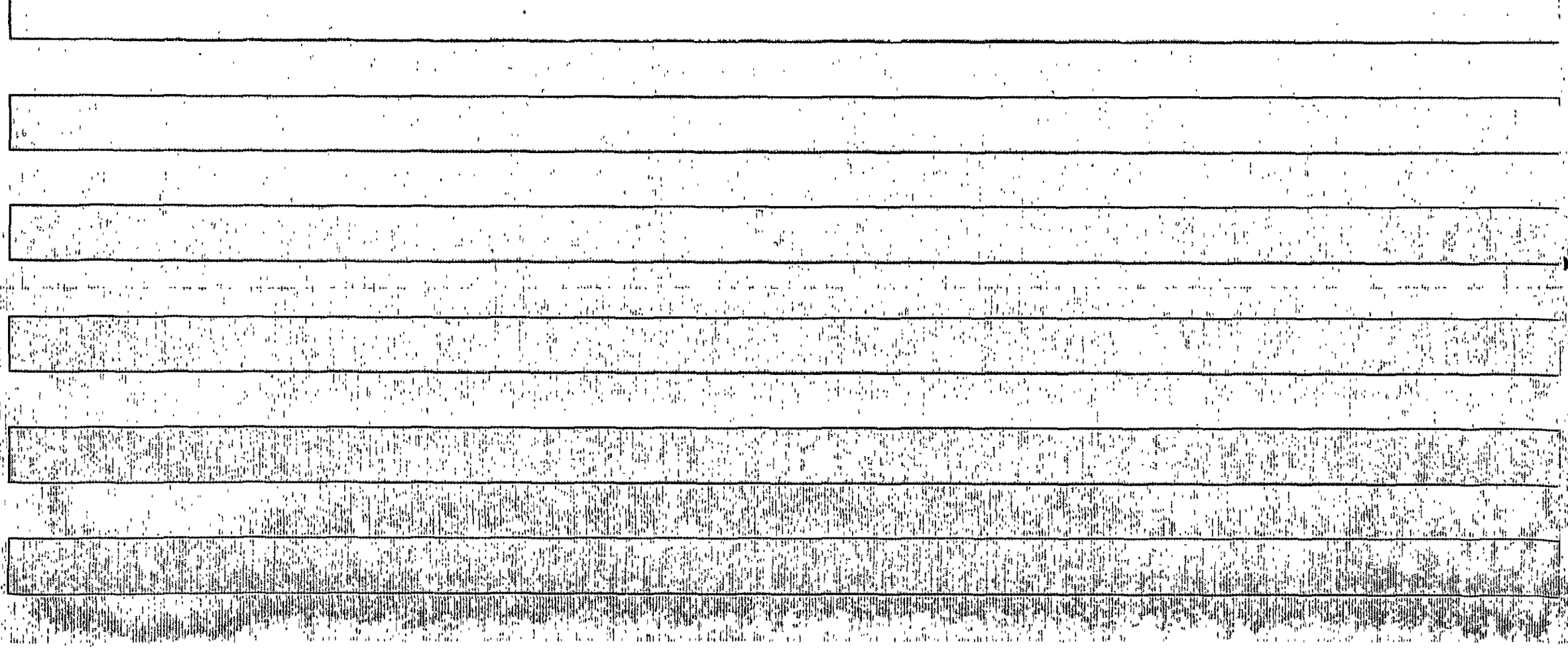
*****************************************************************
  [illegible] RELEASE DATED [illegible] UPDATED FEB [illegible]
  [illegible] CORR = 01
  [illegible]CRIPTION = [illegible]
*****************************************************************

T1 [illegible] CREEK TOWNSHIP FLOOD [illegible] STUDY
T2 [illegible]+YEAR
T3 [illegible] MASON [illegible]

J1  ICHECK   INQ     MINV    IDIR    STRT    METRIC  FVIMS   Q       WSEL    FQ
      0.      0.      0.      0.  0.000000   [illegible]   [illegible]   [illegible]   [illegible]
[illegible]  SPECF   [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
     3.000   0.000  -[illegible].000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
```





```
*****************************************************
  RELEASE DATED NOV 75 [illegible]
  PROJ CODE - 01
  MODIFICATION - 57.01[illegible]
*****************************************************

[illegible] CHECK [illegible] FLOOD [illegible]
[illegible]
[illegible]

01  ICHECK   INQ     RTMV    IDIR    STRT    METRIC   KVIAS    D        MSEL    FC

     0.       0.      [illegible]     0.      [illegible]     0.       [illegible]     [illegible]

[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]

    15.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

FORM 1811 CU PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF SAFRAN PRINTING COMPANY-DETROIT PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Battle Creek Twp

3) WATERCOURSE: Minges Brook

4) DOCUMENT TYPE: 100-yr Encroached

00BREAK00

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
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| | | | | | | | | | | |

"PRO" 2

SCFAC= 0.700 CFOR= 0.500

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

*SECNO 5.420
2300 UNT 01= 133.95 USEL= 855.65 SNC 01= 130.93 USEL= 845.75 RATIO= 0.0900
UNT 01= 137. RATIOS LOB,CH,NOS= 0.1577 0.3043 3.5276 HSEL= 865.75

| SECNO | DEPTH | CHSE | CTLUS | WSELK | EG | HV | EL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 3LOB | CCH | CTLUS | XLOB | VCH | AREA | WSEL | T.S | LEFT/RIGHT |
| *SEC | PLOB | WCH | XNCH | XRCH | QCH | VTP | E.G.S | | |
| SLOPE | KLOB | KLCH | K_OF3 | ATTACK | LOB | LOCAT | CONFG | TOPWID | E.G.A |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3473 ENCROACHMENT STATIONS= | | 45.0 | 512.0 | TYPE= | 1 | TARGET= | | 0.277 | |
| 5.62 | 5.67 | 368.77 | 2.00 | 865.39 | 866.29 | 2.33 | 1.72 | 0.00 | 865.07 |
| 540. | 47. | 532. | 1. | 59. | 100. | 2. | 13. | 3. | 863.57 |
| 0.19 | 2.13 | 4.92 | 3.57 | 0.100 | 0.040 | 0.150 | 0.041 | 861.10 | 851.22 |
| 0.012279 | 450. | 595. | 450. | 2 | 0 | 0 | 3.00 | 61.74 | 511.95 |

*SECNO 5.430
UNT 01= 115.62 USEL= 857.29 SNC 01= 115.63 USEL= 857.29 RATIO= 0.0300
UNT 01= 121. RATIOS LOB,CH,NOS= 0.1441 0.4511 3.0241 HSEL= 867.19

3470 ENCROACHMENT STATIONS= 456.8 511.1 TYPE= 4 TARGET= 0.049

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.50 | 5.50 | 857.30 | 0.70 | 862.04 | 862.20 | 0.61 | 1.51 | 0.12 | 862.70 |
| 150. | 10. | 150. | 1. | 65. | 102. | 0. | 15. | 1. | 864.76 |
| 2.33 | 1.36 | 6.35 | 0.42 | 0.157 | 0.047 | 0.100 | 0.041 | 831.80 | 456.30 |
| 0.012043 | 450. | 595. | 450. | 2 | 3 | 1 | 0.00 | 58.28 | 511.00 |

*SECNO 5.440
UNT 01= 21.07 USEL= 863.71 SNC 01= 121.07 HSEL= 863.83 RATIO= 0.0030
UNT 01= 127. RATIOS LOB,CH,NOS= 0.0583 0.2524 0.1753 HSEL= 868.32

3473 ENCROACHMENT STATIONS= 463.0 536.3 TYPE= 4 TARGET= 0.356

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.30 | 5.20 | 863.99 | 1.00 | 864.70 | 865.22 | 0.33 | 1.62 | 0.01 | 866.50 |
| 630. | 27. | 508. | 101. | 19. | 104. | 00. | 17. | 6. | 866.50 |
| 0.26 | 1.10 | 3.10 | 1.25 | 0.100 | 0.040 | 0.150 | 0.041 | 863.60 | 482.95 |
| 0.508730 | 450. | 595. | 450. | 2 | 0 | 0 | 3.00 | 71.35 | 534.31 |

*SECNO 5.500
UNT 01= 127.96 USEL= 869.59 SNC 01= 127.96 USEL= 869.69 RATIO= 0.0000
UNT 01= 135. RATIOS LOB,CH,NOS= 0.0696 0.7476 0.1869 HSEL= 869.69

3470 ENCROACHMENT STATIONS= 456.7 TYPE= 4 TARGET= 0.353

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.61 | 5.10 | 859.70 | 0.00 | 861.69 | 862.99 | 0.29 | 2.77 | 0.00 | 867.20 |
| 180. | 24. | 497. | 07. | 25. | 152. | 00. | 11. | 5. | 867.20 |
| 0.20 | 1.01 | 4.97 | 1.27 | 0.100 | 0.040 | 0.100 | 0.041 | 864.30 | 458.71 |
| 0.002408 | 300. | 300. | 300. | 2 | 0 | 0 | 3.00 | 76.01 | 536.72 |

*SECNO 5.510 CHNG 0.500
*SECNO 5.700

3470 ENCROACHMENT STATIONS= 701.0 756.0 TYPE= 1 TARGET= 41.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.30 | 5.30 | 870.34 | 0.00 | 871.46 | 870.95 | 0.39 | 1.88 | 0.05 | 869.50 |
| 0.00 | 300. | 325. | 300. | 2 | 0 | 0 | 0.00 | 61.00 | 342.00 |

FROM 1401-07 PRINTED BY PORTRAN WATFOLD FORMS DIVISION OF HEPPNER PRINTING COMPANY, HEPPNER, OREGON
PRINTED IN U.S.A.

*SECNO 6.750

| SEC 0 | DEPTH | CHSEL | CHORD | HSELK | SO | FW | TL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 3. | 0LC? | 3SP | 3?0B | 3LSSB | 3.1 | ?*0E | V?L. | TIA | LEFT/?I3?T |
| *1?? | 0LC3 | W3P | 6?0C | 20L | ?PC1 | RMP | 1?A | 1L?11 | 38?A |
| 0L?2 | 0L?.L | RLC? | 3.0?5 | ?TTICL | 3?. | 330'? | C?3C5 | 11?03 | 6I.3ST |

| 3?7? | 5:C1?0?CH | 0HT | 3??YTC?PE= | ??5.0 | 1.3.1 | TYPE= | 1 | ?*?1?3?I= | 12.1?0 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6.75 | 5.83 | 0?C.12 | 0.00 | 670.46 | 6?*.27 | 2.?5 | 0.16 | 0.58 | 1?5.30 | |
| | 55?. | 06. | 451. | 73. | 45. | 5?. | 35. | 20. | 1. | 7?3.?3 | |
| | 0.30 | 2.57 | 2.C8 | 2.21 | 0.130 | 2.040 | 0.10? | 0.0?1 | ?65.00 | 7?4.0? | |
| | 2.0?0?20 | 0. | 62. | 50. | 2 | 0 | 0 | 0.00 | 32.00 | 32?.02 | |

*SEC?O 6.?10

?30? HV CI?NGED ?0?E THAN 0?2N3

| ?0? | ?:?1?3C?0?:?T | ?T?TI?N?= | ?.?.0 | ?:?.0 | TYPE= | 1 | T?3?L = | 20?.0?3 |
|---|---|---|---|---|---|---|---|---|

J?'1 C?:?:?0?' ?1?? (?3?0?C) ?0?=.?FFECT?VE?ELL?0= 871.10 CL?.?0= 871.?0

D/S FACE RIVERSIDE DR. CROSS SECTION 13

| 3.?0 | 5.?? | 870.?? | 0.00 | 870.?1 | 871.?5 | 2.?5 | 0.?0 | 0.?? | 3??.3. |
|---|---|---|---|---|---|---|---|---|---|
| ?50. | 0. | 0?0. | 0. | ?. | 52. | 0. | 20. | 3. | 161.?3 |
| ?.50 | 0.00 | 12.03 | 0.00 | 0.?10 | ?.040 | 0.?05 | 0.3?1 | 865.00 | 806.20 |
| ?.01?323 | 50. | 50. | 50. | 3 | 0 | 0 | 0.00 | 10.60 | 816.8? |

BRIDGE

| Cm | CW | ZWPR | CDF0 | RDLEN | BMC | BHP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.84 | 3.00 | 0.00 | 0.30 | 0.00 | 63.00 | 0.00 | 863.90 | 865.20 |

*SEC?O 7.0.0

?30? HV CHANGED MORE THAN ?V1?3

PRESSURE FLOW

| ELPRS | ELWC | WI | ?UBTA | CPR | MAREA | TRAPEZOID AREA | ELCO | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 873.04 | 872.35 | 0.00 | 0. | 630. | 651 | 58. | 871.90 | 874.35 |

| 3??? | 0?:?T?:?M?NT | ?T?TI?N?= | 350.? | 350.? | TYPE= | 1 | T?3?ET= | 803.000 |
|---|---|---|---|---|---|---|---|---|

3??? 0V?R?ANK ?RE? ?SSI?NED NO-?FF ??I?E?CUR?= 874.50 EL?S?= 874.50

D/S FACE RIVERSIDE DR. CROSS SECTION 13

| 3.?0 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0?0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0.000 | 0.00 | 8.85 | 0.00 | 0.?10 | 2.040 | 0.?05 | 0.3?1 | 865.10 | 806.20 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.000859 | 99. | 58. | 59. | 3 | 0 | 1 | 0.00 | 10.60 | 816.00 |

*SECNO 7.200

3331 IN CHANNEL FOR TRIBUTARY

3470 ENCROACHMENT STATIONS= 756.0 867.0 TYPE= 1 TARGET= 111.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | U/S RIVERSIDE DR. | | | | CROSS SECTION 7A | | | | |
| 7.20 | 2.37 | 872.61 | 0.00 | 873.36 | 873.65 | 0.04 | 0.04 | 0.33 | 866.70 |
| 653. | 212. | 219. | 198. | 274. | 81. | 23. | 2. | 5. | 906.00 |
| 0.81 | 0.70 | 2.52 | 0.77 | 0.130 | 0.040 | 0.000 | 0.041 | 565.10 | 756.00 |
| 0.000316 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 111.00 | 867.00 |

*SECNO 7.900

2300 INT 01= 159.84 .SEL= 873.60 ENC 01= 159.86 HSEL= 873.70 RATIO= 0.0000

INT 01= 867. RATIOS .OF.CH.TOB= 0.3446 0.5156 0.1110 .SEL= 873.70

3470 ENCROACHMENT STATIONS= 344.7 829.3 TYPE= 4 TARGET= 0.042

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | D/S DAM D/S RIVERSIDE DR. | | | | CROSS SECTION 12A | | | | |
| 7.90 | 2.16 | 873.66 | 0.00 | 873.60 | 873.82 | 0.16 | 0.33 | 0.04 | 869.50 |
| 0.7 | 1.48 | 4.17 | 1.76 | 2.010 | 0.043 | 0.000 | 2.041 | 565.57 | 844.41 |
| 0.011546 | 550. | 930. | 593. | 2 | 2 | 0 | 0.20 | 85.15 | 829.36 |

*SECNO 8.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INT 01= | 164. | OPTIONS LOB,CH,ROB= | 0.3047 | 0.5243 | 0.1106 | HSEL= | 873.64 | | |
| SECNO | DEPTH | CPSEL | QWIN | USEL | CB | HP | PL | CLOSS | TOP LEFT/RIGHT |
| R | QLOB | QCH | QROB | XLOB | NCH | NROB | VSL | TOA | SETA |
| TIME | VLOB | VCH | VROB | XTL | XNCH | XNP | STN | ELMIN | ENDST |
| SLOPE | XLOBL | XLCH | XLOBT | ITRIAL | IP2 | ICONT | CORAR | TOPWID | |

3470 NORMAL PRINTED, VOB= 0 MIN ELTRD= 859.20 MAX ELLC= 866.30

3470 ENCROACHMENT STATIONS= 357.2 829.3 TYPE= 4 TARGET= 0.060

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOP OF DAM | | | | CROSS SECTION 12A | | | | |
| 0.00 | 6.09 | 873.59 | 0.00 | 873.54 | 873.85 | 0.29 | 0.30 | 0.28 | 869.30 |
| 630. | 221. | 304. | 65. | 153. | 64. | 36. | 26. | 7. | 869.00 |
| 0.81 | 1.42 | 3.57 | 1.90 | 2.040 | 2.042 | 0.000 | 2.041 | 565.10 | 847.33 |
| 0.000165 | 2. | 2. | 2. | 2 | 2 | 0 | 415.90 | 82.73 | 829.36 |

*SECNO 8.100

3470 INT 01= 54.75 .SEL= 873.61 ENC 01= 149.75 HSEL= 873.71 RATIO= 0.0000

3470 ENCROACHMENT STATIONS= 544.7 829.3 TYPE= 4 TARGET= 0.056

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.13 | 5.96 | 673.66 | 0.00 | 673.67 | 673.64 | 0.20 | 0.00 | 0.01 | 869.05 |
| 630. | 264. | 315. | 71. | 167. | 66. | 35. | 26. | 7. | 367.70 |
| 0.37 | 1.52 | 4.30 | 1.85 | 0.030 | 1.040 | 3.080 | 0.044 | 867.70 | 544.45 |
| 1.001792 | 2. | 3. | 2. | 2 | 0 | 0 | 3.07 | 64.72 | 529.17 |

*SECNO 3.300
2300 XAT 01= 215.58 WSEL= 874.10 ENC 01= 215.58 WSEL= 874.20 RATIO= 0.3000
XAT 01= 326. RATIOS LOB,CH,ROB= 0.2971 0.5972 0.0357 WSEL= 874.20

3470 ENCROACHMENT STATIONS= 532.3 628.2 TYPE= 4 TARGET= 1.097

VALLEY SECTION — CROSS SECTION 12

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.30 | 5.67 | 874.17 | 0.00 | 874.10 | 874.39 | 0.13 | 0.42 | 0.01 | 870.39 |
| 630. | 188. | 252. | 14. | 167. | 139. | 11. | 29. | 7. | 363.50 |
| 0.40 | 1.83 | 5.27 | 1.27 | 0.030 | 1.040 | 3.080 | 0.044 | 865.39 | 542.27 |
| 0.000961 | 360. | 347. | 300. | 2 | 0 | 0 | 1.03 | 59.93 | 529.61 |

*SECNO 3.310
2300 XAT 01= 123.14 WSEL= 874.56 ENC 01= 123.14 WSEL= 874.66 RATIO= 0.3000
XAT 01= 30. RATIOS LOB,CH,ROB= 0.1337 0.8163 0.0500 WSEL= 875.02

3470 ENCROACHMENT STATIONS= 564.9 627.5 TYPE= 4 TARGET= 1.031

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.31 | 5.52 | 874.62 | 0.00 | 874.56 | 874.96 | 0.34 | 0.60 | 0.56 | 871.90 |
| 630. | 98. | 342. | 6. | 59. | 109. | 6. | 31. | 3. | 872.10 |
| 0.43 | 1.39 | 4.99 | 1.04 | 0.030 | 1.040 | 3.080 | 0.044 | 870.10 | 564.87 |
| 0.000317 | 360. | 441. | 350. | 1 | 1 | 1 | 0.01 | 64.81 | 527.17 |

*SECNO 3.320
2300 XAT 01= 102.87 WSEL= 875.82 ENC 01= 102.87 WSEL= 875.92 RATIO= 1.0000
XAT 01= 109. RATIOS LOB,CH,ROB= 0.1185 0.8479 0.0336 WSEL= 875.92

3470 ENCROACHMENT STATIONS= 574.9 627.2 TYPE= 4 TARGET= 0.052

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.32 | 4.32 | 875.92 | 0.00 | 875.82 | 876.36 | 0.44 | .27 | 2.03 | 873.57 |
| 630. | 57. | 566. | 5. | 39. | 101. | 5. | 32. | 6. | 874.70 |
| 0.45 | 1.59 | 5.60 | 1.11 | 0.030 | 0.340 | 0.300 | 0.04 | 871.72 | 574.87 |
| 2.003759 | 360. | 445. | 350. | 2 | 0 | 0 | 0.00 | 52.37 | 627.26 |

*SECNO 3.330
2300 XAT 01= 103.33 WSEL= 877.44 ENC 01= 103.33 WSEL= 877.54 RATIO= 0.3000
XAT 01= 108. RATIOS LOB,CH,ROB= 0.1199 0.8465 0.0336 WSEL= 877.54

| BRANCH | DEPTH | ONSEL | CRIOS | WSELK | FRG | AV | AL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| | XLOB | XC | XRCH | XLOB | ACT | QMIN | VOL | LEFT/RIGHT | |
| TIME | WLOB | VCH | VROB | XTL | ENCL | ENR | STN | CL*LA | SF |
| SLOPE | XLOBL | XLCH | XLOBR | STRIPL | DH2 | ICONT | CONVR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 575.3 627.1 TYPE= 4 TARGET= 1.055

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.33 | 4.25 | 877.53 | 0.00 | 877.44 | 877.68 | 2.44 | 1.62 | 0.30 | 875.10 |
| 617. | 69. | 304. | 4. | 39. | 101. | 4. | 34. | 6. | 873.30 |
| 0.47 | 1.63 | 5.93 | 1.17 | 0.030 | 0.340 | 0.300 | 0.04 | 871.30 | 582.05 |
| 0.003588 | 360. | 445. | 350. | 1 | 1 | 1 | 0.00 | 54.79 | 627.26 |

*SECNO 3.340
2300 XAT 01= 79.98 WSEL= 879.08 ENC 01= 79.98 WSEL= 879.18 RATIO= 0.3000

3470 ENCROACHMENT STATIONS= 620.9 626.8 TYPE= 4 TARGET= 0.058

VALLEY SECTION CROSS SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.40 | 4.51 | 379.51 | 0.00 | 879.38 | 883.87 | 0.56 | 2.05 | 0.04 | 875.50 |
| 350. | 0. | 541. | 50. | 0. | 30. | 39. | 13. | 3. | 177.5 |
| 0.61 | 3.13 | 6.17 | 1.39 | 0.050 | 0.040 | 0.002 | 0.041 | 875.00 | 877.02 |
| 0.002863 | 350. | 445. | 130. | 2 | 1 | 2 | 0.00 | 37.77 | 874.77 |

*SECNO 8.410

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 |
| 0.00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.000 | 0.00 | |

1ST EMBANKMENT STATIONS= 520.0 886.2 TYPE= 4 TAREA= 0.309

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.41 | 4.93 | 881.63 | 1.05 | 881.49 | 883.50 | 0.87 | 2.33 | 2.09 | 883.00 |
| 650. | 0. | 503. | 47. | 0. | 75. | 23. | 36. | 10. | 630.00 |
| 0.37 | 0.00 | 7.70 | 1.12 | 0.000 | 0.000 | 0.000 | 0.00 | 877.51 | 877.51 |
| 0.000000 | 325. | 367. | 425. | 3 | 0 | 0 | 0.00 | 44.13 | 667.93 |

*SECNO 8.900

2ND EMBANKMENT STATIONS= 431.3 620.0 TYPE= 1 TAREA= 219.000

D/S OF 2ND DAM D/S CAPITAL AVE. CROSS SECTION 100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.00 | 5.74 | 883.72 | 2.00 | 884.92 | 885.87 | 2.16 | 1.50 | 0.07 | 881.50 |
| 0. | 155. | 397. | 450. | 0. | 14. | 210. | 37. | 20. | 380.50 |
| 0.36 | 1.49 | 4.12 | 1.34 | 0.030 | 0.040 | 0.060 | 0.061 | 880.00 | 444.55 |
| 0.002690 | 225. | 300. | 225. | 1 | 0 | 0 | 0.00 | 149.70 | 594.06 |

*SECNO 9.000

BRIDGE,NO= 11 MIN ELTRC= 880.50 MAX ELLO= 883.00

TOP OF DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9.30 | 5.95 | 883.9 | 2.00 | 885.43 | 885.99 | 2.42 | 0.00 | 0.07 | 881.50 |
| 0. | 45. | 417. | 170. | 77. | 67. | 106. | 57. | 10. | 383.50 |
| 0.34 | 1.24 | 6.19 | 1.11 | 0.080 | 0.020 | 0.083 | 0.041 | 880.00 | 445.50 |
| 0.001975 | 3. | 2. | 2. | 2 | 0 | 0 | -12.56 | 145.21 | 590.71 |

*SECNO 9.400

| SECNO | BERTA | E.SEL | ERAOS | ESELO | EG | HV | SL | ELOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | SLOP | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XSCH | XNR | HTN | ELMIN | SSTA |
| SLOPE | K.C. | 1.01 | XLOBR | CTRSTL | TTP | TCOMP | ZCORXP | TOPTO | ELTRST |

D/S OF DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0. | 937. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0.00 |
| 0.00 | 1.00 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.00 |
| 0.000000 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |

*SECNO 9.900

D/S 18" DAM D/S CAPITAL AVE. CROSS SECTION 10A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9.95 | 5.29 | 883.85 | 0.17 | 889.02 | 889.14 | 0.15 | 0.13 | 0.10 | 892.30 |
| 630. | 96. | 333. | 2. | 147. | 44. | 2. | 37. | 15. | 402.00 |
| 0.55 | 0.75 | 1.05 | 0.33 | 0.003 | 0.002 | 0.001 | 0.01 | 377.70 | 340.11 |
| 0.001.65 | 50. | 125. | 53. | 1 | 1 | 0 | 0.20 | 173.65 | 515.72 |

*SECNO 9.950

*** CRITICAL DEPTH SECTION BELOW ELEV OF 877.70 ELEV= 878.70' ELEV= 879.35' DEPTH= 889.7

3370 NORMAL BRIDGE/CRD= 0 MIN ELTRD= 881.70 MAX ELLC= 877.70

TOP OF LAD

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 6.40 | 883.76 | 877.70 | 883.53 | 884.27 | 0.87 | 0.00 | 0.12 | 892.00 |
| 630. | 122. | 508. | 2. | 126. | 75. | 2. | 37. | 10. | 882.00 |
| 0.56 | 0.97 | 6.73 | 0.78 | 0.000 | 0.020 | 0.000 | 0.01 | 377.70 | 345.91 |
| 0.002.30 | 2. | 2. | 2. | 0 | 0 | 0 | -0.70 | 173.30 | 51?.?? |

*SECNO 10.100

3370 NORMAL BRIDGE/CRD= 0 MIN ELTRD= 881.00 MAX ELLC= 880.30

D/S 18" DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.10 | 3.51 | 884.11 | 0.00 | 884.10 | 884.31 | 0.20 | 0.01 | 0.04 | 980.60 |
| 630. | 96. | 284. | 39. | 199. | 56. | 22. | 37. | 10. | 880.50 |
| 0.55 | 1.00 | 5.11 | 0.99 | 0.00 | 0.00 | 0.000 | 0.001 | 377.70 | 340.09 |
| 0.004.25 | 2. | 2. | 2. | 4 | 0 | 0 | -0.60 | 181.10 | 515.99 |

EQLV= 0.300 CRVV= 0.500

*SECNO 10.300

2ND E.SPEAC WEST STATIONS= 540.3 525.3 TYPE= 2 WIDTH= 75.000

TOP OF D/S CAPITAL AVE. CROSS SECTION 9

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.80 | 5.65 | 884.93 | 0.00 | 884.73 | 889.32 | 0.59 | 0.31 | 0.09 | 891.60 |
| 0.33 | 2.20 | 7.23 | 2.23 | 2.000 | 1.043 | 0.000 | 0.041 | 881.10 | 880.00 |
| 1.057.24 | 150. | 69. | 150. | 3 | 3 | 0 | 0.00 | 55.72 | 910.72 |

*SECNO 10.350

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CHTRD | CHELB | LOB | ROB | TL | OLDSC | BANK ELEV |
| Q | ALOB | QC | ACH | ALOB | ACH | ARCH | VOL | TOB | LEFT/RIGHT |
| TIME | VLOB | VC | VCH | XLOB | XMC | XMR | FLTI | SETA | |
| SLOPE | ALOB | ALOB | ALOB | ALOB | ALOB | ALOB | ALOB | ALOB | ALOB |

3370 BRIDGE/CRD= 0 MIN ELTRD= 881.0 TYPE= 1 WIDTH= 35.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.80 | 5.65 | 884.93 | 0.00 | 884.73 | 889.32 | 0.59 | 0.31 | 0.09 | 891.60 |
| 0.33 | 2.20 | 7.23 | 2.23 | 2.000 | 1.043 | 0.000 | 0.041 | 881.10 | 880.00 |
| 1.057.24 | 150. | 69. | 150. | 3 | 3 | 0 | 0.00 | 55.72 | 910.72 |

FORM 161 USED PRINTED BY HOBBY MANIFOLD FORMS DIVISION OF RAFFRAY PRINTING COMPANY, DETROIT

*SECND 10.960

5301 IN STANDARD CODE TIME UNITS

5427 ENCROACHMENT STATIONS= 490.0 510.0 TYPE= 4 TARGET= 20.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.36 | 3.61 | 884.55 | 884.09 | 884.90 | 886.55 | 1.50 | 5.31 | 5.31 | 501.85 |
| 659. | 0. | 619. | 0. | 0. | 67. | 0. | 38. | 11. | 881.85 |
| 0.36 | 1.34 | 11.2 | .0 | 0.340 | 1.250 | .01 | .116 | 881.75 | 550.00 |
| 0.3140309 | 25. | 25. | 25. | 4 | 6 | 0 | 0.00 | 12.00 | 550.00 |

*SECND 10.960

33 IN STANDARD NOTE TABLE TYPE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | FUSEL | CATUS | PCELK | EG | IP | IL | GLOBS | BANK FLEV |
| 0 | GLOB | QCU | CTOB | XLOB | ACL | AMOS | VOL | TOA | LEFT/RIGHT |
| TIPL | VLOP | WCP | WROM | XAL | ANGA | XNR | UPN | ELMI | SSTA |
| SLOPE | XLCHL | XLCH | XLOBR | TRIAL | IHS | ICONT | CORAR | TCPWSD | ENDST |

3345 SLOPE CONVEYANCE METHOD

3720 CRITICAL DEPTH ASSUMED

3695 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 890.00 ELREA= 890.00

178 PAGE CAPACITY EXCEEDED. CROSS SECTION 2

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.90 | 4.17 | 885.57 | 885.97 | 885.57 | 887.67 | 2.09 | 0.44 | 0.25 | 881.40 |
| 635. | 0. | 630. | 0. | 0. | 54. | 0. | 38. | 11. | 881.40 |
| 0.90 | 0.13 | 11.2 | .0 | 0.340 | .081 | 0.01 | 0.116 | 881.40 | 550.00 |
| 0.1206O3 | 25. | 25. | 25. | 4 | 0 | 0 | 0.00 | 12.00 | 550.00 |

SPECIAL BRIDGE

| EJ | KM | KPCT | SUPO | IPLIM | WMC | BHP | BAREA | SS | FLOL | ELCPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.20 | 1.50 | 3.00 | 0.00 | 15.00 | 0.30 | 85.00 | C.00 | 881.40 | 881.40 |

*SECND 11.000

3301 IN STANDARD CODE TIME UNITS

PRESSURE FLOW

| EGRAS | EGLHC | IT | ENEIT | QPR | BAREA | TRAPEZOID | SLLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 889.03 | 887.67 | 0.30 | 0. | 630. | 69. | 69. | 885.40 | 892.20 |

3695 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 892.40 ELREA= 892.40

3720 CRITICAL DEPTH ASSUMED. CROSS SECTION 3

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.00 | 5.27 | 888.40 | 0.00 | 888.40 | 888.00 | 1.30 | 0.39 | 0.10 | 881.40 |
| 630. | 0. | 630. | 0. | 0. | 5. | 0. | 38. | 11. | 881.40 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.55 | 0.53 | 9.15 | 0.00 | 0.080 | 0.040 | 0.000 | 0.361 | 801.40 | 537.00 |
| 0.013295 | 32. | 32. | 32. | 4 | 0 | 0 | 0.00 | 0.00 | 590.00 |

*STA 3 12.800

3231 HP CHANGED TO BE TEAM 1993

3470 ENCROACHMENT STATIONING= 407.0 600.0 TYPE= 1 TARGET= 193.200

SECTION CAPITAL WAY. CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.20 | 6.80 | 788.20 | 0.00 | 808.26 | 808.45 | 0.17 | 0.14 | 6.54 | 881.60 |
| 630. | 199. | 373. | 71. | 161. | 89. | 53. | 39. | 11. | 891.40 |
| 0.56 | 1.17 | 6.14 | 1.32 | 0.060 | 0.040 | 0.050 | 0.041 | 861.40 | 487.05 |
| 0.000511 | 90. | 91. | 91. | 1 | 0 | 0 | 0.01 | 79.00 | 505.97 |

14.0.64 CARD USED
*SECND 11.210

| SECND | DEPTH | CHSEL | CRIVS | MERLK | EG | SV | FL | OLOSS | CANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| T | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| TOTAL | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| CLOPL | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

[illegible] STATION= 40.0 [illegible] TYPE= 1 TARGET= 310.0

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.21 | 5.14 | 801.68 | 0.00 | 830.24 | 788.79 | 0.14 | 0.39 | 0.01 | 817.10 |
| 630. | 307. | 422. | 3. | 285. | 50. | 6. | 43. | 12. | 827.50 |
| 0.59 | 1.55 | 3.68 | 0.50 | 0.052 | 0.040 | 0.000 | 0.051 | 893.50 | 512.56 |
| 0.001671 | 190. | 290. | 150. | 2 | 0 | 0 | 0.00 | 180.40 | 690.97 |

*SECND 11.220

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.22 | 4.22 | 806.17 | 0.00 | 854.87 | 803.26 | 0.39 | 0.37 | 0.11 | 823.45 |
| 630. | 221. | 420. | 0. | 86. | 89. | 1. | 41. | 12. | 840.45 |
| 0.62 | 2.56 | 5.96 | 0.52 | 0.048 | 0.040 | 0.000 | 0.041 | 884.69 | 516.53 |
| 0.000364 | 110. | 190. | 110. | 2 | 0 | 0 | 0.00 | 170.28 | 684.81 |

*SECND 11.230

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.23 | 3.57 | 809.17 | 809.16 | 867.27 | 850.35 | 0.50 | 0.29 | 0.07 | 837.80 |
| 630. | 199. | 431. | 0. | 30. | 63. | 0. | 41. | 15. | 859.60 |
| 0.60 | 1.97 | 6.33 | 0.35 | 0.043 | 0.040 | 0.000 | 0.041 | 885.00 | 517.75 |
| 0.000 | 100. | 191. | 11. | 2 | 3 | 0 | 0.01 | 165.00 | 705.17 |

*SECND 11.240

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.24 | 4.06 | 791.31 | 790.89 | 891.01 | 891.91 | 0.50 | 1.14 | 0.02 | 890.75 |
| 630. | 206. | 424. | 0. | 63. | 65. | 0. | 22. | 13. | 895.75 |
| 0.51 | 2.29 | 6.32 | 0.49 | 0.0 | 0.040 | 0.000 | 0.041 | 886.95 | 516.94 |
| 0.000486 | 190. | 190. | 190. | 2 | 6 | 0 | 0.03 | 167.19 | 693.74 |

CONV= 0.300 CONV= 0.300

*SECND 11.250

[illegible]

```
7195 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   11.20      4.47    892.67    892.67    892.67    893.10      0.51      0.94      0.00    891.30
    630.      137.      491.        3.      116.       75.        3.       42.       13.     899.90
    0.31      1.18      5.41      0.80     0.080     0.040     0.080     0.041    890.20   1335.11
0.006537      100.      140.      100.         1         9         0      0.00    229.21   1564.72

*SECNO 11.290
   SECNO     DEPTH     LOSEL     GRINS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   1         SLOP      QCH       QROB      ALCH      AKH       AROB      VOL       TWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOSL     XLCH      XLOBR     ITRIAL    XH2       ICONT     CORAR     TOPWID    ENDST

7195 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   11.29      4.42    892.75    893.75    894.75    894.33      0.50      0.92      0.02    892.65
    630.      122.      506.        2.      102.       75.        3.       42.       14.     892.05
    0.52      1.19      6.77      0.80     0.080     0.040     0.080     0.041    889.35   1337.05
0.007454      100.      140.      100.         2         5         0      0.00    226.54   1563.59

*SECNO 11.300
   SECNO     DEPTH     LOSEL     GRINS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   1         SLOP      QCH       QROB      ALCH      AKH       AROB      VOL       TWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOSL     XLCH      XLOBR     ITRIAL    XH2       ICONT     CORAR     TOPWID    ENDST

7195 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

      VALLEY SECTION                                    CROSS SECTION #
   11.31      4.44    894.94    894.94    894.94    895.46      0.54      0.98      0.02    893.60
    630.      129.      493.        2.      109.       76.        3.       43.       15.     894.20
    0.63      1.18      6.60      0.80     0.080     0.040     0.080     0.041    890.50   1335.08
0.006895      100.      140.      100.         2         5         0      0.00    227.83   1563.96

*SECNO 11.310
   11.31      4.31    896.01    893.92    895.01    896.48      0.47      1.00      0.01    894.60
    630.      144.      483.        3.      123.       77.        4.       44.       15.     895.20
    0.64      1.12      6.25      0.79     0.080     0.040     0.080     0.041    891.50   1334.06
0.006112      110.      165.      110.         5         5         0      0.00    230.67   1564.73

*SECNO 11.320

3470 ENCROACHMENT STATIONS=    1410.0    7570.0  TYPE=     1  TARGET=     560.000
   11.32      4.46    896.96    896.83    894.96    897.50      0.55      1.00      0.02    895.60
    630.      125.      502.        2.       92.       73.        3.       44.       16.     896.20
    0.64      1.36      6.41      0.81     0.080     0.040     0.080     0.041    892.50   1410.00
0.006972      110.      165.      110.         4         11         0      0.00    154.16   1564.16

*SECNO 11.900

5470 ENCROACHMENT STATIONS=     360.0     430.0  TYPE=     1  TARGET=      70.000

      [illegible]
   11.90      3.57    897.97      0.00    897.97    898.48      0.51      0.90      0.00    896.40
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 530. | 38. | 302. | 16. | 24. | 98. | 13. | 65. | 16. | 395.50 |
| 3.65 | 1.33 | 5.55 | 1.25 | 0.080 | 0.040 | 0.052 | 0.041 | 896.40 | 360.00 |
| 0.023547 | 119. | 166. | 90. | 2 | 0 | 3 | 2.00 | 70.00 | 430.00 |

*SECTION 14.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BRIDGE | DEPTH | LAREA | SLOPE | WIDTH | CP | HB | HL | FLOOD | DAM FLOW |
| 0. | ELOB | PCH | UBOB | ELOB | ACH | ARCH | VOL | THR | LEFT/RIGHT |
| TIME | VLOB | WCH | VBOB | AUL | XNCH | XNI | WTN | ELMIN | STA |
| SLOPE | ELOBL | RLCH | VLOBB | ITRIAL | IHP | ICONV | CORAE | TOP.TO | EMBST |

35°L MINIMAL BRIDGE,ERR= 0 TOP ELTRD= 396.90 MX ELLC= 894.40

[illegible] STA IDENT= 360.0 430.0 TYPE= 1 TARGET= 70.000

TOP OF BANK CROSS SECTION 73

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.00 | 4.68 | 890.00 | 0.00 | 898.00 | 896.50 | 0.42 | 0.21 | 2.01 | 395.40 |
| 630. | 91. | 503. | 16. | 27. | 153. | 15. | 45. | 16. | 896.50 |
| 5.05 | 1.17 | 2.11 | 1.17 | 0.080 | 1.40 | 1.11 | .78 | 891.60 | 360.05 |
| 0.007594 | 2. | 2. | 2. | 2 | 0 | 0 | -22.71 | 70.00 | 430.00 |

ASSUMC 12.100

[illegible] ELTRD= 396.90 MIN ELLC= 394.90

3470 ENCROACHMENT STATIONS= 360.0 430.0 TYPE= 1 TARGET= 70.000

U/S OF DAM CROSS SECTION 73

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.00 | 5.32 | 897.32 | 0.20 | 897.92 | 896.36 | 0.16 | 0.04 | 2.07 | 395.40 |
| 630. | 91. | 503. | 16. | 27. | 84. | 12. | 45. | 16. | 896.50 |
| 0.33 | 1.65 | 0.33 | 2.54 | 0.080 | 0.040 | 0.050 | 0.041 | 894.40 | 360.05 |
| 0.308966 | 3. | 2. | 2. | 2 | 0 | 0 | -12.75 | 70.00 | 430.00 |

*SECTION 15.200
PIER WIDTH= 1.00 PSCL= 0.94 E'S CP= 0.74 HSCL= 1.00 RATIO= 0.0290
PIER WIDTHS LOB,CH,ROB= 0.0858 0.0660 0.0475 ASEL= 890.90

3470 ENCROACH BNT STATIONS= 366.7 423.5 TYPE= 4 TARGET= 0.043

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.00 | 5.91 | 899.19 | 0.00 | 899.19 | 898.13 | 0.97 | 0.45 | 0.00 | 0.00 |
| 477. | 61. | 375. | 16. | 37. | 145. | 16. | 45. | 16. | 896.50 |
| 0.66 | .29 | 0.57 | 1.01 | 0.080 | 0.040 | 0.000 | 0.744 | 893.40 | 360.05 |
| 0.004490 | 0. | 365. | 100. | 4 | 4 | 0 | 0.00 | 70.00 | 430.00 |

*SECTION 15.900

3470 ENCROACH BNT STATIONS= 359.0 360.0 TYPE= 1 TARGET= 70.000

D/S 2ND BR U/S OF DAM CROSS SECTION 72

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.00 | 4.11 | 896.11 | 0.20 | 896.31 | 895.26 | 0.10 | 0.04 | 2.07 | 395.40 |
| 630. | 91. | 503. | 16. | 27. | 84. | 12. | 45. | 16. | 896.50 |
| 0.33 | 1.65 | 0.33 | 2.54 | 0.080 | 0.040 | 0.050 | 0.041 | 894.40 | 360.05 |
| 0.308966 | 3. | 2. | 2. | 2 | 0 | 0 | -12.75 | 70.00 | 430.00 |

*SECND 13.000

3370 NORMAL DEPTH= 3 MIN ELTRD= 894.20 MAX ELEV= 895.80

| 3370 SUBCRITICAL FLOW STATIONS= | 450.0 | 320.0 | TYPE= | 1 | TARGET= | 70.000 |
|---|---|---|---|---|---|---|

TOP OF DAM — CROSS SECTION 70

| 13.00 | 4.78 | 899.36 | 0.00 | 894.53 | 899.75 | 0.40 | 0.02 | 1.03 | 897.60 |
|---|---|---|---|---|---|---|---|---|---|
| 630. | 50. | 471. | 126. | 33. | 65. | 42. | 44. | 15. | 897.10 |
| 0.07 | 2.62 | 6.71 | 3.57 | 0.000 | 0.240 | 1.000 | 1.041 | 894.63 | 250.50 |
| 0.013239 | 2. | 3. | 6. | 6 | 0 | 0 | -7.80 | 71.00 | 320.50 |

*SECND 13.100

| SEC ID | B-FLG | DEPTH | CRIME | MODLR | Q | V | FR | ELEV | TOP WIDTH |
|---|---|---|---|---|---|---|---|---|---|
| | ALG | SSW | SAVE | ALSO | ACH | WPG | WSW | TRA | LEFT/RIGHT |
| ERR | WLG | WSP | WOE | YOZ | XWCH | WSF | WI | FLAIR | WS A |
| SLOPE | SLOBL | XLCH | XLNOR | IYTIAL | IH2 | ZCOST | CONCR | TOPWID | ECOST |

3370 SUB CRITICAL FLOW STATIONS= 0 MIN ELTRD= 894.20 MAX ELEV= 895.80

3055 20 TRIALS ATTEMPTED MSEL/CUSEL
3057 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| 3670 SUBCRITICAL FLOW STATIONS= | 250.0 | 340.0 | TYPE= | 9 | TARGET= | 7.000 |
|---|---|---|---|---|---|---|

D/S 2ND DAM U/S CAPITAL AVE. — CROSS SECTION 72

| 11.10 | 3.60 | 899.20 | 899.20 | 899.23 | 901.05 | 0.85 | 0.03 | 0.14 | 897.90 |
|---|---|---|---|---|---|---|---|---|---|
| 630. | 50. | 473. | 71. | 21. | 30. | 37. | 43. | 15. | 897.10 |
| 1.47 | 2.82 | 6.29 | 2.46 | 2.000 | 0.048 | 0.000 | 0.041 | 894.90 | 250.00 |
| 0.013567 | 2. | 7. | 2. | 20 | 12 | 0 | -7.80 | 70.50 | 320.00 |

*SECND 13.900

3371 TO CRITICAL NODE THAT LOCKS

D/S 3RD DAM U/S CAPITAL AVE. — CROSS SECTION 70

| 13.00 | 5.17 | 900.37 | 0.00 | 905.07 | 900.00 | 0.32 | 0.04 | .03 | 898.10 |
|---|---|---|---|---|---|---|---|---|---|
| 630. | 139. | 54. | 166. | 74. | 36. | 92. | 44. | 17. | 896.00 |
| 0.06 | 1.75 | 5.91 | 1.72 | 0.000 | 0.240 | 0.020 | 0.041 | 894.50 | 223.65 |
| 0.006663 | 120. | 142. | 120. | 2 | 0 | 0 | 0.00 | 825.40 | 348.43 |

*SECND 50.000

3370 NORMAL DEPTH= 3 MIN ELTRD= 897.00 MAX ELEV= 898.60

TOP OF DAM — CROSS SECTION 73

| 12.30 | 4.20 | 900.00 | 0.00 | 900.76 | 901.20 | 00.35 | 0.01 | 0.00 | 898.00 |
|---|---|---|---|---|---|---|---|---|---|
| 63. | 55. | 307. | 79. | 75. | 51. | 91. | 46. | 17. | 898.10 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

*SECTO 94.100

3370 NOTMAL DEPOSITION= 5 MIN ELTRD= 897.00 MAX ELEC= 898.30

| U/S END TYP U/S CANYON WID= | | | | | CROSS SECTION 7: | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 94.10 | 3.91 | 920.71 | 3.00 | 900.71 | 901.01 | 0.20 | 3.01 | 5.00 | 898.00 |
| 631. | 144. | 305. | 170. | 76. | 54. | 94. | 46. | 17. | 893.00 |
| 0.50 | 1.00 | 6.00 | 1.00 | 0.040 | 1.040 | 0.040 | 0.041 | 896.80 | 234.68 |
| 1.015397 | 2. | 2. | 2. | 0 | 0 | 0 | -2.71 | 901.29 | 898.00 |

*SECTO 94.200

2000 NAT 01= 937.13 CSEL= 901.36 ENC 01= 137.13 CSEL= 901.45 RATIO= 0.0000

| NAT 01= 133. RATIOS LOF,CH,TOB= 0.2557 0.4254 0.3189 CSEL= 901.45 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3470 ENCROACH TO= 234.9 336.9 TYPE= 6 TARGET= 0.150 | | | | | | | | | |
| 96.20 | 6.56 | 901.36 | 3.00 | 901.36 | 901.53 | 0.17 | 3.51 | 5.01 | 898.00 |
| 633. | 152. | 288. | 191. | 94. | 63. | 121. | 57. | 7. | 893.00 |
| 0.69 | 1.60 | 4.56 | 1.56 | 0.040 | 0.040 | 0.000 | 0.041 | 896.80 | 234.68 |
| 0.000000 | 2. | 2. | 2. | 2 | 0 | 0 | -2.70 | 901.30 | 898.00 |

*SECTO 94.300

2000 NAT 01= 57.94 CSEL= 901.78 ENC 01= 64.25 SEL= 901.88 RATIO= -0.1291

| INT 01= 64. RATIOS LOF,CH,TOB= 0.0100 1.0000 0.0000 MCEL= 901.80 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | LOF | CH | HEIGHT | ELEV | BOT | ELEV | WL | TRA | DEPTH/ELEV | |
| TOB | LOB | LOB | WIDTH | ELEV | ENC | SLOP | UTS | ELEV | BOT | |
| SLOPE | XLOBL | XLOB | XLOBR | TRIAL | INC | ICONV | CONVR | TOPWID | ENDST | |

3470 ENCROACHMENT STATIONS= 1160.0 1240.0 TYPE= 6 TARGET= 0.000

3483 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELEV= 905.00 ELREG= 905.00

| BRI FLT FOOTBRIDGE | | | | | CROSS SECTION 7: | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | 5.05 | 901.05 | 0.20 | 900.73 | 900.94 | 0.40 | 0.54 | 0.77 | 901.20 | |
| 650. | 0. | 650. | 0. | 0. | 125. | 0. | 46. | 17. | 901.70 | |
| 0.73 | 0.00 | 5.06 | 0.00 | 0.040 | 0.040 | 0.380 | 0.041 | 896.80 | 1160.30 | |
| 0.000396 | 150. | 150. | 150. | 2 | 0 | 0 | 0.00 | 73.00 | 1240.00 | |

SPECIAL BRIDGE

| SJ | XK | XKOA | CDFG | ADLEN | BPC | GP? | BARREA | SS | ELCHD | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.10 | 1.30 | 1.00 | 20.00 | 11.00 | 4.00 | | 83.03 | 1.2 | 897.0 | 897.0 |

*SEC 0 73.000

| PRESSURE RWY VEL= | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| ESKEW | WTCH | [illegible] | [illegible] | ORK | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3470 ENCROACHMENT STATIONS= 1168.0 1246.0 TYPE= 4 TARGET= 0.000

3470 ENCROACHMENT STATIONS= [illegible] TYPE= [illegible] TARGET= [illegible]

U/S FACE FLOODWAY — CROSS SECTION 7A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.00 | 6.05 | 903.65 | 0.00 | 903.62 | 903.74 | 0.09 | 1.50 | 0.00 | 901.20 |
| 655. | 11. | 52. | 5. | 11. | 653. | 1. | 25. | 93. | 901.70 |
| 0.70 | 1.07 | 2.98 | 0.67 | 0.000 | 0.240 | 0.230 | 1.041 | 896.50 | 1168.30 |
| 0.000342 | 13. | 13. | 13. | 2 | 2 | 0 | 0.00 | 71.53 | 1246.30 |

*RECHD 15.200

[illegible] 903.72 CRC CL= 175.5? WSEL= 902.82 [illegible] 0.000

PAT EL= 903. RATIOS LOB/CH/ROB= 0.1661 0.6653 0.2721 LOSS= 903.62

3470 ENCROACHMENT STATIONS= 1166.5 1245.9 TYPE= 4 TARGET= 1.042

VALLEY SECTION — CROSS SECTION 7

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.?? | 6.65 | 903.75 | 0.70 | 903.52 | 903.91 | 0.16 | 0.15 | 0.52 | 900.10 |
| 500. | 31. | 423. | 155. | 66. | 316. | 32. | 59. | 19. | 902.?? |
| 2.72 | 1.34 | 2.06 | 1.29 | 0.000 | 0.063 | 0.000 | 0.001 | 897.10 | 1166.41 |
| 0.000372 | 140. | 140. | 140. | 2 | 2 | 0 | 0.00 | 79.10 | 1245.91 |

*SECHD 15.500

3470 ENCROACHMENT STATIONS= 1167.5 1243.0 TYPE= 4 TARGET= 0.048

U/S ATT OR U/S CAPITAL AVE. — CROSS SECTION 8CS7

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.90 | 6.21 | 903.91 | 0.00 | 903.78 | 904.14 | 0.25 | 0.21 | 0.32 | 901.20 |
| 655. | 74. | 447. | 109. | 49. | 101. | 70. | 69. | 79. | 901.00 |
| 0.73 | 1.49 | 4.45 | 1.43 | 0.000 | 0.040 | 0.000 | 0.141 | 897.70 | 1167.46 |
| 0.000342 | 125. | 125. | 125. | 2 | 2 | 0 | 0.00 | 71.53 | 1243.31 |

*SECHD 16.000

2500 NAT EL= 176.01 WSEL= 903.71 ENC EL= 176.01 WSEL= 903.01 RATIO= 0.3000

CRIT EL= 185. RATIOS LOB/CH/ROB= 0.0936 0.7703 0.1357 WSEL= 903.61

3470 OVERTOPPING DISCHARGE= 0 MIN EL TRD= 899.55 MAX E.L.C= 897.70

3470 ENCROACHMENT STATIONS= 1170.2 1239.0 TYPE= 4 TARGET= 0.051

TOP OF BANK — CROSS SECTION 8CS7

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.00 | 4.02 | 905.73 | 0.05 | 903.71 | 904.23 | 0.50 | 0.03 | 0.05 | 901.20 |
| 655. | 11. | 447. | 109. | 49. | 101. | 70. | 69. | 79. | 901.00 |
| 0.73 | 1.49 | 4.45 | 1.43 | 0.000 | 0.040 | 0.000 | 0.141 | 897.70 | 1170.11 |
| 0.000342 | 125. | 125. | 125. | 2 | 2 | 0 | 0.00 | 66.81 | 1239.00 |

| SECNO | DEPTH | WSEL | ERRIS | WSEL | ES | HV | HL | FLOSS | BASE ELE |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| J | QLCB | SCH | QRCB | ALOE | ACH | ARCB | VOL | THA | LEFT/RIGHT |
| TIME | VLOB | WCH | VROB | ANL | XICH | XAR | QTH | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IHE | ICONT | CORAR | TOPWID | BNEST |

0270 SUBREACH 0.1000 0.010 0.010 LTH= 100.00 RCH ELEV= 940.10

3470 SUBCATCHMENT STATIONS= 1166.5 1244.5 TYPE= 4 TARGET= 0.069

0/S 40TH VIEW APTS SUBSTA. 496. LOCAL SELECTION 0067

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.70 | 0.35 | 904.04 | 0.00 | 905.93 | 904.26 | 0.22 | 0.30 | 0.05 | 901.20 |
| 670. | 62. | 401. | 137. | 54. | 30. | 14. | 49. | 19. | 901.00 |
| 0.73 | 1.70 | 4.54 | 1.64 | 0.090 | 0.043 | 0.030 | 0.041 | 897.70 | 1156.47 |
| 0.003268 | 2. | 2. | 2. | 2 | 1 | 1 | -15.30 | 70.0 | 1256.20 |

*SECOND 16,600.

3470 SUBCATCHMENT STATIONS= 403.0 1184.0 TYPE= 1 TARGET= 771.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.70 | 2.00 | 905.30 | 0.00 | 907.74 | 906.79 | 1.82 | 2.54 | 1.05 | 903.60 |
| 670. | 62. | 401. | 137. | 80. | 117. | 19. | 70. | 19. | 903.90 |
| 0.73 | 1.79 | 6.32 | 1.65 | 0.060 | 0.040 | 0.075 | 0.063 | 897.30 | 908.64 |
| 0.003140 | 200. | 220. | 200. | 2 | 0 | 1 | 5.03 | 95.14 | 1095.05 |

*SEC 0 10.750

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.70 | 0.54 | 905.06 | 0.00 | 907.85 | 905.42 | 0.39 | 0.51 | 0.08 | 903.50 |
| 671. | 13. | 402. | 3. | 16. | 121. | 5. | 44. | 19. | 904.10 |
| 0.75 | 0.50 | 5.05 | 0.66 | 0.060 | 0.040 | 0.060 | 0.061 | 890.50 | 1069.55 |
| 0.003614 | 200. | 220. | 200. | 2 | 0 | 0 | 0.00 | 76.29 | 1085.94 |

SLOPE 0.300 CEPHE 0.500
SECOND 0.300

10SFT S/S RIDGES ST. CROSS SECTION 6

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.70 | 0.35 | 904.66 | 0.00 | 907.45 | 906.30 | 0.42 | 0.52 | 1.09 | 903.30 |
| 671. | 5. | 630. | 3. | 11. | 115. | 3. | 42. | 19. | 905.10 |
| 0.76 | 0.79 | 5.97 | 0.65 | 0.060 | 0.040 | 0.080 | 0.064 | 899.35 | 1019.36 |
| 0.004241 | 200. | 220. | 200. | 2 | 0 | 0 | 0.00 | 69.03 | 1082.46 |

*SECOND 20.900

S/S WEST RIDGES ST. CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.90 | 0.70 | 906.20 | 0.00 | 908.19 | 906.81 | 0.62 | 0.93 | 0.09 | 901.10 |
| 630. | 103. | 401. | 96. | 52. | 47. | 48. | 52. | 19. | 901.70 |
| 0.77 | 1.93 | 6.51 | 2.00 | 0.050 | 0.040 | 0.100 | 0.084 | 894.52 | 1080.44 |
| 0.006581 | 100. | 100. | 120. | 2 | 1 | 0 | 0.00 | 82.54 | 1080.96 |

SPECIAL BRIDGE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.000 | 0.00 |
| 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.000 | 0.00 |

SECOND 0.00 0.000
SECOND CENTR CHSEL CHORD PSSLK WB EX XL GLOSS BANK ELEV

| 1 | BLOC | FCH | QBOB | ALOS | ACH | ABOB | VOL | SNA | LEFT/RIGHT |
|---|---|---|---|---|---|---|---|---|---|
| TIME | VLOS | VCH | VBOB | XML | XLOH | XNB | STN | ELMSY | ESTA |
| SLOPE | XLOOL | XLOH | XLOBF | ITERAL | IN2 | ICONT | SORAB | YOPLID | EMBCT |

DESIGNATE WHAT MEETS FLO.

| ROPPS | EGLOC | HS | QUFIR | GPT | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 910.27 | 0.0 | 255. | 371. | 21. | 21. | 905.00 | 910.00 |

W/S FROM PINCES ST. CROSS SECTION 506

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.1 | 10.05 | 911.51 | 0.70 | 911.06 | 911.83 | 0.7 | 3.0 | 0.13 | 905.11 |
| 635. | 204. | 337. | 85. | 450. | 95. | 134. | 58. | 15. | 905.50 |
| 0.37 | 0.52 | 4.21 | 0.20 | 0.015 | 0.345 | 0.270 | 0.041 | 902.10 | 910.53 |
| 0.000087 | 76. | 46. | 46. | 2 | 2 | 6 | 0.50 | 907.55 | 1150.22 |

CO'd= 1.120 S Inf= 0.500
ACESMO 27.530
ZERO VLY 'S 173.15 PSELS= 911.51 ESC 01= 927.43 NSEL= 911.91 RATIO= 0.0010
DAT 01= 935. RATIOS LOB,CH,ROB= 0.2942 0.6230 0.2755 NSEL= 911.55

BACK ENCROACHMENT STATIONS= 940.3 1154.6 TYPE= 4 TARGET= 0.020

W/S 1ST BAU W/S HIGHS CT. CROSS SECTION 42

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17.90 | 9.76 | 911.86 | 0.00 | 911.36 | 911.87 | 0.01 | 0.02 | 0.02 | 905.00 |
| 630. | 100. | 201. | 169. | 455. | 243. | 431. | 55. | 20. | 904.70 |
| 0.32 | 0.40 | 1.16 | 0.39 | 0.030 | 0.040 | 0.000 | 0.041 | 902.10 | 940.34 |
| 0.000037 | 128. | 121. | 123. | 2 | 2 | 0 | 0.00 | 2 0.25 | 1154.60 |

SECND 90.300
2000 VAT 01= 1044.67 NSEL= 911.85 ESC 01= 1044.67 NSEL= 911.95 RATIO= 0.0000
MAT 01= 1073. RATIOS LOB,CH,ROB= 0.2965 0.5224 0.2310 NSEL= 911.55

SOFT MATERIAL DEPOSITED= 0 MIN ELEND= 906.10 MAX ELLC= 902.10

BACK ENCROACHMENT STATIONS= 942.6 1153.1 TYPE= 4 TARGET= 0.027

TOP OF CUT CROSS SECTION 41

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.30 | 9.75 | 911.05 | 0.001 | 911.65 | 911.87 | 0.03 | 0.00 | 0.10 | 905.30 |
| 93. | 50. | 140. | 140. | 445. | 199. | 427. | 58. | 20. | 904.70 |
| 0.82 | 0.33 | 1.71 | 0.33 | 0.060 | 0.020 | 0.080 | 0.041 | 902.10 | 942.64 |
| 0.000030 | 2. | 2. | 2. | 4 | 0 | 0 | 463.40 | 210.44 | 1153.07 |

SECND 13.100
2000 VAT 01= 1044.67 NSEL= 911.85 ESC 01= 1044.67 NSEL= 911.95 RATIO= 0.0000
MAT 01= 1077. RATIOS LOB,CH,ROB= 0.3344 0.3551 0.3129 NSEL= 911.55

SOFT MATERIAL DEPOSITED= 0 MIN ELEND= 904.10 MAX ELLC= 902.10

W/S 1ST BAU W/S MINSES ST. CROSS SECTION 49

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.10 | 8.76 | 911.06 | 0.00 | 911.66 | 911.07 | 0.01 | 0.00 | 0.00 | 905.00 |
| 930. | 206. | 232. | 198. | 464. | 199. | 490. | 55. | 20. | 906.70 |
| 0.52 | 0.49 | 1.16 | 0.45 | 0.062 | 0.360 | 0.130 | 0.041 | 902.13 | 940.85 |
| 0.000303 | 2. | 2. | 2. | | 1 | 0 | -49.90 | 275.4 | 1154.2 |

*SECTO 10.200
2001 LAT 01= 429.53 LSEL= 911.93 E.C 01= 429.53 MSEL= 912.03 RATIO= 0.0050
MAT 01= 469. RATIOS LOW,CH,HOR= 0.3560 0.3550 0.2597 LSEL= 912.03

3473 ENCROACHMENT STATIONS= 1702.9 1810.4 TYPE= 4 TARGET= 0.743

VALLEY SECTION CROSS SECTION 4

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.25 | 7.02 | 911.95 | 0.00 | 911.93 | 911.96 | 0.03 | 0.08 | 0.00 | 907.68 |
| 630. | 417. | 297. | 196. | 336. | 115. | 210. | 64. | 25. | 907.50 |
| 0.53 | 1.49 | 1.90 | 0.80 | 0.060 | 0.340 | 0.170 | 0.043 | 903.11 | 1762.85 |
| 0.000233 | 1.0. | 630. | 615. | 2 | 0 | 0 | 0.00 | 217.25 | 1360.1 |

1490 BR CARD USED
*SECTO 10.200
2100 LAT 01= 912.62 LSEL= 912.17 E.C 01= 297.62 MSEL= 912.27 RATIO= 0.3000
MAT 01= 317. RATIOS LOW,CH,HOR= 0.3002 0.4620 0.2305 LSEL= 912.27

| SECNO | DEPTH | C.SEL | CRIDS | .SELK | EE | HV | AL | CLOSS | HP/R ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | WOL | TOP | LEFT/RIGHT |
| TIES | VLOB | VCH | VROB | XNL | XSSH | XAR | PTN | ELMIN | SSTA |
| 0.000 | 910.0 | 0.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3470 ENCROACHMENT STATIONS= 1409.6 1810.8 TYPE= 4 TARGET= 0.061

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.72 | 8.56 | 912.19 | 0.00 | 911.17 | 912.31 | 0.12 | 0.33 | 0.02 | 902.50 |
| 650. | 192. | 324. | 134. | 497. | 84. | 258. | 97. | 31. | 903.50 |
| 1.13 | 0.38 | 3.87 | 0.57 | 0.130 | 0.035 | 0.121 | 0.041 | 903.80 | 1409.35 |
| 0.000469 | 1310. | 1010. | 901C. | 2 | 0 | 0 | 0.00 | 407.42 | 1810.78 |

*SECTO 10.000
2300 LAT 01= 905.42 LSEL= 912.32 ENC 01= 303.42 RSEL= 912.34 RATIO= 0.0000
MAT 01= 327. RATIOS LOW,CH,ROT= 0.3001 0.4503 0.2496 LSEL= 912.32

3470 ENCROACHMENT STATIONS= 1409.6 1810.8 TYPE= 4 TARGET= 0.000

LOSS RETURN ROAD CROSS SECTION 3C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.80 | 8.45 | 912.25 | 0.00 | 912.22 | 912.36 | 0.11 | 0.05 | 0.00 | 903.93 |
| 630. | 177. | 310. | 134. | 460. | 86. | 242. | 87. | 32. | 903.80 |
| 1.13 | 0.38 | 3.79 | 0.58 | 0.129 | 0.035 | 0.122 | 0.04 | 903.80 | 1409.42 |
| 0.000455 | 60. | 90. | 54. | 2 | 0 | 0 | 0.00 | 405.79 | 1810.12 |

1490 BR CARD USED
*SECTO 10.200
2001 LAT 01= 911.93 LSEL= 911.93 E.C 01= 429.53 MSEL= 912.03 RATIO= 0.0050
MAT 01= 469. RATIOS LOW,CH,HOR= 0.3560 0.3550 0.2597 LSEL= 912.03

FORM FAIRFIELD PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF MARSH & McLENNAN

3470 ENCROACHMENT STATION= 1401.6 1825.6 TYPE= 4 TARGET= 0.096

D/S FACE ESTATE ROAD CROSS SECTION 3C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.93 | 2.48 | 912.29 | 0.30 | 912.27 | 912.57 | 0.28 | 0.21 | 0.12 | 904.30 |
| 630. | 521. | 130. | 102. | 540. | 46. | 134. | 69. | 38. | 505.30 |
| 1.14 | 0.78 | 1.06 | 0.35 | 1.053 | 0.020 | 0.142 | 0.041 | 903.50 | 1401.34 |
| 0.001528 | 1. | 1. | 1. | 2 | 2 | 0 | -143.55 | 427.60 | 1825.55 |

*SECNO 13.200
3200 MAT 01= 914.24 WSEL= 912.39 ENC 01= 401.24 WSEL= 912.34 RATIO= 0.0000
MAT 01= 250. RATIOS LOB,CH,ROB= 0.5466 0.2156 0.2367 WSEL= 912.44

3370 NORMAL BRIDGE,LOB= 25 MIN ELTRD= 909.90 MAX ELLO= 907.30

3470 ENCROACHMENT STATIONS= 1350.8 1693.2 TYPE= 4 TARGET= 0.533

D/S FACE ESTATE ROAD CROSS SECTION 3C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.00 | 6.50 | 912.38 | 0.02 | 912.36 | 912.64 | 0.06 | 0.07 | 0.00 | 905.30 |
| 630. | 521. | 133. | 105. | 520. | 61. | 300. | 79. | 42. | 505.30 |
| 1.14 | 0.78 | 1.05 | 0.35 | 0.297 | 1.020 | 0.135 | 0.044 | 30[illegible].30 | 1350.01 |
| 0.001552 | 1. | 1. | 1. | 2 | 0 | 1 | -143.55 | 427.60 | 1825.55 |

1401 BR CARD USED
*SECNO 15.100
3200 MAT 01= 914.23 WSEL= 912.32 ENC 01= 364.70 WSEL= 912.43 RATIO= 0.0240
MAT 01= 525. RATIOS LOB,CH,ROB= 0.5469 0.4100 0.2435 WSEL= 912.42

3470 ENCROACHMENT STATIONS= 1402.4 1828.0 TYPE= 4 TARGET= 0.363

D/S ESTATE ROADWAY CROSS SECTION 3C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.10 | 7.16 | 912.36 | 0.02 | 912.32 | 912.45 | 0.09 | 0.00 | 0.01 | 904.50 |
| 630. | 253. | 253. | 142. | 497. | 79. | 265. | 39. | 32. | 904.50 |
| 1.14 | 0.41 | 0.90 | 0.54 | 0.123 | 0.035 | 0.122 | 0.041 | 904.50 | 1402.40 |
| 0.000460 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 425.60 | 1828.00 |

1401 BR CARD USED
*SECNO 19.200
3200 MAT 01= 915.94 WSEL= 912.39 ENC 01= 295.94 WSEL= 912.45 RATIO= 0.0000
MAT 01= 317. RATIOS LOB,CH,ROB= 0.3083 0.5063 0.1854 WSEL= 912.45

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SLOPE | XLOB | XLCH | XLOB | ITRIAL | IPZ | ICONT | CONST | TOPELO | ELOSS |
| *END | WLOB | YCH | YROB | XML | MANIC | XMR | TW | FLWTYP | SBTA |
| | ELOB | BCH | BROB | ALOB | ACH | AROB | WOL | TWA | LEFTYPSOHT |
| | ESP | SEL | PRES | WSEL | ES | | WL | CLOSS | OPTE LE |

3470 ENCROACHMENT STATIONS= 1401.0 1830.0 TYPE= 4 TARGET= 0.065

D/S BAR NO D/S ESTATE ROAD CROSS SECTION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.20 | 7.59 | 912.39 | 0.00 | 912.35 | 912.49 | 0.10 | 0.04 | 0.00 | 905.70 |
| 630. | 253. | 253. | 142. | 497. | 79. | 265. | 39. | 32. | 905. |
| 1.14 | 0.41 | 0.90 | 0.54 | 0.111 | 0.025 | 0.100 | 0.041 | 905.70 | 1401.01 |
| 0.000463 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 429.13 | 830.4 |

*SECNO 19.300

```
2300 NAT Q1=    211.43  WSEL=    912.30  ENC Q1=    211.43  WSEL=    912.40  RATIO=  0.0000
NAT Q1=    239.  RATIOS LOB,CH,ROB=  0.5236  0.3112  0.1552  WSEL=    912.48

3370 NORMAL BRIDGE,MSD=  0 TIN BLTRD=  904.00 MAX ELEC=  904.70

3470 ENCROACHMENT STATIONS=    1398.0    1834.0  TYPE=    4  TARGET=      0.055

      TOP OF DAM                                    CROSS SECTION 3C

    19.30     7.72    912.62     0.30    912.31    912.62     0.07     0.00     0.00    905.70
     630.     327.     220.      53.     459.      62.     220.      91.      33.    905.70
     1.15     0.56     3.58     0.36    0.176    0.035    0.037    0.041   906.70  1397.37
 0.000931       2.       2.       2.       2        0        0    -33.00   436.56  1036.51

1490 NM CARD USED
*SECOND 19.400
2300 NAT Q1=    270.17  WSEL=    912.37  ENC Q1=    270.17  WSEL=    912.47  RATIO=  0.0000
NAT Q1=    239.  RATIOS LOB,CH,ROB=  0.4126  0.4501  0.1373  WSEL=    912.47

3470 ENCROACHMENT STATIONS=    1397.0    1835.9  TYPE=    4  TARGET=      0.065

      1/3 MAX 20 FT D/S ESTATE ROAD                 CROSS SECTION 3C

    19.40     6.51    912.41     0.00    912.37    912.50     0.10     0.00     0.01    906.10
     630.     251.     310.      69.     506.      60.     217.      91.      33.    906.10
     1.15     0.50     3.50     0.32    0.109    0.035    0.138    0.041   906.10  1397.03
 0.000[illegible]       2.       [illegible]       1        0        1     0.00   [illegible]  1355.92

1490 NM CARD USED
*SECOND 19.700
2300 NAT Q1=    195.81  WSEL=    912.82  ENC Q1=    195.81  WSEL=    912.92  RATIO=  0.0000
NAT Q1=    212.  RATIOS LOB,CH,ROB=  [illegible]  0.1365  0.2[illegible]  WSEL=    912.92

3470 ENCROACHMENT STATIONS=    1138.7    1556.2  TYPE=    4  TARGET=      0.070

      100 FT D/S LYNWOOD DR.                        CROSS SECTION 3

    19.70     8.39    912.99     0.00    912.82    913.22     0.17     0.51     0.01    907.10
     630.     244.     234.     131.     246.      52.     355.     102.      59.    907.40
     1.24     0.85     4.52     0.45    0.280    0.035    0.161    0.041   907.00  1128.46
 0.001098     645.     645.     645.       1        0        0     0.00   427.55  1556.28

*SECOND 19.800
2300 NAT Q1=    215.42  WSEL=    912.94  ENC Q1=    215.43  WSEL=    913.04  RATIO=  0.0000
NAT Q1=    234.  RATIOS LOB,CH,ROB=  0.4072  0.3134  0.2767  WSEL=    913.04

3470 ENCROACHMENT STATIONS=    1128.1    1556.2  TYPE=    4  TARGET=      0.080

      D/S LYNWOOD DR.                               CROSS SECTION 3

    19.80     6.02    912.02     0.00    912.94    913.12     0.10     0.10     0.00    907.10
     630.     251.     [illegible]     [illegible]     [illegible]     [illegible]     [illegible]     [illegible]     [illegible]     907.40
     1.25     0.80     4.11     0.44    0.020    0.035    0.154    0.041   907.00  1128.16
 0.000683      99.      99.      99.       2        0        0     0.00   480.65  1556.76

1490 NM CARD USED
*SECOND 19.900
2300 NAT Q1=    100.63  WSEL=    912.94  ENC Q1=    100.63  WSEL=    913.04  RATIO=  0.0000
NAT Q1=    118.  RATIOS LOB,CH,ROB=  0.4444  0.1875  0.3701  WSEL=    913.04
```

| SECNO | DEPTH | CLSEL | CRWS | WSELK | E3 | HV | HL | JLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| C | CLOB | QCH | QBCB | ALOB | PCH | ARCH | WPL | TRA | LEFT/RIGHT |
| TIME | WLOB | VCH | VRCH | RHL | XNCH | XNB | PTR | ELKIN | SSTA |
| SLOPE | XLOCL | PLCH | PLOBD | FTRZAL | 312 | TCOMT | CORAR | TOPWID | SNDST |

3570 NUM NL BRIDGE/CULV= 23 MIN ELTRD= 911.45 MAX ELLC= 939.30

3470 ENCROACHMENT STATIONS= 737.6 915.5 TYPE= 1 TARGET= 0.000

U/S PASS XSECTION FR. CROSS SECTION 3

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.30 | 6.32 | 913.02 | 0.00 | 912.94 | 913.12 | 0.10 | 0.00 | 0.30 | 907.00 |
| 630. | 274. | 136. | 220. | 212. | 27. | 240. | 136. | 40. | 907.00 |
| 1.26 | 1.29 | 4.17 | 0.79 | 0.000 | 0.021 | 0.291 | 0.291 | 907.00 | 1131.57 |
| 0.00[illegible] | | 1. | 1. | 0. | 0 | 1 | -133.01 | 409.02 | 1546.58 |

*SECNO 20.002
2300 LAT 01= 123.41 WSEL= 913.12 ENC 01= 125.41 WSEL= 913.22 RATIO= 0.0000

3270 NUMBER OF CROSSINGS= 23 TOP ELTRD= 911.45 MAX EL.C= 939.30

3470 ENCROACHMENT STATIONS= 1131.6 1552.5 TYPE= 4 TARGET= 0.113

U/S TRUE LAYOUT XS. CROSS SECTION 4

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.00 | 6.21 | 913.27 | 0.00 | 913.12 | 913.27 | 0.06 | 0.15 | 0.00 | 907.00 |
| 630. | 282. | 117. | 231. | 259. | 26. | 296. | 104. | 41. | 907.00 |
| 1.26 | 1.11 | 4.12 | 0.76 | 0.000 | 0.020 | 0.117 | 0.041 | 907.00 | 1131.57 |
| 0.00[illegible] | 63. | 47. | 43. | 2 | 1 | 0 | -133.01 | 420.[illegible] | 1552.51 |

[illegible] NO CONFLUENCE
*SECNO 20.100
2810 LAT 01= 200.56 WSEL= 913.08 ENC 01= 200.56 WSEL= 913.15 RATIO= 0.0000

3270 NUMBER OF CROSSINGS= 2 TOP ELTRD= 911.45 MAX ELEV= 939.30

3470 ENCROACHMENT STATIONS= 1114.9 1547.3 TYPE= 4 TARGET= 0.141

U/S LYN-DOC DR. CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.10 | 6.[illegible] | 913.17 | 0.00 | 913.06 | 913.23 | 0.11 | 0.00 | 0.12 | 914.00 |
| 630. | 245. | 251. | 136. | 282. | 55. | 342. | 136. | 47. | 907.00 |
| 1.31 | 1.06 | 4.35 | 3.46 | 0.000 | 0.033 | 0.165 | 0.141 | 907.00 | 1134.21 |
| 0.00[illegible] | 1. | 1. | 1 | 0 | 0 | 0 | 0.00 | 411.48 | 1547.76 |

FORM 141-DD PRINTED BY THEY MANIFOLD LOGICS, DIVISION OF RAFFKO INDUSTRIES, INC. DETROIT

PRODUCED BY CONVAIR DIVISION OF GENERAL DYNAMICS

[illegible]

[illegible]

[illegible]

| SECTO | C.SEL | DIFKUS | ES | TOPHID | BLOC | NCY | PROB | PERENC | STEYCL | STCHL | STCHP | STEYCP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.900 | 873.90 | 0.20 | 875.79 | 141.80 | 229.25 | 550.36 | 72.37 | 0.70 | 0.90 | 609.00 | 620.00 | 0.00 |
| 7.900 | 873.36 | 0.26 | 875.82 | 141.80 | 230.09 | 550.16 | 69.67 | 0.00 | 599.37 | 605.00 | 620.00 | 629.35 |
| 7.900 | 873.37 | 0.00 | 875.79 | 139.96 | 224.00 | 553.77 | 69.51 | 0.00 | 0.00 | 605.00 | 620.00 | 0.00 |
| 8.000 | 873.19 | 0.05 | 875.35 | 138.05 | 221.15 | 553.77 | 65.09 | 0.05 | 597.37 | 609.00 | 620.00 | 629.29 |
| 8.100 | 873.41 | 0.00 | 875.79 | 142.06 | 245.82 | 509.19 | 75.94 | 0.00 | 0.00 | 609.00 | 620.00 | 0.00 |
| 8.100 | 873.07 | 0.00 | 875.36 | 136.71 | 234.34 | 513.17 | 71.1 | 0.00 | 599.73 | 609.00 | 620.00 | 629.37 |
| 8.200 | 874.16 | 0.00 | 876.32 | 144.04 | 102.74 | 465.64 | 22.55 | 0.00 | 0.00 | 605.00 | 626.00 | 0.00 |
| 8.200 | 874.17 | 0.07 | 876.30 | 95.90 | 164.50 | 557.98 | 13.92 | 0.05 | 552.37 | 605.00 | 620.00 | 628.21 |
| 8.300 | 874.56 | 0.00 | 876.86 | 112.97 | 89.20 | 519.21 | 21.53 | 0.00 | 0.00 | 605.00 | 626.00 | 0.00 |
| 8.300 | 874.07 | 0.00 | 876.90 | 82.00 | 63.62 | 561.51 | 1.23 | 0.00 | 599.77 | 611.00 | 620.00 | 627.37 |
| 8.320 | 874.17 | 0.00 | 876.34 | 94.19 | 61.71 | 540.24 | 20.96 | 0.00 | 0.00 | 605.00 | 626.00 | 0.00 |
| 8.320 | 874.92 | 0.11 | 876.36 | 92.37 | 64.07 | 553.73 | 9.15 | 0.05 | 576.07 | 600.00 | 620.00 | 627.24 |
| 8.330 | 877.44 | 0.00 | 877.84 | 96.52 | 60.26 | 539.74 | 21.30 | 0.00 | 0.00 | 620.30 | 626.00 | 0.00 |
| 8.330 | 877.17 | 0.00 | 877.80 | 97.73 | 61.13 | 541.41 | 9.00 | 0.00 | 599.30 | 620.00 | 0.00 | 627.01 |
| 8.400 | 879.. | 1.00 | 879.91 | 60.65 | 0.34 | 579.13 | 101.51 | 0.00 | 0.00 | 620.30 | 646.0 | 0.00 |
| 8.400 | 879.59 | 0.13 | 881.07 | 56.77 | 0.30 | 590.36 | 89.14 | 0.00 | 620.00 | 620.30 | 644.00 | 674.77 |
| 8.410 | 881.49 | 0.00 | 882.31 | 83.31 | 1.36 | 594.07 | 74.37 | 0.00 | 0.00 | 620.30 | 646.00 | 0.00 |
| 8.410 | 881.1 | 0.00 | 882.57 | 84.91 | 1.41 | 592.95 | 2.00 | 0.00 | 599.00 | 620.00 | 646.00 | 674.10 |
| 8.900 | 883.32 | 0.00 | 885.29 | 147.07 | 122.24 | 552.34 | 114.52 | 0.00 | 0.00 | 620.30 | 646.00 | 0.00 |
| 8.900 | 883.72 | 0.00 | 885.87 | 149.70 | 124.63 | 547.08 | 156.20 | 219.30 | 401.00 | 490.00 | 515.00 | 625.00 |
| 9.000 | 883.43 | 0.30 | 885.84 | 141.90 | 93.06 | 422.64 | 114.32 | 0.00 | 0.00 | 490.00 | 516.00 | 0.00 |
| 9.000 | 883.31 | 0.32 | 885.83 | 141.21 | 92.13 | 423.36 | 0.00 | 0.00 | 0.00 | 490.00 | 516.00 | 0.00 |
| 9.100 | 883.77 | 0.00 | 885.92 | 151.21 | 125.54 | 544.07 | 160.36 | 0.00 | 0.00 | 490.30 | 515.00 | 0.00 |
| 9.100 | 883.24 | 0.07 | 885.98 | 153.49 | 126.06 | 539.68 | 165.47 | 0.00 | 0.00 | 490.00 | 516.00 | 0.00 |
| 9.900 | 883.95 | 0.00 | 884.09 | 177.46 | 119.96 | 507.96 | 2.00 | 0.00 | 0.00 | 485.30 | 515.00 | 0.00 |
| 9.900 | 883.94 | 0.00 | 884.14 | 176.83 | 125.17 | 502.66 | 2.00 | 0.00 | 0.00 | 485.00 | 515.00 | 0.00 |
| 10.000 | 883.58 | 0.00 | 884.25 | 149.49 | 110.75 | 517.91 | 1.95 | 0.00 | 0.00 | 485.00 | 515.00 | 0.00 |
| 10.000 | 883.70 | 0.00 | 884.27 | 172.28 | 142.32 | 5115.55 | 2.13 | 0.00 | 0.00 | 485.00 | 515.00 | 0.00 |
| 10.00 | 884.10 | 0.00 | 884.32 | 180.93 | 315.73 | 234.77 | 89.30 | 0.00 | 0.00 | 491.00 | 509.00 | 0.00 |
| 10.00 | 884.1 | 0.00 | 884.3 | 182.10 | 320.48 | 230.00 | 90.00 | 0.00 | 0.00 | 491.00 | 509.00 | 0.00 |
| 10.100 | 884.33 | 0.00 | 884.32 | 65.37 | 159.12 | 440.34 | 26.46 | 75.00 | 490.00 | 494.30 | 525.00 | 528.00 |
| 10.100 | 884.74 | 0.00 | 885.36 | 63.72 | 163.39 | 440.67 | 20.00 | 0.00 | 490.00 | 494.00 | 509.00 | 528.00 |
| 10.450 | 884.67 | 0.00 | 885.91 | 35.00 | 68.16 | 531.45 | 30.31 | 35.00 | 490.00 | 497.00 | 539.00 | 515.00 |
| 10.450 | 884.97 | 0.00 | 885.94 | 35.00 | 68.19 | 531.50 | 30.52 | 35.00 | 490.00 | 497.00 | 539.00 | 515.00 |
| 10.600 | 885.94 | 1.00 | 886.65 | 60.00 | 0.00 | 630.75 | 3.51 | 60.00 | 490.00 | 495.00 | 509.00 | 540.00 |
| 10.900 | 885.67 | 0.00 | 887.67 | 15.00 | 0.00 | 630.00 | 0.00 | 0.00 | 0.00 | 547.00 | 550.00 | 0.00 |

| | SECND | CMDEL | DIFCHG | FS | TOPWID | GLOB | DGR | CROS | PCREMC | STENCL | STCFL | STCFR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11.000 | 886.70 | 0.10 | 893.00 | 13.50 | 0.30 | 430.30 | 0.30 | 1.00 | 0.00 | 537.00 | 550.00 | 0.00 |
| | 11.000 | 887.20 | -0.50 | 893.00 | 13.50 | 0.30 | 430.30 | 1.00 | 1.00 | 0.00 | 537.00 | 550.00 | 0.00 |
| | 11.100 | 890.20 | 0.20 | 893.80 | 20.20 | 1.00.30 | 420.20 | 97.75 | 113.20 | 547.00 | 557.00 | 550.00 | 600.00 |
| | 11.200 | 889.20 | -0.20 | 893.45 | 20.00 | 1.00.00 | 420.25 | 2.72 | 113.20 | 547.00 | 557.00 | 550.00 | 600.00 |
| | 11.210 | 888.67 | 0.30 | 893.75 | 130.41 | 304.06 | 322.45 | 3.69 | 0.00 | 0.00 | 662.00 | 682.00 | 0.00 |
| | 11.210 | 888.37 | -0.00 | 893.75 | 131.00 | 304.06 | 322.45 | 3.69 | 0.00 | 0.00 | 662.00 | 682.00 | 0.00 |
| | 11.220 | 888.27 | 0.00 | 893.20 | 175.27 | 221.20 | 408.47 | 5.39 | 0.30 | 0.00 | 662.00 | 682.00 | 0.00 |
| | 11.220 | 888.07 | -0.00 | 893.20 | 170.27 | 221.20 | 408.43 | 5.39 | 0.00 | 0.00 | 662.00 | 682.00 | 0.00 |
| | 11.230 | 889.77 | 0.00 | 890.35 | 165.41 | 193.91 | 431.05 | 1.04 | 0.00 | 0.00 | 660.00 | 678.00 | 0.00 |
| | 11.230 | 889.77 | 0.00 | 891.35 | 15.01 | 193.91 | 431.05 | 1.04 | 0.00 | 0.00 | 660.00 | 678.00 | 0.00 |
| | 11.240 | 891.01 | 0.00 | 891.31 | 167.11 | 205.91 | 425.07 | 3.13 | 0.00 | 0.00 | 658.00 | 678.00 | 0.00 |
| | 11.240 | 891.01 | 0.00 | 891.31 | 167.11 | 205.94 | 425.93 | 3.13 | 0.00 | 0.00 | 660.00 | 678.00 | 0.00 |
| * | 11.300 | 893.67 | 0.00 | 893.10 | 229.23 | 136.71 | 490.72 | 2.56 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| * | 11.300 | 893.17 | -0.50 | 893.10 | 229.23 | 136.71 | 490.72 | 2.56 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| * | 11.290 | 895.75 | 0.20 | 894.35 | 226.56 | 122.14 | 503.47 | 2.14 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| * | 11.290 | 895.75 | -0.20 | 894.35 | 226.56 | 122.06 | 505.35 | 2.15 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| * | 11.300 | 894.96 | 0.00 | 895.40 | 227.76 | 129.26 | 498.60 | 2.36 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| * | 11.300 | 894.96 | 0.00 | 895.40 | 227.76 | 129.26 | 498.60 | 2.36 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| | 11.310 | 896.01 | 0.00 | 896.40 | 230.70 | 144.06 | 482.64 | 2.91 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| | 11.310 | 896.01 | -0.00 | 896.40 | 230.67 | 144.40 | 482.79 | 2.90 | 0.00 | 0.00 | 1533.00 | 1550.00 | 0.00 |
| | 11.320 | 896.96 | 0.00 | 897.50 | 154.14 | 125.11 | 302.60 | 2.69 | 140.00 | 1410.00 | 1533.00 | 1554.00 | 1570.00 |
| | 11.320 | 896.96 | 0.00 | 897.50 | 154.14 | 125.11 | 302.60 | 2.69 | 140.00 | 1410.00 | 1533.00 | 1554.00 | 1570.00 |
| | 11.900 | 897.97 | 0.00 | 898.40 | 70.00 | 32.11 | 401.60 | 16.49 | 70.00 | 547.00 | 565.00 | 415.00 | 430.00 |
| | 11.900 | 897.97 | -0.00 | 898.40 | 70.00 | 32.04 | 381.92 | 16.46 | 70.00 | 560.00 | 565.00 | 415.00 | 430.00 |
| | 12.000 | 898.00 | 0.00 | 898.50 | 70.00 | 30.70 | 503.17 | 16.04 | 70.00 | 560.00 | 565.00 | 415.00 | 430.00 |
| | 12.000 | 898.00 | -0.00 | 898.50 | 70.00 | 30.73 | 503.21 | 16.01 | 70.00 | 560.00 | 565.00 | 415.00 | 430.00 |
| | 12.100 | 897.97 | 0.00 | 898.50 | 70.00 | 30.31 | 572.15 | 15.56 | 70.00 | 560.00 | 565.00 | 415.00 | 430.00 |
| | 12.100 | 897.97 | -0.00 | 898.50 | 70.00 | 30.36 | 572.36 | 15.56 | 70.00 | 560.00 | 565.00 | 415.00 | 430.00 |
| | 12.200 | 898.30 | 0.00 | 899.00 | 112.07 | 30.79 | 561.10 | 28.05 | 0.00 | 0.00 | 565.00 | 415.00 | 0.00 |
| | 12.200 | 898.30 | 0.00 | 899.10 | 55.11 | 30.75 | 572.17 | 15.10 | 0.00 | 0.00 | 565.00 | 415.00 | 0.00 |
| | 12.900 | 898.94 | 0.00 | 899.64 | 70.00 | 9.62 | 564.09 | 46.29 | 70.00 | 560.00 | 570.00 | 290.00 | 320.00 |
| | 12.900 | 899.01 | 0.00 | 899.74 | 70.00 | 21.74 | 556.36 | 59.66 | 70.00 | 560.00 | 570.00 | 290.00 | 320.00 |
| | 13.000 | 899.33 | 0.00 | 899.74 | 70.00 | 59.38 | 447.08 | 123.06 | 70.00 | 560.00 | 570.00 | 290.00 | 320.00 |
| | 13.000 | 899.33 | 0.00 | 899.74 | 70.00 | 59.38 | 456.46 | 124.33 | 70.00 | 560.00 | 570.00 | 290.00 | 320.00 |
| | 13.100 | 899.30 | 0.00 | 900.00 | 70.00 | 57.36 | 492.51 | 89.35 | 70.00 | 560.00 | 570.00 | 290.00 | 320.00 |
| | 13.900 | 900.07 | 10.00 | 900.99 | 125.66 | 129.35 | 360.70 | 59.87 | 0.00 | 0.00 | 573.00 | 287.00 | 0.00 |

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| | 9EONC | CASEL | DIFKNS | EG | TOFUID | GLOD | OCI | 3TOS | PCPENC | STENCL | STCOL | STCPR | STENCP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 14.000 | 900.70 | 0.30 | 901.00 | 125.37 | 144.68 | 306.54 | 176.31 | 0.00 | 0.00 | 273.00 | 287.00 | 0.00 |
| | 14.100 | 900.71 | 0.30 | 901.01 | 125.29 | 143.60 | 306.57 | 177.64 | 0.00 | 0.00 | 273.00 | 287.00 | 0.00 |
| | 14.200 | 901.36 | 0.00 | 901.36 | 141.22 | 156.37 | 274.17 | 197.27 | 0.00 | 0.00 | 273.00 | 287.00 | 0.00 |
| | 14.300 | 901.71 | 1.00 | 902.71 | 76.30 | 0.00 | 530.00 | 0.00 | 0.00 | 0.00 | 1264.00 | 1280.30 | 0.00 |
| | 14.400 | 902.35 | 0.06 | 902.41 | 76.00 | 0.00 | 530.00 | 0.00 | 0.00 | 1258.30 | 1264.00 | 1280.00 | 1280.00 |
| | 14.500 | 903.62 | 0.00 | 903.71 | 76.00 | 0.00 | 530.00 | 0.00 | 0.00 | 0.00 | 1264.00 | 1280.00 | 0.00 |
| | 14.600 | 903.78 | 0.07 | 903.85 | 105.55 | 92.57 | 500.00 | 171.27 | 0.00 | 0.00 | 1264.00 | 1280.00 | 0.00 |
| | 14.700 | 903.79 | 0.05 | 903.91 | 79.10 | 63.54 | 624.01 | 124.05 | 0.00 | 1258.30 | 1264.00 | 1280.00 | 1280.00 |
| | 14.800 | 903.89 | 0.07 | 904.05 | 99.90 | 91.03 | 431.43 | 117.54 | 0.00 | 0.00 | 1264.00 | 1280.00 | 0.00 |
| | 14.900 | 903.93 | 0.07 | 904.10 | 79.55 | 78.72 | 467.10 | 133.13 | 0.00 | 1258.30 | 1264.00 | 1280.00 | 1280.00 |
| | 15.000 | 903.98 | 0.07 | 904.05 | 92.04 | 57.52 | 482.06 | 83.13 | 0.00 | 0.00 | 1258.30 | 1264.00 | 0.00 |
| | 15.100 | 903.93 | 0.00 | 904.19 | 101.35 | 99.45 | 396.22 | 144.39 | 0.00 | 0.00 | 1130.30 | 1210.00 | 0.00 |
| | 15.200 | 904.00 | 0.00 | 904.00 | 79.00 | 78.00 | 530.00 | 197.77 | 0.00 | 1258.30 | 1264.00 | 1280.00 | 1280.00 |
| | 15.300 | 904.47 | 0.00 | 904.47 | 92.61 | 2.27 | 530.11 | 0.44 | 0.00 | 0.00 | 1264.00 | 1280.00 | 0.00 |
| | 15.400 | 904.54 | 0.07 | 904.61 | 95.14 | 23.47 | 5?3.19 | 13.20 | 781.00 | 1603.00 | 1035.00 | 1065.00 | 1084.00 |
| | 15.500 | 905.00 | 0.00 | 905.40 | 74.93 | 11.84 | 613.01 | 3.15 | 0.00 | 0.00 | 1035.00 | 1065.00 | 0.00 |
| | 15.600 | 905.83 | 0.03 | 905.87 | 83.09 | 8.43 | 617.12 | 3.33 | 0.00 | 0.00 | 1035.00 | 1065.00 | 0.00 |
| | 15.700 | 905.86 | 0.04 | 905.90 | 89.09 | 9.51 | 617.53 | 3.45 | 0.00 | 0.00 | 1035.00 | 1065.00 | 0.00 |
| | 15.800 | 906.19 | 0.00 | 906.81 | 62.26 | 102.49 | 481.68 | 95.63 | 0.00 | 0.00 | 1045.30 | 1055.00 | 0.00 |
| | 15.900 | 906.43 | 0.00 | 906.81 | 62.54 | 102.73 | 481.43 | 95.81 | 0.00 | 0.00 | 1045.30 | 1055.00 | 0.00 |
| | 16.000 | 911.65 | 0.03 | 911.83 | 207.32 | 154.23 | 324.54 | 83.24 | 0.00 | 0.00 | 1045.30 | 1055.00 | 0.00 |
| | 16.100 | 911.66 | 0.00 | 911.85 | 207.03 | 154.29 | 324.48 | 83.03 | 0.00 | 0.00 | 1045.30 | 1055.00 | 0.00 |
| | 16.200 | 911.86 | 0.02 | 911.87 | 202.00 | 1163.29 | 273.99 | 172.23 | 0.00 | 0.00 | 1037.00 | 1065.00 | 0.00 |
| | 16.300 | 911.86 | 0.00 | 911.87 | 201.97 | 154.25 | 331.29 | 144.51 | 0.00 | 0.00 | 1037.00 | 1065.00 | 0.00 |
| | 16.400 | 911.83 | 0.03 | 911.87 | 210.44 | 149.00 | 339.93 | 140.26 | 0.03 | 942.00 | 1037.00 | 1065.00 | 1154.00 |
| | 16.500 | 911.84 | 0.00 | 911.87 | 201.99 | 209.24 | 224.67 | 198.08 | 0.00 | 0.00 | 1037.00 | 1065.00 | 0.00 |
| | 16.600 | 911.88 | 0.00 | 911.88 | 211.31 | 205.07 | 231.05 | 192.70 | 0.00 | 0.00 | 1037.00 | 1065.00 | 1154.00 |
| | 16.700 | 911.93 | 0.00 | 911.93 | 249.92 | 321.12 | 247.71 | 161.18 | 0.00 | 0.00 | 1035.00 | 1065.00 | 0.00 |
| | 16.800 | 912.17 | 0.00 | 912.24 | 516.76 | 477.23 | 306.72 | 143.03 | 0.00 | 0.00 | 1035.00 | 1065.00 | 0.00 |

| SECND | SUBEL | DIFKUS | TR | TOPNID | GLOB | TCP | SROE | PERENC | STENCL | STCHL | STCHT | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18.000 | 912.32 | 0.30 | 912.32 | 546.49 | 438.31 | 306.29 | 166.20 | 0.00 | 0.00 | 1695.00 | 1705.00 | 0.00 |
| 18.100 | 912.33 | 0.00 | 912.33 | 505.71 | 410.37 | 317.03 | 156.20 | 0.17 | 1704.50 | 1695.00 | 1705.00 | 1516.12 |
| 18.200 | 912.37 | 0.00 | 912.52 | 490.70 | 342.30 | 282.91 | 115.73 | 0.00 | 0.00 | 1695.00 | 1705.00 | 0.00 |
| 18.300 | 912.39 | 0.02 | 912.57 | 427.00 | 347.63 | 166.67 | 107.50 | 0.00 | 1691.00 | 1695.00 | 1705.00 | 521.55 |
| 18.400 | 912.34 | 0.00 | 912.39 | 551.05 | 358.35 | 145.08 | 126.57 | 0.00 | 0.00 | 1695.00 | 1705.00 | 0.00 |
| 18.500 | 912.36 | 0.00 | 912.40 | 534.02 | 406.82 | 153.00 | 107.97 | 0.00 | 1691.00 | 1695.00 | 1705.00 | 531.15 |
| 18.600 | 912.38 | 0.00 | 912.4 | 582.01 | 280.09 | 271.11 | 93.47 | 0.00 | 0.00 | 1695.00 | 1705.00 | 0.00 |
| 18.700 | 912.38 | 0.00 | 912.43 | 625.02 | 205.43 | 252.51 | 104.44 | 0.00 | 1692.00 | 1695.00 | 1705.00 | 1024.11 |
| 18.800 | 912.35 | 0.00 | 912.44 | 554.17 | 227.77 | 333.40 | 74.79 | 0.00 | 0.00 | 1693.00 | 1707.00 | 0.00 |
| 18.900 | 912.35 | 0.00 | 912.47 | 529.13 | 270.97 | 250.31 | 91.7 | 0.00 | 1691.00 | 1695.00 | 1707.00 | 1030.11 |
| 19.000 | 912.31 | 0.00 | 912.33 | 556.17 | 325.27 | 200.47 | 100.36 | 0.00 | 0.00 | 1691.00 | 1707.00 | 0.00 |
| 19.100 | 912.43 | 0.00 | 912.50 | 436.64 | 320.90 | 220.40 | 82.36 | 0.00 | 1697.00 | 1695.00 | 1707.00 | 1035.61 |
| 19.200 | 912.37 | 0.00 | 912.40 | 535.39 | 251.20 | 206.16 | 82.65 | 0.00 | 0.00 | 1693.00 | 1707.00 | 0.00 |
| 19.300 | 912.41 | 0.00 | 912.40 | 536.39 | 251.11 | 209.71 | 85.1 | 0.00 | 1697.00 | 1695.00 | 1707.00 | 1032.92 |
| 19.400 | 912.40 | 0.00 | 912.42 | 482.30 | 307.31 | 272.71 | 155.06 | 0.00 | 0.00 | 1325.50 | 1334.50 | 0.00 |
| 19.500 | 912.40 | 0.00 | 912.42 | 427.55 | 264.47 | 234.51 | 151.23 | 0.00 | 1128.00 | 1325.50 | 1334.50 | 1333.21 |
| 19.600 | 912.94 | 0.00 | 913.04 | 402.32 | 252.62 | 209.92 | 167.57 | 0.00 | 0.00 | 1325.50 | 1334.50 | 0.00 |
| 19.700 | 912.00 | 0.00 | 912.02 | 482.24 | 279.57 | 181.61 | 227.29 | 0.00 | 0.00 | 1325.50 | 1334.50 | 0.00 |
| 19.800 | 913.02 | 0.00 | 913.14 | 509.02 | 273.96 | 135.9 | 270.14 | 0.13 | 1157.50 | 1325.50 | 1334.50 | 1340.32 |
| 19.900 | 913.12 | 0.00 | 913.14 | 482.28 | 283.04 | 110.01 | 236.93 | 0.00 | 0.00 | 1325.50 | 1334.50 | 0.00 |
| 20.000 | 913.09 | 0.00 | 913.17 | 482.24 | 282.17 | 111.9 | 236.04 | 0.00 | 0.00 | 1325.50 | 1334.50 | 1335.51 |
| 20.100 | 913.02 | 0.00 | 913.2. | 482.27 | 284.35 | 242.93 | 163.67 | 0.10 | 0.00 | 1325.50 | 1334.50 | 0.00 |
| 20.200 | 913.09 | 0.00 | 913.30 | 511.85 | 283.04 | 251.23 | 155.7. | 0.00 | 1158.00 | 1325.50 | 1334.50 | 1347.16 |

PRINTED BY LARRY MAY, GOLD COAST DIVISION OF RAPID COMPUTER CORP.

MIAGES BROOK D.C.T.P

SUMMARY PRINTOUT TABLE 150

| SECTION | FLOW | ELTRB | ELBC | ELBCP | J | SPECIL | SPECIC | CD | VCRIT | VCL | FPCL | MOM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.200 | 50.00 | 0.00 | 0.00 | 876.70 | 630.00 | 863.65 | 0.00 | 853.99 | 6.65 | 3.53 | 560.84 | 244.26 |
| 6.200 | 50.00 | 0.00 | 0.00 | 856.70 | 630.00 | 863.65 | 0.00 | 866.30 | 7.04 | 3.65 | 520.55 | 257.17 |
| 6.300 | 400.00 | 0.00 | 0.00 | 855.90 | 630.00 | 864.17 | 0.00 | 866.21 | 6.44 | 5.15 | 845.72 | 270.57 |
| 6.300 | 400.00 | 0.00 | 0.00 | 855.90 | 630.00 | 864.11 | 0.00 | 866.20 | 6.72 | 5.27 | 835.01 | 283.74 |
| 6.400 | 685.00 | 0.00 | 0.00 | 856.70 | 630.00 | 864.52 | 0.00 | 866.69 | 7.93 | 5.37 | 201.42 | 224.12 |
| 6.400 | 685.00 | 0.00 | 0.00 | 856.70 | 630.00 | 864.65 | 0.00 | 866.78 | 10.39 | 5.53 | 186.47 | 197.27 |
| 6.410 | 960.00 | 0.00 | 0.00 | 857.40 | 630.00 | 865.04 | 0.00 | 866.16 | 8.91 | 6.47 | 541.65 | 417.26 |
| 6.410 | 960.00 | 0.00 | 0.00 | 856.40 | 630.00 | 865.13 | 0.00 | 866.31 | 8.96 | 6.43 | 496.71 | 419.39 |
| 6.420 | 595.00 | 0.00 | 0.00 | 860.10 | 630.00 | 865.65 | 0.00 | 866.95 | 23.13 | 4.97 | 240.89 | 130.28 |
| 6.420 | 595.00 | 0.00 | 0.00 | 860.10 | 630.00 | 865.77 | 0.00 | 866.09 | 22.79 | 4.92 | 195.66 | 131.92 |
| 6.430 | 595.00 | 0.00 | 0.00 | 861.80 | 630.00 | 867.03 | 0.00 | 867.46 | 29.59 | 4.82 | 169.65 | 113.38 |
| 6.430 | 595.00 | 0.00 | 0.00 | 861.80 | 630.00 | 867.27 | 0.00 | 867.39 | 30.43 | 5.00 | 144.19 | 116.79 |
| 6.500 | 595.00 | 0.00 | 0.00 | 863.60 | 630.00 | 868.79 | 0.00 | 869.09 | 27.53 | 5.33 | 236.41 | 120.07 |
| 6.500 | 595.00 | 0.00 | 0.00 | 863.60 | 630.00 | 868.19 | 0.00 | 869.22 | 27.90 | 5.20 | 190.77 | 120.57 |
| 6.510 | 300.00 | 0.00 | 0.00 | 864.30 | 630.00 | 869.11 | 0.00 | 869.46 | 24.24 | 4.11 | 458.93 | 127.69 |
| 6.510 | 300.00 | 0.00 | 0.00 | 864.30 | 630.00 | 869.20 | 0.00 | 869.39 | 24.01 | 4.37 | 376.19 | 124.23 |
| 6.700 | 325.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.44 | 0.00 | 870.06 | 35.90 | 6.54 | 204.33 | 105.15 |
| 6.700 | 325.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.54 | 0.00 | 870.93 | 35.23 | 6.47 | 210.17 | 109.20 |
| 6.750 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.44 | 0.00 | 871.32 | 55.24 | 8.24 | 150.72 | 86.75 |
| 6.750 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.52 | 0.00 | 871.37 | 54.00 | 8.10 | 155.46 | 87.37 |
| 6.800 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.19 | 870.03 | 872.46 | 170.94 | 12.26 | 51.45 | 68.15 |
| 6.800 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 873.20 | 0.00 | 872.45 | 162.23 | 12.09 | 52.37 | 69.46 |
| 7.000 | 50.00 | 874.30 | 871.90 | 865.10 | 630.00 | 871.70 | 0.00 | 873.97 | 93.97 | 9.13 | 69.77 | 65.62 |
| 7.000 | 50.00 | 874.30 | 871.90 | 865.10 | 630.00 | 871.76 | 0.00 | 873.96 | 91.55 | 8.85 | 71.72 | 66.52 |
| 7.200 | 50.00 | 0.00 | 0.00 | 865.10 | 630.00 | 873.34 | 0.00 | 873.38 | 48.22 | 2.63 | 611.60 | 348.61 |
| 7.200 | 50.00 | 0.00 | 0.00 | 865.10 | 630.00 | 873.41 | 0.00 | 873.45 | 43.14 | 2.53 | 614.48 | 353.81 |
| 7.210 | 550.00 | 0.00 | 0.00 | 865.50 | 630.00 | 873.60 | 0.00 | 873.75 | 15.53 | 4.19 | 511.96 | 150.56 |
| 7.210 | 550.00 | 0.00 | 0.00 | 865.50 | 630.00 | 873.66 | 0.00 | 873.82 | 15.06 | 4.17 | 278.26 | 150.18 |
| 8.000 | 0.00 | 866.20 | 866.50 | 865.30 | 630.00 | 873.54 | 0.00 | 873.79 | 16.24 | 5.30 | 206.53 | 156.35 |
| 8.000 | 0.00 | 866.20 | 866.50 | 865.30 | 630.00 | 873.59 | 0.00 | 873.83 | 16.45 | 5.37 | 852.85 | 155.34 |
| 8.100 | 0.00 | 0.00 | 0.00 | 867.70 | 630.00 | 873.61 | 0.00 | 873.74 | 17.70 | 4.74 | 292.50 | 149.75 |
| 8.100 | 0.00 | 0.00 | 0.00 | 867.70 | 630.00 | 873.66 | 0.00 | 873.84 | 17.92 | 4.80 | 304.28 | 148.82 |
| 8.500 | 590.00 | 0.00 | 0.00 | 868.50 | 630.00 | 874.10 | 0.00 | 874.22 | 8.56 | 4.27 | 500.58 | 215.5 |
| 8.500 | 590.00 | 0.00 | 0.00 | 868.50 | 630.00 | 874.17 | 0.00 | 874.32 | 8.61 | 4.31 | 510.13 | 216.6 |
| 8.700 | 0.00 | 0.00 | 0.00 | 870.10 | 630.00 | 874.38 | 0.00 | 874.96 | 27.04 | 4.95 | 307.14 | 153.56 |

PRINTED BY PATENT MANIFOLD FORMS DIVISION OF SAFPAK PRINTING GOHMAN DETROIT

| SECND | XLOH | ELTRD | ELLC | ELMIN | P | CMSEL | CMDUB | FG | TORQ | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.320 | 445.10 | 0.30 | 0.30 | 871.70 | 630.10 | 775.82 | 0.00 | 876.25 | 37.51 | 5.50 | 166.75 | 102.07 |
| 1.320 | 445.10 | 0.30 | 0.30 | 871.70 | 630.10 | 775.82 | 0.00 | 876.25 | 37.51 | 5.50 | 166.75 | 102.07 |
| 2.320 | 445.10 | 0.30 | 0.30 | 875.30 | 630.30 | 777.44 | 0.00 | 877.81 | 37.58 | 5.48 | 167.44 | 103.33 |
| 3.320 | 445.30 | 0.30 | 0.30 | 875.90 | 630.30 | 777.95 | 0.00 | 877.33 | 37.55 | 5.57 | 167.25 | 103.05 |
| 0.400 | 445.30 | 0.30 | 0.30 | 875.70 | 630.30 | 777.38 | 0.00 | 877.31 | 62.13 | 8.40 | 153.86 | 79.03 |
| 1.400 | 445.30 | 0.30 | 0.30 | 875.90 | 630.30 | 777.54 | 0.00 | 877.47 | 62.14 | 8.40 | 153.90 | 79.07 |
| 1.410 | 330.30 | 0.30 | 0.30 | 877.50 | 630.30 | 781.49 | 781.49 | 882.31 | 175.06 | 7.41 | 116.87 | 60.04 |
| 2.410 | 330.30 | 0.30 | 0.30 | 877.50 | 630.30 | 781.65 | 0.00 | 882.50 | 175.25 | 7.40 | 116.91 | 60.07 |
| 2.420 | 330.30 | 0.00 | 0.00 | 880.30 | 630.00 | 783.62 | 0.00 | 885.29 | 26.71 | 4.31 | 272.49 | 116.56 |
| 3.420 | 330.30 | 0.00 | 0.00 | 880.30 | 630.00 | 783.72 | 0.00 | 885.39 | 26.70 | 4.32 | 272.47 | 116.55 |
| 3.430 | 0.30 | 630.30 | 630.00 | 630.00 | 630.00 | 783.43 | 0.00 | 885.09 | 24.49 | 3.95 | 252.14 | 106.10 |
| 4.430 | 0.30 | 630.30 | 630.00 | 630.00 | 630.00 | 783.55 | 0.00 | 885.25 | 19.75 | 3.19 | 250.19 | 141.27 |
| 3.120 | 0.00 | 0.00 | 0.00 | 880.00 | 630.00 | 803.77 | 0.00 | 905.92 | 24.26 | 4.02 | 294.52 | 127.90 |
| 4.120 | 0.00 | 0.00 | 0.00 | 880.00 | 630.00 | 803.89 | 0.00 | 906.06 | 19.61 | 3.24 | 293.97 | 127.68 |
| 7.530 | 125.00 | 0.00 | 0.00 | 877.70 | 630.00 | 803.58 | 0.00 | 906.09 | 12.38 | 3.99 | 301.71 | 172.44 |
| 8.530 | 125.00 | 0.00 | 0.00 | 877.70 | 630.00 | 803.74 | 0.00 | 906.15 | 11.63 | 3.48 | 314.74 | 84.70 |
| 10.300 | 2.00 | 881.00 | 877.70 | 877.70 | 630.00 | 883.58 | 877.70 | 986.25 | 31.36 | 7.23 | 123.19 | 121.62 |
| 11.300 | 2.00 | 881.00 | 877.70 | 877.70 | 630.00 | 883.74 | 877.71 | 986.42 | 31.35 | 7.24 | 123.17 | 121.60 |
| 11.310 | 2.00 | 881.00 | 881.60 | 881.60 | 630.00 | 884.13 | 0.00 | 986.80 | 41.75 | 5.13 | 241.45 | 97.50 |
| 12.310 | 2.00 | 881.00 | 880.60 | 880.60 | 630.00 | 884.14 | 0.00 | 986.81 | 41.22 | 5.01 | 274.36 | 98.15 |
| 10.800 | 150.00 | 0.00 | 0.00 | 881.10 | 630.00 | 884.73 | 0.00 | 985.32 | 75.27 | 7.25 | 165.72 | 72.61 |
| 11.800 | 150.00 | 0.00 | 0.00 | 881.10 | 630.00 | 884.73 | 0.00 | 985.32 | 75.27 | 7.25 | 165.72 | 72.61 |
| 13.630 | 50.00 | 0.00 | 0.00 | 881.25 | 630.00 | 884.97 | 0.00 | 985.96 | 49.65 | 5.11 | 97.76 | 63.00 |
| 14.630 | 50.00 | 0.00 | 0.00 | 881.25 | 630.00 | 884.97 | 0.00 | 985.96 | 49.69 | 4.91 | 97.81 | 63.10 |
| 13.640 | 25.00 | 0.00 | 0.00 | 881.35 | 630.00 | 884.96 | 884.89 | 896.55 | 159.10 | 10.21 | 60.48 | 51.42 |
| 14.640 | 25.00 | 0.00 | 0.00 | 881.35 | 630.00 | 884.96 | 884.89 | 896.55 | 159.10 | 10.21 | 60.48 | 51.42 |
| 12.900 | 25.20 | 0.30 | 0.20 | 881.40 | 630.30 | 885.57 | 885.57 | 887.17 | 201.93 | 11.01 | 54.27 | 63.53 |
| 13.900 | 25.20 | 0.00 | 0.00 | 881.40 | 630.00 | 885.57 | 885.57 | 887.57 | 209.03 | 11.01 | 54.20 | 63.53 |
| 11.000 | 50.00 | 882.40 | 886.40 | 881.40 | 630.00 | 886.70 | 0.00 | 888.00 | 102.68 | 9.05 | 66.05 | 92.11 |
| 12.000 | 50.00 | 882.40 | 886.40 | 881.40 | 630.00 | 886.70 | 0.00 | 888.00 | 102.68 | 9.05 | 66.05 | 92.11 |
| 11.200 | 50.00 | 0.00 | 0.00 | 882.40 | 630.00 | 888.80 | 0.00 | 889.45 | 9.42 | 2.14 | 314.20 | 204.63 |
| 12.200 | 50.00 | 0.00 | 0.00 | 882.40 | 630.00 | 888.80 | 0.00 | 889.45 | 9.42 | 2.14 | 314.20 | 204.63 |
| 11.210 | 250.00 | 0.00 | 0.00 | 883.50 | 630.00 | 888.64 | 0.00 | 888.75 | 16.70 | 3.63 | 320.68 | 194.16 |
| 12.210 | 250.00 | 0.00 | 0.00 | 883.50 | 630.00 | 888.64 | 0.00 | 888.75 | 16.70 | 3.63 | 320.68 | 194.16 |
| 11.220 | 140.00 | 0.00 | 0.00 | 884.65 | 630.00 | 888.87 | 0.00 | 889.36 | 63.56 | 5.45 | 159.04 | 78.97 |
| 12.220 | 140.00 | 0.00 | 0.00 | 884.65 | 630.00 | 888.87 | 0.00 | 889.36 | 63.56 | 5.45 | 159.04 | 78.97 |
| 11.230 | 140.00 | 0.00 | 0.00 | 885.80 | 630.00 | 889.77 | 889.16 | 890.55 | 94.44 | 6.83 | 114.43 | 65.13 |
| 12.230 | 140.00 | 0.00 | 0.00 | 885.80 | 630.00 | 889.77 | 889.16 | 890.55 | 94.44 | 6.83 | 114.43 | 65.13 |

PRODUCED BY AN UNLICENSED DISTRIBUTOR OF SAE-ONLINE STANDARDS. FOR MORE INFO VISIT WWW.SAE.ORG

| SECNO | X_CM | ELTRD | ELLC | ELMCH | Q | CHSEL | GRIMS | ZG | TORMS | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.240 | 140.20 | 0.20 | 0.00 | 396.95 | 630.00 | 699.01 | 693.69 | 391.51 | 91.95 | 6.52 | 127.69 | 69.59 |

| SECNO | XLOC | ELTRO | ELLO | ELMIN | E | CUMFL | CUL.S | ES | TOPWS | VCI | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.200 | 140.00 | 0.00 | 0.00 | 897.10 | 630.00 | 913.72 | 0.00 | 928.87 | 12.07 | 3.72 | 294.08 | 175.62 |
| 19.100 | 125.00 | 0.00 | 0.00 | 897.10 | 630.00 | 913.75 | 0.00 | 928.91 | 11.73 | 3.50 | 292.00 | 170.07 |
| 19.000 | 125.00 | 0.00 | 0.00 | 897.10 | 630.00 | 913.78 | 0.00 | 928.96 | 11.70 | 3.52 | 291.01 | 241.05 |
| 18.900 | 25.00 | 0.00 | 0.00 | 897.70 | 630.00 | 903.99 | 0.00 | 928.00 | 20.00 | 4.55 | 228.45 | 138.51 |
| 18.800 | 2.00 | 899.50 | 897.70 | 897.70 | 630.00 | 903.71 | 0.00 | 926.76 | 12.81 | 5.06 | 214.53 | 176.01 |
| 18.700 | 2.00 | 899.50 | 897.70 | 897.70 | 630.00 | 903.74 | 0.00 | 926.83 | 11.02 | 5.56 | 19.57 | 183.61 |
| 18.600 | 2.00 | 899.50 | 896.70 | 897.70 | 630.00 | 903.77 | 0.00 | 926.19 | 24.90 | 4.44 | 244.16 | 126.24 |
| 18.500 | 2.00 | 899.50 | 896.70 | 897.70 | 630.00 | 904.04 | 0.00 | 926.20 | 25.66 | 4.54 | 228.45 | 128.51 |
| 18.400 | 220.00 | 0.00 | 0.00 | 897.50 | 630.00 | 904.44 | 0.00 | 926.73 | 23.49 | 4.43 | 179.61 | 129.58 |
| 18.300 | 220.00 | 0.00 | 0.00 | 897.50 | 630.00 | 904.47 | 0.00 | 926.77 | 23.97 | 4.54 | 183.22 | 136.27 |
| 18.200 | 220.00 | 0.00 | 0.00 | 897.50 | 630.00 | 904.51 | 0.00 | 926.81 | 38.39 | 5.17 | 147.52 | 107.43 |
| 18.100 | 220.00 | 0.00 | 0.00 | 898.50 | 630.00 | 905.04 | 0.00 | 926.82 | 35.14 | 5.13 | 138.19 | 100.37 |
| 18.000 | 220.00 | 0.00 | 0.00 | 898.50 | 630.00 | 905.83 | 0.00 | 926.25 | 62.86 | 3.39 | 151.24 | 96.24 |
| 17.900 | 220.00 | 0.00 | 0.00 | 898.50 | 630.00 | 905.86 | 0.00 | 926.29 | 62.91 | 3.37 | 151.73 | 96.23 |
| 17.800 | 100.00 | 0.00 | 0.00 | 899.50 | 630.00 | 906.19 | 0.00 | 926.81 | 43.27 | 2.15 | 154.1 | 95.23 |
| 17.700 | 100.00 | 0.00 | 0.00 | 899.50 | 630.00 | 906.20 | 0.00 | 926.81 | 43.51 | 2.51 | 157.07 | 95.91 |
| 17.600 | 66.00 | 911.00 | 905.50 | 901.60 | 630.00 | 911.66 | 0.00 | 911.82 | 10.98 | 4.21 | 575.10 | 170.14 |
| 17.500 | 22.00 | 911.00 | 905.50 | 901.60 | 630.00 | 911.66 | 0.00 | 911.82 | 10.97 | 4.21 | 575.10 | 170.14 |
| 17.400 | 22.00 | 0.00 | 0.00 | 902.10 | 630.00 | 911.66 | 0.00 | 911.82 | 0.37 | 1.14 | 1125.58 | 677.63 |
| 17.300 | 125.00 | 0.00 | 0.00 | 902.10 | 630.00 | 911.96 | 0.00 | 911.87 | 0.36 | 1.16 | 1125.96 | 684.65 |
| 17.200 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 911.85 | 0.00 | 911.87 | 0.36 | 1.16 | 1160.24 | 1044.67 |
| 17.100 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 911.86 | 0.00 | 911.87 | 0.36 | 1.16 | 1160.60 | 1045.31 |
| 17.000 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 911.86 | 0.00 | 911.87 | 0.37 | 1.16 | 1160.96 | 770.65 |
| 16.900 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 911.86 | 0.00 | 911.87 | 0.37 | 1.16 | 1161.32 | 769.99 |
| 16.800 | 660.00 | 3.00 | 0.00 | 904.11 | 630.00 | 911.95 | 0.00 | 911.95 | 2.15 | 1.93 | 452.00 | 489.55 |
| 16.700 | 572.00 | 3.00 | 0.00 | 905.11 | 630.00 | 911.95 | 0.00 | 911.95 | 2.15 | 1.91 | 783.16 | 714.96 |
| 16.600 | 1517.00 | 3.00 | 0.00 | 903.60 | 630.00 | 912.19 | 0.00 | 912.24 | 6.41 | 3.71 | 162.32 | 297.62 |
| 16.500 | 1210.00 | 3.00 | 0.00 | 903.60 | 630.00 | 912.19 | 0.00 | 912.24 | 6.47 | 3.71 | 780.56 | 244.63 |
| 16.400 | 990.00 | 0.00 | 0.00 | 903.60 | 630.00 | 912.22 | 0.00 | 912.32 | 4.25 | 3.60 | 804.65 | 305.42 |
| 16.300 | 990.00 | 0.00 | 0.00 | 903.60 | 630.00 | 912.22 | 0.00 | 912.32 | 4.25 | 3.60 | 805.01 | 305.42 |
| 16.200 | 1.00 | 905.90 | 904.20 | 904.60 | 630.00 | 912.27 | 0.00 | 912.33 | 13.25 | 3.33 | 795.14 | 178.78 |
| 16.100 | 1.00 | 905.90 | 904.20 | 904.60 | 630.00 | 912.27 | 0.00 | 912.34 | 13.25 | 3.30 | 795.50 | 178.77 |
| 16.000 | 40.00 | 909.90 | 907.50 | 908.65 | 630.00 | 912.34 | 0.00 | 912.38 | 12.08 | 3.43 | 791.88 | 181.24 |
| 15.900 | 40.00 | 909.90 | 907.50 | 908.65 | 630.00 | 912.34 | 0.00 | 912.38 | 12.08 | 3.43 | 792.24 | 181.24 |
| 15.800 | 1.00 | 0.00 | 0.00 | 904.50 | 630.00 | 912.32 | 0.00 | 912.42 | 4.37 | 3.65 | 952.03 | 304.78 |
| 15.700 | 87.00 | 0.00 | 0.00 | 904.70 | 630.00 | 912.35 | 0.00 | 912.44 | 4.58 | 3.55 | 895.64 | 295.94 |

| SECNO | BLCK | ELTRO | ELLC | SLNOW | Q | CUSEL | CFINS | EG | TOK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.300 | 2.00 | 900.00 | 904.70 | 904.70 | 630.00 | 912.48 | 0.00 | 912.65 | 0.86 | 3.37 | 462.22 | 211.43 |
| 10.200 | 2.00 | 900.00 | 904.70 | 904.70 | 630.00 | 912.48 | 0.00 | 912.65 | 0.86 | 3.37 | 462.22 | 211.43 |
| 10.100 | 2.00 | 0.00 | 0.00 | 902.10 | 630.00 | 912.37 | 0.00 | 912.49 | 5.41 | 3.37 | 186.90 | 277.17 |
| 10.000 | 2.00 | 0.00 | 0.00 | 902.10 | 630.00 | 912.41 | 0.00 | 912.50 | 5.82 | 3.50 | 811.30 | 251.06 |
| 11.720 | 415.00 | 0.00 | 0.00 | 907.00 | 630.00 | 912.62 | 0.00 | 912.93 | 10.39 | 6.30 | 719.04 | 195.81 |
| 11.620 | 415.00 | 0.00 | 0.00 | 907.00 | 630.00 | 912.64 | 0.00 | 912.94 | 10.93 | 6.32 | 720.26 | 200.00 |
| 10.130 | 90.00 | 0.00 | 0.00 | 907.00 | 630.00 | 912.44 | 0.00 | 913.03 | 8.53 | 4.01 | 772.03 | 215.45 |
| 10.030 | 90.00 | 0.00 | 0.00 | 907.00 | 630.00 | 913.02 | 0.00 | 913.12 | 6.83 | 4.11 | 739.47 | 241.99 |
| 10.930 | 1.00 | 911.40 | 909.00 | 907.00 | 630.00 | 912.94 | 0.00 | 913.03 | 39.20 | 4.49 | 922.89 | 100.63 |
| 10.830 | 1.00 | 911.40 | 909.00 | 907.00 | 630.00 | 913.04 | 0.00 | 913.12 | 41.11 | 4.61 | 923.73 | 99.26 |
| 20.030 | 45.00 | 911.40 | 909.00 | 907.00 | 630.00 | 913.19 | 0.00 | 913.31 | 24.07 | 4.06 | 671.11 | 139.41 |
| 20.030 | 45.00 | 911.40 | 909.00 | 907.00 | 630.00 | 913.21 | 0.00 | 913.27 | 24.05 | 5.12 | 379.49 | 126.50 |
| 20.000 | 1.00 | 0.00 | 0.00 | 907.00 | 630.00 | 913.70 | 0.00 | 913.23 | 9.07 | 4.44 | 721.11 | 200.55 |
| 20.000 | 1.00 | 0.00 | 0.00 | 907.00 | 630.00 | 913.77 | 0.00 | 913.30 | 11.06 | 4.62 | 721.12 | 199.37 |

FORM 1411-OD PRINTED BY ROTARY MANIFOLD FORMS, DIVISION OF SAFEGUARD BUSINESS SYSTEMS, INC.

MINGES BROOK S.C.TMP

SUMMARY PRINTOUT TABLE 150

| [illegible] | Q | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|
| 6.200 | 630.00 | 863.05 | 0.00 | 0.00 | 0.00 | 115.03 | 50.00 |
| 6.200 | 630.00 | 863.05 | 0.00 | 0.00 | 0.00 | 52.37 | 50.00 |
| 6.300 | 630.00 | 864.17 | 0.00 | 0.25 | 0.00 | 52.42 | 400.00 |
| 6.300 | 630.00 | 864.19 | 0.00 | 0.25 | 0.00 | 36.69 | 400.00 |
| 6.400 | 630.00 | 864.52 | 0.00 | 0.42 | 0.00 | 39.32 | 605.00 |
| 6.400 | 630.00 | 864.60 | 0.00 | 0.49 | 0.09 | 30.00 | 605.00 |
| 6.410 | 630.00 | 865.04 | 0.00 | 0.52 | 0.00 | 143.36 | 595.00 |
| 6.410 | 630.00 | 865.17 | 0.00 | 0.53 | 0.16 | 102.53 | 395.00 |
| 6.420 | 630.00 | 865.65 | 0.00 | 0.61 | 0.00 | 123.97 | 595.00 |
| 6.420 | 630.00 | 865.77 | 0.00 | 0.59 | 0.12 | 60.77 | 595.00 |
| 6.420 | 630.00 | 867.19 | 0.00 | 1.66 | 0.00 | 113.82 | 595.00 |
| 6.420 | 630.00 | 867.20 | 0.00 | 1.66 | 0.11 | 56.26 | 595.00 |
| 6.500 | 630.00 | 860.70 | 0.00 | 1.69 | 0.00 | 144.05 | 395.00 |
| 6.500 | 630.00 | 860.89 | 0.00 | 1.69 | 0.11 | 71.35 | 595.00 |
| 6.600 | 630.00 | 869.59 | 0.00 | 0.01 | 0.00 | 130.73 | 300.00 |
| 6.600 | 630.00 | 869.70 | 0.00 | 0.01 | 0.01 | 75.01 | 300.00 |
| 6.700 | 630.00 | 870.44 | 0.00 | 0.85 | 0.00 | 61.00 | 325.00 |
| 6.700 | 630.00 | 870.54 | 0.00 | 0.86 | 0.10 | 61.00 | 325.00 |
| 6.750 | 630.00 | 870.44 | 0.00 | -0.00 | 0.00 | 32.00 | 50.00 |
| 6.750 | 630.00 | 870.52 | 0.00 | -0.01 | 0.09 | 32.00 | 50.00 |
| 6.800 | 630.00 | 870.11 | 0.00 | -0.32 | 0.00 | 10.60 | 50.00 |
| 6.800 | 630.00 | 870.20 | 0.00 | -0.32 | 0.09 | 10.60 | 50.00 |
| 7.000 | 630.00 | 871.73 | 0.00 | 1.59 | 0.00 | 10.60 | 39.00 |
| 7.000 | 630.00 | 871.84 | 0.00 | 1.64 | 0.14 | 10.60 | 39.00 |
| 7.200 | 630.00 | 873.34 | 0.00 | 0.64 | 0.00 | 111.00 | 50.00 |
| 7.200 | 630.00 | 873.41 | 0.00 | 0.57 | 0.07 | 111.00 | 50.00 |
| 7.500 | 630.00 | 873.60 | 0.00 | 0.25 | 0.00 | 141.83 | 550.00 |
| 7.500 | 630.00 | 873.60 | 0.00 | 0.25 | 0.06 | 84.65 | 550.00 |
| 8.000 | 630.00 | 873.54 | 0.00 | -0.06 | 0.00 | 133.96 | 2.00 |
| 8.000 | 630.00 | 873.59 | 0.00 | -0.07 | 0.05 | 82.05 | 2.00 |
| 8.100 | 630.00 | 873.61 | 0.00 | 0.07 | 0.00 | 162.08 | 2.00 |
| 8.100 | 630.00 | 873.66 | 0.00 | 0.07 | 0.06 | 84.78 | 2.00 |
| 8.300 | 630.00 | 874.10 | 0.00 | 0.49 | 0.00 | 164.04 | 390.00 |
| 8.300 | 630.00 | 874.17 | 0.00 | 0.50 | 0.07 | 95.90 | 390.00 |
| 8.310 | 630.00 | 874.36 | 0.00 | 0.46 | 0.00 | 117.97 | 465.00 |
| 8.310 | 630.00 | 874.42 | 0.00 | 0.45 | 0.06 | 162.90 | 465.00 |

FORM 1011 OR PRINTED BY DUTARY MARIFOLD FORMS DIVISION OF SAFETY PRINTING COMPANY DETROIT PRINTED IN U.S.A.

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 3.320 | 630.00 | 873.82 | 0.00 | 1.27 | 0.00 | 96.16 | 445.00 |
| 3.300 | 630.00 | [illegible] | 0.00 | 1.30 | 0.00 | 92.39 | [illegible] |
| 3.350 | 630.00 | 877.44 | 0.00 | 1.51 | 0.00 | 91.37 | 445.00 |
| 3.350 | 630.00 | 877.59 | 0.00 | 1.53 | 0.11 | 51.75 | 445.00 |
| 3.400 | 630.00 | 879.30 | 0.00 | 1.96 | 0.00 | 95.04 | 445.00 |
| [illegible] | 630.00 | [illegible] | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 3.410 | 630.00 | 881.60 | 0.00 | 2.11 | 0.00 | 45.01 | 300.00 |
| 3.410 | 630.00 | 881.63 | 0.00 | 2.12 | 0.14 | 45.11 | 300.00 |
| 8.900 | 630.00 | 883.62 | 0.00 | 2.13 | 0.00 | 147.07 | 300.00 |
| [illegible] | 630.00 | [illegible] | 0.00 | 2.06 | [illegible] | [illegible] | [illegible] |
| 9.000 | 630.00 | 883.60 | 0.00 | -0.11 | 0.05 | 161.67 | 2.00 |
| 9.000 | 630.00 | 883.55 | 0.00 | -0.16 | 0.12 | 145.21 | 2.00 |
| 9.100 | 630.00 | 883.77 | 0.00 | 0.34 | 0.02 | 157.24 | 2.00 |
| 9.100 | 630.00 | 883.66 | 0.00 | [illegible] | 0.07 | 153.49 | [illegible] |
| 9.500 | 630.00 | 883.93 | 0.00 | 0.16 | 0.17 | 177.49 | 125.00 |
| 9.400 | 630.00 | 883.99 | 0.00 | 0.15 | 0.05 | 170.59 | 125.00 |
| 10.100 | 630.00 | 883.54 | 0.00 | -0.35 | 0.00 | 159.69 | 2.00 |
| 10.100 | 630.00 | [illegible] | 0.00 | -1.27 | 0.12 | 172.21 | [illegible] |
| 10.200 | 630.00 | 884.11 | 0.00 | 0.52 | 0.00 | 190.85 | 2.00 |
| 10.200 | 630.00 | 884.71 | 0.00 | 0.41 | 0.31 | 191.70 | 2.00 |
| 10.300 | 630.00 | 884.73 | 0.00 | 0.63 | 0.00 | 56.71 | 150.00 |
| 10.300 | 630.00 | [illegible] | 0.00 | [illegible] | [illegible] | 55.72 | 150.00 |
| 10.350 | 630.00 | 884.97 | 0.00 | 0.25 | 0.00 | 35.00 | 50.00 |
| 10.350 | 630.00 | 884.97 | 0.00 | 0.26 | 0.00 | 35.00 | 50.00 |
| 10.360 | 630.00 | 884.98 | 0.00 | -0.01 | 0.00 | 20.00 | 25.00 |
| 10.360 | 630.00 | [illegible] | 0.00 | [illegible] | 0.00 | 20.01 | 25.00 |
| 10.400 | 630.00 | 885.57 | 0.00 | 0.61 | 0.01 | 15.00 | 25.00 |
| 10.400 | 630.00 | 885.57 | 0.00 | 0.60 | -0.00 | 15.00 | 25.00 |
| 11.000 | 630.00 | 885.72 | 0.00 | 0.12 | 0.00 | 15.00 | 52.00 |
| 11.000 | 630.00 | [illegible] | 0.00 | 0.12 | [illegible] | 15.00 | 52.00 |
| 11.200 | 630.00 | 883.28 | 0.00 | [illegible] | 0.07 | 79.9[illegible] | 50.00 |
| 11.200 | 630.00 | 883.28 | 0.00 | [illegible] | -0.00 | 79.9[illegible] | 50.00 |
| 11.210 | 630.00 | 868.64 | 0.00 | 0.35 | 0.00 | 163.61 | 200.00 |
| 11.210 | 630.00 | [illegible] | 0.00 | [illegible] | -0.00 | [illegible] | [illegible] |
| 11.220 | 630.00 | [illegible] | 0.00 | 0.23 | 0.00 | 171.26 | 140.00 |
| 11.220 | 630.00 | [illegible] | 0.00 | 0.22 | -0.00 | 170.26 | [illegible] |
| 11.230 | 630.00 | 889.77 | 0.00 | 0.90 | 0.00 | 165.41 | 140.00 |
| 11.230 | 630.00 | [illegible] | 0.00 | 0.90 | 0.00 | [illegible] | [illegible] |

| | SECNC | Q | CHSEL | DIFWSP | DIFWSH | DIFSUS | TORWIC | WLCH |
|---|---|---|---|---|---|---|---|---|
| | 11.240 | 650.00 | 901.01 | 0.01 | 1.23 | 0.00 | 167.10 | 140.30 |
| | 11.240 | 650.00 | 901.01 | 0.01 | 1.23 | 0.00 | 167.10 | 140.30 |
| * | 11.230 | 650.00 | 902.67 | 0.01 | 1.16 | 0.00 | 230.23 | 140.30 |
| * | 11.230 | 650.00 | 902.67 | 0.01 | 1.16 | -0.00 | 229.21 | 140.30 |
| * | 11.230 | 650.00 | 902.75 | 0.01 | 1.00 | 0.00 | 230.56 | 140.30 |
| * | 11.230 | 650.00 | 902.75 | 0.01 | 1.00 | -0.00 | 230.56 | 140.30 |
| * | 11.230 | 650.00 | 902.95 | 0.01 | 1.02 | 0.00 | 227.16 | 140.30 |
| * | 11.230 | 650.00 | 902.95 | 0.00 | 1.00 | 0.00 | 227.00 | 140.00 |
| | 11.230 | 650.00 | 902.01 | 0.00 | 1.07 | 0.00 | 230.70 | 165.00 |
| | 11.230 | 650.00 | 902.01 | 0.00 | 1.07 | -0.00 | 230.57 | 165.00 |
| | 11.230 | 650.00 | 902.51 | 0.00 | 0.97 | 0.00 | 154.17 | 165.00 |
| | 11.230 | 650.00 | 902.55 | 0.00 | 0.97 | 0.00 | 154.16 | 165.00 |
| | 11.900 | 650.00 | 897.97 | 0.00 | 1.02 | 0.00 | 70.00 | 165.00 |
| | 11.900 | 650.00 | 897.97 | 0.00 | 1.01 | -0.00 | 70.00 | 165.00 |
| | 12.000 | 650.00 | 898.30 | 0.00 | 0.11 | 0.00 | 70.00 | 2.00 |
| | 12.000 | 650.00 | 898.30 | 0.00 | 0.11 | -0.00 | 70.00 | 2.00 |
| | 12.100 | 650.00 | 897.92 | 0.00 | -0.16 | 0.00 | 70.00 | 2.00 |
| | 12.100 | 650.00 | 897.92 | 0.00 | -0.17 | -0.00 | 70.00 | 2.00 |
| | 12.200 | 650.00 | 898.30 | 0.00 | 0.01 | 0.00 | 111.17 | 165.00 |
| | 12.200 | 650.00 | 898.30 | 0.00 | 0.96 | 0.00 | 55.67 | 165.00 |
| | 12.300 | 650.00 | 898.94 | 0.00 | 0.06 | 0.00 | 70.00 | 170.00 |
| | 12.300 | 650.00 | 898.94 | 0.00 | 0.07 | 0.00 | 70.00 | 170.00 |
| | 13.000 | 650.00 | 899.35 | 0.00 | 0.35 | 0.00 | 70.00 | 2.00 |
| | 13.000 | 650.00 | 899.35 | 0.00 | 0.35 | 0.00 | 70.00 | 2.00 |
| | 13.100 | 650.00 | 899.20 | 0.00 | -0.13 | 0.00 | 70.00 | 2.00 |
| | 13.100 | 650.00 | 899.20 | 0.00 | -0.16 | 0.00 | 70.00 | 2.00 |
| | 13.100 | 650.00 | 900.67 | 0.00 | 1.47 | 0.00 | 125.46 | 120.00 |
| | 13.100 | 650.00 | 900.67 | 0.00 | 1.47 | 0.00 | 125.46 | 120.00 |
| | 14.000 | 650.00 | 900.70 | 0.00 | 0.03 | 0.00 | 125.37 | 2.00 |
| | 14.000 | 650.00 | 900.71 | 0.00 | 0.03 | 0.00 | 125.37 | 2.00 |
| | 14.100 | 650.00 | 902.77 | 0.00 | 0.07 | 0.00 | 126.29 | 2.00 |
| | 14.100 | 650.00 | 902.77 | 0.00 | 0.07 | 0.00 | 126.29 | 2.00 |
| | 14.200 | 650.00 | 901.36 | 0.00 | 0.65 | 0.00 | 141.22 | 150.00 |
| | 14.200 | 650.00 | 901.36 | 0.00 | 0.65 | 0.00 | 141.21 | 150.00 |
| | 14.300 | 650.00 | 901.76 | 0.00 | 0.41 | 0.00 | 70.00 | 150.00 |
| | 14.300 | 650.00 | 901.76 | 0.00 | 0.41 | 0.00 | 70.00 | 150.00 |
| | 15.000 | 650.00 | 903.02 | 0.00 | 1.63 | 0.00 | 98.00 | 13.00 |

| SEC.O | R | CUSEL | DIFMSP | DIFMSX | DIFMS | TOPLIC | XLCK |
|---|---|---|---|---|---|---|---|
| 15.200 | 630.00 | 903.72 | 0.00 | 0.11 | 0.00 | 105.33 | 140.00 |
| 15.200 | 630.00 | 903.73 | 0.00 | 0.11 | 0.00 | [illegible] | 140.00 |
| 15.900 | 630.00 | 903.86 | 0.00 | 0.15 | 0.00 | 57.54 | 125.00 |
| 15.900 | 630.00 | 903.91 | 0.00 | 0.16 | 0.04 | 75.55 | 125.00 |
| 16.000 | 630.00 | 903.71 | 0.00 | -0.16 | 0.00 | 90.36 | 2.00 |
| 16.000 | 630.00 | 903.71 | 0.00 | [illegible] | 0.00 | [illegible] | 2.00 |
| 16.100 | 630.00 | 903.91 | 0.00 | 0.27 | 0.00 | 101.33 | 2.00 |
| 16.100 | 630.00 | 904.04 | 0.00 | 0.33 | 0.06 | 78.36 | 2.00 |
| 16.600 | 630.00 | 904.44 | 0.00 | 0.46 | 0.00 | 92.41 | 220.00 |
| 16.600 | 630.00 | 904.51 | 0.00 | 0.47 | 0.07 | [illegible] | 220.00 |
| 16.700 | 630.00 | 905.07 | 0.00 | 0.55 | 0.00 | 76.93 | 220.00 |
| 16.700 | 630.00 | 905.04 | 0.00 | 0.52 | 0.03 | 76.29 | 220.00 |
| 16.800 | 630.00 | 905.85 | 0.00 | 0.84 | 0.00 | 68.69 | 220.00 |
| 16.800 | 630.00 | 905.[illegible] | 0.00 | 0.92 | 0.01 | 59.01 | 220.00 |
| 16.900 | 630.00 | 906.19 | 0.00 | 0.34 | 0.00 | 82.26 | 100.00 |
| 16.900 | 630.00 | 906.20 | 0.00 | 0.36 | 0.01 | 82.54 | 100.00 |
| 17.000 | 630.00 | 911.66 | 0.00 | 5.47 | 0.00 | 207.33 | 46.00 |
| 17.000 | 630.00 | 911.66 | 0.00 | 5.46 | 0.00 | 207.33 | 46.00 |
| 17.900 | 630.00 | 911.85 | 0.00 | 0.20 | 0.00 | 262.00 | 128.00 |
| 17.900 | 630.00 | 911.85 | 0.00 | 0.20 | 0.00 | 214.25 | 128.00 |
| 18.000 | 630.00 | 911.85 | 0.00 | -0.01 | 0.00 | 261.97 | 2.00 |
| 18.000 | 630.00 | 911.85 | 0.00 | -0.01 | -0.00 | 210.44 | 2.00 |
| 18.100 | 630.00 | 911.85 | 0.00 | 0.02 | 0.00 | 261.99 | 2.00 |
| 18.100 | 630.00 | 911.86 | 0.00 | 0.02 | 0.00 | 213.41 | 2.00 |
| 18.200 | 630.00 | 912.93 | 0.00 | 0.06 | 0.00 | 289.92 | 680.00 |
| 18.200 | 630.00 | 912.93 | 0.00 | 0.07 | 0.00 | 217.25 | 580.00 |
| 18.700 | 630.00 | 912.17 | 0.00 | 0.25 | 0.00 | 546.78 | 1010.00 |
| 18.700 | 630.00 | 912.19 | 0.00 | 0.26 | 0.02 | 407.42 | 1010.00 |
| 19.000 | 630.00 | 912.22 | 0.00 | 0.05 | 0.00 | 548.49 | 99.00 |
| 19.000 | 630.00 | 912.21 | 0.00 | 0.03 | 0.00 | 435.71 | 99.00 |
| 19.900 | 630.00 | 912.27 | 0.00 | 0.04 | 0.00 | 530.70 | 1.00 |
| 19.900 | 630.00 | 912.29 | 0.00 | 0.04 | 0.02 | 427.30 | 1.00 |
| 19.000 | 630.00 | 912.34 | 0.00 | 0.08 | 0.00 | 553.85 | 68.00 |
| 19.000 | 630.00 | 912.31 | 0.00 | 0.09 | 0.03 | 434.45 | 68.00 |
| 19.100 | 630.00 | 912.33 | 0.00 | -0.02 | 0.00 | 552.51 | 1.00 |
| 19.100 | 630.00 | 912.34 | 0.00 | -0.02 | 0.04 | 428.80 | 1.00 |
| 19.200 | 630.00 | 912.35 | 0.00 | 0.03 | 0.00 | 554.17 | 87.00 |
| 19.200 | 630.00 | 912.39 | 0.00 | 0.03 | 0.04 | 427.18 | 87.00 |

| SECNO | Q | CHSEL | DIFWSP | DIFWSX | DIFKTS | TOP_ID | XLCH |
|---|---|---|---|---|---|---|---|
| 19.300 | 630.00 | 912.90 | 0.00 | 0.04 | 0.02 | 485.67 | 2.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 9.400 | 630.00 | 912.91 | 0.00 | -0.01 | 0.04 | 493.67 | 0.00 |
| 19.700 | 630.00 | 912.92 | 0.00 | 0.05 | 0.01 | 492.29 | 645.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 19.800 | 630.00 | 912.93 | 0.00 | 0.13 | 0.00 | 492.23 | 99.00 |
| 19.900 | 630.00 | 913.02 | 0.00 | 0.13 | 0.00 | 490.69 | 99.00 |
| 19.900 | 630.00 | 912.94 | 0.00 | 0.05 | 0.00 | 492.24 | 1.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 20.000 | 630.00 | 913.12 | 0.00 | 0.13 | 0.00 | 492.00 | 99.00 |
| 20.000 | 630.00 | 913.21 | 0.00 | 0.23 | 0.00 | 490.90 | 99.00 |
| 20.100 | 630.00 | 913.00 | 0.00 | -0.05 | 0.00 | 492.27 | 1.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

SUMMARY OF ERRORS

| | | | | |
|---|---|---|---|---|
| [illegible] | [illegible] | 10.520 | PROFILE= [illegible] | CRITICAL DEPTH ASSUMED |
| [illegible] | [illegible] | 10.610 | PROFILE= [illegible] | MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 10.900 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 10.900 | PROFILE= 2 | MINIMUM SPECIFIC ENERGY |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| CAUTION | SECNO= | 11.290 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 11.290 | PROFILE= 2 | MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 11.290 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| CAUTION | SECNO= | 11.300 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 11.300 | PROFILE= 1 | MINIMUM SPECIFIC ENERGY |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| CAUTION | SECNO= | 11.100 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 11.100 | PROFILE= 1 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 11.100 | PROFILE= 1 | 20 TRIALS ATTEMPTED TO BALANCE HGBL |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| CAUTION | SECNO= | 11.100 | PROFILE= 2 | PROBABLE MINIMUM SPECIFIC ENERGY |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

FLOODWAY DATA, HUNGES BROOK 2.C.TMP
PROFILE NO. 2

| STATION | WIDTH (FT) | FLOODWAY SECTION AREA | VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 5,240 | 78. | 261. | 1.4 | 362.0 | 362.0 | .0 |
| 5,290 | 57. | 231. | 2.5 | 364.1 | 364.1 | .0 |
| 5,400 | 70. | 127. | 1.4 | 364.6 | 364.5 | .1 |
| 5,410 | 103. | 357. | 1.8 | 365.1 | 365.0 | 0.1 |
| 6,420 | 61. | 194. | 3.5 | 365.7 | 365.6 | 0.1 |
| 6,450 | 54. | 167. | 3.8 | 367.2 | 367.1 | 0.1 |
| 6,500 | 71. | 190. | 3.7 | 368.0 | 368.0 | 0.1 |
| 6,800 | 98. | 216. | 2.9 | 869.7 | 869.6 | 0.1 |
| 6,900 | 69. | 240. | 3.0 | 870.5 | 870.4 | 0.1 |
| 6,910 | 52. | 183. | 4.7 | 870.5 | 870.4 | 0.1 |
| 6,980 | 11. | 52. | 12.0 | 870.6 | 870.1 | 0.1 |
| 7,300 | 10. | 71. | 8.0 | 871.6 | 871.7 | 0.1 |
| 7,310 | 114. | 311. | 1.0 | 872.4 | 872.. | 0.1 |
| 7,380 | 1.. | 27.. | 2.3 | 873.7 | 873.. | 0.1 |
| 8,010 | 52. | 2..6. | 2.5 | 875.6 | 875.5 | 0.1 |
| 8,310 | 83. | 264. | 2.4 | 875.7 | 875.6 | 0.1 |
| 8,360 | 96. | 310. | 2.0 | 876.2 | 876.1 | 0.1 |
| 8,410 | 63. | 174. | 3.6 | 876.7 | 876.6 | 0.1 |
| 8,4.. | 5.. | 1.5. | 4.. | 87..6 | 87..7 | 0.1 |
| 8,..1 | 52. | 145. | 5.2 | 877.5 | 877.4 | 0.1 |
| 8,..1 | 5.. | 1.. | 1.6 | 879.5 | 879.4 | 0.1 |
| 8,610 | 44. | 98. | 6.4 | 881.5 | 881.5 | 0.1 |
| 8,900 | 150. | 266. | 2.2 | 883.7 | 883.6 | 0.1 |
| 9,000 | 145. | 259. | 2.5 | 883.5 | 883.4 | 0.1 |
| 9,..0 | 1..6 | 30.. | 2.1 | 88..2 | 88..1 | 0.1 |
| 9,960 | 149. | 315. | 2.1 | 884.3 | 884.2 | 0.1 |
| 10,000 | 172. | 283. | 3.1 | 885.7 | 885.6 | 0.1 |
| 10,100 | 181. | 275. | 2.5 | 886.1 | 886.1 | 0.0 |
| 10,300 | 67. | 144. | 4.4 | 886.7 | 886.7 | 0.0 |
| 10,350 | 35. | 98. | 6.4 | 885.0 | 885.0 | 0.0 |
| 10,..1 | 90. | 67. | 9.5 | 89..1 | 89..1 | 0.0 |
| 10,..6 | 5. | 54. | 1..2 | 895.6 | 895.6 | 0.0 |
| 11,01. | 53. | 64. | 9.2 | 896.7 | 896.7 | 0.1 |
| 11,..0 | 80. | 304. | 2.1 | 898.5 | 898.4 | 0.1 |
| 11,210 | 180. | 321. | 2.0 | 898.6 | 898.6 | 0.0 |
| 11,220 | 130. | 155. | 4.1 | 898.9 | 898.9 | 0.0 |
| 11,2.. | 1..0 | 11.. | 5.6 | 89..1 | 89..8 | 0.1 |
| 11,24. | 157. | 129. | 4.9 | 901.. | 901.. | 0.1 |
| 11,26. | 220. | 169. | 3.3 | 902.7 | 902.7 | 0.1 |
| 11,2.. | 2..1 | 18.. | 3.5 | 90..8 | 90..3 | 0.1 |
| 11,30. | 228. | 189. | 3.4 | 904.9 | 904.9 | 0.1 |
| 11,310 | 241. | 204. | 3.1 | 905.0 | 906.0 | 0.1 |
| 11,3.. | 15.. | 1.. | 4.. | 90..1 | 90..1 | 0.1 |
| 11,4.. | 70. | 135. | 4.7 | 908.1 | 908.1 | 0.1 |
| 12,0.. | 70. | 12.. | 4.2 | 909.1 | 909.1 | 0.1 |
| 12,200 | 90. | 98. | 6.0 | 909.5 | 909.5 | 0.0 |
| 12,900 | 70. | 120. | 5.0 | 909.0 | 909.0 | 0.0 |
| 13,0.. | 1.. | 1.. | 4.. | 90..1 | 90..1 | 0.1 |
| 13,1.. | 90. | 11.. | 5.4 | 139.2 | 909.2 | 0.1 |

FORM 101 AS PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF DATA-PRINT, INC.
LOUISVILLE-NEW ALBANY CORP.

FLOODWAY DATA, MIGGES BROOK C.C.TWP
PROFILE NO. 2

| STATION | WIDTH (FT) | FLOODWAY SECTION AREA | MAP VELOCITY | WATER SURFACE ELEVATION WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
|---|---|---|---|---|---|---|
| 11.051 | 126. | 212. | 2.5 | 900.7 | 901.7 | 0.9 |
| 11.151 | 126. | 271. | 2.6 | 900.7 | 901.7 | 0.9 |
| 14.250 | 102. | 274. | 2.3 | 901.6 | 901.6 | 0.0 |
| 14.924 | 78. | 173. | 5.1 | 901.9 | 901.8 | 0.1 |
| 15.070 | 76. | 265. | 2.4 | 903.6 | 903.6 | 0.0 |
| 15.150 | 76. | 265. | 2.4 | 903.7 | 903.7 | 0.0 |
| 15.230 | 76. | 265. | 2.4 | 904.0 | 904.0 | 0.0 |
| 15.310 | 76. | 265. | 2.4 | 904.2 | 904.2 | 0.0 |
| 15.390 | 76. | 265. | 2.4 | 904.4 | 904.4 | 0.0 |
| 15.470 | 76. | 265. | 2.4 | 904.7 | 904.7 | 0.0 |
| 15.550 | 76. | 265. | 2.4 | 904.9 | 904.9 | 0.0 |
| 15.630 | 76. | 265. | 2.4 | 905.2 | 905.2 | 0.0 |
| 15.710 | 76. | 265. | 2.4 | 905.4 | 905.4 | 0.0 |
| 15.790 | 76. | 265. | 2.4 | 905.7 | 905.7 | 0.0 |
| 15.870 | 76. | 265. | 2.4 | 905.9 | 905.9 | 0.0 |
| 15.950 | 76. | 265. | 2.4 | 906.2 | 906.2 | 0.0 |
| 16.030 | 76. | 265. | 2.4 | 906.4 | 906.4 | 0.0 |
| 16.110 | 76. | 265. | 2.4 | 906.7 | 906.7 | 0.0 |
| 16.190 | 76. | 265. | 2.4 | 906.9 | 906.9 | 0.0 |
| 16.270 | 76. | 265. | 2.4 | 907.2 | 907.2 | 0.0 |
| 16.350 | 76. | 265. | 2.4 | 907.4 | 907.4 | 0.0 |
| 16.430 | 76. | 265. | 2.4 | 907.7 | 907.7 | 0.0 |
| 16.510 | 76. | 265. | 2.4 | 907.9 | 907.9 | 0.0 |
| 16.590 | 76. | 265. | 2.4 | 908.2 | 908.2 | 0.0 |
| 16.670 | 76. | 265. | 2.4 | 908.4 | 908.4 | 0.0 |
| 16.750 | 76. | 265. | 2.4 | 908.7 | 908.7 | 0.0 |
| 16.830 | 76. | 265. | 2.4 | 908.9 | 908.9 | 0.0 |
| 16.910 | 76. | 265. | 2.4 | 909.2 | 909.2 | 0.0 |
| 16.990 | 76. | 265. | 2.4 | 909.4 | 909.4 | 0.0 |
| 17.070 | 76. | 265. | 2.4 | 909.7 | 909.7 | 0.0 |
| 17.150 | 76. | 265. | 2.4 | 909.9 | 909.9 | 0.0 |
| 17.230 | 76. | 265. | 2.4 | 910.2 | 910.2 | 0.0 |
| 17.310 | 76. | 265. | 2.4 | 910.4 | 910.4 | 0.0 |
| 17.390 | 76. | 265. | 2.4 | 910.7 | 910.7 | 0.0 |
| 17.470 | 76. | 265. | 2.4 | 910.9 | 910.9 | 0.0 |
| 17.550 | 76. | 265. | 2.4 | 911.2 | 911.2 | 0.0 |
| 17.630 | 76. | 265. | 2.4 | 911.4 | 911.4 | 0.0 |
| 17.710 | 76. | 265. | 2.4 | 911.7 | 911.7 | 0.0 |
| 17.790 | 214. | 1424. | 0.8 | 911.9 | 911.9 | 0.0 |
| 17.870 | 210. | 1075. | 1.0 | 911.9 | 911.9 | 0.0 |
| 17.950 | 213. | 1043. | 1.0 | 911.9 | 911.9 | 0.0 |
| 18.030 | 227. | 1...1. | 0.9 | 912.1 | 912.1 | 0.0 |
| 18.110 | 407. | 761. | 1.0 | 912.2 | 912.2 | 0.0 |
| 18.190 | 410. | 761. | 1.0 | 912.2 | 912.2 | 0.0 |
| 18.270 | 407. | 761. | 1.0 | 912.4 | 912.4 | 0.0 |
| 18.350 | 407. | 761. | 1.0 | 912.4 | 912.4 | 0.0 |
| 18.430 | 409. | 811. | 1.0 | 912.4 | 912.4 | 0.0 |
| 18.510 | 426. | 878. | 0.9 | 912.6 | 912.6 | 0.0 |
| 18.590 | 429. | 734. | 0.9 | 912.8 | 912.9 | 0.1 |
| 18.670 | 409. | 667. | 0.9 | 913.0 | 913.0 | 0.1 |
| 18.750 | 401. | 679. | 0.9 | 913.2 | 913.3 | 0.1 |
| 18.830 | 411. | 662. | 0.9 | 913.4 | 913.5 | 0.1 |

FORM FURNISHED BY: DRAINAGE MANUAL WORK, DIVISION OF DRAINAGE
DATA: RIVERSIDE COUNTY, DETROIT
PREPARED IN U.S.A.

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Battle Creek Twp

3) WATERCOURSE: Minges Brook

4) DOCUMENT TYPE: 100 yr natural

00BREAK00

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[illegible]

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|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 7.200 | 0.000 | 0.000 | 0.000 | 50.000 | 50.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 7.950 | 16.000 | 500.000 | 620.000 | 350.000 | 550.000 | 550.000 | 0.000 | 0.000 | 0.000 |
| X2 | 392.600 | 424.000 | 502.400 | 450.000 | 374.000 | 470.000 | 471.600 | 573.000 | 869.000 | 639.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] | [illegible] |
| [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION [illegible]

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 0.000 | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 0.000 | 0.000 | 0.000 | 156.500 | [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | 16.000 | [illegible] | 620.000 | 2.000 | 2.000 | [illegible] | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 667.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 397.000 | 424.000 | 502.400 | 450.000 | 474.000 | 470.000 | 471.600 | 578.000 | 869.000 | 639.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

VALLEY SECTION CROSS SECTION 12

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 16.000 | 500.000 | [illegible] | 300.000 | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] |
| GR | [illegible] | 424.000 | 502.400 | [illegible] | 374.000 | 470.000 | 471.600 | [illegible] | [illegible] | [illegible] |
| GR | [illegible] | [illegible] | 869.700 | 605.000 | 366.500 | 675.000 | 868.500 | 625.000 | 870.000 | [illegible] |
| GR | 876.000 | 638.000 | 880.000 | 645.000 | 802.000 | 676.000 | 882.600 | 760.000 | 846.600 | [illegible] |
| GR | 892.400 | 880.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | [illegible] | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 645.000 | 0.000 | 1.600 | 0.000 |
| X1 | 8.320 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 645.000 | 0.000 | 1.600 | 0.000 |
| X1 | 8.330 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 645.000 | 0.000 | 1.600 | 0.000 |

VALLEY SECTION CROSS SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 8.420 | 19.000 | 520.000 | 644.000 | 350.000 | 350.000 | 645.000 | 0.000 | 0.000 | 0.000 |
| GR | 307.000 | 38.000 | 591.500 | 702.000 | [illegible] | [illegible] | 892.800 | 575.000 | [illegible] | [illegible] |
| GR | [illegible] | 440.000 | 504.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| GR | 875.000 | 620.000 | 875.200 | 634.000 | 375.500 | 630.000 | 877.500 | 644.000 | 870.000 | 646.000 |
| GR | 878.000 | 676.000 | 800.200 | 724.000 | 896.000 | 746.000 | 902.300 | 755.000 | 0.000 | 0.000 |
| X1 | [illegible] | 0.000 | 0.000 | [illegible] | [illegible] | [illegible] | 800.000 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

3/8 OF 250 PAR .75 CAPITAL AVE.  CROSS SECTION NO3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Y1 | 0.940 | 12.100 | 450.230 | 510.000 | 225.000 | 925.700 | 502.000 | 3.230 | 0.320 | 1.000 |
| X1 | 520.700 | 417.020 | 231.730 | 201.020 | 131.300 | 420.230 | 312.020 | 411.720 | 280.220 | 444.120 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| Y2 | 699.020 | 334.200 | 0.000 | 420.400 | 530.320 | 1.020 | 427.401 | 320.320 | 2.000 | 501.000 |
| X2 | 521.420 | 0.000 | 515.020 | 511.400 | 0.270 | 352.020 | 531.401 | 0.000 | 607.001 | 424.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

3/4 OF BAR

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| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

1/2 IST OF 3/8 CAPITAL AVE.  CROSS SECTION 1-1

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Y1 | 9.405 | 10.700 | 455.000 | 511.020 | 51.000 | 30.300 | 121.020 | 0.305 | 0.200 | 0.2[illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

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| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

1.50 FT 3/8 CAPITAL AVE.  CROSS SECTION Y

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|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

W/C FACE CAPITAL AVE.  CROSS SECTION #

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W/J FACE CAPITAL AVE.  CROSS SECTION #10

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VALLEY SECTION  CROSS SECTION #

FORM 10-K (REV. 12-91) PRINTED IN U.S.A.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 18.000 | 11.000 | 270.000 | 290.000 | 2.000 | 3.000 | 2.000 | 3.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 296.000 | 296.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X4 | 120.000 | 0.000 | 270.000 | 290.000 | 305.000 | 230.000 | 297.000 | 270.000 | 295.000 | 275.000 |
| X5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

B/S SAG DR. B/S CAPITAL AVE. CROSS SECTION 3:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION 4:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 16.000 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 296.000 | 297.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION 5:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 24.000 | 11.000 | 275.000 | 297.000 | 2.000 | 3.000 | 2.000 | 3.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 296.000 | 297.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 296.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] CROSS SECTION 6:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X2 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X3 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X4 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X5 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X6 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

B/S FACE DOTERIDGE CROSS SECTION 7:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 24.000 | 25.000 | 1980.300 | 1246.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 826.300 | 711.000 | 216.000 | 514.000 | 719.400 | 630.000 | 314.200 | 754.000 | 910.200 | 886.000 |
| X4 | 977.000 | 1014.000 | 314.700 | 1044.000 | 910.500 | 1054.000 | 905.800 | 1116.000 | 908.400 | 1174.000 |
| X5 | 901.200 | 1164.000 | 900.900 | 1170.000 | 894.000 | 1196.000 | 897.100 | 1199.000 | 898.800 | 1200.000 |
| X6 | 897.400 | 1204.000 | 898.700 | 1208.000 | 900.600 | 1210.000 | 901.700 | 1246.000 | 905.900 | 1270.000 |
| X7 | 906.600 | 1306.000 | 906.600 | 1360.000 | 912.900 | 1430.000 | 917.300 | 1428.000 | 920.000 | 1456.000 |
| X8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

B/S FACE DOTERIDGE CROSS SECTION 7:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 15.000 | 3.000 | 0.300 | 0.000 | 13.000 | 13.000 | 13.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 905.000 | 905.000 | 0.000 |
| X4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION CROSS SECTION 7

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 720.300 | 711.000 | 216.000 | 514.000 | 719.400 | 630.000 | 314.200 | 754.000 | 910.200 | 886.000 |
| X2 | 977.000 | 1014.000 | 314.700 | 1044.000 | 910.500 | 1054.000 | 905.800 | 1116.000 | 908.400 | 1174.000 |
| X3 | 901.200 | 1164.000 | 900.900 | 1170.000 | 894.000 | 1196.000 | 897.100 | 1199.000 | 898.800 | 1200.000 |
| X4 | 897.400 | 1204.000 | 898.700 | 1208.000 | 900.600 | 1210.000 | 901.700 | 1246.000 | 905.900 | 1270.000 |
| X5 | 906.600 | 1306.000 | 906.600 | 1360.000 | 912.900 | 1430.000 | 917.300 | 1428.000 | 920.000 | 1456.000 |
| X6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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PRINTED IN U.S.A.

U/S [illegible] DAM D/S CAPITAL AVE.  CROSS SECTION 0C37

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A1 | 1,500 | [illegible] | 1,[illegible] | 0,[illegible] | 123,[illegible]70 | [illegible],0 1 | 2[illegible],[illegible]0 | [illegible],0 1 | [illegible],[illegible] | [illegible],000 |
| B1 | 1,[illegible]00 | [illegible] | 0,[illegible]0 | 0,[illegible]0 | 0,[illegible]00 | [illegible],0 0 | 1,0[illegible] 1 | [illegible],0 0 | [illegible],[illegible]50 | [illegible],[illegible]00 |

TOP OF [illegible]  CROSS SECTION 0C37

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible],[illegible]50 | [illegible],0[illegible] | [illegible],[illegible]1 | 0,[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0 | [illegible],[illegible]0 | [illegible],[illegible]00 |
| A2 | 0,[illegible]00 | [illegible],0[illegible] | 0,[illegible]7 | 3[illegible],[illegible]0[illegible] | 1[illegible],500 | [illegible],0[illegible]0 | [illegible],0[illegible]3 | [illegible],0[illegible]0 | [illegible],0[illegible]0 | [illegible],[illegible]30 |
| B2 | 0,[illegible]00 | [illegible],0[illegible]3 | [illegible],[illegible]7 | [illegible],[illegible]0[illegible] | [illegible],[illegible]00 | [illegible],0[illegible]3 | [illegible],0[illegible] | [illegible],0[illegible]0 | [illegible],[illegible]0[illegible] | [illegible],[illegible]00 |

U/S ACT DAM U/S CAPITAL AVE.  CROSS SECTION 0C37

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A | [illegible]6,[illegible]40 | [illegible],0[illegible]3 | [illegible],0,[illegible]1 | 0,[illegible]0[illegible] | [illegible],[illegible]20[illegible] | [illegible],[illegible]7[illegible] | [illegible],0[illegible]3 | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] |
| B | [illegible],[illegible]50 | [illegible],[illegible]0[illegible] | [illegible],[illegible]7[illegible] | [illegible]7[illegible],[illegible]0[illegible] | [illegible]3[illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],000 |
| A3 | 0,[illegible]50 | 59[illegible],[illegible]0[illegible] | 0,[illegible]3[illegible] | 0,000 | 0,200 | [illegible],0[illegible] | [illegible],0[illegible]3 | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]00 |
| B3 | 0,[illegible]30 | 0,[illegible]03 | 0,[illegible]03 | 0,000 | 7,100 | [illegible],0[illegible] | 403,0[illegible]3 | 1164,0[illegible]8 | [illegible],[illegible]3[illegible] | [illegible],[illegible]50 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible]6,[illegible]0 | [illegible],[illegible]0[illegible] | [illegible]0[illegible],[illegible]7[illegible] | [illegible]5[illegible],[illegible]30[illegible] | [illegible]7[illegible],[illegible]30 | [illegible]2[illegible],[illegible]0[illegible] | [illegible]3[illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0 | [illegible],000 |
| [illegible] | [illegible]9[illegible],[illegible]00 | [illegible]70[illegible],[illegible]0[illegible] | [illegible]9[illegible],[illegible]3[illegible] | [illegible]3[illegible],[illegible]0[illegible] | [illegible]6[illegible],[illegible]30[illegible] | [illegible]6[illegible],[illegible]0[illegible] | [illegible]9[illegible],[illegible]7[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0 | [illegible],[illegible]0[illegible] |
| [illegible] | [illegible]2[illegible],[illegible]30 | [illegible]3[illegible],[illegible]0[illegible] | [illegible]9[illegible],[illegible]9[illegible] | [illegible]9[illegible],[illegible]0[illegible] | [illegible]9[illegible],[illegible]3[illegible] | [illegible],[illegible]03[illegible],[illegible]0[illegible] | [illegible]9[illegible],[illegible]7[illegible] | [illegible]04[illegible],[illegible]0[illegible] | [illegible]9[illegible],[illegible]3[illegible] | [illegible],[illegible]0[illegible] |
| S3 | 5[illegible],[illegible]00 | 1055,[illegible]0[illegible] | 9[illegible],[illegible]0[illegible] | 10[illegible],[illegible]0[illegible] | 907,400 | 1112,[illegible]0[illegible] | 9[illegible],[illegible]0[illegible] | 11[illegible],[illegible]0[illegible] | 9[illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] |
| B3 | 5[illegible],[illegible]00 | 1[illegible]0[illegible],[illegible]0[illegible] | 9[illegible],[illegible]0[illegible] | 1[illegible],[illegible]0[illegible] | 0,[illegible]00 | 0,[illegible]30 | [illegible],0[illegible] | [illegible],0[illegible] | 0,[illegible]0[illegible] | [illegible],[illegible]0[illegible] |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A[illegible] | [illegible],[illegible]0 | [illegible],0[illegible] | 0,[illegible]7[illegible] | 0,[illegible]0[illegible] | [illegible]30,[illegible]00 | [illegible],0[illegible]0 | [illegible]3[illegible],0[illegible] | [illegible],[illegible]30 | [illegible],[illegible]0[illegible] | [illegible],[illegible]00 |
| B[illegible] | 0,[illegible]00 | [illegible],0[illegible] | [illegible],[illegible]30 | 0,[illegible]0[illegible] | 0,[illegible]00 | [illegible],[illegible]30 | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],000 |

[illegible]  CROSS SECTION 0C37

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A[illegible] | 1[illegible],[illegible]00 | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible]0[illegible],[illegible]00 | [illegible],[illegible]0[illegible] | [illegible]3[illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],000 |
| B[illegible] | [illegible],[illegible]00 | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible] | [illegible],[illegible]0[illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SR | 907.500 | 1051.300 | 902.000 | 1241.500 | 921.500 | 1052.000 | 902.300 | 1054.500 | 905.300 | 1055.000 |
| SC | 910.500 | 1059.300 | 915.300 | 1241.300 | 910.500 | 1156.000 | 920.000 | 1165.000 | 0.300 | 0.000 |
| MC | 3.030 | 0.700 | 3.000 | 0.700 | 0.300 | 3.020 | 0.010 | 3.030 | 0.300 | 0.000 |
| ST | 3.030 | 0.000 | 3.100 | 0.000 | 1.500 | 3.000 | 0.000 | 3.030 | 0.300 | 0.000 |

WS 18' DAM AXE ALONG ST.

CROSS SECTION 1

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| B1 | 17.900 | 13.000 | 1037.000 | 1303.000 | 134.300 | 138.000 | 128.000 | 0.000 | 0.000 | 0.000 |
| C1 | 999.300 | 300.000 | 990.900 | 916.000 | 909.000 | 997.000 | 902.900 | 992.300 | 905.000 | 1367.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 937.300 | 918.000 | 939.400 | 917.000 | 913.000 | 1141.530 | 0.000 | 3.300 | 0.000 | 0.000 |
| [illegible] | 0.300 | 0.000 | 0.330 | 0.000 | 0.000 | 0.530 | 0.010 | 0.130 | 0.000 | 0.000 |

TOP OF DAM

CROSS SECTION 4A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A1 | 21.000 | 0.150 | 0.340 | 0.000 | 0.000 | 0.370 | 0.000 | 0.000 | 0.000 | 0.000 |
| A2 | 0.300 | 0.000 | 0.300 | 913.100 | 904.100 | 0.300 | 0.300 | 0.300 | 0.000 | 0.000 |
| AC | 0.300 | 0.000 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible]

CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A1 | 11.100 | 15.000 | 1377.000 | 1995.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| A2 | 0.000 | 0.000 | 0.000 | 902.000 | 895.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| AS | 922.000 | 920.000 | 910.000 | 896.000 | 909.000 | 950.000 | 926.000 | 992.000 | 905.000 | 1027.000 |
| AC | 902.200 | 1040.000 | 902.100 | 1000.000 | 902.400 | 1000.000 | 902.000 | 1363.000 | 900.500 | 1022.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

WALLEY SECTIO.

CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A1 | 15.200 | 21.000 | 1374.000 | 1995.000 | 680.000 | 680.000 | 680.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| A3 | 909.200 | 1732.200 | 901.200 | 1632.200 | 922.400 | 1376.000 | 932.900 | 1974.000 | 902.100 | 1005.000 |
| AC | 909.600 | 1139.200 | 907.400 | 1735.200 | 903.600 | 1301.000 | 901.400 | 1914.000 | 900.100 | 1.000 |
| AR | 914.000 | 2010.000 | 914.000 | 2040.000 | 913.400 | 2120.000 | 913.900 | 2130.000 | 910.000 | 2014.000 |
| AR | 919.100 | 2294.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.300 | 0.000 | 0.000 | 0.000 |
| NI | 0.000 | 0.200 | 1666.000 | 10.000 | 1695.000 | 0.035 | 1726.000 | 0.000 | 1710.000 | 10.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

100 FT D/S ESTATE ROAD

CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A1 | 18.700 | 13.000 | 1695.000 | 1703.000 | 901.000 | 1010.000 | 1010.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| A3 | 208.900 | 1015.200 | 904.400 | 1640.200 | 903.900 | 1695.000 | 923.800 | 1730.000 | 903.600 | 705.000 |
| AC | 904.100 | 1712.000 | 901.000 | 1710.000 | 911.000 | 1731.000 | 911.600 | 1730.700 | 902.000 | 1002.000 |
| AT | 0.000 | 7.100 | 0.000 | 0.000 | 0.000 | 0.000 | 1695.000 | 1715.000 | 0.000 | 0.000 |

E/S ESTATE ROAD

CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A1 | 18.000 | 7.200 | 0.700 | 3.000 | 99.000 | 99.300 | 97.000 | 0.300 | 0.000 | 0.000 |
| [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | 1695.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| AC | 1798.000 | 0.000 | 1690.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| AT | 0.000 | 7.100 | 0.000 | 3.000 | 0.000 | 0.000 | 1695.000 | 1719.000 | 0.000 | 0.000 |

INTERSTATE ROAD

CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A1 | 18.000 | 84.000 | 1695.000 | 705.000 | 1.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| AR | 0.000 | 903.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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|---|---|---|---|---|---|---|---|---|---|---|
| R5 | 4.020 | 810.410 | 2.000 | 0.300 | 0.070 | 2.070 | 0.000 | 2.000 | 0.000 | 0.000 |
| R7 | 25.020 | 1207.700 | 915.400 | 0.000 | 1336.300 | 911.100 | 1.000 | 9306.010 | 911.000 | 0.000 |
| R7 | 1686.230 | 810.300 | 2.070 | 1605.000 | 579.900 | 0.070 | 1602.000 | 909.900 | 0.300 | 1685.570 |
| R7 | 909.930 | 805.300 | 2675.000 | 905.900 | 536.100 | 1605.130 | 909.950 | 907.130 | 1697.300 | 909.950 |
| R7 | 9.720 | 1202.000 | 915.400 | 905.000 | 1602.100 | 9.000 | 907.000 | 909.000 | 909.000 | 0.000 |
| R7 | 1951.500 | 801.300 | 913.130 | 1701.200 | 579.300 | 911.130 | 1703.130 | 159.170 | 202.130 | 1701.000 |
| R7 | 673.530 | 702.300 | 907.070 | 905.000 | 672.700 | 907.130 | 907.000 | 909.900 | 909.900 | 1690.500 |
| R7 | 9.300 | 1212.000 | 909.900 | 1.000 | 12.300 | 9.930 | 1758.000 | 911.000 | 0.000 | 0.000 |
| R7 | 1690.300 | 911.600 | 0.700 | 1392.000 | 320.700 | 0.300 | 2.070 | 0.070 | 0.000 | 0.000 |
| R8 | 920.300 | 1206.000 | 913.400 | 1207.000 | 911.100 | 1336.300 | 911.020 | 1506.030 | 910.300 | 1666.000 |
| R7 | 1.300 | 1202.000 | 9.300 | 901.000 | 905.300 | 0.300 | 2.000 | 0.000 | 0.000 | 0.000 |
| R7 | 913.300 | 1202.000 | 911.500 | 1697.900 | 206.300 | 1670.300 | 905.530 | 907.270 | 905.300 | 1701.000 |
| R7 | 1.300 | 1209.200 | 911.500 | 1205.100 | 203.300 | 1535.700 | 905.530 | 1513.530 | 906.300 | 1706.000 |
| R7 | 915.300 | 1209.000 | 906.470 | 1212.000 | 907.300 | 1210.300 | 911.020 | 1758.230 | 911.500 | 1206.000 |
| R7 | 920.300 | 1207.000 | 0.300 | 2.000 | 0.000 | 0.300 | 0.070 | 0.030 | 0.000 | 0.000 |
| R7 | 0.300 | 7.100 | 0.300 | 2.000 | 0.000 | 0.300 | 1695.070 | 1713.030 | 0.000 | 0.000 |

U/3 PAUL STATE ROAD — SPECIAL SECTION 2B

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R7 | 19.300 | 1.000 | 0.300 | 2.000 | 48.000 | 46.000 | 44.070 | 0.070 | 0.000 | 0.000 |
| R7 | 0.300 | 0.000 | 0.300 | 2.070 | 0.000 | 0.300 | 1.000 | 0.300 | 0.000 | 0.000 |
| R7 | 1.300 | 1202.500 | 0.300 | 1.000 | 2.000 | 0.000 | 1.000 | 1.000 | 0.000 | 1.000 |
| R7 | 1.000 | 911.530 | 0.000 | 0.170 | 1.000 | 0.000 | 0.00 | 0.300 | 1.00 | 1.000 |
| R7 | 1.000 | 1.530 | 1906.000 | 10.000 | 1605.000 | 0.000 | 1703.300 | 0.100 | 711.000 | 11.000 |
| R7 | 1710.300 | 0.030 | 1690.000 | 0.070 | 2.000 | 0.000 | 0.000 | 0.300 | 0.000 | 0.000 |
| R7 | 0.000 | 7.100 | 0.000 | 0.000 | 2.000 | 0.000 | 1695.300 | 1715.300 | 1.000 | 0.000 |

U/3 STATE ROUTE — CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R7 | 19.100 | 15.000 | 1595.000 | 1705.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| R8 | 10.000 | 964.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 909.900 | 909.900 | 0.000 |
| R8 | 920.000 | 1206.000 | 905.400 | 1207.000 | 911.100 | 1336.000 | 911.000 | 1506.000 | 910.500 | 1666.000 |
| R7 | 16.100 | 1713.000 | 905.000 | 1713.000 | 911.000 | 1706.000 | 911.020 | 1698.200 | 910.000 | 1701.000 |
| R7 | 0.300 | 7.100 | 1696.300 | 12.000 | 1593.000 | 0.100 | 1707.000 | 0.200 | 1711.000 | 10.000 |
| R7 | 1710.300 | 0.000 | 1690.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| R7 | 0.000 | 7.100 | 0.000 | 0.000 | 0.000 | 0.000 | 1695.000 | 1715.000 | 0.000 | 0.000 |

U/3 LOW 30 FT U/3 STATE ROAD — CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R7 | 19.400 | 12.000 | 1695.000 | 1707.000 | 97.000 | 97.000 | 97.000 | 0.000 | 0.000 | 0.000 |
| R8 | 920.300 | 1206.000 | 915.400 | 1207.000 | 911.100 | 1336.000 | 911.000 | 1306.000 | 910.500 | 1666.000 |
| R8 | 959.030 | 1695.000 | 905.700 | 1693.000 | 954.700 | 1702.000 | 905.705 | 1707.000 | 909.200 | 1711.000 |
| R7 | 0.300 | 7.100 | 2.000 | 0.000 | 0.000 | 2.000 | 1500.000 | 1500.000 | 0.100 | 1.000 |

TOP OF SP — CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R7 | 19.000 | 0.000 | 2.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 2.000 | 2.000 |
| R8 | 0.070 | 0.300 | 2.000 | 934.700 | 901.000 | 2.000 | 0.000 | 0.000 | 2.000 | 2.000 |
| R8 | 0.000 | 0.300 | 1666.000 | 10.000 | 1693.000 | 1.000 | 1707.300 | 0.000 | 711.000 | 10.000 |
| R7 | 1710.300 | 0.000 | 1690.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| R7 | 0.000 | 7.100 | 0.000 | 0.000 | 2.000 | 0.000 | 1600.300 | 1500.000 | 0.000 | 0.000 |

U/3 [illegible] STATE ROAD — CROSS SECTION 4

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R7 | 19.000 | 15.000 | 1595.000 | 1705.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| R8 | 920.000 | 1206.000 | 915.400 | 1207.000 | 911.100 | 1336.000 | 911.000 | 1506.000 | 910.500 | 1666.000 |

FORM 1411-00 PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF DAF AN, RINGWOOD, DETROIT

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BR | 929.200 | 1305.000 | 923.700 | 1397.000 | 904.700 | 1720.000 | 905.700 | 1707.000 | 909.200 | 1711.000 |
| GR | 911.200 | 1750.000 | 911.600 | 1308.000 | 920.200 | 1893.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| DH | 6.000 | 0.000 | 1325.500 | 0.000 | 1334.500 | 10.000 | 1384.000 | 0.000 | 1384.000 | 0.000 |

[illegible] CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.700 | 16.000 | 1325.500 | 1334.500 | 645.000 | 645.000 | 645.000 | 0.000 | 0.000 | 0.000 |
| GR | 920.000 | 1100.000 | 911.600 | 1101.000 | 911.500 | 1130.000 | 911.600 | 1212.000 | 911.900 | 1285.000 |
| GR | 910.000 | 1316.000 | 907.100 | 1325.500 | 907.300 | 1330.000 | 907.400 | 1334.500 | 910.100 | 1348.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.000 | 0.000 |

B/S LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 19.300 | 0.000 | 0.000 | 0.000 | 99.200 | 99.000 | 99.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 6.000 | 0.000 | 1325.500 | 0.000 | 1334.500 | 10.000 | 1384.000 | 0.000 | [illegible] | 0.000 |

B/S PAGE LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1130.000 | 912.000 | [illegible] | 1212.000 | [illegible] | [illegible] |
| [illegible] | 1276.000 | 911.900 | 0.000 | 1316.000 | 911.400 | 0.000 | 1325.500 | 911.400 | 907.000 | 1325.750 |
| [illegible] | 911.400 | 908.000 | 1326.100 | 911.400 | 908.500 | 1327.500 | 911.400 | 909.100 | 1326.900 | 911.400 |
| [illegible] | 908.500 | 1329.250 | 911.400 | 908.000 | 1329.500 | 911.400 | 907.000 | 1330.500 | 911.400 | 907.000 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | 911.400 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1476.000 | 912.000 | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 920.000 | 1100.000 | 912.000 | 1101.000 | 912.000 | 1130.000 | 912.000 | 1212.000 | 911.900 | 1285.000 |
| [illegible] | 910.000 | 1316.000 | 907.000 | 1325.500 | 906.000 | 1325.750 | 905.500 | 1326.100 | 905.000 | 1327.500 |
| [illegible] | 905.500 | 1328.900 | 906.000 | 1329.250 | 907.000 | 1329.500 | 907.000 | 1330.500 | 906.000 | 1330.800 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 910.100 | 1340.000 | 911.000 | [illegible] | 912.000 | [illegible] | 912.000 | [illegible] | [illegible] | [illegible] |

B/S PAGE LYNWOOD DR. CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X2 | [illegible] | [illegible] | [illegible] | 0.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| X3 | 10.000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 911.400 | [illegible] |
| [illegible] | 4.000 | [illegible] | 1325.500 | [illegible] | 1334.500 | 10.000 | [illegible] | [illegible] | 1384.000 | [illegible] |

[illegible] CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 20.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 908.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 911.400 | 911.400 | 0.000 |
| E3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*PROF 1

CCHV= 3.300 CSHV= 0.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | DLOSS | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| SLOPE | XLOLL | XLCH | [illegible] | TOTAL | TH2 | ECO T | COFAR | [illegible] | [illegible] |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | CROSS SECTION [illegible] | | | |
| 6.20 | 7.1[illegible] | [illegible] | 0.00 | 865.85 | 868.99 | 0.14 | 0.00 | 0.00 | 856.70 |
| [illegible] | [illegible] | 432. | 92. | 122. | 122. | 126. | 0. | [illegible] | 856.70 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 50. | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECNO= 6.20 CHSEL= 863.[illegible]

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 42.7 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 1.2 | 3.6 | 1.0 | 0.7 | |

CCHV= 3.100 CSHV= 0.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | CROSS SECTION 17 | | | |
| [illegible] | 5.20 | 864.10 | 0.30 | 0.00 | 864.24 | 0.14 | 0.25 | 0.00 | 850.70 |
| 630. | 22. | 574. | 35. | 34. | 183. | 47. | 3. | 1. | 859.30 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 0.00[illegible] | 550. | [illegible] | 301. | 2 | 0 | 0 | 0.00 | 52.49 | 353.9[illegible] |

FLOW DISTRIBUTION FOR SECNO= 6.30 CHSEL= 864.10

| | | | | | |
|---|---|---|---|---|---|
| STA= | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 3.4 | [illegible] | 1.0 | 2.[illegible] | |
| [illegible] | [illegible] | 182.8 | 17.0 | 20.[illegible] | |
| VEL= | 0.6 | 3.1 | 1.0 | 0.5 | |

*SECNO 6.400

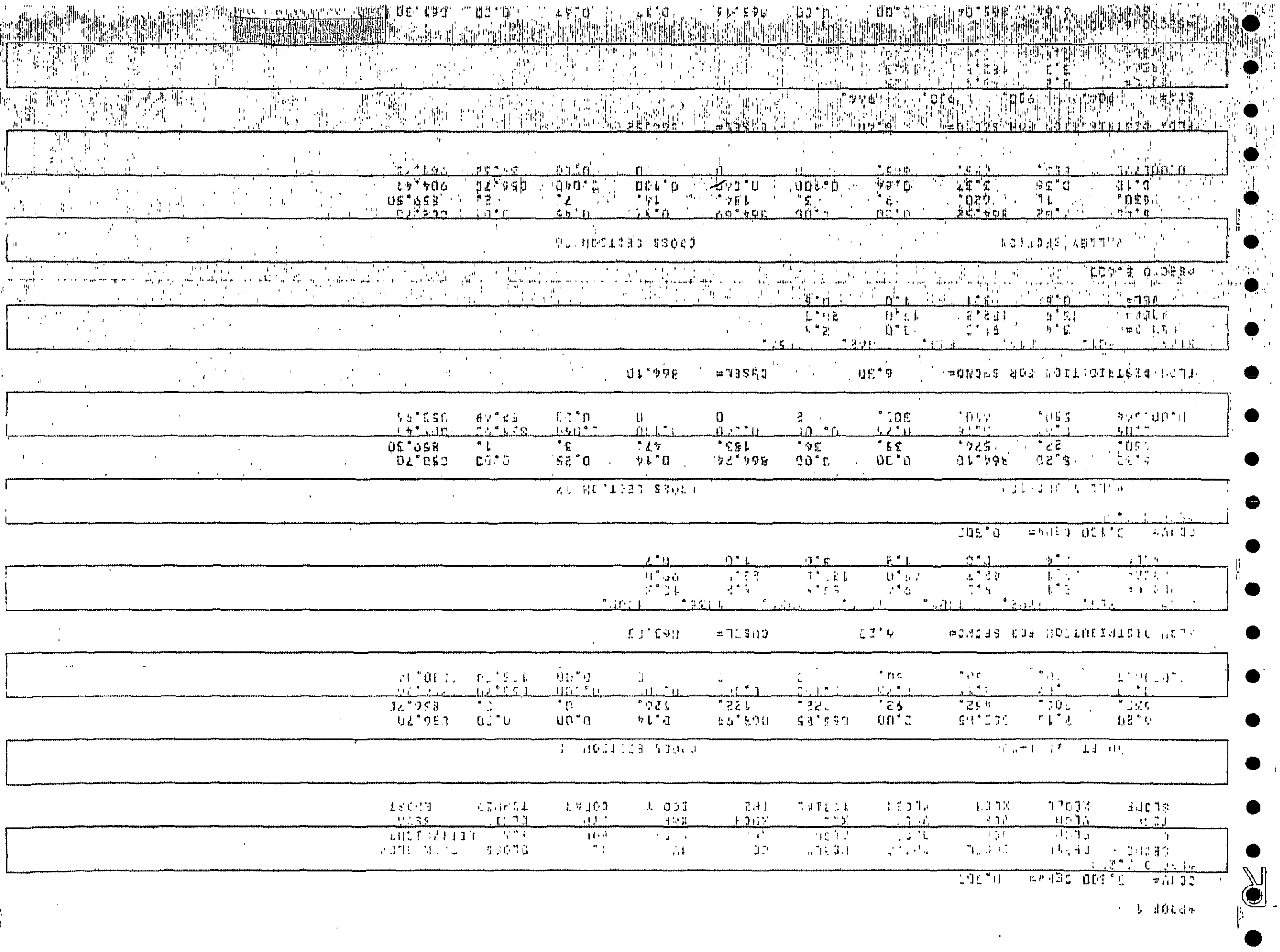
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| VALLEY SECTION | | | | | | CROSS SECTION 26 | | | |
| [illegible] | [illegible] | 864.52 | 0.00 | 0.00 | 864.69 | 0.17 | 0.45 | 0.0[illegible] | [illegible] |
| 630. | 1. | 620. | 9. | 3. | 184. | 14. | 7. | 2. | 859.50 |
| 0.10 | 0.36 | 3.37 | 0.64 | 0.100 | 0.0[illegible] | 0.100 | 0.040 | 856.70 | 904.47 |
| 0.00[illegible] | [illegible] | [illegible] | [illegible] | 0 | 0 | 0 | 0.00 | [illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECNO= 6.40 CHSEL= [illegible]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STA= | [illegible] | 930. | 930. | [illegible] | | | | | |
| [illegible] | 0.2 | [illegible] | [illegible] | | | | | | |
| [illegible] | 3.3 | [illegible] | [illegible] | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | | | | | | |

*SECNO 6.410

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 0.64 | 865.04 | 0.00 | 0.00 | 865.16 | 0.17 | 0.47 | 0.00 | 861.30 |



| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 550. | 169. | 436. | 25. | 237. | 130. | 39. | 10. | 3. | 301.32 |
| 3.19 | 3.79 | 5.37 | 0.35 | 2.170 | 0.045 | 0.107 | 0.240 | 850.40 | 396.49 |
| 0.023&4* | 565. | 595. | 450. | 2 | 0 | 0 | 0.00 | 165.34 | 551.03 |

6.00 SECTION NO. 432 SEC DA= 6.41 CHSEL= 395.17

| | | | | | |
|---|---|---|---|---|---|
| STA= | 230. | 400. | 459. | 911. | 552. |
| P50 3= | 0.0 | 20.0 | 49.3 | 4.0 | |
| AREA= | 17.4 | 212.6 | 129.5 | 35.9 | |
| Q= | 1.0 | 7.1 | 3.9 | 1.0 | |

*****SEC 6.42.

| SEC ID | DEPTH | SPEED | CTIPS | USELK | HB | AV | TL | VELOCITY | ACS ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | ORCH | OCH | 230B | ALOB | ACH | SQDB | VOL | T.A | LEFT/RIGHT |
| TIME | VLOB | VCH | 830E | XSA | SPEC | BMB | DTM | ELEV | DATA |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 6.42 | 5.55 | 865.65 | 0.00 | 0.00 | 865.65 | 2.35 | 0.75 | 0.75 | 865.00 |
| 632. | 99. | 514. | 17. | 115. | 105. | 20. | 16. | 4. | 363.00 |
| 0.20 | 0.03 | 4.87 | 0.05 | 0.130 | 0.040 | 0.100 | 0.241 | 360.10 | 401.77 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECNO= 6.42 CHSEL= 865.65

| | | | | | |
|---|---|---|---|---|---|
| STA= | 402. | 439. | 591. | 926. | |
| P50 3= | 0.0 | 12.5 | 82.2 | 5.3 | |
| AREA= | 1.9 | 93.0 | 99.7 | 5.8 | |
| Q= | 0.0 | 1.9 | 94.3 | 0.9 | |

*****SECTION 6.43

VALLEY SECTION CROSS SECTION 16

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.50 | 3.13 | 860.78 | 0.00 | 0.00 | 869.09 | 0.31 | 1.82 | 0.00 | 866.50 |
| 630. | 32. | 469. | 1001 | 42. | 97. | 97. | 19. | 7. | 866.50 |
| 0.37 | 0.77 | 1.1 | 1.1 | 1.10 | 2.04 | 0.00 | 0.341 | 133.90 | 419.30 |
| 0.002933 | 455. | 595. | 450. | 2 | 3 | 0 | 0.30 | 164.23 | 559.32 |

FLOW DISTRIBUTION FOR SECNO= 6.50 CHSEL= 869.78

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PET = | 0.0 | 2.2 | 2.0 | 21.0 | 11.4 | 5.0 | 0 | | |
| AREA= | 0.0 | 24.8 | 16.7 | 32.8 | 55.1 | 41.8 | 0.0 | | |
| Q= | 0.0 | 0.5 | 0.3 | 6.9 | 2.2 | 1.0 | 0.0 | | |

SECNO 6.600

FORM 1611-LB PRINTED BY ROTARY MASTERCOLD FUSING DIVISION OF RAPID-AMERICAN CORPORATION, PHILADELPHIA, PENNSYLVANIA
PRINTED IN U.S.A.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.63 | 3.29 | 269.59 | 3.00 | 0.00 | 869.36 | 0.20 | 0.77 | 0.00 | 367.20 |
| 550. | 37. | 449. | 15. | 49. | 110. | 103. | 21. | 5. | 847.20 |
| 0.25 | 0.75 | 4.21 | 1.78 | 0.100 | 0.240 | 0.100 | 3.041 | 864.33 | 459.41 |
| 3.0526&4 | 30?. | 302. | 305. | 2 | 0 | 0 | 0.30 | 150.73 | 560.16 |

1.00 DISTRIBUTION FOR SEC%0= 4.60 CUSEL= 27 .59

| STA= | 430. | 434. | 666. | 474. | 496. | 522. | 546. | 560. |
|---|---|---|---|---|---|---|---|---|
| PER = | 0.7 | 2.3 | 3.2 | 79.1 | 11.5 | 6.4 | 0.1 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | |
| VEL= | 0.2 | 0.3 | 1.1 | 4.0 | 2.7 | 2.0 | 0.3 | |

SCFW= 0.50 CFHV= 0.500
ASSUM 6,700

[illegible] 100 FT /S [illegible] 0.178 [illegible] 0.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.72 | 5.44 | 872.44 | 3.00 | 0.70 | 871.96 | 0.42 | 1.93 | 0.07 | 865.32 |
| 590. | 1?0. | 369. | 125. | 77. | 55. | 72. | 23. | 9. | 865.70 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| .07356 | 30?. | 323. | 300. | 2 | 0 | 0 | 0.24 | [illegible] | 342.50 |

1.00 DISTRIBUTION FOR SECT0= 4.70 CUSEL= 371.24

| | | | | | | |
|---|---|---|---|---|---|---|
| [illegible] | 0.9 | 11.3 | 57.9 | [illegible] | 19.0 | |
| [illegible] | 47.3 | 52.7 | 56.7 | 2..2 | [illegible] | |
| VEL= | 1.3 | 2.2 | 6.6 | 2.1 | 1.6 | |

ASSUMED 5.230

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | LEFT | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.0? | FOH | 6500 | ALDO | 45P | PIPE | VEL | TYP | LEFT/RIGHT |
| TLBL | Y OF | VCH | V500 | ABL | RHC= | HEP | RCT | CL"IA | [illegible] |
| ELOPE | RLOBL | RLCR | RLOBR | ITRIAL | [illegible] | ICONT | CCR,R | TOPWID | EMBST |

3470 [illegible] 794.0 [illegible] 0.00 871.22 0.78 0.13 [illegible] 865.30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 115. | [illegible] | 72. | 45. | 55. | 32. | 23. | 9. | [illegible] |
| 0.33 | 2.41 | 8.24 | 2.25 | 0.100 | 0.340 | 0.100 | 5.041 | 865.00 | 794.00 |
| 3.0?6&& | 2. | 63. | 50. | 2 | 0 | 0 | 0.01 | 32.00 | 826.00 |

1.00 DISTRIBUTION FOR SECT0= 4.75 CUSEL= 870.54

| | | | | | | |
|---|---|---|---|---|---|---|
| [illegible] | 794. | 798. | 806. | 817. | 832. | 82?. |
| PER = | 2.7 | 14.1 | [illegible] | 6.5 | 3.0 | |
| [illegible] | [illegible] | 22.7 | [illegible] | 70.1 | [illegible] | |
| VEL= | 1.5 | 2.7 | 3.2 | 2.6 | 1.5 | |

3301 NO CHANGE> [illegible] TRAN [illegible]

3470 [illegible] 350.0 [illegible] 850.3 TYPE= 2 TARGET= 200.300

3405 [illegible] [illegible] NCROSS ELEV= [illegible] ELEV= 871.00

... D/S FACE RIVERSIDE DR.  CROSS SECTION 13

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5.60 | 5.11 | 872.11 | 870.39 | 3.00 | 872.64 | 2.33 | 0.45 | 3.77 | 865.70 |
| 35[illegible] | 0. | [illegible]0. | 1. | [illegible] | 31. | 0. | [illegible] | 5. | [illegible] |
| 0.31 | 3.01 | 12.14 | 1.00 | 3.150 | 0.043 | 0.02 | -0.041 | 0.120 | 865.20 |
| 0.009537 | 15. | 30. | 10. | 3 | 1° | 2 | 0.00 | 10.23 | 316.90 |

FLOW DISTRIBUTION FOR SECTION= 6.90 CHSEL= 870.11

SAT= 135. 137.
LOB= 41.5
CHNL= 21.5
ROB= 12.2

HYDRAULIC TABLE

| SEC ID | XSID | CORL | RDLEN | BETA | EXP | AREA | PS | ELTRD | ELCHD |
|---|---|---|---|---|---|---|---|---|---|
| 2.00 | 1.74 | 1.00 | 3.00 | 3.30 | 0.00 | 65.03 | 0.00 | 865.70 | 865.10 |

[illegible]

ENTER BY LOB, CHNL OR ROB FOR SUBDIVISIONS

PRESSURE FLOW

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | TRANSITION | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|
| | | | | | | [illegible] | | |
| 172.47 | 872.35 | 0.00 | 0. | 650. | 69. | 69. | 871.90 | 870.50 |

[illegible] EXCHANGE SECTION= 650.0 653.0 TYPE= 1 TARGET= 200.000

USER OVERRIDE WHEN ASSUMED NON-EFFECTIVE/BLOCK= 870.30 ELREF.= 870.30

D/S FACE RIVERSIDE DR. CROSS SECTION 13

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.50 | 5.61 | 871.77 | 5.00 | 0.73 | 872.07 | 1.27 | 0.93 | 7.05 | 865.20 |
| 63. | 0. | 650. | 0. | 0. | 70. | 0. | 23. | 9. | 866.00 |
| 0.31 | 0.00 | 9.03 | 0.00 | 0.150 | 0.043 | 0.100 | -0.041 | 865.10 | 806.20 |
| 0.009537 | 15. | 30. | 10. | 3 | 2 | 0 | 0.00 | 10.23 | 316.90 |

FLOW DISTRIBUTION FOR SECTION= 7.00 SWSEL= 871.72

STA= 805. 817.
PER Q= 100.0

[illegible]
PER= 3.0

*SEC 7.2*

3301 NO CHANGES FOR THIS RUN.

[illegible] EXCHANGE STATION= 795.0 [illegible] TYPE= 1 TARGET= 111.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.20 | 0.84 | 873.54 | 0.00 | 0.00 | 873.38 | 0.04 | 0.15 | 0.37 | 866.30 |
| 630. | 219. | 321. | 150. | 277. | 87. | 237. | 23. | 9. | 866.00 |
| 0.32 | 0.76 | 2.53 | 5.76 | 3.150 | 0.042 | 0.102 | 0.241 | 853.90 | 756.30 |
| 0.0003J7 | 63. | 77. | 50. | 2 | | 5 | 0.30 | 121.50 | 867.30 |

FLOW DISTRIBUTION FOR SECTION= 7.20 CHSEL= 873.54

| STA= | 730. | 730. | 604. | 317. | 122. | 052. | 167. |
|---|---|---|---|---|---|---|---|
| PE: %= | 25.7 | 7.7 | 15.0 | 5.7 | 20.9 | 5.7 | |
| FLOW= | 5.41 | 55.7 | 17.1 | 11.3 | 15.1 | 5.1 | |
| VEL= | 0.7 | 0.3 | 0.1 | 0.2 | 0.2 | 0.1 | |

DCIVE= 0.100 CEND= 0.500
ASECND 7.900

CROSS SECTION 128

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.90 | 0.0 | 873.50 | 0.00 | 0.00 | 873.75 | 0.15 | 0.34 | 0.75 | 867.00 |
| 630. | 629. | 333. | 70. | 159. | 66. | 62. | 19. | 10. | 869.00 |
| 0.56 | 1.21 | 6.03 | 1.66 | 0.330 | 0.040 | 0.052 | 0.341 | 865.50 | 691.50 |
| 0.0001332 | 550. | 557. | 550. | 7 | 0 | 3 | 0.00 | 141.30 | 833.30 |

FLOW DISTRIBUTION FOR SECTION= 7.90 CHSEL= 873.50

| STA= | 591. | 575. | 559. | 072. | 520. | 633. |
|---|---|---|---|---|---|---|
| PE: %= | 10.1 | 28.3 | 52.4 | 9.7 | 1.4 | |
| FLOW= | 12.6 | 70.4 | 11.1 | 5.1 | 0.1 | |
| VEL= | 0.7 | 1.0 | 0.1 | 0.2 | 0.3 | |

ASECND 8.000

| SECNO | DEPTH | CHSEL | CRIMS | USELK | EG | HV | HL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 0 | BLCH | BCH | GROB | ALOB | ACH | AROD | VOL | THA | LEFT/RIGHT |
| TYPE | BLCH | BCH | GROB | ALOB | ACH | AROD | VOL | THA | LEFT/RIGHT |
| ICONC | BLCH | BCH | BLTHR | ETICAL | 142 | JCONT | CORAD | VOL.CO | BANK |

BOTTOM OF BRIDGE,MRD= 3.MIN ELTRD= 866.00 MAX ELLC= 865.50

CROSS SECTION 128

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.00 | 0.04 | 873.54 | 0.00 | 0.00 | 873.79 | 0.25 | 0.00 | 0.33 | 869.30 |
| 630. | 224. | 336. | 70. | 182. | 63. | 42. | 29. | 12. | 869.00 |
| 1.35 | 1.23 | 5.41 | 1.68 | 1.190 | 1.042 | 0.064 | 0.241 | 865.50 | 691.23 |
| 0.3013?6 | 2. | 2. | 2. | 2 | 2 | 1 | -15.90 | 136.96 | 833.20 |

FLOW DISTRIBUTION FOR SECTION= 8.00 CHSEL= 873.54

| STA= | 591. | 575. | 559. | 520. | 633. |
|---|---|---|---|---|---|
| PE: %= | 9.1 | 23.1 | 53.4 | 7.7 | 1.4 |
| FLOW= | 11.2 | 69.6 | 13.4 | 5.3 | 0.1 |
| VEL= | 0.7 | 1.0 | 0.1 | 0.2 | 0.3 |

ASECND 8.100

CROSS SECTION 129

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.10 | 0.04 | 873.54 | 0.00 | 0.00 | 873.79 | 0.25 | 0.00 | 0.33 | 869.30 |
| 630. | 224. | 336. | 70. | 182. | 63. | 42. | 29. | 12. | 869.00 |
| 1.35 | 1.23 | 5.41 | 1.68 | 1.190 | 1.042 | 0.064 | 0.241 | 865.50 | 691.23 |
| 0.3013?6 | 2. | 2. | 2. | 2 | 2 | 1 | -15.90 | 136.96 | 833.20 |

0.001970 2. 2. 2. 2 3 7 0.00 162.78 633.31

FLOW DISTRIBUTION FOR SECTION= 0.10 CHSEL= 675.51

| STA= | 491. | 50. | 220. | 0... | 321. | 684. | 0.1. |
|---|---|---|---|---|---|---|---|
| | 11.3 | 12.2 | 11.5 | 1.1 | 0. | . | |
| AREA= | 87.1 | 102.5 | 23.5 | 5.3 | 25.2 | 7.5 | |
| VEL= | 0.8 | 1.7 | 1.7 | 1.7 | 2.0 | 1.2 | |

SECTION 0.30

| F.P. | SECTION | SECTION NUMBER 1? | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.30 | 5.62 | 374.10 | 0.30 | 0.50 | 874.22 | 0.12 | 0.42 | 3.03 | 879.30 |
| 330. | 961. | 447. | 23. | 202. | 137. | 22. | 32. | 12. | 660.50 |
| 0.43 | 1.[illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 1.0 0756 | 300. | 700. | [illegible] | 2. | 1 | 0 | 0.20 | 162.78 | 633.31 |

FLOW DISTRIBUTION FOR SECNO= 0.30 CHSEL= 874.10

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|
| [illegible] | 13.3 | 7.6 | 2.0 | 70.2 | 2.9 | 1.. | |
| [illegible] | 154.3 | 55.3 | 14.0 | [illegible] | 3.7 | 15.6 | |
| VEL= | 0.5 | 1.1 | 1.3 | 2.3 | 1.3 | 1.8 | |

SECTION 0.310

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|---|
| 330. | 0. | 12. | 28. | .1. | 11.7. | 14. | 34. | .13. | 63.40 |
| [illegible] | 1.11 | [illegible] | [illegible] | [illegible] | 0.340 | [illegible] | 0.069 | [illegible] | [illegible] |
| 0.002078 | 350. | 445. | 350. | 2 | 0 | 0 | 0.00 | 112.97 | 652.35 |

FLOW DISTRIBUTION FOR SECNO= 0.31 CHSEL= 772.35

| C.S.= | 513. | 576. | 576. | 610. | 626. | 620. | 633. |
|---|---|---|---|---|---|---|---|
| VEL H= | 4.6 | 6.9 | 2.6 | 62.4 | 2.3 | 1.1 | |
| AREA= | 39.6 | 31.6 | 9.6 | 104.9 | 7.4 | 6.4 | |
| VEL= | 0.7 | 1.4 | 1.7 | 4.9 | 2.0 | 1.1 | |

SECTION 0.312

| F.P. | SECTION | SECTION NUMBER 2? | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.33 | 4.12 | 375.32 | 0.10 | 0.00 | 876.33 | 0.40 | 1.34 | 5.03 | 877.50 |
| 620. | 69. | 540. | 21. | 57. | 98. | 12. | 36. | 15. | 877.70 |
| 0.47 | 1.21 | 5.50 | 4.73 | 0.060 | 0.060 | 0.080 | 0.061 | 871.70 | 883.78 |
| 1.0029 | 350. | 445. | 350. | 2 | 0 | 0 | 0.00 | 95.16 | 631.66 |

FLOW DISTRIBUTION FOR SECNO= 0.32 CHSEL= 875.22

| STA= | 534. | 576. | 596. | 610. | 626. | 620. | 633. |
|---|---|---|---|---|---|---|---|
| VEL H= | 2.6 | 5.9 | 2.4 | 65.6 | 2.6 | 1.0 | |
| AREA= | 22.7 | 21.7 | 7.1 | 93.0 | 6.3 | 5.1 | |
| VEL= | 0.7 | 1.4 | 1.0 | 5.2 | 1.3 | 1.2 | |

| SECNO | DEPTH | CHSEL | CHORD | WSELK | ES | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| | QLOB | ACH | QROB | ALOB | ACH | QROB | VOL | TWA | LEFT/RIGHT |
| TYPE | XLOB | XCH | | ELOB | STAGL | | ICONT | IDRAG | UP LO |
| 3.33 | 4.12 | 877.52 | 0.10 | 0.00 | 877.84 | 0.40 | 1.01 | 0.00 | 875.10 |
| 330. | 69. | 540. | 21. | 57. | 98. | 12. | 37. | 14. | 878.30 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.49 | 1.21 | 5.40 | 1.77 | 0.000 | 0.040 | 0.000 | 0.041 | 873.30 | 553.36 |
| 0.393717 | 350. | 475. | 350. | 2 | 0 | 1 | 0.01 | 90.52 | 631.07 |

FLO, PASTIC TIDE BY STA= 3.30 SUMEL= 177.52

| STA= | 325. | 341. | 355. | 401. | 421. | 481. | 509. |
|---|---|---|---|---|---|---|---|
| PER SH= | 3.7 | 5.7 | 2.6 | 65.7 | 2.5 | 5.5 | |
| AREA= | 23.1 | 23.1 | 3.3 | 9.5 | 6.3 | 5.1 | |
| VEL= | 5.7 | 1.1 | 1.7 | 5.2 | 2.2 | 1.7 | |

PLOW 1.703

VALLEY SECTION

CROSS SECTION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.40 | 5.38 | 879.38 | 0.30 | 0.02 | 875.91 | 0.33 | 2.33 | 0.01 | 870.58 |
| 0.2 | 0.29 | 0.20 | 1.91 | 0.003 | 0.042 | 0.300 | 0.41 | 42.23 | 665. |
| 0.0232 | 350. | 65. | 191. | 2 | 1 | 0 | 0.30 | 39.45 | 705.15 |

FLOW DISTRIBUTION FOR STA= 8.40 SUMEL= 879.38

| STA= | 750. | 825. | 900. | 975. | 1050. | 1125. |
|---|---|---|---|---|---|---|
| PER SH= | 0.3 | 72.2 | 3.3 | 21.3 | 20.8 | |
| AREA= | 5.9 | 54.2 | 3.3 | 21.3 | 20.8 | |
| VEL= | 0.8 | 5.4 | 2.0 | 1.7 | 1.1 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.53 | 0.75 | 7.73 | 1.74 | 0.030 | 0.040 | 0.000 | 0.041 | 877.50 | 612.56 |
| 0.210606 | 225. | 309. | 225. | 5 | 19 | 0 | 0.01 | 85.01 | 697.59 |

FLOW DISTRIBUTION FOR STA= 0.51 SUMEL= 891.49

| STA= | 575. | 820. | 844. | 860. | 876. | 898. |
|---|---|---|---|---|---|---|
| PER SH= | 0.2 | 87.9 | 3.9 | 9.0 | 2.0 | |
| AREA= | 1.8 | 79.7 | 2.5 | 29.6 | 10.6 | |
| VEL= | 0.7 | 7.7 | 2.2 | 1.1 | .2 | |

PLOW 3.130

3501 HV CLASSED MORE THAN 4VIS

R/S OF STR BAR B/C SEPTAL ABE.

CROSS SECTION 'D'

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8.90 | 3.52 | 883.62 | 0.00 | 0.0 | 883.79 | 0.16 | 1.92 | 0.13 | 881.50 |
| 630. | 127. | 253. | 155. | 83. | 82. | 191. | 17. | 16. | 1101.60 |
| 0.55 | 1.55 | 4.31 | 1.39 | 0.090 | 0.040 | 0.000 | 0.041 | 890.50 | 645.03 |
| 0.132077 | 245. | 105. | 223. | | | | 0.00 | 147.27 | 592.10 |

FLOW DISTRIBUTION FOR STA= 6.90 SUMEL= 813.62

| STA= | 445. | 460. | 505. | 550. | 592. |
|---|---|---|---|---|---|
| PER SH= | 5.5 | 6.6 | 21.2 | 3.5 | 62.5 |
| AREA= | 5.5 | 1.7 | 4.3 | 1.2 | 4.0 |

FLOW 9.630

3370 NORMAL DEPTH=  [illegible]  DIM ELEV=  [illegible]  DWN E.LE=  [illegible]

TOP OF [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | | | | | |
| 0.35 | 1.31 | 5.53 | 1.16 | 0.230 | [illegible] | 0.001 | 0.321 | 930.00 | 936.35 |
| 0.302379 | 2. | 2. | 2. | 2 | 3 | 1 | -12.56 | 141.0 | 588.16 |

[illegible]

| STA= | 465. | 480. | 490. | 516. | 550. | 593. |
|---|---|---|---|---|---|---|
| PCP NO= | 1.8 | 12.9 | 27.1 | 13.6 | 4.7 | |
| AREA= | 11.2 | 30.3 | 64.3 | 62.3 | 35.0 | |
| VEL= | 1.0 | 1.7 | 2.3 | 1.5 | 1.0 | |

[illegible]

| SECNO | DP.TP | CHNEL | BANKS | PSELR | SO | FV | FL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| C | VLCH | ACH | STOR | ALOB | ACH | ATOR | VOL | TRA | LEFT/RIGHT |
| TYPE | VLTP | VCH | WTOP | X-L | XNCH | RHR | LTH | ELMIN | SSTA |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

D/S OF [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | | | | | |
| 0.002325 | 2. | 2. | 2. | 3 | 0 | 0 | 0.00 | 151.21 | 595.19 |

[illegible]

| STA= | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|
| PCP NO= | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | |
| AREA= | 18.2 | 60.1 | 95.6 | 71.0 | 49.0 | |
| VEL= | 1.0 | 1.5 | 2.0 | 1.5 | 1.0 | |

[illegible]

D/S [illegible] AVE.  CROSS SECTION [illegible]

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | | | | | |
| 0.00 | 6.23 | 103.93 | 0.00 | 0.00 | 384.09 | 0.16 | 0.17 | 1.00 | 862.09 | |
| 0.55 | 3.75 | 5.56 | 0.19 | 0.005 | 0.320 | 2.050 | 2.04 | 877.73 | 941.19 | |
| 2.007253 | 30. | 183. | 55. | 1 | 0 | 0 | 0.02 | 177.45 | 511.56 | |

FLOW DISTRIBUTION FOR GECNO=  0.90  CHSEL=  803.93

| STA= | 360. | 365. | 400. | 480. | 515. | 570. |
|---|---|---|---|---|---|---|
| PCP NO= | .8 | 12.3 | 76.2 | 6.6 | 3.2 | |
| AREA= | 1.2 | 10.5 | 42.2 | 14.0 | 3.2 | |
| VEL= | 1.2 | 10.5 | 10.8 | 9.6 | 10.6 | |

[illegible]

[illegible] PHYSICAL DEPTH REQUIRED BELOW LOC OF 1277.700 WSLCH= 1284.700 AOC= 384.293 AVEL= 883.980

3301 [illegible]

3370 TOT AL UPSTREAM= 0 CFS ELTRD= 861.00 MAX ELLC= 877.70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.5 | 1.5 | 12.1 | 37.7 | 0.3 | 63.13 | 0.07 | 0.20 | 0. | 83.10 |
| 33%. | 11%. | 51%. | 4%. | 10%. | 7%. | 2%. | 1%. | 1%. | 362.00 |
| 0.55 | 1.37 | 7.13 | 0.03 | 1.000 | 0.013 | 0.000 | 0.241 | 377.70 | 345.37 |
| 3.0231?6 | 2. | 2. | 2. | 6 | 43 | 1 | -60.45 | 369.39 | 517.97 |

[illegible] SYSTEM TOTAL 50 S[illegible] 10.30 C.ELL= 543.51

STA= 340. 430. 785. 915. 913.
PCT CA 1.4 16.2 12.1 0.3
[illegible]
[illegible] P.2 1.1 7.2 0.1

SECOND 10.10

3371 TOTAL UPSTREAM= 0 CFS ELTRD= 861.00 MAX ELLC= 880.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.10 | 3.55 | 364.10 | 0.20 | 7.00 | 384.30 | 0.20 | 0.21 | 0.03 | 851.60 |
| 33%. | 30%. | 78%. | 3%. | 7%. | 3%. | 2%. | 1%. | 1%. | 900.60 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 2.0 [illegible] | [illegible] | 2. | 2. | 5 | 1 | 0 | -9.10 | 130.55 | [illegible] |

FLOW DISTRIBUTION FOR SECNO= 10.10 CMSEL= 864.10

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| PCT CA | 0.2 | 7.5 | 55.4 | 3.5 | 65.2 | 5.[illegible] | 0.7 | |
| [illegible] | 3.[illegible] | 42.5 | 156.0 | 13.[illegible] | 152.[illegible] | 15.[illegible] | [illegible] | |
| VEL= | 0.5 | 1.1 | 1.3 | 2.2 | 3.1 | 2.2 | 1.[illegible] | |

COOR= 0.300 COAV= 0.300

[illegible] 10.150

[illegible] [illegible] PT STATION= 450.1 525.0 TYPE= 1 TRISET= 75.000

[illegible] [illegible] CAPITAL AVE.] CROSS-SECTION 9

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.10 | 3.63 | 314.[illegible] | 0.10 | 1.03 | 165.32 | 0.37 | 0.32 | 0.12 | 844.31 |
| 63%. | 6%. | 6%. | 2%. | 2%. | 1%. | 1%. | 1%. | 1%. | 861.60 |
| 0.57 | 2.29 | 7.25 | 0.03 | 0.000 | 0.041 | 0.000 | 0.041 | 891.10 | 450.30 |
| 3.027547 | 150. | 150. | 150. | 2 | 2 | 0 | 0.30 | 39.71 | 510.71 |

[illegible] [illegible] ST SECNO= 10.20 CMSEL= 864.13

STA= 450. 488. 491. 530. 515. 517.

| | | | | | | |
|---|---|---|---|---|---|---|
| PER CA | 0.[illegible] | 0.[illegible] | 0.[illegible] | 0.[illegible] | 0.[illegible] | 0.1 |
| AREA= | 56.[illegible] | 14.[illegible] | 60.[illegible] | 110.[illegible] | 0.5 | |
| VEL= | 2.2 | 2.0 | 7.2 | 2.4 | 0.7 | |

SECNO 10.150

| ELEMTYP | DEPTH | CHNEL | ACTIVE | WSELK | EG | VH | HL | OLOSS | BANKELEV |
|---|---|---|---|---|---|---|---|---|---|
| TEMP | LOC | QI | VOL | QI | XNC | WP | ELMIN | SSTA | |
| SLOPE | SLOPE | XLOC | XLOB | XTRIAL | EM2 | ICONT | CORAR | TCHMID | ENDST |

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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

AREA= 34.3
VEL= 11.6

[illegible]

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 1.56 | 0.00 | 0.00 | 1.00 | 0.00 | 65.00 | 0.00 | [illegible] | 581.40 |

*SECNO 11.000

[illegible]

PRESSURE FLOW

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 0.[illegible] | 0. | [illegible] | 65. | [illegible] | [illegible] | [illegible] |

[illegible]

U/S FACE CAPITAL AVE. CROSS SECTION 9+1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.00 | 5.30 | 856.70 | 0.00 | 0.00 | 880.20 | 1.20 | 0.33 | 0.00 | 581.40 |
| [illegible] | [illegible] | [illegible] | 0. | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 0.00 | 0.000 | [illegible] | [illegible] | 0.041 | 581.40 | 557.00 |
| [illegible] | [illegible] | [illegible] | 32. | 4 | [illegible] | [illegible] | 0.00 | 13.00 | 550.00 |

FLOW DISTRIBUTION FOR SECNO= 11.00 CUSEL= 856.70

STA= 557. 530.
[illegible] 110.[illegible]
AREA= 60.9
VEL= 9.1

*SECNO 11.[illegible]

[illegible]

5470 EMBANKMENT STATIONS= 437.0 600.0 TYPE= 1 TARGET= 113.000

[illegible] U/S CAPITAL AVE. CROSS SECTION 9

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.20 | 6.88 | 883.28 | 0.00 | 0.00 | 883.45 | 0.17 | 0.71 | 0.34 | 581.40 |
| 630. | 169. | 572. | 71. | 161. | 69. | 53. | 43. | 17. | 281.40 |
| 0.36 | 1.87 | 4.14 | 1.32 | 0.080 | 0.040 | 0.060 | 0.041 | 581.40 | 487.00 |
| [illegible] | [illegible] | [illegible] | 30. | 3 | [illegible] | [illegible] | 0.00 | [illegible] | 556.00 |

FLOW DISTRIBUTION FOR SECNO= [illegible] CUSEL= [illegible]

STA= 437. 533. 557. 530. 556. 567.

| | | | | | |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| AREA= | 131.2 | 10.2 | [illegible] | 32.3 | [illegible] |
| VEL= | 1.3 | [illegible] | [illegible] | [illegible] | [illegible] |

[illegible]
*SECNO 11.210

| SECNO | DEPTH | CHANEL | CUTTING | DESIGN | CUTTING | CE | MW | TL | C.OBS | DOWN SLEW |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | OLOB | OCK | 3.OOF | FLOB | X.CI | X.CW | JOL | TWA | LEFT/RIGHT | |
| TIME | VLOB | VCK | WHOC | X.IL | X.CW | MTV | ELNIN | | 95TW | |
| ELOPE | XLOBE | XLOCI | XLOCI | 1+2 | ICONT | JORNH | TOP XE | | EWOCI | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| P | CLOS | PCH | ARCB | ALOB | ACH | ARCB | VOL | TWA | LEFT/RIGHT |
| TEMP | VLOS | VCH | VRCB | XNL | XNCH | XNR | HTN | ELMIN | SSTA |
| SLOPE | XLOSL | XLCH | XLOBR | XTRIAL | ZHP | ICONT | CORAR | TOPWID | ENDST |

7105 MINIMUM SPECIFIC ENERGY
[illegible] CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.28 | 6.47 | 892.17 | 892.17 | .00 | 893.16 | 0.50 | 0.95 | 0.00 | 891.30 |
| 630. | 137. | 480. | 3. | 10. | 76. | 3. | 45. | 20. | 891.90 |
| 0.63 | 1.11 | 6.43 | 0.80 | 0.000 | 0.040 | 0.010 | 0.042 | 082.20 | 1335.10 |
| 0.[illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECNO= 11.28 CHSEL= 892.67

| STA= | 1335. | 1340. | 1498. | 1520. | 1533. | 1556. | 1564. |
|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | |

SECNO 11.290

| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | HL | HLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| TEMP | VLOS | VCH | VRCB | XNL | XNCH | XNR | HTN | ELMIN | SSTA |
| SLOPE | XLOSL | XLCH | XLOBR | XTRIAL | ZHP | ICONT | CORAR | TOPWID | ENDST |

7105 MINIMUM SPECIFIC ENERGY
[illegible] CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.29 | 6.41 | 893.75 | 893.75 | .00 | 894.55 | 0.37 | 1.[illegible] | .00 | 892.47 |
| [illegible] | 120. | [illegible] | 2. | [illegible] | 73. | 3. | [illegible] | 20. | [illegible] |
| 0.04 | 1.19 | 0.76 | 0.80 | 0.000 | 0.040 | 0.030 | 0.042 | 089.35 | 1337.03 |
| 0.007458 | 100. | 140. | 100. | 2 | 5 | 0 | 0.00 | 226.56 | 1563.59 |

FLOW DISTRIBUTION FOR SECNO= 11.29 CHSEL= 893.75

| STA= | 1337. | 1498. | 1520. | 1533. | 1556. | 1564. |
|---|---|---|---|---|---|---|
| PERIOD= | 8.9 | 0.4 | 2.1 | 80.3 | 0.3 | |
| AREA= | 64.2 | 31.7 | 6.8 | 74.0 | 2.7 | |
| VEL= | 0.9 | 1.1 | 2.0 | 6.0 | 0.3 | |

SECNO 11.300

| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | HL | HLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | CLOS | CCH | ARCB | ALOB | ACH | ARCB | VOL | TWA | LEFT/RIGHT |
| TEMP | VLOS | VCH | VRCB | XNL | XNCH | XNR | HTN | ELMIN | SSTA |
| SLOPE | XLOSL | XLCH | XLOBR | XTRIAL | ZHP | ICONT | CORAR | TOPWID | ENDST |

7105 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| VALLEY SECTION | | | | | | CROSS SECTION | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.30 | 6.47 | 894.94 | 894.94 | 0.00 | 895.40 | 0.04 | 0.95 | 0.00 | 893.60 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 0.04 | 1.19 | 6.63 | 0.00 | 0.030 | 0.040 | 0.080 | 0.042 | 890.30 | 1336.09 |
| 0.007058 | 100. | 140. | 100. | 2 | 5 | 0 | 0.00 | 227.86 | 1565.95 |

FLOW DISTRIBUTION FOR SECNO= 11.300 CHSEL= 894.94

| STA= | 1335. | 1340. | 1498. | 1520. | 1533. | 1556. | 1564. |
|---|---|---|---|---|---|---|---|
| PERIOD= | 0.0 | 8.9 | 8.3 | 2.1 | 79.1 | 0.4 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| AREA= | 0.3 | 69.2 | 22.6 | 6.9 | 75.2 | 2.3 |
| VEL= | 0.3 | 0.9 | 1.6 | 1.9 | 6.6 | 0.3 |

*SECNO 11.310

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.31 | 4.17 | 392.11 | 392.93 | 0.00 | 396.40 | 0.53 | 1.00 | 0.03 | 396.40 |
| 150. | 248. | 4... | 3. | 12. | 75. | 7. | 44. | 27. | 395.2- |
| 1.03 | 1.17 | 1.85 | 1.79 | 2.0[illegible] | 2.0[illegible] | 2.0[illegible] | 0.[illegible] | 291.30 | 1554.0[illegible] |
| 0.0[illegible]3105 | 110. | 204. | 110. | 3 | 3 | 1 | 0.00 | 230.70 | 1554.75 |

[illegible] [illegible] [illegible] [illegible] [illegible]

| | | | | | | |
|---|---|---|---|---|---|---|
| [illegible] | 1332. | 1740. | 1741. | 1326. | 1535. | 1556. | 1363. |
| AREA= | 0.3 | 71.5 | 9.9 | 2.2 | 76.5 | 0.4 |
| AREA= | 0.6 | 80.7 | 24.0 | 7.3 | 77.2 | 3.5 |
| VEL= | 0.3 | 0.9 | 1.6 | 1.9 | 6.3 | 0.3 |

* [illegible] 1,382

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.32 | 4.66 | 396.96 | 396.32 | 0.00 | 397.31 | 0.35 | 1.00 | 0.03 | 393.60 |
| 150. | 133. | 532. | 2. | 92. | 76. | 3. | 43. | 27. | 896.20 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 0.0[illegible]4913 | 410. | 93. | 110. | 4 | 2 | 1 | 0.00 | 152.[illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECNO= 11.32 CHSEL= 396.96

| | | | | | | |
|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| AREA= | 51.8 | 25.2 | 7.0 | 75.7 | 0.4 |
| AREA= | 51.8 | 25.2 | 7.0 | 75.7 | 3.1 |
| VEL= | 1.1 | 1.7 | 1.9 | 6.6 | 0.8 |

*SECNO 11.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11.90 | 3.57 | 397.97 | 0.00 | 0.00 | 690.40 | 0.59 | 3.97 | 0.00 | 396.40 |
| [illegible] | 2. | 2[illegible] | [illegible] | 2[illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 0.07 | 1.33 | 5.95 | 1.25 | 0.030 | 0.040 | 0.000 | 0.042 | 894.40 | 397.0[illegible] |
| 0.0[illegible]9538 | 110. | 163. | 110. | 2 | 0 | 0 | 0.02 | 70.00 | 430.0[illegible] |

FLOW DISTRIBUTION FOR SECNO= 11.90 CHSEL= 397.97

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STA= | 587. | 365. | 495. | 130. |
| AREA= | 41.1 | 42.2 | 8.0 |
| AREA= | 26. | 67.7 | 15.2 |
| VEL= | 1.2 | 6.0 | 1.8 |

*SECNO 12.000

| SECID | DEPTH | CHSL. | CHVL | ISELK | ES | PV. | ML | QLOSS | PAVE ELEV |
|---|---|---|---|---|---|---|---|---|---|
| | WLC | WSL | QTOT | QLOS | ASW | AVDF | VOL | TWP | LEFT/BLOFT |
| SLOPE | WLCOL | RLCI | WLJOB | ITRIAL | 142 | 1POINT | COMP | TOPWID | ERRST |

3270 ORIAL DESIGNATION= 3 NEW E.1200= 394.90 RNA BLOB= 654.40

3420 ENCROACHMENT STATIONS= 340.0 430.0 TYPE= 1 TARGET= 70.200

TOP OF [illegible]  CROSS SECTION 70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.30 | 6.68 | 894.73 | 0.00 | 0.30 | 899.03 | 3.62 | 0.01 | 0.01 | 896.45 |
| 0.4. | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 15. | [illegible] | [illegible] | [illegible] |
| 0.37 | 1.27 | 5.98 | [illegible] | 0.[illegible]0 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | -92.79 | [illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECTION= 12.00  CHSEL= 896.06

| STA | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|
| [illegible] | 6.0 | [illegible] | [illegible] | |
| AREA= | 27.0 | 909.0 | 15.[illegible] | |
| VEL= | 1.1 | 5.6 | 1.[illegible] | |

[illegible]

[illegible] PEAK FLOW= [illegible] WS ELEV= 894.62

BRIDGE DISCHARGE FOR STATION= 460.3  450.5  TYPE= 2  TARGET= 70.300

[illegible]  CROSS SECTION 70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.70 | 3.92 | 197.72 | 0.10 | 0.00 | 898.58 | 0.60 | 0.17 | [illegible] | 895.42 |
| 630. | 30. | 572. | 20. | 23. | 84. | 13. | 49. | 22. | 896.90 |
| 0.27 | 1.45 | 0.62 | 1.56 | 0.083 | 0.760 | 0.330 | 0.042 | 896.60 | 360.30 |
| [illegible] | [illegible] | [illegible] | [illegible] | 2 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECTION= 12.00  CHSEL= 897.92

STA= 360.  365.  415.  460.

| | | | | |
|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | |
| AREA= | [illegible] | 15.[illegible] | 12.7 | |
| VEL= | [illegible] | [illegible] | 1.3 | |

SECNO 12.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.20 | 5.43 | 898.68 | 0.00 | 0.20 | 899.09 | 2.20 | 0.45 | 0.05 | 896.40 |
| 670. | 41. | 551. | 20. | 66. | 69. | 30. | 69. | 29. | 897.[illegible] |
| 0.61 | 0.79 | 1.[illegible] | 1.77 | 3.030 | 2.04[illegible] | 0.06 | 0.252 | 893.40 | 333.59 |
| 0.[illegible] | [illegible] | [illegible] | 100. | 2 | [illegible] | 2 | 0.00 | 1[illegible].7 | 44[illegible].36 |

FLOW DISTRIBUTION FOR SECTION= 12.20  CHSEL= 898.58

| STA= | 333. | 373. | 415. | 466. |
|---|---|---|---|---|
| FSS [illegible]= | 0.[illegible] | 57.6 | [illegible].5 | |
| AREA= | 45.9 | 146.[illegible] | 55.3 | |
| VEL= | 0.3 | 3.3 | 0.8 | |

SECNO 12.90

[illegible] HAS CHANGED [illegible] TRIAL WIDTHS

BRIDGE ENCROACHMENT STATIONS= 250.0  320.0  TYPE= 2  TARGET= 70.300

[illegible]  CROSS SECTION 70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 630. | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 897.30 |
| [illegible] | 32 | 7.28 | 1.59 | 0.300 | 0.040 | [illegible].080 | 0.04[illegible] | 894.60 | 850.00 |

0.007561 100. 170. 200. S 1 3 3.00 70.00 370.00

FLO. DISTRIBUTION FOR SECTION= 12.90 CHSEL= 100.00

| STA= | 200. | 240. | 280. | 320. |
|---|---|---|---|---|
| FLOW= | 14.1 | 77.9 | 29.1 | |
| VEL= | 1.5 | 2.3 | 1.3 | |

SECTION 1.00

CRITICAL DISCHARGE= 1 CRITICAL= 85.62 MAX FLOW= 83.40

3470 INCREMENT STATION= 251.0 320.0 TYPE= 1 TARGET= 77.000

| | | | | | CROSS SECTION PC | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 3.71 | 399.33 | 0.00 | 0.00 | 099.70 | 0.71 | 0.02 | 0.13 | 897.30 |
| 630. | 40. | 497. | 123. | 23. | 77. | 41. | 50. | 23. | 897.10 |
| 0.59 | 2.04 | 5.77 | 3.01 | 0.030 | 0.042 | 0.062 | 0.542 | 594.60 | 250.00 |

FLO. DISTRIBUTION FOR SECTION= 13.00 CHSEL= 099.99

| STA= | 230. | 270. | 290. | 320. |
|---|---|---|---|---|
| FLOW= | 14.3 | 77.7 | 13.0 | |
| VEL= | 2. | 3.4 | 1.0 | |

SECTION 3.500

| SECTION | DEPTH | CHSEL | CHINV | LSEL | ES | HV | HL | CLOSS | ROW ELEV |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | | | |
| TOP | 4.00 | 100 | 0030 | 4HL | N.CH | 30K | HT= | ELOSS | SSTA |
| BLOB | 4.00 | 100 | 0030 | STRIAL | 1.2 | FCONT | 20K1F | TOT.TD | ELOSS |

[illegible] CRITICAL DEPTH= 290.30 QX ELLC= 193.1

3010 2' TRIALS ATTEMPTED MSL=CHSEL

3095 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

[illegible] ENERGY= 290.. 290.0 TYPE= 1 SHEET= 70.030

U/S 2ND DAM DVE CAPITAL AVE. CROSS SECTION PC

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.10 | 3.40 | 399.20 | 899.20 | 0.30 | 900.05 | 0.05 | 0.03 | 0.13 | 897.50 |
| 630. | 46. | 493. | 00. | 24. | 59. | 37. | 50. | 23. | 897.10 |
| 0.59 | 2.23 | 4.27 | 4.04 | 0.050 | 0.061 | 0.050 | 0.542 | 594.50 | 250.10 |
| 0.0 5250 | 2. | 2. | 2. | 20 | 18 | L | -7.30 | 70.10 | 320.30 |

FLOW DISTRIBUTION FOR SECTION= 13.70 CHSEL= 899.24

| STA= | 230. | 270. | 290. | 320. |
|---|---|---|---|---|
| FLOW= | 7.5 | 78.3 | 14.3 | |
| VEL= | 2.5 | 55.2 | 35.0 | |

SECTION 13.900

3201 HV CHANGE ' ORE TRAN RUNS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 630. | 129. | 341. | 102. | 72. | 53. | 98. | 14. | 35. | 69.10 |
| 5.70 | 1.75 | 3.91 | 1.74 | 0.012 | 0.370 | 3.010 | 3.042 | 196.52 | 323.45 |
| 0.304642 | 120. | 123. | 122. | 2 | 0 | 0 | 0.70 | 125.45 | 349.41 |

FLOW DISTRIBUTION FOR SECNO= 12.00 ENGEL= 900.70

STA= 324. 250. 273. 287. 340. 349.
% A= 5.2 20.3 54.1 25.1 0.3

SECNO 14.000

3201 MODEL STREAMLINE= 0 MIN ELTRO= 397.00 MAX ELLO= 396.50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 14.00 | 4.20 | 830.70 | 0.03 | 4.00 | 901.00 | 0.30 | 0.01 | 7.00 | 398.07 |
| 630. | 143. | 302. | 179. | 73. | 51. | 93. | 55. | 23. | 86W.30 |
| 5.71 | 1.74 | 3.93 | 1.73 | 0.011 | 0.370 | 3.010 | 3.042 | 196.52 | 323.45 |
| 0.304642 | 2. | 2. | 2. | 2 | 0 | 0 | -4.73 | 125.17 | 349.41 |

FLOW DISTRIBUTION FOR SECNO= 14.00 ENGEL= 900.70

| | | | | | |
|---|---|---|---|---|---|
| 5.2 | 22.7 | 41.7 | 29.0 | 0.4 | |
| 2.1 | 72.7 | 91.2 | 97.6 | 3.9 | |
| 0.7 | 2.0 | 6.0 | 2.0 | 0.7 | |

SECNO 14.100

3201 MODEL STREAMLINE= 0 MIN ELTRO= 397.00 MAX ELLO= 396.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 0. | 3.01 | 0. | 0.00 | 0.00 | 0. | 0.01 | 0.00 | 0.00 | |
| 630. | 164. | 304. | 178. | 74. | 55. | 94. | 30. | 23. | 159.13 |
| 0.70 | 1.53 | 3.03 | 1.69 | 0.010 | 0.040 | 0.002 | 0.072 | 197.00 | 325.03 |
| 0.305238 | 2. | 2. | 2. | 0 | 0 | 0 | -4.70 | 126.29 | 349.92 |

FLOW DISTRIBUTION FOR SECNO= 14.0 ENGEL= 900.7

| | | | | | | |
|---|---|---|---|---|---|---|
| STA= | 324. | 250. | 273. | 287. | 340. | 349. |
| PE= | 5.2 | 22.7 | 41.7 | 29.0 | 0.4 | |
| ABE= | 2.1 | 72.7 | 91.2 | 97.6 | 3.9 | |
| VBE= | 0.7 | 2.0 | 6.0 | 2.0 | 0.7 | |

SECNO 14.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 14.20 | 4.261 | 90.35 | 5.01 | 0.00 | 90.51 | 0.15 | 0.42 | 0.02 | 99.00 |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| 630. | 150. | 55. | 190. | 2 | 0 | 0 | 0.00 | 111.32 | 359.00 |

FLOW DISTRIBUTION FOR RESNO= 14.20 CWSEL= 902.25

| | | | | | | |
|---|---|---|---|---|---|---|
| CHNL= | 0. | 14.2 | 47.4 | 30.2 | 4.2 | |
| LOB= | 0. | 12.2 | 42.2 | 28.2 | 17.3 | |
| VEL= | 0.7 | 4.5 | 5.3 | 5.3 | 0.7 | |

*SECNO 4.000

| SLOPE | KLOB | KCHN | XLOBF | FTRIAL | IWR | ZCH.T | CORAR | TOPWID | ENDST |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

3493 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLOB= 903.30 ELROB= 903.00

D/S FACE FOOTBRIDGE CROSS SECTION 7A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 0.72 | 0.50 | 4.67 | 5.00 | 3.70 | 3.067 | 0.002 | 0.21 | 196.20 | 1121.00 |
| .0111E+12 | 150. | 150. | 150. | 2 | 0 | 3 | 0.00 | 72.00 | 1256.00 |

FLOW DISTRIBUTION FOR RESNO= 14.00 CWSEL= 902.00

CHNL= 119.6
VEL= 5.3

SPECIAL BRIDGE

| SM XS | XTOP | COPC | PDLE | PNC | PUP | DAREA | SS | ELCHD | ELCHD |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 1.58 | 3.03 | 79.00 | 13.00 | 0.00 | 53.00 | 1.20 | 897.10 | 897.10 |

*ELCHD 15.000
*PRESSURE ONE*PREDP FLO.

| PPRS | EGLWC | VH | QWEIR | QBR | ZAREA | TRPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 904.11 | 903.39 | 0.72 | 60. | 372. | 63. | 63. | 901.30 | 903.30 |

3493 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLOB= 903.30 ELROB= 903.00

D/S FACE FOOTBRIDGE CROSS SECTION 7A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.00 | 5.83 | 903.62 | 0.30 | 0.00 | 903.71 | 0.09 | 1.49 | 3.00 | 901.20 |
| 580. | 0. | 630. | 0. | 0. | 262. | 0. | 52. | 36. | 931.70 |
| 0.00 | 1.2 | 0. | 0. | 0. | 0. | 0 | 0.57 | 73.00 | 1345.00 |

FLOW DISTRIBUTION FOR RESNO= 13.00 CWSEL= 903.02

STA= 1150. 1246.
PER C= 100.0
AREA= 262.5
VEL= 2.4

*SECNO 15.2[illegible]

VALLEY SECTION CROSS SECTION 7

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.20 | 6.62 | 903.72 | 0.00 | 0.00 | 903.87 | 0.15 | 0.15 | 0.02 | 900.60 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 0.75 | 1.14 | 3.72 | 1.32 | 0.[illegible] | 0.[illegible] | 0.[illegible] | 0.[illegible] | [illegible] | [illegible] |
| 0.301[illegible] | [illegible] | [illegible] | [illegible] | 2 | [illegible] | 0 | 0.[illegible] | [illegible] | 257.37 |

FLOW DISTRIBUTION FOR SECNO= 15.20 CWSEL= 903.72

STA= 1152. 1163. 1185. 1210. 1246. 1257.
PER C= 2.4 11.9 [illegible] 17.6 [illegible]
AREA= 19.4 53.5 109.6 90.5 17.7
VEL= 3.5 [illegible] 3.7 1.3 0.[illegible]

*SECNO [illegible]

[illegible] CROSS SECTION 6087

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 15.90 | 6.18 | 903.38 | 0.00 | 0.00 | 904.00 | 0.21 | 0.20 | 0.02 | 901.20 |
| 630. | 5[illegible]. | 431. | 310. | 61. | 100. | 57. | 54. | 25. | 901.30 |
| 0.75 | 1.[illegible] | [illegible] | [illegible] | 0.[illegible] | 0.[illegible] | 0.[illegible] | [illegible] | [illegible] | [illegible] |
| 0.[illegible] | 1[illegible]. | 12[illegible]. | 125. | 2 | 0 | 0 | 0.[illegible] | [illegible] | [illegible] |

FLOW DISTRIBUTION FOR SECNO= 15.90 CWSEL= 903.08

STA= 1152. 1163. 1185. 1210. 1246. 1257.
PER C= 1.3 91.[illegible] 63.5 17.9 0.8
AREA= 13.5 47.3 99.0 80.1 7.1
VEL= 0.3 1.5 4.5 1.4 0.7

*SECNO 16.000

[illegible] NORMAL BRIDGE, RC= 3 MIN ELTRC= 899.50 MAX ELLC= 897.70

TOP OF DAM CROSS SECTION 6087

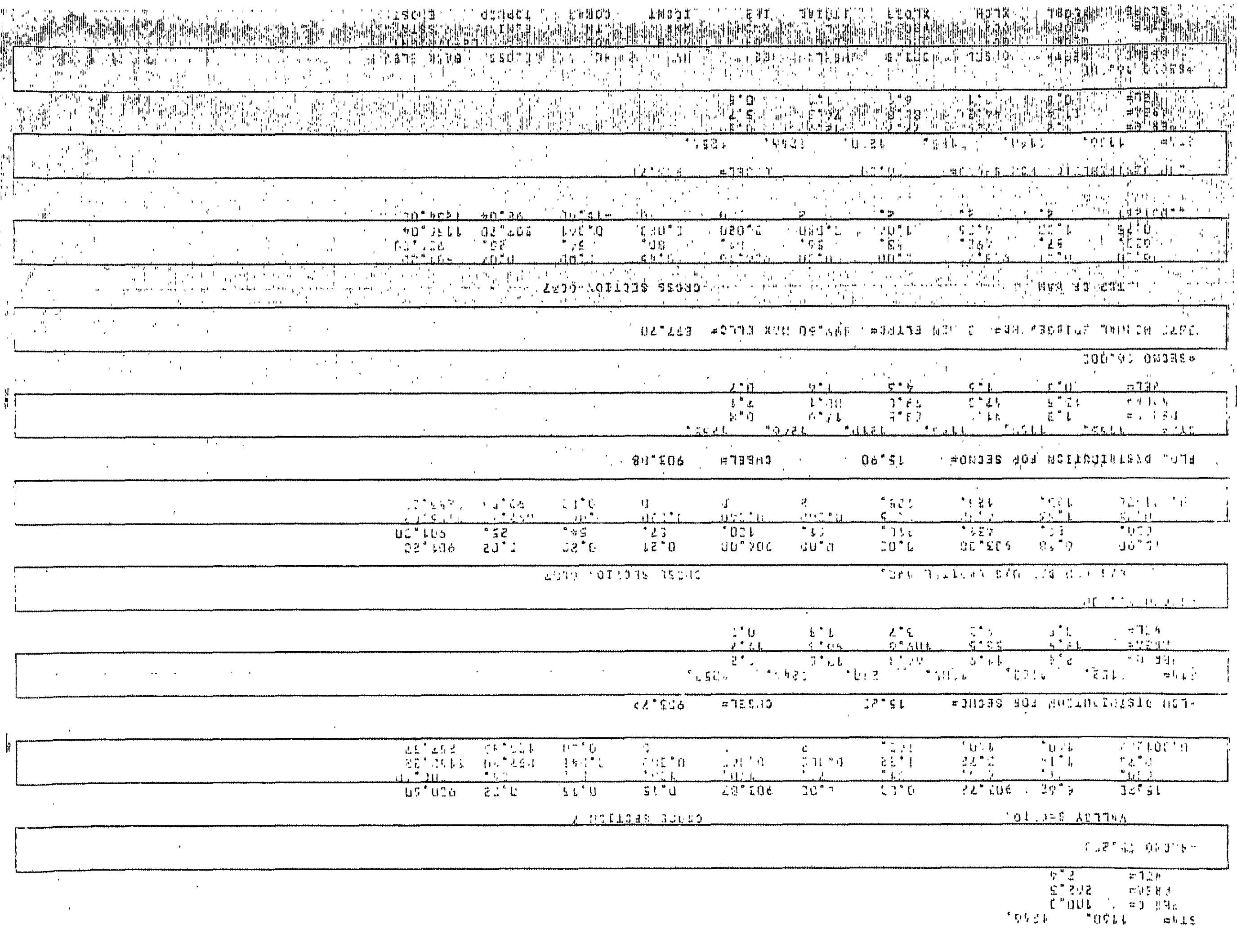
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.07 | [illegible] |
| 623. | 57. | 490. | 53. | 56. | 61. | 80. | 57. | 25. | [illegible] |
| 0.75 | 1.[illegible] | 4.[illegible] | 1.0[illegible] | 0.080 | 0.020 | 0.0[illegible] | 0.[illegible] | 897.70 | 1136.04 |
| [illegible] | 4. | 4. | 4. | 2 | [illegible] | [illegible] | -15.[illegible] | 98.04 | 1234.0[illegible] |

FLOW DISTRIBUTION FOR SECNO= [illegible] CWSEL= [illegible]

STA= 1150. 1160. 1185. 1210. 1246. 1257.
PER C= [illegible] [illegible] [illegible] [illegible] [illegible] 0.[illegible]
AREA= [illegible] 44.[illegible] 8[illegible] 74.3 5.7
VEL= 0.[illegible] [illegible] 6.1 1.[illegible] 0.5

*SECNO 16.[illegible]

| SECNO | DEPTH | CWSEL | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | BACK SLOPE |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| SLOPE | [illegible] | XLCH | XLOB | ITRIAL | IRB | ICONT | CONAR | TOPWID | ENDST | |



3570 NORMAL DEPTH(FEET)= 0.70 CRITICAL DEPTH(FEET)= 1.50 TOP WIDTH= 202.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.10 | 6.20 | 905.00 | 1.00 | 0.00 | 904.30 | 0.50 | 3.00 | 2.02 | 901.27 |
| 623. | 69. | 305. | 966. | 65. | 67. | 92. | 94. | 25. | 901.00 |
| 0.25 | 1.11 | 2.92 | .37 | 0.00 | 0.00 | .0000 | .0000 | .00 | 51.4 |
| 1.710430 | 1. | 1. | 1. | 2 | 0 | 0 | -99.00 | 104.75 | 253.56 |

FLOW DISTRIBUTION FOR SECNO= 16.10 QWSEL= 903.95

| | | | | | |
|---|---|---|---|---|---|
| STA= | 1035. | 1000. | 1011. | 1025. | 1050. |
| FLOW= | 95.0 | 40.3 | 10.3 | 41.5 | 3.2 |
| VEL= | 4.0 | 1.7 | 0.4 | 1.8 | 0.5 |

WSEL= 3 16.030

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.97 | 6.20 | 905.03 | 1.00 | 0.00 | 904.31 | 0.50 | 3.00 | 1.73 | 902.30 |
| 623. | 75. | 307. | 972. | 62. | 67. | 92. | 94. | 25. | 901.00 |
| 0.26 | 0.80 | 2.93 | .37 | 0.00 | 0.000 | 0.000 | 0.000 | 692.50 | 1009.15 |
| 1.732159 | 200. | 220. | 200. | 2 | 0 | 0 | 0.00 | 92.21 | 1079.75 |

FLOW DISTRIBUTION FOR SECNO= 16.00 QWSEL= 905.03

| | | | | | |
|---|---|---|---|---|---|
| STA= | 1011. | 1035. | 1060. | 1085. | 1100. |
| FLOW= | 3.5 | 94.6 | 1.9 | | |
| AREA= | 27.7 | 134.5 | 17.3 | | |
| VEL= | 0.8 | 4.4 | 0.7 | | |

WSECNO 16.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.97 | 6.20 | 905.03 | 0.00 | .00 | 905.30 | 0.50 | 0.53 | 1.73 | 903.30 |
| 630. | 77. | 315. | 5. | 15. | 120. | 6. | 56. | 25. | 901.00 |
| 2.77 | 0.80 | 5.11 | 0.46 | 0.000 | 0.040 | 0.000 | 0.041 | 698.50 | 2010.35 |
| 0.003639 | 200. | 220. | 200. | 2 | 0 | 0 | 0.50 | 74.93 | 1085.29 |

FLOW DISTRIBUTION FOR SECNO= 15.97 QWSEL= 905.00

| | | | | | |
|---|---|---|---|---|---|
| STA= | 1011. | 1035. | 1060. | 1085. | 1100. |
| FLOW= | 1.9 | 97.3 | 0.8 | | |
| AREA= | 16.8 | 135.9 | 7.1 | | |
| VEL= | 0.8 | 5.1 | 0.7 | | |

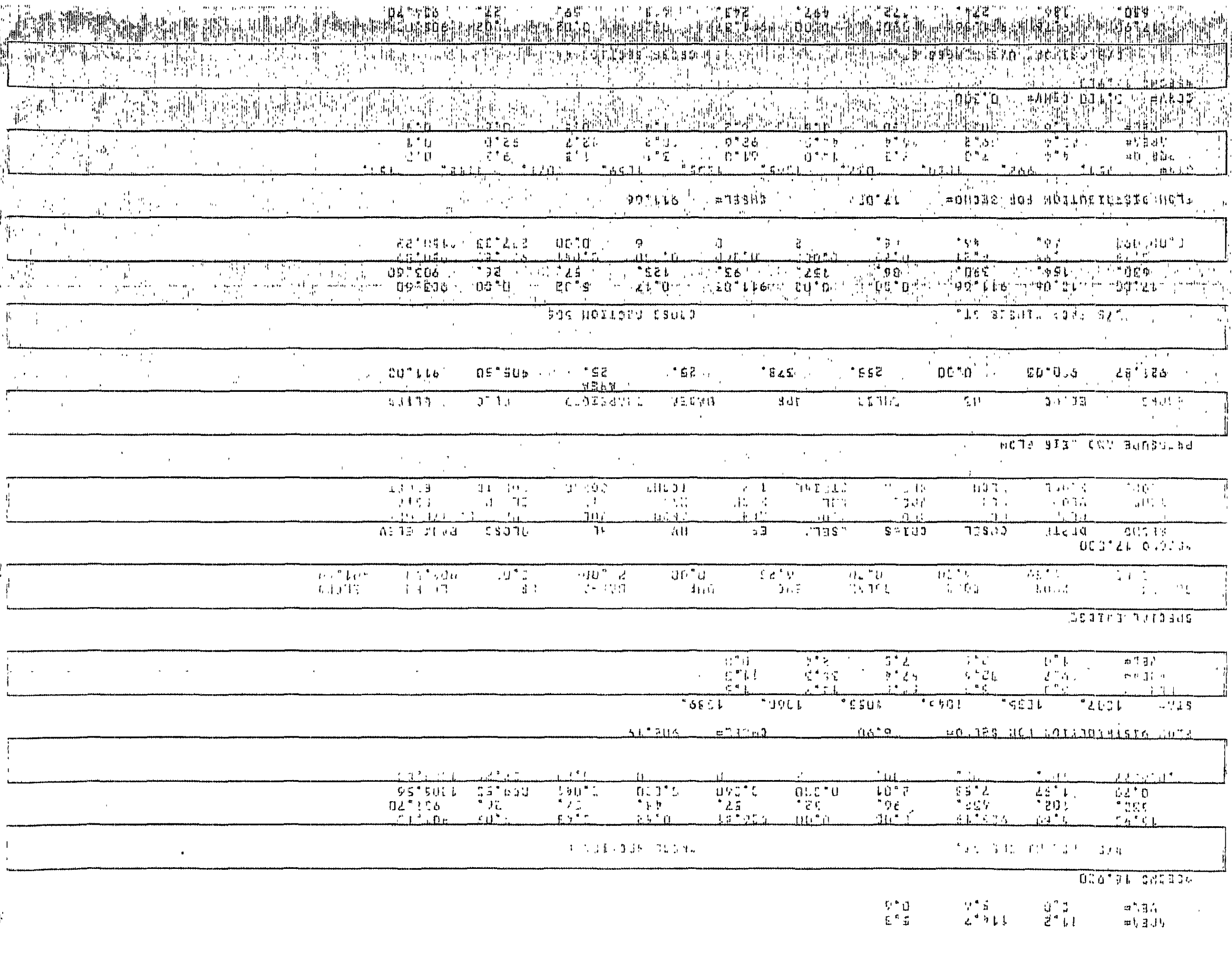
CCTW= .300 CSAVE= 0.500

WSECNO 16.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.83 | 6.25 | 905.05 | 0.70 | 1.00 | 904.26 | 0.64 | 0.97 | 0.52 | 904.10 |
| 631. | 79. | 319. | 3. | 11. | 119. | 5. | 56. | 20. | 903.10 |
| 0.78 | 0.79 | 5.35 | 0.03 | 0.000 | 0.045 | 0.000 | 0.041 | 650.50 | 1019.50 |
| 0.005286 | 200. | 220. | 250. | 2 | 50 | 0 | 0.00 | 68.69 | 1082.27 |

FLOW DISTRIBUTION FOR SECNO= 15.50 CWSEL= 903.85

| | | | | | |
|---|---|---|---|---|---|
| STA= | 1011. | 1035. | 1060. | 1085. | 1100. |
| FLOW= | 1.4 | 98.1 | 0.5 | | |



| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.64 | 0.37 | 1.13 | 0.37 | 0.030 | 3.040 | 3.090 | 0.043 | 902.10 | 914.17 |
| 0.000052 | 428. | 428. | 120. | 2 | 0 | 0 | 0.03 | 262.00 | 1176.15 |

FLOW DISTRIBUTION FOR SEC 0= 0.00 CHSEL= 911.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.70 | 0.73 | 911.11 | 3.07 | 1.00 | 911.17 | 0.12 | 0.07 | 0.05 | 905.00 |
| 623. | 155. | 329. | 155. | 497. | 199. | 465. | 59. | 27. | 934.70 |
| 0.84 | 0.31 | 1.46 | 0.31 | 0.060 | 0.020 | 0.030 | 0.041 | 902.13 | 914.17 |
| 0.000046 | 2. | 2. | 2. | 1 | 0 | 0 | -43.40 | 261.97 | 1176.14 |

FLOW DISTRIBUTION FOR SEC0= 12.00 CHSEL= 911.65

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ITN= | 914. | 916. | 950. | 992. | 1057. | 1067. | 1170. | 1172. | 1173. | 1176. |
| % K 0= | 2.0 | 1.6 | 7.2 | 19.4 | 52.6 | 3.6 | 11.0 | 6.3 | 0.3 | |
| | | | | | | | | | | |
| | 2.7 | 2.0 | 0.3 | 0.4 | 1.7 | 0.4 | 0.4 | 0.3 | 0.1 | |

*SEC.0 10.100

1370 NORMAL BRIDGE,ORD= 0 HIT ELTRD= 904.70 MAX ELLC= 902.10

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.70 | 9.76 | 911.86 | 3.00 | 0.00 | 911.87 | 0.21 | 0.05 | 0.00 | 905.00 |
| 630. | 259. | 285. | 190. | 497. | 199. | 465. | 39. | 27. | 934.70 |
| 0.52 | 0.42 | 1.13 | 0.51 | 0.00 | 0.060 | 0.060 | 0.021 | 902.10 | 914.17 |
| 0.000019 | 2. | 2. | 2. | 1 | 0 | 0 | -43.40 | 261.99 | 1176.15 |

FLOW DISTRIBUTION FOR SEC0= 18.30 CHSEL= 911.96

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ITN= | 914. | 916. | 950. | 992. | 1057. | 1067. | 1170. | 1172. | 1173. | 1176. |
| % K 0= | 1.0 | 2.5 | 9.0 | 24.2 | 55.7 | 3.2 | 10.0 | 5.2 | 1.7 | |
| | 1.0 | 66.4 | 164.0 | 404.7 | 199.4 | 60.3 | 210.2 | 100.5 | 24.1 | |
| | 0.1 | 0.2 | 0.6 | 1.5 | 1.7 | 0.5 | 0.5 | 0.6 | 0.2 | |

*SECND 18.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.90 | 2.31 | 1.03 | 1.61 | 4.02 | 1.35 | 2.96 | 0.75 | 0.51 | 934.40 |
| 0.02 | 0.55 | 1.03 | 0.54 | 0.003 | 0.040 | 0.030 | 0.046 | 904.11 | 1719.99 |
| 0.00 | 2.00 | 1.00 | 0.00 | 0 | 0 | 0 | 0.00 | 262.52 | 2003.00 |

STA= 1725. 1764. 1862. 1874. 1895. 1897. 1950. 1963. 2010.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SECT C= | 3.4 | 23.0 | 3.5 | 34.3 | 0.3 | 0.3 | 17.1 | 7.7 |
| AREA= | 85.1 | 25.7 | 33.8 | 135.0 | 6.1 | 60.3 | 193.1 | 34.8 |
| VEL= | 0.4 | 0.6 | 0.7 | 1.8 | 0.5 | 0.9 | 0.2 | 0.2 |

TYPE OF SECTION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STATION | ELEV | LEFT | CHORD | WEIGHT | .D | .V | | FLOW | TOP WIDTH |
| | 5.0 | FLOW | FLOW | AREA | SEC | AREA | VEL | | LEFT/RIGHT |
| TIRE | W.P. | .WCH | W.CH | MAN | MEAN | MAX | .TW | FLOW% | DATA |
| S_OBJ | X_O | X_CI | X_OBJ | TRIAL | END | CORR | CORAT | TOPPED | E'OST |

TOP OF L/S ESTATE ROAD CROSS SECTION 3C

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 18.70 | 6.37 | 912.17 | 0.30 | 0.03 | 912.25 | 0.11 | 0.30 | 0.02 | 903.90 | |
| [illegible] | 177. | [illegible] | 154. | [illegible] | [illegible] | 250. | 90. | 8. | 203.[illegible] | |
| 1.16 | 0.56 | 1.20 | 0.30 | 0.175 | 0.058 | 0.213 | 0.341 | 903.90 | 1 11.56 | |
| 0.000455 | 101. | 101. | 91. | 2 | | 1 | 0.20 | 546.73 | 193.14 | |

FLOW DISTRIBUTION FOR SECTION= 13.73 CHSEL= 912.17

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SECT C= | 1.1 | 11.0 | 0.3 | 22.2 | 1.3 | 4.0 | 2.5 | |
| AREA= | 158.7 | 227.5 | 704.7 | 33.5 | 50.6 | 25.0 | 205.5 | |
| VEL= | 0.4 | 0.5 | 0.0 | 5.7 | 1.4 | 1.1 | 0.2 | |

S/E ESTATE ROAD LOSS SECTION 3C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.62 | 8.42 | 912.22 | 0.00 | 0.30 | 912.32 | 0.10 | 0.04 | 0.00 | 903.90 |
| 550. | 132. | 303. | 144. | 505. | 84. | 295. | 96. | 42. | 903.90 |
| 1.11 | 1.30 | 1.32 | 0.39 | [illegible] | [illegible] | 0.11 | [illegible] | [illegible] | 1.[illegible] |
| 0.205425 | 59. | 60. | 99. | 1 | 2 | 0 | 0.00 | 548.49 | 193.14 |

FLOW DISTRIBUTION FOR SECTION= 18.00 CHSEL= 912.22

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SECT C= | 10.5 | 13.4 | 0.1 | 41.1 | 11.2 | 4.3 | 6.9 | |
| AREA= | 105.4 | 234.1 | 125.9 | 83.9 | 50.3 | 39.2 | 213.3 | |
| VEL= | 0.4 | 0.5 | 0.0 | 5.0 | 1.4 | 1.0 | 0.2 | |

1490 NH SERD USEL

3370 NORMAL DISCHARGE,WR= 25 01% BLOCK= 903.90 MAX ELEV= 907.30

D/S PACE ESTATE ROAD CROSS SECTION 3C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 13.62 | 1.42 | 912.27 | 0.00 | 0.30 | 912.33 | 2.04 | 2.03 | 0.00 | 903.37 |
| 550. | 253. | 157. | 120. | 477. | 45. | 219. | 96. | 42. | 903.30 |
| 1.11 | 1.16 | 1.08 | 0.32 | [illegible] | [illegible] | 0.12 | [illegible] | [illegible] | [illegible] |
| 0.000329 | 1. | 1. | 1. | 1 | 0 | 1 | -146.65 | 550.70 | 1903.16 |

FLOW DISTRIBUTION FOR SECTION= 11.93 CHSEL= 912.27

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SECT C= | 2.0 | 5.4 | 0.1 | 45.4 | 16. | 212.0 | | |
| AREA= | 174.2 | 242.6 | 2.3 | 43.4 | 16. | 212.0 | | |

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VEL= 0.7 0.5 0.0 2.7 1.8 0.3

*SECNO 10.305

[illegible]

D/S RAIL ESTATE ROAD CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.00 | 7.34 | 912.34 | 0.00 | 0.30 | 992.39 | 3.05 | 0.06 | 0.00 | 905.30 |
| 0. | .3 | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 3. |
| 1.19 | 0.24 | 1.12 | 0.13 | 3.154 | .021 | 0.124 | 0.349 | 267.72 | 1334.52 |
| 0.200720 | 4. | 4. | 0. | 2 | 1 | 0 | 25.25 | 357.25 | 1331.19 |

FLOW DISTRIBUTION FOR SECNO= 10.30 CHSEL= 912.34

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | | |
| [illegible] | 6.2 | 13.0 | 5.1 | 32.0 | 2.2 | 14.4 | |
| Q*EL= | 117.0 | 254.6 | 65.1 | 42.3 | 7.1 | 225.7 | |
| V*EL= | 0.7 | 1.0 | 0.0 | 3.2 | 1.2 | 0.5 | |

[illegible]
*SEC 0 10.30

D/S ESTATE ROADWAY CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.50 | 7.32 | 912.32 | 0.00 | 0.00 | 992.40 | 0.02 | 0.30 | 0.71 | 905.30 |
| 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 1.0 | 0.30 | 3.50 | 0.09 | .027 | 0.135 | 0.127 | 3.744 | 5.4.30 | 1335.23 |
| 1.10012 | 1. | 1. | 1. | 2 | 1 | 0 | 0.00 | 357.51 | 1331.19 |

FLOW DISTRIBUTION FOR SECNO= 10.10 CHSEL= 912.32

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| S*E= | 1155. | 1506. | 1666. | 1695. | 1705. | 1712. | 1718. | 1810. |
| [illegible] | 12.2 | 20.7 | 0.1 | 42.9 | 10.0 | 5.7 | 0.1 | |
| Q*EL= | 185.2 | 251.3 | 107.4 | 78.2 | 45.1 | 29.0 | 233.2 | |
| V*EL= | 0.6 | 0.3 | 0.0 | 3.5 | 1.4 | 1.1 | 0.2 | |

[illegible]
*ELSEC=0.200

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| S*E*D | DEPTH | F.SEC | LEIMS | HSSL= | SC | *V | FL | DLOSS | SAVE ELEV | |
| | XLOS | CCH | CROD | XLOB | XCH | XROB | WSEL | TWA | LEFT/RIGHT | |
| ZERO | XLOS | XLCH | XROD | XNL | XNCH | XNR | WSEL | ELMIN | SETT | |
| CLOSE | XLOSE | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CONVR | TOPWID | SHOST | |

D/S CAR 90 FT D/S ESTATE ROAD CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 19.20 | 7.45 | 912.38 | 0.00 | 0.00 | 912.44 | 0.39 | 0.04 | 0.00 | 905.70 |
| 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 1.30 | 0.42 | 3.36 | 0.11 | 0.109 | 0.135 | 0.154 | 0.04 | 904.42 | 1334.02 |
| 1.010013 | 1. | 1. | 1. | 2 | 0 | 1 | 1.00 | 351.17 | 1331.19 |

FLOW DISTRIBUTION FOR SECNO= 19.20 CHSEL= 912.38

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| S*E= | 1334. | 1339. | 1554. | 1665. | 1695. | 1693. | 1707. | 1717. | 1758. | 1814. |
| PE*= | 1.5 | 21.1 | 22.1 | 2.0 | 0.1 | 53.5 | 2.4 | 0.1 | 0.6 | 1.4 |
| VEL= | 0.3 | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.2 | 0.0 | 0.2 | 0.3 |

*SECNO 19.300

3370 TOTAL UPSTREAM= 0 *** FLOW= 906.00 DSN ELL= 954.70

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 19.30 | 2.01 | 912.37 | 0.00 | 0.00 | 912.37 | 0.13 | 3.02 | 1.02 | 905.2 | |
| 630. | 305. | 237. | 130. | 537. | 61. | 964. | 94. | 66. | 905.20 | |
| 1.22 | 2.64 | 3.37 | 0.30 | 0.103 | 0.035 | 0.162 | 0.048 | 904.20 | 1332.52 | |
| 0.00 | 0.0 | 0.0 | 0.0 | | | 0 | 0 | 0.00 | 0.00 | 0.0 |

FLOW DISTRIBUTION FOR SECNO= 19.30 CHSEL= 912.37

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 1323. | 1386. | 1500. | 1666. | 1685. | 1693. | 1707. | 1711. | 1758. | 1880. |
| | | | 19.1 | 31.7 | 1.1 | 0.0 | 2.7 | 2.7 | 1.1 | 11.1 |
| | | | 191.2 | 261.6 | 57.1 | 31.7 | 51.1 | 13.1 | 117.4 | 140.2 |
| | | | 2.1 | 2.6 | 0.0 | 0.0 | 0.5 | 0.1 | 0.1 | 1.3 |

1680 HH CARD USED
*SECNO 19.400

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 19.40 | 0.27 | 912.37 | 0.00 | 0.00 | 912.37 | 0.00 | 0.00 | 0.21 | 906.10 | |
| 631. | 251. | 296. | 83. | 342. | 38. | 250. | 59. | 44. | 906.10 | |
| 1.20 | 0.44 | 3.37 | 0.32 | 0.107 | 0.035 | 0.169 | 0.041 | 906.10 | 1332.79 | |
| 0.00 | 0.0 | 0.0 | 0.0 | | | 0 | 0 | 0.00 | 0.00 | 0.0 |

FLOW DISTRIBUTION FOR SECNO= 19.40 CHSEL= 912.37

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 1333. | 1386. | 1500. | 1666. | 1685. | 1693. | 1707. | 1711. | 1758. | 1880. |
| | | | 11.6 | 21.6 | 0.1 | 0.1 | 2.0 | 0.3 | 0.1 | 10. |
| | | | 159.6 | 201.5 | 42.9 | 26.6 | 37.5 | 8.5 | 170. | 140.2 |
| | | | 2.1 | 2.6 | 0.0 | 0.0 | 0.5 | 0.1 | 0.2 | 0.5 |

1680 HH CARD USED
*SECNO 19.720

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 19.72 | 5.06 | 912.02 | 0.00 | 0.00 | 912.33 | 0.11 | 3.47 | 2.01 | 907.10 | |
| 630. | 247. | 234. | 159. | 559. | 53. | 353. | 211. | 51. | 902.40 | |
| 1.20 | 0.80 | 4.36 | 0.46 | 0.030 | 0.038 | 0.152 | 0.041 | 907.00 | 1100.85 | |
| 0.01 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 902.20 | 1100.15 | |

FLOW DISTRIBUTION FOR SECNO= 19.7 CHSEL= 912.34

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STA= | 1131. | 1150. | 1212. | 1296. | 1318. | 1326. | 1535. | 1476. | 1903. |
| | 55.7 | 1.0 | 0.0 | 0.7 | 1.1 | 25.5 | 1.9 | 14.7 | |
| | 55.7 | 100.9 | 30.5 | 50.2 | 32.1 | 59.4 | 224.9 | 191.7 | |
| | 0.7 | 0.7 | 0.4 | 0.9 | 0.5 | 5.4 | 0.3 | 0.7 | |

*SECNO 19.800

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 19.80 | 3.66 | 912.34 | 0.00 | 0.00 | 911.01 | 0.09 | 0.00 | 0.00 | 907.0 | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 482.32 | 1583.1 |

FLOW DISTRIBUTION FOR SEC.0= 19.00 QPSEL= 913.54

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

ENTER W. CARD DATA

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |

0.050967 1. 1. 1. 2 0 0 3.03 [illegible] 1503.14

FLOW DISTRIBUTION [illegible] 20.10 [illegible] 912.08

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 85.5 | [illegible] | 54.3 | 54.7 | [illegible] | 115.3 | |
| [illegible] | 0.[illegible] | 0.5 | 0.4 | 1.0 | 1.5 | 4.6 | 0.3 | 0.6 | |




1) COUNTY: Calhoun

2) STUDY NAME: Battle Creek Twp

3) WATERCOURSE: Minges Brook

4) DOCUMENT TYPE: Summary



R

**********

PLEASE RELEASE DATED 10/ TO UPDATED FEB 1971

PERIOD CODE = 01

SPECIFICATION = 50,51,52

**********

[illegible] INCREASE IN FLOW AT LEFT OF CROSS-SECTION DOWNSTR ENTRANCE TO MERRIMACK R. FROM [illegible] DEPTH LOSS

MIDGES BROOK B.C.TOP

SUMMARY PRINTOUT TABLE 151

| | AFCAP | DLTP | FLTRO | DSCP | FLOUT | | | | ET | TOPRS | WCR | ADDO | DOTP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6.200 | 50.00 | 0.00 | 0.00 | 836.70 | 310.00 | 861.55 | [illegible].00 | 661.49 | 10.77 | 3.36 | 140.06 | 97.25 |
| | 6.200 | 50.00 | 0.00 | 0.00 | 836.70 | 525.00 | 863.08 | 0.00 | 653.23 | 7.95 | 3.61 | 280.26 | 156.25 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | [illegible] | 30.00 | 0.00 | 0.00 | [illegible] | 400.00 | [illegible] | .00 | [illegible] | [illegible] | 2.85 | 225.00 | 304.00 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.300 | 410.00 | 0.00 | 0.00 | 855.90 | 525.00 | 865.58 | 0.00 | 863.30 | 5.62 | 2.93 | 227.58 | 225.75 |
| | 6.300 | 410.00 | 0.00 | 0.00 | 855.90 | 630.00 | 864.12 | 0.00 | 866.24 | 5.46 | 3.16 | 295.72 | 270.07 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.400 | 585.00 | 0.00 | 0.00 | 856.70 | 525.00 | 863.44 | 0.00 | 863.47 | 6.28 | 3.14 | 174.42 | 182.47 |
| | 6.400 | 635.00 | 0.00 | 0.00 | 856.70 | 630.00 | 864.52 | 0.00 | 864.69 | 7.90 | 3.37 | 201.62 | 224.12 |
| | 6.400 | 635.00 | 0.00 | 0.00 | 856.70 | 900.00 | 867.25 | 0.00 | 867.41 | 4.51 | 3.26 | 321.17 | 424.02 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.410 | 595.00 | 0.00 | 0.00 | 856.40 | 310.00 | 863.13 | 0.00 | 863.31 | 17.56 | 2.56 | 126.57 | 76.75 |
| | 6.410 | 595.00 | 0.00 | 0.00 | 856.40 | 525.00 | 865.45 | 0.00 | 865.61 | 10.76 | 3.51 | 196.95 | 100.20 |
| | 6.410 | 595.00 | 0.00 | 0.00 | 856.40 | 630.00 | 865.94 | 0.00 | 865.78 | 8.61 | 3.57 | 176.65 | 117.20 |
| | 6.410 | 595.00 | 0.00 | 0.00 | 856.40 | 900.00 | 867.96 | 0.00 | 867.81 | 2.75 | 2.44 | 950.69 | 542.76 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.420 | 595.00 | 0.00 | 0.00 | 860.10 | 525.00 | 865.15 | 0.00 | 865.46 | 25.91 | 4.82 | 106.04 | 103.16 |
| | 6.420 | 595.00 | 0.00 | 0.00 | 860.10 | 630.00 | 865.65 | 0.00 | 865.95 | 23.15 | 4.87 | 240.55 | 130.96 |
| | 6.420 | 595.00 | 0.00 | 0.00 | 860.10 | 900.00 | 867.76 | 0.00 | 867.90 | 7.76 | 3.39 | 303.78 | 329.56 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.430 | 595.00 | 0.00 | 0.00 | 861.80 | 310.00 | 865.79 | 0.00 | 866.05 | 20.79 | 6.18 | 96.10 | 57.81 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.430 | 595.00 | 0.00 | 0.00 | 861.30 | 630.00 | 867.36 | 0.00 | 867.45 | 29.69 | 5.97 | 209.33 | 145.53 |
| | 6.430 | 595.00 | 0.00 | 0.00 | 861.30 | 900.00 | 868.16 | 0.00 | 868.25 | 19.98 | 5.01 | 370.04 | 201.60 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.500 | 595.00 | 0.00 | 0.00 | 865.60 | 310.00 | 867.31 | 0.00 | 867.77 | 29.55 | 4.77 | 101.62 | 57.03 |
| | 6.500 | 595.00 | 0.00 | 0.00 | 863.60 | 525.00 | 868.43 | 0.00 | 868.73 | 20.16 | 4.83 | 190.83 | 98.93 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | 6.600 | 595.00 | 0.00 | 0.00 | 866.50 | 525.00 | 869.24 | 0.00 | 869.52 | 26.36 | 4.98 | 207.14 | 106.34 |
| | 6.600 | 595.00 | 0.00 | 0.00 | 866.50 | 630.00 | 869.59 | 0.00 | 869.86 | 24.44 | 4.98 | 235.83 | 120.96 |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF [illegible] THE COMPANY—SYRACUSE

PRINTED IN U.S.A.

| SECND | XLCH | ELTRO | ELLC | ELMIN | Q | DUCEL | CRICS | EG | TOK*S | VCH | APER | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.700 | 325.00 | 0.00 | 0.00 | 865.00 | 310.00 | 868.19 | 0.00 | 869.65 | 29.25 | 4.99 | 127.92 | 57.32 |
| 6.700 | 325.00 | 0.00 | 0.00 | 865.00 | 525.00 | 869.19 | 0.00 | 870.65 | 29.25 | 4.99 | 127.92 | 57.32 |
| 6.700 | 325.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.19 | 0.00 | 870.65 | 29.25 | 4.99 | 127.92 | 57.32 |
| 6.700 | 325.00 | 0.00 | 0.00 | 865.00 | 900.00 | 871.19 | 0.00 | 871.65 | 29.25 | 4.99 | 127.92 | 57.32 |
| 6.750 | 50.00 | 0.00 | 0.00 | 865.00 | 310.00 | 869.27 | 0.00 | 869.83 | 34.66 | 5.49 | 95.86 | 52.82 |
| 6.750 | 50.00 | 0.00 | 0.00 | 865.00 | 525.00 | 870.33 | 0.00 | 870.76 | 48.04 | 7.38 | 120.90 | 75.75 |
| 6.750 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 871.27 | 0.00 | 871.83 | 59.25 | 8.96 | 139.62 | 94.13 |
| 6.750 | 50.00 | 0.00 | 0.00 | 865.00 | 900.00 | 871.26 | 0.00 | 871.63 | 22.04 | 5.70 | 475.46 | 191.69 |
| 6.300 | 50.00 | 0.00 | 0.00 | 865.00 | 310.00 | 869.20 | 0.00 | 870.10 | 72.00 | 7.21 | 42.50 | 30.14 |
| 6.300 | 50.00 | 0.00 | 0.00 | 865.00 | 525.00 | 869.94 | 0.00 | 871.67 | 130.21 | 10.55 | 49.38 | 46.61 |
| 6.300 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.14 | 870.03 | 872.44 | 170.96 | 12.24 | 51.45 | 48.19 |
| 6.300 | 50.00 | 0.00 | 0.00 | 865.00 | 900.00 | 871.20 | 0.00 | 871.78 | 90.71 | 5.49 | 248.20 | 105.30 |
| 7.000 | 50.00 | 874.30 | 871.90 | 865.10 | 310.00 | 870.20 | 0.00 | 870.85 | 88.86 | 6.75 | 68.04 | 32.70 |
| 7.000 | 55.00 | 874.30 | 871.90 | 865.10 | 525.00 | 870.96 | 0.00 | 872.57 | 182.55 | 9.56 | 52.43 | 50.40 |
| 7.000 | 39.00 | 874.30 | 871.90 | 865.10 | 630.00 | 871.70 | 0.00 | 872.97 | 93.07 | 9.03 | 69.47 | 45.02 |
| 7.000 | 50.00 | 874.30 | 871.90 | 865.10 | 900.00 | 874.91 | 0.00 | 874.93 | 1.72 | 2.05 | 1215.56 | 690.16 |
| 7.200 | 55.00 | 0.00 | 0.00 | 865.10 | 310.00 | 870.17 | 0.00 | 870.82 | 5.20 | 2.60 | 575.15 | 133.53 |
| 7.200 | 55.00 | 0.00 | 0.00 | 865.10 | 525.00 | 870.94 | 0.00 | 872.57 | 3.70 | 2.00 | 1140.54 | 203.37 |
| 7.200 | 50.00 | 0.00 | 0.00 | 865.10 | 630.00 | 871.69 | 0.00 | 872.96 | 3.24 | 2.35 | 911.00 | 348.67 |
| 7.200 | 50.00 | 0.00 | 0.00 | 865.10 | 900.00 | 876.92 | 0.00 | 874.94 | 1.69 | 2.05 | 1215.70 | 691.67 |
| 7.970 | 550.70 | 0.00 | 0.00 | 865.50 | 525.00 | 870.34 | 0.00 | 872.63 | 17.07 | 3.19 | 631.20 | 124.21 |
| 7.970 | 550.70 | 0.00 | 0.00 | 865.50 | 630.00 | 871.34 | 0.00 | 873.75 | 15.21 | 3.13 | 811.26 | 159.06 |
| 7.900 | 550.00 | 0.00 | 0.00 | 865.50 | 900.00 | 875.05 | 0.00 | 875.16 | 9.21 | 3.59 | 1644.74 | 296.05 |
| 8.300 | 2.00 | 868.00 | 866.50 | 865.50 | 310.00 | 870.74 | 870.64 | 871.98 | 98.91 | 7.98 | 61.17 | 32.08 |
| 8.300 | 2.00 | 868.00 | 866.50 | 865.50 | 525.00 | 871.74 | 0.00 | 873.25 | 19.78 | 4.79 | 253.26 | 101.27 |
| 8.300 | 2.00 | 868.00 | 866.50 | 865.50 | 630.00 | 872.74 | 0.00 | 873.79 | 16.24 | 5.33 | 232.25 | 146.35 |
| 8.300 | 2.00 | 868.00 | 866.50 | 865.50 | 900.00 | 875.01 | 0.00 | 875.16 | 6.96 | 4.57 | 322.67 | 301.76 |
| 8.100 | 2.00 | 0.00 | 0.00 | 867.70 | 310.00 | 871.15 | 0.00 | 871.63 | 63.40 | 6.26 | 80.38 | 58.93 |
| 8.100 | 2.00 | 0.00 | 0.00 | 867.70 | 525.00 | 873.04 | 0.00 | 873.26 | 21.49 | 4.38 | 224.73 | 113.24 |
| 8.100 | 2.00 | 0.00 | 0.00 | 867.70 | 630.00 | 873.91 | 0.00 | 873.96 | 7.80 | 3.75 | 583.70 | 209.05 |
| 8.100 | 2.00 | 0.00 | 0.00 | 867.70 | 900.00 | 876.03 | 0.00 | 875.16 | 5.89 | 4.06 | 583.70 | 209.05 |
| 8.300 | 390.00 | 0.00 | 0.00 | 865.50 | 525.00 | 870.63 | 0.00 | 873.75 | 9.23 | 5.19 | 287.70 | 172.85 |
| 8.300 | 390.00 | 0.00 | 0.00 | 865.50 | 630.00 | 871.10 | 0.00 | 874.32 | 8.56 | 5.87 | 360.58 | 215.58 |
| 8.300 | 390.00 | 0.00 | 0.00 | 865.50 | 900.00 | 874.10 | 0.00 | 874.82 | 8.56 | 5.87 | 360.58 | 215.58 |
| 8.310 | 445.00 | 0.00 | 0.00 | 870.10 | 310.00 | 873.13 | 0.00 | 873.58 | 35.25 | 4.23 | 87.90 | 52.21 |
| 8.310 | 445.00 | 0.00 | 0.00 | 870.10 | 525.00 | 874.13 | 0.00 | 874.75 | 20.08 | 3.84 | 201.75 | 123.14 |
| 8.310 | 445.00 | 0.00 | 0.00 | 870.10 | 630.00 | 874.56 | 0.00 | 874.86 | 26.18 | 4.86 | 201.75 | 123.14 |
| 8.310 | 445.00 | 0.00 | 0.00 | 870.10 | 900.00 | 875.62 | 0.00 | 875.68 | 18.76 | 4.60 | 347.23 | 207.77 |
| 8.320 | 445.00 | 0.00 | 0.00 | 871.70 | 310.00 | 874.59 | 0.00 | 874.78 | 36.31 | 4.27 | 87.17 | 51.97 |
| 8.320 | 445.00 | 0.00 | 0.00 | 871.70 | 525.00 | 875.31 | 0.00 | 875.53 | 57.95 | 4.78 | 157.16 | 95.67 |
| 8.320 | 445.00 | 0.00 | 0.00 | 871.70 | 630.00 | 875.74 | 0.00 | 875.84 | 55.31 | 5.72 | 259.05 | 154.05 |
| 8.320 | 445.00 | 0.00 | 0.00 | 871.70 | 900.00 | 876.55 | 0.00 | 876.75 | 55.31 | 5.72 | 259.05 | 154.05 |

| SECND | XLCN | ELTTD | ELLC | ELMCN | Q | CNSEL | CNTLS | EG | TORQS | VCU | AREA | .01R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.350 | 445.00 | 0.00 | 0.00 | 875.70 | 310.00 | 876.30 | 0.00 | 876.57 | 36.47 | 6.28 | 84.11 | 51.35 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.250 | 445.30 | 0.00 | 0.00 | 875.70 | 320.00 | 877.04 | 0.00 | 877.09 | 37.27 | 6.31 | 101.54 | 103.34 |
| 8.130 | 445.00 | 0.00 | 0.00 | 875.70 | 321.00 | 878.04 | 0.00 | 878.56 | 37.96 | 6.18 | 261.32 | 146.07 |
| 8.400 | 445.00 | 0.00 | 0.00 | 875.70 | 340.00 | 878.34 | 0.00 | 878.77 | 69.06 | 5.56 | 89.01 | 57.30 |
| 8.400 | 445.00 | 0.00 | 0.00 | 875.00 | 525.00 | 879.39 | 0.00 | 879.60 | 63.94 | 6.12 | 125.39 | 65.66 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.410 | 300.00 | 0.00 | 0.00 | 877.50 | 525.00 | 881.25 | 883.14 | 882.00 | 103.39 | 7.21 | 93.14 | 51.65 |
| 8.410 | 300.00 | 0.00 | 0.00 | 877.50 | 630.00 | 881.49 | 891.42 | 882.31 | 106.86 | 7.23 | 110.28 | 60.94 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.900 | 300.00 | 0.00 | 0.00 | 870.70 | 310.00 | 870.30 | 0.00 | 881.23 | 36.61 | 6.21 | 140.14 | 51.30 |
| 8.900 | 300.00 | 0.00 | 0.00 | 880.00 | 525.00 | 883.33 | 0.00 | 883.52 | 50.94 | 6.16 | 252.71 | 94.36 |
| 8.900 | 300.00 | 0.00 | 0.00 | 880.00 | 630.00 | 883.62 | 0.00 | 883.79 | 29.71 | 6.31 | 272.49 | 115.58 |
| 8.973 | 300.00 | 0.00 | 0.00 | 880.00 | 900.00 | 884.20 | 0.00 | 884.40 | 26.58 | 6.26 | 362.55 | 168.36 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 9.330 | 2.20 | 880.30 | 880.00 | 880.00 | 310.00 | 880.30 | 0.00 | 880.31 | 37.16 | 6.37 | 202.77 | 49.34 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 9.300 | 2.00 | 880.30 | 880.00 | 880.00 | 630.00 | 880.30 | 0.00 | 880.31 | 22.52 | 7.31 | 314.09 | 109.66 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 9.900 | 125.00 | 0.00 | 0.00 | 877.70 | 310.00 | 883.01 | 0.00 | 883.10 | 3.61 | 2.37 | 158.65 | 103.55 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 9.930 | 125.30 | 0.00 | 0.00 | 877.70 | 320.00 | 883.97 | 0.00 | 884.10 | 32.43 | 5.38 | 305.71 | 179.50 |
| 9.910 | 125.30 | 0.00 | 0.00 | 877.70 | 900.00 | 884.54 | 0.00 | 884.72 | 18.49 | 6.15 | 416.35 | 249.42 |
| 10.000 | 2.00 | 881.00 | 877.70 | 877.70 | 310.00 | 882.55 | 877.70 | 883.38 | 70.38 | 7.38 | 54.05 | 38.95 |
| 10.000 | 2.00 | 881.30 | 877.70 | 877.70 | 525.00 | 883.17 | 877.70 | 884.02 | 48.68 | 7.87 | 119.56 | 75.24 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.001 | 2.00 | 881.30 | 877.70 | 877.70 | 900.00 | 883.24 | 0.00 | 884.04 | 22.30 | 7.93 | 502.00 | 170.24 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.100 | 2.00 | 881.00 | 880.00 | 880.00 | 525.00 | 883.99 | 883.30 | 884.10 | 60.20 | 6.81 | 259.84 | 82.72 |
| 10.100 | 2.00 | 881.00 | 880.00 | 880.00 | 630.00 | 884.10 | 0.00 | 884.30 | 41.75 | 6.10 | 278.27 | 97.60 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.000 | 150.00 | 0.00 | 0.00 | 881.10 | 310.00 | 886.28 | 0.00 | 886.34 | 69.00 | 6.04 | 97.63 | 45.93 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.800 | 150.00 | 0.00 | 0.00 | 881.10 | 630.00 | 884.73 | 0.00 | 885.32 | 75.27 | 7.25 | 143.72 | 72.67 |
| 10.800 | 150.00 | 0.00 | 0.00 | 881.10 | 900.00 | 885.18 | 0.00 | 885.99 | 90.63 | 8.65 | 174.50 | 94.54 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.850 | 50.00 | 0.00 | 0.00 | 881.25 | 900.00 | 885.32 | 0.25 | 886.90 | 130.65 | 10.71 | 112.05 | 60.55 |

| | SECNO | XLCN | SLTRO | ECLC | ELMIN | D | CASEL | CRICS | EG | TONKS | VCN | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10.000 | 25.00 | 0.00 | 0.00 | 301.35 | 310.00 | 304.31 | 0.00 | 284.31 | 74.25 | 6.22 | 55.46 | 35.98 |

| SGCNO | XLCH | BLT30 | ELLC | SLMIN | Q | CMGSL | CMJ.3 | SG | 10K*G | VCH | APHA | .DIK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.310 | 165.00 | 3.00 | 0.00 | 891.50 | 310.00 | 895.22 | 0.00 | 895.60 | 57.67 | 5.07 | 75.13 | 40.82 |
| 11.310 | 165.00 | 0.00 | 0.00 | 891.50 | 525.00 | 893.07 | 0.00 | 893.30 | 51.43 | 5.02 | 130.79 | 75.19 |
| 11.310 | 165.00 | 0.00 | 0.00 | 891.50 | 630.00 | 895.01 | 895.02 | 895.01 | 61.03 | 5.25 | 236.26 | 110.64 |
| 11.310 | 165.00 | 0.00 | 0.00 | 891.50 | 900.00 | 895.02 | 0.00 | 895.01 | 81.51 | 6.71 | 456.00 | 116.36 |
| 11.320 | 165.00 | 0.00 | 0.00 | 892.50 | 310.00 | 896.17 | 0.00 | 896.58 | 69.22 | 5.18 | 70.70 | 39.02 |
| 11.320 | 165.00 | 0.00 | 0.00 | 892.50 | 525.00 | 896.73 | 896.52 | 897.27 | 70.52 | 6.35 | 157.25 | 82.52 |
| 11.320 | 165.00 | 0.00 | 0.00 | 892.50 | 630.00 | 897.00 | 897.00 | 897.00 | 69.89 | 6.02 | 179.02 | 95.30 |
| 11.320 | 165.00 | 0.00 | 0.00 | 892.50 | 900.00 | 897.31 | 0.00 | 897.97 | 81.20 | 7.66 | 226.00 | 98.06 |
| 11.900 | 165.00 | 0.00 | 0.00 | 896.40 | 310.00 | 897.14 | 0.00 | 897.40 | 68.92 | 6.20 | 80.39 | 43.46 |
| 11.900 | 165.00 | 0.00 | 0.00 | 896.40 | 525.00 | 897.70 | 0.00 | 898.20 | 47.05 | 5.54 | 122.63 | 75.19 |
| 11.900 | 165.00 | 0.00 | 0.00 | 896.40 | 630.00 | 897.97 | 0.00 | 898.40 | 55.52 | 5.95 | 156.95 | 84.71 |
| 11.900 | 165.00 | 0.00 | 0.00 | 896.40 | 900.00 | 898.41 | 0.00 | 898.75 | 67.52 | 7.77 | 166.56 | 109.31 |
| 12.000 | 3.00 | 895.50 | 894.20 | 895.80 | 310.00 | 896.22 | 0.00 | 897.49 | 58.45 | 5.79 | 80.67 | 62.76 |
| 12.000 | 2.00 | 896.90 | 894.20 | 895.80 | 525.00 | 897.07 | 0.00 | 898.22 | 50.05 | 5.07 | 135.20 | 86.33 |
| 12.000 | 2.00 | 896.90 | 894.20 | 895.80 | 630.00 | 898.09 | 0.00 | 898.50 | 35.08 | 5.40 | 149.90 | 106.60 |
| 12.000 | 2.00 | 896.90 | 894.20 | 895.80 | 900.00 | 898.54 | 0.00 | 899.15 | 44.29 | 6.19 | 182.37 | 135.26 |
| 12.100 | 2.00 | 896.90 | 894.20 | 896.60 | 310.00 | 897.01 | 0.00 | 897.16 | 85.70 | 5.85 | 69.52 | 35.20 |
| 12.100 | 2.00 | 896.90 | 894.20 | 896.60 | 525.00 | 897.29 | 0.00 | 897.36 | 73.77 | 6.15 | 10 .00 | 57.71 |
| 12.100 | 2.00 | 896.90 | 894.20 | 896.60 | 630.00 | 897.42 | 0.00 | 897.55 | 68.08 | 6.22 | 179.70 | 80.75 |
| 12.100 | 2.00 | 896.90 | 894.20 | 896.60 | 900.00 | 897.63 | 0.00 | 897.84 | 101.90 | 8.05 | 150.58 | 89.16 |
| 12.200 | 165.00 | 0.00 | 0.00 | 897.50 | 310.00 | 897.85 | 0.00 | 897.87 | 8.56 | 2.47 | 144.47 | 99.41 |
| 12.200 | 165.00 | 0.00 | 0.00 | 897.50 | 525.00 | 897.91 | 0.00 | 897.93 | 12.35 | 3.16 | 234.58 | 1841.30 |
| 12.200 | 165.00 | 0.00 | 0.00 | 897.50 | 630.00 | 897.94 | 0.00 | 897.95 | 13.78 | 3.31 | 276.27 | 169.74 |
| 12.200 | 165.00 | 0.00 | 0.00 | 897.50 | 900.00 | 897.98 | 0.00 | 897.99 | 15.84 | 4.47 | 328.78 | 225.58 |
| 12.900 | 170.00 | 0.00 | 0.00 | 894.60 | 310.00 | 897.85 | 0.00 | 898.32 | 67.66 | 5.69 | 61.10 | 37.69 |
| 12.900 | 170.00 | 0.00 | 0.00 | 894.60 | 525.00 | 897.91 | 0.00 | 898.23 | 75.37 | 6.86 | 109.66 | 66.47 |
| 12.900 | 170.00 | 0.00 | 0.00 | 894.60 | 630.00 | 897.94 | 0.00 | 898.03 | 76.61 | 7.25 | 121.40 | 71.95 |
| 12.900 | 170.00 | 0.00 | 0.00 | 894.60 | 900.00 | 897.98 | 0.00 | 898.15 | 75.35 | 8.06 | 169.67 | 103.70 |
| 13.000 | 2.00 | 896.20 | 895.80 | 894.60 | 310.00 | 897.73 | 0.00 | 898.41 | 481.95 | 6.06 | 49.14 | 14.12 |
| 13.000 | 2.00 | 896.20 | 895.80 | 894.60 | 525.00 | 898.80 | 0.00 | 899.35 | 270.56 | 6.45 | 103.69 | 31.92 |
| 13.000 | 2.00 | 896.20 | 895.80 | 894.60 | 630.00 | 899.35 | 0.00 | 899.87 | 177.06 | 6.67 | 141.13 | 47.25 |
| 13.000 | 2.00 | 896.20 | 895.80 | 894.60 | 900.00 | 900.15 | 0.00 | 900.32 | 160.42 | 8.01 | 196.78 | 75.96 |
| 13.100 | 2.00 | 896.20 | 895.80 | 895.30 | 310.00 | 898.44 | 898.24 | 898.98 | 183.73 | 7.01 | 54.77 | 24.23 |
| 13.100 | 2.00 | 896.20 | 895.80 | 895.30 | 525.00 | 898.99 | 898.99 | 899.76 | 128.85 | 7.75 | 102.94 | 46.25 |
| 13.100 | 2.00 | 896.20 | 895.80 | 895.80 | 630.00 | 899.20 | 899.20 | 900.05 | 133.69 | 8.29 | 117.72 | 54.48 |
| 13.100 | 2.00 | 896.20 | 895.80 | 895.80 | 900.00 | 899.75 | 0.00 | 900.15 | 128.00 | 9.42 | 136.99 | 69.11 |
| 13.900 | 120.00 | 0.00 | 0.00 | 896.30 | 310.00 | 899.70 | 0.00 | 900.04 | 51.55 | 5.79 | 112.99 | 68.11 |
| 13.900 | 120.00 | 0.00 | 0.00 | 896.50 | 525.00 | 900.67 | 0.00 | 900.99 | 46.45 | 5.91 | 223.38 | 92.46 |
| 13.900 | 120.00 | 0.00 | 0.00 | 896.50 | 630.00 | 900.67 | 0.00 | 900.99 | 46.45 | 5.91 | 223.38 | 92.46 |
| 13.900 | 120.00 | 0.00 | 0.00 | 896.50 | 900.00 | 901.30 | 0.00 | 901.61 | 62.92 | 6.25 | 306.49 | 137.37 |
| 14.000 | 2.00 | 897.00 | 896.30 | 896.50 | 310.00 | 899.69 | 0.00 | 900.04 | 77.35 | 5.96 | 105.21 | 55.75 |
| 14.000 | 2.00 | 897.00 | 896.30 | 896.50 | 525.00 | 900.10 | 0.00 | 900.72 | 61.08 | 6.38 | 163.35 | 86.35 |
| 14.000 | 2.00 | 897.00 | 896.30 | 896.50 | 630.00 | 900.30 | 0.00 | 900.92 | 60.76 | 6.62 | 203.09 | 108.00 |
| 14.000 | 2.00 | 897.00 | 896.30 | 896.50 | 900.00 | 901.33 | 0.00 | 901.82 | 60.76 | 6.62 | 303.09 | 125.20 |

FORM 1-11 (H PRINTED BY LOVART HANDY OLD FORD DIVISION OF SPERRY RAND PRINTING COMPANY, INC.
PRINTED IN U.S.A.

| SECND | WLCK | ELTRD | ELLC | ELTION | Q | CUSEL | CTILS | EG | TORES | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.100 | 2.00 | 897.00 | 896.00 | 896.00 | 310.00 | 899.70 | 0.00 | 900.05 | 73.07 | 5.68 | 106.47 | 36.27 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 330.00 | [illegible] | [illegible] | [illegible] | 53.84 | 4.00 | 221.10 | 56.34 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 14.200 | 150.00 | 0.00 | 0.00 | 895.80 | 310.00 | 900.45 | 0.00 | 900.38 | 17.71 | 3.41 | 190.67 | 73.67 |
| 14.200 | 150.00 | 0.00 | 0.00 | 896.80 | 525.00 | 901.10 | 0.00 | 901.25 | 20.20 | 4.08 | 274.37 | 116.81 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 14.200 | 150.00 | 0.00 | 0.00 | 896.80 | 900.00 | 901.53 | 0.00 | 902.18 | 22.01 | 4.87 | 341.43 | 159.21 |
| 14.900 | 150.00 | 0.00 | 0.00 | 896.80 | 310.00 | 900.45 | 0.00 | 901.24 | 137.09 | 5.66 | 99.49 | 26.44 |
| 14.900 | 150.00 | 0.00 | 0.00 | 896.80 | 525.00 | 901.52 | 0.00 | 901.95 | 138.28 | 5.27 | 99.57 | 64.65 |
| 14.900 | 150.00 | 0.00 | 0.00 | 896.80 | 630.00 | 901.78 | 0.00 | 902.21 | 118.22 | 5.28 | 119.39 | 57.94 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 13.00 | 903.30 | 901.50 | 896.00 | 310.00 | 901.47 | 0.00 | [illegible] | 133.19 | 6.19 | 73.92 | 30.67 |
| [illegible] | 13.00 | 903.30 | 901.50 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 15.000 | 13.00 | 903.30 | 901.30 | 896.00 | 630.00 | 903.62 | 0.00 | 903.71 | 8.90 | 2.40 | 262.27 | 214.60 |
| 15.000 | 13.00 | 903.30 | 901.50 | 896.00 | 900.00 | 904.36 | 0.00 | 904.48 | 9.02 | 2.81 | 520.46 | 299.69 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 15.200 | 140.00 | 0.00 | 0.00 | 897.10 | 900.00 | 904.49 | 0.00 | 904.66 | 13.96 | 4.26 | 373.90 | 240.17 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.000 | 2.00 | 899.50 | 897.70 | 897.70 | 310.00 | 901.70 | 0.00 | 902.74 | 69.12 | 8.28 | 47.42 | 37.29 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 2.00 | 899.50 | 897.70 | 897.70 | 630.00 | [illegible] | 0.00 | 904.16 | 12.01 | 4.05 | 210.33 | 176.01 |
| [illegible] | 2.00 | 899.50 | 897.70 | 897.70 | [illegible] | [illegible] | 0.00 | 904.97 | 12.64 | 5.04 | 290.14 | 259.24 |
| 16.100 | 2.00 | 899.50 | 898.10 | 897.70 | 310.00 | 901.49 | 0.00 | 902.87 | 638.92 | 9.54 | 50.46 | 14.87 |
| 16.100 | 2.00 | 899.50 | 898.10 | 897.70 | 525.00 | 903.43 | 0.00 | 903.70 | 31.76 | 4.53 | 193.70 | 93.16 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 2.00 | 899.50 | 898.10 | 897.70 | [illegible] | [illegible] | 0.00 | 905.01 | 22.09 | [illegible] | 329.53 | [illegible] |
| [illegible] | 220.00 | 0.00 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.600 | 220.00 | 0.00 | 0.00 | 897.50 | 525.00 | 904.05 | 0.00 | 904.31 | 24.18 | 4.20 | 143.84 | 106.76 |
| 16.600 | 220.00 | 0.00 | 0.00 | 897.50 | 630.00 | 904.44 | 0.00 | 904.75 | 23.49 | 4.43 | 177.48 | 137.98 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.700 | 220.00 | 0.00 | 0.00 | 898.50 | 630.00 | 905.00 | 0.00 | 905.40 | 36.59 | 5.11 | 142.56 | 104.43 |
| 16.700 | 220.00 | 0.00 | 0.00 | 898.50 | 900.00 | 905.74 | 0.00 | 906.22 | 36.29 | 5.77 | 208.48 | 149.40 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.800 | 220.00 | 0.00 | 0.00 | 898.50 | 900.00 | [illegible] | 0.00 | 907.[illegible] | 48.65 | 4.09 | 197.15 | 157.84 |

FORM [illegible] CO PRINTED BY MOFFATT MANIFOLD FORMS DIVISION OF [illegible] PRINTING CORPORATION

| SECND | XLCH | CLTDD | ELLC | CLNIV | ? | CMSE | CRIJS | EG | TOTAS | VCW | APSA | .U1K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.900 | 150.00 | 0.00 | 0.00 | 899.50 | 310.00 | 904.93 | 0.00 | 905.57 | 63.78 | 5.93 | 44.76 | 30.22 |
| 16.900 | 150.00 | 0.00 | 0.00 | 899.50 | 525.00 | 905.64 | 0.00 | 906.31 | 41.00 | 3.83 | 130.02 | 87.41 |
| 16.900 | 150.00 | 0.00 | 0.00 | 899.50 | 630.00 | 906.19 | 0.00 | 906.91 | 33.77 | 3.55 | 157.11 | 99.22 |
| 16.900 | 150.00 | 0.00 | 0.00 | 899.50 | 900.00 | 907.85 | 0.00 | 907.52 | 65.09 | 3.36 | 225.38 | 135.15 |
| 17.000 | 46.00 | 911.00 | 905.50 | 901.60 | 310.00 | 904.29 | 0.00 | 905.72 | 65.15 | 5.26 | 58.95 | 46.14 |
| 17.000 | 46.00 | 911.00 | 905.50 | 901.60 | 525.00 | 911.46 | 0.00 | 911.60 | 9.43 | 3.86 | 323.77 | 170.96 |
| 17.000 | 46.00 | 911.00 | 905.50 | 901.60 | 630.00 | 911.93 | 0.00 | 911.97 | 10.90 | 4.01 | 413.70 | 199.77 |
| 17.000 | 46.00 | 911.00 | 905.50 | 901.60 | 900.00 | 912.57 | 0.00 | 912.61 | 15.27 | 5.70 | 633.55 | 230.33 |
| 17.900 | 123.00 | 0.00 | 0.00 | 902.10 | 310.00 | 910.17 | 0.00 | 910.86 | 1.67 | 1.25 | 677.01 | 544.22 |
| 17.900 | 123.00 | 0.00 | 0.00 | 902.10 | 525.00 | 911.42 | 0.00 | 911.63 | 0.41 | 0.99 | 1142.90 | 819.90 |
| 17.900 | 123.00 | 0.00 | 0.00 | 902.10 | 630.00 | 911.96 | 0.00 | 911.97 | 0.52 | 1.13 | 1204.55 | 977.63 |
| 17.900 | 123.00 | 0.00 | 0.00 | 902.10 | 900.00 | 912.31 | 0.00 | 912.32 | 0.82 | 1.67 | 1325.70 | 1405.90 |
| 18.000 | 2.00 | 904.10 | 902.10 | 902.10 | 310.00 | 910.17 | 0.00 | 910.85 | 2.36 | 1.80 | 455.12 | 326.71 |
| 18.000 | 2.00 | 904.10 | 902.10 | 902.10 | 525.00 | 911.41 | 0.00 | 911.63 | 0.24 | 1.43 | 1099.25 | 770.30 |
| 18.000 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 911.95 | 0.00 | 911.97 | 0.56 | 1.66 | 1160.24 | 7044.07 |
| 18.000 | 2.00 | 904.10 | 902.10 | 902.10 | 900.00 | 912.30 | 0.00 | 912.36 | 0.51 | 2.17 | 1280.54 | 1185.95 |
| 18.100 | 2.00 | 904.10 | 902.10 | 902.10 | 310.00 | 910.17 | 0.00 | 910.86 | 1.97 | 1.33 | 435.57 | 322.37 |
| 18.100 | 2.00 | 904.10 | 902.10 | 902.10 | 525.00 | 911.41 | 0.00 | 911.63 | 0.39 | 1.01 | 1060.21 | 774.15 |
| 18.100 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 911.95 | 0.00 | 911.97 | 0.51 | 1.15 | 1140.44 | 970.34 |
| 18.100 | 2.00 | 904.10 | 902.10 | 902.10 | 900.00 | 912.35 | 0.00 | 912.36 | 1.05 | 1.45 | 1285.54 | 688.17 |
| 18.900 | 607.00 | 0.00 | 0.00 | 903.10 | 310.00 | 910.17 | 0.00 | 910.86 | 1.63 | 1.27 | 760.67 | 602.90 |
| 18.900 | 607.00 | 0.00 | 0.00 | 903.10 | 525.00 | 911.41 | 0.00 | 911.63 | 2.15 | 1.15 | 844.40 | 629.73 |
| 18.900 | 607.00 | 0.00 | 0.00 | 903.10 | 630.00 | 911.95 | 0.00 | 911.97 | 2.00 | 2.22 | 910.00 | 730.72 |
| 18.900 | 607.00 | 0.00 | 0.00 | 903.10 | 900.00 | 912.30 | 0.00 | 912.36 | 2.00 | 2.22 | 910.00 | 730.72 |
| 18.700 | 5013.00 | 0.00 | 0.00 | 903.80 | 310.00 | 910.04 | 0.00 | 910.25 | 7.41 | 5.91 | 175.47 | 113.05 |
| 18.700 | 5013.00 | 0.00 | 0.00 | 903.80 | 525.00 | 911.39 | 0.00 | 911.60 | 4.97 | 4.69 | 338.61 | 248.45 |
| 18.700 | 5013.00 | 0.00 | 0.00 | 903.80 | 630.00 | 912.17 | 0.00 | 912.20 | 4.41 | 5.70 | 368.32 | 297.07 |
| 18.700 | 5013.00 | 0.00 | 0.00 | 903.80 | 900.00 | 912.77 | 0.00 | 912.84 | 4.59 | 5.91 | 1779.41 | 480.30 |
| 18.800 | 99.00 | 0.00 | 0.00 | 903.80 | 310.00 | 910.11 | 0.00 | 910.31 | 7.53 | 5.97 | 140.17 | 112.98 |
| 18.800 | 99.00 | 0.00 | 0.00 | 903.80 | 525.00 | 911.96 | 0.00 | 912.05 | 4.18 | 5.51 | 737.96 | 286.80 |
| 18.800 | 99.00 | 0.00 | 0.00 | 903.80 | 630.00 | 912.72 | 0.00 | 912.82 | 4.27 | 5.53 | 1209.27 | 430.57 |
| 18.800 | 99.00 | 0.00 | 0.00 | 903.80 | 900.00 | 912.77 | 0.00 | 912.84 | 4.59 | 5.91 | 1779.41 | 480.30 |
| 18.900 | 1.00 | 908.90 | 907.30 | 903.80 | 310.00 | 910.11 | 0.00 | 910.32 | 19.12 | 6.20 | 575.47 | 120.05 |
| 18.900 | 1.00 | 908.90 | 907.30 | 903.80 | 525.00 | 911.96 | 0.00 | 912.05 | 19.12 | 6.20 | 575.47 | 120.05 |
| 18.900 | 1.00 | 908.90 | 907.30 | 903.80 | 630.00 | 912.27 | 0.00 | 912.55 | 13.29 | 3.68 | 754.14 | 172.76 |
| 18.900 | 1.00 | 908.90 | 907.30 | 903.80 | 900.00 | 912.77 | 0.00 | 912.84 | 4.59 | 5.91 | 1779.41 | 480.30 |
| 19.000 | 48.00 | 909.90 | 907.30 | 903.80 | 310.00 | 910.11 | 0.00 | 910.30 | 2.80 | 5.88 | 1201.50 | 145.14 |
| 19.000 | 48.00 | 909.90 | 907.30 | 903.80 | 525.00 | 911.96 | 0.00 | 912.05 | 19.12 | 6.20 | 575.47 | 120.05 |
| 19.000 | 48.00 | 909.90 | 907.30 | 903.80 | 630.00 | 912.34 | 0.00 | 912.39 | 12.08 | 3.43 | 791.88 | 181.34 |
| 19.000 | 48.00 | 909.90 | 907.30 | 903.80 | 900.00 | 912.90 | 0.00 | 912.93 | 9.21 | 3.26 | 1100.47 | 296.54 |
| 19.100 | 1.00 | 0.00 | 0.00 | 904.50 | 310.00 | 910.13 | 0.00 | 910.32 | 2.80 | 5.88 | 1201.50 | 145.14 |
| 19.100 | 1.00 | 0.00 | 0.00 | 904.50 | 525.00 | 911.38 | 0.00 | 911.60 | 4.78 | 5.55 | 1199.28 | 258.72 |
| 19.100 | 1.00 | 0.00 | 0.00 | 904.50 | 630.00 | 912.17 | 0.00 | 912.20 | 4.41 | 5.70 | 1368.32 | 297.07 |
| 19.100 | 1.00 | 0.00 | 0.00 | 904.50 | 900.00 | 912.87 | 0.00 | 912.94 | 4.58 | 5.87 | 1792.47 | 429.66 |

PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF UNIVAC DIVISION
PRINTED IN U.S.A.

| SECND | XLCH | ELTRD | ELLC | ELMIN | J | CHSEL | CHSUB | EG | TOX*S | VCH | ATEN | .OTK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.200 | 87.00 | 0.00 | 0.00 | 904.70 | 310.00 | 911.63 | 0.00 | 911.74 | 4.07 | 2.96 | 535.41 | 153.59 |
| 19.300 | 87.00 | 0.00 | 0.00 | 904.70 | 525.00 | 912.11 | 0.00 | 912.19 | 4.90 | 3.56 | 793.06 | 245.73 |
| 19.300 | 87.00 | 0.00 | 0.00 | 904.70 | 530.00 | 913.35 | 0.00 | 913.44 | 4.95 | 3.52 | 699.44 | 255.94 |
| 19.300 | 87.00 | 0.00 | 0.00 | 904.70 | 900.00 | 913.35 | 0.00 | 913.44 | 8.25 | 3.59 | 1208.24 | 422.09 |
| 19.300 | 2.00 | 903.00 | 904.70 | 904.70 | 310.00 | 911.54 | 0.00 | 911.79 | 22.56 | 4.65 | 267.10 | 83.26 |
| 19.300 | 2.00 | 903.00 | 904.70 | 904.70 | 525.00 | 912.11 | 0.00 | 912.19 | 10.56 | 3.52 | 711.84 | 161.58 |
| 19.300 | 2.00 | 903.00 | 904.70 | 904.70 | 530.00 | 913.35 | 0.00 | 913.44 | 8.96 | 3.17 | 590.22 | 211.45 |
| 19.300 | 2.00 | 903.00 | 904.70 | 904.70 | 900.00 | 913.35 | 0.00 | 913.44 | 7.25 | 3.29 | 1179.72 | 354.70 |
| 19.400 | 2.00 | 0.00 | 0.00 | 906.10 | 310.00 | 911.66 | 0.00 | 911.83 | 6.07 | 3.21 | 322.29 | 120.47 |
| 19.400 | 2.00 | 0.00 | 0.00 | 906.10 | 525.00 | 912.20 | 0.00 | 912.20 | 5.77 | 3.57 | 759.40 | 218.62 |
| 19.400 | 2.00 | 0.00 | 0.00 | 906.10 | 530.00 | 912.57 | 0.00 | 912.45 | 5.46 | 3.57 | 808.90 | 270.17 |
| 19.400 | 2.00 | 0.00 | 0.00 | 906.10 | 900.00 | 913.35 | 0.00 | 913.44 | 9.19 | 4.39 | 969.17 | 298.66 |
| 19.700 | 645.00 | 0.00 | 0.00 | 907.00 | 310.00 | 911.71 | 0.00 | 911.80 | 9.02 | 3.97 | 497.53 | 96.62 |
| 19.700 | 645.00 | 0.00 | 0.00 | 907.00 | 525.00 | 912.26 | 0.00 | 912.21 | 10.43 | 4.04 | 547.42 | 153.20 |
| 19.700 | 645.00 | 0.00 | 0.00 | 907.00 | 530.00 | 912.62 | 0.00 | 912.93 | 10.35 | 4.56 | 719.04 | 195.81 |
| 19.700 | 645.00 | 0.00 | 0.00 | 907.00 | 900.00 | 913.35 | 0.00 | 913.44 | 9.19 | 4.39 | 969.17 | 298.66 |
| 19.800 | 93.00 | 0.00 | 0.00 | 907.00 | 310.00 | 911.71 | 0.00 | 911.80 | 7.54 | 3.43 | 510.35 | 113.60 |
| 19.800 | 93.00 | 0.00 | 0.00 | 907.00 | 525.00 | 912.26 | 0.00 | 912.21 | 8.69 | 3.74 | 655.81 | 177.16 |
| 19.800 | 99.00 | 0.00 | 0.00 | 907.00 | 530.00 | 912.62 | 0.00 | 912.93 | 8.39 | 4.01 | 772.83 | 235.43 |
| 19.800 | 99.00 | 0.00 | 0.00 | 907.00 | 900.00 | 913.45 | 0.00 | 913.52 | 7.99 | 4.10 | 1010.52 | 314.32 |
| 19.900 | 1.00 | 911.40 | 909.00 | 907.00 | 310.00 | 912.73 | 0.00 | 912.77 | 17.87 | 3.15 | 424.20 | 73.34 |
| 19.900 | 1.00 | 911.40 | 909.00 | 907.00 | 525.00 | 913.12 | 0.00 | 913.19 | 26.07 | 4.30 | 510.01 | 128.41 |
| 19.900 | 1.00 | 911.40 | 909.00 | 907.00 | 530.00 | 913.36 | 0.00 | 913.62 | 16.84 | 3.65 | 630.55 | 209.59 |
| 20.100 | 1.00 | 0.00 | 0.00 | 907.00 | 310.00 | 912.72 | 0.00 | 912.78 | 4.51 | 2.89 | 355.22 | 146.00 |
| 20.100 | 1.00 | 0.00 | 0.00 | 907.00 | 525.00 | 912.92 | 0.00 | 913.04 | 8.98 | 4.17 | 647.52 | 175.17 |
| 20.100 | 1.00 | 0.00 | 0.00 | 907.00 | 530.00 | 913.36 | 0.00 | 913.62 | 6.97 | 4.55 | 793.19 | 287.87 |

PRINTED BY ISOLA STANDARD FORMS DIVISION OF ... PRINTING CO. IN ... PRINTED IN U.S.A.

MINGES 3700K 3.C.TMP

SUMMARY PRINTOUT TABLE 150

| SECND | F | SUBEL | DIF.SF | DIF.D | STEMS | TIMED | DIST |
|---|---|---|---|---|---|---|---|
| 6.200 | 310.00 | 861.35 | 0.00 | 0.30 | 0.30 | 36.36 | 50.00 |
| 6.200 | 525.00 | 863.08 | 0.00 | 0.70 | 0.00 | 115.02 | 50.00 |
| [illegible] | | | | | | | |
| 6.300 | 310.00 | 867.77 | 0.30 | 0.30 | 0.30 | 30.00 | 410.00 |
| 6.300 | 525.00 | 865.33 | 0.30 | 0.30 | 0.00 | 49.01 | 410.00 |
| 6.300 | 630.00 | 866.10 | 0.00 | 0.25 | 0.00 | 52.49 | 410.00 |
| [illegible] | | | | | | | |
| 6.400 | 310.00 | 863.93 | 0.00 | 0.24 | 0.00 | 37.49 | 405.00 |
| 6.400 | 525.00 | 865.91 | 0.00 | 0.45 | 0.00 | 57.15 | 405.00 |
| 6.400 | 630.00 | 866.52 | 0.00 | 0.48 | 0.00 | 39.38 | 405.00 |
| 6.400 | 900.00 | 867.25 | 0.00 | 0.24 | 0.00 | 43.72 | 405.00 |
| [illegible] | | | | | | | |
| 6.420 | 310.00 | 867.13 | 0.00 | 0.00 | 0.00 | 41.17 | 595.00 |
| [illegible] | | | | | | | |
| 6.420 | 900.00 | 867.56 | 0.00 | 0.39 | 0.00 | 241.33 | 595.00 |
| [illegible] | | | | | | | |
| 6.430 | 310.00 | 865.79 | 0.00 | 1.72 | 0.00 | 65.99 | 595.00 |
| [illegible] | | | | | | | |
| 6.430 | 900.00 | 869.26 | 0.00 | 1.53 | 0.00 | 196.00 | 595.00 |
| [illegible] | | | | | | | |
| 6.500 | 310.00 | 867.51 | 0.00 | 1.72 | 0.00 | 72.43 | 595.00 |
| 6.500 | 525.00 | 868.43 | 0.00 | 1.71 | 0.00 | 125.26 | 595.00 |
| [illegible] | | | | | | | |
| 6.500 | 900.00 | 866.63 | 0.00 | 1.23 | 0.00 | 146.58 | 595.00 |
| [illegible] | | | | | | | |
| 6.600 | 310.00 | 868.56 | 0.00 | 0.85 | 0.00 | 77.65 | 360.00 |
| 6.600 | 525.00 | 869.25 | 0.00 | 0.82 | 0.00 | 131.72 | 360.00 |
| 6.600 | 630.00 | 869.59 | 0.00 | 0.86 | 0.00 | 130.75 | 360.00 |
| [illegible] | | | | | | | |
| 6.700 | 310.00 | 868.15 | 0.00 | 0.58 | 0.00 | 83.13 | 525.00 |
| [illegible] | | | | | | | |
| 6.700 | 630.00 | 870.44 | 0.00 | 0.85 | 1.25 | 87.00 | 525.00 |
| 6.700 | 900.00 | 871.11 | 0.00 | 0.84 | 0.92 | 230.00 | 525.00 |
| [illegible] | | | | | | | |
| [illegible] | | | | | | | |
| [illegible] | | | | | | | |

FORM 11-11 PRINTED BY ROYARY MANIFOLD FORMS DIVISION OF ANTHONY PRINTING EQUIPMENT DETROIT PRINTED IN U.S.A.

| SECNO | Z | CASEL | DIFMSP | DIFMSX | DIFKUS | TOPMID | XLCH |
|---|---|---|---|---|---|---|---|
| 7.000 | 310.00 | 869.75 | 0.00 | 0.46 | 0.00 | 10.00 | 39.00 |
| 7.000 | 525.00 | 870.96 | 0.00 | 1.00 | 1.21 | [illegible] | [illegible] |
| 7.000 | 630.00 | 871.70 | 0.00 | 1.29 | 1.96 | [illegible] | [illegible] |
| 7.000 | 900.00 | 874.91 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 7.200 | 310.00 | 870.67 | 0.00 | 0.92 | 0.00 | 111.00 | 50.00 |
| 7.200 | 525.00 | 872.79 | 0.00 | 1.63 | 2.12 | 111.00 | 50.00 |
| 7.200 | 630.00 | 873.36 | 0.00 | 1.64 | [illegible] | [illegible] | [illegible] |
| 7.200 | 900.00 | 874.92 | 0.00 | 2.01 | [illegible] | [illegible] | [illegible] |
| 7.900 | 310.00 | 871.09 | 0.00 | 0.42 | 0.00 | [illegible] | 550.00 |
| 7.900 | 525.00 | 873.04 | 0.00 | 0.24 | 1.94 | 116.49 | 550.00 |
| 7.900 | 630.00 | 873.67 | 0.00 | 0.26 | 2.51 | 141.80 | 550.00 |
| 7.900 | 900.00 | 875.03 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.000 | 310.00 | 873.74 | 0.00 | -0.23 | 0.00 | [illegible] | 2.00 |
| 8.000 | 525.00 | 872.98 | 0.00 | -0.07 | 2.22 | [illegible] | 2.00 |
| 8.000 | 630.00 | 873.54 | 0.00 | -0.36 | 2.30 | 130.96 | 2.00 |
| 8.000 | 900.00 | 875.01 | 0.00 | -0.04 | 4.27 | 167.57 | 2.00 |
| 8.100 | 310.00 | 871.[illegible] | 0.00 | 0.41 | 0.00 | [illegible] | [illegible] |
| 8.100 | 525.00 | 873.[illegible] | 0.00 | 0.0[illegible] | [illegible] | [illegible] | [illegible] |
| 8.100 | 630.00 | 873.51 | 0.00 | 0.07 | 2.48 | 162.02 | 2.00 |
| 8.100 | 900.00 | 875.05 | 0.00 | 0.04 | 3.90 | 167.73 | 2.00 |
| 8.300 | 310.00 | 872.[illegible] | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.300 | 525.00 | 873.6[illegible] | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.300 | 630.00 | 874.10 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.300 | 900.00 | 875.33 | 0.00 | 0.27 | 2.93 | [illegible] | 390.00 |
| 8.310 | 310.00 | 873.12 | 0.00 | 0.72 | 0.00 | 50.38 | 445.00 |
| 8.310 | 525.00 | 874.1[illegible] | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.310 | 630.00 | 874.36 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.310 | 900.00 | 875.62 | 0.00 | 0.29 | [illegible] | [illegible] | [illegible] |
| 8.320 | 310.00 | 874.69 | 0.00 | 1.57 | 0.00 | 49.81 | 445.00 |
| 8.320 | 525.00 | 875.51 | 0.00 | 1.36 | 0.01 | 83.03 | 445.00 |
| 8.320 | 630.00 | 875.02 | 0.00 | 1.27 | 1.13 | [illegible] | [illegible] |
| 8.320 | 900.00 | 876.35 | 0.00 | 0.93 | 1.05 | [illegible] | [illegible] |
| 8.330 | 310.00 | 876.30 | 0.00 | 1.60 | 0.00 | 49.78 | 445.00 |
| 8.330 | 525.00 | 877.13 | 0.00 | 1.62 | 0.83 | 84.62 | 445.00 |
| 8.330 | 630.00 | 877.64 | 0.00 | 1.61 | 1.14 | 98.52 | 445.00 |
| 8.330 | 900.00 | 878.09 | 0.00 | 1.54 | 1.79 | [illegible] | [illegible] |
| 8.400 | 310.00 | 878.34 | 0.00 | 2.05 | 0.00 | [illegible] | 445.00 |
| 8.400 | 525.00 | 879.09 | 0.00 | 1.90 | 0.73 | [illegible] | 445.00 |
| 8.400 | 630.00 | 879.30 | 0.00 | 1.94 | 1.04 | 99.64 | 445.00 |
| 8.400 | 900.00 | 880.00 | 0.00 | 1.91 | 1.65 | 122.52 | 445.00 |
| 8.410 | 310.00 | 880.65 | 0.00 | 2.30 | 0.00 | [illegible] | 300.00 |
| 8.410 | 525.00 | 881.26 | 0.00 | 2.17 | 0.62 | 76.69 | 300.00 |
| 8.410 | 630.00 | 881.[illegible] | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.410 | 900.00 | 882.00 | 0.00 | 2.01 | 1.36 | 104.07 | 300.00 |

FORM 14TH CD PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF [illegible] PRINTING COMPANY [illegible]
PRINTED IN U.S.A.

| SECND | Z | CHSEL | DIFHSP | DIFHSX | DCFK.S | TCPUSD | XLCI |
|---|---|---|---|---|---|---|---|
| 8.900 | 310.00 | 882.66 | 0.00 | 2.01 | 0.00 | 126.29 | 300.00 |
| [illegible] | 525.00 | 882.35 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8.900 | 630.00 | 867.02 | 0.00 | 2.12 | 0.94 | 147.07 | 300.00 |
| 8.900 | 900.00 | 864.96 | 0.00 | 2.01 | 0.15 | 189.79 | 300.00 |
| 9.000 | 310.00 | 892.47 | 0.00 | -2.19 | 0.00 | 114.53 | 2.00 |
| 9.000 | 525.00 | 883.17 | 0.00 | -0.18 | 0.70 | 134.64 | 2.00 |
| 9.000 | 630.00 | 893.93 | 0.00 | -0.19 | 0.93 | 131.71 | 2.00 |
| 9.000 | 900.00 | 885.97 | 0.00 | -1.23 | 1.50 | 187.11 | 2.00 |
| 9.100 | 310.00 | 882.43 | 0.00 | 0.36 | 0.00 | 126.15 | 2.00 |
| 9.100 | 525.00 | 883.69 | 0.00 | 0.32 | 0.66 | 145.48 | 2.00 |
| 9.100 | 630.00 | 883.77 | 0.00 | 0.34 | 0.96 | 151.21 | 2.00 |
| 9.100 | 900.00 | [illegible] | 0.00 | 0.11 | 1.53 | [illegible] | 2.00 |
| 9.900 | 310.00 | 883.01 | 0.00 | 0.00 | 0.00 | 114.53 | 125.00 |
| 9.900 | 525.00 | 883.68 | 0.00 | 0.17 | 0.65 | 134.67 | 125.00 |
| 9.900 | 630.00 | 883.97 | 0.00 | 0.16 | 0.93 | 177.46 | 125.00 |
| 9.900 | 900.00 | 884.54 | 0.00 | 0.15 | 1.53 | 190.67 | 125.00 |
| [illegible] | 310.00 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 525.00 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.000 | 630.00 | 885.53 | 0.00 | -0.33 | 1.32 | 139.89 | 2.00 |
| 10.000 | 900.00 | 886.26 | 0.00 | -0.28 | 1.70 | 134.45 | 2.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | 525.00 | [illegible] | 0.00 | 0.24 | 0.00 | [illegible] | [illegible] |
| [illegible] | 630.00 | [illegible] | 0.00 | 0.13 | [illegible] | [illegible] | [illegible] |
| [illegible] | 900.00 | [illegible] | 0.00 | 0.46 | 1.52 | [illegible] | 2.00 |
| 10.100 | 310.00 | 884.02 | 0.00 | 0.35 | 0.00 | 64.01 | 150.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.100 | 630.00 | 884.73 | 0.00 | 0.13 | 0.91 | [illegible] | [illegible] |
| 10.100 | 900.00 | 885.19 | 0.00 | 0.36 | 1.16 | 67.49 | [illegible] |
| 10.850 | 310.00 | 884.24 | 0.00 | 0.22 | 0.00 | 34.97 | 50.00 |
| 10.850 | 525.00 | 884.77 | 0.00 | 0.25 | 0.53 | 35.00 | 50.00 |
| [illegible] | 630.00 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.850 | 900.00 | 885.38 | 0.00 | 0.20 | 1.14 | 35.00 | 50.00 |
| 10.860 | 310.00 | 884.31 | 0.00 | 0.00 | 0.00 | 20.00 | 25.00 |
| 10.860 | 525.00 | 884.80 | 0.00 | 0.03 | 0.49 | 20.00 | 25.00 |
| 10.860 | 630.00 | 884.96 | 0.00 | -0.01 | 0.85 | 20.00 | 25.00 |
| [illegible] | 900.00 | 885.77 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 10.900 | 310.00 | 884.34 | 0.00 | 0.04 | 0.00 | 13.00 | 25.00 |
| 10.900 | 525.00 | 885.09 | 0.00 | 0.29 | 0.43 | 13.00 | 25.00 |
| 10.900 | 630.00 | 885.57 | 0.00 | 0.61 | 1.28 | 13.00 | 25.00 |
| 10.900 | 900.00 | 886.68 | 0.00 | 0.92 | 2.32 | 13.00 | 25.00 |
| 11.000 | 310.00 | 885.16 | 0.00 | 0.81 | 0.00 | 13.00 | 12.00 |
| 11.000 | 525.00 | 886.61 | 0.00 | 1.78 | 1.60 | 13.00 | 12.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 11.000 | 900.00 | 890.73 | 0.00 | 4.10 | 5.62 | 13.00 | 12.00 |

FORM 111-68 PRINTED BY MOTLEY MANIFOLD FORMS DIVISION OF [illegible] PRINTED IN U.S.A.

| SECNO | | CHSEL | DIFUSP | DIFUSX | DIFUSS | TOPWID | BLTH |
|---|---|---|---|---|---|---|---|
| 11.200 | 310.00 | 935.72 | 0.00 | 0.65 | 0.00 | 72.96 | 50.00 |
| 11.200 | 525.00 | 938.07 | 0.00 | 1.20 | 2.25 | 79.90 | 50.00 |
| 11.200 | 630.00 | 936.26 | 0.00 | 1.59 | 2.74 | 95.09 | 50.00 |
| 11.200 | 900.00 | 934.01 | 0.00 | 1.37 | 3.01 | 91.04 | 50.00 |
| 11.210 | 310.00 | 386.60 | 0.00 | 0.76 | 0.00 | 29.54 | 280.00 |
| 11.210 | 525.00 | 388.35 | 0.00 | 0.20 | 1.75 | 182.60 | 250.00 |
| 11.210 | 630.00 | 388.84 | 0.00 | 0.55 | 2.04 | 15.44 | 280.00 |
| 11.210 | 900.00 | 389.04 | 0.00 | 0.13 | 3.74 | 213.47 | 280.00 |
| 11.220 | 310.00 | 887.52 | 0.00 | 0.92 | 0.00 | 27.48 | 140.00 |
| 11.220 | 525.00 | 888.59 | 0.00 | 0.24 | 1.67 | 164.75 | 140.00 |
| 11.220 | 630.00 | 888.87 | 0.00 | 0.25 | 1.35 | 170.23 | 140.00 |
| 11.220 | 900.00 | 891.93 | 0.00 | 1.00 | 1.98 | 224.17 | 140.00 |
| 11.230 | 310.00 | 890.83 | 0.00 | 0.93 | 0.00 | 27.92 | 140.00 |
| 11.230 | 525.00 | 889.91 | 0.00 | 0.92 | 0.00 | 81.37 | 140.00 |
| 11.230 | 630.00 | 889.77 | 0.00 | 0.80 | 1.12 | 165.41 | 140.00 |
| 11.230 | 900.00 | 892.01 | 0.00 | 0.35 | 3.35 | 209.09 | 140.00 |
| 11.240 | 310.00 | 895.60 | 0.00 | 1.15 | 0.00 | 31.37 | 140.00 |
| 11.240 | 525.00 | 895.70 | 0.00 | 1.20 | 1.90 | 74.27 | 140.00 |
| 11.240 | 630.00 | 894.01 | 0.00 | 1.25 | 1.21 | 167.10 | 140.00 |
| 11.240 | 900.00 | 892.14 | 0.00 | 0.94 | 2.34 | 169.55 | 140.00 |
| 11.290 | 310.00 | 893.00 | 0.00 | 1.07 | 0.00 | 55.63 | 140.00 |
| 11.290 | 525.00 | 895.21 | 0.00 | 1.21 | 1.01 | 82.62 | 140.00 |
| 11.290 | 630.00 | 894.75 | 0.00 | 1.78 | 1.75 | 221.56 | 140.00 |
| 11.290 | 900.00 | 894.09 | 0.00 | 1.30 | 1.84 | 227.83 | 140.00 |
| 11.300 | 310.00 | 893.94 | 0.00 | 0.94 | 0.00 | 66.31 | 140.00 |
| 11.300 | 525.00 | 896.65 | 0.00 | 1.33 | 0.70 | 100.11 | 140.00 |
| 11.300 | 630.00 | 896.94 | 0.00 | 1.80 | 1.00 | 227.60 | 140.00 |
| 11.300 | 900.00 | 895.20 | 0.00 | 1.19 | 1.34 | 231.39 | 140.00 |
| 11.310 | 310.00 | 895.22 | 0.00 | 1.27 | 0.00 | 41.31 | 165.00 |
| 11.310 | 525.00 | 895.90 | 0.00 | 1.26 | 0.69 | 226.69 | 165.00 |
| 11.310 | 630.00 | 894.01 | 0.00 | 1.07 | 0.80 | 230.70 | 165.00 |
| 11.310 | 900.00 | 892.10 | 0.00 | 1.15 | 1.15 | 234.47 | 165.00 |
| 11.320 | 310.00 | 896.17 | 0.00 | 0.94 | 0.00 | 36.77 | 165.00 |
| 11.320 | 525.00 | 898.79 | 0.00 | 0.83 | 0.50 | 154.76 | 165.00 |
| 11.320 | 630.00 | 896.96 | 0.00 | 0.96 | 0.78 | 156.76 | 165.00 |
| 11.320 | 900.00 | 897.31 | 0.00 | 0.91 | 1.14 | 157.99 | 165.00 |
| 11.900 | 310.00 | 897.15 | 0.00 | 0.95 | 0.00 | 30.10 | 165.00 |
| 11.900 | 525.00 | 897.79 | 0.00 | 1.23 | 0.60 | 70.20 | 165.00 |
| 11.900 | 630.00 | 896.44 | 0.00 | 1.44 | 0.00 | 70.00 | 165.00 |
| 11.900 | 900.00 | 894.41 | 0.00 | 1.00 | 1.29 | 70.00 | 165.00 |

FORM 1511 LJ PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF THE HAAS PRINTING CO., INC., DAYTON, OHIO
PRINTED IN U.S.A.

| SECNO | Q | CUSEL | DIF.SP | DIF.SX | DIF.MS | TOPWID | X.CH |
|---|---|---|---|---|---|---|---|
| 12.000 | 310.00 | 897.22 | 0.00 | 0.07 | 0.00 | 50.00 | 2.00 |
| 12.000 | 525.00 | 897.57 | 0.00 | 0.08 | 0.57 | 70.00 | 2.00 |
| 12.000 | 630.00 | 898.78 | 0.00 | 0.11 | 0.98 | 70.00 | 2.00 |
| 12.000 | 900.00 | 900.34 | 0.00 | 0.13 | 1.56 | 70.00 | 2.00 |
| 12.100 | 310.00 | 897.06 | 0.00 | -0.14 | 0.00 | 68.00 | 2.00 |
| 12.100 | 525.00 | 897.72 | 0.00 | -0.15 | 0.67 | 70.00 | 2.00 |
| 12.100 | 630.00 | 897.92 | 0.00 | -0.16 | 0.88 | 70.00 | 2.00 |
| 12.100 | 900.00 | 898.56 | 0.00 | -0.18 | 1.50 | 70.00 | 2.00 |
| 12.200 | 310.00 | 897.76 | 0.00 | 0.70 | 0.00 | 71.54 | 165.00 |
| 12.200 | 525.00 | 898.58 | 0.00 | 0.85 | 0.82 | 102.02 | 165.00 |
| 12.200 | 630.00 | 898.80 | 0.00 | 0.96 | 1.12 | 112.17 | 165.00 |
| 12.200 | 900.00 | 899.[illegible] | 0.00 | 1.19 | [illegible] | [illegible] | 165.00 |
| 12.900 | 310.00 | 897.85 | 0.00 | 0.05 | [illegible] | [illegible] | 170.00 |
| 12.900 | 525.00 | 898.64 | 0.00 | 0.06 | 0.78 | 53.78 | 170.00 |
| 12.900 | 630.00 | 898.94 | 0.00 | 0.06 | 1.09 | 70.00 | 170.00 |
| 12.900 | 900.00 | 899.62 | 0.00 | 0.07 | 1.77 | 70.00 | 170.00 |
| 13.000 | 310.00 | 897.73 | 0.00 | -0.12 | 0.00 | [illegible] | 2.00 |
| 13.000 | 525.00 | 898.89 | 0.00 | 0.17 | [illegible] | [illegible] | 2.00 |
| 13.000 | 630.00 | 899.33 | 0.00 | 0.39 | 1.50 | 70.00 | 2.00 |
| 13.000 | 900.00 | 900.13 | 0.00 | 0.51 | 2.40 | 70.00 | 2.00 |
| 13.100 | 310.00 | 898.[illegible] | 0.00 | 0.91 | 0.00 | [illegible] | 2.00 |
| 13.100 | 525.00 | 898.99 | 0.00 | 0.[illegible] | 0.72 | 70.00 | 2.00 |
| 13.100 | 630.00 | 899.20 | 0.00 | -0.[illegible] | 0.[illegible] | 70.00 | 2.00 |
| 13.100 | 900.00 | 899.75 | 0.00 | -0.38 | 1.31 | 70.00 | 2.00 |
| 13.900 | 310.00 | 899.70 | 0.00 | 1.46 | 0.00 | 95.19 | 120.00 |
| 13.900 | 525.00 | 900.30 | 0.00 | 1.59 | 0.00 | [illegible] | 120.00 |
| 13.900 | 630.00 | 900.67 | 0.00 | 1.67 | 0.97 | 25.[illegible] | 120.00 |
| 13.900 | 900.00 | 901.30 | 0.00 | 1.54 | 1.60 | 139.[illegible] | 120.00 |
| 14.000 | 310.00 | 899.69 | 0.00 | -0.01 | 0.00 | 94.87 | 2.00 |
| 14.000 | 525.00 | 900.40 | 0.00 | 0.02 | 0.72 | 119.16 | 2.00 |
| 14.000 | 630.00 | 900.20 | 0.00 | 0.03 | 1.01 | [illegible] | 2.00 |
| 14.000 | 900.00 | 901.33 | 0.00 | 0.03 | 1.65 | [illegible] | 2.00 |
| 14.100 | 310.00 | 899.70 | 0.00 | 0.02 | 0.00 | 95.50 | 2.00 |
| 14.100 | 525.00 | 900.41 | 0.00 | 0.01 | 0.71 | 119.47 | 2.00 |
| 14.100 | 630.00 | 900.71 | 0.00 | 0.01 | 1.01 | 128.29 | 2.00 |
| 14.100 | 900.00 | 901.34 | 0.00 | 0.01 | 1.64 | [illegible] | 2.00 |
| 14.200 | 310.00 | 900.45 | 0.00 | 0.75 | 0.00 | 120.09 | 150.00 |
| 14.200 | 525.00 | 901.10 | 0.00 | 0.38 | 0.65 | 135.[illegible] | 150.00 |
| 14.200 | 630.00 | 901.36 | 0.00 | 0.45 | 0.91 | 141.22 | 150.00 |
| 14.200 | 900.00 | 901.95 | 0.00 | 0.61 | 1.50 | 154.82 | 150.00 |
| 14.900 | 310.00 | 900.75 | 0.00 | 0.31 | 0.00 | 85.71 | 150.00 |
| 14.900 | 525.00 | 901.32 | 0.00 | 0.43 | 0.77 | 73.15 | 150.00 |
| 14.900 | 630.00 | 901.78 | 0.00 | 0.42 | 1.03 | 70.00 | 150.00 |
| 14.900 | 900.00 | 902.33 | 0.00 | 0.30 | 1.57 | 78.00 | 150.00 |

FORM 1411-CB PRINTED BY ROTARY TRANSFOLD FORMS DIVISION OF TAFRAN PRINTING COMPANY - DETROIT
PRINTED IN U.S.A.

| SECNO | Q | CHSEL | DIFHSP | DIFHSA | DIFKHS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 15.000 | 310.00 | 901.14 | 0.00 | 0.39 | 0.00 | 60.71 | 13.00 |
| 15.000 | 525.00 | 903.05 | 0.00 | 1.15 | 1.90 | [illegible] | [illegible] |
| 15.000 | 630.00 | 903.62 | 0.00 | 1.35 | 2.47 | [illegible] | 13.00 |
| 15.000 | 900.00 | 904.34 | 0.00 | 2.03 | [illegible] | [illegible] | 13.00 |
| 15.200 | 310.00 | 901.07 | 0.00 | 0.72 | 0.00 | 23.13 | 140.00 |
| 15.200 | 525.00 | 903.18 | 0.00 | 0.13 | 1.32 | 93.67 | 140.00 |
| 15.200 | 630.00 | 903.72 | 0.00 | 0.17 | [illegible] | [illegible] | 140.00 |
| 15.200 | 900.00 | 904.45 | 0.00 | 0.11 | 2.60 | [illegible] | 140.00 |
| 15.900 | 310.00 | 902.21 | 0.00 | 0.34 | 0.00 | 77.91 | 125.00 |
| 15.900 | 525.00 | 903.37 | 0.00 | 0.18 | 1.16 | 93.88 | 125.00 |
| 15.900 | 630.00 | 903.88 | 0.00 | 0.15 | 1.67 | 99.99 | 125.00 |
| 15.900 | 900.00 | 904.[illegible] | 0.00 | 0.17 | [illegible] | [illegible] | 125.00 |
| 16.000 | 310.00 | 901.71 | 0.00 | -0.50 | 0.00 | [illegible] | 2.00 |
| 16.000 | 525.00 | 903.[illegible] | 0.00 | -0.[illegible] | 1.49 | [illegible] | 2.00 |
| 16.000 | 630.00 | 903.71 | 0.00 | -0.16 | 2.81 | 90.86 | 2.00 |
| 16.000 | 900.00 | 904.44 | 0.00 | -0.21 | 2.74 | 106.70 | 2.00 |
| 16.100 | 310.00 | 901.[illegible] | 0.00 | -0.21 | 0.00 | [illegible] | 2.00 |
| 16.100 | 525.00 | 903.[illegible] | 0.00 | 0.29 | [illegible] | [illegible] | 2.00 |
| 16.100 | 630.00 | 903.98 | 0.00 | 0.27 | 2.30 | 101.[illegible] | 2.00 |
| 16.100 | 900.00 | 904.79 | 0.00 | 0.35 | 3.30 | 115.97 | 2.00 |
| 16.500 | 310.00 | 902.07 | 0.00 | [illegible] | 0.00 | [illegible] | [illegible] |
| 16.500 | 525.00 | 904.05 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.500 | 630.00 | 904.[illegible] | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.500 | 900.00 | 905.20 | 0.00 | 0.62 | 1.55 | 122.85 | 220.00 |
| 16.700 | 310.00 | 904.01 | 0.00 | 0.33 | 0.00 | 36.85 | 220.00 |
| 16.700 | 525.00 | 904.64 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.700 | 630.00 | 905.00 | 0.00 | [illegible] | 1.05 | 74.97 | [illegible] |
| 16.700 | 900.00 | 905.74 | 0.00 | 0.54 | 1.73 | 104.10 | [illegible] |
| 16.800 | 310.00 | 904.68 | 0.00 | 0.67 | 0.00 | 31.04 | 220.00 |
| 16.800 | 525.00 | 905.50 | 0.00 | 0.87 | 0.03 | 55.02 | 220.00 |
| 16.800 | 630.00 | 905.[illegible] | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 16.800 | 900.00 | 905.57 | 0.00 | 0.83 | 1.09 | 97.[illegible] | 220.00 |
| 16.900 | 310.00 | 904.93 | 0.00 | 0.25 | 0.00 | 10.00 | 100.00 |
| 16.900 | 525.00 | 905.84 | 0.00 | 0.34 | 0.91 | 68.33 | 100.00 |
| 16.900 | 630.00 | 906.19 | 0.00 | 0.34 | 1.26 | 82.26 | 100.00 |
| 16.900 | 900.00 | 906.94 | 0.00 | [illegible] | 2.01 | [illegible] | 100.00 |
| 17.000 | 310.00 | 908.29 | 0.00 | 0.37 | 0.00 | 10.00 | [illegible] |
| 17.000 | 525.00 | 911.44 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 17.000 | 630.00 | 911.66 | 0.00 | 5.47 | 3.36 | 207.83 | 46.00 |
| 17.000 | 900.00 | 912.05 | 0.00 | 5.11 | 3.76 | 207.46 | 46.00 |
| 17.900 | 310.00 | 908.79 | 0.00 | 0.50 | 0.00 | [illegible] | [illegible] |
| 17.900 | 525.00 | 911.62 | 0.00 | [illegible] | 2.33 | [illegible] | [illegible] |
| 17.900 | 630.00 | 911.80 | 0.00 | [illegible] | [illegible] | [illegible] | [illegible] |
| 17.900 | 900.00 | 912.31 | 0.00 | 0.26 | 3.53 | 265.94 | 128.00 |

FORM 1411-CD PRINTED BY ROTARY MANIFOLD PARIS DIVISION OF SAFMAN PRINTING COMPANY SEATTLE PRINTED IN U.S.A.

| SECNO | C | C.SEL | DIFWSZ | DIFWSK | DIFKUS | TOPHIO | XLCH |
|---|---|---|---|---|---|---|---|
| 18.000 | 310.00 | 908.77 | 0.00 | -0.01 | 0.00 | 193.03 | 2.00 |
| 18.000 | 525.00 | 911.31 | 0.00 | -0.01 | 2.04 | [illegible] | [illegible] |
| 18.000 | 630.00 | 911.15 | 0.00 | -0.01 | 0.07 | [illegible] | [illegible] |
| 18.000 | 900.00 | 912.50 | 0.00 | -0.02 | [illegible] | [illegible] | [illegible] |
| 18.100 | 310.00 | 908.79 | 0.00 | 0.02 | 0.00 | 193.55 | 2.00 |
| 18.100 | 525.00 | 911.62 | 0.00 | 0.01 | 2.83 | 259.97 | 2.00 |
| 18.100 | 630.00 | 911.90 | 0.00 | 0.02 | 3.07 | [illegible] | [illegible] |
| 18.100 | 900.00 | 912.33 | 0.00 | 0.03 | 3.53 | [illegible] | [illegible] |
| 18.200 | 310.00 | 908.98 | 0.00 | 0.18 | 0.00 | [illegible] | 680.00 |
| 18.200 | 525.00 | 911.68 | 0.00 | 0.05 | 2.70 | 285.17 | 680.00 |
| 18.200 | 630.00 | 911.93 | 0.00 | 0.06 | 2.95 | 289.92 | 680.00 |
| 18.200 | 900.00 | 912.42 | 0.00 | 0.10 | [illegible] | [illegible] | [illegible] |
| 18.700 | 310.00 | 911.04 | 0.00 | 1.06 | 0.00 | 70.40 | 1010.00 |
| 18.700 | 525.00 | 911.29 | 0.00 | [illegible] | 1.35 | 535.05 | 1010.00 |
| 18.700 | 630.00 | 912.17 | 0.00 | 0.25 | 2.93 | 546.78 | 1010.00 |
| 18.700 | 900.00 | 912.76 | 0.00 | 0.32 | 2.70 | 570.57 | 1010.00 |
| 18.800 | 310.00 | 910.11 | 0.00 | 0.06 | 0.00 | 30.00 | 95.00 |
| 18.800 | 525.00 | 911.91 | 0.00 | [illegible] | [illegible] | [illegible] | 95.00 |
| 18.800 | 630.00 | 912.22 | 0.00 | 0.05 | 2.11 | [illegible] | 95.00 |
| 18.800 | 900.00 | 912.79 | 0.00 | 0.05 | 2.68 | 572.37 | 95.00 |
| 18.900 | 310.00 | 910.11 | 0.00 | 0.00 | [illegible] | [illegible] | [illegible] |
| 18.900 | 525.00 | 911.95 | 0.00 | 0.01 | [illegible] | [illegible] | [illegible] |
| 18.900 | 630.00 | 912.27 | 0.00 | 0.04 | [illegible] | [illegible] | [illegible] |
| 18.900 | 900.00 | 912.83 | 0.00 | 0.05 | 2.71 | 574.73 | 1.02 |
| 19.000 | 310.00 | 911.50 | 0.00 | 1.39 | 0.00 | 30.00 | 48.00 |
| 19.000 | 525.00 | 912.07 | 0.00 | 0.12 | [illegible] | [illegible] | [illegible] |
| 19.000 | 630.00 | 912.34 | 0.00 | 0.05 | [illegible] | [illegible] | [illegible] |
| 19.000 | 900.00 | 912.90 | 0.00 | 0.05 | [illegible] | [illegible] | [illegible] |
| 19.100 | 310.00 | 911.56 | 0.00 | 0.06 | 0.00 | 30.00 | 1.00 |
| 19.100 | 525.00 | 912.06 | 0.00 | -0.01 | 0.50 | 542.30 | 1.00 |
| 19.100 | 630.00 | 912.32 | 0.00 | -0.02 | [illegible] | [illegible] | [illegible] |
| 19.100 | 900.00 | 912.07 | 0.00 | -0.02 | 1.31 | 575.97 | 1.00 |
| 19.200 | 310.00 | 911.63 | 0.00 | 0.07 | 0.00 | 200.00 | 87.00 |
| 19.200 | 525.00 | 912.08 | 0.00 | 0.03 | 0.46 | 543.13 | 87.00 |
| 19.200 | 630.00 | 912.35 | 0.00 | 0.03 | 0.72 | 554.17 | 87.00 |
| 19.200 | 900.00 | 912.90 | 0.00 | 0.03 | [illegible] | [illegible] | 87.00 |
| 19.300 | 310.00 | 911.34 | 0.00 | -0.09 | 0.00 | 200.00 | 2.00 |
| 19.300 | 525.00 | 912.11 | 0.00 | 0.03 | 0.58 | 544.22 | 2.00 |
| 19.300 | 630.00 | 912.38 | 0.00 | 0.04 | 0.85 | 555.67 | 2.00 |
| 19.300 | 900.00 | 912.94 | 0.00 | 0.04 | 1.41 | 579.02 | 2.00 |
| 19.400 | 310.00 | 911.66 | 0.00 | 0.13 | 0.00 | 200.00 | 2.00 |
| 19.400 | 525.00 | 912.10 | 0.00 | -0.01 | 0.44 | 544.00 | 2.00 |
| 19.400 | 630.00 | 912.37 | 0.00 | -0.02 | [illegible] | [illegible] | 2.00 |
| 19.400 | 900.00 | 912.95 | 0.00 | -0.02 | 1.26 | 578.72 | 2.00 |

FORM 1411-CL PRINTED BY ROTARY MANIFOLD FOR 15 DIVISION OF [illegible] PRINTED IN U.S.A.

| SECNO | Q | CUSEL | DIFUSP | DIFUSX | DIFXUS | TOPUID | XLCP |
|---|---|---|---|---|---|---|---|
| 19.700 | 310.00 | 912.15 | 0.00 | 0.49 | 0.00 | 482.13 | 545.00 |
| 19.700 | 525.00 | 912.59 | 0.00 | 0.43 | 0.45 | 482.23 | [illegible] |
| 19.700 | 630.00 | 912.82 | 0.00 | 0.43 | 0.47 | 482.29 | [illegible] |
| 19.700 | 900.00 | 913.33 | 0.00 | 0.43 | 1.00 | 482.42 | [illegible] |
| 19.800 | 310.00 | 912.20 | 0.00 | 0.13 | 0.00 | 482.16 | 99.00 |
| 19.800 | 525.00 | 912.72 | 0.00 | 0.14 | 0.44 | 482.27 | 99.00 |
| 19.800 | 630.00 | 912.94 | 0.00 | 0.12 | 0.50 | 482.32 | [illegible] |
| 19.800 | 900.00 | 913.45 | 0.00 | 0.10 | 1.17 | 482.44 | [illegible] |
| 19.900 | 310.00 | 912.39 | 0.00 | 0.10 | 0.00 | 482.13 | [illegible] |
| 19.900 | 525.00 | 912.69 | 0.00 | -0.03 | 0.30 | 482.17 | 1.00 |
| 19.900 | 630.00 | 912.96 | 0.00 | 0.00 | 0.56 | 482.24 | 1.00 |
| 19.900 | 900.00 | 913.47 | 0.00 | 0.00 | 1.07 | 482.27 | [illegible] |
| 20.000 | 310.00 | 912.73 | 0.00 | 0.35 | 0.00 | 482.11 | [illegible] |
| 20.000 | 525.00 | 912.92 | 0.00 | 0.20 | 0.23 | 482.24 | 40.00 |
| 20.000 | 630.00 | 913.12 | 0.00 | 0.18 | 0.37 | 482.28 | 40.00 |
| 20.000 | 900.00 | 913.59 | 0.00 | 0.11 | 0.85 | 482.40 | 40.00 |
| 20.100 | 310.00 | 912.73 | 0.00 | -0.01 | 0.00 | 482.36 | 1.00 |
| 20.100 | 525.00 | 912.93 | 0.00 | -0.04 | 0.[illegible] | 482.23 | 1.00 |
| 20.100 | 630.00 | 913.08 | 0.00 | -0.03 | 0.30 | 482.27 | 1.00 |
| 20.100 | 900.00 | 913.54 | 0.00 | -0.04 | 0.82 | 482.30 | 1.00 |

[illegible] OF ERRORS

CAUTION SECNO= 8.610 PROFILE= 4 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 8.610 PROFILE= 4 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 10.000 PROFILE= 1 WSEL ASSUMED BASED ON [illegible]
CAUTION SECNO= 10.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 10.860 PROFILE= 4 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 10.860 PROFILE= 4 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 10.900 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 10.900 PROFILE= 2 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 10.900 PROFILE= 3 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 10.900 PROFILE= 3 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 10.900 PROFILE= 4 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 10.900 PROFILE= 4 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 10.900 PROFILE= 4 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 11.280 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11.280 PROFILE= 2 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 11.280 PROFILE= 3 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11.280 PROFILE= 3 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 11.280 PROFILE= 4 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11.280 PROFILE= 4 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 11.280 PROFILE= 4 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 11.290 PROFILE= 3 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11.290 PROFILE= 3 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 11.290 PROFILE= 4 CRITICAL DEPTH ASSUMED
CAUTION SECNO= [illegible] PROFILE= [illegible] [illegible]

CAUTION SECNO= 11.300 PROFILE= 2 CRITICAL DEPTH ASSUMED

FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS DIVISION OF LAPLAN LEARNING COMPANY BOSTON PRINTED IN U.S.A.

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CAUTION  SECNO=   11.300  PROFILE= 2  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   11.300  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   11.300  PROFILE= 3  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   11.300  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   11.300  PROFILE= 4  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=   13.100  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   13.100  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   13.100  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   13.100  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   13.100  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   13.100  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   13.100  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   13.100  PROFILE= 3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   13.100  PROFILE= 3  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO=   18.000  PROFILE= 1  USED MINIMUM SPECIFIC ENERGY OR CRITICAL
CAUTION  SECNO=   18.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL

NOTE     SECNO=   19.000  PROFILE= 1  WSEL BASED ON X5 CARD

NOTE     SECNO=   19.000  PROFILE= 1  WSEL BASED ON X5 CARD

CAUTIC   SECNO=   19.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTIC   SECNO=   19.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   19.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
```

FLOOD INSURANCE ZONE DATA FOR WIAGES BROOK B.C.T.P

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10% | 2% | 0.2% |
|---|---|---|---|---|
| 5.350 | 0. | -2.5 | -0.3 | 3.1 |
| 5.360 | 40. | -2.5 | -0.7 | 2.9 |
| 5.400 | 1079. | -2.6 | -0.7 | 2.7 |
| 6.410 | 1690. | -2.2 | -0.7 | 2.5 |
| 6.420 | 2285. | -1.6 | -0.5 | 2.1 |
| 6.450 | 2501. | -1.3 | -0.4 | 1.8 |
| 6.510 | 3475. | -1.5 | -0.3 | 2.2 |
| 6.530 | 3775. | -1.2 | -0.3 | 1.7 |
| 6.700 | 4702. | -1.3 | -0.3 | 1.7 |
| 6.750 | 4950. | -1.2 | -0.3 | 1.6 |
| 6.800 | 4200. | -0.8 | -0.2 | 1.2 |
| 7.[illegible] | 4331. | -2.1 | -0.[illegible] | 2.[illegible] |
| 7.200 | 4351. | -2.2 | -0.[illegible] | 2.[illegible] |
| 7.[illegible] | 4351. | -2.5 | -0.[illegible] | 2.[illegible] |
| 8.000 | 5147. | -2.2 | -0.6 | 1.5 |
| 8.100 | 4043. | -2.5 | -0.6 | 1.4 |
| 8.300 | 5233. | -1.7 | -0.5 | 1.2 |
| 8.31[illegible] | 5271. | -1.[illegible] | -0.[illegible] | 1.[illegible] |
| 8.360 | 6122. | -1.[illegible] | -0.2 | 0.7 |
| 8.370 | 6558. | -1.[illegible] | -0.1 | 0.7 |
| 8.400 | 7015. | -1.3 | -0.3 | 0.5 |
| 8.410 | 7313. | -0.3 | -0.2 | 0.5 |
| 8.900 | 7613. | -1.0 | -0.3 | 0.6 |
| 9.000 | 7615. | -1.[illegible] | -0.[illegible] | 0.[illegible] |
| 9.100 | 7617. | -0.3 | -0.[illegible] | 0.[illegible] |
| 9.200 | 7742. | -0.3 | -0.[illegible] | 0.6 |
| 10.000 | 7745. | -1.0 | -0.[illegible] | 0.[illegible] |
| 10.100 | 7746. | -0.9 | -0.2 | 0.5 |
| 10.000 | 7846. | -0.7 | -0.2 | 0.5 |
| 11.000 | 7905. | -0.7 | -0.2 | 1.[illegible] |
| 11.060 | 7976. | -0.[illegible] | -0.2 | 0.8 |
| 11.[illegible]10 | 7956. | -1.2 | -0.5 | 1.[illegible] |
| 11.000 | 8020. | -1.3 | -0.[illegible] | 1.[illegible] |
| 11.200 | 8028. | -2.5 | -0.2 | 3.5 |
| 11.210 | 8358. | -2.3 | -0.[illegible] | 3.3 |
| 11.[illegible] | 8[illegible]. | -1.[illegible] | -0.[illegible] | 1.[illegible] |
| 11.[illegible] | 8772. | -1.2 | -0.[illegible] | 1.[illegible] |
| 11.200 | 8910. | -1.3 | -0.4 | 0.[illegible] |
| 11.290 | 9058. | -0.8 | -0.2 | 0.3 |
| 11.300 | 9198. | -1.0 | -0.3 | 0.3 |
| 12.[illegible] | 9[illegible]. | -1.[illegible] | -0.[illegible] | 0.[illegible] |
| 12.[illegible] | 9[illegible]. | -1.[illegible] | -0.[illegible] | 0.[illegible] |
| 12.[illegible] | 9[illegible]. | -1.[illegible] | -0.[illegible] | 0.[illegible] |
| 12.100 | 9697. | -1.[illegible] | -0.[illegible] | 0.[illegible] |
| 12.200 | 9848. | -1.[illegible] | -0.[illegible] | 0.[illegible] |
| 13.000 | 10014. | -1.[illegible] | -0.[illegible] | 0.[illegible] |
| 13.[illegible] | 10[illegible]

| | | | | |
|---|---|---|---|---|
| 14.200 | 10310. | -0.9 | -0.3 | 0.5 |
| 14.900 | 10460. | -1.0 | -0.3 | 0.3 |
| 15.000 | 10473. | -2.5 | -0.6 | 0.7 |
| 15.200 | 10613. | -1.9 | -0.5 | 0.0 |
| 15.900 | 10738. | -1.7 | [illegible] | 0.0 |
| 16.000 | 10760. | -2.0 | -0.5 | 0.7 |
| 16.400 | 10742. | -2.5 | -0.5 | 0.0 |
| 16.500 | 10962. | -1.0 | -0.4 | 0.0 |
| 16.700 | 11102. | -1.0 | -0.4 | 0.7 |
| 16.800 | 11402. | -1.2 | -0.3 | 0.7 |
| 16.900 | 11502. | [illegible] | [illegible] | [illegible] |
| 17.000 | 11541. | -3.4 | [illegible] | [illegible] |
| 17.900 | 11674. | -3.1 | -0.2 | 0.5 |
| 18.000 | 11675. | -3.1 | -0.2 | 0.5 |
| 18.100 | 11680. | -3.1 | -0.2 | 0.5 |
| 18.200 | 12360. | -2.9 | -0.2 | 0.5 |
| 18.700 | 13370. | -2.1 | [illegible] | [illegible] |
| 18.800 | 13489. | -2.1 | [illegible] | 0.5 |
| 18.900 | 13470. | -2.2 | [illegible] | [illegible] |
| 19.000 | 13510. | -0.3 | -0.3 | 0.4 |
| 19.100 | 13519. | -0.3 | -0.3 | 0.5 |
| 19.200 | 13606. | -0.7 | -0.3 | 0.6 |
| 19.300 | 13700. | -0.3 | -0.3 | 0.5 |
| 19.400 | 13800. | -0.7 | -0.3 | 0.5 |
| 19.700 | 14255. | -0.7 | [illegible] | [illegible] |
| 19.800 | 14354. | -0.7 | -0.2 | 0.5 |
| 19.900 | 14355. | -0.6 | -0.3 | 0.5 |
| 20.000 | 14403. | -0.4 | -0.2 | 0.5 |
| 20.100 | 14404. | [illegible] | [illegible] | [illegible] |
| [illegible] AVG FOR [illegible] | | -1.0 | -0.4 | 1.0 |

FIT FOR THE REACH = 015 WITH 35.90 OF THE REACH WITHIN 0.5 FEET

[illegible] FOR THE REACH = [illegible]

CONTINUOUS FLOOD [illegible] FACTORS OF EVEN INCREMENTS

| SEC. NO. | NOTAL LENGTH | AVG ELEVATION DATA 100 | 10 | DIFF. | WTD. AVG. | FHF | PERCENT WITHIN |
|---|---|---|---|---|---|---|---|
| | [illegible] | | | | SEC. | | [illegible] |
| 1 | 100. | 861.4 | 862.9 | -2.5 | -2.5 | 025 | 100. |
| 2 | 200. | 861.5 | 862.9 | -2.5 | -2.1 | 025 | 100. |
| 3 | 300. | 861.6 | 864.0 | -2.4 | -2.5 | 025 | 100. |
| 4 | 400. | 861.7 | 864.1 | -2.4 | -2.4 | 025 | 100. |
| | 610. | | | | SEC. | | 6.300 |
| 5 | 500. | 861.7 | 864.1 | -2.4 | -2.4 | 025 | 100. |
| 6 | 600. | 861.8 | 864.2 | -2.4 | -2.4 | 025 | 100. |
| 7 | 700. | 861.9 | 864.2 | -2.4 | -2.4 | 025 | 100. |
| 8 | 800. | 861.9 | 864.3 | -2.4 | -2.4 | 025 | 100. |
| 9 | 900. | 862.0 | 864.4 | -2.4 | -2.4 | 025 | 100. |
| 10 | 1000. | 862.1 | 864.4 | -2.4 | -2.4 | 025 | 100. |
| | [illegible] | | | | SEC. | | [illegible] |
| 11 | 1100. | 862.1 | 864.5 | -2.4 | -2.4 | 025 | 100. |
| 12 | 1200. | 862.2 | 864.6 | -2.4 | -2.4 | 025 | 100. |
| 13 | 1300. | 862.3 | 864.6 | -2.4 | -2.4 | 025 | 100. |
| 14 | 1400. | 862.4 | 864.7 | -2.3 | -2.4 | 025 | 100. |
| 15 | 1500. | 862.4 | 864.8 | -2.3 | -2.4 | 025 | 100. |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 16 | 1600. | 862.7 | 864.9 | -2.2 | -2.4 | 025 | 100. | |
| | 1690. | | | | SEC. | | 6.410 | |
| 17 | 1700. | 862.8 | 865.0 | -2.2 | -2.4 | 025 | 100. | |
| 18 | 1800. | 863.0 | 865.1 | -2.1 | -2.3 | 025 | 100. | |
| 19 | 1900. | 864.2 | 865.2 | -1.0 | -2.3 | 025 | 100. | |
| 20 | 2000. | 867.4 | 865.3 | +1.9 | +2.3 | 025 | 100. | |
| 21 | 2100. | 867.6 | 865.4 | +1.3 | +2.3 | 025 | 80. | |
| 22 | 2200. | 863.6 | 865.5 | -1.7 | -2.3 | 025 | 100. | |
| | 2285. | | | | SEC. | | 6.620 | |
| 23 | 2300. | 864.0 | 865.6 | -1.6 | -2.2 | 020 | 100. | |
| 24 | 2400. | 863.2 | 865.7 | -1.5 | -2.2 | 020 | 100. | |
| 25 | 2500. | 863.2 | 865.8 | -1.5 | -2.2 | 020 | 100. | |
| 26 | 2600. | 864.2 | 865.9 | -1.7 | -2.1 | 020 | 100. | |
| 27 | 2700. | 865.1 | 866.0 | -1.6 | -2.1 | 020 | 100. | |
| 28 | 2800. | 865.4 | 866.0 | -1.4 | -2.1 | 020 | 100. | |
| | 2880. | | | | SEC. | | 6.430 | |
| 29 | 2900. | 865.7 | 867.0 | -1.3 | -2.1 | 020 | 100. | |
| 30 | 3000. | 866.0 | 867.2 | -1.3 | -2.1 | 020 | 100. | |
| 31 | 3100. | 866.3 | 867.4 | -1.1 | -2.1 | 020 | 100. | |
| 32 | 3200. | 866.6 | 867.5 | -1.0 | -2.0 | 020 | 75. | |
| 33 | 3300. | 866.9 | 868.1 | -1.3 | -2.0 | 020 | 75. | |
| 34 | 3400. | 867.2 | 868.4 | -1.3 | -2.0 | 020 | 50. | |
| | 3660. | | | | SEC. | | 6.580 | |
| 35 | 3500. | 867.4 | 868.5 | -1.1 | -1.9 | 020 | 50. | |
| 36 | 3600. | 867.7 | 868.6 | -1.0 | -1.9 | 020 | 50. | |
| 37 | 3700. | 868.0 | 868.7 | -1.2 | -1.9 | 020 | 50. | |
| | 3775. | | | | SEC. | | 6.600 | |
| 38 | 3800. | 868.3 | 869.5 | -1.2 | -1.9 | 020 | 50. | |
| 39 | 3900. | 868.2 | 870.1 | -1.9 | -1.9 | 020 | 50. | |
| 40 | 4000. | 868.6 | 870.2 | -1.6 | -1.9 | 020 | 50. | |
| | 4100. | | | | SEC. | | 6.700 | |
| 41 | 4200. | 869.1 | 870.3 | -1.3 | -1.9 | 020 | 50. | |
| 42 | 4200. | 868.2 | 870.3 | -1.0 | -1.0 | 020 | 38. | |
| | 4280. | | | | SEC. | | 7.000 | |
| | 4290. | | | | SEC. | | 7.000 | |
| | 4310. | | | | SEC. | | 7.200 | |
| 43 | 4300. | 872.7 | 873.5 | -2.7 | -1.9 | 020 | 38. | |
| 44 | 4400. | 872.7 | 873.4 | -2.7 | -1.9 | 020 | 38. | |
| 45 | 4500. | 872.6 | 873.4 | -2.6 | -1.9 | 020 | 38. | |
| 46 | 4600. | 872.9 | 873.5 | -2.5 | -1.9 | 020 | 38. | |
| 47 | 4700. | 872.9 | 873.5 | -2.6 | -1.9 | 020 | 38. | |
| 48 | 4800. | 871.0 | 873.6 | -2.7 | -1.9 | 020 | 38. | |
| | 4839. | | | | SEC. | | 7.200 | |
| | 4891. | | | | SEC. | | 8.000 | |
| | 4843. | | | | SEC. | | 8.100 | |
| 49 | 4900. | 871.8 | 873.7 | -2.9 | -1.9 | 020 | 38. | |
| 50 | 5000. | 872.5 | 873.7 | -2.3 | -1.9 | 020 | 38. | |
| 51 | 5100. | 871.8 | 873.9 | -2.1 | -1.9 | 020 | 31. | |
| 52 | 5200. | 872.1 | 874.0 | -1.9 | -1.9 | 020 | 38. | |
| | 5233. | | | | SEC. | | 8.300 | |
| 53 | 5300. | 872.4 | 874.1 | -1.7 | -1.9 | 020 | 53. | |
| 54 | 5400. | 872.0 | 874.3 | -1.5 | -1.9 | 020 | 53. | |
| 55 | 5500. | 872.9 | 874.4 | -1.5 | -1.9 | 020 | 35. | |
| 56 | 5600. | 872.9 | 874.5 | -1.6 | -1.9 | 020 | 38. | |
| 57 | 5700. | 873.1 | 874.6 | -1.5 | -1.9 | 020 | 38. | |
| 58 | 5800. | 873.2 | 874.8 | -1.6 | -1.9 | 020 | 38. | |
| 59 | 5900. | 873.1 | 874.9 | -1.8 | -1.9 | 020 | 38. | |
| 60 | 6000. | 873.1 | 875.0 | -1.9 | -1.9 | 020 | 38. | |
| 61 | 6100. | 873.1 | 875.1 | -2.0 | -1.9 | 020 | 38. | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 64 | 6400. | 875.5 | 876.6 | -1.1 | -1.8 | 020 | 38. |
| 65 | 6500. | 875.9 | 877.0 | -1.1 | -1.8 | 020 | 38. |
| | 6568. | | | | SEC. | 8.330 | |
| 66 | 6600. | 876.2 | 877.4 | -1.1 | -1.8 | 020 | 39. |
| 67 | 6700. | 876.7 | 877.8 | -1.1 | -1.8 | 020 | [illegible] |
| 68 | 6800. | 877.1 | 878.2 | -1.1 | -1.8 | 020 | [illegible] |
| 69 | 6900. | 877.3 | 878.7 | -1.1 | -1.8 | 020 | [illegible] |
| 70 | 7000. | 878.[illegible] | 879.1 | -1.1 | -1.8 | 020 | 43. |
| | 7013. | | | | SEC. | 8.400 | |
| 71 | 7100. | 878.6 | 879.7 | -1.0 | -1.8 | 020 | 44. |
| 72 | 7200. | 879.4 | 880.3 | -0.9 | -1.7 | 015 | 44. |
| 73 | 7300. | 880.2 | 881.0 | -0.9 | -1.7 | 015 | 44. |
| | 7310. | | | | SEC. | 8.610 | |
| 74 | 7400. | 880.9 | 881.8 | -0.9 | -1.7 | 015 | 47. |
| 75 | 7500. | 881.6 | 882.5 | -0.9 | -1.7 | 015 | 45. |
| 76 | 7600. | 882.2 | 883.2 | -0.9 | -1.7 | 015 | 45. |
| | 7613. | | | | SEC. | [illegible] | |
| | 7615. | | | | SEC. | 9.000 | |
| | 7617. | | | | SEC. | [illegible] | |
| 77 | 7700. | 882.9 | 883.2 | -0.9 | -1.7 | 015 | 44. |
| | 7742. | | | | SEC. | 9.900 | |
| | 7744. | | | | SEC. | 10.000 | |
| | 7746. | | | | SEC. | 10.100 | |
| 78 | 7800. | 883.7 | 884.2 | -0.9 | -1.7 | 015 | 45. |
| | 7896. | | | | SEC. | 10.[illegible] | |
| 79 | 7900. | 883.8 | 884.5 | -0.8 | -1.7 | 015 | 44. |
| | 7945. | | | | SEC. | 10.850 | |
| | 7971. | | | | SEC. | 10.860 | |
| | 7973. | | | | SEC. | 10.[illegible] | |
| 80 | 8000. | 884.4 | 885.6 | -1.2 | -1.7 | 015 | 43. |
| | 8073. | | | | SEC. | 11.200 | |
| | 8078. | | | | SEC. | 11.200 | |
| 81 | 8100. | 885.8 | 888.3 | -2.4 | -1.7 | 015 | 44. |
| 82 | 8200. | 886.0 | 888.4 | -2.4 | -1.7 | 015 | 44. |
| 83 | 8300. | 886.3 | 888.5 | -2.2 | -1.7 | 015 | 42. |
| | 8381. | | | | SEC. | 11.210 | |
| 84 | 8400. | 886.7 | 888.6 | -2.0 | -1.7 | 015 | [illegible] |
| | 8498. | | | | SEC. | 11.220 | |
| 85 | 8500. | 887.2 | 888.8 | -1.6 | -1.7 | 015 | 44. |
| 86 | 8600. | 887.9 | 889.2 | -1.3 | -1.7 | 015 | 44. |
| | 8623. | | | | SEC. | 11.250 | |
| 87 | 8700. | 888.3 | 889.9 | -1.2 | -1.7 | 015 | 45. |
| | 8773. | | | | SEC. | 11.240 | |
| 88 | 8800. | 889.6 | 890.8 | -1.2 | -1.7 | 015 | 47. |
| 89 | 8900. | 890.5 | 891.9 | -1.4 | -1.7 | 015 | 47. |
| | 8913. | | | | SEC. | 11.280 | |
| 90 | 9000. | 891.2 | 892.9 | -1.3 | -1.7 | 015 | [illegible] |
| | 9053. | | | | SEC. | 11.290 | |
| 91 | 9100. | 893.8 | 893.7 | -1.0 | -1.7 | 015 | 47. |
| | 9198. | | | | SEC. | 11.300 | |
| 92 | 9200. | 893.6 | 894.5 | -0.9 | -1.6 | 015 | 47. |
| 93 | 9300. | 894.3 | 895.3 | -0.9 | -1.6 | 015 | 46. |
| | 9363. | | | | SEC. | 11.310 | |
| 94 | 9400. | 893.1 | 895.9 | -0.8 | -1.6 | 015 | 50. |
| 95 | 9500. | 893.7 | 896.5 | -0.8 | -1.6 | 015 | 51. |
| | 9523. | | | | SEC. | 11.320 | |
| 96 | 9600. | 896.3 | 897.1 | -0.8 | -1.6 | 015 | 50. |
| | 9693. | | | | SEC. | 11.900 | |
| | 9695. | | | | SEC. | 12.000 | |
| | 9697. | | | | SEC. | 12.100 | |
| 97 | 9700. | 897.3 | 897.9 | -0.9 | -1.6 | 015 | 49. |
| 98 | 9800. | 897.[illegible] | 898.2 | -0.9 | -1.6 | 015 | [illegible] |
| | 9867. | | | | SEC. | 12.200 | |
| 99 | 9900. | 897.6 | 898.7 | -1.1 | -1.7 | 015 | 49. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 100 | 10000. | 897.0 | 898.9 | -1.[illegible] | -1.6 | 015 | 50. |
| | 10032. | | | | SEC. | 12.900 | |
| | 10034. | | | | SEC. | 13.000 | |
| | 10036. | | | | SEC. | 13.100 | |
| 101 | 10100. | 899.6 | 899.5 | -1.0 | -1.6 | 015 | 50. |
| | 10156. | | | | SEC. | 13.[illegible] | |
| | 10158. | | | | SEC. | 14.[illegible] | |
| | 10160. | | | | SEC. | 14.100 | |
| 102 | 10200. | 899.8 | 900.8 | -1.0 | -1.6 | 015 | 49. |
| 103 | 10300. | 900.1 | 901.1 | -0.9 | -1.6 | 015 | 50. |
| | 10310. | | | | SEC. | [illegible] | |
| 104 | 10400. | 900.9 | 901.5 | -1.0 | -1.6 | 015 | 50. |
| | 10460. | | | | SEC. | [illegible] | |
| | 10473. | | | | SEC. | 15.000 | |
| 105 | 10500. | 901.2 | 903.6 | -2.4 | -1.6 | 015 | 49. |
| 106 | 10600. | 901.5 | 903.7 | -2.1 | -1.6 | 015 | 47. |
| | 10[illegible]. | | | | SEC. | [illegible] | |
| 107 | 10700. | 902.0 | 903.8 | -1.8 | -1.6 | 015 | [illegible] |
| | 10730. | | | | SEC. | 15.900 | |
| | 10740. | | | | SEC. | 16.000 | |
| | 10742. | | | | SEC. | 16.100 | |
| 108 | 10800. | 901.0 | 904.0 | -2.3 | -1.6 | 015 | 47. |
| 109 | 10900. | [illegible] | [illegible] | -1.7 | -1.6 | 015 | [illegible] |
| | 10[illegible]. | | | | SEC. | [illegible] | |
| 110 | 11000. | 903.4 | 904.4 | -1.0 | -1.6 | 015 | [illegible] |
| 111 | 11100. | 903.6 | 904.7 | -0.9 | -1.6 | 015 | 47. |
| | 11102. | | | | SEC. | 16.700 | |
| 112 | 11200. | 904.0 | 904.9 | -1.0 | -1.6 | 015 | 47. |
| 113 | 11300. | [illegible] | 905.3 | -1.1 | -1.6 | 015 | [illegible] |
| 114 | 11400. | 904.5 | 905.6 | -1.1 | -1.6 | 015 | [illegible] |
| | 11402. | | | | SEC. | [illegible] | |
| 115 | 11500. | 904.8 | 906.0 | -1.2 | -1.6 | 015 | 49. |
| | 11502. | | | | SEC. | 16.900 | |
| | 11548. | | | | SEC. | 17.000 | |
| 116 | 11600. | 908.4 | 911.7 | -3.3 | -1.6 | 015 | 41. |
| | 11675. | | | | SEC. | 17.900 | |
| | 11678. | | | | SEC. | 18.000 | |
| | 11680. | | | | SEC. | 18.100 | |
| 117 | 11700. | 908.8 | 911.9 | -3.1 | -1.6 | 015 | 46. |
| 118 | 11800. | 908.8 | 911.9 | -3.1 | -1.6 | 015 | 45. |
| 119 | 11900. | 908.9 | 911.9 | -3.0 | -1.6 | 015 | 44. |
| 120 | 12000. | 908.9 | 911.9 | -3.0 | -1.6 | 015 | 42. |
| 121 | 12100. | 908.9 | 911.9 | -3.0 | -1.6 | 015 | 41. |
| 122 | 12200. | 908.9 | 911.9 | -3.0 | -1.6 | 015 | 39. |
| 123 | 12300. | 908.9 | 911.9 | -3.0 | -1.7 | 015 | 38. |
| | 12360. | | | | SEC. | 18.200 | |
| 124 | 12400. | 909.0 | 911.9 | -2.9 | -1.7 | 015 | 38. |
| 125 | 12500. | 909.1 | 911.9 | -2.9 | -1.7 | 015 | 37. |
| 126 | 12600. | 909.2 | 912.0 | -2.8 | -1.7 | 015 | 36. |
| 127 | 12700. | 909.3 | 912.0 | -2.7 | -1.7 | 015 | 35. |
| 128 | 12800. | 909.4 | 912.0 | -2.6 | -1.7 | 015 | 35. |
| 129 | 12900. | 909.5 | 912.0 | -2.6 | -1.7 | 015 | 36. |
| 130 | 13000. | 909.6 | 912.1 | -2.5 | -1.7 | 015 | 35. |
| 131 | 13100. | 909.7 | 912.1 | -2.4 | -1.7 | 015 | 34. |
| 132 | 13200. | 909.8 | 912.1 | -2.3 | -1.7 | 015 | 34. |
| 133 | 13300. | 909.9 | 912.1 | -2.2 | -1.7 | 015 | 34. |
| | 13370. | | | | SEC. | 18.700 | |
| 134 | 13400. | 910.0 | 912.2 | -2.2 | -1.7 | 015 | 35. |
| | 13450. | | | | SEC. | 18.800 | |
| | 13470. | | | | SEC. | 18.900 | |
| 135 | 13500. | 910.5 | 912.3 | -1.7 | -1.7 | 015 | 36. |
| | 13510. | | | | SEC. | 19.000 | |
| 136 | 13600. | 911.6 | 912.3 | -0.7 | -1.7 | 015 | 35. |

FORM 111-60 PRINTED BY HOLLY MANIFOLD FORMS DIVISION OF [illegible] PRINTING CO[illegible] PRINTED IN U.S.A.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 13606. | | | | SEC. | 19.200 | |
| | 13608. | | | | SEC. | 19.300 | |
| | 13610. | | | | SEC. | 19.400 | |
| 137 | 13700. | 911.7 | 912.4 | -0.7 | -1.7 | 015 | 35. |
| 138 | 13800. | 911.8 | 912.5 | -0.7 | -1.7 | 015 | 35. |
| 139 | 13900. | 911.8 | 912.5 | -0.7 | -1.7 | 015 | 34. |
| 140 | 14000. | 911.9 | 912.6 | -0.7 | -1.7 | 015 | 34. |
| 141 | 14100. | 912.0 | 912.7 | -0.7 | -1.7 | 015 | 33. |
| 142 | 14200. | 912.0 | 912.7 | -0.7 | -1.7 | 015 | 34. |
| | 14255. | | | | SEC. | 19.700 | |
| 143 | 14300. | 912.2 | 912.8 | -0.7 | -1.7 | 015 | 34. |
| | 14354. | | | | SEC. | 19.800 | |
| | 14355. | | | | SEC. | 19.900 | |
| 144 | 14400. | 912.9 | 913.0 | -0.5 | -1.7 | 015 | 34. |
| | 14405. | | | | SEC. | 20.000 | |
| | 14404. | | | | SEC. | 20.100 | |

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FEA REQUIREMENTS
INPUT 201 HEADER [illegible] THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE 202 [illegible]
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

**********
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MINGES BROOK E.C.TWP

SUMMARY PRINTOUT TABLE 150

| SECNO | XLOB | ELTRD | ELLOC | ELMIN | Q | CHSEL | CRIWS | EG | VCH | AREA | .DIS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.200 | 50.00 | 0.00 | 0.00 | 856.70 | 630.00 | 863.85 | 0.00 | 863.99 | 6.65 | 3.56 | 368.84 | 244.26 |
| 6.300 | 410.00 | 0.00 | 0.00 | 856.90 | 630.00 | 864.10 | 0.00 | 864.24 | 5.44 | 3.14 | 263.72 | 270.07 |
| 6.400 | 605.00 | 0.00 | 0.00 | 856.70 | 630.00 | 864.52 | 0.00 | 864.69 | 7.90 | 3.37 | 201.42 | 224.12 |
| 6.410 | 595.00 | 0.00 | 0.00 | 856.40 | 630.00 | 865.04 | 0.00 | 865.16 | 8.41 | 3.57 | 398.45 | 217.26 |
| 6.420 | 595.00 | 0.00 | 0.00 | 860.10 | 630.00 | 865.65 | 0.00 | 869.95 | 23.13 | 6.67 | 260.39 | 130.98 |
| 6.435 | 595.00 | 0.00 | 0.00 | 861.00 | 630.00 | 867.04 | 0.00 | 867.46 | 29.69 | 5.32 | 209.35 | 115.63 |
| 6.500 | 595.00 | 0.00 | 0.00 | 863.60 | 630.00 | 868.78 | 0.00 | 869.09 | 27.53 | 5.03 | 236.91 | 120.07 |
| 6.600 | 300.00 | 0.00 | 0.00 | 864.30 | 630.00 | 869.59 | 0.00 | 869.86 | 24.24 | 4.61 | 253.93 | 127.96 |
| 6.700 | 325.00 | 0.00 | 0.00 | 865.00 | 630.00 | 873.44 | 0.00 | 870.36 | 35.90 | 6.64 | 204.53 | 105.15 |
| 6.750 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 870.44 | 0.00 | 871.22 | 55.26 | 8.24 | 130.72 | 84.75 |
| 6.800 | 50.00 | 0.00 | 0.00 | 865.00 | 630.00 | 869.11 | 870.03 | 872.44 | 170.94 | 12.24 | 51.45 | 60.79 |
| 6.900 | 55.00 | 874.30 | 871.90 | 865.10 | 630.00 | 871.20 | 0.00 | 872.97 | 93.82 | 9.03 | 69.77 | 65.42 |
| 7.200 | 50.00 | 0.00 | 0.00 | 865.10 | 630.00 | 873.34 | 0.00 | 873.38 | 3.27 | 2.53 | 611.60 | 348.61 |
| 7.900 | 55.00 | 0.00 | 0.00 | 865.50 | 630.00 | 873.00 | 0.00 | 873.75 | 15.53 | 4.13 | 316.54 | 159.34 |
| 8.000 | 2.00 | 868.00 | 866.50 | 865.90 | 630.00 | 873.54 | 0.00 | 873.79 | 16.24 | 5.30 | 286.53 | 156.33 |
| 8.100 | 2.00 | 0.00 | 0.00 | 867.70 | 630.00 | 873.61 | 0.00 | 873.79 | 17.70 | 4.74 | 298.30 | 149.75 |
| 8.300 | 390.00 | 0.00 | 0.00 | 868.30 | 630.00 | 874.10 | 0.00 | 874.28 | 8.56 | 3.27 | 360.66 | 215.58 |
| 8.310 | 445.00 | 0.00 | 0.00 | 870.30 | 630.00 | 874.94 | 0.00 | 874.85 | 25.18 | 5.82 | 201.75 | 123.16 |
| 8.320 | 445.00 | 0.00 | 0.00 | 871.70 | 630.00 | 875.82 | 0.00 | 876.23 | 37.51 | 5.50 | 166.75 | 102.87 |
| 8.330 | 445.00 | 0.00 | 0.00 | 873.30 | 630.00 | 877.44 | 0.00 | 877.85 | 37.19 | 5.48 | 167.54 | 103.35 |

PRINTED IN U.S.A.
FORM 1411-GS PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CUSEL | CRIUS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.400 | 445.00 | 0.00 | 0.00 | 875.00 | 630.00 | 879.39 | 0.00 | 879.91 | 62.13 | 6.40 | 152.66 | 79.93 |
| 8.410 | 300.00 | 0.00 | 0.00 | 875.30 | 630.00 | 881.65 | 1.00 | 880.35 | 19.51 | 4.24 | 266.26 | 142.62 |
| 8.900 | 300.00 | 0.00 | 0.00 | 875.60 | 630.00 | 881.25 | 0.00 | 881.90 | 61.00 | 6.51 | 96.72 | 80.66 |
| 9.000 | 2.00 | 880.30 | 875.70 | 875.60 | 630.00 | 883.86 | 0.00 | 884.09 | 11.65 | 3.83 | 164.48 | 184.59 |
| 9.100 | 2.00 | 0.00 | 0.00 | 878.90 | 630.00 | 883.41 | 0.00 | 884.21 | 48.66 | 6.22 | 101.26 | 89.82 |
| 9.900 | 125.00 | 0.00 | 0.00 | 877.70 | 630.00 | 884.31 | 0.00 | 884.48 | 10.18 | 3.55 | 218.37 | 197.48 |
| 10.000 | 2.00 | 881.00 | 877.70 | 877.70 | 630.00 | 884.08 | 0.00 | 884.59 | 15.42 | 6.06 | 146.51 | 160.44 |
| 10.100 | 2.00 | 881.00 | 880.60 | 880.60 | 630.00 | 884.20 | 0.00 | 884.60 | 60.66 | 6.28 | 152.51 | 80.89 |
| 10.800 | 150.00 | 0.00 | 0.00 | 881.50 | 630.00 | 885.30 | 0.00 | 886.04 | 104.60 | 8.51 | 102.54 | 61.60 |
| 10.850 | 50.00 | 0.00 | 0.00 | 881.65 | 630.00 | 885.50 | 0.00 | 886.71 | 108.01 | 9.08 | 80.86 | 60.62 |
| 10.860 | 25.00 | 0.00 | 0.00 | 881.75 | 630.00 | 885.72 | 0.00 | 887.03 | 107.46 | 9.26 | 75.67 | 60.77 |
| 10.900 | 25.00 | 0.00 | 0.00 | 881.40 | 630.00 | 885.76 | 0.00 | 887.67 | 182.74 | 11.10 | 56.75 | 46.80 |
| 11.000 | 32.00 | 892.40 | 886.40 | 881.40 | 630.00 | 887.04 | 0.00 | 888.18 | 85.47 | 8.59 | 73.34 | 68.15 |
| 11.200 | 50.00 | 0.00 | 0.00 | 881.40 | 630.00 | 886.43 | 0.00 | 888.54 | 3.60 | 4.00 | 315.84 | 214.78 |
| 11.210 | 280.00 | 0.00 | 0.00 | 883.50 | 630.00 | 888.75 | 0.00 | 888.85 | 14.53 | 3.44 | 341.36 | 165.27 |
| 11.220 | 140.00 | 0.00 | 0.00 | 884.65 | 630.00 | 888.95 | 0.00 | 889.30 | 56.29 | 5.69 | 168.49 | 83.97 |
| 11.230 | 140.00 | 0.00 | 0.00 | 885.80 | 630.00 | 889.77 | 889.15 | 890.35 | 94.56 | 6.86 | 112.12 | 64.79 |
| 11.240 | 140.00 | 0.00 | 0.00 | 886.95 | 630.00 | 891.02 | 890.89 | 891.52 | 82.01 | 6.52 | 127.61 | 69.57 |
| 11.280 | 140.00 | 0.00 | 0.00 | 888.20 | 630.00 | 892.67 | 892.67 | 893.18 | 65.88 | 6.44 | 194.93 | 77.62 |
| 11.290 | 140.00 | 0.00 | 0.00 | 889.35 | 630.00 | 893.76 | 893.76 | 894.53 | 76.30 | 6.75 | 180.46 | 73.09 |
| 11.300 | 140.00 | 0.00 | 0.00 | 890.50 | 630.00 | 894.94 | 894.96 | 895.48 | 70.05 | 6.60 | 187.51 | 75.27 |
| 11.310 | 165.00 | 0.00 | 0.00 | 891.50 | 630.00 | 896.01 | 895.92 | 896.48 | 60.98 | 6.25 | 204.36 | 80.68 |
| 11.320 | 165.00 | 0.00 | 0.00 | 892.50 | 630.00 | 896.96 | 896.92 | 897.50 | 69.89 | 6.62 | 171.02 | 75.36 |
| 11.900 | 165.00 | 0.00 | 0.00 | 894.40 | 630.00 | 897.97 | 0.00 | 898.48 | 55.35 | 5.95 | 134.91 | 84.68 |
| 12.000 | 2.00 | 894.90 | 894.40 | 893.40 | 630.00 | 898.08 | 0.00 | 898.50 | 34.88 | 5.40 | 149.90 | 106.68 |
| 12.100 | 2.00 | 894.90 | 894.40 | 894.40 | 630.00 | 897.91 | 0.00 | 898.50 | 70.02 | 6.82 | 119.70 | 66.75 |
| 12.200 | 165.00 | 0.00 | 0.00 | 893.40 | 630.00 | 898.88 | 0.00 | 899.08 | 13.78 | 3.81 | 244.84 | 169.74 |
| 12.900 | 170.00 | 0.00 | 0.00 | 894.60 | 630.00 | 898.94 | 0.00 | 899.68 | 76.61 | 7.28 | 121.90 | 71.98 |
| 13.000 | 2.00 | 896.20 | 895.80 | 894.60 | 630.00 | 899.53 | 0.00 | 899.74 | 177.68 | 5.77 | 141.06 | 67.26 |

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS,

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRIHS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * | 13.100 | 2.00 | 896.20 | 895.00 | 895.80 | 630.00 | 899.20 | 899.20 | 900.05 | 133.69 | 8.29 | 117.72 | 54.49 |
| | 13.900 | 120.00 | 0.00 | 0.00 | 896.50 | 630.00 | 900.67 | 0.00 | 900.99 | 66.43 | 5.99 | 225.50 | 92.60 |
| | 14.000 | 2.00 | 897.00 | 896.50 | 896.50 | 630.00 | 900.70 | 0.00 | 901.00 | 55.96 | 5.99 | 210.90 | 84.22 |
| | 14.100 | 2.00 | 897.00 | 896.80 | 896.80 | 630.00 | 900.71 | 0.00 | 901.01 | 53.24 | 6.00 | 221.18 | 86.34 |
| | 14.200 | 150.00 | 0.00 | 0.00 | 896.80 | 630.00 | 901.36 | 0.00 | 901.58 | 21.11 | 4.34 | 310.71 | 137.13 |
| | 14.900 | 150.00 | 0.00 | 0.00 | 896.80 | 630.00 | 901.78 | 0.00 | 902.21 | 118.22 | 5.28 | 119.39 | 57.94 |
| | 15.000 | 13.00 | 903.30 | 901.30 | 896.80 | 630.00 | 903.62 | 0.00 | 903.71 | 8.60 | 2.40 | 262.27 | 214.80 |
| | 15.200 | 160.00 | 0.00 | 0.00 | 897.10 | 630.00 | 903.72 | 0.00 | 903.87 | 12.87 | 3.22 | 294.05 | 175.62 |
| | 15.900 | 125.00 | 0.00 | 0.00 | 897.70 | 630.00 | 903.68 | 0.00 | 904.08 | 19.70 | 4.32 | 240.01 | 141.95 |
| | 16.000 | 2.00 | 899.50 | 897.70 | 897.70 | 630.00 | 903.71 | 0.00 | 904.16 | 12.81 | 6.06 | 216.53 | 176.01 |
| | 16.100 | 2.00 | 899.50 | 898.10 | 897.70 | 630.00 | 903.90 | 0.00 | 904.19 | 24.90 | 4.47 | 244.14 | 126.28 |
| | 16.600 | 220.00 | 0.00 | 0.00 | 897.50 | 630.00 | 904.44 | 0.00 | 904.73 | 23.49 | 4.43 | 179.48 | 129.98 |
| | 16.700 | 220.00 | 0.00 | 0.00 | 898.50 | 630.00 | 905.00 | 0.00 | 905.40 | 36.39 | 5.11 | 142.56 | 104.43 |
| | 16.800 | 220.00 | 0.00 | 0.00 | 899.50 | 630.00 | 905.05 | 0.00 | 906.29 | 62.06 | 5.39 | 131.24 | 96.24 |
| | 16.900 | 100.00 | 0.00 | 0.00 | 899.50 | 630.00 | 906.19 | 0.00 | 906.81 | 43.77 | 7.53 | 157.11 | 95.22 |
| | 17.000 | 46.00 | 911.00 | 905.50 | 901.60 | 630.00 | 912.08 | 0.00 | 912.25 | 10.44 | 4.22 | 276.20 | 195.00 |
| | 17.900 | 123.00 | 0.00 | 0.00 | 902.10 | 630.00 | 912.26 | 0.00 | 912.28 | 0.41 | 1.03 | 1315.89 | 986.06 |
| | 18.000 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 912.27 | 0.00 | 912.29 | 0.29 | 1.53 | 1272.69 | 1176.53 |
| | 18.100 | 2.00 | 904.10 | 902.10 | 902.10 | 630.00 | 912.28 | 0.00 | 912.29 | 0.52 | 1.03 | 1272.10 | 875.37 |
| | 18.200 | 680.00 | 0.00 | 0.00 | 904.11 | 630.00 | 912.33 | 0.00 | 912.35 | 1.52 | 1.60 | 953.51 | 511.15 |
| | 18.700 | 1010.00 | 0.00 | 0.00 | 903.80 | 630.00 | 912.51 | 0.00 | 912.57 | 2.96 | 3.09 | 1047.27 | 366.07 |
| | 18.800 | 99.00 | 0.00 | 0.00 | 903.80 | 630.00 | 912.56 | 0.00 | 912.60 | 2.88 | 3.05 | 1059.88 | 371.05 |
| | 18.900 | 1.00 | 909.90 | 907.30 | 903.80 | 630.00 | 912.57 | 0.00 | 912.60 | 7.36 | 2.86 | 924.70 | 232.15 |
| | 19.000 | 48.00 | 909.90 | 907.30 | 903.80 | 630.00 | 912.61 | 0.00 | 912.64 | 7.29 | 2.77 | 938.68 | 233.29 |
| | 19.100 | 1.00 | 0.00 | 0.00 | 904.50 | 630.00 | 912.59 | 0.00 | 912.65 | 2.96 | 2.95 | 1091.72 | 365.88 |
| | 19.200 | 67.00 | 0.00 | 0.00 | 904.70 | 630.00 | 912.62 | 0.00 | 912.68 | 5.15 | 2.65 | 1044.53 | 353.24 |
| | 19.300 | 2.00 | 908.00 | 904.70 | 904.70 | 630.00 | 912.64 | 0.00 | 912.68 | 5.66 | 2.79 | 1006.73 | 264.82 |
| | 19.400 | 2.00 | 0.00 | 0.00 | 904.10 | 630.00 | 912.63 | 0.00 | 912.69 | 3.74 | 2.87 | 1034.17 | 325.72 |
| | 19.700 | 645.00 | 0.00 | 0.00 | 907.00 | 630.00 | 912.96 | 0.00 | 913.04 | 8.54 | 3.97 | 779.92 | 218.17 |

| SECNO | XLCH | ELTRO | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.600 | 99.00 | 0.00 | 0.00 | 907.00 | 630.00 | 913.05 | 0.00 | 913.12 | 7.16 | 3.71 | 823.37 | 235.38 |
| 19.900 | 1.00 | 911.40 | 909.00 | 907.00 | 630.00 | 913.06 | 0.00 | 913.12 | 29.26 | 4.35 | 573.96 | 316.77 |
| 20.000 | 48.00 | 911.40 | 909.00 | 907.00 | 630.00 | 913.19 | 0.00 | 913.24 | 20.38 | 3.73 | 643.90 | 139.55 |
| 20.100 | 1.00 | 0.00 | 0.00 | 907.00 | 630.00 | 913.15 | 0.00 | 913.26 | 8.71 | 4.21 | 757.60 | 213.51 |

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RINGES BROOK B.C.TWP

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CMSEL | DIF.SP | DIF.SX | DIF.HS | TOPWID | KLOP |
|---|---|---|---|---|---|---|---|
| 6.200 | 630.00 | 863.85 | 0.00 | 0.00 | 0.00 | 115.08 | 50.00 |
| 6.300 | 630.00 | 864.10 | 0.00 | 0.25 | 0.00 | 52.49 | 410.00 |
| 6.400 | 630.00 | 864.52 | 0.00 | 0.42 | 0.00 | 39.32 | 585.00 |
| 6.410 | 630.00 | 865.04 | 0.00 | 0.52 | 0.00 | 165.34 | 595.00 |
| 6.420 | 630.00 | 865.65 | 0.00 | 0.61 | 0.00 | 123.97 | 595.00 |
| 6.430 | 630.00 | 867.09 | 0.00 | 1.44 | 0.00 | 113.92 | 595.00 |
| 6.500 | 630.00 | 868.78 | 0.00 | 1.69 | 0.00 | 144.03 | 595.00 |
| 6.600 | 630.00 | 869.59 | 0.00 | 0.81 | 0.00 | 150.75 | 300.00 |
| 6.700 | 630.00 | 870.44 | 0.00 | 0.85 | 0.00 | 61.00 | 325.00 |
| 6.750 | 630.00 | 870.44 | 0.00 | -0.00 | 0.00 | 32.00 | 50.00 |
| 6.800 | 630.00 | 870.11 | 0.00 | -0.32 | 0.00 | 10.60 | 50.00 |
| 7.100 | 630.00 | 871.70 | 0.00 | 1.59 | 0.00 | 13.65 | 39.00 |
| 7.200 | 630.00 | 873.34 | 0.00 | 1.64 | 0.00 | 111.00 | 50.00 |
| 7.900 | 630.00 | 873.60 | 0.00 | 0.26 | 0.00 | 141.65 | 350.00 |
| 8.000 | 630.00 | 873.54 | 0.00 | -0.06 | 0.00 | 138.96 | 2.00 |
| 8.100 | 630.00 | 873.61 | 0.00 | 0.07 | 0.00 | 142.08 | 2.00 |
| 8.300 | 630.00 | 874.10 | 0.00 | 0.49 | 0.00 | 104.06 | 390.00 |
| 8.310 | 630.00 | 874.56 | 0.00 | 0.46 | 0.00 | 112.97 | 445.00 |
| 8.320 | 630.00 | 875.82 | 0.00 | 1.27 | 0.00 | 98.16 | 445.00 |
| 8.330 | 630.00 | 877.46 | 0.00 | 1.64 | 0.00 | 86.58 | 445.00 |
| 8.400 | 630.00 | 879.38 | 0.00 | 1.92 | 0.00 | 99.61 | 445.00 |
| 8.410 | 630.00 | 880.65 | 0.00 | 1.27 | 0.00 | 139.45 | 300.00 |
| 8.900 | 630.00 | 881.25 | 0.00 | 0.60 | 0.00 | 25.58 | 300.00 |
| 9.000 | 630.00 | 883.36 | 0.00 | 2.12 | 0.00 | 36.00 | 2.00 |
| 9.100 | 630.00 | 883.61 | 0.00 | -0.26 | 0.00 | 26.00 | 2.00 |
| 9.900 | 630.00 | 884.31 | 0.00 | 0.70 | 0.00 | 50.51 | 225.00 |
| 10.000 | 630.00 | 884.08 | 0.00 | -0.23 | 0.00 | 50.13 | 2.00 |

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FORM 1411-08 PRINTED BY ROTARY MANIFOLD FORMS

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 10.100 | 630.00 | 884.20 | 0.00 | 0.12 | 0.00 | 50.33 | 2.00 |
| | 10.830 | 630.00 | 885.10 | 0.00 | 0.90 | 0.00 | 41.66 | 150.00 |
| | 10.850 | 630.00 | 885.50 | 0.00 | 0.40 | 0.00 | 25.00 | 50.00 |
| | 10.860 | 630.00 | 885.72 | 0.00 | 0.22 | 0.00 | 20.00 | 25.00 |
| | 10.900 | 630.00 | 885.76 | 0.00 | 0.04 | 0.00 | 13.00 | 25.00 |
| | 11.000 | 630.00 | 887.04 | 0.00 | 1.20 | 0.00 | 13.00 | 32.00 |
| | 11.200 | 630.00 | 888.43 | 0.00 | 1.39 | 0.00 | 80.30 | 50.00 |
| | 11.210 | 630.00 | 888.75 | 0.00 | 0.32 | 0.00 | 190.55 | 200.00 |
| | 11.220 | 630.00 | 888.95 | 0.00 | 0.20 | 0.00 | 171.82 | 140.00 |
| | 11.230 | 630.00 | 889.77 | 0.00 | 0.82 | 0.00 | 165.26 | 140.00 |
| | 11.240 | 630.00 | 891.02 | 0.00 | 1.25 | 0.00 | 167.39 | 140.00 |
| * | 11.280 | 630.00 | 892.67 | 0.00 | 1.65 | 0.00 | 229.12 | 140.00 |
| * | 11.290 | 630.00 | 893.76 | 0.00 | 1.09 | 0.00 | 226.64 | 140.00 |
| * | 11.300 | 630.00 | 894.94 | 0.00 | 1.18 | 0.00 | 227.35 | 140.00 |
| | 11.310 | 630.00 | 896.01 | 0.00 | 1.07 | 0.00 | 230.72 | 165.00 |
| | 11.320 | 630.00 | 896.96 | 0.00 | 0.94 | 0.00 | 154.14 | 165.00 |
| | 11.900 | 630.00 | 897.87 | 0.00 | 1.02 | 0.00 | 70.00 | 165.00 |
| | 12.000 | 630.00 | 898.08 | 0.00 | 0.11 | 0.00 | 70.00 | 2.00 |
| | 12.100 | 630.00 | 897.92 | 0.00 | -0.16 | 0.00 | 70.00 | 2.00 |
| | 12.230 | 630.00 | 898.83 | 0.00 | 0.90 | 0.00 | 112.17 | 165.00 |
| | 12.900 | 630.00 | 898.94 | 0.00 | 0.06 | 0.00 | 70.00 | 170.00 |
| | 13.000 | 630.00 | 899.33 | 0.00 | 0.39 | 0.00 | 70.00 | 2.00 |
| | 13.100 | 630.00 | 898.23 | 0.00 | -1.10 | 0.00 | 70.00 | 2.00 |
| | 13.900 | 630.00 | 900.67 | 0.00 | 1.47 | 0.00 | 125.46 | 120.00 |
| | 14.000 | 630.00 | 900.70 | 0.00 | 0.03 | 0.00 | 125.87 | 2.00 |
| | 14.100 | 630.00 | 900.71 | 0.00 | 0.01 | 0.00 | 126.29 | 2.00 |
| | 14.200 | 630.00 | 901.36 | 0.00 | 0.65 | 0.00 | 141.22 | 150.00 |
| | 14.900 | 630.00 | 901.78 | 0.00 | 0.42 | 0.00 | 78.00 | 150.00 |
| | 15.000 | 630.00 | 903.62 | 0.00 | 1.83 | 0.00 | 78.00 | 15.00 |

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| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 15.200 | 630.00 | 903.72 | 0.00 | 0.11 | 0.00 | 105.35 | 143.00 |
| 15.900 | 630.00 | 903.88 | 0.00 | 0.15 | 0.00 | 99.98 | 125.00 |
| 16.000 | 630.00 | 903.71 | 0.00 | -0.16 | 0.00 | 98.04 | 2.00 |
| 16.100 | 630.00 | 903.98 | 0.00 | 0.27 | 0.00 | 104.35 | 2.00 |
| 16.600 | 630.00 | 904.44 | 0.00 | 0.46 | 0.00 | 92.41 | 220.00 |
| 16.700 | 630.00 | 905.00 | 0.00 | 0.56 | 0.00 | 74.93 | 220.00 |
| 16.800 | 630.00 | 905.85 | 0.00 | 0.84 | 0.00 | 63.69 | 220.00 |
| 16.900 | 630.00 | 906.19 | 0.00 | 0.34 | 0.00 | 52.24 | 110.00 |
| 17.000 | 630.00 | 912.06 | 0.00 | 5.88 | 0.00 | 68.47 | 46.00 |
| 17.900 | 630.00 | 912.28 | 0.00 | 0.21 | 0.00 | 265.62 | 120.00 |
| 18.000 | 630.00 | 912.27 | 0.00 | -0.01 | 0.00 | 265.63 | 2.00 |
| 18.100 | 630.00 | 912.28 | 0.00 | 0.01 | 0.00 | 265.61 | 2.00 |
| 18.200 | 630.00 | 912.33 | 0.00 | 0.05 | 0.00 | 297.62 | 680.00 |
| 18.700 | 630.00 | 912.51 | 0.00 | 0.18 | 0.00 | 560.77 | 1010.00 |
| 18.800 | 630.00 | 912.54 | 0.00 | 0.03 | 0.00 | 561.71 | 99.00 |
| 18.900 | 630.00 | 912.57 | 0.00 | 0.03 | 0.00 | 565.52 | 1.00 |
| 19.000 | 630.00 | 912.61 | 0.00 | 0.04 | 0.00 | 564.34 | 98.00 |
| 19.100 | 630.00 | 912.59 | 0.00 | -0.02 | 0.00 | 564.83 | 1.00 |
| 19.200 | 630.00 | 912.62 | 0.00 | 0.02 | 0.00 | 565.33 | 87.00 |
| 19.300 | 630.00 | 912.64 | 0.00 | 0.03 | 0.00 | 566.45 | 2.00 |
| 19.400 | 630.00 | 912.63 | 0.00 | -0.01 | 0.00 | 566.24 | 2.00 |
| 19.700 | 630.00 | 912.96 | 0.00 | 0.33 | 0.00 | 482.32 | 645.00 |
| 19.800 | 630.00 | 913.05 | 0.00 | 0.09 | 0.00 | 482.34 | 99.00 |
| 19.900 | 630.00 | 913.06 | 0.00 | 0.01 | 0.00 | 482.26 | 1.00 |
| 20.000 | 630.00 | 913.19 | 0.00 | 0.14 | 0.00 | 482.30 | 48.00 |
| 20.100 | 630.00 | 913.15 | 0.00 | -0.04 | 0.00 | 482.27 | 1.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 11.280 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 11.280 PROFILE= 1 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 11.290 PROFILE= 1 CRITICAL DEPTH ASSUMED

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CAUTION SECNO= 11.290 PROFILE= 1 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 11.300 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11.300 PROFILE= 1 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 13.100 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 13.100 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 13.100 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

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00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: East channel of Sperry Drain

4) DOCUMENT TYPE: 4 profiles

00BREAK00

```
JOBID=HEC2          USER=DBHUD17W          PROJECT=HU202507          BILLING=HU202507          RON=XU132

13:20:06                                JOB INTRODUCED FROM                                JUN 04, 1981
                                          HEC2 ENG

13:20:25  START OF TRANSLATION
**          PARAMETER VALUES          **

&1        = DB-SPERRYEAST
&PAPER    = 3PART

          $JOB HEC2,USER=DBHUD17W;
WARNING   36  THIS STATEMENT HAS BEEN GENERATED
          VALUE FILENAM,NHOLD,UK=UTAPAK,CPU=30,PAPER=1PART,SIZE=200,STEP=HEC2,
                SUB=SUBNAME,COPIES=1,WKDVC=400;
          JUMP &PAPER$$X;
          2PARTX:
          OUTVAL &2,MD=112PRT,DVC=PR;
          JUMP CONTX;
          3PARTX:
          OUTVAL &2,MD=113PRT,DVC=PR;
          JUMP CONTX;
          1PARTX:
          OUTVAL &2;
          CONTX:
          INVOKE HEC2,ENGJCLLIB,VALUES=(&1,&2,UK=&UK,CPU=&CPU,PAPER=&PAPER,SIZE=&SIZE,
                STEP=&STEP,SUB=&SUB,COPIES=&COPIES,WKDVC=&WKDVC);

          RECORD COUNT :     16

13:21:11  END OF TRANSLATION
```

EAST CHANNEL
4-PROFILE EXHIBIT 2

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```
JOBID=HEC2          USER=DBHUD17U          PROJECT=HU202507          BILLING=HU202507          RON=X0132

13:27:18                                JOB EXECUTION LISTING                                JUN 04, 1981

          JUMP DONE TO 3PARTX
          JUMP DONE TO CONTX
          JUMP DONE TO HEC2
          START OF HEC□2 EXECUTION
          STEP 4
          LOAD MODULE = HEC□2 (79/2 /22 23:58)
          LIBRARY = UTAENGLG
13:28:12  STEP STARTED XPRTY=9
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: UTAPAK FOR EFN: ;000132.FILE□B
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: UTAPAK FOR EFN: ;000132.FILE□C
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: UTAPAK FOR EFN: ;000132.FILE□D
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: UTAPAK FOR EFN: ;000132.FILE□A
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: UTAPAK FOR EFN: ;000132.FILE□E
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: UTAPAK FOR EFN: ;000132.FILE□F
          TASK MAIN J=DA P=00 COMPLETED
          DUF01.IFN=FILE□F       REMEMBER REUSE=        0
          DUF01.IFN=FILE□E       REMEMBER REUSE=        0
          DUF01.IFN=FILE□C       REMEMBER REUSE=        0
          DUF01.IFN=FILE□B       REMEMBER REUSE=        0
          DUF01.IFN=FILE□D       REMEMBER REUSE=        0
          DUF01.IFN=FILE□A       REMEMBER REUSE=        0    UNLOCK BUFFER=        0    CREATE BUFFER=       31
          TEMPORARY  FILES USED=    228 TRACKS
          FILE□F     ON  UTAPAK :  NB  OF  IO  CONNECTS=        30
          FILE□E     ON  UTAPAK :  NB  OF  IO  CONNECTS=       119
          FILE□C     ON  UTAPAK :  NB  OF  IO  CONNECTS=        98
          H□PR       ON  MES2DC :  NB  OF  IO  CONNECTS=        14
          FILE□F     ON  UTAPAK :  NB  OF  IO  CONNECTS=       133
          H□RD       ON  UTAPAK :  NB  OF  IO  CONNECTS=         2
          FILE□D     ON  UTAPAK :  NB  OF  IO  CONNECTS=        67
          FILE□A     ON  UTAPAK :  NB  OF  IO  CONNECTS=       113
          CPU          1.503                    PROG MISSING SEGTS      371    STACKOV      81
          ELAPSED      7.772                    SYS  MISSING SEGTS      615
          LINES          313  LIMIT    NOLIM    BACKING STORE        507936
          CARDS            0  LIMIT    NOLIM    BUFFER SIZE           15920    OPSIZE     2272
13:35:58  STEP COMPLETED

          JUMP DONE TO FINISH
          JUMP DONE TO 3PART
          ***********************************
          *  READY 3PART  GREEN BAR PAPER   *
          ***********************************

          START    13:27:18   LINES        313
          STOP     13:36:07   CARDS          0
          CPU         1.503
          ELAPSE      8.816
13:36:07  RESULT:  JOB COMPLETED
```

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     W         WSEL      FQ
        0.        2.        0.        0.  0.000000      0.00      3.0       0.    804.200     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IBW       CHNIM     ITRACE
        1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      150.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J5  LPRNT     NUMSEC                        ********REQUESTED SECTION NUMBERS********
      -10.000   -10.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
QT      5.000    55.000    85.000   145.000   145.000   190.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.035     0.300     0.500     0.000     0.000     0.000     0.000     0.000

                D/S FACE JACKSON ST. 60 INCH CONCRETE CULVERT

X1      1.000    14.000   241.750   246.250     0.000     0.000     0.000     0.000     0.000     0.000
X3     10.000     0.000     0.000     0.000     0.000     0.000     0.000   817.800   817.800     0.000
GR    817.800   195.000   808.600   196.000   808.100   220.000   808.100   241.740   802.500   241.750
GR    801.500   242.000   800.500   243.000   800.250   244.000   800.500   245.000   801.500   246.000
GR    802.500   246.250   809.300   246.260   809.300   294.000   817.800   295.000     0.000     0.000
SD      2.000     4.360     5.900     0.000     4.000     0.000    16.000     0.000   802.250   800.750

                U/S FACE JACKSON ST. 60 INCH CONCRETE CULVERT

X1      4.900    14.000   241.750   246.250   175.000   175.000   175.000     0.000     0.000     0.000
X2      0.000     0.000     1.000   806.250   817.800     0.000     0.000     0.000     0.000     0.000
X3     10.000     0.000     0.000     0.000     0.000     0.000     0.000   817.800   817.800     0.000
BT     14.000   195.000   815.800     0.000   196.000   815.700     0.000   220.000   815.700     0.000
BT    241.740   815.700     0.000   241.750   815.700   804.000   242.000   815.700   805.000   245.000
BT    815.700   806.000   244.000   815.700   806.250   245.000   815.700   806.000   246.000   815.700
BT    805.000   246.250   815.700   804.000   246.260   815.700     0.000   294.000   815.700     0.000
BT    295.000   817.800     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    815.700   195.000   808.600   196.000   808.100   220.000   808.100   241.740   804.000   241.750
GR    803.000   242.000   802.000   243.000   801.750   244.000   802.000   245.000   805.000   246.000
GR    804.000   246.250   809.300   246.260   809.300   294.000   817.800   295.000     0.000     0.000

                50 FT U/S JACKSON ST.

X1      2.100     9.000   239.000   246.000    50.000    50.000    50.000     0.000     0.000     0.000
GR    815.700   195.000   808.600   196.000   808.600   229.000   802.100   239.000   801.950   244.000
```

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | 0.120 | 0.120 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 2.150 | 9.000 | 293.000 | 307.000 | 275.000 | 275.000 | 275.000 | 0.000 | -2.850 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 250.000 | 0.000 | 350.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 817.800 | 0.000 | 810.000 | 50.000 | 810.000 | 215.000 | 305.400 | 293.000 | 805.200 | 300.000 |
| GR | 805.900 | 307.000 | 810.000 | 319.000 | 810.000 | 599.000 | 810.000 | 600.000 | 0.000 | 0.000 |

VALLEY SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.200 | 0.000 | 0.000 | 0.000 | 275.000 | 275.000 | 275.000 | 0.000 | 2.850 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 250.000 | 0.000 | 350.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 100.000 | 145.000 | 225.000 | 225.000 | 330.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.000 | 9.000 | 222.000 | 238.000 | 300.000 | 310.000 | 300.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 150.000 | 0.000 | 280.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 810.000 | 50.000 | 810.000 | 215.000 | 806.700 | 222.000 | 806.000 | 230.000 |
| GR | 806.700 | 238.000 | 810.000 | 249.000 | 810.000 | 330.000 | 820.000 | 380.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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**************************************************
  NEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR - 01
  MODIFICATION - 50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3      SPERRY DRAIN

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         HSEL      FQ

        0.       3.        0.        0.  0.000000      0.00      0.0       0.    604.200     0.000
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR - 01
  MODIFICATION - 50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1   ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
          0.        4.         0.         0.   0.000000       0.00       0.0        0.    804.203      2.000
J2   NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IDW        CHNIM      ITRACE
         3.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
```

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  D1
  MODIFICATION -  50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK     INQ      NINV     IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.       5.       0.       0.  0.000000      0.00      0.0       0.   804.200     0.050
J2  NPROF      IPLOT    PRFVS    XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       15.000    0.000   -1.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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FORM 1411-08 PRINTED BY ROTARY MANIFOLD FORMS.

**********
HEC2 RELEASE DATE) NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 55.00 | 804.20 | 0.00 | 804.40 | 34.54 | 3.63 | 15.15 | 9.36 |
| | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 85.00 | 804.20 | 0.00 | 804.69 | 82.49 | 5.61 | 15.15 | 9.36 |
| | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 145.00 | 804.20 | 0.00 | 805.62 | 240.04 | 9.57 | 15.15 | 9.36 |
| * | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 190.00 | 806.63 | 806.63 | 806.55 | 293.75 | 11.11 | 17.10 | 11.09 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 55.00 | 804.97 | 0.00 | 805.31 | 70.92 | 4.66 | 11.79 | 6.53 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 85.00 | 806.01 | 0.00 | 806.51 | 134.78 | 5.66 | 15.01 | 7.32 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 145.00 | 809.44 | 0.00 | 809.76 | 32.10 | 4.53 | 31.99 | 25.59 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 190.00 | 813.98 | 0.00 | 814.16 | 16.14 | 3.63 | 52.40 | 47.30 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 55.00 | 805.40 | 0.00 | 805.44 | 2.71 | 1.62 | 46.25 | 33.41 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 85.00 | 806.64 | 0.00 | 806.68 | 2.28 | 1.81 | 69.29 | 56.33 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 145.00 | 809.83 | 0.00 | 809.86 | 0.94 | 1.64 | 211.49 | 149.60 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 190.00 | 814.23 | 0.00 | 814.24 | 0.17 | 0.93 | 647.57 | 463.08 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 55.00 | 805.48 | 0.00 | 805.50 | 2.10 | 1.26 | 57.63 | 37.97 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 85.00 | 806.71 | 0.00 | 806.73 | 1.46 | 1.33 | 95.41 | 70.23 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 145.00 | 809.87 | 0.00 | 809.88 | 0.37 | 0.98 | 379.75 | 237.66 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 190.00 | 814.24 | 0.00 | 814.25 | 0.09 | 0.65 | 817.27 | 640.91 |
| * | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 55.00 | 806.13 | 806.13 | 806.56 | 194.86 | 5.00 | 11.61 | 3.96 |
| | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 85.00 | 806.89 | 0.00 | 806.97 | 107.55 | 4.96 | 18.96 | 8.20 |
| | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 145.00 | 809.85 | 0.00 | 809.92 | 3.34 | 2.10 | 103.09 | 79.38 |
| | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 190.00 | 814.24 | 0.00 | 814.25 | 0.28 | 0.96 | 532.58 | 360.28 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 100.00 | 808.05 | 0.00 | 808.24 | 35.01 | 3.57 | 32.22 | 16.90 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 145.00 | 809.37 | 0.00 | 809.65 | 61.11 | 4.33 | 39.85 | 22.61 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 809.97 | 0.00 | 810.16 | 12.89 | 3.59 | 87.12 | 62.87 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 330.00 | 814.25 | 0.00 | 814.27 | 0.96 | 1.64 | 512.90 | 537.36 |

PRINTED IN U.S.A
FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS,

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 1.000 | 55.00 | 804.20 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 |
| 1.000 | 85.00 | 804.20 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 |
| 1.000 | 145.00 | 804.20 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 |
| * 1.000 | 190.00 | 804.63 | 0.00 | 0.00 | 0.43 | 4.50 | 0.00 |
| 1.900 | 55.00 | 804.97 | 0.00 | 0.77 | 0.00 | 4.50 | 175.00 |
| 1.900 | 85.00 | 806.01 | 0.00 | 1.81 | 0.00 | 4.50 | 175.00 |
| 1.900 | 145.00 | 809.44 | 0.00 | 5.24 | 0.00 | 4.50 | 175.00 |
| 1.900 | 190.00 | 813.98 | 0.00 | 9.34 | 0.00 | 4.50 | 175.00 |
| 2.100 | 55.00 | 805.40 | 0.00 | 0.43 | 0.00 | 17.20 | 50.00 |
| 2.100 | 85.00 | 806.64 | 0.00 | 0.62 | 0.00 | 20.09 | 50.00 |
| 2.100 | 145.00 | 809.83 | 0.00 | 0.38 | 0.00 | 98.25 | 50.00 |
| 2.100 | 190.00 | 814.23 | 0.00 | 0.26 | 0.00 | 99.56 | 50.00 |
| 2.150 | 55.00 | 805.48 | 0.00 | 0.00 | 0.00 | 26.32 | 275.00 |
| 2.150 | 85.00 | 806.71 | 0.00 | 0.07 | 0.00 | 31.97 | 275.00 |
| 2.150 | 145.00 | 809.87 | 0.00 | 0.04 | 0.00 | 100.00 | 275.00 |
| 2.150 | 190.00 | 814.24 | 0.00 | 0.01 | 0.00 | 100.00 | 275.00 |
| * 2.200 | 55.00 | 306.18 | 0.00 | 0.70 | 0.00 | 16.43 | 275.00 |
| 2.200 | 85.00 | 806.59 | 0.00 | -0.12 | 0.00 | 16.37 | 275.00 |
| 2.200 | 145.00 | 809.85 | 0.00 | -0.01 | 0.00 | 33.33 | 275.00 |
| 2.200 | 190.00 | 814.24 | 0.00 | 0.00 | 0.00 | 100.00 | 275.00 |
| 3.000 | 100.00 | 806.05 | 0.00 | 1.87 | 0.00 | 23.30 | 300.00 |
| 3.000 | 145.00 | 808.37 | 0.00 | 1.77 | 0.00 | 25.09 | 300.00 |
| 3.000 | 225.00 | 809.97 | 0.00 | 0.12 | 0.00 | 33.34 | 300.00 |
| 3.000 | 330.00 | 814.25 | 0.00 | 0.00 | 0.00 | 100.00 | 300.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 1.000 PROFILE= 4 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 2.200 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.200 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.200 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WEEL

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.




1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: Sperry Drain

4) DOCUMENT TYPE: 4 profiles



14:30:06 X315 [illegible] JUN 05, 1981

Sperry Drain
4-Drain [illegible]

4-PROFILE FROM SECNO 3
TO SECNO 4 EXHIBIT 6

#400 12*3 SM:1223 LM:12*3 FW:E6-041 22AQ0561 PROT PR/H112/FI/SI/A/H132

PRINTED IN U.S.A.
FORM 1411-38 PRINTED BY ROTARY MANIFOLD FORMS.

```
JOBID=HEC2                USER=DRHUD17W              PROJECT=HU202507              BILLING=HU202507              ROM=X0315
```

```
14:16:20                                    JOB INTRODUCED FROM                                    JUN 05, 1981
                                                  HEC2 ENG

14:16:25  START OF TRANSLATION

**        PARAMETER VALUES        **

@1        = DB-SPERRY4
@PAPER    = 3PART

          $JOB HEC2,USER=DRHUD17W;
WARNING   36  THIS STATEMENT HAS BEEN GENERATED
          VALUE FILENAM,NHOLD,WK=WTAPAK,CPU=30,PAPER=1PART,SIZE=200,STEP=HEC2,
                SUB=SUBNAME,COPIES=1,WKDVC=400;
          JUMP @PAPER$$X;
          2PARTX:
          OUTVAL @2,ND=I12PRT,DVC=PR;
          JUMP CONTX;
          3PARTX:
          OUTVAL @2,ND=I13PRT,DVC=PR;
          JUMP CONTX;
          1PARTX:
          OUTVAL @2;
          CONTX:
          INVOKE HEC2,ENGJCLLIB,VALUES=(@1,@2,WK=@WK,CPU=@CPU,PAPER=@PAPER,SIZE=@SIZE,
                    STEP=@STEP,SUB=@SUB,COPIES=@COPIES,WKDVC=@WKDVC);

          RECORD COUNT :     16

14:16:40  END OF TRANSLATION
```

```
JOBID=HEC2                USER=DBHUD17W          PROJECT=HU202507          BILLING=HU202507          RON=X0315

NOT  : PLEASE SIGN OFF SYSTEM AT 3:00 TODAY INSTEAD OF 3:30.

14:16:42                                    JOB EXECUTION LISTING                                    JUN 05, 1981

          JUMP DONE TO 3PARTX
          JUMP DONE TO CONTX
          JUMP DONE TO HEC2
          START OF HEC□2 EXECUTION
          STEP 4
          LOAD MODULE = HEC□2 (79/2 /22 23:58)
          LIBRARY = HTAENGLM
14:17:00  STEP STARTED XPRTY=9
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HTAPAK FOR EFN: ;000315.FILE□B
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HTAPAK FOR EFN: ;000315.FILE□C
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HTAPAK FOR EFN: ;000315.FILE□D
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HTAPAK FOR EFN: ;000315.FILE□A
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HTAPAK FOR EFN: ;000315.FILE□E
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HTAPAK FOR EFN: ;000315.FILE□F
          TASK MAIN J=0A P=00 COMPLETED
          DUF01.IFN=FILE□B       REMEMBER REUSE=        0
          DUF01.IFN=FILE□C       REMEMBER REUSE=        0
          DUF01.IFN=FILE□D       REMEMBER REUSE=        0
          DUF01.IFN=FILE□A       REMEMBER REUSE=        0
          DUF01.IFN=FILE□E       REMEMBER REUSE=        0
          DUF01.IFN=FILE□F       REMEMBER REUSE=        0    UNLOCK BUFFER=        0    CREATE BUFFER=        31
          TEMPORARY  FILES USED=   228 TRACKS
          H□RD       ON  WTAPAK :  NB  OF  IO  CONNECTS=          2
          FILE□B     ON  WTAPAK :  NB  OF  IO  CONNECTS=        133
          FILE□C     ON  WTAPAK :  NB  OF  IO  CONNECTS=         98
          FILE□D     ON  WTAPAK :  NB  OF  IO  CONNECTS=         67
          H□PR       ON  MEG200 :  NB  OF  IO  CONNECTS=         16
          FILE□A     ON  WTAPAK :  NB  OF  IO  CONNECTS=        113
          FILE□E     ON  WTAPAK :  NB  OF  IO  CONNECTS=        105
          FILE□F     ON  WTAPAK :  NB  OF  IO  CONNECTS=         30
          CPU          1.003                        PROG MISSING SEGTS       69   STACKOV      81
          ELAPSED      3.287                        SYS  MISSING SEGTS      278
          LINES          304   LIMIT     NOLIM      BACKING STORE        507936
          CARDS            0   LIMIT     NOLIM      BUFFER SIZE           15920   CPSIZE      2272
14:20:25  STEP COMPLETED

          JUMP DONE TO FINISH
          JUMP DONE TO 3PART
          ************************************
          *  READY 3PART  GREEN BAR PAPER  *
          ************************************

          START     14:16:42   LINES        304
          STOP      14:20:31   CARDS          0
          CPU          1.003
          ELAPSE       3.815
14:20:33  RESULT:  JOB COMPLETED
```

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

C
T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN
T3       SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        2.        0.        0.  0.000000      0.00       0.0        0.   808.150     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J5  LPRNT     NUMSEC                    ********REQUESTED SECTION NUMBERS********

    -10.000   -10.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
QT      3.000   100.000   145.000   245.000   225.000   330.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.035     0.300     0.500     0.000     0.000     0.000     0.000     0.000

        VALLEY SECTION                                CROSS SECTION 62

X1      3.000     9.000   222.000   230.000   300.000   300.000   300.000     0.000     0.000     0.000
X3      0.000     0.000     0.000   180.000     0.000   280.000     0.000     0.000     0.000     0.000
GR    820.000     0.000   810.000    50.000   810.000   215.000   806.700   222.000   806.000   230.000
GR    806.700   230.000   810.000   249.000   810.000   330.000   820.000   380.000     0.000     0.000

        100 FT D/S MICHIGAN AVE.                      CROSS SECTION 62

X1      3.700    16.000   164.000   180.000   350.000   350.000   350.000     0.000    -0.300     0.000
GR    826.400     0.000   825.000    18.000   825.000    84.000   825.200   112.000   822.400   122.000
GR    814.600   150.000   807.900   164.000   807.300   169.500   807.300   172.000   807.300   174.500
GR    807.300   180.000   811.300   186.000   813.700   197.000   817.300   228.000   824.000   260.000
GR    825.200   320.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
ET      7.100     7.100     7.100     7.100     7.100     0.000   164.000   180.000     0.000     0.000

X1      3.800     0.000     0.000     0.000    50.000    50.000    50.000     0.000     0.150     0.000

        D/S FACE MICHIGAN AVE.                        CROSS SECTION 62

X1      3.900    16.000   169.500   174.500    50.000    50.000    50.000     0.000     0.000     0.000
X3     10.000     0.000     0.000     0.000     0.000     0.000     0.000   812.000   812.000     0.000
GR    826.400     0.000   825.000    18.000   825.000    84.000   825.200   112.000   822.400   122.000
GR    814.600   150.000   807.900   164.000   807.300   169.500   807.300   172.000   807.300   174.500
GR    807.300   180.000   811.300   186.000   813.700   197.000   817.300   220.000   824.000   260.000
GR    825.200   320.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
SB      0.000     2.770     3.000     0.000     3.200     0.000    17.000     0.000   807.600   807.300
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 842.000 | 942.000 |

U/S FACE MICHIGAN AVE CROSS SECTION 65864

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.000 | 16.000 | 889.500 | 894.500 | 160.000 | 160.000 | 160.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 812.900 | 825.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 825.000 | 825.000 | 0.000 |
| DT | 16.000 | 504.000 | 835.600 | 0.000 | 570.000 | 833.300 | 0.000 | 680.000 | 828.300 | 0.000 |
| DT | 832.000 | 826.000 | 0.000 | 876.000 | 825.300 | 0.000 | 889.500 | 825.300 | 810.100 | 890.000 |
| DT | 825.300 | 811.600 | 891.000 | 825.300 | 812.400 | 892.000 | 825.300 | 812.600 | 893.000 | 825.300 |
| DT | 812.400 | 894.000 | 825.300 | 811.600 | 894.500 | 825.300 | 810.100 | 906.000 | 825.300 | 0.000 |
| DT | 1108.000 | 828.500 | 0.000 | 1156.000 | 832.000 | 0.000 | 1180.000 | 832.000 | 0.000 | 0.000 |
| GR | 830.700 | 504.000 | 825.300 | 570.000 | 819.600 | 680.000 | 815.000 | 832.000 | 812.600 | 876.000 |
| GR | 810.100 | 889.500 | 808.500 | 890.000 | 807.800 | 891.000 | 807.600 | 892.000 | 807.800 | 893.000 |
| GR | 808.600 | 894.000 | 810.100 | 894.500 | 811.300 | 906.000 | 813.200 | 1108.000 | 827.000 | 1156.000 |
| GR | 832.000 | 1180.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN
T3       SPERRY DRAIN

J1   ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
          0.       3.        0.        0.  0.000000      0.00       0.0       0.    808.350     0.000

J2   NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IBW       CHNIM     ITRACE
       2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

PRINTED IN U.S.A.
FORM 1411-GB-PRINTED BY ROYARY MANIFOLD FORMS.

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN
T3       SPERRY DRAIN

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        4.        0.        0.  0.000000      0.00       0.0        0.   810.100     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IDW       CHNIP     ITRACE

      3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN
T3      SPERRY DRAIN

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

        0.       6.         0.         0.  0.000000       0.00       0.0        0.     814.350      0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IDP        CHNIM      ITRACE

       15.000     0.000    -1.000     0.500      0.500      0.000      0.000      1.000      0.000      0.000
```

FORM 1411-08-PRINTED BY ROTARY MANIFOLD FORMS.

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PRINTED IN U.S.A.

**********
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | IOPT | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 100.00 | 808.15 | 0.00 | 808.32 | 20.92 | 3.37 | 34.55 | 18.60 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 145.00 | 808.35 | 0.00 | 808.64 | 42.32 | 4.37 | 39.43 | 22.29 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 810.10 | 0.00 | 810.27 | 11.30 | 3.44 | 95.11 | 66.94 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 330.00 | 814.35 | 0.00 | 814.38 | 0.91 | 1.67 | 525.11 | 346.30 |
| | 3.700 | 350.00 | 0.00 | 0.00 | 807.00 | 100.00 | 809.06 | 0.00 | 809.21 | 21.90 | 3.11 | 35.72 | 21.33 |
| | 3.700 | 350.00 | 0.00 | 0.00 | 807.00 | 145.00 | 809.52 | 0.00 | 809.72 | 22.60 | 3.63 | 47.21 | 30.50 |
| | 3.700 | 350.00 | 0.00 | 0.00 | 807.00 | 225.00 | 810.54 | 0.00 | 810.76 | 16.14 | 3.88 | 73.47 | 56.01 |
| | 3.700 | 350.00 | 0.00 | 0.00 | 807.00 | 330.00 | 814.37 | 0.00 | 814.45 | 2.36 | 2.46 | 224.66 | 213.91 |
| | 3.800 | 50.00 | 0.00 | 0.00 | 807.15 | 100.00 | 809.15 | 0.00 | 809.35 | 31.50 | 3.23 | 30.95 | 17.22 |
| | 3.800 | 50.00 | 0.00 | 0.00 | 807.15 | 145.00 | 809.65 | 0.00 | 809.87 | 34.57 | 3.78 | 38.32 | 24.66 |
| | 3.800 | 50.00 | 0.00 | 0.00 | 807.15 | 225.00 | 810.63 | 0.00 | 810.90 | 30.23 | 4.18 | 53.85 | 40.92 |
| | 3.800 | 50.00 | 0.00 | 0.00 | 807.15 | 330.00 | 814.38 | 0.00 | 814.47 | 2.57 | 2.52 | 216.59 | 205.76 |
| * | 3.900 | 50.00 | 0.00 | 0.00 | 807.30 | 100.00 | 809.61 | 809.61 | 810.77 | 169.29 | 8.65 | 11.56 | 7.69 |
| * | 3.900 | 50.00 | 0.00 | 0.00 | 807.30 | 145.00 | 810.27 | 810.27 | 811.75 | 171.69 | 9.77 | 14.84 | 11.07 |
| * | 3.900 | 50.00 | 0.00 | 0.00 | 807.30 | 225.00 | 811.27 | 811.27 | 813.27 | 103.09 | 11.33 | 19.86 | 16.59 |
| | 3.900 | 50.00 | 0.00 | 0.00 | 807.30 | 330.00 | 814.36 | 0.00 | 814.53 | 8.56 | 4.52 | 207.84 | 114.10 |
| | 4.000 | 160.00 | 825.30 | 812.90 | 807.60 | 100.00 | 812.56 | 0.00 | 812.98 | 94.47 | 5.19 | 19.27 | 10.29 |
| | 4.000 | 160.00 | 825.30 | 812.90 | 807.60 | 145.00 | 812.76 | 0.00 | 813.40 | 80.07 | 6.40 | 22.67 | 16.20 |
| | 4.000 | 160.00 | 825.30 | 812.90 | 807.60 | 225.00 | 813.51 | 0.00 | 813.81 | 22.63 | 4.38 | 51.59 | 47.30 |
| | 4.000 | 160.00 | 825.30 | 812.90 | 807.60 | 330.00 | 825.80 | 0.00 | 825.80 | 0.11 | 0.71 | 1389.47 | 989.26 |

FORM 1411-GB-PRINTED BY ROTARY MANIFOLD FORMS.

S*ERRY DRAIN

SUM*ARY PRINTOUT TA?LE 150

| | SECNO | Q | CWSEL | DIFWSP | LIFWSX | DEPK.S | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 3.000 | 100.00 | 808.15 | 0.00 | 0.00 | 0.00 | 23.91 | 300.00 |
| | 3.000 | 145.00 | 808.35 | 0.00 | 0.00 | 0.00 | 25.00 | 300.00 |
| | 3.000 | 225.00 | 810.10 | 0.00 | 0.00 | 0.00 | 100.00 | 300.00 |
| | 3.000 | 330.00 | 814.35 | 0.00 | 0.00 | 0.00 | 100.00 | 300.00 |
| | 3.700 | 100.00 | 809.08 | 0.00 | 3.91 | 0.00 | 22.14 | 350.00 |
| | 3.700 | 145.00 | 809.52 | 0.00 | 1.17 | 0.00 | 25.78 | 350.00 |
| | 3.700 | 225.00 | 810.54 | 0.00 | 0.44 | 0.00 | 27.46 | 350.00 |
| | 3.700 | 330.00 | 814.37 | 0.00 | 0.02 | 0.00 | 55.68 | 350.00 |
| | 3.800 | 100.00 | 809.19 | 0.00 | 3.12 | 0.00 | 16.00 | 50.00 |
| | 3.800 | 145.00 | 809.65 | 0.00 | 0.13 | 0.47 | 16.00 | 50.00 |
| | 3.800 | 225.00 | 810.63 | 0.00 | 0.08 | 1.44 | 16.00 | 50.00 |
| | 3.800 | 330.00 | 814.38 | 0.00 | 0.01 | 0.00 | 53.99 | 50.00 |
| * | 3.900 | 100.00 | 809.67 | 0.00 | 0.49 | 0.00 | 5.00 | 50.00 |
| * | 3.900 | 145.00 | 810.27 | 0.00 | 0.62 | 0.66 | 5.00 | 50.00 |
| * | 3.900 | 225.00 | 811.27 | 0.00 | 0.65 | 1.66 | 5.00 | 50.00 |
| | 3.900 | 330.00 | 814.36 | 0.00 | -0.02 | 0.00 | 52.23 | 50.00 |
| | 4.000 | 100.00 | 812.56 | 0.00 | 2.95 | 0.00 | 5.00 | 160.00 |
| | 4.000 | 145.00 | 812.76 | 0.00 | 2.49 | 0.20 | 5.00 | 160.00 |
| | 4.000 | 225.00 | 813.51 | 0.00 | 7.24 | 5.95 | 5.00 | 160.00 |
| | 4.000 | 330.00 | 825.80 | 0.00 | 11.43 | 15.24 | 130.00 | 160.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 3.900 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3.900 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 3.900 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 3.900 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3.900 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 3.900 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 3.900 PROFILE= 3 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3.900 PROFILE= 3 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 3.900 PROFILE= 3 20 TRIALS ATTEMPTED TO BALANCE WSEL

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00BREAK00

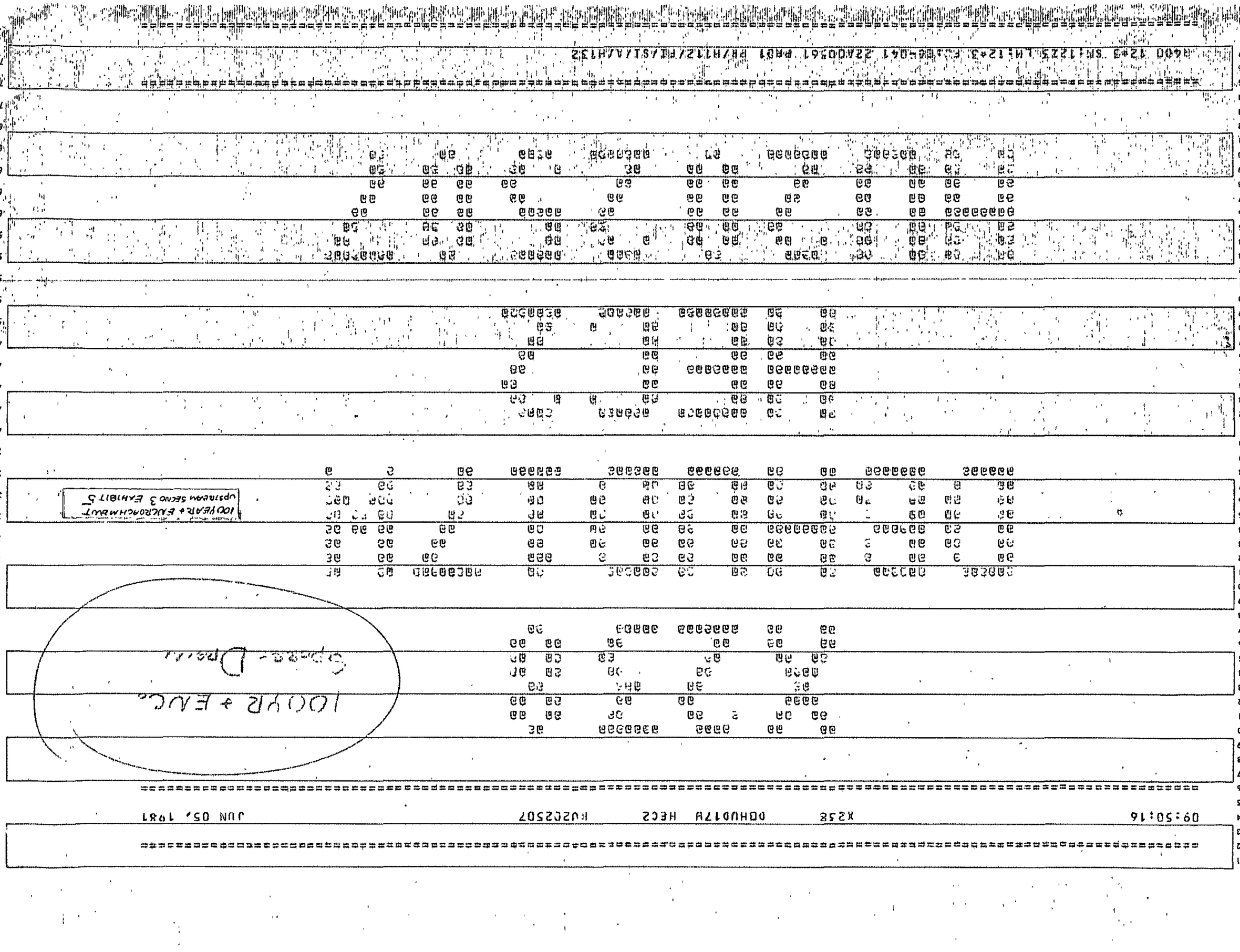
1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: Sperry Drain

4) DOCUMENT TYPE: 100 yr encroachment

00BREAK00



09:50:16 X258 DOHUD17W HEC2 RV202507 JUN 05, 1981

100YR + ENC.
Spare - Drain

100 YEAR + ENCROACHMENT
UPSTREAM SECNO 3 EXHIBIT 5

R400 12*3 SM:1223 LM:12*3 F:[illegible]-041 22A00561 PR01 PR/H112/FI/SI/A/H132

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```
JOBID=HEC2          USER=DBHUD17U          PROJECT=HU202507          BILLING=HU202507          RUN=X0238

09:26:56                                JOB INTRODUCED FROM                                JUN 05, 1981
                                          HEC2 ENG

09:27:02  START OF TRANSLATION

**          PARAMETER VALUES          **

&1          = DB-SPERRY
&PAPER      = 3PART

            $JOB HEC2,USER=DBHUD17U;
WARNING     56  THIS STATEMENT HAS BEEN GENERATED
            VALUE FILENAM,NHOLD,WK=UTAPAK,CPU=30,PAPER=1PART,SIZE=200,STEP=HEC2,
                  SUB=SUBNAME,COPIES=1,WKDVC=400;
            JUMP &PAPER%%X;
            2PARTX:
            OUTVAL &2,RD=I12PRT,DVC=PR;
            JUMP CONTX;
            3PARTX:
            OUTVAL &2,RD=I13PRT,DVC=PR;
            JUMP CONTX;
            1PARTX:
            OUTVAL &2;
            CONTX:
            INVOKE HEC2,ENGJCLLIB,VALUES=(&1,&2,WK=&WK,CPU=&CPU,PAPER=&PAPER,SIZE=&SIZE,
                  STEP=&STEP,SUB=&SUB,COPIES=&COPIES,WKDVC=&WKDVC);
            RECORD COUNT :    16

09:27:21  END OF TRANSLATION
```

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```
JOBID=HEC2                USER=DBHUD17W          PROJECT=HU202507          BILLING=HU202507          RON=X0238

MOT  : PLEASE SIGN OFF SYSTEM AT 3:15 TODAY INSTEAD OF 3:30.

09:31:25                                  JOB EXECUTION LISTING                                    JUN 05, 1981

                JUMP DONE TO 3PARTX
                JUMP DONE TO CONTX
                JUMP DONE TO HEC2
                START OF HEC¤2 EXECUTION
                STEP 4
                LOAD MODULE = HEC¤2 (79/2 /22 23:58)
                LIBRARY = WTAZNGLW
09:31:50        STEP STARTED XPRTY=9
                FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000238.FILE¤P
                FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000238.FILE¤C
                FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000238.FILE¤D
                FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000238.FILE¤A
                FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000238.FILE¤E
                FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000238.FILE¤F
                TASK MAIN J=01 P=00 COMPLETED
                DUF01.IFN=FILE¤F       REMEMBER REUSE=        0
                DUF01.IFN=FILE¤H       REMEMBER REUSE=        0
                DUF01.IFN=FILE¤C       REMEMBER REUSE=        0
                DUF01.IFN=FILE¤D       REMEMBER REUSE=        0
                DUF01.IFN=FILE¤A       REMEMBER REUSE=        0
                DUF01.IFN=FILE¤E       REMEMBER REUSE=        0    UNLOCK BUFFER=        0    CREATE BUFFER=        26
                TEMPORARY  FILES USED=    228 TRACKS
                FILE¤F    ON  WTAPAK :  NB  OF  IO  CONNECTS=        30
                FILE¤E    ON  WTAPAK :  NB  OF  IO  CONNECTS=       133
                FILE¤C    ON  WTAPAK :  NB  OF  IO  CONNECTS=        02
                H¤PR      ON  MEG200 :  NB  OF  IO  CONNECTS=        50
                H¤RD      ON  WTAPAK :  NB  OF  IO  CONNECTS=         6
                FILE¤D    ON  WTAPAK :  NB  OF  IO  CONNECTS=        83
                FILE¤A    ON  WTAPAK :  NB  OF  IO  CONNECTS=       229
                FILE¤E    ON  WTAPAK :  NB  OF  IO  CONNECTS=       375
                CPU          3.187                    PROG MISSING SEGTS       95    STACKOV       76
                ELAPSED      4.881                    SYS  MISSING SEGTS      187
                LINES         1805   LIMIT     NOLIM  BACKING STORE        507936
                CARDS            0   LIMIT     NOLIM  BUFFER SIZE           15920    CPSIZE      2272
09:35:43        STEP COMPLETED

                JUMP DONE TO FINISH
                JUMP DONE TO 3PART
                ************************************
                * READY 3PART  GREEN BAR PAPER     *
                ************************************

                START     09:31:25    LINES      1805
                STOP      09:36:44    CARDS         0
                CPU          3.187
                ELAPSE       5.317
09:36:44        RESULT:  JOB COMPLETED
```

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

C
T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN
T3       SPERRY DRAIN

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        4.        0.        0.  0.000000      0.00       0.0       0.   810.100     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000   110.000   200.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

QT      5.000   100.000   145.000   225.000   225.000   330.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.035     0.300     0.500     0.000     0.000     0.000     0.000     0.000
ET      0.000     0.000     0.000     0.000     0.000     9.100     0.000     0.000   130.000   330.000

        VALLEY SECTION                          CROSS SECTION 62

X1      3.000     9.000   222.000   238.000   300.000   300.000   300.000     0.000     0.000     0.000
GR    820.000     0.000   810.000    50.000   810.000   215.000   806.700   222.000   806.000   230.000
GR    806.700   238.000   810.000   249.000   810.000   330.000   820.000   310.000     0.000     0.000

        100 FT D/S MICHIGAN AVE.                CROSS SECTION 62

X1      3.700    16.000   164.000   180.000   350.000   350.000   350.000     0.000    -0.300     0.000
GR    826.400     0.000   825.000    18.000   825.000    84.000   825.200   112.000   822.400   122.000
GR    814.600   150.000   807.900   164.000   807.300   169.500   807.300   172.000   807.300   174.500
GR    807.300   180.000   811.300   186.000   813.700   197.000   817.300   228.000   824.000   260.000
GR    825.200   320.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1      3.800     0.000     0.000     0.000    50.000    50.000    50.000     0.000     0.150     0.000
X3      0.000     0.000     0.000   164.000     0.000   180.000     0.000     0.000     0.000     0.000

        D/S FACE MICHIGAN AVE.                  CROSS SECTION 62

X1      3.900    16.000   169.500   174.500    50.000    50.000    50.000     0.000     0.000     0.000
X3     10.000     0.000     0.000     0.000     0.000     0.000     0.000   825.000   825.000     0.000
GR    826.400     0.000   825.000    18.000   825.000    84.000   825.200   112.000   822.400   122.000
GR    814.600   150.000   807.900   164.000   807.300   169.500   807.300   172.000   807.300   174.500
GR    807.300   180.000   811.300   186.000   813.700   197.000   817.300   228.000   824.000   260.000
GR    825.200   320.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
SB      0.000     2.770     3.000     0.000     3.200     0.000    17.000     0.000   807.600   807.300
ET      0.000     0.000     0.000     0.000     0.000     9.100     0.000     0.000   842.000   942.000
```

U/S FACE MICHIGAN AVE — CROSS SECTION 63&64

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.000 | 16.000 | 889.500 | 894.500 | 160.000 | 169.000 | 160.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 812.900 | 825.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 825.000 | 825.000 | 0.000 |
| BT | 16.000 | 504.000 | 835.600 | 0.000 | 570.000 | 833.300 | 0.000 | 600.000 | 828.300 | 0.000 |
| BT | 832.000 | 825.000 | 0.000 | 876.000 | 825.300 | 0.000 | 809.500 | 825.300 | 810.100 | 890.000 |
| BT | 825.300 | 811.600 | 891.000 | 825.300 | 812.400 | 892.000 | 825.300 | 812.600 | 893.000 | 825.300 |
| BT | 812.400 | 894.000 | 825.300 | 811.600 | 894.500 | 825.300 | 810.100 | 906.000 | 825.300 | 0.000 |
| BT | 1108.000 | 828.500 | 0.000 | 1156.000 | 832.000 | 0.000 | 1180.000 | 832.000 | 0.000 | 0.000 |
| GR | 830.700 | 504.000 | 825.300 | 570.000 | 819.600 | 680.000 | 815.000 | 832.000 | 812.600 | 876.000 |
| GR | 810.100 | 889.500 | 808.600 | 890.000 | 807.800 | 891.000 | 807.600 | 892.000 | 807.600 | 893.000 |
| GR | 808.600 | 894.000 | 810.300 | 894.500 | 811.300 | 906.000 | 813.200 | 1108.000 | 827.000 | 1156.000 |
| GR | 832.000 | 1180.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

50 FT U/S MICHIGAN AVE. — CROSS SECTION 64

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.100 | 12.000 | 884.000 | 900.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 842.000 | 0.000 | 942.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.700 | 504.000 | 825.300 | 570.000 | 819.600 | 680.000 | 815.000 | 832.000 | 812.600 | 876.000 |
| GR | 808.500 | 884.000 | 807.800 | 892.000 | 807.800 | 930.000 | 811.300 | 906.000 | 813.200 | 1108.000 |
| GR | 827.000 | 1156.000 | 332.000 | 1180.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION — 2 FT CONTOUR MAP

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.500 | 11.000 | 752.000 | 760.000 | 350.000 | 350.000 | 350.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 800.000 | 0.000 | 800.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 500.000 | 812.000 | 501.000 | 811.500 | 732.000 | 808.500 | 760.000 | 811.500 | 768.000 |
| GR | 812.300 | 920.000 | 814.000 | 960.000 | 816.000 | 980.000 | 810.000 | 990.500 | 820.000 | 1010.000 |
| GR | 830.000 | 1060.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

100 FT D/S RIDGEMOOR ST. — CROSS SECTION 66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.700 | 15.000 | 686.000 | 698.000 | 375.000 | 375.000 | 375.000 | 0.000 | 0.000 | 0.000 |
| GR | 829.500 | 300.000 | 820.000 | 520.000 | 814.600 | 560.000 | 813.200 | 586.000 | 812.600 | 612.000 |
| GR | 811.700 | 686.000 | 809.200 | 687.500 | 809.200 | 690.000 | 809.200 | 692.500 | 811.400 | 698.000 |
| GR | 811.400 | 746.000 | 812.400 | 736.000 | 820.600 | 850.200 | 825.200 | 902.000 | 830.200 | 926.000 |

D/S RIDGEMOOR ST. — CROSS SECTION 66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.800 | 19.000 | 687.500 | 692.500 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 812.200 | 812.200 | 0.000 |
| GR | 829.500 | 300.000 | 820.000 | 520.000 | 814.600 | 560.000 | 813.200 | 586.000 | 812.600 | 612.000 |
| GR | 811.700 | 686.000 | 809.200 | 687.500 | 809.200 | 690.000 | 809.200 | 692.500 | 811.400 | 698.000 |
| GR | 809.200 | 691.000 | 809.200 | 692.000 | 809.700 | 692.500 | 811.400 | 698.000 | 811.400 | 746.000 |
| GR | 812.400 | 784.000 | 820.600 | 850.000 | 825.200 | 902.000 | 830.200 | 926.000 | 0.000 | 0.000 |

D/S FACE RIDGEMOOR ST. — CROSS SECTION 65&66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 812.200 | 812.200 | 0.000 |
| BT | 19.000 | 300.000 | 829.500 | 0.000 | 520.000 | 820.000 | 0.000 | 560.000 | 818.000 | 0.000 |
| BT | 586.000 | 816.000 | 0.000 | 812.000 | 816.400 | 0.000 | 688.000 | 816.100 | 0.000 | 687.500 |
| BT | 816.100 | 809.700 | 658.000 | 816.100 | 811.200 | 639.500 | 816.100 | 812.000 | 695.000 | 816.100 |
| BT | 812.200 | 991.000 | 816.100 | 812.000 | 692.000 | 816.100 | 811.200 | 692.500 | 816.100 | 809.700 |
| BT | 698.000 | 816.100 | 0.000 | 746.000 | 816.800 | 0.000 | 784.000 | 817.300 | 0.000 | 850.000 |
| BT | 820.600 | 0.000 | 902.000 | 825.200 | 0.000 | 926.000 | 830.200 | 0.000 | 0.000 | 0.000 |

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U/S FACE RIDGEMOOR ST. CROSS SECTION 65&66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.000 | 19.000 | 687.500 | 692.500 | 104.000 | 104.000 | 104.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.100 | 816.100 | 0.000 |
| BT | 19.000 | 300.000 | 929.500 | 0.000 | 520.000 | 820.000 | 0.000 | 560.000 | 818.000 | 0.000 |
| BT | 586.000 | 816.800 | 0.000 | 812.000 | 816.400 | 0.000 | 686.000 | 816.100 | 0.000 | 687.500 |
| BT | 816.100 | 811.300 | 688.000 | 816.100 | 812.800 | 689.000 | 816.100 | 813.600 | 690.000 | 816.100 |
| BT | 813.800 | 691.000 | 816.100 | 813.600 | 692.000 | 816.100 | 812.800 | 692.500 | 816.100 | 811.300 |
| BT | 698.000 | 816.100 | 0.000 | 746.000 | 816.800 | 0.000 | 784.000 | 817.300 | 0.000 | 850.000 |
| BT | 820.600 | 0.000 | 902.000 | 825.200 | 0.000 | 925.000 | 830.200 | 0.000 | 0.000 | 0.000 |
| GR | 829.500 | 300.000 | 820.000 | 520.000 | 814.600 | 560.000 | 813.200 | 586.000 | 812.600 | 612.000 |
| GR | 811.700 | 686.000 | 811.300 | 687.500 | 810.800 | 688.000 | 810.800 | 689.000 | 810.800 | 690.000 |
| GR | 810.800 | 691.000 | 810.800 | 692.000 | 811.300 | 692.500 | 811.400 | 698.000 | 811.400 | 746.000 |
| GR | 812.400 | 784.000 | 820.600 | 850.000 | 825.200 | 902.000 | 830.200 | 926.000 | 0.000 | 0.000 |

U/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 815.000 | 815.000 | 0.000 |

51 FT U/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.200 | 13.000 | 686.000 | 698.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 829.500 | 300.000 | 820.000 | 520.000 | 814.600 | 560.000 | 813.200 | 586.000 | 812.600 | 612.000 |
| GR | 811.500 | 686.000 | 811.100 | 690.000 | 811.500 | 698.000 | 812.100 | 714.000 | 812.400 | 784.000 |
| GR | 820.600 | 850.000 | 825.200 | 902.000 | 830.200 | 926.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.035 | 0.100 | 0.300 | 0.030 | 0.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION CROSS SECTION 67

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.300 | 14.000 | 319.000 | 337.000 | 560.000 | 905.000 | 850.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 40.000 | 821.800 | 68.000 | 819.000 | 156.000 | 814.500 | 256.000 | 815.000 | 310.000 |
| GR | 812.700 | 319.000 | 812.800 | 326.000 | 812.000 | 337.000 | 814.000 | 342.000 | 814.200 | 378.000 |
| GR | 813.800 | 444.000 | 813.800 | 556.000 | 820.000 | 560.000 | 830.000 | 565.000 | 0.000 | 0.000 |

VALLEY SECTION 2 FT CONTOUR MAP

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.350 | 12.000 | 490.000 | 510.000 | 475.000 | 400.000 | 440.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 400.000 | 0.000 | 560.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 100.000 | 818.000 | 150.000 | 816.000 | 220.000 | 815.500 | 400.000 | 815.500 | 490.000 |
| GR | 814.200 | 496.000 | 813.900 | 500.000 | 814.200 | 506.000 | 815.500 | 510.000 | 816.000 | 560.000 |
| GR | 816.000 | 650.000 | 830.000 | 660.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.100 | 0.000 | 0.000 | 0.000 | 1.000 | 512.000 |

VALLEY SECTION CROSS SECTION 68

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.400 | 15.000 | 371.000 | 377.000 | 475.000 | 440.000 | 440.000 | 0.000 | 0.000 | 0.000 |
| GR | 831.200 | 0.000 | 828.300 | 176.000 | 824.800 | 168.000 | 823.700 | 236.000 | 820.200 | 346.000 |
| GR | 818.800 | 366.000 | 816.000 | 371.000 | 815.800 | 374.000 | 816.000 | 377.000 | 816.800 | 384.000 |
| GR | 817.600 | 418.000 | 823.400 | 444.000 | 832.600 | 466.000 | 839.600 | 492.000 | 842.300 | 512.000 |

VALLEY SECTION 2 FT CONTOUR MAP

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.450 | 10.000 | 807.000 | 505.000 | 200.000 | 200.000 | 220.000 | 0.300 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 475.000 | 0.000 | 555.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 400.000 | 822.000 | 410.000 | 820.000 | 475.000 | 818.000 | 490.000 | 817.200 | 497.000 |
| GR | 817.000 | 500.000 | 817.200 | 505.000 | 816.000 | 510.000 | 820.000 | 600.000 | 830.000 | 610.000 |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | 0.120 | 0.120 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

100 FT D/S BALBOA BLVD. CROSS SECTION 70

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.700 | 9.000 | 597.000 | 603.000 | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 460.000 | 820.000 | 470.000 | 819.600 | 593.000 | 818.500 | 597.000 | 818.300 | 600.000 |
| GR | 818.500 | 603.000 | 819.400 | 620.000 | 820.000 | 665.000 | 840.000 | 655.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 560.000 | 760.000 |

D/S FACE BALBOASCON RD. CROSS SECTION 70

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.900 | 9.000 | 709.000 | 721.000 | 50.000 | 150.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 819.000 | 819.000 | 0.000 |
| GR | 330.000 | 560.000 | 824.000 | 570.000 | 820.000 | 560.000 | 820.000 | 709.000 | 818.600 | 711.500 |
| SH | 819.100 | 718.900 | 820.000 | 721.000 | 820.300 | 750.000 | 330.000 | 760.000 | 0.000 | 0.000 |
| SH | 0.000 | 4.660 | 3.300 | 0.000 | 6.900 | 5.030 | 13.000 | 0.000 | 818.700 | 818.600 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 560.000 | 760.000 |

D/S FACE BALBOASCON RD. CROSS SECTION 69870

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.000 | 21.000 | 709.700 | 721.000 | 62.000 | 62.000 | 62.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 820.900 | 823.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 823.600 | 823.600 | 0.000 |
| BT | 21.000 | 560.000 | 830.000 | 0.000 | 570.000 | 824.000 | 0.000 | 580.000 | 823.600 | 0.000 |
| BT | 700.000 | 823.600 | 0.000 | 709.700 | 823.600 | 610.800 | 709.500 | 823.600 | 819.900 | 710.500 |
| BT | 823.600 | 820.700 | 711.500 | 823.600 | 820.900 | 712.500 | 823.600 | 820.700 | 713.500 | 823.600 |
| BT | 819.900 | 716.000 | 823.600 | 618.800 | 716.000 | 823.600 | 618.700 | 716.500 | 823.600 | 820.000 |
| BT | 717.500 | 823.600 | 820.900 | 718.500 | 823.600 | 821.100 | 719.500 | 823.600 | 820.900 | 720.500 |
| BT | 823.600 | 820.000 | 721.000 | 823.600 | 818.700 | 730.000 | 823.600 | 0.000 | 750.000 | 823.600 |
| BT | 0.000 | 760.000 | 830.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 560.000 | 824.000 | 570.000 | 822.000 | 580.000 | 822.000 | 700.000 | 818.800 | 709.000 |
| GR | 818.800 | 709.500 | 818.800 | 710.500 | 818.800 | 711.500 | 818.800 | 712.500 | 818.800 | 713.500 |
| GR | 818.800 | 714.000 | 818.700 | 716.000 | 818.700 | 716.500 | 818.700 | 717.500 | 818.700 | 718.500 |
| GR | 818.700 | 719.500 | 818.700 | 720.500 | 818.700 | 721.000 | 822.000 | 730.000 | 822.000 | 750.000 |
| GR | 830.000 | 760.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 1.000 | 400.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.100 | 12.000 | 297.000 | 303.000 | 325.000 | 325.000 | 325.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 255.000 | 0.000 | 345.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 0.000 | 828.000 | 110.000 | 826.000 | 130.000 | 824.000 | 180.000 | 822.000 | 290.000 |
| GR | 821.000 | 297.000 | 820.700 | 300.000 | 821.000 | 303.000 | 822.000 | 310.000 | 824.000 | 320.000 |
| GR | 826.000 | 375.000 | 830.000 | 400.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.200 | 11.000 | 997.000 | 1003.000 | 325.000 | 325.000 | 325.000 | 0.000 | 0.000 | 0.000 |
| GR | 831.000 | 850.000 | 828.200 | 960.000 | 825.500 | 980.000 | 825.200 | 990.000 | 823.000 | 997.000 |
| GR | 822.700 | 1000.000 | 823.000 | 1003.000 | 825.200 | 1010.000 | 825.500 | 1040.000 | 828.500 | 1075.000 |
| GR | 840.000 | 1160.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION CROSS SECTION 71

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.300 | 13.000 | 1143.000 | 1149.000 | 300.000 | 300.000 | 300.000 | 0.000 | 0.000 | 0.000 |
| X4 | 1.030 | 827.000 | 1136.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 844.400 | 696.000 | 832.000 | 780.000 | 831.200 | 936.000 | 830.800 | 1076.000 | 829.100 | 1104.000 |
| GR | 824.800 | 1143.000 | 824.500 | 1166.000 | 824.000 | 1149.000 | 827.000 | 1159.000 | 827.700 | 1178.000 |
| GR | 829.400 | 1202.000 | 829.900 | 1268.000 | 840.300 | 1286.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.350 | 0.000 | 0.000 | 0.000 | 200.000 | 200.000 | 200.000 | 0.000 | 2.100 | 0.000 |
| X1 | 6.500 | 11.000 | 217.000 | 223.000 | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 0.000 | 835.000 | 35.000 | 834.000 | 80.000 | 831.200 | 210.000 | 829.000 | 217.000 |
| GR | 828.700 | 227.000 | 829.000 | 223.000 | 831.200 | 230.000 | 832.000 | 250.000 | 835.000 | 290.000 |
| GR | 860.000 | 340.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 6.550 | 0.000 | 0.000 | 0.000 | 200.000 | 200.000 | 200.000 | 0.000 | 2.100 | 0.000 |
| X1 | 6.600 | 9.000 | 127.000 | 133.000 | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 0.000 | 838.000 | 30.000 | 835.400 | 120.000 | 833.200 | 127.000 | 832.900 | 130.000 |
| GR | 833.200 | 133.000 | 835.400 | 140.000 | 838.000 | 220.000 | 840.000 | 285.000 | 0.000 | 0.000 |
| X1 | 6.650 | 0.000 | 0.000 | 0.000 | 200.000 | 200.000 | 200.000 | 0.000 | 2.100 | 0.000 |
| X1 | 6.700 | 10.000 | 227.000 | 233.000 | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| GR | 844.000 | 0.000 | 841.000 | 190.000 | 839.000 | 220.000 | 837.400 | 227.000 | 837.100 | 230.000 |
| GR | 837.400 | 233.000 | 839.000 | 240.000 | 841.000 | 230.000 | 844.000 | 340.000 | 850.000 | 390.000 |

100 FT D/S HAUBASCON RD. CROSS SECTION 72

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.800 | 11.000 | 915.000 | 923.000 | 275.000 | 275.000 | 275.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 894.300 | 0.000 | 964.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 849.300 | 650.000 | 844.500 | 740.300 | 844.100 | 834.000 | 843.900 | 882.000 | 843.200 | 926.000 |
| GR | 841.800 | 915.000 | 841.500 | 919.000 | 841.500 | 923.000 | 842.700 | 940.000 | 846.200 | 952.000 |
| GR | 851.400 | 1028.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE HAUBASCON RD. CROSS SECTION 72

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.900 | 14.000 | 127.500 | 132.500 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 847.500 | 847.500 | 0.000 |
| GR | 870.000 | 0.000 | 860.000 | 30.000 | 850.000 | 70.000 | 848.000 | 95.000 | 843.500 | 124.000 |
| GR | 842.400 | 127.500 | 842.100 | 130.000 | 842.600 | 132.500 | 843.500 | 134.000 | 850.000 | 170.000 |
| GR | 854.000 | 300.000 | 858.000 | 390.000 | 860.000 | 430.000 | 870.000 | 580.000 | 0.000 | 0.000 |
| SS | 0.000 | 1.910 | 3.000 | 0.000 | 3.000 | 0.000 | 20.500 | 0.000 | 842.100 | 842.800 |

U/S FACE HAUBASCON RD. CROSS SECTION 72873

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 7.000 | 0.000 | 0.000 | 0.000 | 41.000 | 41.000 | 41.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 846.200 | 850.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 850.300 | 850.300 | 0.000 |
| BT | 15.000 | 0.000 | 870.000 | 0.000 | 30.000 | 860.000 | 0.000 | 70.000 | 850.300 | 0.000 |
| BT | 95.000 | 850.300 | 0.000 | 124.000 | 850.300 | 0.000 | 127.500 | 850.300 | 0.000 | 127.500 |
| BT | 850.300 | 846.200 | 132.500 | 850.300 | 846.200 | 132.500 | 850.300 | 0.000 | 136.000 | 850.300 |
| BT | 0.000 | 171.000 | 850.300 | 0.000 | 300.000 | 854.000 | 0.000 | 300.000 | 856.000 | 0.000 |
| BT | 430.000 | 862.000 | 0.000 | 380.000 | 870.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

250 FT U/S HAUBSCON RD. BATTLE CREEK CORP. BOUND. CROSS SECTION 74

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 7.200 | 10.000 | 513.000 | 519.000 | 250.000 | 250.000 | 250.000 | 0.000 | 0.000 | 0.000 |
| GR | 885.500 | 294.000 | 851.800 | 322.000 | 848.200 | 360.000 | 854.400 | 384.000 | 852.500 | 404.200 |
| GR | 849.400 | 448.000 | 848.500 | 508.000 | 844.700 | 513.000 | 844.700 | 516.000 | 845.700 | 519.000 |
| GR | 850.200 | 522.000 | 857.100 | 542.000 | 857.100 | 622.000 | 857.800 | 636.000 | 865.400 | 802.000 |
| GR | 877.000 | 906.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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*PROF 1

CCHV=   0.300 CEHV=   0.500
*SECNO 3.000
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA     LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IN2        ICONT      CORAR      TOPWID      ENDST

        VALLEY SECTION                                  CROSS SECTION 62

      3.00       4.10     810.10       0.00     810.10     810.26       0.16       0.00       0.00     806.70
       225.         8.      205.        12.        29.        60.        27.         0.         0.     806.70
      0.00       0.79       3.41       0.44      0.120      0.035      0.120      0.000     806.00      49.50
  0.001114       300.       300.       300.          0          0          0       0.00     231.00     330.50

*SECNO 3.700

        100 FT D/S MICHIGAN AVE.                        CROSS SECTION 62

      3.79       3.54     810.34       0.00       0.00     810.76       0.22       0.42       0.03     807.60
       225.         5.      214.         6.         9.        55.         9.         1.         1.     807.00
      0.03       0.60       3.89       0.65      0.120      0.035      0.120      0.035     807.00     157.86
  0.001621       350.       350.       350.          2          0          0       0.00      27.44     185.31

*SECNO 3.800

3470 ENCROACHMENT STATIONS=      164.0      180.0  TYPE=       1  TARGET=       16.000
      3.80       3.47     810.62       0.00       0.00     810.89       0.27       0.11       0.02     807.75
       225.         0.      225.         0.         0.        54.         0.         1.         1.  100000.00
      0.03       0.00       4.19       0.00      0.120      0.035      0.120      0.035     807.15     164.00
  0.003039         50.        50.        50.          1          0          0       0.00      12.00     180.00

*SECNO 3.900

3301 HV CHANGED MORE THAN NUINS

   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA     LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IN2        ICONT      CORAR      TOPWID      ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,FLLEA=      825.00 FLREA=      825.00

        D/S FACE MICHIGAN AVE.                          CROSS SECTION 62

      3.90       3.77     811.27     811.27       0.00     813.27       1.99       0.31       0.88     807.30
       225.         0.      225.         0.         0.        20.         0.         1.         1.     807.30
      0.03       0.00       4.32       0.00      0.120      0.035      0.120      0.035     807.30     169.50
  0.018350         50.        50.        50.         20          8          0       0.00       5.00     174.50
```

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SPECIAL BRIDGE

| SP | XK | XKOR | COFQ | RDLEN | DWC | DWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 2.77 | 3.00 | 0.00 | 3.20 | 0.00 | 17.00 | 0.00 | 807.40 | 807.30 |

*SECNO 4.000

3391 HV CHANGED MORE THAN HVINS

| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | XL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | STW | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 818.81 | 814.39 | 0.00 | 0. | 225. | 17. | 17. | 812.90 | 825.30 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 825.00 ELREA= 825.00

D/S FACE MICHIGAN AVE CROSS SECTION 63&64

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.00 | 10.91 | 818.5* | 0.00 | 0.00 | 818.81 | 0.30 | 5.54 | 0.00 | 810.10 |
| 225. | 0. | 225. | 0. | 0. | 51. | 0. | 1. | 1. | 810.10 |
| 0.04 | 0.00 | 4.38 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 807.60 | 889.50 |
| 0.002261 | 160. | 160. | 160. | 2 | 0 | 0 | 0.00 | 5.00 | 894.50 |

*SECNO 4.100

3470 ENCROACHMENT STATIONS= 842.0 942.0 TYPE= 1 TARGET= 100.000

50 FT U/S MICHIGAN AVE. CROSS SECTION 64

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.10 | 11.09 | 818.39 | 0.00 | 0.00 | 818.90 | 0.01 | 0.00 | 0.09 | 808.50 |
| 225. | 36. | 137. | 52. | 249. | 175. | 323. | 1. | 1. | 807.80 |
| 0.07 | 0.14 | 0.78 | 0.16 | 0.120 | 0.035 | 0.120 | 0.035 | 807.80 | 842.00 |
| 0.000014 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 100.00 | 942.00 |

*SECNO 4.500

3470 ENCROACHMENT STATIONS= 600.0 850.0 TYPE= 1 TARGET= 250.000

VALLEY SECTION 2 FT CONTOUR MAP

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.50 | 10.40 | 818.50 | 0.00 | 0.00 | 813.90 | 0.00 | 0.00 | 0.00 | 811.50 |
| 225. | 111. | 56. | 59. | 1102. | 142. | 596. | 12. | 3. | 811.50 |
| 0.63 | 0.10 | 0.39 | 0.10 | 0.120 | 0.035 | 0.120 | 0.035 | 808.50 | 600.00 |
| 0.000005 | 350. | 350. | 350. | 2 | 0 | 0 | 0.00 | 250.00 | 850.00 |

*SECNO 4.700

100 FT D/S RIDGEMOOR ST. CROSS SECTION 66

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.70 | 9.71 | 818.91 | 0.00 | 0.00 | 818.91 | 0.00 | 0.00 | 0.00 | 811.70 |
| 225. | 90. | 47. | 88. | 855. | 109. | 797. | 27. | 5. | 811.40 |
| 1.22 | 0.11 | 0.44 | 0.11 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 528.10 |
| 0.000007 | 375. | 375. | 375. | 0 | 0 | 0 | 0.00 | 308.27 | 836.37 |

*SECNO 4.600

D/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.80 | 9.71 | 818.91 | 0.00 | 0.00 | 818.91 | 0.00 | 0.00 | 0.00 | 809.70 |
| 225. | 99. | 25. | 101. | 867. | 40. | 843. | 31. | 6. | 809.70 |
| 1.40 | 0.11 | 0.51 | 0.12 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 528.11 |
| 0.000008 | 100. | 100. | 100. | 0 | 0 | 0 | 0.00 | 308.25 | 836.36 |

*SECNO 4.900

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRIWS | USELK | EG | FV | HL | OLOSS | BANK ELEV |
| Q | QLOD | QCH | QROB | ALOB | ACH | AROD | VOL | TWA | LEFT/RIGHT |
| TIME | VLOD | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOCL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 19 MIN ELTRD= 816.10 MAX ELLC= 812.20

D/S FACE RIDGEMOOR ST. CROSS SECTION 65866

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.90 | 9.70 | 818.90 | 0.00 | 0.00 | 818.91 | 0.00 | 0.00 | 0.00 | 809.70 |
| 225. | 116. | 27. | 82. | 314. | 26. | 246. | 31. | 6. | 809.70 |
| 1.40 | 0.37 | 1.06 | 0.33 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 528.11 |
| 0.000292 | 1. | 1. | 1. | 0 | 0 | 0 | -1172.50 | 308.26 | 836.36 |

*SECNO 5.000

3370 NORMAL BRIDGE,NRD= 19 MIN ELTRD= 816.10 MAX ELLC= 813.80

U/S FACE RIDGEMOOR ST. CROSS SECTION 65866

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.00 | 8.13 | 818.93 | 0.00 | 0.00 | 818.94 | 0.00 | 0.03 | 0.00 | 811.30 |
| 225. | 116. | 27. | 82. | 317. | 26. | 249. | 33. | 7. | 811.30 |
| 1.46 | 0.37 | 1.05 | 0.33 | 0.120 | 0.035 | 0.120 | 0.035 | 810.80 | 527.95 |
| 0.000282 | 104. | 104. | 104. | 1 | 0 | 0 | -1159.59 | 308.59 | 836.54 |

*SECNO 5.100

U/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.10 | 8.14 | 818.94 | 0.00 | 0.00 | 818.94 | 0.00 | 0.00 | 0.00 | 811.30 |
| 225. | 102. | 29. | 104. | 871. | 40. | 843. | 33. | 7. | 811.30 |
| 1.47 | 0.12 | 0.47 | 0.12 | 0.120 | 0.035 | 0.120 | 0.035 | 810.80 | 527.89 |
| 0.000008 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 308.70 | 836.60 |

*SECNO 5.200

50 FT U/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.20 | 7.84 | 818.94 | 0.00 | 0.00 | 818.94 | 0.00 | 0.00 | 0.00 | 811.50 |
| 225. | 99. | 22. | 35. | 9. | 92. | 255. | 35. | 7. | 811.50 |

```
     1.54      0.11      0.46      0.11     0.120     0.035     0.120     0.035    811.10    527.81
 0.000008       50.       50.       50.         0         0         0      0.00    308.88    836.69

CCHV=   0.100 CEHV=   0.300
*SECNO 5.300

        VALLEY SECTION                                    CROSS SECTION 67

     5.30      6.95    818.95      0.00      0.00    818.95      0.00      0.01      0.00    812.70
     225.       43.       53.      129.      492.      115.     1115.       64.       13.    812.00
     2.65      0.09      0.46      0.12     0.120     0.035     0.120     0.036    812.00    157.23
 0.000010      500.      850.      930.         0         0         0      0.00    402.09    559.32

*SECNO 5.350
   SECNO     DEPTH     CUSEL     CRIUB     HSELK     EG        HV        KL        DLOSS   BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA   LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XKL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST

3470 ENCROACHMENT STATIONS=     400.0     560.0  TYPE=     1  TARGET=     160.000

        VALLEY SECTION                                    2 FT CONTOUR MAP

     5.35      5.05    818.95      0.00      0.00    818.96      0.01      0.01      0.00    815.50
     225.       94.      101.       41.      510.       90.      160.       75.       16.    815.50
     2.83      0.27      1.12      0.25     0.120     0.035     0.120     0.036    813.90    400.00
 0.000096      475.      440.      400.         0         0         0      0.00    160.00    560.00

*SECNO 5.400

        VALLEY SECTION                                    CROSS SECTION 68

     5.40      3.12    818.92      0.00      0.00    819.16      0.23      0.13      0.07    816.00
     225.       29.      102.       94.       26.       18.       80.       79.       17.    816.00
     2.87      1.12      5.63      1.17     0.120     0.035     0.120     0.036    815.80    353.52
 0.004035      475.      440.      440.         2         3         0      0.00     70.40    423.92

*SECNO 5.450

3470 ENCROACHMENT STATIONS=     475.0     555.0  TYPE=     1  TARGET=      80.000

        VALLEY SECTION                                    2 FT CONTOUR MAP

     5.45      2.83    819.83      0.00      0.00    820.10      0.27      0.93      0.01    817.20
     225.       35.      100.       90.       28.       16.       75.       79.       17.    817.20
     2.89      1.24      6.12      1.19     0.120     0.035     0.120     0.036    817.00    476.28
 0.005470      200.      200.      200.         3         0         0      0.00     78.72    555.00

CCHV=   0.300 CEHV=   0.500
*SECNO 5.700

        100 FT D/S BALBASCON RD.                          CROSS SECTION 70

     5.70      2.57    820.87      0.00      0.00    820.96      0.09      0.81      0.05    818.50
     225.      103.       64.       58.      140.       15.       62.       80.       18.    818.50
     2.92      0.74      4.33      0.92     0.120     0.035     0.120     0.036    818.30    469.56
 0.003115      200.      200.      200.         2         0         0      0.00    175.87    645.44
```

```
*SECNO 5.900

        D/S FACE WAUBASCON RD.                          CROSS SECTION 70

     5.90      2.54    821.14      0.00      0.00    821.23      0.09      0.26      0.00    820.00
     225.      110.      90.       25.      149.       25.       34.       81.       18.     820.00
     2.93      0.74      3.66      0.74     0.120     0.035     0.120     0.036    818.60    577.15
 0.003025       50.      100.      150.         2         0         0      0.00    173.99    751.14


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.00      4.66      3.00      0.00      6.00      0.00     13.00      0.00    810.70    818.60

*SECNO 6.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST


PRESSURE AND WEIR FLOW

 EGPRS    6  EGLMC      HS        QWEIR     QPR       AREA    TRAPEZOID     ELLC      ELTRD
                                                                AREA
   842.32    822.12      0.00      165.       82.       13.       13.      820.90    823.60


        U/S FACE WAUBASCON RD.                          CROSS SECTION 69870

     6.00      5.30    824.00      0.00      0.00    824.02      0.03      2.80      0.00    818.80
     225.       83.      117.       25.      282.       63.       75.       81.       18.     818.70
     2.95      0.29      1.86      0.33     0.120     0.035     0.120     0.036    818.70    570.02
 0.000210       62.       62.       62.         2         0         7      0.00    182.48    752.50


*SECNO 6.100

3470 ENCROACHMENT STATIONS=      255.0      345.0  TYPE=      1  TARGET=      90.000
     6.10      3.38    824.08      0.00      0.00    824.30      0.22      0.18      0.10    821.00
     225.       83.      105.       33.       80.       19.       29.       83.       19.     821.00
     2.98      1.10      5.40      1.12     0.120     0.035     0.120     0.036    820.70    255.00
 0.003408      325.      325.      325.         2         0         0      0.00     67.24    322.24


*SECNO 6.200
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST


7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
     6.20      3.36    826.06    826.06      0.00    826.75      0.70      1.59      0.24    823.00
     225.       29.      155.       41.       22.       19.       37.       84.       20.     823.00
     2.99      1.33      8.04      1.13     0.120     0.035     0.120     0.036    822.70    975.89
 0.007832      325.      325.      325.         7         5         0      0.00     70.59   1046.48
```

*SECNO 6.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| VALLEY SECTION | | | | | CROSS SECTION 71 | | | | |
| 6.30 | 3.66 | 828.16 | 0.30 | 0.00 | 828.70 | 0.53 | 1.90 | 0.05 | 824.80 |
| 225. | 30. | 150. | 44. | 26. | 21. | 38. | 84. | 20. | 824.80 |
| 3.01 | 1.16 | 7.13 | 1.16 | 0.120 | 0.035 | 0.120 | 0.036 | 824.50 | 1118.29 |
| 0.005319 | 300. | 300. | 300. | 2 | 0 | 0 | 0.00 | 66.24 | 1184.53 |

*SECNO 6.350

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.35 | 3.33 | 829.93 | 829.93 | 0.00 | 830.74 | 0.81 | 1.33 | 0.14 | 826.90 |
| 225. | 27. | 162. | 37. | 19. | 19. | 27. | 85. | 21. | 826.90 |
| 3.02 | 1.42 | 8.48 | 1.37 | 0.120 | 0.035 | 0.120 | 0.036 | 826.60 | 1123.40 |
| 0.008590 | 200. | 200. | 200. | 1 | 11 | 0 | 0.00 | 56.39 | 1179.79 |

*SECNO 6.500

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.50 | 3.64 | 832.14 | 832.14 | 0.00 | 832.84 | 0.69 | 1.57 | 0.03 | 829.00 |
| 225. | 37. | 157. | 31. | 35. | 20. | 25. | 85. | 21. | 829.00 |
| 3.03 | 1.05 | 7.97 | 1.23 | 0.120 | 0.035 | 0.120 | 0.035 | 828.70 | 166.28 |
| 0.007236 | 200. | 200. | 200. | 2 | 8 | 0 | 0.00 | 85.61 | 251.89 |

*SECNO 6.550

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.55 | 3.44 | 834.24 | 834.24 | 0.00 | 834.94 | 0.69 | 1.45 | 0.00 | 831.10 |
| 225. | 37. | 157. | 31. | 35. | 20. | 25. | 85. | 21. | 831.10 |
| 3.04 | 1.05 | 7.96 | 1.23 | 0.120 | 0.035 | 0.120 | 0.035 | 830.80 | 166.28 |
| 0.007216 | 200. | 200. | 200. | 2 | 5 | 0 | 0.00 | 85.71 | 251.91 |

*SECNO 6.600

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

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7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.60 | 3.42 | 836.32 | 836.32 | 0.00 | 837.06 | -0.74 | 1.49 | 0.02 | 833.20 |
| 225. | 33. | 160. | 32. | 29. | 20. | 27. | 86. | 22. | 833.20 |
| 3.04 | 1.15 | 5.15 | 1.18 | 0.120 | 0.035 | 0.120 | 0.035 | 832.90 | 86.23 |
| 0.007658 | 200. | 200. | 200. | 2 | 5 | 0 | 0.00 | 80.00 | 168.24 |

*SECNO 6.650

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.65 | 3.42 | 838.4 | 838.42 | 0.00 | 839.16 | 0.73 | 1.59 | 0.00 | 835.30 |
| 225. | 33. | 160. | 32. | 29. | 20. | 27. | 86. | 22. | 835.30 |
| 3.05 | 1.15 | 8.13 | 1.18 | 0.120 | 0.035 | 0.120 | 0.035 | 835.00 | 88.05 |
| 0.007595 | 200. | 200. | 200. | 2 | 5 | 0 | 0.00 | 80.35 | 168.40 |

*SECNO 6.700

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.70 | 3.10 | 840.20 | 840.20 | 0.00 | 840.96 | 0.76 | 1.70 | 0.01 | 837.40 |
| 225. | 36. | 151. | 39. | 25. | 18. | 28. | 86. | 22. | 837.40 |
| 3.06 | 1.44 | 8.51 | 1.37 | 0.120 | 0.035 | 0.123 | 0.035 | 837.10 | 202.01 |
| 0.009552 | 200. | 200. | 200. | 2 | 11 | 0 | 0.00 | 61.97 | 263.98 |

*SECNO 6.800

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 896.0 964.0 TYPE= 1 TARGET= 50.000

100 FT D/S WAUBASCON RD. CROSS SECTION 72

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.80 | 2.21 | 843.71 | 845.71 | 0.00 | 846.41 | 0.70 | 3.15 | 0.02 | 841.30 |
| 225. | 25. | 142. | 58. | 17. | 17. | 30. | 87. | 23. | 841.50 |
| 3.08 | 1.46 | 8.39 | 1.92 | 0.120 | 0.035 | 0.120 | 0.035 | 841.50 | 894.00 |
| 0.013969 | 275. | 275. | 275. | 3 | 19 | 0 | 0.00 | 50.00 | 944.00 |

CCHVE 0.300 CEHV= 0.500
*SECNO 6.900

3301 HV CHANGED MORE THAN HVINS

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|

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| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
|---|---|---|---|---|---|---|---|---|---|
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3685 20 TRIALS ATTEMPTED ,SEL,CNSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 847.50 ELREA= 847.50

D/S FACE BAUBASCON RD. CROSS SECTION 72

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.90 | 4.12 | 846.22 | 846.22 | 0.00 | 848.22 | 2.00 | 1.62 | 0.65 | 842.40 |
| 225. | 0. | 225. | 0. | 0. | 20. | 0. | 87. | 23. | 842.40 |
| 3.00 | 0.00 | 11.34 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 842.10 | 127.50 |
| 0.013944 | 100. | 100. | 100. | 20 | 16 | 0 | 0.00 | 5.00 | 132.50 |

SPECIAL BRIDGE

| SL | XK | KKOR | COFC | ROLEN | SPC | SUP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3.00 | 1.91 | 3.00 | 0.00 | 5.00 | 0.00 | 21.50 | 0.00 | 842.10 | 842.83 |

*SECNO 7.000

3301 HV CHANGED MORE THAN HVINS

PRESSURE FLOW

| EGPRS | EGLUC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 849.79 | 848.22 | 0.00 | 0. | 225. | 21. | 20. | 846.20 | 850.30 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 850.30 ELREA= 850.30

U/S FACE BAUBASCON RD. CROSS SECTION 72873

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.00 | 7.03 | 849.13 | 0.00 | 0.00 | 849.79 | 0.66 | 1.57 | 0.00 | 842.40 |
| 225. | 0. | 225. | 0. | 0. | 34. | 0. | 87. | 23. | 842.40 |
| 3.00 | 0.00 | 6.54 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 842.10 | 127.50 |
| 0.004560 | 41. | 41. | 41. | 2 | 0 | 0 | 0.00 | 5.00 | 132.50 |

*SECNO 7.200

250 FT U/S BAUBASCON RD. BATTLE CREEK CORP. BOUND. CROSS SECTION 74

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.20 | 5.55 | 850.25 | 0.10 | 0.00 | 850.52 | 0.27 | 0.41 | 0.12 | 844.70 |
| 225. | 64. | 157. | 4. | 101. | 32. | 7. | 88. | 23. | 845.70 |
| 3.10 | 0.63 | 4.94 | 0.57 | 0.120 | 0.035 | 0.120 | 0.035 | 844.70 | 435.98 |
| 0.001521 | 250. | 250. | 250. | 2 | 0 | 0 | 0.00 | 186.16 | 522.14 |

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**************************************************
  HEC2 RELEASE DATED JUN 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,52,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN
T3      SPERRY DRAIN

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
          0.       5.        0.        0.  0.000000      0.00       0.0        0.    910.100     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IDC       CHNIM     ITRACE
     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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*PROF 2

CCHV= 0.300 CEHV= 0.500

*SECNO 3.000

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | HTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

VALLEY SECTION CROSS SECTION 62

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 4.10 | 810.10 | 0.00 | 810.10 | 810.26 | 0.16 | 0.00 | 0.00 | 806.70 |
| 225. | 0. | 205. | 12. | 29. | 60. | 27. | 0. | 0. | 806.70 |
| 0.00 | 0.29 | 3.41 | 0.44 | 0.120 | 0.035 | 0.120 | 0.000 | 806.00 | 49.50 |
| 0.001114 | 300. | 300. | 300. | 0 | 0 | 0 | 0.00 | 291.00 | 330.50 |

*SECNO 3.700

100 FT D/E MICHIGAN AVE. CROSS SECTION 62

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.70 | 3.54 | 810.34 | 0.03 | 0.09 | 810.76 | 0.22 | 0.47 | 0.03 | 807.60 |
| 225. | 5. | 214. | 6. | 9. | 55. | 9. | 1. | 1. | 807.00 |
| 0.03 | 0.60 | 3.89 | 0.65 | 0.120 | 0.035 | 0.120 | 0.035 | 807.00 | 157.86 |
| 0.001621 | 350. | 350. | 350. | 2 | 0 | 0 | 0.00 | 27.44 | 185.31 |

*SECNO 3.800

3470 ENCROACHMENT STATIONS= 164.0 180.0 TYPE= 1 TARGET= 16.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.80 | 3.47 | 810.62 | 0.00 | 0.00 | 810.89 | 0.27 | 0.11 | 0.02 | 807.75 |
| 225. | 0. | 225. | 0. | 0. | 54. | 0. | 1. | 1. | 100160.00 |
| 0.03 | 0.00 | 4.19 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 807.15 | 164.00 |
| 0.003035 | 50. | 50. | 50. | 1 | 0 | 0 | 0.00 | 16.00 | 180.00 |

*SECNO 3.900

3301 HV CHANGED NOTE THAT HVINC

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | HTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3685 20 TRIALS ATTEMPTED WSEL/CWSEL

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 825.00 ELREA= 825.00

D/S FACE MICHIGAN AVE. CROSS SECTION 62

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.90 | 3.97 | 811.37 | 811.27 | 0.00 | 813.27 | 1.99 | 0.31 | 0.65 | 807.50 |
| 225. | 0. | 225. | 0. | 0. | 20. | 0. | 1. | 1. | 807.50 |
| 0.03 | 0.00 | 11.32 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 807.50 | 199.50 |
| 0.018350 | 50. | 50. | 50. | 20 | 8 | 0 | 0.30 | 5.00 | 174.50 |

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SPECIAL BRIDGE

| SO | XK | XKOR | COPO | RDLEN | BLC | BHP | BAREA | SS | ELCHO | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 2.77 | 3.03 | 0.00 | 3.20 | 0.00 | 17.03 | 0.00 | 807.40 | 807.30 |

*SECNO 4.000

3301 HV CHANGED MORE THAN HVINS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CTINS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QTOB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | HTS | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 818.81 | 814.39 | 0.00 | 0. | 225. | 17. | 17. | 812.90 | 825.30 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 825.00 ELREA= 825.00

U/S FACE MICHIGAN AVE — CROSS SECTION 63P64

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.00 | 10.91 | 810.91 | 0.00 | 0.00 | 810.91 | 0.30 | 5.54 | 0.00 | 810.10 |
| 225. | 0. | 225. | 0. | 0. | 51. | 0. | 1. | 1. | 810.10 |
| 0.04 | 0.00 | 4.38 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 807.60 | 889.50 |
| 0.002261 | 160. | 160. | 160. | 2 | 0 | 0 | 0.00 | 5.00 | 894.50 |

*SECNO 4.100

3470 ENCROACHMENT STATIONS= 842.0 942.0 TYPE= 1 TARGET= 100.000

50 FT U/S MICHIGAN AVE. — CROSS SECTION 64

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.10 | 11.09 | 818.89 | 0.00 | 0.00 | 818.90 | 0.01 | 0.30 | 0.09 | 808.50 |
| 225. | 36. | 137. | 52. | 249. | 175. | 323. | 1. | 1. | 807.80 |
| 0.07 | 0.14 | 0.78 | 0.16 | 0.120 | 0.035 | 0.120 | 0.035 | 807.80 | 842.00 |
| 0.000014 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 100.00 | 942.00 |

*SECNO 4.500

3470 ENCROACHMENT STATIONS= 600.0 850.0 TYPE= 1 TARGET= 250.000

VALLEY SECTION — 2 FT CONTOUR MAP

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.50 | 10.40 | 818.90 | 0.00 | 0.00 | 818.90 | 0.00 | 3.00 | 0.00 | 811.50 |
| 225. | 111. | 56. | 59. | 1102. | 142. | 596. | 12. | 3. | 811.50 |
| 0.63 | 0.10 | 0.39 | 0.10 | 0.120 | 0.035 | 0.120 | 0.035 | 808.50 | 600.00 |
| 0.000005 | 350. | 350. | 350. | 2 | 0 | 0 | 0.00 | 250.00 | 850.00 |

*SECNO 4.700

2800 NAT Q1= 866.23 WSEL= 818.91 ENC Q1= 866.23 WSEL= 819.01 RATIO= 0.0000
NAT Q1= REG. RATIOS LOB,CH,ROB= 0.4011 0.2087 0.3902 WSEL= 819.01

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3470 ENCROACHMENT STATIONS= 556.2 804.6 TYPE= 4 TARGET= 0.024

100 FT D/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4.70 | 9.71 | 818.91 | 0.00 | 818.91 | 818.91 | 0.00 | 0.00 | 0.00 | 811.70 |
| | 225. | 98. | 40. | 87. | 302. | 109. | 734. | 27. | 5. | 811.40 |
| | 1.19 | 0.11 | 0.45 | 0.12 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 556.17 |
| 0.000007 | 375. | 375. | 375. | 0 | 0 | 0 | 0.00 | 248.45 | 804.62 | |

*SECNO 4.000
2800 NAT Q1= 799.38 WSEL= 818.91 ENC Q1= 799.38 WSEL= 819.01 RATIO= 0.0000
NAT Q1= 820. RATIOS LOB,CH,ROB= 0.4598 0.1094 0.4508 WSEL= 819.01

3470 ENCROACHMENT STATIONS= 555.7 805.0 TYPE= 4 TARGET= 0.025

D/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4.80 | 9.71 | 818.91 | 0.00 | 818.91 | 818.91 | 0.00 | 0.00 | 0.00 | 809.70 |
| | 225. | 98. | 25. | 101. | 816. | 48. | 782. | 31. | 5. | 809.70 |
| | 1.35 | 0.12 | 0.53 | 0.13 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 555.71 |
| 0.000008 | 100. | 100. | 100. | 0 | 0 | 0 | 0.00 | 249.30 | 805.01 | |

*SECNO 4.900
2800 NAT Q1= 131.66 WSEL= 818.90 ENC Q1= 131.66 WSEL= 819.00 RATIO= 0.0000
NAT Q1= 141. RATIOS LOB,CH,ROB= 0.5159 0.1171 0.3670 WSEL= 819.00

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | VLOB | VCH | VROB | ALOB | ACH | AROB | WCL | THA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | PTY | ELTRD | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IHS | ICONT | CDSAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 19 MIN ELTRD= 816.10 MAX ELLC= 812.20

3470 ENCROACHMENT STATIONS= 575.0 785.8 TYPE= 4 TARGET= 0.065

D/S FACE RIDGEMOOR ST. CROSS SECTION 65&66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4.90 | 9.70 | 818.90 | 0.00 | 818.90 | 818.91 | 0.00 | 0.00 | 0.00 | 809.70 |
| | 225. | 116. | 29. | 80. | 281. | 25. | 207. | 31. | 5. | 809.70 |
| | 1.36 | 0.41 | 1.14 | 0.39 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 575.03 |
| 0.000335 | 1. | 1. | 1. | 0 | 0 | 0 | -946.50 | 218.72 | 785.76 | |

*SECNO 5.000
2800 AT Q1= 134.01 WSEL= 818.93 ENC Q1= 134.01 WSEL= 819.03 RATIO= 0.0000
NAT Q1= 144. RATIOS LOB,CH,ROB= 0.5167 0.1156 0.3677 WSEL= 819.03

3370 NORMAL BRIDGE,NRD= 19 MIN ELTRD= 816.10 MAX ELLC= 813.80

3470 ENCROACHMENT STATIONS= 575.9 784.7 TYPE= 4 TARGET= 0.069

U/S FACE RIDGEMOOR ST. CROSS SECTION 65&66

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 5.00 | 8.14 | 818.94 | 0.00 | 818.93 | 818.94 | 0.00 | 0.03 | 0.10 | 811.30 |
| | 225. | 116. | 29. | 80. | 283. | 26. | 207. | 32. | 6. | 811.30 |
| | 1.41 | 0.46 | 1.12 | 0.39 | 0.120 | 0.035 | 0.120 | 0.035 | 810.60 | 575.85 |
| 0.000323 | 104. | 104. | 104. | 0 | 0 | 0 | -924.85 | 208.83 | 784.68 | |

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*SECNO 5.100
2800 NAT Q1= 780.04 WSEL= 818.94 ENC Q1= 780.04 WSEL= 819.04 RATIO= 0.0000
NAT Q1= 801. RATIOS LOB,CH,ROB= 0.4550 0.0836 0.4614 WSEL= 819.04

3470 ENCROACHMENT STATIONS= 555.8 805.0 TYPE= 4 TARGET= 0.026

U/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.10 | 8.14 | 818.94 | 0.00 | 818.94 | 818.94 | 0.00 | 0.00 | 0.00 | 811.30 |
| 225. | 102. | 19. | 104. | 819. | 40. | 781. | 32. | 6. | 811.30 |
| 1.62 | 0.12 | 0.40 | 0.13 | 0.120 | 0.035 | 0.120 | 0.035 | 810.00 | 555.80 |
| 0.000009 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 249.15 | 304.95 |

*SECNO 5.200
2800 NAT Q1= 812.20 WSEL= 818.94 ENC Q1= 812.20 WSEL= 819.04 RATIO= 0.0000
NAT Q1= 832. RATIOS LOB,CH,ROB= 0.4385 0.1851 0.3765 WSEL= 819.04

3470 ENCROACHMENT STATIONS= 555.2 805.4 TYPE= 4 TARGET= 0.024

50 FT U/S RIDGEMOOR ST. CROSS SECTION 66

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.20 | 7.04 | 818.94 | 0.00 | 818.94 | 818.94 | 0.00 | 0.00 | 0.00 | 811.50 |
| 225. | 98. | 43. | 84. | 818. | 92. | 695. | 34. | 6. | 811.50 |
| 1.49 | 0.12 | 0.47 | 0.12 | 0.120 | 0.035 | 0.120 | 0.035 | 811.10 | 553.21 |
| 0.000008 | 50. | 50. | 50. | 0 | 0 | 0 | 0.00 | 250.24 | 805.44 |

CCHV= 0.100 CERV= 0.300
*SECNO 5.300
2800 NAT Q1= 707.38 WSEL= 818.95 ENC Q1= 707.38 WSEL= 819.05 RATIO= 0.0000
NAT Q1= 732. RATIOS LOB,CH,ROB= 0.1945 0.2343 0.5713 WSEL= 819.05

3470 ENCROACHMENT STATIONS= 221.2 553.9 TYPE= 4 TARGET= 0.034

VALLEY SECTION CROSS SECTION 67

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.30 | 6.95 | 818.95 | 0.00 | 818.95 | 818.95 | 0.00 | 0.01 | 0.00 | 812.70 |
| 225. | 41. | 55. | 129. | 400. | 115. | 1097. | 61. | 11. | 812.00 |
| 2.54 | 0.10 | 0.48 | 0.12 | 0.120 | 0.035 | 0.120 | 0.036 | 812.00 | 221.15 |
| 0.000019 | 500. | 850. | 900. | 0 | 0 | 0 | 0.00 | 332.71 | 553.06 |

*SECNO 5.350

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | EL MIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 400.0 560.0 TYPE= 1 TARGET= 160.000

VALLEY SECTION 2 FT CONTOUR MAP

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.35 | 5.06 | 818.96 | 0.00 | 818.95 | 818.96 | 0.01 | 0.01 | 0.00 | 815.50 |
| 225. | 84. | 101. | 41. | 511. | 90. | 160. | 72. | 14. | 815.50 |
| 2.73 | 0.27 | 1.12 | 0.25 | 0.120 | 0.035 | 0.120 | 0.036 | 813.90 | 400.00 |
| 0.000095 | 475. | 440. | 400. | 0 | 0 | 0 | 0.00 | 160.00 | 560.00 |

*SECNO 5.400
3470 ENCROACHMENT STATIONS= 511.0 512.0 TYPE= 1 TARGET= 511.000

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VALLEY SECTION CROSS SECTION 68

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.40 | 3.13 | 818.93 | 0.00 | 818.92 | 819.16 | 0.23 | 0.13 | 0.07 | 816.00 |
| 225. | 29. | 102. | 94. | 26. | 18. | 30. | 76. | 19. | 816.00 |
| 2.77 | 1.12 | 5.61 | 1.17 | 0.120 | 0.035 | 0.120 | 0.036 | 815.80 | 353.49 |
| 0.004002 | 475. | 460. | 440. | 2 | 0 | 0 | 0.00 | 70.46 | 423.95 |

*SECNO 5.450

3470 ENCROACHMENT STATIONS= 475.0 555.0 TYPE= 1 TARGET= 80.000

VALLEY SECTION 2 FT CONTOUR MAP

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.45 | 2.83 | 819.83 | 0.00 | 819.83 | 820.10 | 0.27 | 0.93 | 0.01 | 817.20 |
| 225. | 35. | 100. | 90. | 20. | 16. | 75. | 76. | 19. | 817.20 |
| 2.78 | 1.24 | 6.12 | 1.19 | 0.120 | 0.035 | 0.120 | 0.036 | 817.00 | 476.23 |
| 0.005463 | 200. | 200. | 200. | 3 | 0 | 0 | 0.00 | 78.72 | 555.00 |

CCHV= 0.300 CEHV= 0.500

*SECNO 5.700

2800 NAT Q1= 40.32 HSEL= 820.87 CNC Q1= 40.32 USEL= 820.97 RATIO= 0.0000

NAT Q1= 65. RATIOS LOB,CH,ROB= 0.4734 0.2726 0.2540 HSEL= 820.97

3470 ENCROACHMENT STATIONS= 488.6 630.5 TYPE= 4 TARGET= 0.107

100 FT D/S WAIMANALO RD. CROSS SECTION 70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.70 | 2.61 | 820.91 | 0.00 | 820.87 | 821.02 | 0.12 | 0.86 | 0.05 | 818.50 |
| 225. | 104. | 71. | 51. | 126. | 15. | 48. | 77. | 16. | 818.50 |
| 2.81 | 0.82 | 4.69 | 1.07 | 0.120 | 0.035 | 0.120 | 0.036 | 818.30 | 488.57 |
| 0.003589 | 200. | 200. | 200. | 2 | 0 | 0 | 0.00 | 141.90 | 630.47 |

*SEC 0 5.900

3470 ENCROACHMENT STATIONS= 560.0 760.0 TYPE= 1 TARGET= 200.000

D/S FACE WAIMANALO RD. CROSS SECTION 70

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.90 | 2.61 | 821.21 | 0.30 | 821.14 | 821.29 | 0.00 | 0.25 | 0.01 | 820.00 |
| 225. | 112. | 88. | 25. | 158. | 25. | 36. | 77. | 16. | 820.00 |
| 2.82 | 0.71 | 3.44 | 0.70 | 0.120 | 0.035 | 0.120 | 0.036 | 818.60 | 576.97 |
| 0.002549 | 50. | 100. | 150. | 2 | 0 | 0 | 0.00 | 174.25 | 751.21 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 4.66 | 3.00 | 0.00 | 6.00 | 0.00 | 13.00 | 0.00 | 818.70 | 818.60 |

*SECNO 6.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | QWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IX2 | ICONT | CORAR | TOPWID | ENDST |

PRESSURE AND WEIR FLOW

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| EGPRS | EGLNC | H3 | QWEIR | QPR | BARCA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 842.89 | 822.14 | 0.00 | 146. | 81. | 13. | 13. | 820.90 | 823.60 |

3470 ENCROACHMENT STATIONS= 560.0 760.0 TYPE= 1 TARGET= 200.000

U/S FACE HAUBASCON RD. CROSS SECTION 69870

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.00 | 5.30 | 824.00 | 0.00 | 824.00 | 824.03 | 0.03 | 2.74 | 0.00 | 818.70 |
| 225. | 83. | 117. | 25. | 282. | 63. | 75. | 78. | 16. | 818.70 |
| 2.84 | 0.29 | 1.66 | 0.33 | 0.120 | 0.035 | 0.120 | 0.036 | 818.70 | 570.01 |
| 0.000209 | 62. | 62. | 62. | 2 | 0 | 7 | 0.00 | 182.49 | 752.50 |

*SEC'O 6.100

3470 ENCROACHMENT STATIONS= 255.0 345.0 TYPE= 1 TARGET= 90.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.10 | 3.38 | 824.08 | 0.00 | 824.08 | 824.30 | 0.22 | 0.17 | 0.10 | 821.00 |
| 225. | 88. | 105. | 33. | 80. | 19. | 29. | 80. | 17. | 821.00 |
| 2.87 | 1.10 | 5.40 | 1.12 | 0.120 | 0.035 | 0.120 | 0.036 | 820.70 | 255.00 |
| 0.003404 | 325. | 325. | 325. | 2 | 7 | 0 | 0.00 | 67.26 | 322.26 |

*SECNO 6.200

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | LTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.20 | 3.35 | 826.05 | 826.05 | 826.06 | 826.75 | 0.70 | 1.59 | 0.24 | 827.00 |
| 225. | 29. | 155. | 41. | 22. | 19. | 37. | 80. | 18. | 823.00 |
| 2.98 | 1.33 | 9.04 | 1.53 | 0.120 | 0.035 | 0.120 | 0.036 | 822.70 | 975.69 |
| 0.007641 | 325. | 325. | 325. | 7 | 5 | 0 | 0.00 | 70.58 | 1046.47 |

*SECNO 6.300

VALLEY SECTION CROSS SECTION 71

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.30 | 3.66 | 828.16 | 0.00 | 828.16 | 828.70 | 0.53 | 1.90 | 0.05 | 824.80 |
| 225. | 30. | 150. | 44. | 26. | 21. | 38. | 81. | 18. | 824.80 |
| 2.90 | 1.16 | 7.13 | 1.16 | 0.120 | 0.035 | 0.120 | 0.036 | 824.50 | 1118.28 |
| 0.005315 | 300. | 300. | 300. | 2 | 0 | 0 | 0.00 | 66.25 | 1184.54 |

*SECNO 6.350

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | LTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.36 | 3.33 | 829.93 | 829.93 | 829.93 | 830.74 | 0.91 | 1.33 | 0.14 | 826.90 |
| 225. | 27. | 162. | 37. | 19. | 19. | 27. | 81. | 18. | 826.90 |
| 2.91 | 1.42 | 8.48 | 1.37 | 0.120 | 0.035 | 0.120 | 0.036 | 826.60 | 1123.41 |
| 0.003596 | 200. | 200. | 200. | 1 | 11 | 0 | 0.00 | 56.37 | 1179.78 |

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*SECNO 6.500

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 6.50 | 3.44 | 832.14 | 832.14 | 832.14 | 832.84 | 0.70 | 1.55 | 0.03 | 829.00 |
| | 225. | 37. | 157. | 31. | 35. | 20. | 25. | 62. | 19. | 829.00 |
| | 2.92 | 1.05 | 7.97 | 1.23 | 0.120 | 0.035 | 0.120 | 0.035 | 828.70 | 166.33 |
| 0.007247 | 200. | 200. | 200. | 2 | 8 | 0 | 0.00 | 85.55 | 251.88 | |

*SECNO 6.550

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 6.55 | 3.44 | 834.24 | 834.24 | 834.24 | 834.94 | 0.69 | 1.45 | 0.00 | 831.10 |
| | 225. | 37. | 157. | 31. | 35. | 20. | 25. | 62. | 19. | 831.10 |
| | 2.92 | 1.05 | 7.95 | 1.23 | 0.120 | 0.035 | 0.120 | 0.035 | 830.80 | 166.16 |
| 0.007205 | 200. | 200. | 200. | 2 | 5 | 0 | 0.00 | 85.77 | 251.92 | |

*SECNO 6.600

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 6.60 | 3.42 | 836.32 | 836.32 | 835.32 | 837.06 | 0.74 | 1.49 | 0.02 | 833.20 |
| | 225. | 33. | 160. | 32. | 29. | 20. | 27. | 62. | 20. | 833.20 |
| | 2.93 | 1.15 | 8.16 | 1.18 | 0.120 | 0.035 | 0.120 | 0.035 | 832.90 | 88.24 |
| 0.007672 | 200. | 200. | 200. | 2 | 5 | 0 | 0.00 | 79.92 | 168.20 | |

*SECNO 6.650

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 6.65 | 3.42 | 838.42 | 838.42 | 838.42 | 839.16 | 0.73 | 1.53 | 0.00 | 835.30 |
| | 225. | 33. | 160. | 32. | 29. | 20. | 27. | 83. | 20. | 835.30 |
| | 2.94 | 1.15 | 8.13 | 1.18 | 0.120 | 0.035 | 0.120 | 0.035 | 835.00 | 88.05 |
| 0.007595 | 200. | 200. | 200. | 2 | 5 | 0 | 0.00 | 80.35 | 168.40 | |

*SECNO 6.700

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |

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FORM 1411-08 PRINTED BY ROTARY MANIFOLD FORMS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |
| 7185 MINIMUM SPECIFIC ENERGY | | | | | | | | | |
| 3720 CRITICAL DEPTH ASSUMED | | | | | | | | | |
| 6.70 | 3.10 | 840.20 | 840.20 | 840.20 | 840.96 | 0.76 | 1.70 | 0.01 | 837.40 |
| 225. | 36. | 151. | 39. | 25. | 18. | 28. | 83. | 70. | 837.40 |
| 2.95 | 1.46 | 8.51 | 1.37 | 0.120 | 0.035 | 0.120 | 0.035 | 837.10 | 202.01 |
| 0.009552 | 200. | 200. | 200. | 2 | 11 | 0 | 0.00 | 61.97 | 263.98 |
| *SECNO 6.800 | | | | | | | | | |
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |
| 7185 MINIMUM SPECIFIC ENERGY | | | | | | | | | |
| 3720 CRITICAL DEPTH ASSUMED | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= | 894.0 | 944.3 | TYPE= | 1 | TARGET= | 50.000 | | | |
| 100 FT D/S WAUBASCON RD. | | | | | CROSS SECTION 72 | | | | |
| 6.80 | 2.21 | 843.71 | 843.71 | 843.71 | 844.41 | 0.70 | 3.15 | 0.02 | 841.80 |
| 225. | 25. | 142. | 58. | 17. | 17. | 30. | 84. | 21. | 841.50 |
| 2.96 | 1.46 | 8.51 | 1.92 | 0.120 | 0.035 | 0.120 | 0.035 | 841.50 | 894.00 |
| 0.013969 | 275. | 275. | 275. | 3 | 19 | 0 | 0.00 | 50.00 | 944.00 |
| CCHV= 0.300 CEHV= 0.500 | | | | | | | | | |
| *SECNO 6.900 | | | | | | | | | |
| 3301 HV CHANGED MORE THAN HVINS | | | | | | | | | |
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |
| 3685 20 TRIALS ATTEMPTED WSEL/CWSEL | | | | | | | | | |
| 3693 PROBABLE MINIMUM SPECIFIC ENERGY | | | | | | | | | |
| 3720 CRITICAL DEPTH ASSUMED | | | | | | | | | |
| 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, BLLEA= | 847.50 | ELREA= | 847.50 | | | | | | |
| D/S FACE WAUBASCON RD. | | | | | CROSS SECTION 72 | | | | |
| 6.90 | 4.12 | 845.22 | 846.22 | 846.22 | 848.22 | 2.00 | 1.62 | 0.65 | 842.40 |
| 225. | 0. | 225. | 0. | 0. | 20. | 0. | 84. | 21. | 842.40 |
| 2.97 | 0.00 | 11.34 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 842.10 | 127.50 |
| 0.018944 | 100. | 100. | 100. | 20 | 14 | 0 | 0.00 | 5.00 | 132.50 |
| SPECIAL BRIDGE | | | | | | | | | |
| SB XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
| 0.00 | 1.91 | 3.00 | 0.00 | 5.00 | 0.00 | 20.50 | 0.00 | 842.10 | 842.20 |

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*SECNO 7.000

3301 HV CHANGED MORE THAN HVINS

PRESSURE FLOW

| EGPRS | ECLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 849.79 | 848.22 | 0.00 | 0. | 225. | 21. | 20. | 846.20 | 850.30 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 850.30 ELREA= 850.30

U/S FACE WAUBASCON RD. CROSS SECTION 72&73

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.00 | 7.03 | 849.13 | 0.00 | 849.13 | 849.79 | 0.66 | 1.37 | 0.00 | 842.40 |
| 225. | 0. | 225. | 0. | 0. | 34. | 0. | 84. | 21. | 842.40 |
| 2.97 | 0.00 | 6.54 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 842.10 | 127.50 |
| 0.004548 | 41. | 41. | 41. | 2 | 0 | 0 | 0.00 | 5.00 | 132.50 |

*SECNO 7.200

250 FT U/S WAUBSCON RD. BATTLE CREEK CORP. BOUND. CROSS SECTION 74

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.20 | 5.55 | 150.25 | 0.00 | 850.25 | 850.52 | 0.27 | 0.61 | 0.12 | 846.70 |
| 225. | 64. | 157. | 4. | 101. | 32. | 7. | 84. | 21. | 845.70 |
| 2.99 | 0.63 | 4.94 | 0.57 | 0.120 | 0.035 | 0.120 | 0.035 | 866.70 | 435.96 |
| 0.001521 | 250. | 250. | 250. | 2 | 0 | 0 | 0.00 | 86.16 | 522.14 |

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**********

HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52

**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 110

| | SECNO | CHSEL | DIFKOS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3.000 | 810.10 | 0.00 | 810.26 | 281.00 | 8.35 | 204.70 | 11.95 | 0.00 | 0.00 | 222.00 | 238.00 | 0.00 |
| | 3.000 | 810.10 | 0.00 | 810.26 | 281.00 | 8.35 | 204.70 | 11.95 | 0.00 | 0.00 | 222.00 | 238.00 | 0.00 |
| | 3.700 | 810.54 | 0.00 | 810.76 | 27.44 | 5.42 | 213.52 | 6.05 | 0.00 | 0.00 | 164.00 | 180.00 | 0.00 |
| | 3.700 | 810.54 | 0.00 | 810.76 | 27.44 | 5.42 | 213.52 | 6.05 | 0.00 | 0.00 | 164.00 | 180.00 | 0.00 |
| | 3.800 | 810.62 | 0.00 | 810.89 | 16.00 | 0.00 | 225.00 | 0.00 | 16.00 | 164.00 | 164.00 | 180.00 | 180.00 |
| | 3.800 | 810.62 | 0.00 | 810.89 | 16.00 | 0.00 | 225.00 | 0.00 | 16.00 | 164.00 | 164.00 | 180.00 | 180.00 |
| * | 3.900 | 811.27 | 0.00 | 813.27 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 169.50 | 174.50 | 0.00 |
| * | 3.900 | 811.27 | 0.00 | 813.27 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 169.50 | 174.50 | 0.00 |
| | 4.000 | 818.51 | 0.00 | 818.87 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 889.50 | 894.50 | 0.00 |
| | 4.000 | 818.51 | 0.00 | 818.87 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 889.50 | 894.50 | 0.00 |
| | 4.100 | 818.89 | 0.00 | 818.90 | 100.00 | 35.75 | 136.91 | 52.34 | 100.00 | 842.00 | 884.00 | 900.00 | 942.00 |
| | 4.100 | 818.89 | 0.00 | 818.90 | 100.00 | 35.75 | 136.91 | 52.34 | 100.00 | 842.00 | 884.00 | 900.00 | 942.00 |
| | 4.500 | 818.90 | 0.00 | 818.90 | 250.00 | 110.87 | 55.58 | 58.55 | 250.00 | 600.00 | 752.00 | 768.00 | 850.00 |
| | 4.500 | 818.90 | 0.00 | 818.90 | 250.00 | 110.87 | 55.58 | 58.55 | 250.00 | 600.00 | 752.00 | 768.00 | 850.00 |
| | 4.700 | 818.91 | 0.00 | 818.91 | 308.27 | 89.98 | 47.26 | 87.76 | 0.00 | 0.00 | 686.00 | 698.00 | 0.00 |
| | 4.700 | 818.91 | 0.00 | 818.91 | 248.45 | 89.33 | 48.47 | 87.20 | 0.02 | 556.17 | 686.00 | 698.00 | 804.62 |
| | 4.800 | 818.91 | 0.00 | 818.91 | 308.25 | 98.72 | 24.81 | 101.47 | 0.00 | 0.00 | 687.50 | 692.50 | 0.00 |
| | 4.800 | 818.91 | 0.00 | 818.91 | 249.30 | 98.27 | 25.46 | 101.27 | 0.02 | 555.71 | 687.50 | 692.50 | 805.01 |
| | 4.900 | 818.90 | 0.00 | 818.91 | 308.26 | 115.82 | 27.29 | 81.06 | 0.00 | 0.00 | 687.50 | 692.50 | 0.00 |
| | 4.900 | 818.90 | 0.00 | 818.91 | 210.72 | 115.91 | 29.24 | 79.85 | 0.06 | 575.03 | 687.50 | 692.50 | 785.76 |
| | 5.000 | 818.93 | 0.00 | 818.94 | 308.59 | 116.01 | 27.00 | 81.99 | 0.00 | 0.00 | 687.50 | 692.50 | 0.00 |
| | 5.000 | 818.94 | 0.00 | 818.94 | 208.83 | 116.01 | 28.98 | 80.01 | 0.07 | 575.85 | 687.50 | 692.50 | 784.68 |
| | 5.100 | 818.94 | 0.00 | 818.96 | 308.70 | 102.19 | 18.91 | 103.90 | 0.00 | 0.00 | 687.50 | 692.50 | 0.00 |
| | 5.100 | 818.94 | 0.01 | 818.96 | 249.15 | 101.82 | 19.44 | 103.74 | 0.03 | 555.46 | 687.50 | 692.50 | 806.95 |
| | 5.200 | 818.94 | 0.00 | 818.94 | 308.88 | 98.54 | 41.81 | 84.64 | 0.00 | 0.00 | 686.00 | 698.00 | 0.00 |
| | 5.200 | 818.94 | 0.01 | 818.94 | 250.24 | 98.10 | 42.88 | 84.02 | 0.02 | 555.21 | 686.00 | 698.00 | 805.44 |

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FORM 141-GD PRINTED BY ROTARY MANIFOLD FORMS.

| | SECNO | CWSEL | DIFKUS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5.300 | 818.95 | 0.00 | 818.95 | 402.09 | 63.16 | 53.14 | 128.70 | 0.00 | 0.00 | 319.00 | 337.00 | 0.00 |
| | 5.300 | 818.95 | 0.01 | 818.95 | 332.71 | 61.07 | 54.85 | 129.07 | 0.03 | 221.15 | 319.00 | 337.00 | 553.86 |
| | 5.350 | 818.95 | 0.00 | 818.96 | 160.00 | 83.78 | 100.71 | 40.52 | 160.00 | 400.00 | 490.00 | 510.00 | 560.00 |
| | 5.350 | 818.96 | 0.01 | 818.96 | 160.00 | 83.79 | 100.67 | 40.54 | 160.00 | 400.00 | 490.00 | 510.00 | 560.00 |
| | 5.400 | 818.92 | 0.00 | 819.16 | 70.40 | 28.94 | 102.04 | 94.02 | 0.00 | 0.00 | 371.00 | 377.00 | 0.00 |
| | 5.400 | 818.93 | 0.01 | 819.16 | 70.46 | 28.97 | 101.93 | 94.11 | 511.20 | 1.00 | 371.00 | 377.00 | 512.00 |
| | 5.450 | 819.83 | 0.00 | 820.10 | 78.72 | 35.04 | 100.27 | 89.69 | 80.00 | 475.00 | 497.00 | 503.00 | 555.00 |
| | 5.450 | 819.83 | 0.00 | 820.10 | 78.72 | 35.05 | 100.25 | 89.70 | 80.00 | 475.00 | 497.00 | 503.00 | 555.00 |
| | 5.700 | 820.87 | 0.00 | 820.96 | 175.87 | 103.17 | 64.26 | 57.57 | 0.00 | 0.00 | 597.00 | 603.00 | 0.00 |
| | 5.700 | 820.91 | 0.03 | 821.02 | 141.90 | 103.55 | 70.52 | 50.93 | 0.11 | 488.57 | 597.00 | 603.00 | 630.47 |
| | 5.900 | 821.14 | 0.03 | 821.23 | 173.99 | 110.09 | 90.03 | 24.83 | 0.00 | 0.00 | 709.00 | 721.00 | 0.00 |
| | 5.900 | 821.21 | 0.07 | 821.29 | 174.25 | 112.08 | 87.64 | 25.28 | 200.00 | 560.00 | 709.00 | 721.00 | 760.00 |
| | 6.000 | 824.00 | 0.00 | 824.02 | 182.48 | 83.00 | 116.90 | 25.11 | 0.00 | 0.00 | 709.00 | 721.00 | 0.00 |
| | 6.000 | 824.00 | 0.00 | 824.03 | 182.49 | 83.06 | 116.86 | 25.11 | 200.00 | 560.00 | 709.00 | 721.00 | 760.00 |
| | 6.100 | 824.00 | 0.00 | 824.30 | 67.24 | 87.70 | 104.58 | 32.34 | 90.00 | 255.00 | 297.00 | 303.00 | 345.00 |
| | 6.100 | 824.08 | 0.00 | 824.30 | 67.26 | 87.79 | 104.67 | 32.55 | 90.00 | 255.00 | 297.00 | 303.00 | 345.00 |
| * | 6.200 | 826.06 | 0.00 | 826.75 | 70.59 | 29.01 | 154.58 | 41.41 | 0.00 | 0.00 | 997.00 | 1003.00 | 0.00 |
| * | 6.200 | 826.05 | -0.00 | 826.75 | 70.58 | 29.00 | 154.61 | 41.39 | 0.00 | 0.00 | 997.00 | 1003.00 | 0.00 |
| | 6.300 | 828.16 | 0.00 | 828.70 | 66.24 | 30.35 | 150.28 | 44.37 | 0.00 | 0.00 | 1143.00 | 1149.00 | 0.00 |
| | 6.300 | 828.16 | 0.00 | 828.70 | 66.25 | 30.36 | 150.27 | 44.38 | 0.00 | 0.00 | 1143.00 | 1149.00 | 0.00 |
| * | 6.350 | 829.93 | 0.00 | 830.74 | 56.39 | 26.54 | 161.54 | 36.92 | 0.00 | 0.00 | 1143.00 | 1149.00 | 0.00 |
| * | 6.350 | 829.93 | -0.00 | 830.74 | 56.37 | 26.53 | 161.56 | 36.91 | 0.00 | 0.00 | 1143.00 | 1149.00 | 0.00 |
| * | 6.500 | 832.14 | 0.00 | 832.84 | 85.61 | 36.60 | 157.32 | 31.08 | 0.00 | 0.00 | 217.00 | 223.00 | 0.00 |
| * | 6.500 | 832.14 | -0.00 | 832.84 | 85.55 | 36.57 | 157.36 | 31.06 | 0.00 | 0.00 | 217.00 | 223.00 | 0.00 |
| * | 6.550 | 834.24 | 0.00 | 834.94 | 85.71 | 36.65 | 157.24 | 31.11 | 0.00 | 0.00 | 217.00 | 223.00 | 0.00 |
| * | 6.550 | 834.24 | 0.00 | 834.94 | 85.77 | 36.67 | 157.20 | 31.13 | 0.00 | 0.00 | 217.00 | 223.00 | 0.00 |
| * | 6.600 | 836.32 | 0.00 | 837.06 | 80.00 | 33.03 | 159.89 | 32.03 | 0.00 | 0.00 | 127.00 | 133.00 | 0.00 |
| * | 6.600 | 836.32 | -0.00 | 837.06 | 79.92 | 33.05 | 159.94 | 32.01 | 0.00 | 0.00 | 127.00 | 133.00 | 0.00 |
| * | 6.650 | 838.42 | 0.00 | 839.16 | 80.35 | 33.19 | 159.67 | 32.14 | 0.00 | 0.00 | 127.00 | 133.00 | 0.00 |
| * | 6.650 | 838.42 | 0.00 | 839.16 | 80.35 | 33.19 | 159.67 | 32.14 | 0.00 | 0.00 | 127.00 | 133.00 | 0.00 |
| * | 6.700 | 840.20 | 0.00 | 840.96 | 61.97 | 35.70 | 150.51 | 38.79 | 0.00 | 0.00 | 227.00 | 233.00 | 0.00 |
| * | 6.700 | 840.20 | 0.00 | 840.96 | 61.97 | 35.70 | 150.51 | 38.79 | 0.00 | 0.00 | 227.00 | 233.00 | 0.00 |
| * | 6.800 | 843.71 | 0.00 | 844.41 | 50.00 | 24.55 | 142.06 | 58.39 | 50.00 | 894.00 | 915.00 | 923.00 | 944.00 |
| * | 6.800 | 843.71 | 0.00 | 844.41 | 50.00 | 24.55 | 142.06 | 58.39 | 50.00 | 894.00 | 915.00 | 923.00 | 944.00 |
| * | 6.900 | 846.22 | 0.00 | 848.22 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 127.50 | 132.50 | 0.00 |
| * | 6.900 | 846.22 | 0.00 | 848.22 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 127.50 | 132.50 | 0.00 |
| | 7.000 | 849.13 | 0.00 | 849.79 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 127.50 | 132.50 | 0.00 |
| | 7.000 | 849.13 | 0.00 | 849.79 | 5.00 | 0.00 | 225.00 | 0.00 | 0.00 | 0.00 | 127.50 | 132.50 | 0.00 |

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.200 | 850.25 | 0.00 | 850.52 | 86.16 | 64.00 | 157.09 | 3.91 | 0.00 | 0.00 | 513.00 | 519.00 | 0.00 |
| 7.200 | 850.25 | 0.00 | 850.52 | 86.16 | 64.00 | 157.09 | 3.91 | 0.00 | 0.00 | 513.00 | 519.00 | 0.00 |

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FORM 1411.08 PRINTED BY ROTARY MANIFOLD FORMS.

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCN | ELTRD | ELLC | ELMIN | Q | CWSEL | CRITWS | ES | 10K*S | VCR | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 810.10 | 0.00 | 810.26 | 11.14 | 3.41 | 116.18 | 67.42 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 810.10 | 0.00 | 810.26 | 11.14 | 3.41 | 116.18 | 67.42 |
| | 3.700 | 350.00 | 0.00 | 0.00 | 807.00 | 225.00 | 810.54 | 0.00 | 810.76 | 16.21 | 3.89 | 73.35 | 55.66 |
| | 3.700 | 350.00 | 0.00 | 0.00 | 807.00 | 225.00 | 810.54 | 0.00 | 810.76 | 16.21 | 3.89 | 73.35 | 55.80 |
| | 3.800 | 50.00 | 0.00 | 0.00 | 807.15 | 225.00 | 810.62 | 0.00 | 810.89 | 30.35 | 4.19 | 53.76 | 40.84 |
| | 3.800 | 50.00 | 0.00 | 0.00 | 807.15 | 225.00 | 810.62 | 0.00 | 810.89 | 30.35 | 4.19 | 53.76 | 40.84 |
| * | 3.900 | 50.00 | 0.00 | 0.00 | 807.30 | 225.00 | 811.27 | 811.27 | 813.27 | 103.50 | 11.32 | 19.87 | 16.61 |
| * | 3.900 | 50.00 | 0.00 | 0.00 | 807.30 | 225.00 | 811.27 | 811.27 | 813.27 | 103.50 | 11.32 | 19.87 | 16.61 |
| | 4.000 | 160.00 | 825.30 | 812.90 | 807.60 | 225.00 | 818.51 | 0.00 | 818.81 | 22.61 | 4.38 | 51.41 | 47.32 |
| | 4.000 | 160.00 | 825.30 | 812.90 | 807.60 | 225.00 | 818.51 | 0.00 | 818.81 | 22.61 | 4.38 | 51.41 | 47.32 |
| | 4.100 | 50.00 | 0.00 | 0.00 | 807.80 | 225.00 | 818.69 | 0.00 | 818.90 | 0.14 | 0.78 | 767.20 | 599.18 |
| | 4.100 | 50.00 | 0.00 | 0.00 | 807.80 | 225.00 | 818.89 | 0.00 | 818.90 | 0.14 | 0.78 | 767.20 | 599.18 |
| | 4.500 | 350.00 | 0.00 | 0.00 | 808.50 | 225.00 | 818.90 | 0.00 | 818.90 | 0.05 | 0.39 | 1840.57 | 1006.61 |
| | 4.500 | 350.00 | 0.00 | 0.00 | 808.50 | 225.00 | 818.90 | 0.00 | 818.90 | 0.05 | 0.39 | 1840.57 | 1006.61 |
| | 4.700 | 375.00 | 0.00 | 0.00 | 809.20 | 225.00 | 818.91 | 0.00 | 818.91 | 0.07 | 0.44 | 1760.49 | 866.23 |
| | 4.700 | 375.00 | 0.00 | 0.00 | 809.20 | 225.00 | 818.91 | 0.00 | 818.91 | 0.07 | 0.45 | 1664.35 | 844.43 |
| | 4.800 | 100.00 | 0.00 | 0.00 | 809.20 | 225.00 | 818.91 | 0.00 | 818.91 | 0.08 | 0.51 | 1758.19 | 799.38 |
| | 4.800 | 100.00 | 0.00 | 0.00 | 809.20 | 225.00 | 818.91 | 0.00 | 818.91 | 0.08 | 0.53 | 1645.76 | 778.91 |
| | 4.900 | 1.00 | 816.10 | 812.20 | 809.20 | 225.00 | 818.90 | 0.00 | 818.91 | 2.92 | 1.06 | 585.77 | 131.66 |
| | 4.900 | 1.00 | 816.10 | 812.20 | 809.20 | 225.00 | 818.90 | 0.00 | 818.91 | 3.35 | 1.14 | 513.25 | 122.90 |
| | 5.000 | 104.00 | 816.10 | 813.80 | 810.80 | 225.00 | 818.93 | 0.00 | 818.94 | 2.82 | 1.05 | 591.70 | 134.01 |
| | 5.000 | 104.00 | 816.10 | 813.80 | 810.80 | 225.00 | 818.94 | 0.00 | 818.94 | 3.23 | 1.12 | 516.07 | 125.14 |
| | 5.100 | 1.00 | 0.00 | 0.00 | 810.80 | 225.00 | 818.94 | 0.00 | 818.94 | 0.08 | 0.47 | 1753.55 | 780.04 |
| | 5.100 | 1.00 | 0.00 | 0.00 | 810.80 | 225.00 | 818.94 | 0.00 | 818.94 | 0.09 | 0.48 | 1639.76 | 759.63 |
| | 5.200 | 50.00 | 0.00 | 0.00 | 811.10 | 225.00 | 818.94 | 0.00 | 818.94 | 0.08 | 0.46 | 1715.84 | 812.20 |
| | 5.200 | 50.00 | 0.00 | 0.00 | 811.10 | 225.00 | 818.94 | 0.00 | 818.94 | 0.08 | 0.47 | 1604.10 | 791.79 |
| | 5.300 | 350.00 | 0.00 | 0.00 | 812.00 | 225.00 | 818.95 | 0.00 | 818.95 | 0.10 | 0.48 | 1721.80 | 707.38 |
| | 5.300 | 350.00 | 0.00 | 0.00 | 812.00 | 225.00 | 818.95 | 0.00 | 818.95 | 0.11 | 0.48 | 1612.17 | 686.28 |
| | 5.350 | 440.00 | 0.00 | 0.00 | 813.90 | 225.00 | 818.95 | 0.00 | 818.96 | 0.96 | 1.12 | 560.37 | 229.87 |
| | 5.350 | 440.00 | 0.00 | 0.00 | 813.90 | 225.00 | 818.96 | 0.00 | 818.96 | 0.95 | 1.12 | 561.27 | 230.43 |
| | 5.400 | 440.00 | 0.00 | 0.00 | 815.80 | 225.00 | 818.93 | 0.00 | 819.16 | 40.35 | 5.63 | 124.06 | 35.42 |
| | 5.400 | 440.00 | 0.00 | 0.00 | 815.80 | 225.00 | 818.93 | 0.00 | 819.16 | 40.02 | 5.61 | 124.45 | 35.57 |
| | 5.450 | 200.00 | 0.00 | 0.00 | 817.00 | 225.00 | 819.83 | 0.00 | 820.10 | 54.70 | 6.12 | 119.94 | 30.42 |
| | 5.450 | 200.00 | 0.00 | 0.00 | 817.00 | 225.00 | 819.83 | 0.00 | 820.10 | 54.63 | 6.12 | 119.99 | 30.44 |
| | 5.700 | 200.00 | 0.00 | 0.00 | 818.30 | 225.00 | 820.87 | 0.00 | 820.96 | 31.15 | 4.33 | 216.72 | 60.32 |
| | 5.700 | 200.00 | 0.00 | 0.00 | 818.30 | 225.00 | 820.91 | 0.00 | 821.02 | 58.68 | 4.69 | 408.98 | 57.56 |

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| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRIMS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5.900 | 100.00 | 0.00 | 0.00 | 818.60 | 225.00 | 821.14 | 0.00 | 821.23 | 30.25 | 3.66 | 207.06 | 60.91 |
| | 5.900 | 100.00 | 0.00 | 0.00 | 818.60 | 225.00 | 821.21 | 0.00 | 821.29 | 25.69 | 3.44 | 219.73 | 64.56 |
| | 6.300 | 62.00 | 823.60 | 820.90 | 818.70 | 225.00 | 824.00 | 0.00 | 824.02 | 2.10 | 1.86 | 420.08 | 155.32 |
| | 6.000 | 62.00 | 823.60 | 820.90 | 818.70 | 225.00 | 824.00 | 0.00 | 824.03 | 2.09 | 1.86 | 420.48 | 155.50 |
| | 6.100 | 325.00 | 0.00 | 0.00 | 820.70 | 225.00 | 824.08 | 0.00 | 824.30 | 34.08 | 5.40 | 128.14 | 38.54 |
| | 6.100 | 325.00 | 0.00 | 0.00 | 820.70 | 225.00 | 824.09 | 0.00 | 824.30 | 34.04 | 5.40 | 128.19 | 38.56 |
| * | 6.200 | 325.00 | 0.00 | 0.00 | 822.70 | 225.00 | 826.06 | 826.06 | 826.75 | 76.32 | 8.04 | 77.77 | 25.75 |
| * | 6.200 | 325.00 | 0.00 | 0.00 | 822.70 | 225.00 | 826.05 | 826.05 | 826.75 | 76.41 | 8.04 | 77.72 | 25.74 |
| | 6.300 | 300.00 | 0.00 | 0.00 | 824.50 | 225.00 | 828.16 | 0.00 | 828.70 | 53.19 | 7.13 | 85.32 | 30.85 |
| | 6.300 | 300.00 | 0.00 | 0.00 | 824.50 | 225.00 | 828.16 | 0.00 | 828.70 | 53.15 | 7.13 | 85.35 | 30.86 |
| * | 6.350 | 200.00 | 0.00 | 0.00 | 826.60 | 225.00 | 829.93 | 829.93 | 830.74 | 85.90 | 8.48 | 64.74 | 24.28 |
| * | 6.350 | 200.00 | 0.00 | 0.00 | 826.60 | 225.00 | 829.93 | 829.93 | 830.74 | 85.96 | 8.48 | 64.71 | 24.27 |
| * | 6.500 | 200.00 | 0.00 | 0.00 | 828.70 | 225.00 | 832.14 | 832.14 | 832.84 | 72.36 | 7.97 | 79.88 | 26.45 |
| * | 6.500 | 200.00 | 0.00 | 0.00 | 828.70 | 225.00 | 832.14 | 832.14 | 832.84 | 72.47 | 7.97 | 79.80 | 26.43 |
| * | 6.550 | 200.00 | 0.00 | 0.00 | 830.80 | 225.00 | 834.24 | 834.24 | 834.96 | 72.16 | 7.96 | 80.03 | 26.49 |
| * | 6.550 | 200.00 | 0.00 | 0.00 | 830.80 | 225.00 | 834.24 | 834.24 | 834.94 | 72.05 | 7.95 | 80.11 | 26.51 |
| * | 6.600 | 200.00 | 0.00 | 0.00 | 832.90 | 225.00 | 836.32 | 836.32 | 837.06 | 76.58 | 8.15 | 75.39 | 25.71 |
| * | 6.600 | 200.00 | 0.00 | 0.00 | 832.90 | 225.00 | 836.32 | 836.32 | 837.05 | 76.72 | 8.16 | 75.29 | 25.69 |
| * | 6.650 | 200.00 | 0.00 | 0.00 | 835.00 | 225.00 | 838.42 | 838.42 | 839.16 | 75.95 | 8.13 | 75.82 | 25.82 |
| * | 6.650 | 200.00 | 0.00 | 0.00 | 835.00 | 225.00 | 838.42 | 838.42 | 839.16 | 75.95 | 8.13 | 75.82 | 25.82 |
| * | 6.700 | 200.00 | 0.00 | 0.00 | 837.10 | 225.00 | 840.20 | 840.20 | 840.96 | 95.52 | 8.51 | 70.85 | 23.02 |
| * | 6.700 | 200.00 | 0.00 | 0.00 | 837.10 | 225.00 | 840.20 | 840.20 | 840.96 | 95.57 | 8.51 | 70.85 | 23.02 |
| * | 6.800 | 275.00 | 0.00 | 0.00 | 841.50 | 225.00 | 843.71 | 843.71 | 844.41 | 139.69 | 8.31 | 64.34 | 19.04 |
| * | 6.800 | 275.00 | 0.00 | 0.00 | 841.50 | 225.00 | 843.71 | 843.71 | 844.41 | 139.69 | 8.31 | 64.34 | 19.04 |
| * | 6.900 | 100.00 | 0.00 | 0.00 | 842.10 | 225.00 | 846.22 | 846.22 | 848.22 | 189.44 | 11.34 | 19.84 | 16.35 |
| * | 6.900 | 100.00 | 0.00 | 0.00 | 842.10 | 225.00 | 846.22 | 846.22 | 848.22 | 189.44 | 11.34 | 19.84 | 16.35 |
| | 7.000 | 41.00 | 850.30 | 846.30 | 842.10 | 225.00 | 849.13 | 0.00 | 849.79 | 45.48 | 6.54 | 34.43 | 33.36 |
| | 7.000 | 41.00 | 850.30 | 846.20 | 842.10 | 225.00 | 849.13 | 0.00 | 849.79 | 45.48 | 6.54 | 34.43 | 33.36 |
| | 7.200 | 250.00 | 0.00 | 0.00 | 844.70 | 225.00 | 850.25 | 0.00 | 850.52 | 15.21 | 4.94 | 139.83 | 57.70 |
| | 7.200 | 250.00 | 0.00 | 0.00 | 844.70 | 225.00 | 850.25 | 0.00 | 850.52 | 15.21 | 4.94 | 139.83 | 57.70 |

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SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| | SECNO | Q | CHBEL | DIFNSP | DIFNSX | DIFNIS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 3.000 | 225.00 | 810.10 | 0.00 | 0.00 | 0.00 | 281.00 | 300.00 |
| | 3.000 | 225.00 | 810.10 | 0.00 | 0.00 | 0.00 | 281.00 | 300.00 |
| | 3.700 | 225.00 | 810.54 | 0.00 | 0.44 | 0.00 | 27.44 | 350.00 |
| | 3.700 | 225.00 | 810.54 | 0.00 | 0.44 | 0.00 | 27.44 | 350.00 |
| | 3.800 | 225.00 | 810.62 | 0.00 | 0.08 | 0.00 | 16.00 | 50.00 |
| | 3.800 | 225.00 | 810.62 | 0.00 | 0.08 | 0.00 | 16.00 | 50.00 |
| * | 3.900 | 225.00 | 811.27 | 0.00 | 0.65 | 0.00 | 5.00 | 50.00 |
| * | 3.900 | 225.00 | 811.27 | 0.00 | 0.65 | 0.00 | 5.00 | 50.00 |
| | 4.000 | 225.00 | 818.51 | 0.00 | 7.24 | 0.00 | 5.00 | 160.00 |
| | 4.000 | 225.00 | 818.51 | 0.00 | 7.24 | 0.00 | 5.00 | 160.00 |
| | 4.100 | 225.00 | 818.89 | 0.00 | 0.38 | 0.00 | 100.00 | 50.00 |
| | 4.100 | 225.00 | 818.89 | 0.00 | 0.38 | 0.00 | 100.00 | 50.00 |
| | 4.500 | 225.00 | 818.90 | 0.00 | 0.01 | 0.00 | 250.00 | 350.00 |
| | 4.500 | 225.00 | 818.90 | 0.00 | 0.01 | 0.00 | 250.00 | 350.00 |
| | 4.700 | 225.00 | 818.91 | 0.00 | 0.00 | 0.00 | 308.27 | 375.00 |
| | 4.700 | 225.00 | 818.91 | 0.00 | 0.00 | 0.00 | 248.45 | 375.00 |
| | 4.800 | 225.00 | 818.91 | 0.00 | 0.00 | 0.00 | 308.25 | 100.00 |
| | 4.800 | 225.00 | 818.91 | 0.00 | 0.00 | 0.00 | 249.30 | 100.00 |
| | 4.900 | 225.00 | 818.90 | 0.00 | -0.00 | 0.00 | 308.26 | 1.00 |
| | 4.900 | 225.00 | 818.90 | 0.00 | -0.00 | -0.00 | 210.72 | 1.00 |
| | 5.000 | 225.00 | 818.93 | 0.00 | 0.03 | 0.00 | 308.59 | 104.00 |
| | 5.000 | 225.00 | 818.94 | 0.00 | 0.03 | 0.00 | 208.83 | 104.00 |
| | 5.100 | 225.00 | 818.94 | 0.00 | 0.00 | 0.00 | 308.70 | 1.00 |
| | 5.100 | 225.00 | 818.94 | 0.00 | 0.01 | 0.01 | 249.15 | 1.00 |
| | 5.200 | 225.00 | 818.94 | 0.00 | 0.00 | 0.00 | 308.88 | 50.00 |
| | 5.200 | 225.00 | 818.94 | 0.00 | 0.00 | 0.01 | 250.24 | 50.00 |
| | 5.300 | 225.00 | 818.95 | 0.00 | 0.01 | 0.00 | 402.09 | 850.00 |
| | 5.300 | 225.00 | 818.95 | 0.00 | 0.01 | 0.01 | 332.73 | 850.00 |
| | 5.350 | 225.00 | 818.95 | 0.00 | 0.00 | 0.00 | 160.00 | 440.00 |
| | 5.350 | 225.00 | 818.96 | 0.00 | 0.00 | 0.01 | 160.00 | 440.00 |
| | 5.400 | 225.00 | 818.92 | 0.00 | -0.03 | 0.00 | 70.40 | 440.00 |
| | 5.400 | 225.00 | 818.90 | 0.00 | -0.03 | 0.01 | 70.44 | 440.00 |
| | 5.450 | 225.00 | 819.83 | 0.00 | 0.91 | 0.00 | 78.72 | 200.00 |
| | 5.450 | 225.00 | 819.83 | 0.00 | 0.90 | 0.00 | 78.72 | 200.00 |
| | 5.700 | 225.00 | 820.87 | 0.00 | 1.05 | 0.00 | 175.87 | 200.00 |
| | 5.700 | 225.00 | 820.91 | 0.00 | 1.08 | 0.03 | 141.90 | 200.00 |

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| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKUS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 5.900 | 225.00 | 821.14 | 0.00 | 0.26 | 0.00 | 173.99 | 100.00 |
| | 5.900 | 225.00 | 821.21 | 0.00 | 0.31 | 0.07 | 174.25 | 100.00 |
| | 6.000 | 225.00 | 824.00 | 0.00 | 2.86 | 0.00 | 182.48 | 62.00 |
| | 6.000 | 225.00 | 824.00 | 0.00 | 2.79 | 0.00 | 182.49 | 62.00 |
| | 6.100 | 225.00 | 824.08 | 0.00 | 0.08 | 0.00 | 67.24 | 325.00 |
| | 6.100 | 225.00 | 824.08 | 0.00 | 0.08 | 0.00 | 67.26 | 325.00 |
| * | 6.200 | 225.00 | 826.06 | 0.00 | 1.90 | 0.00 | 70.59 | 325.00 |
| * | 6.200 | 225.00 | 826.05 | 0.00 | 1.98 | -0.00 | 70.58 | 325.00 |
| | 6.300 | 225.00 | 828.16 | 0.00 | 2.11 | 0.00 | 66.24 | 300.00 |
| | 6.300 | 225.00 | 828.16 | 0.00 | 2.11 | 0.00 | 66.25 | 300.00 |
| * | 6.350 | 225.00 | 829.94 | 0.00 | 1.76 | 0.00 | 36.39 | 200.00 |
| * | 6.350 | 225.00 | 829.93 | 0.00 | 1.76 | -0.00 | 56.37 | 200.00 |
| * | 6.500 | 225.00 | 832.14 | 0.00 | 2.21 | 0.00 | 85.61 | 200.00 |
| * | 6.500 | 225.00 | 832.14 | 0.00 | 2.21 | -0.00 | 85.55 | 200.00 |
| * | 6.550 | 225.00 | 834.26 | 0.00 | 2.10 | 0.00 | 85.71 | 200.00 |
| * | 6.550 | 225.00 | 834.24 | 0.00 | 2.10 | 0.00 | 85.77 | 200.00 |
| * | 6.600 | 225.00 | 836.32 | 0.00 | 2.07 | 0.00 | 80.00 | 200.00 |
| * | 6.600 | 225.00 | 836.32 | 0.00 | 2.07 | -0.00 | 79.92 | 200.00 |
| * | 6.650 | 225.00 | 838.42 | 0.00 | 2.11 | 0.00 | 80.35 | 200.00 |
| * | 6.650 | 225.00 | 838.42 | 0.00 | 2.11 | 0.00 | 80.35 | 200.00 |
| * | 6.700 | 225.00 | 840.20 | 0.00 | 1.78 | 0.00 | 61.97 | 200.00 |
| * | 6.700 | 225.00 | 840.20 | 0.00 | 1.78 | 0.00 | 61.97 | 200.00 |
| * | 6.800 | 225.00 | 843.71 | 0.00 | 3.51 | 0.00 | 50.00 | 275.00 |
| * | 6.800 | 225.00 | 843.71 | 0.00 | 3.51 | 0.00 | 50.00 | 275.00 |
| * | 6.900 | 225.00 | 846.22 | 0.00 | 2.51 | 0.00 | 5.00 | 100.00 |
| * | 6.900 | 225.00 | 846.22 | 0.00 | 2.51 | 0.00 | 5.00 | 100.00 |
| | 7.000 | 225.00 | 849.13 | 0.00 | 2.91 | 0.00 | 5.00 | 41.00 |
| | 7.000 | 225.00 | 849.13 | 0.00 | 2.91 | 0.00 | 5.00 | 41.00 |
| | 7.200 | 225.00 | 850.25 | 0.00 | 1.13 | 0.00 | 86.16 | 250.00 |
| | 7.200 | 225.00 | 850.25 | 0.00 | 1.13 | 0.00 | 86.16 | 250.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 5.900 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.900 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5.900 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 5.900 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.900 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5.900 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 6.900 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 6.200 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 6.200 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 6.200 PROFILE= 2 MINIMUM SPECIFIC ENERGY

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 CAUTION  SECNO=    6.350  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.350  PROFILE= 1  MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO=    6.350  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.350  PROFILE= 2  MINIMUM SPECIFIC ENERGY

 CAUTION  SECNO=    6.500  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.500  PROFILE= 1  MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO=    6.500  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.500  PROFILE= 2  MINIMUM SPECIFIC ENERGY

 CAUTION  SECNO=    6.550  PROFILE= 1  CRITICAL DEPTH ASSUMED
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 CAUTION  SECNO=    6.550  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.550  PROFILE= 2  MINIMUM SPECIFIC ENERGY

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 CAUTION  SECNO=    6.600  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.600  PROFILE= 2  MINIMUM SPECIFIC ENERGY

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 CAUTION  SECNO=    6.650  PROFILE= 2  MINIMUM SPECIFIC ENERGY

 CAUTION  SECNO=    6.700  PROFILE= 1  CRITICAL DEPTH ASSUMED
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 CAUTION  SECNO=    6.700  PROFILE= 2  CRITICAL DEPTH ASSUMED
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 CAUTION  SECNO=    6.800  PROFILE= 1  MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO=    6.800  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.800  PROFILE= 2  MINIMUM SPECIFIC ENERGY

 CAUTION  SECNO=    6.900  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.900  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO=    6.900  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
 CAUTION  SECNO=    6.900  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO=    6.900  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO=    6.900  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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FLOODWAY DATA, SPERRY DRAIN
PROFILE NO. 2

| STATION | FLOODWAY WIDTH (FT) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WATER SURFACE ELEVATION WITHOUT FLOODWAY | WATER SURFACE ELEVATION DIFFERENCE |
|---|---|---|---|---|---|---|
| 3.000 | 281. | 116. | 1.9 | 810.1 | 810.1 | 0.0 |
| 3.700 | 27. | 73. | 3.1 | 810.5 | 810.5 | 0.0 |
| 3.800 | 16. | 56. | 4.2 | 810.6 | 810.6 | 0.0 |
| 3.900 | 5. | 20. | 11.3 | 811.3 | 811.3 | 0.0 |
| 4.000 | 5. | 51. | 4.4 | 818.5 | 818.5 | 0.0 |
| 4.100 | 100. | 747. | 0.3 | 818.9 | 818.9 | 0.0 |
| 4.500 | 250. | 1341. | 0.1 | 818.9 | 818.9 | 0.0 |
| 4.700 | 248. | 1644. | 0.1 | 818.9 | 818.9 | 0.0 |
| 4.800 | 249. | 1666. | 0.1 | 818.9 | 818.9 | 0.0 |
| 4.900 | 211. | 513. | 0.4 | 818.9 | 818.9 | 0.0 |
| 5.000 | 209. | 516. | 0.4 | 818.9 | 818.9 | 0.0 |
| 5.100 | 249. | 1640. | 0.1 | 818.9 | 818.9 | 0.0 |
| 5.200 | 250. | 1604. | 0.1 | 818.9 | 818.9 | 0.0 |
| 5.300 | 333. | 1612. | 0.1 | 818.9 | 818.9 | 0.0 |
| 5.350 | 160. | 561. | 0.4 | 818.9 | 818.9 | 0.0 |
| 5.400 | 70. | 124. | 1.8 | 818.9 | 818.9 | 0.0 |
| 5.450 | 79. | 120. | 1.9 | 819.8 | 819.8 | 0.0 |
| 5.700 | 142. | 189. | 1.2 | 820.9 | 820.9 | 0.0 |
| 5.900 | 174. | 220. | 1.0 | 821.2 | 821.1 | 0.1 |
| 6.000 | 102. | 420. | 0.5 | 824.0 | 824.0 | 0.0 |
| 6.100 | 67. | 123. | 1.8 | 824.1 | 824.1 | 0.0 |
| 6.200 | 71. | 78. | 2.9 | 826.1 | 826.1 | 0.0 |
| 6.300 | 66. | 85. | 2.6 | 828.2 | 828.2 | 0.0 |
| 6.350 | 56. | 65. | 3.5 | 829.9 | 829.9 | 0.0 |
| 6.500 | 86. | 90. | 2.5 | 832.1 | 832.1 | 0.0 |
| 6.550 | 64. | 90. | 2.5 | 834.2 | 834.2 | 0.0 |
| 6.600 | 60. | 75. | 3.0 | 836.3 | 836.3 | 0.0 |
| 6.650 | 80. | 76. | 3.0 | 838.4 | 838.4 | 0.0 |
| 6.700 | 62. | 71. | 3.2 | 840.2 | 840.2 | 0.0 |
| 6.800 | 50. | 64. | 3.5 | 843.7 | 843.7 | 0.0 |
| 6.900 | 5. | 20. | 11.3 | 846.2 | 846.2 | 0.0 |
| 7.000 | 5. | 34. | 6.5 | 849.1 | 849.1 | 0.0 |
| 7.200 | 66. | 140. | 1.6 | 850.3 | 850.3 | 0.0 |

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1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: Sperry Drain & Waubascon creek

4) DOCUMENT TYPE: report

RECEIVED
MAR 6 1981
WATER MANAGEMENT

# SPERRY DRAIN AND WAUBASCON CREEK
# HYDRAULIC ANALYSIS FOR
# BEDFORD TOWNSHIP AND
# CITY OF BATTLE CREEK
# Calhoun Co
# FLOOD INSURANCE STUDIES

HUD 2023-07
HUD 2021-07
February, 1981

Prepared By:
Wade, Trim & Associates, Inc.
25185 Goddard Road
Taylor, Michigan 48180

# I INTRODUCTION

This hydraulic study investigates the existence and severity of flood hazards along the Sperry Drain in the City of Battle Creek and the Waubascon Creek in Bedford Township and the City of Battle Creek, Calhoun County, Michigan.

Bedford Township covers an area of approximately 30 square miles and the City of Battle Creek covers approximately 12 square miles. The flood plains of the Sperry Drain and Waubascon Creek basins have basically remained undeveloped but are presently experiencing residential development.

# II DETAILED STUDY OF THE SPERRY DRAIN

A detailed hydraulic study was performed for the entire length of the Sperry Drain within the City of Battle Creek. This study began at the confluence of the Kalamazoo River and ended at the northern boundary of the City of Battle Creek.

A total of 4 bridge and 11 valley cross sections were field surveyed by Wade, Trim & Associates, Inc. in February, 1980. These cross sections were supplemented by aerial topography, 2-foot contour maps and U.S.G.S. Quad Maps which consist of 10-foot contour intervals (References 1, 2 and 3, respectively).

Cross section locations are shown on Exhibit 1. Table 1 cross references section designations by showing the computer section number which corresponds to each cross section letter shown in Exhibit 1. Table 2 lists discharges which have been approved by the Michigan Department of Natural Resources (M.D.N.R.) for this stream.

## A. METHOD OF ANALYSIS

The HEC-2 backwater computer program was used in developing water surface profiles (Reference 4). Table 2 presents water surface elevations at selected locations for the four storms (10, 50, 100 and 500-year) analyzed in this report. HEC-2 printouts including computer cross section plots are presented as Exhibit 2. (Exhibit 2 is contained in the 11" x 15" folder enclosed with this report.) Water surface profiles resulting from the backwater analyses are presented as Exhibit 3.

TABLE 1

CITY OF BATTLE CREEK
SPERRY DRAIN
CROSS REFERENCE INDEX

| X-SECT. | COMPUTER NO. | DESCRIPTION |
|---|---|---|
| A | 2.0 | U/S Face Jackson Street Bridge |
| B | 3.0 | Valley Section |
| C | 3.9 | D/S Face Michigan Avenue Bridge |
| D | 4.0 | U/S Face Michigan Avenue Bridge |
| E | 4.5 | Valley Section |
| F | 4.9 | D/S Face Ridgemoor Street Bridge |
| G | 5.0 | U/S Face Ridgemoor Street Bridge |
| H | 5.3 | Valley Section |
| I | 5.4 | Valley Section |
| J | 5.9 | D/S Face Limit Street Bridge |
| K | 6.0 | U/S Face Limit Street Bridge |
| L | 6.3 | Valley Section |
| M | 6.8 | 100 FT. D/S Waubascon Road Bridge |
| N | 6.9 | D/S Face Waubascon Road Bridge |
| O | 7.0 | U/S Face Waubascon Road Bridge |
| P | 7.2 | Valley Section, Corporate Limit |

TABLE 2

CITY OF BATTLE CREEK
SPERRY DRAIN
FLOOD ELEVATIONS AT SELECTED LOCATIONS*

| LOCATION | X-SECT. | Frequency 10-YEAR | 50-YEAR | 100-YEAR | 500-YEAR |
|---|---|---|---|---|---|
| | | Q= 100 CFS | Q= 145 CFS | Q= 225 CFS | Q= 330 CFS |
| D/S Michigan Avenue Bridge | C | 809.6 | 810.3 | 811.3 | 812.4 |
| U/S Michigan Avenue Bridge | D | 812.6 | 812.8 | 818.5 | 825.7 |
| U/S Ridgemoor Street Bridge | G | 816.4 | 817.0 | 818.9 | 825.7 |
| U/S Limit Street Bridge | K | 823.7 | 823.8 | 824.0 | 825.8 |
| Corporate Boundary | P | 847.3 | 848.7 | 850.2 | 850.8 |

* All elevations are based upon National Geodetic Vertical Datum

## B. VARIABLES AND COEFFICIENTS

Roughness coefficients (Mannings "n") were estimated from field inspections, quad maps, and photographs. Typical roughness values for the main channel and overbank areas of the Sperry Drain are .035 and .12, respectively, for all floods. These values are indicative of summer month conditions and are consistent with values recommended and used in engineering practice (Reference 5). Contraction and expansion coefficients were selected as 0.3 and 0.5, respectively, at bridge sections and 0.1 and 0.3, respectively, for gradual channel transitions. Bridge loss coefficient computations are included in Exhibit 4.

## C. HIGH WATER MARKS

There are no documented high water marks for this reach of the Sperry Drain.

## D. STARTING CONDITIONS

The starting water surface elevation used in all backwater computations for the Sperry Drain was the mean annual Kalamazoo River level. A storm frequency/discharge rating curve was developed for the Kalamazoo River (Reference 6) to determine the mean annual flow (2.33 year recurrence interval) of 2,850 cfs. This flow was then applied to the stage/discharge rating curve to obtain the mean annual elevation of 804.2 (Exhibit 5). The 10, 50, 100 and 500 year flood elevations of the Kalamazoo River, located at its confluence with Sperry Drain, were plotted horizontally on the stream profile where these elevations exceeded Sperry Drain elevations, to reflect flood conditions from both streams.

## E. SPECIAL PROBLEMS

Downstream of Michigan Avenue, Sperry Drain divides into two separate channels, hereinafter referred to as east and west channels in this analysis. These channels discharge directly into the Kalamazoo River downstream of Jackson Avenue. A divided flow analysis was performed to determine the impact of this divided flow upon flood elevations and obtain the distribution of flow between the east and west channels.

Results of this analysis, as presented in Exhibit 6, indicate that approximately one third of the flow passes through the west channel and two thirds passes through the east channel for the four storms analyzed in this report. HEC-2 printouts and water surface profiles resulting from this analysis are presented in Exhibits 2 and 3, respectively.

## F. GENERAL

Computed water surface elevations were developed to an accuracy of 0.5 feet for floods of the selected recurrence intervals.

All elevations are referenced to the U.S. Geological Survey (U.S.G.S.) Datum. This datum is equivalent to the National Geodetic Vertical Datum (N.G.V.D.).

The hydraulic analyses for this study were based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

# III DETAILED STUDY OF WAUBASCON CREEK

A detailed hydraulic study was performed for approximately 1.7 miles of the Waubascon Creek, beginning at its confluence with the Kalamazoo River in Bedford Township, and ending approximately 1,000 feet upstream of the Mason Street Bridge in the City of Battle Creek.

A total of 3 bridge and 10 valley cross sections were field surveyed by Wade, Trim & Associates, Inc. in March, 1980. These cross sections were supplemented by aerial topography and U.S.G.S. Quad Maps which consist of 10-foot contour intervals (References 7, 8 and 3, respectively).

Cross section locations are shown on Exhibit 1. Table 3 cross references section designations by showing the computer section number which corresponds to each cross section letter shown in Exhibit 1. Table 4 lists discharges which have been approved by the Michigan Department of Natural Resources (M.D.N.R.) for this stream.

## A. METHOD OF ANALYSIS

The HEC-2 backwater computer program was used in developing water surface profiles (Reference 4). Table 4 presents water surface elevations at selected locations for the four storms (10, 50, 100 and 500-year) analyzed in this report. HEC-2 printouts including computer cross section plots are presented as Exhibit 2. (Exhibit 2 is contained in the 11" x 15" folder enclosed with this report.) Water surface profiles resulting from the backwater analyses are presented as Exhibit 7.

TABLE 3

BEDFORD TOWNSHIP
AND THE
CITY OF BATTLE CREEK
WAUBASCON CREEK
CROSS REFERENCE INDEX

| X-SECT. | COMPUTER NO. | DESCRIPTION |
|---|---|---|
| A | 112.0 | Valley Section |
| B | 113.0 | Valley Section |
| C | 114.9 | D/S Face Michigan Avenue Bridge |
| D | 115.0 | U/S Face Michigan Avenue Bridge |
| E | 116.9 | D/S Face Cross Street Bridge |
| F | 117.0 | U/S Face Cross Street Bridge |
| G | 119.0 | Valley Section |
| H | 119.5 | Valley Section |
| I | 120.9 | D/S Face Mason Street Bridge |
| J | 121.0 | U/S Face Mason Street Bridge |
| K | 122.0 | Valley Section |

TABLE 4

BEDFORD TOWNSHIP
AND THE
CITY OF BATTLE CREEK

WAUBASCON CREEK

FLOOD ELEVATIONS AT SELECTED LOCATIONS*

| LOCATION | X-SECT. | Frequency 10-YEAR | 50-YEAR | 100-YEAR | 500-YEAR |
|---|---|---|---|---|---|
| | | Q= 270 CFS | Q= 490 CFS | Q= 650 CFS | Q= 1,230 CFS |
| U/S Michigan Avenue Bridge | C | 804.7 | 805.6 | 806.1 | 807.3 |
| U/S Cross Street Bridge | E | 807.2 | 808.5 | 809.3 | 811.2 |
| U/S Mason Street Bridge | J | 814.6 | 816.0 | 817.0 | 819.2 |
| U/S Limit of Study | K | 816.0 | 817.4 | 818.1 | 820.2 |

* All elevations are based upon National Geodetic Vertical Datum

## B. VARIABLES AND COEFFICIENTS

Roughness coefficients (Mannings "n") were estimated from field inspections, quad maps, and photographs. Typical roughness values for the main channel and overbank areas of the Waubascon Creek range from .035 to .045 and .10 to .12, respectively, for all floods. These values are indicative of summer month conditions and are consistent with values recommended and used in engineering practice (Reference 5). Contraction and expansion coefficients were selected as 0.3 and 0.5, respectively, at bridge sections and 0.1 and 0.3, respectively, for gradual channel transitions. Bridge loss coefficient computations are included in Exhibit 8.

## C. HIGH WATER MARKS

There are no documented high water marks for this reach of the Waubascon Creek.

## D. STARTING CONDITIONS

The starting water surface elevation used in all backwater computations for the Waubascon Creek was the mean annual Kalamazoo River level. A storm frequency/discharge rating curve was developed for the Kalamazoo River (Reference 6) to determine the mean annual flow (2.33 year recurrence interval) of 2,850 cfs. This flow was then applied to the stage/discharge rating curve to obtain the mean annual elevation of 801.3 (Exhibit 9). The 10, 50, 100 and 500 year flood elevations of the Kalamazoo River, located at its confluence with Waubascon Creek, were plotted horizontally on the stream profile, where these elevations exceeded Waubascon Creek elevations, to reflect flood conditions from both streams.

## E. SPECIAL PROBLEMS

No special problems were encountered during the analysis of the Waubascon Creek in the Study Area.

## F. GENERAL

Computed water surface elevations were developed to an accuracy of 0.5 feet for floods of the selected recurrence intervals.

All elevations are referenced to the U.S. Geological Survey (U.S.G.S.) Datum. This datum is equivalent to the National Geodetic Vertical Datum (N.G.V.D.).

The hydraulic analyses for this study were based upon only the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

# LIST OF REFERENCES


1. Abrams Aerial Survey Corporation, Aerial Topography for Sperry Drain in City of Battle Creek, Michigan, 1979.

2. Abrams Aerial Survey Corporation, 2-Foot Contour Topographic Map, Section 35, Bedford Township, Calhoun County, Michigan, 1964.

3. U.S. Geological Survey, Topographic Maps - Battle Creek Quadrangle, Calhoun County, 7.5 Minute Series - Photo Revised, 1972.

4. U.S. Department of the Army, Corps of Engineers, HEC-2 Water Surface Profiles, Users Manual, Davis, California, August, 1979.

5. Chow, Ven Te, Open Channel Hydraulics, McGraw Hill, Inc., 1959.

6. Wade, Trim & Associates, Inc., Hydraulic Report, Kalamazoo River Basin, Bedford Township and City of Battle Creek, Michigan, 1980.

7. Abrams Aerial Survey Corporation, Aerial Topography for Waubascon Creek in Bedford Township and City of Battle Creek, Michigan, 1979.

8. U.S. Geological Survey, Topographic Maps - Augusta Quadrangle, Calhoun County, 7.5 Minute Series - Photo Revised, 1972.

# INDEX OF EXHIBITS


EXHIBIT 1 — Field Cross Section Location and 100-Year Flood Plain - Floodway Map, Sperry Drain, 2 Sheets, Waubascon Creek, 1 Sheet.

EXHIBIT 2 — Computer Printouts, HEC-2 Backwater Analysis With Cross Section Plots (In Separate Folder) Sperry Drain and Waubascon Creek.

EXHIBIT 3 — Sperry Drain Profiles, City of Battle Creek, 5 Sheets.

EXHIBIT 4 — Sperry Drain Bridge Notes and Sketches, City of Battle Creek, 16 Sheets.

EXHIBIT 5 — Kalamazoo River Mean Annual Water Surface, Sperry Drain, City of Battle Creek, 2 Sheets.

EXHIBIT 6 — Sperry Drain, Divided Flow Analysis D/S Michigan Avenue, 3 Sheets.

EXHIBIT 7 — Waubascon Creek Profiles, Bedford Township and City of Battle Creek, 2 Sheets.

EXHIBIT 8 — Waubascon Creek Bridge Notes and Sketches, Bedford Township and City of Battle Creek, 7 Sheets.

EXHIBIT 9 — Kalamazoo River Mean Annual Water Surface, Waubascon Creek, Bedford Township, 2 Sheets.

SPERRY DRAIN AND
WAUBASCON CREEK

CITY OF BATTLE CREEK AND
BEDFORD TOWNSHIP

EXHIBIT 1

FIELD CROSS SECTION LOCATION AND
100 YEAR FLOOD PLAIN-FLOODWAY MAPS

SPERRY DRAIN AND
WAUBASCON CREEK

CITY OF BATTLE CREEK AND
BEDFORD TOWNSHIP

EXHIBIT 2

COMPUTER PRINTOUTS
HEC-2 BACKWATER ANALYSIS WITH
CROSS SECTION PLOTS
(SEE SEPARATE FOLDER)

SPERRY DRAIN

CITY OF BATTLE CREEK

EXHIBIT 3

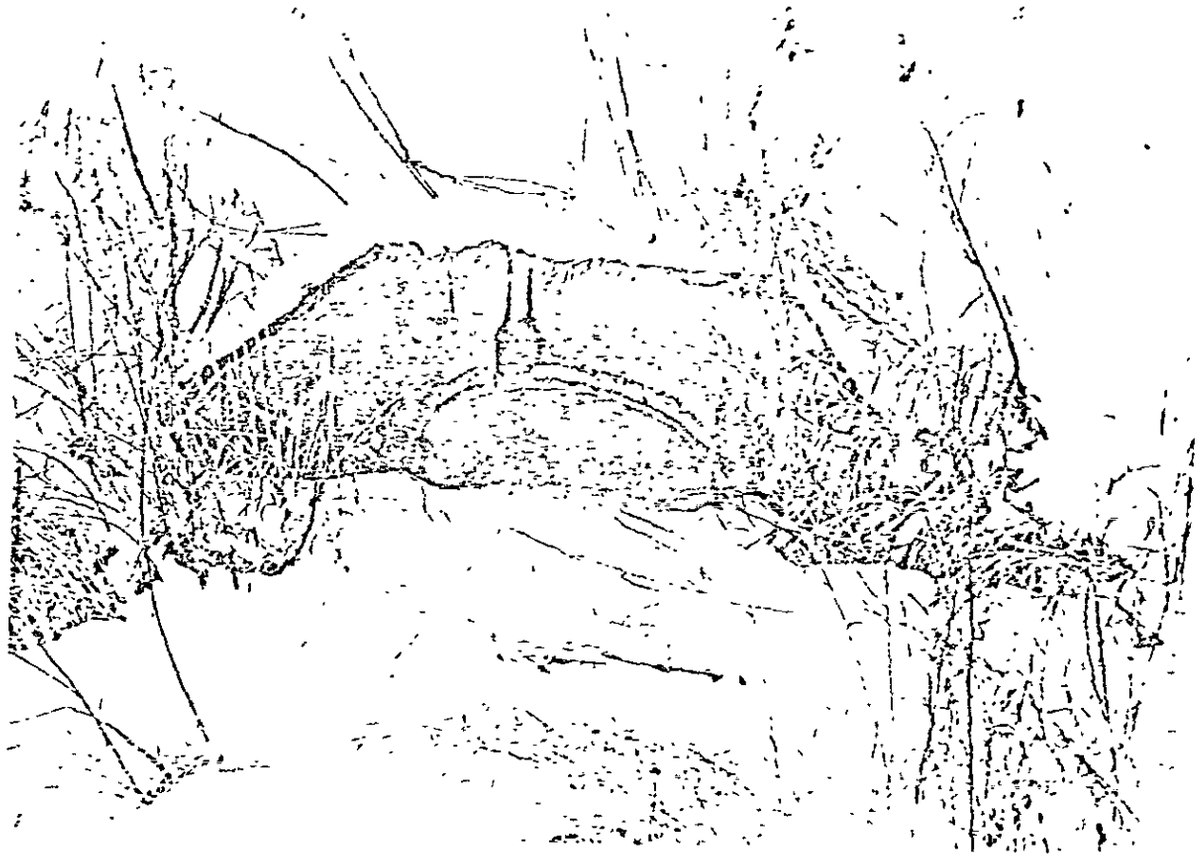
SPERRY DRAIN PROFILES

SPERRY DRAIN

CITY OF BATTLE CREEK

EXHIBIT 4

SPERRY DRAIN BRIDGE NOTES AND SKETCHES



CROSS SECTION #59 ~~[illegible] CREEK~~ AT JACKSON
SPERRY DRAIN

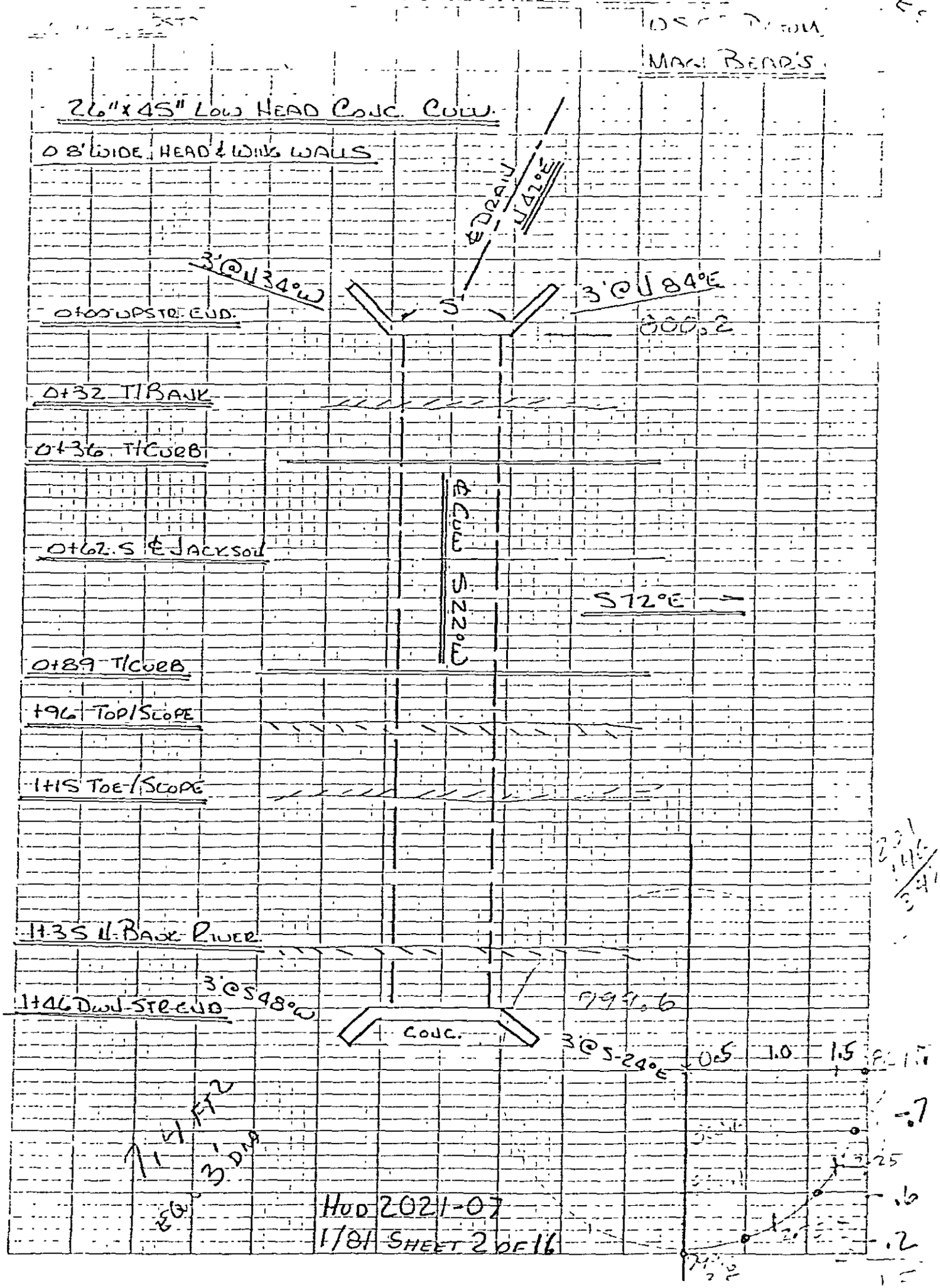
HUD 2021-07
1/81 SHEET 1 OF 16

CROSS SECTIONS # 58-59 SPERRY DRAIN

MAG BEAR'S

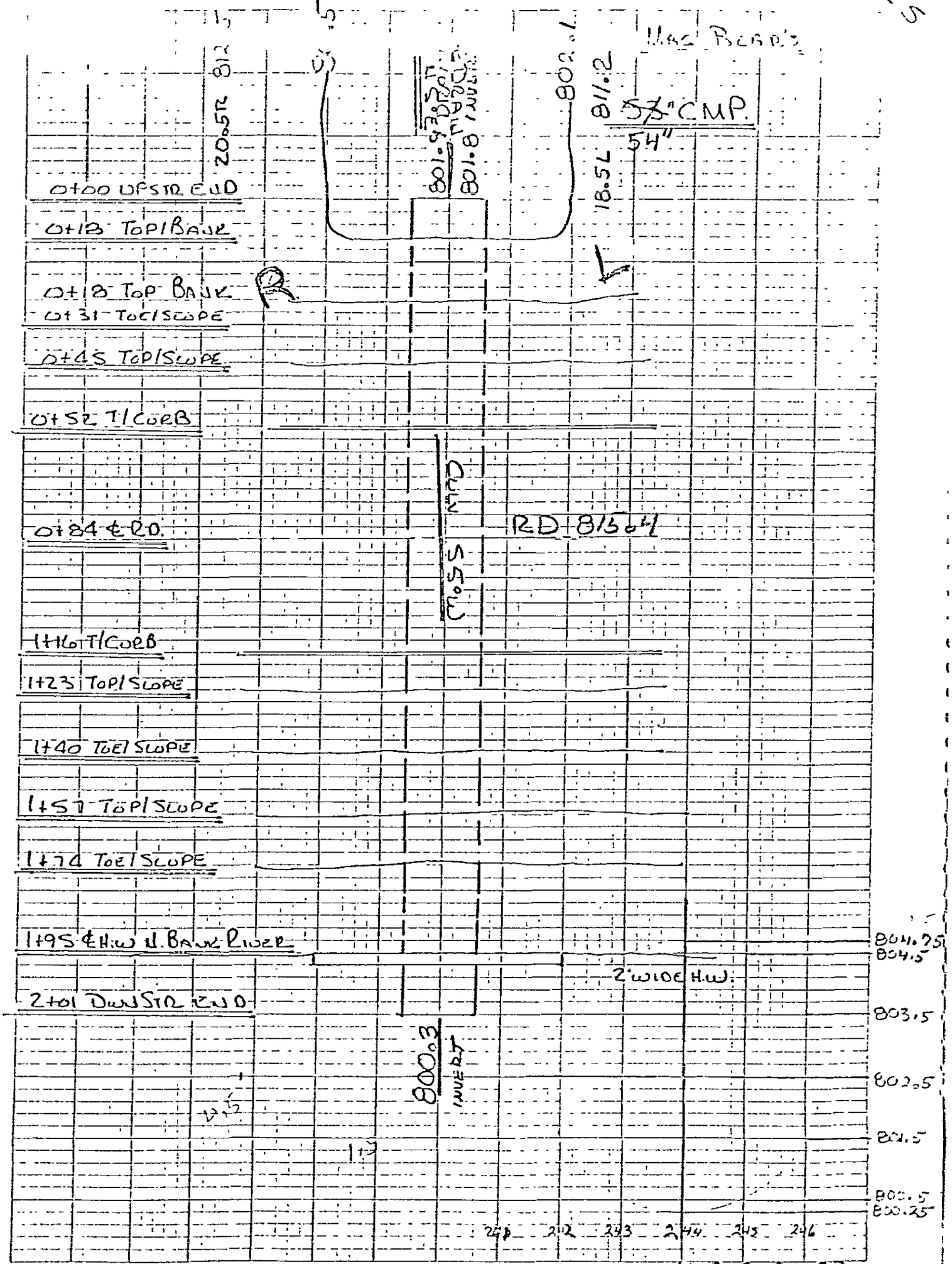
26"x45" LOW HEAD CONC. CULV.

0 8' WIDE HEAD & WING WALLS




HUD 2021-07
1/81 SHEET 2 OF 16

# Cross Section #59A Sperry Drain




HUD 7021-07



CROSS SECTION #64 SPERRY DRAIN AT MICHIGAN AVE. (UPSTREAM)



CROSS SECTION #63 SPERRY DRAIN AT MICHIGAN AVE (DOWNSTREAM)

HUD 2021-07
1/81 SHEET 40 OF 16

Bridge Location: MICHIGAN AVE. STA 4.0

REFERENCE

Bridge Losses - SB Card

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + $\Sigma k$, $\Sigma k = k_f + k_e + k_p$

where $k_f$ = friction loss coefficient

$k_e$ = entrance loss coefficient

$k_p$ = loss from intermediate piers

Description of Bridge:

$k_f = 29.1 n^2 L / R^{4/3}$ for English units

Area = = 17.3 $W_p$ = 16.5'

$R = A/W_p$ 1.05 $R^{4/3}$ = 1.06 $L$ = 160'

n (composite) = $.013\left(\frac{13.5}{16.5}\right) + .035\left(\frac{3}{16.5}\right)$ =

$k_f = 29.1 \times (0.017)^2 \times 160 / 1.06 = 1.27$

$k_e = 0.5$ — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 45

$k_p = 0$ if bridge has no intermediate piers

$k_p = 0.05$ if bridge has intermediate piers — HEC-2 manual

60 INCH CONCRETE CULVERT

U/S FACE .2' SILTED 19.6 FT² − 19.6(.013) = 19.3 FT² (SILTED AREA)

D/S FACE 1.3' SILTED 19.6 FT² − 19.6(.207) = 15.3 FT²

} 17.3 FT² COMPOSITE AREA

2. XKOR = 1 + 1.27 + 0.5 + 0 = 2.77

3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)

5. BWC - bottom width of bridge opening (inc. piers): 3.2

[illegible] width of obstruction = 0 — field data

[illegible] bridge opening inc. piers = 17.

8. SS = side slope = 0.

(horizontal per 1 vertical unit)

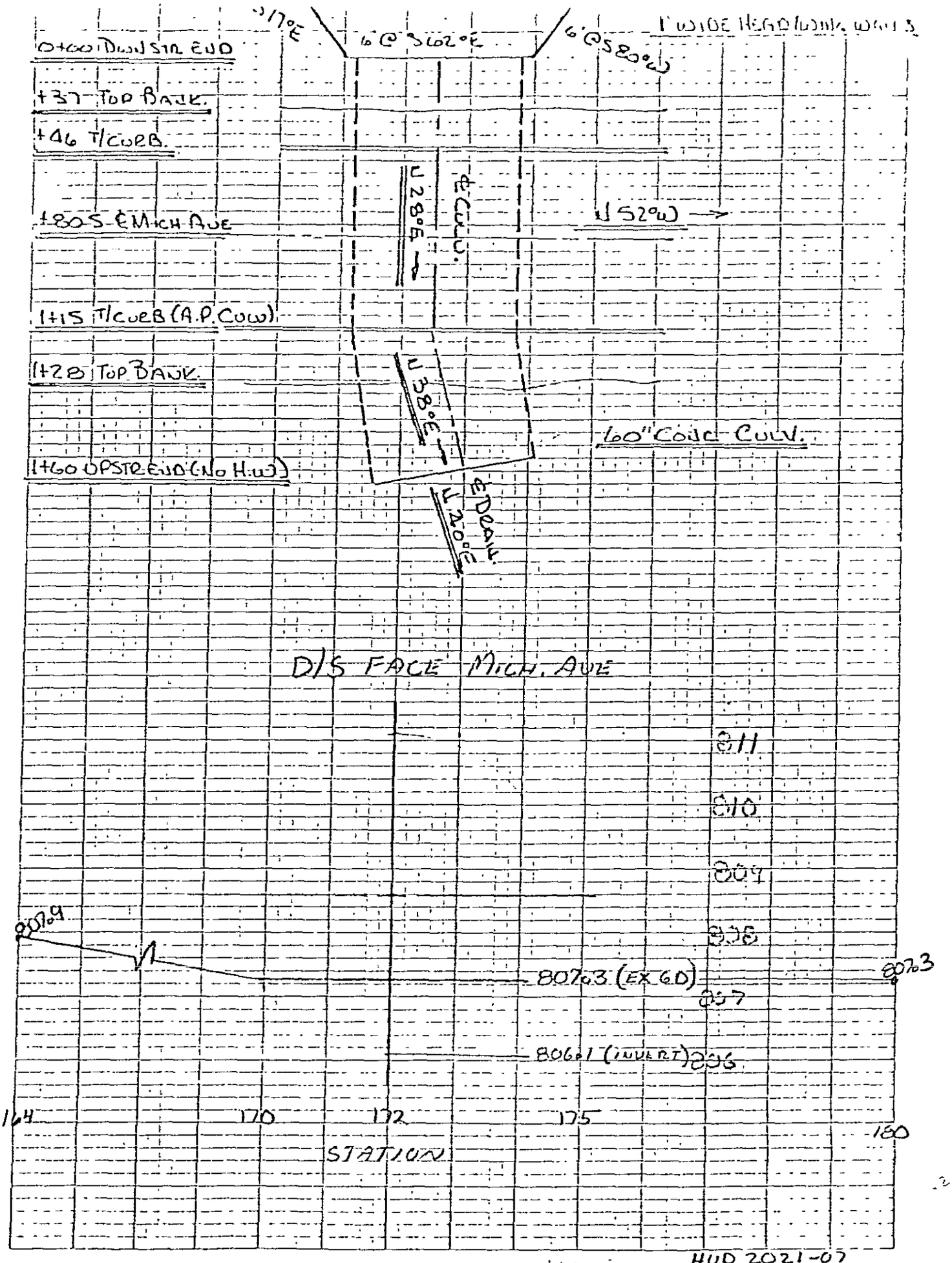
9. ELCHU = Elevation of channel invert U/S side = 807.6

(0 if equal to minimum elevation in previous X-sect.)

10. ELCHD = Elevation of channel invert D/S side = 807.3

(0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No. (Job No.) Owner | Project | Suff. |
|---|---|---|---|---|---|---|
| SPERRY DRAIN - B.C. CITY | DRB | | 5 OF 16 | HUD | 2021 | 07 |
| | DATE 3/80 | DATE | | | | |



3/64 SPERRY DRAIN
BOOK 5
1' WIDE HEAD/WING WALLS
6' @ S62°E
6' @ S80°W
0+00 DOWNSTR END
+37 TOP BANK.
+46 T/CURB.
+80.5 ℄ MICH AVE
N 28°E
℄ CULV.
N 52°W
1+15 T/CURB (A.P. CULV)
1+28 TOP BANK.
N 38°E
60" CONC CULV.
1+60 UPSTR END (NO H.W)
℄ DRAIN
N 20°E
D/S FACE MICH. AVE
811
810
809
808
807.9
807.3 (EX GD)
807.3
807
806.1 (INVERT)
806
164
170
172
175
180
STATION


HUD 2021-07



CROSS SECTION #65 SPERRY DRAIN AT ~~LONDINE~~ (DOWNSTREAM)
RIDGEMOOR STREET

HUD 2021-07
1/81 SHEET 7 OF 16

Bridge Location: RIDGEMOOR ST. STA 5.0

Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + $\Sigma k$, $\Sigma k = k_f + k_e + k_p$

where $k_f$ = friction loss coefficient

$k_e$ = entrance loss coefficient

$k_p$ = loss from intermediate piers

Description of Bridge:

$k_f = 29.1 n^2 L / R^{4/3}$ for English units

Area = 58" x 36" ARCH CMP = 11.4 Wp = 12.5

$R = A/w_p$ 0.91 $R^{4/3}$ = .88 L = 104

n (composite) =

$k_f = 29.1 \times (0.024)^2 \times 104 / 0.88 = 1.98$

$k_e$ = 0.5 (HEADWALL) — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 45

$k_p$ = 0 if bridge has no intermediate piers

$k_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + 1.98 + 0.5 + 0.0 = 3.48

3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN: Length of weir = 0.0 (0 if read off BT cards)

5. BWC - bottom width of bridge opening (inc. piers): 3.8

[illegible] width of obstruction = 0.0 — field data

[illegible] = bridge opening inc. piers = 11.4

8. SS = side slope = 0.

(horizontal per 1 vertical unit)

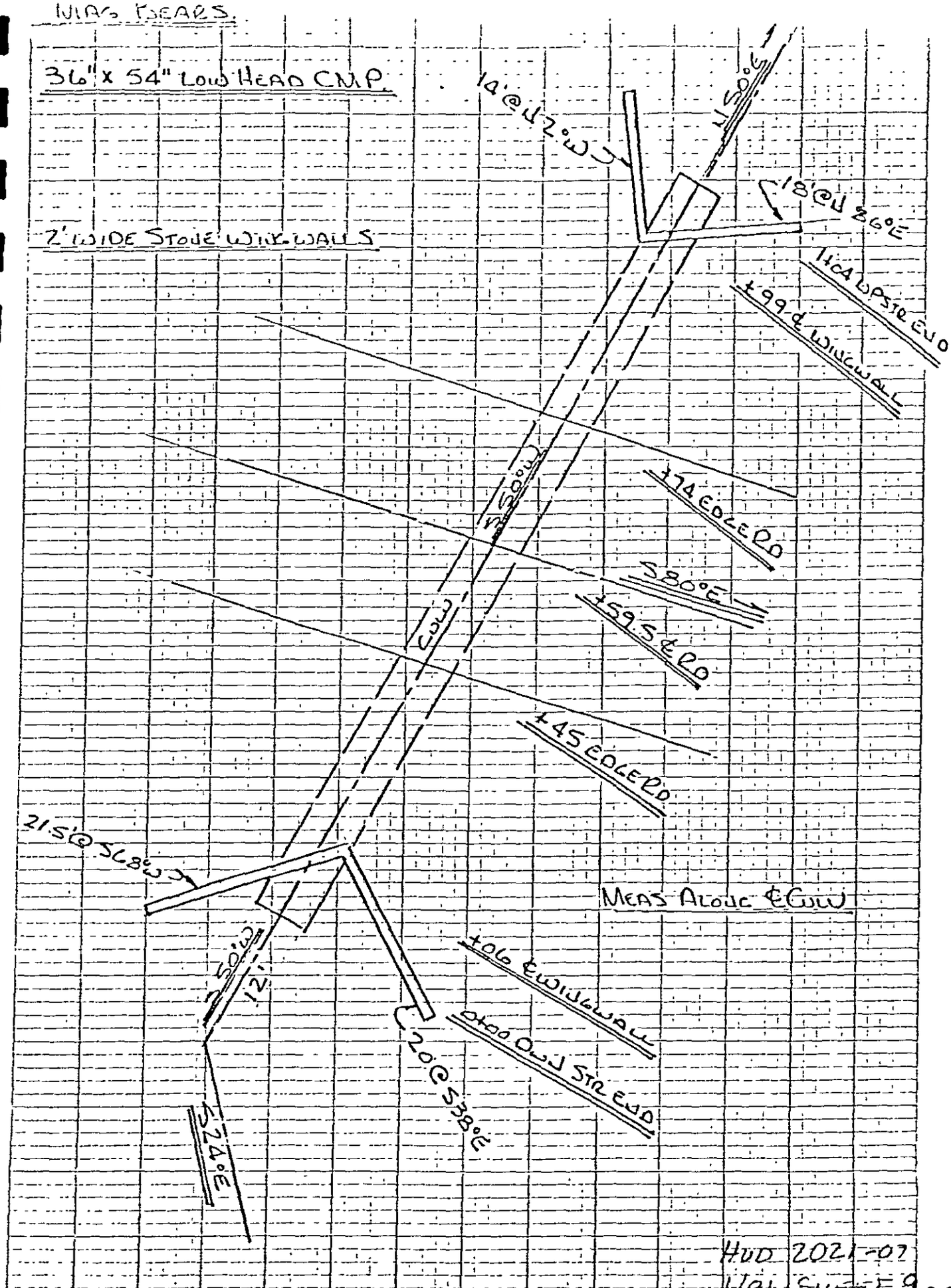
9. ELCHU = Elevation of channel invert U/S side = 810.8

(0 if equal to minimum elevation in previous x-sect.)

10. ELCHD = Elevation of channel invert D/S side = 809.2

(0 if equal to minimum elevation in previous x-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No. (Job No.) Owner | Project | Suffix |
|---|---|---|---|---|---|---|
| SPERRY DRAIN | DRB | | 8 of 16 | HUD | 2021 | 07 |
| | DATE 1/80 | DATE | | | | |




HDD 2021-07
1/81 SHEET 9 of 16



CROSS SECTION #69 - SPERRY DRAIN AT ~~LIMIT STREET~~ LIMIT STREET
~~[illegible]~~

HUD 2021-07
1/81 SHEET 10 OF 16

Bridge Location : ~~Waurasson Rd~~ Limit St. STA 6.0

Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + $\Sigma k$ , $\Sigma k = k_f + k_e + k_p$

where $k_f$ = friction loss coefficient

$k_e$ = entrance loss coefficient

$k_p$ = loss from intermediate piers

Description of Bridge :

$k_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = = 13.0 $W_p \cong$ (AVE 22.5) BASED ON 0.9 FT OF FILL IN EACH PIPE

$R = A/w_p$ 0.58 $R^{4/3} = 0.48$ $L = 62$

n (composite) = .024(6.5/11.25) + 0.035(4.75/11.25) = 0.029

$K_f = 29.1 \times (0.029)^2 \times 62 / 0.48 = 3.16$

$K_e$ = 0.5 (HEADWALL) — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 45

$k_p$ = 0 if bridge has no intermediate piers

$K_p = 0.05$ if bridge has intermediate piers — HEC-2 manual

TWIN 58" x 36" ARCH CMP'S

U/S FACE (EFFECTIVE FLOW AREA)

11.4 FT² − 4.0 FT² = 7.4 (SILTED AREA)

11.4 − 2.7 = 8.7

15.1 FT²

D/S FACE (EFFECTIVE FLOW AREA)

11.4 − 4.5 = 6.9

11.4 − 7.3 = 4.1

11.0

AVE. EFFECTIVE FLOW AREA = 13.0 FT²

2. XKOR = 1 + 3.16 + 0.5 + 0.0 = 4.66

COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)

BWC = bottom width of bridge opening (inc. piers) = 6.

[illegible] width of obstruction = 0.0 — field data

[illegible] = bridge opening inc. piers = 13.

8. SS = side slope = 0.0

(horizontal per 1 vertical unit)

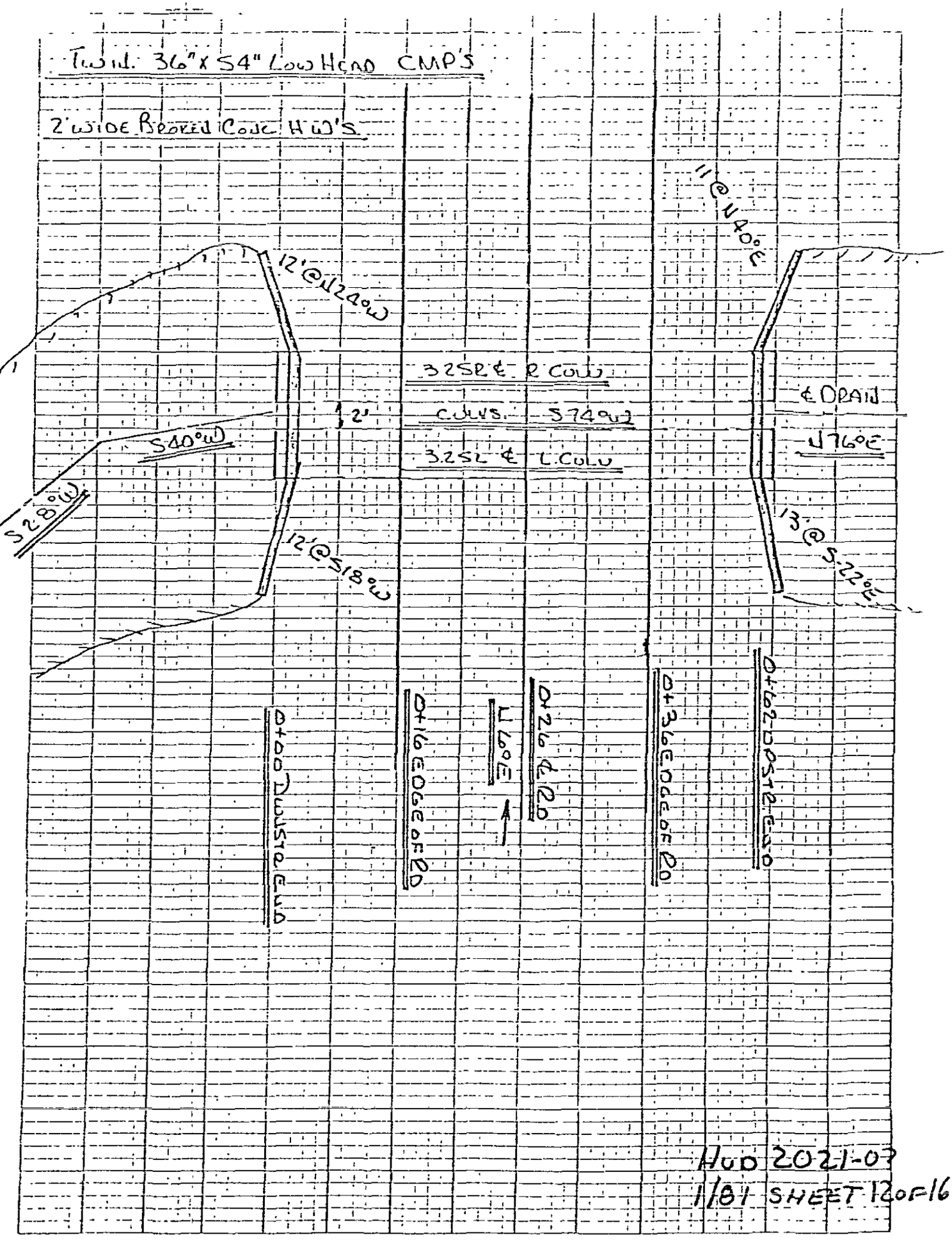
9. ELCHU = Elevation of channel invert U/S side = 818.7

(0 if equal to minimum elevation in previous x-sect.)

10. ELCHD = Elevation of channel invert D/S side = 818.6

(0 if equal to minimum elevation in previous x-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No. / Job No. / Owner / Project / Suffix |
|---|---|---|---|---|
| Sperry Drain - B.C. City | DRB | | 11 of 16 | HUD • 2021 • 07 |
| | DATE 3/90 | DATE | | |




HUD 2021-07
1/81 SHEET 12 OF 16



CROSS SECTION #73 - SPERRY DRAIN AT OAKLEY-WAGNSCON

HUD 2021-07

1/81 SHEET 13 OF 16

Bridge Location : WAUBASCON [illegible] STA 7.0

REFERENCE

## Bridge Losses - SB Card

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + $\Sigma K$, $\Sigma k = k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge :

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = $\frac{20.5}{1.017}$ Wp = 18.2
R = A/wp = 1.13 L = 41
n (composite) =

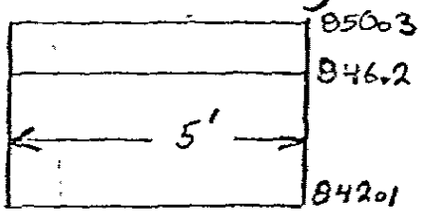
$K_f = 29.1 \times (0.02)^2 \times 41 / 1.17 = 0.41$

$K_c$ = 0.4 (WINGWALL 30° TO BARREL)

Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 45

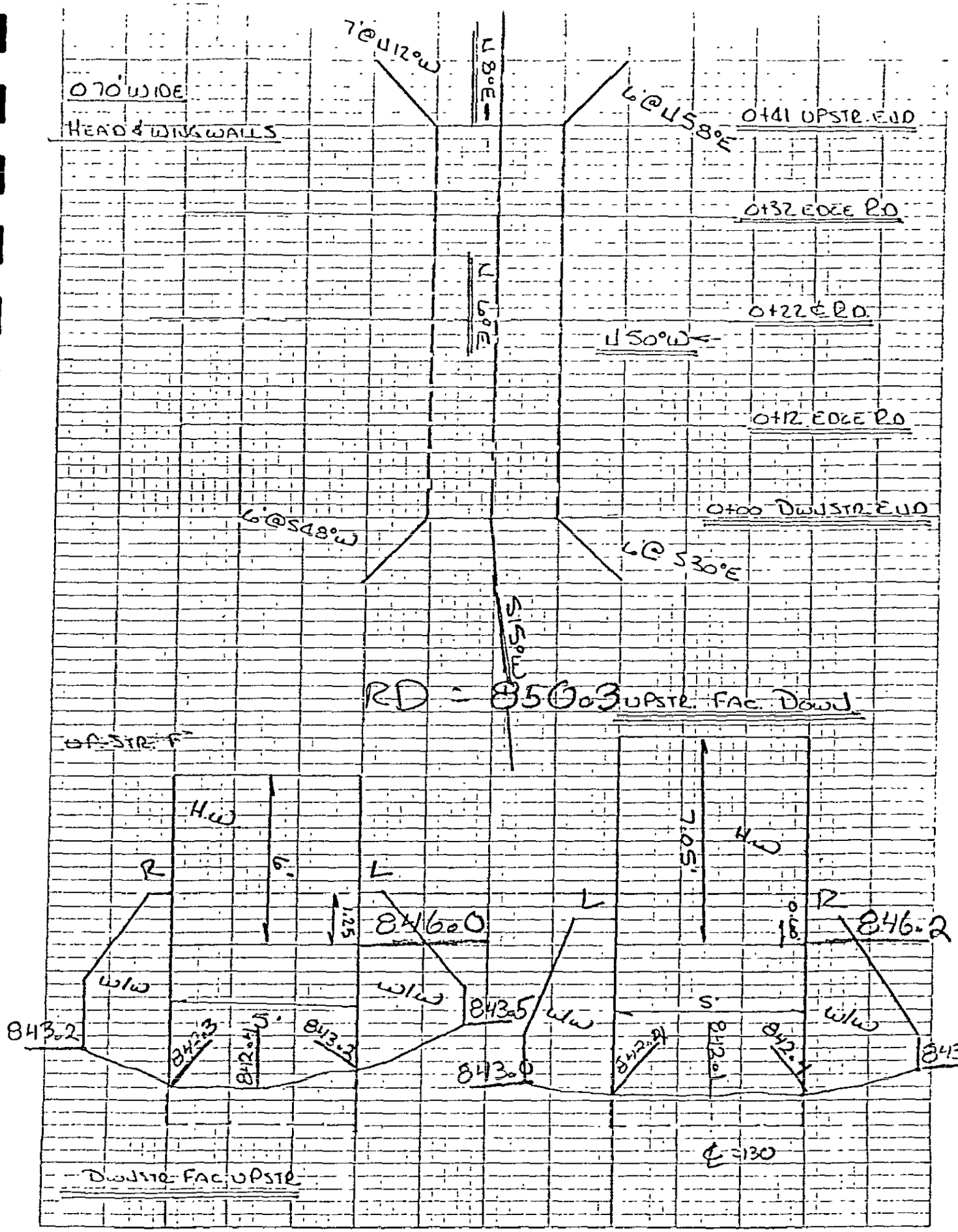
($K_p$ = 0) if bridge has no intermediate piers

$K_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual




2. XKOR = 1 + 0.41 + 0.5 + 0.0 = 1.91
3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 5.0
6. [illegible] width of obstruction = 0. — field data
7. [illegible] bridge opening inc. piers = 20.5
8. SS = side slope = 0.
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 842.01
(0 if equal to minimum elevation in previous X-sect.)
ELCHD = Elevation of channel invert D/S side = 842.8
(0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO | File Code No. (Job No.) Project | Suffix |
|---|---|---|---|---|---|
| SPERRY DRAIN - B.C. CMP | DRB | | 14 OF 16 | HUD • 2021 • 07 | |
| | DATE 2/90 | DATE | | Owner | |




HUD 2021-07

1/81 SHEET 5 OF 16

HUD 2021-07

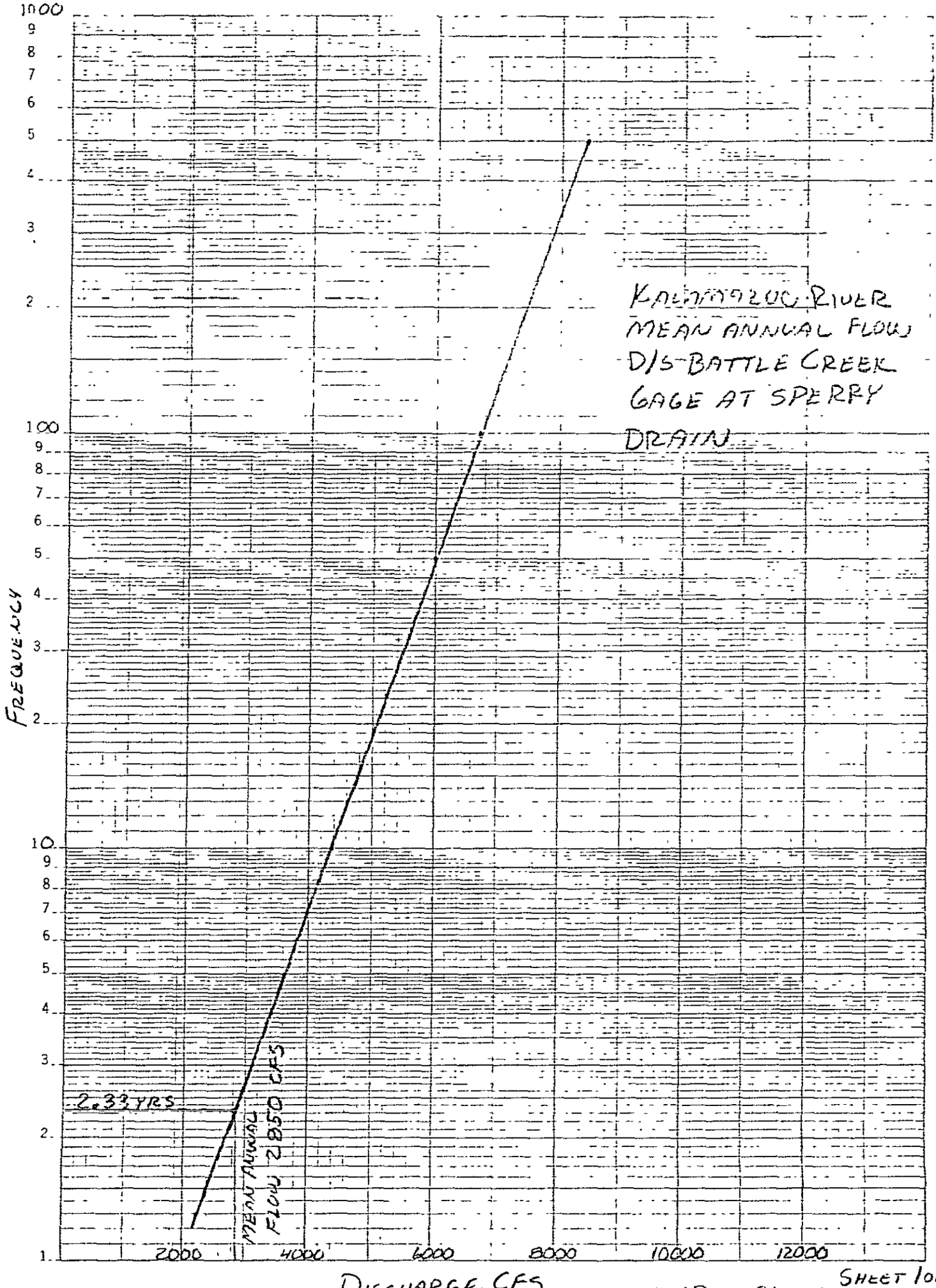
1/A1 SHEET 16 OF 16

SPERRY DRAIN

CITY OF BATTLE CREEK

EXHIBIT 5

KALAMAZOO RIVER MEAN ANNUAL WATER SURFACE




HUD2021-'7

SHEET 1 OF 2

DRB 5/8

# SPERRY DRAIN

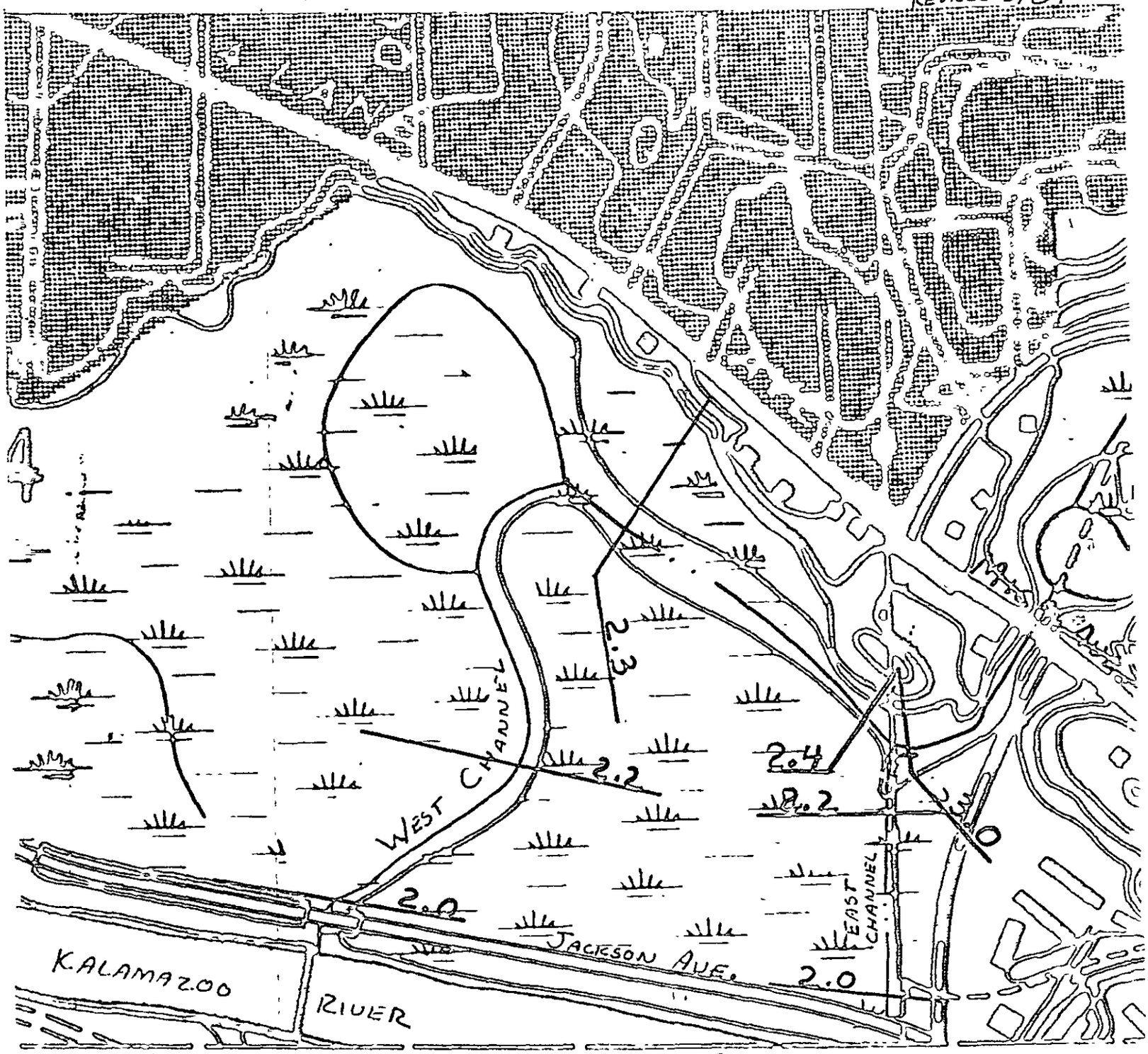
DIVIDED FLOW ANALYSIS D/S MICHIGAN AVE.

LOCATION SKETCH (REVISED)

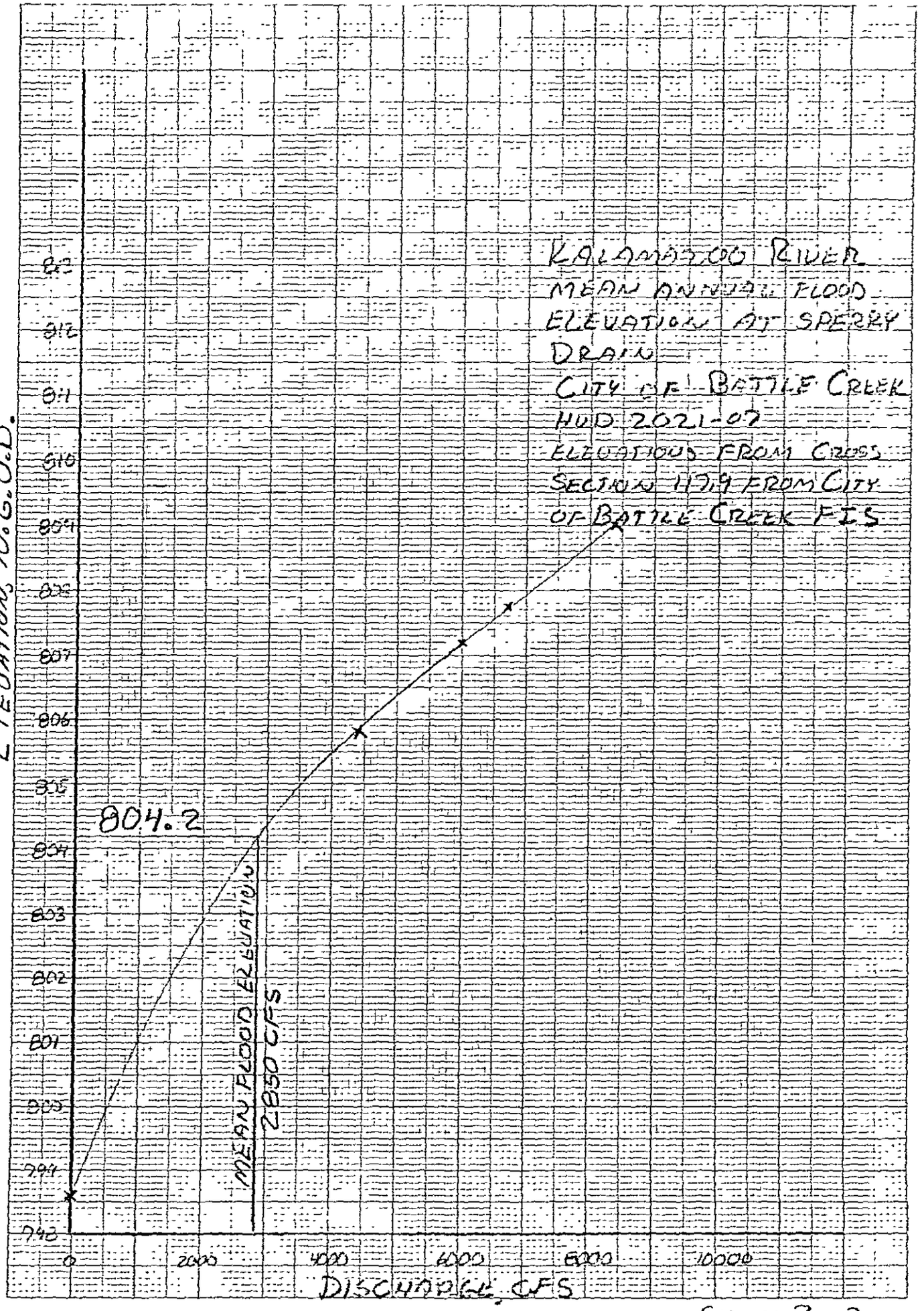
FIELD CROSS SECTION LOCATIONS

RECEIVED
JUN 19 1981
WATER MANAGEMENT

HUD 2021-07
DRB 1/81
REVISED 6/81




MATCH LINE SEE SHEET 3




SHEET 2 OF 2
DRR 5/80

SPERRY DRAIN
CITY OF BATTLE CREEK

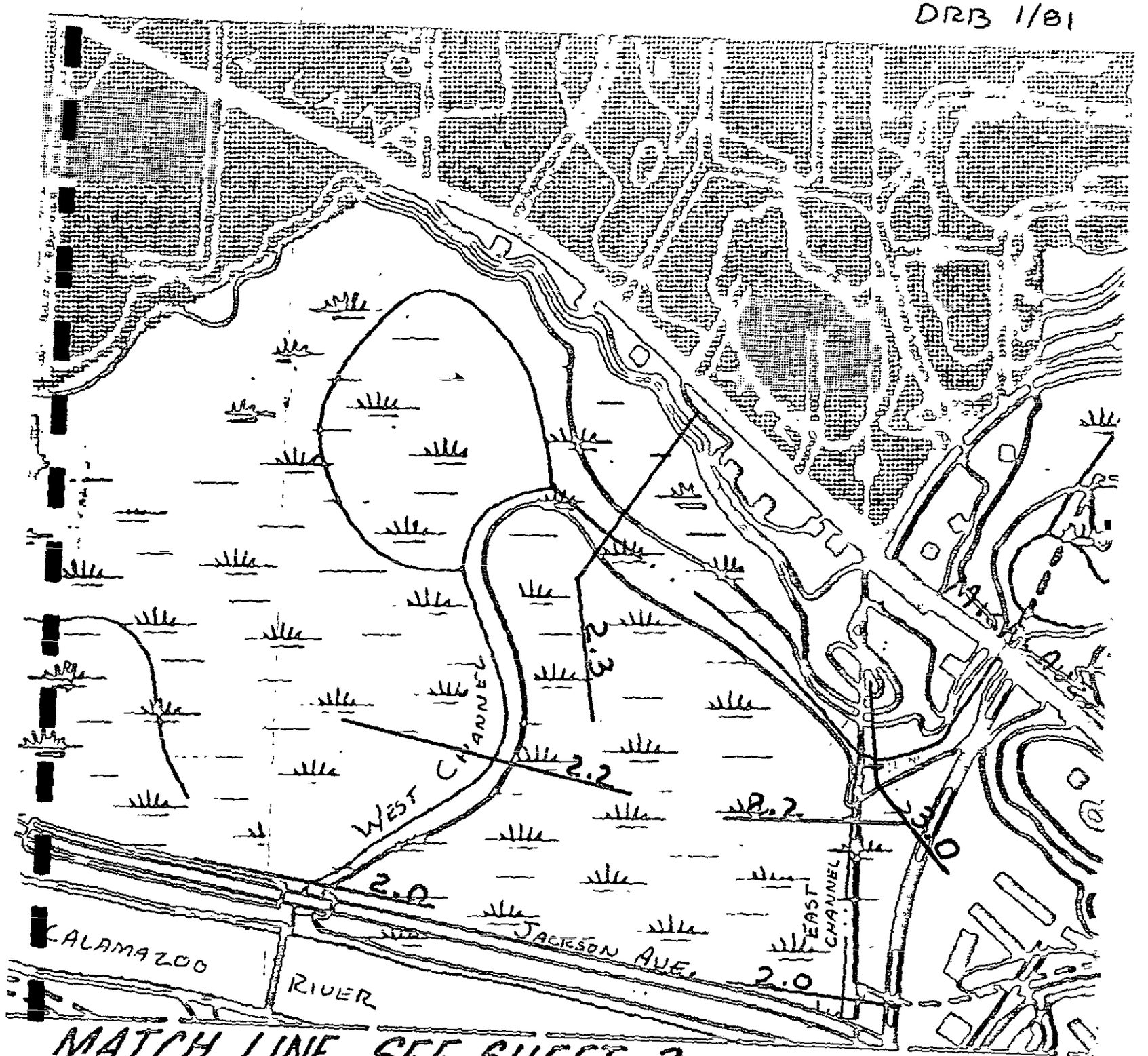
EXHIBIT 6

DIVIDED FLOW ANALYSIS
D/S MICHIGAN AVENUE

# SPERRY DRAIN

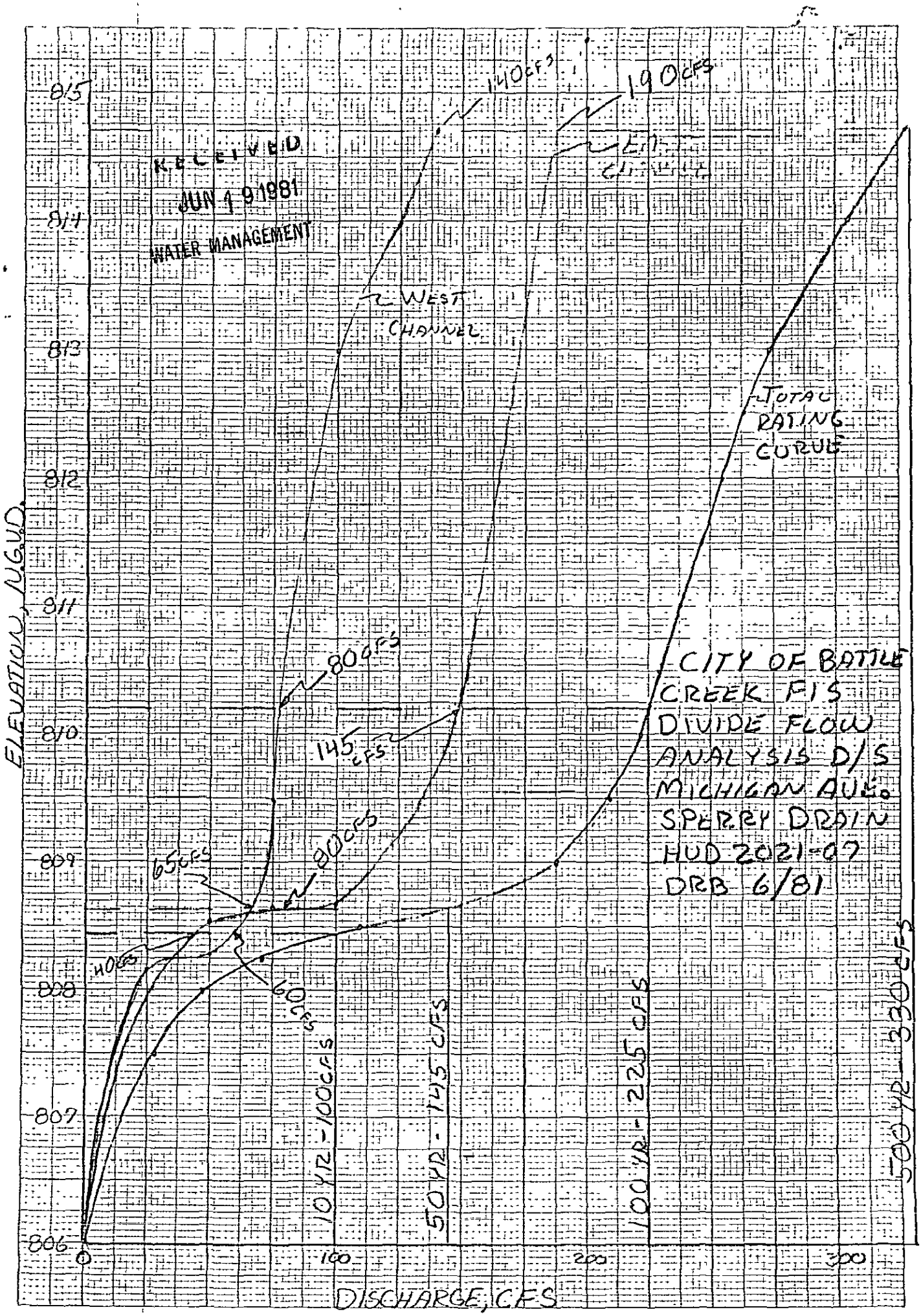
DIVIDED FLOW ANALYSIS D/S MICHIGAN AVE.
LOCATION SKETCH
FIELD CROSS SECTION LOCATIONS

HOO 2021-07
DRB 1/81

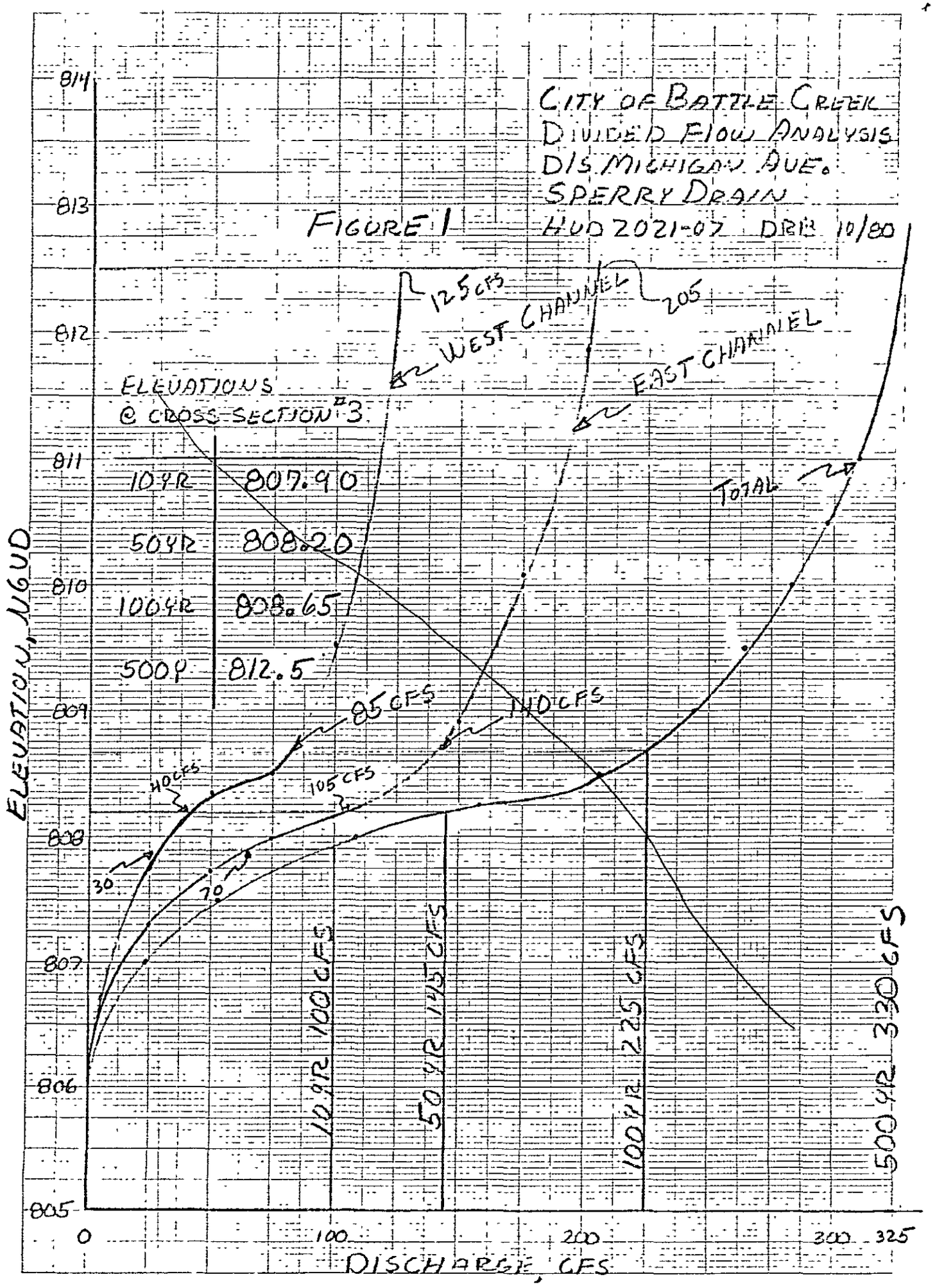



MATCH LINE SEE SHEET 3

SHEET 1 of 3


RECEIVED
JUN 19 1981
WATER MANAGEMENT
140 CFS
190 CFS
WEST CHANNEL
JOTAC RATING CURVE
CITY OF BATTLE CREEK FIS DIVIDE FLOW ANALYSIS D/S MICHIGAN AVE. SPERRY DRAIN HUD 2021-07 DRB 6/81
800 CFS
145 CFS
80 CFS
65 CFS
60 CFS
10 YR - 100 CFS
50 YR - 145 CFS
100 YR - 225 CFS
500 YR - 330 CFS
ELEVATION, NGVD
DISCHARGE, CFS
815
814
813
812
811
810
809
808
807
806
0
100
200
300

SHEET 2 OF 2


CITY OF BATTLE CREEK
DIVIDED FLOW ANALYSIS
D/S MICHIGAN AVE.
SPERRY DRAIN
HUD 2021-07 DRB 10/80
FIGURE 1
125 CFS
WEST CHANNEL
205
EAST CHANNEL
ELEVATIONS
@ CROSS SECTION #3
10 YR 807.90
50 YR 808.20
100 YR 808.65
500 YR 812.5
TOTAL
85 CFS
110 CFS
110 CFS
105 CFS
30
70
10 YR 100 CFS
50 YR 175 CFS
100 YR 225 CFS
500 YR 320 CFS
ELEVATION, NGVD
DISCHARGE, CFS
814
813
812
811
810
809
808
807
806
805
0
100
200
300
325

# SPRING BRANCH - EAST CHANNEL PROFILES

REACH 1 ZONE A6

JACKSON STREET

ELEVATION IN FEET (NGVD)

820
816
812
808
804
800
796
792

0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400

DISTANCE IN FEET

A

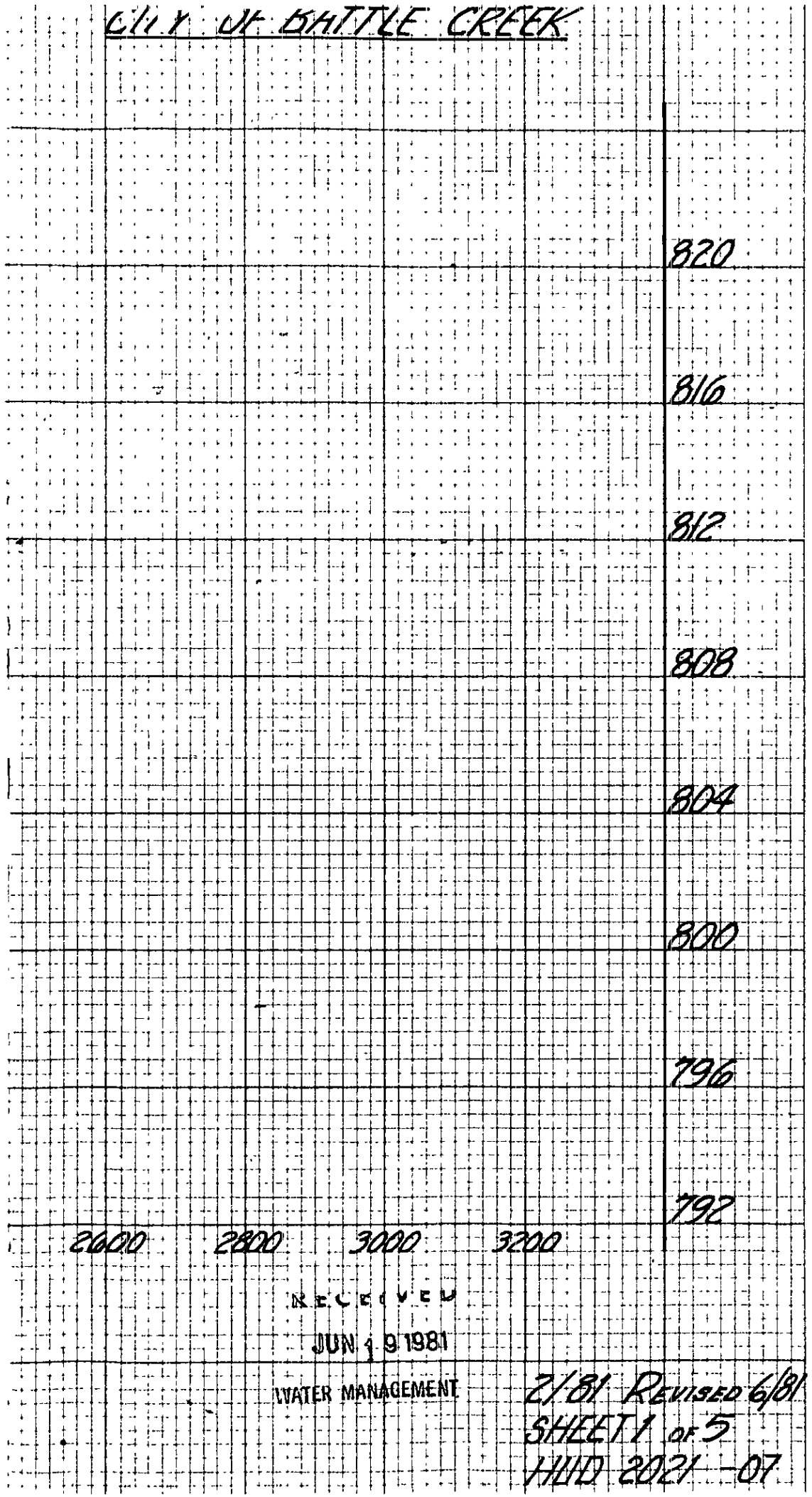
B

SCALE
HORIZ. 1"=200'
VERT. 1"=4'

LEGEND

- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM

CITY OF BATTLE CREEK




RECEIVED
JUN 19 1981
WATER MANAGEMENT

2/81 REVISED 6/81
SHEET 1 OF 5
HUD 2021-07

# SPERRY DRAIN - WEST CHANNEL PROFILES

REACH 1 ZONE A6

JACKSON STREET

ELEVATION IN FEET (N.G.W.D.)

820
816
812
808
804
800
796
792

0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400

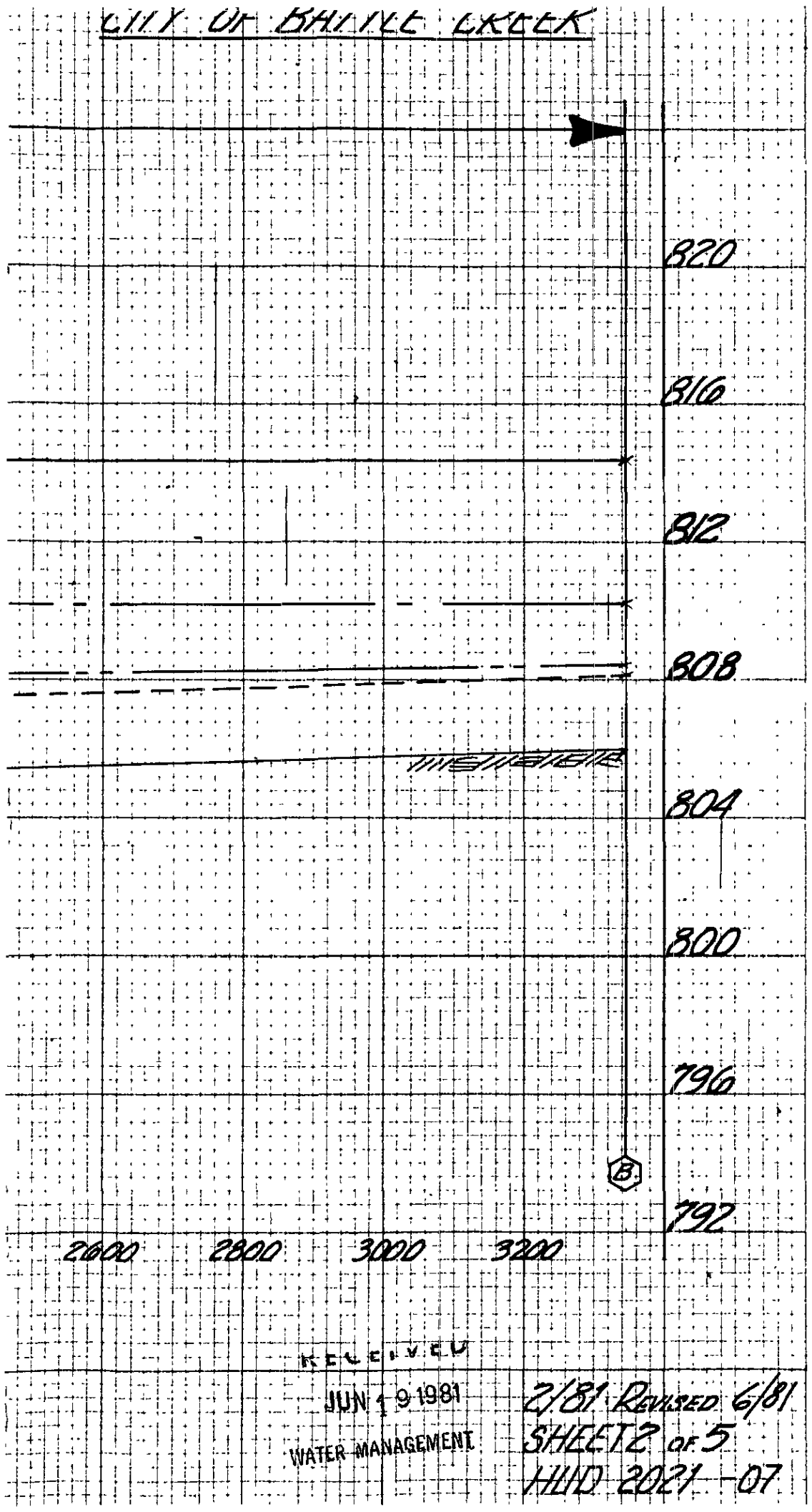
DISTANCE IN FEET

A

SCALE
HORIZ. 1"=200'
VERT. 1"=4'

LEGEND

500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM




RECEIVED
JUN 19 1981
WATER MANAGEMENT

2/81 REVISED 6/81
SHEET 2 OF 5
HUD 2021-07

STACK DIAGRAM

REACH 1 ZONE A6 | REACH 2 ZONE A11 | REACH 3

MICHIGAN AVENUE

RIDGEMADE STREET

ELEVATION IN FEET (NGVD)

828
824
820
816
812
808
804
800

3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 5200 5400 5600

DISTANCE IN FEET

B C D E F G

MEAN STREAM BED

MEAN STREAM BED

SCALE
HORIZ. 1"=200'
VERT. 1"=4'

LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
MEAN STREAM BOTTOM

CITY OF BATTLE CREEK

WEST

828

824

820

816

812

808

804

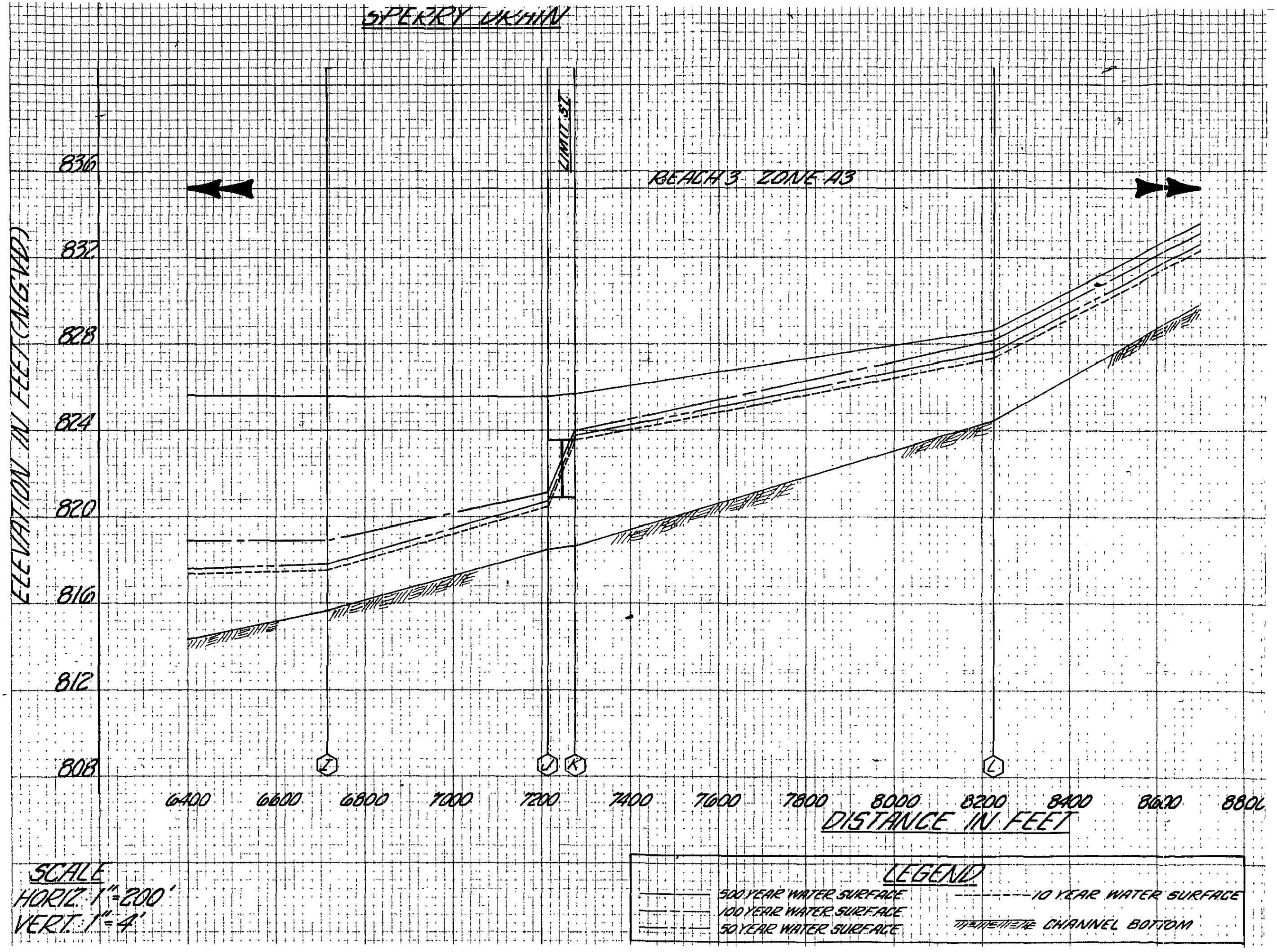
800

5800 6000 6200 6400

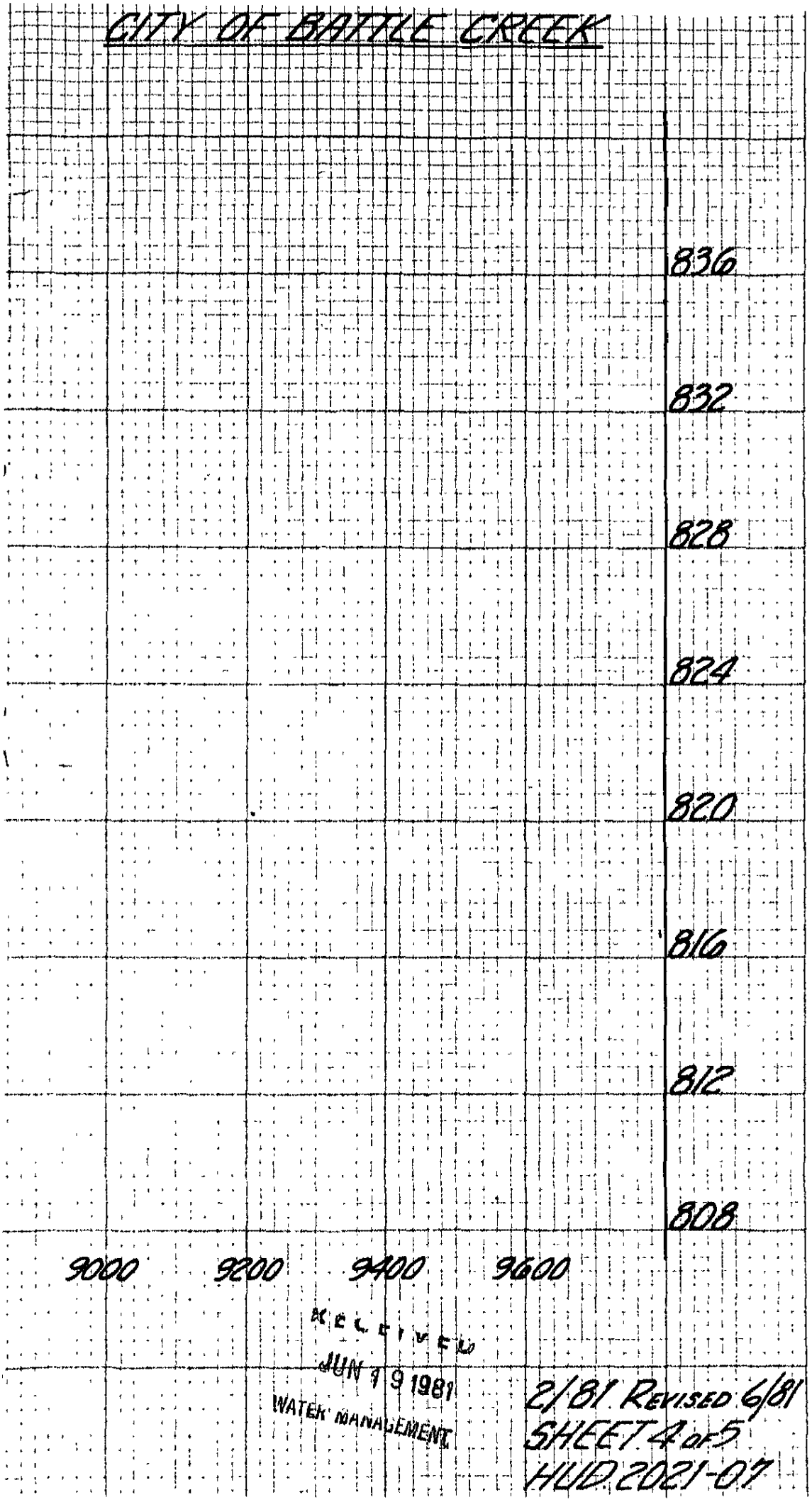
RECEIVED
JUN 1 9 1981
WATER MANAGEMENT

2/81 REVISED 6/81
SHEET 3 OF 5
HUC 2021-01

K&E 10 X 10 TO THE INCH
KEUFFEL & ESSER CO
PRINTED IN U.S.A. 7K1001


SPERRY DRAIN
LIMIT ST.
REACH 3 ZONE A3
ELEVATION IN FEET (N.G.V.D.)
836
832
828
824
820
816
812
808
I
J
K
L
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
DISTANCE IN FEET
SCALE
HORIZ. 1"=200'
VERT. 1"=4'
LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM

# CITY OF BATTLE CREEK




RECEIVED
JUN 19 1981
WATER MANAGEMENT

2/81 REVISED 6/81
SHEET 4 of 5
HUD 2021-07

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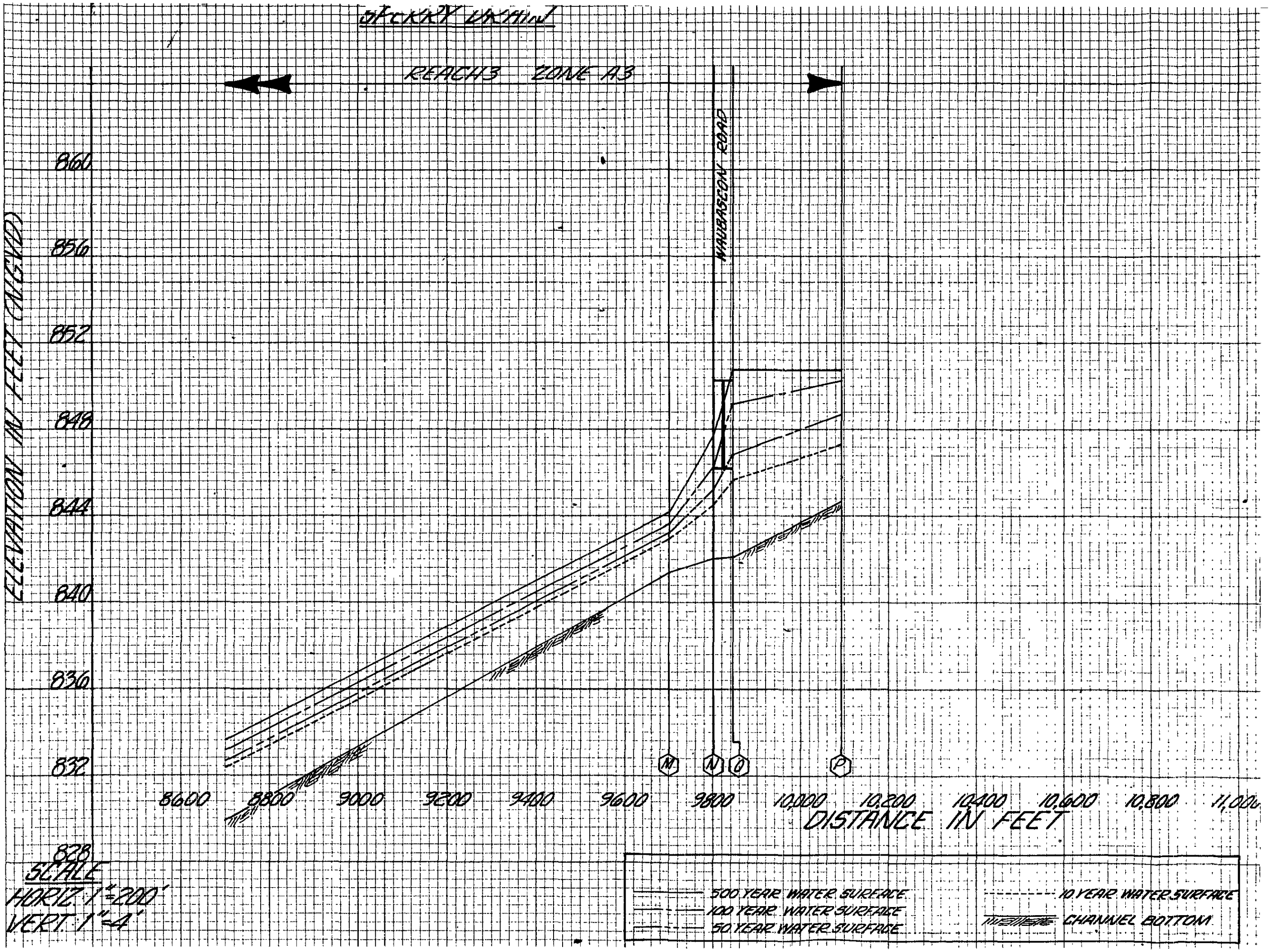
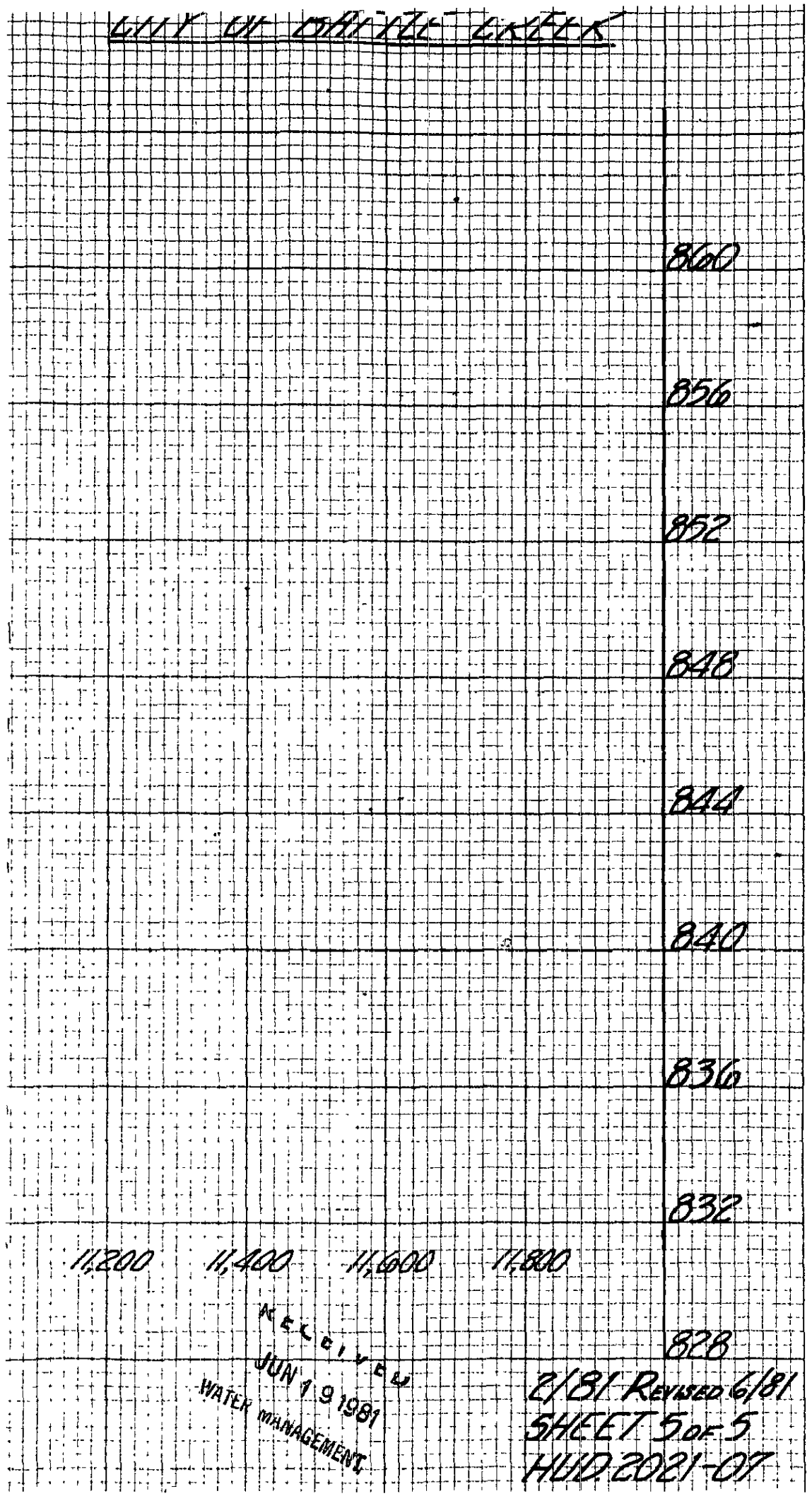
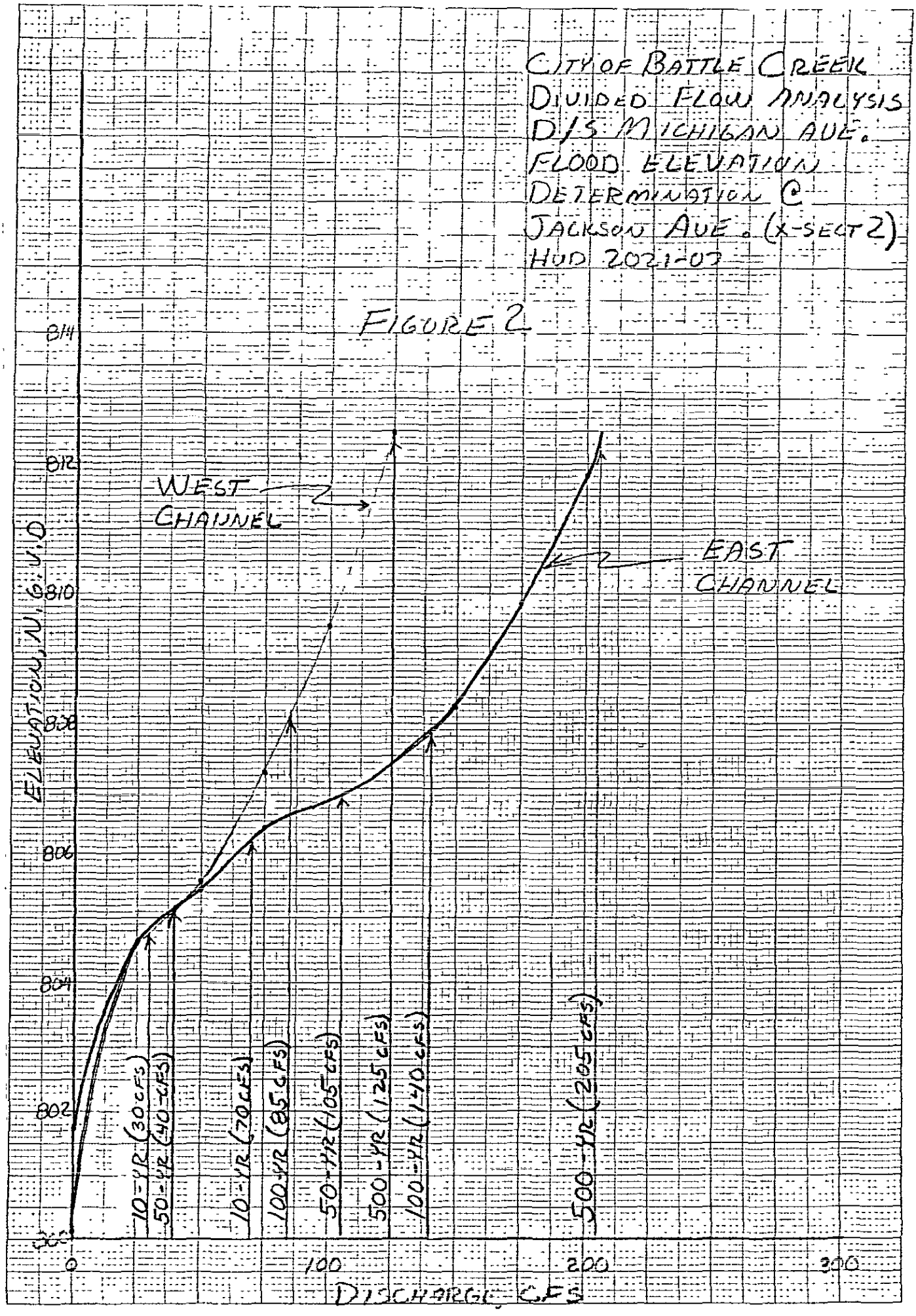
KEUFFEL & ESSER CO



SPERRY DRAIN
REACH 3 ZONE A3
WAUBASCON ROAD
ELEVATION IN FEET (NGVD)
860
856
852
848
844
840
836
832
828
8600
8800
9000
9200
9400
9600
9800
10,000
10,200
10,400
10,600
10,800
11,000
DISTANCE IN FEET
M
N
O
P
SCALE
HORIZ. 1"=200'
VERT. 1"=4'
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM




K+E 10 X 10 TO THE INCH
KEUFFEL & ESSER CO
PRINTED IN U.S.A. 751001


CITY OF BATTLE CREEK
DIVIDED FLOW ANALYSIS
D/S MICHIGAN AVE.
FLOOD ELEVATION
DETERMINATION @
JACKSON AVE. (X-SECT 2)
HUD 2021-07
FIGURE 2
WEST CHANNEL
EAST CHANNEL
ELEVATION, N.G.V.D.
814
812
810
808
806
804
802
800
0
100
200
300
DISCHARGE C.F.S.
10-YR (30 CFS)
50-YR (40 CFS)
10-YR (70 CFS)
100-YR (85 CFS)
50-YR (105 CFS)
500-YR (125 CFS)
100-YR (140 CFS)
500-YR (205 CFS)

SHEET 3 OF 3

WAUBASCON CREEK
BEDFORD TOWNSHIP AND
CITY OF BATTLE CREEK

EXHIBIT 7

WAUBASCON CREEK PROFILES

# BEDFORD TOWNSHIP, CITY OF BATTLE CREEK

BACKWATER FROM KALAMAZOO RIVER

ELEVATION IN FEET (NGVD)

816
812
808
804
800
796
792
788

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500

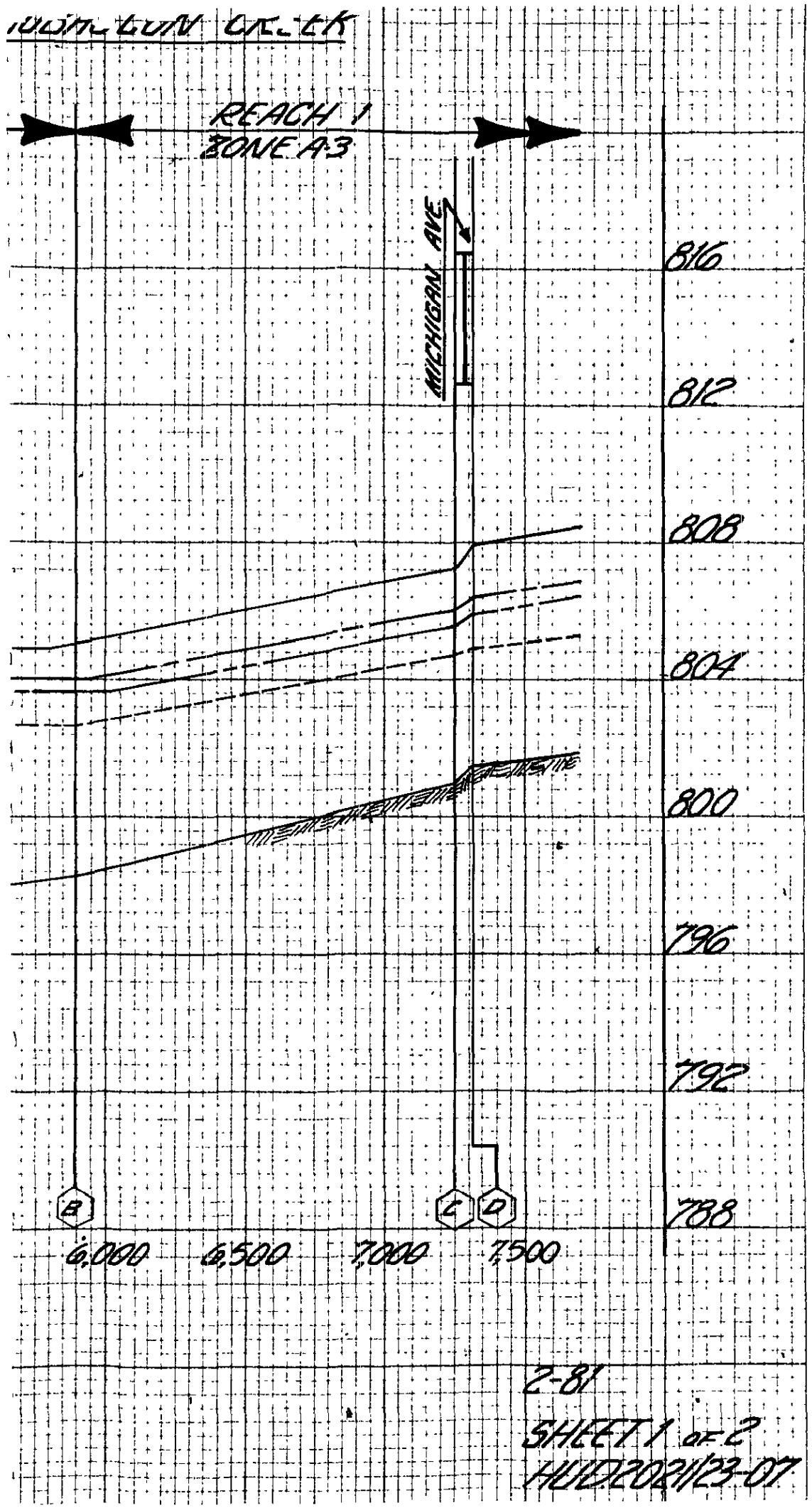
A

DISTANCE IN FEET

SCALE
HORIZ. 1"=500'
VERT. 1"=4'

LEGEND

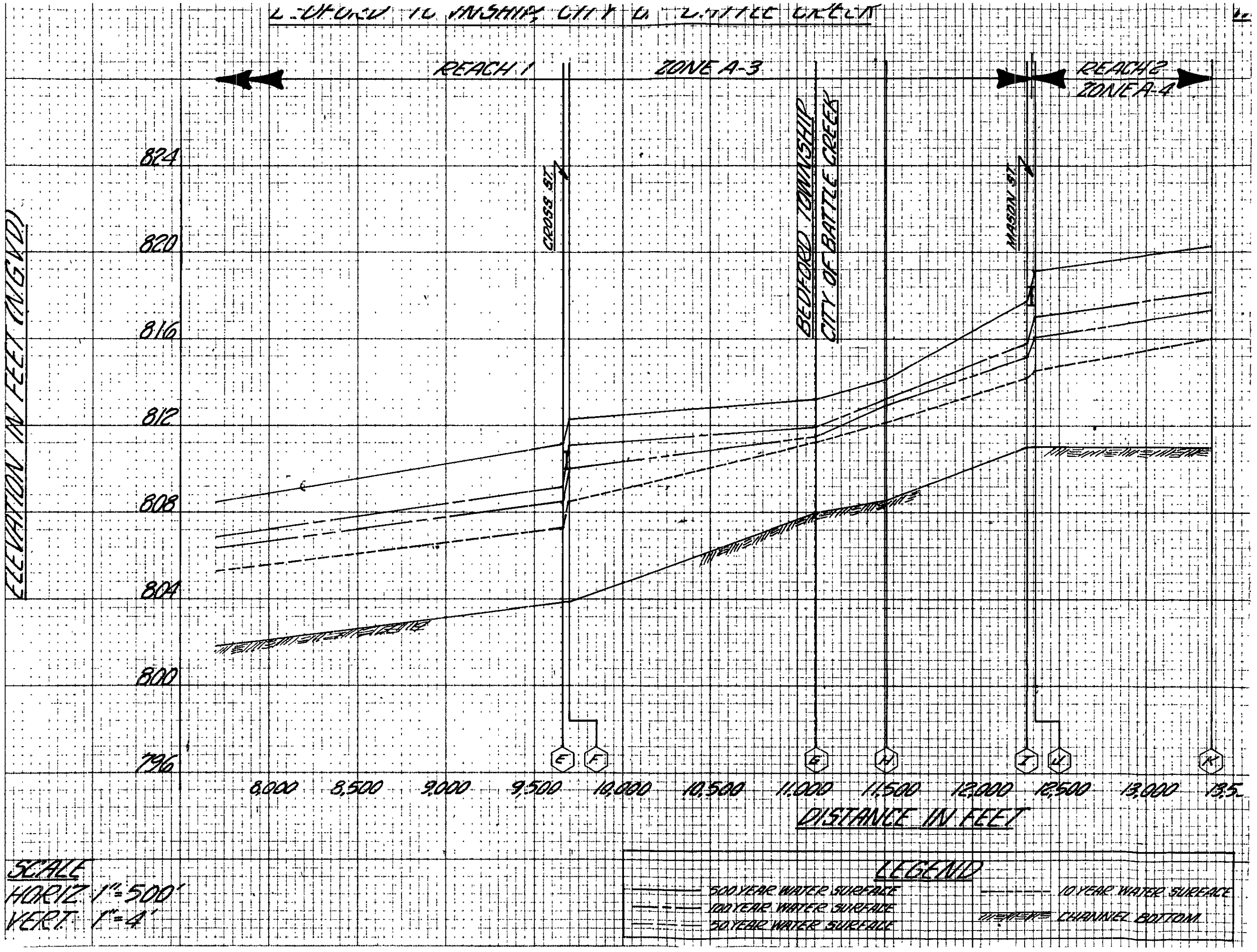
- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM




2-81

SHEET 1 OF 2

HUD 2021/23-07



BEDFORD TOWNSHIP, CITY OF BATTLE CREEK
REACH 1
ZONE A-3
REACH 2
ZONE A-4
CROSS ST.
BEDFORD TOWNSHIP
CITY OF BATTLE CREEK
MASON ST.
ELEVATION IN FEET (N.G.V.D.)
824
820
816
812
808
804
800
796
E
F
G
H
I
J
K
8,000
8,500
9,000
9,500
10,000
10,500
11,000
11,500
12,000
12,500
13,000
13,5
DISTANCE IN FEET
SCALE
HORIZ. 1"=500'
VERT. 1"=4'
LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM

824

820

816

812

808

804

800

796

2-81

SHEET 2 of 2

HUD 2021/23-07

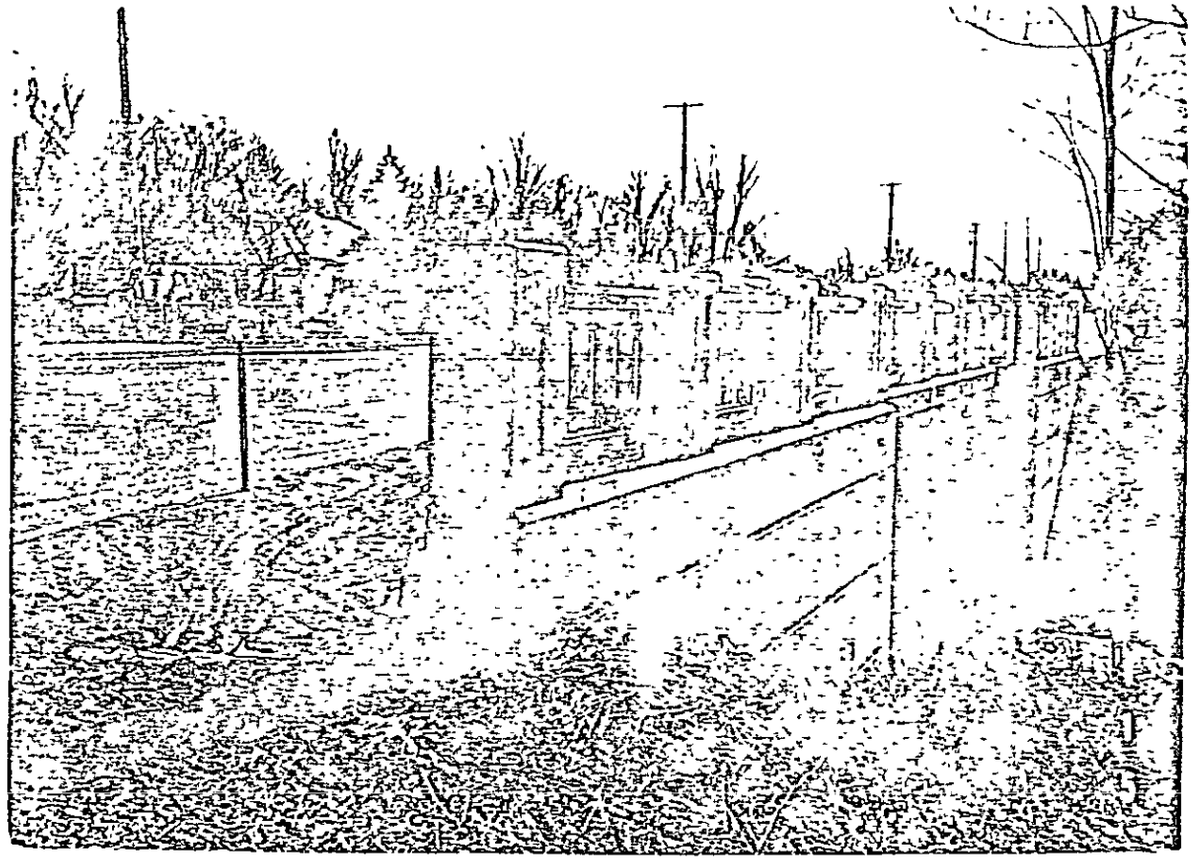
WAUBASCON CREEK

BEDFORD TOWNSHIP AND

CITY OF BATTLE CREEK

EXHIBIT 8

WAUBASCON CREEK BRIDGE NOTES AND SKETCHES



SEC #115 - TOP VIEW MICHIGAN AVE. BRIDGE AT WABASCON CREEK (DOWNSTREAM)



3

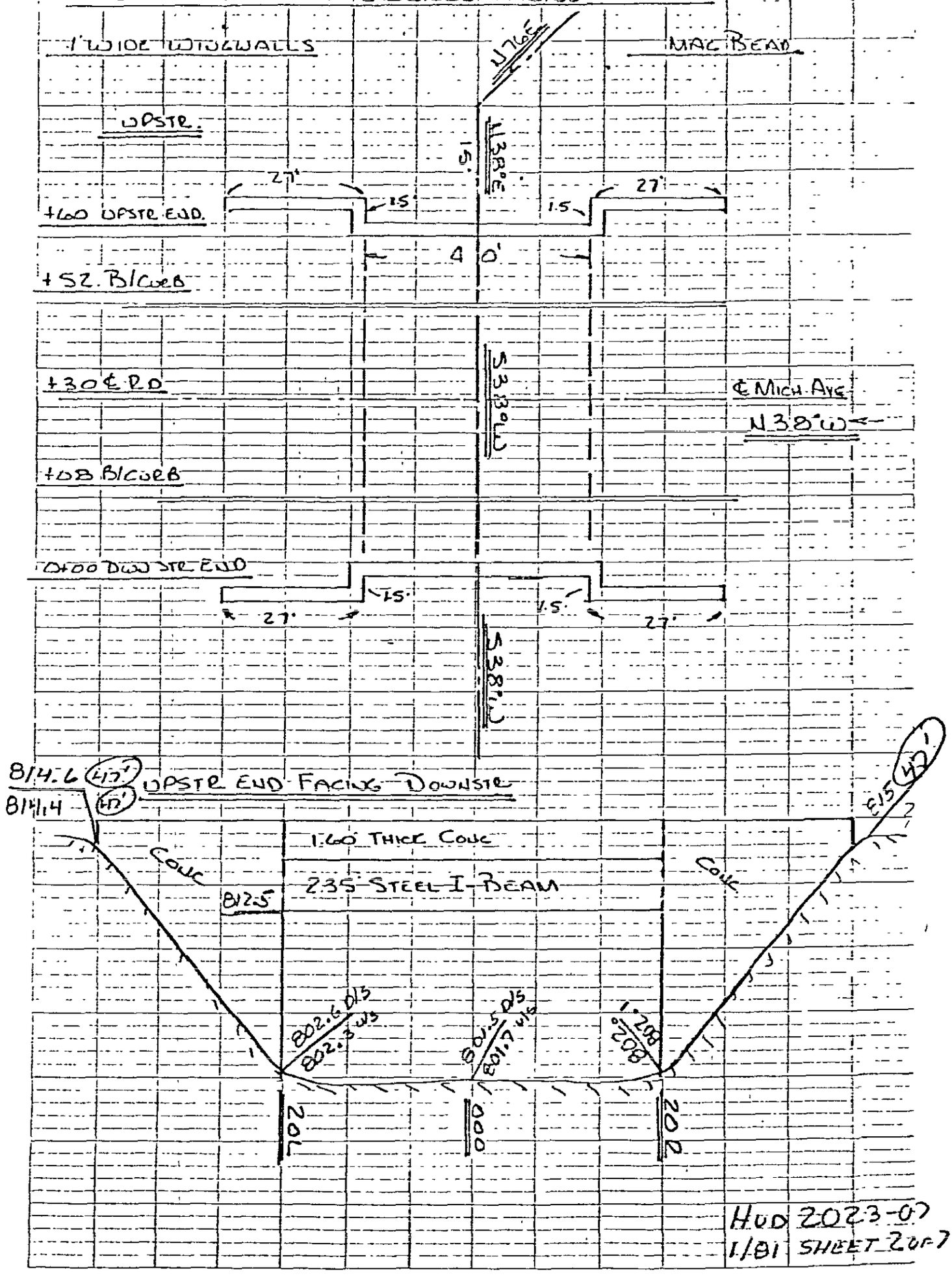
CROSS-SECTION # 115 WABASCON DR. AT MICH AVE.

HUD 2023-07
1/81 SHEET 1 OF 1

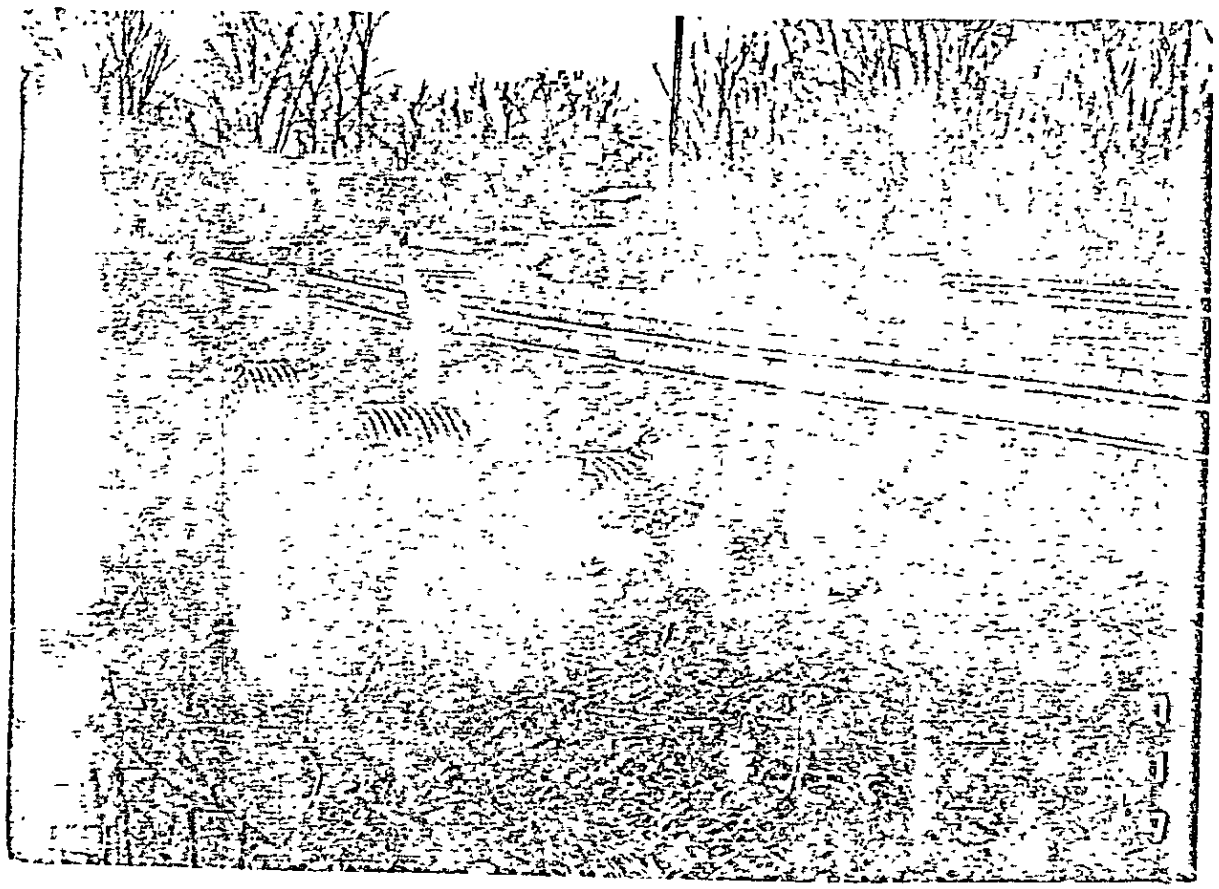
HUD 2023-07

Cross Section #115 Wabascon Creek At Mich Ave

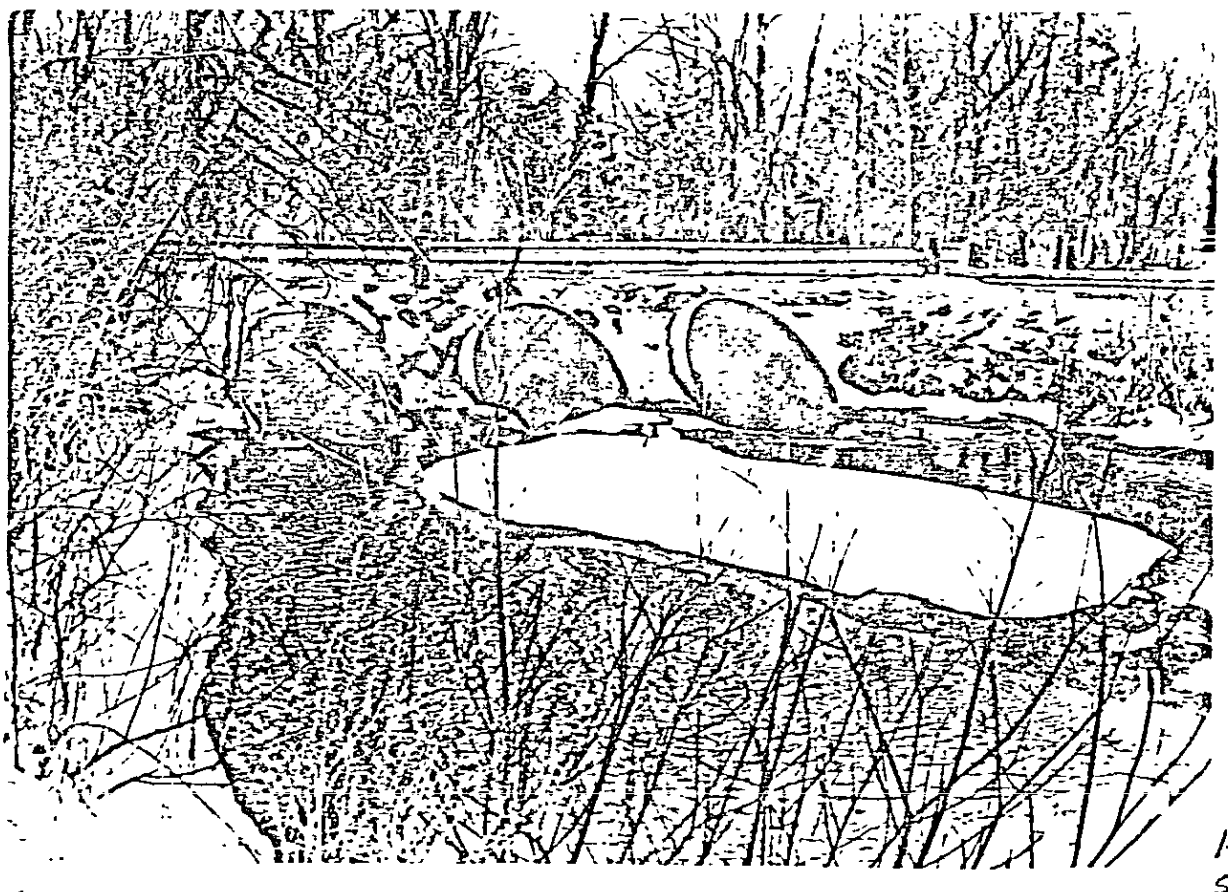
Book 5




HUD 2023-07
1/81 SHEET 2 OF 7



SEC #117 - TOP VIEW CROSS ST & WABASCON CREEK BRIDGE (UPSTREAM)



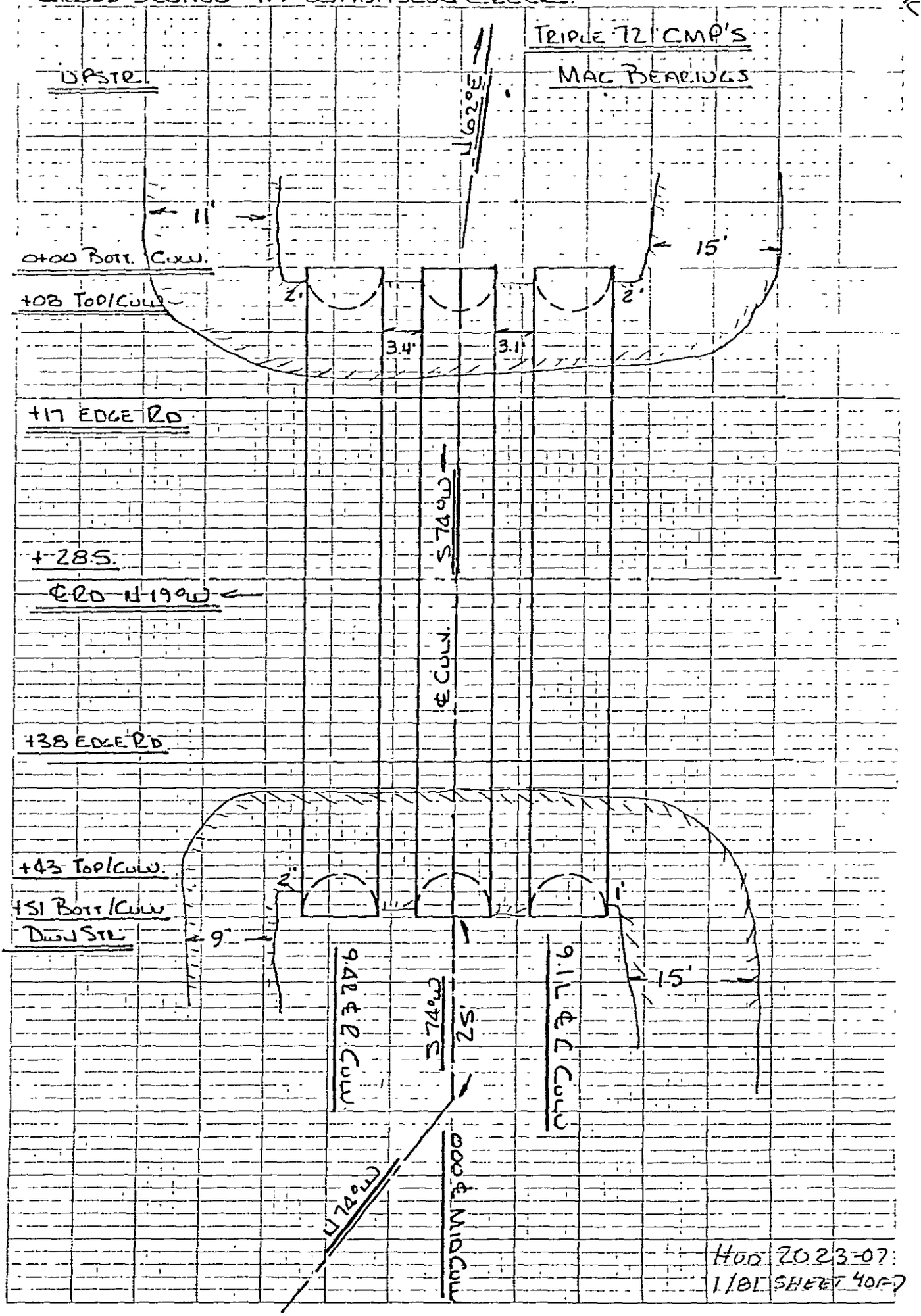
CROSS SECTION #117 - WABASCON CREEK AT CROSS STREET (UPSTREAM)

HUD 2023-07
SHEET 3 OF 7
1/81

HUD 2023-05

103 Book 5

# CROSS-SECTION #117 WABASCON CREEK




HUD 2023-07
1.181 SHEET 4 OF 7

Bridge Location: Cross St.
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + Σk, Σk = $k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge:

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 3-72" CMP's = 85 Wp = 56

$R = A/wp$ 85/56 $R^{4/3} = 2.02$ $L = 35$

n (composite) =

$K_f = 29.1 \times (0.024)^2 \times 35 / 2.02 = 0.27$

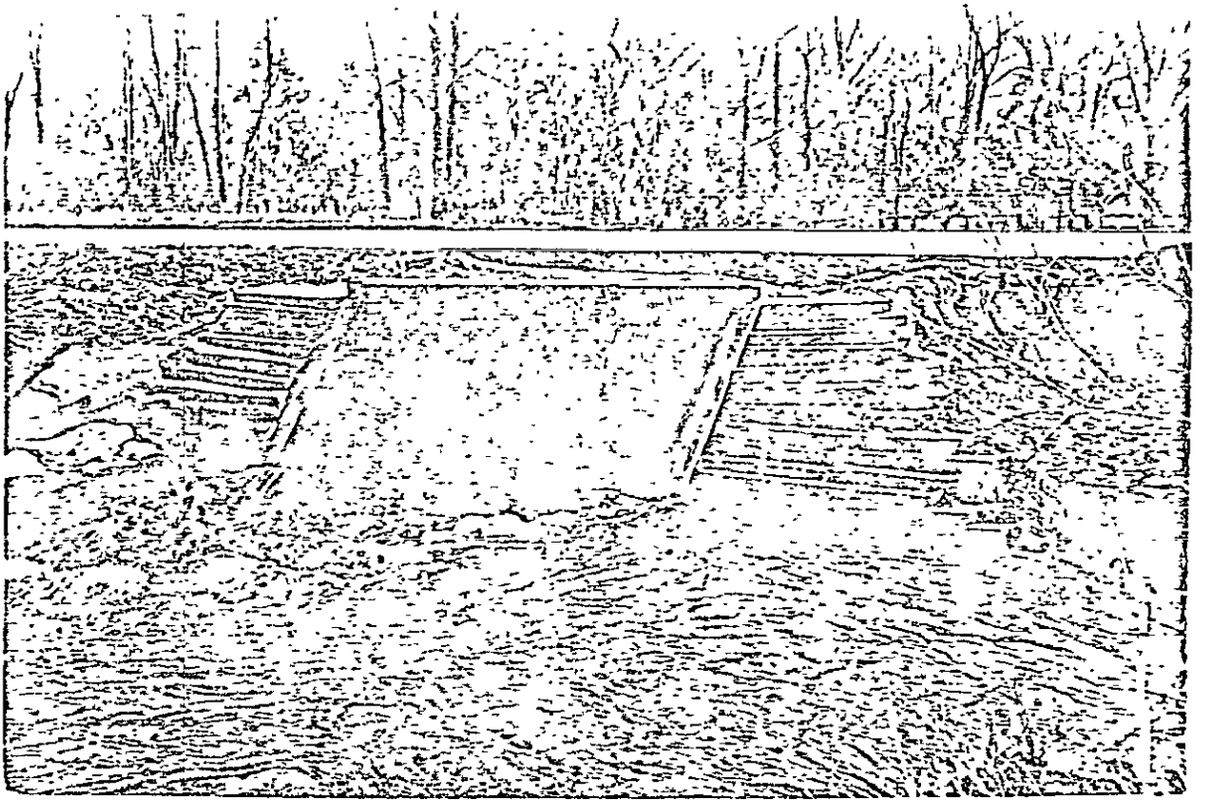
$K_e$ = 0.7 (MITERED TO CONFORM TO FILL SLOPE) — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 45

$K_p$ = 0 if bridge has no intermediate piers

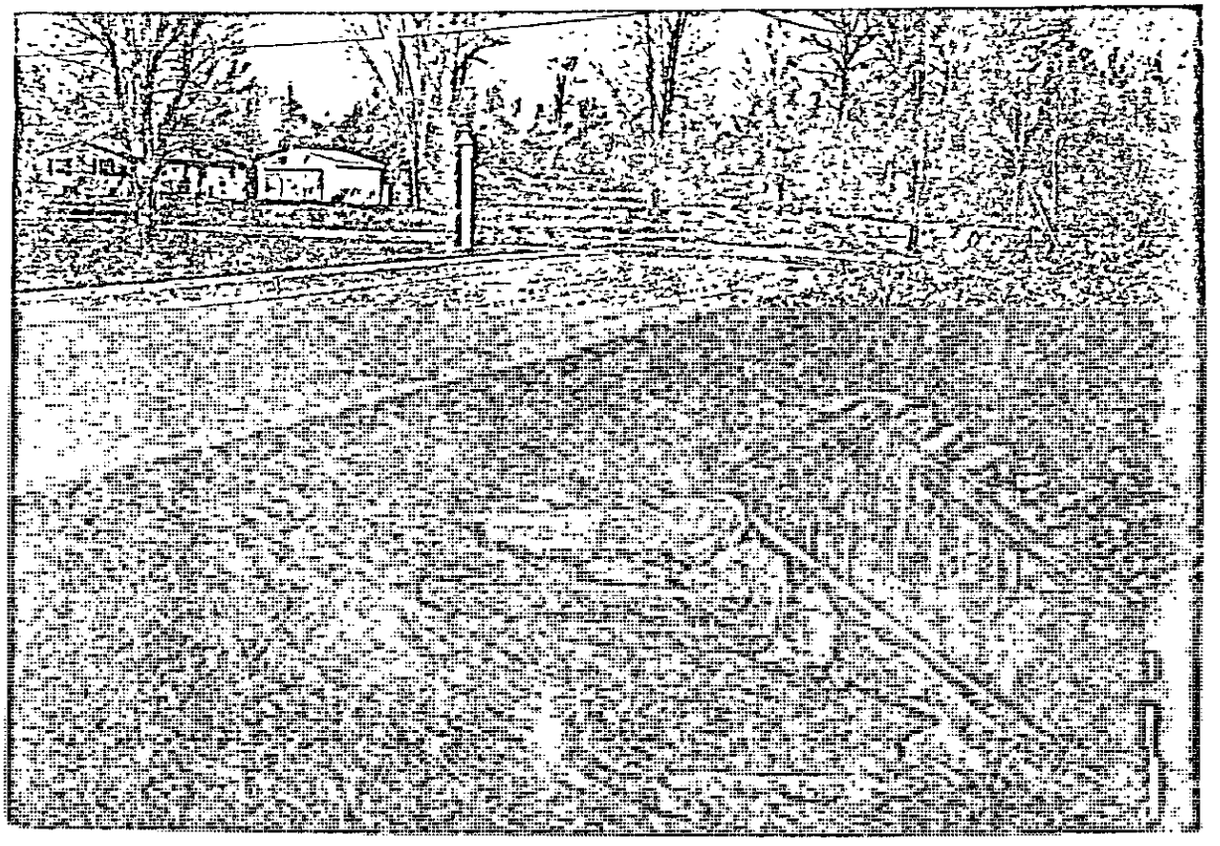
$K_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + 0.27 + 0.7 + .05 = 2.02
3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0 (0 if read off BT cards)
5. BWC = Bottom width of bridge opening (inc. piers) = 14.4
   Bottom width of obstruction = 0. — field data
   Bridge opening inc. piers = 85
8. SS = side slope = 0
   (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 804.1
   (0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 804.1
    (0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No. (Job No.) Project Suffix |
|---|---|---|---|---|
| Wabscon Cr. | DRB DATE 11/80 | DATE | 5 OF 7 | Owner HUD • 2023 • 07 |



SEC "C" - DOWNSTREAM END MASON ST AND WABASON CREEK BRIDGE



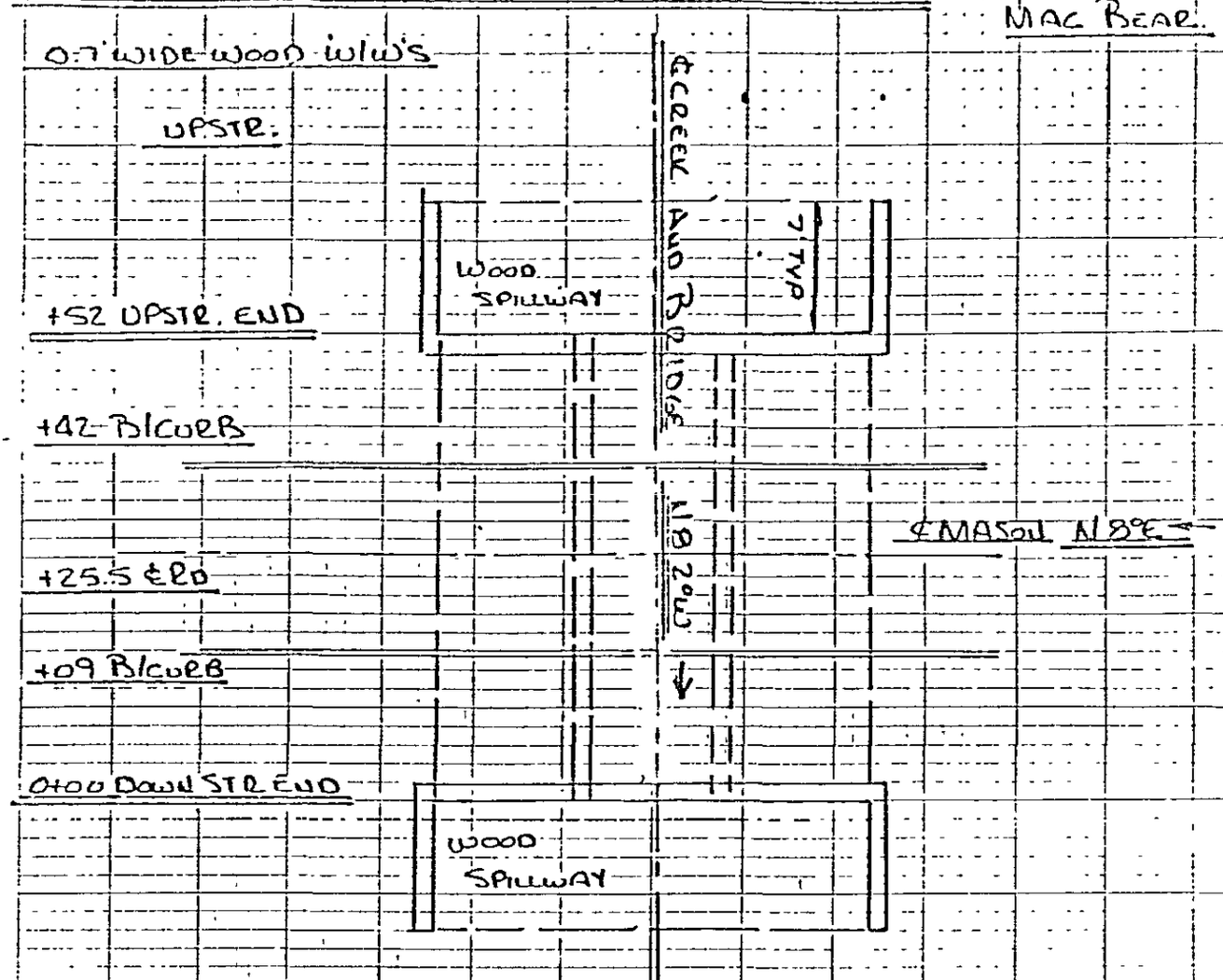
SEC "D" - TOP VIEW MASON ST AND WABASSON BRIDGE (UPSTREAM)

HUD 2021-07
1/81 SHEET 6 OF 7

2021-0 Cross-Section #1 Wabasoon Creek At Mason Book 5

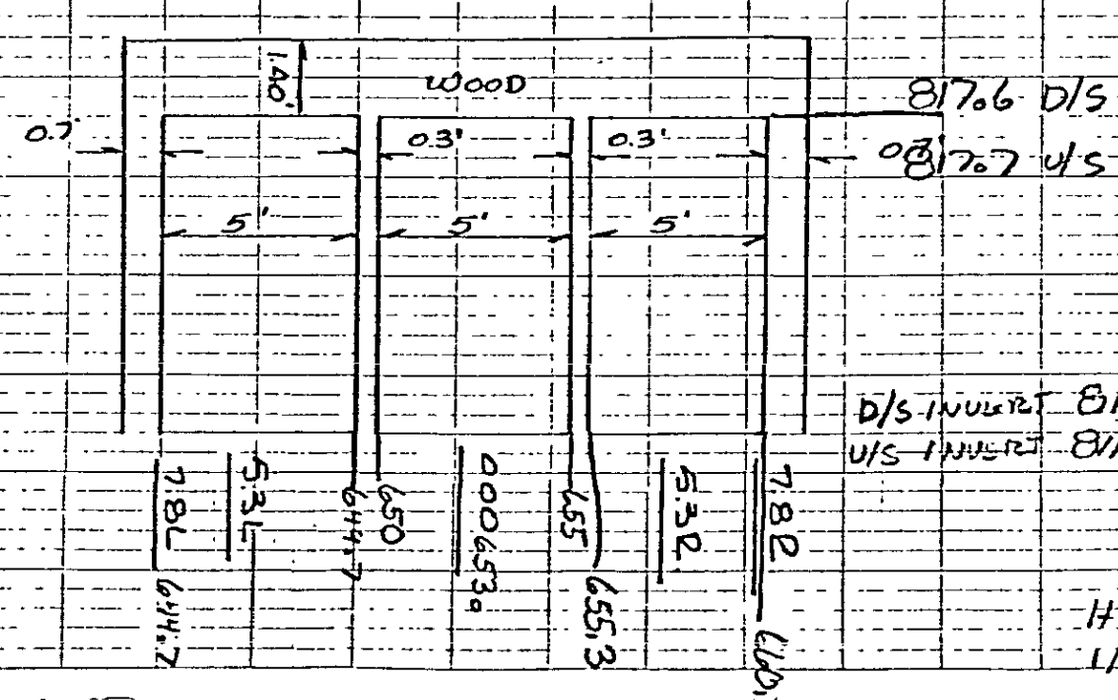
L&R OFFSETS FROM ℄ BRIDGE FACING DOWNSTR

MAC BEAR




L R

UPSTR. END FACING DOWNSTR

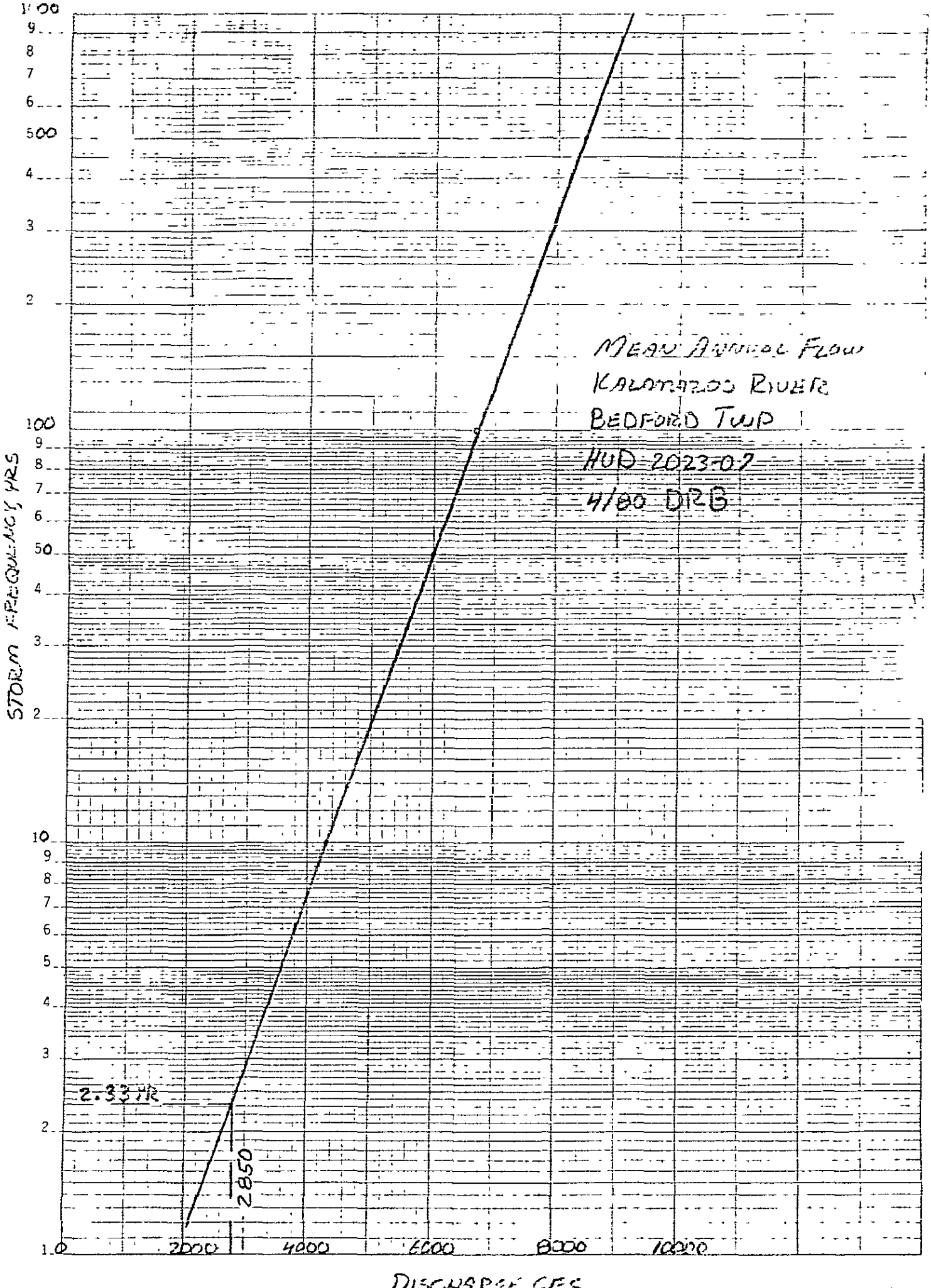


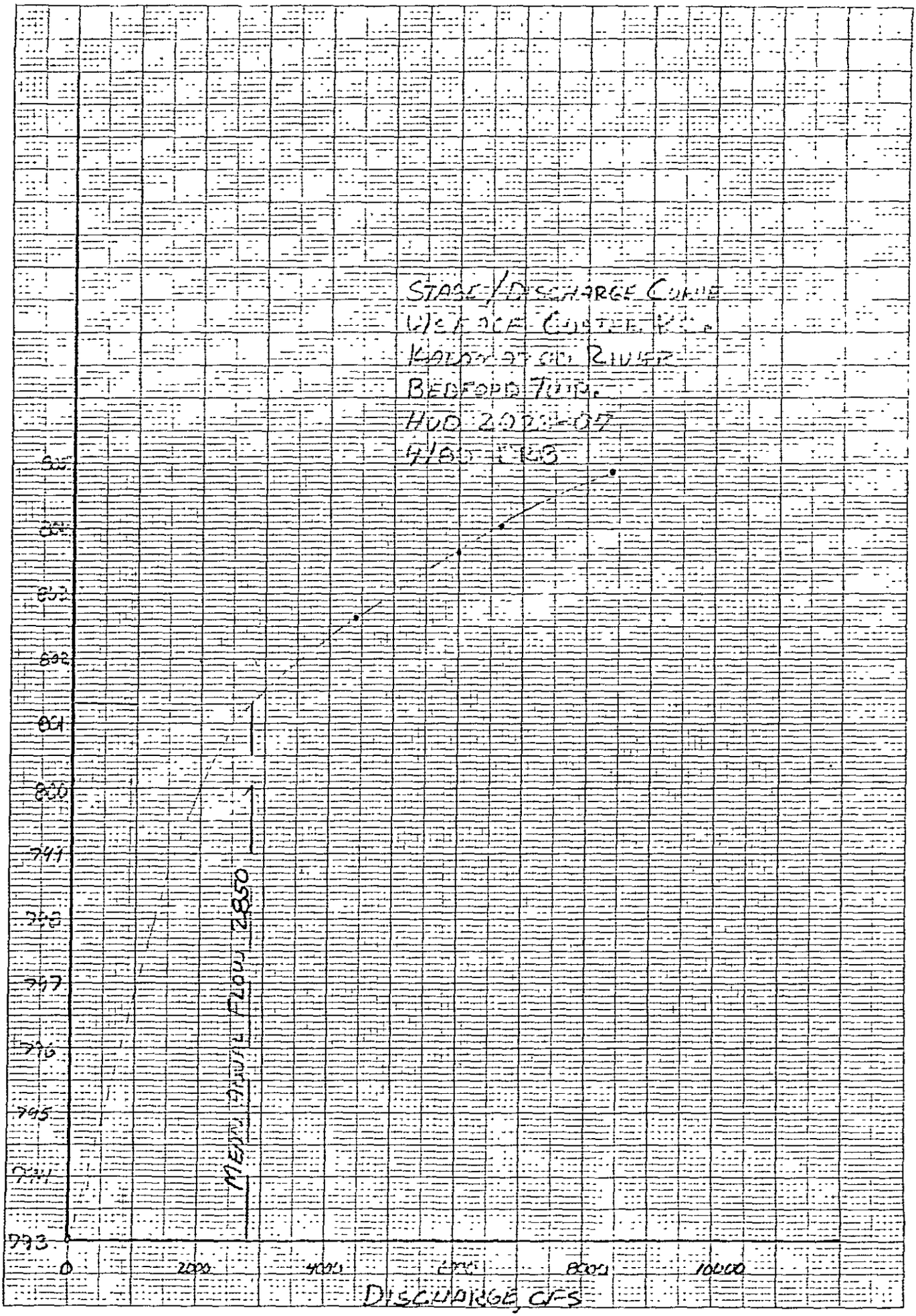

HUD 2021-07
1/81 SHEET 7 OF 7

WAUBASCON CREEK
BEDFORD TOWNSHIP AND
CITY OF BATTLE CREEK

EXHIBIT 9

KALAMAZOO RIVER MEAN ANNUAL WATER SURFACE


MEAN ANNUAL FLOW
KALAMAZOO RIVER
BEDFORD TWP
HUD 2023-07
4/80 DRB
2.33 YR
2850
STORM FREQUENCY, YRS
DISCHARGE, CFS
1.0
2000
4000
6000
8000
10000
SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO MADE IN U.S.A.
16 5506




46 1320
K+E 10 X 10 TO ½ INCH 7 X 10 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: Sperry Drain East Channel

4) DOCUMENT TYPE: rating curve

00BREAK00

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14:43:21  START OF TRANSLATION

**        PARAMETER VALUES        **

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3PAPER    = 3PART

          JOB HEC2,USER=DEMUD17M;
WARNING   IF THIS STATEMENT HAS BEEN GENERATED
          VALUE FILENAM,WHOLD,UK=MEG200,CPU=30,PAPER=1PART,SIZE=200,STEP=HEC2,
               SUB=SUBNAME,COPIES=1,HKDVC=452;
          JUMP 8PAPER&&X;
          8PARTX:
          OUTVAL 22,ND=I12PRT,DVC=PR;
          JUMP CONTX;
          3PARTX:
          OUTVAL 22,ND=I13PRT,DVC=PR;
          JUMP CONTX;
          1PARTX:
          OUTVAL 22;
          CONTX:
          INVOKE HEC2,ENG$CLLIB,VALUES=(21,22,UK=&UK,CPU=&CPU,PAPER=&PAPER,SIZE=&SIZE,
                    STEP=&STEP,SUB=&SUB,COPIES=&COPIES,HKDVC=&HKDVC);

          RECORD COUNT :     16

14:43.34  END OF TRANSLATION
```

EAST CHANNEL RATING CURVE EXHIBIT 2

RECEIVED JUN 19 1981 WATER MANAGEMENT

14:43:56 JOB EXECUTION LISTING

```
            JUMP DONE TO SPARTX
            JUMP DONE TO CONTX
            JUMP DONE TO HEC2
            START OF HEC2 EXECUTION
            STEP 5
            LOAD MODULE = HEC2 (79/2 /22 23:58)
            LIBRARY = MTAENGLM
14:43:57    STEP STARTED XPRTY=9
            FT04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HE3200 FOR EFN: #000082,FILE=D
            FT04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HE3200 FOR EFN: #000082,FILE=A
            FT04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HE3200 FOR EFN: #000082,FILE=E
            FT04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HE3200 FOR EFN: #000082,FILE=A
            FT04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HE3200 FOR EFN: #000082,FILE=F
            FT04.    2 CYLINDER(S) ALLOCATED ON VOLUME: HE3200 FOR EFN: #000082,FILE=F
            TASK  XII  IS  0  COMPLETED
            OUFO1,DFN=FILE=C      REMEMBER; REUSE=      0
            OUFO1,DFN=FILE=C      REMEMBER; REUSE=      0
            OUFO1,IFN=FILE=D      REMEMBER REUSE=       0
            OUFO1,IFN=FILE=F      REMEMBER REUSE=       0
            OUFO1,IFN=FILE=A      REMEMBER REUSE=       0
            OUFO1,DFN=FILE=E      REMEMBER; REUSE=      0    FILES=    1    CONNECTS=
            TOTAL NUMBER  FILES USED =    22  TRACKS
            FILE=D    ON  HE3200 :  NB  OF  IO  CONNECTS=      131
            FILE=C    ON  HE3200 :  NB  OF  IO  CONNECTS=      115
            H=P9      ON  HE3200 :  NB  OF  IO  CONNECTS=       15
            H=RD      ON  MTAPAK :  NB  OF  IO  CONNECTS=        2
            FILE=D    ON  HE3200 :  NB  OF  IO  CONNECTS=        3
            FILE=F    ON  HE3200 :  NB  OF  IO  CONNECTS=       37
            FILE=A    ON  HE3200 :  NB  OF  IO  CONNECTS=      127
            FILE=E    ON  HE3200 :  NB  OF  IO  CONNECTS=      139
            CPU          1.047                    PROG MISSING SEGTS       55   STACKOV      03
            ELAPSED      2.143                    SYS  MISSING SEGTS      137
            LINES          359   LIMIT     2ULIM     DACKING STORE       423792
            CARDS            0   LIMIT     2ULIM     BUFFER SIZE          15920   CPSIZE     2272
14:46:00    STEP COMPLETED

            JUMP DONE TO FINISH
            JUMP DONE TO SPART
            ***********************************
            *  READY SPART SCREEN PAD PAGER   *
            ***********************************

            START    14:43:56   LINES        359
            F-UP     14:46:00   CARDS          0
            CPU          .047
            ELAPSED     2.57
14:46:00    RESULT:  JOB COMPLETED
```

PRINTED IN U.S.A.
PERFECTION FORM PRINTED BY CONTROL MASTER FORMS

```
**************************************************
  HEC2 RELEASE DATED NOV 79 UPDATED FEB 1982
  ERROR CODE =  51
  MODIFICATION -  50,51,52
**************************************************

C
CITY OF BATTLE CREEK FLOOD CLEARANCE STUDY
TSPERRY DRAIN EXISTING FLOW ANALYSIS
T3      SPERRY DRAIN

J1   ICHECK     INQ       NINV      IDIR      STRT      METRIC    HOURS     Q         USEL      FQ
          0.        0.        0.        0.  0.000000      0.00      1.0       0.    137.200     1.000

J2   NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IDW       CHNIM     ITRACE
        1.000     0.000    -1.000     0.000     0.000     0.000     3.000     0.000     0.000     0.000

J3   VARIABLE CODES FOR SUMMARY PRINTOUT

       150.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J5   LPRNT     NUMSEC                    ********REQUESTED SECTION NUMBERS********

         -10.000   -10.000     1.000     1.000     1.000     1.000      .000      .000     0.000     0.000
QT       3.000    10.000    73.000   100.000   150.000   200.000     0.000     0.000     0.000     0.000
QC       0.120     0.120     0.035     0.300     0.500     0.060     0.300     0.000     0.000     0.000

                U/S FACE JACKSON ST. 60 INCH CONCRETE CULVEIT

X1       1.000    14.000   241.750   246.250     5.000     5.000     0.000     0.000     0.000     0.000
X3      10.000     0.000     0.000     0.000     5.000     0.000     0.000   617.800   617.800     0.000
GR     317.000   193.000   300.600   196.000   308.100   220.000   808.100   241.740   802.500   241.750
GR     801.500   242.000   800.500   243.000   800.250   244.000   302.500   245.000   801.500   246.000
GR     802.500   245.250   809.300   245.250   804.500   297.000   817.000   253.000     1.000     1.000
SB       0.000     4.350     3.000     3.000     4.000     0.000     1.000     0.000   802.250   802.750

                U/S FACE JACKSON ST. 60 INCH CONCRETE CULVERT

X1       1.000    14.000   247.750   246.250   175.000   175.000   175.000     0.000     0.000     0.000
X2       0.000     0.000     1.000   806.250   617.800     0.000     0.000     0.000     0.000     0.000
X3      13.000     0.000     0.000     0.000     0.000     0.000     0.000   617.800   617.800     0.000
BT      14.000   195.000   815.600     0.000   196.000   815.700     0.000   220.000   815.700     0.000
BT     241.740   815.700     0.000   241.750   815.700   804.000   242.000   815.700   805.000   243.000
BT     815.700   806.000   244.000   815.700   806.250   245.000   815.700   806.300   246.000   815.700
BT     809.000   246.250   815.700   804.300   246.250   815.700     0.000   294.700   815.700     0.000
BT     295.000   617.800     0.000     0.000     1.000     0.000     0.000     0.000     0.000     0.000
SB     815.700   195.000   808.600   196.000   808.100   220.000   804.100   241.740   804.000   241.750
GR     303.000   242.000   802.000   243.000   801.750   246.000   802.000   245.000   825.000   246.000
GR     804.000   246.250   809.300   246.260   809.300   296.000   817.650   253.000     0.000     0.000

                SD FT U/S JACKSON ST.

X1       2.000     9.000   239.000   248.000   50.000    50.000    50.000     0.000     0.000     0.000
GR     815.700   195.000   800.600   196.000   808.900   239.000   302.100   239.000   801.900   244.000
SB      60.600   249.000   939.340   334.000   829.300   254.000   315.700   305.000     0.000     0.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | 0.120 | 0.120 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 2.150 | 9.000 | 293.000 | 307.000 | 275.000 | 275.000 | 275.000 | 0.000 | -2.850 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 250.000 | 0.000 | 330.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 817.000 | 0.000 | 810.000 | 50.000 | 810.000 | 295.000 | 553.400 | 293.000 | 805.200 | 330.000 |
| EJ | 305.000 | 337.000 | 810.000 | 279.000 | 810.000 | 599.000 | 810.000 | 300.000 | 0.000 | 0.000 |

VALLEY SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.200 | 0.000 | 0.000 | 0.000 | 275.000 | 275.000 | 275.000 | 0.000 | 2.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 250.000 | 0.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 225.000 | 225.000 | 225.000 | 225.000 | 225.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 3.000 | 9.000 | 222.000 | 258.000 | 300.000 | 300.000 | 300.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 100.000 | 0.000 | 280.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 810.000 | 50.000 | 810.000 | 215.000 | 806.700 | 222.000 | 805.000 | 230.000 |
| GR | 806.700 | 238.000 | 810.000 | 249.000 | 810.000 | 330.000 | 029.000 | 380.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411-03 PRINTED BY ROTARY MANIFOLD FORMS
PRINTED IN U.S.A.

```
*****************************************************
  FEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3      SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        3.        0.        0.  0.000000      0.30       0.0        0.   604.200     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IBN       CHNIM     ITRACE

     2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
*****************************************************
  HEC2 RELEASE DATED NOW FG UPDATED FEB 1977
  ERROR CORR -  51
  MODIFICATION -  51,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3      SPERRY DRAIN

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    C        WSEL     FG
       0.       4.       0.       0.  0.002000     0.00     0.0      0.   804.200    0.000

J2  NPROF    IPLOT    PRFVS    XSECV    XSFCV    FV       ALLOC    I2H      CHNOM    ITRACE
     3.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

```
*****************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
 ERROR CORR -  01
 MODIFICATION -  50,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3.      SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        5.        0.        0.  0.000000     0.00      0.0       0.   004.200     0.300

J2  NPROF     IPLOT     PRFVS     XSSCV     XSECH     [illegible]     ALLDC     IEU       CHMIN     ITRACE

     4.000     0.000    -1.000     0.000     0.300     0.000     0.000     0.000     0.000     0.000
```

```
*****************************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  C
  MODIFICATION -  30,31,32
*****************************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3      SPERRY DRAIN

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       6.       0.       0.  0.000000    0.00     1.0      0.   804.200    0.000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBL      CHNIM    ITRACE

    15.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

**********

HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977

ERROR CORR - 01

MODIFICATION - 51,51,52

**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLOB | ELTRD | ELLOB | ELMIN | Q | CWSEL | CRIWS | VOL | TOPWID | VCH | AREA | ENRGY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 50.00 | 804.20 | 0.00 | 804.37 | 25.54 | 3.30 | 15.15 | 9.36 |
| | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 75.00 | 804.20 | 0.00 | 804.56 | 64.22 | 4.95 | 15.15 | 9.36 |
| | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 100.00 | 804.21 | 0.00 | 804.80 | 114.17 | 5.50 | 18.18 | 9.46 |
| | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 150.00 | 804.23 | 0.00 | 805.22 | 255.69 | 8.80 | 18.18 | 9.36 |
| * | 1.000 | 0.00 | 0.00 | 0.00 | 800.25 | 200.00 | 804.27 | 804.27 | 806.75 | 394.30 | 11.28 | 18.18 | 11.66 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 50.00 | 805.96 | 0.00 | 805.17 | 66.37 | 4.43 | 11.30 | 6.14 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 75.00 | 805.98 | 0.00 | 806.04 | 105.99 | 5.48 | 13.69 | 7.21 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 100.00 | 806.04 | 0.00 | 806.14 | 93.12 | 5.56 | 14.64 | 12.17 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 150.00 | 809.44 | 0.00 | 810.13 | 80.53 | 6.47 | 23.10 | 27.67 |
| | 1.900 | 175.00 | 817.80 | 806.25 | 801.75 | 200.00 | 815.27 | 0.00 | 815.35 | 14.16 | 3.46 | 57.75 | 53.16 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 50.00 | 805.25 | 0.00 | 805.28 | 2.69 | 1.56 | 45.66 | 30.97 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 75.00 | 806.16 | 0.00 | 806.21 | 2.55 | 1.79 | 60.06 | 46.96 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 100.00 | 806.95 | 0.00 | 807.00 | 2.52 | 1.97 | 73.66 | 62.96 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 150.00 | 810.22 | 0.00 | 810.25 | 0.79 | 1.55 | 247.84 | 198.24 |
| | 2.100 | 50.00 | 0.00 | 0.00 | 801.50 | 200.00 | 815.40 | 0.00 | 815.41 | 0.12 | 0.84 | 764.06 | 576.10 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 50.00 | 805.33 | 0.00 | 805.35 | 2.10 | 1.21 | 55.60 | 34.54 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 75.00 | 806.24 | 0.00 | 806.27 | 1.74 | 1.33 | 78.99 | 56.90 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 100.00 | 807.03 | 0.00 | 807.06 | 1.55 | 1.46 | 105.97 | 80.28 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 150.00 | 810.25 | 0.00 | 810.26 | 0.42 | 0.68 | 411.08 | 266.55 |
| | 2.150 | 275.00 | 0.00 | 0.00 | 802.35 | 200.00 | 815.41 | 0.00 | 815.41 | 0.07 | 0.60 | 933.60 | 772.72 |
| * | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 50.00 | 806.13 | 806.13 | 806.69 | 200.99 | 4.86 | 10.80 | 3.53 |
| * | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 75.00 | 806.35 | 806.35 | 806.82 | 181.32 | 5.53 | 14.59 | 5.87 |
| | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 100.00 | 805.97 | 0.00 | 807.27 | 59.05 | 4.41 | 28.15 | 13.02 |
| | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 150.00 | 810.24 | 0.00 | 810.29 | 2.59 | 3.95 | 132.00 | 53.12 |
| | 2.200 | 275.00 | 0.00 | 0.00 | 805.20 | 200.00 | 815.41 | 0.00 | 815.42 | 0.18 | 3.64 | 629.00 | 467.53 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 808.55 | 0.00 | 809.11 | 73.53 | 6.14 | 66.50 | 26.24 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 808.69 | 0.00 | 809.18 | 62.24 | 5.83 | 67.36 | 28.52 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 808.86 | 0.00 | 809.17 | 52.58 | 5.64 | 67.32 | 28.48 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 810.53 | 0.00 | 810.47 | 8.37 | 3.17 | 120.82 | 75.55 |
| | 3.000 | 300.00 | 0.00 | 0.00 | 806.00 | 225.00 | 815.41 | 0.00 | 815.42 | 0.25 | 0.93 | 829.33 | 645.66 |

PRINTED IN U.S.A.

FORM 1611-20-PRINTED BY NATIONAL MANIFOLD FORMS

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| | SECNO | Q | WSEL | DIFSP | DIFSK | DIFKNE | TOPWID | XLOH |
|---|---|---|---|---|---|---|---|---|
| | 1.000 | 50.00 | 804.20 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 |
| | 1.000 | 75.00 | 804.20 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 |
| | 1.000 | 100.00 | 804.20 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 |
| | 1.000 | 150.00 | 804.20 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 |
| | 1.000 | 200.00 | 804.77 | 0.00 | 0.00 | 0.57 | 4.50 | 0.00 |
| | 1.900 | 50.00 | 804.86 | 0.00 | 0.66 | 0.00 | 4.50 | 175.00 |
| | 1.900 | 75.00 | 805.58 | 0.00 | 1.38 | 0.00 | 4.50 | 175.00 |
| | 1.900 | 100.00 | 806.30 | 0.00 | 2.10 | 0.00 | 4.50 | 175.00 |
| | 1.900 | 150.00 | 809.84 | 0.00 | 5.64 | 0.00 | 4.50 | 175.00 |
| | 1.900 | 200.00 | 815.17 | 0.00 | 10.37 | 0.00 | 4.50 | 175.00 |
| | 2.100 | 50.00 | 805.25 | 0.00 | 0.39 | 0.00 | 16.84 | 50.00 |
| | 2.100 | 75.00 | 806.16 | 0.00 | 0.58 | 0.00 | 18.98 | 50.00 |
| | 2.100 | 100.00 | 806.93 | 0.00 | 0.57 | 0.00 | 20.81 | 50.00 |
| | 2.100 | 150.00 | 810.22 | 0.00 | 0.37 | 0.00 | 98.87 | 50.00 |
| | 2.100 | 200.00 | 815.40 | 0.00 | 0.24 | 0.00 | 99.91 | 50.00 |
| | 2.150 | 50.00 | 805.33 | 0.00 | 0.08 | 0.00 | 25.61 | 275.00 |
| | 2.150 | 75.00 | 806.24 | 0.00 | 0.08 | 0.00 | 29.82 | 275.00 |
| | 2.150 | 100.00 | 807.03 | 0.00 | 0.08 | 0.00 | 33.65 | 275.00 |
| | 2.150 | 150.00 | 810.25 | 0.00 | 0.04 | 0.00 | 100.00 | 275.00 |
| | 2.150 | 200.00 | 815.41 | 0.00 | 0.01 | 0.00 | 100.00 | 275.00 |
| * | 2.200 | 50.00 | 806.13 | 0.00 | 0.80 | 0.00 | 16.20 | 275.00 |
| * | 2.200 | 75.00 | 806.35 | 0.00 | 0.11 | 0.00 | 17.24 | 275.00 |
| | 2.200 | 100.00 | 806.97 | 0.00 | -0.06 | 0.00 | 20.09 | 275.00 |
| | 2.200 | 150.00 | 810.24 | 0.00 | -0.01 | 0.00 | 100.00 | 275.00 |
| | 2.200 | 200.00 | 815.41 | 0.00 | 0.00 | 0.00 | 100.00 | 275.00 |
| | 3.000 | 225.00 | 808.55 | 0.00 | 2.42 | 0.00 | 26.08 | 300.00 |
| | 3.000 | 225.00 | 808.65 | 0.00 | 2.30 | 0.00 | 26.68 | 300.00 |
| | 3.000 | 225.00 | 808.66 | 0.00 | 1.69 | 0.00 | 26.67 | 300.00 |
| | 3.000 | 225.00 | 810.33 | 0.00 | 0.09 | 0.00 | 100.00 | 300.00 |
| | 3.000 | 225.00 | 815.41 | 0.00 | 0.01 | 0.00 | 100.00 | 300.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 1.000 PROFILE= 5 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 2.200 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.200 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.200 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 2.200 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.200 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.200 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

FORM 1411-00 PRINTED BY ROYARY MANIFOLD FORMS PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: Waubason Creek

4) DOCUMENT TYPE: 100 Yr. Encroachment

00BREAK00

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP & CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2MAUBASCON CREEK FROM CONFLUENCE OF KALAMAZOO RIVER TO 1000 FT. U/S MASON ST.
T3      MAUBASCON CREEK

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     S         USEL      FQ
       0.        5.        0.        0.  0.000000      1.00       0.0       0.  001.000     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IF        CHNIM     ITRACE
     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
*PROF 2

CCHV=   0.100 CEHV=   0.300
*SECNO 110.000
 2800 NAT Q1=   1136.20  WSEL=    801.30  ENC Q1=   1164.37  WSEL=    801.40  RATIO= -0.0247
 NAT Q1=   1156.  RATIOS LOB,CH,ROB=  0.0005  0.9989  0.0005  WSEL=    801.40
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        CLOSS    BANK ELEV
   C         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XML       XNCH      XNR       WTN       RLMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IX2       ICOUT     CORAR     TOPWID     ENDST


3470 ENCROACHMENT STATIONS=      578.0      713.0  TYPE=     4  TARGET=        0.001

        CROSS SECTION 110 AT CONFLUENCE TO KALAMAZOO RIVER

   110.00     7.90   801.30     0.00   801.30   801.31     0.01     0.00     0.00   799.20
     650.       0.     650.       0.       0.     880.       0.       0.       0.   798.30
     0.00     0.00     0.74     0.00    0.120    0.040    0.120    0.000   793.40   573.00
 0.000035       0.       0.       0.        0        0        0     0.00   135.00   713.00


*SECNO 111.000
 2800 NAT Q1=   1042.85  WSEL=    801.36  ENC Q1=   1073.33  WSEL=    801.46  RATIO= -0.0292
 NAT Q1=   1076.  RATIOS LOB,CH,ROB=  0.0017  0.9970  0.0005  WSEL=    801.46

3470 ENCROACHMENT STATIONS=      903.0     1061.0  TYPE=     4  TARGET=        0.002

        CROSS SECTION 111

   111.00     7.66   801.36     0.00   801.36   801.37     0.01     0.06     0.00   798.70
     650.       0.     650.       0.       0.     889.       0.       33.      6.   798.80
     0.62     0.00     0.73     0.00    0.120    0.040    0.120    0.040   793.70   903.00
 0.000049     1640.    1640.    1640.        0        0        0     0.00   138.00  1061.10


*SECNO 112.000
 2800 NAT Q1=    864.05  WSEL=    801.41  ENC Q1=    864.34  WSEL=    801.51  RATIO= -0.0240
 NAT Q1=    873.  RATIOS LOB,CH,ROB=  0.0013  0.9904  0.0083  WSEL=    801.51

3470 ENCROACHMENT STATIONS=      543.0      683.0  TYPE=     4  TARGET=        0.010

        CROSS SECTION 112

   112.00     6.32   801.42     0.00   801.41   801.43     0.01     0.06     0.00   790.80
     650.       0.     650.       0.       0.     743.       0.       55.      10.   797.90
     1.00     0.00     0.87     0.00    0.120    0.040    0.120    0.040   795.10   543.00
 0.000064     1200.    1200.    1200.        0        0        0     0.00   140.00   683.00


*SECNO 112.500
 2800 NAT Q1=    317.16  WSEL=    801.58  ENC Q1=    329.54  WSEL=    801.66  RATIO= -0.0391
 NAT Q1=    330.  RATIOS LOB,CH,ROB=  0.0011  0.9958  0.0030  WSEL=    801.68

3470 ENCROACHMENT STATIONS=      407.0      495.0  TYPE=     4  TARGET=        0.004
   112.50     4.90   801.60     0.00   801.58   801.65     0.05     0.21     0.01   800.10
     650.       0.     650.       0.       0.     346.       0.       75.      14.   799.50
     1.23     0.00     1.08     0.00    0.120    0.040    0.120    0.040   798.70   407.00
 0.000440     1550.    1550.    1550.        2        0        0     0.00    68.00   495.00


*SECNO 112.600
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2800 NAT Q1=    101.23  WSEL=    801.75  ENC Q1=    101.23  WSEL=    801.85  RATIO=  0.0000
NAT Q1=    109.  RATIOS LOB,CH,ROB=  0.0618  0.9012  0.0370  WSEL=    801.85
  SECNO     DEPTH     CHSEL     CRIMS     HSELK     EG        HV        HL        OLOSS    BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
  TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       XTH       ELTIN    SSTA
  SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     CORAR     TOPWID   ENDST

3470 ENCROACHMENT STATIONS=      353.2      419.6  TYPE=      4  TARGET=      0.060
   112.60      4.64    801.74      0.00    801.75    802.14      0.40      0.39      0.10    800.30
     650.       17.      631.        2.       21.      123.        2.        77.       14.    800.80
     1.25      0.8[illegible]      5.12      0.66     0.120     0.040     0.120     0.040    797.10    353.[illegible]
 0.004652      375.      375.      375.         3         0         0      0.00     66.41    419.60

*SECNO 112.700
2800 NAT Q1=    162.92  WSEL=    802.85  ENC Q1=    162.92  WSEL=    802.95  RATIO=  0.0000
NAT Q1=    174.  RATIOS LOB,CH,ROB=  0.1084  0.7937  0.0929  WSEL=    802.95

3470 ENCROACHMENT STATIONS=      327.1      461.4  TYPE=      4  TARGET=      0.062
   112.70      5.45    802.95      0.00    802.85    803.11      0.17      0.95      0.02    801.00
     650.       54.      353.       43.       79.      157.       67.       79.       15.    801.[illegible]
     1.29      0.6[illegible]      3.52      0.64     0.120     0.040     0.120     0.040    797.50    327.09
 0.001395      375.      375.      375.         2         0         0      0.00    134.36    461.45

*SECNO 112.800
2800 NAT Q1=    151.33  WSEL=    803.42  ENC Q1=    151.33  WSEL=    803.52  RATIO=  0.0000
NAT Q1=    192.  RATIOS LOB,CH,ROB=  0.1168  0.7765  0.1067  WSEL=    803.52

3470 ENCROACHMENT STATIONS=      323.6      473.4  TYPE=      4  TARGET=      0.060
   112.80      5.62    803.52      0.00    803.42    803.66      0.14      0.54      0.00    801.40
     650.       60.      537.       53.       93.      164.       88.       82.       16.    801.40
     1.32      0.65      3.27      0.67     0.120     0.040     0.120     0.040    797.90    323.57
 0.001299      375.      375.      375.         2         0         0      0.00    149.03    473.40

*SECNO 113.000
2800 NAT Q1=    189.06  WSEL=    803.89  ENC Q1=    189.06  WSEL=    803.99  RATIO=  0.0000
NAT Q1=    201.  RATIOS LOB,CH,ROB=  0.1204  0.7667  0.1128  WSEL=    803.99

3470 ENCROACHMENT STATIONS=      321.5      480.2  TYPE=      4  TARGET=      0.058

        CROSS SECTION 113

   113.00      5.69    803.99      0.00    803.89    804.12      0.15      0.46      0.00    801.00
     650.       63.      329.       56.      100.      167.       99.       85.       18.    802.00
     1.36      0.63      3.16      0.68     0.120     0.040     0.120     0.040    798.30    321.69
 0.001179      375.      375.      375.         2         0         0      0.00    150.69    480.18

*SECNO 113.100
2800 NAT Q1=    151.58  WSEL=    804.44  ENC Q1=    151.58  WSEL=    804.54  RATIO=  0.0000
NAT Q1=    162.  RATIOS LOB,CH,ROB=  0.1023  0.8146  0.0834  WSEL=    804.54

3470 ENCROACHMENT STATIONS=      329.6      453.5  TYPE=      4  TARGET=      0.062
   113.10      5.33    804.53      0.00    804.44    804.72      0.19      0.58      0.02    802.70
     650.       49.      364.       36.       70.      153.       34.       88.       19.    802.90
     1.40      0.70      3.70      0.66     0.120     0.040     0.120     0.040    799.20    329.63
 0.001828      400.      400.      400.         1         0         0      0.00    123.92    453.56

*SECNO 113.200
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2800 NAT Q1=     139.94  WSEL=     805.21  ENC Q1=     139.94  WSEL=     805.31  RATIO=  0.0000
NAT Q1=     149.  RATIOS LOB,CH,ROB=  0.0947  0.8321  0.0732  WSEL=     805.31
  SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        DLOSS    BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
  TIME      VLOB      VCH       VROB      XML       XNCH      XNR       WTN       ELMIN      BSTA
  SLOPE     XLCML     XLCH      XLOBR     ITRIAL    IME       ICONT     CORAR     TOPWID     ENDST

3470 ENCROACHMENT STATIONS=      333.3      445.2  TYPE=      4  TARGET=      0.064
   193.20      5.21    805.31      0.00    805.21    805.52      0.21      0.80      0.0    803.60
     650.       43.      570.       23.       60.      147.       40.       92.       20.    803.00
     1.43      0.72      3.93      0.71     0.120     0.040     0.120     0.040    800.10    333.24
 0.002173      400.      400.      400.         2         0         0      0.00    111.91    445.17

*SECNO 114.000
CCPV=    0.300 CEPV=    0.500

3470 ENCROACHMENT STATIONS=        1.0      748.0  TYPE=      1  TARGET=      747.000

        100 D/S MICHIGAN AVE. CROSS SECTION 114

   114.00      5.16    806.16      0.00    806.26    806.32      0.10      0.00      0.01    802.60
     650.       15.      620.        6.       23.      103.       10.       93.       21.    802.10
     1.47      0.67      3.43      0.63     0.120     0.045     0.120     0.040    801.00    362.17
 0.001423      460.      460.      460.         2         0         0      0.00     57.84    420.01

*SECNO 114.800

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      816.50 ELREA=      816.50

        D/S MICHIGAN AVE CROSS SECTION 116

   114.00      4.80    806.30      0.00    806.21    806.51      0.21      0.16      0.02    802.60
     650.        0.      650.        0.        0.      175.        0.       93.       21.    802.10
     1.47      0.00      3.72      0.00     0.120     0.045     0.120     0.040    801.50    414.00
 0.001805      100.      100.      100.         2         0         0      0.00     40.00    454.00

*SECNO 114.900

3370 NORMAL BRIDGE,NRD=  5 MIN ELTRD=  816.50 MAX ELLC=  812.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      816.50 ELREA=      816.50

        D/S FACE MICHIGAN AVE. CROSS SECTION 115 116

   114.90      4.80    806.30      0.00    805.21    806.51      0.21      0.00      0.00    802.60
     650.        0.      650.        0.        0.      175.        0.       93.       21.    802.10
     1.47      0.00      3.71      0.00     0.120     0.045     0.120     0.040    801.50    414.00
 0.001802        1.        1.        1.         0         0         0      0.00     40.00    454.00

*SECNO 115.000

3370 NORMAL BRIDGE,NRD=  5 MIN ELTRD=  816.50 MAX ELLC=  812.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      816.50 ELREA=      816.50
```

K'200 Controls

U/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.00 | 4.71 | 806.41 | 0.00 | 806.33 | 806.63 | 0.22 | 0.11 | 0.00 | 802.00 |
| 650. | 0. | 650. | 0. | 0. | 171. | 0. | 94. | 21. | 802.30 |
| 1.48 | 0.00 | 3.79 | 0.00 | 0.120 | 0.045 | 0.120 | 0.040 | 801.70 | 414.00 |
| 0.001933 | 60. | 60. | 60. | 0 | 0 | 0 | 0.00 | 40.00 | 454.00 |

*SECNO 115.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | QWSEL | CRIWS | WSELX | BL | AV | HL | BLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IP2 | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEV= 816.50 ELEVA= 816.50

U/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.10 | 4.71 | 806.41 | 0.00 | 806.33 | 806.63 | 0.22 | 0.00 | 0.00 | 802.50 |
| 650. | 0. | 650. | 0. | 0. | 171. | 0. | 94. | 21. | 802.30 |
| 1.48 | 0.00 | 3.79 | 0.00 | 0.120 | 0.045 | 0.120 | 0.040 | 801.70 | 414.00 |
| 0.001931 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 40.00 | 454.00 |

*SECNO 116.000

50 FT U/S MICHIGAN AVE. CROSS SECTION 116

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.00 | 5.06 | 806.56 | 0.00 | 806.49 | 806.73 | 0.16 | 0.08 | 0.02 | 802.60 |
| 650. | 9. | 628. | 13. | 15. | 190. | 19. | 94. | 21. | 802.30 |
| 1.48 | 0.66 | 3.31 | 0.68 | 0.120 | 0.045 | 0.120 | 0.040 | 801.50 | 341.56 |
| 0.001266 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 56.05 | 397.72 |

*SECNO 116.700

2800 MAT Q1= 184.79 WSEL= 809.26 ENC Q1= 184.79 WSEL= 809.36 RATIO= 0.0000
MAT Q1= 192. RATIOS LOB,CH,ROB= 0.0209 0.9381 0.0411 WSEL= 809.36

3470 ENCROACHMENT STATIONS= 449.7 489.0 TYPE= 4 TARGET= 0.035

100 FT D/S CROSS ST CROSS SECTION 118

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.70 | 3.49 | 809.31 | 0.00 | 809.26 | 809.31 | 0.19 | 2.75 | 0.01 | 804.90 |
| 650. | 2. | 632. | 15. | 5. | 170. | 15. | 104. | 23. | 803.90 |
| 1.66 | 0.45 | 3.55 | 0.97 | 0.120 | 0.045 | 0.120 | 0.042 | 803.90 | 469.66 |
| 0.001278 | 1350. | 2200. | 1350. | 2 | 0 | 0 | 0.00 | 39.38 | 489.04 |

CCHV= 0.300 CEHV= 0.500
*SECNO 116.900

3470 ENCROACHMENT STATIONS= 394.0 543.0 TYPE= 1 TARGET= 149.000

D/S FACE CROSS ST. CROSS SECTION 118

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.90 | 5.16 | 809.46 | 0.00 | 809.29 | 809.92 | 0.56 | 0.23 | 0.13 | 807.00 |
| 650. | 28. | 602. | 20. | 25. | 97. | 19. | 104. | 24. | 807.00 |
| 1.66 | 1.11 | 6.22 | 1.07 | 0.120 | 0.035 | 0.120 | 0.041 | 804.20 | 426.87 |
| 0.00529 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 81.90 | 508.74 |

SPECIAL BRIDGE

| SG | XK | XKCO | CEFU | BOLEN | BUC | BUF | BAREA | SC | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 2.02 | 3.00 | 0.00 | 13.00 | 0.00 | 75.00 | 0.00 | 804.10 | 804.10 |

*SECNO 117.000
PRESSURE AND WEIR FLOW

| EGPRS | EGLLC | HZ | OHEAD | HPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 811.72 | 810.15 | 0.00 | 89. | 565. | 75. | 77. | 810.00 | 810.00 |

U/S FACE CROSS ST. CROSS SECTION 117[illegible]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 117.00 | 5.83 | 810.83 | 0.00 | 810.00 | 811.14 | 0.31 | 1.22 | 0.00 | 807.00 |
| 650. | 33. | 584. | 34. | 58. | 124. | 60. | 104. | 24. | 807.00 |
| 1.66 | 0.56 | 4.72 | 0.56 | 0.120 | 0.035 | 0.120 | 0.041 | 805.00 | 393.93 |
| 0.002023 | 35. | 35. | 35. | 2 | 0 | 3 | 0.00 | 148.45 | 542.00 |

*SECNO 117.200
2800 NAT Q1= 661.89 WSEL= 811.16 ENC Q1= 661.89 WSEL= 811.26 RATIO= 0.0000
NAT Q1= 477. RATIOS LOB,CH,ROB= 0.0636 0.0000 0.1205 WSEL= 811.26

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 3 | VLOB | VCH | VROB | ALOB | ACH | AROB | VOL | WMA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 410.7 573.5 TYPE= 4 TARGET= 0.031

50 FT U/S CROSS ST. CROSS SECTION 118

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 117.20 | 7.27 | 811.17 | 0.00 | 811.16 | 811.24 | 0.07 | 0.02 | 0.07 | 804.90 |
| 650. | 31. | 549. | 74. | 96. | 241. | 220. | 105. | 24. | 803.90 |
| 1.67 | 0.32 | 2.26 | 0.33 | 0.120 | 0.035 | 0.120 | 0.041 | 803.90 | 410.73 |
| 0.000238 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 162.81 | 573.54 |

CCHV= 0.100 CEHV= 0.300
*SECNO 119.000
2800 NAT Q1= 84.34 WSEL= 811.65 ENC Q1= 84.34 WSEL= 811.75 RATIO= 0.0000
NAT Q1= 92. RATIOS LOB,CH,ROB= 0.1491 0.6620 0.1889 WSEL= 811.75

3470 ENCROACHMENT STATIONS= 157.5 320.2 TYPE= 4 TARGET= 0.080

CROSS SECTION 119

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.00 | 3.66 | 811.66 | 0.00 | 811.65 | 812.15 | 0.49 | 0.78 | 0.13 | 808.40 |
| 650. | 72. | 479. | 99. | 58. | 74. | 75. | 115. | 28. | 809.00 |
| 1.74 | 1.23 | 6.47 | 1.32 | 0.100 | 0.040 | 0.100 | 0.042 | 808.00 | 157.47 |
| 0.006369 | 900. | 1365. | 1100. | 4 | 0 | 0 | 0.00 | 162.76 | 320.21 |

CCHV= 0.300 CEHV= 0.500
*SECNO 119.500

```
3470 ENCROACHMENT STATIONS=      507.0      853.0  TYPE=      1  TARGET=      346.000
   119.50      4.89    813.49      0.00    813.40    814.02      0.53      1.85      0.02    810.90
     650.       11.      631.        8.       11.      107.        8.      117.       29.    810.60
     1.76      0.93      5.92      0.97     0.120     0.035     0.120     0.041    803.60    629.91
 0.003315      400.      400.      400.         2         0         0      0.00     42.61    672.52

*SECNO 119.600
   119.60      4.86    814.66      0.00    814.65    815.20      0.54      1.18      0.00    812.10
     650.       10.      632.        8.       11.      106.        8.      118.       29.    811.80
     1.70      0.93      5.97      0.98     0.120     0.035     0.120     0.041    809.80    630.03
 0.003404      350.      350.      350.         2                   0      0.00     42.43    672.45

*SECNO 120.000

3470 ENCROACHMENT STATIONS=      638.0      668.0  TYPE=      1  TARGET=      30.000

        100 FT D/S MASON ST. CROSS SECTION 2

   120.00      4.87    815.87      0.00    815.86    816.30      0.43      1.06      0.03    812.10
     650.        2.      646.        2.        4.      123.        4.      119.       30.    811.80
     1.30      0.49      5.25      0.50     0.120     0.035     0.120     0.041    811.00    638.00
 0.002131      400.      400.      400.         2         0         1      0.00     30.00    668.00

*SECNO 120.800

3301 HV CHANGED MORE THAN EWING

   SECNO     DEPTH     CHSEL     CRIMS     USELK     EC        HV        [illegible]      BLOSS     BANK F EV
   Q         QLOB      QCH       QROB      ALOB      ACH       ARDB      VOL       THA       LEFT/RIGHT
   TIME      VLOB      VCH       VROS      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IM2       ICONT     CORAR     TOPHID    ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        D/S MASON ST. CROSS SECTION 2

   120.80      4.52    815.62      0.00    815.61    816.93      1.32      0.19      0.45    811.10
     650.        0.      650.        0.        0.       71.        0.      119.       30.    811.10
     1.80      0.00      9.21      0.00     0.120     0.035     0.120     0.041    811.10    644.70
 0.008781       50.       50.       50.         2         0         0      0.00     15.60    660.30

*SECNO 120.900

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD=  818.50 MAX ELLC=  817.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        D/S FACE MASON ST. CROSS SECTION 1&2

   120.90      4.45    815.56      0.00    815.56    817.00      1.43      0.01      0.05    811.10
     650.        0.      650.        0.        0.       68.        0.      119.       30.    811.10
     1.80      0.00      9.61      0.00     0.120     0.025     0.120     0.041    811.10    644.70
 0.005138        1.        1.        1.         2         0         0    -29.97     15.60    660.30
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*SECNO 121.000

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD=  818.50 MAX ELLC=  817.60

3470 ENCROACHMENT STATIONS=      617.0      680.0  TYPE=      1  TARGET=      63.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        U/S PACE MASON ST. CROSS SECTION 1&2

   121.00      5.13    816.23      0.00    816.23    817.32      1.09      0.21      0.10    812.10
     650.        0.      650.        0.        0.       78.        0.      119.       30.    811.10
     1.80      0.00      8.36      0.00     0.120     0.025     0.120     0.041    811.10    644.70
 0.003377       52.       52.       52.         3         0         0    -34.34     15.60    660.30

*SECNO 121.100

3470 ENCROACHMENT STATIONS=      617.0      680.0  TYPE=      1  TARGET=      63.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        U/S MASON ST. CROSS SECTION 2

   121.10      5.30    816.40      0.00    816.40    817.36      0.96      0.01      0.04    811.10
     650.        0.      650.        0.        0.       80.        0.      119.       30.    811.10
     1.80      0.00      7.85      0.00     0.120     0.045     0.120     0.041    811.10    644.70
 0.008900        1.        1.        1.         2         0         0      0.00     15.60    660.30

*SECNO 121.200

3301 HV CHANGED MORE THAN 1VINS

3470 ENCROACHMENT STATIONS=      808.0      888.0  TYPE=      1  TARGET=      80.000

        50 FT U/S MASON ST. CROSS SECTION 2

   121.20      6.47    817.47      0.00    817.47    817.75      0.28      0.18      0.20    811.30
     650.       68.      481.       101.       74.       98.       90.      119.       30.    812.00
     1.80      0.92      4.89      1.12     0.120     0.045     0.120     0.041    811.00    808.00
 0.001963       50.       50.       50.         3         0         0      0.00     80.00    888.00

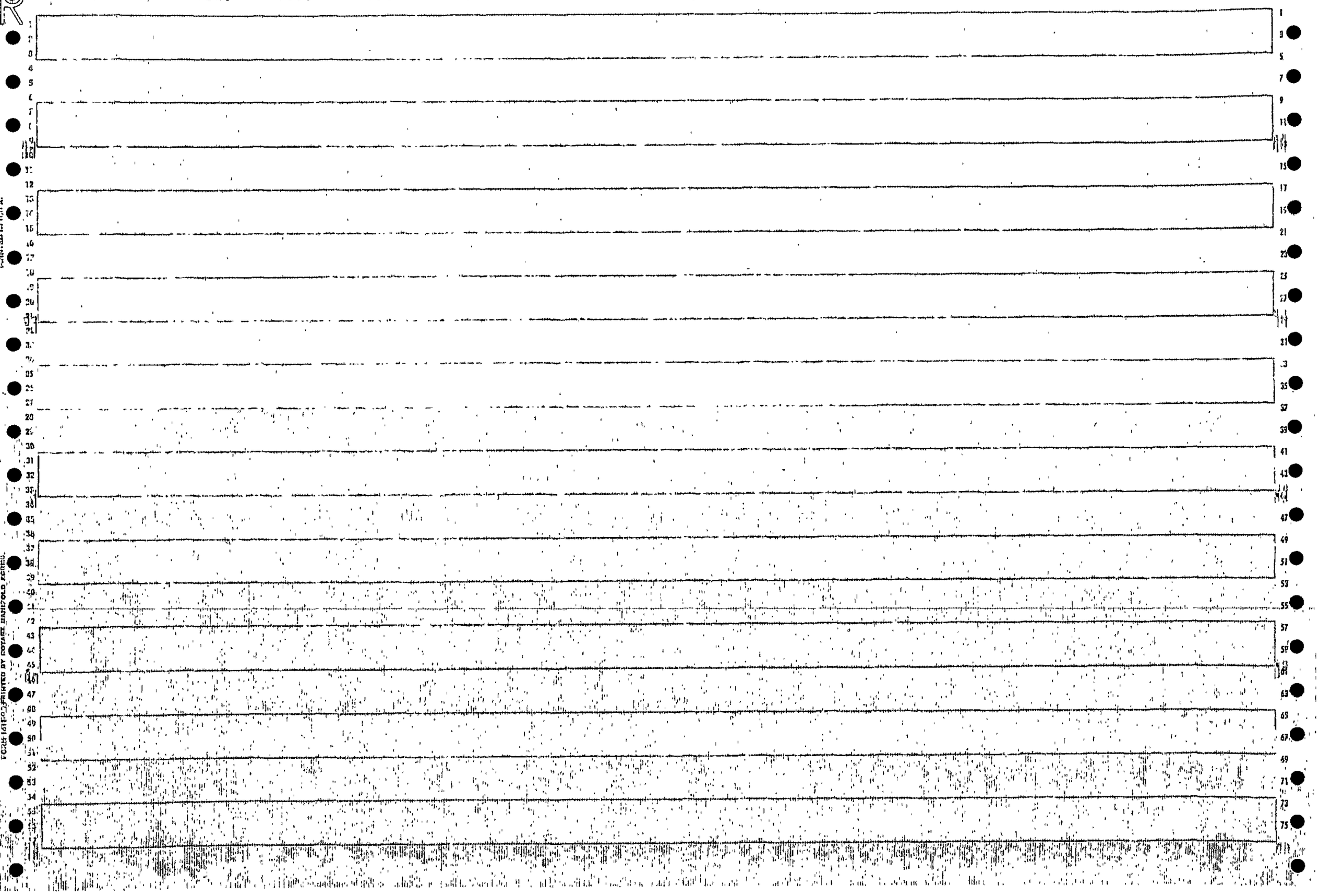
CCHV=   0.100 CEHV=   0.300
*SECNO 122.000
 2800 NAT Q1=    371.66  WSEL=    818.35  ENC Q1=    371.66  WSEL=    818.45  RATIO=  0.0000
 NAT Q1=    388.  RATIOS LOB,CH,ROB=  0.1236  0.3582  0.5182  WSEL=    818.45
   SECNO     DEPTH     CWSEL     CRCHS     WSELK     EG        HV        HL        CLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       ARCB      VOL       THA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTH       ELMIN      SSTG
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     CORAR     TOPWID     ENDST

3470 ENCROACHMENT STATIONS=      777.6     1052.5  TYPE=      4  TARGET=      0.042

        CROSS SECTION 3

   122.00      7.38    818.38      0.00    811.35    818.44      0.06      0.03      0.02    811.30
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 650. | 69. | 246. | 335. | 159. | 113. | 658. | 133. | 34. | 812.00 |
| 2.04 | 0.43 | 2.98 | 0.51 | 0.120 | 0.245 | 0.129 | 0.061 | 811.00 | 777.57 |
| 0.000325 | 965. | 965. | 965. | 2 | 0 | 0 | 0.00 | 274.93 | 1052.49 |



**********
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERROR LIST

WAUBASCON CREEK

SUMMARY PRINTOUT TABLE 110

| SECNO | CHSEL | DIFSHF | E3 | TOPWID | ALOB | ROB | CODE | PREMIS | PIPSEL | STHVEL | STMAXE | STCRIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.000 | 801.30 | 0.00 | 801.31 | 144.77 | 0.31 | 649.30 | 0.31 | 0.00 | 0.00 | 578.00 | 713.00 | 0.00 |
| 110.000 | 801.30 | 0.00 | 801.31 | 135.00 | 0.00 | 650.00 | 0.00 | 0.00 | 578.00 | 578.00 | 713.00 | 713.00 |
| 111.000 | 801.36 | 0.00 | 801.37 | 170.00 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 903.00 | 1061.00 | 0.00 |
| 111.000 | 801.36 | 0.00 | 801.37 | 150.00 | 0.00 | 650.00 | 0.00 | 0.00 | 903.00 | 903.00 | 1061.00 | 1061.00 |
| 112.000 | 801.41 | 0.00 | 801.42 | 166.23 | 0.70 | 646.17 | 5.16 | 0.00 | 0.00 | 543.00 | 683.00 | 0.00 |
| 112.000 | 801.42 | 0.01 | 801.43 | 140.00 | 0.00 | 650.00 | 0.00 | 0.01 | 543.00 | 543.00 | 683.00 | 683.00 |
| 112.500 | 801.54 | 0.00 | 801.55 | 99.29 | 0.44 | 647.54 | 1.62 | 0.00 | 0.00 | 507.00 | 495.00 | 0.00 |
| 112.500 | 801.60 | 0.02 | 801.61 | 80.00 | 0.01 | 650.00 | 0.00 | 0.00 | 407.00 | 407.00 | 495.00 | 495.00 |
| 112.600 | 801.75 | 0.00 | 802.08 | 186.09 | 35.05 | 594.84 | 20.11 | 0.00 | 0.00 | 375.00 | 417.00 | 0.00 |
| 112.600 | 801.74 | -0.00 | 802.14 | 66.41 | 17.25 | 631.13 | 1.62 | 0.07 | 353.19 | 375.00 | 417.00 | 419.60 |
| 112.700 | 802.55 | 0.00 | 803.00 | 251.23 | 63.73 | 628.30 | 36.80 | 0.00 | 0.00 | 375.00 | 417.00 | 0.00 |
| 112.700 | 802.95 | 0.10 | 803.11 | 134.36 | 53.73 | 553.32 | 42.97 | 0.06 | 327.09 | 375.00 | 417.00 | 461.45 |
| 112.800 | 803.42 | 0.00 | 803.54 | 260.33 | 72.57 | 513.70 | 63.73 | 0.00 | 0.00 | 375.00 | 417.00 | 0.00 |
| 112.800 | 803.52 | 0.10 | 803.66 | 149.83 | 60.17 | 537.03 | 52.80 | 0.06 | 323.57 | 375.00 | 417.00 | 473.40 |
| 113.000 | 803.89 | 0.00 | 804.01 | 261.69 | 75.14 | 501.06 | 64.03 | 0.00 | 0.00 | 375.00 | 417.00 | 0.00 |
| 113.000 | 803.99 | 0.10 | 804.12 | 158.09 | 63.62 | 528.08 | 57.69 | 0.06 | 321.69 | 375.00 | 417.00 | 480.18 |
| 113.100 | 804.44 | 0.00 | 804.61 | 244.56 | 62.41 | 538.86 | 48.73 | 0.00 | 0.00 | 375.00 | 417.00 | 0.00 |
| 113.100 | 804.53 | 0.10 | 804.72 | 123.92 | 49.30 | 564.31 | 36.39 | 0.06 | 329.63 | 375.00 | 417.00 | 453.54 |
| 113.200 | 805.21 | 0.00 | 805.41 | 237.37 | 57.41 | 550.49 | 47.13 | 0.00 | 0.00 | 375.00 | 417.00 | 0.00 |
| 113.200 | 805.31 | 0.09 | 805.52 | 111.91 | 45.44 | 588.10 | 28.46 | 0.06 | 333.86 | 375.00 | 417.00 | 445.17 |
| 114.000 | 806.06 | 0.00 | 806.24 | 57.37 | 14.71 | 628.04 | 6.25 | 0.00 | 0.00 | 375.00 | 415.00 | 0.00 |
| 114.000 | 806.16 | 0.10 | 806.33 | 57.84 | 15.27 | 628.30 | 6.63 | 747.00 | 1.00 | 375.00 | 415.00 | 748.00 |
| 114.800 | 806.21 | 0.00 | 806.43 | 60.00 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |
| 114.800 | 806.30 | 0.09 | 806.51 | 40.00 | 0.30 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |
| 114.900 | 806.21 | 0.00 | 806.44 | 40.00 | 0.30 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |
| 114.900 | 806.30 | 0.09 | 806.51 | 40.00 | 0.30 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |

FORM 11(1)-D PRINTED IN U.S.A.
FOR SALE BY ROYAT HADFOLD FORMS.

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROT | PERENC | STENCL | STCHL | STCHR | STENCT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 115.000 | 806.33 | 0.00 | 806.56 | 40.00 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |
| 115.000 | 806.41 | 0.00 | 806.63 | 40.00 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |
| 115.100 | 806.33 | 0.00 | 806.55 | 40.00 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |
| 115.100 | 806.41 | 0.00 | 806.63 | 40.00 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 414.00 | 454.00 | 0.00 |
| 116.000 | 806.49 | 0.00 | 806.66 | 55.78 | 9.08 | 628.53 | 12.39 | 0.00 | 0.00 | 349.00 | 389.00 | 0.00 |
| 116.000 | 806.56 | 0.07 | 806.73 | 56.00 | 9.30 | 630.00 | 12.63 | 0.00 | 0.00 | 349.00 | 389.00 | 0.00 |
| 116.700 | 809.24 | 0.00 | 809.44 | 131.33 | 12.79 | 612.91 | 25.13 | 0.00 | 0.00 | 451.00 | 485.00 | 0.00 |
| 116.700 | 809.31 | 0.05 | 809.51 | 39.30 | 2.29 | 632.00 | 15.71 | 0.04 | 449.56 | 451.00 | 485.00 | 489.04 |
| 116.900 | 809.29 | 0.00 | 809.48 | 75.33 | 26.20 | 606.66 | 19.14 | 0.00 | 0.00 | 456.00 | 480.00 | 0.00 |
| 116.900 | 809.36 | 0.07 | 809.72 | 71.00 | 27.71 | 601.27 | 20.32 | 0.00 | 396.30 | 456.00 | 480.00 | 561.00 |
| 117.000 | 810.00 | 0.00 | 811.12 | 140.24 | 31.49 | 585.90 | 32.71 | 0.00 | 0.00 | 456.00 | 480.00 | 0.00 |
| 117.000 | 810.83 | 0.03 | 811.14 | 140.15 | 32.56 | 583.43 | 33.81 | 0.00 | 0.00 | 456.00 | 480.00 | 0.00 |
| 117.200 | 811.16 | 0.00 | 811.22 | 207.37 | 39.66 | 529.63 | 80.73 | 0.00 | 0.00 | 451.00 | 485.00 | 0.00 |
| 117.200 | 811.17 | 0.01 | 811.24 | 192.41 | 81.27 | 545.00 | 73.73 | 0.00 | 440.73 | 451.00 | 485.00 | 573.54 |
| 119.000 | 811.65 | 0.00 | 812.07 | 230.12 | 80.36 | 469.13 | 115.19 | 0.00 | 0.00 | 223.00 | 247.00 | 0.00 |
| 119.000 | 811.66 | 0.01 | 812.15 | 182.76 | 71.56 | 479.36 | 99.10 | 0.00 | 157.47 | 223.00 | 247.00 | 320.21 |
| 119.500 | 813.40 | 0.00 | 813.95 | 42.10 | 10.04 | 632.38 | 7.59 | 0.00 | 0.00 | 639.00 | 667.00 | 0.00 |
| 119.500 | 813.49 | 0.09 | 814.02 | 42.41 | 10.62 | 631.46 | 7.91 | 546.20 | 537.00 | 639.00 | 667.00 | 853.00 |
| 119.600 | 814.65 | 0.10 | 815.19 | 42.42 | 10.40 | 631.30 | 7.80 | 0.00 | 0.00 | 639.00 | 667.00 | 0.00 |
| 119.600 | 814.66 | 0.01 | 815.20 | 42.43 | 10.42 | 631.77 | 7.81 | 0.00 | 0.00 | 639.00 | 667.00 | 0.00 |
| 120.000 | 815.86 | 0.00 | 816.29 | 30.00 | 1.79 | 646.31 | 1.90 | 30.00 | 638.00 | 639.00 | 667.00 | 660.00 |
| 120.000 | 815.87 | 0.01 | 816.30 | 30.30 | 1.79 | 646.31 | 1.90 | 30.00 | 638.00 | 639.00 | 667.00 | 660.00 |
| 120.800 | 815.61 | 0.00 | 816.93 | 15.60 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 644.70 | 660.30 | 0.00 |
| 120.800 | 815.62 | 0.01 | 816.93 | 15.60 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 644.70 | 660.30 | 0.00 |
| 120.900 | 815.56 | 0.00 | 817.00 | 15.60 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 644.70 | 660.30 | 0.00 |
| 120.900 | 815.56 | 0.00 | 817.00 | 15.60 | 0.00 | 650.00 | 0.00 | 0.00 | 0.00 | 644.70 | 660.30 | 0.00 |
| 121.000 | 816.23 | 0.00 | 817.32 | 15.60 | 0.00 | 650.00 | 0.00 | 63.00 | 617.00 | 644.70 | 660.30 | 680.00 |
| 121.000 | 816.23 | 0.00 | 817.32 | 15.60 | 0.00 | 650.00 | 0.00 | 63.00 | 617.00 | 644.70 | 660.30 | 680.00 |
| 121.100 | 816.40 | 0.00 | 817.36 | 15.60 | 0.00 | 650.00 | 0.00 | 63.00 | 617.00 | 644.70 | 660.30 | 680.00 |
| 121.100 | 816.40 | 0.00 | 817.36 | 15.60 | 0.00 | 650.00 | 0.00 | 63.00 | 617.00 | 644.70 | 660.30 | 680.00 |
| 121.200 | 817.67 | 0.00 | 817.75 | 80.00 | 66.45 | 400.76 | 100.80 | 80.00 | 808.00 | 840.00 | 856.00 | 888.00 |
| 121.200 | 817.67 | 0.00 | 817.75 | 80.00 | 66.47 | 400.71 | 100.82 | 80.00 | 808.00 | 840.00 | 856.00 | 888.00 |
| 122.000 | 818.35 | 0.00 | 818.38 | 392.49 | 78.30 | 237.56 | 334.13 | 0.00 | 0.00 | 840.00 | 856.00 | 0.00 |
| 122.000 | 818.38 | 0.02 | 818.41 | 274.93 | 66.64 | 256.22 | 339.13 | 0.24 | 777.57 | 840.00 | 856.00 | 1052.49 |

FORM 1411-CO4 UNITED DISTRIBUTORS MANIFOLD FORMS PRINTED IN U.S.A.

HAUBASCON CREEK

SUMMARY PRINTOUT TABLE 150

| SECNO | NLSW | ELTRB | FLLC | ELTTY | Q | CANEL | CRITS | DF | 10**S | WCI | AREA | PERM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.000 | 0.00 | 0.00 | 0.00 | 793.40 | 650.00 | 801.30 | 0.00 | 801.31 | 0.33 | 0.74 | 888.95 | 1136.20 |
| 110.000 | 0.00 | 0.00 | 0.00 | 793.40 | 650.00 | 801.30 | 0.00 | 801.31 | 0.35 | 0.74 | 879.77 | 1106.55 |
| 111.000 | 1640.00 | 0.00 | 0.00 | 793.70 | 650.00 | 801.36 | 0.00 | 801.37 | 0.39 | 0.73 | 903.14 | 1042.03 |
| 111.000 | 1640.00 | 0.00 | 0.00 | 793.70 | 650.00 | 801.36 | 0.00 | 801.37 | 0.41 | 0.73 | 888.64 | 1019.08 |
| 112.000 | 1200.00 | 0.00 | 0.00 | 795.10 | 650.00 | 801.41 | 0.00 | 801.42 | 0.59 | 0.87 | 706.10 | 844.05 |
| 112.000 | 1200.00 | 0.00 | 0.00 | 795.10 | 650.00 | 801.42 | 0.00 | 801.43 | 0.64 | 0.87 | 763.20 | 813.94 |
| 112.500 | 1530.00 | 0.00 | 0.00 | 796.70 | 650.00 | 801.50 | 0.00 | 802.03 | 4.20 | 1.80 | 354.79 | 317.10 |
| 112.500 | 1530.00 | 0.00 | 0.00 | 796.70 | 650.00 | 801.50 | 0.00 | 802.05 | 4.40 | 1.85 | 366.13 | 308.85 |
| 112.600 | 375.00 | 0.00 | 0.00 | 797.10 | 650.00 | 801.75 | 0.00 | 802.08 | 41.23 | 4.02 | 210.03 | 101.23 |
| 112.600 | 375.00 | 0.00 | 0.00 | 797.10 | 650.00 | 801.76 | 0.00 | 802.14 | 46.52 | 5.12 | 166.94 | 95.30 |
| 112.700 | 375.00 | 0.00 | 0.00 | 797.50 | 650.00 | 802.35 | 0.00 | 803.03 | 15.92 | 2.66 | 350.92 | 102.92 |
| 112.700 | 375.00 | 0.00 | 0.00 | 797.50 | 650.00 | 802.95 | 0.00 | 803.11 | 15.85 | 3.52 | 302.07 | 102.77 |
| 112.800 | 375.00 | 0.00 | 0.00 | 797.90 | 650.00 | 803.42 | 0.00 | 803.54 | 12.99 | 3.22 | 410.87 | 100.33 |
| 112.800 | 375.00 | 0.00 | 0.00 | 797.90 | 650.00 | 803.52 | 0.00 | 803.66 | 12.98 | 3.27 | 344.32 | 100.41 |
| 113.000 | 375.00 | 0.00 | 0.00 | 798.50 | 650.00 | 803.89 | 0.00 | 804.01 | 11.82 | 3.11 | 431.75 | 100.06 |
| 113.000 | 375.00 | 0.00 | 0.00 | 798.50 | 650.00 | 803.99 | 0.00 | 804.12 | 11.79 | 3.16 | 386.79 | 100.20 |
| 113.100 | 400.00 | 0.00 | 0.00 | 799.20 | 650.00 | 804.44 | 0.00 | 804.61 | 18.39 | 3.64 | 360.96 | 151.50 |
| 113.100 | 400.00 | 0.00 | 0.00 | 799.20 | 650.00 | 804.53 | 0.00 | 804.72 | 18.28 | 3.70 | 276.87 | 152.02 |
| 113.200 | 400.00 | 0.00 | 0.00 | 800.10 | 650.00 | 805.21 | 0.00 | 805.61 | 21.58 | 3.85 | 311.69 | 139.94 |
| 113.200 | 400.00 | 0.00 | 0.00 | 800.10 | 650.00 | 805.31 | 0.00 | 805.52 | 21.75 | 3.93 | 266.96 | 139.44 |
| 114.000 | 460.00 | 0.00 | 0.00 | 801.00 | 650.00 | 806.06 | 0.00 | 806.24 | 15.33 | 3.51 | 210.67 | 166.01 |
| 114.000 | 460.00 | 0.00 | 0.00 | 801.00 | 650.00 | 806.16 | 0.00 | 806.33 | 14.23 | 3.43 | 216.33 | 172.31 |
| 114.500 | 100.00 | 0.00 | 0.00 | 801.50 | 650.00 | 806.21 | 0.00 | 806.48 | 19.23 | 5.79 | 171.46 | 148.05 |
| 114.600 | 100.00 | 0.00 | 0.00 | 801.50 | 650.00 | 806.30 | 0.00 | 806.51 | 18.05 | 5.72 | 174.90 | 152.78 |
| 114.900 | 1.00 | 816.50 | 812.50 | 801.50 | 650.00 | 806.21 | 0.00 | 806.44 | 19.26 | 3.79 | 171.51 | 148.12 |
| 114.900 | 1.00 | 816.50 | 812.50 | 801.50 | 650.00 | 806.30 | 0.00 | 806.51 | 18.02 | 3.71 | 174.99 | 155.11 |
| 115.000 | 50.00 | 816.50 | 812.70 | 801.70 | 650.00 | 806.33 | 0.00 | 806.56 | 20.56 | 3.87 | 168.15 | 143.36 |
| 115.000 | 50.00 | 816.50 | 812.70 | 801.70 | 650.00 | 806.43 | 0.00 | 806.63 | 19.33 | 3.79 | 171.53 | 147.66 |
| 115.100 | 1.00 | 0.00 | 0.00 | 801.70 | 650.00 | 806.33 | 0.00 | 806.56 | 20.54 | 3.86 | 168.20 | 143.43 |
| 115.100 | 1.00 | 0.00 | 0.00 | 801.70 | 650.00 | 806.41 | 0.00 | 806.63 | 19.31 | 3.79 | 171.38 | 147.93 |
| 116.000 | 50.00 | 0.00 | 0.00 | 801.30 | 650.00 | 806.69 | 0.00 | 806.66 | 13.33 | 3.96 | 218.85 | 170.05 |
| 116.000 | 50.00 | 0.00 | 0.00 | 801.30 | 650.00 | 806.56 | 0.00 | 806.73 | 12.66 | 3.31 | 222.81 | 182.70 |
| 116.700 | 2200.00 | 0.00 | 0.00 | 803.90 | 650.00 | 809.26 | 0.00 | 809.44 | 12.37 | 3.47 | 230.23 | 184.79 |
| 116.700 | 2200.00 | 0.00 | 0.00 | 803.90 | 650.00 | 809.31 | 0.00 | 809.51 | 12.78 | 3.55 | 199.10 | 181.85 |
| 116.900 | 00.00 | 0.00 | 0.00 | 804.20 | 650.00 | 809.29 | 0.00 | 809.08 | 54.74 | 6.37 | 135.01 | 86.29 |
| 116.900 | 00.00 | 0.00 | 0.00 | 804.20 | 650.00 | 809.36 | 0.00 | 809.92 | 52.95 | 6.22 | 140.67 | 89.32 |

FORM 1411-0-PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRO | ELLC | ELMIN | Q | CHSEL | CTILS | FS | TOK*S | VCH | AREA | .01A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 117.000 | 35.00 | 810.80 | 810.00 | 805.00 | 650.00 | 810.30 | 0.00 | 811.12 | 20.75 | 4.76 | 237.43 | 142.69 |
| 117.000 | 35.00 | 810.80 | 810.00 | 805.00 | 650.00 | 810.33 | 0.00 | 811.14 | 20.23 | 4.72 | 241.55 | 144.33 |
| 117.200 | 50.00 | 0.00 | 0.00 | 803.90 | 650.00 | 811.16 | 0.00 | 811.22 | 1.98 | 2.25 | 627.71 | 466.35 |
| 117.200 | 50.00 | 0.00 | 0.00 | 803.90 | 650.00 | 811.17 | 0.00 | 811.24 | 2.06 | 2.26 | 557.09 | 450.29 |
| 119.000 | 1365.00 | 0.00 | 0.00 | 808.00 | 650.00 | 811.65 | 0.00 | 812.04 | 39.60 | 6.01 | 255.04 | 84.34 |
| 119.000 | 1365.00 | 0.00 | 0.00 | 808.00 | 650.00 | 811.66 | 0.00 | 812.13 | 37.69 | 6.47 | 207.43 | 75.47 |
| 119.300 | 400.00 | 0.00 | 0.00 | 808.60 | 650.00 | 813.40 | 0.00 | 813.93 | 36.13 | 6.00 | 122.36 | 108.14 |
| 119.300 | 400.00 | 0.00 | 0.00 | 808.60 | 650.00 | 813.69 | 0.00 | 814.02 | 33.15 | 5.92 | 126.33 | 112.89 |
| 119.600 | 350.00 | 0.00 | 0.00 | 809.80 | 650.00 | 814.65 | 0.00 | 815.19 | 36.23 | 5.98 | 124.83 | 111.10 |
| 119.600 | 350.00 | 0.00 | 0.00 | 809.80 | 650.00 | 814.66 | 0.00 | 815.20 | 34.14 | 5.97 | 126.95 | 111.28 |
| 120.000 | 400.00 | 0.00 | 0.00 | 811.00 | 650.00 | 815.96 | 0.00 | 816.29 | 21.42 | 5.26 | 130.32 | 140.65 |
| 120.000 | 400.00 | 0.00 | 0.00 | 811.00 | 650.00 | 815.87 | 0.00 | 816.30 | 21.31 | 5.25 | 130.51 | 140.80 |
| 120.300 | 50.00 | 0.00 | 0.00 | 811.10 | 650.00 | 815.61 | 0.00 | 816.33 | 08.17 | 9.23 | 70.46 | 69.22 |
| 120.300 | 50.00 | 0.00 | 0.00 | 811.10 | 650.00 | 815.62 | 0.00 | 816.93 | 07.31 | 9.21 | 70.55 | 69.37 |
| 120.900 | 1.00 | 818.50 | 817.60 | 811.10 | 650.00 | 815.54 | 0.00 | 817.00 | 51.39 | 9.62 | 67.56 | 90.50 |
| 120.900 | 1.00 | 818.50 | 817.60 | 811.10 | 650.00 | 815.54 | 0.00 | 817.00 | 51.38 | 9.61 | 67.64 | 90.60 |
| 121.000 | 52.00 | 818.50 | 817.60 | 811.10 | 650.00 | 816.23 | 0.00 | 817.32 | 33.03 | 8.37 | 77.67 | 111.75 |
| 121.000 | 52.50 | 818.50 | 817.60 | 811.10 | 650.00 | 816.23 | 0.00 | 817.32 | 32.77 | 8.31 | 77.72 | 111.81 |
| 121.100 | 1.00 | 0.00 | 0.00 | 811.10 | 650.00 | 816.40 | 0.00 | 817.36 | 09.79 | 7.86 | 82.75 | 68.20 |
| 121.100 | 1.00 | 0.00 | 0.00 | 811.10 | 650.00 | 816.40 | 0.00 | 817.36 | 09.65 | 7.85 | 82.79 | 68.65 |
| 121.200 | 50.00 | 0.00 | 0.00 | 811.00 | 650.00 | 817.47 | 0.00 | 817.75 | 15.64 | 4.89 | 262.87 | 146.66 |
| 121.200 | 50.00 | 0.00 | 0.00 | 811.00 | 650.00 | 817.47 | 0.00 | 817.75 | 15.63 | 4.89 | 262.97 | 146.72 |
| 122.000 | 965.00 | 0.00 | 0.00 | 811.00 | 650.00 | 818.39 | 0.00 | 818.38 | 3.06 | 2.11 | 1035.42 | 371.66 |
| 122.000 | 965.00 | 0.00 | 0.00 | 811.00 | 650.00 | 818.38 | 0.00 | 818.41 | 3.25 | 2.18 | 929.80 | 360.48 |

FORMATI DI PRODOTTO DA: ROTARY MANUFACTURING BOARD

WAUBASCON CREEK

SUMMARY PRINTOUT TABLE 150

| SECTO | Q | CUSEL | DIFSP | DIFSK | DIFKUS | TOPWID | YLCH |
|---|---|---|---|---|---|---|---|
| 110.000 | 650.00 | 801.30 | 0.00 | 0.00 | 0.00 | 146.77 | 0.00 |
| 110.000 | 650.00 | 801.30 | 0.00 | 0.00 | 0.00 | 135.00 | 0.00 |
| 111.000 | 650.00 | 801.35 | 0.00 | 0.06 | 0.00 | 170.60 | 1640.00 |
| 111.000 | 650.00 | 801.36 | 0.00 | 0.06 | 0.00 | 158.00 | 1640.00 |
| 112.000 | 650.00 | 801.41 | 0.00 | 0.03 | 0.00 | 166.23 | 1200.00 |
| 112.000 | 650.00 | 801.42 | 0.00 | 0.06 | 0.01 | 140.00 | 1200.00 |
| 112.500 | 650.00 | 801.58 | 0.00 | 0.06 | 0.00 | 99.23 | 1550.00 |
| 112.500 | 650.00 | 801.60 | 0.00 | 0.10 | 0.00 | 80.00 | 1550.00 |
| 112.600 | 650.00 | 801.75 | 0.00 | 0.17 | 0.00 | 186.09 | 375.00 |
| 112.600 | 650.00 | 801.74 | 0.00 | 0.15 | -0.00 | 66.41 | 375.00 |
| 112.700 | 650.00 | 802.85 | 0.00 | 1.11 | 0.10 | 251.2[illegible] | 375.00 |
| 112.700 | 650.00 | 802.95 | 0.00 | 1.21 | 0.10 | 133.36 | 375.00 |
| 112.800 | 650.00 | 803.42 | 0.00 | 0.56 | 0.00 | 260.33 | 375.00 |
| 112.800 | 650.00 | 803.52 | 0.00 | 0.57 | 0.10 | 169.63 | 375.00 |
| 113.000 | 650.00 | 803.89 | 0.00 | 0.40 | 0.00 | 261.49 | 375.00 |
| 113.000 | 650.00 | 803.99 | 0.00 | 0.4[illegible] | 0.10 | 158.69 | 375.00 |
| 113.100 | 650.00 | 804.44 | 0.00 | 0.55 | 0.00 | 244.56 | 400.00 |
| 113.100 | 650.00 | 804.53 | 0.00 | 0.54 | 0.10 | 123.92 | 400.00 |
| 113.200 | 650.00 | 805.21 | 0.00 | 0.75 | 0.00 | 237.37 | 400.00 |
| 113.200 | 650.00 | 805.31 | 0.00 | 0.78 | 0.09 | 111.91 | 400.00 |
| 114.000 | 650.00 | 806.06 | 0.00 | 0.84 | 0.00 | 57.37 | 460.00 |
| 114.000 | 650.00 | 806.16 | 0.00 | 0.85 | 0.10 | 57.04 | 460.00 |
| 114.800 | 650.00 | 806.21 | 0.00 | 0.15 | 0.00 | 40.00 | 100.00 |
| 114.800 | 650.00 | 806.30 | 0.00 | 0.14 | 0.09 | 40.00 | 100.00 |
| 114.900 | 650.00 | 806.21 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 114.900 | 650.00 | 806.30 | 0.00 | 0.00 | 0.09 | 40.00 | 1.00 |
| 115.000 | 650.00 | 806.33 | 0.00 | 0.11 | 0.00 | 40.00 | 60.00 |
| 115.000 | 650.00 | 806.41 | 0.00 | 0.11 | 0.00 | 40.00 | 60.00 |
| 115.100 | 650.00 | 806.33 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 115.100 | 650.00 | 806.41 | 0.00 | 0.00 | 0.08 | 40.00 | 1.00 |
| 116.000 | 650.00 | 806.49 | 0.00 | 0.16 | 0.00 | 55.76 | 50.00 |
| 116.000 | 650.00 | 806.56 | 0.00 | 0.15 | 0.07 | 56.06 | 30.00 |
| 116.700 | 650.00 | 809.26 | 0.00 | 2.77 | 0.00 | 101.33 | 2200.00 |
| 116.700 | 650.00 | 809.31 | 0.00 | 2.75 | 0.05 | 39.38 | 2200.00 |
| 116.900 | 650.00 | 809.29 | 0.00 | 0.02 | 0.00 | 79.33 | 100.00 |
| 116.900 | 650.00 | 809.36 | 0.00 | 0.05 | 0.07 | 81.90 | 100.00 |

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKUS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 117.000 | 650.00 | 810.80 | 0.00 | 1.52 | 0.00 | 148.14 | 35.00 |
| 117.000 | 650.00 | 812.63 | 0.00 | 1.47 | 0.03 | 148.15 | 35.00 |
| 117.200 | 650.00 | 811.16 | 0.00 | 0.36 | 0.01 | 207.07 | 50.00 |
| 117.200 | 650.00 | 811.17 | 0.00 | 0.34 | 0.01 | 162.81 | 50.00 |
| 119.000 | 650.00 | 811.65 | 0.00 | 0.49 | 0.00 | 224.12 | 1365.00 |
| 119.000 | 650.00 | 811.65 | 0.00 | 0.49 | 0.01 | 162.74 | 1365.00 |
| 119.500 | 650.00 | 813.41 | 0.00 | 1.74 | 0.00 | 42.11 | 400.00 |
| 119.500 | 650.00 | 813.49 | 0.00 | 1.83 | 0.09 | 42.61 | 400.00 |
| 119.600 | 650.00 | 814.65 | 0.00 | 1.25 | 0.00 | 42.42 | 350.00 |
| 119.600 | 650.00 | 814.66 | 0.00 | 1.17 | 0.01 | 42.43 | 350.00 |
| 120.000 | 650.00 | 815.85 | 0.00 | 1.21 | 0.00 | 30.00 | 400.00 |
| 120.000 | 650.00 | 815.87 | 0.00 | 1.21 | 0.01 | 30.00 | 400.00 |
| 120.800 | 650.00 | 815.61 | 0.00 | -0.24 | 0.00 | 15.60 | 50.00 |
| 120.800 | 650.00 | 815.62 | 0.00 | -0.23 | 0.01 | 15.60 | 50.00 |
| 120.900 | 650.00 | 815.56 | 0.00 | -0.05 | 0.00 | 15.60 | 1.00 |
| 120.900 | 650.00 | 815.56 | 0.00 | -0.05 | 0.01 | 15.60 | 1.00 |
| 121.000 | 650.00 | 816.23 | 0.00 | 0.67 | 0.00 | 15.60 | 52.00 |
| 121.000 | 650.00 | 816.23 | 0.00 | 0.67 | 0.00 | 15.60 | 52.00 |
| 121.100 | 650.00 | 816.40 | 0.00 | 0.17 | 0.00 | 15.60 | 1.00 |
| 121.100 | 650.00 | 816.40 | 0.00 | 0.17 | 0.00 | 15.60 | 1.00 |
| 121.200 | 650.00 | 817.47 | 0.00 | 1.06 | 0.00 | 80.00 | 50.00 |
| 121.200 | 650.00 | 817.47 | 0.00 | 1.06 | 0.00 | 80.00 | 50.00 |
| 122.000 | 650.00 | 818.35 | 0.00 | 0.86 | 0.00 | 392.69 | 965.00 |
| 122.000 | 650.00 | 818.36 | 0.00 | 0.91 | 0.02 | 274.93 | 965.00 |

SUMMARY OF ERRORS

FORM 3211.02 PRINTED BY MOTOR MANIFOLD FORMS
PRINTED IN U.S.A.

FLOODWAY DATA, WAUBASCON CREEK
PROFILE NO. 2

| STATION | FLOODWAY WIDTH (FT) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 110.000 | 185. | 830. | 0.7 | 801.3 | 801.3 | 0.0 |
| 111.000 | 150. | 839. | 0.7 | 801.4 | 801.4 | 0.0 |
| 112.000 | 140. | 743. | 0.7 | 801.4 | 801.4 | 0.0 |
| 112.500 | 88. | 346. | 1.9 | 801.6 | 801.6 | 0.0 |
| 112.600 | 66. | 147. | 4.4 | 801.7 | 801.7 | 0.0 |
| 112.700 | 134. | 303. | 2.1 | 803.0 | 802.9 | 0.1 |
| 112.800 | 150. | 344. | 1.9 | 803.5 | 803.4 | 0.1 |
| 113.000 | 159. | 367. | 1.8 | 804.0 | 803.9 | 0.1 |
| 113.100 | 124. | 277. | 2.3 | 804.5 | 804.4 | 0.1 |
| 113.200 | 112. | 247. | 2.6 | 805.3 | 805.2 | 0.1 |
| 114.000 | 58. | 216. | 3.0 | 806.2 | 806.1 | 0.1 |
| 114.800 | 40. | 175. | 3.7 | 806.3 | 806.2 | 0.1 |
| 114.900 | 40. | 175. | 3.7 | 806.3 | 806.2 | 0.1 |
| 115.000 | 50. | 171. | 3.8 | 806.4 | 806.3 | 0.1 |
| 115.100 | 40. | 171. | 3.8 | 806.4 | 806.3 | 0.1 |
| 116.000 | 56. | 223. | 2.9 | 806.6 | 806.5 | 0.1 |
| 116.700 | 39. | 199. | 3.3 | 809.4 | 809.3 | 0.1 |
| 116.900 | 82. | 141. | 4.6 | 809.4 | 809.3 | 0.1 |
| 117.000 | 176. | 243. | 2.7 | 810.9 | 810.8 | 0.0 |
| 117.200 | 163. | 558. | 1.2 | 811.2 | 811.2 | 0.0 |
| 119.300 | 163. | 207. | 3.1 | 811.7 | 811.7 | 0.0 |
| 119.500 | 43. | 126. | 5.1 | 813.5 | 813.4 | 0.1 |
| 119.600 | 42. | 125. | 5.2 | 814.6 | 814.6 | 0.0 |
| 120.000 | 50. | 133. | 5.0 | 815.9 | 815.9 | 0.0 |
| 120.800 | 16. | 79. | 9.2 | 815.6 | 815.6 | 0.0 |
| 120.900 | 16. | 80. | 9.0 | 815.6 | 815.6 | 0.0 |
| 121.000 | 16. | 78. | 9.4 | 816.2 | 816.2 | 0.0 |
| 121.100 | 16. | 83. | 7.9 | 816.4 | 816.4 | 0.0 |
| 121.200 | 80. | 263. | 2.5 | 817.5 | 817.5 | 0.0 |
| 122.000 | 275. | 930. | 0.7 | 818.4 | 818.4 | 0.0 |

PRINTED IN U.S.A.
PGEB-1011.00-PRINTED BY GRAPHIC MANIFOLD FORMS

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1HEDFORD TOWNSHIP & CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2WAUBASCON CREEK FROM CONFLUENCE OF KALAMAZOO RIVER TO 1000 FT. U/S MASON ST.
T3       WAUBASCON CREEK.

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
          0.        2.        0.        0.  0.000000      0.00      0.0       0.   801.300     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000   201.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J5  LPRNT     NUMSEC                        ********REQUESTED SECTION NUMBERS********

    -10.000   -10.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
ET    0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000     0.000
QT    5.000   270.000   490.000   650.000   650.000  1230.000     0.000     0.000     0.000     0.000
NC    0.120     0.120     0.040     0.100     0.300     0.000     0.000     0.000     0.000     0.000

          CROSS SECTION 110 AT CONFLUENCE TO KALAMAZOO RIVER

X1  110.000    15.000   578.000   713.000     0.000     0.000     0.000     0.000     0.000     0.000
GR  812.400   518.000   808.600   538.000   803.700   562.000   805.000   566.000   799.200   578.000
GR  794.900   593.000   794.000   623.000   793.400   653.000   794.000   683.000   798.300   713.000
GR  800.700   715.000   802.100   723.000   803.400   744.000   804.100   772.000   810.500   860.000

          CROSS SECTION 111

X1  111.000    22.000   903.000  1061.000  1640.000  1640.000  1640.000     0.000     0.000     0.000
GR  814.200    48.000   811.600    82.000   803.200   118.000   802.500   400.000   802.000   800.000
GR  801.800   893.000   798.700   903.000   796.200   943.000   794.400   983.000   793.700  1003.000
GR  794.700  1033.000   798.000  1061.000   800.700  1083.000   803.900  1073.000   808.300  1098.000
GR  811.600  1122.000   813.900  1142.000   815.900  1164.000   817.200  1190.000   817.200  1256.000
GR  819.100  1278.000   820.000  1300.000     0.000     0.000     0.000     0.000     0.000     0.000

          CROSS SECTION 112

X1  112.000    18.000   543.000   683.000  1200.000  1200.000  1200.000     0.000     0.000     0.000
GR  811.800    56.000   803.600    82.000   803.000   300.000   802.700   536.000   798.500   543.000
GR  795.900   573.000   795.100   603.000   795.300   633.000   796.400   663.000   797.900   683.000
GR  802.000   708.000   801.900   728.000   806.400   746.000   811.400   766.000   813.800   770.000
GR  814.600   808.000   818.000   832.000   825.000   840.000     0.000     0.000     0.000     0.000

X1  112.500    14.000   407.000   493.000  1550.000  1550.000  1550.000     0.000     0.000     0.000
GR  810.000     0.000   804.000    24.000   802.500    90.200   802.500   400.000   802.100   407.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 797.500 | 437.000 | 796.700 | 467.000 | 796.900 | 490.000 | 799.500 | 495.000 | 802.500 | 505.000 |
| GR | 802.500 | 750.000 | 802.500 | 1000.000 | 810.000 | 1050.000 | 815.000 | 1100.000 | 0.000 | 0.000 |
| X1 | 112.600 | 19.000 | 375.000 | 417.000 | 375.000 | 375.000 | 375.000 | 0.000 | -1.200 | 0.000 |
| GR | 815.000 | 150.000 | 809.800 | 200.000 | 808.200 | 234.000 | 805.400 | 270.000 | 802.500 | 306.000 |
| GR | 802.000 | 364.000 | 801.800 | 375.000 | 802.800 | 330.000 | 800.300 | 393.000 | 798.700 | 399.000 |
| GR | 798.300 | 404.000 | 799.000 | 409.000 | 802.000 | 417.000 | 802.000 | 430.000 | 802.800 | 466.000 |
| GR | 803.200 | 522.000 | 803.800 | 550.000 | 810.000 | 565.000 | 815.000 | 575.000 | 0.000 | 0.000 |
| X1 | 112.700 | 0.000 | 0.000 | 0.000 | 375.000 | 375.000 | 375.000 | 0.000 | 0.400 | 0.000 |
| X1 | 112.800 | 0.000 | 0.000 | 0.000 | 375.000 | 375.000 | 375.000 | 0.000 | 0.400 | 0.000 |

CROSS SECTION 113

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 113.000 | 0.000 | 0.000 | 0.000 | 375.000 | 375.000 | 375.000 | 0.000 | 0.400 | 0.000 |
| X1 | 113.100 | 0.000 | 0.000 | 0.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.900 | 0.000 |
| X1 | 113.200 | 0.000 | 0.000 | 0.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.900 | 0.000 |

100 D/S DICHICAN AVE. CROSS SECTIO 114

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.000 | 19.000 | 375.000 | 415.000 | 460.000 | 460.000 | 460.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.045 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 1.000 | 748.000 |
| GR | 815.200 | 0.000 | 815.300 | 54.000 | 812.400 | 92.000 | 812.600 | 176.000 | 813.200 | 210.000 |
| GR | 813.000 | 312.000 | 812.300 | 360.000 | 802.600 | 375.000 | 802.400 | 381.000 | 801.200 | 386.000 |
| GR | 801.000 | 396.000 | 801.300 | 404.000 | 802.100 | 413.000 | 810.200 | 425.000 | 811.000 | 436.000 |
| GR | 813.000 | 534.000 | 813.200 | 634.000 | 812.800 | 716.000 | 815.600 | 748.000 | 0.000 | 0.000 |

D/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.800 | 5.000 | 414.000 | 454.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |
| GR | 816.500 | 413.000 | 802.600 | 414.000 | 801.500 | 434.000 | 802.100 | 454.000 | 816.500 | 455.000 |

D/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |
| BT | 5.000 | 413.000 | 816.500 | 0.000 | 414.000 | 816.500 | 812.500 | 434.000 | 816.500 | 812.500 |
| BT | 454.000 | 816.500 | 812.500 | 455.000 | 816.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.000 | 0.000 | 0.000 | 0.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.200 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |

U/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

PRINTED IN U.S.A.
FORM 141-00 PRINTED BY HOLARY MANIFOLD FORMS.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |

50 FT U/S MICHIGAN AVE. CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.000 | 13.000 | 349.000 | 389.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 815.800 | 0.000 | 815.600 | 122.300 | 815.400 | 105.000 | 815.200 | 315.000 | 810.700 | 334.000 |
| GR | 802.600 | 349.000 | 801.600 | 356.300 | 801.500 | 369.000 | 802.300 | 389.000 | 806.700 | 398.000 |
| GR | 810.600 | 426.000 | 813.300 | 436.000 | 816.000 | 526.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

100 FT D/S CROSS ST CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.700 | 13.000 | 451.000 | 485.000 | 1350.000 | 1350.000 | 2200.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 393.000 | 810.000 | 394.000 | 809.400 | 405.000 | 809.400 | 430.000 | 808.100 | 445.000 |
| GR | 806.700 | 469.000 | 804.900 | 451.000 | 804.000 | 481.000 | 804.900 | 485.000 | 806.700 | 489.000 |
| GR | 808.700 | 498.000 | 809.400 | 542.000 | 820.000 | 593.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| XC | 0.120 | 0.120 | 0.035 | 0.300 | 0.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 394.000 | 543.000 |

D/S FACE CROSS ST. CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.900 | 32.000 | 456.000 | 486.000 | 150.000 | 101.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 804.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 809.000 | 809.000 | 0.000 |
| GR | 820.000 | 393.000 | 810.200 | 394.000 | 809.000 | 441.000 | 807.000 | 454.000 | 807.000 | 456.000 |
| GR | 805.300 | 456.500 | 804.400 | 457.500 | 806.100 | 458.500 | 804.100 | 459.500 | 804.400 | 460.500 |
| GR | 805.300 | 461.500 | 807.000 | 462.000 | 807.300 | 465.000 | 805.300 | 465.500 | 804.400 | 466.500 |
| GR | 804.100 | 467.500 | 806.100 | 468.500 | 804.400 | 469.500 | 805.300 | 470.500 | 807.000 | 471.000 |
| GR | 807.000 | 474.000 | 805.300 | 474.500 | 804.400 | 475.500 | 804.100 | 476.500 | 804.100 | 477.500 |
| GR | 804.400 | 478.500 | 805.300 | 479.500 | 807.000 | 480.000 | 807.000 | 482.000 | 809.000 | 490.000 |
| GR | 810.000 | 542.000 | 820.000 | 543.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 0.000 | 2.020 | 3.000 | 0.000 | 13.000 | 0.000 | 75.000 | 0.000 | 804.100 | 804.100 |

U/S FACE CROSS ST. CROSS SECTION 1178130

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.000 | 32.000 | 456.000 | 480.000 | 35.000 | 35.000 | 35.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 810.000 | 810.800 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 805.000 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 810.800 | 810.800 | 0.000 |
| BT | 32.000 | 393.000 | 820.000 | 0.000 | 394.000 | 810.600 | 0.000 | 441.000 | 810.800 | 0.000 |
| BT | 454.000 | 810.800 | 0.000 | 456.000 | 810.800 | 807.000 | 456.500 | 810.800 | 808.700 | 457.500 |
| BT | 810.800 | 809.600 | 458.500 | 810.800 | 810.000 | 459.500 | 810.800 | 810.000 | 460.500 | 810.800 |
| BT | 809.600 | 461.500 | 810.800 | 808.700 | 462.000 | 810.800 | 807.000 | 465.000 | 810.800 | 807.000 |
| BT | 465.500 | 810.800 | 808.700 | 466.500 | 810.800 | 809.600 | 467.500 | 810.800 | 810.000 | 468.500 |
| BT | 810.800 | 810.000 | 469.500 | 810.800 | 809.600 | 470.500 | 810.800 | 808.700 | 471.000 | 810.800 |
| BT | 807.000 | 474.000 | 810.800 | 807.000 | 474.500 | 810.000 | 808.700 | 475.500 | 810.800 | 809.600 |
| BT | 476.500 | 810.800 | 810.000 | 477.500 | 810.800 | 810.000 | 478.500 | 810.800 | 809.600 | 479.500 |
| BT | 810.800 | 808.700 | 480.000 | 810.800 | 807.000 | 482.000 | 810.800 | 0.000 | 490.000 | 810.800 |
| BT | 0.000 | 542.000 | 810.800 | 0.000 | 543.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 393.000 | 810.200 | 394.000 | 810.000 | 441.000 | 809.000 | 454.000 | 807.000 | 456.000 |
| GR | 805.300 | 456.500 | 804.400 | 457.500 | 804.100 | 458.500 | 804.100 | 459.500 | 804.400 | 460.500 |
| GR | 805.300 | 461.500 | 807.000 | 462.000 | 807.000 | 465.000 | 805.300 | 465.500 | 804.400 | 466.500 |
| GR | 804.100 | 467.500 | 804.100 | 468.500 | 804.400 | 469.500 | 805.300 | 470.500 | 807.000 | 471.000 |
| GR | 807.000 | 474.000 | 805.300 | 474.500 | 804.400 | 475.500 | 804.100 | 476.500 | 804.100 | 477.500 |
| GR | 804.400 | 478.500 | 805.300 | 479.500 | 807.000 | 480.000 | 809.000 | 482.000 | 810.000 | 490.000 |
| GR | 810.000 | 542.000 | 820.000 | 543.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 9.100 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 406.000 | 530.000 |

50 FT U/S CROSS ST. CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.200 | 13.000 | 451.000 | 485.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 820.000 | 363.000 | 810.000 | 388.000 | 809.400 | 400.000 | 809.400 | 430.000 | 808.100 | 445.000 |
| GR | 806.700 | 449.000 | 804.900 | 451.000 | 804.000 | 460.000 | 803.900 | 485.000 | 806.700 | 489.000 |
| GR | 808.700 | 498.000 | 809.400 | 592.000 | 820.000 | 593.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.100 | 0.100 | 0.040 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 118.000 | 13.000 | 223.000 | 247.000 | 450.000 | 550.000 | 680.000 | 0.000 | -2.000 | 0.000 |
| GR | 825.000 | 122.000 | 811.000 | 123.000 | 810.000 | 102.000 | 811.200 | 214.000 | 808.400 | 223.000 |
| GR | 808.400 | 235.000 | 808.000 | 238.000 | 809.100 | 240.000 | 809.000 | 247.000 | 810.000 | 251.000 |
| GR | 811.200 | 306.000 | 810.600 | 347.000 | 825.000 | 348.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 119

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.000 | 0.000 | 0.000 | 0.000 | 450.000 | 550.000 | 605.000 | 0.000 | 2.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 507.000 | 853.000 |
| X1 | 119.500 | 10.000 | 639.000 | 667.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 819.200 | 506.000 | 817.000 | 566.000 | 817.000 | 617.000 | 812.100 | 635.000 | 810.900 | 639.000 |
| GR | 808.600 | 653.000 | 810.600 | 667.000 | 812.100 | 670.000 | 817.600 | 680.000 | 818.000 | 833.000 |
| X1 | 119.600 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 350.000 | 0.000 | 1.200 | 0.000 |

100 FT D/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.000 | 11.000 | 639.000 | 667.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 617.000 | 0.000 | 680.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.000 | 578.000 | 817.000 | 579.000 | 817.000 | 617.000 | 813.300 | 635.000 | 812.100 | 639.000 |
| GR | 811.000 | 653.000 | 811.800 | 667.000 | 813.300 | 670.000 | 817.600 | 680.000 | 818.000 | 727.000 |
| GR | 825.000 | 728.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.800 | 22.000 | 644.700 | 660.300 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 617.000 | 0.000 | 680.000 | 0.000 | 816.000 | 816.000 | 0.000 |
| GR | 825.000 | 578.000 | 817.000 | 579.000 | 817.000 | 617.000 | 813.300 | 635.000 | 812.100 | 639.000 |
| GR | 811.100 | 644.700 | 811.100 | 646.800 | 811.100 | 669.700 | 811.100 | 649.800 | 811.100 | 649.900 |
| GR | 811.100 | 650.000 | 811.100 | 655.000 | 811.100 | 655.100 | 811.100 | 655.200 | 811.100 | 655.300 |
| GR | 811.100 | 660.200 | 811.100 | 660.300 | 811.800 | 667.000 | 813.300 | 670.000 | 817.600 | 680.000 |
| GR | 818.000 | 727.000 | 825.000 | 728.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 1.250 | 2.350 | 3.000 | 0.000 | 15.600 | 0.600 | 98.000 | 0.000 | 811.100 | 811.100 |

U/S FACE MASON ST. CROSS SECTION 1&2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.000 | 0.000 | 0.000 | 0.000 | 52.000 | 52.000 | 52.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 817.600 | 818.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 817.000 | 0.000 | 680.000 | 0.000 | 817.000 | 817.000 | 0.000 |
| BT | 22.000 | 578.000 | 825.000 | 825.000 | 579.000 | 818.500 | 817.000 | 617.000 | 818.500 | 817.000 |
| BT | 639.000 | 818.500 | 813.300 | 639.000 | 818.500 | 812.100 | 664.700 | 818.500 | 811.100 | 664.800 |
| BT | 818.500 | 817.600 | 649.700 | 818.500 | 817.600 | 649.800 | 818.500 | 811.100 | 669.900 | 818.500 |
| BT | 811.100 | 650.000 | 818.500 | 817.600 | 655.000 | 818.500 | 817.600 | 655.100 | 818.500 | 811.100 |
| BT | 655.200 | 818.500 | 811.100 | 655.300 | 818.500 | 817.600 | 660.200 | 818.500 | 817.600 | 660.300 |
| BT | 818.500 | 811.100 | 667.000 | 818.500 | 811.800 | 670.000 | 818.500 | 813.300 | 680.000 | 818.500 |
| BT | 817.600 | 727.000 | 818.500 | 818.000 | 728.000 | 825.000 | 825.000 | 0.000 | 0.000 | 0.000 |

50 FT U/S MASON ST. CROSS SECTION 2

FORM 1411.08 PRINTED BY ROYALITE MANIFOLD FORMS
PRINTED IN U.S.A.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.200 | 11.000 | 840.000 | 856.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 808.000 | 0.000 | 888.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 821.800 | 660.000 | 818.800 | 724.000 | 816.800 | 762.000 | 815.100 | 836.000 | 811.300 | 840.000 |
| GR | 811.000 | 848.000 | 812.000 | 856.000 | 814.300 | 864.000 | 815.000 | 870.000 | 816.000 | 900.000 |
| GR | 820.000 | 913.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| MC | 0.120 | 0.120 | 0.045 | 0.130 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.000 | 21.000 | 840.000 | 856.000 | 965.000 | 965.000 | 965.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.200 | 0.000 | 821.700 | 56.000 | 823.000 | 106.000 | 823.000 | 152.000 | 821.600 | 198.000 |
| GR | 821.200 | 376.000 | 820.400 | 520.000 | 821.800 | 660.000 | 818.800 | 724.000 | 816.800 | 762.000 |
| GR | 815.900 | 830.000 | 811.300 | 840.000 | 811.000 | 848.000 | 812.000 | 856.000 | 814.300 | 864.000 |
| GR | 815.000 | 978.000 | 816.600 | 1052.000 | 819.000 | 1152.000 | 819.200 | 1260.000 | 819.100 | 1488.000 |
| GR | 830.000 | 1650.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP & CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2WAUBASCON CREEK FROM CONFLUENCE OF KALAMAZOO RIVER TO 1000 FT. U/S MASON ST.
T3      WAUBASCON CREEK

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       3.       0.       0.  0.000000     0.00      0.0      0.   801.303   0.000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH     FN      ALLDC    IBH      CHNIM    ITRACE

     2.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP & CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2WAUBASCON CREEK FROM CONFLUENCE OF KALAMAZOO RIVER TO 1000 FT. U/S MASON ST.
T3       WAUBASCON CREEK

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        4.        0.        0.  0.000000      0.00      0.0        0.   801.300     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBC       CHNIM     ITRACE

     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP & CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2WAUBASCON CREEK FROM CONFLUENCE OF KALAMAZOO RIVER TO 1000 FT. U/S MASON ST.
T3       WAUBASCON CREEK

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        6.        0.        0.  0.000000      0.00       0.0        0.   801.300     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: Waubason Creek

4) DOCUMENT TYPE:

00BREAK00

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  30,51,52
*****************************************************

C
T1BEDFORD TOWNSHIP & CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2WAUBASCON CREEK FROM CONFLUENCE OF KALAMAZOO RIVER TO 1050 FT. U/S MASON ST.
T3       WAUBASCON CREEK

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      0.        4.        0.        0.  0.000000      1.00      0.0       0.   800.300     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
   150.000   110.000   200.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

OT @ Month 5.000   270.000✓  490.000✓  650.000✓  650.000   1250.000✓   0.000     0.000     0.000     0.000
ET        0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000     0.000
NC        0.120     0.120     0.040     0.100     0.300     0.300     0.300     0.300     0.300     0.000

        CROSS SECTION 110 AT CONFLUENCE TO KALAMAZOO RIVER

X1      110.000    15.000   575.000   713.000     0.000     0.000     0.000     0.000     0.000     0.000
GR      812.400   518.000   806.600   538.000   803.700   562.000   803.000   563.000   799.200   578.000
GR      794.900   593.000   794.000   623.000   793.400   633.000   794.000   683.000   798.300   713.000
GR      800.700   715.000   802.100   723.000   803.400   744.000   804.100   772.000   810.500   860.000

        CROSS SECTION 111

X1      111.000    22.000   903.000  1061.000  1640.000  1640.000  1640.000     0.000     0.000     0.000
GR      814.200    48.000   811.600    82.000   803.200   115.000   802.500   400.000   802.000   800.000
GR      801.800   893.000   798.700   903.000   796.200   943.000   794.400   983.000   793.700  1003.000
GR      794.700  1033.000   798.800  1061.000   800.700  1063.000   803.900  1073.000   808.300  1098.000
GR      811.800  1122.000   813.900  1142.000   813.900  1144.000   817.200  1190.000   817.200  1256.000
GR      819.100  1278.000   820.000  1300.000     0.000     0.000     0.000     0.000     0.000     0.000

        CROSS SECTION 112

X1      112.000    10.000   543.000   683.000  1200.000  1200.000  1200.000     0.000     0.000     0.000
GR      811.800    56.000   803.600    82.000   803.000   300.000   802.700   536.000   798.500   548.000
GR      795.900   573.000   795.100   603.000   795.300   633.000   796.400   663.000   797.900   683.000
GR      802.000   708.000   801.900   728.000   806.400   746.000   811.400   760.000   813.800   770.000
GR      816.600   808.000   818.000   832.000   825.000   840.000     0.000     0.000     0.000     0.000

X1      112.500    14.000   407.000   495.000  1550.000  1550.000  1550.000     0.000     0.000     0.000
GR      810.000     0.000   804.000    26.000   802.500    50.000   802.500   400.000   808.100   407.000
GR      797.500   437.000   796.700   467.000   796.900   490.000   799.500   495.000   802.500   505.000
GR      802.500   750.000   802.500  1000.000   810.000  1050.000   815.000  1100.000     0.000     0.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 112.600 | 19.000 | 375.000 | 417.300 | 375.000 | 375.000 | 375.000 | 0.300 | -1.200 | 0.000 |
| GR | 815.000 | 150.000 | 809.800 | 200.300 | 808.200 | 234.000 | 805.400 | 270.300 | 802.500 | 336.900 |
| GR | 802.300 | 364.000 | 801.800 | 375.300 | 802.000 | 300.000 | 800.300 | 393.000 | 798.700 | 399.000 |
| GR | 798.300 | 404.000 | 799.000 | 409.300 | 802.000 | 417.300 | 802.000 | 430.300 | 802.800 | 486.000 |
| GR | 803.200 | 322.000 | 803.800 | 550.300 | 812.000 | 365.000 | 815.000 | 575.300 | 0.300 | 0.000 |
| X1 | 112.700 | 0.000 | 0.000 | 0.300 | 375.000 | 375.300 | 375.000 | 0.300 | 0.400 | 0.000 |
| X1 | 112.800 | 0.000 | 0.000 | 0.700 | 375.000 | 375.000 | 375.000 | 0.000 | 0.400 | 0.000 |

CROSS SECTION 113

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 113.000 | 0.500 | 0.000 | 0.300 | 375.000 | 375.300 | 375.000 | 0.300 | 0.400 | 0.700 |
| X1 | 113.100 | 0.000 | 0.000 | 0.000 | 400.000 | 400.300 | 400.000 | 0.000 | 0.900 | 0.300 |
| X1 | 113.200 | 0.000 | 0.000 | 0.000 | 700.000 | 400.300 | 400.000 | 0.000 | 0.900 | 0.300 |

100 D/S MICHIGAN AVE. CROSS SECTION 114

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.000 | 19.000 | 375.000 | 413.000 | 660.000 | 460.300 | 460.000 | 0.000 | 0.000 | 0.000 |
| RC | 0.120 | 0.120 | 0.065 | 0.350 | 0.500 | 0.300 | 0.020 | 0.000 | 0.000 | 0.000 |
| CT | 0.000 | 0.000 | 0.000 | 0.000 | 0.100 | 0.300 | 0.000 | 0.300 | 1.000 | 748.300 |
| GR | 815.200 | 0.000 | 815.300 | 56.000 | 812.400 | 96.000 | 812.000 | 176.300 | 813.200 | 810.000 |
| GR | 813.000 | 312.000 | 812.300 | 340.000 | 802.600 | 375.000 | 802.400 | 381.000 | 801.200 | 386.000 |
| GR | 801.000 | 395.000 | 801.300 | 404.000 | 802.100 | 415.000 | 810.200 | 425.000 | 811.000 | 436.000 |
| GR | 813.000 | 534.000 | 813.200 | 634.000 | 812.800 | 716.000 | 815.400 | 740.000 | 0.000 | 0.000 |

D/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 414.000 | 5.000 | 414.000 | 454.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |
| GR | 816.500 | 413.000 | 802.600 | 414.000 | 801.500 | 454.000 | 802.100 | 454.000 | 816.500 | 435.000 |

D/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |
| BT | 5.000 | 413.000 | 816.500 | 0.000 | 414.000 | 816.500 | 812.500 | 434.000 | 816.500 | 812.300 |
| BT | 454.000 | 816.500 | 812.500 | 455.300 | 816.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.000 | 0.000 | 0.000 | 0.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.200 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |

D/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |

PRINTED IN U.S.A.
FORM 141.00 PRINTED BY ROTARY-RANFOLD PRESS.

50 FT U/S MICHIGAN AVE. CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.000 | 13.000 | 349.000 | 389.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 815.900 | 0.000 | 815.600 | 122.000 | 815.400 | 135.300 | 615.000 | 315.000 | 810.700 | 334.000 |
| GR | 832.400 | 349.000 | 801.600 | 356.700 | 801.300 | 349.300 | 832.300 | 389.300 | 806.700 | 394.000 |
| GR | 810.300 | 426.000 | 813.300 | 406.300 | 816.000 | 526.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

100 FT D/S CROSS ST CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.700 | 13.000 | 451.000 | 435.000 | 1350.000 | 1350.000 | 2820.300 | 0.300 | 0.300 | 0.300 |
| GR | 820.300 | 393.000 | 810.000 | 396.300 | 809.600 | 400.000 | 839.400 | 430.000 | 808.100 | 446.000 |
| GR | 806.700 | 449.000 | 804.900 | 451.000 | 804.000 | 460.000 | 803.900 | 485.000 | 806.700 | 489.000 |
| GR | 808.700 | 498.000 | 809.400 | 542.000 | 820.000 | 593.000 | 0.300 | 0.000 | 0.300 | 0.000 |
| NC | 0.120 | 0.120 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.300 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.300 | 1.100 | 0.000 | 0.300 | 0.300 | 598.300 | 543.000 |

D/S FACE CROSS ST. CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.900 | 32.000 | 656.000 | 480.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X2 | 10.300 | 804.200 | 0.000 | 0.300 | 0.000 | 0.000 | 0.300 | 800.000 | 809.300 | 0.300 |
| GR | 820.300 | 393.000 | 810.200 | 396.000 | 809.000 | 441.000 | 807.000 | 454.000 | 807.500 | 456.300 |
| GR | 803.300 | 456.300 | 804.400 | 457.300 | 804.100 | 456.500 | 804.100 | 459.500 | 804.400 | 460.500 |
| GR | 805.300 | 461.500 | 807.000 | 462.000 | 807.000 | 465.000 | 805.300 | 465.500 | 804.400 | 466.500 |
| GR | 804.100 | 467.500 | 804.100 | 468.500 | 804.400 | 469.500 | 805.300 | 470.500 | 807.000 | 471.000 |
| GR | 807.000 | 474.000 | 805.300 | 474.500 | 804.400 | 475.500 | 804.100 | 476.500 | 804.100 | 477.500 |
| GR | 804.400 | 478.500 | 804.300 | 479.300 | 807.000 | 480.000 | 809.000 | 482.000 | 809.300 | 490.000 |
| GR | 810.000 | 562.000 | 820.000 | 563.000 | 0.000 | 0.000 | 0.300 | 0.000 | 0.300 | 0.300 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.490 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE CROSS ST. CROSS SECTION 1173118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.000 | 32.000 | 456.000 | 480.000 | 35.000 | 35.000 | 35.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.200 | 1.000 | 810.300 | 810.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 805.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 810.800 | 810.800 | 0.000 |
| DT | 32.000 | 393.000 | 820.000 | 0.000 | 394.000 | 810.800 | 0.000 | 441.000 | 810.800 | 0.000 |
| BT | 454.000 | 810.800 | 0.000 | 456.000 | 810.800 | 807.000 | 456.500 | 810.800 | 808.700 | 457.500 |
| BT | 810.000 | 809.600 | 458.500 | 810.800 | 810.000 | 459.500 | 810.800 | 810.300 | 460.500 | 810.800 |
| BT | 809.600 | 461.500 | 810.800 | 808.700 | 462.000 | 810.800 | 807.000 | 465.000 | 810.800 | 807.000 |
| DT | 465.500 | 810.800 | 808.700 | 466.500 | 810.000 | 809.600 | 467.500 | 810.800 | 810.000 | 468.500 |
| BT | 810.000 | 810.000 | 469.500 | 810.800 | 809.600 | 470.500 | 810.800 | 808.700 | 471.000 | 810.800 |
| BT | 807.000 | 474.000 | 810.800 | 807.000 | 474.500 | 810.800 | 808.700 | 475.500 | 810.800 | 809.600 |
| BT | 476.500 | 810.800 | 810.000 | 477.500 | 810.800 | 810.000 | 478.500 | 810.800 | 809.600 | 479.500 |
| DT | 810.800 | 808.700 | 480.300 | 810.800 | 807.000 | 482.000 | 810.000 | 0.000 | 490.000 | 810.000 |
| BT | 0.000 | 542.000 | 810.800 | 0.000 | 543.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 820.000 | 393.000 | 810.200 | 394.000 | 810.000 | 441.000 | 806.000 | 454.000 | 807.000 | 456.000 |
| GR | 805.300 | 456.500 | 804.400 | 457.500 | 804.100 | 858.500 | 804.100 | 459.500 | 804.400 | 460.500 |
| GR | 805.300 | 461.500 | 807.000 | 462.000 | 807.000 | 465.000 | 805.300 | 465.500 | 804.400 | 466.500 |
| GR | 804.100 | 467.500 | 804.100 | 468.500 | 804.400 | 469.500 | 805.300 | 470.500 | 807.000 | 471.000 |
| GR | 807.000 | 474.000 | 805.300 | 474.500 | 804.400 | 475.500 | 804.100 | 476.500 | 804.100 | 477.500 |
| GR | 804.400 | 478.500 | 805.300 | 479.500 | 807.000 | 480.000 | 809.000 | 482.000 | 810.000 | 490.000 |
| GR | 810.000 | 562.000 | 820.000 | 563.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.490 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

50 FT U/S CROSS ST. CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.200 | 13.000 | 451.000 | 435.000 | 50.000 | 50.000 | 50.000 | 0.300 | 0.000 | 0.000 |
| GR | 820.000 | 393.000 | 810.000 | 396.000 | 809.400 | 400.000 | 839.400 | 430.000 | 808.100 | 445.000 |
| GR | 806.700 | 449.000 | 804.900 | 451.300 | 804.000 | 460.300 | 803.900 | 485.000 | 806.700 | 489.000 |
| GR | 808.700 | 498.000 | 809.400 | 542.000 | 820.000 | 593.300 | 0.000 | 0.300 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | 0.100 | 0.100 | 0.040 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 119

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.000 | 13.000 | 223.300 | 247.000 | 300.000 | 1150.300 | 1363.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.000 | 122.300 | 811.000 | 123.000 | 810.600 | 122.300 | 611.250 | 216.300 | 803.430 | 223.000 |
| GR | 808.400 | 255.000 | 806.000 | 238.000 | 809.100 | 240.300 | 809.000 | 247.000 | 810.000 | 251.000 |
| GR | 811.200 | 306.000 | 810.600 | 347.000 | 825.000 | 346.300 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.300 | 0.101 | 0.000 | 0.300 | 0.000 | 507.300 | 653.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 119.500 | 10.000 | 639.000 | 667.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 819.200 | 506.000 | 817.000 | 566.000 | 617.000 | 617.000 | 812.100 | 635.000 | 810.900 | 639.000 |
| GR | 808.600 | 653.000 | 810.600 | 667.000 | 812.100 | 670.000 | 817.600 | 680.000 | 818.000 | 853.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 119.600 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 350.000 | 0.000 | 1.300 | 0.000 |

100 FT D/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.000 | 11.000 | 639.000 | 667.000 | 400.000 | 400.000 | 400.000 | 0.000 | 1.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 639.000 | 0.000 | 639.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.000 | 578.000 | 817.000 | 579.000 | 817.000 | 617.000 | 813.300 | 635.000 | 812.100 | 639.000 |
| GR | 811.000 | 653.000 | 811.800 | 667.000 | 813.300 | 670.000 | 817.600 | 680.000 | 818.000 | 727.000 |
| GR | 825.000 | 728.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.800 | 22.000 | 644.700 | 660.300 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 818.500 | 818.500 | 0.000 |
| GR | 825.300 | 578.000 | 817.000 | 579.000 | 817.000 | 617.000 | 813.300 | 635.000 | 812.100 | 639.000 |
| GR | 811.100 | 644.700 | 811.100 | 646.800 | 811.100 | 649.700 | 811.100 | 649.900 | 811.100 | 649.900 |
| GR | 811.100 | 650.000 | 811.100 | 655.000 | 811.100 | 655.900 | 811.100 | 655.200 | 811.100 | 655.300 |
| GR | 811.100 | 660.200 | 811.100 | 660.300 | 811.800 | 667.000 | 813.300 | 670.000 | 817.600 | 680.000 |
| GR | 818.000 | 727.000 | 825.000 | 728.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

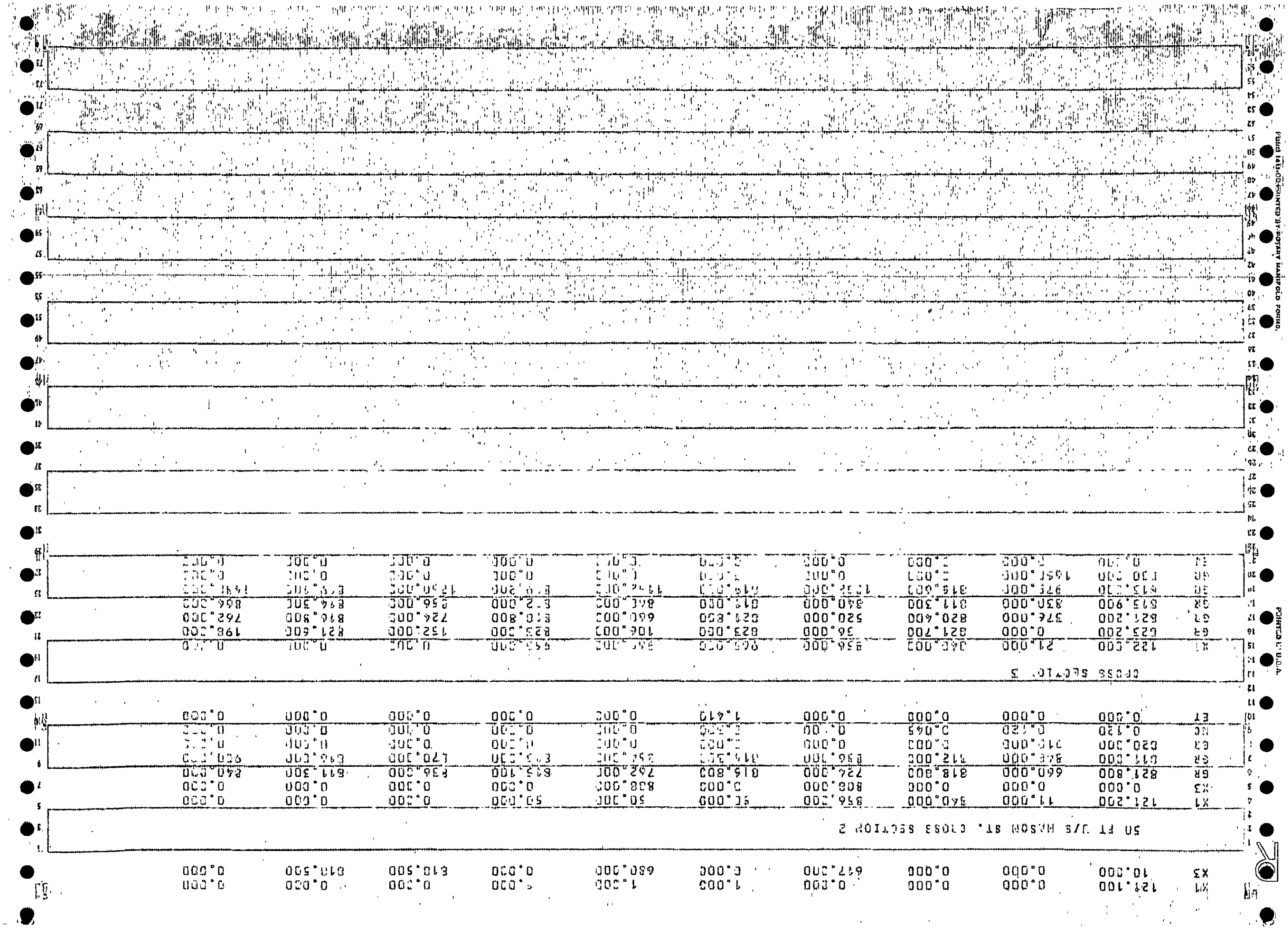
D/S FACE MASON ST. CROSS SECTION 123

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 818.500 | 818.500 | 0.000 |
| BT | 22.000 | 578.000 | 825.000 | 0.000 | 579.000 | 614.500 | 0.000 | 617.000 | 813.500 | 0.000 |
| BT | 635.000 | 818.500 | 0.000 | 639.000 | 818.500 | 0.000 | 644.700 | 818.500 | 0.000 | 644.800 |
| BT | 818.500 | 817.600 | 649.700 | 818.500 | 817.600 | 649.800 | 818.500 | 0.000 | 649.900 | 818.500 |
| BT | 0.000 | 680.000 | 818.500 | 817.600 | 655.000 | 812.500 | 817.600 | 655.100 | 818.500 | 0.000 |
| BT | 655.200 | 818.500 | 0.000 | 655.300 | 818.500 | 817.600 | 660.200 | 818.500 | 817.600 | 660.300 |
| BT | 818.500 | 0.000 | 667.000 | 818.500 | 0.000 | 670.000 | 818.500 | 0.000 | 680.000 | 818.500 |
| BT | 0.000 | 727.000 | 818.500 | 0.000 | 728.500 | 823.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE MASON ST. CROSS SECTION 182

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.000 | 0.000 | 0.000 | 0.000 | 52.000 | 52.000 | 52.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 617.000 | 0.000 | 667.000 | 0.000 | 818.500 | 818.500 | 0.000 |
| X3 | 0.000 | 0.000 | 0.045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S MASON ST. CROSS SECTION 2



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 617.000 | 0.000 | 680.000 | 0.000 | 818.500 | 818.500 | 0.000 |

50 FT U/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.200 | 11.000 | 840.000 | 856.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 808.000 | 0.000 | 838.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 821.800 | 660.000 | 818.800 | 724.000 | 816.800 | 762.000 | 815.100 | 836.000 | 811.300 | 840.000 |
| GR | 811.000 | 848.000 | 812.000 | 856.000 | 814.300 | 854.000 | 815.000 | 870.000 | 816.000 | 900.000 |
| GR | 820.000 | 910.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.045 | 0.000 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.000 | 21.000 | 840.000 | 856.000 | 965.000 | 965.000 | 965.000 | 0.000 | 0.000 | 0.000 |
| GR | 823.200 | 0.000 | 821.700 | 36.000 | 823.000 | 106.000 | 823.000 | 152.000 | 821.600 | 198.000 |
| GR | 821.200 | 376.000 | 820.400 | 520.000 | 821.800 | 660.000 | 818.800 | 724.000 | 816.800 | 762.000 |
| GR | 815.900 | 830.000 | 811.300 | 840.000 | 811.000 | 848.000 | 812.000 | 856.000 | 814.300 | 864.000 |
| GR | 813.000 | 975.000 | 816.600 | 1032.000 | 819.000 | 1152.000 | 819.200 | 1250.000 | 819.100 | 1480.000 |
| GR | 830.000 | 1650.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

PRINTED IN U.S.A.
Form 141-00 PRINTED BY POTARY MANIFOLD FORMS

*PROB 1

CCHV= 0.100 CEHV= 0.300

*SECNO 110.000

| SECNO | DEPTH | CWSEL | CRWS | WSELK | EG | HV | IL | ELOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IM2 | ICONT | CORAR | TOPWID | ENDST |

CROSS SECTION 110 AT CONFLUENCE TO KALAMAZOO RIVER

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 110.00 | 7.90 | 801.30 | 0.00 | 801.30 | 801.31 | 0.01 | 0.00 | 0.00 | 799.20 |
| 650. | 0. | 649. | 0. | 3. | 883. | 5. | 0. | 0. | 798.30 |
| 0.00 | 0.07 | 0.74 | 0.07 | 0.120 | 0.040 | 0.120 | 0.000 | 797.60 | 573.66 |
| 0.000033 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 144.77 | 713.73 |

*SECNO 111.000

CROSS SECTION 111

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 111.00 | 7.66 | 801.36 | 0.01 | 0.00 | 801.37 | 0.01 | 0.00 | 0.00 | 799.75 |
| 650. | 1. | 649. | 0. | 11. | 883. | 4. | 34. | 6. | 798.80 |
| 0.62 | 0.09 | 0.73 | 0.08 | 0.120 | 0.040 | 0.120 | 0.040 | 793.70 | 894.44 |
| 0.000039 | 1640. | 1640. | 1640. | 0 | 0 | 0 | 0.00 | 170.60 | 1065.04 |

*SECNO 112.000

CROSS SECTION 112

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 112.00 | 6.31 | 801.41 | 0.00 | 0.00 | 801.42 | 0.01 | 0.00 | 0.00 | 796.56 |
| 650. | 1. | 644. | 5. | 7. | 742. | 36. | 37. | 11. | 797.90 |
| 1.01 | 0.11 | 0.87 | 0.14 | 0.120 | 0.040 | 0.120 | 0.040 | 795.10 | 538.15 |
| 0.000059 | 1200. | 1200. | 1200. | 1 | 0 | 0 | 0.00 | 166.23 | 704.39 |

*SECNO 112.500

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 112.50 | 4.08 | 801.53 | 0.00 | 0.00 | 801.65 | 0.05 | 0.19 | 0.01 | 630.10 |
| 650. | 1. | 648. | 2. | 3. | 344. | 2. | 27. | 15. | 799.50 |
| 1.24 | 0.20 | 1.88 | 0.25 | 0.120 | 0.040 | 0.120 | 0.040 | 796.70 | 402.69 |
| 0.000420 | 1550. | 1550. | 1550. | 2 | 0 | 0 | 0.00 | 99.23 | 501.92 |

*SECNO 112.600

| SECNO | DEPTH | CWSEL | CRWS | WSELK | EG | HV | IL | ELOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IM2 | ICONT | CORAR | TOPWID | ENDST |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 112.60 | 4.65 | 801.75 | 0.00 | 0.00 | 802.06 | 0.33 | 0.36 | 0.08 | 800.60 |
| 650. | 55. | 595. | 20. | 53. | 123. | 33. | 80. | 37. | 800.80 |
| 1.24 | 0.66 | 4.82 | 0.60 | 0.120 | 0.040 | 0.120 | 0.040 | 797.10 | 300.45 |
| 0.004123 | 375. | 375. | 375. | 2 | 0 | 0 | 0.00 | 186.09 | 496.55 |

*SECNO 113.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 113.70 | 6.35 | 802.95 | 0.00 | 0.00 | 803.00 | 0.15 | 0.91 | 0.02 | 801.00 |
| 650. | 57. | 524. | 69. | 129. | 153. | 107. | 82. | 19. | 801.20 |
| 1.30 | 0. | 0.46 | 0.91 | 0.120 | 0.040 | 0.120 | 0.040 | 797.60 | 54.42 |

```
0.001592     375.     375.     375.        2        0        0     0.00   251.23   562.96

*SECNO 112.300
   112.30     5.52   803.42     0.00     0.00   803.54     0.13     0.54     0.00   801.40
     650.      73.     514.      64.     122.     160.     129.      66.      21.   801.60
     1.36     0.59     3.22     0.30    0.120    0.040    0.120    0.040   797.[illegible]   809.73
 0.001299     375.     375.     375.        2        0        0     0.00   260.33   550.03

*SECNO 113.000

        CROSS SECTION 113

   113.00     5.59   803.89     0.00     0.00   804.01     0.12     0.46     0.00   801.80
     650.      75.     507.      68.     129.     163.     139.      89.      23.   802.00
     1.38     0.58     3.1[illegible]     0.49    0.120    0.040    0.120    0.040   778.30   280.73
 0.001182     375.     375.     375.        2        0        0     0.00   261.49   550.22

*SECNO 113.100
   113.10     5.24   804.44     0.00     0.00   804.61     0.17     0.58     0.02   802.70
     650.      62.     559.      49.      99.      [illegible]      96.      93.      25.   802.90
     1.62     0.63     3.84     0.52    0.120    0.040    0.120    0.040   799.20   803.13
 0.001839     400.     400.     400.        2        0        0     0.00   244.35   537.70

*SECNO 113.200
   SECNO     DEPTH     CWSEL     CRIMS     ISELK     FS        HV        BL        CLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA       LEFT/RIGHT
   TIMS      VLOB      VCH       VROB      XNL       XNCH      XNR       HTW       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID    ENDST

   113.20     5.11   805.2[illegible]     0.00     0.00   805.4[illegible]     0.20     0.80     0.0[illegible]   803.60
     650.      57.     550.      42.      89.     163.      79.      96.      27.   803.00
     1.45     0.64     3.[illegible]     0.53    0.120    0.040    0.120    0.040   800.10   294.65
 0.002158     400.     400.     400.        2        0        0     0.00   237.37   532.01

*SECNO 114.000
CCHV=   0.300 CEHV=   0.500

        100 D/S MICHIGAN AVE. CROSS SECTION 114

   114.00     5.06   806.06     0.00     0.00   806.24     0.18     0.83     0.00   802.60
     650.      15.     629.       6.      22.     179.      10.      99.      29.   802.[illegible]0
     1.49     0.60     3.51     0.55    0.120    0.045    0.120    0.040   801.00   362.52
 0.001533     460.     460.     460.        2        0        0     0.00    57.37   419.69

*SECNO 114.800

3493 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      816.50 ELREA=      816.50

        D/S MICHIGAN AVE CROSS SECTION 116

   114.80     4.2[illegible]   806.21     0.00     0.00   806.43     0.22     0.17     0.02   802.60
     650.       0.     650.       0.       0.     17[illegible].       0.      99.      29.   802.10
     1.49     0.00     3.79     0.00    0.120    0.045    0.120    0.040   801.50   414.00
 0.001928     100.     100.     100.        2        0        0     0.00    40.00   454.00
```

*SECNO 114.900

3370 NORMAL BRIDGE,NRD= 5 MIN ELTRD= 816.50 MAX ELLC= 812.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 816.50 ELREA= 816.50

D/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 114.90 | 4.71 | 806.21 | 0.00 | 0.00 | 806.44 | 0.22 | 0.00 | 0.00 | 802.60 |
| 650. | 0. | 650. | 0. | 0. | 172. | 0. | 99. | 29. | 802.10 |
| 1.49 | 0.00 | 3.79 | 0.00 | 0.120 | 0.045 | 0.120 | 0.040 | 801.50 | 414.00 |
| 0.001926 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 40.00 | 454.00 |

*SECNO 115.000

3370 NORMAL BRIDGE,NRD= 5 MIN ELTRD= 816.50 MAX ELLC= 812.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 816.50 ELREA= 816.50

U/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.00 | 4.63 | 806.33 | 0.00 | 0.00 | 806.56 | 0.23 | 0.12 | 0.00 | 802.80 |
| 650. | 0. | 650. | 0. | 0. | 168. | 0. | 99. | 29. | 802.30 |
| 1.50 | 0.00 | 3.87 | 0.00 | 0.120 | 0.045 | 0.120 | 0.040 | 801.70 | 414.00 |
| 0.002056 | 60. | 60. | 60. | 0 | 0 | 0 | 0.00 | 40.00 | 454.00 |

*SECNO 115.100

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | THA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | HTA | CLMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 816.50 ELREA= 816.50

U/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.10 | 4.63 | 806.33 | 0.00 | 0.00 | 806.56 | 0.23 | 0.00 | 0.00 | 802.80 |
| 650. | 0. | 650. | 0. | 0. | 168. | 0. | 99. | 29. | 802.30 |
| 1.50 | 0.00 | 3.86 | 0.00 | 0.120 | 0.045 | 0.120 | 0.040 | 801.70 | 414.00 |
| 0.002056 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 40.00 | 454.00 |

*SECNO 116.000

50 FT U/S MICHIGAN AVE. CROSS SECTION 116

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.00 | 4.99 | 806.49 | 0.00 | 0.00 | 806.66 | 0.17 | 0.08 | 0.02 | 802.60 |
| 650. | 9. | 629. | 12. | 14. | 187. | 18. | 99. | 29. | 802.30 |
| 1.50 | 0.65 | 3.36 | 0.69 | 0.120 | 0.045 | 0.120 | 0.040 | 801.50 | 341.79 |
| 0.001333 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 53.78 | 397.53 |

*SECNO 116.700

100 FT U/S CROSS ST CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 116.70 | 5.36 | 809.26 | 0.00 | 0.00 | 809.44 | 0.18 | 2.77 | 0.00 | 806.90 |
| | 650. | 13. | 612. | 25. | 22. | 176. | 40. | 110. | 32. | 803.90 |
| | 1.68 | 0.58 | 3.47 | 0.63 | 0.120 | 0.045 | 0.120 | 0.042 | 803.90 | 431.50 |
| | 0.001237 | 1350. | 2200. | 1350. | 1 | 3 | 5 | 0.00 | 101.13 | 933.41 |

CCHV= 0.300 CEHV= 0.500
*SECNO 116.900

D/S FACE CROSS ST. CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 116.90 | 5.09 | 809.29 | 0.00 | 0.00 | 809.80 | 0.59 | 3.03 | 0.20 | 807.00 |
| | 650. | 26. | 605. | 19. | 23. | 95. | 17. | 110. | 33. | 807.00 |
| | 1.69 | 1.14 | 6.37 | 1.12 | 0.120 | 0.035 | 0.120 | 0.042 | 804.20 | 429.69 |
| | 0.005676 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 75.33 | 505.02 |

SPECIAL BRIDGE

| SB XX | KKOR | COPC | ROLEN | BHC | THP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 1.02 | 0.00 | 0.00 | 10.00 | 0.00 | 70.00 | 0.00 | [illegible] | [illegible] |

*SECNO 117.000
PRESSURE AND WEIR FLOW

| FSKKK | ECOEC | XS | CWEIR | BPR | BAREA | TRAPEZOID AREA | FLOW | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 811.64 | 810.10 | 0.00 | 61. | 576. | 77. | 77. | 910.00 | 810.00 |

U/S FACE CROSS ST. CROSS SECTION 117&110

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 117.00 | 5.00 | 810.69 | 0.00 | 0.00 | 811.12 | 0.52 | 1.25 | 0.00 | 807.00 |
| | 650. | 31. | 506. | 33. | 56. | 123. | 56. | 111. | 33. | 807.00 |
| | 1.69 | 0.56 | 4.76 | 0.96 | 0.120 | 0.035 | 0.120 | 0.042 | 805.00 | 393.94 |
| | 0.002075 | 35. | 35. | 35. | 2 | 0 | 3 | 0.00 | 148.14 | 542.06 |

*SECNO 117.200

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SECNO | DEPTH | CWSEL | CRIWS | SELK | EG | HV | HL | OLOSS | BANK ELEV |
| | Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| | TIME | VLOB | VCH | VROB | XNL | XLCH | XNR | UTN | ELMIN | SSTA |
| | SLOPE | XLOFL | XLCH | XLOBR | ITRIAL | IHP | ICONT | CORAR | TOPWID | ESTA |

50 FT U/S CROSS ST. CROSS SECTION 110

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 117.20 | 7.25 | 811.16 | 0.00 | 0.00 | 811.23 | 0.06 | 0.02 | 0.18 | 806.90 |
| | 650. | 40. | 530. | 81. | 134. | 241. | 253. | 111. | 33. | 807.90 |
| | 1.70 | 0.30 | 2.20 | 0.32 | 0.120 | 0.035 | 0.120 | 0.041 | 803.90 | 335.10 |
| | 0.000198 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 207.07 | 592.17 |

CCHV= 0.100 CEHV= 0.300
*SECNO 119.000

CROSS SECTION 119

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 119.00 | 5.45 | 811.55 | 0.00 | 0.00 | 812.04 | 0.36 | 0.78 | 0.10 | 809.40 |

```
     650.      89.     445.     115.      83.      74.      98.     123.      38.    809.00
     1.78     1.08     6.01     1.16    0.100    0.042    0.100    0.042   800.00   122.95
 0.005940     900.    1365.    1100.        3        0        0     0.00   224.12   347.07

CCHV=   0.300 CEHV=   0.300
*SECNO 119.500
   119.50     4.79   813.40     0.00     0.00   813.93     0.56     1.82     0.06   813.93
     650.      10.     632.       8.      11.     104.       8.     124.      39.   810.60
     1.80     0.94     6.08     0.99    0.120    0.035    0.120    0.041   808.60   630.25
 0.003613     400.     400.     400.        2        0        0     0.00    42.10   672.31

*SECNO 119.600
   119.60     4.85   814.63     0.00     0.00   815.19     0.54     1.23     0.01   812.10
     650.      10.     632.       8.      11.     106.       8.     125.      40.   811.30
     1.81     0.97     5.98     0.98    0.120    0.035    0.120    0.041   809.00   630.34
 0.003423     350.     350.     350.        2        0        0     0.00    42.42   672.46

*SECNO 120.000

3470 ENCROACHMENT STATIONS=      633.0     663.0  TYPE=     1  TARGET=      30.000

        100 FT D/S MASON ST. CROSS SECTION 2

   120.00     4.86   815.86     0.00     0.00   816.29     0.43     1.07     0.03   812.10
     650.       2.     646.       2.       4.     123.       4.     127.      40.   811.00
     1.33     0.49     5.28     0.50    0.120    0.035    0.120    0.041   811.00   630.00
 0.002142     400.     400.     400.        2        0        0     0.00    30.00   665.00

*SECNO 120.800

3301 HV CHANGED MORE THAN HVINS

   SECNO    DERTH    QUSEL    QRING    QSELK    EG       HV       HL       CLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA     LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IH2      ICONT    CORAR    TOPWID     ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        D/S MASON ST. CROSS SECTION 2

   120.80     4.51   815.61     0.00     0.00   815.93     1.32     0.19     0.43   811.10
     650.       0.     650.       0.       0.      70.       0.     127.      40.   811.10
     1.84     0.00     9.23     0.00    0.120    0.035    0.120    0.041   811.10   644.70
 0.008817      50.      50.      50.        2        0        0     0.00    15.60   660.30

*SECNO 120.900

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD=  818.50 MAX ELLC=  817.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        D/S FACE MASON ST. CROSS SECTION 182
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  120.90     4.46   815.56     0.00     0.00   817.00     1.44     0.01     0.00   811.10
    650.       0.     650.       0.       0.      68.       0.     127.      40.   811.10
    1.84     0.00     9.62     0.00    0.120    0.025    0.120    0.041   811.10   644.70
0.005159       1.       1.       1.        2        0        0   -29.53    15.60   660.30

*SECNO 121.000

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD=  818.50 MAX ELLC=  817.60

3470 ENCROACHMENT STATIONS=     617.0     680.0  TYPE=     1  TARGET=      63.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        U/S FACE MASON ST. CROSS SECTION 2

  121.00     5.13   816.23     0.00     0.00   817.32     1.09     0.21     0.19   811.10
    650.       0.     650.       0.       0.      78.       0.     127.      40.   811.10
    1.84     0.00     8.37     0.00    0.120    0.025    0.120    0.041   811.10   646.70
0.003383      52.      52.      52.        3        0        0   -34.31    15.60   660.30

*SECNO 121.100

3470 ENCROACHMENT STATIONS=     617.0     680.0  TYPE=     1  TARGET=      63.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      818.50 ELREA=      818.50

        U/S MASON ST. CROSS SECTION 2

  121.10     5.30   816.40     0.00     0.00   817.36     0.96     0.01     0.04   811.10
    650.       0.     650.       0.       1.      82.       0.     127.      40.   811.10
    1.84     0.00     7.85     0.00    0.120    0.045    0.120    0.041   811.10   646.70
0.008979       1.       1.       1.        2        0        0     0.00    15.60   660.30

*SECNO 121.200

3301 HV CHANGED FORE THAN KWINS

3470 ENCROACHMENT STATIONS=     808.0     888.0  TYPE=     1  TARGET=      80.000

        50 FT U/S MASON ST. CROSS SECTION 2

  121.20     6.47   817.67     0.00     0.00   817.75     0.20     0.18     0.22   811.30
    650.      68.     481.     101.      74.      98.      90.     127.      40.   812.00
    1.84     0.92     4.89     1.12    0.120    0.045    0.120    0.041   811.00   808.00
0.001964      50.      50.      50.        3        0        0     0.00    80.00   888.00

CCHV=    0.100 CEHV=    0.300
*SECNO 122.000
  SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS     BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      WO        TWA       LEFT/RIGHT
  TIME      WLOB      WCH       WROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
  SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    CH2       ICONT     CORAR     TOPWID    ENDST

        CROSS SECTION 3
```

A=83

817.36
.2
817.56

A=262

velocity head

friction

transition

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.00 | 7.35 | 818.35 | 0.00 | 0.00 | 818.38 | 0.03 | 0.61 | 0.03 | 811.30 |
| 650. | 78. | 238. | 334. | 207. | 112. | 716. | 141. | 45. | 812.00 |
| 2.09 | 0.38 | 2.11 | 0.47 | 0.120 | 0.045 | 0.120 | 0.041 | 811.00 | 732.51 |
| 0.000306 | 965. | 965. | 965. | 4 | 0 | 0 | 0.00 | 392.49 | 1125.20 |

A = 1035

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: Waubasem creek

4) DOCUMENT TYPE: Summary

00BREAK00

**********
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

WAUBASCON CREEK

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | TOPWS | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.000 | 0.00 | 0.00 | 0.00 | 793.40 | 270.00 | 801.30 | 0.00 | 801.30 | 0.06 | 0.31 | 868.95 | 1136.20 |
| 110.000 | 0.00 | 0.00 | 0.00 | 793.40 | 490.00 | 801.30 | 0.00 | 801.30 | 0.19 | 0.56 | 868.95 | 1136.20 |
| 110.000 | 0.00 | 0.00 | 0.00 | 793.40 | 650.00 | 801.30 | 0.00 | 801.31 | 0.33 | 0.74 | 868.95 | 1136.20 |
| 110.000 | 0.00 | 0.00 | 0.00 | 793.40 | 1230.00 | 801.30 | 0.00 | 801.33 | 1.17 | 1.40 | 868.95 | 1136.20 |
| 111.000 | 1640.00 | 0.00 | 0.00 | 793.70 | 270.00 | 801.31 | 0.00 | 801.31 | 0.07 | 0.31 | 895.56 | 1029.08 |
| 111.000 | 1640.00 | 0.00 | 0.00 | 793.70 | 490.00 | 801.33 | 0.00 | 801.34 | 0.22 | 0.55 | 899.18 | 1035.65 |
| 111.000 | 1640.00 | 0.00 | 0.00 | 793.70 | 650.00 | 801.36 | 0.00 | 801.37 | 0.39 | 0.73 | 903.14 | 1042.85 |
| 111.000 | 1640.00 | 0.00 | 0.00 | 793.70 | 1230.00 | 801.50 | 0.00 | 801.53 | 1.28 | 1.35 | 927.78 | 1086.04 |
| 112.000 | 1200.00 | 0.00 | 0.00 | 795.10 | 270.00 | 801.32 | 0.00 | 801.32 | 0.11 | 0.37 | 771.24 | 820.07 |
| 112.000 | 1200.00 | 0.00 | 0.00 | 795.10 | 490.00 | 801.37 | 0.00 | 801.37 | 0.35 | 0.66 | 777.95 | 830.88 |
| 112.000 | 1200.00 | 0.00 | 0.00 | 795.10 | 650.00 | 801.41 | 0.00 | 801.42 | 0.59 | 0.87 | 786.10 | 844.05 |
| 112.000 | 1200.00 | 0.00 | 0.00 | 795.10 | 1230.00 | 801.68 | 0.00 | 801.71 | 1.80 | 1.56 | 831.23 | 917.97 |
| 112.500 | 1550.00 | 0.00 | 0.00 | 796.70 | 270.00 | 801.35 | 0.00 | 801.36 | 0.89 | 0.83 | 331.65 | 285.83 |
| 112.500 | 1550.00 | 0.00 | 0.00 | 796.70 | 490.00 | 801.46 | 0.00 | 801.50 | 2.64 | 1.46 | 343.47 | 301.72 |
| 112.500 | 1550.00 | 0.00 | 0.00 | 796.70 | 650.00 | 801.58 | 0.00 | 801.63 | 4.20 | 1.88 | 354.79 | 317.16 |
| 112.500 | 1550.00 | 0.00 | 0.00 | 796.70 | 1230.00 | 802.14 | 0.00 | 802.29 | 9.56 | 3.10 | 411.72 | 397.82 |
| 112.600 | 375.00 | 0.00 | 0.00 | 797.10 | 270.00 | 801.38 | 0.00 | 801.47 | 12.36 | 2.81 | 149.00 | 76.80 |
| 112.600 | 375.00 | 0.00 | 0.00 | 797.10 | 490.00 | 801.56 | 0.00 | 801.79 | 30.81 | 3.99 | 177.76 | 88.27 |
| 112.600 | 375.00 | 0.00 | 0.00 | 797.10 | 650.00 | 801.75 | 0.00 | 802.00 | 41.23 | 4.82 | 210.03 | 101.23 |
| 112.600 | 375.00 | 0.00 | 0.00 | 797.10 | 1230.00 | 802.60 | 0.00 | 803.06 | 46.56 | 6.09 | 410.68 | 180.25 |
| 112.700 | 375.00 | 0.00 | 0.00 | 797.50 | 270.00 | 801.83 | 0.00 | 801.91 | 11.39 | 2.35 | 157.11 | 79.99 |
| 112.700 | 375.00 | 0.00 | 0.00 | 797.50 | 490.00 | 802.46 | 0.00 | 802.59 | 15.22 | 3.13 | 276.46 | 125.62 |
| 112.700 | 375.00 | 0.00 | 0.00 | 797.50 | 650.00 | 802.85 | 0.00 | 803.00 | 15.98 | 3.46 | 368.92 | 162.92 |
| 112.700 | 375.00 | 0.00 | 0.00 | 797.50 | 1230.00 | 803.90 | 0.00 | 804.10 | 17.62 | 4.30 | 666.81 | 293.05 |
| 112.800 | 375.00 | 0.00 | 0.00 | 797.90 | 270.00 | 802.25 | 0.00 | 802.33 | 10.97 | 2.32 | 160.96 | 81.52 |
| 112.800 | 375.00 | 0.00 | 0.00 | 797.90 | 490.00 | 803.00 | 0.00 | 803.11 | 12.58 | 2.93 | 306.98 | 138.13 |
| 112.800 | 375.00 | 0.00 | 0.00 | 797.90 | 650.00 | 803.42 | 0.00 | 803.54 | 12.99 | 3.22 | 410.87 | 180.33 |
| 112.800 | 375.00 | 0.00 | 0.00 | 797.90 | 1230.00 | 804.53 | 0.00 | 804.69 | 14.16 | 3.90 | 709.54 | 326.85 |
| 113.000 | 375.00 | 0.00 | 0.00 | 798.30 | 270.00 | 802.66 | 0.00 | 802.74 | 10.75 | 2.30 | 163.01 | 82.34 |
| 113.000 | 375.00 | 0.00 | 0.00 | 798.30 | 490.00 | 803.46 | 0.00 | 803.56 | 11.59 | 2.84 | 321.80 | 143.95 |
| 113.000 | 375.00 | 0.00 | 0.00 | 798.30 | 650.00 | 803.89 | 0.00 | 804.01 | 11.82 | 3.11 | 431.25 | 189.08 |
| 113.000 | 375.00 | 0.00 | 0.00 | 798.30 | 1230.00 | 805.04 | 0.00 | 805.20 | 12.68 | 3.83 | 742.90 | 345.40 |

PRINTED IN U.S.A.
FORM 1611.09 PRINTED BY NOTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRIUS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 113.100 | 400.00 | 0.00 | 0.00 | 799.20 | 270.00 | 803.20 | 0.00 | 803.31 | 19.11 | 2.78 | 111.28 | 61.77 |
| 113.100 | 400.00 | 0.00 | 0.00 | 799.20 | 490.00 | 804.00 | 0.00 | 804.16 | 18.79 | 3.37 | 240.86 | 113.05 |
| 113.100 | 400.00 | 0.00 | 0.00 | 799.20 | 650.00 | 804.64 | 0.00 | 804.81 | 18.39 | 3.64 | 340.96 | 151.58 |
| 113.100 | 400.00 | 0.00 | 0.00 | 799.20 | 1230.00 | 805.80 | 0.00 | 805.80 | 17.69 | 4.29 | 648.01 | 296.10 |
| 113.200 | 400.00 | 0.00 | 0.00 | 800.10 | 270.00 | 804.01 | 0.00 | 804.14 | 22.06 | 2.91 | 101.74 | 57.69 |
| 113.200 | 400.00 | 0.00 | 0.00 | 800.10 | 490.00 | 804.80 | 0.00 | 804.97 | 21.80 | 3.55 | 219.58 | 104.96 |
| 113.200 | 400.00 | 0.00 | 0.00 | 800.10 | 650.00 | 805.41 | 0.00 | 805.41 | 21.53 | 3.85 | 311.61 | 139.94 |
| 113.200 | 400.00 | 0.00 | 0.00 | 800.10 | 1230.00 | 806.56 | 0.00 | 806.57 | 20.59 | 4.55 | 604.39 | 271.06 |
| 114.000 | 460.00 | 0.00 | 0.00 | 801.00 | 270.00 | 804.71 | 0.00 | 804.77 | 9.05 | 2.12 | 137.37 | 89.73 |
| 114.000 | 460.00 | 0.00 | 0.00 | 801.00 | 490.00 | 805.60 | 0.00 | 805.74 | 12.59 | 2.96 | 185.03 | 138.11 |
| 114.000 | 460.00 | 0.00 | 0.00 | 801.00 | 650.00 | 806.06 | 0.00 | 806.24 | 15.33 | 3.51 | 210.67 | 166.01 |
| 114.000 | 460.00 | 0.00 | 0.00 | 801.00 | 1230.00 | 807.28 | 0.00 | 807.67 | 23.90 | 5.14 | 284.27 | 251.58 |
| 114.800 | 100.00 | 0.00 | 0.00 | 801.50 | 270.00 | 804.80 | 0.00 | 804.89 | 12.43 | 2.35 | 115.13 | 76.57 |
| 114.800 | 100.00 | 0.00 | 0.00 | 801.50 | 490.00 | 805.73 | 0.00 | 805.89 | 16.21 | 3.22 | 152.28 | 121.69 |
| 114.800 | 100.00 | 0.00 | 0.00 | 801.50 | 650.00 | 806.21 | 0.00 | 806.43 | 19.28 | 3.79 | 171.46 | 148.05 |
| 114.800 | 100.00 | 0.00 | 0.00 | 801.50 | 1230.00 | 807.50 | 0.00 | 807.97 | 29.03 | 5.51 | 223.06 | 228.27 |
| 114.900 | 1.00 | 816.50 | 812.50 | 801.50 | 270.00 | 804.80 | 0.00 | 804.89 | 12.42 | 2.34 | 115.17 | 76.61 |
| 114.900 | 1.00 | 816.50 | 812.50 | 801.50 | 490.00 | 805.73 | 0.00 | 805.89 | 16.20 | 3.22 | 152.32 | 121.75 |
| 114.900 | 1.00 | 816.50 | 812.50 | 801.50 | 650.00 | 806.21 | 0.00 | 806.44 | 19.26 | 3.79 | 171.51 | 148.12 |
| 114.900 | 1.00 | 816.50 | 812.50 | 801.50 | 1230.00 | 807.51 | 0.00 | 807.98 | 28.98 | 5.51 | 223.17 | 228.46 |
| 115.000 | 60.00 | 816.50 | 812.70 | 801.70 | 270.00 | 804.18 | 0.00 | 804.97 | 14.60 | 2.45 | 110.16 | 71.19 |
| 115.000 | 60.00 | 816.50 | 812.70 | 801.70 | 490.00 | 805.13 | 0.00 | 806.00 | 17.72 | 3.31 | 168.23 | 116.39 |
| 115.000 | 60.00 | 816.50 | 812.70 | 801.70 | 650.00 | 806.33 | 0.00 | 806.56 | 20.56 | 3.87 | 168.15 | 143.36 |
| 115.000 | 60.00 | 816.50 | 812.70 | 801.70 | 1230.00 | 807.68 | 0.00 | 808.15 | 29.42 | 5.54 | 222.17 | 226.70 |
| 115.100 | 1.00 | 0.00 | 0.00 | 801.70 | 270.00 | 804.88 | 0.00 | 804.98 | 14.34 | 2.45 | 110.27 | 71.29 |
| 115.100 | 1.00 | 0.00 | 0.00 | 801.70 | 490.00 | 805.83 | 0.00 | 806.00 | 17.70 | 3.30 | 168.30 | 116.48 |
| 115.100 | 1.00 | 0.00 | 0.00 | 801.70 | 650.00 | 806.53 | 0.00 | 806.56 | 20.54 | 3.86 | 168.20 | 143.43 |
| 115.100 | 1.00 | 0.00 | 0.00 | 801.70 | 1230.00 | 807.68 | 0.00 | 808.16 | 29.38 | 5.53 | 222.25 | 226.91 |
| 116.000 | 50.00 | 0.00 | 0.00 | 801.50 | 270.00 | 804.97 | 0.00 | 805.04 | 8.89 | 2.11 | 138.06 | 90.53 |
| 116.000 | 50.00 | 0.00 | 0.00 | 801.50 | 490.00 | 805.96 | 0.00 | 806.09 | 11.65 | 2.88 | 189.74 | 144.81 |
| 116.000 | 50.00 | 0.00 | 0.00 | 801.50 | 650.00 | 806.60 | 0.00 | 806.66 | 13.33 | 3.36 | 218.85 | 178.05 |
| 116.000 | 50.00 | 0.00 | 0.00 | 801.50 | 1230.00 | 807.98 | 0.00 | 808.31 | 18.24 | 4.73 | 310.63 | 288.01 |
| 116.700 | 2200.00 | 0.00 | 0.00 | 803.90 | 270.00 | 807.22 | 0.00 | 807.31 | 12.22 | 2.47 | 118.31 | 77.25 |
| 116.700 | 2200.00 | 0.00 | 0.00 | 803.90 | 490.00 | 808.52 | 0.00 | 808.67 | 12.24 | 3.12 | 182.18 | 140.06 |
| 116.700 | 2200.00 | 0.00 | 0.00 | 803.90 | 650.00 | 809.26 | 0.00 | 809.46 | 12.37 | 3.47 | 238.23 | 184.79 |
| 116.700 | 2200.00 | 0.00 | 0.00 | 803.90 | 1230.00 | 811.18 | 0.00 | 811.40 | 11.86 | 4.19 | 520.69 | 357.16 |
| 116.900 | 100.00 | 0.00 | 0.00 | 804.20 | 270.00 | 807.29 | 0.00 | 807.80 | 119.17 | 5.76 | 47.02 | 24.73 |
| 116.900 | 100.00 | 0.00 | 0.00 | 804.20 | 490.00 | 808.53 | 0.00 | 809.16 | 80.22 | 6.38 | 76.78 | 54.71 |
| 116.900 | 100.00 | 0.00 | 0.00 | 804.20 | 650.00 | 809.29 | 0.00 | 809.88 | 56.74 | 6.37 | 135.01 | 86.29 |
| 116.900 | 100.00 | 0.00 | 0.00 | 804.20 | 1230.00 | 811.23 | 0.00 | 811.73 | 34.62 | 6.49 | 393.27 | 209.06 |
| 117.000 | 35.00 | 810.80 | 810.00 | 805.00 | 270.00 | 807.71 | 0.00 | 808.31 | 145.59 | 6.21 | 43.48 | 22.38 |
| 117.000 | 35.00 | 810.80 | 810.00 | 805.00 | 490.00 | 808.76 | 0.00 | 809.76 | 192.21 | 8.04 | 60.91 | 35.34 |
| 117.000 | 35.00 | 810.80 | 810.00 | 805.00 | 650.00 | 810.80 | 0.00 | 811.12 | 20.75 | 4.76 | 237.43 | 142.69 |
| 117.000 | 35.00 | 810.80 | 810.00 | 805.00 | 1230.00 | 811.71 | 0.00 | 812.29 | 34.07 | 6.80 | 371.77 | 210.74 |

FORM 1411-00 PRINTED BY ROTARY MANIFOLD FORMS, PRINTED IN U.S.A.

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 117.200 | 50.00 | 0.00 | 0.00 | 803.90 | 270.00 | 808.46 | 0.00 | 808.51 | 2.40 | 1.76 | 178.88 | 174.44 |
| 117.200 | 50.00 | 0.00 | 0.00 | 803.90 | 490.00 | 810.01 | 0.00 | 810.08 | 2.59 | 2.24 | 332.08 | 304.31 |
| 117.200 | 50.00 | 0.00 | 0.00 | 803.90 | 650.00 | 811.16 | 0.00 | 811.22 | 2.90 | 2.20 | 627.71 | 461.89 |
| 117.200 | 50.00 | 0.00 | 0.00 | 803.90 | 1230.00 | 812.36 | 0.00 | 812.47 | 3.52 | 3.25 | 875.38 | 655.95 |
| 118.000 | 680.00 | 0.00 | 0.00 | 806.00 | 270.00 | 808.71 | 0.00 | 809.04 | 61.31 | 4.79 | 77.09 | 34.43 |
| 118.000 | 680.00 | 0.00 | 0.00 | 806.00 | 490.00 | 810.31 | 0.00 | 810.39 | 11.82 | 3.05 | 400.73 | 142.53 |
| 118.000 | 680.00 | 0.00 | 0.00 | 806.00 | 650.00 | 811.37 | 0.00 | 811.42 | 5.86 | 2.53 | 638.27 | 260.57 |
| 118.000 | 680.00 | 0.00 | 0.00 | 806.00 | 1230.00 | 812.69 | 0.00 | 812.76 | 6.70 | 3.21 | 934.73 | 472.50 |
| 119.000 | 685.00 | 0.00 | 0.00 | 808.00 | 270.00 | 811.25 | 0.00 | 811.39 | 22.96 | 3.40 | 162.58 | 56.34 |
| 119.000 | 685.00 | 0.00 | 0.00 | 808.00 | 490.00 | 811.47 | 0.00 | 811.78 | 48.73 | 5.22 | 211.49 | 70.19 |
| 119.000 | 685.00 | 0.00 | 0.00 | 808.00 | 650.00 | 811.95 | 0.00 | 812.19 | 36.28 | 4.99 | 318.96 | 107.91 |
| 119.000 | 685.00 | 0.00 | 0.00 | 808.00 | 1230.00 | 813.27 | 0.00 | 813.46 | 25.24 | 4.98 | 615.81 | 255.15 |
| 119.500 | 400.00 | 0.00 | 0.00 | 808.60 | 270.00 | 812.14 | 0.00 | 812.39 | 24.79 | 3.85 | 74.63 | 54.23 |
| 119.500 | 400.00 | 0.00 | 0.00 | 808.60 | 490.00 | 812.96 | 0.00 | 813.38 | 31.37 | 5.22 | 104.73 | 87.49 |
| 119.500 | 400.00 | 0.00 | 0.00 | 808.60 | 650.00 | 813.29 | 0.00 | 813.89 | 39.83 | 6.26 | 118.02 | 102.99 |
| 119.500 | 400.00 | 0.00 | 0.00 | 808.60 | 1230.00 | 814.13 | 0.00 | 815.69 | 66.52 | 9.37 | 157.20 | 150.81 |
| 119.600 | 350.00 | 0.00 | 0.00 | 809.80 | 270.00 | 813.14 | 0.00 | 813.42 | 33.84 | 4.23 | 67.06 | 46.47 |
| 119.600 | 350.00 | 0.00 | 0.00 | 809.80 | 490.00 | 814.09 | 0.00 | 814.52 | 33.73 | 5.33 | 102.00 | 84.36 |
| 119.600 | 350.00 | 0.00 | 0.00 | 809.80 | 650.00 | 814.65 | 0.00 | 815.19 | 34.15 | 5.97 | 124.93 | 111.23 |
| 119.600 | 350.00 | 0.00 | 0.00 | 809.80 | 1230.00 | 816.38 | 0.00 | 817.22 | 32.90 | 7.54 | 206.71 | 214.44 |
| 120.000 | 400.00 | 0.00 | 0.00 | 811.00 | 270.00 | 813.21 | 0.00 | 813.38 | 17.12 | 3.43 | 90.37 | 65.26 |
| 120.000 | 400.00 | 0.00 | 0.00 | 811.00 | 490.00 | 815.23 | 0.00 | 815.54 | 18.31 | 4.40 | 137.81 | 116.30 |
| 120.000 | 400.00 | 0.00 | 0.00 | 811.00 | 650.00 | 815.80 | 0.00 | 816.24 | 18.81 | 4.94 | 170.05 | 149.87 |
| 120.000 | 400.00 | 0.00 | 0.00 | 811.00 | 1230.00 | 817.73 | 0.00 | 818.29 | 19.36 | 6.33 | 280.06 | 279.53 |
| 120.800 | 50.00 | 0.00 | 0.00 | 811.10 | 270.00 | 814.19 | 0.00 | 814.67 | 49.05 | 5.61 | 48.14 | 38.55 |
| 120.800 | 50.00 | 0.00 | 0.00 | 811.10 | 490.00 | 815.00 | 0.00 | 816.04 | 73.64 | 7.89 | 62.10 | 57.10 |
| 120.800 | 50.00 | 0.00 | 0.00 | 811.10 | 650.00 | 815.56 | 0.00 | 816.92 | 91.55 | 9.34 | 69.59 | 67.93 |
| 120.800 | 50.00 | 0.00 | 0.00 | 811.10 | 1230.00 | 817.71 | 0.00 | 818.56 | 33.28 | 8.63 | 286.06 | 213.20 |
| 121.000 | 52.00 | 818.50 | 817.60 | 811.10 | 270.00 | 814.29 | 0.00 | 814.75 | 44.24 | 5.43 | 49.77 | 40.59 |
| 121.000 | 52.00 | 818.50 | 817.60 | 811.10 | 490.00 | 815.36 | 0.00 | 816.21 | 59.72 | 7.37 | 66.51 | 63.41 |
| 121.000 | 52.00 | 818.50 | 817.60 | 811.10 | 650.00 | 815.82 | 0.00 | 817.05 | 77.37 | 8.84 | 73.57 | 73.90 |
| 121.000 | 52.00 | 818.50 | 817.60 | 811.10 | 1230.00 | 819.10 | 0.00 | 819.62 | 16.30 | 6.86 | 331.73 | 304.69 |
| 121.200 | 50.00 | 0.00 | 0.00 | 811.00 | 270.00 | 814.60 | 0.00 | 814.95 | 27.54 | 4.90 | 70.02 | 51.45 |
| 121.200 | 50.00 | 0.00 | 0.00 | 811.00 | 490.00 | 816.05 | 0.00 | 816.50 | 22.85 | 5.70 | 149.99 | 102.52 |
| 121.200 | 50.00 | 0.00 | 0.00 | 811.00 | 650.00 | 817.00 | 0.00 | 817.43 | 18.75 | 5.83 | 225.08 | 150.12 |
| 121.200 | 50.00 | 0.00 | 0.00 | 811.00 | 1230.00 | 819.16 | 0.00 | 819.72 | 17.56 | 7.00 | 398.91 | 293.56 |
| 122.000 | 965.00 | 0.00 | 0.00 | 811.00 | 270.00 | 816.04 | 0.00 | 816.10 | 6.34 | 2.33 | 307.63 | 107.25 |
| 122.000 | 965.00 | 0.00 | 0.00 | 811.00 | 490.00 | 817.35 | 0.00 | 817.39 | 4.61 | 2.34 | 671.97 | 228.20 |
| 122.000 | 965.00 | 0.00 | 0.00 | 811.00 | 650.00 | 818.13 | 0.00 | 818.16 | 3.75 | 2.29 | 949.07 | 335.88 |
| 122.000 | 965.00 | 0.00 | 0.00 | 811.00 | 1230.00 | 820.23 | 0.00 | 820.25 | 2.28 | 2.14 | 2217.00 | 813.89 |

FORM 1311-DB PRINTED BY ROTARY MANIFOLD FORM

UAUBASCON CREEK

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CMSEL | DIFMSP | DIFMSX | DIFKMS | TOPWID | XLCF |
|---|---|---|---|---|---|---|---|
| 110.000 | 270.00 | 801.30 | 0.00 | 0.00 | 0.00 | 144.77 | 0.00 |
| 110.000 | 490.00 | 801.30 | 0.00 | 0.00 | 0.00 | 144.77 | 0.00 |
| 110.000 | 650.00 | 801.30 | 0.00 | 0.00 | 0.00 | 144.77 | 0.00 |
| 110.000 | 1230.00 | 801.30 | 0.00 | 0.00 | 0.00 | 144.77 | 0.00 |
| 111.000 | 270.00 | 801.31 | 0.00 | 0.01 | 0.00 | 170.32 | 1640.00 |
| 111.000 | 490.00 | 801.33 | 0.00 | 0.03 | 0.00 | 170.46 | 1640.00 |
| 111.000 | 650.00 | 801.36 | 0.00 | 0.06 | 0.00 | 170.60 | 1640.00 |
| 111.000 | 1230.00 | 801.50 | 0.00 | 0.20 | 0.00 | 171.52 | 1640.00 |
| 112.000 | 270.00 | 801.32 | 0.00 | 0.01 | 0.00 | 165.54 | 1200.00 |
| 112.000 | 490.00 | 801.37 | 0.00 | 0.03 | 0.00 | 165.85 | 1200.00 |
| 112.000 | 650.00 | 801.41 | 0.00 | 0.05 | 0.00 | 166.23 | 1200.00 |
| 112.000 | 1230.00 | 801.68 | 0.00 | 0.17 | 0.00 | 168.33 | 1200.00 |
| 112.300 | 270.00 | 801.35 | 0.00 | 0.03 | 0.00 | 97.77 | 1550.00 |
| 112.300 | 490.00 | 801.46 | 0.00 | 0.10 | 0.00 | 98.52 | 1550.00 |
| 112.500 | 650.00 | 801.58 | 0.00 | 0.16 | 0.00 | 99.23 | 1550.00 |
| 112.500 | 1230.00 | 802.14 | 0.00 | 0.46 | 0.00 | 102.76 | 1550.00 |
| 112.600 | 270.00 | 801.33 | 0.00 | 0.03 | 0.00 | 150.82 | 375.00 |
| 112.600 | 490.00 | 801.56 | 0.00 | 0.10 | 0.00 | 161.40 | 375.00 |
| 112.600 | 650.00 | 801.75 | 0.00 | 0.17 | 0.00 | 186.09 | 375.00 |
| 112.600 | 1230.00 | 802.60 | 0.00 | 0.46 | 0.00 | 260.32 | 375.00 |
| 112.700 | 270.00 | 801.83 | 0.00 | 0.45 | 0.00 | 153.87 | 375.00 |
| 112.700 | 490.00 | 802.46 | 0.00 | 0.98 | 0.00 | 227.93 | 375.00 |
| 112.700 | 650.00 | 802.85 | 0.00 | 1.11 | 0.00 | 251.23 | 375.00 |
| 112.700 | 1230.00 | 803.90 | 0.00 | 1.30 | 0.00 | 273.44 | 375.00 |
| 112.800 | 270.00 | 802.25 | 0.00 | 0.42 | 0.00 | 155.30 | 375.00 |
| 112.800 | 490.00 | 803.00 | 0.00 | 0.54 | 0.00 | 236.21 | 375.00 |
| 112.800 | 650.00 | 803.42 | 0.00 | 0.56 | 0.00 | 260.33 | 375.00 |
| 112.800 | 1230.00 | 804.53 | 0.00 | 0.63 | 0.00 | 276.83 | 375.00 |
| 113.000 | 270.00 | 802.66 | 0.00 | 0.41 | 0.00 | 156.06 | 375.00 |
| 113.000 | 490.00 | 803.46 | 0.00 | 0.46 | 0.00 | 239.89 | 375.00 |
| 113.000 | 650.00 | 803.89 | 0.00 | 0.48 | 0.00 | 261.49 | 375.00 |
| 113.000 | 1230.00 | 805.04 | 0.00 | 0.52 | 0.00 | 278.61 | 375.00 |
| 113.100 | 270.00 | 803.20 | 0.00 | 0.53 | 0.00 | 113.64 | 400.00 |
| 113.100 | 490.00 | 804.00 | 0.00 | 0.55 | 0.00 | 209.84 | 400.00 |
| 113.100 | 650.00 | 804.44 | 0.00 | 0.55 | 0.00 | 244.56 | 400.00 |
| 113.100 | 1230.00 | 805.60 | 0.00 | 0.56 | 0.00 | 273.55 | 400.00 |
| 113.200 | 270.00 | 804.01 | 0.00 | 0.81 | 0.00 | 99.21 | 400.00 |
| 113.200 | 490.00 | 804.80 | 0.00 | 0.79 | 0.00 | 193.76 | 400.00 |
| 113.200 | 650.00 | 805.21 | 0.00 | 0.78 | 0.00 | 237.37 | 400.00 |
| 113.200 | 1230.00 | 806.34 | 0.00 | 0.74 | 0.00 | 271.13 | 400.00 |
| 114.000 | 270.00 | 804.71 | 0.00 | 0.70 | 0.00 | 50.81 | 460.00 |
| 114.000 | 490.00 | 805.60 | 0.00 | 0.81 | 0.00 | 55.16 | 460.00 |
| 114.000 | 650.00 | 806.06 | 0.00 | 0.84 | 0.00 | 57.37 | 460.00 |
| 114.000 | 1230.00 | 807.28 | 0.00 | 0.94 | 0.00 | 63.28 | 460.00 |

PRINTED IN U.S.A.
FORM 1411-00 PRINTED BY BOTANY MANIFOLD FORMS

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 114.800 | 270.00 | 804.80 | 0.00 | 0.10 | 0.00 | 40.00 | 100.00 |
| 114.800 | 490.00 | 805.73 | 0.00 | 0.13 | 0.00 | 40.00 | 100.00 |
| 114.800 | 650.00 | 806.21 | 0.00 | 0.15 | 0.00 | 40.00 | 100.00 |
| 114.800 | 1230.00 | 807.50 | 0.00 | 0.22 | 0.00 | 40.00 | 100.00 |
| 114.900 | 270.00 | 804.80 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 114.900 | 490.00 | 805.73 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 114.900 | 650.00 | 806.21 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 114.900 | 1230.00 | 807.51 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 115.000 | 270.00 | 804.88 | 0.00 | 0.08 | 0.00 | 40.00 | 60.00 |
| 115.000 | 490.00 | 805.83 | 0.00 | 0.10 | 0.00 | 40.00 | 60.00 |
| 115.000 | 650.00 | 806.33 | 0.00 | 0.11 | 0.00 | 40.00 | 60.00 |
| 115.000 | 1230.00 | 807.60 | 0.00 | 0.17 | 0.00 | 40.00 | 60.00 |
| 115.100 | 270.00 | 804.88 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 115.100 | 490.00 | 805.83 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 115.100 | 650.00 | 806.33 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 115.100 | 1230.00 | 807.68 | 0.00 | 0.00 | 0.00 | 40.00 | 1.00 |
| 116.000 | 270.00 | 804.97 | 0.00 | 0.09 | 0.00 | 49.82 | 50.00 |
| 116.000 | 490.00 | 805.96 | 0.00 | 0.13 | 0.00 | 53.71 | 50.00 |
| 116.000 | 650.00 | 806.49 | 0.00 | 0.16 | 0.00 | 55.78 | 50.00 |
| 116.000 | 1230.00 | 807.98 | 0.00 | 0.30 | 0.00 | 68.19 | 50.00 |
| 116.700 | 270.00 | 807.22 | 0.00 | 2.25 | 0.00 | 43.05 | 2200.00 |
| 116.700 | 490.00 | 808.52 | 0.00 | 2.56 | 0.00 | 57.04 | 2200.00 |
| 116.700 | 650.00 | 809.26 | 0.00 | 2.77 | 0.00 | 101.03 | 2200.00 |
| 116.700 | 1230.00 | 811.18 | 0.00 | 3.19 | 0.00 | 156.64 | 2200.00 |
| 116.900 | 270.00 | 807.29 | 0.00 | 0.07 | 0.00 | 24.00 | 100.00 |
| 116.900 | 490.00 | 808.53 | 0.00 | 0.01 | 0.00 | 24.00 | 100.00 |
| 116.900 | 650.00 | 809.29 | 0.00 | 0.02 | 0.00 | 75.33 | 100.00 |
| 116.900 | 1230.00 | 811.23 | 0.00 | 0.05 | 0.00 | 148.23 | 100.00 |
| 117.000 | 270.00 | 807.71 | 0.00 | 0.42 | 0.00 | 24.00 | 35.00 |
| 117.000 | 490.00 | 808.76 | 0.00 | 0.23 | 0.00 | 24.00 | 35.00 |
| 117.000 | 650.00 | 810.00 | 0.00 | 1.52 | 0.00 | 148.14 | 35.00 |
| 117.000 | 1230.00 | 811.71 | 0.00 | 0.48 | 0.00 | 148.33 | 35.00 |
| 117.200 | 270.00 | 808.46 | 0.00 | 0.76 | 0.00 | 56.11 | 50.00 |
| 117.200 | 490.00 | 810.01 | 0.00 | 1.25 | 1.55 | 124.00 | 50.00 |
| 117.200 | 650.00 | 811.16 | 0.00 | 0.36 | 0.00 | 207.07 | 50.00 |
| 117.200 | 1230.00 | 812.35 | 0.00 | 0.63 | 0.00 | 210.15 | 50.00 |
| 118.000 | 270.00 | 808.71 | 0.00 | 0.25 | 0.00 | 76.29 | 680.00 |
| 118.000 | 490.00 | 810.31 | 0.00 | 0.30 | 1.60 | 224.21 | 680.00 |
| 118.000 | 650.00 | 811.37 | 0.00 | 0.21 | 0.00 | 224.36 | 680.00 |
| 118.000 | 1230.00 | 812.69 | 0.00 | 0.35 | 0.00 | 224.55 | 680.00 |
| 119.000 | 270.00 | 811.25 | 0.00 | 2.53 | 0.00 | 224.06 | 685.00 |
| 119.000 | 490.00 | 811.47 | 0.00 | 1.16 | 0.22 | 224.09 | 685.00 |
| 119.000 | 650.00 | 811.95 | 0.00 | 0.58 | 0.00 | 224.16 | 685.00 |
| 119.000 | 1230.00 | 813.27 | 0.00 | 0.58 | 0.00 | 224.35 | 685.00 |

PRINTED IN U.S.A.
FORM 1411-80 PRINTED BY ROTARY MANIFOLD FORMS

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 119.500 | 270.00 | 812.16 | 0.00 | 0.91 | 0.00 | 35.32 | 400.00 |
| | 119.500 | 490.00 | 812.95 | 0.00 | 1.50 | 0.00 | 39.73 | 400.00 |
| | 119.500 | 650.00 | 813.29 | 0.00 | 1.35 | 0.00 | 41.53 | 400.00 |
| | 119.500 | 1230.00 | 814.13 | 0.00 | 0.91 | 0.00 | 46.42 | 400.00 |
| | 119.600 | 270.00 | 813.14 | 0.00 | 0.98 | 0.00 | 34.15 | 350.00 |
| | 119.600 | 490.00 | 814.09 | 0.00 | 1.13 | 0.95 | 39.35 | 350.00 |
| | 119.600 | 650.00 | 814.65 | 0.00 | 1.36 | 0.00 | 42.43 | 350.00 |
| | 119.600 | 1230.00 | 816.38 | 0.00 | 2.21 | 0.00 | 51.95 | 350.00 |
| | 120.000 | 270.00 | 814.21 | 0.00 | 1.06 | 0.00 | 41.51 | 400.00 |
| | 120.000 | 490.00 | 815.25 | 0.00 | 1.16 | 1.05 | 49.04 | 400.00 |
| | 120.000 | 650.00 | 815.88 | 0.00 | 1.23 | 0.00 | 53.56 | 400.00 |
| | 120.000 | 1230.00 | 817.73 | 0.00 | 1.35 | 0.00 | 63.00 | 400.00 |
| | 120.800 | 270.00 | 814.19 | 0.00 | -0.02 | 0.00 | 15.60 | 50.00 |
| | 120.800 | 490.00 | 815.08 | 0.00 | -0.18 | 0.89 | 15.60 | 50.00 |
| | 120.800 | 650.00 | 815.56 | 0.00 | -0.32 | 0.00 | 15.60 | 50.00 |
| | 120.800 | 1230.00 | 817.71 | 0.00 | -0.02 | 0.00 | 63.00 | 50.00 |
| | 121.000 | 270.00 | 814.29 | 0.00 | 0.00 | 0.00 | 15.60 | 52.00 |
| | 121.000 | 490.00 | 815.36 | 0.00 | 0.29 | 1.07 | 15.60 | 52.00 |
| * | 121.000 | 650.00 | 815.82 | 0.00 | 0.25 | 0.00 | 15.60 | 52.00 |
| * | 121.000 | 1230.00 | 819.10 | 0.00 | 1.39 | 0.00 | 63.00 | 52.00 |
| | 121.200 | 270.00 | 814.60 | 0.00 | 0.31 | 0.00 | 30.02 | 50.00 |
| | 121.200 | 490.00 | 816.05 | 0.00 | 0.69 | 1.46 | 00.00 | 50.00 |
| | 121.200 | 650.00 | 817.00 | 0.00 | 1.18 | 0.00 | 00.00 | 50.00 |
| | 121.200 | 1230.00 | 819.16 | 0.00 | 0.07 | 0.00 | 80.00 | 50.00 |
| | 122.000 | 270.00 | 816.04 | 0.00 | 1.45 | 0.00 | 206.95 | 965.00 |
| | 122.000 | 490.00 | 817.35 | 0.00 | 1.29 | 1.31 | 331.58 | 965.00 |
| | 122.000 | 650.00 | 818.13 | 0.00 | 1.13 | 0.00 | 370.91 | 965.00 |
| | 122.000 | 1230.00 | 820.23 | 0.00 | 1.06 | 0.00 | 810.00 | 965.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 121.000 PROFILE= 3 HYDRAULIC JUMP D.S.
CAUTION SECNO= 121.000 PROFILE= 4 HYDRAULIC JUMP D.S.

FORM 1411-60 PRINTED BY ROTARY MANIFOLD FORMS. PRINTED IN U.S.A.

FLOOD INSURANCE ZONE DATA FOR WAUBASCON CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10Ø | 2Ø | 0.2Ø |
|---|---|---|---|---|
| 110.000 | 0. | 0.0 | 0.0 | 0.0 |
| 111.000 | 1660. | -0.0 | -0.0 | 0.1 |
| 112.000 | 2840. | -0.1 | -0.0 | 0.3 |
| 112.500 | 4390. | -0.2 | -0.1 | 0.6 |
| 112.600 | 4765. | -0.6 | -0.2 | 0.9 |
| 112.700 | 5160. | -1.0 | -0.4 | 1.0 |
| 112.800 | 5515. | -1.2 | -0.6 | 1.1 |
| 113.000 | 5890. | -1.2 | -0.4 | 1.2 |
| 113.100 | 6290. | -1.2 | -0.4 | 1.2 |
| 113.200 | 6690. | -1.2 | -0.6 | 1.1 |
| 114.000 | 7150. | -1.4 | -0.5 | 1.2 |
| 114.800 | 7250. | -1.4 | -0.5 | 1.3 |
| 114.900 | 7251. | -1.4 | -0.5 | 1.3 |
| 115.000 | 7311. | -1.4 | -0.5 | 1.4 |
| 115.100 | 7312. | -1.4 | -0.5 | 1.4 |
| 116.000 | 7362. | -1.5 | -0.5 | 1.5 |
| 116.700 | 9562. | -2.0 | -0.7 | 1.9 |
| 116.900 | 9662. | -2.0 | -0.8 | 1.9 |
| 117.000 | 9697. | -3.1 | -2.0 | 0.9 |
| 117.200 | 9747. | -2.7 | -1.1 | 1.2 |
| 118.000 | 10427. | -2.7 | -1.1 | 1.3 |
| 119.000 | 11112. | -0.7 | -0.5 | 1.3 |
| 119.500 | 11512. | -1.1 | -0.3 | 0.9 |
| 119.600 | 11862. | -1.5 | -0.6 | 1.7 |
| 120.000 | 12262. | -1.7 | -0.6 | 1.8 |
| 120.800 | 12312. | -1.4 | -0.5 | 2.1 |
| 121.000 | 12364. | -1.5 | -0.5 | 3.3 |
| 121.200 | 12414. | -2.4 | -0.9 | 2.2 |
| 122.000 | 13379. | -2.1 | -0.8 | 2.1 |
| WEIGHTED AVG FOR REACH | | -1.1 | -0.4 | 1.0 |

FHF FOR THE REACH = 010 WITH 28.8Ø OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 2

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | AVG ELEVATION DATA 10Ø | 1Ø | DIFF. | WTD. AVG. | FHF | PERCENT WITHIN |
|---|---|---|---|---|---|---|---|
| | 0. | | | | SEC. | 110.000 | |
| 1 | 100. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 2 | 200. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 3 | 300. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 4 | 400. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 5 | 500. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 6 | 600. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7 | 700. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 8 | 800. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 9 | 900. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 10 | 1000. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 11 | 1100. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 12 | 1200. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 13 | 1300. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 14 | 1400. | 801.3 | 801.3 | -0.0 | -0.0 | 005 | 100. |
| 15 | 1500. | 801.3 | 801.4 | -0.0 | -0.0 | 005 | 100. |
| 16 | 1600. | 801.3 | 801.4 | -0.0 | -0.0 | 005 | 100. |
| | 1640. | | | | SEC. | 111.000 | |
| 17 | 1700. | 801.3 | 801.4 | -0.0 | -0.0 | 005 | 100. |
| 18 | 1800. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 19 | 1900. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 20 | 2000. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 21 | 2100. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 22 | 2200. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 23 | 2300. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 24 | 2400. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 25 | 2500. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 26 | 2600. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 27 | 2700. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 28 | 2800. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| | 2840. | | | | SEC. | 112.000 | |
| 29 | 2900. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 30 | 3000. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 31 | 3100. | 801.3 | 801.4 | -0.1 | -0.0 | 005 | 100. |
| 32 | 3200. | 801.3 | 801.4 | -0.1 | -0.1 | 005 | 100. |
| 33 | 3300. | 801.3 | 801.5 | -0.1 | -0.1 | 005 | 100. |
| 34 | 3400. | 801.3 | 801.5 | -0.1 | -0.1 | 005 | 100. |
| 35 | 3500. | 801.3 | 801.5 | -0.1 | -0.1 | 005 | 100. |
| 36 | 3600. | 801.3 | 801.5 | -0.2 | -0.1 | 005 | 100. |
| 37 | 3700. | 801.3 | 801.5 | -0.2 | -0.1 | 005 | 100. |
| 38 | 3800. | 801.3 | 801.5 | -0.2 | -0.1 | 005 | 100. |
| 39 | 3900. | 801.3 | 801.5 | -0.2 | -0.1 | 005 | 100. |
| 40 | 4000. | 801.3 | 801.5 | -0.2 | -0.1 | 005 | 100. |
| 41 | 4100. | 801.3 | 801.5 | -0.2 | -0.1 | 005 | 100. |
| 42 | 4200. | 801.3 | 801.6 | -0.2 | -0.1 | 005 | 100. |
| 43 | 4300. | 801.3 | 801.6 | -0.2 | -0.1 | 005 | 100. |
| | 4390. | | | | SEC. | 112.500 | |
| 44 | 4400. | 801.6 | 801.6 | -0.2 | -0.1 | 005 | 100. |
| 45 | 4500. | 801.4 | 801.6 | -0.2 | -0.1 | 005 | 100. |
| 46 | 4600. | 801.6 | 801.6 | -0.3 | -0.1 | 005 | 100. |
| 47 | 4700. | 801.4 | 801.7 | -0.3 | -0.1 | 005 | 100. |
| | 4765. | | | | SEC. | 112.600 | |
| 48 | 4800. | 801.4 | 801.8 | -0.4 | -0.1 | 005 | 100. |
| 49 | 4900. | 801.5 | 802.0 | -0.5 | -0.1 | 005 | 100. |
| 50 | 5000. | 801.6 | 802.3 | -0.7 | -0.1 | 005 | 98. |
| 51 | 5100. | 801.7 | 802.6 | -0.9 | -0.1 | 005 | 96. |
| | 5140. | | | | SEC. | 112.700 | |
| 52 | 5200. | 801.8 | 802.8 | -1.0 | -0.2 | 005 | 94. |
| 53 | 5300. | 802.0 | 803.0 | -1.1 | -0.2 | 005 | 92. |
| 54 | 5400. | 802.1 | 803.2 | -1.1 | -0.2 | 005 | 91. |
| 55 | 5500. | 802.2 | 803.3 | -1.1 | -0.2 | 005 | 91. |
| | 5515. | | | | SEC. | 112.800 | |
| 56 | 5600. | 802.3 | 803.5 | -1.2 | -0.2 | 005 | 89. |
| 57 | 5700. | 802.4 | 803.6 | -1.2 | -0.2 | 005 | 88. |
| 58 | 5800. | 802.5 | 803.7 | -1.2 | -0.3 | 005 | 86. |
| | 5890. | | | | SEC. | 113.000 | |
| 59 | 5900. | 802.6 | 803.8 | -1.2 | -0.3 | 005 | 85. |
| 60 | 6000. | 802.7 | 804.0 | -1.2 | -0.3 | 005 | 83. |
| 61 | 6100. | 802.9 | 804.1 | -1.2 | -0.3 | 005 | 82. |
| 62 | 6200. | 803.0 | 804.2 | -1.2 | -0.3 | 005 | 81. |
| | 6290. | | | | SEC. | 113.100 | |

FORM 1411-CO PRINTED BY COTAPT MANIFOLD FORTRAN

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 63 | 6300. | 803.1 | 804.4 | -1.2 | -0.3 | 005 | 79. |
| 64 | 6400. | 803.3 | 804.6 | -1.2 | -0.3 | 005 | 78. |
| 65 | 6500. | 803.5 | 804.7 | -1.2 | -0.4 | 005 | 77. |
| 66 | 6600. | 803.7 | 804.9 | -1.2 | -0.4 | 005 | 77. |
| | 6690. | | | | SEC. | 113.200 | |
| 67 | 6700. | 803.9 | 805.1 | -1.2 | -0.4 | 005 | 76. |
| 68 | 6800. | 804.1 | 805.3 | -1.2 | -0.4 | 005 | 75. |
| 69 | 6900. | 804.3 | 805.5 | -1.3 | -0.4 | 005 | 74. |
| 70 | 7000. | 804.4 | 805.7 | -1.3 | -0.4 | 005 | 73. |
| 71 | 7100. | 804.6 | 805.9 | -1.3 | -0.4 | 005 | 72. |
| | 7150. | | | | SEC. | 114.000 | |
| 72 | 7200. | 804.7 | 806.1 | -1.4 | -0.5 | 005 | 71. |
| | 7250. | | | | SEC. | 114.800 | |
| | 7251. | | | | SEC. | 114.900 | |
| 73 | 7300. | 804.8 | 806.3 | -1.4 | -0.5 | 005 | 70. |
| | 7311. | | | | SEC. | 115.000 | |
| | 7312. | | | | SEC. | 115.100 | |
| | 7362. | | | | SEC. | 116.000 | |
| 74 | 7400. | 805.0 | 806.5 | -1.5 | -0.5 | 005 | 69. |
| 75 | 7500. | 805.1 | 806.6 | -1.5 | -0.5 | 005 | 68. |
| 76 | 7600. | 805.2 | 806.7 | -1.6 | -0.5 | 005 | 66. |
| 77 | 7700. | 805.3 | 806.9 | -1.6 | -0.5 | 003 | 58. |
| 78 | 7800. | 805.4 | 807.0 | -1.6 | -0.5 | 005 | 51. |
| 79 | 7900. | 805.5 | 807.1 | -1.6 | -0.5 | 005 | 46. |
| 80 | 8000. | 805.6 | 807.2 | -1.7 | -0.6 | 005 | 41. |
| 81 | 8100. | 805.7 | 807.4 | -1.7 | -0.6 | 005 | 36. |
| 82 | 8200. | 805.8 | 807.5 | -1.7 | -0.6 | 005 | 30. |
| 83 | 8300. | 805.9 | 807.6 | -1.7 | -0.6 | 005 | 29. |
| 84 | 8400. | 806.0 | 807.7 | -1.8 | -0.6 | 005 | 27. |
| 85 | 8500. | 806.1 | 807.9 | -1.8 | -0.6 | 005 | 25. |
| 86 | 8600. | 806.2 | 808.0 | -1.8 | -0.6 | 005 | 24. |
| 87 | 8700. | 806.3 | 808.1 | -1.8 | -0.7 | 005 | 22. |
| 88 | 8800. | 806.4 | 808.2 | -1.9 | -0.7 | 005 | 20. |
| 89 | 8900. | 806.5 | 808.4 | -1.9 | -0.7 | 005 | 19. |
| 90 | 9000. | 806.6 | 808.5 | -1.9 | -0.7 | 005 | 18. |
| 91 | 9100. | 806.7 | 808.6 | -1.9 | -0.7 | 005 | 18. |
| 92 | 9200. | 806.8 | 808.7 | -1.9 | -0.7 | 005 | 10. |
| 93 | 9300. | 806.9 | 808.9 | -2.0 | -0.7 | 005 | 25. |
| 94 | 9400. | 807.0 | 809.0 | -2.0 | -0.8 | 010 | 24. |
| 95 | 9500. | 807.1 | 809.1 | -2.0 | -0.8 | 010 | 25. |
| | 9562. | | | | SEC. | 116.700 | |
| 96 | 9600. | 807.2 | 809.2 | -2.0 | -0.8 | 010 | 25. |
| | 9662. | | | | SEC. | 116.900 | |
| | 9697. | | | | SEC. | 117.000 | |
| 97 | 9700. | 807.7 | 810.8 | -3.1 | -0.8 | 010 | 25. |
| | 9747. | | | | SEC. | 117.200 | |
| 98 | 9800. | 808.1 | 811.0 | -2.9 | -0.8 | 010 | 24. |
| 99 | 9900. | 808.5 | 811.2 | -2.7 | -0.8 | 010 | 24. |
| 100 | 10000. | 808.5 | 811.2 | -2.7 | -0.9 | 010 | 25. |
| 101 | 10100. | 808.6 | 811.3 | -2.7 | -0.9 | 010 | 25. |
| 102 | 10200. | 808.6 | 811.3 | -2.7 | -0.9 | 010 | 24. |
| 103 | 10300. | 808.6 | 811.3 | -2.7 | -0.9 | 010 | 23. |
| 104 | 10400. | 808.7 | 811.3 | -2.7 | -0.9 | 010 | 24. |
| | 10427. | | | | SEC. | 118.000 | |
| 105 | 10500. | 808.8 | 811.4 | -2.6 | -0.9 | 010 | 24. |
| 106 | 10600. | 809.2 | 811.5 | -2.3 | -1.0 | 010 | 24. |
| 107 | 10700. | 809.5 | 811.6 | -2.0 | -1.0 | 010 | 23. |
| 108 | 10800. | 809.9 | 811.6 | -1.7 | -1.0 | 010 | 23. |
| 109 | 10900. | 810.3 | 811.7 | -1.4 | -1.0 | 010 | 24. |
| 110 | 11000. | 810.6 | 811.8 | -1.2 | -1.0 | 010 | 25. |
| 111 | 11100. | 811.0 | 811.9 | -0.9 | -1.0 | 010 | 25. |
| | 11112. | | | | SEC. | 119.000 | |
| 112 | 11200. | 811.3 | 812.1 | -0.8 | -1.0 | 010 | 26. |
| 113 | 11300. | 811.6 | 812.4 | -0.9 | -1.0 | 010 | 26. |

FORM 5A1510 PRINTED QT ROTARY MANIFOLD FORMS
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 116 | 11400. | 811.8 | 812.7 | -1.0 | -1.0 | 010 | 27. |
| 115 | 11500. | 812.0 | 813.1 | -1.1 | -1.0 | 010 | 28. |
| | 11512. | | | | SEC. | 119.500 | |
| 116 | 11600. | 812.3 | 813.4 | -1.2 | -1.0 | 010 | 28. |
| 117 | 11700. | 812.5 | 813.0 | -1.3 | -1.0 | 010 | 29. |
| 118 | 11800. | 812.8 | 814.2 | -1.4 | -1.0 | 010 | 30. |
| | 11862. | | | | SEC. | 119.600 | |
| 119 | 11900. | 813.1 | 814.6 | -1.5 | -1.0 | 010 | 30. |
| 120 | 12000. | 813.4 | 814.9 | -1.5 | -1.0 | 010 | 30. |
| 121 | 12100. | 813.6 | 815.2 | -1.6 | -1.0 | 010 | 30. |
| 122 | 12200. | 813.9 | 815.5 | -1.6 | -1.0 | 010 | 30. |
| | 12262. | | | | SEC. | 120.000 | |
| 123 | 12300. | 814.1 | 815.7 | -1.5 | -1.0 | 010 | 29. |
| | 12312. | | | | SEC. | 120.800 | |
| | 12364. | | | | SEC. | 121.000 | |
| 124 | 12400. | 814.4 | 816.2 | -1.8 | -1.0 | 010 | 28. |
| | 12414. | | | | SEC. | 121.200 | |
| 125 | 12500. | 814.6 | 816.9 | -2.3 | -1.0 | 010 | 29. |
| 126 | 12600. | 814.8 | 817.2 | -2.4 | -1.0 | 010 | 29. |
| 127 | 12700. | 815.0 | 817.3 | -2.3 | -1.0 | 010 | 29. |
| 128 | 12800. | 815.1 | 817.4 | -2.3 | -1.1 | 010 | 30. |
| 129 | 12900. | 815.2 | 817.5 | -2.3 | -1.1 | 010 | 30. |
| 130 | 13000. | 815.4 | 817.6 | -2.2 | -1.1 | 010 | 31. |
| 131 | 13100. | 815.5 | 817.7 | -2.2 | -1.1 | 010 | 31. |
| 132 | 13200. | 815.7 | 817.9 | -2.2 | -1.1 | 010 | 32. |
| 133 | 13300. | 815.8 | 818.0 | -2.1 | -1.1 | 010 | 32. |
| | 13379. | | | | SEC. | 122.000 | |

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FIA REQUIREMENTS
INPUT 20X WHERE N IS THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE 202 62 133
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

PRINTED IN U.S.A.
FORM 141-80 PRINTED BY FOXBOY HANIFIELD 10SHG.

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*****************************************************
  REC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

C
T1BEDFORD TOWNSHIP & CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2WAUBASCON CREEK FROM CONFLUENCE OF KALAMAZOO RIVER TO 1000 FT. U/S MASON ST.
T3      WAUBASCON CREEK

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        4.        0.        0.  0.000000      0.00       0.0        0.   801.300     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J5  LPRNT     NUMSEC                  ********REQUESTED SECTION NUMBERS********

    -10.000   -10.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
ET      0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000     0.000
QT      5.000   270.000   490.000   650.000   650.000  1230.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.040     0.100     0.300     0.000     0.000     0.000     0.000     0.000

        CROSS SECTION 110 AT CONFLUENCE TO KALAMAZOO RIVER

X1    110.000    15.000   578.000   713.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    812.400   518.000   808.600   538.000   803.700   562.000   805.000   566.000   799.200   578.000
GR    794.900   593.000   794.000   623.000   793.400   653.000   794.000   683.000   798.300   713.000
GR    800.700   715.000   802.100   723.000   803.400   744.000   806.100   772.000   810.500   860.000

        CROSS SECTION 111

X1    111.000    22.000   903.000  1061.000  1640.000  1640.000  1640.000     0.000     0.000     0.000
GR    814.200    48.000   811.600    82.000   803.200   116.000   802.500   600.000   802.000   800.000
GR    801.800   893.000   798.700   903.000   796.200   943.000   794.400   983.000   793.700  1003.000
GR    794.700  1033.000   798.800  1061.000   800.700  1063.000   803.900  1073.000   808.300  1098.000
GR    811.600  1122.000   813.900  1142.000   815.900  1164.000   817.200  1190.000   817.200  1256.000
GR    819.100  1278.000   820.000  1300.000     0.000     0.000     0.000     0.000     0.000     0.000

        CROSS SECTION 112

X1    112.000    18.000   543.000   683.000  1200.000  1200.000  1200.000     0.000     0.000     1.000
GR    811.800    56.000   803.600    82.000   803.000   330.000   802.700   536.000   798.500   543.000
GR    795.900   573.000   795.100   603.000   795.300   633.000   796.400   663.000   797.900   683.000
GR    802.000   708.000   801.900   728.000   806.400   746.000   811.400   760.000   813.800   770.000
GR    816.600   808.000   818.000   832.000   825.000   840.000     0.000     0.000     0.000     0.000

X1    112.500    14.000   407.000   495.000  1550.000  1550.000  1550.000     0.000     0.000     0.000
GR    810.000     0.000   804.000    26.000   802.500    50.000   802.500   400.000   800.100   407.000
GR    797.500   437.000   796.700   467.000   796.900   490.000   799.500   495.000   802.500   505.000
GR    802.500   750.000   802.500  1000.000   810.000  1050.000   815.000  1100.000     0.000     0.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 112.600 | 19.000 | 375.000 | 417.000 | 375.000 | 375.000 | 375.000 | 0.000 | -1.200 | 0.000 |
| GR | 815.000 | 150.000 | 809.800 | 200.000 | 808.200 | 234.000 | 805.400 | 270.000 | 802.500 | 306.000 |
| GR | 802.000 | 364.000 | 801.800 | 375.000 | 800.800 | 380.000 | 800.300 | 393.000 | 796.700 | 399.000 |
| GR | 798.300 | 404.000 | 799.000 | 409.000 | 802.000 | 417.000 | 802.000 | 430.000 | 802.800 | 466.000 |
| GR | 803.200 | 522.000 | 803.800 | 550.000 | 810.000 | 565.000 | 815.000 | 575.000 | 0.000 | 0.000 |
| X1 | 112.700 | 0.000 | 0.000 | 0.000 | 375.000 | 375.000 | 375.000 | 0.000 | 0.400 | 0.000 |
| X1 | 112.800 | 0.000 | 0.000 | 0.000 | 375.000 | 375.000 | 375.000 | 0.000 | 0.400 | 0.000 |

CROSS SECTION 113

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 113.000 | 0.000 | 0.000 | 0.000 | 375.000 | 375.000 | 375.000 | 0.000 | 0.400 | 1.000 |
| X1 | 113.100 | 0.000 | 0.000 | 0.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.900 | 0.000 |
| X1 | 113.200 | 0.000 | 0.000 | 0.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.900 | 0.000 |

100 D/S MICHIGAN AVE. CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.000 | 19.000 | 375.000 | 415.000 | 460.000 | 460.000 | 460.000 | 0.000 | 0.000 | 1.000 |
| NC | 0.120 | 0.120 | 0.045 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 1.000 | 748.000 |
| GR | 815.200 | 0.000 | 815.300 | 54.000 | 812.400 | 92.000 | 812.600 | 176.000 | 813.200 | 210.000 |
| GR | 813.000 | 312.000 | 812.300 | 340.000 | 802.600 | 375.000 | 802.400 | 321.000 | 801.200 | 385.000 |
| GR | 801.000 | 395.000 | 801.300 | 404.000 | 802.100 | 415.000 | 810.200 | 425.000 | 811.000 | 436.000 |
| GR | 813.000 | 534.000 | 813.200 | 634.000 | 812.800 | 716.000 | 815.400 | 748.000 | 0.000 | 0.000 |

D/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.800 | 5.000 | 414.000 | 454.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |
| GR | 816.500 | 413.000 | 802.600 | 414.000 | 801.500 | 436.000 | 802.100 | 454.000 | 816.500 | 455.000 |

D/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |
| BT | 5.000 | 413.000 | 816.500 | 0.000 | 414.000 | 816.500 | 812.500 | 434.000 | 816.500 | 812.500 |
| BT | 454.000 | 816.500 | 812.500 | 455.000 | 816.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE MICHIGAN AVE. CROSS SECTION 115 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.000 | 0.000 | 0.000 | 0.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.200 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |

U/S MICHIGAN AVE CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 816.500 | 816.500 | 0.000 |

50 FT. U/S MICHIGAN AVE. CROSS SECTION 116

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.000 | 13.000 | 349.000 | 389.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 1.000 |
| GR | 815.800 | 0.000 | 815.600 | 122.000 | 815.400 | 185.000 | 815.000 | 315.000 | 810.700 | 334.000 |
| GR | 802.600 | 349.000 | 801.600 | 356.000 | 821.500 | 369.000 | 802.300 | 389.000 | 806.700 | 398.000 |
| GR | 810.600 | 426.000 | 813.300 | 486.000 | 816.000 | 526.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

100 FT D/S CROSS ST CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.700 | 13.000 | 451.000 | 485.000 | 1350.000 | 1350.000 | 2200.000 | 0.000 | 0.000 | 1.000 |
| GR | 820.000 | 393.000 | 810.000 | 394.000 | 809.400 | 402.000 | 809.400 | 430.000 | 806.100 | 445.000 |
| GR | 806.700 | 449.000 | 804.900 | 451.000 | 806.000 | 460.000 | 803.900 | 485.000 | 806.700 | 489.000 |
| GR | 808.700 | 498.000 | 809.400 | 542.000 | 820.000 | 593.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.035 | 0.300 | 0.500 | 0.030 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 394.000 | 543.000 |

D/S FACE CROSS ST. CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.900 | 32.000 | 436.000 | 480.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 804.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 809.000 | 809.000 | 0.000 |
| GR | 820.000 | 393.300 | 810.200 | 394.000 | 809.000 | 441.000 | 807.000 | 454.000 | 807.000 | 456.000 |
| GR | 805.300 | 456.500 | 804.400 | 457.500 | 804.100 | 458.500 | 804.100 | 459.500 | 804.400 | 460.500 |
| GR | 805.300 | 461.500 | 807.000 | 462.000 | 807.000 | 465.000 | 805.300 | 465.500 | 804.400 | 466.500 |
| GR | 804.100 | 467.500 | 804.100 | 468.500 | 804.400 | 469.500 | 805.300 | 470.500 | 807.000 | 471.000 |
| GR | 807.000 | 474.000 | 805.300 | 474.500 | 804.400 | 475.500 | 804.100 | 476.500 | 804.100 | 477.500 |
| GR | 804.400 | 478.500 | 805.300 | 479.500 | 807.000 | 480.000 | 809.000 | 482.000 | 809.000 | 490.000 |
| GR | 810.000 | 542.000 | 820.000 | 543.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 9.100 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 406.000 | 530.000 |

U/S FACE CROSS ST. CROSS SECTION 117B118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.000 | 32.000 | 456.000 | 480.000 | 35.000 | 35.000 | 35.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 810.000 | 810.800 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 805.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 810.800 | 810.800 | 0.000 |
| BT | 32.000 | 393.000 | 820.000 | 0.000 | 394.000 | 810.800 | 0.000 | 441.000 | 810.800 | 0.000 |
| BT | 454.000 | 810.800 | 0.000 | 456.000 | 810.800 | 807.000 | 456.500 | 810.800 | 808.700 | 457.300 |
| BT | 810.800 | 809.600 | 458.500 | 810.800 | 810.000 | 459.500 | 810.800 | 810.000 | 460.500 | 810.800 |
| BT | 809.600 | 461.500 | 810.800 | 808.700 | 462.000 | 810.800 | 807.000 | 465.000 | 810.800 | 807.000 |
| BT | 465.500 | 810.800 | 808.700 | 466.500 | 810.800 | 807.600 | 467.500 | 810.800 | 810.000 | 468.500 |
| BT | 810.800 | 810.000 | 469.500 | 810.800 | 809.600 | 472.500 | 810.000 | 808.700 | 471.000 | 810.800 |
| BT | 807.000 | 474.000 | 810.800 | 807.000 | 474.500 | 810.800 | 808.700 | 475.500 | 810.800 | 809.600 |
| BT | 476.500 | 810.800 | 810.000 | 477.500 | 810.000 | 810.000 | 478.500 | 810.800 | 809.600 | 479.500 |
| BT | 810.800 | 808.700 | 480.000 | 810.800 | 807.000 | 482.000 | 810.800 | 0.000 | 490.000 | 810.800 |
| BT | 0.000 | 542.000 | 810.800 | 0.000 | 543.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 393.000 | 810.200 | 394.000 | 810.000 | 441.000 | 809.000 | 454.000 | 807.000 | 456.000 |
| SR | 805.300 | 456.500 | 804.400 | 457.500 | 804.100 | 458.500 | 804.100 | 459.500 | 804.400 | 460.500 |
| GR | 805.300 | 461.500 | 807.000 | 462.000 | 807.000 | 465.000 | 805.300 | 465.500 | 804.400 | 466.500 |
| GR | 804.100 | 467.500 | 804.100 | 468.500 | 804.400 | 469.500 | 805.300 | 470.500 | 807.000 | 471.000 |
| GR | 807.000 | 474.000 | 805.300 | 474.500 | 804.400 | 475.500 | 804.100 | 476.500 | 804.100 | 477.500 |
| GR | 804.400 | 478.500 | 805.300 | 479.500 | 807.000 | 480.000 | 809.000 | 482.000 | 810.000 | 490.000 |
| GR | 810.000 | 542.000 | 820.000 | 543.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 9.100 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 406.000 | 530.000 |

50 FT U/S CROSS ST. CROSS SECTION 118

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.200 | 13.000 | 456.000 | 485.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 393.000 | 810.000 | 388.000 | 809.400 | 400.000 | 809.400 | 430.000 | 808.100 | 445.000 |
| GR | 806.700 | 449.000 | 804.900 | 451.000 | 804.000 | 460.000 | 803.900 | 485.000 | 806.700 | 489.000 |
| GR | 808.700 | 498.000 | 809.400 | 542.000 | 820.000 | 593.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.100 | 0.100 | 0.040 | 0.120 | 0.450 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 118.000 | 13.000 | 223.000 | 247.000 | 450.000 | 550.000 | 680.000 | 0.000 | -2.000 | 0.000 |
| GR | 825.000 | 122.000 | 811.000 | 123.000 | 810.800 | 182.000 | 811.200 | 214.000 | 808.400 | 223.000 |
| GR | 808.400 | 235.000 | 808.000 | 230.000 | 809.100 | 240.000 | 809.000 | 247.000 | 810.000 | 251.000 |
| GR | 811.200 | 306.000 | 810.600 | 367.000 | 825.000 | 348.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 119

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.000 | 0.000 | 0.000 | 0.000 | 450.000 | 550.000 | 685.000 | 0.000 | 2.300 | 1.000 |
| NC | 0.120 | 0.120 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 507.000 | 853.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.500 | 10.000 | 639.000 | 667.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 819.200 | 506.000 | 817.000 | 566.000 | 817.000 | 617.000 | 812.100 | 635.000 | 810.900 | 639.000 |
| GR | 808.600 | 653.000 | 810.600 | 667.000 | 812.100 | 670.000 | 817.600 | 680.000 | 815.000 | 853.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.600 | 0.000 | 0.000 | 0.000 | 350.000 | 350.000 | 350.000 | 0.000 | 1.200 | 0.000 |

100 FT D/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.000 | 11.000 | 639.000 | 667.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 1.000 |
| X3 | 0.000 | 0.000 | 0.000 | 617.000 | 0.000 | 680.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.000 | 578.000 | 817.000 | 579.000 | 817.000 | 617.000 | 813.300 | 635.000 | 812.100 | 639.000 |
| GR | 811.000 | 653.000 | 811.300 | 667.000 | 813.300 | 670.000 | 817.600 | 680.000 | 815.000 | 727.000 |
| GR | 825.000 | 720.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.800 | 22.000 | 664.700 | 660.300 | 50.000 | 50.300 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 617.000 | 0.000 | 680.000 | 0.000 | 816.000 | 816.000 | 0.000 |
| GR | 825.000 | 578.000 | 817.000 | 579.000 | 817.000 | 617.000 | 813.300 | 635.000 | 812.100 | 639.000 |
| GR | 811.100 | 644.700 | 811.100 | 644.800 | 811.100 | 649.700 | 811.100 | 649.800 | 811.100 | 649.900 |
| GR | 811.100 | 650.000 | 811.100 | 655.000 | 811.100 | 655.100 | 811.100 | 655.200 | 811.100 | 655.300 |
| GR | 811.100 | 660.200 | 811.100 | 660.300 | 811.800 | 667.000 | 813.300 | 670.000 | 817.600 | 680.000 |
| GR | 818.000 | 727.000 | 825.000 | 728.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SE | 1.250 | 2.350 | 3.000 | 0.000 | 15.600 | 0.600 | 98.000 | 0.000 | 811.100 | 811.100 |

U/S FACE MASON ST. CROSS SECTION 1&2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.000 | 0.000 | 0.000 | 0.000 | 52.000 | 52.000 | 52.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 817.600 | 818.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 617.000 | 0.000 | 680.000 | 0.000 | 817.000 | 817.000 | 0.000 |
| BT | 22.000 | 578.000 | 825.000 | 825.000 | 579.000 | 818.500 | 817.000 | 617.000 | 818.500 | 817.000 |
| BT | 635.000 | 818.500 | 813.300 | 639.000 | 818.500 | 812.100 | 664.700 | 818.500 | 811.100 | 644.800 |
| BT | 818.500 | 817.600 | 649.700 | 818.500 | 817.600 | 649.800 | 818.500 | 811.100 | 649.900 | 818.500 |
| BT | 811.100 | 650.000 | 818.500 | 817.600 | 655.000 | 818.500 | 817.600 | 655.100 | 818.500 | 811.100 |
| BT | 655.200 | 818.500 | 811.100 | 655.300 | 818.500 | 817.600 | 660.200 | 818.500 | 817.600 | 660.300 |
| BT | 818.500 | 811.100 | 667.000 | 818.500 | 811.800 | 670.000 | 818.500 | 813.300 | 680.000 | 818.500 |
| BT | 817.600 | 727.000 | 818.500 | 818.000 | 728.000 | 825.000 | 825.000 | 0.000 | 0.000 | 0.000 |

50 FT U/S MASON ST. CROSS SECTION 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.200 | 11.000 | 840.000 | 856.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 808.000 | 0.000 | 856.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 821.800 | 660.000 | 818.800 | 724.000 | 816.800 | 762.000 | 815.100 | 836.000 | 811.300 | 840.000 |
| GR | 811.000 | 848.000 | 812.000 | 856.000 | 814.300 | 864.000 | 815.000 | 870.000 | 814.000 | 900.000 |

FORM 1411-60 PRINTED BY ROTARY MANIFOLD FORMS PRINTED IN U.S.A.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 820.000 | 910.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.045 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.000 | 21.000 | 840.000 | 056.000 | 965.000 | 965.000 | 965.000 | 0.000 | 0.000 | 1.000 |
| GR | 825.200 | 0.000 | 821.700 | 56.000 | 823.000 | 106.000 | 823.000 | 152.000 | 821.600 | 198.000 |
| GR | 821.200 | 376.000 | 820.400 | 520.000 | 821.300 | 660.000 | 818.800 | 724.000 | 816.800 | 762.000 |
| GR | 815.900 | 830.000 | 811.300 | 840.000 | 811.000 | 848.000 | 812.000 | 856.000 | 814.300 | 864.000 | |
| GR | 815.000 | 978.000 | 816.600 | 1052.000 | 819.000 | 1152.000 | 819.200 | 1260.000 | 819.100 | 1488.000 |
| GR | 830.000 | 1650.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

PRINTED IN U.S.A.
FORM 1411-GP-PRINTED BY ROTARY MANIFOLD-FORMS.

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: West channel of Sperry Drain

4) DOCUMENT TYPE: Rating Curve

```
JOBID=HEC2          USER=DBHUD17W          PROJECT=HU202507          BILLING=HU202507          RON=X0065

13:48:03                                JOB INTRODUCED FROM                                MAY 21, 1981
                                        HEC2 ENG

13:48:07  START OF TRANSLATION

**          PARAMETER VALUES          **

&1        = DB-SPERRYWEST
&PAPER    = 3PART

                SJOB HEC2,USER=DBHUD17U;
WARNING  - 36  THIS STATEMENT HAS BEEN GENERATED
                VALUE FILENAM,NHOLD,WK=TEG2UU,CPU=30,PAPER=1PART,SIZE=2J0,STEP=HEC2,
                      SUB=SUBNAME,COPIES=1,WKDVC=452;
                JUMP &PAPER%%X;
                2PART:
                OUTVAL &2,MD=I12PRT,DVC=P8;
                JUMP CONTX;
                3PARTX:
                OUTVAL &2,MD=I13PRT,DVC=P9;
                JUMP CONTX;
                1PARTX:
                OUTVAL &2;
                CONTX;
                INVOKE HEC2,ENGJCLLIB,VALUES=(&1,&2,WK=&WK,CPU=&CPU,PAPER=&PAPER,SIZE=&SIZE,
                      STEP=&STEP,SUB=&SUB,COPIES=&COPIES,WKDVC=&WKDVC);

          RECORD COUNT :    16

13:48:21  END OF TRANSLATION
```

WEST CHANNEL RATING CURVE — EXHIBIT 2

FORM 1411-GD-PRINTED BY ROTARY MANIFOLD FORMS.

```
JOBID=HEC2                USER=DPHUD17W          PROJECT=HU202507          BILLING=HU202507          RON=X0065

13:46:22                                   JOB EXECUTION LISTING                                    MAY 21, 1981

            JUMP DONE TO 3PARTX
            JUMP DONE TO CONTX
            JUMP DONE TO HFC2
            START OF HEC#2 EXECUTION
            STEP 4
            LOAD MODULE = HEC#2 (7972 /22 23:58)
            LIBRARY = UTAENGLM
13:48:44    STEP STARTED XPRTY=9
            FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: MEG200 FOR EFN: ;000065.FILE#B
            FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: MEG200 FOR EFN: ;000065.FILE#C
            FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: MEG200 FOR EFN: ;000065.FILE#D
            FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: MEG200 FOR EFN: ;000065.FILE#A
            FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: MEG200 FOR EFN: ;000065.FILE#E
            FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: MEG200 FOR EFN: ;000065.FILE#F
            TASK MAIN J=09 P=00 COMPLETED
            DUF01.IFN=FILE#B       REMEMBER REUSE=        0
            DUF01.IFN=FILE#C       REMEMBER REUSE=        0
            DUF01.IFN=FILE#D       REMEMBER REUSE=        0
            DUF01.IFN=FILE#A       REMEMBER REUSE=        0
            DUF01.IFN=FILE#E       REMEMBER REUSE=        0
            DUF01.IFN=FILE#F       REMEMBER REUSE=        0     UNLOCK BUFFER=        0     CREATE BUFFER=        34
            TEMPORARY  FILES USED=    226 TRACKS
            FILE#B     ON  MEG200 :  NB  OF  IO  CONNECTS=        133
            FILE#C     ON  MEG200 :  NB  OF  IO  CONNECTS=        120
            H#PR       ON  MEG200 :  NB  OF  IO  CONNECTS=         16
            H#RD       ON  MTAPAK :  NB  OF  IO  CONNECTS=          3
            FILE#D     ON  MEG200 :  NB  OF  IO  CONNECTS=         71
            FILE#A     ON  MEG200 :  NB  OF  IO  CONNECTS=        139
            FILE#E     ON  MEG200 :  NB  OF  IO  CONNECTS=        171
            FILE#F     ON  MEG200 :  NB  OF  IO  CONNECTS=         30
            CPU          1.265                        PROG MISSING SEGTS       94    STACKOV      86
            ELAPSED      2.559                        SYS  MISSING SEGTS      213
            LINES          407   LIMIT     NOLIM      STACKING STORE       468064
            CARDS            0   LIMIT     NOLIM      BUFFER SIZE           15920    CPSIZE     2272
13:51:18    STEP COMPLETED

            JUMP DONE TO FINISH
            JUMP DONE TO 3PART
            ***********************************
            *  READY 3PART, GREEN BAR PAPER   *
            ***********************************

            START      13:48:22    LINES        407
            STOP       13:51:21    CARDS          0
            CPU          1.265
            ELAPSE       2.972
13:51:21    RESULT:  JOB COMPLETED
```

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************


C
T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          USEL       FQ
          0.         2.         0.         0.   0.000000       0.00       0.0         0.    804.200      0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECE      FN         ALLOC      ICV        CHNIM      ITRACE
      1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    150.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
J5  LPRNT      NUMSEC                          ********REQUESTED SECTION NUMBERS********
     -10.000    -10.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
QT        5.000     25.000     50.000     75.000    100.000    125.000      0.000      0.000      0.000      0.000
NC        0.120      0.120      0.035      0.300      0.500      0.000      0.000      0.000      0.000      0.000

          D/S FACE JACKSON ST. 29X45 INCH CONCRETE CULVERT

X1        1.000     11.000      2.000      5.000      0.000      0.000      0.000      0.000      0.000      0.000
X3       10.000      0.000      0.000      0.000      0.000      0.000      0.000    812.600    812.600      0.000
GR      812.600      1.000    801.100      2.000    800.600      2.100    800.100      2.400    799.700      3.000
GR      799.600      3.500    799.700      4.000    800.100      4.600    800.600      4.900    801.100      5.000
GR      812.600      6.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
SB        0.000      3.250      3.000      0.000      2.720      0.000      7.400      0.000    800.600    799.880


          U/S FACE JACKSON ST. 29X45 INCH CONCRETE CULVERT

X1        2.000     11.000      2.000      5.000    146.000    146.000    146.000      0.000      0.000      0.000
X2        0.000      0.000      1.000    803.200    812.600      0.000      0.000      0.000      0.000      0.000
X3       10.000      0.000      0.000      0.000      0.000      0.000      0.000    812.600    812.600      0.000
BT       11.000      1.000    812.600      0.000      2.000    812.600    801.700      2.100    812.600    802.200
BT        2.400    812.600    802.700      3.000    812.600    803.100      3.500    812.600    803.200      4.000
BT      812.600    803.100      4.600    812.600    802.700      4.900    812.600    802.200      5.000    812.600
BT      801.700      6.000    812.600      0.000      0.000      0.000      0.000      0.000      0.000      0.000
GR      812.600      1.000    801.700      2.000    801.200      2.100    800.700      2.400    800.300      3.000
GR      800.200      3.500    800.300      4.000    800.700      4.600    801.200      4.900    801.700      5.000
GR      812.600      6.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000


          50 FT U/S JACKSON ST.

X1        2.100      9.000     45.000     35.000     55.000     50.000     50.000      0.000      0.000      0.000
GR      815.000      0.000    805.000      1.000    805.000     20.000    800.500     45.000    800.200     50.000
GR      800.500     55.000    805.000     55.000    805.000     60.000    815.000    110.000      0.000      0.000
NC        0.120      0.120      0.035      0.100      0.300      0.000      0.000      0.000      0.000      0.000
```

VALLEY SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.200 | 9.000 | 242.000 | 256.000 | 600.000 | 600.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 200.000 | 0.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 806.000 | 1.000 | 806.000 | 230.000 | 820.500 | 242.000 | 800.300 | 250.000 |
| GR | 800.300 | 256.000 | 806.000 | 265.000 | 806.000 | 499.000 | 820.000 | 500.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.250 | 9.000 | 245.000 | 255.000 | 700.000 | 700.000 | 700.000 | 0.000 | -2.500 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 200.000 | 0.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 807.000 | 1.000 | 807.000 | 229.000 | 805.600 | 245.000 | 805.300 | 250.000 |
| GR | 805.400 | 255.000 | 807.000 | 264.000 | 807.000 | 499.000 | 820.000 | 500.000 | 0.000 | 0.000 |

VALLEY SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.300 | 0.000 | 0.000 | 0.000 | 700.000 | 700.000 | 700.000 | 0.000 | 2.500 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 200.000 | 0.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.400 | 9.000 | 192.000 | 208.000 | 1000.000 | 1000.000 | 1000.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 150.000 | 0.000 | 250.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 810.000 | 1.000 | 810.000 | 125.000 | 806.500 | 192.000 | 805.900 | 200.000 |
| GR | 806.500 | 208.000 | 810.000 | 219.000 | 810.000 | 250.000 | 820.000 | 280.000 | 0.000 | 0.000 |
| QT | 5.000 | 225.000 | 225.000 | 225.000 | 225.000 | 225.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.000 | 9.000 | 222.000 | 238.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 180.000 | 0.000 | 280.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 810.000 | 50.000 | 810.000 | 215.000 | 806.700 | 222.000 | 806.000 | 230.000 |
| GR | 806.700 | 238.000 | 810.000 | 249.000 | 810.000 | 330.000 | 820.000 | 380.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411-GR-PRINTED BY ROTARY MANIFOLD FORMS.
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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3      SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        3.        0.        0.  0.000000      3.00       0.0        0.   804.200     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBH       CHNIM     ITRACE

     2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        4.        0.        0.  0.000000      0.00      0.0        0.   804.200     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSLCH     FN        ALLDC     CHV       CHNIM     ITRACE

     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS.
PRINTED IN U.S.A.

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    NVINS     Q         HSEL      FQ

      3.        5.        0.        3.  0.200000      0.00       0.0        0.   864.200     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBH       CHNIM     ITRACE

    4.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3      SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.      5.        0.        0.  0.000300      0.00      0.0       0.    804.200     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECD     FN        ALLOC     IEP       CHNIM     ITRACE
    15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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FORM 121.00 PRINTED BY BOTARY MANIFOLD FORMS.

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SPERRY DRAIN

SUMMARY PRINTOUT TABLE  150
```

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | IOK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 25.00 | 804.20 | 0.00 | 804.26 | 11.16 | 1.97 | 12.69 | 7.49 |
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 50.00 | 804.20 | 0.00 | 804.44 | 44.56 | 3.94 | 12.69 | 7.49 |
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 75.00 | 804.20 | 0.00 | 804.74 | 100.22 | 5.91 | 12.69 | 7.49 |
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 100.00 | 804.20 | 0.00 | 805.16 | 178.17 | 7.88 | 12.69 | 7.49 |
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 125.00 | 804.20 | 0.00 | 805.71 | 278.40 | 9.85 | 12.69 | 7.49 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 25.00 | 804.71 | 0.00 | 804.78 | 11.75 | 2.01 | 12.43 | 7.29 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 50.00 | 806.58 | 0.00 | 806.50 | 19.84 | 2.87 | 17.42 | 11.23 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 75.00 | 809.22 | 0.00 | 809.38 | 16.70 | 2.68 | 28.06 | 18.35 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 100.00 | 812.84 | 0.00 | 812.95 | 2.52 | 2.68 | 48.17 | 62.96 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 125.00 | 813.76 | 0.00 | 813.91 | 3.08 | 3.11 | 52.80 | 71.20 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 25.00 | 804.79 | 0.00 | 804.80 | 0.19 | 0.51 | 75.15 | 56.62 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 50.00 | 806.54 | 0.00 | 806.54 | 0.17 | 0.58 | 231.10 | 122.32 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 75.00 | 809.42 | 0.00 | 809.42 | 0.06 | 0.44 | 515.45 | 314.60 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 100.00 | 812.98 | 0.00 | 812.98 | 0.02 | 0.55 | 808.39 | 659.35 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 125.00 | 813.95 | 0.00 | 813.95 | 0.03 | 0.39 | 965.62 | 772.09 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 25.00 | 804.80 | 0.00 | 804.80 | 0.10 | 0.37 | 98.46 | 78.41 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 50.00 | 806.55 | 0.00 | 806.55 | 0.12 | 0.49 | 192.58 | 144.89 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 75.00 | 809.42 | 0.00 | 809.43 | 0.05 | 0.40 | 480.10 | 343.17 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 100.00 | 812.98 | 0.00 | 812.98 | 0.02 | 0.53 | 835.52 | 693.65 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 125.00 | 813.95 | 0.00 | 813.96 | 0.02 | 0.36 | 933.85 | 805.98 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 25.00 | 804.82 | 0.00 | 804.83 | 2.16 | 0.96 | 65.75 | 17.01 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 50.00 | 806.56 | 0.00 | 806.57 | 0.39 | 0.63 | 240.53 | 79.71 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 75.00 | 809.43 | 0.00 | 809.43 | 0.09 | 0.43 | 527.19 | 256.74 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 100.00 | 812.98 | 0.00 | 812.98 | 0.03 | 0.55 | 882.59 | 567.61 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 125.00 | 813.96 | 0.00 | 813.96 | 0.04 | 0.39 | 979.95 | 667.50 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 25.00 | 805.97 | 805.97 | 806.23 | 207.13 | 4.19 | 7.38 | 1.74 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 50.00 | 806.51 | 0.00 | 806.73 | 78.32 | 4.02 | 19.21 | 5.65 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 75.00 | 809.44 | 0.00 | 809.64 | 0.58 | 0.82 | 277.78 | 98.22 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 100.00 | 812.98 | 0.00 | 812.98 | 0.09 | 0.48 | 632.61 | 339.63 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 125.00 | 813.96 | 0.00 | 813.96 | 0.09 | 0.52 | 730.19 | 423.67 |

PRINTED IN U.S.A.
FORM 1411-SB-PRINTED BY ROTARY MANIFOLD FORMS.

| | SECNO | XLCH | FLTRD | ELLC | ELMIN | Q | CHSCL | CRIBS | EG | TDK*S | VCH | APCA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 25.00 | 807.50 | 0.00 | 807.60 | 4.43 | 1.11 | 25.15 | 11.88 |
| | 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 50.00 | 808.13 | 0.00 | 808.17 | 5.73 | 1.57 | 37.59 | 20.09 |
| | 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 75.00 | 809.52 | 0.00 | 809.55 | 1.94 | 1.32 | 76.66 | 53.82 |
| | 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 100.00 | 812.99 | 0.00 | 813.00 | 0.17 | 0.63 | 391.22 | 241.32 |
| | 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 125.00 | 813.97 | 0.00 | 813.97 | 0.15 | 0.65 | 485.83 | 321.57 |
| * | 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 225.00 | 808.16 | 808.16 | 809.02 | 143.84 | 7.54 | 34.75 | 18.76 |
| | 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 225.00 | 808.23 | 808.17 | 809.02 | 113.46 | 7.01 | 37.90 | 21.12 |
| | 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 225.00 | 809.49 | 0.00 | 809.75 | 21.29 | 4.19 | 71.46 | 48.76 |
| | 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 225.00 | 812.99 | 0.00 | 813.01 | 0.92 | 1.43 | 387.61 | 234.77 |
| | 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 225.00 | 813.97 | 0.00 | 813.98 | 0.52 | 1.18 | 485.12 | 313.31 |

FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS PRINTED IN U.S.A.

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CHSEL | DIFWSP | DIFWSR | DIFWCS | TOPWID | XLOB |
|---|---|---|---|---|---|---|---|
| 1.000 | 25.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 1.000 | 50.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 1.000 | 75.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 1.000 | 100.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 1.000 | 125.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 2.000 | 25.00 | 804.71 | 0.00 | 0.51 | 0.00 | 3.00 | 146.00 |
| 2.000 | 50.00 | 806.38 | 0.00 | 2.18 | 0.00 | 3.00 | 146.00 |
| 2.000 | 75.00 | 809.25 | 0.00 | 5.06 | 0.00 | 3.00 | 146.00 |
| 2.000 | 100.00 | 812.84 | 0.00 | 8.64 | 0.00 | 3.00 | 146.00 |
| 2.000 | 125.00 | 813.76 | 0.00 | 9.56 | 0.00 | 3.00 | 146.00 |
| 2.100 | 25.00 | 804.79 | 0.00 | 0.08 | 0.00 | 24.31 | 50.00 |
| 2.100 | 50.00 | 806.54 | 0.00 | 0.16 | 0.00 | 98.31 | 50.00 |
| 2.100 | 75.00 | 809.42 | 0.00 | 0.17 | 0.00 | 98.38 | 50.00 |
| 2.100 | 100.00 | 812.93 | 0.00 | 0.14 | 0.00 | 99.50 | 50.00 |
| 2.100 | 125.00 | 813.93 | 0.00 | 0.19 | 0.00 | 99.79 | 50.00 |
| 2.200 | 25.00 | 804.80 | 0.00 | 0.01 | 0.00 | 30.50 | 600.00 |
| 2.200 | 50.00 | 806.55 | 0.00 | 0.01 | 0.00 | 100.00 | 600.00 |
| 2.200 | 75.00 | 809.42 | 0.00 | 0.00 | 0.00 | 100.00 | 600.00 |
| 2.200 | 100.00 | 812.98 | 0.00 | 0.00 | 0.00 | 100.00 | 600.00 |
| 2.200 | 125.00 | 813.95 | 0.00 | 0.00 | 0.00 | 100.00 | 600.00 |
| 2.250 | 25.00 | 804.82 | 0.00 | 0.01 | 0.00 | 100.00 | 700.00 |
| 2.250 | 50.00 | 806.56 | 0.00 | 0.01 | 0.00 | 100.00 | 700.00 |
| 2.250 | 75.00 | 809.43 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| 2.250 | 100.00 | 812.98 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| 2.250 | 125.00 | 813.96 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| * 2.300 | 25.00 | 805.97 | 0.00 | 1.15 | 0.00 | 17.42 | 700.00 |
| 2.300 | 50.00 | 806.51 | 0.00 | -0.06 | 0.00 | 26.59 | 700.00 |
| 2.300 | 75.00 | 809.44 | 0.00 | 0.01 | 0.00 | 100.00 | 700.00 |
| 2.300 | 100.00 | 812.98 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| 2.300 | 125.00 | 813.96 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| 2.400 | 25.00 | 807.58 | 0.00 | 1.61 | 0.00 | 21.57 | 1000.00 |
| 2.400 | 50.00 | 808.13 | 0.00 | 1.62 | 0.00 | 24.36 | 1000.00 |
| 2.400 | 75.00 | 809.57 | 0.00 | 0.08 | 0.00 | 31.55 | 1000.00 |
| 2.400 | 100.00 | 812.99 | 0.00 | 0.01 | 0.00 | 100.00 | 1000.00 |
| 2.400 | 125.00 | 813.97 | 0.00 | 0.01 | 0.00 | 100.00 | 1000.00 |
| * 3.000 | 225.00 | 808.16 | 0.00 | 0.58 | 0.00 | 23.96 | 150.00 |
| 3.000 | 225.00 | 808.28 | 0.00 | 0.15 | 0.00 | 24.67 | 150.00 |
| 3.000 | 225.00 | 809.49 | 0.00 | -0.03 | 0.00 | 31.22 | 150.00 |
| 3.000 | 225.00 | 812.99 | 0.00 | -0.01 | 0.00 | 100.00 | 150.00 |
| 3.000 | 225.00 | 813.97 | 0.00 | -0.00 | 0.00 | 100.00 | 150.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 2.300 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 2.300 PROFILE= 1 TERCRABLE MINIMU SPECIFIC ENERGY

CAUTION SECNO= 2.300 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE ...

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FORM 34166 PRINTED BY ROTARY MANIFOLD FORMS.

CAUTION SECNO= 3.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

FORM [41]-GB-PRINTED BY ROTARY MANIFOLD FORMS.
PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp & City of Battle Creek

3) WATERCOURSE: west channel

4) DOCUMENT TYPE: 4 profiles

00BREAK00

13:29:38 X150 08HUD17U HEC2 HU202507 JUN 04, 1981

WEST CHANNEL
4-PROFILE

WEST CHANNEL
4-PROFILE EXHIBIT 2

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FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS

```
JOBID=HEC2                USER=DBHUD17W          PROJECT=HU202507          BILLING=HU202507          RON=X0130

13:10:57                                  JOB INTRODUCED FROM                                    JUN 04, 1981
                                                HEC2 ENG

13:15:50  START OF TRANSLATION

**        PARAMETER VALUES        **

&1        = DB-SPERRYWEST
&PAPER    = 3PART

          $JOB HEC2,USER=DBHUD17W;
WARNING   36  THIS STATEMENT HAS BEEN GENERATED
          VALUE FILENAM,WHOLD,WK=WTAPAK,CPU=30,PAPER=1PART,SIZE=200,STEP=HEC2,
                SUB=SUBNAME,COPIES=1,WKDVC=400;
          JUMP &PAPER&&X;
          2PARTX:
          OUTVAL &2,MD=I12PRT,DVC=PR;
          JUMP CONTX;
          3PARTX:
          OUTVAL &2,MD=I13PRT,DVC=PR;
          JUMP CONTX;
          1PARTX:
          OUTVAL &2;
          CONTX:
          INVOKE HEC2,ENGJCLLIB,VALUES=(&1,&2,WK=&WK,CPU=&CPU,PAPER=&PAPER,SIZE=&SIZE,
                STEP=&STEP,SUB=&SUB,COPIES=&COPIES,WKDVC=&WKDVC);

          RECORD COUNT :    16
13:16:38  END OF TRANSLATION
```

FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.
PRINTED IN U.S.A.

```
JOBID=HEC2          USER=DBHUD17H          PROJECT=HU202507          BILLING=HU202507          RON=X0130

13:16:44                                JOB EXECUTION LISTING                                JUN 04, 1981

          JUMP DONE TO 3PARTX
          JUMP DONE TO CONTX
          JUMP DONE TO HEC2
          START OF HEC□2 EXECUTION
          STEP 4
          LOAD MODULE = HEC□2 (79/2 /22 23:58)
          LIBRARY = HTAENGLN
13:17:54  STEP STARTED XPRTY=9
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000130.FILE□B
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000130.FILE□C
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000130.FILE□D
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000130.FILE□A
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000130.FILE□E
          FP04.    2 CYLINDER(S) ALLOCATED ON VOLUME: WTAPAK FOR EFN: ;000130.FILE□F
          TASK MAIN J=0A P=00 COMPLETED
          DUF01.IFN=FILE□E       REMEMBER REUSE=        0
          DUF01.IFN=FILE□C       REMEMBER REUSE=        0
          DUF01.IFN=FILE□B       REMEMBER REUSE=        0
          DUF01.IFN=FILE□F       REMEMBER REUSE=        0
          DUF01.IFN=FILE□D       REMEMBER REUSE=        0
          DUF01.IFN=FILE□A       REMEMBER REUSE=        0    BLOCK BUFFER=        0    CREATE BUFFER=       31
          TEMPORARY  FILES USED=    225 TRACKS
          FILE□E     ON  WTAPAK :  NB  OF  IO  CONNECTS=        145
          FILE□C     ON  WTAPAK :  NB  OF  IO  CONNECTS=        102
          FILE□B     ON  WTAPAK :  NB  OF  IO  CONNECTS=        133
          HARD       ON  WTAPAK :  NB  OF  IO  CONNECTS=          2
          FILE□F     ON  WTAPAK :  NB  OF  IO  CONNECTS=         30
          HARD       ON  WTAPAK :  NB  OF  IO  CONNECTS=         15
          FILE□D     ON  WTAPAK :  NB  OF  IO  CONNECTS=         67
          FILE□A     ON  WTAPAK :  NB  OF  IO  CONNECTS=        123
          CPU          1.666                    PROG MISSING SEGTS      382   STACKOV      81
          ELAPSED      8.620                    SYS  MISSING SEGTS      679
          LINES          352   LIMIT    NOLIM   BACKING STORE        547008
          CARDS            0   LIMIT    NOLIM   BUFFER SIZE           15920   CPSIZE     2272
13:26:32  STEP COMPLETED

          JUMP DONE TO FINISH
          JUMP DONE TO 3PART
          ************************************
          *  READY 3PART  GREEN BAR PAPER    *
          ************************************

          START     13:16:44    LINES        352
          STOP      13:26:34    CARDS          0
          CPU          1.666
          ELAPSE       9.838
13:26:34  RESULT:  JOB COMPLETED
```

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FORM 1411-00 PRINTED BY ROTARY MANIFOLD FORMS

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q          WSEL      FQ
        0.       2.        0.        0.  0.000000      0.00      0.0       0.    804.200     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
        1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    150.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J5  LPRNT     NUMSEC                    ********REQUESTED SECTION NUMBERS*********
      -10.000   -10.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
GT      5.000    45.000    60.000    80.000    80.000   140.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.035     0.300     0.500     0.000     0.000     0.000     0.000     0.000

                D/S FACE JACKSON ST, 29X45 INCH CONCRETE CULVERT
X1      1.000    11.000     2.000     5.000     0.000     0.000     0.000     0.000     0.000     0.000
X3     10.000     0.000     0.000     0.000     0.000     0.000     0.000   812.600   812.600     0.000
GR    812.600     1.000   801.100     2.000   800.600     2.100   800.100     2.400   799.700     3.000
GR    799.600     3.000   799.700     4.000   800.100     4.600   800.600     4.900   801.100     5.000
GR    812.600     6.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
SB      0.000     3.250     3.000     0.000     2.720     0.000     7.400     0.000   800.480   799.880

                U/S FACE JACKSON ST, 29X45 INCH CONCRETE CULVERT
X1      2.000    11.000     2.000     5.000   146.000   146.000   146.000     0.000     0.000     0.000
X2      0.000     0.000     1.000   803.200   812.600     0.300     0.000     0.000     0.000     0.000
X3     10.000     0.000     0.000     0.000     0.000     0.000     0.000   812.600   812.600     0.000
BT     11.000     1.000   812.600     0.000     2.000   812.600   801.700     2.100   812.600   802.200
BT      2.400   812.600   802.700     3.000   812.600   803.100     3.500   812.600   803.200     4.000
BT    812.600   803.100     4.600   812.600   802.700     4.900   812.600   802.200     5.000   812.600
BT    801.700     6.000   812.600     0.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    812.600     1.000   801.700     2.000   801.200     2.100   800.700     2.400   800.500     3.000
GR    800.200     3.500   800.300     4.000   800.700     4.600   801.200     4.900   801.700     5.000
GR    812.600     6.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

                50 FT U/S JACKSON ST.
X1      2.100     9.000    45.000    55.000    50.000    50.000    50.000     0.000     0.000     0.000
GR    815.000     0.000   805.000     1.000   805.000    40.000   800.500    45.000   800.200    50.000
GR    800.500    55.000   805.000    65.000   805.000   190.000   815.000   200.000     0.000     0.000
```

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | 0.420 | 0.120 | 0.035 | 0.100 | 0.300 | 1.000 | 0.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.200 | 9.000 | 242.000 | 250.000 | 600.000 | 600.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 200.000 | 0.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 806.000 | 1.000 | 806.000 | 230.000 | 800.500 | 242.000 | 800.300 | 250.000 |
| GR | 800.300 | 256.000 | 806.000 | 265.000 | 806.000 | 499.000 | 820.000 | 500.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.250 | 9.000 | 245.000 | 255.000 | 700.000 | 700.000 | 700.000 | 0.000 | -2.500 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 200.000 | 0.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 807.000 | 1.000 | 807.000 | 229.000 | 805.600 | 245.000 | 805.300 | 250.000 |
| GR | 805.400 | 255.000 | 807.000 | 264.000 | 807.000 | 499.000 | 820.000 | 500.000 | 0.000 | 0.000 |

VALLEY SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.300 | 0.000 | 0.000 | 0.000 | 700.000 | 700.000 | 700.000 | 0.000 | 2.500 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 200.000 | 0.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.400 | 9.000 | 192.000 | 200.000 | 1000.000 | 1000.000 | 1000.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 150.000 | 0.000 | 250.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 810.000 | 1.000 | 810.000 | 185.000 | 806.500 | 192.000 | 805.900 | 200.000 |
| GR | 806.500 | 208.000 | 810.000 | 219.000 | 810.000 | 250.000 | 820.000 | 280.000 | 0.000 | 0.000 |
| QT | 5.000 | 100.000 | 145.000 | 225.000 | 225.000 | 330.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.000 | 9.000 | 222.000 | 258.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 180.000 | 0.000 | 280.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 810.000 | 50.000 | 810.000 | 215.000 | 806.700 | 222.000 | 806.000 | 230.000 |
| GR | 806.700 | 238.000 | 810.000 | 249.000 | 810.000 | 330.000 | 820.000 | 380.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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*****************************************************
  HEC2 RTLEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    NVINS     Q         WSEL      FQ

       0.        3.        0.        3.  0.000000      0.00      0.0        0.   804.200     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3       SPERRY DRAIN

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
       0.       4.       0.       0.  0.000000    0.00      0.0      0.   804.200   0.000
J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     3.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS. PRINTED IN U.S.A.

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

T1CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2SPERRY DRAIN DIVIDED FLOW ANALYSIS
T3      SPERRY DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
          0.        0.        0.        0.  0.000000      0.00      0.0       0.   004.200     0.000
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       15.000    0.000    -1.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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**********
JEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRINS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 45.00 | 804.20 | 0.00 | 804.40 | 36.08 | 3.55 | 12.69 | 7.49 |
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 60.00 | 804.20 | 0.00 | 804.55 | 64.14 | 4.73 | 12.69 | 7.49 |
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 80.00 | 804.20 | 0.00 | 804.82 | 114.03 | 6.30 | 12.69 | 7.49 |
| 1.000 | 0.00 | 0.00 | 0.00 | 799.60 | 140.00 | 804.20 | 0.00 | 806.09 | 349.22 | 11.03 | 12.69 | 7.49 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 45.00 | 805.95 | 0.00 | 806.07 | 19.51 | 2.79 | 16.13 | 10.19 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 60.00 | 807.38 | 0.00 | 807.52 | 19.22 | 2.94 | 20.44 | 13.69 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 80.00 | 809.97 | 0.00 | 810.10 | 15.74 | 2.84 | 28.21 | 20.17 |
| 2.000 | 146.00 | 812.60 | 803.20 | 800.20 | 140.00 | 814.20 | 0.00 | 814.37 | 3.47 | 3.37 | 54.97 | 75.19 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 45.00 | 806.10 | 0.00 | 806.10 | 0.20 | 0.61 | 187.41 | 101.06 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 60.00 | 807.56 | 0.00 | 807.56 | 0.11 | 0.53 | 331.41 | 180.13 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 80.00 | 810.13 | 0.00 | 810.14 | 0.05 | 0.41 | 586.05 | 374.93 |
| 2.100 | 50.00 | 0.00 | 0.00 | 800.20 | 140.00 | 814.42 | 0.00 | 814.42 | 0.03 | 0.42 | 1012.20 | 828.61 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 45.00 | 806.11 | 0.00 | 806.11 | 0.13 | 0.49 | 148.73 | 124.13 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 60.00 | 807.56 | 0.00 | 807.56 | 0.09 | 0.47 | 293.87 | 203.92 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 80.00 | 810.14 | 0.00 | 810.14 | 0.04 | 0.38 | 551.34 | 405.26 |
| 2.200 | 600.00 | 0.00 | 0.00 | 800.30 | 140.00 | 814.42 | 0.00 | 814.42 | 0.03 | 0.40 | 979.73 | 861.98 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 45.00 | 806.13 | 0.00 | 806.13 | 0.56 | 0.69 | 196.63 | 60.15 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 60.00 | 807.57 | 0.00 | 807.57 | 0.20 | 0.53 | 341.28 | 133.02 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 80.00 | 810.14 | 0.00 | 810.14 | 0.07 | 0.41 | 598.58 | 311.78 |
| 2.250 | 700.00 | 0.00 | 0.00 | 802.80 | 140.00 | 814.42 | 0.00 | 814.42 | 0.04 | 0.42 | 1026.68 | 717.33 |
| * 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 45.00 | 806.23 | 806.23 | 806.59 | 178.86 | 5.01 | 12.48 | 3.36 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 60.00 | 807.59 | 0.00 | 807.62 | 8.82 | 1.61 | 92.60 | 23.68 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 80.00 | 810.15 | 0.00 | 810.15 | 0.54 | 0.70 | 548.85 | 137.46 |
| 2.300 | 700.00 | 0.00 | 0.00 | 805.30 | 140.00 | 814.43 | 0.00 | 814.43 | 0.09 | 0.55 | 776.97 | 466.30 |
| 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 45.00 | 808.08 | 0.00 | 808.11 | 5.07 | 1.45 | 36.40 | 19.99 |
| 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 60.00 | 808.24 | 0.00 | 808.29 | 8.79 | 1.77 | 40.54 | 23.02 |
| 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 80.00 | 810.19 | 0.00 | 810.21 | 1.13 | 1.14 | 111.76 | 75.16 |
| 2.400 | 1000.00 | 0.00 | 0.00 | 805.90 | 140.00 | 814.44 | 0.00 | 814.46 | 0.15 | 0.67 | 535.61 | 361.77 |
| 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 100.00 | 808.19 | 0.00 | 808.35 | 26.93 | 3.50 | 35.44 | 19.27 |
| 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 145.00 | 808.38 | 0.00 | 808.66 | 40.27 | 4.31 | 40.16 | 22.85 |
| 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 225.00 | 810.16 | 0.00 | 810.32 | 10.50 | 3.56 | 104.26 | 69.16 |
| 3.000 | 150.00 | 0.00 | 0.00 | 806.00 | 330.00 | 814.43 | 0.00 | 814.45 | 0.87 | 1.59 | 531.92 | 354.24 |

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FORM 1411-08-PRINTED BY ROTARY MANIFOLD FORMS

SPERRY DRAIN

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CHSEL | DIFUSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 1.000 | 45.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 1.000 | 60.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 1.000 | 80.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 1.000 | 140.00 | 804.20 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 2.000 | 45.00 | 805.95 | 0.00 | 1.75 | 0.00 | 3.00 | 146.00 |
| 2.000 | 60.00 | 807.38 | 0.00 | 3.18 | 0.00 | 3.00 | 146.00 |
| 2.000 | 80.00 | 809.97 | 0.00 | 5.77 | 0.00 | 3.00 | 146.00 |
| 2.000 | 140.00 | 814.20 | 0.00 | 10.00 | 0.00 | 5.00 | 146.00 |
| 2.100 | 45.00 | 806.10 | 0.00 | 0.15 | 0.00 | 98.22 | 50.00 |
| 2.100 | 60.00 | 807.56 | 0.00 | 0.17 | 0.00 | 98.51 | 50.00 |
| 2.100 | 80.00 | 810.13 | 0.00 | 0.16 | 0.00 | 99.03 | 50.00 |
| 2.100 | 140.00 | 814.42 | 0.00 | 0.22 | 0.00 | 99.88 | 50.00 |
| 2.200 | 45.00 | 806.11 | 0.00 | 0.01 | 0.00 | 100.00 | 600.00 |
| 2.200 | 60.00 | 807.56 | 0.00 | 0.01 | 0.00 | 100.00 | 600.00 |
| 2.200 | 80.00 | 810.14 | 0.00 | 0.00 | 0.00 | 100.00 | 600.00 |
| 2.200 | 140.00 | 814.42 | 0.00 | 0.00 | 0.00 | 100.00 | 600.00 |
| 2.250 | 45.00 | 806.13 | 0.00 | 0.02 | 0.00 | 100.00 | 700.00 |
| 2.250 | 60.00 | 807.57 | 0.00 | 0.01 | 0.00 | 100.00 | 700.00 |
| 2.250 | 80.00 | 810.14 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| 2.250 | 140.00 | 814.42 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| * 2.300 | 45.00 | 806.23 | 0.00 | 0.10 | 0.00 | 21.85 | 700.00 |
| 2.300 | 60.00 | 807.59 | 0.00 | 0.02 | 0.00 | 100.00 | 700.00 |
| 2.300 | 80.00 | 810.19 | 0.00 | 0.01 | 0.00 | 100.00 | 700.00 |
| 2.300 | 140.00 | 814.43 | 0.00 | 0.00 | 0.00 | 100.00 | 700.00 |
| 2.400 | 45.00 | 808.08 | 0.00 | 1.85 | 0.00 | 24.10 | 1000.00 |
| 2.400 | 60.00 | 809.24 | 0.00 | 0.65 | 0.00 | 24.93 | 1000.00 |
| 2.400 | 80.00 | 810.19 | 0.00 | 0.05 | 0.00 | 100.00 | 1000.00 |
| 2.400 | 140.00 | 814.44 | 0.00 | 0.01 | 0.00 | 100.00 | 1000.00 |
| 3.000 | 100.00 | 808.19 | 0.00 | -0.11 | 0.00 | 24.12 | 150.00 |
| 3.000 | 145.00 | 808.38 | 0.00 | 0.14 | 0.00 | 25.16 | 150.00 |
| 3.000 | 225.00 | 810.16 | 0.00 | -0.03 | 0.00 | 100.00 | 150.00 |
| 3.000 | 330.00 | 814.43 | 0.00 | -0.01 | 0.00 | 100.00 | 150.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 2.300 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.300 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.300 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

PRINTED IN U.S.A.
FORM 1411-GB-PRINTED BY ROTARY MANIFOLD FORMS

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp.

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100 yr Encroached

00BREAK00

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

C
T1BEDFORD TOWNSHIP AND CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2KALAMAZOO RIVER FROM KALAMAZOO/CALHOUN COUNTY BOUNDARY TO BATTLE CREEK RIVER
T3      KALAMAZOO RIVER

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINC    Q        MSEL     FQ

      0.       2.       0.       0.  0.00E+21     0.00     0.0      0.   797.620    0.000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLOC    IDW      CKNIT    ITRACE

     1.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000  201.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000

J5  LPRNT    NUMSEC                  ********REQUESTED SECTION NUMBERS********

    -10.000  -10.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
ET      0.000    0.000    0.000    0.000    1.410    0.000    0.000    0.000    0.000    0.000
QT      5.000 4390.000 6000.000 6700.000 6700.000 8420.000    0.000    0.000    0.000    0.000
NC      0.120    0.120    0.040    0.100    0.300    0.000    0.000    0.000    0.000    0.000

        CROSS SECTION 102A

X1    102.000   34.000 2023.000 2234.000 1100.000  400.000 3575.000    0.000    0.000    0.000
GR    810.000    0.000  806.000  100.000  805.600  250.000  802.700  450.000  800.800  534.000
GR    795.600  568.000  795.000  850.000  794.800 1026.000  793.700 1118.000  795.700 1348.000
GR    796.200 1528.000  797.000 1632.000  794.600 1714.000  796.000 1884.000  795.700 2016.000
GR    794.300 2023.000  792.000 2049.000  791.300 2079.000  789.800 2109.000  790.600 2139.000
GR    791.300 2169.000  790.100 2199.000  793.700 2234.000  795.200 2241.000  795.900 2249.000
GR    797.800 2438.000  797.000 2800.000  796.600 3250.000  795.600 3450.000  796.500 3626.000
GR    796.800 3872.000  799.000 3934.000  807.000 3990.000  810.600 4086.000    0.000    0.000

        CROSS SECTION 102C

X1    102.500   32.000 3697.000 3902.000 1050.000 1200.000 2950.000    0.000    0.000    0.000
GR    805.500    0.000  806.200  130.000  803.700  158.000  801.200  214.000  800.300  290.000
GR    800.000  516.000  797.400  716.000  793.400  868.000  797.100  962.000  798.800 1128.000
GR    796.400 1366.000  797.000 1646.000  797.000 1926.000  798.700 2166.000  798.400 2398.000
GR    796.600 2568.000  796.000 2700.000  796.200 3100.000  796.400 3550.000  797.400 3692.000
GR    792.400 3697.000  789.500 3712.000  791.000 3722.000  792.200 3772.000  792.500 3812.000
GR    792.100 3867.000  792.700 3902.000  796.200 3907.000  796.700 3912.000  796.200 3962.000
GR    800.000 4050.000  810.000 4150.000    0.000    0.000    0.000    0.000    0.000    0.000

        CROSS SECTION 103.

X1    103.000   29.000 2669.000 2809.000  400.000 1300.000 1590.000    0.000    0.000    0.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 300.000 | 515.000 | 797.400 | 715.000 | 795.400 | 881.000 | 797.100 | 902.000 | 798.000 | 1126.000 |
| GR | 796.400 | 1366.000 | 797.800 | 1646.000 | 797.000 | 1926.000 | 798.700 | 2166.000 | 798.400 | 2398.000 |
| GR | 796.600 | 2568.000 | 796.700 | 2654.000 | 796.100 | 2659.000 | 794.200 | 2669.000 | 793.400 | 2669.000 |
| GR | 791.900 | 2719.000 | 789.600 | 2746.000 | 790.100 | 2799.000 | 793.600 | 2809.000 | 797.100 | 2819.000 |
| GR | 796.800 | 2922.000 | 797.200 | 3000.000 | 800.300 | 3100.300 | 803.500 | 3182.000 | 0.000 | 0.000 |

CROSS SECTION 104

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 104.000 | 28.000 | 1453.000 | 1561.000 | 1450.000 | 3000.000 | 4025.000 | 0.000 | 0.000 | 0.000 |
| GR | 808.000 | 142.700 | 802.500 | 655.000 | 801.500 | 900.000 | 797.700 | 905.000 | 798.500 | 1174.000 |
| GR | 800.100 | 1334.000 | 800.300 | 1446.000 | 795.300 | 1430.000 | 798.100 | 1486.000 | 791.000 | 1507.000 |
| GR | 793.200 | 1536.000 | 795.000 | 1591.000 | 796.300 | 1596.000 | 797.100 | 1675.000 | 798.100 | 1596.000 |
| GR | 798.900 | 1607.000 | 797.400 | 1720.000 | 797.500 | 1936.000 | 796.600 | 2132.000 | 798.100 | 2280.000 |
| GR | 796.000 | 2464.000 | 798.000 | 2666.000 | 797.300 | 2832.000 | 798.000 | 3070.000 | 801.200 | 3522.000 |
| GR | 801.900 | 3510.000 | 805.800 | 3618.000 | 818.500 | 3660.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 105

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 105.000 | 29.000 | 1137.000 | 1303.000 | 675.000 | 675.000 | 675.000 | 0.000 | 0.000 | 0.000 |
| GR | 816.600 | 0.000 | 807.100 | 118.000 | 809.200 | 144.000 | 803.500 | 306.000 | 802.100 | 496.000 |
| GR | 802.000 | 658.000 | 801.600 | 802.000 | 797.600 | 998.000 | 795.400 | 1127.000 | 798.900 | 1131.000 |
| GR | 795.500 | 1137.000 | 792.500 | 1141.000 | 793.000 | 1191.000 | 793.500 | 1220.000 | 793.000 | 1241.000 |
| GR | 795.000 | 1271.000 | 795.500 | 1303.000 | 800.200 | 1306.000 | 803.600 | 1311.000 | 796.200 | 1512.000 |
| GR | 797.700 | 1734.000 | 797.600 | 1846.000 | 797.000 | 2091.000 | 797.800 | 2220.000 | 797.400 | 2350.000 |
| GR | 799.200 | 2474.000 | 799.300 | 2496.000 | 799.000 | 2548.000 | 810.000 | 2850.000 | 0.000 | 0.000 |

CROSS SECTION 106

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 106.000 | 27.000 | 278.000 | 368.000 | 1435.000 | 1000.000 | 1435.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 812.300 | 100.000 | 812.800 | 228.000 | 811.600 | 250.000 | 812.000 | 263.000 |
| GR | 796.800 | 278.000 | 790.900 | 298.000 | 790.900 | 323.000 | 790.900 | 348.000 | 795.100 | 368.000 |
| GR | 799.600 | 378.000 | 799.200 | 484.000 | 900.000 | 660.000 | 800.400 | 394.000 | 800.700 | 1084.000 |
| GR | 799.800 | 1360.000 | 800.600 | 1608.000 | 800.400 | 1696.000 | 799.900 | 2099.000 | 810.000 | 2100.000 |
| CH | 5.000 | 0.120 | 629.000 | 0.040 | 605.000 | 0.120 | 608.000 | 0.040 | 916.000 | 0.120 |
| NH | 1600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 107

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 107.000 | 27.000 | 678.000 | 916.000 | 553.000 | 600.000 | 1275.000 | 0.300 | 0.300 | 0.000 |
| GR | 820.000 | 0.000 | 813.000 | 90.000 | 815.200 | 130.000 | 808.200 | 164.000 | 810.000 | 296.000 |
| GR | 807.400 | 374.000 | 798.600 | 400.000 | 800.300 | 424.000 | 797.100 | 429.000 | 795.800 | 444.000 |
| GR | 795.300 | 457.000 | 796.200 | 474.000 | 796.300 | 485.000 | 799.300 | 489.000 | 798.700 | 628.000 |
| GR | 798.400 | 764.050 | 802.100 | 803.000 | 797.100 | 808.000 | 788.900 | 833.300 | 794.200 | 862.000 |
| GR | 794.900 | 893.000 | 796.200 | 916.000 | 800.200 | 923.000 | 830.200 | 1172.000 | 799.700 | 1428.000 |
| GR | 793.100 | 1599.000 | 810.200 | 1600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 3790.000 | 5200.000 | 5800.000 | 5800.000 | 7290.000 | 0.000 | 0.000 | 0.000 | 0.000 |

350 FT D/S CUSTER RD.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RT | 708.700 | 10.000 | 85.000 | 236.000 | 700.000 | 1075.000 | 1075.000 | 0.000 | 0.000 | 0.000 |
| GR | 810.000 | 0.000 | 797.500 | 85.000 | 794.400 | 100.000 | 792.800 | 156.000 | 793.100 | 175.000 |
| GR | 794.500 | 205.000 | 798.500 | 219.000 | 798.900 | 236.000 | 800.500 | 268.000 | 810.000 | 350.000 |

D/S CUSTER RD. ACROSS SECTION 108

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 108.000 | 15.000 | 1410.400 | 1577.600 | 350.000 | 350.000 | 350.000 | 0.000 | 0.000 | 0.000 |

FORM 1411-GD PRINTED BY LOTARY SANIFOLD FORMS.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 795.000 | 1443.800 | 795.000 | 1446.700 | 795.400 | 1464.300 | 796.300 | 1481.300 | 796.300 | 1497.400 |
| GR | 794.300 | 1482.900 | 794.300 | 1483.000 | 795.000 | 1502.000 | 797.100 | 1517.300 | 810.700 | 1517.600 |
| BT | 5.000 | 4390.300 | 6000.000 | 6700.000 | 6700.300 | 8420.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE CUSTER RD. CROSS SECTION 108

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 108.900 | 9.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 12.000 | 1410.400 | 810.700 | 0.000 | 1410.500 | 810.700 | 808.700 | 1445.000 | 810.700 | 808.700 |
| BT | 1445.100 | 810.700 | 0.000 | 1446.600 | 810.700 | 0.000 | 1446.700 | 810.700 | 808.700 | 1481.300 |
| BT | 810.700 | 808.700 | 1481.400 | 810.700 | 0.000 | 1482.900 | 810.700 | 0.000 | 1483.000 | 810.700 |
| BT | 808.700 | 1517.500 | 810.700 | 808.700 | 1517.600 | 810.700 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE CUSTER RD. CROSS SECTION 108 & 109

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 109.000 | 15.000 | 1470.400 | 1577.600 | 15.000 | 35.300 | 35.300 | 0.000 | 0.000 | 0.000 |
| BT | 12.000 | 1410.400 | 810.700 | 0.000 | 1410.500 | 810.700 | 808.700 | 1445.000 | 810.700 | 808.700 |
| BT | 1445.100 | 810.700 | 0.000 | 1446.600 | 810.700 | 0.000 | 1446.700 | 810.700 | 808.700 | 1481.300 |
| BT | 810.700 | 808.700 | 1481.400 | 810.700 | 0.000 | 1482.900 | 810.700 | 0.000 | 1483.000 | 810.700 |
| BT | 808.700 | 1517.500 | 810.700 | 808.700 | 1517.600 | 810.700 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 810.700 | 1410.400 | 796.700 | 1410.500 | 794.200 | 1426.000 | 791.600 | 1445.000 | 791.600 | 1465.100 |
| GR | 791.600 | 1446.600 | 791.800 | 1463.700 | 795.100 | 1482.000 | 795.300 | 1501.300 | 796.300 | 1497.400 |
| GR | 796.300 | 1482.900 | 794.300 | 1483.000 | 795.400 | 1502.200 | 796.500 | 1517.500 | 810.700 | 1517.600 |

U/S CUSTER RD. ACROSS SECTION 109

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 109.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

100 FT U/S CUSTER RD.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 109.200 | 9.000 | 1410.500 | 1517.500 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 800.000 | 1310.000 | 796.700 | 1410.500 | 794.200 | 1426.000 | 791.600 | 1445.000 | 790.100 | 1465.000 |
| GR | 794.300 | 1481.000 | 793.400 | 1502.000 | 796.500 | 1517.300 | 808.000 | 1625.000 | 0.000 | 0.000 |
| NC | 0.100 | 0.100 | 0.033 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 110 SURVEY SECTION 4

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 110.000 | 31.000 | 1690.000 | 1937.000 | 650.000 | 650.000 | 650.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1632.000 | 0.000 | 1994.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 613.900 | 666.000 | 809.400 | 702.000 | 805.700 | 712.000 | 803.600 | 620.000 | 803.200 | 966.000 |
| GR | 803.300 | 1078.000 | 801.700 | 1184.000 | 799.200 | 1300.000 | 799.200 | 1442.000 | 801.400 | 1532.000 |
| GR | 802.800 | 1602.000 | 804.000 | 1632.000 | 802.800 | 1666.000 | 801.700 | 1688.000 | 798.400 | 1698.000 |
| GR | 796.900 | 1748.000 | 793.300 | 1804.000 | 793.600 | 1853.000 | 795.000 | 1913.000 | 799.000 | 1937.000 |
| GR | 799.400 | 1944.000 | 801.000 | 1966.000 | 805.700 | 1980.000 | 809.500 | 1994.000 | 809.500 | 2004.000 |
| GR | 804.300 | 2014.000 | 801.100 | 2120.000 | 802.400 | 2420.000 | 802.800 | 2800.000 | 804.100 | 2970.000 |
| GR | 811.600 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.100 | 0.100 | 0.033 | 0.100 | 0.300 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 110.900 | 25.000 | 1120.000 | 1385.000 | 5150.000 | 3750.000 | 3450.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1038.000 | 0.000 | 1406.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 811.800 | 620.000 | 802.800 | 782.000 | 803.200 | 930.000 | 790.600 | 990.000 | 802.800 | 1038.000 |
| GR | 802.600 | 1106.000 | 800.600 | 1113.000 | 799.200 | 1120.000 | 796.300 | 1131.300 | 795.100 | 1198.000 |
| GR | 795.300 | 1253.000 | 795.600 | 1277.000 | 796.100 | 1329.000 | 799.600 | 1385.000 | 802.700 | 1400.000 |
| GR | 803.400 | 1408.000 | 804.600 | 1468.000 | 802.700 | 1562.000 | 803.600 | 1794.000 | 804.400 | 1896.000 |
| GR | 806.700 | 2066.000 | 802.900 | 2248.000 | 802.900 | 2290.000 | 806.200 | 2870.000 | 810.600 | 2998.000 |

TOP OF 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 111.000 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 795.100 | 797.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 795.100 | 0.000 | 1483.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 111.100 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1531.000 | 0.000 | 1482.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 112 SURVEY SECTION 6

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 112.000 | 20.000 | 1230.000 | 1510.000 | 1800.000 | 900.000 | 1400.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1012.000 | 0.000 | 1544.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 822.500 | 1250.000 | 812.500 | 1042.000 | 806.600 | 1114.000 | 806.200 | 1204.000 | 808.200 | 1220.000 |
| GR | 800.100 | 1250.000 | 794.700 | 1240.000 | 795.000 | 1330.000 | 794.700 | 1370.000 | 796.100 | 1445.000 |
| GR | 796.500 | 1460.000 | 800.200 | 1510.000 | 803.100 | 1520.000 | 806.600 | 1532.000 | 850.200 | 1544.000 |
| GR | 805.000 | 1612.000 | 805.300 | 1806.000 | 806.000 | 1912.000 | 808.000 | 2026.000 | 810.400 | 2126.000 |

CROSS SECTION 113 SURVEY SECTION 7

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 113.000 | 23.000 | 1505.000 | 1739.000 | 1700.000 | 1720.000 | 1700.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1466.000 | 0.000 | 1822.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 628.100 | 1152.000 | 819.800 | 1266.000 | 809.900 | 1342.000 | 807.800 | 1430.000 | 811.000 | 1466.000 |
| GR | 802.200 | 1606.000 | 804.900 | 1470.000 | 794.500 | 1505.000 | 795.500 | 1587.000 | 795.200 | 1614.000 |
| GR | 794.500 | 1654.000 | 794.200 | 1685.000 | 795.400 | 1726.000 | 800.300 | 1769.000 | 806.000 | 1789.000 |
| GR | 807.400 | 1810.000 | 808.200 | 1822.000 | 809.000 | 1842.000 | 802.700 | 1966.000 | 802.300 | 2166.000 |
| GR | 802.900 | 2306.000 | 802.100 | 2498.000 | 820.000 | 2500.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 114 SURVEY SECTION 8

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.000 | 25.000 | 1505.300 | 1259.000 | 1400.300 | 1301.000 | 1450.300 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 964.000 | 0.000 | 1338.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.000 | 696.800 | 825.300 | 758.000 | 821.800 | 826.000 | 813.800 | 876.000 | 810.900 | 906.000 |
| GR | 808.500 | 932.000 | 805.800 | 964.000 | 805.600 | 980.000 | 801.900 | 1005.000 | 795.100 | 1027.000 |
| GR | 795.100 | 1356.000 | 796.700 | 1120.000 | 794.700 | 1159.000 | 795.100 | 1205.000 | 796.500 | 1228.000 |
| GR | 800.600 | 1255.000 | 802.600 | 1275.000 | 803.900 | 1296.000 | 811.000 | 1338.000 | 809.400 | 1448.000 |
| GR | 805.600 | 1550.000 | 810.000 | 1636.000 | 811.000 | 1640.000 | 808.100 | 1748.000 | 828.000 | 1748.000 |

CROSS SECTION 115 SURVEY SECTION 9

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.000 | 26.000 | 760.000 | 1016.000 | 1200.000 | 1700.000 | 1500.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 500.000 | 0.000 | 1066.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 817.000 | 172.000 | 812.900 | 206.000 | 812.000 | 238.000 | 812.000 | 500.000 | 802.400 | 501.000 |
| GR | 801.200 | 584.000 | 801.800 | 696.000 | 802.400 | 726.000 | 802.900 | 749.000 | 799.100 | 760.000 |
| GR | 795.600 | 773.000 | 796.200 | 803.000 | 796.700 | 853.000 | 796.400 | 913.000 | 796.800 | 958.000 |
| GR | 800.300 | 1016.000 | 805.700 | 1022.000 | 806.200 | 1044.000 | 812.000 | 1068.000 | 872.000 | 1140.000 |
| GR | 806.400 | 1204.000 | 804.200 | 1438.000 | 806.200 | 1634.000 | 813.700 | 1670.000 | 815.800 | 1716.000 |
| GR | 821.400 | 1772.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

1300 FT D/S BEDFORD RD. SURVEY SECTION 9 REPEATED

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.700 | 0.000 | 0.000 | 0.000 | 1900.000 | 1405.000 | 1600.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 500.000 | 0.000 | 1066.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 0.000 | 0.100 | 0.000 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411-CD PRINTED BY KOSTAL MANIFOLD FORMS

D/S BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.800 | 29.000 | 0.000 | 330.000 | 1300.000 | 1300.000 | 1300.000 | 0.000 | 0.000 | 0.000 |
| GR | 816.000 | 0.000 | 809.000 | 1.000 | 807.000 | 20.000 | 805.600 | 35.000 | 799.000 | 54.000 |
| GR | 797.900 | 65.000 | 797.900 | 65.100 | 797.900 | 66.900 | 797.900 | 67.000 | 796.200 | 99.000 |
| GR | 797.600 | 131.000 | 797.600 | 131.100 | 797.600 | 132.900 | 797.600 | 133.000 | 797.600 | 165.000 |
| GR | 797.200 | 197.000 | 797.200 | 197.100 | 797.200 | 198.900 | 797.200 | 199.000 | 797.400 | 231.000 |
| GR | 797.900 | 263.000 | 797.900 | 263.100 | 797.900 | 264.900 | 797.900 | 265.000 | 799.000 | 231.000 |
| GR | 803.600 | 292.000 | 803.600 | 296.000 | 803.200 | 329.000 | 816.000 | 330.000 | 0.000 | 0.000 |

D/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 20.000 | 0.000 | 816.000 | 0.000 | 1.000 | 816.000 | 811.600 | 65.000 | 816.000 | 811.600 |
| BT | 65.100 | 816.000 | 0.000 | 66.900 | 816.000 | 0.000 | 67.000 | 816.000 | 811.600 | 131.000 |
| BT | 816.000 | 811.600 | 131.100 | 816.000 | 0.000 | 132.900 | 816.000 | 0.000 | 133.000 | 816.000 |
| BT | 811.600 | 197.000 | 816.000 | 811.600 | 197.100 | 816.000 | 0.000 | 199.900 | 816.000 | 0.000 |
| BT | 199.000 | 816.000 | 811.600 | 263.000 | 816.000 | 811.600 | 263.100 | 816.000 | 0.000 | 264.900 |
| BT | 816.000 | 0.000 | 265.000 | 816.000 | 811.600 | 329.000 | 816.000 | 811.600 | 330.000 | 816.000 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 116.000 | 29.000 | 0.000 | 330.000 | 64.000 | 64.000 | 64.000 | 0.000 | 0.000 | 0.000 |
| BT | 20.000 | 0.000 | 816.000 | 0.000 | 1.000 | 816.000 | 811.600 | 65.000 | 816.000 | 811.600 |
| BT | 65.100 | 816.000 | 0.000 | 66.900 | 816.000 | 0.000 | 67.000 | 816.000 | 811.600 | 131.000 |
| BT | 816.000 | 811.600 | 131.100 | 816.000 | 0.000 | 132.900 | 816.000 | 0.000 | 133.000 | 816.000 |
| BT | 811.600 | 197.000 | 816.000 | 811.600 | 197.100 | 816.000 | 0.000 | 199.900 | 816.000 | 0.000 |
| BT | 199.000 | 816.000 | 811.600 | 263.000 | 816.000 | 811.600 | 263.100 | 816.000 | 0.000 | 264.900 |
| BT | 816.000 | 0.000 | 265.000 | 816.000 | 811.600 | 329.000 | 816.000 | 811.600 | 330.000 | 816.000 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 816.000 | 0.000 | 810.000 | 1.000 | 807.200 | 20.000 | 805.700 | 35.000 | 799.100 | 54.000 |
| GR | 797.200 | 65.000 | 797.200 | 65.100 | 797.200 | 66.900 | 797.200 | 67.000 | 796.700 | 99.000 |
| GR | 796.200 | 131.000 | 796.200 | 131.100 | 796.200 | 132.900 | 796.200 | 133.000 | 797.400 | 165.000 |
| GR | 796.700 | 197.000 | 796.700 | 197.100 | 796.700 | 198.900 | 796.700 | 199.000 | 797.100 | 231.000 |
| GR | 796.000 | 263.000 | 796.000 | 263.100 | 796.000 | 264.900 | 796.000 | 265.000 | 797.000 | 231.000 |
| GR | 803.200 | 292.000 | 803.600 | 296.000 | 808.200 | 329.000 | 816.000 | 330.000 | 0.000 | 0.000 |

U/S BEDFORD Rd. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 116.700 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

350 FT U/S BEDFORD RD.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 110.200 | 10.000 | 330.000 | 576.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 815.400 | 0.000 | 817.500 | 122.000 | 813.100 | 160.000 | 813.800 | 270.000 | 807.200 | 296.000 |
| GR | 805.300 | 317.000 | 799.000 | 330.000 | 796.900 | 368.000 | 797.100 | 413.000 | 798.400 | 453.000 |
| GR | 797.400 | 493.000 | 797.600 | 533.000 | 801.100 | 576.000 | 804.400 | 583.000 | 806.200 | 648.000 |
| GR | 813.000 | 690.000 | 814.200 | 704.000 | 814.800 | 818.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| XC | 0.080 | 0.100 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 117 SURVEY SECTION 12

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 117.000 | 22.000 | 1075.000 | 1325.000 | 2050.000 | 2100.000 | 2050.000 | 0.000 | 0.000 | 0.000 |
| XS | 0.000 | 0.000 | 0.000 | 875.000 | 0.000 | 1420.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.400 | 762.300 | 820.401 | 762.000 | 809.600 | 762.000 | 810.700 | 878.000 | 810.100 | 940.000 |
| GR | 813.400 | 986.000 | 806.000 | 1046.000 | 801.800 | 1086.000 | 799.100 | 1075.000 | 797.400 | 1120.000 |
| GR | 797.200 | 1145.000 | 796.700 | 1200.000 | 797.200 | 1255.000 | 797.300 | 1205.000 | 798.200 | 1330.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 505.600 | 1654.100 | 820.100 | 1655.000 | 0.100 | 0.100 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.100 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE 20 YR STREET SURVEY SECTION 15

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.900 | 6.000 | 9.000 | 918.000 | 1310.000 | 1300.000 | 1300.300 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 814.200 | 814.200 | 0.000 |
| GR | 816.100 | 0.000 | 812.300 | 9.000 | 798.600 | 47.900 | 798.600 | 297.000 | 811.700 | 318.000 |
| GR | 816.700 | 326.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 1.050 | 1.500 | 3.000 | 0.500 | 260.000 | 10.000 | 4590.000 | 2.200 | 790.300 | 769.800 |

D/S FACE 20 YR STREET SURVEY SECTION 13

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.300 | 0.000 | 0.000 | 0.000 | 40.000 | 40.000 | 40.000 | 0.000 | -0.300 | 0.000 |
| X2 | 0.000 | 0.000 | 1.300 | 814.200 | 196.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.300 | 0.000 | 0.300 | 0.000 | 0.000 | 814.200 | 814.200 | 0.000 |

400 FT D/S 20 TH STREET SURVEY SECTION 14

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 118.700 | 19.000 | 657.000 | 878.000 | 500.000 | 500.000 | 420.200 | 0.000 | 0.000 | 0.000 |
| GR | 612.300 | 212.000 | 811.200 | 364.000 | 811.200 | 364.000 | 812.200 | 626.300 | 679.500 | 635.200 |
| GR | 830.200 | 657.000 | 798.400 | 706.000 | 787.720 | 747.000 | 797.300 | 758.300 | 797.900 | 795.900 |
| GR | 797.700 | 840.000 | 799.900 | 878.000 | 811.500 | 852.000 | 804.700 | 590.000 | 809.400 | 920.000 |
| GR | 810.700 | 936.000 | 815.800 | 948.000 | 816.000 | 1018.000 | 816.200 | 1044.000 | 0.000 | 0.000 |

CROSS SECTION 119 SURVEY SECTION 15

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 119.000 | 19.000 | 645.000 | 879.000 | 500.000 | 500.000 | 500.000 | 0.000 | 0.000 | 0.000 |
| GR | 813.000 | 0.000 | 810.200 | 350.000 | 810.200 | 410.000 | 809.600 | 494.000 | 812.100 | 504.000 |
| GR | 812.900 | 538.000 | 812.100 | 578.000 | 809.700 | 613.000 | 802.600 | 635.000 | 799.700 | 645.000 |
| GR | 797.100 | 682.000 | 797.900 | 792.300 | 797.600 | 782.300 | 797.500 | 827.000 | 798.500 | 842.000 |
| GR | 801.200 | 879.100 | 807.100 | 920.000 | 812.000 | 954.000 | 815.200 | 912.000 | 0.000 | 0.000 |
| NC | 0.500 | 0.080 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 120 SURVEY SECTION 16

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.000 | 13.000 | 661.000 | 901.000 | 1050.000 | 850.000 | 850.300 | 0.000 | 0.000 | 0.000 |
| GR | 812.000 | 594.000 | 808.400 | 608.000 | 807.900 | 636.000 | 802.600 | 651.000 | 800.000 | 661.000 |
| GR | 798.600 | 701.000 | 798.400 | 731.000 | 798.200 | 791.000 | 797.700 | 846.000 | 800.500 | 901.000 |
| GR | 805.600 | 937.000 | 812.900 | 954.000 | 813.200 | 1004.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 121 SURVEY SECTION 17

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.000 | 22.000 | 819.000 | 1039.000 | 2650.000 | 2650.000 | 2650.000 | 0.000 | 0.000 | 0.000 |
| GR | 815.000 | 316.000 | 813.000 | 362.000 | 812.300 | 424.000 | 812.200 | 616.000 | 812.200 | 748.000 |
| GR | 810.300 | 792.000 | 802.500 | 807.000 | 801.400 | 812.000 | 806.100 | 819.000 | 798.600 | 879.000 |
| GR | 797.400 | 919.000 | 796.000 | 949.000 | 797.400 | 1039.500 | 800.200 | 1039.000 | 802.600 | 1049.000 |
| GR | 806.500 | 1065.000 | 812.200 | 1094.000 | 813.200 | 1104.300 | 813.000 | 1214.000 | 815.000 | 1230.000 |
| GR | 817.300 | 1244.000 | 822.200 | 1250.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.000 | 0.035 | 0.300 | 0.500 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.800 | 14.000 | 0.000 | 174.000 | 700.000 | 700.000 | 700.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 5.000 | 811.100 | 55.000 | 804.400 | 82.000 | 800.200 | 45.000 | 798.300 | 78.000 |
| GR | 800.400 | 78.100 | 800.400 | 85.000 | 800.000 | 85.000 | 800.000 | 0.000 | 0.000 | 0.000 |

FORM 1411-98 PRINTED BY ROTARY MANIFOLD FORMS
PRINTED IN U.S.A.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 820.000 | 174.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 0.000 | 0.000 | 820.000 | 0.000 | 1.000 | 820.000 | 814.500 | 85.000 | 820.000 | 814.500 |
| BT | 85.100 | 820.000 | 0.000 | 88.900 | 820.000 | 0.000 | 89.000 | 820.000 | 814.500 | 173.000 |
| BT | 820.000 | 815.500 | 174.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.000 | 16.000 | 0.000 | 174.000 | 58.000 | 59.000 | 58.000 | 0.000 | 0.000 | 0.000 |
| BT | 0.000 | 0.000 | 820.000 | 0.000 | 1.000 | 820.000 | 814.500 | 85.000 | 820.000 | 814.500 |
| BT | 85.100 | 820.000 | 0.000 | 88.900 | 820.000 | 0.000 | 89.000 | 820.000 | 814.500 | 173.000 |
| BT | 820.000 | 815.500 | 174.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 811.100 | 1.000 | 801.000 | 22.300 | 799.900 | 44.300 | 798.700 | 78.700 |
| GR | 800.400 | 75.100 | 800.900 | 35.000 | 800.900 | 15.100 | 801.300 | 38.900 | 801.300 | 89.000 |
| GR | 801.300 | 96.900 | 799.900 | 97.000 | 799.900 | 130.000 | 801.700 | 149.000 | 801.900 | 173.000 |
| GR | 820.000 | 174.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

200 FT U/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.200 | 13.000 | 704.000 | 854.300 | 200.000 | 200.000 | 220.000 | 0.000 | 0.000 | 0.000 |
| GR | 816.200 | 552.000 | 816.000 | 640.000 | 816.600 | 676.000 | 809.000 | 690.000 | 801.600 | 704.000 |
| GR | 795.200 | 729.000 | 797.800 | 779.000 | 798.400 | 814.000 | 801.300 | 854.000 | 815.200 | 892.000 |
| GR | 819.200 | 906.000 | 819.500 | 986.000 | 820.200 | 1006.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| CC | 0.080 | 0.080 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.100 | 0.000 | 0.000 | 0.000 | 535.000 | 916.000 |

700 FT D/S KENDALL ST. SURVEY SECTION 20

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 123.000 | 11.000 | 693.000 | 845.000 | 1100.000 | 1100.000 | 1100.000 | 0.000 | 0.000 | 0.000 |
| GR | 814.100 | 584.000 | 815.600 | 664.000 | 814.000 | 680.000 | 801.700 | 693.000 | 797.600 | 723.000 |
| GR | 799.200 | 760.000 | 801.400 | 819.000 | 802.200 | 843.000 | 815.000 | 877.000 | 815.200 | 904.000 |
| GR | 818.100 | 918.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.080 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 123.800 | 12.300 | 1.000 | 174.000 | 700.000 | 700.000 | 700.000 | 0.000 | 0.000 | 0.000 |
| GR | 821.000 | 1.000 | 811.200 | 2.000 | 801.600 | 20.000 | 800.300 | 44.000 | 800.400 | 85.000 |
| GR | 800.400 | 85.100 | 800.400 | 88.900 | 800.400 | 89.000 | 801.400 | 130.000 | 802.500 | 153.000 |
| GR | 811.400 | 173.000 | 821.000 | 174.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 123.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 0.000 | 1.000 | 821.000 | 0.100 | 2.000 | 821.000 | 817.700 | 85.000 | 821.000 | 817.700 |
| BT | 85.100 | 821.000 | 3.000 | 88.900 | 821.000 | 0.000 | 89.000 | 824.000 | 817.700 | 173.000 |
| BT | 821.000 | 817.700 | 174.000 | 821.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 541-PRINTED BY KEUFFEL MANIFOLD FORMS

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 124.000 | 12.000 | 1.000 | 174.000 | 58.000 | 58.000 | 58.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 1.000 | 821.000 | 0.000 | 2.000 | 821.000 | 817.700 | 85.000 | 821.000 | 817.700 |
| BT | 85.100 | 821.000 | 0.000 | 88.900 | 821.000 | 1.000 | 89.000 | 821.000 | 817.700 | 173.000 |
| BT | 821.000 | 817.700 | 173.000 | 821.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| CR | 821.000 | 1.000 | 812.300 | 2.000 | 802.300 | 20.000 | 801.900 | 64.000 | 802.200 | 53.000 |
| GR | 802.200 | 35.100 | 802.300 | 86.900 | 802.300 | 59.000 | 802.300 | 130.000 | 802.800 | 153.000 |
| GR | 812.200 | 173.000 | 821.000 | 174.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 124.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| XJ | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 821.000 | 821.000 | 0.000 |
| QT | 5.000 | 4270.000 | 5920.000 | 6650.000 | 6650.000 | 8420.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

200 FT U/S KENDALL ST. SURVEY SECTION 21

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 124.200 | 9.000 | 815.000 | 945.000 | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| GR | 818.100 | 772.000 | 801.400 | 815.000 | 802.800 | 845.000 | 802.000 | 865.000 | 802.000 | 915.000 |
| GR | 802.200 | 945.000 | 815.600 | 979.000 | 816.900 | 990.000 | 824.800 | 1014.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 125 SURVEY SECTION 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 125.000 | 16.000 | 801.000 | 955.000 | 1000.000 | 1000.000 | 1000.000 | 0.000 | 0.000 | 0.000 |
| CR | 817.500 | 726.000 | 816.300 | 730.000 | 815.800 | 771.300 | 804.000 | 801.000 | 803.900 | 815.000 |
| GR | 804.000 | 830.000 | 803.800 | 851.000 | 802.200 | 893.000 | 802.800 | 910.000 | 804.700 | 934.000 |
| GR | 803.300 | 944.000 | 803.700 | 955.000 | 815.100 | 986.300 | 816.900 | 994.000 | 818.600 | 1104.000 |
| GR | 823.200 | 1208.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1311-GR-PRINTED BY ROTARY HANDFOLD FORMS.

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR - 01
  MODIFICATION - 50,51,52
**********************************************************

T1BEDFORD TOWNSHIP AND CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2KALAMAZOO RIVER FROM KALAMAZOO/CALHOUN COUNTY BOUNDARY TO BATTLE CREEK RIVER
T3      KALAMAZOO RIVER

J1  ICHECK      INQ         NINV        IDIR        STRT        METRIC      HVINS       G           WSEL        FQ
          0.          3.          0.          1.  0.070821        0.00        0.0         0.     793.550       0.000

J2  NPROF       IPLOT       PRINTS      XSECV       XSECH       FN          ALLDC       IBW         CHNIM       ITRACE
        2.000       0.000      -1.000       0.000       0.000       0.000       0.000       0.000       0.000       0.000
```

PRINTED IN U.S.A.
FORM HEC-GD-PRINTED BY ISOTAPE MANIFOLD FORMS

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP AND CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2KALAMAZOO RIVER FROM KALAMAZOO/CALHOUN COUNTY BOUNDARY TO BATTLE CREEK RIVER
T3       KALAMAZOO RIVER

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        4.        0.        0.  0.000225      0.00       0.0        0.   798.630     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
*****************************************************
  HEC2 RELEASE DATED NOV 75 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP AND CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2KALAMAZOO RIVER FROM KALAMAZOO/CALHOUN COUNTY BOUNDARY TO BATTLE CREEK RIVER
T3      KALAMAZOO RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        5.        0.        0.  0.000000      0.00       0.0        0.   798.850     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHRIM     ITRACE

     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

*PROF 2

```
CCHV=   0.100 CEHV=   0.300
*SECNO 102.000
 2400 NAT Q1=   4497.65  WSEL=    798.85  ENC Q1=   4497.65  WSEL=    798.95  RATIO=  0.0000
 NAT Q1=   4675.  RATIOS LOB,CH,ROB=  0.3303  0.4999  0.1698  WSEL=    798.95
   SECNO      DEPTH     CWSEL     CRIWS     WSELK      EG         HV         HL        QLOSS     BANK ELEV
   Q          QLOB      QCH       QROB      ALOB       ACH        AROB       VOL       TWA    LEFT/RIGHT
   TIME       VLOB      VCH       VROB      XTL        XNCH       XNB        PTN       EL TP      SSTA
   SLOPE      XLOBL     XLCH      XLOBR     ITRIAL     IH2        ISORT      CORAN     TOPWID     ENDST

3470 ENCROACHMENT STATIONS=     666.2     3705.7  TYPE=     4  TARGET=       0.038

        CROSS SECTION 102A

   102.00      9.05    798.85      0.00    798.85    796.39      0.34      0.03      0.00    794.30
   6700.      2151.     3530.     1011.     4775.     1597.     3109.        0.        0.    793.70
     0.00      0.45      2.21      0.33     3.120     0.040     0.120     0.000    789.00    666.20
 0.000240     4100.     3575.      430.         0         0         0      0.00   3039.49   3705.68

*SECNO 102.500
 2800 NAT Q1=   3936.75  WSEL=    799.36  ENC Q1=   3934.75  WSEL=    799.46  RATIO=  0.0050
 NAT Q1=   4101.  RATIOS LOB,CH,ROB=  0.4435  0.5339  0.0176  WSEL=    799.46

3470 ENCROACHMENT STATIONS=     663.8     3902.0  TYPE=     4  TARGET=       0.040

        CROSS SECTION 102C

   102.50      9.91    799.41      0.00    799.36    799.46      0.05      0.57      0.00    792.40
   6700.      2972.     3728.        0.     7017.     1520.        0.      291.       36.    792.70
     0.38      0.42      2.44      0.00     3.120     0.040     0.120     0.056    789.50    803.78
 0.000310     1050.     8950.     1200.         2         0         0      0.00   3098.22   3902.00

*SECNO 103.000
 2800 NAT Q1=   3122.59  WSEL=    799.73  ENC Q1=   3122.59  WSEL=    799.83  RATIO=  0.0300
 NAT Q1=   3245.  RATIOS LOB,CH,ROB=  0.3771  0.5665  0.0563  WSEL=    799.83

3470 ENCROACHMENT STATIONS=     757.3     2967.3  TYPE=     4  TARGET=       0.038

        CROSS SECTION 103.

   103.00     10.19    799.79      3.00    799.73    799.90      0.10      0.42      0.02    794.20
   6700.      2472.     3969.      259.     4697.     1186.      469.      401.      116.    793.60
     0.52      0.53      3.35      0.55     0.120     0.040     0.120     0.057    789.60    757.31
 0.000473      400.     1590.     1300.         2         0         0      0.00   2210.00   2967.30

*SECNO 104.000
 2800 NAT Q1=   3492.45  WSEL=    801.06  ENC Q1=   3492.45  WSEL=    801.16  RATIO=  0.0000
 NAT Q1=   3623.  RATIOS LOB,CH,ROB=  0.0783  0.4244  0.4973  WSEL=    801.16

3470 ENCROACHMENT STATIONS=     973.7     3079.3  TYPE=     4  TARGET=       0.036

        CROSS SECTION 104

   104.00      5.08    801.16      0.00    801.06    801.22      0.07      1.33      0.00    795.80
   6700.       418.     2951.     3331.     1004.      967.     5741.      8"4       "?     794.00
```

```
0.000369    1400.    4025.    3300.        2        0        0      0.00  2505.59  5079.29


*SECNO 105.000
 2800 NAT Q1=   3264.46  WSEL=    801.32  ENC Q1=   3264.46  WSEL=    801.42  RATIO=  0.0000
 NAT Q1=   3383.  RATIOS LOB,CH,ROB=  0.3528  0.3519  0.3953  WSEL=    801.42
   SECNO     DEPTH     CWSEL     CRIWS     WSELX     EG        HV        FL        BLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST


3470 ENCROACHMENT STATIONS=     979.2    2729.5  TYPE=     4  TARGET=      0.035

        CROSS SECTION 105

   105.00      8.41   801.41      0.00   801.32   801.50      0.36      0.27      0.00   795.50
    6700.      273.    3835.     2622.     466.    1285.     4571.     915.      254.    796.50
     1.14      0.52     2.98      0.57    0.120    0.040     0.120     0.052   793.00   979.17
 0.000423      675.     675.      675.        0        0         0      0.00  1750.32  2729.49


*SECNO 106.000
 2800 NAT Q1=   2091.32  WSEL=    801.95  ENC Q1=   2091.32  WSEL=    802.05  RATIO=  0.0000
 NAT Q1=   2170.  RATIOS LOB,CH,ROB=  0.0012  0.7113  0.2876  WSEL=    802.05

3470 ENCROACHMENT STATIONS=     278.0    1886.2  TYPE=     4  TARGET=      0.036

        CROSS SECTION 106

   106.00     11.16   802.06      0.00   801.95   802.39      0.33      0.82      0.07   796.80
    6700.        0.    4879.     1821.       0.     904.     2376.     1044.      294.    795.10
     1.23      0.00     5.40      0.63    0.120    0.040     0.120     0.051   790.90   278.00
 0.001072     1435.    1435.     1000.        2        0         0      0.00  1608.20  1886.20


1490 NH CARD USED
*SECNO 107.000
 2800 NAT Q1=   3131.93  WSEL=    802.87  ENC Q1=   3131.93  WSEL=    802.97  RATIO=  0.0000
 NAT Q1=   3224.  RATIOS LOB,CH,ROB=  0.3020  0.5124  0.1859  WSEL=    802.97

3470 ENCROACHMENT STATIONS=     427.2    1573.2  TYPE=     4  TARGET=      0.029

        CROSS SECTION 107

   107.00     14.08   802.98      0.00   802.87   803.09      0.14      0.67      0.02   797.10
    6700.     2003.    3516.     1181.    1702.    1014.     2078.     1117.      315.    796.20
     1.36      1.13     3.47      0.57    0.075    0.040     0.120     0.051   788.90   427.23
 0.000450      550.    1275.      600.        2        0         0      0.00  1145.93  1573.16


CCRV=   0.300 CERV=   0.500
*SECNO 108.700
 2800 NAT Q1=   2133.22  WSEL=    803.36  ENC Q1=   2133.22  WSEL=    803.46  RATIO=  0.0000
 NAT Q1=   2177.  RATIOS LOB,CH,ROB=  0.0141  0.9666  0.0193  WSEL=    803.46

3470 ENCROACHMENT STATIONS=      80.0     253.7  TYPE=     4  TARGET=      0.020

        350 FT D/S CUSTER RD.

   108.70     10.66   803.46      0.00   803.36   803.75      0.28      0.57      0.09   797.50
    5800.      118.    5726.       56.      28.    1333.       73.    1186.      329.    798.90
```

0.000758 760. 7075. 1.75. 2 3 4 0.00 175.71 255.75

*SECNO 108.300
2900 NAT Q1= 1599.33 WSEL= 803.59 ENC Q1= 1625.17 WSEL= 803.69 RATIO= -0.0102
NAT Q1= 1626. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 801.69

3470 ENCROACHMENT STATIONS= 1410.4 1517.6 TYPE= 4 TARGET= 0.000

D/S CUSTER RD. ACROSS SECTION 108

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 108.00 | 10.70 | 803.70 | 0.00 | 803.69 | 804.18 | 0.48 | 0.35 | 0.10 | 810.70 |
| 5580. | 0. | 5800. | 0. | 0. | 1345. | 0. | 1196. | 330. | 810.70 |
| 1.44 | 0.00 | 5.35 | 0.00 | 0.120 | 0.040 | 0.120 | 0.050 | 793.00 | 1410.45 |
| 0.001267 | 350. | 350. | 350. | 2 | 0 | 0 | 0.00 | 107.10 | 1517.55 |

*SECNO 108.900
2300 NAT Q1= 1491.35 WSEL= 803.46 ENC Q1= 1516.32 WSEL= 803.53 RATIO= -0.0164
NAT Q1= 1516. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 803.56

| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | HL | DLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| S | QLOB | QCH | ZRO3 | ALOD | ACH | AROB | VOL | TUA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XSL | XNCH | XNR | LTN | RLPIV | SSTA |
| SLOPE | XLOL | XLCH | XLOBR | ITRIAL | IP2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 810.70 MAX ELLC= 808.70

3470 ENCROACHMENT STATIONS= 1410.4 1517.6 TYPE= 4 TARGET= 0.000

D/S FACE CUSTER RD. CROSS SECTION 108

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 108.90 | 13.59 | 803.59 | 0.00 | 803.48 | 804.29 | 0.69 | 0.00 | 0.11 | 810.70 |
| 6700. | 0. | 6700. | 0. | 0. | 1002. | 0. | 1196. | 330. | 810.70 |
| 1.44 | 0.00 | 6.69 | 0.00 | 0.120 | 0.040 | 0.120 | 0.050 | 793.00 | 1410.45 |
| 0.001942 | 1. | 1. | 1. | 2 | 0 | 0 | -31.81 | 107.10 | 1517.55 |

*SECNO 109.000
2600 NAT Q1= 1707.11 WSEL= 803.68 ENC Q1= 1732.71 WSEL= 803.78 RATIO= -0.0150
NAT Q1= 1733. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 803.78

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 810.70 MAX ELLC= 808.70

3470 ENCROACHMENT STATIONS= 1410.4 1517.6 TYPE= 4 TARGET= 0.000

D/S FACE CUSTER RD. CROSS SECTION 108 & 109

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 109.00 | 13.69 | 803.79 | 0.00 | 803.68 | 804.38 | 0.59 | 0.06 | 0.03 | 810.70 |
| 6700. | 0. | 6700. | 0. | 0. | 1089. | 0. | 1197. | 331. | 810.70 |
| 1.44 | 0.00 | 6.15 | 0.00 | 0.120 | 0.040 | 0.120 | 0.050 | 790.10 | 1410.45 |
| 0.001492 | 35. | 35. | 35. | 2 | 0 | 0 | -34.69 | 107.10 | 1517.55 |

*SECNO 109.100
2600 NAT Q1= 1814.07 WSEL= 803.74 ENC Q1= 1841.07 WSEL= 803.84 RATIO= -0.0149
NAT Q1= 1841. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 803.84

3470 ENCROACHMENT STATIONS= 1410.4 1517.6 TYPE= 4 TARGET= 0.000

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 109.10 | 13.75 | 803.85 | 0.00 | 803.74 | 804.39 | 0.55 | 0.00 | 0.01 | 810.70 | |
| 6700. | 0. | 6700. | 0. | 0. | 1130. | 0. | 1197. | 331. | 810.70 | |
| 1.44 | 0.00 | 5.93 | 0.00 | 0.120 | 0.040 | 0.120 | 0.050 | 790.10 | 1410.45 | |
| 0.001322 | 1. | 1. | 1. | 2 | | 0 | 0.00 | 107.00 | 1517.55 | |

*SECNO 109.200
2300 NAT Q1= 2219.07 WSEL= 804.02 ENC Q1= 2219.07 WSEL= 804.12 RATIO= 0.0000
NAT Q1= 2257. RATIOS LOB,CH,ROB= 0.0353 0.9285 0.0362 LSEL= 804.12

3470 ENCROACHMENT STATIONS= 1502.6 1544.3 TYPE= 4 TARGET= 0.517

100 FT U/S CUSTER RD.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 109.20 | 13.99 | 804.09 | 0.00 | 804.02 | 804.53 | 0.44 | 0.11 | 0.03 | 796.71 |
| 6700. | 100. | 6333. | 196. | 962. | 1157. | 165. | 1201. | 331. | 796.50 |
| 1.65 | 1.12 | 5.47 | 1.13 | 0.100 | 0.040 | 0.120 | 0.050 | 791.10 | 1503.65 |
| 0.000922 | 100. | 100. | 100. | 2 | 1 | 0 | 0.00 | 103.65 | 1544.20 |

CCHV= 0.100 CEHV= 0.300
*SECNO 110.000

3470 ENCROACHMENT STATIONS= 1632.0 1594.0 TYPE= 1 TARGET= 302.000

CROSS SECTION 110 SURVEY SECTION 4

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 110.00 | 11.39 | 804.69 | 0.00 | 804.61 | 804.31 | 0.12 | 0.25 | 0.03 | 796.60 |
| 6700. | 58. | 6553. | 89. | 144. | 2.54. | 151. | 1231. | 355. | 799.30 |
| 1.51 | 0.40 | 2.70 | 0.56 | 0.100 | 0.735 | 0.120 | 0.049 | 793.30 | 1632.00 |
| 0.000204 | 650. | 650. | 650. | 2 | 0 | 0 | 0.00 | 345.00 | 1977.00 |

CCHV= 0.100 CEHV= 0.300
*SECNO 110.900

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1038.0 1488.0 TYPE= 1 TARGET= 450.000

D/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 110.90 | 10.32 | 805.42 | 0.00 | 805.36 | 805.53 | 0.11 | 5.72 | 0.00 | 799.20 |
| 6700. | 314. | 6512. | 74. | 248. | 2411. | 195. | 1449. | 366. | 799.60 |
| 1.88 | 0.46 | 2.70 | 0.38 | 0.100 | 0.535 | 0.100 | 0.046 | 795.10 | 1036.00 |
| 0.000213 | 3150. | 3450. | 3750. | 2 | 0 | 0 | 0.00 | 450.00 | 1488.00 |

*SECNO 111.000

3370 NORMAL BRIDGE,NRD= 0 *IN ELTRD= 797.30 MAX.ELLC= 795.10

3470 ENCROACHMENT STATIONS= 1038.0 1486.0 TYPE= 1 TARGET= 450.000

TOP OF 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 111.00 | 10.29 | 805.39 | 0.00 | 805.33 | 805.54 | 0.15 | 5.00 | 0.01 | 799.20 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.68 | 0.59 | 5.15 | 0.49 | 0.100 | 0.055 | 0.100 | 0.046 | 795.10 | 1038.00 |
| 0.000360 | 2. | 2. | 2. | 2 | 0 | 0 | -356.59 | 450.00 | 1480.00 |

*SEC 0 111.100

3470 ENCROACHMENT STATIONS= 1038.0 1480.0 TYPE= 1 TARGET= 450.000

U/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 111.10 | 10.34 | 803.44 | 0.00 | 805.39 | 805.53 | 0.11 | 0.06 | 0.00 | 799.20 |
| 6700. | 115. | 6610. | 75. | 250. | 2617. | 196. | 1449. | 366. | 799.60 |
| 1.08 | 0.46 | 2.69 | 0.36 | 0.100 | 0.035 | 0.100 | 0.046 | 795.10 | 1046.02 |
| 0.000211 | 2. | 2. | 2. | 2 | 0 | 0 | 0.00 | 450.00 | 1458.02 |

*SECNO 112.000

3470 ENCROACHMENT STATIONS= 1092.0 1546.0 TYPE= 1 TARGET= 452.000

CROSS SECTION 112 SURVEY SECTION 6

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 112.00 | 11.60 | 805.72 | 0.00 | 805.54 | 805.78 | 0.00 | 0.23 | 0.00 | 800.70 |
| 6700. | 21. | 6680. | 20. | 57. | 2563. | 32. | 1543. | 372. | 800.20 |
| 2.04 | 0.36 | 2.33 | 0.36 | 0.100 | 0.035 | 0.100 | 0.045 | 796.10 | 1206.66 |
| 0.000136 | 1400. | 1400. | 900. | 2 | 0 | 0 | 0.00 | 322.25 | 1520.92 |

*SECNO 113.000

3470 ENCROACHMENT STATIONS= 1466.0 1822.0 TYPE= 1 TARGET= 356.000

CROSS SECTION 113 SURVEY SECTION 7

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 113.00 | 11.74 | 805.94 | 0.00 | 805.89 | 806.04 | 0.10 | 0.25 | 0.00 | 799.50 |
| 6700. | 49. | 6615. | 37. | 102. | 2645. | 38. | 1656. | 391. | 800.30 |
| 2.24 | 0.40 | 2.50 | 0.42 | 0.100 | 0.035 | 0.100 | 0.044 | 796.20 | 1477.49 |
| 0.000161 | 1700. | 1700. | 1700. | 2 | 0 | 0 | 0.00 | 325.51 | 1801.00 |

*SECNO 114.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CUSEL | CRIWS | WSELK | EG | HV | HL | CLOSS | BANK ELEV |
| 0 | ELOB | ECH | OROB | ALOB | ZCH | AROB | VOL | TOA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | CTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 964.0 1338.0 TYPE= 1 TARGET= 374.000

CROSS SECTION 114 SURVEY SECTION 8

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 114.00 | 11.48 | 806.18 | 0.00 | 806.43 | 805.29 | 0.11 | 0.24 | 0.00 | 804.90 |
| 6700. | 23. | 6599. | 78. | 68. | 3514. | 169. | 1750. | 402. | 800.60 |
| 2.39 | 0.33 | 2.63 | 0.46 | 0.100 | 0.035 | 0.100 | 0.043 | 796.70 | 964.00 |
| 0.000177 | 1400. | 1450. | 1500. | 2 | 0 | 0 | 0.00 | 345.49 | 1309.49 |

*SECNO 115.000

3470 ENCROACHMENT STATIONS= 590.0 1065.0 TYPE= 1 TARGET= 586.000

CROSS SECTION 115 SURVEY SECTION 9

FORM 1411-UDSPRINTED BY ROYLEY MANIFOLD FORMS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.00 | 10.36 | 806.46 | 0.00 | 806.42 | 806.50 | 0.08 | 0.26 | 0.00 | 799.10 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6700. | 663. | 5997. | 40. | 1223. | 2433. | 98. | 1856. | 417. | 800.30 |
| 2.57 | 0.54 | 2.47 | 0.41 | 0.100 | 0.035 | 0.100 | 0.043 | 795.60 | 800.53 |
| 0.000168 | 1200. | 1500. | 1700. | 2 | 0 | 0 | 0.00 | 549.80 | 1050.37 |

*SECNO 115.700

3470 ENCROACHMENT STATIONS= 500.0 1066.0 TYPE= 1 TARGET= 566.000

1300 FT D/S BEDFORD RD. SURVEY SECTION 9 REPEATED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.70 | 11.22 | 806.72 | 0.00 | 806.68 | 806.80 | 0.08 | 0.26 | 0.00 | 799.10 |
| 6700. | 690. | 5966. | 43. | 1293. | 2502. | 107. | 2004. | 438. | 800.30 |
| 2.76 | 0.53 | 2.38 | 0.40 | 0.100 | 0.035 | 0.100 | 0.042 | 795.60 | 800.55 |
| 0.000151 | 1800. | 1600. | 1400. | 1 | 0 | 0 | 0.00 | 550.59 | 1051.14 |

CLRV= 0.300 CEHV= 0.500

*SECNO 115.800

2800 NAT Q1= 3952.11 WSEL= 806.63 ENC Q1= 4020.55 WSEL= 807.03 RATIO= -0.0173

NAT Q1= 4021. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 807.03

D/S BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.80 | 10.76 | 806.96 | 0.00 | 806.93 | 807.09 | 0.12 | 0.26 | 0.02 | 816.00 |
| 6700. | 0. | 6700. | 0. | 0. | 2372. | 0. | 2097. | 451. | 816.00 |
| 2.91 | 0.00 | 2.82 | 0.00 | 0.100 | 0.035 | 0.100 | 0.042 | 796.20 | 20.38 |
| 0.000286 | 1500. | 1500. | 1500. | 2 | 0 | 0 | 0.00 | 799.76 | 320.14 |

*SECNO 115.900

2800 NAT Q1= 3757.50 WSEL= 806.92 ENC Q1= 3820.35 WSEL= 807.02 RATIO= -0.0167

NAT Q1= 3820. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 807.02

3370 NORMAL BRIDGE,XRD= 20 MIN ELTRD= 816.10 MAX ELLC= 811.60

D/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.90 | 10.76 | 806.96 | 0.00 | 806.92 | 807.09 | 0.13 | 0.00 | 0.20 | 816.00 |
| 6700. | 0. | 6700. | 0. | 0. | 2301. | 0. | 2097. | 451. | 816.00 |
| 2.91 | 0.00 | 2.91 | 0.00 | 0.100 | 0.035 | 0.100 | 0.042 | 796.20 | 20.38 |
| 0.000314 | 1. | 1. | 1. | 0 | 0 | 0 | -70.79 | 299.76 | 320.14 |

*SECNO 116.000

2800 NAT Q1= 4204.10 WSEL= 806.96 ENC Q1= 4271.45 WSEL= 807.06 RATIO= -0.0160

NAT Q1= 4271. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 807.06

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | IL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IM2 | ICONT | CONAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,XRD= 20 MIN ELTRD= 816.00 MAX ELLC= 811.60

U/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.00 | 11.00 | 807.0. | 0.00 | 806.76 | 807.12 | 0.12 | 0.02 | 0.00 | 816.00 |
| 6700. | 6. | 6700. | 0. | 0. | 2439. | 0. | 2101. | 451. | 816.00 |

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```
0.000251      64.      64.      64.       2        0        0    -79.61    291.40    321.39


*SECNO 116.100
 2800 NAT Q1=   4433.77  WSEL=    806.97  ENC Q1=   4510.52  WSEL=    807.07  RATIO= -0.0174
 NAT Q1=   4511.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    807.07

        U/S BEDFORD RD. SURVEY SECTION 11

   116.10    11.01   807.01     0.00   806.97   807.12     0.11     0.00     0.00   816.00
   6700.        0.     6700.       0.      0.     2339.       0.     2110.     459.   316.00
     2.91     0.00     2.64     0.00    0.100    0.033    0.100    0.042   796.30    21.99
0.000226        1.       1.       1.        0        0        0     0.00   298.40   320.39


*SECNO 116.200
 2800 NAT Q1=   4243.12  WSEL=    807.06  ENC Q1=   4255.82  WSEL=    807.16  RATIO= -0.0098
 NAT Q1=   4324.  RATIOS LOB,CH,ROB=  0.0067  0.9933  0.0000  WSEL=    807.13

3470 ENCROACHMENT STATIONS=      330.0      576.0  TYPE=      4  TARGET=       0.016

        350 FT U/S BEDFORD RD.

   116.20    10.19   807.09     0.00   807.06   807.23     0.14     0.10     0.01   799.00
   6700.        0.     6700.       0.      0.     2262.       3.     2125.     454.   801.10
     2.95     0.00     2.96     0.00    0.100    0.035    0.100    0.042   796.90   330.00
0.000273      400.     400.     400.        0        0        0     0.00   246.00   576.00


CCHV=    0.100 CCHV=    0.300
*SECNO 117.000

3470 ENCROACHMENT STATIONS=      878.0     1420.0  TYPE=      1  TARGET=     542.000

        CROSS SECTION 117 SURVEY SECTION 12

   117.00    10.85   807.55     0.00   807.50   807.65     0.10     0.42     0.00   799.10
   6700.       97.     6571.      52.     147.     2561.      87.     2239.     467.   799.20
     3.17     0.66     2.57     0.39    0.080    0.035    0.100    0.041   796.70  1033.43
0.000164     2000.    2000.    2000.        2        0        0     0.00   334.02  1367.44


CCHV=    0.300 CCHV=    0.500
*SECNO 117.900
 2800 NAT Q1=   4338.32  WSEL=    807.75  ENC Q1=   4411.31  WSEL=    807.85  RATIO= -0.0168
 NAT Q1=   4411.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    807.85

3470 ENCROACHMENT STATIONS=        9.0      318.0  TYPE=      4  TARGET=       0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      814.20 ELREA=      814.20


        D/S FACE 20 TH STREET SURVEY SECTION 13

   117.90     9.20   807.80     0.00   807.75   807.91     0.11     0.25     0.01   892.30
   6700.        0.     6700.       0.      0.     2486.       0.     2317.     476.   811.70
     3.31     0.00     2.70     0.00    0.080    0.035    0.100    0.041   798.60    21.46
0.000234     1300.    1300.    1300.        1        0        0     0.00   290.20   311.75


SPECIAL BRIDGE
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   1.05      1.30      3.00      0.00    260.00     16.00   4530.00      2.70    791.30    796.30

*SECNO 118.000
   SECNO     DEPTH     CNSEL     CRIBS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XWL       XNCH      XVR       WTA       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOER     ITRIAL    THE       ICONT     CORAR     TOPWID     ENDST

CLASS A LOW FLOW

3420 BRIDGE W.S.=    807.64 BRIDGE VELOCITY=      2.70      CALCULATED CHANNEL AREA=     2527.

 EGPRS      EGLWC       H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC      ELTRD
                                                                 AREA
    0.00     807.96     0.00        0.     6700.     4530.     4531.      814.20     816.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      814.20 ELREA=      814.20

        U/S FACE 20 TH STREET SURVEY SECTION 13

  118.00      9.55    807.85      0.00    807.75    807.96      0.10      0.09      0.00    812.00
   6700.        0.     6700.        0.        0.     2588.        0.     2320.      476.    811.40
    3.31      0.00      2.59      0.00     0.080     0.035     0.100     0.041    798.30     20.51
0.000207       40.       40.       40.         0         0         0      0.00    291.81    312.31

*SECNO 118.100
 2800 NAT Q1=    4056.64  WSEL=     807.83  ENC Q1=    4056.64  WSEL=     807.93  RATIO=  0.0000
 NAT Q1=    4123.  RATIOS LOB,CH,ROB=  0.0082  0.9827  0.0091  WSEL=     807.93

3470 ENCROACHMENT STATIONS=      656.9      880.5  TYPE=      4  TARGET=       0.016

        400 FT U/S 20 TH STREET SURVEY SECTION 14

  118.10     10.42    807.92      0.00    807.83    808.08      0.16      0.09      0.03    800.20
   6700.        0.     6693.        7.        1.     2116.       19.     2361.      479.    799.90
    3.35      0.03      3.16      0.38     0.080     0.035     0.100     0.041    797.50    656.93
0.000273      400.      400.      400.         2         0         0      0.00    223.37    800.50

*SECNO 119.000
 2800 NAT Q1=    4607.11  WSEL=     807.98  ENC Q1=    4607.11  WSEL=     808.08  RATIO=  0.0000
 NAT Q1=    4687.  RATIOS LOB,CH,ROB=  0.0132  0.9804  0.0064  WSEL=     808.08

3470 ENCROACHMENT STATIONS=      640.9      879.0  TYPE=      4  TARGET=       0.017

        CROSS SECTION 119 SURVEY SECTION 15

  119.00     10.98    808.08      0.00    807.98    808.21      0.13      0.12      0.01    799.70
   6700.       17.     6683.        0.       32.     2335.        0.     2367.      481.    801.20
    3.39      0.55      2.06      0.00     0.080     0.035     0.100     0.041    797.10    640.89
0.000220      500.      500.      500.         2         0         0      0.00    238.11    879.00

CCHV=    0.100 CEHV=    0.300
*SECNO 120.000
 2800 NAT Q1=    4725.41  WSEL=     808.19  ENC Q1=    4725.41  WSEL=     808.29  RATIO=  0.0000
 NAT Q1=    4889.  RATIOS LOB,CH,ROB=  0.0133  0.9646  0.0222  WSEL=     808.29
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        CROSS SECTION 120 SURVEY SECTION 16

   120.00     11.19    808.29      0.00    808.19    808.41      0.12      0.20      0.00    800.00
    6700.       32.     6576.       92.       51.     2372.      119.     2421.      407.    800.50
     3.49      0.63      2.77      0.77     0.080     0.035     0.080     0.040    797.10    654.15
 0.000201     1050.      950.      850.         1         0         0      0.00    265.27    919.42

*SECNO 121.000
 2800 NAT Q1=    4752.38  USEL=     808.71  ENC Q1=    4752.38  USEL=     808.81  RATIO=  0.0000
 NAT Q1=    4831.  RATIOS LOB,CH,ROB=  0.0162  0.9665  0.0174  WSEL=     808.81

3470 ENCROACHMENT STATIONS=      809.8     1050.6  TYPE=      4  TARGET=        0.016

        CROSS SECTION 121 SURVEY SECTION 17

   121.00     11.41    808.81      0.00    808.71    808.94      0.12      0.53      0.00    800.10
    6700.       65.     6562.       73.       72.     2301.       83.     2573.      502.    800.20
     3.75      0.89      2.85      0.89     0.080     0.035     0.080     0.040    797.40    809.76
 0.000198     2650.     2650.     2650.         0         0         0      0.00    240.89   1050.64

CCHV=    0.300 CEHV=    0.300
*SECNO 121.800
 2800 NAT Q1=    1965.03  USEL=     808.82  ENC Q1=    2024.41  USEL=     808.92  RATIO= -0.0198
 NAT Q1=    2024.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     808.92
   SECNO     DEPTH     CWSEL     CRIUS     WSELK     EG        HV        HL        GLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XML       XNCH      XNR       UTA       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOP.ID      ENDST

        D/S ANGELL ST. SURVEY SECTION 19

   121.80     10.42    808.92      0.00    808.82    809.37      0.45      0.27      0.16    820.00
    6700.        0.     6700.        0.        0.     1249.        0.     2603.      506.    820.00
     3.79      0.00      5.36      0.00     0.080     0.035     0.080     0.040    798.50      5.71
 0.001093      700.      700.      700.         2         0         0      0.00    161.00    166.71

*SECNO 121.900
 2800 NAT Q1=    1897.79  USEL=     808.81  ENC Q1=    1933.14  USEL=     808.91  RATIO= -0.0186
 NAT Q1=    1933.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     808.91

3370 NORMAL BRIDGE,NRD=  8 MIN ELTRD=  820.00 MAX ELLC=  815.50

        D/S FACE ANGELL ST. SURVEY SECTION 19

   121.90     10.41    808.91      0.00    808.81    809.38      0.47      0.00      0.01    820.00
    6700.        0.     6700.        0.        0.     1216.        0.     2603.      506.    820.00
     3.79      0.00      5.51      0.00     0.080     0.035     0.080     0.040    798.50      5.72
 0.001196        1.        1.        1.         1         0         0    -32.45    160.97    166.69

*SECNO 122.000
 2800 NAT Q1=    1905.30  USEL=     808.88  ENC Q1=    1945.66  USEL=     808.90  RATIO= -0.0212
 NAT Q1=    1946.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     808.96

3370 NORMAL BRIDGE,NRD=  8 MIN ELTRD=  820.00 MAX ELLC=  815.50
```

U/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.00 | 10.29 | 808.99 | 0.00 | 808.80 | 809.45 | 0.47 | 0.07 | 0.00 | 820.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1220. | 0. | 2604. | 536. | 820.00 |
| 3.79 | 0.00 | 3.49 | 0.00 | 0.000 | 0.035 | 0.060 | 0.040 | 795.70 | 5.70 |
| 0.001107 | 53. | 58. | 56. | 0 | 0 | 3 | -32.74 | 160.73 | 160.14 |

*SECNO 122.100
2800 NAT Q1= 2003.63 WSEL= 808.92 ENC Q1= 2043.34 USEL= 809.02 RATIO= -0.0198
NAT Q1= 2043. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 809.02

U/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.10 | 10.32 | 809.02 | 0.00 | 806.92 | 809.46 | 0.64 | 0.00 | 0.01 | 820.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1257. | 0. | 2604. | 536. | 820.00 |
| 3.79 | 0.00 | 3.33 | 0.00 | 0.000 | 0.035 | 0.060 | 0.040 | 795.70 | 5.32 |
| 0.001075 | 1. | 1. | 1. | 2 | 3 | 5 | 0.00 | 160.91 | 166.25 |

*SECNO 122.200
2800 NAT Q1= 3639.36 USEL= 809.32 ENC Q1= 3639.36 USEL= 809.42 RATIO= 0.0000
NAT Q1= 3599. RATIOS LOB,CH,ROB= 0.0369 0.9421 0.0211 WSEL= 809.22

3470 ENCROACHMENT STATIONS= 784.0 856.0 TYPE= 4 TARGET= 5.045

200 FT U/S ANGELL ST. SURVEY SECTION 18

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.20 | 14.20 | 809.40 | 0.00 | 809.32 | 809.84 | 1.24 | 0.12 | 0.06 | 801.60 |
| 6700. | 0. | 6667. | 15. | 0. | 1695. | 21. | 2611. | 536. | 801.30 |
| 3.81 | 0.00 | 3.94 | 3.59 | 0.000 | 0.035 | 0.060 | 0.040 | 795.20 | 704.00 |
| 0.000366 | 200. | 200. | 200. | 2 | 0 | 0 | 0.00 | 152.83 | 856.83 |

CCHV= 0.100 CEHV= 0.300
*SECNO 123.000

| SECNO | DEPTH | CHSEL | CHINS | HSELK | ES | HV | HL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 0 | XLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TOA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | GSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 585.0 918.0 TYPE= 1 TARGET= 553.300

700 FT D/S KENDALL ST. SURVEY SECTION 20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 123.00 | 12.23 | 809.93 | 0.00 | 809.73 | 810.12 | 0.29 | 0.47 | 0.02 | 801.70 |
| 6700. | 60. | 6565. | 75. | 59. | 1497. | 77. | 2653. | 581. | 802.20 |
| 3.68 | 1.02 | 4.39 | 0.97 | 0.080 | 0.035 | 0.080 | 0.040 | 797.60 | 677.99 |
| 0.000498 | 1100. | 1100. | 1100. | 2 | 0 | 0 | 0.00 | 185.28 | 863.27 |

CCHV= 0.300 CEHV= 0.500
*SECNO 123.800

D/S KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 123.60 | 9.93 | 810.23 | 0.00 | 810.14 | 810.50 | 0.37 | 0.44 | 0.04 | 821.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1327. | 0. | 2678. | 584. | 821.00 |
| 3.92 | 0.00 | 4.47 | 0.00 | 0.000 | 0.035 | 0.060 | 0.040 | 800.30 | 3.82 |
| 0.000813 | 700. | 700. | 700. | 2 | 0 | 0 | 0.00 | 166.96 | 870.37 |

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*SECNO 125.900

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 821.00 MAX ELLC= 817.70

D/S FACE KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 125.90 | 9.92 | 810.22 | 0.00 | 810.13 | 810.61 | 0.39 | 0.00 | 0.01 | 821.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1338. | 0. | 2678. | 514. | 821.00 |
| 3.92 | 0.00 | 5.01 | 0.00 | 0.080 | 0.035 | 0.080 | 0.040 | 800.30 | 3.82 |
| 0.000391 | 1. | 1. | 1. | 1 | 0 | 0 | -38.32 | 166.54 | 170.36 |

*SECNO 124.000

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 821.00 MAX ELLC= 817.70

D/S FACE KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 124.00 | 8.31 | 810.21 | 0.00 | 810.12 | 810.75 | 0.54 | 0.37 | 0.08 | 821.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1137. | 0. | 2679. | 514. | 821.00 |
| 3.92 | 0.00 | 5.09 | 0.00 | 0.080 | 0.035 | 0.080 | 0.040 | 831.90 | 5.50 |
| 0.001490 | 56. | 56. | 56. | 2 | 0 | 0 | -31.05 | 163.27 | 168.77 |

*SECNO 124.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLC1= 821.00 ELREA= 821.00

O/S KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 124.10 | 8.36 | 810.24 | 0.00 | 810.17 | 810.76 | 0.50 | 0.00 | 0.01 | 821.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1176. | 0. | 2679. | 514. | 821.00 |
| 3.92 | 0.00 | 5.73 | 0.00 | 0.080 | 0.035 | 0.080 | 0.040 | 831.90 | 5.41 |
| 0.001335 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 163.46 | 168.87 |

*SECNO 124.200

2800 NAT QT= 1975.63 WSEL= 810.43 ENC QT= 1975.63 WSEL= 810.53 RATIO= 0.0000

NAT QT= 2016. RATIOS LOB,CH,ROB= 0.0260 0.9540 0.0200 WSEL= 810.53

| SECNO | DEPTH | CWSEL | CRIWS | ∆SELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 807.0 950.6 TYPE= 4 TARGET= 0.520

200 FT U/S KENDALL ST. SURVEY SECTION 21

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 124.20 | 9.09 | 810.49 | 0.00 | 810.43 | 811.03 | 0.56 | 0.25 | 0.02 | 801.40 |
| 6650. | 99. | 6495. | 56. | 61. | 1090. | 40. | 2695. | 513. | 802.20 |
| 3.93 | 1.63 | 5.96 | 1.41 | 0.080 | 0.035 | 0.080 | 0.039 | 801.40 | 806.97 |
| 0.001155 | 200. | 200. | 200. | 1 | 0 | 0 | 0.00 | 143.62 | 950.58 |

CCHV= 0.100 CEHV= 0.300

*SECNO 123.000

2802 NAT QT= 2224.54 WSEL= 811.56 ENC QT= 2224.54 WSEL= 811.66 RATIO= 0.0000

NAT QT= 2271. RATIOS LOB,CH,ROB= 0.0142 0.9703 0.0155 WSEL= 811.66

5470 ENCROACHMENT STATIONS= 798.3 958.4 TYPE= 4 TARGET= 0.020

CROSS SECTION 125 SURVEY SECTION 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 125.00 | 9.44 | 811.64 | 0.00 | 871.56 | 812.06 | 0.42 | 1.02 | 0.01 | 804.00 |
| 3650. | 17. | 6606. | 25. | 19. | 1269. | 25. | 2716. | 510. | 803.70 |
| 3.96 | 0.89 | 5.21 | 1.00 | 0.030 | 0.025 | 0.06 | 0.039 | 802.20 | 798.31 |
| 0.000905 | 1000. | 1000. | 1000. | 2 | 0 | 0 | 0.00 | 160.08 | 958.39 |

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  PROGRAM RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**********************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 110

| SECNO | CWSEL | DIFKWS | CG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 102.000 | 798.85 | 0.22 | 798.89 | 3375.61 | 2196.75 | 3406.46 | 1596.79 | 0.00 | 0.00 | 2023.00 | 2234.00 | 0.00 |
| 102.000 | 798.85 | -0.50 | 798.79 | 3039.48 | 2150.30 | 3530.25 | 1510.96 | 0.04 | 650.20 | 2023.00 | 2234.00 | 3765.05 |
| 102.500 | 799.36 | 0.00 | 799.41 | 3469.19 | 2939.62 | 3365.15 | 715.22 | 0.00 | 0.00 | 3697.00 | 3902.00 | 0.00 |
| 102.500 | 799.41 | 0.05 | 799.46 | 3098.22 | 2972.02 | 3727.98 | 0.00 | 0.04 | 803.78 | 3697.00 | 3902.00 | 3902.00 |
| 103.000 | 799.73 | 0.00 | 799.83 | 2534.98 | 2463.19 | 3867.00 | 369.81 | 0.00 | 0.00 | 2669.00 | 2809.00 | 0.00 |
| 103.000 | 799.79 | 0.06 | 799.90 | 2210.00 | 2472.37 | 3965.63 | 253.97 | 0.04 | 757.31 | 2669.00 | 2809.00 | 2967.30 |
| 104.000 | 801.06 | 0.00 | 801.13 | 2610.66 | 507.17 | 2093.76 | 3299.07 | 0.00 | 0.00 | 1453.00 | 1561.00 | 0.00 |
| 104.000 | 801.16 | 0.10 | 801.22 | 2105.59 | 418.18 | 2953.61 | 3331.21 | 0.04 | 973.71 | 1453.00 | 1561.00 | 3079.30 |
| 105.000 | 801.32 | 0.00 | 801.40 | 2042.41 | 343.92 | 3749.56 | 2606.52 | 0.00 | 0.00 | 1137.00 | 1303.00 | 0.00 |
| 105.000 | 801.41 | 0.10 | 801.50 | 1750.32 | 242.56 | 3835.25 | 2622.19 | 0.04 | 979.17 | 1137.00 | 1303.00 | 2729.49 |
| 106.000 | 801.95 | 0.00 | 802.26 | 1026.26 | 7.69 | 4663.07 | 1029.24 | 0.00 | 0.00 | 278.00 | 368.00 | 0.00 |
| 106.000 | 802.06 | 0.12 | 802.39 | 1608.20 | 0.00 | 4878.75 | 1021.26 | 0.04 | 278.00 | 278.00 | 368.00 | 1886.20 |
| 107.000 | 802.87 | 0.00 | 802.97 | 1212.00 | 2015.78 | 3470.38 | 1213.84 | 0.00 | 0.00 | 808.00 | 916.00 | 0.00 |
| 107.000 | 802.98 | 0.12 | 803.09 | 1145.93 | 2002.01 | 3515.89 | 1181.32 | 0.03 | 427.23 | 808.00 | 916.00 | 1573.16 |
| 108.700 | 803.36 | 0.00 | 803.63 | 247.65 | 79.73 | 5611.97 | 108.30 | 0.00 | 0.00 | 85.00 | 236.00 | 0.00 |
| 108.700 | 803.46 | 0.11 | 803.75 | 173.71 | 16.25 | 5726.07 | 55.69 | 0.02 | 80.03 | 85.00 | 236.00 | 253.73 |
| 108.800 | 803.59 | 0.00 | 804.07 | 107.10 | 0.00 | 5800.00 | 0.00 | 0.00 | 0.00 | 1410.40 | 1517.60 | 0.00 |
| 108.800 | 803.70 | 0.11 | 804.18 | 107.10 | 0.00 | 5800.00 | 0.00 | 0.00 | 1410.40 | 1410.40 | 1517.60 | 1517.60 |
| 108.900 | 803.68 | 0.00 | 804.19 | 107.10 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1410.40 | 1517.60 | 0.00 |
| 108.900 | 803.59 | 0.12 | 804.29 | 107.10 | 0.00 | 6700.00 | 0.00 | 0.00 | 1410.40 | 1410.40 | 1517.60 | 1517.60 |
| 109.000 | 803.68 | 0.00 | 804.28 | 107.10 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1410.40 | 1517.60 | 0.00 |
| 109.000 | 803.79 | 0.11 | 804.38 | 107.10 | 0.00 | 6700.00 | 0.00 | 0.00 | 1410.40 | 1410.40 | 1517.60 | 1517.60 |
| 109.100 | 803.74 | 0.00 | 804.30 | 107.10 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1410.40 | 1517.60 | 0.00 |
| 109.100 | 803.85 | 0.11 | 804.39 | 107.10 | 0.00 | 6700.00 | 0.00 | 0.00 | 1410.40 | 1410.40 | 1517.60 | 1517.60 |
| 109.200 | 804.02 | 0.00 | 804.45 | 248.91 | 231.99 | 6229.01 | 238.21 | 0.00 | 0.00 | 1410.50 | 1517.50 | 0.00 |
| 109.200 | 804.09 | 0.07 | 804.53 | 180.63 | 180.26 | 6353.35 | 186.39 | 0.02 | 1383.65 | 1410.50 | 1517.50 | 1544.28 |

FORM 1411.00 PRINTED BY HOTAPY HARFOLD FORMS, INC. U.S.A.

| SECNO | CHSEL | DIFKHS | ZG | TOPUZO | QLOB | SCH | SAOb | PCPENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110.000 | 804.67 | 0.00 | 804.73 | 344.74 | 55.75 | 6537.72 | 87.13 | 302.00 | 1632.00 | 1598.00 | 1937.00 | 1994.00 |
| 110.000 | 804.69 | 0.09 | 804.81 | 349.00 | 58.09 | 6553.24 | 80.67 | 302.00 | 1632.00 | 1598.00 | 1937.00 | 1994.00 |
| 110.900 | 805.36 | 0.00 | 805.47 | 450.00 | 111.34 | 6577.20 | 77.61 | 450.00 | 1036.00 | 1120.00 | 1385.00 | 1488.00 |
| 110.900 | 805.42 | 0.07 | 805.53 | 450.00 | 113.76 | 6512.21 | 74.03 | 450.00 | 1036.00 | 1120.00 | 1385.00 | 1488.00 |
| 111.000 | 805.33 | 0.00 | 805.42 | 450.00 | 163.29 | 6465.29 | 97.62 | 450.00 | 1036.00 | 1120.00 | 1385.00 | 1486.00 |
| 111.000 | 805.39 | 0.07 | 805.54 | 450.00 | 166.96 | 6459.16 | 94.69 | 450.00 | 1036.00 | 1120.00 | 1385.00 | 1488.00 |
| 111.100 | 805.37 | 0.00 | 805.48 | 450.00 | 112.20 | 6515.48 | 72.33 | 450.00 | 1038.00 | 1120.00 | 1385.00 | 1488.00 |
| 111.100 | 805.44 | 0.06 | 805.55 | 450.00 | 114.60 | 6510.44 | 74.96 | 450.00 | 1038.00 | 1120.00 | 1385.00 | 1488.00 |
| 112.000 | 805.64 | 0.00 | 805.73 | 321.76 | 20.17 | 6662.52 | 19.31 | 432.00 | 1092.00 | 1230.00 | 1510.00 | 1544.00 |
| 112.000 | 805.70 | 0.05 | 805.78 | 322.15 | 20.59 | 6659.74 | 19.67 | 432.00 | 1092.00 | 1230.00 | 1510.00 | 1544.00 |
| 113.000 | 805.89 | 0.00 | 805.99 | 323.05 | 48.10 | 6616.00 | 35.89 | 336.00 | 1466.00 | 1595.00 | 1769.00 | 1822.00 |
| 113.000 | 805.94 | 0.05 | 806.04 | 323.51 | 48.69 | 6614.79 | 36.52 | 336.00 | 1466.00 | 1595.00 | 1769.00 | 1822.00 |
| 114.000 | 806.13 | 0.00 | 806.24 | 345.20 | 21.02 | 6609.24 | 76.96 | 374.00 | 964.00 | 1035.00 | 1255.00 | 1336.00 |
| 114.000 | 806.18 | 0.05 | 806.29 | 345.69 | 22.51 | 6590.47 | 78.37 | 374.00 | 964.00 | 1035.00 | 1255.00 | 1336.00 |
| 115.000 | 806.42 | 0.00 | 806.50 | 549.67 | 658.19 | 6002.69 | 39.12 | 566.00 | 500.00 | 760.00 | 1016.00 | 1066.00 |
| 115.000 | 806.46 | 0.04 | 806.54 | 549.00 | 662.66 | 5997.43 | 39.71 | 566.00 | 500.00 | 760.00 | 1016.00 | 1066.00 |
| 115.700 | 806.68 | 0.00 | 806.76 | 551.47 | 686.37 | 5970.91 | 42.72 | 566.00 | 500.00 | 760.00 | 1016.00 | 1066.00 |
| 115.700 | 806.72 | 0.04 | 806.80 | 553.59 | 690.35 | 5966.45 | 43.23 | 566.00 | 500.00 | 760.00 | 1016.00 | 1066.00 |
| 115.800 | 806.93 | 0.00 | 807.05 | 299.11 | 0.30 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 0.00 |
| 115.800 | 806.96 | 0.04 | 807.09 | 299.76 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 330.00 |
| 115.900 | 806.92 | 0.00 | 807.06 | 299.12 | 0.30 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 0.00 |
| 115.900 | 806.96 | 0.04 | 807.09 | 299.76 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 330.00 |
| 116.000 | 806.96 | 0.00 | 807.08 | 297.78 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 0.00 |
| 116.000 | 807.00 | 0.04 | 807.12 | 298.40 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 330.00 |
| 116.100 | 806.97 | 0.00 | 807.05 | 297.79 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 0.00 |
| 116.100 | 807.01 | 0.04 | 807.12 | 298.40 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 330.00 | 330.00 |
| 116.200 | 807.06 | 0.00 | 807.19 | 355.64 | 44.04 | 6598.86 | 57.09 | 0.00 | 0.00 | 330.00 | 576.00 | 0.00 |
| 116.200 | 807.09 | 0.04 | 807.23 | 246.00 | 0.00 | 6700.00 | 0.00 | 0.02 | 330.00 | 330.00 | 576.00 | 576.00 |
| 117.000 | 807.50 | 0.00 | 807.60 | 332.51 | 96.13 | 6572.65 | 31.32 | 562.00 | 878.00 | 1075.00 | 1325.00 | 1420.00 |
| 117.000 | 807.55 | 0.06 | 807.65 | 334.02 | 97.16 | 6570.93 | 31.92 | 562.00 | 878.00 | 1075.00 | 1325.00 | 1420.00 |
| 117.900 | 807.75 | 0.00 | 807.86 | 290.07 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 9.00 | 318.00 | 0.00 |
| 117.900 | 807.80 | 0.05 | 807.91 | 290.28 | 0.00 | 6700.00 | 0.00 | 0.00 | 9.00 | 9.00 | 318.00 | 318.00 |
| 118.000 | 807.75 | 0.00 | 807.86 | 291.37 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 9.00 | 318.00 | 0.00 |
| 118.000 | 807.85 | 0.10 | 807.96 | 291.81 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 9.00 | 318.00 | 0.00 |
| 118.100 | 807.83 | 0.00 | 807.98 | 272.71 | 53.78 | 6586.28 | 59.94 | 0.00 | 0.00 | 657.00 | 878.00 | 0.00 |
| 118.100 | 807.92 | 0.09 | 808.08 | 223.57 | 0.08 | 8692.79 | 7.19 | 0.02 | 656.93 | 657.00 | 878.00 | 880.50 |
| 119.000 | 807.98 | 0.00 | 808.10 | 207.79 | 87.56 | 6573.60 | 41.84 | 0.00 | 0.00 | 645.00 | 879.00 | 0.00 |
| 119.000 | 808.08 | 0.10 | 808.21 | 236.11 | 17.49 | 8682.52 | 0.00 | 0.02 | 640.89 | 645.00 | 879.00 | 879.00 |

FORM 1411-GS PRINTED BY ROTARY MANIFOLD FORMS.
PRINTED IN U.S.A.

| | SECNO | CWSEL | DIFKWS | EC | TOPWID | QLOD | QCH | CROS | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 120.000 | 805.19 | 0.00 | 808.30 | 323.11 | 97.29 | 6486.35 | 166.36 | 0.00 | 0.00 | 661.00 | 961.00 | 0.00 |
| 2 | 120.000 | 808.29 | 0.10 | 808.41 | 265.27 | 32.16 | 6575.76 | 97.17 | 0.02 | 664.15 | 661.00 | 961.00 | 919.42 |
| 3 | | | | | | | | | | | | | |
| 4 | 121.000 | 808.71 | 0.00 | 808.83 | 261.20 | 107.80 | 6477.22 | 114.99 | 0.00 | 0.00 | 819.00 | 1039.00 | 0.00 |
| 5 | 121.000 | 808.81 | 0.10 | 808.94 | 240.89 | 64.65 | 6562.00 | 73.35 | 0.02 | 809.76 | 819.00 | 1039.00 | 1050.65 |
| 6 | | | | | | | | | | | | | |
| 7 | 121.800 | 808.92 | 0.00 | 809.03 | 160.52 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 174.00 | 0.00 |
| 8 | 121.800 | 808.92 | 0.10 | 809.37 | 161.20 | 0.00 | 6700.00 | 0.00 | 0.10 | 0.00 | 0.00 | 174.00 | 174.00 |
| 9 | | | | | | | | | | | | | |
| 10 | 121.900 | 808.81 | 0.00 | 809.29 | 160.50 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 174.00 | 0.00 |
| 11 | 121.900 | 808.91 | 0.11 | 809.33 | 160.97 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 174.00 | 174.00 |
| 12 | | | | | | | | | | | | | |
| 13 | 122.000 | 808.46 | 0.01 | 809.37 | 160.27 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 174.00 | 0.00 |
| 14 | 122.000 | 808.99 | 0.10 | 809.45 | 160.73 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 174.00 | 174.00 |
| 15 | | | | | | | | | | | | | |
| 16 | 122.100 | 808.92 | 0.00 | 809.38 | 160.47 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 174.00 | 0.00 |
| 17 | 122.100 | 809.02 | 0.10 | 809.46 | 160.91 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 174.00 | 174.00 |
| 18 | | | | | | | | | | | | | |
| 19 | 122.200 | 809.32 | 0.00 | 809.55 | 160.32 | 44.65 | 6642.34 | 72.81 | 0.00 | 0.00 | 704.00 | 954.00 | 0.00 |
| 20 | 122.200 | 809.42 | 0.10 | 809.64 | 162.03 | 0.01 | 6687.50 | 12.62 | 0.02 | 704.00 | 704.00 | 954.00 | 956.65 |
| 21 | | | | | | | | | | | | | |
| 22 | 123.000 | 809.73 | 0.00 | 810.03 | 164.77 | 59.81 | 6567.66 | 73.54 | 0.02 | 0.00 | 693.00 | 843.00 | 0.00 |
| 23 | 123.000 | 809.83 | 0.10 | 810.12 | 165.28 | 60.08 | 6565.03 | 74.89 | 333.05 | 555.00 | 693.00 | 843.00 | 918.00 |
| 24 | | | | | | | | | | | | | |
| 25 | 123.800 | 810.14 | 0.00 | 810.52 | 166.23 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 26 | 123.800 | 810.23 | 0.09 | 810.62 | 166.55 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 27 | | | | | | | | | | | | | |
| 28 | 123.900 | 810.13 | 0.00 | 810.53 | 166.18 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 29 | 123.900 | 810.22 | 0.09 | 810.61 | 166.54 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 30 | | | | | | | | | | | | | |
| 31 | 124.000 | 810.12 | 0.00 | 810.65 | 162.91 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 32 | 124.000 | 810.21 | 0.09 | 810.75 | 163.27 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 33 | | | | | | | | | | | | | |
| 34 | 124.100 | 810.17 | 0.00 | 810.69 | 163.11 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 35 | 124.100 | 810.26 | 0.09 | 810.76 | 163.46 | 0.00 | 6700.00 | 0.00 | 0.00 | 0.00 | 1.00 | 174.00 | 0.00 |
| 36 | | | | | | | | | | | | | |
| 37 | 124.200 | 810.43 | 0.00 | 810.94 | 174.13 | 171.07 | 6567.48 | 151.65 | 0.00 | 0.00 | 815.00 | 945.00 | 0.00 |
| 38 | 124.200 | 810.49 | 0.06 | 811.03 | 148.62 | 98.69 | 6494.85 | 56.66 | 0.02 | 806.97 | 815.00 | 945.00 | 950.58 |
| 39 | | | | | | | | | | | | | |
| 40 | 125.000 | 811.56 | 0.00 | 811.96 | 192.85 | 93.21 | 6435.25 | 101.53 | 0.00 | 0.00 | 801.00 | 955.00 | 0.00 |
| 41 | 125.000 | 811.64 | 0.08 | 812.06 | 160.08 | 17.04 | 6608.25 | 24.70 | 0.02 | 798.31 | 801.00 | 955.00 | 958.39 |
| 42 | | | | | | | | | | | | | |
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FORM 1471-GS PRINTED BY ROTARY MANIFOLD FORMS.

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 153

| SECNO | XLCH | ELYRD | ELLC | ELMIN | Q | CHSEL | CRIWS | EG | TOPWS | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 102.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 6700.00 | 798.65 | 0.00 | 798.89 | 2.22 | 2.13 | 10221.53 | 4497.65 |
| 102.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 6700.00 | 798.65 | 0.00 | 798.89 | 2.40 | 2.21 | 9480.87 | 4328.03 |
| 102.500 | 2950.00 | 0.00 | 0.00 | 789.50 | 6700.00 | 799.36 | 0.00 | 799.41 | 2.90 | 2.40 | 9119.81 | 3934.75 |
| 102.500 | 2950.00 | 0.00 | 0.00 | 789.50 | 6700.00 | 799.41 | 0.00 | 799.46 | 3.10 | 2.46 | 8546.73 | 3803.58 |
| 103.000 | 1590.00 | 0.00 | 0.00 | 789.60 | 6700.00 | 799.73 | 0.00 | 799.83 | 4.60 | 3.28 | 6782.06 | 3122.59 |
| 103.000 | 1590.00 | 0.00 | 0.00 | 789.60 | 6700.00 | 799.79 | 0.00 | 799.90 | 4.73 | 3.35 | 6552.20 | 3000.98 |
| 104.000 | 4025.00 | 0.00 | 0.00 | 783.10 | 6700.00 | 801.06 | 0.00 | 801.13 | 3.68 | 3.05 | 6087.74 | 3492.65 |
| 104.000 | 4025.00 | 0.00 | 0.00 | 782.70 | 6700.00 | 801.16 | 0.00 | 801.22 | 3.69 | 3.05 | 7711.25 | 3407.55 |
| 105.000 | 675.00 | 0.00 | 0.00 | 793.00 | 6700.00 | 801.32 | 0.00 | 801.40 | 4.21 | 2.96 | 6722.76 | 3264.46 |
| 105.000 | 675.00 | 0.00 | 0.00 | 793.00 | 6700.00 | 801.41 | 0.00 | 801.50 | 4.25 | 2.99 | 6524.02 | 3259.23 |
| 106.000 | 1435.00 | 0.00 | 0.00 | 790.90 | 6700.00 | 801.95 | 0.00 | 802.28 | 10.21 | 5.44 | 3933.71 | 2091.32 |
| 106.000 | 1435.00 | 0.00 | 0.00 | 790.90 | 6700.00 | 802.06 | 0.00 | 802.39 | 10.72 | 5.40 | 3779.44 | 2046.55 |
| 107.000 | 1275.00 | 0.00 | 0.00 | 793.90 | 6700.00 | 802.87 | 0.00 | 802.97 | 4.58 | 3.47 | 4900.45 | 3131.93 |
| 107.000 | 1275.00 | 0.00 | 0.00 | 793.90 | 6700.00 | 802.92 | 0.00 | 803.09 | 4.50 | 3.47 | 4793.32 | 3156.02 |
| 108.700 | 1075.00 | 0.00 | 0.00 | 792.80 | 5800.00 | 803.36 | 0.00 | 803.63 | 7.39 | 4.26 | 1585.44 | 2133.22 |
| 108.700 | 1075.00 | 0.00 | 0.00 | 792.80 | 5800.00 | 803.46 | 0.00 | 803.75 | 7.38 | 4.30 | 1434.06 | 2134.31 |
| 108.800 | 350.00 | 0.00 | 0.00 | 793.00 | 5800.00 | 803.59 | 0.00 | 804.07 | 13.14 | 5.62 | 1032.84 | 1599.83 |
| 108.800 | 350.00 | 0.00 | 0.00 | 793.00 | 5800.00 | 803.70 | 0.00 | 804.18 | 12.67 | 5.55 | 1044.98 | 1629.24 |
| 108.900 | 1.00 | 810.70 | 808.70 | 795.00 | 6700.00 | 803.43 | 0.00 | 804.19 | 20.17 | 6.77 | 909.71 | 1491.83 |
| 108.900 | 1.00 | 810.70 | 808.70 | 795.00 | 6700.00 | 803.59 | 0.00 | 804.29 | 19.42 | 6.69 | 1001.76 | 1520.28 |
| 109.000 | 35.00 | 810.70 | 808.70 | 790.10 | 6700.00 | 803.68 | 0.00 | 806.28 | 15.40 | 6.22 | 1077.78 | 1707.11 |
| 109.000 | 35.00 | 810.70 | 808.70 | 790.10 | 6700.00 | 803.79 | 0.00 | 806.38 | 14.92 | 6.15 | 1088.97 | 1734.71 |
| 109.100 | 1.00 | 0.00 | 0.00 | 790.10 | 6700.00 | 803.74 | 0.00 | 806.30 | 13.64 | 5.99 | 1118.22 | 1814.07 |
| 109.100 | 1.00 | 0.00 | 0.00 | 790.10 | 6700.00 | 803.85 | 0.00 | 806.39 | 13.22 | 5.93 | 1129.56 | 1842.73 |
| 109.200 | 100.00 | 0.00 | 0.00 | 790.10 | 6700.00 | 804.02 | 0.00 | 804.45 | 9.12 | 5.42 | 1676.17 | 2219.07 |
| 109.200 | 100.00 | 0.00 | 0.00 | 790.10 | 6700.00 | 804.09 | 0.00 | 804.53 | 9.22 | 5.47 | 1663.71 | 2206.65 |
| 110.000 | 650.00 | 0.00 | 0.00 | 793.30 | 6700.00 | 804.61 | 0.00 | 804.73 | 2.10 | 2.31 | 2626.38 | 4619.41 |
| 110.000 | 650.00 | 0.00 | 0.00 | 793.30 | 6700.00 | 804.69 | 0.00 | 804.81 | 2.04 | 2.28 | 2656.10 | 4690.33 |
| 110.900 | 3450.00 | 0.00 | 0.00 | 795.10 | 6700.00 | 805.36 | 0.00 | 805.47 | 2.19 | 2.72 | 2825.82 | 4529.84 |
| 110.900 | 3450.00 | 0.00 | 0.00 | 795.10 | 6700.00 | 805.42 | 0.00 | 805.53 | 2.13 | 2.70 | 2855.04 | 4587.79 |
| 111.000 | 2.00 | 797.30 | 795.10 | 795.10 | 6700.00 | 805.33 | 0.00 | 805.48 | 3.71 | 3.18 | 2461.45 | 3479.18 |
| 111.000 | 2.00 | 797.30 | 795.10 | 795.10 | 6700.00 | 805.39 | 0.00 | 805.54 | 3.60 | 3.15 | 2491.22 | 3532.67 |
| 111.100 | 2.00 | 0.00 | 0.00 | 795.10 | 6700.00 | 805.37 | 0.00 | 805.48 | 2.17 | 2.71 | 2836.15 | 4550.27 |
| 111.100 | 2.00 | 0.00 | 0.00 | 795.10 | 6700.00 | 805.44 | 0.00 | 805.55 | 2.11 | 2.69 | 2865.26 | 4606.15 |
| 112.000 | 1400.00 | 0.00 | 0.00 | 794.10 | 6700.00 | 805.64 | 0.00 | 805.73 | 1.38 | 2.34 | 2953.61 | 5695.04 |
| 112.000 | 1400.00 | 0.00 | 0.00 | 794.10 | 6700.00 | 805.70 | 0.00 | 805.78 | 1.36 | 2.33 | 2972.39 | 5751.10 |

FORM 1411-GS-PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLOC | ELTRD | ELLC | ELDIN | Q | CWSEL | CRINS | EG | 10*S | VCH | ARCA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 113.000 | 2700.00 | 0.00 | 0.00 | 794.20 | 6700.00 | 805.29 | 0.00 | 805.99 | 1.65 | 2.51 | 2617.56 | 5233.64 |
| 113.000 | 2700.00 | 0.00 | 0.00 | 794.20 | 6700.00 | 805.94 | 0.00 | 806.04 | 1.61 | 2.50 | 2634.65 | 5271.49 |
| 114.000 | 1450.00 | 0.00 | 0.00 | 796.70 | 6700.00 | 806.15 | 0.00 | 806.24 | 1.81 | 2.64 | 2733.89 | 4986.62 |
| 114.000 | 1450.00 | 0.00 | 0.00 | 796.70 | 6700.00 | 806.16 | 0.00 | 806.29 | 1.77 | 2.63 | 2750.93 | 5029.04 |
| 115.000 | 1500.00 | 0.00 | 0.00 | 795.60 | 6700.00 | 806.52 | 0.00 | 806.50 | 1.71 | 2.48 | 3728.44 | 5124.44 |
| 115.000 | 1500.00 | 0.00 | 0.00 | 795.60 | 6700.00 | 806.46 | 0.00 | 806.56 | 1.66 | 2.47 | 3753.00 | 5169.36 |
| 115.700 | 1600.00 | 0.00 | 0.00 | 795.60 | 6700.00 | 806.68 | 0.00 | 806.76 | 1.54 | 2.40 | 3879.79 | 5403.91 |
| 115.700 | 1600.00 | 0.00 | 0.00 | 795.60 | 6700.00 | 806.72 | 0.00 | 806.80 | 1.51 | 2.38 | 3901.69 | 5464.87 |
| 115.800 | 1300.00 | 0.00 | 0.00 | 796.20 | 6700.00 | 806.93 | 0.00 | 807.15 | 2.87 | 2.84 | 2360.97 | 3952.11 |
| 115.800 | 1300.00 | 0.00 | 0.00 | 796.20 | 6700.00 | 806.98 | 0.00 | 807.09 | 2.64 | 2.32 | 2371.37 | 3976.79 |
| 115.900 | 1.00 | 816.00 | 811.60 | 796.20 | 6700.00 | 806.92 | 0.00 | 807.06 | 3.18 | 2.93 | 2290.53 | 3757.50 |
| 115.900 | 1.00 | 816.00 | 811.60 | 796.20 | 6700.00 | 806.96 | 0.00 | 807.09 | 3.14 | 2.91 | 2301.07 | 3780.94 |
| 116.000 | 64.00 | 816.00 | 811.60 | 796.20 | 6700.00 | 806.98 | 0.00 | 807.08 | 2.54 | 2.76 | 2641.46 | 4234.10 |
| 116.000 | 64.00 | 816.00 | 811.60 | 796.20 | 6700.00 | 807.00 | 0.00 | 807.12 | 2.51 | 2.72 | 2656.90 | 4228.17 |
| 116.100 | 1.00 | 0.00 | 0.00 | 796.00 | 6700.00 | 806.97 | 0.00 | 807.08 | 2.20 | 2.65 | 2527.89 | 4433.77 |
| 116.100 | 1.00 | 0.00 | 0.00 | 796.00 | 6700.00 | 807.01 | 0.00 | 807.12 | 2.26 | 2.64 | 2538.52 | 4455.79 |
| 116.200 | 400.00 | 0.00 | 0.00 | 796.90 | 6700.00 | 807.06 | 0.00 | 807.19 | 2.39 | 2.93 | 2481.00 | 4264.12 |
| 116.200 | 400.00 | 0.00 | 0.00 | 796.90 | 6700.00 | 807.09 | 0.00 | 807.23 | 2.73 | 2.96 | 2262.21 | 4057.75 |
| 117.000 | 2000.00 | 0.00 | 0.00 | 796.70 | 6700.00 | 807.50 | 0.00 | 807.60 | 1.67 | 2.58 | 2770.53 | 5180.80 |
| 117.000 | 2000.00 | 0.00 | 0.00 | 796.70 | 6700.00 | 807.55 | 0.00 | 807.65 | 1.64 | 2.57 | 2789.08 | 5229.35 |
| 117.900 | 1300.00 | 0.00 | 0.00 | 796.60 | 6700.00 | 807.75 | 0.00 | 807.86 | 2.39 | 2.71 | 2472.39 | 4358.32 |
| 117.900 | 1300.00 | 0.00 | 0.00 | 796.60 | 6700.00 | 807.80 | 0.00 | 807.91 | 2.36 | 2.70 | 2485.85 | 4375.54 |
| 118.000 | 40.00 | 816.50 | 814.20 | 798.30 | 6700.00 | 807.75 | 0.00 | 807.86 | 2.14 | 2.62 | 2558.34 | 4577.78 |
| 118.000 | 40.00 | 816.50 | 814.20 | 798.30 | 6700.00 | 807.85 | 0.00 | 807.96 | 2.07 | 2.59 | 2587.53 | 4660.07 |
| 118.100 | 400.00 | 0.00 | 0.00 | 797.30 | 6700.00 | 807.83 | 0.00 | 807.98 | 2.73 | 3.14 | 2269.42 | 4056.64 |
| 118.100 | 400.00 | 0.00 | 0.00 | 797.30 | 6700.00 | 807.92 | 0.00 | 808.03 | 2.73 | 3.16 | 2135.03 | 4053.23 |
| 119.000 | 500.00 | 0.00 | 0.00 | 797.10 | 6700.00 | 807.98 | 0.00 | 808.10 | 2.11 | 2.64 | 2508.62 | 4607.11 |
| 119.000 | 500.00 | 0.00 | 0.00 | 797.10 | 6700.00 | 808.08 | 0.00 | 808.21 | 2.20 | 2.86 | 2367.34 | 4516.26 |
| 120.000 | 950.00 | 0.00 | 0.00 | 797.10 | 6700.00 | 808.19 | 0.00 | 808.30 | 2.01 | 2.75 | 2656.58 | 4725.41 |
| 120.000 | 950.00 | 0.00 | 0.00 | 797.10 | 6700.00 | 808.29 | 0.00 | 808.41 | 2.01 | 2.77 | 2541.72 | 4723.36 |
| 121.000 | 2650.00 | 0.00 | 0.00 | 797.40 | 6700.00 | 808.71 | 0.00 | 808.83 | 1.99 | 2.64 | 2554.69 | 4752.38 |
| 121.000 | 2650.00 | 0.00 | 0.00 | 797.40 | 6700.00 | 808.81 | 0.00 | 808.94 | 1.98 | 2.85 | 2455.72 | 4766.78 |
| 121.800 | 700.00 | 0.00 | 0.00 | 796.50 | 6700.00 | 808.82 | 0.00 | 809.20 | 11.39 | 5.44 | 1232.46 | 1985.03 |
| 121.800 | 700.00 | 0.00 | 0.00 | 796.50 | 6700.00 | 808.92 | 0.00 | 809.37 | 10.93 | 5.36 | 1249.45 | 2026.63 |
| 121.900 | 1.00 | 820.00 | 815.50 | 796.50 | 6700.00 | 808.81 | 0.00 | 809.29 | 12.46 | 5.59 | 1199.60 | 1897.79 |
| 121.900 | 1.00 | 820.00 | 815.50 | 796.50 | 6700.00 | 808.91 | 0.00 | 809.38 | 11.96 | 5.51 | 1216.10 | 1937.49 |
| 122.000 | 58.00 | 820.00 | 815.50 | 796.70 | 6700.00 | 808.88 | 0.00 | 809.37 | 12.37 | 5.57 | 1203.27 | 1905.30 |
| 122.000 | 58.00 | 820.00 | 815.50 | 796.70 | 6700.00 | 808.99 | 0.00 | 809.45 | 11.87 | 5.49 | 1219.75 | 1965.01 |

FORM 141-GD-PRINTED BY ROTARY MANIFOLD FORMS,

| SECND | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRIBS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 122.100 | 1.00 | 0.00 | 0.00 | 798.70 | 6700.00 | 808.92 | 0.00 | 809.36 | 11.13 | 5.40 | 1240.87 | 2003.63 |
| 122.100 | 1.00 | 0.00 | 0.00 | 798.70 | 6700.00 | 809.02 | 0.00 | 809.46 | 10.75 | 5.33 | 1257.05 | 2043.54 |
| 122.200 | 200.00 | 0.00 | 0.00 | 795.20 | 6700.00 | 809.32 | 0.00 | 809.55 | 3.39 | 3.90 | 1830.04 | 3639.36 |
| 122.200 | 200.00 | 0.00 | 0.00 | 795.20 | 6700.00 | 809.40 | 0.00 | 809.64 | 3.66 | 3.94 | 1719.03 | 3503.15 |
| 123.000 | 1100.00 | 0.00 | 0.00 | 797.60 | 6700.00 | 809.73 | 0.00 | 810.03 | 5.16 | 4.43 | 1614.85 | 2950.80 |
| 123.000 | 1100.00 | 0.00 | 0.00 | 797.60 | 6700.00 | 809.83 | 0.00 | 810.12 | 4.90 | 4.39 | 1633.55 | 3002.49 |
| 123.800 | 700.00 | 0.00 | 0.00 | 800.30 | 6700.00 | 810.14 | 0.00 | 810.52 | 8.36 | 4.92 | 1362.80 | 2317.45 |
| 123.800 | 700.00 | 0.00 | 0.00 | 800.30 | 6700.00 | 810.23 | 0.00 | 810.60 | 8.10 | 4.87 | 1377.17 | 2354.69 |
| 123.900 | 1.00 | 821.00 | 817.70 | 800.30 | 6700.00 | 810.13 | 0.00 | 810.53 | 9.20 | 5.08 | 1324.84 | 2208.93 |
| 123.900 | 1.00 | 821.00 | 817.70 | 800.30 | 6700.00 | 810.22 | 0.00 | 810.61 | 8.91 | 5.01 | 1335.20 | 2244.83 |
| 124.000 | 58.00 | 821.00 | 817.70 | 801.90 | 6700.00 | 810.12 | 0.00 | 810.68 | 15.48 | 5.97 | 1122.93 | 1703.10 |
| 124.000 | 58.00 | 821.00 | 817.70 | 801.90 | 6700.00 | 810.21 | 0.00 | 810.75 | 14.90 | 5.89 | 1136.84 | 1735.65 |
| 124.100 | 1.00 | 0.00 | 0.00 | 801.90 | 6700.00 | 810.17 | 0.00 | 810.69 | 13.85 | 5.77 | 1151.81 | 1800.46 |
| 124.100 | 1.00 | 0.00 | 0.00 | 801.90 | 6700.00 | 810.26 | 0.00 | 810.76 | 13.35 | 5.70 | 1175.63 | 1833.89 |
| 124.200 | 200.00 | 0.00 | 0.00 | 801.40 | 6650.00 | 810.43 | 0.00 | 810.94 | 11.33 | 5.87 | 1272.67 | 1975.63 |
| 124.200 | 200.00 | 0.00 | 0.00 | 801.40 | 6650.00 | 810.49 | 0.00 | 811.03 | 11.55 | 5.96 | 1191.11 | 1956.46 |
| 125.000 | 1000.00 | 0.00 | 0.00 | 802.20 | 6650.00 | 811.52 | 0.00 | 811.98 | 8.94 | 5.14 | 1406.02 | 2224.34 |
| 125.000 | 1000.00 | 0.00 | 0.00 | 802.20 | 6650.00 | 811.64 | 0.00 | 812.06 | 9.05 | 5.21 | 1312.97 | 2210.36 |

FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFUSP | DIFUSX | DIFRUS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 102.000 | 6700.00 | 798.85 | 0.00 | 0.00 | 0.22 | 3375.61 | 3575.00 |
| 102.000 | 6700.00 | 798.35 | 0.00 | 0.00 | -0.00 | 3539.40 | 3575.00 |
| 102.500 | 6700.00 | 799.36 | 0.00 | 0.51 | 0.00 | 3469.89 | 2951.00 |
| 102.500 | 6700.00 | 799.41 | 0.00 | 0.56 | 0.05 | 3696.22 | 2951.00 |
| 103.000 | 6700.00 | 799.73 | 0.00 | 0.36 | 0.00 | 2534.98 | 1590.00 |
| 103.000 | 6700.00 | 799.79 | 0.00 | 0.33 | 0.06 | 2290.00 | 1590.00 |
| 104.000 | 6700.00 | 801.06 | 0.00 | 1.24 | 0.00 | 2410.46 | 4025.00 |
| 104.000 | 6700.00 | 801.16 | 0.00 | 1.37 | 0.10 | 2105.59 | 4025.00 |
| 105.000 | 6700.00 | 801.32 | 0.00 | 0.26 | 0.00 | 2042.41 | 675.00 |
| 105.000 | 6700.00 | 801.41 | 0.00 | 0.26 | 0.10 | 1755.32 | 675.00 |
| 106.000 | 6700.00 | 801.95 | 0.00 | 0.63 | 0.00 | 1825.29 | 1435.00 |
| 106.000 | 6700.00 | 802.06 | 0.00 | 0.65 | 0.12 | 1603.20 | 1435.00 |
| 107.000 | 6700.00 | 802.87 | 0.00 | 0.92 | 0.00 | 1212.00 | 1275.00 |
| 107.000 | 6700.00 | 802.98 | 0.00 | 0.92 | 0.12 | 1145.95 | 1275.00 |
| 108.700 | 5800.00 | 803.36 | 0.00 | 0.49 | 0.00 | 247.45 | 1075.00 |
| 108.700 | 5800.00 | 803.46 | 0.00 | 0.46 | 0.11 | 173.71 | 1075.00 |
| 108.800 | 5800.00 | 803.59 | 0.00 | 0.23 | 0.00 | 107.10 | 350.00 |
| 108.800 | 5800.00 | 803.70 | 0.00 | 0.23 | 0.11 | 107.10 | 350.00 |
| 108.900 | 6700.00 | 803.48 | 0.00 | -0.11 | 0.00 | 107.10 | 1.00 |
| 108.900 | 6700.00 | 803.59 | 0.00 | -0.11 | 0.12 | 107.10 | 1.00 |
| 109.000 | 6700.00 | 803.68 | 0.00 | 0.21 | 0.00 | 107.10 | 35.00 |
| 109.000 | 6700.00 | 803.79 | 0.00 | 0.20 | 0.11 | 107.10 | 35.00 |
| 109.100 | 6700.00 | 803.74 | 0.00 | 0.06 | 0.00 | 107.10 | 1.00 |
| 109.100 | 6700.00 | 803.85 | 0.00 | 0.06 | 0.11 | 107.10 | 1.00 |
| 109.200 | 6700.00 | 804.02 | 0.00 | 0.28 | 0.00 | 248.91 | 100.00 |
| 109.200 | 6700.00 | 804.09 | 0.00 | 0.25 | 0.07 | 163.63 | 100.00 |
| 110.000 | 6700.00 | 804.61 | 0.00 | 0.58 | 0.00 | 344.74 | 650.00 |
| 110.000 | 6700.00 | 804.69 | 0.00 | 0.60 | 0.09 | 345.00 | 650.00 |
| 110.900 | 6700.00 | 805.36 | 0.00 | 0.75 | 0.00 | 450.00 | 3450.00 |
| 110.900 | 6700.00 | 805.42 | 0.00 | 0.73 | 0.07 | 450.00 | 3450.00 |
| 111.000 | 6700.00 | 805.33 | 0.00 | -0.03 | 0.00 | 450.00 | 2.00 |
| 111.000 | 6700.00 | 805.39 | 0.00 | -0.03 | 0.07 | 450.00 | 2.00 |
| 111.100 | 6700.00 | 805.37 | 0.00 | 0.04 | 0.00 | 450.00 | 2.00 |
| 111.100 | 6700.00 | 805.44 | 0.00 | 0.04 | 0.06 | 450.00 | 2.00 |
| 112.000 | 6700.00 | 805.64 | 0.00 | 0.27 | 0.00 | 321.74 | 1400.00 |
| 112.000 | 6700.00 | 805.70 | 0.00 | 0.24 | 0.06 | 322.25 | 1400.00 |

FORM 1-011-9R-PRINTED BY BOTANY MANIFOLD FORMS.

| SECNO | Z | CLSEL | DIFWSP | DIFUSR | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 113.000 | 6700.00 | 805.89 | 0.10 | 0.25 | 0.07 | 325.03 | 1700.00 |
| 113.000 | 6700.00 | 806.94 | 0.00 | 0.24 | 0.05 | 325.51 | 1700.00 |
| 114.000 | 6700.00 | 806.13 | 0.00 | 0.24 | 0.00 | 345.20 | 1450.00 |
| 114.000 | 6700.00 | 806.18 | 0.00 | 0.24 | 0.05 | 345.49 | 1450.00 |
| 115.000 | 6700.00 | 806.42 | 0.00 | 0.23 | 0.00 | 549.67 | 1500.00 |
| 115.000 | 6700.00 | 806.46 | 0.00 | 0.23 | 0.04 | 549.80 | 1500.00 |
| 115.700 | 6700.00 | 806.68 | 0.00 | 0.27 | 0.00 | 550.47 | 1600.00 |
| 115.700 | 6700.00 | 806.72 | 0.00 | 0.26 | 0.04 | 550.59 | 1600.00 |
| 115.800 | 6700.00 | 806.93 | 0.10 | 0.24 | 0.00 | 299.71 | 1300.00 |
| 115.800 | 6700.00 | 806.96 | 0.00 | 0.24 | 0.04 | 299.76 | 1300.00 |
| 115.900 | 6700.00 | 806.92 | 0.00 | -0.00 | 0.00 | 299.72 | 1.00 |
| 115.900 | 6700.00 | 806.96 | 0.00 | -0.00 | 0.04 | 299.76 | 1.00 |
| 115.000 | 6700.00 | 806.96 | 0.00 | 0.25 | 0.00 | 297.73 | 600.00 |
| 115.000 | 6700.00 | 837.00 | 0.00 | 0.26 | 0.04 | 298.40 | 600.00 |
| 116.100 | 6700.00 | 806.97 | 0.00 | 0.01 | 0.00 | 297.79 | 1.00 |
| 116.100 | 6700.00 | 807.01 | 0.00 | 0.01 | 0.04 | 298.40 | 1.00 |
| 116.200 | 6700.00 | 837.36 | 0.00 | 0.23 | 0.00 | 335.14 | 400.00 |
| 116.200 | 6700.00 | 807.09 | 0.00 | 0.23 | 0.04 | 446.20 | 400.00 |
| 117.000 | 6700.00 | 807.50 | 0.00 | 0.44 | 0.00 | 332.51 | 2000.00 |
| 117.000 | 6700.00 | 807.55 | 0.00 | 0.46 | 0.06 | 334.02 | 2000.00 |
| 117.900 | 6700.00 | 807.75 | 0.00 | 0.23 | 0.00 | 290.07 | 1300.00 |
| 117.900 | 6700.00 | 807.80 | 0.00 | 0.23 | 0.04 | 290.28 | 1300.00 |
| 118.000 | 6700.00 | 807.75 | 0.00 | 0.00 | 0.00 | 291.37 | 40.00 |
| 118.000 | 6700.00 | 807.85 | 0.00 | 0.05 | 0.10 | 291.01 | 40.00 |
| 118.100 | 6700.00 | 807.83 | 0.00 | 0.07 | 0.00 | 272.71 | 400.00 |
| 118.100 | 6700.00 | 807.92 | 0.00 | 0.07 | 0.09 | 223.57 | 400.00 |
| 119.000 | 6700.00 | 807.98 | 0.00 | 0.16 | 0.00 | 287.79 | 500.00 |
| 119.000 | 6700.00 | 808.08 | 0.00 | 0.16 | 0.10 | 238.11 | 500.00 |
| 120.800 | 6700.00 | 808.19 | 0.00 | 0.21 | 0.00 | 323.10 | 930.00 |
| 120.800 | 6700.00 | 808.29 | 0.00 | 0.21 | 0.10 | 269.27 | 930.00 |
| 121.000 | 6700.00 | 808.71 | 0.00 | 0.52 | 0.00 | 261.20 | 2650.00 |
| 121.000 | 6700.00 | 808.81 | 0.00 | 0.52 | 0.10 | 240.89 | 2650.00 |
| 121.800 | 6700.00 | 808.82 | 0.00 | 0.11 | 0.00 | 160.52 | 700.00 |
| 121.800 | 6700.00 | 808.92 | 0.00 | 0.11 | 0.10 | 161.00 | 700.00 |
| 121.900 | 6700.00 | 808.81 | 0.00 | -0.01 | 0.00 | 160.50 | 1.00 |
| 121.900 | 6700.00 | 808.91 | 0.00 | -0.01 | 0.11 | 160.97 | 1.00 |
| 122.000 | 6700.00 | 808.88 | 0.00 | 0.08 | 0.00 | 160.27 | 58.00 |
| 122.000 | 6700.00 | 808.99 | 0.00 | 0.07 | 0.10 | 160.75 | 58.00 |

FORM 1411-GO PRINTED BY DOTARY MANIFOLD FORMS.

| SECNO | Q | CUSEL | DIFWSP | DIFWSX | DIFKUS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 122.100 | 6700.00 | 309.92 | 0.00 | 0.04 | 0.00 | 160.47 | 1.00 |
| 122.100 | 6700.00 | 309.02 | 0.00 | 0.04 | 0.10 | 160.91 | 1.00 |
| 122.200 | 6700.00 | 309.32 | 0.00 | 0.45 | 0.02 | 166.52 | 200.00 |
| 122.200 | 6700.00 | 309.40 | 0.00 | 0.38 | 0.03 | 152.83 | 200.00 |
| 123.000 | 6700.00 | 809.73 | 0.00 | 0.41 | 0.00 | 165.77 | 1100.00 |
| 123.000 | 6700.00 | 809.83 | 0.00 | 0.43 | 0.10 | 165.20 | 1100.00 |
| 123.800 | 6700.00 | 810.14 | 0.00 | 0.42 | 0.00 | 166.20 | 700.00 |
| 123.800 | 6700.00 | 810.23 | 0.00 | 0.40 | 0.09 | 166.56 | 700.00 |
| 123.900 | 6700.00 | 810.13 | 0.00 | -0.01 | 0.00 | 165.16 | 1.00 |
| 123.900 | 6700.00 | 810.22 | 0.00 | -0.01 | 0.09 | 165.54 | 1.00 |
| 124.000 | 6700.00 | 810.12 | 0.00 | -0.01 | 0.00 | 162.91 | 50.00 |
| 124.000 | 6700.00 | 810.21 | 0.00 | -0.01 | 0.09 | 163.27 | 50.00 |
| 124.100 | 6700.00 | 810.17 | 0.00 | 0.05 | 0.00 | 165.11 | 1.00 |
| 124.100 | 6700.00 | 810.26 | 0.00 | 0.05 | 0.09 | 165.70 | 1.00 |
| 124.200 | 6650.00 | 810.43 | 0.00 | 0.26 | 0.00 | 174.13 | 200.00 |
| 124.200 | 6650.00 | 810.49 | 0.00 | 0.23 | 0.06 | 143.62 | 200.00 |
| 125.000 | 6650.00 | 811.56 | 0.00 | 1.13 | 0.00 | 142.15 | 1020.00 |
| 125.000 | 6650.00 | 811.64 | 0.00 | 1.15 | 0.03 | 160.10 | 1020.00 |

SUMMARY OF ERRORS

PRINTED IN U.S.A.

FORM 1611-CD PRINTED BY NOTARY MANIFOLD FORMS,

FLOODWAY DATA, KALAMAZOO RIVER
PROFILE NO. 2

| STATION | FLOODWAY WIDTH (FT) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WATER SURFACE ELEVATION WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 102.300 | 3039. | 9481. | 0.7 | 798.9 | 798.9 | 0.0 |
| 102.500 | 3098. | 8543. | 0.8 | 799.4 | 799.4 | 0.0 |
| 103.000 | 2210. | 6352. | 1.1 | 799.8 | 799.7 | 0.1 |
| 104.000 | 2106. | 7711. | 0.9 | 801.2 | 801.1 | 0.1 |
| 105.000 | 1750. | 6325. | 1.1 | 801.4 | 801.3 | 0.1 |
| 106.000 | 1608. | 5779. | 1.3 | 802.0 | 801.9 | 0.1 |
| 107.000 | 1146. | 4795. | 1.4 | 803.0 | 802.9 | 0.1 |
| 108.700 | 174. | 1434. | 4.0 | 805.5 | 805.4 | 0.1 |
| 108.800 | 107. | 1065. | 5.6 | 805.7 | 805.6 | 0.1 |
| 108.900 | 107. | 1002. | 6.7 | 803.6 | 803.5 | 0.1 |
| 109.000 | 107. | 1089. | 6.2 | 803.8 | 803.7 | 0.1 |
| 109.100 | 107. | 1151. | 5.9 | 805.8 | 805.7 | 0.1 |
| 109.200 | 161. | 1484. | 4.5 | 804.1 | 804.0 | 0.1 |
| 110.000 | 345. | 2656. | 3.5 | 804.9 | 804.8 | 0.1 |
| 110.900 | 450. | 2855. | 2.3 | 805.5 | 805.4 | 0.1 |
| 111.000 | 450. | 2491. | 2.7 | 805.4 | 805.3 | 0.1 |
| 111.100 | 450. | 2365. | 2.3 | 805.5 | 805.4 | 0.1 |
| 112.000 | 322. | 2972. | 2.5 | 805.7 | 805.6 | 0.1 |
| 113.000 | 324. | 2635. | 2.4 | 806.0 | 805.9 | 0.1 |
| 114.000 | 345. | 2791. | 2.4 | 806.1 | 806.1 | 0.0 |
| 115.000 | 550. | 3753. | 1.8 | 806.4 | 806.4 | 0.0 |
| 115.700 | 551. | 3902. | 1.7 | 806.7 | 806.7 | 0.0 |
| 115.800 | 300. | 2372. | 2.8 | 806.9 | 806.9 | 0.0 |
| 115.900 | 300. | 2301. | 2.9 | 806.9 | 806.9 | 0.1 |
| 116.000 | 298. | 2459. | 2.7 | 807.0 | 807.0 | 0.0 |
| 116.100 | 298. | 2539. | 2.6 | 807.0 | 807.0 | 0.0 |
| 116.200 | 246. | 2262. | 3.0 | 807.1 | 807.1 | 0.0 |
| 117.000 | 334. | 2789. | 2.4 | 807.6 | 807.5 | 0.1 |
| 117.900 | 290. | 2486. | 2.7 | 807.8 | 807.7 | 0.1 |
| 118.000 | 292. | 2588. | 2.6 | 807.9 | 807.8 | 0.1 |
| 118.100 | 224. | 2135. | 3.1 | 807.9 | 807.8 | 0.1 |
| 119.000 | 250. | 2347. | 2.8 | 808.1 | 808.0 | 0.1 |
| 120.000 | 265. | 2542. | 2.6 | 808.3 | 808.2 | 0.1 |
| 121.000 | 241. | 2456. | 2.7 | 808.8 | 808.7 | 0.1 |
| 121.800 | 161. | 1249. | 5.4 | 808.9 | 808.8 | 0.1 |
| 121.900 | 161. | 1216. | 5.5 | 808.9 | 808.8 | 0.1 |
| 122.000 | 161. | 1220. | 5.5 | 809.0 | 808.9 | 0.1 |
| 122.100 | 161. | 1257. | 5.3 | 809.0 | 808.9 | 0.1 |
| 122.200 | 153. | 1719. | 3.9 | 809.4 | 809.3 | 0.1 |
| 123.000 | 185. | 1634. | 4.1 | 809.8 | 809.7 | 0.1 |
| 123.800 | 167. | 1377. | 4.9 | 810.2 | 810.1 | 0.1 |
| 123.900 | 167. | 1338. | 5.0 | 810.2 | 810.1 | 0.1 |
| 124.000 | 163. | 1137. | 5.9 | 810.2 | 810.1 | 0.1 |
| 124.100 | 163. | 1176. | 5.7 | 810.3 | 810.2 | 0.1 |
| 124.200 | 144. | 1191. | 5.6 | 810.5 | 810.4 | 0.1 |
| 125.000 | 160. | 1313. | 5.1 | 811.7 | 811.6 | 0.1 |

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************
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PRINTED IN U.S.A.
FORM 1411-CD PRINTED BY ROTARY MANIFOLD FORMS.




1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp

3) WATERCOURSE: Kalamazoo River.

4) DOCUMENT TYPE: 100 yr natural



```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

C
T1 REDFORD TOWNSHIP AND CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2 KALAMAZOO RIVER FROM KALAMAZOO/CALHOUN COUNTY BOUNDARY TO BATTLE CREEK RIVER
T3       KALAMAZOO RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        4.        0.        0.  0.000221      0.00      0.0        0.   793.630     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000    10.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    110.000   150.000   200.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

LT      0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000     0.000
QT      5.000  4390.000  6000.000  6700.000  6700.000  8420.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.040     0.100     0.300     0.000     0.000     0.000     0.000     0.000


        CROSS SECTION 102A

X1    102.000    34.000  2023.000  2234.000  1100.000   400.000  3575.000     0.000     0.000     0.000
GR    810.000     0.000   806.000   100.000   805.600   250.000   802.700   450.000   800.000   534.000
GR    795.600   588.000   795.000   850.000   794.800  1026.000   793.700  1118.000   795.700  1348.000
GR    796.200  1528.000   797.000  1632.000   794.600  1714.000   796.000  1804.000   795.700  2016.000
GR    794.300  2023.000   792.000  2049.000   791.300  2079.000   789.800  2109.000   790.600  2139.000
GR    791.300  2169.000   790.100  2199.000   793.700  2234.000   795.200  2241.000   795.900  2249.000
GR    797.800  2438.000   797.000  2800.000   796.600  3250.000   795.600  3450.000   796.500  3628.000
GR    796.800  3872.000   799.000  3934.000   807.000  3990.000   810.600  4086.000     0.000     0.000


        CROSS SECTION 102C

X1    102.500    32.000  3697.000  3902.000  1050.000  1200.000  2950.000     0.000     0.000     0.000
GR    805.500     0.000   806.200   130.000   803.700   158.000   801.200   214.000   800.300   290.000
GR    800.000   516.000   797.400   718.000   793.400   868.000   797.100   962.000   798.800  1128.000
GR    796.400  1366.000   797.800  1646.000   797.000  1926.000   798.700  2166.000   798.400  2398.000
GR    796.600  2568.000   796.000  2700.000   796.200  3100.000   796.400  3550.000   797.400  3692.000
GR    792.400  3697.000   789.500  3712.000   791.000  3722.000   792.200  3772.000   792.500  3812.000
GR    792.100  3867.000   792.700  3902.000   796.200  3907.000   796.700  3912.000   796.200  3962.000
GR    800.000  4350.000   810.000  4150.000     0.000     0.000     0.000     0.000     0.000     0.000


        CROSS SECTION 103.

X1    103.000    29.000  2669.000  2809.000   400.000  1300.000  1590.000     0.000     0.000     0.000
GR    805.300     0.000   807.000   134.000   803.700   158.000   801.200   214.000   800.300   290.000
GR    800.000   516.000   797.400   718.000   793.400   868.000   797.100   962.000   798.800  1128.000
GR    796.400  1366.000   797.800  1646.000   797.000  1926.000   798.700  2166.000   798.400  2398.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 791.900 | 2715.000 | 799.500 | 2744.000 | 790.100 | 2735.300 | 795.800 | 2839.300 | 797.100 | 2[illegible] |
| GR | 796.900 | 2922.000 | 797.200 | 3050.000 | 801.300 | 3[illegible] | 805.200 | 3102.300 | 0.300 | 0.000 |

CROSS SECTION 104

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 104.300 | 20.100 | 1552.000 | 1561.200 | 1[illegible] | 3001.000 | 4[illegible] | 0.300 | 0.000 | [illegible] |
| GR | 808.000 | 142.000 | 802.400 | 656.000 | 801.500 | 7[illegible] | 797.700 | 706.000 | 798.400 | 1144.000 |
| GR | 800.100 | 1334.000 | 800.300 | 1446.000 | 795.800 | 1453.000 | 788.100 | 1486.000 | 791.800 | 1507.000 |
| GR | 793.200 | 1536.000 | 795.000 | 1561.000 | 796.300 | 1566.000 | 797.100 | 1576.000 | 798.100 | 1593.000 |
| GR | 798.900 | 1607.000 | 797.400 | 1720.000 | 797.400 | 1935.000 | 795.000 | 2132.000 | 797.100 | 2273.000 |
| GR | 796.000 | 2464.000 | 798.000 | 2666.000 | 797.300 | 2682.000 | 758.000 | 3078.000 | 801.200 | 3582.000 |
| GR | 801.800 | 3510.000 | 805.800 | 3618.000 | 818.500 | 3660.300 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 105

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 105.500 | 29.000 | 1137.000 | 1303.000 | 675.000 | 675.300 | 675.300 | 0.300 | 0.100 | 0.000 |
| GR | 806.300 | 0.000 | 807.700 | 119.000 | 805.200 | 154.000 | 803.500 | 306.300 | 632.100 | 436.000 |
| GR | 802.300 | 636.000 | 801.400 | 602.000 | 797.600 | 936.000 | 799.400 | 1121.000 | 798.900 | 1131.000 |
| GR | 795.500 | 1137.000 | 793.500 | 1161.000 | 793.000 | 1191.000 | 793.500 | 1220.000 | 793.300 | 1241.000 |
| GR | 793.700 | 1271.000 | 796.500 | 1303.000 | 800.200 | 1306.000 | 800.600 | 1311.000 | 796.300 | 1512.000 |
| GR | 797.700 | 1754.000 | 797.800 | 1843.000 | 797.000 | 2091.000 | 797.300 | 2220.300 | 797.400 | 2310.000 |
| GR | 799.200 | 2474.000 | 799.300 | 2696.000 | 799.000 | 2841.000 | 310.000 | 2850.000 | 0.000 | 0.000 |

CROSS SECTION 106

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 106.000 | 20.000 | 278.100 | 366.000 | 1436.000 | 1000.000 | 1435.000 | 0.100 | 0.000 | 0.100 |
| GR | 320.000 | 0.700 | 812.600 | 100.000 | 812.300 | 228.000 | 811.600 | 253.000 | 812.000 | 263.000 |
| GR | 796.800 | 276.000 | 790.900 | 298.000 | 790.900 | 323.000 | 790.900 | 348.000 | 795.100 | 363.000 |
| GR | 799.800 | 378.000 | 799.200 | 464.000 | 800.000 | 660.000 | 800.400 | 894.000 | 800.700 | 1066.000 |
| GR | 799.800 | 1360.000 | 800.600 | 1608.000 | 800.400 | 1694.000 | 799.900 | 2099.000 | 810.000 | 2100.000 |
| NH | 5.000 | 0.120 | 429.000 | 0.040 | 485.000 | 0.120 | 808.000 | 0.040 | 916.000 | 0.120 |
| NR | 1600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 107

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 107.000 | 27.000 | 808.000 | 916.000 | 550.000 | 600.000 | 1275.000 | 0.000 | 0.000 | 0.000 |
| GR | 823.000 | 0.000 | 813.000 | 90.000 | 815.200 | 130.000 | 808.200 | 164.000 | 815.000 | 215.000 |
| GR | 807.400 | 374.000 | 798.600 | 400.000 | 800.300 | 424.000 | 797.100 | 429.000 | 795.800 | 444.000 |
| GR | 795.300 | 457.000 | 796.200 | 474.000 | 796.300 | 485.000 | 799.300 | 489.000 | 798.700 | 629.000 |
| GR | 798.400 | 764.000 | 802.100 | 803.000 | 797.100 | 808.000 | 788.900 | 833.000 | 794.200 | 862.000 |
| GR | 794.900 | 893.000 | 796.200 | 916.000 | 800.200 | 923.000 | 800.200 | 1172.000 | 799.700 | 1628.000 |
| GR | 798.100 | 1599.000 | 810.200 | 1600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 3790.000 | 5209.000 | 5300.000 | 5800.300 | 7290.000 | 0.000 | 0.000 | 0.000 | 0.000 |

350 FT D/S CUSTER RD.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 104.700 | 10.000 | 85.000 | 236.000 | 700.300 | 1075.000 | 1075.000 | 0.000 | 0.000 | 0.000 |
| GR | 810.000 | 0.000 | 797.500 | 85.000 | 794.400 | 100.000 | 792.800 | 156.000 | 793.100 | 173.000 |
| GR | 794.500 | 205.000 | 798.500 | 219.000 | 790.900 | 236.000 | 800.500 | 268.000 | 814.000 | 350.000 |

D/S CUSTER RD. ACROSS SECTION 103

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 104.800 | 15.000 | 1410.400 | 1517.600 | 350.300 | 350.000 | 350.000 | 0.000 | 0.000 | 0.000 |
| GR | 810.700 | 1410.400 | 796.700 | 1410.500 | 795.400 | 1426.000 | 794.000 | 1445.000 | 793.000 | 1445.100 |
| GR | 793.000 | 1446.500 | 793.000 | 1446.700 | 793.400 | 1464.000 | 794.300 | 1481.300 | 794.500 | 1514.400 |
| GR | 794.300 | 1482.900 | 794.300 | 1483.000 | 795.000 | 1502.000 | 797.100 | 1517.500 | 813.700 | 1517.600 |
| QT | 5.100 | 4390.000 | 6020.200 | 6700.000 | 6700.300 | 8620.500 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411-00-PRINTED BY ROTARY MANIFOLD FORMS

D/S FACE CUSTER RD. CROSS SECTION 108

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 109.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| AT | 12.000 | 1410.400 | 810.700 | 0.000 | 1410.500 | 810.700 | 808.700 | 1445.000 | 810.700 | 808.700 |
| BT | 1445.100 | 810.700 | 0.000 | 1446.600 | 810.700 | 0.000 | 1446.700 | 810.700 | 808.700 | 1461.300 |
| BT | 810.700 | 808.700 | 1461.600 | 810.700 | 0.000 | 1462.900 | 810.700 | 0.000 | 1483.000 | 810.700 |
| DT | 808.700 | 1517.500 | 810.700 | 808.700 | 1517.600 | 810.700 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE CUSTER RD. CROSS SECTION 108 & 109

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 109.000 | 15.000 | 1410.400 | 1517.600 | 35.000 | 35.000 | 35.000 | 0.000 | 0.000 | 0.000 |
| DT | 12.000 | 1410.400 | 810.700 | 0.000 | 1410.500 | 810.700 | 808.700 | 1445.000 | 810.700 | 808.700 |
| BT | 1445.100 | 810.700 | 0.000 | 1446.600 | 810.700 | 0.000 | 1446.700 | 810.700 | 808.700 | 1461.300 |
| BT | 810.700 | 808.700 | 1461.600 | 810.700 | 0.000 | 1462.900 | 810.700 | 0.000 | 1483.000 | 810.700 |
| DT | 808.700 | 1517.500 | 810.700 | 808.700 | 1517.600 | 810.700 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 810.700 | 1410.400 | 796.700 | 1410.500 | 796.200 | 1426.000 | 791.600 | 1445.000 | 791.600 | 1445.100 |
| GR | 791.300 | 1446.600 | 791.600 | 1446.700 | 790.700 | 1464.000 | 794.300 | 1481.300 | 794.300 | 1481.400 |
| GR | 794.300 | 1462.900 | 794.300 | 1483.000 | 793.400 | 1502.000 | 796.500 | 1517.500 | 810.700 | 1517.600 |

U/S CUSTER RD. ACROSS SECTION 106

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 109.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

100 FT U/S CUSTER RD.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 109.200 | 9.000 | 1410.300 | 1517.500 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 808.000 | 1500.000 | 796.700 | 1410.500 | 794.200 | 1426.000 | 791.600 | 1445.000 | 790.100 | 1464.000 |
| GR | 794.300 | 1481.000 | 793.400 | 1502.000 | 796.500 | 1517.500 | 808.000 | 1625.000 | 0.000 | 0.000 |
| NC | 0.100 | 0.100 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 110 SURVEY SECTION 4

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 110.000 | 31.000 | 1698.000 | 1937.000 | 650.000 | 650.000 | 650.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1632.000 | 0.000 | 1994.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 813.900 | 666.000 | 809.600 | 732.000 | 805.700 | 772.000 | 803.600 | 820.000 | 803.200 | 966.000 |
| GR | 803.300 | 1078.000 | 801.700 | 1186.000 | 799.200 | 1300.000 | 799.200 | 1442.000 | 801.400 | 1532.000 |
| GR | 802.800 | 1602.000 | 804.000 | 1632.000 | 802.800 | 1666.000 | 801.700 | 1688.000 | 798.400 | 1696.000 |
| GR | 794.900 | 1748.000 | 793.300 | 1804.000 | 793.600 | 1853.000 | 795.000 | 1913.000 | 799.000 | 1937.000 |
| GR | 799.400 | 1944.000 | 801.000 | 1966.000 | 805.700 | 1980.000 | 809.500 | 1996.000 | 809.500 | 2004.000 |
| GR | 804.300 | 2016.000 | 801.100 | 2100.000 | 802.400 | 2420.000 | 802.800 | 2830.000 | 804.100 | 2970.000 |
| GR | 871.600 | 3120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.100 | 0.100 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 110.900 | 25.000 | 1120.000 | 1385.000 | 3150.000 | 3750.000 | 3450.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1036.000 | 0.000 | 1686.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GT | 811.300 | 620.000 | 802.800 | 782.000 | 803.200 | 930.000 | 796.600 | 990.000 | 802.300 | 1036.000 |
| GR | 802.600 | 1109.000 | 800.600 | 1111.000 | 799.200 | 1120.000 | 796.300 | 1151.000 | 795.100 | 1196.000 |
| GR | 795.300 | 1233.000 | 795.600 | 1277.000 | 796.100 | 1329.000 | 800 | 1365.000 | 802.700 | 1400.000 |
| GR | 803.400 | 1466.700 | 804.600 | 1488.000 | 802.700 | 1562.000 | 804.600 | 1734.000 | 804.400 | 1896.000 |
| GR | 804.700 | 2036.000 | 802.900 | 2248.000 | 802.900 | 2292.000 | 801.200 | 2310.000 | 810.600 | 2694.000 |

TOP OF 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 111.700 | 0.000 | 0.000 | 0.000 | | | | | | |

FORM 1411-60 PRINTED IN U.S.A. PRIMARY MANIFOLD FORMS.

FORM 1411-05-PRINTED BY ROTARY MANIFOLD FORMS.

PRINTED IN U.S.A.

0/S BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.000 | 25.000 | 1005.000 | 1255.000 | 1400.000 | 1500.000 | 1450.000 | 0.000 | 0.300 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 964.000 | 0.000 | 1336.000 | 0.000 | 0.200 | 0.000 | 0.000 |
| 4R | 825.000 | 694.000 | 825.300 | 754.000 | 826.000 | 813.800 | 876.000 | 810.900 | 936.000 | |
| 5R | 908.500 | 932.000 | 805.900 | 964.000 | 905.600 | 980.020 | 1005.020 | 795.100 | 1027.200 | |
| 6R | 795.100 | 1056.000 | 796.900 | 1120.000 | 794.700 | 795.100 | 1175.000 | 1205.000 | 796.500 | 1223.000 |
| 6R | 800.600 | 1255.000 | 802.600 | 1275.000 | 803.900 | 811.000 | 1296.000 | 1338.000 | 805.400 | 1443.000 |
| 6R | 805.600 | 1550.000 | 610.000 | 1606.000 | 811.000 | 1646.020 | 1748.000 | 308.100 | 820.000 | 1748.000 |

CROSS SECTION 115 SURVEY SECTION 9

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.000 | 26.000 | 760.000 | 1016.000 | 1200.000 | 1700.000 | 1500.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 500.000 | 0.000 | 1066.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6R | 817.000 | 172.000 | 812.900 | 254.000 | 912.000 | 736.000 | 812.000 | 500.000 | 852.400 | 507.300 |
| 6R | 801.200 | 584.000 | 801.300 | 694.000 | 802.400 | 736.300 | 802.900 | 749.000 | 799.120 | 790.000 |
| 5R | 795.600 | 773.000 | 796.200 | 796.700 | 796.430 | 735.000 | 913.000 | 796.800 | 796.800 | 953.000 |
| 3R | 800.300 | 1016.000 | 805.100 | 1022.000 | 804.200 | 1044.020 | 812.000 | 1066.000 | 812.003 | 1102.000 |
| 3R | 821.400 | 1772.000 | 0.000 | 0.000 | 0.000 | 0.003 | 0.000 | 0.000 | 0.000 | 3.000 |
| 6R | 306.400 | 1204.000 | 804.200 | 1438.000 | 806.200 | 1034.000 | 813.700 | 1670.000 | 815.800 | 1716.000 |

1300 FT O/S BEDFORD RD. SURVEY SECTION 9 REPEATED

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 175.700 | 0.300 | 0.000 | 0.000 | 1800.000 | 1400.000 | 1600.000 | 0.300 | 0.600 | 0.000 |
| X3 | 0.000 | 0.200 | 0.000 | 0.000 | 500.000 | 0.000 | 1666.300 | 0.300 | 0.000 | 0.000 |
| NC | 0.700 | 0.900 | 0.755 | 0.300 | 0.502 | 0.300 | 0.000 | 0.300 | 0.000 | 0.000 |

0/S BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.800 | 29.000 | 0.000 | 332.000 | 1300.700 | 1500.000 | 1300.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 113 SURVEY SECTION 9

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.000 | 25.000 | 1255.000 | 1400.000 | 1500.000 | 1450.000 | 0.000 | 0.300 | 0.000 | |
| X3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1666.300 | 0.000 | 0.000 | 0.000 | |
| X4 | 175.700 | 0.300 | 0.000 | 0.000 | 1800.000 | 1400.000 | 1600.000 | 0.300 | 0.600 | 0.000 |
| X3 | 0.000 | 0.200 | 0.000 | 0.000 | 500.000 | 0.000 | 1666.300 | 0.300 | 0.000 | 0.000 |
| NC | 0.700 | 0.900 | 0.755 | 0.300 | 0.502 | 0.300 | 0.000 | 0.300 | 0.000 | 0.000 |

CROSS SECTION 114 SURVEY SECTION 8

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 114.000 | 25.000 | 1005.000 | 1255.000 | 1400.000 | 1500.000 | 1450.000 | 0.000 | 0.300 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 964.000 | 0.000 | 1336.000 | 0.000 | 0.200 | 0.000 | 0.000 |
| 4R | 825.000 | 694.000 | 825.300 | 754.000 | 826.000 | 813.800 | 876.000 | 810.900 | 936.000 | |
| 5R | 908.500 | 932.000 | 805.900 | 964.000 | 905.600 | 980.020 | 1005.020 | 795.100 | 1027.200 | |
| 6R | 795.100 | 1056.000 | 796.900 | 1120.000 | 794.700 | 795.100 | 1175.000 | 1205.000 | 796.500 | 1223.000 |
| 6R | 800.600 | 1255.000 | 802.600 | 1275.000 | 803.900 | 811.000 | 1296.000 | 1338.000 | 805.400 | 1443.000 |
| 6R | 805.600 | 1550.000 | 610.000 | 1606.000 | 811.000 | 1646.020 | 1748.000 | 308.100 | 820.000 | 1748.000 |

CROSS SECTION 112 SURVEY SECTION 6

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 112.000 | 25.000 | 1230.000 | 1312.000 | 1300.000 | 950.000 | 1413.020 | 1.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1092.000 | 0.000 | 1544.020 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6R | 822.500 | 1050.000 | 812.500 | 1092.000 | 806.600 | 1114.020 | 1204.000 | 803.200 | 1220.000 | |
| 6R | 600.100 | 1234.000 | 794.700 | 1290.000 | 795.000 | 1320.020 | 1370.000 | 794.100 | 1445.000 | |
| 6R | 796.500 | 1466.000 | 800.200 | 1310.000 | 805.300 | 1532.000 | 805.200 | 801.200 | 1525.100 | |
| 6R | 805.300 | 1612.000 | 805.320 | 1906.020 | 1912.020 | 2026.020 | 708.000 | 813.400 | 2.25.100 | |

CROSS SECTION 113 SURVEY SECTION 7

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.000 | 25.000 | 1252.000 | 1320.000 | 1270.000 | 1700.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1466.000 | 0.000 | 1422.000 | 0.020 | 0.000 | 0.000 | 0.000 |
| 6R | 311.000 | 1452.000 | 819.800 | 1296.000 | 819.900 | 1342.020 | 1432.020 | 1.000 | 1466.000 | |
| 6R | 795.200 | 1486.000 | 804.100 | 1496.000 | 799.900 | 1505.000 | 1537.000 | 796.500 | 1814.000 | |
| 6R | 794.500 | 1654.000 | 794.200 | 1685.000 | 795.400 | 1728.000 | 1769.000 | 800.300 | 1804.000 | 1729.000 |
| 6R | 807.400 | 1810.000 | 308.200 | 1822.000 | 608.000 | 1842.020 | 1966.000 | 802.300 | 2166.020 | |
| 6R | 802.900 | 2306.000 | 302.100 | 2440.000 | 820.000 | 2510.020 | 0.000 | 0.000 | 0.000 | |

0/S ... INCH ENCLOSED SERIES CONCRETE CURB SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 111.700 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1438.000 | 1038.000 | 0.000 | 0.000 | 0.000 |

7973

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 816.000 | 0.000 | 809.000 | 1.000 | 807.000 | 20.000 | 815.600 | 35.000 | 799.200 | 54.000 |
| GR | 797.900 | 65.000 | 797.900 | 65.100 | 797.900 | 66.900 | 797.900 | 67.000 | 796.200 | 99.000 |
| GR | 797.600 | 131.000 | 797.600 | 131.100 | 797.600 | 132.900 | 797.600 | 133.000 | 797.600 | 165.000 |
| GR | 797.200 | 197.000 | 797.200 | 197.100 | 797.200 | 198.900 | 797.200 | 199.000 | 797.400 | 231.000 |
| GR | 797.900 | 263.000 | 797.900 | 263.100 | 797.900 | 264.900 | 797.900 | 265.000 | 799.200 | 281.000 |
| GR | 803.600 | 292.000 | 803.600 | 296.000 | 808.200 | 329.000 | 816.000 | 330.000 | 0.000 | 0.000 |

D/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 115.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 20.000 | 0.000 | 816.000 | 0.000 | 1.000 | 816.000 | 811.600 | 65.000 | 816.000 | 811.600 |
| BT | 65.100 | 816.000 | 0.000 | 66.900 | 815.000 | 0.000 | 67.000 | 816.000 | 811.600 | 131.000 |
| BT | 816.000 | 811.600 | 131.100 | 816.000 | 0.000 | 132.900 | 816.000 | 0.000 | 133.000 | 816.000 |
| BT | 811.600 | 197.000 | 816.000 | 811.600 | 197.100 | 816.000 | 0.000 | 198.900 | 816.000 | 0.000 |
| BT | 199.000 | 816.000 | 811.600 | 263.000 | 816.000 | 811.600 | 263.100 | 816.000 | 0.000 | 264.900 |
| BT | 816.000 | 0.000 | 265.000 | 816.000 | 811.600 | 329.000 | 816.000 | 811.600 | 330.000 | 816.000 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.000 | 25.000 | 0.000 | 330.000 | 64.000 | 64.000 | 64.000 | 0.000 | 0.000 | 0.000 |
| BT | 20.000 | 0.000 | 816.000 | 0.000 | 1.000 | 816.000 | 811.600 | 65.000 | 816.000 | 811.600 |
| BT | 65.100 | 816.000 | 0.000 | 66.900 | 815.000 | 0.000 | 67.000 | 816.000 | 811.600 | 131.000 |
| BT | 816.000 | 811.600 | 131.100 | 816.000 | 0.000 | 132.900 | 816.000 | 0.000 | 133.000 | 816.000 |
| BT | 811.600 | 197.000 | 816.000 | 811.600 | 197.100 | 816.000 | 0.000 | 198.900 | 816.000 | 0.000 |
| BT | 199.000 | 816.000 | 811.600 | 263.000 | 816.000 | 811.600 | 263.100 | 816.000 | 0.000 | 264.900 |
| BT | 816.000 | 0.000 | 265.000 | 816.000 | 811.600 | 329.000 | 816.000 | 811.600 | 330.000 | 816.000 |
| BT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 816.000 | 0.000 | 810.000 | 1.000 | 807.200 | 20.000 | 805.700 | 35.000 | 799.100 | 54.000 |
| GR | 797.200 | 65.000 | 797.200 | 65.100 | 797.200 | 66.900 | 797.200 | 67.000 | 796.700 | 99.000 |
| GR | 796.200 | 131.000 | 796.200 | 131.100 | 796.200 | 132.900 | 796.200 | 133.000 | 797.400 | 165.000 |
| GR | 796.700 | 197.000 | 796.700 | 197.100 | 796.700 | 198.900 | 796.700 | 199.000 | 797.100 | 231.000 |
| GR | 796.000 | 263.000 | 796.000 | 263.100 | 796.000 | 264.900 | 796.000 | 265.000 | 797.000 | 281.000 |
| GR | 803.200 | 292.000 | 803.600 | 296.000 | 808.200 | 329.000 | 816.000 | 330.000 | 0.000 | 0.000 |

U/S BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

350 FT U/S BEDFORD RD.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.200 | 18.000 | 330.000 | 576.000 | 400.000 | 400.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 815.400 | 0.000 | 817.500 | 122.000 | 813.100 | 160.000 | 813.800 | 270.000 | 807.200 | 296.000 |
| GR | 805.300 | 317.000 | 799.000 | 330.000 | 796.900 | 368.000 | 797.100 | 413.000 | 798.400 | 453.000 |
| GR | 797.400 | 493.000 | 797.600 | 533.000 | 801.100 | 576.000 | 804.400 | 583.000 | 806.200 | 648.000 |
| GR | 813.000 | 690.000 | 814.200 | 764.000 | 814.800 | 808.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.100 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 117 SURVEY SECTION 12

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.000 | 22.000 | 1075.000 | 1325.000 | 2000.000 | 2000.000 | 2000.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 878.000 | 0.000 | 1420.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.600 | 762.000 | 820.400 | 762.000 | 809.600 | 762.000 | 810.700 | 878.000 | 810.100 | 940.000 |
| GR | 813.400 | 986.000 | 806.000 | 1046.000 | 801.300 | 1066.000 | 799.100 | 1075.000 | 797.100 | 1100.000 |
| GR | 797.200 | 1165.000 | 796.700 | 1200.000 | 797.200 | 1255.000 | 797.300 | 1295.000 | 799.200 | 1325.000 |
| GR | 805.900 | 1336.000 | 808.000 | 1375.000 | 811.300 | 1420.000 | 810.500 | 1454.000 | 805.800 | 1470.000 |
| GR | 803.400 | 1650.000 | 820.400 | 1650.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.100 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE 20 TH STREET SURVEY SECTION 13

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 117.900 | 6.000 | 9.000 | 314.000 | 1300.000 | 1300.000 | 1300.000 | 0.000 | 0.000 | 0.000 |
| X2 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 814.200 | 814.200 | 0.000 |
| GR | 816.100 | 0.000 | 812.300 | 0.000 | 798.600 | 47.000 | 796.600 | 297.000 | 811.700 | 516.000 |
| GR | 816.700 | 326.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SL | 7.050 | 1.505 | 3.000 | 0.000 | 250.300 | 10.000 | 4550.000 | 2.200 | 798.300 | 798.600 |

D/S FACE 20 TH STREET SURVEY SECTION 13

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 116.000 | 0.000 | 0.000 | 0.000 | 40.000 | 40.000 | 40.000 | 0.000 | -0.300 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 814.200 | 816.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 814.200 | 814.200 | 0.000 |

400 FT U/S 20 TH STREET SURVEY SECTION 14

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 118.700 | 19.000 | 657.000 | 878.000 | 400.000 | 430.000 | 400.000 | 0.000 | 0.000 | 0.000 |
| GR | 612.000 | 212.000 | 811.200 | 364.000 | 811.200 | 566.000 | 612.000 | 626.000 | 609.500 | 633.000 |
| GR | 800.200 | 657.000 | 796.600 | 706.000 | 797.700 | 747.000 | 797.500 | 783.000 | 797.900 | 830.000 |
| GR | 797.700 | 843.000 | 796.900 | 870.000 | 801.500 | 882.000 | 504.700 | 890.300 | 809.400 | 921.000 |
| GR | 810.700 | 936.000 | 815.000 | 948.000 | 816.000 | 1017.000 | 816.200 | 1044.000 | 0.000 | 0.000 |

CROSS SECTION 119 SURVEY SECTION 15

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 119.000 | 19.000 | 645.000 | 879.000 | 500.000 | 500.000 | 500.000 | 0.000 | 0.000 | 0.000 |
| GR | 813.000 | 0.000 | 810.200 | 355.000 | 810.200 | 410.000 | 609.600 | 494.000 | 812.100 | 534.000 |
| GR | 812.900 | 538.000 | 812.100 | 576.000 | 809.700 | 613.000 | 802.600 | 635.000 | 799.700 | 645.000 |
| GR | 797.100 | 682.000 | 797.900 | 732.000 | 797.600 | 762.000 | 797.500 | 807.000 | 795.300 | 842.000 |
| GR | 801.200 | 879.000 | 807.100 | 900.000 | 812.000 | 934.000 | 815.200 | 932.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.080 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 120 SURVEY SECTION 16

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 120.000 | 13.000 | 661.000 | 901.000 | 1050.000 | 850.000 | 950.000 | 0.000 | 0.000 | 0.000 |
| GR | 812.300 | 594.000 | 808.400 | 608.000 | 807.900 | 636.000 | 802.600 | 651.000 | 800.000 | 661.000 |
| GR | 798.600 | 701.000 | 798.100 | 731.000 | 796.200 | 797.000 | 797.100 | 846.000 | 800.500 | 901.000 |
| GR | 805.600 | 937.000 | 812.900 | 954.000 | 813.200 | 1004.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 121 SURVEY SECTION 17

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 121.000 | 22.000 | 819.000 | 1039.000 | 2650.000 | 2650.000 | 2650.000 | 0.000 | 0.000 | 0.000 |
| GR | 815.000 | 316.000 | 813.000 | 362.000 | 812.300 | 424.000 | 612.200 | 616.800 | 812.200 | 748.000 |
| GR | 810.300 | 792.000 | 802.500 | 807.000 | 801.400 | 812.000 | 800.100 | 819.000 | 798.600 | 879.000 |
| GR | 797.400 | 919.000 | 798.000 | 949.000 | 797.400 | 1009.000 | 800.200 | 1039.000 | 802.800 | 1049.000 |
| GR | 806.500 | 1065.000 | 812.200 | 1094.000 | 813.200 | 1104.000 | 813.000 | 1214.000 | 815.000 | 1230.000 |
| GR | 817.800 | 1244.000 | 822.200 | 1258.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.080 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.300 | 0.000 |

D/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.800 | 16.000 | 0.000 | 174.000 | 700.000 | 700.000 | 700.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 811.100 | 1.000 | 801.400 | 22.000 | 802.200 | 44.000 | 798.500 | 78.000 |
| GR | 800.400 | 74.100 | 800.400 | 85.000 | 800.400 | 85.100 | 800.800 | 88.900 | 800.800 | 89.000 |
| GR | 800.800 | 96.900 | 799.500 | 97.000 | 800.000 | 130.000 | 801.400 | 149.000 | 811.600 | 175.000 |
| GR | 820.000 | 174.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411-ED PRINTED BY ROTARY MANIFOLD FORMS.

D/S FACE ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 121.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| DT | 8.000 | 0.000 | 820.000 | 0.000 | 1.000 | 820.000 | 814.500 | 65.000 | 820.000 | 814.500 |
| DT | 85.100 | 820.000 | 0.000 | 82.900 | 820.000 | 0.000 | 89.000 | 820.000 | 814.500 | 173.000 |
| BT | 820.000 | 815.500 | 174.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.300 | 12.000 | 0.000 | 174.000 | 53.000 | 54.000 | 54.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 0.000 | 820.000 | 0.000 | 1.000 | 820.000 | 814.500 | 65.000 | 820.000 | 814.500 |
| BT | 85.100 | 820.000 | 0.000 | 82.900 | 820.000 | 0.000 | 89.000 | 820.000 | 814.500 | 173.000 |
| BT | 820.000 | 815.500 | 174.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 520.000 | 0.000 | 811.100 | 1.000 | 801.300 | 22.000 | 799.900 | 44.000 | 798.700 | 78.000 |
| GR | 800.900 | 78.100 | 800.900 | 65.000 | 800.900 | 85.100 | 801.300 | 88.900 | 801.300 | 89.000 |
| GR | 801.300 | 90.900 | 799.900 | 97.000 | 799.900 | 150.000 | 801.700 | 149.000 | 811.900 | 173.300 |
| GP | 820.000 | 174.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 122.700 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

200 FT U/S ANGELL ST. SURVEY SECTION 18

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 122.200 | 13.000 | 704.000 | 654.000 | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| GR | 316.200 | 552.000 | 316.000 | 660.000 | 313.600 | 672.000 | 639.000 | 690.000 | 311.600 | 704.000 |
| GR | 795.200 | 729.000 | 797.000 | 779.000 | 793.400 | 814.000 | 801.300 | 854.000 | 315.200 | 192.000 |
| GR | 819.200 | 906.000 | 819.600 | 902.000 | 820.200 | 1002.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.080 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 565.000 | 918.000 |

700 FT D/S KENDALL ST. SURVEY SECTION 20

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 123.000 | 11.000 | 693.000 | 843.000 | 1150.900 | 1100.000 | 1100.000 | 0.000 | 0.000 | 0.000 |
| GR | 314.100 | 564.000 | 815.600 | 664.000 | 809.300 | 680.000 | 801.700 | 693.000 | 797.600 | 723.000 |
| GR | 799.200 | 768.000 | 801.400 | 818.000 | 802.200 | 843.000 | 815.000 | 877.000 | 815.200 | 904.000 |
| GP | 115.100 | 919.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.080 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 |

D/S KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XT | 123.800 | 12.000 | 1.000 | 174.000 | 700.000 | 700.000 | 700.000 | 0.000 | 0.200 | 0.000 |
| GR | 821.000 | 1.000 | 311.200 | 2.000 | 301.600 | 20.000 | 800.300 | 44.000 | 830.400 | 85.300 |
| GR | 800.400 | 85.100 | 800.400 | 88.900 | 800.600 | 89.000 | 801.400 | 130.000 | 802.500 | 153.000 |
| GR | 811.400 | 173.000 | 821.000 | 174.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 123.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 1.000 | 821.000 | 0.000 | 2.000 | 821.000 | 817.700 | 65.000 | 821.000 | 817.700 |
| BT | 85.100 | 821.000 | 0.000 | 88.900 | 821.000 | 0.000 | 89.000 | 821.000 | 817.700 | 173.000 |
| BT | 821.000 | 817.700 | 174.000 | 821.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 124.000 | 12.000 | 1.200 | 174.000 | 58.200 | 58.000 | 58.000 | 0.000 | 0.000 | 0.000 |
| BT | 8.000 | 1.000 | 821.200 | 0.000 | 2.000 | | | | | |

FORM 1411-OE PRINTED BY ROTARY MANIFOLD FORMS.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ET | 85.100 | 821.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 821.000 | 817.700 | 174.300 | 821.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 321.000 | 1.000 | 812.300 | 2.000 | 802.800 | 20.000 | 501.900 | 64.000 | 802.200 | 85.000 |
| GR | 802.200 | 85.100 | 802.300 | 88.900 | 802.300 | 89.000 | 802.300 | 130.000 | 802.800 | 153.000 |
| GR | 812.200 | 175.000 | 821.300 | 174.000 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 124.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| XS | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 821.300 | 821.300 | 0.000 |
| GT | 5.000 | 4270.000 | 5920.000 | 6650.300 | 6650.000 | 8420.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

200 FT U/S KENDALL ST. SURVEY SECTION 21

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 124.200 | 9.000 | 815.300 | 945.000 | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| GR | 818.100 | 772.000 | 801.400 | 815.000 | 802.800 | 845.000 | 802.000 | 865.000 | 802.000 | 915.000 |
| GR | 802.200 | 945.000 | 815.600 | 979.000 | 816.900 | 990.000 | 824.300 | 1014.000 | 0.000 | 0.000 |
| NC | 0.080 | 0.080 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 125 SLAVEY SECTION 25

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 125.000 | 16.000 | 801.000 | 955.000 | 1000.000 | 1000.000 | 1000.000 | 0.000 | 0.000 | 0.000 |
| GR | 817.500 | 726.000 | 816.300 | 768.000 | 815.000 | 771.000 | 864.000 | 801.000 | 803.900 | 815.000 |
| GR | 804.000 | 830.000 | 803.800 | 851.000 | 802.200 | 893.000 | 802.800 | 918.000 | 804.700 | 934.000 |
| GR | 803.300 | 942.000 | 803.700 | 935.000 | 818.100 | 946.000 | 876.900 | 994.000 | 818.300 | 1154.300 |
| GR | 823.200 | 1200.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411.00 PRINTED BY ROTARY MANIFOLD FORMS.

```
*PROF 1

CCHV=   0.100 CEHV=   0.300
*SECNO 102.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        NL        DLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TOA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST

        CROSS SECTION 102A

   102.00      9.05    798.85      0.00    798.63    798.89      0.04      0.03      0.00    794.30
    6700.     2197.     3405.     1097.     5594.     1598.     3530.        0.        0.    795.73
     0.00      0.43      2.13      0.31     0.120     0.040     0.120     0.000    769.00    534.23
 0.000222     1100.     3573.      400.         0         0         4      0.00   3375.61   3929.64

FLOW DISTRIBUTION FOR SECNO=     102.00          CWSEL=     798.85

STA=      554.      850.     1026.     1116.     1343.     1637.     1884.     2023.     2234.     2800.     3250.     3626.     3930.
  PER Q=      6.2       4.8       3.2       6.3       4.0       5.3       2.5      50.5       3.9       4.1       3.7       2.7
   AREA=    985.6     695.6     423.4     955.0     756.7     854.2     423.5    1597.9     961.4     923.5    1043.5     601.1
    VEL=      0.4       0.5       0.5       0.5       0.4       0.4       0.4       2.1       0.3       0.3       0.4       0.3

*SECNO 102.500

        CROSS SECTION 102C

   102.50      9.86    799.36      0.00      0.00    799.41      0.05      0.52      0.00    792.40
    6700.     2940.     3645.      115.     7301.     1518.      301.      308.       95.    792.70
     0.38      0.40      2.40      0.38     0.120     0.040     0.120     0.057    789.50    565.39
 0.000290     1050.     2950.     1200.         2         0         0      0.00   3469.89   4035.20

FLOW DISTRIBUTION FOR SECNO=     102.50          CWSEL=     799.36

STA=      565.      868.      962.     1646.     2166.     2700.     3100.     3350.     3697.     3902.     4035.
  PER Q=      5.2       3.1       6.3       4.2       4.7       9.0       9.2       2.2      54.4       1.7
   AREA=    744.5     386.7    1288.7     913.4     910.3    1305.7    1378.9     372.3    1518.4     300.8
    VEL=      0.5       0.5       0.3       0.3       0.3       0.5       0.4       0.4       2.4       0.4

*SECNO 103.000

        CROSS SECTION 103.

   103.00     10.13    799.73      0.00      0.00    799.83      0.10      0.40      0.01    794.20
    6700.     2463.     3867.      370.     4898.     1177.      707.      428.      131.    793.60
     0.53      0.50      3.28      0.52     0.120     0.040     0.120     0.057    789.60    537.21
 0.000460      400.     1590.     1300.         2         0         0      0.00   2534.98   3072.79

FLOW DISTRIBUTION FOR SECNO=     103.00          CWSEL=     799.73

STA=      537.      868.      962.     1366.     1646.     1926.     2398.     2654.     2669.     2809.     3050.     3072.
  PER Q=      7.8       4.5       5.0       5.6       4.5       3.9       4.6       0.6      57.7       5.4       0.1
   AREA=    859.4     423.8     801.2     735.6     651.6     723.6     643.2      62.4    1177.3     676.9      26.0
    VEL=      0.6       0.7       0.4       0.5       0.5       0.4       0.5       0.7       3.3       0.5       0.3

*SECNO 104.000
```

CROSS SECTION 104

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 104.00 | 12.96 | 801.06 | 0.00 | 0.00 | 801.15 | 0.06 | 1.30 | 0.00 | 795.00 |
| 6700. | 507. | 2894. | 3299. | 1184. | 956. | 5947. | 853. | 255. | 795.50 |
| 1.07 | 2.43 | 2.03 | 0.55 | 0.120 | 0.040 | 0.120 | 0.054 | 788.10 | 800.92 |
| 0.000363 | 1400. | 4025. | 3000. | 2 | 0 | 0 | 2.00 | 2611.46 | 3311.59 |

FLOW DISTRIBUTION FOR SECNO= 104.00 CWSEL= 801.06

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 901. | 1144. | 1453. | 1551. | 1724. | 1934. | 2132. | 2270. | 2464. | 2656. | 2882. | 3071. | 3311. |
| PER Q= | 5.3 | 2.3 | 43.2 | 4.0 | 6.4 | 7.2 | 4.7 | 6.6 | 7.4 | 5.4 | 5.4 | 1.7 | |
| AREA= | 722.5 | 661.0 | 956.3 | 520.3 | 767.5 | 795.0 | 549.2 | 730.0 | 820.3 | 736.7 | 668.5 | 357.2 | |
| VEL= | 0.5 | 0.3 | 3.0 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.3 | |

*SECNO 105.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | ESELX | EG | IV | FL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | XLOB | XCH | XROB | SOL | T.A | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | STN | LLIM | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

CROSS SECTION 105

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 105.00 | 6.32 | 801.32 | 0.00 | 0.00 | 801.40 | 0.08 | 0.27 | 0.00 | 795.50 |
| 6700. | 344. | 3750. | 2607. | 759. | 1269. | 4695. | 968. | 290. | 796.50 |
| 1.17 | 0.45 | 2.96 | 0.56 | 0.120 | 0.040 | 0.120 | 0.353 | 793.00 | 806.02 |
| 0.000621 | 675. | 675. | 675. | 2 | 0 | 0 | 0.00 | 2062.61 | 2636.42 |

FLOW DISTRIBUTION FOR SECNO= 105.00 CWSEL= 801.32

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 806. | 1121. | 1137. | 1303. | 1734. | 1846. | 2098. | 2220. | 2350. | 2696. | 2848. | |
| PER Q= | 4.0 | 0.4 | 55.0 | 8.7 | 5.7 | 9.7 | 4.5 | 4.6 | 5.3 | 2.1 | | |
| AREA= | 713.1 | 46.4 | 1268.0 | 1146.7 | 410.8 | 1012.5 | 476.0 | 483.3 | 633.3 | 330.0 | | |
| VEL= | 0.4 | 0.5 | 3.0 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | | |

*SECNO 106.000

CROSS SECTION 106

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 106.00 | 11.05 | 801.95 | 0.00 | 0.00 | 802.28 | 0.34 | 0.81 | 0.00 | 796.30 |
| 6700. | 8. | 4863. | 1829. | 13. | 893. | 3077. | 1106. | 557. | 795.10 |
| 1.26 | 0.59 | 5.44 | 0.59 | 0.120 | 0.040 | 0.120 | 0.051 | 790.90 | 272.92 |
| 0.001026 | 1435. | 1435. | 1000. | 2 | 0 | 0 | 0.00 | 1826.28 | 2099.20 |

FLOW DISTRIBUTION FOR SECNO= 106.00 CWSEL= 801.95

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 273. | 278. | 368. | 378. | 464. | 660. | 894. | 1066. | 1360. | 1608. | 1894. | 2099. | 2099. |
| PER Q= | 0.1 | 72.6 | 0.7 | 2.3 | 4.8 | 3.5 | 1.8 | 4.2 | 3.7 | 3.1 | 3.2 | 0.0 | |
| AREA= | 15.1 | 893.1 | 45.0 | 210.4 | 459.8 | 408.6 | 240.1 | 698.6 | 433.0 | 413.6 | 368.2 | 0.2 | |
| VEL= | 0.6 | 5.4 | 1.0 | 0.7 | 0.7 | 0.8 | 0.5 | 0.6 | 0.6 | 0.5 | 0.6 | 0.1 | |

1490 NH CARD USED

*SECNO 107.000

CROSS SECTION 107

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 107.00 | 13.97 | 802.87 | 0.30 | 0.00 | 802.97 | 0.10 | 0.67 | 0.00 | 797.12 |
| 6700. | 2016. | 3470. | 214. | 1778. | 4101. | 2122. | 1170. | 559. | 796.20 |
| 1.39 | 1.13 | 3.47 | 0.57 | 0.078 | 0.040 | 0.120 | 0.051 | 766.90 | 387.40 |
| 0.002458 | 550. | 1375. | 400. | 2 | 0 | 0 | 0.00 | 1313.00 | 1599.38 |

```
FLOW DISTRIBUTION FOR SECNO=     107.00          CWSEL=     802.37

STA=      307.      444.      457.      474.      485.      628.      764.      803.      916.     1172.     1628.     1599.     1599.
  PER Q=      5.0       4.2       3.3       3.0       5.4       6.2       0.9       5[illegible].6       5.4       6.0       6.7       0.0
  AREA=     225.9      95.1     121.0      72.6     557.6     586.9     113.3    1000.9     696.4     746.4     678.1       0.9
   VEL=       1.5       3.0       2.9       2.8       0.7       0.7       0.5       3.5       0.5       0.5       0.7       0.1

CCHV=   0.300 CEHV=   0.500
*SECNO 108.700

        350 FT D/S CUSTER RD.                    not Oxbow

   108.70     10.56    803.36      0.00      0.00    803.63      0.27      0.57      0.08    797.50
    5800.       80.     5612.      108.      117.     1317.      152.     1252.      375.    798.90
     1.45      0.68      4.26      0.71     0.120     0.040     0.120     0.050    792.00     45.19
 0.000739      700.     1075.     1075.         2         0         0      0.00    247.45    292.64

FLOW DISTRIBUTION FOR SECNO=     108.70          CWSEL=     803.36

STA=       45.       85.      256.      258.      293.
  PER Q=      1.4      96.6       1.6       0.3
  AREA=    116.5    1316.6     117.0      35.2
   VEL=       0.7       4.3       0.8       0.4

*SECNO 108.800

        D/S CUSTER RD. ACROSS SECTION 108

   108.80     10.58    803.59      0.00      0.00    804.07      0.49      0.34      0.11    810.70
    5800.        0.     5800.        0.        0.     1033.        0.     1263.      377.    810.70
     1.47      0.00      5.62      0.00     0.120     0.040     0.120     0.050    793.00   1410.45
 0.001314      350.      350.      350.         2         0         0      0.00    107.10   1517.55

FLOW DISTRIBUTION FOR SECNO=     108.80          CWSEL=     803.59

STA=     1410.     1518.
  PER Q=     100.0
  AREA=    1032.8
   VEL=       5.6

*SECNO 108.900
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLODL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID      EMDST

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD=  810.70 MAX ELLC=  800.70

        D/S FACE CUSTER RD. CROSS SECTION 108

   108.90     10.48    803.48      0.00      0.00    804.19      0.71      0.00      0.11    810.70
    6700.        0.     6700.        0.        0.      990.        0.     1263.      377.    810.70
     1.47      0.00      6.77      0.00     0.120     0.040     0.120     0.050    793.00   1410.45
 0.002017        1.        1.        1.         2         0         0    -31.44    107.10   1517.55

FLOW DISTRIBUTION FOR SECNO=     108.[illegible]
```

```
STA=     1410.     1518.
  PER Q=     100.0
   AREA=     989.7
    VEL=       6.3

*SECNO 109.000

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD=  810.70 MAX ELLC=  808.70

        U/S FACE CUSTER RD. CROSS SECTION 108 & 109

   109.00     13.58    803.68      0.00      0.00    804.28      0.60      0.06      0.03    810.70
    6700.        0.     6700.        0.        0.     1078.        0.     1264.      377.    810.70
     1.47      0.00      6.22      0.00     0.120     0.040     0.120     0.050    790.10   1410.45
 0.001540       35.       35.       35.         2         0         0    -34.54    107.10   1517.55

FLOW DISTRIBUTION FOR SECNO=     109.00          CWSEL=     803.68

STA=     1410.     1518.
  PER Q=     100.0
   AREA=    1077.8
    VEL=       6.2

*SECNO 109.100

        U/S CUSTER RD. ACROSS SECTION 100

   109.10     13.64    803.74      0.00      0.00    804.30      0.56      0.03      0.01    810.70
    6700.        0.     6700.        0.        0.     1118.        0.     1264.      377.    810.70
     1.47      0.00      5.99      0.00     0.120     0.040     0.120     0.050    790.10   1410.45
 0.001364        1.        1.        1.         2         0         0      0.00    107.10   1517.55

FLOW DISTRIBUTION FOR SECNO=     109.10          CWSEL=     803.74

STA=     1410.     1518.
  PER Q=     100.0
   AREA=    1118.2
    VEL=       6.0

*SECNO 109.200

        100 FT U/S CUSTER RD.

   109.20     13.92    804.02      0.00      0.00    804.45      0.42      0.11      0.04    796.70
    6700.      232.     6230.      230.      262.     8150.      264.     1267.      377.    796.50
     1.48      0.89      5.42      0.90     0.120     0.040     0.120     0.050    790.10   1338.90
 0.000912      100.      100.      100.         2         0         0      0.00    248.91   1587.81

FLOW DISTRIBUTION FOR SECNO=     109.20          CWSEL=     804.02

STA=     1339.     1411.     1518.     1588.
  PER Q=       3.5      93.0       3.6
   AREA=     262.1    1149.6     264.4
    VEL=       0.9       5.4       0.9

CCHV=    0.100 CEHV=    0.300
*SECNO 110.000

3370 CHROMAKEEPT STATIONS=     1632.0     1994.0   TYPE=     1   TARGET=     [illegible]
```

CROSS SECTION 110 SURVEY SECTION 4

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 110.00 | 11.31 | 804.61 | 0.00 | 0.00 | 804.73 | 0.12 | 0.25 | 0.03 | 798.40 |
| 6700. | 56. | 6557. | 07. | 138. | 2334. | 154. | 1299. | 301. | 799.00 |
| 1.54 | 0.40 | 2.31 | 0.57 | 0.100 | 0.035 | 0.100 | 0.049 | 793.30 | 1632.00 |
| 0.000210 | 650. | 650. | 650. | 2 | 0 | 0 | 0.00 | 344.74 | 1975.74 |

FLOW DISTRIBUTION FOR SECNO= 110.00 CWSEL= 804.61

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| STA= | 1632. | 1666. | 1608. | 1696. | 1937. | 1944. | 1966. | 1977. |
| PER Q= | 0.1 | 0.3 | 0.6 | 97.9 | 0.4 | 0.0 | 0.1 | |
| AREA= | 41.0 | 51.8 | 45.6 | 2333.8 | 37.8 | 96.9 | 19.4 | |
| VEL= | 0.2 | 0.4 | 0.6 | 2.8 | 0.7 | 0.6 | 0.3 | |

CCHV= 0.100 CEHV= 0.300

*SECNO 110.900

| SECNO | DEPTH | CWSEL | CRIMS | MSEEK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | EHDST |

3470 ENCROACHMENT STATIONS= 1038.0 1488.0 TYPE= 1 TARGET= 450.000

D/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 110.90 | 10.26 | 805.36 | 0.00 | 0.00 | 805.47 | 0.11 | 0.74 | 0.00 | 799.20 |
| 6700. | 111. | 6517. | 71. | 242. | 2394. | 189. | 1515. | 413. | 799.60 |
| 1.90 | 0.46 | 2.72 | 0.38 | 0.100 | 0.035 | 0.100 | 0.046 | 795.10 | 1038.00 |
| 0.000219 | 3150. | 3450. | 3750. | 2 | 0 | 0 | 0.00 | 450.00 | 1488.00 |

FLOW DISTRIBUTION FOR SECNO= 110.90 CWSEL= 805.36

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| STA= | 1038. | 1108. | 1113. | 1120. | 1385. | 1400. | 1408. | 1488. |
| PER Q= | 1.1 | 0.1 | 0.4 | 97.3 | 0.5 | 0.1 | 0.4 | |
| AREA= | 105.5 | 18.8 | 38.2 | 2394.0 | 63.0 | 18.4 | 108.0 | |
| VEL= | 0.4 | 0.5 | 0.7 | 2.7 | 0.6 | 0.4 | 0.3 | |

*SECNO 111.000

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 797.30 MAX ELLC= 795.10

3470 ENCROACHMENT STATIONS= 1038.0 1488.0 TYPE= 1 TARGET= 450.000

TOP OF 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 111.00 | 10.23 | 805.33 | 0.00 | 0.00 | 805.48 | 0.15 | 0.00 | 0.01 | 799.20 |
| 6700. | 143. | 6465. | 91. | 241. | 2034. | 187. | 1515. | 413. | 799.60 |
| 1.90 | 0.60 | 3.18 | 0.49 | 0.100 | 0.035 | 0.100 | 0.046 | 795.10 | 1038.00 |
| 0.000377 | 2. | 2. | 2. | 2 | 0 | 0 | [illegible] | 450.00 | 1488.00 |

FLOW DISTRIBUTION FOR SECNO= 111.00 CWSEL= 805.33

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| STA= | 1038. | 1108. | 1113. | 1120. | 1385. | 1400. | 1408. | 1488. |
| PER Q= | 1.5 | 0.2 | 0.5 | 96.5 | 0.7 | 0.1 | 0.5 | |
| AREA= | 184.0 | 18.6 | 38.0 | 2033.7 | 62.7 | 18.2 | 138.3 | |
| VEL= | 0.5 | 0.7 | 0.9 | 3.2 | 0.7 | 0.3 | 0.3 | |

*SECNO 111.100

3470 ENCROACHMENT STATIONS= 1030.0 1488.0 TYPE= 1 TARGET= 450.000

U/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 111.10 | 10.27 | 805.37 | 0.00 | 0.00 | 805.48 | 0.11 | 0.20 | 0.00 | 799.20 |
| 6700. | 112. | 6515. | 72. | 244. | 2400. | 192. | 1515. | 413. | 799.60 |
| 1.90 | 0.46 | 2.71 | 0.33 | 0.100 | 0.035 | 0.100 | 0.046 | 795.10 | 1038.00 |
| 0.000217 | 2. | 2. | 2. | 2 | 0 | 0 | 0.00 | 450.00 | 1488.00 |

FLOW DISTRIBUTION FOR SECNO= 111.10 CUSEL= 805.37

| STA= | 1030. | 1108. | 1113. | 1120. | 1385. | 1400. | 1408. | 1488. |
|---|---|---|---|---|---|---|---|---|
| PER Q= | 1.1 | 0.1 | 0.4 | 97.2 | 0.5 | 0.1 | 0.4 | |
| AREA= | 187.1 | 18.9 | 33.3 | 2400.7 | 23.7 | 19.6 | 109.6 | |
| VEL= | 0.4 | 0.5 | 1.7 | 2.7 | 0.6 | 0.4 | 0.5 | |

*SECNO 112.000

3470 ENCROACHMENT STATIONS= 1092.0 1544.0 TYPE= 1 TARGET= 452.000

CROSS SECTION 112 SURVEY SECTION 6

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 112.00 | 11.54 | 805.64 | 0.00 | 0.00 | 805.73 | 0.08 | 0.24 | 0.00 | 800.10 |
| 6700. | 20. | 6661. | 19. | 56. | 2847. | 51. | 1608. | 425. | 800.20 |
| 2.07 | 0.36 | 2.34 | 0.33 | 0.100 | 0.035 | 0.100 | 0.043 | 794.10 | 1206.90 |
| 0.002138 | 1600. | 1400. | 903. | 2 | 0 | 0 | 0.00 | 522.74 | 1528.72 |

FLOW DISTRIBUTION FOR SECNO= 112.00 CUSEL= 805.64

| STA= | 1207. | 1220. | 1230. | 1510. | 1520. | 1529. |
|---|---|---|---|---|---|---|
| PER Q= | 0.0 | 0.3 | 99.4 | 0.3 | 0.0 | |
| AREA= | 15.9 | 39.9 | 2846.8 | 39.9 | 11.1 | |
| VEL= | 0.2 | 0.4 | 2.3 | 0.4 | 0.2 | |

*SECNO 113.000

3470 ENCROACHMENT STATIONS= 1666.0 1022.0 TYPE= 1 TARGET= 356.000

CROSS SECTION 113 SURVEY SECTION 7

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 113.00 | 11.69 | 805.89 | 0.00 | 0.00 | 805.99 | 0.10 | 0.20 | 0.00 | 799.50 |
| 6700. | 48. | 6616. | 36. | 101. | 2631. | 86. | 1721. | 438. | 800.30 |
| 2.20 | 0.48 | 2.51 | 0.42 | 0.105 | 0.035 | 0.100 | 0.044 | 794.20 | 1477.62 |
| 0.000164 | 1700. | 1700. | 1700. | 2 | 0 | 0 | 0.00 | 523.05 | 1800.67 |

FLOW DISTRIBUTION FOR SECNO= 113.00 CUSEL= 805.89

| STA= | 1473. | 1486. | 1496. | 1505. | 1769. | 1789. | 1801. |
|---|---|---|---|---|---|---|---|
| PER Q= | 0.1 | 0.3 | 0.4 | 98.7 | 0.5 | 0.3 | |
| AREA= | 15.5 | 38.6 | 46.7 | 2631.2 | 74.8 | 11.0 | |
| VEL= | 0.3 | 0.5 | 0.6 | 2.5 | 0.5 | 0.2 | |

*SECNO 114.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | ULOSS | BANK EL,V |
| Q | WLOB | WCH | WROB | ALOB | ACH | AROB | VOL | THA | LEFT/RIGHT |
| TICE | VLOB | VCH | VROB | XNL | XNCH | XNR | WTH | BEGIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORARE | TOPWID | ESTOST |

3470 ENCROACHMENT STATIONS= 964.0 1338.0 TYPE= 1 TARGET= 374.000

CROSS SECTION 114 SURVEY SECTION 8

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 114.00 | 11.43 | 806.13 | 0.00 | 0.00 | 806.24 | 0.11 | 0.25 | 0.00 | 801.90 |
| 6700. | 22. | 6681. | 77. | 66. | 2502. | 166. | 1513. | 465. | 800.60 |
| 2.42 | 0.33 | 2.64 | 0.46 | 0.100 | 0.035 | 0.100 | 0.043 | 794.70 | 964.00 |
| 0.000181 | 1400. | 1450. | 1500. | 2 | 0 | 0 | 0.00 | 545.23 | 1309.20 |

FLOW DISTRIBUTION FOR SECNO= 114.00 CHSEL= 806.13

| STA= | 964. | 980. | 1005. | 1255. | 1275. | 1296. | 1309. |
|---|---|---|---|---|---|---|---|
| PER Q= | 0.0 | 0.3 | 98.5 | 0.7 | 0.4 | 0.0 | |
| AREA= | 6.9 | 59.5 | 2501.6 | 90.6 | 60.5 | 14.7 | |
| VEL= | 0.1 | 0.6 | 2.6 | 0.5 | 0.4 | 0.2 | |

*SECNO 115.000

3470 ENCROACHMENT STATIONS= 500.0 1066.0 TYPE= 1 TARGET= 566.000

CROSS SECTION 115 SURVEY SECTION 9

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.00 | 10.52 | 806.42 | 0.00 | 0.00 | 806.53 | 0.09 | 0.26 | 0.00 | 799.90 |
| 6700. | 656. | 6003. | 39. | 1211. | 2421. | 96. | 1921. | 465. | 800.30 |
| 2.60 | 0.54 | 2.48 | 0.41 | 0.100 | 0.035 | 0.100 | 0.043 | 795.60 | 500.30 |
| 0.000171 | 1200. | 1500. | 1700. | 2 | 0 | 0 | 0.00 | 549.67 | 1050.25 |

FLOW DISTRIBUTION FOR SECNO= 115.00 CHSEL= 806.42

| STA= | 501. | 584. | 696. | 728. | 749. | 760. | 1016. | 1022. | 1044. | 1050. |
|---|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 3.1 | 4.6 | 1.1 | 0.6 | 0.5 | 89.6 | 0.2 | 0.3 | 0.0 | |
| AREA= | 383.9 | 550.5 | 136.1 | 79.1 | 59.6 | 2421.3 | 26.3 | 60.8 | 6.9 | |
| VEL= | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 2.5 | 0.5 | 0.4 | 0.2 | |

*SECNO 115.700

3470 ENCROACHMENT STATIONS= 500.0 1066.0 TYPE= 1 TARGET= 566.000

1300 FT D/S BEDFORD RD. SURVEY SECTION 9 REPEATED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.70 | 11.08 | 806.68 | 0.00 | 0.00 | 806.76 | 0.08 | 0.26 | 0.00 | 799.10 |
| 6700. | 686. | 5971. | 43. | 1282. | 2492. | 106. | 2066. | 485. | 800.30 |
| 2.80 | 0.54 | 2.40 | 0.40 | 0.100 | 0.035 | 0.100 | 0.042 | 795.60 | 500.55 |
| 0.000154 | 1800. | 1600. | 1400. | 1 | 0 | 0 | 0.00 | 553.47 | 1051.02 |

FLOW DISTRIBUTION FOR SECNO= 115.70 CHSEL= 806.68

| STA= | 501. | 584. | 696. | 728. | 749. | 760. | 1016. | 1022. | 1044. | 1051. |
|---|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 3.2 | 4.8 | 1.1 | 0.6 | 0.5 | 89.1 | 0.2 | 0.6 | 0.0 | |
| AREA= | 406.9 | 581.3 | 145.9 | 84.8 | 62.4 | 2491.7 | 29.9 | 66.9 | 8.7 | |
| VEL= | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 2.4 | 0.5 | 0.6 | 0.2 | |

CCHV= 0.300 CEHV= 0.500

*SECNO 115.800

D/S BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.80 | 10.75 | 806.95 | 0.00 | 0.00 | 807.35 | 0.13 | 0.27 | 0.02 | 816.00 |
| 6700. | 0. | 6700. | 0. | 0. | 2361. | 0. | 2159. | 497. | 816.00 |
| 2.93 | 0.00 | 3.84 | 0.00 | 0.100 | 0.035 | 0.100 | 0.042 | 796.20 | 20.77 |

FLOW DISTRIBUTION FOR SECNO= 115.00 CWSEL= 806.93

STA= 21. 330.
PER Q= 100.0
AREA= 2367.0
VEL= 2.8

*SECNO 115.900

3370 NORMAL BRIDGE,XHD= 20 MIN ELTRD= 816.00 MAX ELLC= 811.60

D/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 115.90 | 20.72 | 806.92 | 0.00 | 0.00 | 807.20 | 0.13 | 0.00 | 0.00 | 816.00 |
| 6700. | 0. | 6700. | 0. | 0. | 2291. | 0. | 2159. | 497. | 816.00 |
| 2.93 | 0.00 | 2.93 | 0.00 | 0.100 | 0.035 | 0.100 | 0.042 | 796.20 | 20.76 |
| 0.000318 | 1. | 1. | 1. | 0 | 0 | 0 | -70.52 | 299.12 | 319.88 |

FLOW DISTRIBUTION FOR SECNO= 115.90 CWSEL= 806.72

STA= 21. 330.
PER Q= 100.0
AREA= 2290.5
VEL= 2.9

*SECNO 115.000

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOSL | XLCH | XLOBR | ITRIAL | IHS | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,XHD= 20 MIN ELTRD= 816.00 MAX ELLC= 811.60

U/S FACE BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.00 | 10.96 | 806.96 | 0.00 | 0.00 | 807.08 | 0.12 | 0.02 | 0.00 | 816.00 |
| 6700. | 0. | 6700. | 0. | 0. | 2448. | 0. | 2162. | 498. | 816.00 |
| 2.94 | 0.00 | 2.74 | 0.00 | 0.100 | 0.035 | 0.100 | 0.042 | 796.00 | 22.35 |
| 0.000254 | 64. | 64. | 64. | 2 | 0 | 0 | -79.37 | 297.78 | 320.14 |

FLOW DISTRIBUTION FOR SECNO= 116.00 CWSEL= 806.96

STA= 22. 330.
PER Q= 100.0
AREA= 2448.5
VEL= 2.7

*SECNO 116.100

U/S BEDFORD RD. SURVEY SECTION 11

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.10 | 10.97 | 806.97 | 0.00 | 0.00 | 807.08 | 0.11 | 0.00 | 0.00 | 816.00 |
| 6700. | 0. | 6700. | 0. | 0. | 2523. | 0. | 2162. | 498. | 816.00 |
| 2.94 | 0.00 | 2.65 | 0.00 | 0.100 | 0.035 | 0.100 | 0.042 | 796.00 | 22.35 |
| 0.000226 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 297.79 | 320.14 |

FLOW DISTRIBUTION FOR SECNO= 116.10 CWSEL= 806.97

STA= 22. 330.
PER Q= 100.0
AREA= 2527.9
VEL= 2.7

*SECNO 116.200

350 FT U/S BEDFORD RD.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 116.20 | 10.16 | 807.06 | 0.00 | 0.00 | 807.19 | 0.13 | 0.10 | 0.01 | 799.00 |
| 6700. | 44. | 6599. | 57. | 81. | 2253. | 147. | 2183. | 501. | 801.10 |
| 2.97 | 0.54 | 2.93 | 0.39 | 0.100 | 0.035 | 0.100 | 0.042 | 796.90 | 297.50 |
| 0.000249 | 400. | 430. | 490. | 7 | - | 0 | 0.00 | 555.84 | 633.34 |

FLOW DISTRIBUTION FOR SECNO= 116.20 CWSEL= 807.06

STA= 297. 317. 330. 576. 583. 648. 653.
PER Q= 0.1 0.8 91.3 0.3 0.6 6.8
AREA= 17.2 63.9 2252.7 30.7 14.7 2.5
VEL= 0.2 3.6 2.9 0.3 0.3 3.1

CCHV= 0.100 CEHV= 0.300
*SECNO 117.000

3470 ENCROACHMENT STATIONS= 370.0 1420.0 TYPE= 1 TARGET= 542.200

CROSS SECTION 117 SURVEY SECTION 12

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 117.00 | 10.80 | 807.50 | 0.00 | 0.00 | 807.60 | 0.10 | 0.40 | 0.00 | 799.10 |
| 6710. | 96. | 6573. | 91. | 144. | 2548. | 79. | 2306. | 517. | 799.20 |
| 3.19 | 0.67 | 2.58 | 0.60 | 0.100 | 0.033 | 0.100 | 0.041 | 796.70 | 1033.88 |
| 0.000167 | 2000. | 2000. | 2000. | 2 | 0 | 0 | 0.00 | 332.51 | 1366.38 |

FLOW DISTRIBUTION FOR SECNO= 117.00 CWSEL= 807.50

STA= 1034. 1046. 1066. 1075. 1325. 1336. 1366.
PER Q= 0.8 0.6 0.8 98.1 0.6 0.1
AREA= 9.1 71.9 63.4 2547.5 54.4 24.2
VEL= 0.2 0.6 0.9 2.6 0.5 0.2

CCHV= 0.300 CEHV= 0.500
*SECNO 117.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 814.20 ELREA= 814.20

D/S FACE 20 TR STREET SURVEY SECTION 13

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 117.90 | 9.15 | 807.75 | 0.00 | 0.00 | 807.86 | 0.11 | 0.26 | 0.01 | 812.30 |
| 6700. | 0. | 6700. | 0. | 0. | 2472. | 0. | 2304. | 526. | 811.70 |
| 3.33 | 0.00 | 2.71 | 0.00 | 0.080 | 0.035 | 0.100 | 0.041 | 796.60 | 21.60 |
| 0.000239 | 1300. | 1300. | 1300. | 1 | 0 | 0 | 0.00 | 290.07 | 311.68 |

FLOW DISTRIBUTION FOR SECNO= 117.90 CWSEL= 807.75

STA= 22. 350.
PER Q= 100.0

FORM 1411.00 PRINTED BY BOTTARF MANIFOLD FORMS

VEL= 2.7

SPECIAL BRIDGE

| SS | XK | XKOR | COFR | ROLEN | BWC | BUP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.05 | 1.50 | 3.00 | 0.00 | 260.00 | 10.00 | 4530.00 | 2.20 | 798.30 | 798.60 |

*SECNO 118.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELR | EG | HV | HL | OLCSE | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | THA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | EL IN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

CLASS A LOW FLOW

3423 BRIDGE W.S.= 807.39 BRIDGE VELOCITY= 2.71 CALCULATED CHANNEL AREA= 2512.

| FGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 807.36 | 0.00 | 0. | 6700. | 4530. | 4531. | 814.20 | 816.50 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 814.20 ELREA= 814.20

U/S FACE 20 TH STREET SURVEY SECTION 13

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 118.00 | 9.45 | 807.75 | 0.00 | 0.00 | 807.86 | 0.11 | -0.00 | 0.00 | 812.00 |
| 6700. | 0. | 6700. | 0. | 0. | 2558. | 0. | 2386. | 526. | 811.40 |
| 3.33 | 0.00 | 2.62 | 0.00 | 0.080 | 0.035 | 0.100 | 0.041 | 798.30 | 20.78 |
| 0.000274 | 40. | 40. | 40. | 0 | 0 | 0 | 0.00 | 291.37 | 312.15 |

FLOW DISTRIBUTION FOR SECNO= 118.00 CWSEL= 807.75

STA= 21. 318.
PER Q= 100.0
AREA= 2558.3
VEL= 2.6

*SECNO 118.100

400 FT U/S 20 TH STREET SURVEY SECTION 14

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 118.10 | 10.33 | 807.83 | 0.00 | 0.00 | 807.98 | 0.15 | 0.10 | 0.02 | 800.20 |
| 6700. | 54. | 6586. | 60. | 75. | 2096. | 98. | 2409. | 529. | 799.90 |
| 3.37 | 0.72 | 3.14 | 0.61 | 0.080 | 0.035 | 0.100 | 0.041 | 797.50 | 637.30 |
| 0.000273 | 400. | 400. | 400. | 1 | 0 | 0 | 0.00 | 272.71 | 910.00 |

FLOW DISTRIBUTION FOR SECNO= 118.10 CWSEL= 807.83

STA= 637. 657. 878. 882. 890. 910.
PER Q= 0.8 98.3 0.4 0.4 0.2
AREA= 75.2 2096.5 28.5 37.9 31.3
VEL= 0.7 3.1 0.9 0.7 0.3

*SECNO 119.000

CROSS SECTION 119 SURVEY SECTION 15

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 119.00 | 10.88 | 807.98 | 0.00 | 0.00 | 808.10 | 0.12 | 0.12 | 3.01 | 799.70 |
| 6700. | 87. | 6571. | 42. | 113. | 2312. | 83. | 2436. | 532. | 801.20 |
| 3.42 | 0.77 | 2.84 | 0.50 | 0.060 | 0.035 | 0.100 | 0.041 | 797.10 | 618.33 |
| 0.000211 | 500. | 500. | 500. | 2 | 0 | 0 | 0.00 | 287.79 | 906.11 |

FLOW DISTRIBUTION FOR SECNO= 119.00 CHSEL= 807.98

| STA= | 618. | 635. | 645. | 679. | 900. | 906. |
|---|---|---|---|---|---|---|
| PER Q= | 0.3 | 1.0 | 96.4 | 0.6 | 0.0 | |
| AREA= | 44.9 | 66.3 | 2312.3 | 80.5 | 3.7 | |
| VEL= | 0.5 | 0.9 | 2.8 | 0.5 | 0.1 | |

CCHV= 0.100 CEHV= 0.300

*SECNO 120.000

CROSS SECTION 120 SURVEY SECTION 6

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 120.00 | 11.09 | 808.19 | 0.00 | 0.00 | 808.30 | 0.11 | 0.20 | 0.00 | 800.30 |
| 6700. | 67. | 6466. | 146. | 115. | 2349. | 193. | 2492. | 539. | 800.50 |
| 3.51 | 0.76 | 2.75 | 0.76 | 0.080 | 0.035 | 0.080 | 0.040 | 797.10 | 619.92 |
| 0.000203 | 1050. | 950. | 850. | 2 | 1 | 0 | 0.00 | 323.70 | 943.02 |

FLOW DISTRIBUTION FOR SECNO= 120.00 CHSEL= 808.19

| STA= | 620. | 651. | 661. | 901. | 937. | 943. |
|---|---|---|---|---|---|---|
| PER Q= | 0.3 | 1.0 | 96.5 | 2.2 | 0.2 | |
| AREA= | 46.4 | 68.9 | 2348.6 | 104.9 | 7.8 | |
| VEL= | 0.5 | 0.9 | 2.8 | 0.8 | 0.3 | |

*SECNO 121.000

CROSS SECTION 121 SURVEY SECTION 17

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 121.00 | 11.31 | 808.71 | 0.00 | 0.00 | 808.83 | 0.12 | 0.53 | 0.00 | 800.10 |
| 6700. | 108. | 6477. | 115. | 127. | 2279. | 150. | 2651. | 557. | 800.20 |
| 5.78 | 0.85 | 2.84 | 0.77 | 0.080 | 0.035 | 0.060 | 0.040 | 797.40 | 795.05 |
| 0.000199 | 2650. | 2650. | 2650. | 2 | 0 | 0 | 0.00 | 281.20 | 1076.25 |

FLOW DISTRIBUTION FOR SECNO= 121.00 CHSEL= 808.71

| STA= | 795. | 807. | 812. | 819. | 1039. | 1049. | 1065. | 1076. |
|---|---|---|---|---|---|---|---|---|
| PER Q= | 0.3 | 0.5 | 0.9 | 96.7 | 1.0 | 0.6 | 0.1 | |
| AREA= | 37.1 | 53.8 | 55.7 | 2278.5 | 72.1 | 65.0 | 12.4 | |
| VEL= | 0.5 | 0.9 | 1.0 | 2.8 | 1.0 | 0.7 | 0.3 | |

CCHV= 0.300 CEHV= 0.500

*SECNO 121.800

| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 3 | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TRA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTH | CLMIN | SSTA |
| SLOPS | XLOBL | XLCH | XLOBR | ITRIAL | IHE | ICONT | CONAR | TOPWID | ENDST |

D/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 121.80 | 10.32 | 808.82 | 0.00 | 0.00 | 809.28 | 0.46 | 0.29 | 0.17 | 820.00 |
| 5700. | 0. | 5700. | 0. | 0. | 6252. | | 2651. | 561. | 820.00 |
| 3.82 | 0.00 | 5.44 | 0.00 | 0.080 | 0.035 | 0.080 | 0.042 | 798.50 | 5.94 |
| 0.001139 | 700. | 700. | 700. | 2 | 0 | 0 | 0.00 | 140.52 | 166.46 |

FLOW DISTRIBUTION FOR SECNO= 121.80 CUSEL= 808.82

STA= 6. 174.
PER Q= 100.0
AREA= 1232.5
VEL= 5.4

*SECNO 121.900

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 820.00 MAX ELLC= 815.50

D/S FACE ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 121.90 | 10.31 | 808.81 | 0.00 | 0.00 | 809.29 | 0.48 | 0.04 | 0.01 | 820.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1270. | 0. | 2661. | 561. | 820.00 |
| 3.82 | 0.00 | 5.59 | 0.00 | 0.080 | 0.035 | 0.030 | 0.040 | 798.50 | 5.95 |
| 0.001246 | 1. | 1. | 1. | 1 | 0 | 0 | -32.24 | 160.50 | 166.45 |

FLOW DISTRIBUTION FOR SECNO= 121.90 CHSEL= 808.31

STA= 6. 174.
PER Q= 100.0
AREA= 1199.6
VEL= 5.6

*SECNO 122.000

3370 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 820.00 MAX ELLC= 815.50

U/S FACE ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.00 | 10.16 | 808.86 | 0.00 | 0.00 | 809.37 | 0.48 | 0.07 | 0.00 | 820.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1203. | 0. | 2663. | 561. | 820.00 |
| 3.82 | 0.00 | 5.57 | 0.00 | 0.080 | 0.035 | 0.030 | 0.040 | 798.70 | 5.62 |
| 0.001237 | 58. | 58. | 58. | 0 | 0 | 0 | -30.33 | 160.27 | 165.89 |

FLOW DISTRIBUTION FOR SECNO= 122.00 CHSEL= 808.86

STA= 6. 174.
PER Q= 100.0
AREA= 1203.3
VEL= 5.6

*SECNO 122.100

U/S ANGELL ST. SURVEY SECTION 19

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.10 | 10.22 | 808.92 | 0.00 | 0.00 | 809.38 | 0.45 | 0.00 | 0.01 | 820.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1241. | 0. | 2683. | 561. | 820.00 |
| 3.82 | 0.00 | 5.40 | 0.00 | 0.080 | 0.035 | 0.080 | 0.040 | 798.70 | 5.53 |
| 0.001116 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 160.47 | 165.99 |

FLOW DISTRIBUTION FOR SECNO= 122.10 CHSEL= 808.92

STA= 6. 174.
PER Q= 100.0
AREA= 1240.8

FORM 1411-00 PRINTED BY ROTARY MANIFOLD FORMS.

```
*SECNO 122.200

        200 FT D/S ANGELL ST. SURVEY SECTION 18

   122.20     14.52    809.32      0.00      0.00    809.55      0.23      0.11      0.07    801.60
    6700.       45.     6582.       73.       56.     1680.       68.     2690.      562.    801.30
     3.83      0.80      3.90      0.83     0.080     0.035     0.080     0.040    795.20    669.41
 0.000339      200.      200.      200.         2         0         0      0.00    186.52    875.93

FLOW DISTRIBUTION FOR SECNO=     122.20          CWSEL=     809.32

STA=      689.      704.      854.      876.
  PER Q=       0.7      98.2       1.1
   AREA=      56.3    1605.7      37.9
    VEL=       0.0       3.9       0.8

CCHV=    0.100 CEHV=    0.300
*SECNO 123.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       APCB      WOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XML       XNCH      XMR       XTN       ELEVN       SSTA
   SLOPE     XLOBL     XLCH      XLCHR     ETRIAL    IN2       ICONT     CORAR     TOPWID      ENDST

        700 FT D/S KENDALL ST. SURVEY SECTION 20

   123.00     12.13    809.73      0.00      0.00    810.73      0.30      0.45      0.02    801.70
    6700.       59.     6568.       74.       58.     1482.       75.     2733.      566.    802.20
     3.90      1.02      4.43      0.98     0.080     0.035     0.080     0.040    797.60    678.23
 0.000516     1100.     1100.     1100.         2         0         0      0.00    184.77    863.00

FLOW DISTRIBUTION FOR SECNO=     123.00          CWSEL=     809.73

STA=      678.      693.      843.      863.
  PER Q=       0.9      98.0       1.1
   AREA=      57.6    1482.0      75.3
    VEL=       1.0       4.4       1.0

CCHV=    0.300 CEHV=    0.500
*SECNO 123.800

        D/S KENDALL ST. SURVEY SECTION 22

   123.80      9.84    810.14      0.00      0.00    810.52      0.38      0.45      0.04    821.00
    6700.        0.     6700.        0.        0.     1363.        0.     2757.      569.    821.00
     3.94      0.00      4.92      0.00     0.080     0.035     0.080     0.040    800.30      3.98
 0.000836      700.      700.      700.         2         0         0      0.00    166.20    170.18

FLOW DISTRIBUTION FOR SECNO=     123.80          CWSEL=     810.14

STA=        4.      174.
  PER Q=     100.0
   AREA=    1362.8
    VEL=       4.9

*SECNO 123.900

3370 NORMAL BRIDGE,WRD=  0 MIN ELTRD=  821.00 MAX ELLC=  817.70
```

D/S FACE KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 123.90 | 9.63 | 810.13 | 0.00 | 0.00 | 810.53 | 0.40 | 0.00 | 0.01 | 821.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1324. | 0. | 2757. | 569. | 821.00 |
| 3.94 | 0.00 | 5.06 | 0.00 | 0.000 | 0.035 | 0.000 | 0.040 | 801.90 | 5.99 |
| 0.000920 | 1. | 1. | 1. | 1 | 0 | 0 | -37.96 | 158.73 | 170.97 |

FLOW DISTRIBUTION FOR SECNO= 123.90 CWSEL= 810.13

STA= 6. 174.
PER Q= 100.0
AREA= 1324.0
VEL= 5.1

*SECNO 124.000

3570 NORMAL BRIDGE,NRD= 8 MIN ELTRD= 821.00 MAX ELLC= 877.70

D/S FACE KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 124.00 | 8.22 | 810.92 | 0.00 | 0.00 | 810.66 | 0.55 | 0.57 | 0.08 | 821.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1123. | 0. | 2759. | 569. | 821.00 |
| 3.95 | 0.00 | 5.97 | 0.00 | 0.000 | 0.035 | 0.000 | 0.040 | 801.90 | 5.67 |
| 0.001343 | 58. | 58. | 58. | 2 | 0 | 0 | -30.71 | 162.91 | 168.58 |

FLOW DISTRIBUTION FOR SECNO= 124.00 CWSEL= 810.12

STA= 6. 174.
PER Q= 100.0
AREA= 1122.9
VEL= 6.0

*SECNO 124.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 821.00 ELREA= 821.00

U/S KENDALL ST. SURVEY SECTION 22

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 124.10 | 8.27 | 810.17 | 0.00 | 0.00 | 810.69 | 0.52 | 0.00 | 0.01 | 821.00 |
| 6700. | 0. | 6700. | 0. | 0. | 1162. | 0. | 2759. | 569. | 821.00 |
| 3.95 | 0.00 | 5.77 | 0.00 | 0.000 | 0.035 | 0.000 | 0.040 | 801.90 | 5.57 |
| 0.001385 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 163.11 | 168.69 |

FLOW DISTRIBUTION FOR SECNO= 124.10 CWSEL= 810.17

STA= 6. 174.
PER Q= 100.0
AREA= 1161.6
VEL= 5.8

*SECNO 124.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRWS | XSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | NTS | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IHS | ICONT | CORAR | TOPWID | ENDST |

FORM 1411-CO PRINTED BY ROTARY MANIFOLD FORMS, PRINTED IN U.S.A.

200 FT U/S KENDALL ST. SURVEY SECTION 21

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 124.20 | 9.03 | 810.43 | 0.00 | 0.00 | 810.94 | 0.51 | 0.25 | 0.00 | 801.40 |
| 6650. | 171. | 6347. | 131. | 105. | 1032. | 86. | 2765. | 570. | 802.20 |
| 3.96 | 1.63 | 5.07 | 1.53 | 0.060 | 0.055 | 0.300 | 0.040 | 801.43 | 791.75 |
| 0.007133 | 200. | 200. | 200. | 2 | 0 | 0 | 0.00 | 174.13 | 965.38 |

FLOW DISTRIBUTION FOR SECNO= 124.20 CHSEL= 810.43

| | | | |
|---|---|---|---|
| STA= | 792. | 815. | 945. 950. |
| PER Q= | 2.6 | 95.5 | 2.0 |
| AREA= | 105.0 | 1061.8 | 85.9 |
| VEL= | 1.6 | 5.9 | 1.5 |

CCTV= 0.700 CEHV= 0.300
*SECNO 125.000

CROSS SECTION 125 SURVEY SECTION 23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 125.00 | 9.36 | 811.56 | 0.00 | 0.00 | 811.96 | 0.40 | 1.00 | 0.01 | 804.00 |
| 6650. | 93. | 6455. | 102. | 75. | 1255. | 77. | 2795. | 576. | 805.70 |
| 4.01 | 1.28 | 5.16 | 1.32 | 0.060 | 0.055 | 0.080 | 0.039 | 802.20 | 791.79 |
| 0.005394 | 1000. | 1000. | 1000. | 2 | 0 | 0 | 0.00 | 192.85 | 974.64 |

FLOW DISTRIBUTION FOR SECNO= 125.00 CHSEL= 811.56

| | | | |
|---|---|---|---|
| STA= | 732. | 801. | 955. 975. |
| PER Q= | 1.4 | 97.1 | 1.5 |
| AREA= | 72.6 | 1256.3 | 77.2 |
| VEL= | 1.3 | 5.1 | 1.3 |

00BREAK00

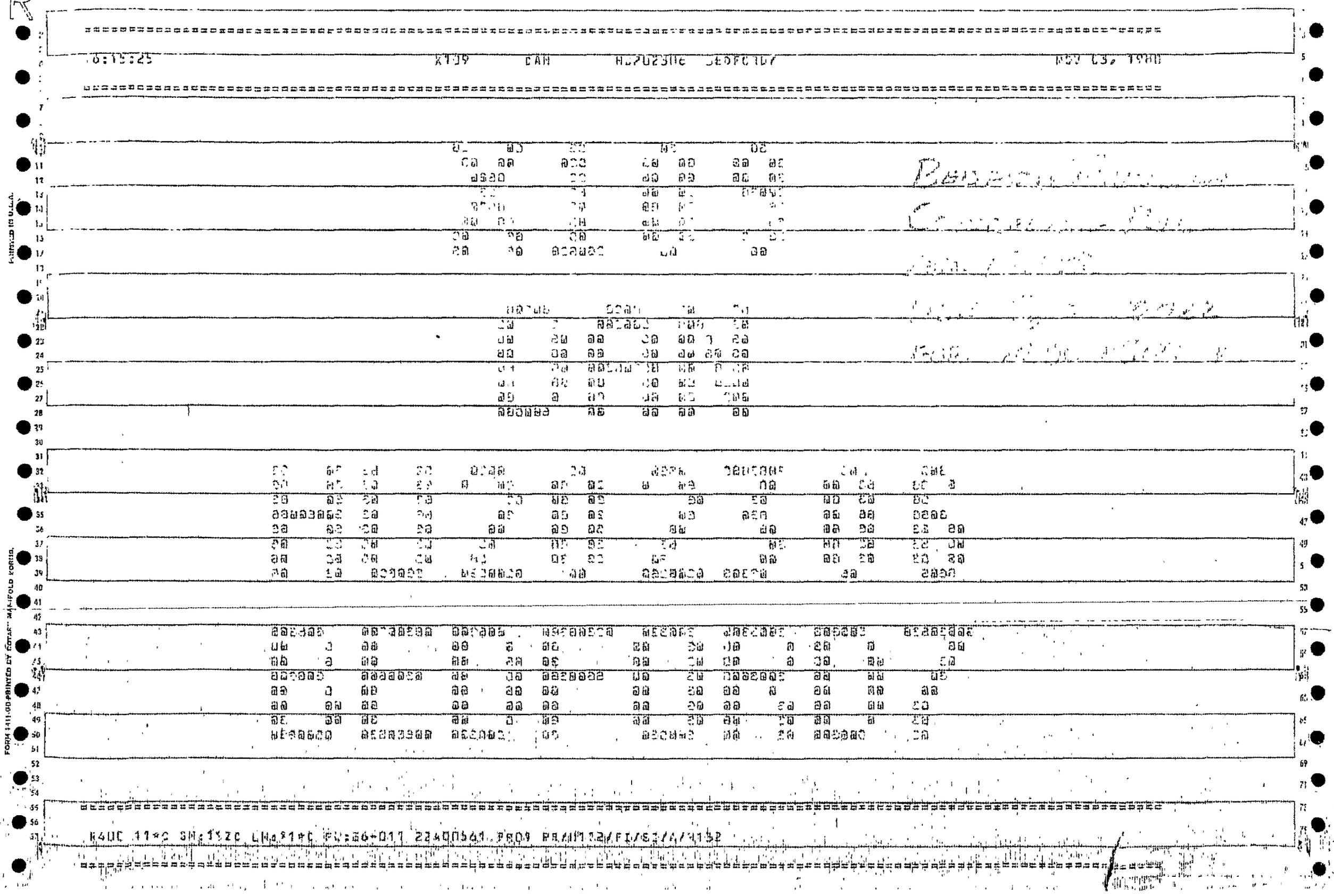
1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: Covergence Rwy

00BREAK00



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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FE  1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

C
T1BEDFORD TOWNSHIP FLOOD INSURANCE STUDY
T2CONVERGENCE RUN STARTING FROM L/S LIMIT OF AUGUSTA FIS
T3      KALAMAZOO RIVER

J1  IOHECK    ING       NINV      IDIR      STRT      METRIC    NVINS     G         SSEL      FQ
      0.        4.        0.        0. -1.000000      0.00      0.0       0.      0.000     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    150.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

NT      5.000  4270.000  5920.000  6700.000  6700.000  3420.000     0.000     0.000     0.000     0.000
NC      0.100     0.100     0.040     0.100     0.000     0.000     0.000     0.000     0.000     0.000

X1    110.000    17.000   375.000   485.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    810.000     0.000   800.800   120.000   800.000   260.000   796.000   290.000   794.200   365.000
GR    791.200   375.000   786.700   390.000   785.700   430.000   785.200   430.000   785.700   460.000
GR    786.700   470.000   791.200   485.000   794.200   495.000   794.000  1000.000   794.000  2400.000
GR    800.000  2650.000   810.000  3300.000     0.000     0.000     0.000     0.000     0.000     0.000

      SURVEY CROSS SECTION 101 BEDFORD TWP.

X1    109.000    37.000   517.000   652.000  3000.000  3750.000  3000.000     0.000     0.000     0.000
GR    810.000     0.000   805.000   200.000   802.300   240.000   800.200   324.000   799.200   360.000
GR    796.900   380.000   796.000   442.000   795.100   494.000   795.600   512.000   793.300   517.000
GR    787.800   575.000   787.000   585.000   786.700   618.000   785.800   640.000   790.500   652.000
GR    795.300   660.000   794.700   702.000   796.200   786.000   795.500   898.000   794.400   960.000
GR    795.400  1058.000   794.800  1154.000   793.600  1310.000   796.400  1408.000   796.600  1640.000
GR    795.600  1846.000   796.000  2056.000   795.800  2246.000   798.400  2524.000   795.600  2786.000
GR    796.600  3018.000   796.300  3150.000   797.200  3242.000   799.000  3270.000   802.800  3304.000
GR    807.000  3326.000   810.600  3422.000     0.000     0.000     0.000     0.000     0.000     0.000

      SURVEY CROSS SECTION 102A

X1    120.000    34.000  2023.000  2234.000  1100.000   400.000  3575.000     0.000     0.000     0.000
GR    810.000     0.000   806.000   100.000   805.600   250.000   802.700   450.000   800.800   534.000
GR    795.600   588.000   795.000   850.000   794.800  1026.000   793.700  1118.000   795.700  1348.000
GR    796.200  1528.000   797.000  1632.000   794.600  1714.000   796.000  1884.000   795.700  2016.000
GR    794.300  2023.000   792.000  2049.000   791.300  2079.000   789.800  2109.000   790.600  2139.000
GR    791.300  2169.000   790.100  2199.000   793.700  2234.000   795.200  2249.000   795.900  2249.000
GR    797.800  2430.000   797.000  2800.000   796.600  3250.000   795.600  3450.000   796.500  3626.000
GR    796.800  3672.000   799.000  3934.000   807.000  3990.000   810.600  4086.000     0.000     0.000
EQ      0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
*PROF 1

CCHV=    0.100 CERV=    0.300
*SECNO 110.000
2096 WSEL NOT GIVEN,AVG OF MAX,MIN USED
   SECNO     DEPTH     CWSEL     CRIS      WSELK     EG        HV        FL        HLOSS     BANK ELEV
   Q         QLOB      QCH       QROS      ALOB      ACH       AROB      VOL       TWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROS      XNL       XNCH      XNR       FTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOSR     ITRIAL    IH2       ICONT     CORAR     TOPWID    ENDST

3720 CRITICAL DEPTH ASSUMED
   118.00     6.18    791.38    791.38      0.00    793.84      2.46      0.00      0.00    791.20
    6700.       0.     6700.        0.        0.      533.        0.        0.        0.    791.20
     0.00      0.02     12.58      0.02     0.130     0.040     0.100     0.000    785.20    374.39
 0.014229        0.        0.        0.         0         7         0      0.00    191.23    485.27

*SECNO 119.000

3301 HV CHANGED MORE THAN HVINS

        SURVEY CROSS SECTION 101 BEDFORD T.P.

   119.00    11.96    797.74      0.00      0.00    797.84      0.10      3.77      0.24    793.30
    6700.     120.     4109.     2472.      256.     1247.     5004.      286.      125.    793.50
     0.39      0.47      1.29      0.49     0.100     0.040     0.100     0.050    785.80    372.75
 0.000611     3000.     3000.     3730.         9         0         0      0.00   2877.60   3250.33

*SECNO 120.000

        SURVEY CROSS SECTION 102A

   120.00     0.72    798.52      0.00      0.00    798.56      0.04      0.71      0.01    794.30
    6700.     2346.     3305.     1049.     4615.     1529.     2977.      498.      179.    793.70
     0.88      0.51      2.16      0.35     0.100     0.040     0.100     0.048    709.80    557.62
 0.000242     1100.     3575.      400.         4         0         0      0.00   3363.01   3920.63
```

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CONR -  01
  MODIFICATION -  50,50,52
*****************************************************

TIMBERFORD TOWNSHIP FLOOD INSURANCE STUDY
TRCONVERGENCE RUN STARTING FROM U/S LIMIT OF AUGUSTA FIS
T3      KALAMAZOO RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        4.        0.        0.  0.000330      2.00      0.0        0.   797.000     0.000

J2  NPROF     IPLOT     PRFVS     XSECH     XSECK     FN        ALLOC     IE.       CNNI.     ITRACE

     2.000     0.000    -1.000     0.000     0.000     0.500     0.000     0.500     0.000     0.000
```

*PROF 2

CCEV= 0.100 CSHV= 0.300

*SECNO 110.000

| SECNO | DEPTH | CHSEL | CRIWS | SELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| C | QLOB | WCH | QROB | XLOB | WCH | PROB | VOL | TRA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XSA | PTS | EL.IN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IHS | ICONT | CORAR | TOPWID | ENDST |
| | 110.00 | 11.57 | 796.57 | 0.00 | 797.00 | 796.96 | 0.09 | 0.50 | 0.00 | 791.20 |
| | 6700. | 67. | 3557. | 3022. | 978. | 1937. | 3643. | 7. | 0. | 791.20 |
| | 0.00 | 0.48 | 3.16 | 0.54 | 0.100 | 0.040 | 0.100 | 0.050 | 783.20 | 263.44 |
| | 0.000328 | 0. | 0. | 0. | 0 | 0 | 4 | 0.00 | 2236.34 | 2519.73 |

*SECNO 119.000

SURVEY CROSS SECTION TOT REDFORD TWP.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.00 | 12.18 | 797.98 | 0.00 | 0.00 | 798.06 | 0.06 | 1.80 | 0.00 | 793.30 |
| 6700. | 132. | 3676. | 2817. | 797. | 1640. | 3633. | 3.3. | 270. | 790.30 |
| 0.97 | 1.22 | 1.07 | 0.46 | 0.100 | 0.040 | 0.100 | 1.36 | 709.00 | 570.54 |
| 0.000334 | 2700. | 3700. | 3750. | 2 | 1 | 0 | 0.00 | 2305.47 | 3256.10 |

*SECNO 120.000

SURVEY CROSS SECTION TOT

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 120.00 | 0.43 | 798.63 | 0.00 | 0.00 | 798.66 | 0.03 | 3.60 | 0.00 | 794.30 |
| 6700. | 2365. | 3237. | 1099. | 4767. | 1551. | 3153. | 805. | 270. | 793.70 |
| 0.97 | 0.50 | 2.09 | 0.35 | 0.100 | 0.040 | 0.100 | 0.047 | 709.00 | 556.54 |
| 0.000221 | 1130. | 3573. | 400. | 2 | 0 | 0 | 3.05 | 3387.03 | 3923.57 |

PRINTED IN U.S.A.
FORM 1411.08 PRINTED BY ROTARY MANIFOLD FORMS,

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  [illegible]
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP FLOOD INSURANCE STUDY
T2CONVERGENCE RUN STARTING FROM U/S LIMIT OF AUGUSTA FIS
T3       KALAMAZOO RIVER
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0. | 4. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 797.500 | 0.000 |

| J2 | NPROF | IPLOT | PRTVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 15.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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PRINTED BY ROTARY MANIFOLD FORMS.

*PROF 3

CCHV= 0.100 CEHV= 0.300

*SECNO 118.000

| SECNO | DEPTH | CUSEL | CRIWS | USELK | ES | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 0 | QLOB | QCH | QROB | QLOS | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOH | VCH | VROB | XML | XNCH | XNH | BTX | ELMIN | SSTA |
| SLOPE | XLOHL | XLCH | XLOBR | ITPIAL | IR2 | ICONT | CORAR | TOPWID | ENDST |
| 118.00 | 12.30 | 797.50 | 0.00 | 797.50 | 797.55 | 0.05 | 0.00 | 0.00 | 791.20 |
| 6700. | 100. | 3190. | 3432. | 236. | 1206. | 6920. | 0. | 0. | 791.20 |
| 0.00 | 0.42 | 2.65 | 0.49 | 0.100 | 0.040 | 0.100 | 0.000 | 705.20 | 278.75 |
| 0.000213 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 2267.08 | 2545.83 |

*SECNO 119.000

SURVEY CROSS SECTION TUT BEDFORD TWP.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.00 | 12.48 | 798.28 | 0.00 | 0.00 | 798.35 | 0.06 | 0.79 | 0.00 | 793.30 |
| 6700. | 126. | 3[illegible]. | 2[illegible]. | [illegible]. | 1321. | 6432. | 601. | [illegible] | 793.30 |
| 0.55 | 0.43 | 2.74 | 0.42 | 0.100 | 0.040 | 0.100 | 0.008 | 765.60 | 367.96 |
| 0.000263 | 3000. | 3000. | 3750. | 2 | 0 | 0 | 0.00 | 3[illegible].90 | 3258.87 |

*SECNO 120.000

SURVEY CROSS SECTION 1024

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 120.00 | 9.00 | 798.80 | 0.00 | 0.00 | 798.83 | 0.03 | 0.43 | 0.00 | 794.30 |
| 6700. | 2392. | 3133. | 1175. | 5015. | 1587. | 3439. | 914. | 272. | 793.70 |
| 1.07 | 0.48 | 1.97 | 0.34 | 0.100 | 0.040 | 0.100 | 0.043 | 789.80 | 554.78 |
| 0.000192 | 1100. | 3575. | 400. | 2 | 0 | 0 | 0.00 | 3373.54 | 3923.32 |

PRINTED IN U.S.A.
FORM 1411-CD PRINTED BY ROTARY MANIFOLD FORMS.

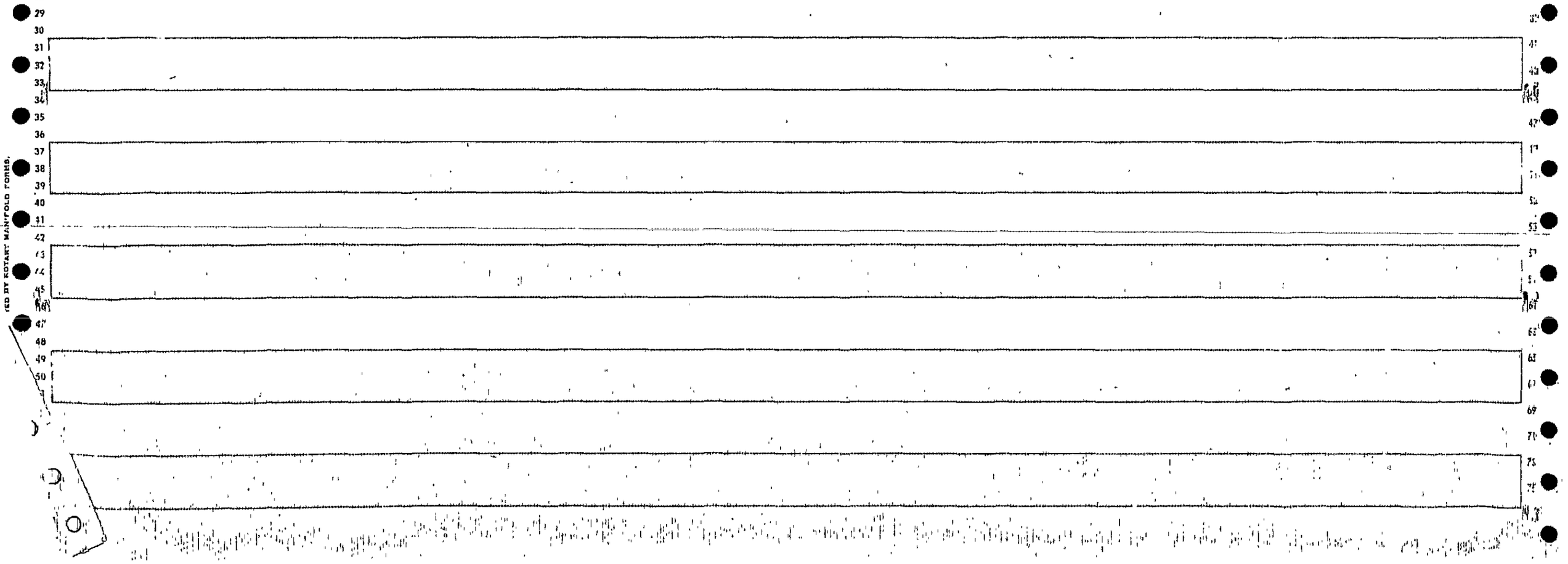
**********
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,5[illegible],52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| | SECNO | ELCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | TOTWS | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * | 118.000 | 0.00 | 0.00 | 0.00 | 785.20 | 6700.00 | 791.38 | 791.38 | 793.84 | 142.29 | 12.58 | 532.83 | 561.67 |
| | 118.000 | 0.00 | 0.00 | 0.00 | 785.20 | 6700.00 | 796.87 | 0.00 | 796.96 | 3.28 | 3.16 | 6954.30 | 3699.96 |
| | 118.000 | 0.00 | 0.00 | 0.00 | 785.20 | 6700.00 | 797.50 | 0.00 | 797.55 | 2.13 | 2.05 | 8362.16 | 4509.35 |
| | 119.000 | 3000.00 | 0.00 | 0.00 | 785.20 | 6700.00 | 797.74 | 0.00 | 797.84 | 4.11 | 3.29 | 6507.09 | 3306.76 |
| | 119.000 | 3000.00 | 0.00 | 0.00 | 785.80 | 6700.00 | 797.90 | 0.00 | 798.05 | 3.36 | 3.03 | 7204.02 | 3657.24 |
| | 119.000 | 3000.00 | 0.00 | 0.00 | 785.80 | 6700.00 | 798.20 | 0.00 | 798.35 | 2.63 | 2.74 | 8089.34 | 4133.71 |
| | 120.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 6700.00 | 798.32 | 0.00 | 798.55 | 2.42 | 2.11 | 9120.71 | 4307.15 |
| | 120.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 6700.00 | 798.65 | 0.00 | 798.66 | 2.21 | 2.09 | 9471.59 | 4503.98 |
| | 120.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 6700.00 | 798.80 | 0.00 | 798.83 | 1.92 | 1.97 | 10040.08 | 4832.61 |



KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| | SECNO | C | CUSEL | DIFWSP | DIFWSN | DIFKWS | VOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| * | 118.000 | 6700.00 | 791.35 | 0.00 | 0.00 | 0.00 | 2111.23 | 0.00 |
| | 118.000 | 6700.00 | 796.67 | 0.00 | 0.00 | -0.13 | 2236.34 | 0.00 |
| | 118.000 | 6700.00 | 797.52 | 0.00 | 0.00 | 0.00 | 2267.05 | 0.00 |
| | 119.000 | 6700.00 | 797.74 | 0.00 | 6.35 | 0.00 | 2877.80 | 3000.00 |
| | 119.000 | 6700.00 | 797.99 | 0.00 | 1.10 | 0.00 | 2883.47 | 3000.00 |
| | 119.000 | 6700.00 | 798.28 | 0.00 | 0.78 | 0.00 | 2890.90 | 3000.00 |
| | 120.000 | 6700.00 | 798.52 | 0.00 | 0.75 | 0.00 | 3383.01 | 3575.00 |
| | 120.000 | 6700.00 | 798.63 | 0.00 | 0.65 | 0.00 | 3357.[illegible] | 3575.00 |
| | 120.000 | 6700.00 | 798.8[illegible] | 0.00 | 0.5[illegible] | 0.00 | 3373.54 | 3575.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 118.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

FORM 1411-GB-PRINTED BY ROTARY MANIFOLD FORMS.
PRINTED IN U.S.A.

**********
FEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CODE - 01
MODIFICATION - 50[illegible]1,32
**********

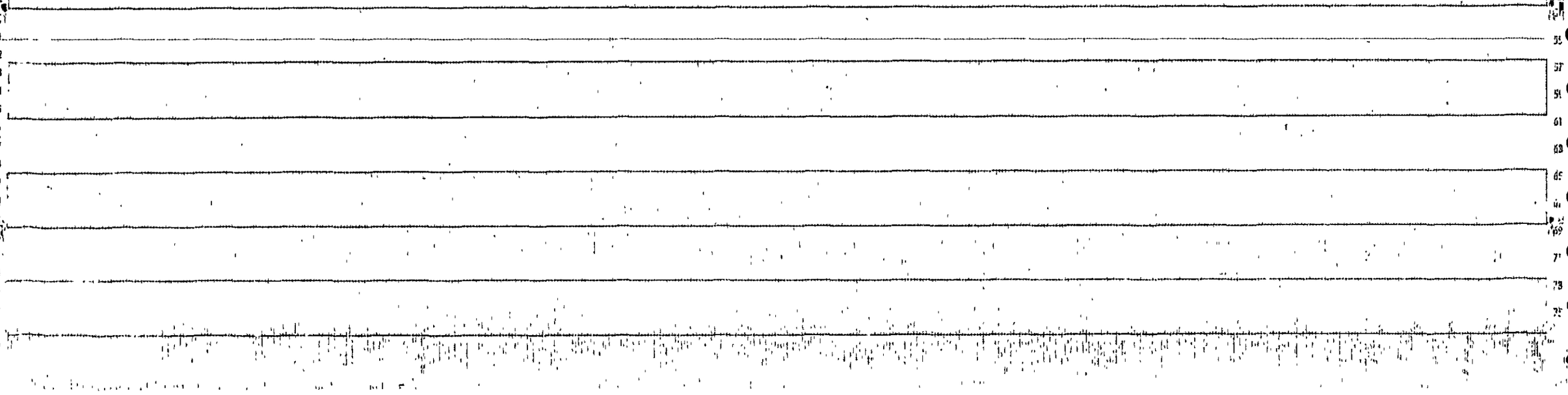
FORM 1411-CD PRINTED BY ROTARY MANIFOLD FORMS.

## ERROR SUMMARY

0 ERROR(S) DETECTED BY THE USER PROGRAM
0 ERROR(S) DETECTED BY THE MATHEMATICAL PACKAGE
0 ERROR(S) DETECTED FOR INPUT/OUTPUT STATEMENTS

PRINTED IN U.S.A.
FORM 1411 GB PRINTED BY BOTANY MANIFOLD FORMS.

```
==========================================================================================
13:16:00                    X109      DAS      HU202318  HEBFORD7                NOV 03, 1980
==========================================================================================
```



```
R600 11*C SI:11ZC LM:11*C FJ:E6-011 22A00561 PR01 PR/H112/FI/SI/A/H132
==========================================================================================
```

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: Bedford Twp

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: Summary of profiles

00BREAK00

```
*****************************************************
  NEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*****************************************************

T1BEDFORD TOWNSHIP AND CITY OF BATTLE CREEK FLOOD INSURANCE STUDY
T2KALAMAZOO RIVER FROM KALAMAZOO/CALHOUN COUNTY BOUNDARY TO BATTLE CREEK RIVER
T3       KALAMAZOO RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
       0.        6.        0.        0.  0.000221      0.00      0.0        0.   799.550     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

4-PROFILE

**********
 LFO2 RELEASE DATED NOV 76 UPDATED FEB 1977
 ERROR CODE - 01
 MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CPSEL | CRIMS | EG | FRK*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 102.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 4390.00 | 797.66 | 0.00 | 797.89 | 2.23 | 1.95 | 6832.93 | 2936.64 |
| 102.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 6000.00 | 798.51 | 0.00 | 798.81 | 2.27 | 2.22 | 9291.56 | 4026.95 |
| 102.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 6700.00 | 798.93 | 0.00 | 799.09 | 2.22 | 2.13 | 10221.33 | 4497.65 |
| 102.000 | 3575.00 | 0.00 | 0.00 | 789.80 | 8420.00 | 799.46 | 0.00 | 799.56 | 2.23 | 2.25 | 12290.69 | 5640.10 |
| 102.500 | 2950.00 | 0.00 | 0.00 | 789.50 | 4390.00 | 793.42 | 0.00 | 793.47 | 2.87 | 2.10 | 5941.08 | 2589.95 |
| 102.500 | 2950.00 | 0.00 | 0.00 | 789.50 | 6000.00 | 799.10 | 0.00 | 799.15 | 2.91 | 2.35 | 8211.77 | 3519.80 |
| 102.500 | 2950.00 | 0.00 | 0.00 | 789.50 | 6700.00 | 799.36 | 0.00 | 799.41 | 2.93 | 2.48 | 9119.87 | 3934.75 |
| 102.500 | 2950.00 | 0.00 | 0.00 | 789.50 | 8420.00 | 799.93 | 0.00 | 800.00 | 2.98 | 2.52 | 11177.96 | 4961.36 |
| 103.100 | 1590.00 | 0.00 | 0.00 | 789.60 | 4390.00 | 798.81 | 0.00 | 798.91 | 4.19 | 2.90 | 4504.04 | 2165.71 |
| 103.000 | 1590.00 | 0.00 | 0.00 | 789.60 | 6000.00 | 799.47 | 0.00 | 799.57 | 4.51 | 3.18 | 6141.81 | 2826.08 |
| 103.000 | 1590.00 | 0.00 | 0.00 | 789.60 | 6700.00 | 799.73 | 0.00 | 799.83 | 4.60 | 3.28 | 6702.06 | 3122.59 |
| 103.000 | 1590.00 | 0.00 | 0.00 | 789.60 | 8420.00 | 800.30 | 0.00 | 800.40 | 4.77 | 3.49 | 8265.62 | 3856.44 |
| 104.000 | 4025.00 | 0.00 | 0.00 | 788.10 | 4390.00 | 800.11 | 0.00 | 800.17 | 3.35 | 2.67 | 5830.81 | 2599.19 |
| 104.000 | 4025.00 | 0.00 | 0.00 | 788.10 | 6000.00 | 800.80 | 0.00 | 800.86 | 3.59 | 2.93 | 7456.63 | 3168.11 |
| 104.000 | 4025.00 | 0.00 | 0.00 | 788.10 | 6700.00 | 801.06 | 0.00 | 801.13 | 3.68 | 3.03 | 8087.74 | 3492.45 |
| 104.000 | 4025.00 | 0.00 | 0.00 | 788.10 | 8420.00 | 801.66 | 0.00 | 801.71 | 3.87 | 3.24 | 9530.60 | 4278.29 |
| 105.000 | 675.00 | 0.00 | 0.00 | 793.00 | 4390.00 | 800.36 | 0.00 | 800.41 | 3.83 | 2.37 | 4775.56 | 2264.24 |
| 105.000 | 675.00 | 0.00 | 0.00 | 793.00 | 6000.00 | 801.05 | 0.00 | 801.12 | 4.11 | 2.85 | 6177.03 | 2959.39 |
| 105.000 | 675.00 | 0.00 | 0.00 | 793.00 | 6700.00 | 801.32 | 0.00 | 801.40 | 4.21 | 2.96 | 6722.76 | 3264.46 |
| 105.000 | 675.00 | 0.00 | 0.00 | 793.00 | 8420.00 | 801.91 | 0.00 | 802.00 | 4.42 | 3.18 | 7976.29 | 4004.17 |
| 106.000 | 1435.00 | 0.00 | 0.00 | 790.90 | 4390.00 | 800.93 | 0.00 | 801.26 | 9.55 | 4.89 | 2128.81 | 1420.83 |
| 106.000 | 1435.00 | 0.00 | 0.00 | 790.90 | 6000.00 | 801.67 | 0.00 | 802.05 | 10.16 | 5.31 | 3473.68 | 1882.58 |
| 106.000 | 1435.00 | 0.00 | 0.00 | 790.90 | 6700.00 | 801.95 | 0.00 | 802.28 | 10.26 | 5.44 | 3983.71 | 2091.32 |
| 106.000 | 1435.00 | 0.00 | 0.00 | 790.90 | 8420.00 | 802.56 | 0.00 | 802.89 | 10.41 | 5.71 | 5109.29 | 2610.29 |
| 107.000 | 1275.00 | 0.00 | 0.00 | 788.90 | 4390.00 | 801.82 | 0.00 | 801.90 | 3.74 | 2.90 | 3636.41 | 2269.03 |
| 107.000 | 1275.00 | 0.00 | 0.00 | 788.90 | 6000.00 | 802.59 | 0.00 | 802.68 | 4.32 | 3.30 | 4560.59 | 2885.49 |
| 107.000 | 1275.00 | 0.00 | 0.00 | 788.90 | 6700.00 | 802.87 | 0.00 | 802.97 | 4.58 | 3.47 | 4900.45 | 3131.93 |
| 107.000 | 1275.00 | 0.00 | 0.00 | 788.90 | 8420.00 | 803.49 | 0.00 | 803.60 | 5.16 | 3.84 | 5646.10 | 3707.45 |
| 108.700 | 1075.00 | 0.00 | 0.00 | 792.80 | 3790.00 | 802.22 | 0.00 | 802.38 | 5.13 | 3.24 | 1315.08 | 1673.36 |
| 108.700 | 1075.00 | 0.00 | 0.00 | 792.80 | 5200.00 | 803.05 | 0.00 | 803.29 | 6.73 | 3.97 | 1510.58 | 2004.16 |
| 108.700 | 1075.00 | 0.00 | 0.00 | 792.80 | 5800.00 | 803.36 | 0.00 | 803.63 | 7.39 | 4.26 | 1585.44 | 2133.22 |
| 108.700 | 1075.00 | 0.00 | 0.00 | 792.80 | 7290.00 | 804.02 | 0.00 | 804.39 | 9.01 | 4.94 | 1736.48 | 2428.97 |

FORM 1411-GB PRINTED BY LISTAUT MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | EL*IN | Q | LUSEL | CRINS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 108.300 | 350.00 | 0.00 | 0.00 | 793.00 | 3790.00 | 802.55 | 0.00 | 802.67 | 8.51 | 4.19 | 934.39 | 1259.35 |
| 108.300 | 350.00 | 0.00 | 0.00 | 793.00 | 5200.00 | 803.[illegible] | 0.00 | 803.68 | 11.75 | 5.21 | 995.38 | 1517.23 |
| 108.300 | 350.00 | 0.00 | 0.00 | 793.00 | 5800.00 | 803.56 | 0.00 | 804.07 | 13.14 | 5.82 | 1032.64 | 1699.63 |
| 108.300 | 350.00 | 0.00 | 0.00 | 793.00 | 7290.00 | 804.29 | 0.00 | 804.96 | 16.71 | 6.58 | 1107.34 | 1783.13 |
| 108.900 | 1.30 | 810.70 | 808.70 | 793.00 | 4390.00 | 802.33 | 0.00 | 802.73 | 12.92 | 5.06 | 871.09 | 1221.29 |
| 108.900 | 1.30 | 810.70 | 808.70 | 793.00 | 6000.00 | 803.17 | 0.00 | 803.78 | 17.97 | 6.26 | 957.96 | 1417.68 |
| 108.900 | 1.30 | 810.70 | 808.70 | 793.00 | 6700.00 | 803.43 | 0.00 | 804.19 | 20.17 | 6.77 | 989.71 | 1491.93 |
| 108.900 | 1.30 | 810.70 | 808.70 | 793.00 | 8420.00 | 804.14 | 0.00 | 805.12 | 25.84 | 7.96 | 1058.38 | 1656.27 |
| 109.000 | 35.00 | 810.70 | 808.70 | 790.10 | 4390.00 | 802.45 | 0.00 | 802.79 | 9.79 | 4.62 | 950.25 | 1402.72 |
| 109.000 | 35.00 | 810.70 | 808.70 | 790.10 | 6000.00 | 803.35 | 0.00 | 803.86 | 13.67 | 5.75 | 1063.16 | 1622.59 |
| 109.000 | 35.00 | 810.70 | 808.70 | 790.10 | 6700.00 | 803.71 | 0.00 | 804.28 | 15.43 | 6.32 | 1077.78 | 1707.11 |
| 109.000 | 35.00 | 810.70 | 808.70 | 790.10 | 8420.00 | 804.42 | 0.00 | 805.24 | 19.65 | 7.29 | 1154.34 | 1693.77 |
| 109.100 | 1.00 | 0.00 | 0.00 | 790.10 | 4390.00 | 802.40 | 0.00 | 802.79 | 8.79 | 4.46 | 983.83 | 1485.02 |
| 109.100 | 1.00 | 0.00 | 0.00 | 790.10 | 6000.00 | 803.40 | 0.00 | 803.87 | 12.13 | 5.55 | 1081.56 | 1722.45 |
| 109.100 | 1.00 | 0.00 | 0.00 | 790.10 | 6700.00 | 803.74 | 0.00 | 804.32 | 13.64 | 5.99 | 1118.22 | 1814.07 |
| 109.100 | 1.00 | 0.00 | 0.00 | 790.10 | 8420.00 | 804.50 | 0.00 | 805.25 | 17.32 | 7.02 | 1199.78 | 2023.18 |
| 109.200 | 100.00 | 0.00 | 0.00 | 790.10 | 4390.00 | 802.65 | 0.00 | 802.84 | 6.46 | 4.16 | 1546.25 | 1726.67 |
| 109.200 | 100.00 | 0.00 | 0.00 | 790.10 | 6000.00 | 803.63 | 0.00 | 803.81 | 8.38 | 5.08 | 1580.93 | 2075.45 |
| 109.200 | 100.00 | 0.00 | 0.00 | 790.10 | 6700.00 | 804.02 | 0.00 | 804.45 | 9.12 | 5.42 | 1676.17 | 2219.07 |
| 109.200 | 100.00 | 0.00 | 0.00 | 790.10 | 8420.00 | 804.91 | 0.00 | 805.46 | 10.76 | 6.21 | 1905.70 | 2567.29 |
| 110.000 | 650.00 | 0.00 | 0.00 | 793.30 | 4390.00 | 802.92 | 0.00 | 803.04 | 1.06 | 2.22 | 2095.96 | 3402.29 |
| 110.000 | 650.00 | 0.00 | 0.00 | 793.30 | 6000.00 | 804.15 | 0.00 | 804.27 | 1.96 | 2.64 | 2472.46 | 4259.19 |
| 110.000 | 650.00 | 0.00 | 0.00 | 793.30 | 6700.00 | 804.61 | 0.00 | 804.73 | 2.10 | 2.87 | 2626.38 | 4619.41 |
| 110.000 | 650.00 | 0.00 | 0.00 | 793.30 | 8420.00 | 805.63 | 0.00 | 805.79 | 2.35 | 3.17 | 2982.46 | 5496.79 |
| 110.900 | 3450.00 | 0.00 | 0.00 | 795.10 | 4390.00 | 803.64 | 0.00 | 803.72 | 1.96 | 2.24 | 2085.28 | 3133.96 |
| 110.900 | 3450.00 | 0.00 | 0.00 | 795.10 | 6000.00 | 804.67 | 0.00 | 804.98 | 2.13 | 2.59 | 2609.17 | 4111.13 |
| 110.900 | 3450.00 | 0.00 | 0.00 | 795.10 | 6700.00 | 805.38 | 0.00 | 805.47 | 2.19 | 2.72 | 2825.62 | 4529.66 |
| 110.900 | 3450.00 | 0.00 | 0.00 | 795.10 | 8420.00 | 806.45 | 0.00 | 806.59 | 2.30 | 3.01 | 3379.43 | 5554.30 |
| 111.000 | 2.00 | 797.30 | 795.10 | 795.10 | 4390.00 | 803.61 | 0.00 | 803.73 | 3.07 | 2.74 | 1721.93 | 2232.77 |
| 111.000 | 2.00 | 797.30 | 795.10 | 795.10 | 6000.00 | 804.65 | 0.00 | 804.99 | 3.76 | 3.08 | 2244.69 | 3101.27 |
| 111.000 | 2.00 | 797.30 | 795.10 | 795.10 | 6700.00 | 805.33 | 0.00 | 805.40 | 3.71 | 3.18 | 2461.45 | 3479.18 |
| 111.000 | 2.00 | 797.30 | 795.10 | 795.10 | 8420.00 | 806.63 | 0.00 | 806.80 | 3.56 | 3.44 | 2955.61 | 4414.34 |
| 111.100 | 2.00 | 0.00 | 0.00 | 795.10 | 4390.30 | 803.66 | 0.00 | 803.73 | 1.94 | 2.23 | 2093.09 | 3146.94 |
| 111.100 | 2.00 | 0.00 | 0.00 | 795.10 | 6000.30 | 804.89 | 0.00 | 804.99 | 2.11 | 2.58 | 2619.06 | 4129.01 |
| 111.100 | 2.00 | 0.00 | 0.00 | 795.10 | 6700.30 | 805.37 | 0.00 | 805.43 | 2.17 | 2.71 | 2836.15 | 4550.27 |
| 111.100 | 2.00 | 0.00 | 0.00 | 795.10 | 8420.30 | 806.47 | 0.00 | 806.61 | 2.28 | 3.00 | 3330.86 | 5579.21 |
| 112.000 | 1400.00 | 0.00 | 0.00 | 794.10 | 4390.00 | 803.46 | 0.00 | 803.94 | 1.13 | 1.86 | 2401.58 | 4157.79 |
| 112.000 | 1400.00 | 0.00 | 0.00 | 794.10 | 6000.00 | 805.15 | 0.00 | 805.22 | 1.31 | 2.20 | 2796.31 | 5238.65 |
| 112.000 | 1400.00 | 0.00 | 0.00 | 794.10 | 6700.00 | 805.64 | 0.00 | 805.73 | 1.38 | 2.34 | 2953.61 | 5695.24 |
| 112.000 | 1400.00 | 0.00 | 0.00 | 794.10 | 8420.00 | 806.76 | 0.00 | 806.87 | 1.53 | 2.64 | 3350.83 | 6797.71 |
| 113.000 | 1700.00 | 0.00 | 0.00 | 794.20 | 4390.00 | 804.09 | 0.00 | 804.15 | 1.38 | 2.02 | 2249.74 | 3732.30 |
| 113.000 | 1700.00 | 0.00 | 0.00 | 794.20 | 6000.00 | 805.39 | 0.00 | 805.47 | 1.57 | 2.38 | 2655.85 | 4791.81 |
| 113.000 | 1700.00 | 0.00 | 0.00 | 794.20 | 6700.00 | 805.89 | 0.00 | 805.99 | 1.64 | 2.51 | 2817.56 | 5233.64 |
| 113.000 | 1700.00 | 0.00 | 0.00 | 794.20 | 8420.00 | 807.05 | 0.00 | 807.19 | 1.79 | 2.82 | 3192.27 | 6296.41 |

FORM 4411 PRINTED BY BOEING MANIFOLD FORMS.

| SECNO | XLCN | ELTRO | ELLC | ELMIN | Q | CUSEL | COILS | FG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114.000 | 1450.00 | 0.00 | 0.00 | 794.70 | 4390.00 | 804.50 | 0.00 | 804.57 | 1.55 | 2.14 | 2138.63 | 3527.37 |
| 114.000 | 1450.00 | 0.00 | 0.00 | 794.70 | 6000.00 | 805.62 | 0.00 | 805.71 | 1.76 | 2.50 | 2558.69 | 4554.78 |
| 114.000 | 1450.00 | 0.00 | 0.00 | 794.70 | 6700.00 | 806.15 | 0.00 | 806.24 | 1.81 | 2.64 | 2733.29 | 4946.62 |
| 114.000 | 1450.00 | 0.00 | 0.00 | 794.70 | 8420.00 | 807.30 | 0.00 | 807.45 | 1.95 | 2.95 | 3139.82 | 6030.66 |
| 115.000 | 1500.00 | 0.00 | 0.00 | 795.60 | 4390.00 | 804.54 | 0.00 | 804.61 | 1.67 | 2.11 | 2703.86 | 3401.02 |
| 115.000 | 1500.00 | 0.00 | 0.00 | 795.60 | 6000.00 | 805.66 | 0.00 | 805.77 | 1.89 | 2.38 | 3440.19 | 4609.34 |
| 115.000 | 1500.00 | 0.00 | 0.00 | 795.60 | 6700.00 | 806.18 | 0.00 | 806.50 | 1.71 | 2.48 | 3723.44 | 5124.44 |
| 115.000 | 1500.00 | 0.00 | 0.00 | 795.60 | 8420.00 | 807.60 | 0.00 | 807.70 | 1.76 | 2.71 | 4384.04 | 6578.23 |
| 115.700 | 1600.00 | 0.00 | 0.00 | 795.60 | 4390.00 | 804.60 | 0.00 | 804.66 | 1.47 | 2.03 | 2843.88 | 3618.37 |
| 115.700 | 1600.00 | 0.00 | 0.00 | 795.60 | 6000.00 | 806.16 | 0.00 | 806.23 | 1.51 | 2.29 | 3590.84 | 4875.73 |
| 115.700 | 1600.00 | 0.00 | 0.00 | 795.60 | 6700.00 | 806.86 | 0.00 | 806.78 | 1.54 | 2.41 | 3879.79 | 5403.91 |
| 115.700 | 1600.00 | 0.00 | 0.00 | 795.60 | 8420.00 | 807.98 | 0.00 | 807.97 | 1.58 | 2.63 | 4542.16 | 6697.65 |
| 115.800 | 1300.00 | 0.00 | 0.00 | 796.20 | 4390.00 | 805.05 | 0.00 | 805.12 | 2.54 | 2.41 | 1824.56 | 2756.02 |
| 115.800 | 1300.00 | 0.00 | 0.00 | 796.20 | 6000.00 | 806.60 | 0.00 | 806.51 | 2.78 | 2.72 | 2204.10 | 3601.00 |
| 115.800 | 1300.00 | 0.00 | 0.00 | 796.20 | 6700.00 | 806.95 | 0.00 | 807.06 | 2.87 | 2.84 | 2360.97 | 3952.11 |
| 115.800 | 1300.00 | 0.00 | 0.00 | 796.20 | 8420.00 | 808.14 | 0.00 | 808.25 | 3.06 | 3.08 | 2732.71 | 4828.84 |
| 115.900 | 1.00 | 816.00 | 811.60 | 796.20 | 4390.00 | 805.01 | 0.00 | 805.12 | 2.31 | 2.68 | 1748.45 | 2616.56 |
| 115.900 | 1.00 | 816.00 | 811.60 | 796.20 | 6000.00 | 806.59 | 0.00 | 806.51 | 2.67 | 2.81 | 2137.77 | 3422.14 |
| 115.900 | 1.00 | 816.00 | 811.60 | 796.20 | 6700.00 | 806.92 | 0.00 | 807.06 | 3.18 | 2.93 | 2290.53 | 3757.50 |
| 115.900 | 1.00 | 816.00 | 811.60 | 796.20 | 8420.00 | 808.13 | 0.00 | 808.28 | 3.36 | 3.17 | 2653.20 | 4596.73 |
| 116.000 | 64.00 | 816.00 | 811.60 | 796.00 | 4390.00 | 805.06 | 0.00 | 805.14 | 2.13 | 2.20 | 1924.09 | 3006.23 |
| 116.000 | 64.00 | 816.00 | 811.60 | 796.00 | 6000.00 | 806.63 | 0.00 | 806.54 | 2.43 | 2.62 | 2293.24 | 3849.33 |
| 116.000 | 64.00 | 816.00 | 811.60 | 796.00 | 6700.00 | 806.96 | 0.00 | 807.06 | 2.54 | 2.74 | 2448.48 | 4204.10 |
| 116.000 | 64.00 | 816.00 | 811.60 | 796.00 | 8420.00 | 808.17 | 0.00 | 808.31 | 2.74 | 3.00 | 2808.68 | 5086.94 |
| 116.100 | 1.00 | 0.00 | 0.00 | 795.00 | 4390.00 | 805.07 | 0.00 | 805.15 | 1.90 | 2.20 | 1991.42 | 3182.85 |
| 116.100 | 1.00 | 0.00 | 0.00 | 796.00 | 6000.00 | 806.64 | 0.00 | 806.54 | 2.17 | 2.53 | 2371.34 | 4069.26 |
| 116.100 | 1.00 | 0.00 | 0.00 | 796.00 | 6700.00 | 806.97 | 0.00 | 807.08 | 2.28 | 2.65 | 2527.89 | 4433.77 |
| 116.100 | 1.00 | 0.00 | 0.00 | 796.00 | 8420.00 | 808.16 | 0.00 | 808.31 | 2.47 | 2.90 | 2898.94 | 5361.42 |
| 116.200 | 400.00 | 0.00 | 0.00 | 796.90 | 4390.00 | 805.15 | 0.00 | 805.24 | 2.30 | 2.45 | 1848.21 | 2847.72 |
| 116.200 | 400.00 | 0.00 | 0.00 | 796.90 | 6000.00 | 806.72 | 0.00 | 806.64 | 2.46 | 2.80 | 2242.19 | 3527.16 |
| 116.200 | 400.00 | 0.00 | 0.00 | 796.90 | 6700.00 | 807.06 | 0.00 | 807.19 | 2.49 | 2.93 | 2481.00 | 4248.12 |
| 116.200 | 400.00 | 0.00 | 0.00 | 796.90 | 8420.00 | 808.27 | 0.00 | 808.42 | 2.56 | 3.22 | 2920.33 | 5271.49 |
| 117.000 | 2000.00 | 0.00 | 0.00 | 796.70 | 4390.00 | 805.56 | 0.00 | 805.61 | 1.48 | 2.11 | 2171.93 | 3609.35 |
| 117.000 | 2000.00 | 0.00 | 0.00 | 796.70 | 6000.00 | 806.95 | 0.00 | 807.04 | 1.62 | 2.45 | 2592.68 | 4714.66 |
| 117.000 | 2000.00 | 0.00 | 0.00 | 796.70 | 6700.00 | 807.50 | 0.00 | 807.61 | 1.67 | 2.56 | 2770.53 | 5180.80 |
| 117.000 | 2000.00 | 0.00 | 0.00 | 796.70 | 8420.00 | 808.75 | 0.00 | 808.85 | 1.78 | 2.87 | 3198.64 | 6304.11 |
| 117.900 | 1300.00 | 0.00 | 0.00 | 798.60 | 4390.00 | 805.77 | 0.00 | 805.86 | 2.32 | 2.30 | 1908.97 | 2861.78 |
| 117.900 | 1300.00 | 0.00 | 0.00 | 798.60 | 6000.00 | 807.19 | 0.00 | 807.30 | 2.36 | 2.59 | 2312.65 | 3905.00 |
| 117.900 | 1300.00 | 0.00 | 0.00 | 798.60 | 6700.00 | 807.75 | 0.00 | 807.86 | 2.39 | 2.71 | 2472.39 | 4338.32 |
| 117.900 | 1300.00 | 0.00 | 0.00 | 798.60 | 8420.00 | 809.00 | 0.00 | 809.13 | 2.45 | 2.97 | 2836.16 | 5300.55 |
| 118.000 | 40.00 | 816.50 | 814.20 | 798.30 | 4390.00 | 805.78 | 0.00 | 805.85 | 2.03 | 2.20 | 1991.02 | 3083.16 |
| 118.000 | 40.00 | 816.50 | 814.20 | 798.30 | 6000.00 | 807.20 | 0.00 | 807.29 | 2.11 | 2.50 | 2397.68 | 4133.73 |
| 118.000 | 40.00 | 816.50 | 814.20 | 798.30 | 6700.00 | 807.75 | 0.00 | 807.86 | 2.14 | 2.62 | 2558.34 | 4577.78 |
| 118.000 | 40.00 | 816.50 | 814.20 | 798.30 | 8420.00 | 809.00 | 0.00 | 809.12 | 2.23 | 2.88 | 2924.16 | 5643.66 |

FORM 141.00 PRINTED BY MOODY MANIFOLD FORMS

| SECNO | XLCN | ELTRD | ELLC | ELMIX | Q | CLSEL | CRITS | EG | TOK*S | VCP | AREA | .C1K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 118.100 | 400.00 | 0.00 | 0.00 | 797.50 | 6390.00 | 805.95 | 0.00 | 805.95 | 2.50 | 2.52 | 1748.47 | 2732.79 |
| 118.100 | 400.00 | 0.00 | 0.00 | 797.50 | 6600.00 | 807.27 | 0.00 | 807.47 | 2.68 | 2.99 | 2119.56 | 3662.79 |
| 118.100 | 400.00 | 0.00 | 0.00 | 797.50 | 6700.00 | 807.93 | 0.00 | 807.98 | 2.73 | 3.14 | 2269.42 | 4056.64 |
| 118.100 | 400.00 | 0.00 | 0.00 | 797.50 | 8420.00 | 809.07 | 0.00 | 809.25 | 2.84 | 3.48 | 2612.73 | 4994.66 |
| 119.000 | 500.00 | 0.00 | 0.00 | 797.10 | 4390.00 | 805.99 | 0.00 | 806.08 | 1.95 | 2.35 | 1954.12 | 3147.18 |
| 119.000 | 500.00 | 0.00 | 0.00 | 797.10 | 6000.00 | 807.42 | 0.00 | 807.53 | 2.07 | 2.70 | 2349.50 | 4173.02 |
| 119.000 | 500.00 | 0.00 | 0.00 | 797.10 | 6700.00 | 807.98 | 0.00 | 808.10 | 2.11 | 2.84 | 2508.62 | 4607.11 |
| 119.000 | 500.00 | 0.00 | 0.00 | 797.10 | 8420.00 | 809.24 | 0.00 | 809.39 | 2.22 | 3.15 | 2877.66 | 5648.92 |
| 120.000 | 950.00 | 0.00 | 0.00 | 797.10 | 4390.00 | 806.16 | 0.00 | 806.26 | 1.90 | 2.30 | 2047.00 | 3185.81 |
| 120.000 | 950.00 | 0.00 | 0.00 | 797.10 | 6000.00 | 807.62 | 0.00 | 807.73 | 1.98 | 2.62 | 2481.82 | 4267.23 |
| 120.000 | 950.00 | 0.00 | 0.00 | 797.10 | 6700.00 | 808.19 | 0.00 | 808.30 | 2.01 | 2.75 | 2656.56 | 4725.41 |
| 120.000 | 950.00 | 0.00 | 0.00 | 797.10 | 8420.00 | 809.65 | 0.00 | 809.79 | 2.08 | 3.04 | 3084.18 | 5836.77 |
| 121.000 | 2650.00 | 0.00 | 0.00 | 797.40 | 4390.00 | 806.67 | 0.00 | 806.75 | 1.81 | 2.34 | 1990.91 | 3264.90 |
| 121.000 | 2650.00 | 0.00 | 0.00 | 797.40 | 6000.00 | 808.14 | 0.00 | 808.25 | 1.94 | 2.70 | 2394.58 | 4310.92 |
| 121.000 | 2650.00 | 0.00 | 0.00 | 797.40 | 6700.00 | 808.71 | 0.00 | 808.83 | 1.99 | 2.84 | 2554.69 | 4752.38 |
| 121.000 | 2650.00 | 0.00 | 0.00 | 797.40 | 8420.00 | 810.08 | 0.00 | 810.15 | 2.11 | 3.18 | 2923.06 | 5811.49 |
| 121.800 | 700.00 | 0.00 | 0.00 | 798.50 | 4390.00 | 806.87 | 0.00 | 807.15 | 13.06 | 4.79 | 917.27 | 1264.29 |
| 121.800 | 700.00 | 0.00 | 0.00 | 798.50 | 6000.00 | 808.25 | 0.00 | 808.68 | 11.52 | 5.25 | 1161.95 | 1767.97 |
| 121.800 | 700.00 | 0.00 | 0.00 | 798.50 | 6700.00 | 808.82 | 0.00 | 809.28 | 11.39 | 5.44 | 1232.46 | 1955.03 |
| 121.800 | 700.00 | 0.00 | 0.00 | 798.50 | 8420.00 | 810.19 | 0.00 | 810.63 | 11.22 | 5.84 | 1441.14 | 2513.29 |
| 121.900 | 1.00 | 820.00 | 815.50 | 798.50 | 4390.00 | 806.79 | 0.00 | 807.16 | 13.19 | 4.92 | 892.77 | 1263.57 |
| 121.900 | 1.00 | 820.00 | 815.50 | 798.50 | 6000.00 | 808.24 | 0.00 | 808.69 | 12.60 | 5.40 | 1111.40 | 1669.59 |
| 121.900 | 1.00 | 820.00 | 815.50 | 798.50 | 6700.00 | 808.81 | 0.00 | 809.29 | 12.46 | 5.59 | 1199.60 | 1897.79 |
| 121.900 | 1.00 | 820.00 | 815.50 | 798.50 | 8420.00 | 810.08 | 0.00 | 810.64 | 12.27 | 6.00 | 1403.11 | 2404.01 |
| 122.000 | 50.00 | 820.00 | 815.50 | 798.70 | 4390.00 | 806.87 | 0.00 | 807.24 | 13.04 | 4.59 | 898.92 | 1215.61 |
| 122.000 | 50.00 | 820.00 | 815.50 | 798.70 | 6000.00 | 808.32 | 0.00 | 808.77 | 12.49 | 5.38 | 1115.42 | 1667.64 |
| 122.000 | 50.00 | 820.00 | 815.50 | 798.70 | 6700.00 | 808.88 | 0.00 | 809.37 | 12.37 | 5.57 | 1203.27 | 1905.30 |
| 122.000 | 50.00 | 820.00 | 815.50 | 798.70 | 8420.00 | 810.16 | 0.00 | 810.71 | 12.20 | 5.99 | 1406.11 | 2410.89 |
| 122.100 | 1.00 | 0.00 | 0.00 | 798.70 | 4390.00 | 806.90 | 0.00 | 807.25 | 11.78 | 4.75 | 925.12 | 1278.97 |
| 122.100 | 1.00 | 0.00 | 0.00 | 798.70 | 6000.00 | 808.35 | 0.00 | 808.78 | 11.29 | 5.22 | 1150.32 | 1785.20 |
| 122.100 | 1.00 | 0.00 | 0.00 | 798.70 | 6700.00 | 808.92 | 0.00 | 809.38 | 11.18 | 5.40 | 1240.89 | 2003.63 |
| 122.100 | 1.00 | 0.00 | 0.00 | 798.70 | 8420.00 | 810.27 | 0.00 | 810.73 | 11.04 | 5.81 | 1449.76 | 2534.53 |
| 122.200 | 200.00 | 0.00 | 0.00 | 795.20 | 4390.00 | 807.24 | 0.00 | 807.41 | 2.90 | 3.16 | 1454.93 | 2577.81 |
| 122.200 | 200.00 | 0.00 | 0.00 | 795.20 | 6000.00 | 808.74 | 0.00 | 808.95 | 3.26 | 3.69 | 1722.75 | 3325.22 |
| 122.200 | 200.00 | 0.00 | 0.00 | 795.20 | 6700.00 | 809.32 | 0.00 | 809.55 | 3.39 | 3.91 | 1830.04 | 3639.36 |
| 122.200 | 200.00 | 0.00 | 0.00 | 795.20 | 8420.00 | 810.62 | 0.00 | 810.91 | 3.68 | 4.38 | 2076.58 | 4389.92 |
| 123.000 | 1100.00 | 0.00 | 0.00 | 797.60 | 4390.00 | 807.63 | 0.00 | 807.86 | 4.99 | 3.72 | 1238.99 | 1965.66 |
| 123.000 | 1100.00 | 0.00 | 0.00 | 797.60 | 6000.00 | 809.14 | 0.00 | 809.41 | 5.10 | 4.23 | 1506.70 | 2656.70 |
| 123.000 | 1100.00 | 0.00 | 0.00 | 797.60 | 6700.00 | 809.73 | 0.00 | 810.03 | 5.16 | 4.43 | 1614.85 | 2950.80 |
| 123.000 | 1100.00 | 0.00 | 0.00 | 797.60 | 8420.00 | 811.05 | 0.00 | 811.42 | 5.30 | 4.89 | 1863.93 | 3657.95 |
| 123.800 | 700.00 | 0.00 | 0.00 | 800.30 | 4390.00 | 806.04 | 0.00 | 806.33 | 8.65 | 4.29 | 1022.31 | 1492.23 |
| 123.800 | 700.00 | 0.00 | 0.00 | 800.30 | 6000.00 | 807.55 | 0.00 | 807.90 | 8.41 | 4.74 | 1265.20 | 2069.57 |
| 123.800 | 700.00 | 0.00 | 0.00 | 800.30 | 6700.00 | 810.14 | 0.00 | 810.52 | 8.36 | 4.92 | 1362.80 | 2317.45 |
| 123.800 | 700.00 | 0.00 | 0.00 | 800.30 | 8420.00 | 811.47 | 0.00 | 811.91 | 8.29 | 5.30 | 1587.59 | 2923.92 |

FORM 1411 RE-PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRICS | EG | 10K*S | VCM | ARSA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123.900 | 1.00 | 821.00 | 817.70 | 801.30 | 4392.00 | 806.03 | 0.00 | 808.36 | 9.55 | 4.42 | 992.06 | 1620.77 |
| 123.900 | 1.00 | 821.00 | 817.70 | 802.30 | 5002.00 | 809.54 | 0.00 | 809.91 | 9.26 | 4.08 | 1228.84 | 1971.54 |
| 123.900 | 1.00 | 821.00 | 817.70 | 802.30 | 5702.00 | 810.13 | 0.00 | 810.53 | 9.20 | 5.06 | 1334.04 | 2200.83 |
| 123.900 | 1.00 | 821.00 | 817.70 | 800.30 | 3620.00 | 811.46 | 0.00 | 811.93 | 9.11 | 5.46 | 1545.42 | 2709.65 |
| 124.000 | 50.00 | 821.00 | 817.70 | 801.90 | 4390.00 | 808.03 | 0.00 | 808.50 | 19.15 | 5.50 | 798.36 | 1003.27 |
| 124.000 | 50.00 | 821.00 | 817.70 | 801.90 | 5002.00 | 809.53 | 0.00 | 810.00 | 16.21 | 5.53 | 1029.85 | 1490.66 |
| 124.000 | 50.00 | 821.00 | 817.70 | 801.90 | 5702.00 | 810.12 | 0.00 | 810.66 | 15.48 | 5.97 | 1122.93 | 1703.10 |
| 124.000 | 50.00 | 821.00 | 817.70 | 801.90 | 3620.00 | 811.45 | 0.00 | 812.07 | 14.31 | 5.29 | 1337.64 | 2226.19 |
| 124.100 | 1.00 | 0.00 | 0.00 | 801.90 | 4390.00 | 805.07 | 0.00 | 808.51 | 17.01 | 5.30 | 827.64 | 1064.43 |
| 124.100 | 1.00 | 0.00 | 0.00 | 801.90 | 6000.00 | 809.59 | 0.00 | 810.07 | 14.48 | 5.63 | 1065.86 | 1576.94 |
| 124.100 | 1.00 | 0.00 | 0.00 | 801.90 | 5702.00 | 810.17 | 0.00 | 810.69 | 13.85 | 5.77 | 1161.64 | 1800.46 |
| 124.100 | 1.00 | 0.00 | 0.00 | 801.90 | 3620.00 | 811.52 | 0.00 | 812.08 | 12.65 | 6.09 | 1332.24 | 2349.15 |
| 124.200 | 250.00 | 0.00 | 0.00 | 801.40 | 4270.00 | 808.49 | 0.00 | 808.81 | 17.69 | 5.01 | 935.12 | 1238.20 |
| 124.200 | 200.00 | 0.00 | 0.00 | 801.40 | 3920.00 | 809.87 | 0.00 | 810.34 | 11.41 | 5.62 | 1175.36 | 1752.90 |
| 124.200 | 200.00 | 0.00 | 0.00 | 801.40 | 6650.00 | 810.43 | 0.00 | 810.94 | 11.33 | 5.87 | 1272.67 | 1975.63 |
| 124.200 | 250.00 | 0.00 | 0.00 | 801.40 | 5420.00 | 811.99 | 0.00 | 812.55 | 11.05 | 6.30 | 1505.37 | 2532.52 |
| 125.000 | 1500.00 | 0.00 | 0.00 | 802.20 | 4270.00 | 809.53 | 0.00 | 809.87 | 9.45 | 4.39 | 1034.46 | 1386.64 |
| 125.000 | 1000.00 | 0.00 | 0.00 | 802.20 | 5920.00 | 810.99 | 0.00 | 811.36 | 9.04 | 4.95 | 1297.70 | 1988.74 |
| 125.000 | 1000.00 | 0.00 | 0.00 | 802.20 | 6650.00 | 811.56 | 0.00 | 811.96 | 8.94 | 5.16 | 1406.02 | 2224.34 |
| 125.000 | 1000.00 | 0.00 | 0.00 | 802.20 | 5420.00 | 812.85 | 0.00 | 813.32 | 8.67 | 5.56 | 1660.03 | 2858.85 |

FORM 1911-GB PRINTED BY ROTARY HARIFOLD FORMS.

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 153

| SECNO | Q | CHSEL | DIFUSP | DIFUSX | DIFKUS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 102.000 | 4390.00 | 797.86 | 0.00 | 0.00 | 0.04 | 3337.25 | 3575.00 |
| 102.000 | 6000.00 | 798.36 | 0.00 | 0.00 | 0.00 | 3554.97 | 3575.00 |
| 102.000 | 6700.00 | 798.05 | 0.00 | 0.00 | 0.22 | 3375.41 | 3575.00 |
| 102.000 | 8420.00 | 799.46 | 0.00 | 0.00 | -0.07 | 3389.37 | 3575.00 |
| 102.500 | 4390.00 | 796.42 | 0.00 | 0.56 | 0.00 | 3044.97 | 2950.00 |
| 102.500 | 6000.00 | 799.10 | 0.00 | 0.53 | 0.00 | 3443.40 | 2950.00 |
| 102.500 | 6700.00 | 799.32 | 0.00 | 0.51 | 0.00 | 3439.99 | 2950.00 |
| 102.500 | 8420.00 | 799.95 | 0.00 | 0.49 | 0.00 | 3529.97 | 2950.00 |
| 103.000 | 4390.00 | 798.01 | 0.00 | 0.59 | 0.00 | 2456.05 | 1590.00 |
| 103.000 | 6000.00 | 799.47 | 0.00 | 0.37 | 0.00 | 2513.05 | 1590.00 |
| 103.000 | 6700.00 | 799.73 | 0.00 | 0.36 | 0.00 | 2534.90 | 1590.00 |
| 103.000 | 8421.00 | 800.50 | 0.00 | 0.47 | 0.00 | 2733.30 | 1590.00 |
| 104.000 | 4390.00 | 800.11 | 0.00 | 1.39 | 0.00 | 2270.16 | 4025.00 |
| 104.000 | 6000.00 | 800.80 | 0.00 | 1.33 | 0.00 | 2389.06 | 4025.00 |
| 104.000 | 6700.00 | 801.06 | 0.00 | 1.34 | 0.00 | 2410.46 | 4025.00 |
| 104.000 | 8420.00 | 801.64 | 0.00 | 1.35 | 0.00 | 2599.61 | 4025.00 |
| 105.000 | 4390.00 | 800.54 | 0.00 | 0.24 | 0.00 | 1971.05 | 675.00 |
| 105.000 | 6000.00 | 801.05 | 0.00 | 0.25 | 0.00 | 2029.24 | 675.00 |
| 105.000 | 6700.00 | 801.32 | 0.00 | 0.26 | 0.00 | 2042.41 | 675.00 |
| 105.000 | 8420.00 | 801.91 | 0.00 | 0.27 | 0.00 | 2193.34 | 675.00 |
| 106.000 | 4390.00 | 800.93 | 0.00 | 0.59 | 0.00 | 1325.16 | 1435.00 |
| 106.000 | 6000.00 | 801.67 | 0.00 | 0.62 | 0.00 | 1325.98 | 1435.00 |
| 106.000 | 6700.00 | 301.95 | 0.00 | 0.63 | 0.00 | 1326.26 | 1435.00 |
| 106.000 | 8420.00 | 802.56 | 0.00 | 0.65 | 0.00 | 1826.95 | 1435.00 |
| 107.000 | 4390.00 | 801.82 | 0.00 | 0.39 | 0.00 | 1205.60 | 1275.00 |
| 107.000 | 6000.00 | 302.59 | 0.00 | 0.92 | 0.00 | 1211.75 | 1275.00 |
| 107.000 | 6700.00 | 802.87 | 0.00 | 0.92 | 0.00 | 1212.00 | 1275.00 |
| 107.000 | 8420.00 | 803.46 | 0.00 | 0.93 | 0.00 | 1213.86 | 1275.00 |
| 108.700 | 3790.00 | 802.22 | 0.00 | 0.40 | 0.00 | 229.98 | 1075.00 |
| 108.700 | 5200.00 | 803.05 | 0.00 | 0.46 | 0.00 | 242.74 | 1075.00 |
| 108.700 | 5800.00 | 803.36 | 0.00 | 0.49 | 0.00 | 247.45 | 1075.00 |
| 108.700 | 7290.00 | 804.22 | 0.00 | 0.54 | 0.00 | 257.70 | 1075.00 |
| 108.800 | 3790.00 | 802.39 | 0.00 | 0.17 | 0.00 | 107.08 | 350.00 |
| 108.800 | 5200.00 | 803.26 | 0.00 | 0.21 | 0.00 | 107.09 | 350.00 |
| 108.800 | 5800.00 | 803.59 | 0.00 | 0.23 | 0.00 | 107.10 | 350.00 |
| 108.800 | 7290.00 | 804.29 | 0.00 | 0.27 | 0.00 | 107.11 | 350.00 |
| 108.900 | 4390.00 | 802.33 | 0.00 | -0.06 | 0.00 | 107.08 | 1.00 |
| 108.900 | 6000.00 | 803.17 | 0.00 | -0.09 | 0.00 | 107.09 | 1.00 |
| 108.900 | 6700.00 | 803.48 | 0.00 | -0.11 | 0.00 | 107.10 | 1.00 |
| 108.900 | 8420.00 | 804.14 | 0.00 | -0.15 | 0.00 | 107.11 | 1.00 |
| 109.000 | 4390.00 | 802.45 | 0.00 | 0.12 | 0.00 | 107.08 | 35.00 |
| 109.000 | 6000.00 | 803.35 | 0.00 | 0.18 | 0.00 | 107.10 | 35.00 |
| 109.000 | 6700.00 | 803.66 | 0.00 | 0.21 | 0.00 | 107.10 | 35.00 |
| 109.000 | 8420.00 | 804.42 | 0.00 | 0.28 | 0.00 | 107.11 | 35.00 |

FORM 1411-GR PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 109.100 | 4390.00 | 802.48 | 0.00 | 0.03 | 0.00 | 107.08 | 1.00 |
| 109.100 | 6000.00 | 803.40 | 0.00 | 0.05 | 0.00 | 107.10 | 1.00 |
| 109.100 | 6700.00 | 803.74 | 0.00 | 0.06 | 0.00 | 107.10 | 1.00 |
| 109.100 | 8420.00 | 804.50 | 0.00 | 0.08 | 0.00 | 107.11 | 1.00 |
| 109.200 | 4390.00 | 802.63 | 0.00 | 0.14 | 0.00 | 222.29 | 100.00 |
| 109.200 | 6000.00 | 803.63 | 0.00 | 0.24 | 0.00 | 243.48 | 100.00 |
| 109.200 | 6700.00 | 804.02 | 0.00 | 0.28 | 0.00 | 243.91 | 100.00 |
| 109.200 | 8420.00 | 804.91 | 0.00 | 0.41 | 0.00 | 265.96 | 100.00 |
| 110.000 | 4390.00 | 803.02 | 0.00 | 0.39 | 0.00 | 312.17 | 650.00 |
| 110.000 | 6000.00 | 804.16 | 0.00 | 0.53 | 0.00 | 343.41 | 650.00 |
| 110.000 | 6700.00 | 804.61 | 0.00 | 0.53 | 0.00 | 344.74 | 650.00 |
| 110.000 | 8420.00 | 805.63 | 0.00 | 0.72 | 0.00 | 347.61 | 650.00 |
| 110.900 | 4390.00 | 803.64 | 0.00 | 0.62 | 0.00 | 385.73 | 3450.00 |
| 110.900 | 6000.00 | 804.87 | 0.00 | 0.79 | 0.00 | 450.00 | 3450.00 |
| 110.900 | 6700.00 | 805.36 | 0.00 | 0.75 | 0.00 | 450.00 | 3450.00 |
| 110.900 | 8420.00 | 806.55 | 0.00 | 0.82 | 0.00 | 450.00 | 3450.00 |
| 111.000 | 4390.00 | 803.61 | 0.00 | -0.03 | 0.00 | 314.19 | 2.00 |
| 111.000 | 6000.00 | 804.85 | 0.00 | -0.03 | 0.00 | 450.00 | 2.00 |
| 111.000 | 6700.00 | 805.33 | 0.00 | -0.03 | 0.00 | 450.00 | 2.00 |
| 111.000 | 8420.00 | 806.43 | 0.00 | -0.03 | 0.00 | 450.00 | 2.00 |
| 111.100 | 4390.00 | 803.66 | 0.00 | 0.04 | 0.00 | 387.05 | 2.00 |
| 111.100 | 6000.00 | 804.39 | 0.00 | 0.04 | 0.00 | 450.00 | 2.00 |
| 111.100 | 6700.00 | 805.37 | 0.00 | 0.04 | 0.00 | 450.00 | 2.00 |
| 111.100 | 8420.00 | 806.47 | 0.00 | 0.05 | 0.00 | 450.00 | 2.00 |
| 112.000 | 4390.00 | 803.80 | 0.00 | 0.23 | 0.00 | 326.34 | 1400.00 |
| 112.000 | 6000.00 | 805.15 | 0.00 | 0.26 | 0.00 | 317.43 | 1400.00 |
| 112.000 | 6700.00 | 805.64 | 0.00 | 0.27 | 0.00 | 321.74 | 1400.00 |
| 112.000 | 8420.00 | 806.76 | 0.00 | 0.29 | 0.00 | 419.61 | 1400.00 |
| 113.000 | 4390.00 | 804.09 | 0.00 | 0.20 | 0.00 | 307.64 | 1700.00 |
| 113.000 | 6000.00 | 805.39 | 0.00 | 0.24 | 0.00 | 318.80 | 1700.00 |
| 113.000 | 6700.00 | 805.89 | 0.00 | 0.25 | 0.00 | 323.05 | 1700.00 |
| 113.000 | 8420.00 | 807.03 | 0.00 | 0.27 | 0.00 | 332.71 | 1700.00 |
| 114.000 | 4390.00 | 804.30 | 0.00 | 0.21 | 0.00 | 309.53 | 1450.00 |
| 114.000 | 6000.00 | 805.62 | 0.00 | 0.23 | 0.00 | 327.55 | 1450.00 |
| 114.000 | 6700.00 | 806.13 | 0.00 | 0.24 | 0.00 | 345.20 | 1450.00 |
| 114.000 | 8420.00 | 807.30 | 0.00 | 0.26 | 0.00 | 352.09 | 1450.00 |
| 115.000 | 4390.00 | 804.54 | 0.00 | 0.25 | 0.00 | 544.19 | 1500.00 |
| 115.000 | 6000.00 | 805.89 | 0.00 | 0.27 | 0.00 | 546.13 | 1500.00 |
| 115.000 | 6700.00 | 806.42 | 0.00 | 0.28 | 0.00 | 549.67 | 1500.00 |
| 115.000 | 8420.00 | 807.60 | 0.00 | 0.31 | 0.00 | 553.14 | 1500.00 |
| 115.700 | 4390.00 | 804.80 | 0.00 | 0.26 | 0.00 | 544.94 | 1600.00 |
| 115.700 | 6000.00 | 806.16 | 0.00 | 0.27 | 0.00 | 548.93 | 1600.00 |
| 115.700 | 6700.00 | 806.68 | 0.00 | 0.27 | 0.00 | 550.47 | 1600.00 |
| 115.700 | 8420.00 | 807.88 | 0.00 | 0.28 | 0.00 | 553.98 | 1600.00 |

FORM 1411-DB PRINTED BY ROYALTY MANIFOLD FORMS.

| SECNO | Q | CUSEL | DIFUSP | DIFUSX | DIFKHS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 115.000 | 4390.00 | 805.03 | 0.00 | 0.23 | 0.00 | 269.63 | 1300.00 |
| 115.000 | 6000.00 | 806.40 | 0.00 | 0.24 | 0.00 | 289.5[illegible] | 1300.00 |
| 115.000 | 6700.00 | 806.91 | 0.00 | 0.24 | 0.00 | 299.1[illegible] | 1300.00 |
| 115.000 | 8420.00 | 808.13 | 0.00 | 0.25 | 0.00 | 319.25 | 1300.00 |
| 115.900 | 4390.00 | 805.03 | 0.00 | -0.00 | 0.00 | 269.63 | 1.00 |
| 115.900 | 6000.00 | 806.39 | 0.00 | -0.00 | 0.00 | 289.59 | 1.00 |
| 115.900 | 6700.00 | 806.92 | 0.00 | -0.00 | 0.00 | 299.12 | 1.00 |
| 115.900 | 8420.00 | 808.13 | 0.00 | -0.00 | 0.00 | 319.25 | 1.00 |
| 116.000 | 4390.00 | 805.06 | 0.00 | 0.03 | 0.00 | 269.53 | 64.00 |
| 116.000 | 6000.00 | 806.43 | 0.00 | 0.04 | 0.00 | 288.45 | 64.00 |
| 116.000 | 6700.00 | 806.96 | 0.00 | 0.04 | 0.00 | 297.7[illegible] | 64.00 |
| 116.000 | 8420.00 | 808.17 | 0.00 | 0.04 | 0.00 | 315.34 | 64.00 |
| 116.100 | 4390.00 | 805.07 | 0.00 | 0.01 | 0.00 | 269.67 | 1.00 |
| 116.100 | 6000.00 | 806.44 | 0.00 | 0.01 | 0.00 | 288.62 | 1.00 |
| 116.100 | 6700.00 | 806.97 | 0.00 | 0.01 | 0.00 | 297.79 | 1.00 |
| 116.100 | 8420.00 | 808.1[illegible] | 0.00 | 0.01 | 0.00 | 315.42 | 1.00 |
| 116.200 | 4390.00 | 805.1[illegible] | 0.00 | 0.00 | 0.00 | 292.8[illegible] | 400.00 |
| 116.200 | 6000.00 | 806.52 | 0.00 | 0.00 | 0.00 | 346.58 | 400.00 |
| 116.200 | 6700.00 | 807.06 | 0.00 | 0.08 | 0.00 | 355.84 | 400.00 |
| 116.200 | 8420.00 | 808.27 | 0.00 | 0.09 | 0.00 | 369.05 | 400.00 |
| 117.000 | 4390.00 | 805.34 | 0.00 | 0.40 | 0.00 | 287.2[illegible] | 2000.00 |
| 117.000 | 6000.00 | 806.95 | 0.00 | 0.43 | 0.00 | 317.59 | 2000.00 |
| 117.000 | 6700.00 | 807.50 | 0.00 | 0.44 | 0.00 | 332.51 | 2000.00 |
| 117.000 | 8420.00 | 808.73 | 0.00 | 0.46 | 0.00 | 361.77 | 2000.00 |
| 117.900 | 4390.00 | 805.77 | 0.00 | 0.25 | 0.00 | 281.46 | 1300.00 |
| 117.900 | 6000.00 | 807.19 | 0.00 | 0.25 | 0.00 | 287.95 | 1300.00 |
| 117.900 | 6700.00 | 807.75 | 0.00 | 0.25 | 0.00 | 290.37 | 1300.00 |
| 117.900 | 8420.00 | 808.99 | 0.00 | 0.26 | 0.00 | 295.51 | 1300.00 |
| 118.000 | 4390.00 | 805.78 | 0.00 | 0.00 | 0.00 | 282.73 | 40.00 |
| 118.000 | 6000.00 | 807.2[illegible] | 0.00 | 0.00 | 0.00 | 288.94 | 40.00 |
| 118.000 | 6700.00 | 807.75 | 0.00 | 0.00 | 0.00 | 291.37 | 40.00 |
| 118.000 | 8420.00 | 809.00 | 0.00 | 0.01 | 0.00 | 296.61 | 40.00 |
| 118.100 | 4390.00 | 805.85 | 0.00 | 0.08 | 0.00 | 255.01 | 400.00 |
| 118.100 | 6000.00 | 807.27 | 0.00 | 0.07 | 0.00 | 267.74 | 400.00 |
| 118.100 | 6700.00 | 807.83 | 0.00 | 0.07 | 0.00 | 272.71 | 400.00 |
| 118.100 | 8420.00 | 809.07 | 0.00 | 0.07 | 0.00 | 283.77 | 400.00 |
| 119.000 | 4390.00 | 805.99 | 0.00 | 0.14 | 0.00 | 271.57 | 500.00 |
| 119.000 | 6000.00 | 807.42 | 0.00 | 0.15 | 0.00 | 282.18 | 500.00 |
| 119.000 | 6700.00 | 807.98 | 0.00 | 0.16 | 0.00 | 287.79 | 500.00 |
| 119.000 | 8420.00 | 809.26 | 0.00 | 0.17 | 0.00 | 300.38 | 500.00 |
| 120.000 | 4390.00 | 806.10 | 0.00 | 0.19 | 0.00 | 297.40 | 950.00 |
| 120.000 | 6000.00 | 807.62 | 0.00 | 0.20 | 0.00 | 304.93 | 950.00 |
| 120.000 | 6700.00 | 808.19 | 0.00 | 0.21 | 0.00 | 323.10 | 950.00 |
| 120.000 | 8420.00 | 809.49 | 0.00 | 0.22 | 0.00 | 342.08 | 950.00 |

| SECNO | Q | CHSEL | DIFHSP | DIFHSX | DIFKHS | TOPWID | X_CH |
|---|---|---|---|---|---|---|---|
| 121.000 | 4390.00 | 806.67 | 0.00 | 0.49 | 0.00 | 156.98 | 2650.00 |
| 121.000 | 6000.00 | 808.14 | 0.00 | 0.51 | 0.00 | 277.18 | 2650.00 |
| 121.000 | 6700.00 | 808.71 | 0.00 | 0.52 | 0.00 | 241.20 | 2650.00 |
| 121.000 | 8420.00 | 810.00 | 0.00 | 0.55 | 0.00 | 290.24 | 2650.00 |
| 121.900 | 4390.00 | 806.80 | 0.00 | 0.13 | 0.00 | 151.39 | 700.00 |
| 121.900 | 6000.00 | 808.25 | 0.00 | 0.14 | 0.00 | 157.95 | 700.00 |
| 121.900 | 6700.00 | 808.82 | 0.00 | 0.14 | 0.00 | 160.52 | 700.00 |
| 121.900 | 8420.00 | 810.10 | 0.00 | 0.10 | 0.00 | 166.29 | 700.00 |
| 121.900 | 4390.00 | 806.79 | 0.00 | -0.01 | 0.00 | 151.38 | 1.00 |
| 121.900 | 6000.00 | 808.24 | 0.00 | -0.01 | 0.00 | 157.93 | 1.00 |
| 121.900 | 6700.00 | 808.81 | 0.00 | -0.01 | 0.00 | 160.50 | 1.00 |
| 121.900 | 8420.00 | 810.09 | 0.00 | -0.01 | 0.00 | 166.26 | 1.00 |
| 122.000 | 4390.00 | 806.87 | 0.00 | 0.00 | 0.00 | 151.55 | 50.00 |
| 122.000 | 6000.00 | 808.32 | 0.00 | 0.00 | 0.00 | 157.76 | 50.00 |
| 122.000 | 6700.00 | 808.88 | 0.00 | 0.00 | 0.00 | 160.27 | 50.00 |
| 122.000 | 8420.00 | 810.16 | 0.00 | 0.00 | 0.00 | 165.91 | 50.00 |
| 122.100 | 4390.00 | 806.90 | 0.00 | 0.03 | 0.00 | 151.49 | 1.00 |
| 122.100 | 6000.00 | 808.35 | 0.00 | 0.04 | 0.00 | 157.95 | 1.00 |
| 122.100 | 6700.00 | 808.92 | 0.00 | 0.04 | 0.00 | 160.47 | 1.00 |
| 122.100 | 8420.00 | 810.20 | 0.00 | 0.04 | 0.00 | 166.16 | 1.00 |
| 122.200 | 4390.00 | 807.24 | 0.00 | 0.36 | 0.00 | 176.99 | 200.00 |
| 122.200 | 6000.00 | 808.74 | 0.00 | 0.39 | 0.00 | 183.36 | 200.00 |
| 122.200 | 6700.00 | 809.32 | 0.00 | 0.40 | 0.00 | 186.52 | 200.00 |
| 122.200 | 8420.00 | 810.62 | 0.00 | 0.42 | 0.00 | 192.47 | 200.00 |
| 123.000 | 4390.00 | 807.63 | 0.00 | 0.57 | 0.00 | 174.97 | 1100.00 |
| 123.000 | 6000.00 | 809.14 | 0.00 | 0.60 | 0.00 | 181.72 | 1100.00 |
| 123.000 | 6700.00 | 809.73 | 0.00 | 0.61 | 0.00 | 184.77 | 1100.00 |
| 123.000 | 8420.00 | 811.05 | 0.00 | 0.63 | 0.00 | 191.50 | 1100.00 |
| 123.800 | 4390.00 | 808.04 | 0.00 | 0.41 | 0.00 | 157.53 | 700.00 |
| 123.800 | 6000.00 | 809.55 | 0.00 | 0.41 | 0.00 | 163.76 | 700.00 |
| 123.800 | 6700.00 | 810.14 | 0.00 | 0.42 | 0.00 | 166.20 | 700.00 |
| 123.800 | 8420.00 | 811.47 | 0.00 | 0.42 | 0.00 | 171.04 | 700.00 |
| 123.900 | 4390.00 | 808.03 | 0.00 | -0.01 | 0.00 | 157.53 | 1.00 |
| 123.900 | 6000.00 | 809.54 | 0.00 | -0.01 | 0.00 | 163.74 | 1.00 |
| 123.900 | 6700.00 | 810.13 | 0.00 | -0.01 | 0.00 | 166.18 | 1.00 |
| 123.900 | 8420.00 | 811.46 | 0.00 | -0.01 | 0.00 | 171.03 | 1.00 |
| 124.000 | 4390.00 | 808.03 | 0.00 | -0.01 | 0.00 | 154.35 | 50.00 |
| 124.000 | 6000.00 | 809.53 | 0.00 | -0.01 | 0.00 | 160.50 | 50.00 |
| 124.000 | 6700.00 | 810.12 | 0.00 | -0.01 | 0.00 | 162.91 | 50.00 |
| 124.000 | 8420.00 | 811.45 | 0.00 | -0.01 | 0.00 | 168.34 | 50.00 |
| 124.100 | 4390.00 | 808.07 | 0.00 | 0.04 | 0.00 | 154.52 | 1.00 |
| 124.100 | 6000.00 | 809.58 | 0.00 | 0.05 | 0.00 | 160.70 | 1.00 |
| 124.100 | 6700.00 | 810.17 | 0.00 | 0.05 | 0.00 | 163.11 | 1.00 |
| 124.100 | 8420.00 | 811.50 | 0.00 | 0.05 | 0.00 | 168.55 | 1.00 |

FORM 101-60-PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | C | CNSEL | DIFWSP | DIFWSX | DIFSWS | TOPJID | XLCH |
|---|---|---|---|---|---|---|---|
| 124.200 | 6270.00 | 638.49 | 0.00 | 0.35 | 0.00 | 165.92 | 200.00 |
| 124.200 | 5920.00 | 609.87 | 0.00 | 0.25 | 0.00 | 171.84 | 200.00 |
| 124.200 | 6650.00 | 670.46 | 0.00 | 0.25 | 0.00 | 174.13 | 200.00 |
| 124.200 | 6420.00 | 641.73 | 0.00 | 0.22 | 0.01 | 180.77 | 200.00 |
| 125.000 | 6270.00 | 639.58 | 0.00 | 1.15 | 0.00 | 182.88 | 1000.00 |
| 125.000 | 5920.00 | 610.99 | 0.00 | 1.13 | 0.00 | 190.00 | 1000.00 |
| 125.000 | 6650.00 | 671.56 | 0.00 | 1.18 | 0.00 | 192.86 | 1000.00 |
| 125.000 | 6420.00 | 642.63 | 0.00 | 1.12 | 0.00 | 199.13 | 1000.00 |

SUMMARY OF ERRORS

FORM 1411-GR-PRINTED BY ROTARY MANIFOLD FORMS.

FLOOD INSURANCE ZONE DATA FOR KALAMAZOO RIVER

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND | | |
|---|---|---|---|---|
| | | 10% | 2% | 0.2% |
| 102.000 | 0. | -1.8 | -0.2 | 0.6 |
| 102.500 | 2950. | -0.9 | -0.3 | 0.6 |
| 103.000 | 6540. | -0.9 | -0.3 | 0.6 |
| 104.000 | 8565. | -1.0 | -0.3 | 0.6 |
| 105.000 | 9240. | -1.2 | -0.3 | 0.6 |
| 106.000 | 10675. | -1.0 | -0.3 | 0.6 |
| 107.000 | 11950. | -1.2 | -0.2 | 0.6 |
| 108.700 | 13025. | -1.1 | -0.3 | 0.7 |
| 108.800 | 13375. | -1.2 | -0.3 | 0.7 |
| 108.900 | 13376. | -1.1 | -0.3 | 0.7 |
| 109.000 | 13611. | -1.2 | -0.3 | 0.7 |
| 109.100 | 13612. | -1.2 | -0.3 | 0.7 |
| 109.200 | 13612. | -1.2 | -0.4 | 0.7 |
| 110.000 | 14162. | -1.6 | -0.4 | 1.0 |
| 110.900 | 17612. | -1.7 | -0.5 | 1.1 |
| 111.000 | 17614. | -1.7 | -0.5 | 1.1 |
| 111.100 | 17616. | -1.7 | -0.5 | 1.1 |
| 112.000 | 19016. | -1.8 | -0.4 | 1.1 |
| 113.000 | 20716. | -1.8 | -0.5 | 1.1 |
| 114.000 | 22166. | -1.8 | -0.5 | 1.2 |
| 115.000 | 23666. | -1.9 | -0.5 | 1.2 |
| 115.700 | 25266. | -1.9 | -0.5 | 1.2 |
| 115.800 | 26566. | -1.9 | -0.5 | 1.2 |
| 115.900 | 26567. | -1.9 | -0.5 | 1.2 |
| 116.000 | 26651. | -1.9 | -0.5 | 1.2 |
| 116.100 | 26652. | -1.9 | -0.5 | 1.2 |
| 116.200 | 27032. | -1.9 | -0.5 | 1.2 |
| 117.000 | 29032. | -2.0 | -0.5 | 1.2 |
| 117.900 | 30932. | -2.0 | -0.6 | 1.2 |
| 118.000 | 30972. | -2.0 | -0.6 | 1.2 |
| 118.100 | 30772. | -2.0 | -0.6 | 1.2 |
| 119.000 | 31272. | -2.0 | -0.5 | 1.3 |
| 120.000 | 32222. | -2.0 | -0.6 | 1.3 |
| 121.000 | 34872. | -2.0 | -0.6 | 1.3 |
| 121.800 | 35572. | -2.0 | -0.6 | 1.3 |
| 121.900 | 35573. | -2.0 | -0.6 | 1.3 |
| 122.000 | 35631. | -2.0 | -0.6 | 1.3 |
| 122.100 | 35632. | -2.0 | -0.6 | 1.3 |
| 122.200 | 35832. | -2.1 | -0.6 | 1.3 |
| 123.000 | 36932. | -2.1 | -0.6 | 1.3 |
| 123.800 | 37632. | -2.1 | -0.6 | 1.3 |
| 123.900 | 37633. | -2.1 | -0.6 | 1.3 |
| 124.000 | 37691. | -2.1 | -0.6 | 1.3 |
| 124.100 | 37692. | -2.1 | -0.6 | 1.3 |
| 124.200 | 37892. | -2.0 | -0.6 | 1.3 |
| 125.000 | 38892. | -2.0 | -0.6 | 1.3 |
| WEIGHTED AVG FOR REACH | | -1.6 | -0.4 | 1.0 |

THE FOR THE REACH IS 0.15 WITH 64.5% OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH IS A3

FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS
PRINTED IN U.S.A.

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | AVG ELEVATION DATA 100 | 10 | DIFF. | NTD. AVG. | FHF | PERCENT WITHIN |
|---|---|---|---|---|---|---|---|
| | C. | | | | SEC. | 102.000 | |
| 1 | 169. | 797.9 | 798.9 | -1.0 | -1.0 | 010 | 100. |
| 2 | 338. | 797.9 | 798.9 | -1.0 | -1.0 | 010 | 100. |
| 3 | 507. | 797.9 | 798.9 | -1.0 | -1.0 | 010 | 100. |
| 4 | 676. | 798.0 | 799.0 | -1.0 | -1.0 | 010 | 100. |
| 5 | 845. | 798.0 | 799.0 | -1.0 | -1.0 | 010 | 100. |
| 6 | 1014. | 798.0 | 799.0 | -1.0 | -1.0 | 010 | 100. |
| 7 | 1183. | 798.0 | 799.0 | -1.0 | -1.0 | 010 | 100. |
| 8 | 1352. | 798.1 | 799.1 | -1.0 | -1.0 | 010 | 100. |
| 9 | 1521. | 798.1 | 799.1 | -1.0 | -1.0 | 010 | 100. |
| 10 | 1690. | 798.2 | 799.1 | -1.0 | -1.0 | 010 | 100. |
| 11 | 1859. | 798.2 | 799.2 | -1.0 | -1.0 | 010 | 100. |
| 12 | 2028. | 798.2 | 799.2 | -1.0 | -1.0 | 010 | 100. |
| 13 | 2197. | 798.3 | 799.2 | -1.0 | -1.0 | 010 | 100. |
| 14 | 2366. | 798.3 | 799.2 | -1.0 | -1.0 | 010 | 100. |
| 15 | 2535. | 798.3 | 799.3 | -1.0 | -1.0 | 010 | 100. |
| 16 | 2704. | 798.4 | 799.3 | -0.9 | -1.0 | 010 | 100. |
| 17 | 2873. | 798.4 | 799.3 | -0.9 | -1.0 | 010 | 100. |
| | 2950. | | | | SEC. | 102.500 | |
| 18 | 3042. | 798.4 | 799.4 | -0.9 | -1.0 | 010 | 100. |
| 19 | 3211. | 798.5 | 799.4 | -0.9 | -1.0 | 010 | 100. |
| 20 | 3380. | 798.5 | 799.4 | -0.9 | -1.0 | 010 | 100. |
| 21 | 3549. | 798.5 | 799.5 | -0.9 | -1.0 | 010 | 100. |
| 22 | 3718. | 798.6 | 799.5 | -0.9 | -1.0 | 010 | 100. |
| 23 | 3887. | 798.6 | 799.6 | -0.9 | -1.0 | 010 | 100. |
| 24 | 4056. | 798.7 | 799.6 | -0.9 | -1.0 | 010 | 100. |
| 25 | 4225. | 798.7 | 799.6 | -0.9 | -1.0 | 010 | 100. |
| 26 | 4394. | 798.8 | 799.7 | -0.9 | -1.0 | 010 | 100. |
| | 4540. | | | | SEC. | 103.000 | |
| 27 | 4563. | 798.8 | 799.7 | -0.9 | -1.0 | 010 | 100. |
| 28 | 4732. | 798.8 | 799.8 | -0.9 | -1.0 | 010 | 100. |
| 29 | 4901. | 798.9 | 799.8 | -0.9 | -1.0 | 010 | 100. |
| 30 | 5070. | 799.0 | 799.9 | -0.9 | -1.0 | 010 | 100. |
| 31 | 5239. | 799.0 | 799.9 | -0.9 | -0.9 | 010 | 100. |
| 32 | 5408. | 799.1 | 800.0 | -0.9 | -0.9 | 010 | 100. |
| 33 | 5577. | 799.1 | 800.0 | -0.9 | -0.9 | 010 | 100. |
| 34 | 5746. | 799.2 | 800.1 | -0.9 | -0.9 | 010 | 100. |
| 35 | 5915. | 799.2 | 800.2 | -0.9 | -0.9 | 010 | 100. |
| 36 | 6084. | 799.3 | 800.2 | -0.9 | -0.9 | 010 | 100. |
| 37 | 6253. | 799.3 | 800.3 | -0.9 | -0.9 | 010 | 100. |
| 38 | 6422. | 799.4 | 800.3 | -0.9 | -0.9 | 010 | 100. |
| 39 | 6591. | 799.4 | 800.4 | -0.9 | -0.9 | 010 | 100. |
| 40 | 6760. | 799.5 | 800.4 | -0.9 | -0.9 | 010 | 100. |
| 41 | 6929. | 799.6 | 800.5 | -0.9 | -0.9 | 010 | 100. |
| 42 | 7098. | 799.6 | 800.5 | -0.9 | -0.9 | 010 | 100. |
| 43 | 7267. | 799.7 | 800.6 | -0.9 | -0.9 | 010 | 100. |
| 44 | 7436. | 799.7 | 800.7 | -0.9 | -0.9 | 010 | 100. |
| 45 | 7605. | 799.8 | 800.7 | -0.9 | -0.9 | 010 | 100. |
| 46 | 7774. | 799.8 | 800.8 | -0.9 | -0.9 | 010 | 100. |
| 47 | 7943. | 799.9 | 800.8 | -0.9 | -0.9 | 010 | 100. |
| 48 | 8112. | 799.9 | 800.9 | -0.9 | -0.9 | 010 | 100. |
| 49 | 8281. | 800.0 | 800.9 | -0.9 | -0.9 | 010 | 100. |
| 50 | 8450. | 800.0 | 801.0 | -1.0 | -0.9 | 010 | 100. |

FORM 32H-CO PRINTED BY ROYALTY HABIT-O-D FORMS, INC. IN U.S.A.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 51 | 8619. | 800.1 | 801.1 | -1.0 | -0.9 | 010 | 100. |
| 52 | 8788. | 800.2 | 801.1 | -1.0 | -0.9 | 010 | 100. |
| 53 | 8957. | 800.2 | 801.2 | -1.0 | -0.9 | 010 | 100. |
| 54 | 9125. | 800.3 | 801.2 | -1.0 | -0.9 | 010 | 100. |
| | 9240. | | | | SEC. | 105.000 | |
| 55 | 9294. | 800.3 | 801.3 | -1.0 | -0.9 | 010 | 100. |
| 56 | 9463. | 800.4 | 801.4 | -1.0 | -0.9 | 010 | 100. |
| 57 | 9633. | 800.5 | 801.5 | -1.0 | -0.9 | 010 | 100. |
| 58 | 9802. | 800.5 | 801.5 | -1.0 | -0.9 | 010 | 100. |
| 59 | 9971. | 800.6 | 801.6 | -1.0 | -0.9 | 010 | 100. |
| 60 | 10140. | 800.7 | 801.7 | -1.0 | -1.0 | 010 | 100. |
| 61 | 10309. | 800.7 | 801.7 | -1.0 | -1.0 | 010 | 100. |
| 62 | 10478. | 800.8 | 801.8 | -1.0 | -1.0 | 010 | 100. |
| 63 | 10647. | 800.9 | 801.9 | -1.0 | -1.0 | 010 | 100. |
| | 10675. | | | | SEC. | 106.000 | |
| 64 | 10676. | 801.0 | 802.0 | -1.0 | -1.0 | 010 | 100. |
| 65 | 10955. | 801.1 | 802.1 | -1.1 | -1.0 | 010 | 100. |
| 66 | 11154. | 801.2 | 802.2 | -1.1 | -1.0 | 010 | 100. |
| 67 | 11323. | 801.3 | 802.4 | -1.0 | -1.0 | 010 | 100. |
| 68 | 11492. | 801.4 | 802.5 | -1.0 | -1.0 | 010 | 100. |
| 69 | 11661. | 801.6 | 802.6 | -1.2 | -1.0 | 010 | 100. |
| 70 | 11830. | 801.7 | 802.7 | -1.2 | -1.0 | 010 | 100. |
| | 11950. | | | | SEC. | 107.200 | |
| 71 | 11999. | 801.8 | 802.8 | -1.2 | -1.0 | 010 | 100. |
| 72 | 12168. | 801.9 | 802.9 | -1.1 | -1.0 | 010 | 100. |
| 73 | 12337. | 801.9 | 803.0 | -1.1 | -1.0 | 010 | 100. |
| 74 | 12506. | 802.0 | 803.1 | -1.1 | -1.0 | 010 | 100. |
| 75 | 12675. | 802.1 | 803.2 | -1.1 | -1.0 | 010 | 100. |
| 76 | 12844. | 802.1 | 803.2 | -1.1 | -1.0 | 010 | 100. |
| 77 | 13013. | 802.2 | 803.3 | -1.1 | -1.0 | 010 | 100. |
| | 13025. | | | | SEC. | 108.700 | |
| 78 | 13182. | 802.3 | 803.4 | -1.1 | -1.0 | 010 | 100. |
| 79 | 13351. | 802.3 | 803.5 | -1.2 | -1.0 | 010 | 100. |
| | 13375. | | | | SEC. | 110.800 | |
| | 13376. | | | | SEC. | 110.900 | |
| | 13411. | | | | SEC. | 109.300 | |
| | 13412. | | | | SEC. | 109.100 | |
| | 13512. | | | | SEC. | 109.200 | |
| 80 | 13520. | 802.6 | 804.0 | -1.4 | -1.0 | 010 | 100. |
| 81 | 13689. | 802.7 | 804.1 | -1.4 | -1.0 | 010 | 100. |
| 82 | 13858. | 802.8 | 804.3 | -1.5 | -1.0 | 010 | 100. |
| 83 | 14027. | 802.9 | 804.4 | -1.5 | -1.0 | 010 | 99. |
| | 14162. | | | | SEC. | 110.000 | |
| 84 | 14196. | 803.0 | 804.5 | -1.6 | -1.0 | 010 | 98. |
| 85 | 14365. | 803.0 | 804.6 | -1.6 | -1.0 | 010 | 96. |
| 86 | 14534. | 803.1 | 804.7 | -1.6 | -1.0 | 010 | 95. |
| 87 | 14703. | 803.1 | 804.7 | -1.6 | -1.0 | 010 | 95. |
| 88 | 14872. | 803.1 | 804.7 | -1.6 | -1.0 | 010 | 94. |
| 89 | 15041. | 803.2 | 804.8 | -1.6 | -1.0 | 010 | 93. |
| 90 | 15210. | 803.2 | 804.8 | -1.6 | -1.0 | 010 | 92. |
| 91 | 15379. | 803.2 | 804.9 | -1.6 | -1.1 | 010 | 91. |
| 92 | 15548. | 803.3 | 804.9 | -1.6 | -1.1 | 010 | 90. |
| 93 | 15717. | 803.3 | 804.9 | -1.6 | -1.1 | 010 | 89. |
| 94 | 15886. | 803.3 | 805.0 | -1.6 | -1.1 | 010 | 89. |
| 95 | 16055. | 803.3 | 805.0 | -1.7 | -1.1 | 010 | 88. |
| 96 | 16224. | 803.4 | 805.0 | -1.7 | -1.1 | 010 | 88. |
| 97 | 16393. | 803.4 | 805.1 | -1.7 | -1.1 | 010 | 87. |
| 98 | 16562. | 803.4 | 805.1 | -1.7 | -1.1 | 010 | 87. |
| 99 | 16731. | 803.5 | 805.1 | -1.7 | -1.1 | 010 | 87. |
| 100 | 16900. | 803.5 | 805.2 | -1.7 | -1.1 | 010 | 87. |
| 101 | 17069. | 803.5 | 805.2 | -1.7 | -1.1 | 010 | 87. |
| 102 | 17238. | 803.6 | 805.3 | -1.7 | -1.1 | 010 | 87. |
| 103 | 17407. | 803.6 | 805.3 | -1.7 | -1.1 | 010 | 87. |

FORM 1511 GO-PRINTED BY ROTARY MANIFOLD FORMS.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 17612. | | | | SEC. | 110.900 | |
| | 17614. | | | | SEC. | 111.000 | |
| | 17616. | | | | SEC. | 111.100 | |
| 105 | 17745. | 803.7 | 805.4 | -1.7 | -1.1 | 010 | 87. |
| 106 | 17914. | 803.7 | 805.4 | -1.7 | -1.1 | 010 | 87. |
| 107 | 18083. | 803.7 | 805.4 | -1.7 | -1.1 | 010 | 87. |
| 108 | 18252. | 803.7 | 805.5 | -1.7 | -1.2 | 010 | 87. |
| 109 | 18421. | 803.8 | 805.5 | -1.7 | -1.2 | 010 | 87. |
| 110 | 18590. | 803.8 | 805.5 | -1.7 | -1.2 | 010 | 87. |
| 111 | 18759. | 803.8 | 805.6 | -1.7 | -1.2 | 010 | 87. |
| 112 | 18928. | 803.9 | 805.6 | -1.7 | -1.2 | 010 | 87. |
| | 19016. | | | | SEC. | 112.000 | |
| 113 | 19097. | 803.9 | 805.6 | -1.8 | -1.2 | 010 | 87. |
| 114 | 19266. | 803.9 | 805.7 | -1.8 | -1.2 | 010 | 87. |
| 115 | 19435. | 803.9 | 805.7 | -1.8 | -1.2 | 010 | 87. |
| 116 | 19604. | 803.9 | 805.7 | -1.8 | -1.2 | 010 | 87. |
| 117 | 19773. | 804.0 | 805.7 | -1.8 | -1.2 | 010 | 86. |
| 118 | 19942. | 804.0 | 805.8 | -1.8 | -1.2 | 010 | 86. |
| 119 | 20111. | 804.0 | 805.8 | -1.8 | -1.2 | 010 | 87. |
| 120 | 20280. | 804.0 | 805.8 | -1.8 | -1.2 | 010 | 87. |
| 121 | 20449. | 804.0 | 805.8 | -1.8 | -1.2 | 010 | 86. |
| 122 | 20617. | 804.1 | 805.9 | -1.8 | -1.2 | 010 | 86. |
| | 20716. | | | | SEC. | 113.000 | |
| 123 | 20787. | 804.1 | 805.9 | -1.8 | -1.2 | 010 | 15. |
| 124 | 20956. | 804.1 | 805.9 | -1.8 | -1.2 | 010 | 85. |
| 125 | 21125. | 804.1 | 805.9 | -1.8 | -1.2 | 010 | 85. |
| 126 | 21294. | 804.2 | 806.0 | -1.8 | -1.2 | 010 | 87. |
| 127 | 21463. | 804.2 | 806.0 | -1.8 | -1.2 | 010 | 87. |
| 128 | 21632. | 804.2 | 806.0 | -1.8 | -1.3 | 015 | 87. |
| 129 | 21801. | 804.2 | 806.1 | -1.8 | -1.3 | 015 | 87. |
| 130 | 21970. | 804.3 | 806.1 | -1.8 | -1.3 | 015 | 87. |
| 131 | 22139. | 804.3 | 806.1 | -1.8 | -1.3 | 015 | 87. |
| | 22166. | | | | SEC. | 114.000 | |
| 132 | 22308. | 804.3 | 806.1 | -1.8 | -1.3 | 015 | 87. |
| 133 | 22477. | 804.3 | 806.2 | -1.8 | -1.3 | 015 | 87. |
| 134 | 22646. | 804.4 | 806.2 | -1.8 | -1.3 | 015 | 87. |
| 135 | 22815. | 804.4 | 806.2 | -1.8 | -1.3 | 015 | 87. |
| 136 | 22984. | 804.4 | 806.3 | -1.9 | -1.3 | 015 | 88. |
| 137 | 23153. | 804.4 | 806.3 | -1.9 | -1.3 | 015 | 88. |
| 138 | 23322. | 804.5 | 806.3 | -1.9 | -1.3 | 015 | 83. |
| 139 | 23491. | 804.5 | 806.4 | -1.9 | -1.3 | 015 | 88. |
| 140 | 23660. | 804.5 | 806.4 | -1.9 | -1.3 | 015 | 88. |
| | 23666. | | | | SEC. | 115.000 | |
| 141 | 23829. | 804.6 | 806.4 | -1.9 | -1.3 | 015 | 88. |
| 142 | 23998. | 804.6 | 806.5 | -1.9 | -1.3 | 015 | 88. |
| 143 | 24167. | 804.6 | 806.5 | -1.9 | -1.3 | 015 | 86. |
| 144 | 24336. | 804.6 | 806.5 | -1.9 | -1.3 | 015 | 88. |
| 145 | 24505. | 804.7 | 806.5 | -1.9 | -1.3 | 015 | 00. |
| 146 | 24674. | 804.7 | 806.6 | -1.9 | -1.3 | 015 | 86. |
| 147 | 24843. | 804.7 | 806.6 | -1.9 | -1.3 | 015 | 86. |
| 148 | 25012. | 804.7 | 806.6 | -1.9 | -1.3 | 015 | 89. |
| 149 | 25181. | 804.8 | 806.7 | -1.9 | -1.3 | 015 | 89. |
| | 25266. | | | | SEC. | 115.700 | |
| 150 | 25350. | 804.8 | 806.7 | -1.9 | -1.3 | 015 | 88. |
| 151 | 25519. | 804.8 | 806.7 | -1.9 | -1.3 | 015 | 88. |
| 152 | 25688. | 804.9 | 806.7 | -1.9 | -1.3 | 015 | 88. |
| 153 | 25857. | 804.9 | 806.8 | -1.9 | -1.4 | 015 | 88. |
| 154 | 26026. | 804.9 | 806.8 | -1.9 | -1.4 | 015 | 88. |
| 155 | 26195. | 805.0 | 806.8 | -1.9 | -1.4 | 015 | 38. |
| 156 | 26364. | 805.0 | 806.9 | -1.9 | -1.4 | 015 | 88. |
| 157 | 26533. | 805.0 | 806.9 | -1.9 | -1.4 | 015 | 88. |
| | 26566. | | | | SEC. | 115.900 | |
| | 26587. | | | | SEC. | 115.900 | |

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FORM 1011-AR-PRINTED BY ROTARY MANIFOLD FORMS.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 26632. | | | | SEC. | 116.900 | |
| 158 | 26702. | 805.1 | 807.0 | -1.9 | -1.4 | 015 | 38. |
| 159 | 26871. | 805.1 | 807.0 | -1.9 | -1.4 | 015 | 38. |
| | 27032. | | | | SEC. | 118.200 | |
| 160 | 27040. | 805.1 | 807.0 | -1.9 | -1.4 | 015 | 80. |
| 161 | 27209. | 805.2 | 807.1 | -1.9 | -1.4 | 015 | 89. |
| 162 | 27378. | 805.2 | 807.1 | -1.9 | -1.4 | 015 | 91. |
| 163 | 27547. | 805.2 | 807.2 | -1.9 | -1.4 | 015 | 92. |
| 164 | 27716. | 805.3 | 807.2 | -1.9 | -1.4 | 015 | 93. |
| 165 | 27885. | 805.3 | 807.2 | -1.9 | -1.4 | 015 | 93. |
| 166 | 28054. | 805.3 | 807.3 | -1.9 | -1.4 | 015 | 94. |
| 167 | 28223. | 805.4 | 807.3 | -1.9 | -1.4 | 015 | 94. |
| 168 | 28392. | 805.4 | 807.3 | -1.9 | -1.4 | 015 | 93. |
| 169 | 28561. | 805.4 | 807.4 | -1.9 | -1.4 | 015 | 93. |
| 170 | 28730. | 805.5 | 807.4 | -1.9 | -1.4 | 015 | 94. |
| 171 | 28899. | 805.5 | 807.4 | -1.9 | -1.4 | 015 | 94. |
| | 29032. | | | | SEC. | 117.000 | |
| 172 | 29068. | 805.5 | 807.5 | -2.0 | -1.4 | 015 | 93. |
| 173 | 29237. | 805.6 | 807.5 | -2.0 | -1.4 | 015 | 92. |
| 174 | 29406. | 805.6 | 807.6 | -2.0 | -1.4 | 015 | 90. |
| 175 | 29575. | 805.6 | 807.6 | -2.0 | -1.4 | 015 | 88. |
| 176 | 29744. | 805.7 | 807.6 | -2.0 | -1.4 | 015 | 87. |
| 177 | 29913. | 805.7 | 807.6 | -2.0 | -1.4 | 015 | 85. |
| 178 | 30082. | 805.7 | 807.7 | -2.0 | -1.4 | 015 | 84. |
| 179 | 30251. | 805.7 | 807.7 | -2.0 | -1.4 | 015 | 82. |
| | 30332. | | | | SEC. | 117.900 | |
| | 30372. | | | | SEC. | 118.000 | |
| 180 | 30420. | 805.8 | 807.8 | -2.0 | -1.4 | 015 | 81. |
| 181 | 30589. | 805.8 | 807.8 | -2.0 | -1.4 | 015 | 80. |
| 182 | 30758. | 805.8 | 807.8 | -2.0 | -1.4 | 015 | 79. |
| | 30772. | | | | SEC. | 118.100 | |
| 183 | 30927. | 805.9 | 807.8 | -2.0 | -1.4 | 015 | 77. |
| 184 | 31096. | 805.9 | 807.9 | -2.0 | -1.4 | 015 | 75. |
| 185 | 31265. | 806.0 | 808.0 | -2.0 | -1.5 | 015 | 74. |
| | 31272. | | | | SEC. | 119.000 | |
| 186 | 31434. | 806.0 | 808.0 | -2.0 | -1.5 | 015 | 73. |
| 187 | 31603. | 806.0 | 808.0 | -2.0 | -1.5 | 015 | 73. |
| 188 | 31772. | 806.1 | 808.1 | -2.0 | -1.5 | 015 | 72. |
| 189 | 31941. | 806.1 | 808.1 | -2.0 | -1.5 | 015 | 71. |
| 190 | 32110. | 806.1 | 808.1 | -2.0 | -1.5 | 015 | 71. |
| | 32222. | | | | SEC. | 120.000 | |
| 191 | 32279. | 806.2 | 808.2 | -2.0 | -1.5 | 015 | 70. |
| 192 | 32448. | 806.2 | 808.2 | -2.0 | -1.5 | 015 | 70. |
| 193 | 32617. | 806.2 | 808.2 | -2.0 | -1.5 | 015 | 69. |
| 194 | 32786. | 806.3 | 808.3 | -2.0 | -1.5 | 015 | 69. |
| 195 | 32955. | 806.3 | 808.3 | -2.0 | -1.5 | 015 | 68. |
| 196 | 33124. | 806.3 | 808.3 | -2.0 | -1.5 | 015 | 67. |
| 197 | 33293. | 806.4 | 808.4 | -2.0 | -1.5 | 015 | 66. |
| 198 | 33462. | 806.4 | 808.4 | -2.0 | -1.5 | 015 | 66. |
| 199 | 33631. | 806.4 | 808.4 | -2.0 | -1.5 | 015 | 65. |
| 200 | 33800. | 806.5 | 808.5 | -2.0 | -1.5 | 015 | 64. |
| 201 | 33969. | 806.5 | 808.5 | -2.0 | -1.5 | 015 | 64. |
| 202 | 34139. | 806.5 | 808.5 | -2.0 | -1.5 | 015 | 64. |
| 203 | 34307. | 806.5 | 808.6 | -2.0 | -1.5 | 015 | 64. |
| 204 | 34476. | 806.6 | 808.6 | -2.0 | -1.5 | 015 | 63. |
| 205 | 34645. | 806.6 | 808.6 | -2.0 | -1.5 | 015 | 63. |
| 206 | 34814. | 806.6 | 808.7 | -2.0 | -1.5 | 015 | 63. |
| | 34872. | | | | SEC. | 121.000 | |
| 207 | 34983. | 806.7 | 808.7 | -2.0 | -1.5 | 015 | 63. |
| 208 | 35152. | 806.7 | 808.7 | -2.0 | -1.5 | 015 | 63. |
| 209 | 35321. | 806.7 | 808.8 | -2.0 | -1.5 | 015 | 63. |
| 210 | 35490. | 806.8 | 808.8 | -2.0 | -1.5 | 015 | 63. |
| | 35572. | | | | SEC. | 122.000 | |

FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS, INC. PRINTED IN U.S.A.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 35631. | | | | | SEC. | 122.000 | |
| | 35632. | | | | | SEC. | 122.100 | |
| 211 | 35659. | 806.9 | 808.9 | -2.0 | -1.5 | 015 | | 63. |
| 212 | 35628. | 807.1 | 809.1 | -2.0 | -1.5 | 015 | | 63. |
| | 35632. | | | | | SEC. | 122.200 | |
| 213 | 35997. | 807.3 | 809.3 | -2.1 | -1.5 | 015 | | 63. |
| 214 | 36166. | 807.3 | 809.4 | -2.1 | -1.5 | 015 | | 64. |
| 215 | 36335. | 807.4 | 809.5 | -2.1 | -1.5 | 015 | | 64. |
| 216 | 36504. | 807.5 | 809.5 | -2.1 | -1.5 | 015 | | 64. |
| 217 | 36673. | 807.5 | 809.6 | -2.1 | -1.5 | 015 | | 64. |
| 218 | 36842. | 807.6 | 809.7 | -2.1 | -1.5 | 015 | | 64. |
| | 36932. | | | | | SEC. | 123.000 | |
| 219 | 37011. | 807.6 | 809.7 | -2.1 | -1.5 | 015 | | 64. |
| 220 | 37180. | 807.7 | 809.8 | -2.1 | -1.5 | 015 | | 64. |
| 221 | 37349. | 807.8 | 809.9 | -2.1 | -1.5 | 015 | | 64. |
| 222 | 37518. | 807.9 | 810.0 | -2.1 | -1.6 | 015 | | 64. |
| | 37632. | | | | | SEC. | 123.100 | |
| | 37635. | | | | | SEC. | 123.900 | |
| 223 | 37687. | 808.0 | 810.1 | -2.1 | -1.6 | 015 | | 63. |
| | 37691. | | | | | SEC. | 124.000 | |
| | 37692. | | | | | SEC. | 124.100 | |
| 224 | 37856. | 808.2 | 810.3 | -2.1 | -1.6 | 015 | | 63. |
| | 37892. | | | | | SEC. | 124.200 | |
| 225 | 38025. | 808.5 | 810.5 | -2.0 | -1.5 | 015 | | 63. |
| 226 | 38194. | 808.7 | 810.7 | -2.0 | -1.5 | 015 | | 63. |
| 227 | 38363. | 808.9 | 810.9 | -2.0 | -1.5 | 015 | | 63. |
| 228 | 38532. | 809.1 | 811.1 | -2.0 | -1.5 | 015 | | 64. |
| 229 | 38701. | 809.3 | 811.2 | -2.0 | -1.5 | 015 | | 64. |
| 230 | 38870. | 809.5 | 811.4 | -2.0 | -1.5 | 015 | | 64. |
| | 38892. | | | | | SEC. | 125.000 | |

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FIA REQUIREMENTS
INPUT ZON WHERE N IS THE NUMBER OF REACHES AND THEY INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE 212 100 230
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

FORM 1011-GR PRINTED BY ROTARY MANIFOLD FORMS,

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*****************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
 ERROR CORR -  01
 MODIFICATION -  50,51,52
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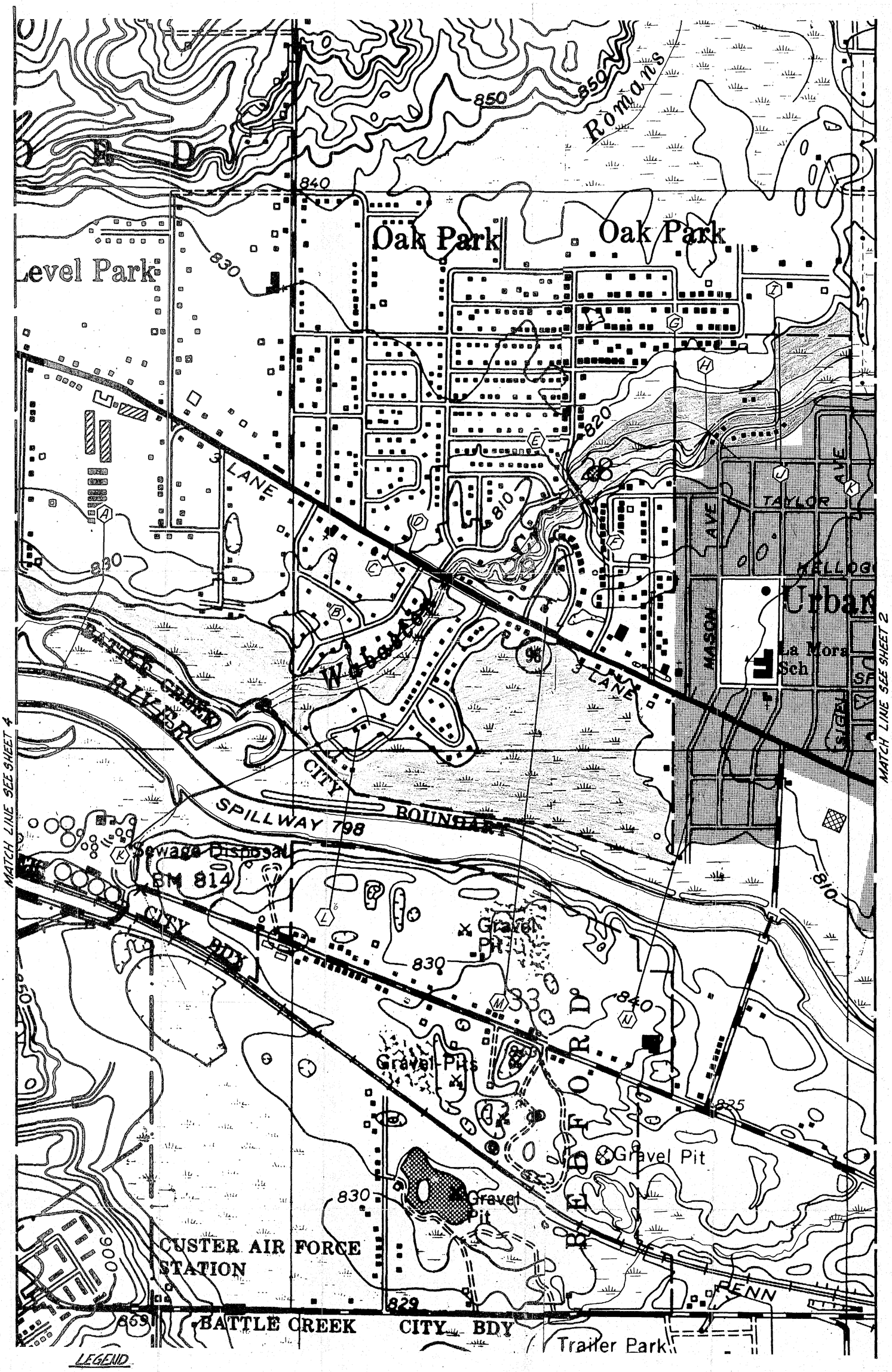
FORM 1411-CD-PRINTED BY BOTARY MANIFOLD FORMS.




LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

(A)—(A) CROSS SECTION

CORPORATE LIMIT

COUNTY BOUNDARY

# FLOOD MAP

WAUBASCON CREEK
2/81

BEDFORD TOWNSHIP
CALHOUN COUNTY, MICHIGAN

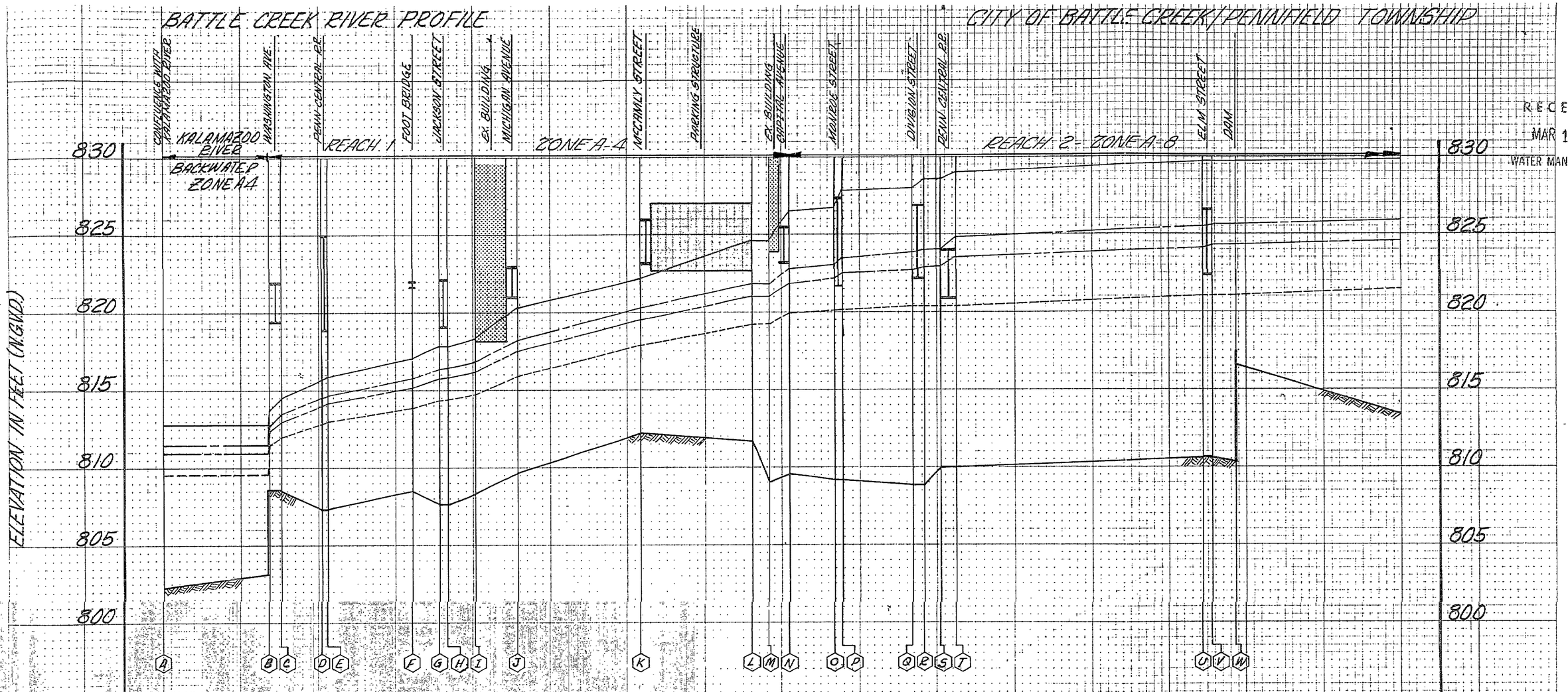
SCALE: 1" = 400'

N

# BATTLE CREEK RIVER PROFILE

## CITY OF BATTLE CREEK/PENNFIELD TOWNSHIP

RECEIVED
MAR 1 81981
WATER MANAGEMENT




SCALE
HORIZ. 1" = 500'
VERT. 1" = 5'

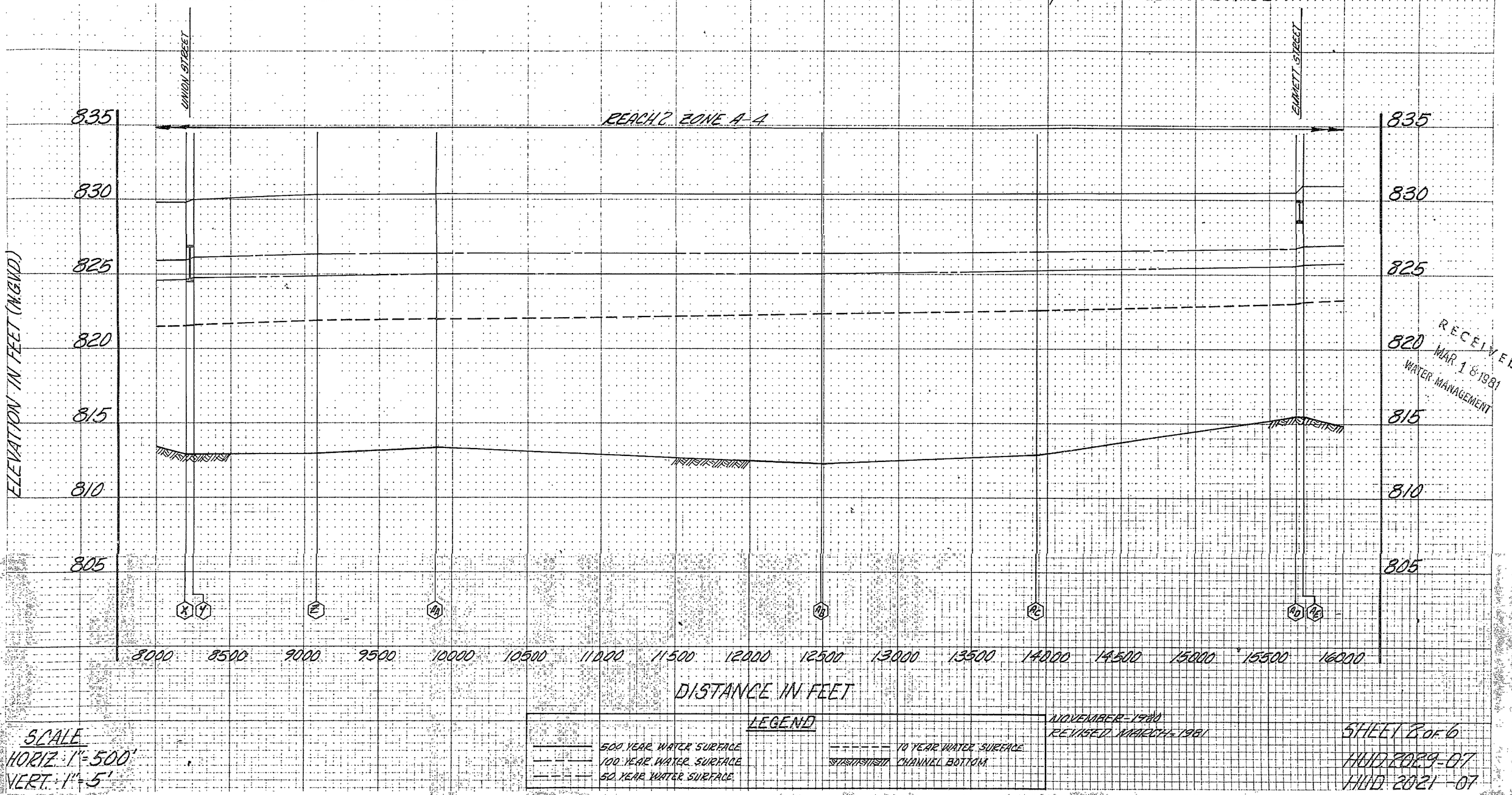
NOVEMBER 1980
REVISED MARCH 1981

SHEET 1 OF 6

HUD 2029-07
HUD 2021-07

# BATTLE CREEK RIVER PROFILE

CITY OF BATTLE CREEK / PENNFIELD TOWNSHIP




RECEIVED
MAR 18 1981
WATER MANAGEMENT

LEGEND

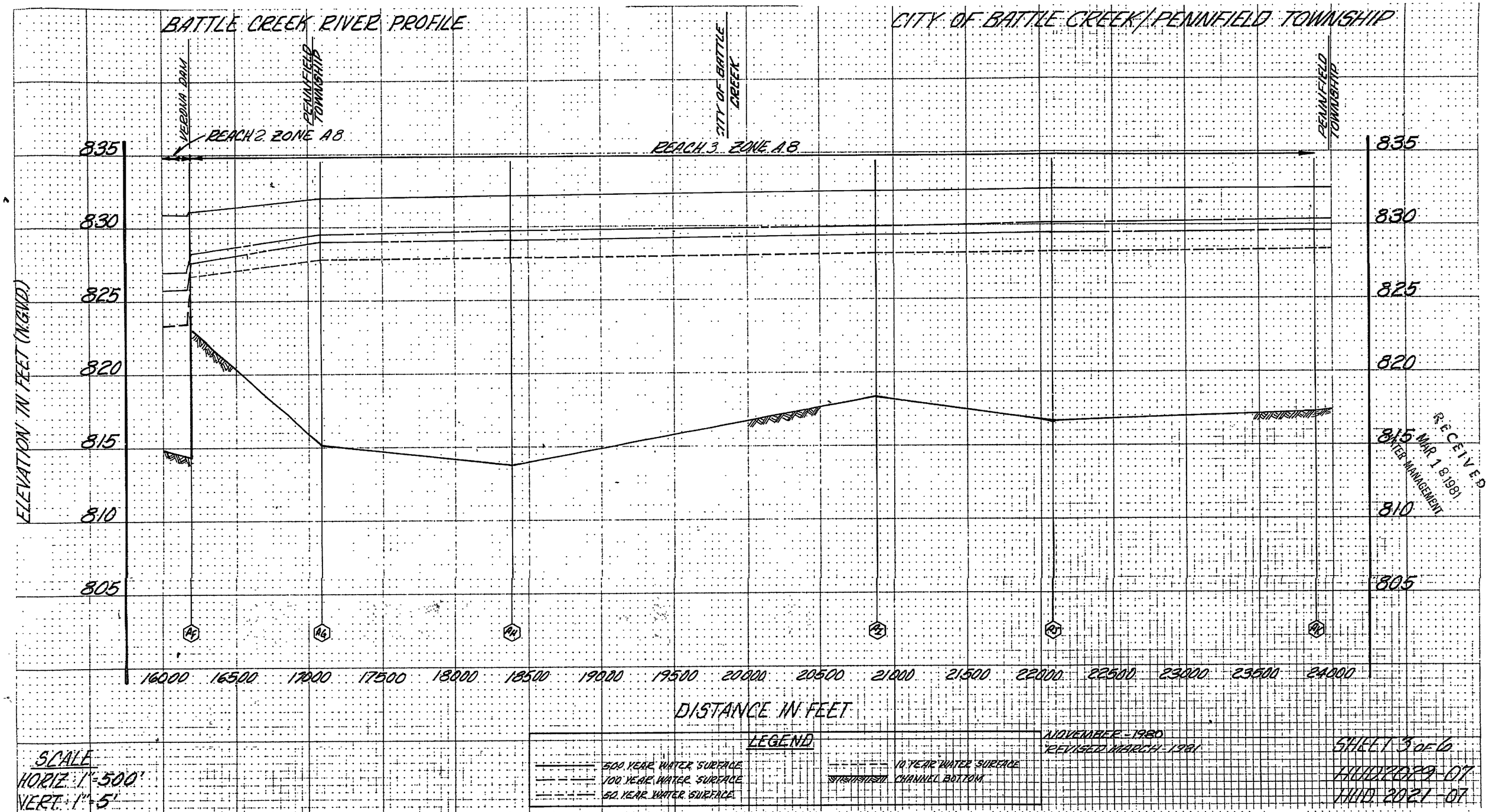
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM

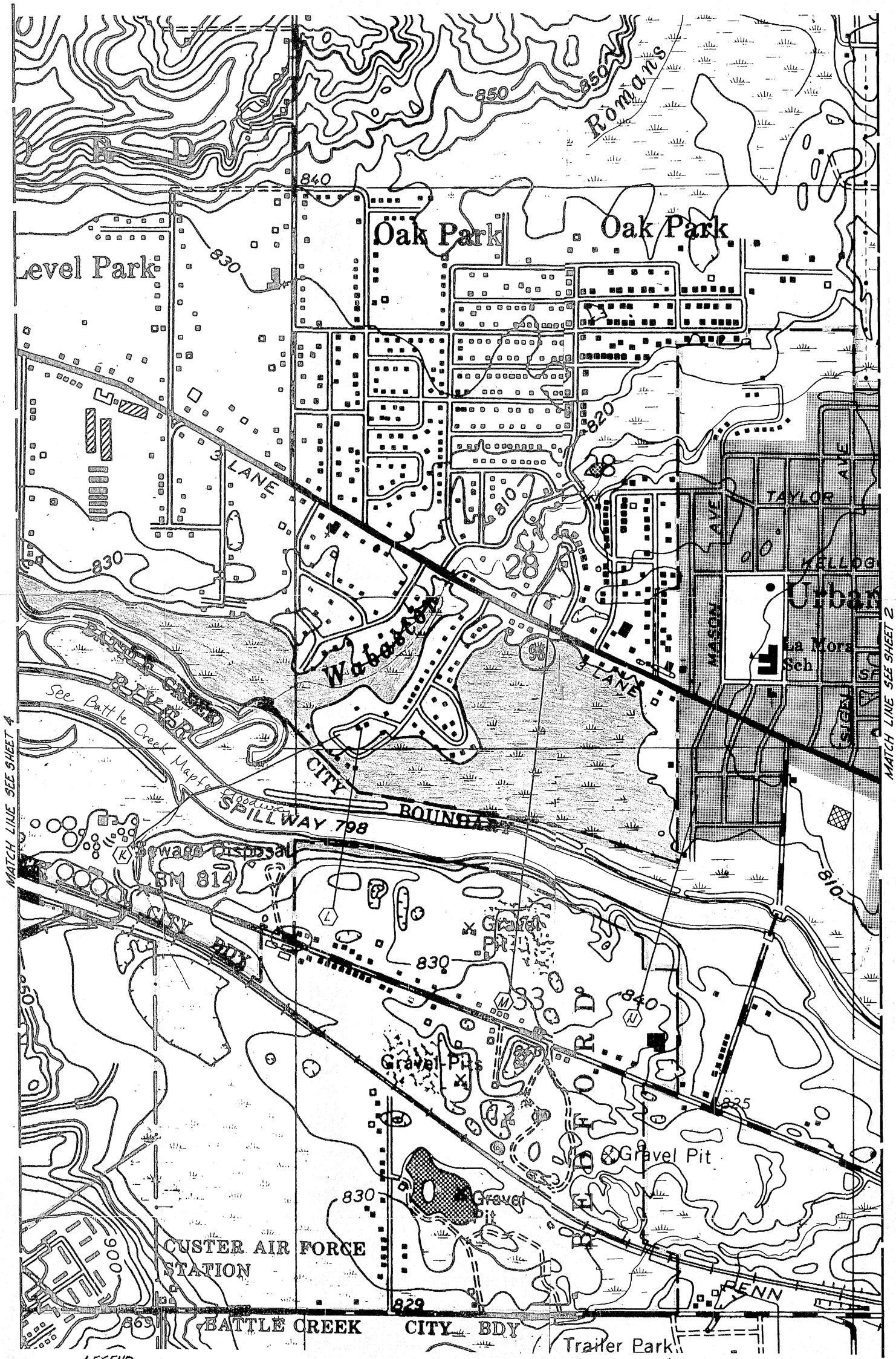
NOVEMBER-1980
REVISED MARCH-1981

SCALE
HORIZ: 1"=500'
VERT: 1"=5'

SHEET 2 OF 6

HUD 2029-07
HUD 2021-07


BATTLE CREEK RIVER PROFILE
CITY OF BATTLE CREEK/PENNFIELD TOWNSHIP
VERONA DAM
PENNFIELD TOWNSHIP
CITY OF BATTLE CREEK
PENNFIELD TOWNSHIP
REACH 2 ZONE A8
REACH 3 ZONE A8
835
830
825
820
815
810
805
ELEVATION IN FEET (N.G.V.D.)
AF
AG
AH
AI
AJ
AK
16000
16500
17000
17500
18000
18500
19000
19500
20000
20500
21000
21500
22000
22500
23000
23500
24000
DISTANCE IN FEET
LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM
SCALE
HORIZ. 1"=500'
VERT. 1"=5'
NOVEMBER-1980
REVISED MARCH-1981
SHEET 3 OF 6
HUD 2029-07
HUD 2021-07
RECEIVED
MAR 18 1981
WATER MANAGEMENT




LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

CROSS SECTION

CORPORATE LIMIT

COUNTY BOUNDARY

# FLOOD MAP

BEDFORD TOWNSHIP
CALHOUN COUNTY, MICHIGAN

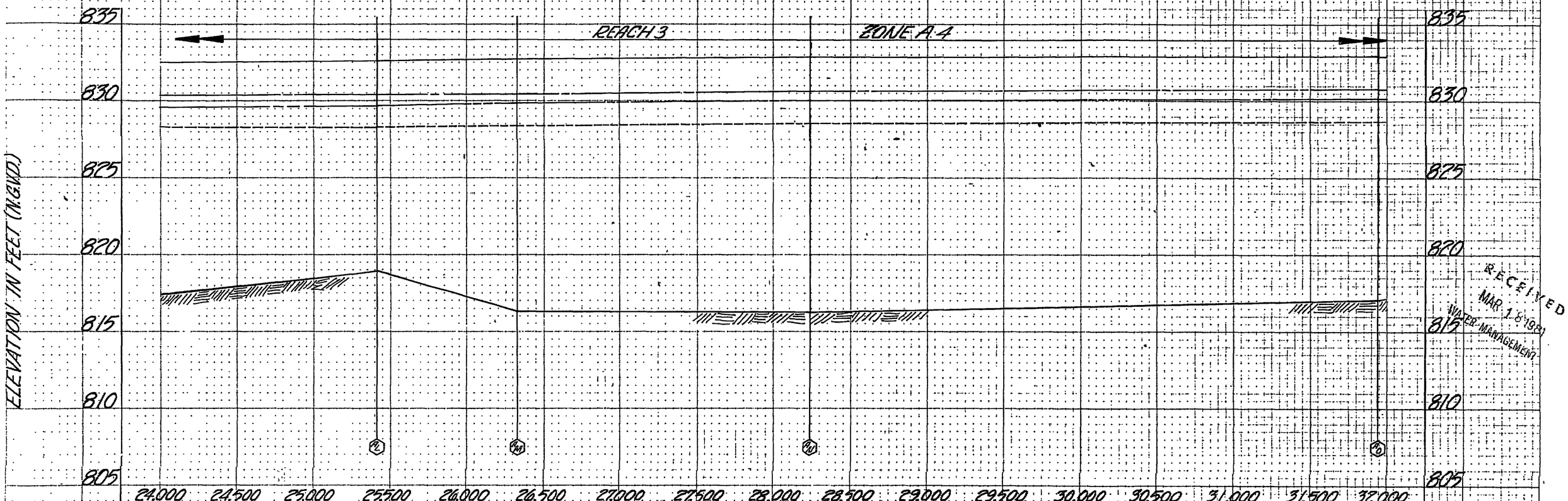
SCALE: 1" = 400'

N

KALAMAZOO RIVER
11/80

# BATTLE CREEK RIVER PROFILE

## CITY OF BATTLE CREEK/PENNFIELD TOWNSHIP




DISTANCE IN FEET

RECEIVED
MAR 18 1981
WATER MANAGEMENT

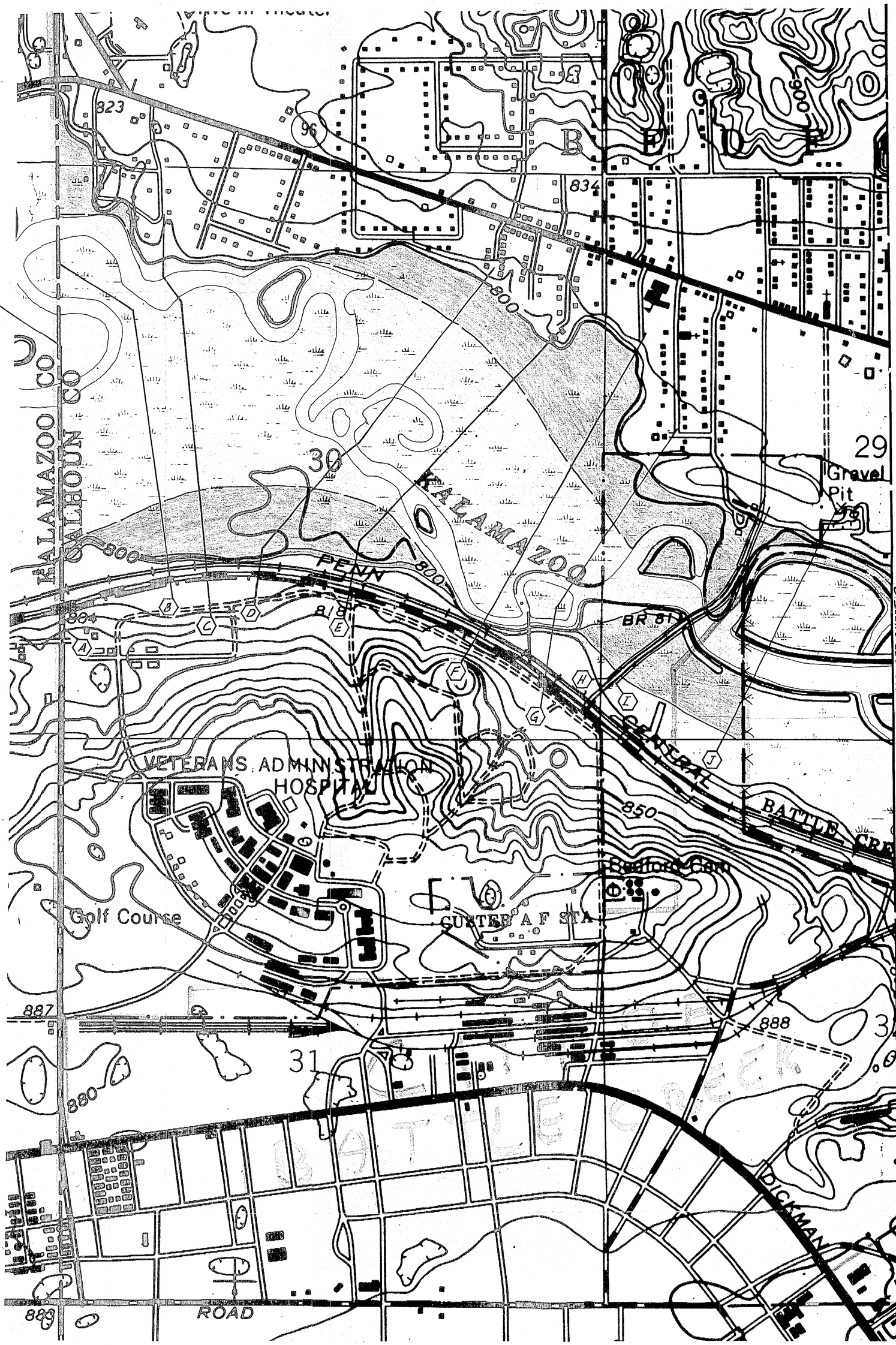
LEGEND

500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM

SCALE
HORIZ. 1"=500'
VERT. 1"=5'

NOVEMBER-1980
REVISED MARCH-1981

SHEET 4 OF 6
HUD 2029-07
HUD 2021-07




LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

A — A CROSS SECTION

CORPORATE LIMIT

COUNTY BOUNDARY

# FLOOD MAP

## BEDFORD TOWNSHIP

CALHOUN COUNTY, MICHIGAN

SCALE: 1" = 400'

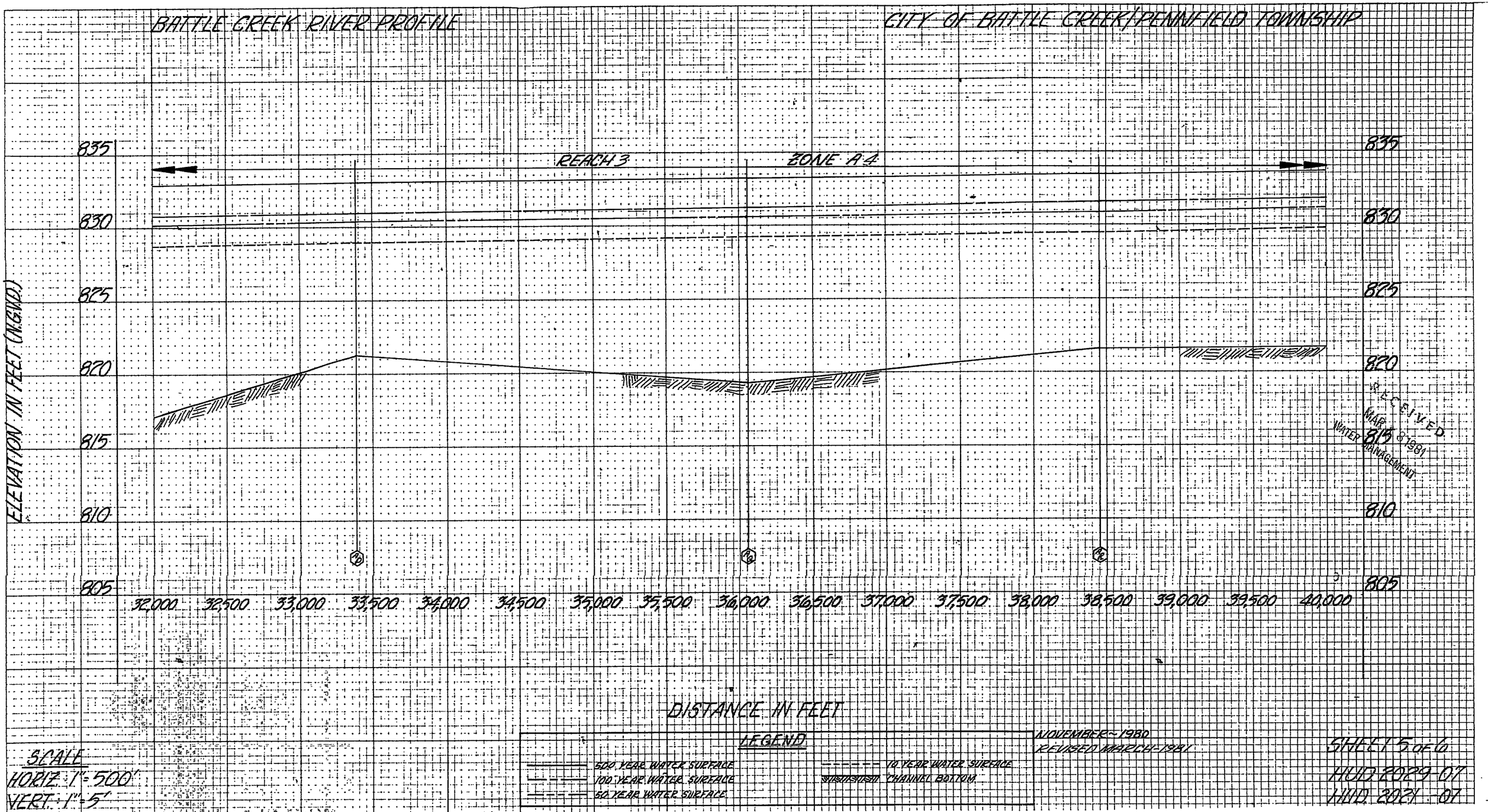
KALAMAZOO RIVER

11/80

N

# BATTLE CREEK RIVER PROFILE

CITY OF BATTLE CREEK/PENNFIELD TOWNSHIP




RECEIVED
MAR 6 1981
WATER MANAGEMENT

SCALE
HORIZ. 1" = 500'
VERT. 1" = 5'

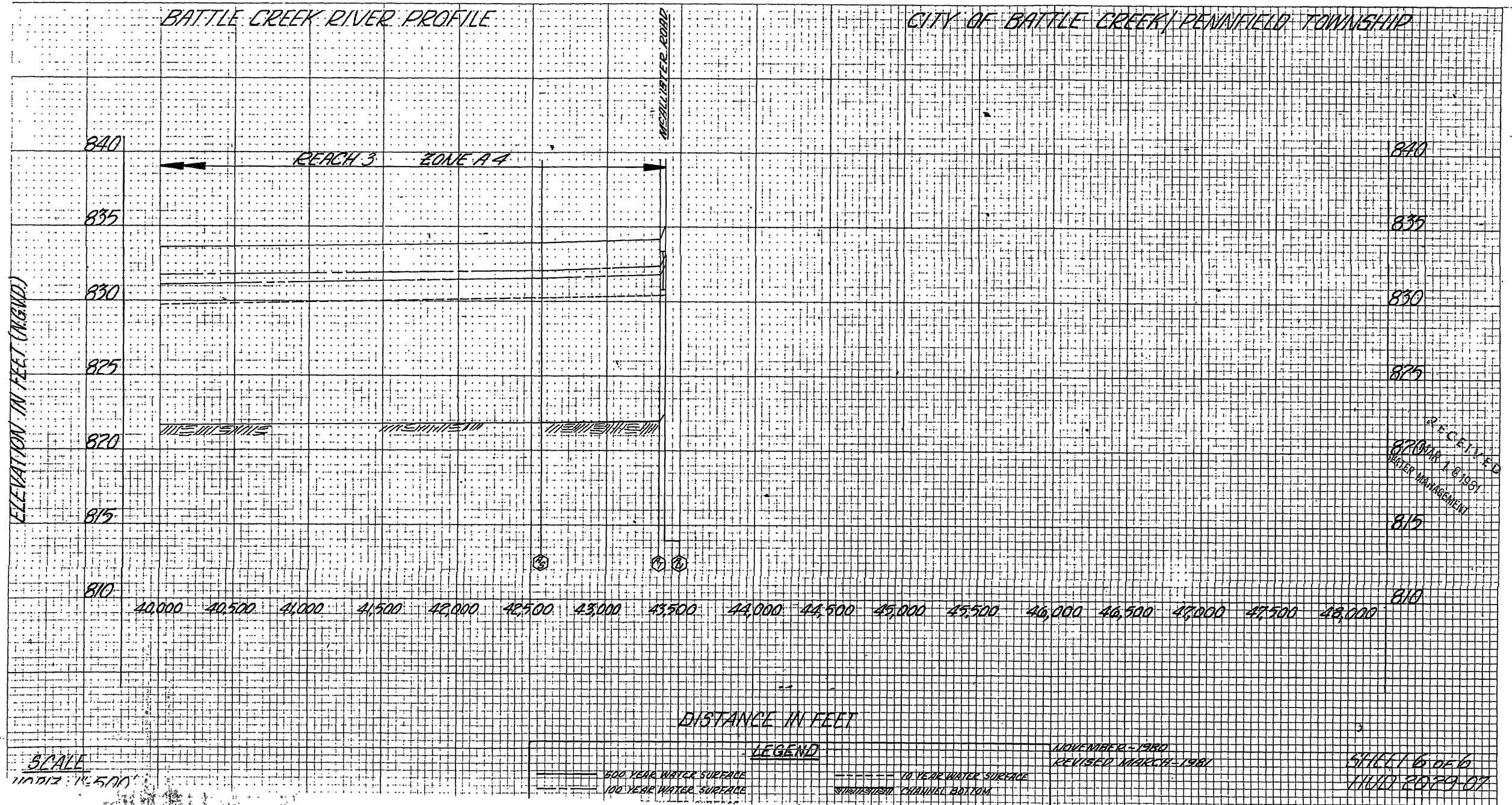
NOVEMBER - 1980
REVISED MARCH - 1981

SHEET 5 OF 6

HUD 2029-07
HUD 2021-07

# BATTLE CREEK RIVER PROFILE

## CITY OF BATTLE CREEK / PENNFIELD TOWNSHIP

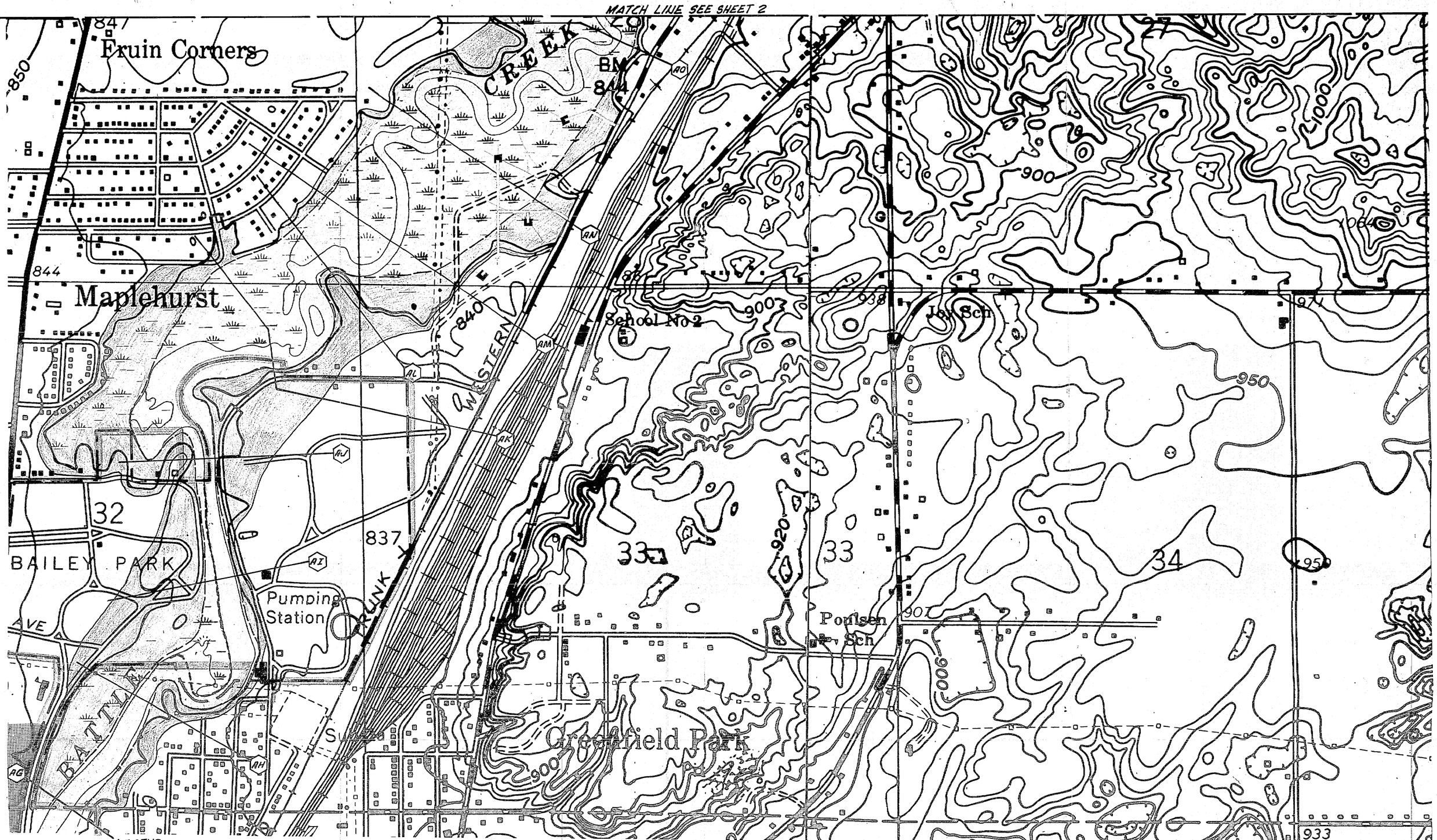



RECEIVED
MAR 16 1981
WATER MANAGEMENT

SCALE
1 INCH = 500'

NOVEMBER-1980
REVISED MARCH-1981

SHEET 6 OF 6
HUD 260291-07




LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

CROSS SECTION

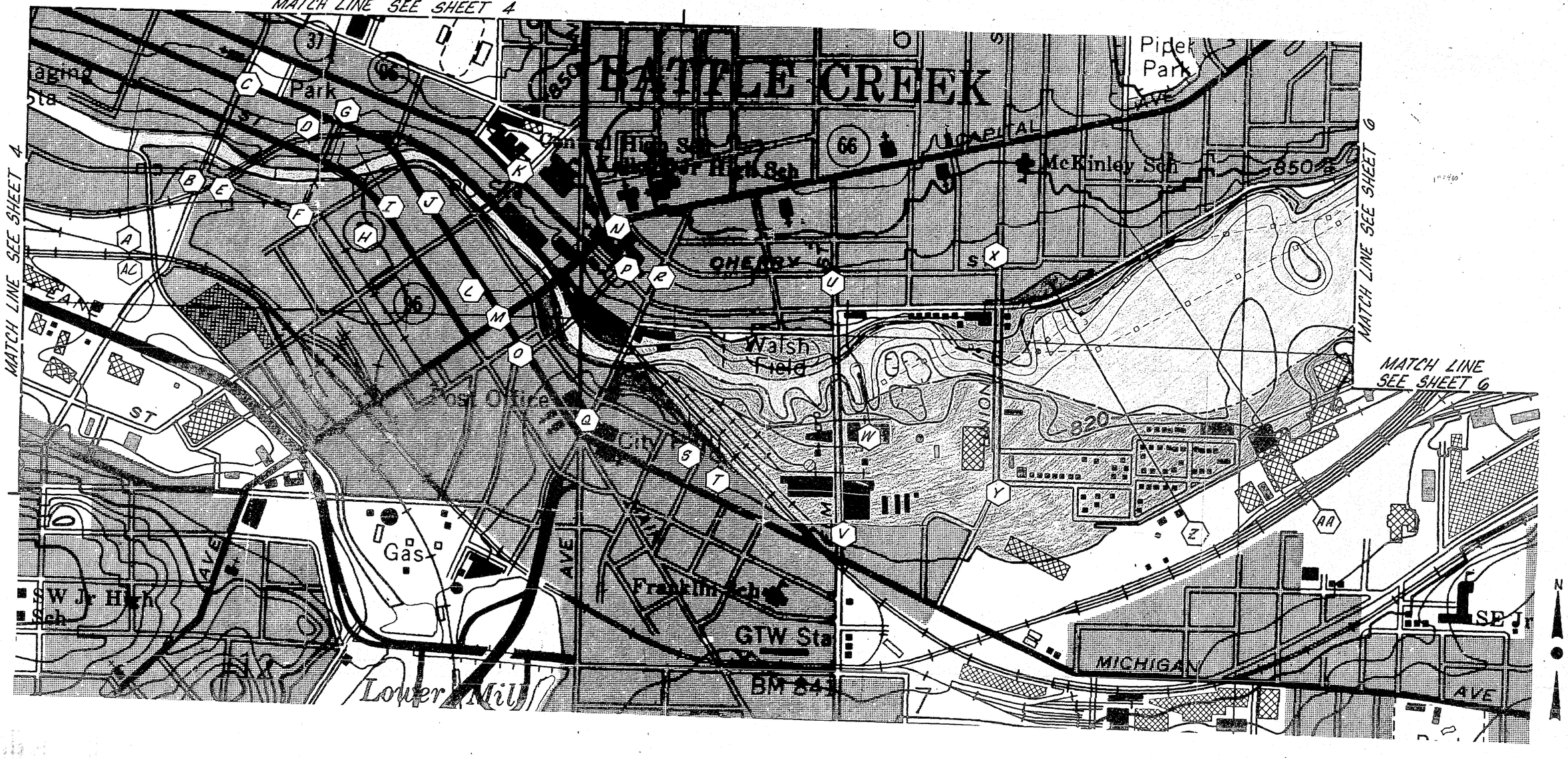
CORPORATE BOUNDARIES

FLOOD MAP

PENNFIELD TOWNSHIP
CALHOUN COUNTY, MICHIGAN

RECEIVED
MAR 18 1981
WATER MANAGEMENT

SHEET 3 of 3
HUD 2029-10




## FLOOD MAP

### LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

A——A CROSS SECTION

CORPORATE BOUNDARY

BATTLE CREEK RIVER
11/80

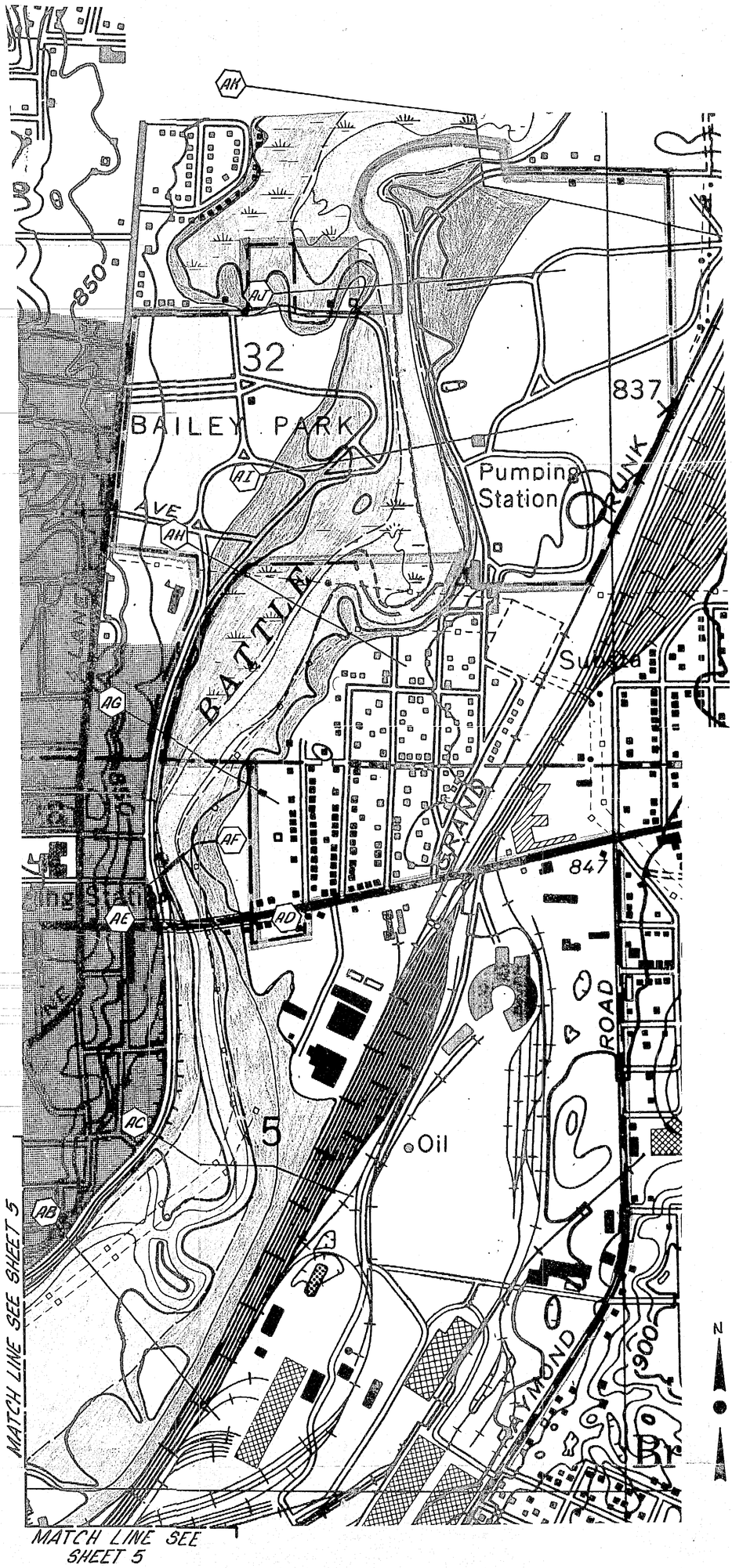
KALAMAZOO RIVER
11/80

CITY OF BATTLE CREEK
CALHOUN COUNTY, MICHIGAN

SCALE: 1"=400'

RECEIVED
MAR 18 1981
WATER MANAGEMENT

RECEIVED
MAR 18 1981
WATER MANAGEMENT




# FLOOD MAP

## LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

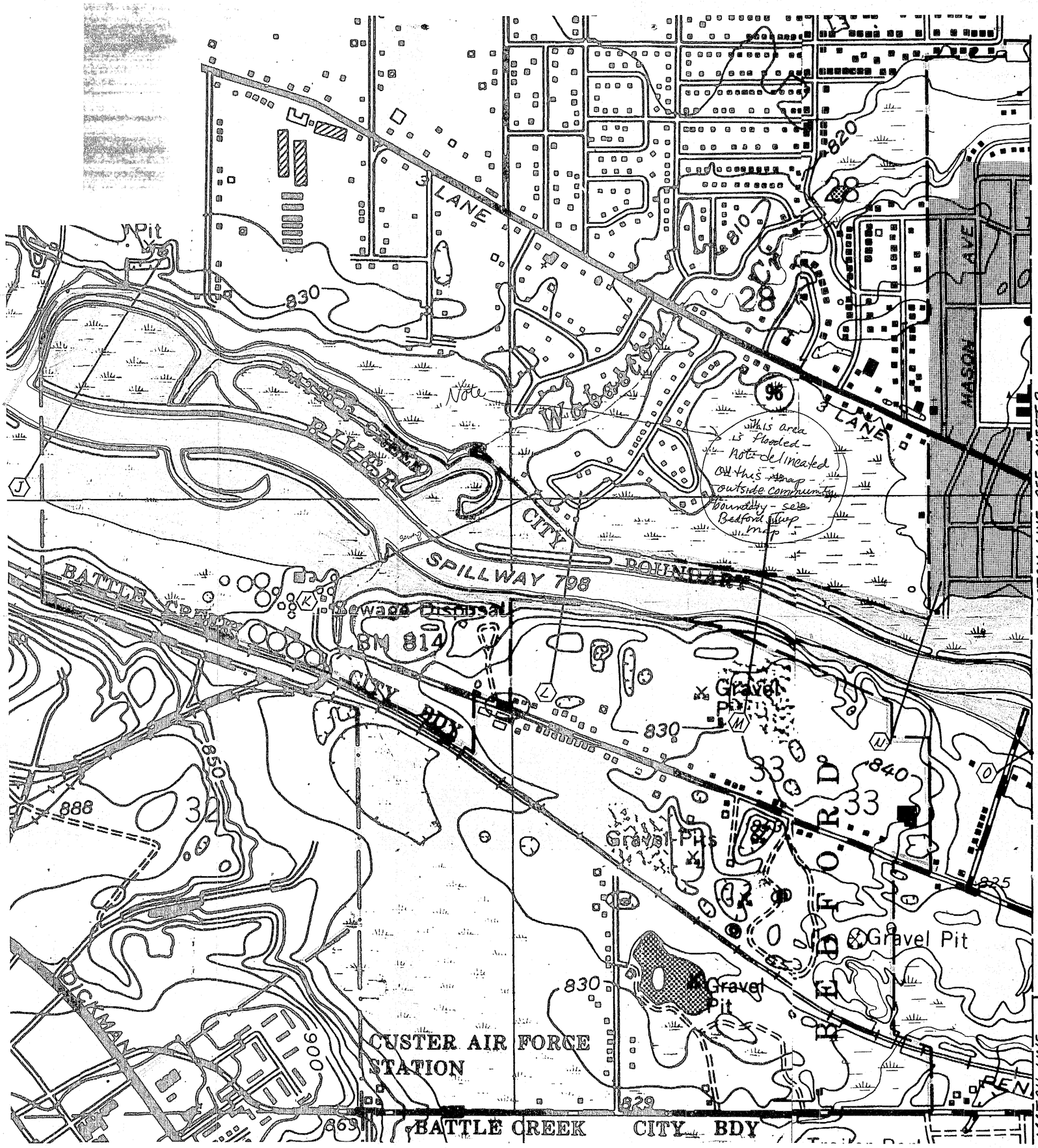
A — A CROSS SECTION

CORPORATE BOUNDARY

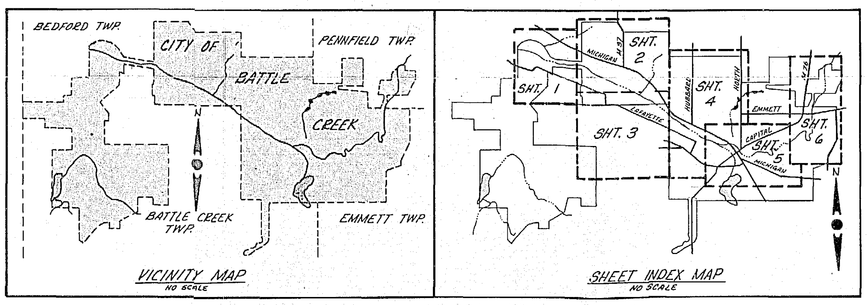
## CITY OF BATTLE CREEK

CALHOUN COUNTY, MICHIGAN

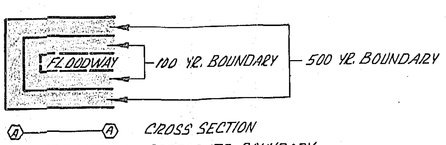
SCALE: 1" = 400'




# FLOOD MAP




## LEGEND

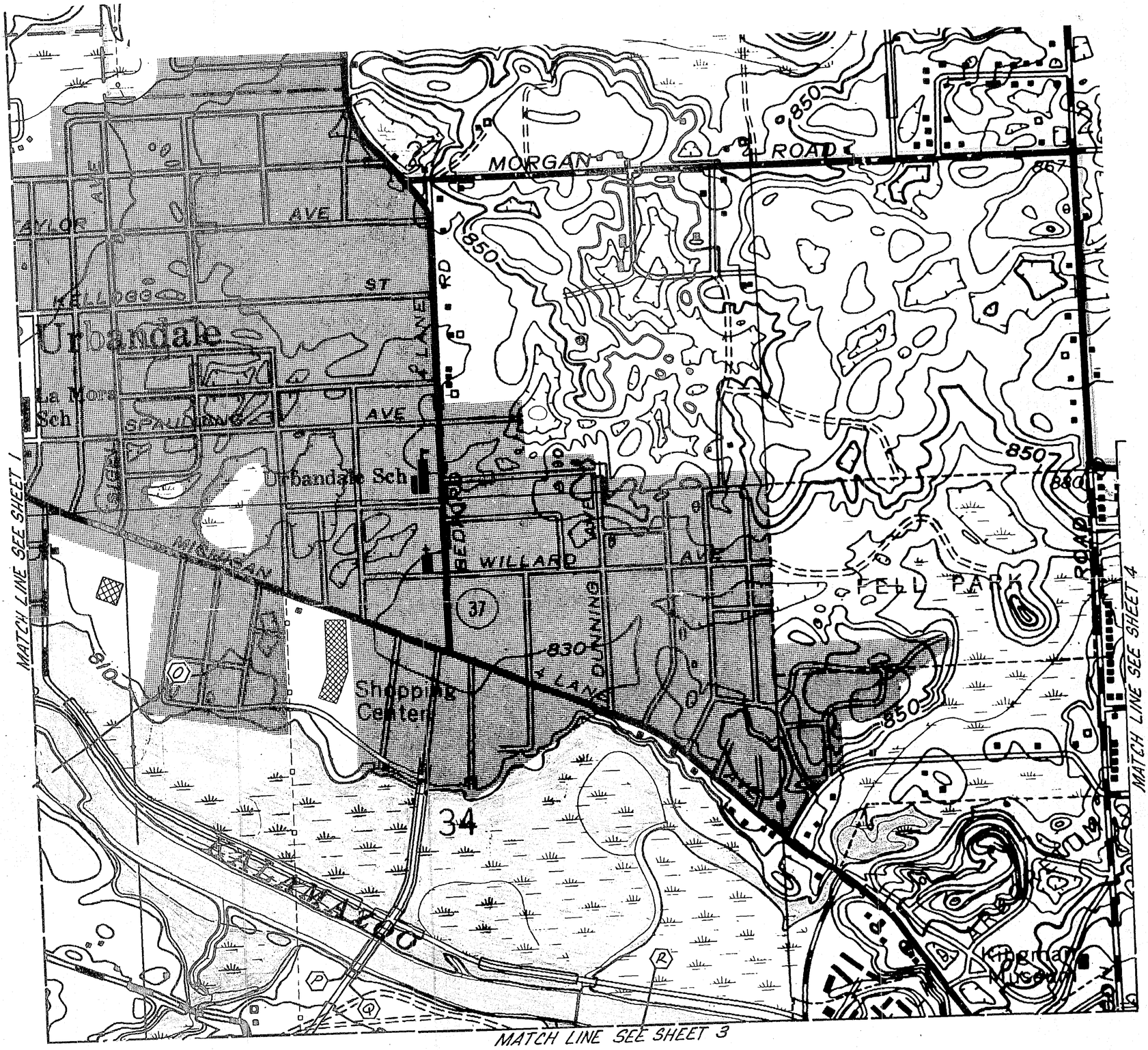



CITY OF BATTLE CREEK
CALHOUN COUNTY, MICHIGAN

SCALE: 1" = 400'

BATTLE CREEK RIVER
11/80

KALAMAZOO RIVER
11/80




N

# FLOOD MAP

## LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

A — A CROSS SECTION

CORPORATE BOUNDARY

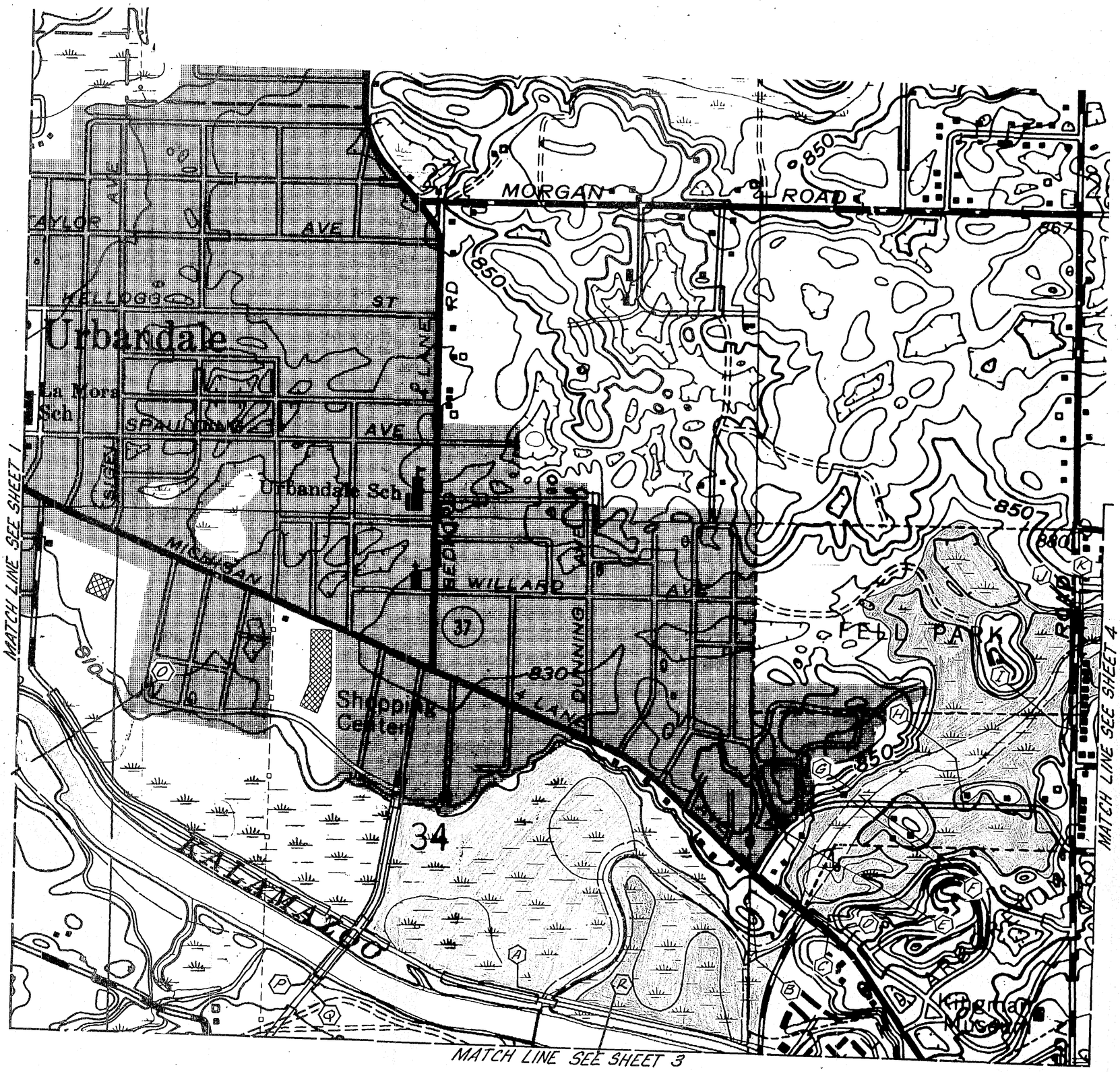
CITY OF BATTLE CREEK

CALHOUN COUNTY, MICHIGAN

SCALE: 1"= 400'

BATTLE CREEK RIVER 11/80

KALAMAZOO RIVER 11/80




N

# FLOOD MAP

RECEIVED
JUN 19 1981
WATER MANAGEMENT

## LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

A — A CROSS SECTION

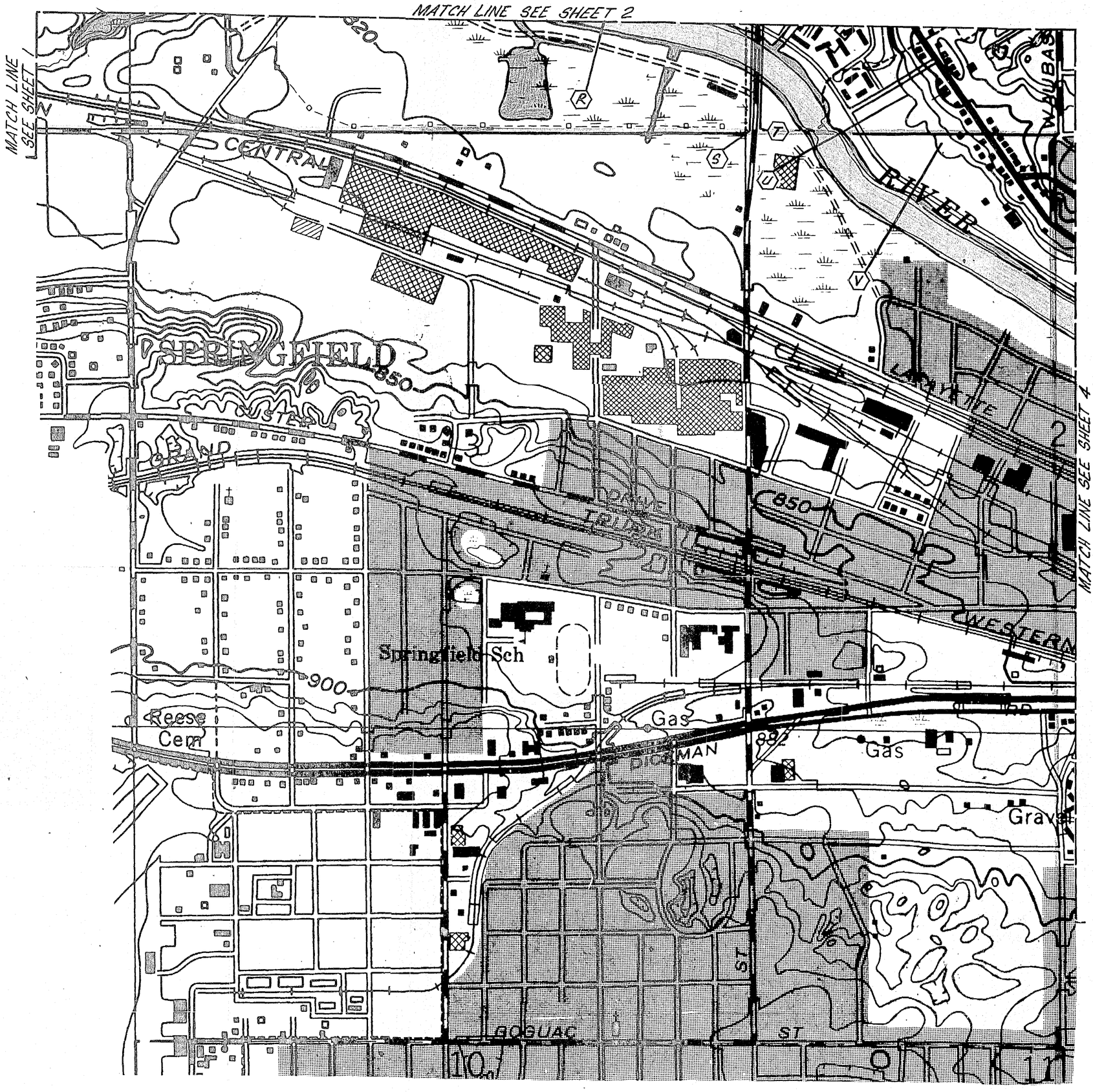
CORPORATE BOUNDARY

CITY OF BATTLE CREEK
CALHOUN COUNTY, MICHIGAN

SCALE: 1" = 400'

BATTLE CREEK RIVER
11/80

KALAMAZOO RIVER
11/80




# FLOOD MAP

## LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

CROSS SECTION

CORPORATE BOUNDARY

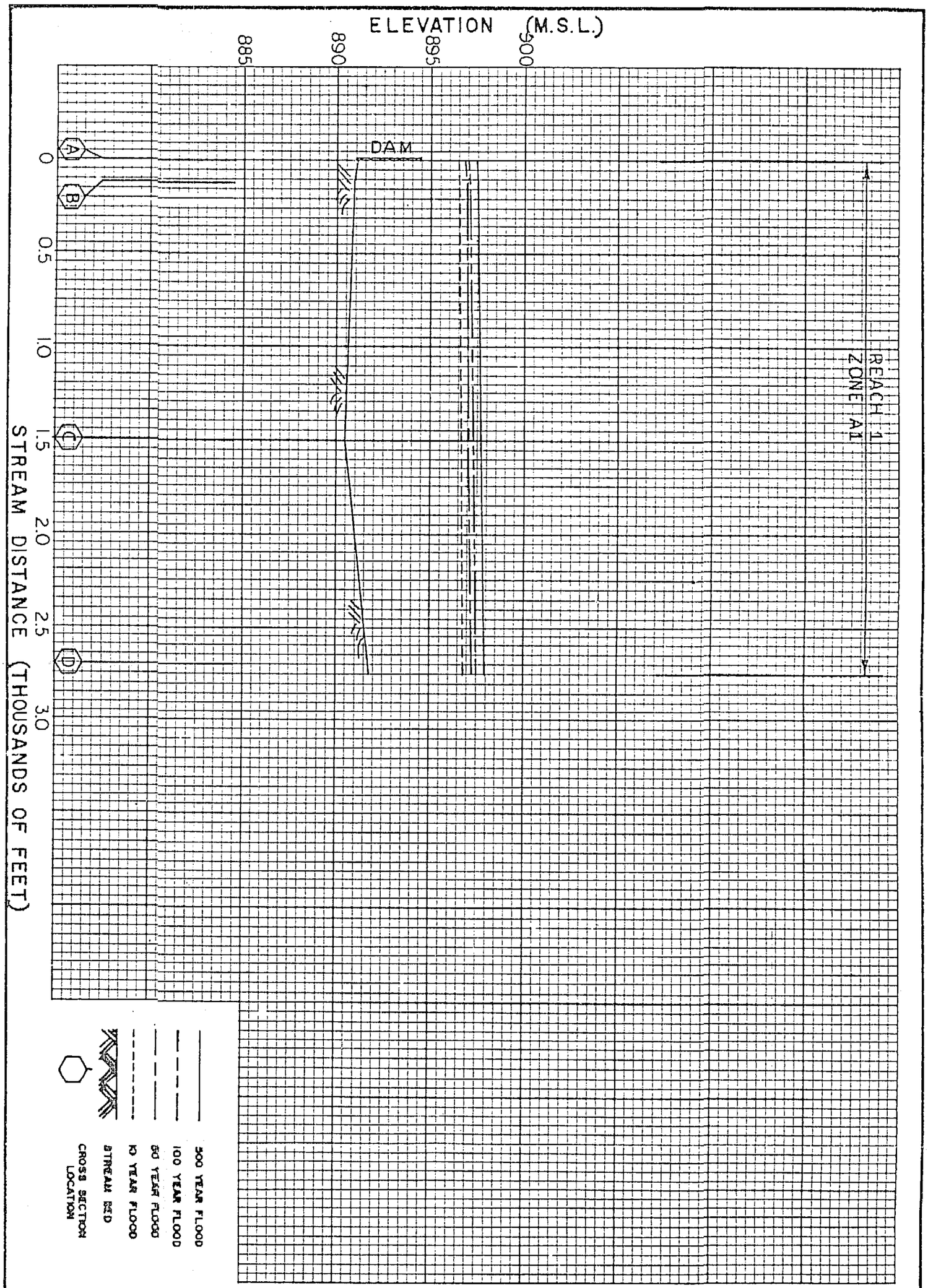
## CITY OF BATTLE CREEK

CALHOUN COUNTY, MICHIGAN

SCALE: 1" = 400'

BATTLE CREEK RIVER
11/80

KALAMAZOO RIVER
11/80




CITY OF MARSHALL

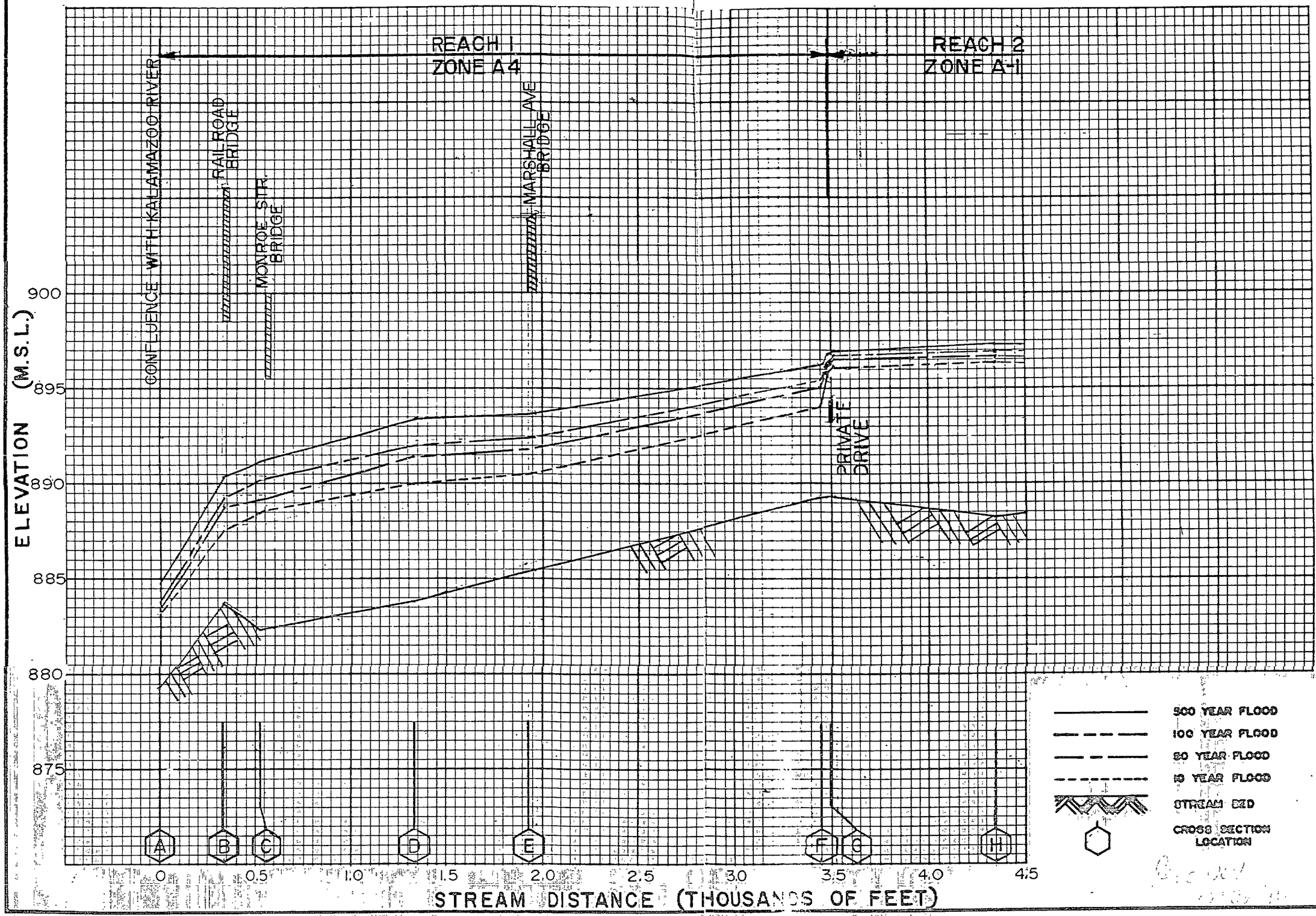
MILL RACE

# FLOOD PROFILE

# FLOOD PROFILE

RICE CREEK

CITY OF MARSHALL



ELEVATION (M.S.L.)

875 880 885 890 895 900

4.5 5.0 5.5 6.0 6.5

STREAM DISTANCE (THOUSANDS OF FEET)

REACH 2
ZONE A-1

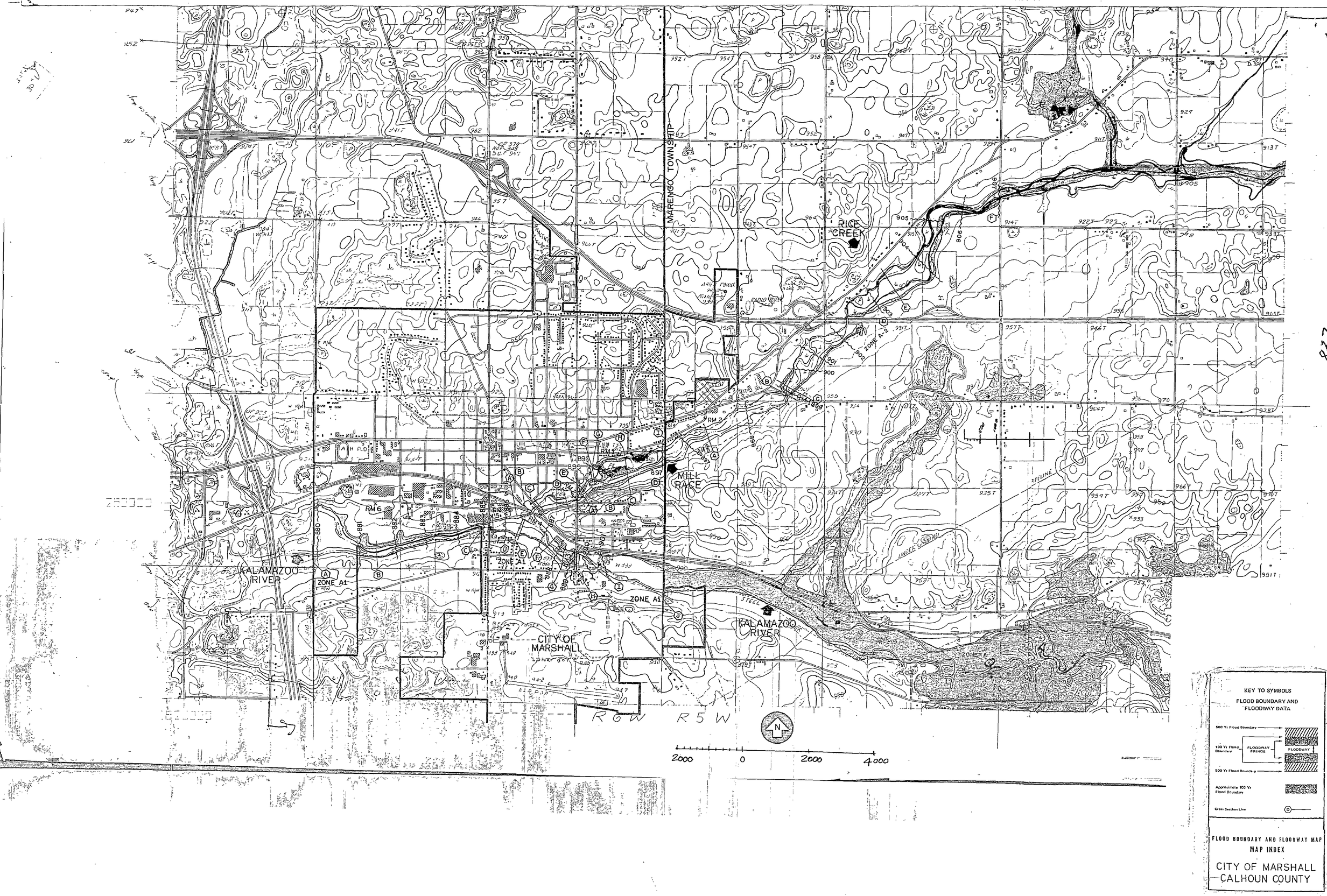
CORPORATE BOUNDARY

500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION

CITY OF MARSHALL

RICE CREEK

# FLOOD PROFILE


MARENGO TOWNSHIP
RICE CREEK
MILL RACE
KALAMAZOO RIVER
KALAMAZOO RIVER
CITY OF MARSHALL
ZONE A1
ZONE A1
ZONE A1
ZONE A
ZONE A-2
RM 1
RM 2
RM 4
RM 6
RM 7
RM 8
RM 9
RM 10
RM 11
RM 12
RM 13
RM 14
RM 15
RM 16
RM 17
RM 18
RM 19
RM 20
RM 21
RM 22
RM 23
RM 24
RM 25
RM

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Battle Creek and Pennfield Twp

3) WATERCOURSE: Battle Creek River

4) DOCUMENT TYPE: 100-yr encroachment

00BREAK00

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**************************************************************
  HEC2 RELEASE DATED NOV 75 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************************

T1CITY OF BATTLE CREEK/PENNFIELD TOWNSHIP FLOOD INSURANCE STUDY
T2BATTLE CREEK RIVER FROM ITS CONFLUENCE TO MC ALLISTER ST. BRIDGE
T3      BATTLE CREEK RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         USEL      FQ

      0.        5.        0.        0.  0.000000      0.00      0.0        0.   307.830     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IPU       CHNIM     ITRACE

    15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

*PROF 2

CCHV= 0.300 CFHV= 0.500

*SECNO 23.000

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | BLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | HTX | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOPR | ITRIAL | IHZ | ICONT | CORAR | TOPWID | ENDST |

SURVEY VALLEY SECTION AT CONFLUENCE TO KALAMAZOO RIVER

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.00 | 5.60 | 807.80 | 0.00 | 807.80 | 808.37 | 0.57 | 0.00 | 0.00 | 804.00 |
| 4200. | 27. | 4141. | 32. | 18. | 678. | 21. | 0. | 0. | 803.70 |
| 0.00 | 1.46 | 6.[illegible] | [illegible] | 0.000 | 0.035 | 0.0[illegible] | 0.000 | 802.20 | 20.34 |
| 0.002376 | 0. | 0. | 0. | 0 | 0 | [illegible] | 0.00 | 173.91 | 194.25 |

*SECNO 23.900

SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.90 | 6.52 | 809.22 | 0.00 | 0.00 | 810.26 | 0.[illegible] | 1.[illegible] | [illegible] | 807.[illegible] |
| 4200. | 3. | 4196. | [illegible]1. | 3. | 707. | 2. | 11. | 3. | 800.00 |
| 0.03 | 0.88 | 5.94 | 0.73 | 0.080 | 0.035 | 0.000 | 0.035 | 803.20 | 12.43 |
| 0.002703 | 675. | 675. | 675. | 2 | [illegible] | 0 | 0.00 | 164.53 | 177.02 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFC | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.50 | 2.64 | 0.00 | 10.00 | 0.00 | 0.10 | 0.00 | 803.20 | 803.20 |

*SECNO 24.000

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| ********** | 810.26 | 0.00 | 4201. | 1. | 0. | 1. | 803.30 | 808.60 |

SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.00 | 9.79 | 812.99 | 0.00 | 0.00 | 813.17 | 0.18 | 2.91 | 0.00 | 807.30 |
| 4200. | 10. | 6181. | 9. | 17. | 1231. | 15. | 11. | 3. | 808.00 |
| 0.03 | 0.62 | 3.40 | 0.59 | 0.080 | 0.035 | 0.080 | 0.035 | 803.20 | 9.07 |
| 0.000622 | 3. | 3. | 3. | 2 | 0 | 8 | 0.00 | 171.81 | 180.88 |

*SECNO 24.800

D/S WASHINGTON AVE. SURVEY SECTION 25

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.80 | 4.22 | 812.82 | 0.00 | 0.00 | 813.37 | 0.55 | 0.01 | 0.19 | 822.00 |
| 4200. | 0. | 6200. | 0. | 0. | 703. | 0. | 11. | 3. | 822.00 |
| 0.03 | 0.00 | 5.97 | 0.00 | 0.000 | 0.035 | 0.080 | 0.035 | 800.60 | 9.57 |
| 0.0003100 | 11. | 11. | 11. | 2 | 0 | 0 | 0.00 | 166.86 | 167.43 |

```
*SECNO 24.900
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       FLMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IM2       ICONT     CORAR     TOPWID     ENDST

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD=  822.00 MAX ELLC=  819.40

        D/S FACE WASHINGTON AVE. SURVEY SECTION 25

    24.90      4.10    812.70      0.00      0.00    813.49      0.79      0.00      0.12    822.00
    4200.        0.     4200.        0.        0.      587.        0.       11.        3.    822.00
     0.03      0.00      7.15      0.00     0.080     0.035     0.080     0.035    808.60      0.57
 0.005651        1.        1.        1.         2         0         0    -95.74    166.06    167.43

*SECNO 25.000

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD=  822.00 MAX ELLC=  819.40

        U/S FACE WASHINGTON AVE. SURVEY SECTION 25

    25.00      4.62    813.22      0.00      0.00    813.85      0.62      0.30      0.03    822.00
    4200.        0.     4200.        0.        0.      663.        0.       12.        3.    822.00
     0.04      0.00      6.54      0.00     0.080     0.035     0.080     0.035    808.60      0.57
 0.003801       66.       66.       66.         2         0         0    -107.22    166.87    167.43

*SECNO 25.100

        U/S WASHINGTON AVE. SURVEY SECTION 25

    25.10      4.91    813.51      0.00      0.00    813.92      0.41      0.00      0.06    822.00
    4200.        0.     4200.        0.        0.      819.        0.       12.        3.    822.00
     0.04      0.00      5.13      0.00     0.080     0.035     0.080     0.035    808.60      0.56
 0.001884        1.        1.        1.         2         0         0      0.00    166.87    167.44

*SECNO 26.000

        SURVEY VALLEY SECTION 26

    26.00      6.62    813.62      0.00      0.00    814.43      0.81      0.31      0.20    808.60
    4200.       93.     4005.      102.       51.      543.       56.       15.        3.    808.70
     0.04      1.82      7.38      1.83     0.080     0.035     0.080     0.035    807.00      1.55
 0.002923      135.      135.      135.         2         0         0      0.00    141.86    143.41

CCHV=    0.300 CEHV=    0.500
*SECNO 26.800

        D/S PENN CENTRAL RAILROAD SURVEY SECTION 27

    26.80      7.21    814.51      0.00      0.00    814.84      0.33      0.27      0.14    825.00
    4200.        0.     4200.        0.        0.      911.        0.       17.        4.    825.00
     0.05      0.00      4.61      0.00     0.100     0.035     0.100     0.035    807.30      1.90
 0.001455      135.      135.      135.         3         0         0      0.00    107.14    139.04

*SECNO 26.900
```

| SECNO | DEPTH | C.SEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | PCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | CTM | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IPR | ICONT | CORAR | IOPTYP | ENDST |

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 825.00 MAX ELLC= 818.80

D/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.90 | 7.17 | 814.67 | 0.00 | 0.00 | 814.89 | 0.41 | 0.21 | 0.04 | 825.00 |
| 4200. | 0. | 4200. | 0. | 0. | 816. | 0. | 17. | 4. | 825.00 |
| 0.05 | 0.00 | 5.15 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.30 | 1.90 |
| 0.002106 | 1. | 1. | 1. | 2 | 0 | 0 | -80.33 | 187.13 | 189.03 |

*SECNO 27.000

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 825.00 MAX ELLC= 818.00

U/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.00 | 7.25 | 814.55 | 0.00 | 0.00 | 814.95 | 0.40 | 0.06 | 0.00 | 825.00 |
| 4200. | 0. | 4200. | 0. | 0. | 829. | 0. | 18. | 4. | 825.00 |
| 0.05 | 0.00 | 5.07 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.30 | 1.89 |
| 0.001996 | 30. | 30. | 30. | 2 | 0 | 0 | -99.71 | 187.15 | 189.04 |

*SECNO 27.100

U/S PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.10 | 7.37 | 814.67 | 0.00 | 0.00 | 814.98 | 0.31 | 0.10 | 0.03 | 825.00 |
| 4200. | 0. | 4200. | 0. | 0. | 841. | 0. | 18. | 4. | 825.00 |
| 0.05 | 0.00 | 4.46 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.30 | 1.88 |
| 0.001312 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 187.17 | 189.05 |

*SECNO 28.000

SURVEY VALLEY SECTION 28

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.00 | 7.27 | 814.87 | 0.00 | 0.00 | 815.60 | 0.73 | 0.41 | 0.21 | 809.00 |
| 4200. | 57. | 4084. | 50. | 43. | 590. | 46. | 22. | 5. | 809.40 |
| 0.06 | 1.33 | 4.93 | 1.29 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 1026.65 |
| 0.002110 | 250. | 250. | 250. | 2 | 0 | 0 | 0.00 | 119.63 | 1145.08 |

*SECNO 28.800

D/S BARNEY STD FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.80 | 7.22 | 815.72 | 0.00 | 0.00 | 816.25 | 0.53 | 0.60 | 0.06 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 716. | 0. | 27. | 6. | 822.00 |
| 0.07 | 0.00 | 5.87 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 806.50 | 0.85 |
| 0.001979 | 300. | 300. | 300. | 2 | 0 | 0 | 0.00 | 923.16 | 132.00 |

*SECNO 26.900

| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | PCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |

| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
|---|---|---|---|---|---|---|---|---|---|
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 822.00 MAX ELLC= 821.60

D/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.90 | 7.21 | 815.71 | 0.00 | 0.00 | 816.26 | 0.55 | 0.00 | 0.01 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 709. | 0. | 27. | 6. | 822.00 |
| 0.08 | 0.00 | 5.93 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 8.85 |
| 0.001943 | 1. | 1. | 1. | 0 | 0 | 0 | -7.15 | 123.15 | 132.00 |

*SECNO 29.000

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 822.00 MAX ELLC= 821.60

U/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.00 | 7.23 | 815.73 | 0.00 | 0.00 | 816.27 | 0.54 | 0.01 | 0.00 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 709. | 0. | 27. | 6. | 822.00 |
| 0.08 | 0.00 | 5.92 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 8.83 |
| 0.001930 | 6. | 6. | 6. | 0 | 0 | 0 | -7.15 | 123.18 | 132.02 |

*SECNO 29.100

U/S BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.10 | 7.24 | 815.74 | 0.00 | 0.00 | 816.28 | 0.53 | 0.00 | 0.00 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 718. | 0. | 27. | 6. | 822.00 |
| 0.08 | 0.00 | 5.89 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 8.81 |
| 0.001863 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 123.24 | 132.05 |

*SECNO 29.200

SURVEY VALLEY SECTION 29

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.20 | 7.45 | 815.95 | 0.00 | 0.00 | 816.45 | 0.49 | 0.16 | 0.01 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 745. | 0. | 29. | 6. | 822.00 |
| 0.08 | 0.00 | 5.64 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 8.29 |
| 0.001670 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 124.33 | 132.63 |

*SECNO 29.800

D/S JACKSON AVE. CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.80 | 8.73 | 816.35 | 0.00 | 0.00 | 816.61 | 0.27 | 0.10 | 0.07 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 1011. | 0. | 31. | 6. | 816.00 |
| 0.09 | 0.00 | 4.16 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.96 |
| 0.000806 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 156.11 | 157.06 |

*SECNO 29.900

| SECNO | DEPTH | CLSEL | CRIWS | HSELN | EG | HV | HL | QLOSS | TANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 822.10 MAX ELLC= 819.00

D/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.90 | 8.74 | 816.34 | 0.00 | 0.00 | 816.62 | 0.20 | 0.00 | 0.01 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 980. | 0. | 31. | 6. | 816.00 |
| 0.09 | 0.00 | 4.20 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.94 |
| 0.000892 | 1. | 1. | 1. | 0 | 0 | 2 | -30.20 | 156.91 | 157.06 |

*SECNO 30.000

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 822.10 MAX ELLC= 819.00

U/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.00 | 8.79 | 816.79 | 0.00 | 0.00 | 816.67 | 0.28 | 0.09 | 0.00 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 916. | 0. | 32. | 7. | 816.00 |
| 0.09 | 0.00 | 4.20 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.94 |
| 0.000875 | 54. | 54. | 54. | 0 | 0 | 2 | -30.34 | 156.13 | 157.06 |

*SECNO 30.100

U/S JACKSON AVE. CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.10 | 8.82 | 816.42 | 0.00 | 0.00 | 816.68 | 0.26 | 0.00 | 0.01 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 1022. | 0. | 32. | 7. | 816.00 |
| 0.09 | 0.00 | 4.11 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.93 |
| 0.000772 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 156.14 | 157.07 |

CCRV= 0.500 CERV= 0.000

*SECNO 31.000

SURVEY VALLEY SECTION 31

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.00 | 9.74 | 816.64 | 0.00 | 0.00 | 817.00 | 0.36 | 3.00 | 0.24 | 810.40 |
| 4200. | 46. | 4078. | 75. | 50. | 670. | 70. | 33. | 7. | 809.20 |
| 0.09 | 0.93 | 6.09 | 1.07 | 0.120 | 0.035 | 0.120 | 0.035 | 806.70 | 907.02 |
| 0.001467 | 80. | 80. | 80. | 2 | 0 | 0 | 0.00 | 128.42 | 1035.46 |

*SECNO 31.100

D/S STRUCTURE OVER BATTLE CREEK RIVER STA.2+74.3

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.10 | 8.55 | 816.85 | 0.00 | 0.00 | 817.21 | 0.36 | 0.11 | 0.10 | 817.60 |
| 4200. | 0. | 4200. | 0. | 0. | 868. | 0. | 35. | 7. | 820.00 |
| 0.10 | 0.00 | 4.84 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 800.30 | 1.01 |
| 0.001085 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 121.96 | 122.97 |

*SECNO 31.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRCHS | LSELK | ES | HV | NL | QLOSS | BANK ELEV |
| 0 | QLOB | QCH | QROB | ALOB | AGH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | TN | ELTRIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

FORM 1411-CO PRINTED BY ROZARY MANIFOLD FORMS

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 822.00 MAX ELLC= 817.60

STRUCTURE OVER BATTLE CREEK STA.2+74.1

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.20 | 8.54 | 816.36 | 0.00 | 0.00 | 817.23 | 0.30 | 0.00 | 0.02 | 817.60 |
| 4200. | 0. | 4200. | 0. | 0. | 844. | 0. | 35. | 7. | 322.00 |
| 0.10 | 0.00 | 6.97 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 806.30 | 1.01 |
| 0.001107 | 1. | 1. | 1. | 0 | 0 | 2 | -23.03 | 121.96 | 122.97 |

*SECNO 31.300

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 820.00 MAX ELLC= 818.10

STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.30 | 8.11 | 816.99 | 0.00 | 0.30 | 817.34 | 0.64 | 0.07 | 0.36 | 818.10 |
| 4200. | 0. | 4200. | 0. | 0. | 792. | 0. | 36. | 7. | 820.50 |
| 0.10 | 0.30 | 7.07 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 1.02 |
| 0.001465 | 55. | 56. | 56. | 0 | 2 | 0 | -21.65 | 121.93 | 122.97 |

*SECNO 31.400

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 822.00 MAX ELLC= 819.70

STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.40 | 8.17 | 816.97 | 0.00 | 0.00 | 817.37 | 0.39 | 0.00 | 0.02 | 819.70 |
| 4200. | 0. | 4200. | 0. | 0. | 843. | 0. | 36. | 7. | 822.00 |
| 0.10 | 0.00 | 7.04 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.00 | 1.03 |
| 0.001262 | 1. | 1. | 1. | 2 | 0 | 2 | -21.77 | 121.93 | 122.96 |

*SECNO 31.500

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 822.00 MAX ELLC= 819.70

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.50 | 7.59 | 817.09 | 0.00 | 0.00 | 817.81 | 0.72 | 0.18 | 0.26 | 821.60 |
| 4200. | 0. | 4200. | 0. | 0. | 816. | 0. | 30. | 7. | 822.00 |
| 0.11 | 0.00 | 6.82 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.05 |
| 0.002682 | 105. | 105. | 105. | 2 | 0 | 0 | -19.68 | 100.91 | 101.96 |

*SECNO 31.600

3370 NORMAL BRIDGE,NRD= 37 MIN ELTRD= 822.00 MAX ELLC= 821.00

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.60 | 7.06 | 817.04 | 0.00 | 0.00 | 817.93 | 0.89 | 0.00 | 0.13 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 586. | 0. | 38. | 7. | 822.00 |
| 0.11 | 0.00 | 7.55 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.06 |
| 0.003731 | 1. | 1. | 1. | 2 | 0 | 0 | -63.66 | 100.90 | 101.96 |

FORM 1441-80 PRINTED BY ROTARY MANIFOLD FORMS

*SECNO 31.700

| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | WPL | TIA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | ANCH | XNR | LTI | ELMIN | SSTA |
| SLOPE | XLOFL | XLCH | XLOTR | TYPICAL | IN2 | ICO Y | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 37 MIN ELTRD= 822.00 MAX ELLC= 821.00

STRUCTURE OVER BATTLE CREEK STA 1+61.5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.70 | 8.14 | 817.34 | 0.00 | 0.00 | 818.15 | 0.81 | 0.16 | 0.04 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 582. | 0. | 39. | 8. | 822.00 |
| 0.11 | 0.00 | 7.21 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 109.70 | 1.05 |
| 0.003219 | 47. | 47. | 47. | 2 | 0 | 0 | -45.56 | 109.91 | 101.96 |

*SECNO 32.900

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 823.00 MAX ELLC= 821.90

D/S FACE MICHIGAN AVE. SURVEY SECTION 33

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.90 | 7.74 | 817.44 | 0.00 | 0.00 | 818.18 | 0.75 | 0.00 | 0.03 | 823.00 |
| 4200. | 0. | 4200. | 0. | 0. | 606. | 0. | 39. | 8. | 823.00 |
| 0.11 | 0.00 | 6.93 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 109.70 | 1.06 |
| 0.005014 | 1. | 1. | 1. | 2 | 0 | 0 | -106.39 | 109.90 | 110.94 |

*SECNO 33.000

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 823.00 MAX ELLC= 820.90

U/S FACE MICHIGAN AVE. SURVEY SECTION 33

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.30 | 9.14 | 817.84 | 0.00 | 0.00 | 818.54 | 0.70 | 0.00 | 0.02 | 823.00 |
| 4200. | 0. | 4200. | 0. | 0. | 627. | 0. | 40. | 8. | 823.00 |
| 0.11 | 0.00 | 6.70 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 109.70 | 1.05 |
| 0.004502 | 70. | 70. | 70. | 2 | 0 | 0 | -129.95 | 109.89 | 110.94 |

*SECNO 33.100

U/S MICHIGAN AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.10 | 8.55 | 818.25 | 0.00 | 0.00 | 818.68 | 0.43 | 0.00 | 0.14 | 823.00 |
| 4200. | 0. | 4200. | 0. | 0. | 803. | 0. | 40. | 8. | 823.00 |
| 0.11 | 0.00 | 5.23 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 109.70 | 1.05 |
| 0.001203 | 1. | 1. | 1. | 2 | 0 | 0 | 0.30 | 109.90 | 110.95 |

*SECNO 34.000

SURVEY VALLEY SECTION 34.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.00 | 0.23 | 813.33 | 0.00 | 0.00 | 813.22 | 0.39 | 0.17 | 0.37 | 814.30 |
| 4200. | 3. | 4935. | 65. | 5. | 541. | 47. | 41. | 8. | 811.20 |
| 0.11 | 0.66 | 7.63 | 1.35 | 0.120 | 0.035 | 0.120 | 0.035 | 810.10 | 809.45 |
| 0.022589 | 100. | 100. | 100. | 2 | 0 | 0 | 2.00 | 96.73 | 786.18 |

PRINTED IN U.S.A.
FORM 1411-80-PRINTED BY ROTARY MANIFOLD FORMS

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*SECNO 35.000
   SECNO     DEPTH     CHSEL     CRIWS     WSELK     EG        EV        HL        DLOSS     BANK ELEV
   0         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       NTH       ELTIN     SSTA
   SLOPE     XLOPL     XLCH      XLOPR     ITRIAL    IH2       ICONT     CCRAR     TOPWID    ENDST

        SURVEY VALLEY SECTION 35

    35.00     7.09    819.95      0.00      0.00    820.62      0.47      0.90      0.21    812.30
    4200.       1.     4127.       72.        5.      745.       54.       51.        9.    813.10
     0.14     0.30      5.54      1.32     0.120     0.035     0.120     0.035    812.10    579.80
 0.001139     600.      600.      600.         2         0         0      0.00    109.70    688.50

*SECNO 35.800

        D/S MC CALMLY AVE

    35.00     8.01    820.21      0.00      0.00    820.58      0.36      0.01      0.05    826.00
    4200.       0.     4200.        0.        0.      866.        0.       53.       10.    826.00
     0.15     0.00      4.85      0.00     0.120     0.035     0.120     0.035    812.20      1.04
 0.000979     100.      100.      100.         2         0         0      0.00    109.91    110.96

*SECNO 35.900

3370 NORMAL BRIDGE,NRD= 15 MIN ELTRD=  826.00 MAX ELLC=  823.10

        D/S FACE MC CALMLY AVE.

    35.90     7.99    820.19      0.00      0.00    820.67      0.48      0.00      0.09    826.00
    4200.       0.     4200.        0.        0.      753.        0.       53.       10.    826.00
     0.15     0.00      5.57      0.00     0.120     0.035     0.120     0.035    812.20      1.05
 0.001938       1.        1.        1.         2         0         0   -110.56    109.91    110.96

*SECNO 36.000

3370 NORMAL BRIDGE,NRD= 15 MIN ELTRD=  826.00 MAX ELLC=  823.10

        U/S FACE MC CALMLY AVE.

    36.00     8.13    820.33      0.00      0.00    820.80      0.47      0.12      0.01    826.00
    4200.       0.     4200.        0.        0.      765.        0.       54.       10.    826.00
     0.15     0.00      5.49      0.00     0.120     0.035     0.120     0.035    812.20      1.04
 0.001844      65.       65.       65.         2         0         0   -114.63    109.91    110.96

*SECNO 36.100

3370 NORMAL BRIDGE,NRD=  9 MIN ELTRD=  827.00 MAX ELLC=  823.30

        D/S FACE PARKING LOT BRIDGE CROSS SECTION 37

    36.10     8.20    820.50      0.00      0.00    820.86      0.36      0.00      0.06    827.00
    4200.       0.     4200.        0.        0.      878.        0.       54.       10.    827.00
     0.15     0.00      4.78      0.00     0.120     0.035     0.120     0.035    812.30      1.05
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.000942 | 1. | 1. | 1. | 2 | 0 | 0 | -15.59 | 129.91 | 110.95 |

*SECNO 36.200

3301 HV CHANGED MORE THAN HVINS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CMSEL | CRIDS | USELK | EG | HV | HL | DLOSS | ELEV |
| Q | QLO | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | XTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | XTRIAL | XNE | ICONT | CORAR | TOPWID | COST |

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 827.00 MAX ELLC= 823.30

U/S FACE PARKING LOT BRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.20 | 8.20 | 820.57 | 0.00 | 0.00 | 821.38 | 0.00 | 0.10 | 0.42 | 812.30 |
| 4200. | 0. | 4200. | 0. | 0. | 558. | 0. | 55. | 10. | 827.00 |
| 0.16 | 0.00 | 7.53 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.30 | 0.44 |
| 0.002239 | 74. | 74. | 74. | 2 | 1 | 0 | -10.28 | 70.51 | 70.95 |

*SECNO 36.300

3370 NORMAL BRIDGE,NRD= 5 MIN ELTRD= 827.00 MAX ELLC= 823.30

D/S FACE PARKING LOT STRUCTURE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.30 | 8.31 | 820.61 | 0.00 | 0.00 | 821.42 | 0.81 | 0.00 | 0.03 | 812.30 |
| 4200. | 0. | 4200. | 0. | 0. | 581. | 0. | 55. | 10. | 827.00 |
| 0.16 | 0.00 | 7.24 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.30 | 0.43 |
| 0.002005 | 1. | 1. | 1. | 2 | 0 | 0 | -2.75 | 70.52 | 70.96 |

*SECNO 37.000

3370 NORMAL BRIDGE,NRD= 5 MIN ELTRD= 827.00 MAX ELLC= 822.70

U/S FACE PARKING LOT STRUCTURE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37.00 | 10.12 | 821.82 | 0.00 | 0.00 | 822.37 | 0.55 | 0.01 | 0.13 | 811.70 |
| 4200. | 0. | 4200. | 0. | 0. | 700. | 0. | 64. | 11. | 826.40 |
| 0.18 | 0.00 | 5.93 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 811.70 | 0.31 |
| 0.001069 | 570. | 570. | 570. | 1 | 0 | 0 | -3.99 | 70.66 | 70.97 |

*SECNO 37.100

U/S PARKING LOT STRUCTURE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37.10 | 10.12 | 821.82 | 0.00 | 0.00 | 822.37 | 0.55 | 0.00 | 0.00 | 811.70 |
| 4200. | 1. | 4199. | 0. | 3. | 700. | 0. | 64. | 11. | 826.40 |
| 0.18 | 0.20 | 5.93 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 811.70 | 0.31 |
| 0.001067 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 70.65 | 70.97 |

CCHV= 0.300 CEHV= 0.500
*SECNO 37.800

D/S BUILDING OVER RIVER D/S CAPITAL AVE CROSS SECTION 38

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37.80 | 12.06 | 821.86 | 0.00 | 0.00 | 822.63 | 0.76 | 0.15 | 0.11 | 830.00 |
| 4200. | 0. | 4200. | 0. | 0. | 599. | 0. | 65. | 11. | 830.00 |
| 0.19 | 0.00 | 7.02 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.00 | 1.07 |
| 0.001595 | 115. | 115. | 115. | 2 | 0 | 0 | 0.00 | 56.00 | 57.95 |

*SECNO 37.900

| SECNO | DEPTH | CHSEL | CRIWS | HSELK | EG | HV | HL | BLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | THA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XML | XMOB | XMR | HTA | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 830.00 MAX ELLC= 823.30

D/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37.90 | 12.75 | 821.75 | 0.00 | 0.00 | 822.74 | 0.99 | 0.00 | 0.11 | 830.00 |
| 4200. | 0. | 4200. | 0. | 0. | 596. | 0. | 65. | 11. | 830.00 |
| 0.19 | 0.00 | 7.02 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.00 | 1.07 |
| 0.002444 | 1. | 1. | 1. | 2 | 0 | 0 | -60.22 | 56.00 | 57.95 |

*SECNO 38.000

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 830.00 MAX ELLC= 823.30

U/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 38.00 | 13.01 | 822.51 | 0.00 | 0.00 | 823.00 | 0.49 | 0.11 | 0.15 | 830.00 |
| 4200. | 0. | 4200. | 0. | 0. | 755. | 0. | 66. | 11. | 830.00 |
| 0.19 | 0.00 | 5.67 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.05 |
| 0.001164 | 66. | 66. | 66. | 2 | 0 | 0 | -60.10 | 80.90 | 81.95 |

*SECNO 38.900

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD= 825.50 MAX ELLC= 823.40

D/S FACE CAPITAL AVE. CROSS SECTION 39

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 38.90 | 12.95 | 822.45 | 0.00 | 0.00 | 823.06 | 0.61 | 0.00 | 0.06 | 825.50 |
| 4200. | 0. | 4200. | 0. | 0. | 666. | 0. | 66. | 11. | 825.50 |
| 0.19 | 0.00 | 6.29 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.03 |
| 0.001691 | 1. | 1. | 1. | 2 | 0 | 0 | -98.62 | 80.94 | 81.97 |

*SECNO 39.000

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD= 825.50 MAX ELLC= 823.10

U/S FACE CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39.00 | 13.08 | 822.58 | 0.00 | 0.00 | 823.17 | 0.60 | 0.11 | 0.01 | 825.50 |
| 4200. | 0. | 4200. | 0. | 0. | 677. | 0. | 67. | 11. | 825.50 |
| 0.19 | 0.00 | 6.20 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.03 |
| 0.001619 | 66. | 66. | 66. | 2 | 0 | 0 | -99.79 | 80.95 | 81.98 |

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*SECNO 39.100

L/S CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39.10 | 15.29 | 822.79 | 0.00 | 0.00 | 823.22 | 0.43 | 0.00 | 0.05 | 825.30 |
| 4200. | 0. | 4200. | 0. | 0. | 794. | 0. | 67. | 11. | 825.50 |
| 0.19 | 0.00 | 5.29 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.03 |
| 0.000957 | 1. | 1. | 1. | 2 | 0 | 0 | 3.06 | 80.95 | 81.98 |

*SECNO 40.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRITHS | CWSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | OLOB | QCH | QROB | ALOB | ACH | AROB | VOL | THA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | MIN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | ZWP | ICONT | CCHAN | TOPWID | ENDST |

SURVEY VALLEY SECTION 40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 40.00 | 14.66 | 822.96 | 0.00 | 0.00 | 823.36 | 0.40 | 0.46 | 0.00 | 816.40 |
| 4200. | 165. | 4035. | 11. | 279. | 769. | 32. | 71. | 12. | 814.90 |
| 0.20 | 1.06 | 5.20 | 0.53 | 0.120 | 0.035 | 0.120 | 0.035 | 809.30 | 819.33 |
| 0.000624 | 165. | 165. | 165. | 2 | 2 | 0 | 0.00 | 102.05 | 921.37 |

*SECNO 40.900

D/S FACE MONROE ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 40.90 | 13.93 | 823.13 | 0.00 | 0.00 | 823.46 | 0.34 | 0.08 | 0.02 | 827.40 |
| 4200. | 0. | 4200. | 0. | 0. | 802. | 0. | 74. | 12. | 827.60 |
| 0.21 | 0.00 | 4.66 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.03 |
| 0.000615 | 135. | 135. | 135. | 2 | 2 | 0 | 0.00 | 77.96 | 70.97 |

SPECIAL BRIDGE

| SE | MX | KROR | COFC | ROLEN | BYC | BYP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.62 | 3.00 | 0.00 | 73.13 | 0.10 | 790.00 | 0.00 | 811.60 | 811.60 |

*SECNO 41.000

PRESSURE FLOW

| EGPRS | EGLKC | HS | QWEIR | QBR | AREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 823.84 | 823.46 | 0.00 | 0. | 4200. | 790. | 768. | 821.70 | 827.40 |

U/S FACE MONROE ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41.00 | 14.32 | 823.52 | 0.00 | 0.00 | 823.84 | 0.32 | 0.37 | 0.00 | 827.40 |
| 4200. | 0. | 4200. | 0. | 0. | 932. | 0. | 75. | 12. | 827.40 |
| 0.21 | 0.00 | 4.98 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.03 |
| 0.000555 | 46. | 46. | 46. | 2 | 0 | 0 | 0.00 | 77.96 | 70.97 |

*SECNO 42.000

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SURVEY VALLEY SECTION 42

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.00 | 12.79 | 823.79 | 0.00 | 0.00 | 823.97 | 0.18 | 0.09 | 0.04 | 821.60 |
| 4200. | C. | 4104. | 96. | 0. | 1197. | 128. | 80. | 13. | 816.70 |
| 0.25 | 0.06 | 3.43 | 0.75 | 0.120 | 0.035 | 0.120 | 0.035 | 311.00 | 723.69 |
| 0.000308 | 225. | 225. | 225. | 2 | 0 | 0 | 0.00 | 157.24 | 060.97 |

*SECNO 43.900

D/S FACE DIVISION ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.90 | 13.04 | 823.84 | 0.00 | 0.00 | 824.06 | 0.22 | 0.07 | 0.02 | 826.90 |
| 4200. | C. | 4200. | 0. | 0. | 1109. | 0. | 87. | 13. | 826.90 |
| 0.25 | 0.00 | 3.79 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.80 | 1.02 |
| 0.000344 | 225. | 225. | 225. | 2 | 0 | 0 | 0.00 | 81.96 | 82.98 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BHC | BWP | DAREA | SS | SLCHD | FLCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.90 | 1.74 | 3.00 | 0.00 | 12.00 | 2.00 | 245.00 | 0.00 | 810.32 | 810.70 |

*SECNO 44.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | QUSEL | CRIWS | WSELK | EG | HV | AL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROD | ALOB | ACH | AROB | VOL | TOA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROD | XNL | XNCH | XNR | WTN | FLMIX | SETA |
| SLOPE | XLOBL | XLCH | XLOBR | STRICKL | ICONT | COMMT | TOPWID | CRDST | |

PRESSURE FLOW

| EGPRS | EGLOC | HS | QWEIR | QPR | RATIO | TRAPEZOID AREA | CLLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 824.37 | 824.07 | 3.00 | 0. | 4200. | 965. | 966. | 822.10 | 826.00 |

D/S FACE DIVISION ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.00 | 15.36 | 824.16 | 0.00 | 0.00 | 824.37 | 0.21 | 0.31 | 0.00 | 826.90 |
| 4200. | 0. | 4200. | 0. | 0. | 1136. | 0. | 89. | 13. | 826.90 |
| 0.25 | 0.00 | 3.78 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.80 | 1.02 |
| 0.000321 | 76. | 76. | 76. | 2 | 0 | 0 | 0.00 | 81.96 | 82.98 |

*SECNO 44.900

3280 CROSS SECTION 44.90 EXTENDED 0.19 FEET

D/S FACE PENN CENTRAL R.R.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.90 | 14.18 | 824.18 | 0.00 | 0.00 | 824.43 | 0.24 | 0.04 | 0.02 | 824.00 |
| 4200. | 0. | 4200. | 0. | 0. | 1062. | 0. | 91. | 14. | 826.00 |
| 0.26 | 0.07 | 3.95 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 10.00 | 0.00 |
| 0.000420 | 100. | 100. | 100. | 1 | 2 | 0 | 0.00 | 93.00 | 93.00 |

SPECIAL BRIDGE

PUNCHED AND PRINTED BY ROTARY MANIFOLD FORMS.

```
SD  XK        XKOR      COFC      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.25      1.93      3.00      0.00     94.00      8.00    695.00      0.00    812.80    812.00

*SECNO 45.000
3280 CROSS SECTION      45.00 EXTENDED      0.00 FEET

PRESSURE AND WEIR FLOW

 EGPRS      EGLWC      HB        QWEIR     QPR       BAREA     TRAPEZOID     ELLC      ELTRD
                                                                 AREA
  825.28    824.67     0.05      323.      3867.     695.      697.      820.90    824.00

        U/S FACE PENN CENTRAL R.R.

   45.00     14.90    824.90     0.00      0.00    823.11      0.22      0.69      0.00    824.00
   4200.        0.      4200.      0.        1.      1127.       0.       94.       14.    824.00
    0.27      0.14      3.73     0.00     0.120     0.035     0.120     0.035    810.00      0.00
0.000348      96.       96.      96.         2         0         3      0.00     93.00     93.00

*SECNO 46.000

        100 FT U/S PENN CENTRAL R.R. CROSS SECTION 46

   46.00     15.09    824.89     0.00      0.00    825.19      0.31      0.34      0.05    815.70
   4200.       62.      4090.     60.       70.      936.      104.       93.       14.    813.50
    0.23      0.61      4.51     0.58     0.120     0.035     0.120     0.035    809.80    912.83
0.000389     100.      100.     100.         2         0         0      0.00    135.99   1048.84

*SECNO 46.500
 2000 NAT Q1=   3174.02  HSEL=    825.27  ENC Q1=   3174.02  HSEL=    825.37  RATIO=  0.0000
 NAT Q1=   3220.  RATIOS LOB,CH,ROB=  0.0210  0.9614  0.0176  HSEL=    825.37

3470 ENCROACHMENT STATIONS=     193.7     327.4  TYPE=     4  TARGET=       0.014

        VALLEY SECTION

   46.50     14.77    825.27     0.00    825.27    825.42      0.15      0.18      0.05    814.00
   4200.       58.      4096.     46.      116.      1302.      94.      117.       16.    814.00
    0.34      0.50      3.15     0.49     0.120     0.035     0.120     0.035    810.50    193.65
0.000180     700.      700.     700.         2         0         0      0.00    133.78    327.44

*SECNO 47.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        CLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     COPRT     TOPWID      ENDST

3470 ENCROACHMENT STATIONS=    1380.0    1605.0  TYPE=     1  TARGET=     225.000

        100 FT D/S ELM ST. CROSS SECTION 47

   47.00     14.12    825.42     0.00    825.42    825.54      0.12      0.11      0.00    813.30
   4200.      114.      3991.     95.      248.      1393.     207.      144.       19.    814.50
    0.41      0.46      2.86     0.46     0.120     0.035     0.120     0.035    811.30   1380.00
0.000151     700.      700.     700.         2         0         0      0.00    204.91   1504.91
```

```
*SECNO 47.900
 2800 NAT Q1=   4245.76  WSEL=    825.50  ENC Q1=   4303.26  WSEL=    825.60  RATIO= -0.0135
 NAT Q1=   4303.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    825.60

3470 ENCROACHMENT STATIONS=        1.0      175.0  TYPE=      4  TARGET=        0.002

        D/S FACE ELM ST.

     47.90     14.91    825.51     0.00    825.50    825.57     0.07     0.01     0.02    826.60
     4200.        0.     4200.       0.        0.     2036.       0.     1[illegible].      19.    826.60
      0.42      0.00      2.06     0.00     0.120     0.035    0.120    0.035    810.60      1.02
 0.000098       100.      100.     100.         2         0        0     0.00    173.97    174.98

SPECIAL BRIDGE

SB   XK        XKOR      COFO      RDLEN     BWC       BAP       BAREA     SS        ELCHU     ELCHD
      0.90      1.74      3.00      0.00    174.00      4.00    1455.00     0.00    814.00    814.00

*SECNO 48.000
CLASS A LOW FLOW

3420 BRIDGE W.S.=     825.51 BRIDGE VELOCITY=       2.15      CALCULATED CHANNEL AREA=      1956.

 EGPRS      EGLUC      H3       QWEIR      QPR       BAREA   TRAPEZOID     ELLC      ELTRD
                                                                  AREA
   825.73     825.80     0.10        0.     4200.     1455.     1420.     822.40    826.60


        U/S FACE ELM ST.

     48.00     15.16    825.76     0.00    825.66    825.83     0.06     0.25     0.00    826.60
     4200.        0.     4200.       0.        0.     2001.       0.     151.      20.    826.60
      0.43      0.00      2.02     0.00     0.120     0.035    0.120    0.035    810.60      1.01
 0.000091        60.       60.      60.         0         0        0     0.00    173.97    174.99

*SECNO 48.200
 2000 NAT Q1=   5511.60  WSEL=    825.69  ENC Q1=   5511.60  WSEL=    825.79  RATIO=  0.0000
 NAT Q1=   5581.  RATIOS LOB,CH,ROB=  0.0338  0.8573  0.1089  WSEL=    825.79

3470 ENCROACHMENT STATIONS=      249.4      467.3  TYPE=      4  TARGET=        0.012

        D/S DAM 150 FT U/S ELM ST.

     48.20     15.48    825.78     0.00    825.69    825.84     0.05     0.01     0.00    810.60
     4200.      117.     3643.     441.      266.     1824.     880.     160.      20.    810.30
      0.45      0.44      2.00     0.50     0.120     0.035    0.120    0.035    810.30    249.43
 0.000058       150.      150.     150.         1         0        0     0.00    817.06    467.29

*SECNO 48.300
 2800 NAT Q1=   2509.43  WSEL=    825.65  ENC Q1=   2509.43  WSEL=    825.75  RATIO=  0.0000
 NAT Q1=   2558.  RATIOS LOB,CH,ROB=  0.0551  0.8056  0.1394  WSEL=    825.75

3370 NORMAL BRIDGE,NPC=  0 MIN ELTRD=  816.50 MAX ELLC=  810.30

3470 ENCROACHMENT STATIONS=      244.6      469.5  TYPE=      4  TARGET=        0.019
```

AT DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.30 | 15.45 | 825.75 | 0.00 | 825.65 | 825.08 | 0.13 | 0.00 | 0.04 | 810.60 |
| 4200. | 791. | 3453. | 556. | 245. | 1131. | 646. | 160. | 20. | 810.30 |
| 0.45 | 0.78 | 2.14 | 0.86 | 0.120 | 0.035 | 0.120 | 0.035 | 810.30 | 244.57 |
| 0.000281 | 2. | 2. | 2. | 2 | 0 | 0 | -1011.59 | 224.69 | 669.45 |

*SECNO 48.400

2000 NAT Q1= 2031.22 USEL= 825.67 ENC Q1= 2831.22 USEL= 825.77 RATIO= 0.0000

NAT Q1= 2887. RATIOS LOB,CH,ROB= 0.0520 0.0134 0.1525 USEL= 825.77

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DELTA | CWSEL | CRIWS | WSELK | EG | HV | HL | CLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | WOL | TIE | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | UTK | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IM2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 246.5 667.0 TYPE= 4 TARGET= 0.019

U/S DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.40 | 13.17 | 825.77 | 0.00 | 825.67 | 825.09 | 0.11 | 0.00 | 0.00 | 815.60 |
| 4200. | 197. | 2497. | 523. | 240. | 1191. | 650. | 160. | 20. | 815.90 |
| 0.65 | 0.74 | 2.94 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 813.40 | 246.36 |
| 0.000222 | 2. | 2. | 2. | 1 | 0 | 0 | 0.00 | 220.67 | 467.02 |

*SECNO 48.900

2800 NAT Q1= 3690.20 USEL= 825.82 ENC Q1= 3860.21 USEL= 825.92 RATIO= 0.0000

NAT Q1= 3752. RATIOS LOB,CH,ROB= 0.3145 0.6853 0.0002 USEL= 825.92

3470 ENCROACHMENT STATIONS= 7.8 490.1 TYPE= 4 TARGET= 0.019

CROSS SECTION 494

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.90 | 11.92 | 825.92 | 0.00 | 825.82 | 825.90 | 0.06 | 0.09 | 0.01 | 825.00 |
| 4200. | 1300. | 2793. | 107. | 2546. | 1142. | 179. | 196. | 26. | 815.00 |
| 0.53 | 0.51 | 2.45 | 0.59 | 0.120 | 0.035 | 0.120 | 0.035 | 814.00 | 7.79 |
| 0.000129 | 520. | 520. | 520. | 2 | 0 | 3 | 0.00 | 402.33 | 490.13 |

*SECNO 49.000

3470 ENCROACHMENT STATIONS= 851.0 1017.0 TYPE= 1 TARGET= 166.000

SURVEY CROSS SECTION 49

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49.00 | 17.68 | 825.90 | 0.00 | 825.80 | 826.10 | 0.12 | 0.09 | 0.03 | 817.30 |
| 4200. | 80. | 3946. | 174. | 160. | 1363. | 301. | 238. | 29. | 815.10 |
| 0.60 | 0.50 | 2.90 | 0.58 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 651.00 |
| 0.000151 | 650. | 650. | 650. | 2 | 0 | 0 | 0.00 | 166.00 | 1017.00 |

*SECNO 49.900

2300 NAT Q1= 2486.24 USEL= 825.88 ENC Q1= 2516.80 USEL= 825.98 RATIO= -0.0131

NAT Q1= 2517. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 USEL= 825.98

3470 ENCROACHMENT STATIONS= 1.0 917.5 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 826.90 SLREA= 826.90

D/S FACE UNION ST. CROSS SECTION 50

```
   49.90    13.18   825.98     0.00   825.88   826.14     0.16     0.02     0.02   826.90
   4200.       0.    4200.       0.       0.    1303.       0.     242.      30.   826.90
    0.61     0.00     3.22     0.00    0.120    0.035    0.120    0.035   812.80     1.01
0.000279     100.     100.     100.        2        0        0     0.00   116.48   117.49


SPECIAL BRIDGE

SH  XK        XKOR      COEC      RDLEN     S C       FWP       BAREA     SS        ELCHU     ELCHD
    0.90      1.75      3.00      0.00    116.50     10.50    1123.00     0.00    813.90    813.90

*SECNO 50.000
 2000 NAT Q1=   2559.29  WSEL=    826.10  ENC Q1=   2594.50  WSEL=    826.20  RATIO= -0.0138
 NAT Q1=   2594.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    826.20
PRESSURE FLOW

 EGPRS      EGLUC      H3       QWEIR      OPR       BAREA   TRAPEZOID     ELLC      ELTPD
                                                                AREA
  826.36    826.36     0.01        0.     4200.     1125.     1124.      826.50    826.90


3470 ENCROACHMENT STATIONS=       1.0     117.5  TYPE=     4  TARGET=       0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      826.90 ELREA=      826.90

        U/S FACE UNION ST.

   50.00    13.40   826.20     0.00   826.10   826.36     0.16     0.22     0.00   826.90
   4200.       0.    4200.       0.       0.    1329.       0.     243.      30.   826.90
    0.61     0.00     3.16     0.00    0.120    0.035    0.120    0.035   812.80     1.01
0.000262     50.      50.      50.        0        0        0     0.00   116.49   117.49

*SECNO 50.100
   SECNO     DEPTH     CHSEL     CRIWS     HSELK     EG        HV        HL        DLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      AOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XXL       XNCH      XNR       XTH       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOER     ITRIAL    IN2       ICONT     CORAR     TOPMXD     ELDST


3470 ENCROACHMENT STATIONS=      87.0     403.0  TYPE=     1  TARGET=     316.000

        100 FT U/S UNION ST.

   50.10    13.49   826.29     0.00   826.18   826.39     0.11     0.02     0.01   814.00
   4200.     101.    3626.     472.     287.    1289.     837.     248.      30.   814.00
    0.62     0.35     2.81     0.56    0.120    0.035    0.120    0.035   812.80    87.00
0.000145     100.     100.     100.        2        0        0     0.00   316.00   403.00

CCHV=   0.100 CEHV=   0.300
*SECNO 51.000
 2000 NAT Q1=   5391.47  WSEL=    826.35  ENC Q1=   5591.47  WSEL=    826.45  RATIO=  0.0000
 NAT Q1=   5707.  RATIOS LOB,CH,ROB=  0.4907  0.4391  0.0705  WSEL=    826.45

3470 ENCROACHMENT STATIONS=     763.4    1789.4  TYPE=     4  TARGET=       0.020

        SURVEY VALLEY SECTION 51
```

403

```
   51.00    13.45   826.45     0.00   826.35   826.47     0.02     0.07     0.01   816.40
    4200.    2060.    1882.     257.    5606.    1272.     950.     342.      43.   815.10
     0.07     0.37     1.48     0.27    0.120    0.040    0.120    0.035   813.00   763.43
 0.000036     850.     730.     730.        2        0        0     0.00  1026.22  1789.45

*SECNO 52.000
 2800 NAT Q1=   7280.09  WSEL=    826.40  ENC Q1=   7280.09  WSEL=    826.50  RATIO=  0.0000
 NAT Q1=   7420.  RATIOS LOB,CH,ROB=  0.6686  0.3230  0.0084  WSEL=    826.50

3470 ENCROACHMENT STATIONS=    1030.1    2456.0  TYPE=     4  TARGET=       0.019

        SURVEY VALLEY SECTION 52

   52.00    13.20   826.50     0.00   826.40   826.50     0.01     0.03     0.00   816.30
    4200.    2080.    1320.       0.    9951.    1219.       0.      513.      65.   815.60
     1.20     0.29     1.00     0.00    0.120    0.040    0.120    0.033   813.30  1080.07
 0.000038     800.     800.     800.        1        0        0     0.00  1375.93  2456.00

*SECNO 53.000
 2800 NAT Q1=   5461.62  WSEL=    826.45  ENC Q1=   5461.62  WSEL=    826.59  RATIO=  0.0000
 NAT Q1=   5540.  RATIOS LOB,CH,ROB=  0.4559  0.5366  0.0074  WSEL=    826.59

3470 ENCROACHMENT STATIONS=     554.5    1570.0  TYPE=     4  TARGET=       0.018

        SURVEY VALLEY SECTION 53

   53.00    14.30   826.60     0.00   826.45   826.62     0.02     0.11     0.00   815.90
    4200.    1965.    2235.       0.    5731.    1475.       0.     1012.     129.   816.40
     1.98     0.34     1.52     0.00    0.120    0.040    0.120    0.037   812.30   554.54
 0.000063    2300.    2600.    2400.        1        0        0     0.00  1015.46  1570.00

*SECNO 54.000
 2800 NAT Q1=   4183.00  WSEL=    826.59  ENC Q1=   4183.00  WSEL=    826.69  RATIO=  0.0000
 NAT Q1=   4183.  RATIOS LOB,CH,ROB=  0.0249  0.5659  0.4092  WSEL=    826.69

3470 ENCROACHMENT STATIONS=     683.6    1384.0  TYPE=     4  TARGET=       0.019

        SURVEY VALLEY SECTION 54

   54.00    13.80   826.70     0.00   826.59   826.74     0.04     0.11     0.01   816.50
    4200.      66.    2417.    1718.     220.    1217.    3755.    1211.     156.   817.20
     2.27     0.30     1.98     0.46    0.120    0.040    0.120    0.037   812.90   683.57
 0.000104    1550.    1450.    1100.        1        0        0     0.00   700.39  1383.96

*SECNO 55.000
 2800 NAT Q1=   2394.19  WSEL=    826.79  ENC Q1=   2394.19  WSEL=    826.89  RATIO=  0.0000
 NAT Q1=   2434.  RATIOS LOB,CH,ROB=  0.0198  0.9203  0.0599  WSEL=    826.89
   SECNO    DEPTH    CHSEL    CRIWS    HSELK    EG       KW       ML       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      THA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      MTR      ELMIN     SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IH2      ICONT    COBAR    TOPWID    ENDST

3470 ENCROACHMENT STATIONS=    1935.0    2119.3  TYPE=     4  TARGET=       0.016

        100 FT MD/S EMMETT ST. CROSS SECTION 55

   55.00    12.49   826.89     0.00   826.79   827.04     0.15     0.27     0.03   818.30
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4200. | 51. | 3927. | 222. | 84. | 1216. | 343. | 1340. | 173. | 816.80 |
| 2.42 | 0.61 | 3.23 | 0.65 | 0.120 | 0.040 | 0.120 | 0.038 | 814.40 | 1935.04 |
| 0.000307 | 1650. | 1650. | 1650. | 2 | 0 | 0 | 0.00 | 184.23 | 2119.32 |

*SECNO 55.600
2800 NAT Q1= 2093.65 WSEL= 826.82 ENC Q1= 2060.35 WSEL= 826.90 RATIO= -1.0146
NAT Q1= 2062. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 826.90

3470 ENCROACHMENT STATIONS= 1965.0 2061.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

D/S EMMETT ST. CROSS SECTION 56

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.83 | 11.41 | 826.91 | 0.00 | 826.80 | 827.20 | 0.11 | 0.04 | 0.01 | 817.70 |
| 4200. | 0. | 4200. | 0. | 0. | 1284. | 0. | 1336. | 173. | 816.60 |
| 2.43 | 0.00 | 3.66 | 0.00 | 0.120 | 0.060 | 0.120 | 0.038 | 815.50 | 1965.00 |
| 0.000458 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 116.00 | 2061.00 |

*SECNO 55.900
2800 NAT Q1= 1229.12 WSEL= 826.72 ENC Q1= 1243.35 WSEL= 826.82 RATIO= -0.0132
NAT Q1= 1243. RATIOS LOB,CH,ROB= 0.0000 1.0000 1.0000 WSEL= 826.82

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 830.00 MAX ELLC= 828.60

3470 ENCROACHMENT STATIONS= 1945.0 2041.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

D/S FACE EMMETT ST. CROSS SECTION 56

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.90 | 11.33 | 826.83 | 0.00 | 826.72 | 827.12 | 0.29 | 0.00 | 1.03 | 817.70 |
| 4200. | 0. | 4200. | 0. | 0. | 976. | 0. | 1344. | 173. | 816.60 |
| 2.43 | 0.00 | 4.30 | 0.00 | 0.120 | 0.060 | 0.120 | 0.038 | 815.50 | 1965.00 |
| 0.001240 | 1. | 1. | 1. | 2 | 0 | 0 | -236.84 | 116.00 | 2061.00 |

*SECNO 56.000
2800 NAT Q1= 1239.21 WSEL= 826.79 ENC Q1= 1253.48 WSEL= 826.89 RATIO= -0.0131
NAT Q1= 1255. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 826.89

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 830.00 MAX ELLC= 828.60

3470 ENCROACHMENT STATIONS= 1945.0 2061.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

U/S FACE EMMETT ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 56.00 | 11.40 | 826.90 | 0.00 | 826.79 | 827.19 | 0.28 | 0.06 | 0.00 | 817.70 |
| 4200. | 0. | 4200. | 0. | 0. | 981. | 0. | 1345. | 173. | 816.60 |
| 2.43 | 0.00 | 4.28 | 0.00 | 0.120 | 0.060 | 0.120 | 0.038 | 815.50 | 1965.00 |
| 0.001222 | 51. | 51. | 51. | 0 | 0 | 0 | -239.38 | 116.00 | 2061.00 |

*SECNO 56.100
2800 NAT Q1= 2070.44 WSEL= 826.91 ENC Q1= 2102.09 WSEL= 827.00 RATIO= -0.0153

```
NAT Q1=   2102.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    827.00

3470 ENCROACHMENT STATIONS=    1945.0    2061.0  TYPE=     4  TARGET=       0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      831.00 ELREA=      831.00

        U/S EMMETT ST.

    56.10    11.52   827.02     0.00   826.90   827.20     0.10     0.00     0.01   817.70
    4200.       0.    4200.       0.       0.    1234.       0.    1345.     173.   816.60
     2.43     0.00     3.41     0.00    0.120    0.040    0.120    0.038   815.50  1945.00
 0.000463       1.       1.       1.        2        0        0     0.00   116.00  2061.00

*SECNO 56.200
 2800 NAT Q1=   2471.52  WSEL=    826.99  ENC Q1=   2471.52  WSEL=    827.00  RATIO=  0.0000
 NAT Q1=   2513.  RATIOS LOB,CH,ROB=  0.0226  0.9977  0.0116  WSEL=    827.03
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     ER        HV        HL        FLOES    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID    ENDST

3470 ENCROACHMENT STATIONS=    1934.2    2119.9  TYPE=     4  TARGET=       0.017

        100 FT U/S EMMETT ST.

    56.20    12.69   827.09     0.00   826.90   827.24     0.15     0.04     0.00   818.30
    4200.      56.    3917.     229.      90.    1239.     351.    1360.     174.   816.60
     2.44     0.60     3.16     0.64    0.120    0.040    0.120    0.038   814.40  1934.18
 0.000288     100.     100.     100.        2        0        0     0.00   185.75  2119.93

CCHV=   0.300 CEHV=   0.500
*SECNO 56.900
 2800 NAT Q1=   1947.15  WSEL=    827.09  ENC Q1=   1976.96  WSEL=    827.19  RATIO= -0.0153
 NAT Q1=   1977.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    827.19

3470 ENCROACHMENT STATIONS=    2237.0    2363.0  TYPE=     4  TARGET=       0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      835.00 ELREA=      835.00

        D/S VERONA DAM CROSS SECTION 57

    56.90    11.10   827.20     0.00   827.09   827.37     0.17     0.12     0.01   827.83
    4200.       0.    4200.       0.       0.    1257.       0.    1360.     175.   826.80
     2.47     0.00     3.34     0.00    0.120    0.040    0.120    0.038   816.10  2237.06
 0.000451     350.     350.     350.        1        0        0     0.00   125.94  2363.00

SPECIAL BRIDGE

SB  XK        XKOB      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.00      1.50      3.50      0.00     10.00      0.00      0.18      0.00    816.10    816.10

*SECNO 57.000
 2800 NAT Q1=   2893.82  WSEL=    828.44  ENC Q1=   2428.35  WSEL=    828.54  RATIO= -0.0144
 NAT Q1=   2428.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    828.54
PRESSURE AND WEIR FLOW
```

| ESPRS | ECLHC | KB | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| ********** | 828.72 | 0.00 | 4209. | 1. | 0. | 1. | 816.20 | 825.90 |

3470 ENCROACHMENT STATIONS= 2237.0 2363.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,FLEA= 835.00 ELREA= 835.00

AT VERONA DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 57.00 | 12.37 | 828.67 | 0.00 | 828.64 | 828.60 | 0.14 | 1.23 | 0.00 | 827.80 |
| 4200. | 0. | 4200. | 0. | 0. | 1616. | 0. | 1360. | 175. | 826.80 |
| 2.47 | 0.00 | 2.97 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 816.10 | 2237.00 |
| 0.000311 | 4. | 4. | 4. | 2 | 0 | 1 | 0.00 | 126.00 | 2363.00 |

*SECNO 57.100
2800 NAT Q1= 481.25 WSEL= 820.22 ENC Q1= 702.33 WSEL= 820.32 RATIO= -0.0309
NAT Q1= 704. RATIOS LOB,CH,ROB= 1.0001 0.9919 0.0015 WSEL= 820.32

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 2237.0 2363.0 TYPE= 4 TARGET= 0.002

U/S VERONA DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 57.10 | 5.24 | 828.24 | 0.00 | 828.22 | 828.90 | 0.66 | 0.04 | 0.26 | 827.80 |
| 4200. | 0. | 4200. | 0. | 0. | 646. | 0. | 1361. | 175. | 826.80 |
| 2.48 | 0.00 | 6.52 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 823.00 | 2237.00 |
| 0.003023 | 50. | 30. | 50. | 2 | 0 | 0 | 0.00 | 126.00 | 2363.00 |

*SECNO 200.000
2800 NAT Q1= 1868.68 WSEL= 829.38 ENC Q1= 1027.73 WSEL= 829.48 RATIO= -0.0105
NAT Q1= 1856. RATIOS LOB,CH,ROB= 0.0148 0.9866 0.0005 WSEL= 829.48

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 1930.0 2130.0 TYPE= 4 TARGET= 0.015

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 200.00 | 10.41 | 829.41 | 0.00 | 829.38 | 829.56 | 0.15 | 0.50 | 0.15 | 825.00 |
| 4200. | 0. | 4200. | 0. | 0. | 1335. | 0. | 1371. | 177. | 828.70 |
| 2.51 | 0.00 | 3.10 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 819.00 | 1930.00 |
| 0.000566 | 425. | 425. | 425. | 2 | 0 | 0 | 0.00 | 200.00 | 2130.00 |

CCHV= 0.100 CEHV= 0.300

*SECNO 201.000
2800 NAT Q1= 6475.13 WSEL= 829.36 ENC Q1= 6475.13 WSEL= 829.66 RATIO= 0.0000
NAT Q1= 4552. RATIOS LOB,CH,ROB= 0.0332 0.9369 0.0299 WSEL= 829.66

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | UTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOP.ID | ENDST |

3470 ENCROACHMENT STATIONS= 1856.7 2220.9 TYPE= 4 TARGET= 0.017

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SURVEY VALLEY SECTION 201

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 201.00 | 14.50 | 829.60 | 0.00 | 829.56 | 829.65 | 0.05 | 0.08 | 0.01 | 825.00 |
| 4200. | 105. | 4006. | 89. | 336. | 2265. | 326. | 1392. | 179. | 823.30 |
| 2.58 | 0.51 | 1.77 | 2.27 | 0.120 | 0.240 | 0.120 | 0.038 | 817.10 | 1856.70 |
| 0.000090 | 425. | 425. | 425. | 2 | 0 | 0 | 0.00 | 367.22 | 2220.92 |

*SECNO 202.000
2800 NAT Q1= 3758.33 WSEL= 829.69 ENC Q1= 3774.06 WSEL= 829.79 RATIO= -0.0062
NAT Q1= 3027. RATIOS LOB,CH,ROB= 0.0025 0.9863 0.0112 WSEL= 829.79

3470 ENCROACHMENT STATIONS= 1647.0 1881.0 TYPE= 4 TARGET= 0.016

SURVEY VALLEY SECTION 202

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 202.00 | 16.54 | 829.74 | 0.00 | 829.69 | 829.76 | 0.05 | 0.14 | 0.00 | 825.30 |
| 4200. | 0. | 4200. | 0. | 0. | 2241. | 0. | 1669. | 193. | 824.60 |
| 2.78 | 0.00 | 1.67 | 0.00 | 0.120 | 0.140 | 0.120 | 0.038 | 813.70 | 1647.00 |
| 0.000134 | 1300. | 1300. | 1300. | 0 | 0 | 0 | 0.00 | 234.00 | 1881.00 |

*SECNO 203.000
2800 NAT Q1= 3930.57 WSEL= 829.99 ENC Q1= 3930.57 WSEL= 830.09 RATIO= 0.0030
NAT Q1= 4016. RATIOS LOB,CH,ROB= 0.0030 0.9491 0.0491 WSEL= 830.09

3470 ENCROACHMENT STATIONS= 1895.0 2262.5 TYPE= 4 TARGET= 0.019

SURVEY VALLEY SECTION 203

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 203.00 | 11.75 | 830.05 | 0.00 | 829.99 | 830.10 | 0.05 | 0.11 | 0.00 | 825.90 |
| 4200. | 0. | 4055. | 145. | 0. | 2159. | 409. | 1603. | 203. | 824.30 |
| 3.15 | 0.00 | 1.88 | 0.30 | 0.120 | 0.040 | 0.120 | 0.038 | 818.30 | 1895.00 |
| 0.000120 | 2500. | 2500. | 1300. | 2 | 0 | 0 | 0.00 | 367.51 | 2262.51 |

*SECNO 204.000
2800 NAT Q1= 3549.59 WSEL= 830.13 ENC Q1= 3549.59 WSEL= 830.23 RATIO= 0.0000
NAT Q1= 3620. RATIOS LOB,CH,ROB= 0.0031 0.9516 0.0453 WSEL= 830.23

3470 ENCROACHMENT STATIONS= 2469.0 2752.5 TYPE= 4 TARGET= 0.019

SURVEY VALLEY SECTION 204

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 204.00 | 13.50 | 830.20 | 0.00 | 830.13 | 830.26 | 0.06 | 0.16 | 0.00 | 822.90 |
| 4200. | 0. | 4074. | 126. | 0. | 2041. | 317. | 1672. | 212. | 826.10 |
| 3.32 | 0.00 | 2.00 | 0.40 | 0.120 | 0.040 | 0.120 | 0.038 | 816.70 | 2469.00 |
| 0.000140 | 1200. | 1200. | 1200. | 0 | 0 | 0 | 0.00 | 283.52 | 2752.52 |

*SECNO 205.000
2800 NAT Q1= 6183.73 WSEL= 830.32 ENC Q1= 6183.73 WSEL= 830.42 RATIO= 0.0000
NAT Q1= 6312. RATIOS LOB,CH,ROB= 0.0038 0.6493 0.3469 WSEL= 830.42

3470 ENCROACHMENT STATIONS= 2269.0 3910.1 TYPE= 4 TARGET= 0.220

SURVEY VALLEY SECTION 205

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 205.00 | 13.09 | 830.39 | 0.00 | 830.32 | 830.41 | 0.01 | 0.14 | 0.00 | 826.80 |
| 4200. | 0. | 2772. | 1428. | 0. | 2430. | 5450. | 1883. | 244. | 823.00 |
| 3.92 | 0.00 | 1.14 | 0.26 | 0.120 | 0.040 | 0.120 | 0.038 | 817.30 | 2249.00 |
| 0.000022 | 1100. | 1800. | 1800. | 2 | 0 | 0 | 0.00 | 1261.10 | 3510.10 |

```
*SECNO 206.000
 2800 NAT Q1=   3812.36  WSEL=    830.40  ENC Q1=   3812.36  WSEL=    830.50  RATIO=  0.0000
 NAT Q1=   3897.  RATIOS LOB,CH,ROB=  0.0202  0.7698  0.2100  WSEL=    830.50
   SECNO     DEPTH     CWSEL     CRIHS     WSELK     EG        HV        HL        QLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       XWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XML       XNCH      XNR       WTX       ELMIN     BETA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     COBAR     TOPWID    ENDST

3470 ENCROACHMENT STATIONS=     2356.1     1900.9  TYPE=     4  TARGET=      0.022

        SURVEY VALLEY SECTION 206

   206.00     11.48    830.48      0.00    830.40    830.52      0.04      0.10      0.01    823.90
    4200.       40.     3307.      853.      100.     1894.     1875.     2062.      271.    822.80
     6.19      0.37      1.75      0.43     0.120     0.040     0.120     0.039    819.00   1336.08
 0.000122     1525.     1525.     1200.         2         0         0      0.00    344.78   1900.86

*SECNO 207.000
 2800 NAT Q1=   5131.38  WSEL=    830.69  ENC Q1=   5131.38  WSEL=    830.59  RATIO=  0.0000
 NAT Q1=   5264.  RATIOS LOB,CH,ROB=  0.1741  0.5741  0.2518  WSEL=    830.59

3470 ENCROACHMENT STATIONS=      934.7     2314.8  TYPE=     4  TARGET=      0.025

        SURVEY VALLEY SECTION 207

   207.00     14.29    830.59      0.00    830.49    830.60      0.02      0.01      0.00    823.90
    4200.      609.     2341.     1157.     2261.     1552.     3820.     2164.      207.    823.40
     4.43      0.31      1.51      0.30     0.120     0.040     0.120     0.039    816.30    984.73
 0.000068     1200.      925.      500.         1         0         0      0.00   1330.12   2314.84

*SECNO 208.000
 2800 NAT Q1=   5582.09  WSEL=    830.60  ENC Q1=   5582.09  WSEL=    830.70  RATIO=  0.0000
 NAT Q1=   5727.  RATIOS LOB,CH,ROB=  0.4194  0.3475  0.2331  WSEL=    830.70

3470 ENCROACHMENT STATIONS=      333.2     2143.4  TYPE=     4  TARGET=      0.025

        SURVEY VALLEY SECTION 208

   208.00     14.38    830.68      0.00    830.60    830.70      0.01      0.10      0.00    822.30
    4200.     1751.     1502.      948.     6150.     1084.     3126.     2451.      336.    824.00
     5.07      0.28      1.39      0.30     0.120     0.040     0.120     0.039    816.30    333.23
 0.000057     1300.     1900.     1300.         1         0         0      0.00   1810.18   2143.40

*SECNO 209.000
 2000 NAT Q1=   3922.08  WSEL=    830.80  ENC Q1=   3922.08  WSEL=    830.90  RATIO=  0.0000
 NAT Q1=   4030.  RATIOS LOB,CH,ROB=  0.0725  0.4117  0.5158  WSEL=    830.90

3470 ENCROACHMENT STATIONS=      202.8     1519.9  TYPE=     4  TARGET=      0.027

        SURVEY VALLEY SECTION 209

   209.00     13.78    830.88      0.00    830.80    830.91      0.03      0.21      0.00    824.40
    4200.      254.     1779.     2167.      703.      925.     5492.     2884.      409.    823.60
     5.78      0.36      1.92      0.39     0.120     0.040     0.120     0.041    817.10    202.76
 0.000115     1900.     3700.     2000.         1         0         0      0.00   1317.17   1519.93

*SECNO 210.000
 2800 NAT Q1=   3682.00  WSEL=    830.96  ENC Q1=   3682.00  WSEL=    831.06  RATIO=  0.0000
```

NAT Q1= 3701. RATIOS LOB,CH,ROB= 0.4791 0.3481 0.1728 WSEL= 831.06

3470 ENCROACHMENT STATIONS= 1670.2 2836.6 TYPE= 4 TARGET= 0.026

SURVEY VALLEY SECTION 210

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 210.00 | 10.34 | 831.06 | 0.00 | 830.96 | 831.06 | 0.10 | 0.14 | 0.00 | 823.30 |
| 4200. | 2012. | 1501. | 687. | 6350. | 614. | 1663. | 3072. | 462. | 823.30 |
| 6.15 | 0.46 | 1.04 | 0.41 | 0.120 | 0.040 | 0.120 | 0.041 | 820.70 | 1678.16 |
| 0.000131 | 1400. | 1450. | 950. | 0 | 0 | 0 | 0.00 | 1150.40 | 2836.56 |

*SECNO 211.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | QWSEL | CRIWS | WSELK | EG | HV | EL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | KTN | ELWID | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | ILP | ICONV | CONVG | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 2108.0 3526.0 TYPE= 1 TARGET= 1618.000

SURVEY VALLEY SECTION 211

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 211.00 | 12.11 | 831.31 | 0.00 | 831.22 | 831.35 | 0.04 | 0.36 | 0.51 | 824.50 |
| 4200. | 8. | 1838. | 2354. | 25. | 784. | 4330. | 3257. | 672. | 823.00 |
| 6.51 | 0.32 | 2.34 | 0.54 | 0.120 | 0.040 | 0.120 | 0.042 | 819.30 | 2507.68 |
| 0.000192 | 1200. | 2675. | 1100. | 2 | 0 | 0 | 0.00 | 875.36 | 3383.05 |

*SECNO 212.000

SURVEY VALLEY SECTION 212

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 212.00 | 10.01 | 831.61 | 0.00 | 831.56 | 831.64 | 0.02 | 0.29 | 0.00 | 823.60 |
| 4200. | 2030. | 2136. | 27. | 5233. | 1317. | 35. | 3482. | 511. | 825.00 |
| 7.07 | 0.39 | 1.62 | 0.31 | 0.120 | 0.040 | 0.120 | 0.042 | 821.60 | 2409.82 |
| 0.000109 | 900. | 2400. | 2400. | 0 | 0 | 0 | 0.00 | 1185.23 | 3675.05 |

CCHV= 0.300 CEHV= 0.500

*SECNO 213.000

SURVEY VALLEY SECTION 213

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 213.00 | 10.27 | 832.17 | 0.00 | 832.12 | 832.27 | 0.10 | 0.63 | 0.04 | 826.70 |
| 3370. | 1051. | 2300. | 19. | 1707. | 774. | 43. | 3803. | 566. | 827.30 |
| 7.51 | 0.62 | 2.97 | 0.49 | 0.120 | 0.040 | 0.120 | 0.043 | 821.90 | 2250.00 |
| 0.000358 | 2600. | 4100. | 4000. | 2 | 0 | 0 | 0.00 | 696.00 | 2746.00 |

*SECNO 214.900

2000 NAT Q1= 1346.22 WSEL= 832.44 ENC Q1= 1370.32 WSEL= 832.54 RATIO= -0.0179

NAT Q1= 1370. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 832.54

3470 ENCROACHMENT STATIONS= 1.0 106.0 TYPE= 4 TARGET= 0.000

D/S FACE OF ALLISTER ROAD SURVEY SECTION 215

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 214.90 | 10.49 | 832.69 | 0.00 | 832.64 | 832.69 | 0.20 | 0.37 | 0.05 | 833.40 |
| 3370. | 0. | 3370. | 0. | 0. | 928. | 0. | 3035. | 571. | 833.40 |
| 7.57 | 0.00 | 3.63 | 0.00 | 0.120 | 0.040 | 0.120 | 0.043 | 822.00 | 1.01 |
| 0.000617 | 000. | 000. | 800. | 2 | 0 | 0 | 0.00 | 104.98 | 105.99 |

SPECIAL BRIDGE

| SB | MX | MXOB | COFQ | BDLEN | BHC | BUP | BAREA | SS | ELCHJ | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.90 | 1.91 | 3.00 | 0.00 | 105.00 | 2.00 | 700.00 | 0.00 | 824.00 | 824.00 |

*SECNO 215.000
CLASS A LOW FLOW

3420 BRIDGE U.S.= 832.48 BRIDGE VELOCITY= 3.86 CALCULATED CHANNEL AREA= 873.

| ESPRS | EGLUC | H3 | OWEIR | OPR | BAREA | TRAPEZOID AREA | FLLC | E.TRD |
|---|---|---|---|---|---|---|---|---|
| 833.17 | 833.23 | 0.00 | 0. | 3370. | 700. | 700. | 830.80 | 833.40 |

U/S FACE MC ALLISTER ROAD SURVEY SECTION 215

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 215.00 | 11.05 | 833.05 | 0.00 | 832.95 | 833.23 | 0.18 | 0.54 | 0.00 | 833.40 |
| 3370. | 0. | 3370. | 0. | 0. | 986. | 0. | 3835. | 571. | 833.40 |
| 7.37 | 0.00 | 3.42 | 0.00 | 0.120 | 0.040 | 0.120 | 0.043 | 822.00 | 1.00 |
| 0.000509 | 37. | 37. | 37. | 0 | 0 | 0 | 0.00 | 104.99 | 106.00 |

*SECNO 215.100
2800 NAT Q1= 1765.58 WSEL= 833.07 ENC Q1= 1765.58 WSEL= 833.17 RATIO= 0.0000
NAT Q1= 1802. RATIOS LOB,CH,ROB= 0.0510 0.7967 0.1543 WSEL= 833.17

| SECNO | DEPTH | CWSEL | CRIMS | WSELK | EG | HV | HL | GLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TMA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XXR | HTX | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1276.6 1543.2 TYPE= 4 TARGET= 0.020

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 215.10 | 10.75 | 833.15 | 0.00 | 833.07 | 833.29 | 0.13 | 0.04 | 0.01 | 827.40 |
| 3370. | 141. | 2732. | 497. | 275. | 851. | 622. | 3839. | 572. | 824.90 |
| 7.58 | 0.51 | 3.21 | 0.80 | 0.120 | 0.040 | 0.123 | 0.043 | 822.40 | 1276.56 |
| 0.000365 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 266.61 | 1543.16 |

**********
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

BATTLE CREEK RIVER

SUMMARY PRINTOUT TABLE 110

| SECNO | CWSEL | DIFKUS | FS | TOPWID | QLOB | QCH | QROB | PERMNC | STENCL | STCHL | STCHT | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23.000 | 807.80 | 0.00 | 808.37 | 173.91 | 26.75 | 4141.10 | 32.16 | 0.00 | 0.00 | 30.00 | 184.00 | 0.00 |
| 23.000 | 807.80 | 0.00 | 808.37 | 173.91 | 26.75 | 4141.10 | 32.16 | 0.00 | 0.00 | 30.00 | 184.00 | 0.00 |
| 23.900 | 809.72 | 0.00 | 810.26 | 164.53 | 2.66 | 4196.07 | 1.26 | 0.00 | 0.00 | 15.00 | 175.00 | 0.00 |
| 23.900 | 809.72 | 0.00 | 810.26 | 164.53 | 2.66 | 4196.07 | 1.26 | 0.00 | 0.00 | 15.00 | 175.00 | 0.00 |
| 24.000 | 812.99 | 0.00 | 813.17 | 171.81 | 10.41 | 4181.00 | 8.59 | 0.00 | 0.00 | 15.00 | 175.00 | 0.00 |
| 24.000 | 812.99 | 0.00 | 813.17 | 171.81 | 10.41 | 4181.00 | 8.59 | 0.00 | 0.00 | 15.00 | 175.00 | 0.00 |
| 24.800 | 812.82 | 0.00 | 813.37 | 166.86 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 24.800 | 812.82 | 0.00 | 813.37 | 166.86 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 24.900 | 812.70 | 0.00 | 813.49 | 166.86 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 24.900 | 812.70 | 0.00 | 813.49 | 166.86 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 25.000 | 813.22 | 0.00 | 813.85 | 166.87 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 25.000 | 813.22 | 0.00 | 813.85 | 166.87 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 25.100 | 813.51 | 0.00 | 813.92 | 166.87 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 25.100 | 813.51 | 0.00 | 813.92 | 166.87 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 0.50 | 167.50 | 0.00 |
| 26.000 | 813.62 | 0.00 | 814.43 | 141.86 | 93.40 | 4004.73 | 101.87 | 0.00 | 0.00 | 22.00 | 116.00 | 0.00 |
| 26.000 | 813.62 | 0.00 | 814.43 | 141.86 | 93.40 | 4004.73 | 101.87 | 0.00 | 0.00 | 22.00 | 116.00 | 0.00 |
| 26.800 | 814.51 | 0.00 | 814.84 | 187.14 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 26.800 | 814.51 | 0.00 | 814.84 | 187.14 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 26.900 | 814.47 | 0.00 | 814.89 | 187.13 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 26.900 | 814.47 | 0.00 | 814.89 | 187.13 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 27.000 | 814.55 | 0.00 | 814.95 | 187.15 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 27.000 | 814.55 | 0.00 | 814.95 | 187.15 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 27.100 | 814.67 | 0.00 | 814.90 | 187.17 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 27.100 | 814.67 | 0.00 | 814.90 | 187.17 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 190.00 | 0.00 |
| 28.000 | 814.87 | 0.00 | 815.60 | 119.43 | 56.84 | 4083.50 | 59.66 | 0.00 | 0.00 | 1041.00 | 1129.00 | 0.00 |
| 28.000 | 814.87 | 0.00 | 815.60 | 119.43 | 56.84 | 4083.50 | 59.66 | 0.00 | 0.00 | 1041.00 | 1129.00 | 0.00 |

| SECNO | CUSEL | DIFKUS | EG | TOPVID | GLOB | GCH | GROB | PERESC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28.800 | 815.72 | 0.00 | 816.25 | 123.16 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 28.800 | 815.72 | 0.00 | 816.25 | 123.16 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 28.900 | 815.71 | 0.00 | 816.26 | 123.15 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 28.900 | 815.71 | 0.00 | 816.26 | 123.15 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 29.000 | 815.73 | 0.00 | 816.27 | 123.10 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 29.000 | 815.73 | 0.00 | 816.27 | 123.10 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 29.100 | 815.74 | 0.00 | 816.28 | 123.24 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 29.100 | 815.74 | 0.00 | 816.28 | 123.24 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 29.200 | 815.93 | 0.00 | 816.45 | 124.33 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 29.200 | 815.93 | 0.00 | 816.45 | 124.33 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 141.00 | 0.00 |
| 29.800 | 816.35 | 0.00 | 816.81 | 156.11 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 29.800 | 816.35 | 0.00 | 816.81 | 156.11 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 29.900 | 816.36 | 0.00 | 816.82 | 156.11 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 29.900 | 816.36 | 0.00 | 816.82 | 156.11 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 30.000 | 816.39 | 0.00 | 816.87 | 156.13 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 30.000 | 816.39 | 0.00 | 816.87 | 156.13 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 30.100 | 816.42 | 0.00 | 816.88 | 156.14 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 30.100 | 816.42 | 0.00 | 816.88 | 156.14 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 157.00 | 0.00 |
| 31.000 | 816.46 | 0.00 | 817.00 | 120.42 | 46.29 | 4078.34 | 75.38 | 0.00 | 0.00 | 924.00 | 1016.00 | 0.00 |
| 31.000 | 816.46 | 0.00 | 817.00 | 120.42 | 46.29 | 4078.34 | 75.38 | 0.00 | 0.00 | 924.00 | 1016.00 | 0.00 |
| 31.100 | 816.85 | 0.00 | 817.21 | 121.96 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.100 | 816.85 | 0.00 | 817.21 | 121.96 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.200 | 816.86 | 0.00 | 817.23 | 121.96 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.200 | 816.86 | 0.00 | 817.23 | 121.96 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.300 | 816.91 | 0.00 | 817.34 | 121.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.300 | 816.91 | 0.00 | 817.34 | 121.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.400 | 816.97 | 0.00 | 817.37 | 121.93 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.400 | 816.97 | 0.00 | 817.37 | 121.93 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 123.00 | 0.00 |
| 31.500 | 817.09 | 0.00 | 817.31 | 100.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 102.00 | 0.00 |
| 31.500 | 817.09 | 0.00 | 817.31 | 100.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 102.00 | 0.00 |
| 31.600 | 817.06 | 0.00 | 817.95 | 100.90 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 102.00 | 0.00 |
| 31.600 | 817.06 | 0.00 | 817.95 | 100.90 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 102.00 | 0.00 |
| 31.700 | 817.34 | 0.00 | 818.15 | 100.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 102.00 | 0.00 |
| 31.700 | 817.34 | 0.00 | 818.15 | 100.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 102.00 | 0.00 |
| 32.900 | 817.44 | 0.00 | 818.10 | 109.80 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 32.900 | 817.44 | 0.00 | 818.10 | 109.80 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 33.000 | 817.84 | 0.00 | 818.54 | 109.89 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 33.000 | 817.84 | 0.00 | 818.54 | 109.89 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |

FOLDS 1411-80 PRINTED BY "ROYALTY MANIFOLD FORMS"

| SECNO | CUSEL | DIFK'IS | EG | TOPWID | QLOB | QC1 | QROB | PESENC | STENCL | STCHL | STC.R | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33.100 | 818.25 | 0.00 | 818.68 | 109.90 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 33.100 | 818.25 | 0.00 | 818.68 | 109.90 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 34.000 | 819.33 | 0.00 | 819.22 | 96.73 | 3.40 | 4133.19 | 53.41 | 0.00 | 0.00 | 692.00 | 773.00 | 0.00 |
| 34.000 | 819.33 | 0.00 | 819.22 | 96.73 | 3.40 | 4133.19 | 53.41 | 0.00 | 0.00 | 692.00 | 773.00 | 0.00 |
| 35.000 | 819.95 | 0.00 | 820.42 | 108.70 | 1.36 | 4127.30 | 71.63 | 0.00 | 0.00 | 581.00 | 679.00 | 0.00 |
| 35.000 | 819.95 | 0.00 | 820.42 | 108.70 | 1.36 | 4127.30 | 71.63 | 0.00 | 0.00 | 581.00 | 679.00 | 0.00 |
| 35.900 | 820.21 | 0.00 | 820.58 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 35.800 | 820.21 | 0.00 | 820.58 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 35.900 | 820.19 | 0.00 | 820.67 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 35.900 | 820.19 | 0.00 | 820.67 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 36.000 | 820.33 | 0.00 | 820.80 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 36.000 | 820.33 | 0.00 | 820.80 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 36.100 | 820.50 | 0.00 | 820.96 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 36.100 | 820.50 | 0.00 | 820.96 | 109.91 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 111.00 | 0.00 |
| 36.200 | 820.30 | 0.00 | 821.30 | 70.31 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 36.200 | 820.30 | 0.00 | 821.30 | 70.31 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 36.300 | 820.61 | 0.00 | 821.42 | 70.32 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 36.300 | 820.61 | 0.00 | 821.42 | 70.32 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 37.000 | 821.82 | 0.00 | 822.37 | 70.66 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 37.000 | 821.82 | 0.00 | 822.37 | 70.66 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 37.100 | 821.82 | 0.00 | 822.37 | 70.66 | 0.69 | 4199.31 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 37.100 | 821.82 | 0.00 | 822.37 | 70.66 | 0.69 | 4199.31 | 0.00 | 0.00 | 0.00 | 1.00 | 71.00 | 0.00 |
| 37.800 | 821.86 | 0.00 | 822.63 | 56.88 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 58.00 | 0.00 |
| 37.800 | 821.86 | 0.00 | 822.63 | 56.88 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 58.00 | 0.00 |
| 37.900 | 821.75 | 0.00 | 822.74 | 56.88 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 58.00 | 0.00 |
| 37.900 | 821.75 | 0.00 | 822.74 | 56.88 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 58.00 | 0.00 |
| 38.000 | 822.51 | 0.00 | 823.00 | 80.90 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 38.000 | 822.51 | 0.00 | 823.00 | 80.90 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 38.900 | 822.45 | 0.00 | 823.06 | 80.94 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 38.900 | 822.45 | 0.00 | 823.06 | 80.94 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 39.000 | 822.58 | 0.00 | 823.17 | 80.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 39.000 | 822.58 | 0.00 | 823.17 | 80.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 39.100 | 822.79 | 0.00 | 823.22 | 80.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 39.100 | 822.79 | 0.00 | 823.22 | 80.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 82.00 | 0.00 |
| 40.000 | 822.96 | 0.00 | 823.36 | 102.05 | 185.06 | 4003.49 | 11.45 | 0.00 | 0.00 | 867.00 | 916.00 | 0.00 |
| 40.000 | 822.96 | 0.00 | 823.36 | 102.05 | 185.06 | 4003.49 | 11.45 | 0.00 | 0.00 | 867.00 | 916.00 | 0.00 |
| 40.900 | 823.13 | 0.00 | 823.46 | 77.94 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 79.00 | 0.00 |
| 40.900 | 823.13 | 0.00 | 823.46 | 77.94 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 79.00 | 0.00 |

FORM 1111-00-PRINTED BY ROTARY LIGHTFOLD FORMS

| SECNO | CUSEL | DIFKWS | SG | TOPHID | CLOC | QCR | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 41.000 | 823.52 | 0.00 | 823.86 | 77.94 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 79.00 | 0.00 |
| 41.000 | 823.52 | 0.00 | 823.84 | 77.94 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 79.00 | 0.00 |
| 42.000 | 823.79 | 0.00 | 823.97 | 137.24 | 0.02 | 4204.35 | 95.67 | 0.00 | 0.00 | 724.00 | 841.00 | 0.00 |
| 42.000 | 823.79 | 0.00 | 823.97 | 137.24 | 0.02 | 4204.35 | 95.67 | 0.00 | 0.00 | 724.00 | 841.00 | 0.00 |
| 43.900 | 823.84 | 0.00 | 824.06 | 81.96 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 43.900 | 823.84 | 0.00 | 824.06 | 81.96 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 44.000 | 824.16 | 0.00 | 824.37 | 81.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 44.000 | 824.16 | 0.00 | 824.37 | 81.95 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 44.900 | 824.18 | 0.00 | 824.43 | 93.00 | 0.01 | 4199.99 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 44.900 | 824.18 | 0.10 | 824.43 | 93.00 | 0.01 | 4199.99 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 45.000 | 824.90 | 0.00 | 825.11 | 93.00 | 0.13 | 4199.86 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 45.000 | 824.90 | 0.00 | 825.11 | 93.00 | 0.13 | 4199.86 | 0.00 | 0.00 | 0.00 | 1.00 | 93.00 | 0.00 |
| 46.000 | 824.89 | 0.00 | 825.19 | 135.99 | 42.31 | 4097.89 | 59.81 | 1.00 | 0.00 | 928.00 | 1000.00 | 0.00 |
| 46.000 | 824.89 | 0.00 | 825.19 | 135.99 | 42.31 | 4097.89 | 59.81 | 0.00 | 0.00 | 928.00 | 1000.00 | 0.00 |
| 46.500 | 825.27 | 0.00 | 825.42 | 306.54 | 86.44 | 4044.34 | 74.27 | 0.00 | 0.00 | 215.00 | 315.00 | 0.00 |
| 46.500 | 825.27 | -3.00 | 825.42 | 133.78 | 57.74 | 4096.01 | 46.25 | 0.01 | 193.65 | 215.00 | 315.00 | 327.44 |
| 47.000 | 825.42 | 0.00 | 825.54 | 204.90 | 114.27 | 3990.74 | 94.99 | 225.00 | 1380.00 | 1439.00 | 1547.00 | 1605.00 |
| 47.000 | 825.42 | 0.00 | 825.54 | 204.90 | 114.35 | 3990.69 | 95.01 | 225.00 | 1380.00 | 1439.00 | 1547.00 | 1605.00 |
| 47.900 | 825.50 | 0.00 | 825.57 | 173.97 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 175.00 | 0.00 |
| 47.900 | 825.51 | 0.00 | 825.57 | 173.97 | 0.00 | 4200.00 | 0.00 | 0.00 | 1.00 | 1.00 | 175.00 | 175.00 |
| 48.000 | 825.66 | 0.00 | 825.73 | 173.97 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 175.00 | 0.00 |
| 48.000 | 825.70 | 0.10 | 825.33 | 173.97 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 175.00 | 0.00 |
| 48.200 | 825.69 | 0.00 | 825.74 | 303.72 | 140.78 | 3603.39 | 455.23 | 0.00 | 0.00 | 275.00 | 394.00 | 0.00 |
| 48.200 | 825.78 | 0.10 | 825.84 | 217.86 | 116.67 | 3642.64 | 440.69 | 0.01 | 249.63 | 275.00 | 394.00 | 467.29 |
| 48.300 | 825.65 | 0.00 | 825.78 | 332.80 | 229.93 | 3386.99 | 583.07 | 0.00 | 0.00 | 275.00 | 394.00 | 0.00 |
| 48.300 | 825.75 | 0.09 | 825.89 | 224.69 | 190.79 | 3469.08 | 598.23 | 0.02 | 244.37 | 275.00 | 394.00 | 469.45 |
| 48.400 | 825.67 | 0.00 | 825.78 | 333.11 | 215.74 | 3428.76 | 554.51 | 0.00 | 0.00 | 275.00 | 394.00 | 0.00 |
| 48.400 | 825.77 | 0.10 | 825.88 | 220.67 | 177.29 | 3496.78 | 525.94 | 0.02 | 246.36 | 275.00 | 394.00 | 467.02 |
| 48.900 | 825.82 | 0.00 | 825.80 | 510.11 | 1312.16 | 2764.48 | 126.36 | 0.00 | 0.00 | 370.00 | 470.00 | 0.00 |
| 48.900 | 825.92 | 0.10 | 825.98 | 482.33 | 1300.25 | 2793.17 | 106.58 | 0.02 | 7.79 | 370.00 | 470.00 | 490.13 |
| 49.000 | 825.88 | 0.00 | 826.00 | 166.00 | 79.70 | 3967.33 | 173.68 | 166.00 | 841.00 | 883.00 | 985.00 | 1017.00 |
| 49.000 | 825.98 | 0.10 | 826.10 | 166.00 | 79.98 | 3945.57 | 174.45 | 166.00 | 851.00 | 883.00 | 985.00 | 1017.00 |
| 49.900 | 825.88 | 0.00 | 826.04 | 116.48 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 117.50 | 0.00 |
| 49.900 | 825.98 | 0.10 | 826.14 | 116.48 | 0.00 | 4200.00 | 0.00 | 0.00 | 1.00 | 1.00 | 117.50 | 117.50 |
| 50.000 | 826.10 | 0.00 | 826.25 | 116.48 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1.00 | 117.50 | 0.00 |
| 50.000 | 826.20 | 0.10 | 826.36 | 116.49 | 0.00 | 4200.00 | 0.00 | 0.00 | 1.00 | 1.00 | 117.50 | 117.50 |
| 50.100 | 826.18 | 0.00 | 826.29 | 316.00 | 98.14 | 3632.44 | 469.42 | 316.00 | 87.00 | 195.00 | 295.00 | 403.00 |
| 50.100 | 826.29 | 0.10 | 826.39 | 316.00 | 101.38 | 3626.75 | 472.37 | 316.00 | 87.00 | 195.00 | 295.00 | 403.00 |

PRINTED IN U.S.A.

FORMS APPROVED PRINTED BY REPAFY MANIFOLD FORMS.

| SECNO | CHSEL | DIFKHS | EG | TOPWID | GLOB | GCH | GRCB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51.000 | 826.35 | 0.00 | 826.37 | 1135.05 | 2055.71 | 1055.21 | 289.03 | 0.00 | 0.00 | 1474.00 | 1578.00 | 0.00 |
| 51.000 | 826.45 | 0.10 | 826.47 | 1026.02 | 2060.50 | 1882.28 | 257.22 | 0.02 | 783.43 | 1474.00 | 1578.00 | 1789.25 |
| 52.000 | 826.40 | 0.30 | 826.40 | 1483.92 | 2870.72 | 1386.26 | 35.22 | 0.00 | 0.00 | 2356.00 | 2456.00 | 0.00 |
| 52.000 | 826.50 | 0.10 | 826.50 | 1375.93 | 2890.44 | 1389.57 | 0.00 | 0.02 | 1060.07 | 2356.00 | 2456.00 | 2456.00 |
| 53.000 | 826.69 | 0.00 | 826.51 | 1110.59 | 1901.79 | 2267.38 | 30.33 | 0.00 | 0.00 | 1434.00 | 1570.00 | 0.00 |
| 53.000 | 826.80 | 0.11 | 826.82 | 1015.46 | 1965.03 | 2254.07 | 0.00 | 0.02 | 554.54 | 1434.00 | 1570.00 | 1570.00 |
| 54.000 | 826.59 | 0.00 | 826.63 | 352.90 | 100.69 | 2389.59 | 1709.73 | 0.01 | 0.00 | 739.00 | 840.00 | 0.00 |
| 54.000 | 826.70 | 0.11 | 826.74 | 700.39 | 65.83 | 2416.57 | 1717.60 | 0.02 | 633.57 | 739.00 | 840.00 | 1383.96 |
| 55.000 | 826.79 | 0.00 | 826.94 | 237.39 | 81.14 | 3079.82 | 248.04 | 0.00 | 0.00 | 1948.00 | 2058.00 | 0.00 |
| 55.000 | 826.89 | 0.10 | 827.04 | 184.29 | 53.95 | 3927.07 | 227.93 | 0.02 | 1785.04 | 1948.00 | 2058.00 | 2119.32 |
| 55.800 | 826.80 | 0.00 | 826.97 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1945.00 | 2061.00 | 0.00 |
| 55.800 | 826.91 | 0.11 | 827.09 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 1945.00 | 1945.00 | 2061.00 | 2061.00 |
| 55.900 | 826.72 | 0.00 | 827.02 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1945.00 | 2061.00 | 0.00 |
| 55.900 | 826.83 | 0.11 | 827.13 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 1945.00 | 1945.00 | 2061.00 | 2061.00 |
| 56.000 | 826.79 | 0.00 | 827.08 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1945.00 | 2061.00 | 0.00 |
| 56.000 | 826.90 | 0.11 | 827.19 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 1945.00 | 1945.00 | 2061.00 | 2061.00 |
| 56.100 | 826.90 | 0.00 | 827.09 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 0.00 | 1945.00 | 2061.00 | 0.00 |
| 56.100 | 827.02 | 0.11 | 827.20 | 116.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 1945.00 | 1945.00 | 2061.00 | 2061.00 |
| 56.200 | 826.98 | 0.00 | 827.13 | 239.01 | 64.60 | 3862.13 | 255.19 | 0.00 | 0.00 | 1948.00 | 2058.00 | 0.00 |
| 56.200 | 827.09 | 0.11 | 827.24 | 185.75 | 54.09 | 3916.90 | 229.01 | 0.02 | 1934.18 | 1948.00 | 2058.00 | 2119.96 |
| 56.900 | 827.09 | 0.00 | 827.27 | 125.93 | 0.00 | 4203.00 | 0.00 | 0.00 | 0.00 | 2237.00 | 2363.00 | 0.00 |
| 56.900 | 827.20 | 0.11 | 827.37 | 125.94 | 0.00 | 4203.00 | 0.00 | 0.00 | 2237.00 | 2237.00 | 2363.00 | 2363.00 |
| 57.000 | 828.44 | 0.00 | 828.58 | 126.00 | 0.00 | 4203.00 | 0.00 | 0.00 | 0.00 | 2237.00 | 2363.00 | 0.00 |
| 57.000 | 828.47 | 0.02 | 828.60 | 126.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 2237.00 | 2237.00 | 2363.00 | 2363.00 |
| 57.100 | 828.22 | 0.00 | 828.80 | 156.31 | 1.19 | 4193.18 | 5.63 | 0.00 | 0.00 | 2237.00 | 2363.00 | 0.00 |
| 57.100 | 828.24 | 0.01 | 828.80 | 126.00 | 0.00 | 4200.00 | 0.00 | 0.00 | 2237.00 | 2237.00 | 2363.00 | 2363.00 |
| 200.000 | 829.38 | 0.00 | 829.52 | 321.19 | 57.79 | 4140.52 | 1.69 | 0.00 | 0.00 | 1930.00 | 2130.00 | 0.00 |
| 200.000 | 829.41 | 0.03 | 829.56 | 200.00 | 0.00 | 4200.00 | 0.00 | 0.02 | 1930.00 | 1930.00 | 2130.00 | 2130.00 |
| 201.000 | 829.56 | 0.00 | 829.61 | 572.69 | 135.73 | 3943.89 | 120.37 | 0.00 | 0.00 | 1930.00 | 2130.00 | 0.00 |
| 201.000 | 829.60 | 0.04 | 829.65 | 364.22 | 104.72 | 4006.14 | 69.14 | 0.02 | 1856.70 | 1930.00 | 2130.00 | 2220.92 |
| 202.000 | 829.69 | 0.00 | 829.74 | 348.10 | 9.33 | 4144.77 | 45.90 | 0.00 | 0.00 | 1647.00 | 1881.00 | 0.00 |
| 202.000 | 829.74 | 0.04 | 829.79 | 234.00 | 0.00 | 4200.00 | 0.00 | 0.01 | 1647.00 | 1647.00 | 1881.00 | 1881.00 |
| 203.000 | 829.99 | 0.00 | 830.04 | 841.37 | 15.41 | 3990.62 | 194.18 | 0.00 | 0.00 | 1895.00 | 2105.00 | 0.00 |
| 203.000 | 830.05 | 0.06 | 830.10 | 367.51 | 0.00 | 4054.75 | 145.25 | 0.02 | 1695.80 | 1895.00 | 2105.00 | 2262.53 |
| 204.000 | 830.13 | 0.00 | 830.19 | 511.40 | 12.93 | 4007.51 | 183.55 | 0.00 | 0.00 | 2469.00 | 2681.00 | 0.00 |
| 204.000 | 830.20 | 0.07 | 830.26 | 283.52 | 0.00 | 4073.54 | 126.66 | 0.02 | 2469.00 | 2469.00 | 2681.00 | 2752.52 |
| 205.000 | 830.32 | 0.00 | 830.33 | 1418.90 | 15.72 | 2739.36 | 1444.90 | 0.00 | 0.00 | 2249.00 | 2501.00 | 0.00 |
| 205.000 | 830.39 | 0.08 | 830.41 | 1261.10 | 0.00 | 2771.94 | 1422.06 | 0.02 | 2249.00 | 2249.00 | 2501.00 | 3510.10 |

PRINTED IN U.S.A.

FORM 1011-G PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | CUSEL | DIFKMS | EG | TOP.ID | QLOB | QCK | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 206.000 | 830.40 | 0.00 | 830.44 | 754.39 | 82.37 | 3242.47 | 875.17 | 0.00 | 0.00 | 1375.00 | 1591.00 | 0.00 |
| 206.000 | 830.49 | 0.08 | 830.52 | 544.73 | 40.27 | 3396.99 | 852.87 | 0.02 | 1356.01 | 1375.00 | 1591.00 | 1900.86 |
| 207.000 | 830.49 | 0.00 | 830.51 | 1430.77 | 724.25 | 2405.95 | 1169.30 | 0.00 | 0.00 | 1412.00 | 1552.00 | 0.00 |
| 207.000 | 830.58 | 0.08 | 830.60 | 1330.12 | 694.66 | 2368.40 | 1156.96 | 0.03 | 906.73 | 1412.00 | 1552.00 | 2314.84 |
| 208.000 | 830.60 | 0.00 | 830.61 | 1956.12 | 1749.38 | 1674.86 | 975.56 | 0.00 | 0.00 | 1511.00 | 1609.00 | 0.00 |
| 208.000 | 830.69 | 0.08 | 830.70 | 1950.10 | 1750.37 | 1501.50 | 947.92 | 0.03 | 333.25 | 1511.00 | 1609.00 | 2143.40 |
| 209.000 | 830.80 | 0.00 | 830.82 | 1612.69 | 300.29 | 1749.51 | 2165.20 | 0.00 | 0.00 | 357.00 | 443.00 | 0.00 |
| 209.000 | 830.88 | 0.09 | 830.91 | 1317.17 | 253.06 | 1778.63 | 2167.30 | 0.03 | 202.76 | 357.00 | 443.00 | 1519.93 |
| 210.000 | 830.96 | 0.00 | 830.98 | 1292.99 | 2007.53 | 1673.56 | 718.91 | 0.00 | 0.00 | 2415.00 | 2505.00 | 0.00 |
| 210.000 | 831.04 | 0.09 | 831.06 | 1150.42 | 2012.08 | 1651.69 | 696.68 | 0.03 | 1670.16 | 2415.00 | 2505.00 | 2836.56 |
| 211.000 | 831.22 | 0.00 | 831.26 | 874.93 | 7.75 | 1849.58 | 2342.67 | 0.00 | 0.00 | 2513.00 | 2593.00 | 0.00 |
| 211.000 | 831.31 | 0.08 | 831.35 | 875.36 | 7.86 | 1830.13 | 2354.01 | 1418.00 | 2108.00 | 2513.00 | 2595.00 | 3526.00 |
| 212.000 | 831.54 | 0.00 | 831.56 | 1184.65 | 2027.35 | 2165.90 | 26.25 | 0.00 | 0.00 | 3695.00 | 3669.00 | 0.00 |
| 212.000 | 831.61 | 0.07 | 831.64 | 1183.63 | 2039.09 | 2135.59 | 26.56 | 0.00 | 0.00 | 3695.00 | 3669.00 | 0.00 |
| 213.000 | 832.12 | 0.00 | 832.22 | 496.70 | 1048.01 | 2307.17 | 19.24 | 0.00 | 0.00 | 2646.00 | 2736.00 | 0.00 |
| 213.000 | 832.17 | 0.05 | 832.27 | 496.00 | 1050.60 | 2299.97 | 19.36 | 0.00 | 0.00 | 2646.00 | 2736.00 | 0.00 |
| 214.900 | 832.64 | 0.00 | 832.65 | 104.98 | 0.00 | 3370.00 | 0.00 | 0.00 | 0.00 | 1.00 | 106.00 | 0.00 |
| 214.900 | 832.69 | 0.04 | 832.69 | 104.99 | 0.00 | 3370.00 | 0.00 | 0.00 | 1.00 | 1.00 | 106.00 | 106.00 |
| 215.000 | 832.95 | 0.00 | 833.13 | 104.99 | 0.00 | 3370.00 | 0.00 | 0.00 | 0.00 | 1.00 | 106.00 | 0.00 |
| 215.000 | 833.05 | 0.10 | 833.23 | 104.99 | 0.00 | 3370.00 | 0.00 | 0.00 | 0.00 | 1.00 | 106.00 | 0.00 |
| 215.100 | 833.07 | 0.00 | 833.19 | 300.00 | 166.25 | 2686.18 | 517.57 | 0.00 | 0.00 | 1361.00 | 1449.00 | 0.00 |
| 215.100 | 833.15 | 0.09 | 833.29 | 266.61 | 140.65 | 2732.29 | 497.05 | 0.02 | 1276.56 | 1361.00 | 1449.00 | 1564.17 |

FORM 1411-GO-PRINTED BY ROTARY MANIFOLD FORMS

BATTLE CREEK RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | XLOB | ELTRD | ELLOB | ELMIN | Q | SOMEL | CRIWS | FR | TOPWS | VCH | AREA | QCH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23.000 | 0.00 | 0.00 | 0.00 | 802.20 | 4200.00 | 807.60 | 0.00 | 803.37 | 28.78 | 6.11 | 717.13 | 702.95 |
| 23.000 | 0.00 | 0.00 | 0.00 | 802.20 | 4200.00 | 807.60 | 0.00 | 803.37 | 28.78 | 6.11 | 717.13 | 702.95 |
| 23.900 | 675.00 | 0.00 | 0.00 | 803.20 | 4200.00 | 809.72 | 0.00 | 810.26 | 27.03 | 5.74 | 731.64 | 807.78 |
| 23.900 | 675.00 | 0.00 | 0.00 | 803.20 | 4200.00 | 809.72 | 0.00 | 810.26 | 27.03 | 5.74 | 731.64 | 807.78 |
| 24.000 | 3.00 | 808.60 | 803.30 | 803.20 | 4200.00 | 812.99 | 0.00 | 813.17 | 4.22 | 3.40 | 1263.04 | 2044.92 |
| 24.000 | 3.00 | 808.60 | 803.30 | 803.20 | 4200.00 | 812.99 | 0.00 | 813.17 | 4.22 | 3.40 | 1263.04 | 2044.92 |
| 24.800 | 11.00 | 0.00 | 0.00 | 808.60 | 4200.00 | 812.82 | 0.00 | 813.37 | 31.00 | 5.97 | 703.43 | 756.36 |
| 24.800 | 11.00 | 0.00 | 0.00 | 808.60 | 4200.00 | 812.82 | 0.00 | 813.37 | 31.00 | 5.97 | 703.43 | 756.36 |
| 24.900 | 1.00 | 822.00 | 819.40 | 808.60 | 4200.00 | 812.70 | 0.00 | 813.49 | 56.51 | 7.13 | 587.16 | 558.73 |
| 24.900 | 1.00 | 822.00 | 819.40 | 808.60 | 4200.00 | 812.70 | 0.00 | 813.49 | 56.51 | 7.13 | 587.16 | 558.73 |
| 25.000 | 64.00 | 822.00 | 819.40 | 808.60 | 4200.00 | 813.32 | 0.00 | 813.85 | 38.51 | 6.34 | 662.91 | 881.24 |
| 25.000 | 64.00 | 822.00 | 819.40 | 808.60 | 4200.00 | 813.32 | 0.00 | 813.83 | 38.21 | 6.34 | 662.91 | 881.24 |
| 25.100 | 1.00 | 0.00 | 0.00 | 808.60 | 4200.00 | 813.51 | 0.00 | 813.92 | 18.84 | 5.13 | 819.32 | 967.60 |
| 25.100 | 1.00 | 0.00 | 0.00 | 808.60 | 4200.00 | 813.51 | 0.00 | 813.92 | 18.84 | 5.13 | 819.32 | 967.60 |
| 26.000 | 135.00 | 0.00 | 0.00 | 807.30 | 4200.00 | 813.62 | 0.00 | 814.43 | 29.33 | 7.30 | 669.45 | 776.50 |
| 26.000 | 135.00 | 0.00 | 0.00 | 807.00 | 4200.00 | 813.62 | 0.00 | 814.43 | 29.35 | 7.38 | 669.45 | 776.50 |
| 26.800 | 135.00 | 0.00 | 0.00 | 807.30 | 4200.00 | 814.51 | 0.00 | 814.84 | 14.55 | 4.61 | 911.24 | 1101.04 |
| 26.800 | 135.00 | 0.00 | 0.00 | 807.30 | 4200.00 | 814.51 | 0.00 | 814.84 | 14.55 | 4.61 | 911.24 | 1101.04 |
| 26.900 | 1.00 | 825.00 | 818.30 | 807.30 | 4200.00 | 814.47 | 0.00 | 814.89 | 21.04 | 5.15 | 815.65 | 915.60 |
| 26.900 | 1.00 | 825.00 | 818.30 | 807.30 | 4200.00 | 814.47 | 0.00 | 814.89 | 21.04 | 5.15 | 815.65 | 915.60 |
| 27.000 | 30.00 | 825.00 | 818.80 | 807.30 | 4200.00 | 814.55 | 0.00 | 814.95 | 19.96 | 5.07 | 828.93 | 940.06 |
| 27.000 | 30.00 | 825.00 | 818.80 | 807.30 | 4200.00 | 814.55 | 0.00 | 814.95 | 19.96 | 5.07 | 828.93 | 940.06 |
| 27.100 | 1.00 | 0.00 | 0.00 | 807.30 | 4200.00 | 814.67 | 0.00 | 814.98 | 13.12 | 4.46 | 940.67 | 1159.63 |
| 27.100 | 1.00 | 0.00 | 0.00 | 807.30 | 4200.00 | 814.67 | 0.00 | 814.98 | 13.12 | 4.46 | 940.67 | 1159.63 |
| 28.000 | 250.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 814.87 | 0.00 | 815.60 | 21.10 | 6.93 | 678.44 | 914.33 |
| 28.000 | 250.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 814.87 | 0.00 | 815.60 | 21.10 | 6.93 | 678.44 | 914.33 |
| 28.800 | 300.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.72 | 0.00 | 816.25 | 18.79 | 5.87 | 715.85 | 963.91 |
| 28.800 | 300.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.72 | 0.00 | 816.25 | 18.79 | 5.87 | 715.85 | 963.91 |
| 28.900 | 1.00 | 822.00 | 821.60 | 808.50 | 4200.00 | 815.71 | 0.00 | 816.26 | 19.43 | 5.93 | 708.65 | 952.72 |
| 28.900 | 1.00 | 822.00 | 821.60 | 808.50 | 4200.00 | 815.71 | 0.00 | 816.26 | 19.43 | 5.93 | 708.65 | 952.72 |
| 29.000 | 6.00 | 822.00 | 821.60 | 808.50 | 4200.00 | 815.73 | 0.00 | 816.27 | 19.38 | 5.92 | 709.36 | 954.16 |
| 29.000 | 6.00 | 822.00 | 821.60 | 808.50 | 4200.00 | 815.73 | 0.00 | 816.27 | 19.38 | 5.92 | 709.36 | 954.16 |
| 29.100 | 1.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.74 | 0.00 | 816.28 | 18.63 | 5.85 | 717.87 | 973.00 |
| 29.100 | 1.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.74 | 0.00 | 816.28 | 18.63 | 5.85 | 717.87 | 973.00 |
| 29.200 | 90.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.95 | 0.00 | 816.45 | 16.70 | 5.64 | 744.64 | 1027.84 |
| 29.200 | 90.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.95 | 0.00 | 816.45 | 16.70 | 5.64 | 744.64 | 1027.84 |

FORM 1411-00 PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRO | ELLC | ELHIS | Q | CUSEL | CRIMS | EG | TOKES | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29.800 | 90.00 | 0.00 | 0.00 | 807.50 | 4200.00 | 816.35 | 0.00 | 816.69 | 8.06 | 4.16 | 1010.63 | 1470.96 |
| 29.800 | 90.00 | 0.00 | 0.00 | 807.50 | 4200.00 | 816.35 | 0.00 | 816.69 | 8.06 | 4.16 | 1010.63 | 1470.96 |
| 29.900 | 1.00 | 822.10 | 819.00 | 807.60 | 4200.00 | 816.34 | 0.00 | 816.62 | 6.92 | 4.28 | 980.50 | 1456.21 |
| 29.900 | 1.00 | 822.10 | 819.00 | 807.60 | 4200.00 | 816.34 | 0.00 | 816.62 | 6.92 | 4.28 | 980.50 | 1456.21 |
| 30.000 | 54.00 | 822.10 | 819.00 | 807.60 | 4200.00 | 816.39 | 0.00 | 816.67 | 8.79 | 4.26 | 986.20 | 1419.83 |
| 30.000 | 54.00 | 822.10 | 819.00 | 807.60 | 4200.00 | 816.39 | 0.00 | 816.67 | 8.79 | 4.26 | 986.20 | 1419.83 |
| 30.100 | 1.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 816.42 | 0.00 | 816.68 | 7.79 | 4.11 | 1021.57 | 1505.71 |
| 30.100 | 1.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 816.42 | 0.00 | 816.68 | 7.79 | 4.11 | 1021.57 | 1505.71 |
| 31.000 | 80.00 | 0.00 | 0.00 | 806.70 | 4200.00 | 816.46 | 0.00 | 817.00 | 14.67 | 6.09 | 789.68 | 1096.55 |
| 31.000 | 80.00 | 0.00 | 0.00 | 806.70 | 4200.00 | 816.46 | 0.00 | 817.00 | 14.67 | 6.09 | 789.68 | 1096.55 |
| 31.100 | 90.00 | 0.00 | 0.00 | 806.30 | 4200.00 | 816.44 | 0.00 | 817.21 | 10.85 | 4.84 | 867.51 | 1275.06 |
| 31.100 | 90.00 | 0.00 | 0.00 | 806.30 | 4200.00 | 816.85 | 0.00 | 817.21 | 10.85 | 4.84 | 867.51 | 1275.06 |
| 31.200 | 1.00 | 820.00 | 817.60 | 806.30 | 4200.00 | 816.04 | 0.00 | 817.23 | 11.87 | 4.97 | 844.61 | 1218.99 |
| 31.200 | 1.00 | 820.00 | 817.60 | 806.30 | 4200.00 | 816.04 | 0.00 | 817.23 | 11.87 | 4.97 | 844.61 | 1218.99 |
| 31.300 | 96.00 | 820.00 | 818.10 | 806.80 | 4200.00 | 816.91 | 0.00 | 817.36 | 14.55 | 5.30 | 792.32 | 1101.05 |
| 31.300 | 96.00 | 820.00 | 818.10 | 806.80 | 4200.00 | 816.91 | 0.00 | 817.36 | 14.55 | 5.30 | 792.32 | 1101.05 |
| 31.400 | 1.00 | 822.00 | 819.70 | 808.80 | 4200.00 | 816.97 | 0.00 | 817.37 | 12.42 | 5.04 | 833.24 | 1191.71 |
| 31.400 | 1.00 | 822.00 | 819.70 | 808.80 | 4200.00 | 816.97 | 0.00 | 817.37 | 12.42 | 5.04 | 833.24 | 1191.71 |
| 31.500 | 105.00 | 822.00 | 819.70 | 809.50 | 4200.00 | 817.09 | 0.00 | 817.81 | 26.82 | 6.82 | 615.60 | 811.04 |
| 31.500 | 105.00 | 822.00 | 819.70 | 809.50 | 4200.00 | 817.09 | 0.00 | 817.81 | 26.82 | 6.82 | 615.60 | 811.04 |
| 31.600 | 1.00 | 822.00 | 821.00 | 809.20 | 4200.00 | 817.06 | 0.00 | 817.95 | 37.31 | 7.55 | 556.17 | 667.62 |
| 31.600 | 1.00 | 822.00 | 821.00 | 809.20 | 4200.00 | 817.06 | 0.00 | 817.95 | 37.31 | 7.55 | 556.17 | 667.62 |
| 31.700 | 67.00 | 822.00 | 821.00 | 809.20 | 4200.00 | 817.34 | 0.00 | 818.15 | 32.19 | 7.21 | 582.48 | 740.21 |
| 31.700 | 67.00 | 822.00 | 821.00 | 809.20 | 4200.00 | 817.34 | 0.00 | 818.15 | 32.19 | 7.21 | 582.48 | 740.21 |
| 32.900 | 1.00 | 823.00 | 820.90 | 809.70 | 4200.00 | 817.46 | 0.00 | 818.18 | 50.14 | 6.93 | 606.07 | 593.13 |
| 32.900 | 1.00 | 823.00 | 820.90 | 809.70 | 4200.00 | 817.46 | 0.00 | 818.18 | 50.14 | 6.93 | 606.07 | 593.13 |
| 33.000 | 70.00 | 823.00 | 820.90 | 809.70 | 4200.00 | 817.86 | 0.00 | 818.54 | 45.02 | 6.70 | 627.18 | 625.99 |
| 33.000 | 70.00 | 823.00 | 820.90 | 809.70 | 4200.00 | 817.86 | 0.00 | 818.54 | 45.02 | 6.70 | 627.18 | 625.99 |
| 33.100 | 1.00 | 0.00 | 0.00 | 809.70 | 4200.00 | 818.25 | 0.00 | 818.68 | 12.03 | 5.23 | 802.53 | 1210.95 |
| 33.100 | 1.00 | 0.00 | 0.00 | 809.70 | 4200.00 | 818.25 | 0.00 | 818.68 | 12.03 | 5.23 | 802.53 | 1210.95 |
| 34.000 | 100.00 | 0.00 | 0.00 | 810.10 | 4200.00 | 818.33 | 0.00 | 819.22 | 25.89 | 7.63 | 593.47 | 825.51 |
| 34.000 | 100.00 | 0.00 | 0.00 | 810.10 | 4200.00 | 818.33 | 0.00 | 819.22 | 25.89 | 7.63 | 593.47 | 825.51 |
| 35.000 | 600.00 | 0.00 | 0.00 | 812.10 | 4200.00 | 819.95 | 0.00 | 820.42 | 11.39 | 5.56 | 803.96 | 1246.47 |
| 35.000 | 600.00 | 0.00 | 0.00 | 812.10 | 4200.00 | 819.95 | 0.00 | 820.42 | 11.39 | 5.56 | 803.96 | 1246.47 |
| 35.800 | 100.00 | 0.00 | 0.00 | 812.20 | 4200.00 | 820.21 | 0.00 | 820.58 | 9.79 | 4.85 | 866.36 | 1342.41 |
| 35.800 | 100.00 | 0.00 | 0.00 | 812.20 | 4200.00 | 820.21 | 0.00 | 820.58 | 9.79 | 4.85 | 866.36 | 1342.41 |
| 35.900 | 1.00 | 826.00 | 823.10 | 812.20 | 4200.00 | 820.19 | 0.00 | 820.67 | 19.38 | 5.57 | 753.39 | 953.96 |
| 35.900 | 1.00 | 826.00 | 823.10 | 812.20 | 4200.00 | 820.19 | 0.00 | 820.67 | 19.38 | 5.57 | 753.39 | 953.96 |

FORM 1415 PRINTED BY ROYALTY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CUSEL | CRIUS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36.000 | 65.00 | 826.30 | 823.10 | 812.20 | 4200.00 | 820.33 | 0.00 | 820.80 | 10.44 | 5.49 | 765.31 | 977.95 |
| 36.000 | 65.00 | 826.00 | 823.10 | 812.20 | 4200.00 | 820.33 | 0.00 | 820.80 | 10.44 | 5.49 | 765.31 | 977.95 |
| 36.100 | 1.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.50 | 0.00 | 820.86 | 9.42 | 4.73 | 870.02 | 1363.39 |
| 36.100 | 1.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.50 | 0.00 | 820.86 | 9.42 | 4.73 | 870.02 | 1363.39 |
| 36.200 | 74.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.50 | 0.00 | 821.30 | 22.89 | 7.53 | 557.61 | 877.86 |
| 36.200 | 74.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.50 | 0.00 | 821.36 | 22.89 | 7.53 | 557.61 | 877.86 |
| 36.300 | 1.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.51 | 0.00 | 821.42 | 20.05 | 7.24 | 580.50 | 937.90 |
| 36.300 | 1.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.51 | 0.00 | 821.42 | 20.05 | 7.24 | 580.50 | 937.90 |
| 37.000 | 570.00 | 827.00 | 822.70 | 811.70 | 4200.00 | 821.82 | 0.00 | 822.37 | 10.69 | 5.94 | 707.61 | 1284.77 |
| 37.000 | 570.00 | 827.00 | 822.70 | 811.70 | 4200.00 | 821.82 | 0.00 | 822.37 | 10.69 | 5.94 | 707.61 | 1284.77 |
| 37.100 | 1.00 | 0.00 | 0.00 | 811.70 | 4200.00 | 821.82 | 0.00 | 822.37 | 10.67 | 5.93 | 711.30 | 1285.63 |
| 37.100 | 1.00 | 0.00 | 0.00 | 811.70 | 4200.00 | 821.82 | 0.00 | 822.37 | 10.67 | 5.93 | 711.30 | 1285.63 |
| 37.300 | 115.00 | 0.00 | 0.00 | 809.00 | 4200.00 | 821.86 | 0.00 | 822.63 | 15.95 | 7.02 | 598.55 | 1051.55 |
| 37.300 | 115.00 | 0.00 | 0.00 | 809.00 | 4200.00 | 821.86 | 0.00 | 822.63 | 15.95 | 7.02 | 598.55 | 1051.55 |
| 37.900 | 1.00 | 830.00 | 823.80 | 809.00 | 4200.00 | 821.75 | 0.00 | 822.76 | 24.64 | 7.98 | 526.02 | 849.63 |
| 37.900 | 1.00 | 830.00 | 823.80 | 809.00 | 4200.00 | 821.75 | 0.00 | 822.76 | 24.64 | 7.98 | 526.02 | 849.63 |
| 38.000 | 66.00 | 830.00 | 823.80 | 809.50 | 4200.00 | 822.51 | 0.00 | 823.00 | 11.64 | 5.63 | 746.46 | 1231.28 |
| 38.000 | 66.00 | 830.00 | 823.80 | 809.50 | 4200.00 | 822.51 | 0.00 | 823.00 | 11.64 | 5.63 | 746.46 | 1231.28 |
| 38.900 | 1.00 | 825.50 | 823.10 | 809.50 | 4200.00 | 822.45 | 0.00 | 823.06 | 16.91 | 6.29 | 667.64 | 1021.29 |
| 38.900 | 1.00 | 825.50 | 823.10 | 809.50 | 4200.00 | 822.45 | 0.00 | 823.06 | 16.91 | 6.29 | 667.64 | 1021.29 |
| 39.000 | 66.00 | 825.50 | 823.10 | 809.50 | 4200.00 | 822.58 | 0.00 | 823.17 | 16.19 | 6.20 | 677.16 | 1043.82 |
| 39.000 | 66.00 | 825.50 | 823.10 | 809.50 | 4200.00 | 822.58 | 0.00 | 823.17 | 16.19 | 6.20 | 677.16 | 1043.82 |
| 39.100 | 1.00 | 0.00 | 0.00 | 809.50 | 4200.00 | 822.79 | 0.00 | 823.22 | 9.57 | 5.29 | 794.16 | 1357.47 |
| 39.100 | 1.00 | 0.00 | 0.00 | 809.50 | 4200.00 | 822.79 | 0.00 | 823.22 | 9.57 | 5.29 | 794.16 | 1357.47 |
| 40.000 | 165.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 822.96 | 0.00 | 823.36 | 6.24 | 5.20 | 965.99 | 1681.06 |
| 40.000 | 165.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 822.96 | 0.00 | 823.36 | 6.24 | 5.20 | 965.99 | 1681.06 |
| 40.900 | 135.00 | 0.00 | 0.00 | 809.20 | 4200.00 | 823.13 | 0.00 | 823.46 | 6.15 | 4.66 | 901.52 | 1696.17 |
| 40.900 | 135.00 | 0.00 | 0.00 | 809.20 | 4200.00 | 823.13 | 0.00 | 823.46 | 6.15 | 4.66 | 901.52 | 1696.17 |
| 41.000 | 46.00 | 827.40 | 821.70 | 809.20 | 4200.00 | 823.52 | 0.00 | 823.84 | 5.55 | 4.50 | 932.38 | 1782.23 |
| 41.000 | 46.00 | 827.40 | 821.70 | 809.20 | 4200.00 | 823.52 | 0.00 | 823.84 | 5.55 | 4.50 | 932.38 | 1782.23 |
| 42.000 | 225.00 | 0.00 | 0.00 | 811.00 | 4200.00 | 823.79 | 0.00 | 823.97 | 3.08 | 3.46 | 1315.17 | 2391.82 |
| 42.000 | 225.00 | 0.00 | 0.00 | 811.00 | 4200.00 | 823.79 | 0.00 | 823.97 | 3.08 | 3.46 | 1315.17 | 2391.82 |
| 43.900 | 225.00 | 0.00 | 0.00 | 808.80 | 4200.00 | 823.84 | 0.00 | 824.06 | 3.44 | 3.79 | 1109.40 | 2263.98 |
| 43.900 | 225.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 823.84 | 0.00 | 824.06 | 3.44 | 3.79 | 1109.40 | 2263.98 |
| 44.000 | 76.00 | 826.90 | 822.10 | 808.30 | 4200.00 | 824.16 | 0.00 | 824.37 | 3.21 | 3.70 | 1135.73 | 2344.72 |
| 44.000 | 76.00 | 826.90 | 822.10 | 808.80 | 4200.00 | 824.16 | 0.00 | 824.37 | 3.21 | 3.70 | 1135.73 | 2344.72 |
| 44.900 | 100.00 | 0.00 | 0.00 | 810.00 | 4200.00 | 824.10 | 0.00 | 824.43 | 4.20 | 3.95 | 1062.16 | 2049.03 |
| 44.900 | 100.00 | 0.00 | 0.00 | 810.00 | 4200.00 | 824.10 | 0.00 | 824.43 | 4.20 | 3.95 | 1062.16 | 2049.03 |

FORM 7331-00-PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | XLCH | ELTPC | ELLC | ELMIN | Q | CUSEL | CRIMS | EC | TOKOS | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45.000 | 96.00 | 824.00 | 820.90 | 810.00 | 4200.00 | 824.90 | 0.00 | 825.11 | 3.48 | 3.73 | 1127.86 | 2252.69 |
| 45.000 | 96.00 | 824.00 | 820.90 | 810.00 | 4200.00 | 824.90 | 0.00 | 825.11 | 3.48 | 3.73 | 1127.86 | 2252.69 |
| 46.000 | 100.00 | 0.00 | 0.00 | 809.80 | 4200.00 | 824.89 | 0.00 | 825.19 | 3.89 | 4.51 | 1081.93 | 2129.60 |
| 46.000 | 100.00 | 0.00 | 0.00 | 809.80 | 4200.00 | 824.89 | 0.00 | 825.19 | 3.89 | 4.51 | 1081.93 | 2129.60 |
| 46.500 | 700.00 | 0.00 | 0.00 | 810.50 | 4200.00 | 825.27 | 0.00 | 825.42 | 1.75 | 3.11 | 1771.35 | 3174.02 |
| 46.500 | 700.00 | 0.00 | 0.00 | 810.50 | 4200.00 | 825.27 | 0.00 | 825.42 | 1.80 | 3.15 | 1541.38 | 3132.16 |
| 47.000 | 700.00 | 0.00 | 0.00 | 811.20 | 4200.00 | 825.42 | 0.00 | 825.54 | 1.51 | 2.86 | 1847.18 | 3422.06 |
| 47.000 | 700.00 | 0.00 | 0.00 | 811.30 | 4200.00 | 825.42 | 0.00 | 825.54 | 1.51 | 2.86 | 1868.08 | 3422.12 |
| 47.900 | 130.00 | 0.20 | 0.00 | 810.60 | 4200.00 | 825.50 | 0.00 | 825.57 | 0.93 | 2.06 | 2035.61 | 4265.76 |
| 47.900 | 130.00 | 0.20 | 0.00 | 810.60 | 4200.00 | 825.51 | 0.00 | 825.57 | 0.93 | 2.06 | 2036.17 | 4268.29 |
| 48.000 | 60.00 | 826.60 | 822.60 | 810.60 | 4200.00 | 825.76 | 0.00 | 825.83 | 0.91 | 2.02 | 2080.73 | 4396.32 |
| 48.000 | 60.00 | 826.60 | 822.60 | 810.60 | 4200.00 | 825.76 | 0.00 | 825.83 | 0.91 | 2.02 | 2080.73 | 4396.32 |
| 48.200 | 150.00 | 0.00 | 0.00 | 810.30 | 4200.00 | 825.69 | 0.00 | 825.76 | 0.56 | 1.99 | 3198.23 | 5511.60 |
| 48.200 | 150.00 | 0.00 | 0.00 | 810.30 | 4200.00 | 825.70 | 0.00 | 825.86 | 0.57 | 2.00 | 2969.94 | 5511.08 |
| 48.300 | 2.00 | 816.50 | 810.30 | 810.30 | 4200.00 | 825.65 | 0.00 | 825.70 | 2.00 | 3.11 | 2176.17 | 2509.43 |
| 48.300 | 2.00 | 816.50 | 810.30 | 810.30 | 4200.00 | 825.75 | 0.00 | 825.88 | 2.81 | 3.14 | 1990.85 | 2504.24 |
| 48.400 | 2.00 | 0.00 | 0.00 | 816.60 | 4200.00 | 825.67 | 0.00 | 825.78 | 2.20 | 2.91 | 2300.28 | 2831.27 |
| 48.400 | 2.00 | 0.00 | 0.00 | 816.60 | 4200.00 | 825.77 | 0.00 | 825.88 | 2.22 | 2.94 | 2091.09 | 2820.04 |
| 48.900 | 520.00 | 0.00 | 0.00 | 814.00 | 4200.00 | 825.92 | 0.00 | 825.98 | 1.30 | 2.46 | 3932.50 | 3690.21 |
| 48.900 | 520.00 | 0.00 | 0.00 | 814.00 | 4200.00 | 825.92 | 0.00 | 825.98 | 1.29 | 2.45 | 3867.36 | 3696.63 |
| 49.000 | 650.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 825.88 | 0.00 | 826.00 | 1.55 | 2.92 | 1807.97 | 3376.10 |
| 49.000 | 650.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 825.98 | 0.00 | 826.10 | 1.51 | 2.90 | 1824.46 | 3419.90 |
| 49.900 | 100.00 | 0.00 | 0.00 | 812.30 | 4200.00 | 825.38 | 0.00 | 826.04 | 2.86 | 3.25 | 1292.53 | 2496.24 |
| 49.900 | 100.00 | 0.00 | 0.00 | 812.80 | 4200.00 | 825.96 | 0.00 | 826.14 | 2.79 | 3.22 | 1303.33 | 2516.84 |
| 50.000 | 50.00 | 826.90 | 824.50 | 812.80 | 4200.00 | 826.10 | 0.00 | 826.26 | 2.69 | 3.19 | 1317.50 | 2559.29 |
| 50.000 | 50.00 | 826.90 | 824.50 | 812.80 | 4200.00 | 826.20 | 0.00 | 826.36 | 2.62 | 3.16 | 1329.13 | 2594.50 |
| 50.100 | 100.00 | 0.00 | 0.00 | 812.80 | 4200.00 | 826.10 | 0.00 | 826.29 | 1.50 | 2.84 | 2380.26 | 3431.19 |
| 50.100 | 100.00 | 0.00 | 0.00 | 812.80 | 4200.00 | 826.29 | 0.00 | 826.39 | 1.45 | 2.81 | 2412.20 | 3482.45 |
| 51.000 | 730.00 | 0.00 | 0.00 | 813.00 | 4200.00 | 826.35 | 0.00 | 826.37 | 0.56 | 1.47 | 8075.06 | 5591.47 |
| 51.000 | 730.00 | 0.00 | 0.00 | 813.00 | 4200.00 | 826.45 | 0.00 | 826.47 | 0.56 | 1.48 | 7835.84 | 5591.00 |
| 52.000 | 800.00 | 0.00 | 0.00 | 813.30 | 4200.00 | 826.40 | 0.00 | 826.40 | 0.33 | 1.13 | 11455.68 | 7280.09 |
| 52.000 | 800.00 | 0.00 | 0.00 | 813.30 | 4200.00 | 826.50 | 0.00 | 826.50 | 0.35 | 1.08 | 11169.64 | 7112.81 |
| 53.000 | 2600.00 | 0.00 | 0.00 | 812.30 | 4200.00 | 826.49 | 0.00 | 826.51 | 0.60 | 1.55 | 7459.88 | 5441.62 |
| 53.000 | 2600.00 | 0.00 | 0.00 | 812.30 | 4200.00 | 826.60 | 0.00 | 826.62 | 0.63 | 1.52 | 7253.23 | 5209.21 |
| 54.000 | 1450.00 | 0.00 | 0.00 | 812.90 | 4200.00 | 826.58 | 0.00 | 826.63 | 1.05 | 1.99 | 5405.98 | 4203.06 |
| 54.000 | 1450.00 | 0.00 | 0.00 | 812.90 | 4200.00 | 826.70 | 0.00 | 826.74 | 1.04 | 1.98 | 5193.35 | 4121.77 |
| 55.000 | 1650.00 | 0.00 | 0.00 | 814.40 | 4200.00 | 826.79 | 0.00 | 826.94 | 3.08 | 3.21 | 1741.35 | 2394.19 |
| 55.000 | 1650.00 | 0.00 | 0.00 | 814.40 | 4200.00 | 826.86 | 0.00 | 827.04 | 3.07 | 3.23 | 1644.47 | 2397.14 |

PRINTED IN U.S.A.
FORM 1411-DD PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | C | CMSEL | CRIMS | EC | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55.800 | 130.00 | 0.00 | 0.00 | 815.50 | 4200.00 | 826.87 | 0.01 | 826.98 | 4.24 | 3.47 | 1209.25 | 2036.66 |
| 55.800 | 130.00 | 0.00 | 0.00 | 815.50 | 4200.00 | 826.91 | 0.00 | 827.09 | 4.30 | 3.44 | 1221.26 | 1963.07 |
| 55.900 | 1.00 | 830.00 | 823.60 | 815.50 | 4200.00 | 826.72 | 0.30 | 827.02 | 11.68 | 4.37 | 967.78 | 1229.12 |
| 55.900 | 1.00 | 830.00 | 820.60 | 815.50 | 4200.00 | 826.83 | 0.30 | 827.12 | 12.40 | 4.30 | 976.05 | 1192.55 |
| 56.000 | 81.00 | 830.00 | 826.60 | 815.50 | 4200.00 | 826.79 | 0.30 | 827.08 | 11.49 | 4.32 | 972.69 | 1239.21 |
| 56.000 | 81.00 | 830.00 | 826.60 | 815.50 | 4200.00 | 826.90 | 0.00 | 827.19 | 12.22 | 4.28 | 900.81 | 1207.64 |
| 56.100 | 1.00 | 0.00 | 0.00 | 815.50 | 4200.00 | 826.90 | 0.00 | 827.09 | 4.12 | 3.44 | 1220.90 | 2070.44 |
| 56.100 | 1.00 | 0.00 | 0.00 | 815.50 | 4200.00 | 827.02 | 0.00 | 827.20 | 4.43 | 3.40 | 1236.06 | 1996.32 |
| 56.200 | 100.00 | 0.00 | 0.00 | 816.40 | 4200.00 | 826.98 | 0.00 | 827.13 | 2.39 | 3.14 | 1787.31 | 2671.52 |
| 56.200 | 100.00 | 0.00 | 0.00 | 816.40 | 4200.00 | 827.09 | 0.00 | 827.24 | 2.38 | 3.16 | 1807.72 | 2675.63 |
| 56.900 | 350.00 | 0.00 | 0.00 | 816.10 | 4200.00 | 827.09 | 0.00 | 827.27 | 4.35 | 3.30 | 1269.69 | 1907.15 |
| 56.900 | 350.00 | 0.00 | 0.00 | 816.10 | 4200.00 | 827.20 | 0.00 | 827.37 | 4.51 | 3.34 | 1257.45 | 1978.02 |
| 57.000 | 4.00 | 823.90 | 815.20 | 816.10 | 4200.00 | 828.44 | 0.00 | 828.56 | 3.00 | 2.97 | 1612.78 | 2395.02 |
| 57.000 | 4.00 | 823.90 | 815.20 | 816.10 | 4200.00 | 828.47 | 0.00 | 828.60 | 3.11 | 2.97 | 1615.74 | 2382.98 |
| 57.100 | 50.00 | 0.00 | 0.00 | 823.00 | 4200.00 | 828.22 | 0.20 | 828.80 | 38.01 | 6.54 | 652.77 | 681.45 |
| 57.100 | 50.00 | 0.00 | 0.00 | 823.00 | 4200.00 | 828.24 | 0.20 | 828.90 | 38.28 | 6.52 | 643.96 | 678.87 |
| 200.000 | 425.00 | 0.00 | 0.00 | 819.00 | 4200.00 | 829.38 | 0.00 | 829.52 | 5.39 | 3.27 | 1503.18 | 1808.68 |
| 200.000 | 425.00 | 0.00 | 0.00 | 819.00 | 4200.00 | 829.41 | 0.00 | 829.56 | 5.06 | 3.10 | 1355.00 | 1766.17 |
| 201.000 | 425.00 | 0.00 | 0.00 | 815.10 | 4200.00 | 829.51 | 0.00 | 829.61 | 0.68 | 1.75 | 3257.95 | 6675.13 |
| 201.000 | 425.00 | 0.00 | 0.00 | 815.10 | 4200.00 | 829.60 | 0.00 | 829.65 | 0.90 | 1.77 | 2928.07 | 4430.40 |
| 202.000 | 1300.00 | 0.00 | 0.00 | 813.70 | 4200.00 | 829.69 | 0.00 | 829.74 | 1.25 | 1.86 | 2465.62 | 3758.33 |
| 202.000 | 1300.00 | 0.00 | 0.00 | 813.70 | 4200.00 | 829.74 | 0.00 | 829.79 | 1.34 | 1.87 | 2240.97 | 3533.37 |
| 203.000 | 2500.00 | 0.00 | 0.00 | 818.30 | 4200.00 | 829.99 | 0.00 | 830.04 | 1.14 | 1.86 | 3068.75 | 3938.57 |
| 203.000 | 2500.00 | 0.00 | 0.00 | 818.30 | 4200.00 | 830.05 | 0.00 | 830.10 | 1.20 | 1.88 | 2648.72 | 3840.53 |
| 204.000 | 1200.00 | 0.00 | 0.00 | 816.70 | 4200.00 | 830.13 | 0.00 | 830.19 | 1.40 | 1.98 | 2630.96 | 3549.59 |
| 204.000 | 1200.00 | 0.00 | 0.00 | 816.70 | 4200.00 | 830.20 | 0.00 | 830.26 | 1.48 | 2.00 | 2358.41 | 3652.95 |
| 205.000 | 1800.00 | 0.00 | 0.00 | 817.30 | 4200.00 | 830.32 | 0.00 | 830.33 | 0.46 | 1.14 | 8160.29 | 6183.73 |
| 205.000 | 1800.00 | 0.00 | 0.00 | 817.30 | 4200.00 | 830.39 | 0.00 | 830.41 | 0.47 | 1.14 | 7879.98 | 6095.33 |
| 206.000 | 1525.00 | 0.00 | 0.00 | 819.00 | 4200.00 | 830.40 | 0.00 | 830.46 | 1.21 | 1.73 | 4154.23 | 3812.36 |
| 206.000 | 1525.00 | 0.00 | 0.00 | 819.00 | 4200.00 | 830.48 | 0.00 | 830.52 | 1.22 | 1.75 | 3876.33 | 3795.35 |
| 207.000 | 925.00 | 0.00 | 0.00 | 816.30 | 4200.00 | 830.69 | 0.00 | 830.51 | 0.67 | 1.50 | 7931.42 | 5131.38 |
| 207.000 | 925.00 | 0.00 | 0.00 | 816.30 | 4200.00 | 830.58 | 0.00 | 830.60 | 0.68 | 1.51 | 7673.49 | 5103.47 |
| 208.000 | 1930.00 | 0.00 | 0.00 | 816.30 | 4200.00 | 830.60 | 0.00 | 830.61 | 0.57 | 1.37 | 10687.79 | 5582.09 |
| 208.000 | 1930.00 | 0.00 | 0.00 | 816.30 | 4200.00 | 830.66 | 0.00 | 830.70 | 0.57 | 1.39 | 10359.61 | 5543.16 |
| 209.000 | 3700.00 | 0.00 | 0.00 | 817.10 | 4200.00 | 830.80 | 0.00 | 830.82 | 1.15 | 1.91 | 7498.17 | 3922.68 |
| 209.000 | 3700.00 | 0.00 | 0.00 | 817.10 | 4200.00 | 830.88 | 0.00 | 830.91 | 1.15 | 1.92 | 7119.61 | 3912.79 |
| 210.000 | 1450.00 | 0.00 | 0.00 | 820.70 | 4200.00 | 830.96 | 0.00 | 830.98 | 1.30 | 1.83 | 7082.04 | 3682.00 |
| 210.000 | 1450.00 | 0.00 | 0.00 | 820.70 | 4200.00 | 831.04 | 0.00 | 831.06 | 1.31 | 1.84 | 6827.76 | 3666.14 |

FORM 141-GD PRINTED BY ROTARY MANIFOLD FORMS

| SECND | XLCH | ELTTD | ELLC | ELMIN | C | CUSEL | CRIUS | EG | 10K*3 | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 211.000 | 2673.00 | 0.00 | 0.00 | 819.20 | 4200.00 | 831.22 | 0.00 | 831.26 | 2.01 | 2.38 | 5093.17 | 2965.73 |
| 211.000 | 2673.00 | 0.00 | 0.00 | 819.20 | 4200.00 | 831.31 | 0.00 | 831.33 | 1.92 | 2.34 | 5147.52 | 3027.01 |
| 212.000 | 2600.00 | 0.00 | 0.00 | 821.60 | 4200.00 | 831.54 | 0.00 | 831.56 | 1.13 | 1.64 | 6543.02 | 3943.00 |
| 212.000 | 2600.00 | 0.00 | 0.00 | 821.60 | 4200.00 | 831.61 | 0.00 | 831.66 | 1.09 | 1.62 | 6635.59 | 4023.15 |
| 213.000 | 4100.00 | 0.00 | 0.00 | 821.90 | 3371.00 | 832.12 | 0.00 | 832.22 | 3.67 | 3.00 | 2495.74 | 1759.63 |
| 213.000 | 4100.00 | 0.00 | 0.00 | 821.90 | 3370.00 | 832.17 | 0.00 | 832.27 | 3.58 | 2.97 | 2570.57 | 1731.99 |
| 214.900 | 100.00 | 0.00 | 0.00 | 822.00 | 3370.00 | 832.44 | 0.00 | 832.65 | 6.27 | 3.65 | 973.05 | 1346.22 |
| 214.900 | 800.00 | 0.00 | 0.00 | 822.00 | 3370.00 | 832.49 | 0.00 | 832.69 | 6.17 | 3.63 | 927.51 | 1356.43 |
| 215.000 | 37.00 | 833.40 | 830.80 | 822.00 | 3370.00 | 832.95 | 0.00 | 833.13 | 5.27 | 3.45 | 975.00 | 1668.59 |
| 215.000 | 37.00 | 833.40 | 830.80 | 822.00 | 3370.00 | 833.00 | 0.00 | 833.23 | 5.09 | 3.42 | 986.28 | 1693.32 |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 3370.00 | 833.07 | 0.00 | 833.19 | 3.64 | 3.16 | 1835.25 | 1765.58 |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 3370.00 | 833.15 | 0.00 | 833.29 | 3.65 | 3.21 | 1747.64 | 1762.91 |

FORM 1411-HD-PRINTED BY ROTARY MANIFOLD FORMS

BATTLE CREEK RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CHSEL | DIFLSP | DIFLSX | DIFXMC | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 23.000 | 4200.00 | 807.80 | 0.00 | 0.00 | 0.00 | 173.91 | 0.00 |
| 23.000 | 4200.00 | 807.80 | 0.00 | 0.00 | 0.00 | 173.91 | 0.00 |
| 23.900 | 4200.00 | 809.72 | 0.00 | 1.92 | 0.00 | 166.53 | 675.00 |
| 23.900 | 4200.00 | 809.72 | 0.00 | 1.92 | 0.00 | 166.53 | 675.00 |
| 24.000 | 4200.00 | 812.99 | 0.00 | 3.20 | 0.00 | 171.81 | 3.00 |
| 24.000 | 4200.00 | 812.99 | 0.00 | 3.20 | 0.00 | 171.81 | 3.00 |
| 24.800 | 4200.00 | 812.82 | 0.00 | -0.10 | 0.00 | 166.36 | 11.00 |
| 24.800 | 4200.00 | 812.82 | 0.00 | -0.10 | 0.00 | 166.36 | 11.00 |
| 24.900 | 4200.00 | 812.70 | 0.00 | -0.12 | 0.00 | 166.36 | 1.00 |
| 24.900 | 4200.00 | 812.70 | 0.00 | -0.12 | 0.00 | 166.36 | 1.00 |
| 25.000 | 4200.00 | 813.22 | 0.00 | 0.52 | 0.00 | 166.87 | 66.00 |
| 25.000 | 4200.00 | 813.22 | 0.00 | 0.52 | 0.00 | 166.87 | 66.00 |
| 25.100 | 4200.00 | 813.51 | 0.00 | 0.28 | 0.00 | 166.87 | 1.00 |
| 25.100 | 4200.00 | 813.51 | 0.00 | 0.28 | 0.00 | 166.87 | 1.00 |
| 26.000 | 4200.00 | 813.62 | 0.00 | 0.11 | 0.00 | 161.86 | 135.00 |
| 26.000 | 4200.00 | 813.62 | 0.00 | 0.11 | 0.00 | 161.86 | 135.00 |
| 26.800 | 4200.00 | 814.51 | 0.00 | 0.89 | 0.00 | 187.14 | 135.00 |
| 26.800 | 4200.00 | 814.51 | 0.00 | 0.89 | 0.00 | 187.14 | 135.00 |
| 26.900 | 4200.00 | 814.47 | 0.00 | -0.04 | 0.00 | 187.13 | 1.00 |
| 26.900 | 4200.00 | 814.47 | 0.00 | -0.04 | 0.00 | 187.13 | 1.00 |
| 27.000 | 4200.00 | 814.55 | 0.00 | 0.08 | 0.00 | 187.15 | 30.00 |
| 27.000 | 4200.00 | 814.55 | 0.00 | 0.08 | 0.00 | 187.15 | 30.00 |
| 27.100 | 4200.00 | 814.67 | 0.00 | 0.12 | 0.00 | 187.17 | 1.00 |
| 27.100 | 4200.00 | 814.67 | 0.00 | 0.12 | 0.00 | 187.17 | 1.00 |
| 28.000 | 4200.00 | 814.87 | 0.00 | 0.20 | 0.00 | 119.43 | 250.00 |
| 28.000 | 4200.00 | 814.87 | 0.00 | 0.20 | 0.00 | 119.43 | 250.00 |
| 28.800 | 4200.00 | 815.72 | 0.00 | 0.84 | 0.00 | 123.16 | 300.00 |
| 28.800 | 4200.00 | 815.72 | 0.00 | 0.84 | 0.00 | 123.16 | 300.00 |
| 28.900 | 4200.00 | 815.71 | 0.00 | -0.00 | 0.00 | 123.15 | 1.00 |
| 28.900 | 4200.00 | 815.71 | 0.00 | -0.00 | 0.00 | 123.15 | 1.00 |
| 29.000 | 4200.00 | 815.73 | 0.00 | 0.01 | 0.00 | 123.18 | 6.00 |
| 29.000 | 4200.00 | 815.73 | 0.00 | 0.01 | 0.00 | 123.18 | 6.00 |
| 29.100 | 4200.00 | 815.74 | 0.00 | 0.02 | 0.00 | 123.24 | 1.00 |
| 29.100 | 4200.00 | 815.74 | 0.00 | 0.02 | 0.00 | 123.24 | 1.00 |
| 29.200 | 4200.00 | 815.95 | 0.00 | 0.21 | 0.00 | 124.33 | 90.00 |
| 29.200 | 4200.00 | 815.95 | 0.00 | 0.21 | 0.00 | 124.33 | 90.00 |

| SECNO | C | CUSEL | DIFUSP | DIFUSX | DIFKUS | TOPMID | XLOC |
|---|---|---|---|---|---|---|---|
| 29.000 | 4200.00 | 816.35 | 0.00 | 0.39 | 0.00 | 156.11 | 90.00 |
| 29.000 | 4200.00 | 816.35 | 0.00 | 0.39 | 0.00 | 156.11 | 90.00 |
| 29.900 | 4200.00 | 816.34 | 0.00 | -0.01 | 0.00 | 156.11 | 1.00 |
| 29.900 | 4200.00 | 816.34 | 0.00 | -0.01 | 0.00 | 156.11 | 1.00 |
| 30.000 | 4200.00 | 816.39 | 0.00 | 0.05 | 0.00 | 156.17 | 54.00 |
| 30.000 | 4200.00 | 816.39 | 0.00 | 0.05 | 0.00 | 156.17 | 54.00 |
| 30.100 | 4200.00 | 816.42 | 0.00 | 0.03 | 0.00 | 156.14 | 1.00 |
| 30.100 | 4200.00 | 816.42 | 0.00 | 0.03 | 0.00 | 156.14 | 1.00 |
| 31.000 | 4200.00 | 816.46 | 0.00 | 0.02 | 0.00 | 129.42 | 90.00 |
| 31.000 | 4200.00 | 816.46 | 0.00 | 0.02 | 0.00 | 129.42 | 90.00 |
| 31.100 | 4200.00 | 816.85 | 0.00 | 0.41 | 0.00 | 121.96 | 90.00 |
| 31.100 | 4200.00 | 816.85 | 0.00 | 0.41 | 0.00 | 121.96 | 90.00 |
| 31.200 | 4200.00 | 816.84 | 0.00 | -0.00 | 0.00 | 121.96 | 1.00 |
| 31.200 | 4200.00 | 816.84 | 0.00 | -0.00 | 0.00 | 121.96 | 1.00 |
| 31.300 | 4200.00 | 816.91 | 0.00 | 0.06 | 0.00 | 121.95 | 56.00 |
| 31.300 | 4200.00 | 816.91 | 0.00 | 0.06 | 0.00 | 121.95 | 56.00 |
| 31.600 | 4200.00 | 816.97 | 0.00 | 0.06 | 0.00 | 121.93 | 1.00 |
| 31.600 | 4200.00 | 816.97 | 0.00 | 0.06 | 0.00 | 121.93 | 1.00 |
| 31.500 | 4200.00 | 817.09 | 0.00 | 0.12 | 0.00 | 100.91 | 105.00 |
| 31.500 | 4200.00 | 817.09 | 0.00 | 0.12 | 0.00 | 100.91 | 105.00 |
| 31.600 | 4200.00 | 817.06 | 0.00 | -0.03 | 0.00 | 100.90 | 1.00 |
| 31.600 | 4200.00 | 817.06 | 0.00 | -0.03 | 0.00 | 100.90 | 1.00 |
| 31.700 | 4200.00 | 817.34 | 0.00 | 0.28 | 0.00 | 100.91 | 47.00 |
| 31.700 | 4200.00 | 817.36 | 0.00 | 0.28 | 0.00 | 100.91 | 47.00 |
| 32.900 | 4200.00 | 817.44 | 0.00 | 0.10 | 0.00 | 109.88 | 1.00 |
| 32.900 | 4200.00 | 817.44 | 0.00 | 0.10 | 0.00 | 109.88 | 1.00 |
| 33.000 | 4200.00 | 817.04 | 0.00 | 0.41 | 0.00 | 109.89 | 70.00 |
| 33.000 | 4200.00 | 817.04 | 0.00 | 0.41 | 0.00 | 109.89 | 70.00 |
| 33.100 | 4200.00 | 818.25 | 0.00 | 0.41 | 0.00 | 109.90 | 1.00 |
| 33.100 | 4200.00 | 818.25 | 0.00 | 0.41 | 0.00 | 109.90 | 1.00 |
| 34.000 | 4200.00 | 810.33 | 0.00 | 0.08 | 0.00 | 96.73 | 100.00 |
| 34.000 | 4200.00 | 810.33 | 0.00 | 0.08 | 0.00 | 96.73 | 100.00 |
| 35.000 | 4200.00 | 819.95 | 0.00 | 1.62 | 0.00 | 108.70 | 600.00 |
| 35.000 | 4200.00 | 819.95 | 0.00 | 1.62 | 0.00 | 108.70 | 600.00 |
| 35.800 | 4200.00 | 820.21 | 0.00 | 0.26 | 0.00 | 109.91 | 100.00 |
| 35.800 | 4200.00 | 820.21 | 0.00 | 0.26 | 0.00 | 109.91 | 100.00 |
| 35.900 | 4200.00 | 820.19 | 0.00 | -0.02 | 0.00 | 109.91 | 1.00 |
| 35.900 | 4200.00 | 820.19 | 0.00 | -0.02 | 0.00 | 109.91 | 1.00 |

PRINTED IN U.S.A.

FORM 1411.00 PRINTED BY ROYAFT MANIFOLD FORMS

| SECNO | C | CUSEL | DIFHSP | DIFHSX | DTEKHS | TCPHID | XLCH |
|---|---|---|---|---|---|---|---|
| 36.000 | 4200.00 | 820.33 | 0.00 | 0.13 | 0.00 | 109.91 | 65.00 |
| 36.000 | 4200.00 | 820.33 | 0.00 | 0.13 | 0.00 | 109.91 | 65.00 |
| 36.100 | 4200.00 | 820.50 | 0.00 | 0.17 | 0.00 | 109.91 | 1.00 |
| 36.100 | 4200.00 | 820.50 | 0.00 | 0.17 | 0.00 | 109.91 | 1.00 |
| 36.200 | 4200.00 | 820.50 | 0.00 | -0.00 | 0.00 | 70.51 | 76.00 |
| 36.200 | 4200.00 | 820.50 | 0.00 | -0.00 | 0.00 | 70.51 | 76.00 |
| 36.300 | 4200.00 | 820.61 | 0.00 | 0.10 | 0.00 | 70.52 | 1.00 |
| 36.300 | 4200.00 | 820.61 | 0.00 | 0.10 | 0.00 | 70.52 | 1.00 |
| 37.000 | 4200.00 | 821.82 | 0.00 | 1.21 | 0.00 | 70.66 | 570.00 |
| 37.000 | 4200.00 | 821.82 | 0.00 | 1.21 | 0.00 | 70.66 | 570.00 |
| 37.100 | 4200.00 | 821.82 | 0.00 | 0.00 | 0.00 | 70.66 | 1.00 |
| 37.100 | 4200.00 | 821.82 | 0.00 | 0.00 | 0.00 | 70.66 | 1.00 |
| 37.800 | 4200.00 | 821.66 | 0.00 | -0.04 | 0.00 | 56.68 | 115.00 |
| 37.800 | 4200.00 | 821.66 | 0.00 | -0.04 | 0.00 | 56.68 | 115.00 |
| 37.900 | 4200.00 | 821.75 | 0.00 | -0.11 | 0.00 | 56.68 | 1.00 |
| 37.900 | 4200.00 | 821.75 | 0.00 | -0.11 | 0.00 | 56.68 | 1.00 |
| 38.000 | 4200.00 | 822.51 | 0.00 | 0.76 | 0.00 | 80.90 | 66.00 |
| 38.000 | 4200.00 | 822.51 | 0.00 | 0.76 | 0.00 | 80.90 | 66.00 |
| 38.900 | 4200.00 | 822.45 | 0.00 | -0.06 | 0.00 | 80.94 | 1.00 |
| 38.900 | 4200.00 | 822.45 | 0.00 | -0.06 | 0.00 | 80.94 | 1.00 |
| 39.000 | 4200.00 | 822.58 | 0.00 | 0.13 | 0.00 | 80.95 | 66.00 |
| 39.000 | 4200.00 | 822.58 | 0.00 | 0.13 | 0.00 | 80.95 | 66.00 |
| 39.100 | 4200.00 | 822.79 | 0.00 | 0.21 | 0.00 | 80.93 | 1.00 |
| 39.100 | 4200.00 | 822.79 | 0.00 | 0.21 | 0.00 | 80.95 | 1.00 |
| 40.300 | 4200.00 | 822.96 | 0.00 | 0.17 | 0.00 | 102.05 | 165.00 |
| 40.300 | 4200.00 | 822.96 | 0.00 | 0.17 | 0.00 | 102.05 | 165.00 |
| 40.900 | 4200.00 | 823.13 | 0.00 | 0.17 | 0.00 | 77.94 | 135.00 |
| 40.900 | 4200.00 | 823.13 | 0.00 | 0.17 | 0.00 | 77.94 | 135.00 |
| 41.000 | 4200.00 | 823.52 | 0.00 | 0.40 | 0.00 | 77.96 | 66.00 |
| 41.000 | 4200.00 | 823.52 | 0.00 | 0.40 | 0.00 | 77.94 | 66.00 |
| 42.000 | 4200.00 | 823.79 | 0.00 | 0.26 | 0.00 | 137.24 | 225.00 |
| 42.000 | 4200.00 | 823.79 | 0.00 | 0.26 | 0.00 | 137.24 | 225.00 |
| 43.900 | 4200.00 | 823.84 | 0.00 | 0.05 | 0.00 | 81.96 | 225.00 |
| 43.900 | 4200.00 | 823.84 | 0.00 | 0.05 | 0.00 | 81.96 | 225.00 |
| 44.000 | 4200.00 | 824.16 | 0.00 | 0.32 | 0.00 | 81.96 | 76.00 |
| 44.000 | 4200.00 | 824.16 | 0.00 | 0.32 | 0.00 | 81.96 | 76.00 |
| 44.900 | 4200.00 | 824.18 | 0.00 | 0.02 | 0.00 | 93.00 | 100.00 |
| 44.900 | 4200.00 | 824.18 | 0.00 | 0.02 | 0.00 | 93.00 | 100.00 |

FORM 1411-02 PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | Q | CUGEL | DIFHSP | DIFUSX | DIFKHS | TOPUID | XLCH |
|---|---|---|---|---|---|---|---|
| 45.000 | 4200.00 | 824.90 | 0.00 | 0.71 | 0.00 | 93.00 | 96.00 |
| 45.000 | 4200.00 | 824.90 | 0.00 | 0.71 | 0.00 | 93.00 | 96.00 |
| 46.000 | 4200.00 | 824.89 | 0.00 | -0.01 | 0.00 | 135.99 | 100.00 |
| 46.000 | 4200.00 | 824.89 | 0.00 | -0.01 | 0.00 | 135.99 | 100.00 |
| 46.500 | 4200.00 | 825.27 | 0.00 | 0.39 | 0.00 | 386.56 | 700.00 |
| 46.500 | 4200.00 | 825.27 | 0.00 | 0.38 | -0.00 | 133.78 | 700.00 |
| 47.000 | 4200.00 | 825.42 | 0.00 | 0.15 | 0.00 | 204.80 | 700.00 |
| 47.000 | 4200.00 | 825.42 | 0.00 | 0.15 | 0.00 | 204.91 | 700.00 |
| 47.900 | 4200.00 | 825.50 | 0.00 | 0.08 | 0.00 | 173.97 | 100.00 |
| 47.900 | 4200.00 | 825.51 | 0.00 | 0.08 | 0.00 | 173.97 | 100.00 |
| 48.000 | 4200.00 | 825.66 | 0.00 | 0.16 | 0.00 | 173.97 | 60.00 |
| 48.000 | 4200.00 | 825.76 | 0.00 | 0.26 | 0.10 | 173.97 | 60.00 |
| 48.200 | 4200.00 | 825.69 | 0.00 | 0.03 | 0.00 | 333.72 | 150.00 |
| 48.200 | 4200.00 | 825.78 | 0.00 | 0.02 | 0.10 | 217.75 | 150.00 |
| 48.300 | 4200.00 | 825.65 | 0.00 | -0.03 | 0.00 | 332.30 | 2.00 |
| 48.300 | 4200.00 | 825.75 | 0.00 | -0.04 | 0.09 | 224.39 | 2.00 |
| 48.400 | 4200.00 | 825.67 | 0.00 | 0.02 | 0.00 | 333.11 | 2.00 |
| 48.400 | 4200.00 | 825.77 | 0.00 | 0.02 | 0.10 | 220.57 | 2.00 |
| 48.900 | 4200.00 | 825.82 | 0.00 | 0.13 | 0.00 | 510.11 | 520.00 |
| 48.900 | 4200.00 | 825.92 | 0.00 | 0.15 | 0.10 | 482.33 | 520.00 |
| 49.000 | 4200.00 | 825.88 | 0.00 | 0.06 | 0.00 | 166.00 | 650.00 |
| 49.000 | 4200.00 | 825.98 | 0.00 | 0.06 | 0.10 | 166.00 | 650.00 |
| 49.900 | 4200.00 | 825.88 | 0.00 | 0.00 | 0.00 | 116.48 | 100.00 |
| 49.900 | 4200.00 | 825.98 | 0.00 | 0.00 | 0.10 | 116.48 | 100.00 |
| 50.000 | 4200.00 | 826.10 | 0.00 | 0.22 | 0.00 | 116.48 | 50.00 |
| 50.000 | 4200.00 | 826.20 | 0.00 | 0.22 | 0.10 | 116.49 | 50.00 |
| 50.100 | 4200.00 | 826.18 | 0.00 | 0.08 | 0.00 | 316.00 | 100.00 |
| 50.100 | 4200.00 | 826.29 | 0.00 | 0.08 | 0.10 | 316.00 | 100.00 |
| 51.000 | 4200.00 | 826.35 | 0.00 | 0.17 | 0.00 | 1135.05 | 730.00 |
| 51.000 | 4200.00 | 826.45 | 0.00 | 0.16 | 0.10 | 1026.02 | 730.00 |
| 52.000 | 4200.00 | 826.40 | 0.00 | 0.06 | 0.00 | 1433.92 | 800.00 |
| 52.000 | 4200.00 | 826.50 | 0.00 | 0.05 | 0.10 | 1375.93 | 800.00 |
| 53.000 | 4200.00 | 826.49 | 0.00 | 0.10 | 0.00 | 1110.59 | 2600.00 |
| 53.000 | 4200.00 | 826.60 | 0.00 | 0.10 | 0.10 | 1015.46 | 2600.00 |
| 54.000 | 4200.00 | 826.59 | 0.00 | 0.10 | 0.00 | 832.93 | 1450.00 |
| 54.000 | 4200.00 | 826.70 | 0.00 | 0.10 | 0.11 | 700.39 | 1450.00 |
| 55.000 | 4200.00 | 826.79 | 0.00 | 0.20 | 0.00 | 237.39 | 1650.00 |
| 55.000 | 4200.00 | 826.89 | 0.00 | 0.19 | 0.10 | 184.28 | 1650.00 |

| SECNO | Q | CHSEL | DIFWSP | DIFWSX | DIFKUS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 55.800 | 4200.00 | 826.80 | 0.00 | 0.01 | 0.00 | 116.00 | 100.00 |
| 55.800 | 4200.00 | 826.91 | 0.00 | 0.01 | 0.11 | 116.00 | 100.00 |
| 55.900 | 4200.00 | 826.72 | 0.00 | -0.07 | 0.00 | 116.00 | 1.00 |
| 55.900 | 4200.00 | 826.83 | 0.00 | -0.07 | 0.11 | 116.00 | 1.00 |
| 56.000 | 4200.00 | 826.79 | 0.00 | 0.06 | 0.00 | 116.00 | 51.00 |
| 56.000 | 4200.00 | 826.90 | 0.00 | 0.07 | 0.11 | 116.00 | 51.00 |
| 56.100 | 4200.00 | 826.90 | 0.00 | 0.12 | 0.00 | 116.00 | 1.00 |
| 56.100 | 4200.00 | 827.02 | 0.00 | 0.12 | 0.11 | 116.00 | 1.00 |
| 56.200 | 4200.00 | 826.98 | 0.00 | 0.08 | 0.00 | 239.81 | 100.00 |
| 56.200 | 4200.00 | 827.09 | 0.00 | 0.07 | 0.11 | 125.73 | 100.00 |
| 56.900 | 4200.00 | 827.09 | 0.00 | 0.11 | 0.00 | 125.93 | 350.00 |
| 56.900 | 4200.00 | 827.20 | 0.00 | 0.11 | 0.11 | 125.94 | 350.00 |
| 57.000 | 4200.00 | 828.44 | 0.00 | 1.35 | 0.00 | 126.00 | 4.00 |
| 57.000 | 4200.00 | 828.47 | 0.00 | 1.27 | 0.02 | 126.00 | 4.00 |
| 57.100 | 4200.00 | 828.22 | 0.00 | -0.23 | 0.00 | 156.31 | 50.00 |
| 57.100 | 4200.00 | 828.24 | 0.00 | -0.22 | 0.05 | 126.00 | 50.00 |
| 200.000 | 4200.00 | 829.38 | 0.00 | 1.16 | 0.00 | 321.19 | 425.00 |
| 200.000 | 4200.00 | 829.41 | 0.00 | 1.17 | 0.05 | 200.00 | 425.00 |
| 201.000 | 4200.00 | 829.56 | 0.00 | 0.19 | 0.00 | 572.69 | 425.00 |
| 201.000 | 4200.00 | 829.60 | 0.00 | 0.19 | 0.04 | 364.22 | 425.00 |
| 202.000 | 4200.00 | 829.69 | 0.00 | 0.13 | 0.00 | 348.10 | 1300.00 |
| 202.000 | 4200.00 | 829.74 | 0.00 | 0.14 | 0.04 | 234.00 | 1300.00 |
| 203.000 | 4200.00 | 829.99 | 0.00 | 0.30 | 0.00 | 841.37 | 2500.00 |
| 203.000 | 4200.00 | 830.05 | 0.00 | 0.31 | 0.06 | 367.51 | 2500.00 |
| 204.000 | 4200.00 | 830.13 | 0.00 | 0.15 | 0.00 | 511.40 | 1200.00 |
| 204.000 | 4200.00 | 830.20 | 0.00 | 0.15 | 0.07 | 283.52 | 1200.00 |
| 205.000 | 4200.00 | 830.32 | 0.00 | 0.18 | 0.00 | 1418.90 | 1800.00 |
| 205.000 | 4200.00 | 830.39 | 0.00 | 0.19 | 0.08 | 1261.10 | 1800.00 |
| 206.000 | 4200.00 | 830.40 | 0.00 | 0.09 | 0.00 | 756.31 | 1525.00 |
| 206.000 | 4200.00 | 830.48 | 0.00 | 0.09 | 0.08 | 544.70 | 1525.00 |
| 207.000 | 4200.00 | 830.49 | 0.00 | 0.09 | 0.00 | 1439.77 | 925.00 |
| 207.000 | 4200.00 | 830.58 | 0.00 | 0.09 | 0.08 | 1330.12 | 925.00 |
| 208.000 | 4200.00 | 830.60 | 0.00 | 0.11 | 0.00 | 1956.12 | 1900.00 |
| 208.000 | 4200.00 | 830.68 | 0.00 | 0.11 | 0.00 | 1810.18 | 1900.00 |
| 209.000 | 4200.00 | 830.80 | 0.00 | 0.20 | 0.00 | 1612.49 | 3700.00 |
| 209.000 | 4200.00 | 830.88 | 0.00 | 0.20 | 0.09 | 1317.17 | 3700.00 |
| 210.000 | 4200.00 | 830.96 | 0.00 | 0.16 | 0.00 | 1292.99 | 1450.00 |
| 210.000 | 4200.00 | 831.04 | 0.00 | 0.16 | 0.09 | 1158.40 | 1450.00 |

PRINTED IN U.S.A.
FORM 1[illegible] PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKHS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 211.000 | 6200.00 | 833.22 | 0.00 | 0.26 | 0.00 | 874.93 | 2675.00 |
| 211.000 | 6200.00 | 833.39 | 0.00 | 0.26 | 0.00 | 873.36 | 2675.00 |
| 212.000 | 6200.00 | 832.54 | 0.00 | 0.32 | 0.00 | 1134.65 | 2400.00 |
| 212.000 | 6200.00 | 832.61 | 0.00 | 0.31 | 0.07 | 1105.23 | 2400.00 |
| 213.000 | 3370.00 | 832.12 | 0.00 | 0.58 | 0.00 | 496.00 | 6100.00 |
| 213.000 | 3370.00 | 832.17 | 0.00 | 0.56 | 0.05 | 496.00 | 6100.00 |
| 214.900 | 3370.00 | 832.44 | 0.00 | 0.32 | 0.00 | 106.93 | 800.00 |
| 214.900 | 3370.00 | 832.49 | 0.00 | 0.31 | 0.04 | 106.93 | 800.00 |
| 215.000 | 3370.00 | 832.95 | 0.00 | 0.50 | 0.00 | 106.99 | 37.00 |
| 215.000 | 3370.00 | 833.01 | 0.00 | 0.33 | 0.01 | 106.99 | 37.00 |
| 215.100 | 3370.00 | 833.07 | 0.00 | 0.12 | 0.00 | 300.00 | 100.00 |
| 215.100 | 3370.00 | 833.15 | 0.00 | 0.11 | 0.09 | 266.61 | 100.00 |

SUMMARY OF ERRORS

FORM 1611-ED PRINTED BY ROTARY MANIFOLD FORMS.

FLOODWAY DATA, BATTLE CREEK RIVER
PROFILE NO. 2

| STATION | FLOODWAY WIDTH (FT) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WATER SURFACE ELEVATION WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 23.000 | 174. | 717. | 5.9 | 807.8 | 807.8 | 0.0 |
| 23.900 | 165. | 712. | 5.9 | 809.7 | 809.7 | 0.0 |
| 24.000 | 172. | 1263. | 3.3 | 813.0 | 813.0 | 0.0 |
| 24.800 | 167. | 703. | 6.0 | 812.8 | 812.8 | 0.0 |
| 24.900 | 167. | 587. | 7.2 | 812.7 | 812.7 | 0.0 |
| 25.000 | 167. | 663. | 6.3 | 813.2 | 813.2 | 0.0 |
| 25.100 | 167. | 819. | 5.1 | 813.5 | 813.5 | 0.0 |
| 26.000 | 142. | 649. | 6.5 | 813.6 | 813.6 | 0.0 |
| 26.800 | 187. | 911. | 4.6 | 814.5 | 814.5 | 0.0 |
| 26.900 | 187. | 816. | 5.1 | 814.5 | 814.5 | 0.0 |
| 27.000 | 187. | 829. | 5.1 | 814.6 | 814.6 | 0.0 |
| 27.100 | 187. | 941. | 4.5 | 814.7 | 814.7 | 0.0 |
| 28.000 | 119. | 678. | 6.2 | 814.9 | 814.9 | 0.0 |
| 28.800 | 123. | 716. | 5.9 | 815.7 | 815.7 | 0.0 |
| 28.900 | 123. | 704. | 5.9 | 815.7 | 815.7 | 0.0 |
| 29.000 | 123. | 709. | 5.9 | 815.7 | 815.7 | 0.0 |
| 29.100 | 123. | 718. | 5.9 | 815.7 | 815.7 | 0.0 |
| 29.200 | 124. | 745. | 5.6 | 816.0 | 816.0 | 0.0 |
| 29.800 | 156. | 1011. | 4.2 | 816.3 | 816.3 | 0.0 |
| 29.900 | 156. | 981. | 4.3 | 816.3 | 816.3 | 0.0 |
| 30.000 | 156. | 986. | 4.3 | 816.4 | 816.4 | 0.0 |
| 30.100 | 156. | 1022. | 4.1 | 816.4 | 816.4 | 0.0 |
| 31.000 | 128. | 790. | 5.3 | 816.4 | 816.4 | 0.0 |
| 31.100 | 122. | 868. | 4.8 | 816.8 | 816.8 | 0.0 |
| 31.200 | 122. | 844. | 5.0 | 816.8 | 816.8 | 0.0 |
| 31.300 | 122. | 792. | 5.3 | 816.9 | 816.9 | 0.0 |
| 31.400 | 122. | 833. | 5.0 | 817.0 | 817.0 | 0.0 |
| 31.500 | 101. | 616. | 6.8 | 817.1 | 817.1 | 0.0 |
| 31.600 | 101. | 556. | 7.6 | 817.1 | 817.1 | 0.0 |
| 31.700 | 101. | 582. | 7.2 | 817.3 | 817.3 | 0.0 |
| 32.900 | 110. | 606. | 5.9 | 817.4 | 817.4 | 0.0 |
| 33.000 | 110. | 627. | 6.7 | 817.8 | 817.8 | 0.0 |
| 33.100 | 110. | 803. | 5.2 | 818.3 | 818.3 | 0.0 |
| 34.000 | 97. | 593. | 7.1 | 818.3 | 818.3 | 0.0 |
| 35.000 | 109. | 804. | 5.2 | 820.0 | 820.0 | 0.0 |
| 35.800 | 110. | 866. | 4.8 | 820.2 | 820.2 | 0.0 |
| 35.900 | 110. | 753. | 5.6 | 820.2 | 820.2 | 0.0 |
| 36.000 | 110. | 765. | 5.5 | 820.3 | 820.3 | 0.0 |
| 36.100 | 110. | 878. | 4.8 | 820.5 | 820.5 | 0.0 |
| 36.200 | 71. | 558. | 7.5 | 820.5 | 820.5 | 0.0 |
| 36.300 | 71. | 581. | 7.2 | 820.6 | 820.6 | 0.0 |
| 37.000 | 71. | 708. | 5.9 | 821.8 | 821.8 | 0.0 |
| 37.100 | 71. | 711. | 5.9 | 821.8 | 821.8 | 0.0 |
| 37.800 | 57. | 599. | 7.0 | 821.9 | 821.9 | 0.0 |
| 37.900 | 57. | 525. | 8.0 | 821.8 | 821.8 | 0.0 |
| 38.000 | 81. | 746. | 5.6 | 822.5 | 822.5 | 0.0 |
| 38.900 | 81. | 668. | 6.3 | 822.4 | 822.4 | 0.0 |
| 39.000 | 81. | 677. | 6.2 | 822.6 | 822.6 | 0.0 |
| 39.100 | 81. | 794. | 5.3 | 822.8 | 822.8 | 0.0 |
| 40.000 | 102. | 966. | 4.3 | 823.0 | 823.0 | 0.0 |

FLOODWAY DATA, BATTLE CREEK RIVER
PROFILE NO. 2

| STATION | FLOODWAY WIDTH (FT) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 40.900 | 78. | 902. | 4.7 | 823.1 | 823.1 | 0.0 |
| 41.000 | 78. | 932. | 4.5 | 823.1 | 823.5 | 0.0 |
| 42.000 | 137. | 1315. | 3.2 | 823.8 | 123.8 | 0.0 |
| 43.900 | 82. | 1109. | 3.8 | 823.8 | 823.8 | 0.0 |
| 44.000 | 82. | 1136. | 3.7 | 824.2 | 824.2 | 0.0 |
| 44.900 | 93. | 1062. | 4.0 | 824.2 | 824.2 | 0.0 |
| 45.000 | 93. | 1120. | 3.7 | 824.9 | 824.9 | 0.0 |
| 46.000 | 136. | 1062. | 3.9 | 824.9 | 824.9 | 0.0 |
| 46.500 | 136. | 1511. | 2.8 | 825.3 | 825.3 | 0.0 |
| 47.000 | 295. | 1848. | 2.3 | 825.4 | 825.4 | 0.0 |
| 47.900 | 174. | 2035. | 2.1 | 825.5 | 825.5 | 0.0 |
| 48.000 | 174. | 2088. | 2.0 | 825.8 | 825.7 | 0.1 |
| 48.200 | 218. | 2970. | 1.4 | 825.8 | 825.7 | 0.1 |
| 48.300 | 225. | 1991. | 2.1 | 825.8 | 825.7 | 0.1 |
| 48.400 | 221. | 2091. | 2.0 | 825.8 | 825.7 | 0.1 |
| 48.900 | 402. | 3867. | 1.1 | 825.9 | 825.8 | 0.1 |
| 49.000 | 166. | 1826. | 2.3 | 826.0 | 825.9 | 0.1 |
| 49.900 | 116. | 1303. | 3.2 | 826.0 | 825.9 | 0.1 |
| 50.000 | 116. | 1329. | 3.2 | 826.2 | 826.1 | 0.1 |
| 50.100 | 316. | 2462. | 1.7 | 826.3 | 826.2 | 0.1 |
| 51.000 | 1026. | 7336. | 0.5 | 826.5 | 826.4 | 0.1 |
| 52.000 | 1376. | 11170. | 0.4 | 826.5 | 826.4 | 0.1 |
| 53.000 | 1015. | 7255. | 0.6 | 826.6 | 826.5 | 0.1 |
| 54.000 | 700. | 5193. | 0.8 | 826.7 | 826.6 | 0.1 |
| 55.000 | 164. | 1384. | 2.6 | 826.9 | 826.8 | 0.1 |
| 55.300 | 116. | 1221. | 3.4 | 826.9 | 826.8 | 0.1 |
| 55.900 | 116. | 976. | 4.3 | 826.8 | 826.7 | 0.1 |
| 56.000 | 116. | 901. | 4.3 | 826.9 | 826.8 | 0.1 |
| 56.100 | 116. | 1234. | 3.4 | 827.0 | 826.9 | 0.1 |
| 56.200 | 106. | 1680. | 2.5 | 827.1 | 827.0 | 0.1 |
| 56.900 | 126. | 1257. | 3.3 | 827.2 | 827.1 | 0.1 |
| 57.000 | 126. | 1416. | 3.0 | 820.4 | 820.4 | 0.0 |
| 57.100 | 126. | 646. | 6.5 | 820.2 | 820.2 | 0.0 |
| 200.000 | 200. | 1355. | 3.1 | 829.4 | 829.4 | 0.0 |
| 201.000 | 364. | 2928. | 1.6 | 829.6 | 829.6 | 0.0 |
| 202.000 | 234. | 2241. | 1.9 | 829.7 | 829.7 | 0.0 |
| 203.000 | 368. | 2649. | 1.6 | 830.1 | 830.0 | 0.1 |
| 204.000 | 204. | 2359. | 1.8 | 830.2 | 830.1 | 0.1 |
| 205.000 | 1261. | 7880. | 0.5 | 830.4 | 830.3 | 0.1 |
| 206.000 | 565. | 3876. | 1.1 | 830.5 | 830.4 | 0.1 |
| 207.000 | 1330. | 7673. | 0.5 | 830.6 | 830.5 | 0.1 |
| 208.000 | 1810. | 10360. | 0.4 | 830.7 | 830.6 | 0.1 |
| 209.000 | 1317. | 7120. | 0.6 | 830.9 | 830.8 | 0.1 |
| 210.000 | 1150. | 6028. | 0.6 | 831.1 | 831.0 | 0.1 |
| 211.000 | 975. | 5168. | 0.8 | 831.3 | 831.2 | 0.1 |
| 212.000 | 1185. | 6636. | 0.6 | 831.6 | 831.5 | 0.1 |
| 213.000 | 496. | 2521. | 1.3 | 832.2 | 832.1 | 0.1 |
| 214.900 | 105. | 928. | 3.6 | 832.4 | 832.4 | 0.0 |
| 215.000 | 103. | 966. | 3.4 | 833.0 | 832.9 | 0.1 |
| 215.100 | 257. | 1748. | 1.9 | 833.2 | 833.1 | 0.1 |




1) COUNTY: Calhoun

2) STUDY NAME: City of Battle Creek and Pennfield Twp

3) WATERCOURSE: Battle Creek

4) DOCUMENT TYPE: 1975 Storm



*PROF 1

CCHV= 0.300 CEHV= 0.500

*SECNO 23.000

| SECNO | DEPTH | CHLBL | CROPS | USELK | SA | PW | WL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | SCH | CROR | ALOB | SCH | AROB | VOL | T.A | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | LTP | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | BADST |

SURVEY VALLEY SECTION AT CONFLUENCE TO ROCKAWAY RIVER

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.00 | 5.60 | 807.00 | 0.00 | 807.30 | 808.22 | 0.42 | 0.00 | 0.00 | 804.00 |
| 3590. | 23. | 3540. | 27. | 18. | 678. | 21. | 0. | 0. | 803.70 |
| 0.00 | .23 | 5.22 | 1.31 | 0.000 | 0.035 | 0.080 | 0.000 | 802.20 | 23.34 |
| 0.002102 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 178.91 | 194.25 |

*SECNO 23.900

SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.90 | 6.10 | 812.30 | 0.00 | 0.00 | 808.63 | 0.37 | 1.51 | 0.3 | 807.30 |
| 3590. | 2. | 3588. | 1. | 2. | 649. | 2. | 11. | 3. | 808.00 |
| 0.03 | 0.70 | 5.53 | 0.01 | 0.000 | 0.035 | 0.080 | 0.035 | 803.20 | 12.86 |
| 0.002427 | 675. | 675. | 675. | 2 | 0 | 0 | 0.00 | 163.73 | 176.59 |

SPECIAL BRIDGE

| SD | AK | XKOR | CORC | RDLEN | BHC | BHP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.50 | 2.64 | 0.00 | 90.00 | 0.00 | 0.00 | 0.00 | 803.20 | 803.20 |

*SECNO 24.000

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | WS | Q.WEIR | OPR | BAREA | TRAPEZOID AREA | EL_C | ELTRD |
|---|---|---|---|---|---|---|---|---|
| ********** | 809.83 | 0.00 | 3592. | 1. | 0. | 1. | 803.30 | 808.60 |

SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.00 | 9.37 | 812.67 | 0.00 | 0.00 | 812.71 | 0.13 | 2.89 | 0.03 | 807.30 |
| 3590. | 3. | 3576. | 6. | 14. | 1163. | 12. | 11. | 3. | 808.00 |
| 0.03 | 0.55 | 3.07 | 0.52 | 0.000 | 0.035 | 0.080 | 0.035 | 803.20 | 9.51 |
| 0.000373 | 3. | 3. | 3. | 2 | 0 | 8 | 0.00 | 170.86 | 180.37 |

*SECNO 24.800

D/S WASHINGTON AVE. SURVEY SECTION 25

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.80 | 3.80 | 812.40 | 0.00 | 0.00 | 812.90 | 0.50 | 0.01 | 0.18 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 634. | 0. | 11. | 3. | 822.00 |
| 0.03 | 0.00 | 5.66 | 0.00 | 0.000 | 0.035 | 0.080 | 0.035 | 808.60 | 9.57 |
| 0.003177 | 11. | 11. | 11. | 2 | 0 | 2 | 0.00 | 166.86 | 187.43 |

FORM 1411.00 PRINTED ON ROTARY MANIFOLD FORM

```
*SECNO 24.900
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        CLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IF2       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD=  822.00 MAX ELLC=  819.40

        D/S FACE WASHINGTON AVE. SURVEY SECTION 25

    24.90     3.70   812.30     0.00     0.00   813.01     0.71     0.00     0.11   822.00
    3590.       0.    3590.       0.       0.     530.       0.      11.       3.   822.00
     0.03     0.00     6.78     0.00    0.080    0.035    0.080    0.035   808.60     0.57
 0.003735       1.       1.       1.        2        0        0   -87.27   166.06   167.43

*SECNO 25.000

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD=  822.00 MAX ELLC=  819.40

        D/S FACE WASHINGTON AVE. SURVEY SECTION 25

    25.00     4.22   812.82     0.00     0.00   813.36     0.55     0.30     0.05   822.00
    3590.       0.    3590.       0.       0.     604.       0.      12.       3.   822.00
     0.04     0.00     5.94     0.00    0.080    0.035    0.080    0.035   808.60     0.57
 0.003756      56.      66.      66.        2        0        0   -99.55   166.06   167.43

*SECNO 25.100

        D/S WASHINGTON AVE. SURVEY SECTION 25

    25.10     4.46   813.06     0.00     0.00   813.42     0.36     0.00     0.06   822.00
    3590.       0.    3590.       0.       0.     745.       0.      12.       3.   822.00
     0.04     0.00     4.82     0.00    0.080    0.035    0.080    0.035   808.60     0.57
 0.001876       1.       1.       1.        2        0        0     0.00   166.07   167.43

*SECNO 26.000

        SURVEY VALLEY SECTION 26

    26.00     6.20   813.20     0.00     0.00   813.90     0.70     0.31     0.17   808.60
    3590.      72.    3462.      76.      43.     503.      45.      16.       3.   808.70
     0.04     1.67     6.64     1.70    0.080    0.035    0.080    0.035   807.00     3.26
 0.002780      135.     135.     135.        2        0        0     0.00   137.03   140.29

CCHV=   0.300 CEHV=   0.500
*SECNO 26.800

        D/S PENN CENTRAL RAILROAD SURVEY SECTION 27

    26.80     6.69   813.99     0.00     0.00   814.29     0.30     0.27     0.12   825.00
    3590.       0.    3590.       0.       0.     314.       0.      16.       4.   825.00
     0.05     0.00     4.41     0.00    0.100    0.035    0.100    0.035   807.30     1.94
 0.001525      135.     135.     135.        2        0        0     0.00   185.79   187.73

*SECNO 26.900
```

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | KV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IM2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 825.00 MAX ELLC= 818.00

D/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.90 | 6.63 | 813.93 | 0.00 | 0.00 | 814.33 | 0.36 | 0.00 | 0.04 | 825.00 |
| 3590. | 0. | 3590. | 0. | 0. | 727. | 0. | 16. | 4. | 825.00 |
| 0.05 | 0.00 | 4.94 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.30 | 1.94 |
| 0.002212 | 1. | 1. | 1. | 2 | 0 | 0 | -79.07 | 185.30 | 187.25 |

*SECNO 27.000

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 825.00 MAX ELLC= 815.00

D/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.00 | 6.73 | 814.03 | 0.00 | 0.00 | 814.40 | 0.36 | 0.06 | 0.00 | 825.00 |
| 3590. | 0. | 3590. | 0. | 0. | 741. | 0. | 17. | 4. | 825.00 |
| 0.05 | 0.00 | 4.84 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.30 | 1.94 |
| 0.002092 | [illegible] | 30. | 30. | 2 | 0 | [illegible] | [illegible] | [illegible] | [illegible] |

*SECNO 27.100

U/S PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.10 | 6.84 | 814.14 | 0.00 | 0.00 | 814.42 | 0.28 | 0.00 | 0.02 | 825.00 |
| 3590. | 0. | 3590. | 0. | 0. | 842. | 0. | 17. | 4. | 825.00 |
| 0.05 | 0.00 | 4.26 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.30 | 1.93 |
| 0.001377 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 187.08 | 189.00 |

*SECNO 28.000

SURVEY VALLEY SECTION 28

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.00 | 6.78 | 814.38 | 0.00 | 0.00 | 815.00 | 0.62 | 0.41 | 0.17 | 809.00 |
| 3590. | 44. | 3501. | 45. | 36. | 546. | 30. | 29. | 5. | 809.40 |
| 0.06 | 1.22 | 6.41 | 1.10 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 1027.67 |
| 0.001997 | 250. | 250. | 250. | 2 | 0 | 0 | 0.00 | 116.71 | 1144.37 |

*SECNO 28.800

D/S BARNEY STD FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.80 | 6.65 | 815.15 | 0.00 | 0.00 | 815.63 | 0.48 | 0.58 | 0.04 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 646. | 0. | 25. | 6. | 822.00 |
| 0.08 | 0.00 | 5.55 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 10.20 |
| 0.001865 | 300. | 300. | 300. | 2 | 0 | 0 | 0.00 | 128.27 | 130.47 |

*SECNO 28.900

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | KV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |

| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | MTN | ELMIN | SSTA |
|---|---|---|---|---|---|---|---|---|---|
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE, NOD= 9 MIN ELTRD= 822.00 MAX ELLC= 821.60

D/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.90 | 6.55 | 815.13 | 0.00 | 0.00 | 815.63 | 0.49 | 0.00 | 0.00 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 640. | 0. | 25. | 6. | 822.00 |
| 0.00 | 0.00 | 5.61 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 10.20 |
| 0.001929 | 90. | 90. | 90. | 2 | 0 | 0 | -6.50 | 120.28 | 130.48 |

*SECNO 29.000

3370 NORMAL BRIDGE, NOD= 9 MIN. ELTRD= 822.00 MAX. ELLC= 821.60

U/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.00 | 6.56 | 815.13 | 0.00 | 0.00 | 815.63 | 0.49 | 0.01 | 0.00 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 641. | 0. | 25. | 6. | 822.00 |
| 0.08 | 0.00 | 5.60 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 10.18 |
| 0.001922 | 90. | 90. | 90. | 0 | 0 | 0 | -6.59 | 120.31 | 130.49 |

*SECNO 29.100

U/S BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.10 | 6.60 | 815.18 | 0.00 | 0.00 | 815.65 | 0.48 | 0.00 | 0.00 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 649. | 0. | 25. | 6. | 822.00 |
| 0.08 | 0.00 | 5.53 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 10.16 |
| 0.001847 | 90. | 90. | 90. | 2 | 0 | 0 | -6.64 | 120.36 | 130.52 |

*SECNO 29.200

SURVEY VALLEY SECTION 29

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.20 | 6.80 | 815.38 | 0.00 | 0.00 | 815.82 | 0.44 | 0.16 | 0.01 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 674. | 0. | 27. | 6. | 822.00 |
| 0.09 | 0.00 | 5.33 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 9.66 |
| 0.001644 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 121.43 | 131.09 |

*SECNO 29.800

D/S JACKSON AVE. CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.80 | 8.16 | 815.74 | 0.00 | 0.00 | 815.98 | 0.24 | 0.10 | 0.06 | 816.00 |
| 3590. | 0. | 3590. | 0. | 0. | 916. | 0. | 22. | 6. | 816.00 |
| 0.09 | 0.00 | 3.92 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 2.21 |
| 0.000803 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 154.09 | 156.30 |

*SECNO 29.900

| SECNO | DEPTH | CHSEL | CRIHS | HSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 0 | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | MTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS

3370 NORMAL BRIDGE,NRD= 92 MIN ELTRD= 822.10 MAX ELLC= 819.00

D/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.90 | 8.13 | 815.73 | 0.00 | 0.00 | 815.99 | 0.25 | 0.00 | 0.01 | 816.00 |
| 3590. | 0. | 3590. | 0. | 0. | 889. | 0. | 28. | 6. | 816.00 |
| 0.09 | 0.00 | 4.04 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 2.20 |
| 0.000890 | 1. | 1. | 1. | 0 | 0 | 0 | -27.50 | 154.13 | 156.31 |

*SECNO 30.000

3370 NORMAL BRIDGE,NRD= 92 MIN ELTRD= 822.10 MAX ELLC= 819.00

U/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.00 | 8.19 | 815.79 | 0.00 | 0.00 | 816.04 | 0.25 | 0.00 | 0.00 | 816.00 |
| 3590. | 0. | 3590. | 0. | 0. | 894. | 0. | 29. | 6. | 816.00 |
| 0.09 | 0.00 | 4.01 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 2.00 |
| 0.000878 | 98. | 98. | 98. | 0 | 1 | 0 | -26.98 | 154.58 | 156.49 |

*SECNO 30.100

U/S JACKSON AVE. CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.10 | 8.21 | 815.81 | 0.00 | 0.00 | 816.04 | 0.23 | 0.00 | 0.01 | 816.00 |
| 3590. | 0. | 3590. | 0. | 0. | 927. | 0. | 29. | 6. | 816.00 |
| 0.10 | 0.00 | 3.67 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 1.89 |
| 0.000777 | 1. | 1. | 1. | 2 | 1 | 0 | 0.00 | 156.59 | 156.49 |

CCHV= 0.500 CEKV= 0.300

*SECNO 31.000

SURVEY VALLEY SECTION 31

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.00 | 9.14 | 815.84 | 0.00 | 0.30 | 815.33 | 0.49 | 0.00 | 0.21 | 810.60 |
| 3590. | 34. | 3496. | 59. | 40. | 614. | 59. | 31. | 7. | 809.20 |
| 0.10 | 0.06 | 5.69 | 1.00 | 0.120 | 0.035 | 0.120 | 0.035 | 806.70 | 908.77 |
| 0.001637 | 80. | 80. | 80. | 2 | 0 | 0 | 0.00 | 125.06 | 1033.83 |

*SECNO 31.100

D/S STRUCTURE OVER BATTLE CREEK RIVER STA.2+76.3

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.10 | 7.90 | 816.20 | 0.00 | 0.00 | 816.53 | 0.32 | 0.11 | 0.06 | 817.60 |
| 3590. | 0. | 3590. | 0. | 0. | 789. | 0. | 32. | 7. | 820.00 |
| 0.10 | 0.00 | 4.55 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 806.30 | 1.02 |
| 0.001073 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 121.94 | 122.96 |

*SECNO 31.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRIWS | ASELK | EG | HV | HL | CLOSS | BANK ELEV |
| S | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

FORM 1411-GO-PRINTED IN U.S.A. RAPIFOLD FORMS.

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 820.00 MAX ELLC= 817.60

STRUCTURE OVER BATTLE CREEK STA.2+74.3

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.20 | 7.93 | 816.20 | 0.00 | 0.00 | 816.54 | 0.34 | 0.00 | 0.01 | 817.60 |
| 3590. | 0. | 3590. | 0. | 0. | 760. | 0. | 32. | 7. | 820.00 |
| 0.10 | 0.00 | 4.67 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 800.30 | 1.02 |
| 0.001173 | 1. | 1. | 1. | 0 | 0 | 0 | -20.72 | 121.55 | 122.96 |

*SECNO 31.300

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 820.00 MAX ELLC= 818.10

STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.30 | 7.46 | 816.26 | 0.00 | 0.00 | 816.66 | 0.39 | 0.07 | 0.06 | 818.10 |
| 3590. | 0. | 3590. | 0. | 0. | 716. | 0. | 33. | 7. | 820.50 |
| 0.11 | 0.00 | 5.01 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 806.30 | 1.03 |
| 0.001669 | 56. | 56. | 56. | 0 | 0 | 0 | -19.17 | 121.93 | 122.96 |

*SECNO 31.400

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 822.00 MAX ELLC= 819.70

STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.40 | 7.53 | 816.33 | 0.00 | 0.00 | 816.68 | 0.35 | 0.00 | 0.02 | 819.70 |
| 3590. | 0. | 3590. | 0. | 0. | 757. | 0. | 33. | 7. | 822.00 |
| 0.11 | 0.00 | 4.74 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 1.04 |
| 0.001233 | 1. | 1. | 1. | 0 | 0 | 0 | -19.45 | 121.91 | 122.95 |

*SECNO 31.500

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 822.00 MAX ELLC= 819.70

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.50 | 6.95 | 816.45 | 0.00 | 0.00 | 817.10 | 0.65 | 0.19 | 0.24 | 821.40 |
| 3590. | 0. | 3590. | 0. | 0. | 554. | 0. | 35. | 7. | 822.05 |
| 0.11 | 0.00 | 6.48 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.05 |
| 0.002737 | 105. | 105. | 105. | 1 | 0 | 0 | -17.41 | 100.90 | 101.95 |

*SECNO 31.600

3370 NORMAL BRIDGE,NRD= 37 MIN ELTRD= 822.00 MAX ELLC= 821.00

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.60 | 7.22 | 816.62 | 0.00 | 0.00 | 817.24 | 0.61 | 0.00 | 0.13 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 496. | 0. | 35. | 7. | 822.00 |
| 0.11 | 0.00 | 7.23 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.06 |
| 0.003920 | 1. | 1. | 1. | 0 | 0 | 0 | -39.05 | 100.89 | 101.95 |

FORM 1A-1 48-PRINTED IN U.S.A. MANIFOLD FORM

*SECNO 31.700

| SECNO | DEPTH | CUSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELTIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 37 MIN ELTRD= 822.00 MAX ELLC= 821.00

STRUCTURE OVER BATTLE CREEK STA. 1469.5

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.70 | 7.52 | 816.72 | 0.00 | 0.00 | 817.45 | 0.73 | 0.17 | 0.04 | 822.00 |
| 3590. | 0. | 3590. | 0. | 0. | 326. | 0. | 35. | 8. | 822.00 |
| 0.11 | 0.00 | 6.85 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.06 |
| 0.003293 | 47. | 47. | 47. | 2 | 0 | 0 | -41.[illegible] | 100.90 | 101.95 |

*SECNO 32.900

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 823.00 MAX ELLC= 820.90

D/S FACE MICHIGAN AVE. SURVEY SECTION 33

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 32.90 | 7.22 | 816.92 | 0.00 | 0.00 | 817.52 | 0.60 | 0.00 | 0.07 | 823.00 |
| 3590. | 0. | 3590. | 0. | 0. | 388. | 0. | 36. | 8. | 823.00 |
| 0.11 | 0.00 | 6.19 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.70 | 1.06 |
| 0.004210 | 1. | 1. | 1. | 2 | 0 | 0 | -76.87 | 109.87 | 110.93 |

*SECNO 33.000

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD= 823.00 MAX ELLC= 820.90

U/S FACE MICHIGAN AVE. SURVEY SECTION 33

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.00 | 7.55 | 817.25 | 0.00 | 0.00 | 817.61 | 0.36 | 0.28 | 0.02 | 823.00 |
| 3590. | 0. | 3590. | 0. | 0. | 597. | 0. | 37. | 8. | 823.00 |
| 0.12 | 0.00 | 6.02 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.70 | 1.06 |
| 0.003852 | 70. | 70. | 70. | 2 | 0 | 0 | -95.74 | 109.88 | 110.94 |

*SECNO 33.100

U/S MICHIGAN AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.10 | 7.02 | 817.32 | 0.00 | 0.00 | 817.91 | 0.38 | 0.03 | 0.09 | 823.00 |
| 3590. | 0. | 3590. | 0. | 0. | 722. | 0. | 37. | 8. | 823.00 |
| 0.12 | 0.00 | 4.97 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.70 | 1.06 |
| 0.001229 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 109.08 | 110.94 |

*SECNO 34.000

SURVEY VALLEY SECTION 34.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.00 | 7.51 | 817.61 | 0.00 | 0.00 | 810.43 | 0.82 | 0.18 | 0.35 | 814.30 |
| 3590. | 2. | 3538. | 49. | 3. | 683. | 38. | 38. | 8. | 811.20 |
| 0.12 | 0.60 | 7.32 | 1.30 | 0.120 | 0.035 | 0.120 | 0.035 | 810.10 | 689.90 |
| 0.002769 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 94.95 | 784.86 |

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*SECNO 35.000

| SECNO | DEPTH | CWSEL | CRI.S | MSELK | EG | HV | HL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | SLOS | LCH | ORCS | ALOB | ACH | ARCB | VOL | TOA | LEFT/RIGHT |
| TIME | VLOS | VCH | VRCS | XNL | XICH | XNR | WTN | ELMCN | ESTA |
| SLOPE | XLO.L | XLCH | XLC30 | ITRIAL | IXP | ICONT | CORAT | TOP.ID | ENDST |

SURVEY VALLEY SECTION 35

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.00 | 7.14 | 819.24 | 0.00 | 0.00 | 820.66 | 0.42 | 0.02 | 0.20 | 812.30 |
| 3590. | 1. | 3591. | 38. | 4. | 675. | 48. | 47. | 9. | 813.10 |
| 0.15 | 0.28 | 5.23 | 1.22 | 0.120 | 0.035 | 0.120 | 0.035 | 312.10 | 579.91 |
| 0.001156 | 600. | 600. | 600. | 2 | 0 | 0 | 0.00 | 108.52 | 688.42 |

*SECNO 35.050

D/S MC CALMLY AVE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.03 | 7.25 | 819.49 | 0.03 | 0.00 | 819.81 | 0.32 | 0.01 | 0.05 | 826.00 |
| 3590. | 0. | 3590. | 0. | 0. | 737. | 0. | 46. | 10. | 826.00 |
| 0.16 | 0.00 | 5.26 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.20 | 1.05 |
| 0.000970 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 109.90 | 110.95 |

*SECNO 35.900

3370 NORMAL BRIDGE,NRD= 15 MIN ELTRD= 826.00 MAX ELLC= 823.30

D/S FACE MC CALMLY AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.90 | 7.27 | 819.47 | 0.00 | 0.00 | 819.89 | 0.41 | 0.01 | 0.07 | 826.00 |
| 3590. | 0. | 3590. | 0. | 0. | 635. | 0. | 46. | 10. | 826.00 |
| 0.16 | 0.00 | 5.16 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.20 | 1.05 |
| 0.001826 | 1. | 1. | 1. | 1 | 0 | 0 | -90.74 | 109.90 | 110.95 |

*SECNO 36.000

3370 NORMAL BRIDGE,NRD= 15 MIN ELTRD= 826.00 MAX ELLC= 823.10

D/S FACE MC CALMLY AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.00 | 7.41 | 819.61 | 0.00 | 0.00 | 820.01 | 0.40 | 0.12 | 0.01 | 826.00 |
| 3590. | 0. | 3590. | 0. | 0. | 706. | 0. | 49. | 10. | 826.00 |
| 0.16 | 0.00 | 5.09 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.20 | 1.05 |
| 0.001764 | 65. | 65. | 65. | 2 | 0 | 0 | -94.23 | 109.90 | 110.95 |

*SECNO 36.100

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 827.00 MAX ELLC= 823.30

D/S FACE PARKING LOT BRIDGE CROSS SECTION 37

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.10 | 7.43 | 819.73 | 0.00 | 0.00 | 820.05 | 0.32 | 0.00 | 0.04 | 827.00 |
| 3590. | 0. | 3590. | 0. | 0. | 795. | 0. | 49. | 10. | 827.00 |
| 0.16 | 0.30 | 4.52 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.30 | 1.05 |

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0.000963        1.        1.        1.        2        0        0   -14.13   109.90   110.95

*SECNO 36.200
   SECNO     DEPTH     CHSEL     CRIMS     WSELK     EG        HW        HL        CLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XML       XNCH      XMR       STN       ELMIN      ESTA
   SLOPE     XLOBL     XLCH      XLOBR     XTRIAL    IH2       ICONT     CORAN     TOP.ID     ENDST

3370 NORMAL BRIDGE,NRD=  9  IN ELTRD=  827.00 MAX ELLC=  823.30

        U/S FACE PARKING LOT BRIDGE

     36.20      7.44    819.74      0.00      0.00    820.53      0.70      0.10      0.37    812.30
     3590.        0.     3590.        0.        0.      506.        0.       31.       10.    827.00
      0.17      0.00      0.09      0.00     0.120     0.035     0.120     0.035    812.30      0.49
 0.002281       74.       74.       74.         2         0         0    -16.40     70.46     70.95

*SECNO 36.300

3370 NORMAL BRIDGE,NRD=  5 MIN ELTRD=  827.00 MAX ELLC=  823.30

        D/S FACE PARKING LOT STRUCTURE

     36.30      7.54    819.04      0.00      0.00    820.53      0.72      0.00      0.13    812.30
     3590.        0.     3590.        0.        0.      527.        0.       [illegible]       10.    827.00
      0.17      0.00      6.82      0.00     0.120     0.035     0.120     0.035    812.30      0.49
 0.002000        1.        1.        1.         2         0         0     -2.31     70.46     70.95

*SECNO 37.000

3370 NORMAL BRIDGE,NRD=  5 MIN ELTRD=  827.00 MAX ELLC=  822.70

        U/S FACE PARKING LOT STRUCTURE

     37.00      9.30    821.00      0.00      0.00    821.47      0.47      0.79      0.12    811.70
     3590.        0.     3590.        0.        0.      650.        0.       58.       11.    826.40
      0.20      0.00      5.52      0.00     0.120     0.035     0.120     0.035    811.70      0.37
 0.001022       570.      570.      570.         2         0         0     -3.41     70.60     70.96

*SECNO 37.100

        U/S PARKING LOT STRUCTURE

     37.10      9.30    821.00      0.00      0.00    821.40      0.47      0.00      0.00    811.70
     3590.        1.     3589.        0.        3.      651.        0.       58.       11.    826.40
      0.20      0.18      5.52      0.00     0.120     0.035     0.120     0.035    811.70      0.37
 0.001019        1.        1.        1.         0         0         0      0.00     70.60     70.96

CCHV=   0.300 CEHV=   0.500
*SECNO 37.800

        D/S BUILDING OVER RIVER D/S CAPITAL AVE CROSS SECTION 38

     37.30     12.05    821.05      0.00      0.00    821.71      0.66      0.14      0.09    830.00
```

```
    3590.       0.     3590.       0.       0.     553.       0.      60.      11.    830.00
     0.20      0.00     6.50      0.00    0.120    0.035    0.120    0.035   809.00     1.07
 0.001476      115.     115.      115.        2        0        0     0.00    56.87    57.94

*SECNO 37.900
   SECNO     DEPTH     CHSEL     CHIWS     USELK     EO        HV        HL        BLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     CORAR     TOPWID     ENDST

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD=  830.00 MAX ELLC=  823.80

        D/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

    37.90     11.96    821.96      0.00      0.00    821.81      0.65      0.00      0.10    830.00
    3590.       0.     3590.       0.       0.     485.       0.      60.      11.    830.00
     0.20      0.00     7.40      0.00    0.120    0.035    0.120    0.035   809.00     1.07
 0.002264        1.       1.        1.        2        0        0    -61.69    56.87    57.94

*SECNO 38.000

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD=  830.00 MAX ELLC=  823.80

        D/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

    38.00     12.10    821.60      0.00      0.00    822.03      0.44      0.10      0.12    830.00
    3590.       0.     3590.       0.       0.     678.       0.      61.      11.    830.00
     0.20      0.00     5.29      0.00    0.120    0.035    0.120    0.035   809.50     1.06
 0.001142       66.      66.       66.        2        0        0    -54.92    80.89    81.95

*SECNO 38.900

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD=  825.50 MAX ELLC=  823.10

        D/S FACE CAPITAL AVE. CROSS SECTION 39

    38.90     12.04    821.54      0.00      0.00    822.09      0.55      0.00      0.06    825.50
    3590.       0.     3590.       0.       0.     602.       0.      61.      11.    825.50
     0.20      0.00     5.96      0.00    0.120    0.035    0.120    0.035   809.50     1.06
 0.001698        1.       1.        1.        2        0        0    -90.66    80.93    81.97

*SECNO 39.000

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD=  825.50 MAX ELLC=  823.10

        U/S FACE CAPITAL AVE.

    39.00     12.17    821.67      0.00      0.00    822.21      0.53      0.11      0.01    825.50
    3590.       0.     3590.       0.       0.     612.       0.      62.      11.    825.50
     0.21      0.00     5.87      0.00    0.120    0.035    0.120    0.035   809.50     1.04
 0.001618       66.      66.       66.        2        0        0    -91.82    80.93    81.97

*SECNO 39.100
```

U/S CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39.10 | 12.37 | 821.87 | 0.00 | 0.00 | 822.25 | 0.39 | 0.00 | 0.04 | 825.50 |
| 3590. | 0. | 3590. | 0. | 0. | 719. | 0. | 67. | 11. | 825.50 |
| 0.21 | 0.00 | 4.99 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.04 |
| 0.000948 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 80.93 | 81.97 |

*SECNO 40.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRIMS | HSELK | SG | HV | HL | BLOSS | BANK ELEV |
| Q | QLOB | QCH | QROD | ALOB | ACH | AROE | VOL | TOA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROE | XKL | XMCH | XMR | XMH | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPHID | ENDST |

SURVEY VALLEY SECTION 40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 40.00 | 13.73 | 822.03 | 0.00 | 0.00 | 822.39 | 0.35 | 0.12 | 0.01 | 816.40 |
| 3590. | 142. | 3440. | 0. | 150. | 705. | 17. | 65. | 12. | 814.90 |
| 0.22 | 0.95 | 4.86 | 0.40 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 819.45 |
| 0.000613 | 165. | 135. | 135. | 2 | 0 | 0 | 0.00 | 101.03 | 920.76 |

*SECNO 40.900

D/S FACE MONROE ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 40.90 | 13.0[illegible] | 822.2[illegible] | 0.00 | 0.00 | 822.49 | 0.29 | 0.06 | 0.02 | 827.40 |
| 3590. | 0. | 3590. | 0. | 0. | 829. | 0. | 67. | 12. | 827.40 |
| 0.23 | 0.00 | 4.33 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.04 |
| 0.000579 | 135. | 135. | 135. | 2 | 0 | 0 | 0.00 | 77.92 | 78.96 |

SPECIAL BRIDGE

| SB | XK | XKOR | COR2 | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.62 | 3.00 | 0.00 | 70.10 | 0.10 | 790.00 | 0.00 | 811.60 | 811.60 |

*SECNO 41.000
PRESSURE FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 822.72 | 822.49 | 0.00 | 0. | 3590. | 790. | 788. | 821.70 | 827.40 |

U/S FACE MONROE ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41.00 | 13.24 | 822.44 | 0.00 | 0.00 | 822.72 | 0.28 | 0.23 | 0.00 | 827.40 |
| 3590. | 0. | 3590. | 0. | 0. | 848. | 0. | 60. | 12. | 827.40 |
| 0.23 | 0.00 | 4.23 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.04 |
| 0.000541 | 46. | 46. | 46. | 2 | 0 | 0 | 0.00 | 77.93 | 78.96 |

*SECNO 42.000

SURVEY VALLEY SECTION 42

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.00 | 11.67 | 822.67 | 0.00 | 0.00 | 822.84 | 0.17 | 0.09 | 0.03 | 821.60 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3590. | 0. | 3517. | 73. | 0. | 1057. | 106. | 73. | 13. | 816.20 |
| 0.25 | 0.00 | 3.33 | 0.69 | 0.120 | 0.035 | 0.120 | 0.035 | 811.30 | 723.85 |
| 0.000334 | 225. | 225. | 225. | 2 | 0 | 0 | 0.00 | 136.90 | 860.75 |

*SECNO 43.900

D/S FACE DIVISION ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.90 | 13.94 | 822.74 | 0.00 | 0.00 | 822.93 | 0.19 | 0.07 | 0.01 | 826.90 |
| 3590. | 0. | 3590. | 0. | 0. | 1219. | 0. | 79. | 13. | 826.90 |
| 0.27 | 0.00 | 3.52 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 806.30 | 1.03 |
| 0.000325 | 225. | 225. | 225. | 2 | 0 | 0 | 0.00 | 91.96 | 82.97 |

SPECIAL BRIDGE

| SB | XK | XKCI | COFQ | BDLEN | BUC | BUP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.90 | 1.74 | 3.00 | 0.00 | 82.00 | 2.00 | 945.00 | 0.00 | 810.30 | 810.30 |

*SECNO 44.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SEC U | ESPT | C.SEL | SPLIC | .SELM | EC | HV | HL | BLCSe | BANK ELEV |
| U | C_UT | ACI | UNCU | XLOS | ACH | GROD | VOL | TOP | LEFT/FLOW |
| TIME | W.O | UCA | UNCO | XUL | 2.2.0 | UNI | LTA | ELIZO | SSTO |
| SLOPE | XLOSL | XLCH | XLOBR | STRIAL | IH2 | ICONT | CORAR | TOPUID | ENDST |

PRESSURE FLO

| EGPRS | EGLUC | M3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 823.13 | 822.93 | 0.00 | 0. | 3590. | 945. | 944. | 822.10 | 826.90 |

U/S FACE DIVISION ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.00 | 14.14 | 822.94 | 0.00 | 0.00 | 823.13 | 0.19 | 0.20 | 0.00 | 826.90 |
| 3590. | 0. | 3590. | 0. | 0. | 1056. | 0. | 31. | 13. | 825.90 |
| 0.27 | 0.00 | 3.47 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 806.00 | 1.02 |
| 0.000309 | 76. | 76. | 76. | 2 | 0 | 0 | 0.00 | 91.96 | 82.97 |

*SECNO 44.900

D/S FACE PENN CENTRAL R.R.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 44.90 | 12.96 | 822.96 | 0.00 | 0.00 | 823.18 | 0.22 | 0.04 | 0.02 | 824.00 |
| 3590. | 0. | 3590. | 0. | 0. | 949. | 0. | 83. | 13. | 824.00 |
| 0.28 | 0.00 | 3.78 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 810.00 | 1.01 |
| 0.000436 | 100. | 100. | 100. | 1 | 0 | 0 | 0.00 | 91.97 | 92.99 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | BDLEM | BUC | BUP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.25 | 1.93 | 3.00 | 0.00 | 94.00 | 8.00 | 695.00 | 0.00 | 812.60 | 812.80 |

*SECNO 45.000
PRESSURE FLOW

FORM 1411 UB PRINTED BY HOLABIRD MANIFOLD FORMS.

| EGPRS | EGLOC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 823.76 | 823.22 | 0.04 | 0. | 3590. | 695. | 697. | 820.90 | 824.00 |

U/S FACE PENN CENTRAL R.R.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 45.00 | 13.56 | 823.56 | 0.00 | 0.00 | 823.76 | 0.20 | 0.58 | 0.00 | 824.00 |
| 3590. | 0. | 3590. | 0. | 0. | 1004. | 0. | 15. | 24. | 823.50 |
| 0.29 | 0.30 | 3.83 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 811.00 | 1.01 |
| 0.000365 | 96. | 96. | 96. | 2 | 0 | 0 | 2.00 | 91.99 | 92.95 |

*SECNO 46.000

100 FT U/S PENN CENTRAL R.R. CROSS SECTION 46

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 46.00 | 13.75 | 823.55 | 0.00 | 0.00 | 823.36 | 0.29 | 0.04 | 0.04 | 815.70 |
| 3590. | 29. | 3323. | 38. | 51. | 813. | 61. | 88. | 24. | 813.60 |
| 0.29 | 0.57 | 4.34 | 0.63 | 0.120 | 0.035 | 0.120 | 0.035 | 809.00 | 915.05 |
| 0.000417 | 100. | 100. | 100. | 2 | 0 | 0 | 1.00 | 10.99 | 1015.11 |

*SECNO 46.500

VALLEY SECTION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 46.50 | 13.64 | 839.14 | 0.00 | 0.00 | 826.07 | 0.16 | 0.19 | 0.04 | 816.00 |
| 3590. | 42. | 3503. | 40. | 111. | 1159. | 97. | 106. | 16. | 814.30 |
| 0.36 | 0.38 | 3.00 | 0.42 | 0.120 | 0.035 | 0.120 | 0.035 | 810.50 | 137.81 |
| 0.000189 | 700. | 700. | 700. | 2 | 0 | 0 | 0.00 | 225.00 | 362.81 |

*SECNO 47.000

| SECNO | DEPTH | CHSEL | CRSUS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | BLOS | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | HTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IM2 | ICONT | CORAN | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1380.0 1605.0 TYPE= 1 TARGET= 225.000

100 FT D/S ELM ST. CROSS SECTION 47

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 47.00 | 12.79 | 824.09 | 0.00 | 0.00 | 824.20 | 0.11 | 0.12 | 0.01 | 813.30 |
| 3590. | 76. | 3445. | 70. | 169. | 1249. | 150. | 130. | 20. | 814.50 |
| 0.43 | 0.45 | 2.76 | 0.44 | 0.120 | 0.035 | 0.120 | 0.035 | 811.30 | 1380.30 |
| 0.000161 | 700. | 700. | 700. | 2 | 0 | 0 | 0.00 | 200.29 | 1580.29 |

*SECNO 47.900

D/S FACE ELM ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 47.90 | 13.57 | 824.17 | 0.00 | 0.00 | 824.23 | 0.06 | 0.01 | 0.02 | 826.60 |
| 3590. | 0. | 3590. | 0. | 0. | 1604. | 0. | 134. | 20. | 826.60 |
| 0.45 | 0.00 | 1.99 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 810.60 | 1.04 |
| 0.000105 | 100. | 100. | 900. | 2 | 0 | 0 | 0.00 | 173.93 | 174.97 |

POINT 1411 UB PRINTED BY ROTARY MANIFOLD FORMS.

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.90 | 1.74 | 3.00 | 0.00 | 174.00 | 4.00 | 1455.00 | 0.00 | 814.00 | 814.00 |

*SECNO 48.000
PRESSURE FLOW

| EGPRS | EGLPC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 824.33 | 824.23 | 0.00 | 0. | 3590. | 1455. | 1420. | 822.40 | 826.60 |

U/S FACE ELM ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.00 | 13.67 | 824.27 | 0.00 | 0.00 | 824.33 | 0.05 | 0.10 | 0.00 | 826.60 |
| 3590. | 0. | 3590. | 0. | 0. | 1022. | 0. | 136. | 21. | 826.60 |
| 0.45 | 0.00 | 1.97 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 810.60 | 1.04 |
| 0.000102 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 173.93 | 174.97 |

*SECNO 48.200

D/S DAM 150 FT U/S ELM ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.20 | 14.00 | 824.30 | 0.00 | 0.00 | 824.35 | 0.05 | 0.01 | 0.00 | 810.60 |
| 3590. | 186. | 3118. | 368. | 334. | 1648. | 814. | 144. | 21. | 810.30 |
| 0.48 | 0.35 | 1.89 | 0.45 | 0.120 | 0.035 | 0.120 | 0.035 | 810.30 | 217.79 |
| 0.000060 | 150. | 150. | 150. | 1 | 0 | 0 | 0.00 | 290.27 | 503.06 |

*SECNO 48.300

3370 NORMAL BRIDGE,NRD= 0 MIN ELTWD= 816.50 MAX ELLC= 810.30

AT DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.30 | 13.96 | 824.26 | 0.00 | 0.00 | 824.39 | 0.13 | 0.00 | 0.04 | 810.60 |
| 3590. | 179. | 2935. | 476. | 253. | 923. | 567. | 144. | 21. | 810.30 |
| 0.48 | 0.71 | 3.16 | 0.84 | 0.120 | 0.035 | 0.120 | 0.035 | 810.30 | 210.32 |
| 0.000365 | 2. | 2. | 2. | 2 | 0 | 0 | -1011.59 | 289.17 | 507.20 |

*SECNO 48.400

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLCSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALCB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

U/S DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.40 | 8.69 | 824.29 | 0.00 | 0.00 | 824.40 | 0.11 | 0.00 | 0.01 | 815.60 |
| 3590. | 168. | 2972. | 450. | 260. | 1016. | 596. | 144. | 21. | 815.90 |
| 0.48 | 0.65 | 2.93 | 0.76 | 0.120 | 0.035 | 0.120 | 0.035 | 815.60 | 217.86 |
| 0.000272 | 2. | 2. | 2. | 2 | 0 | 0 | 0.00 | 289.96 | 507.82 |

*SECNO 48.900

CROSS SECTION 49A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.90 | 10.45 | 824.45 | 0.00 | 0.00 | 824.52 | 0.07 | 0.11 | 0.01 | 815.00 |
| 3590. | 1013. | 2476. | 101. | 2053. | 995. | 194. | 175. | 26. | 815.00 |
| 0.58 | 0.49 | 2.49 | 0.52 | 0.120 | 0.035 | 0.120 | 0.035 | 814.00 | 0.45 |
| 0.000161 | 520. | 520. | 520. | 0 | 0 | 0 | 0.00 | 805.90 | 506.35 |

*SECNO 49.000

3473 ENCROACHMENT STATIONS= 850.0 1017.0 TYPE= 1 TARGET= 165.000

SURVEY CROSS SECTION 48

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49.00 | 16.23 | 824.53 | 0.00 | 0.00 | 824.65 | 0.11 | 0.11 | 0.02 | 817.30 |
| 3590. | 54. | 3395. | 141. | 117. | 1215. | 255. | 211. | 31. | 815.10 |
| 0.62 | 0.48 | 2.79 | 0.35 | 0.120 | 0.035 | 0.120 | 0.035 | 810.30 | 856.45 |
| 0.000164 | 650. | 650. | 650. | 2 | 0 | 0 | 0.00 | 150.55 | 1017.00 |

*SECNO 49.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 826.90 ELREA= 826.90

U/S FACE UNION ST. CROSS SECTION 50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49.90 | 11.73 | 824.53 | 0.00 | 0.00 | 824.69 | 0.16 | 0.02 | 0.02 | 826.90 |
| 3590. | 0. | 3590. | 0. | 0. | 1136. | 0. | 215. | 32. | 826.90 |
| 0.63 | 0.00 | 3.16 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.80 | 1.02 |
| 0.000313 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 116.45 | 117.48 |

SPECIAL BRIDGE

| SU | XR | ABDW | CDSD | RDLEN | BAC | SKP | SAREA | SS | ELCHU | E.CFS |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.90 | 1.75 | 3.00 | 0.00 | 116.50 | 10.50 | 1125.00 | 0.00 | 813.90 | 813.90 |

*SECNO 50.000

PRESSURE FLOW

| EGPRS | EGLOC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 824.81 | 824.70 | 0.01 | 0. | 3590. | 1125. | 1124. | 826.50 | 826.90 |

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 826.90 ELREA= 826.90

U/S FACE UNION ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50.00 | 11.86 | 824.66 | 0.00 | 0.00 | 824.81 | 0.15 | 0.12 | 0.00 | 826.90 |
| 3590. | 0. | 3590. | 0. | 0. | 1149. | 0. | 215. | 32. | 826.90 |
| 0.64 | 0.00 | 3.12 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.80 | 1.02 |
| 0.000301 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 116.45 | 117.48 |

*SECNO 50.100

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| 0 | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |

GRM 1411-GD PRINTED BY NOTARY MANIFOLD FORMS

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SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IM2      ICONT    CORAR    TOPWID   ENDST

3470 ENCROACHMENT STATIONS=      87.0     403.0  TYPE=     1  TARGET=     316.000

        100 FT W/S UNION ST.

    50.10    11.94   824.74     0.00     0.00   824.84     0.11     0.02     0.01   814.00
    3590.      51.    3180.     358.     119.    1134.     669.     219.      32.   814.00
     0.65     0.42     2.31     0.56    0.120    0.035    0.120    0.035   812.80    92.86
 0.000171     100.     100.     100.        2        0        0     0.00   310.14   403.00

CCHV=   0.100 CEHV=   0.300
*SECNO 51.000

        SURVEY VALLEY SECTION 51

    51.00    11.92   824.92     0.00     0.00   824.94     0.02     0.08     0.01   816.40
    3590.    1680.    1732.     179.    4610.    1113.     742.     295.      45.   815.10
     0.87     0.36     1.56     0.24    0.120    0.040    0.120    0.035   813.00   726.95
 0.000075     800.     730.     730.        0        0        0     0.00  1121.15  1048.10

*SECNO 52.000

        SURVEY VALLEY SECTION 52

    52.00    11.67   824.97     0.00     0.00   824.90     0.01     0.03     0.00   816.30
    3590.    2287.    1275.      28.    3169.    1067.     113.     441.      69.   815.60
     1.24     0.28     1.19     0.25    0.120    0.040    0.120    0.035   813.30  1000.80
 0.000044     800.     800.     800.        2        0        0     0.00  1479.82  2480.62

*SECNO 53.000

        SURVEY VALLEY SECTION 53

    53.00    12.80   825.10     0.00     0.00   825.13     0.03     0.14     0.01   815.90
    3590.    1433.    2133.      24.    4344.    1301.      86.     853.     130.   816.40
     1.36     0.32     1.64     0.27    0.120    0.040    0.120    0.037   812.30   508.63
 0.000070    2300.    2600.    2400.        1        0        0     0.00  1089.22  1589.65

*SECNO 54.000

        SURVEY VALLEY SECTION 54

    54.00    12.33   825.23     0.00     0.00   825.27     0.04     0.14     0.01   816.50
    3590.      43.    2216.    1331.     196.    1069.    3020.    1016.     168.   817.20
     2.13     0.22     2.07     0.44    0.120    0.040    0.120    0.037   812.90   607.60
 0.000135    1550.    1450.    1100.        2        0        0     0.00   805.70  1413.30

CCHV=   0.300 CEHV=   0.500
*SECNO 55.000
   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       KV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA     LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IM2      ICONT    CORAR    TOPWID     ENDST
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FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS.

100 FT D/S EMMETT ST. CROSS SECTION 55

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 11.12 | 825.52 | 0.00 | 0.00 | 825.67 | 0.15 | 0.34 | 0.05 | 816.30 |
| 3590. | 51. | 3371. | 168. | 95. | 1067. | 289. | 1124. | 188. | 816.80 |
| 2.28 | 0.54 | 3.16 | 0.50 | 0.120 | 0.040 | 0.120 | 0.030 | 816.40 | 1911.67 |
| 0.000352 | 1650. | 1650. | 1650. | 2 | 0 | 0 | 0.00 | 221.46 | 2132.93 |

*SECNO 55.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLOB= 831.00 ELTOB= 831.00

D/S EMMETT ST. CROSS SECTION 56

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.80 | 10.04 | 825.54 | 0.00 | 0.00 | 825.72 | 0.18 | 0.04 | 0.02 | 817.70 |
| 3590. | 0. | 3590. | 0. | 0. | 1063. | 0. | 1127. | 188. | 816.80 |
| 2.29 | 0.00 | 3.33 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 815.50 | 1945.00 |
| 0.000479 | 100. | 100. | 100. | 0 | 0 | 0 | 0.00 | 116.00 | 2061.00 |

*SECNO 55.900

3370 NORMAL BRIDGE,NRO= 22 MIN ELTRD= 830.00 MAX ELLC= 828.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

D/S FACE EMMETT ST. CROSS SECTION 56

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.90 | 10.00 | 825.50 | 0.00 | 0.00 | 825.76 | 0.26 | 0.00 | 0.04 | 817.70 |
| 3590. | 0. | 3590. | 0. | 0. | 871. | 0. | 1127. | 188. | 816.60 |
| 2.29 | 0.00 | 4.12 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 815.50 | 1945.00 |
| 0.001193 | 1. | 1. | 1. | 2 | 0 | 0 | -227.73 | 116.00 | 2061.00 |

*SECNO 56.000

3370 NORMAL BRIDGE,NRO= 22 MIN ELTRD= 830.00 MAX ELLC= 828.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

U/S FACE EMMETT ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 56.00 | 10.07 | 825.57 | 0.00 | 0.00 | 825.83 | 0.26 | 0.00 | 0.00 | 817.70 |
| 3590. | 0. | 3590. | 0. | 0. | 876. | 0. | 1128. | 188. | 816.60 |
| 2.29 | 0.00 | 4.10 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 815.50 | 1945.00 |
| 0.001176 | 51. | 51. | 51. | 2 | 0 | 0 | -230.55 | 116.00 | 2061.00 |

*SECNO 56.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

U/S EMMETT ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 56.10 | 10.18 | 825.68 | 0.00 | 0.00 | 825.85 | 0.17 | 0.00 | 0.03 | 817.70 |
| 3590. | 0. | 3590. | 0. | 0. | 1079. | 0. | 1128. | 188. | 816.60 |
| 2.29 | 0.00 | 3.33 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 815.50 | 1945.00 |
| 0.000443 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 116.00 | 2061.00 |

FORM 1411-AB PRINTED BY ROTARY MANIFOLD FORMS.

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*SECNO 56.200
   SECNO     DEPTH     CUSEL     CRIBS     USELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         CLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       HT.       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     XTRIAL    IF2       ICONT     CORAR     TOPWID     ENDST

        100 FT U/S EMMETT ST.

    56.20     11.36    825.76      0.00      0.00    825.90      0.14      0.04      0.01    813.30
    3590.       54.     3359.      177.      104.     1893.      307.     1131.      186.    816.80
     2.30      0.52      3.07      0.58     0.120     0.040     0.120     0.038    814.40   1908.99
 0.000321      100.      100.      100.         0         0         0      0.00    224.53   2133.51

*SECNO 56.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      835.00 ELREA=      835.00

        D/S VERONA DAM CROSS SECTION 57

    56.90      9.79    825.39      0.00      0.00    826.06      0.17      0.14      0.02    827.80
    3590.        0.     3590.        0.        0.     1092.        0.     1141.      190.    826.80
     2.33      0.00      3.29      0.00     0.120     0.040     0.120     0.038    816.10   2237.20
 0.000313      350.      350.      350.         0         0         0      0.00    126.72   2362.92

SPECIAL BRIDGE

SB  XX        XKOR      COFQ      ROLEN     SMC       SMP       BAREA     SS        ELCHU     ELCHD
     0.00      1.50      3.50      0.00     10.00      0.00      0.10      0.00    816.10    816.10

*SECNO 57.000
PRESSURE AND WEIR FLOW

 EGPRS      EGLLC      H3       QWEIR      QPR       BAREA    TRAPEZOID      ELLC      ELTRD
                                                                AREA
**********   826.06     0.00     3622.       1.        0.        1.       816.20    823.90

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      835.00 ELREA=      835.00

        AT VERONA DAM

    57.00     11.84    827.94      0.00      0.00    828.05      0.11      2.00      0.00    827.80
    3590.        0.     3590.        0.        0.     1350.        0.     1142.      190.    826.80
     2.33      0.00      2.66      0.00     0.120     0.040     0.120     0.038    816.10   2237.00
 0.000261        4.        4.        4.         2         0         8      0.00    126.00   2363.00

*SECNO 57.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      835.00 ELREA=      835.00

        U/S VERONA DAM
```

```
    57.10      4.73    827.73      0.00      0.00    828.33      0.60      0.03      0.24    827.80
    3590.        0.     3590.        0.        0.      580.        0.     1143.      190.    826.80
     2.33      0.00      6.19      0.00     0.120     0.040     0.120     0.038    623.00   2237.01
 0.003882       50.       50.       50.         2         0         0      0.00    125.99   2363.00

CCHV=   0.100 CEHV=   0.300
*SECNO 201.000

3301 HV CHANGED MORE THAN KVINS

        SURVEY VALLEY SECTION 201

   201.00     13.48    828.58      0.00      0.00    828.62      0.04      0.23      0.06    825.00
    3590.       65.     3463.       62.      337.     2062.      321.     1173.      196.    823.80
     2.40      0.25      1.67      0.19     0.120     0.040     0.120     0.038    813.10   1793.95
 0.000091       350.      850.      850.         2         0         0      0.00    516.29   2310.24

*SECNO 202.000
   SECNO     DEPTH      USEL     CHINS     [illegible]     EO        HV        HL        GLOBS    BANK ELEV
   C         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XICL      XNR       ITA       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID      ENDST

        SURVEY VALLEY SECTION 202

   202.00     15.01    828.71      0.00      0.00    828.76      0.05      0.14      0.00    825.00
    3590.        5.     3562.       23.       24.     2000.      112.     1247.      209.    824.40
     2.68      0.21      1.78      0.21     0.120     0.040     0.120     0.038    813.70   1633.80
 0.000133     1300.     1300.     1300.         2         0         0      0.00    320.14   1953.94

*SECNO 203.000

        SURVEY VALLEY SECTION 203

   203.00     10.73    829.03      0.00      0.00    829.03      0.05      0.31      0.00    823.90
    3590.       10.     3490.       90.       41.     1944.      424.     1370.      228.    824.30
     3.08      0.25      1.79      0.21     0.120     0.040     0.120     0.038    818.30   1879.11
 0.000121     2500.     2500.     1300.         2         0         0      0.00    506.51   2385.62

*SECNO 204.000

        SURVEY VALLEY SECTION 204

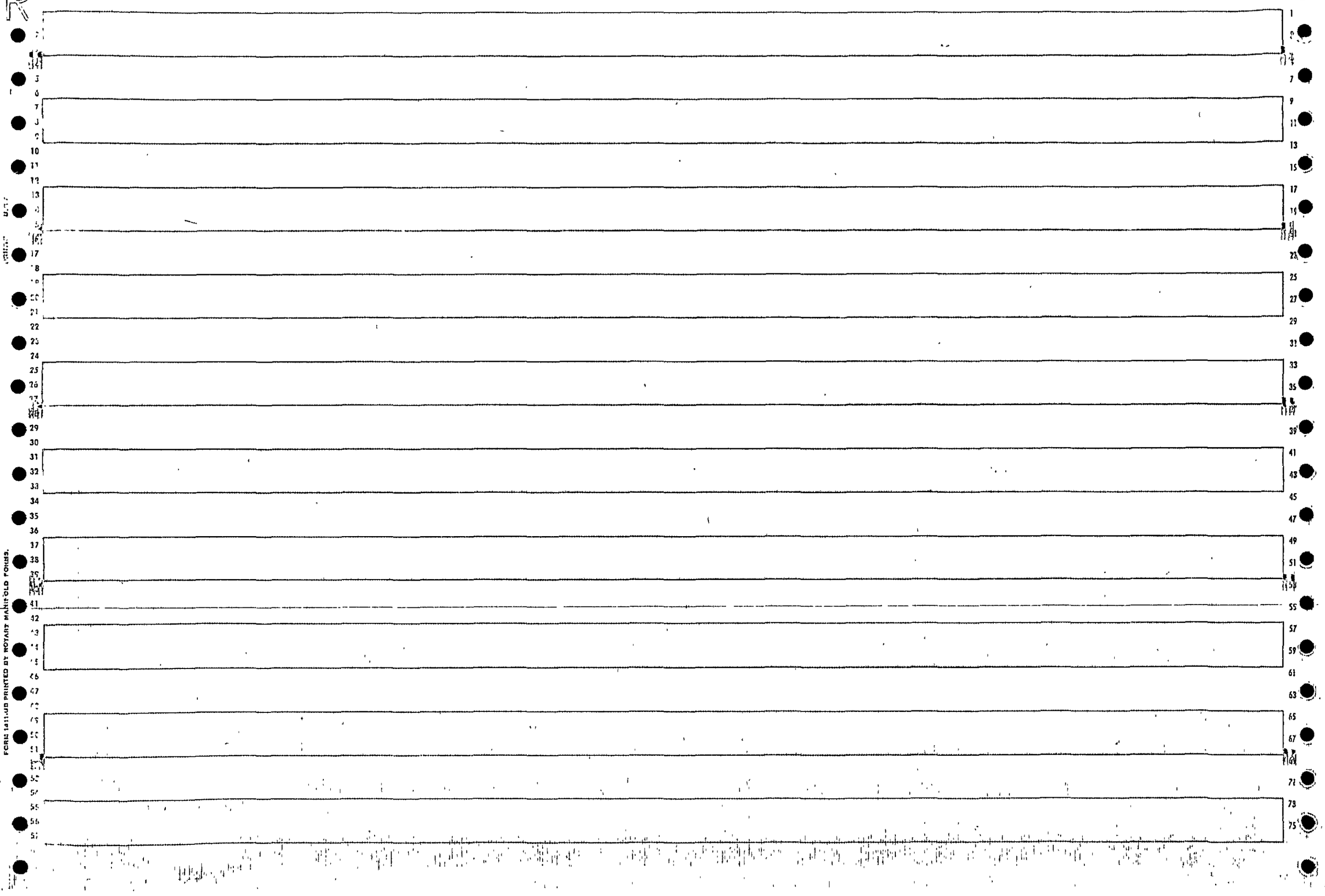
   204.00     12.48    829.18      0.00      0.00    829.24      0.05      0.16      0.00    822.90
    3590.        9.     3463.      113.       32.     1826.      379.     1434.      240.    826.10
     3.26      0.29      1.90      0.30     0.120     0.040     0.120     0.038    816.70   2458.95
 0.000149     1200.     1200.     1200.         0         0         0      0.00    385.16   2844.11

*SECNO 205.000

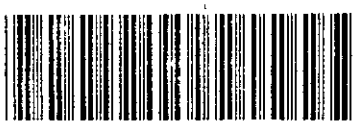
        SURVEY VALLEY SECTION 205

   205.00     12.08    829.38      0.00      0.00    829.39      0.01      0.15      0.00    824.80
    3590.       11.     2464.     1115.       56.     2175.     4655.     1622.      276.    823.80
     3.84      0.20      1.13      0.24     0.120     0.040     0.120     0.038    817.30   2230.33
```

0.000353 1130. 1800. 1800. 1 0 0 0.00 1348.96 3579.29



FORM 1411.UD PRINTED BY ROTARY MANIFOLD FORMS.




1) COUNTY: Calhoun

2) STUDY NAME: City of Battle Creek and Pennfield Twp

3) WATERCOURSE: Battle creek River

4) DOCUMENT TYPE: input & 100 yr natual



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*****************************************************
  WEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR - 01
  MODIFICATION - 30,51,52
*****************************************************

C
T1CITY OF BATTLE CREEK/PENNFIELD TOWNSHIP FLOOD INSURANCE STUDY
T2BATTLE CREEK RIVER FROM ITS CONFLUENCE TO MC ALLISTER ST. BRIDGE
T3       BATTLE CREEK RIVER

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FN
       0.       4.       0.       0.  0.000000     0.00     0.0      0.   807.800    1.000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     1.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000   15.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    110.000  150.000  200.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000

QT      5.000  2360.000  3600.000  4200.000  4200.000  5800.000  3590.000     0.000     0.000     0.000
MC      0.080     0.000     0.035     0.300     0.300     0.000     0.000     0.000     0.000     0.000

        SURVEY VALLEY SECTION AT CONFLUENCE TO KALAMAZOO RIVER

X1     23.000    11.000    30.000   184.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    813.800     0.000   804.000    30.000   803.900    44.000   804.000    59.000   803.800    80.000
GR    802.200   122.000   802.800   147.000   806.700   163.000   803.300   173.000   803.700   184.000
GR    816.100   215.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

        SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

X1     23.900     8.000    15.000   175.000   675.000   675.000   675.000     0.000     0.000     0.000
GR    821.700     0.000   807.300    15.000   805.000    44.000   803.200    78.000   803.900   112.000
GR    807.200   146.000   808.000   175.000   821.600   191.000     0.000     0.000     0.000     0.000
SB      0.000     1.500     2.640     0.000    10.000     0.000     0.100     0.000   803.200   803.200

        SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

X1     24.000     0.000     0.000     0.000     3.000     3.000     3.000     0.000     0.000     0.000
X2      0.000     0.000     1.000   803.300   808.600     0.000     0.000     0.000     0.000     0.000
BT      8.000     0.000   821.700     0.000    15.000   808.600     0.000    44.000   808.600     0.000
BT     78.000   808.600   803.300   112.000   808.600     0.000   146.000   808.600     0.000   175.000
BT    808.600     0.000   191.000   821.600     0.000     0.000     0.000     0.000     0.000     0.000

        D/S WASHINGTON AVE. SURVEY SECTION 25

X1     24.000    21.000     0.500   167.500    11.000    11.000    11.000     0.000     0.000     0.000
GR    822.000     0.000   822.000     0.500   808.600     0.000   808.600    30.000   808.600    30.100
GR    808.600    35.900   808.600    36.000   808.600    64.000   808.600    64.100   808.600    69.900
GR    808.600    70.000   808.600    98.000   808.600    98.100   808.600   103.900   808.600   104.000
GR    808.600   132.000   808.600   132.100   808.600   137.900   808.600   138.000   808.600   167.400
GR    822.000   167.500     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

D/S FACE WASHINGTON AVE. SURVEY SECTION 25

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 24.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 21.000 | 0.000 | 822.000 | 0.000 | 0.500 | 822.000 | 0.000 | 0.000 | 822.000 | 819.400 |
| BT | 35.000 | 822.000 | 819.400 | 39.100 | 822.000 | 0.000 | 35.900 | 822.000 | 0.000 | 36.000 |
| BT | 822.000 | 819.400 | 64.000 | 822.000 | 819.400 | 64.100 | 822.000 | 0.000 | 69.900 | 822.000 |
| BT | 0.000 | 70.000 | 822.000 | 819.400 | 98.000 | 822.000 | 819.400 | 98.100 | 822.000 | 0.000 |
| BT | 103.900 | 822.000 | 0.000 | 104.000 | 822.000 | 819.400 | 132.000 | 822.000 | 819.400 | 132.100 |
| BT | 822.000 | 0.000 | 137.900 | 822.000 | 0.000 | 137.000 | 822.000 | 819.400 | 167.400 | 822.000 |
| BY | 819.400 | 167.500 | 822.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE WASHINGTON AVE. SURVEY SECTION 25

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.000 | 0.000 | 0.000 | 0.000 | 66.000 | 66.000 | 66.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

U/S WASHINGTON AVE. SURVEY SECTION 25

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 25.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 26

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 26.000 | 10.000 | 22.000 | 116.000 | 135.000 | 135.000 | 135.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.500 | 0.000 | 814.000 | 0.000 | 808.600 | 22.000 | 807.000 | 46.000 | 803.000 | 78.000 |
| GR | 807.800 | 92.000 | 808.700 | 116.000 | 811.000 | 124.000 | 813.700 | 144.000 | 817.600 | 144.000 |
| NC | 0.100 | 0.100 | 0.035 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 26.000 | 21.000 | 1.000 | 190.000 | 135.000 | 135.000 | 135.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.000 | 0.000 | 825.000 | 1.000 | 813.300 | 2.000 | 809.100 | 18.000 | 809.300 | 44.000 |
| GR | 809.300 | 44.100 | 809.300 | 49.900 | 809.300 | 50.000 | 807.400 | 74.000 | 809.000 | 92.000 |
| GR | 809.000 | 92.100 | 809.000 | 97.900 | 809.000 | 98.000 | 807.300 | 122.000 | 808.700 | 139.000 |
| GR | 809.700 | 142.000 | 809.700 | 142.100 | 810.600 | 147.900 | 810.600 | 148.000 | 814.100 | 189.000 |
| GR | 825.000 | 190.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 26.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 17.000 | 0.000 | 825.000 | 0.000 | 1.000 | 825.000 | 0.000 | 2.000 | 825.000 | 818.000 |
| BT | 44.000 | 825.000 | 818.800 | 44.100 | 825.000 | 0.000 | 49.900 | 825.000 | 0.000 | 50.000 |
| BT | 825.000 | 818.800 | 92.000 | 825.000 | 818.800 | 92.100 | 825.000 | 0.000 | 92.900 | 825.000 |
| BT | 0.000 | 98.000 | 825.000 | 818.800 | 142.000 | 825.000 | 818.800 | 142.100 | 825.000 | 0.000 |
| BT | 147.900 | 825.000 | 0.000 | 148.000 | 825.000 | 818.800 | 189.000 | 825.000 | 818.800 | 190.000 |
| BT | 825.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.000 | 0.000 | 0.000 | 0.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

U/S PENN CENTRAL RAILROAD SURVEY SECTION 27

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 27.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

PRINTED IN U.S.A.
FORM 1411-OD-PRINTED BY ROYARY MANIFOLD FORMS

SURVEY VALLEY SECTION 28

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.000 | 7.000 | 1041.000 | 1129.000 | 250.000 | 250.000 | 250.000 | 0.000 | 0.000 | 0.000 |
| GR | 819.900 | 1014.000 | 805.000 | 1041.000 | 807.800 | 1055.000 | 807.600 | 1078.000 | 808.200 | 1105.000 |
| GR | 809.400 | 1129.000 | 818.000 | 1158.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S BARNEY STD FOOTBRIDGE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.000 | 11.000 | 1.000 | 141.000 | 300.000 | 300.000 | 300.000 | 0.000 | 0.000 | 0.000 |
| GR | 822.000 | 0.000 | 822.000 | 1.000 | 818.600 | 2.000 | 808.500 | 26.000 | 808.500 | 70.250 |
| GR | 808.500 | 70.260 | 808.500 | 71.240 | 808.500 | 71.250 | 810.500 | 110.000 | 818.700 | 140.000 |
| GR | 822.000 | 141.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 28.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 1.000 |
| BT | 9.000 | 0.000 | 822.000 | 0.000 | 1.000 | 822.000 | 0.000 | 2.000 | 822.000 | 818.600 |
| BT | 70.250 | 824.500 | 821.600 | 70.260 | 824.500 | 0.000 | 71.240 | 824.500 | 0.000 | 71.250 |
| BT | 824.500 | 821.600 | 140.000 | 822.000 | 818.700 | 141.000 | 822.000 | 0.000 | 0.000 | 0.000 |

U/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.000 | 0.000 | 0.000 | 0.000 | 6.000 | 6.000 | 6.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

U/S BARNEY ST FOOTBRIDGE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 29

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.200 | 0.000 | 0.000 | 0.000 | 90.000 | 90.000 | 90.000 | 0.000 | 0.000 | 0.000 |

D/S JACKSON AVE. CROSS SECTION 30

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.800 | 15.000 | 1.000 | 157.000 | 90.000 | 90.000 | 90.000 | 0.000 | 0.000 | 0.000 |
| GR | 822.100 | 0.000 | 816.000 | 1.000 | 810.000 | 29.000 | 807.900 | 63.000 | 807.900 | 63.100 |
| GR | 807.900 | 64.900 | 807.900 | 65.000 | 807.600 | 79.000 | 808.900 | 110.000 | 808.900 | 110.100 |
| GR | 808.900 | 111.900 | 808.900 | 112.000 | 809.300 | 139.000 | 816.000 | 157.000 | 822.100 | 158.000 |

D/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 29.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 12.000 | 0.000 | 822.100 | 0.000 | 1.000 | 822.100 | 819.000 | 63.000 | 822.100 | 819.000 |
| BT | 63.100 | 822.100 | 0.000 | 64.900 | 822.100 | 0.000 | 65.000 | 822.100 | 819.000 | 110.000 |
| BT | 822.100 | 819.000 | 110.100 | 822.100 | 0.000 | 111.900 | 822.100 | 0.000 | 112.000 | 822.100 |
| BT | 819.000 | 157.000 | 822.100 | 819.000 | 158.000 | 822.100 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 30.000 | 0.000 | 0.000 | 0.000 | 54.000 | 54.000 | 54.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

U/S JACKSON AVE. CROSS SECTION 30

FORM 1811-CO-PRINTED BY ROTARY MANIFOLD FORMS
PRINTED IN U.S.A.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 30.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.500 |
| NC | 0.120 | 0.120 | 0.035 | 0.500 | 0.800 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 3+

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.000 | 9.000 | 924.000 | 1016.000 | 60.000 | 30.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| GR | 819.200 | 899.000 | 810.600 | 924.000 | 811.200 | 943.000 | 809.700 | 960.000 | 809.100 | 973.000 |
| GR | 807.600 | 988.000 | 806.700 | 1003.000 | 809.200 | 1016.000 | 820.000 | 1045.000 | 0.000 | 0.000 |

D/S STRUCTURE OVER BATTLE CREEK RIVER STA.2+76.3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.100 | 22.000 | 1.000 | 123.000 | 90.000 | 90.000 | 90.000 | 0.000 | 0.000 | 0.000 |
| GR | 820.000 | 0.000 | 817.600 | 1.000 | 811.600 | 1.100 | 811.300 | 12.500 | 811.300 | 12.600 |
| GR | 811.300 | 13.400 | 811.300 | 13.500 | 810.700 | 28.500 | 810.700 | 29.600 | 810.700 | 29.600 |
| GR | 810.700 | 29.500 | 810.500 | 44.500 | 810.500 | 44.600 | 810.500 | 45.400 | 810.500 | 45.500 |
| GR | 809.300 | 60.500 | 809.300 | 60.600 | 809.300 | 61.400 | 809.300 | 61.500 | 809.300 | 92.000 |
| GR | 809.300 | 122.900 | 820.000 | 123.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

STRUCTURE OVER BATTLE CREEK STA.2+74.3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 21.000 | 0.000 | 820.000 | 0.000 | 1.000 | 820.000 | 0.000 | 1.100 | 820.000 | 817.600 |
| BT | 12.500 | 820.000 | 817.600 | 12.600 | 820.000 | 0.000 | 13.400 | 820.000 | 0.000 | 13.500 |
| BT | 820.000 | 817.600 | 28.500 | 820.000 | 817.600 | 28.600 | 820.000 | 0.000 | 29.600 | 820.000 |
| BT | 0.000 | 29.500 | 820.000 | 817.600 | 44.500 | 820.000 | 817.600 | 44.600 | 820.000 | 0.000 |
| BT | 45.400 | 820.000 | 0.000 | 45.500 | 820.000 | 817.600 | 60.500 | 820.000 | 817.600 | 60.600 |
| BT | 820.000 | 0.000 | 61.400 | 820.000 | 0.000 | 61.500 | 820.000 | 817.600 | 122.900 | 820.000 |
| BT | 817.600 | 123.000 | 820.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.300 | 0.000 | 0.000 | 0.000 | 56.000 | 56.000 | 56.000 | 0.000 | 0.500 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.400 | 22.000 | 1.000 | 123.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 22.000 | 0.000 | 822.000 | 0.000 | 1.000 | 822.000 | 0.000 | 1.100 | 822.000 | 819.700 |
| BT | 11.500 | 822.000 | 819.700 | 11.600 | 822.000 | 0.000 | 12.400 | 822.000 | 0.000 | 12.500 |
| BT | 822.000 | 819.700 | 22.500 | 822.000 | 819.700 | 22.600 | 822.000 | 0.000 | 23.400 | 822.000 |
| BT | 0.000 | 23.500 | 822.000 | 819.700 | 33.500 | 822.000 | 819.700 | 33.600 | 822.000 | 0.000 |
| BT | 34.400 | 822.000 | 0.000 | 34.500 | 822.000 | 819.700 | 44.500 | 822.000 | 819.700 | 44.600 |
| BT | 822.000 | 0.000 | 45.400 | 822.000 | 0.000 | 45.500 | 822.000 | 819.700 | 92.000 | 822.000 |
| BT | 819.700 | 122.900 | 822.000 | 819.700 | 123.000 | 822.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 822.000 | 0.000 | 819.700 | 1.000 | 811.300 | 1.100 | 811.300 | 11.500 | 811.300 | 11.600 |
| GR | 811.300 | 12.400 | 811.300 | 12.500 | 811.300 | 22.500 | 811.300 | 22.600 | 811.300 | 23.400 |
| GR | 811.300 | 23.500 | 811.300 | 33.500 | 811.300 | 33.600 | 811.300 | 34.400 | 811.300 | 34.500 |
| GR | 809.800 | 44.500 | 809.800 | 44.600 | 809.800 | 45.400 | 809.800 | 45.500 | 809.800 | 92.000 |
| GR | 809.800 | 122.900 | 822.000 | 123.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.500 | 22.000 | 1.000 | 102.000 | 105.000 | 105.000 | 105.000 | 0.000 | 0.000 | 0.000 |
| BT | 22.000 | 0.000 | 822.000 | 0.000 | 1.000 | 822.000 | 0.000 | 1.100 | 822.000 | 819.700 |
| BT | 11.500 | 822.000 | 819.700 | 11.600 | 822.000 | 0.000 | 12.400 | 822.000 | 0.000 | 12.500 |
| BT | 822.000 | 819.700 | 22.500 | 822.000 | 819.700 | 22.600 | 822.000 | 0.000 | 23.400 | 822.000 |
| BT | 0.000 | 23.500 | 822.000 | 819.700 | 33.500 | 822.000 | 819.700 | 33.600 | 822.000 | 0.000 |

FORM 1611 3D-PRINTED BY BURLEY MAP-FOLD FORMS

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BT | 34.400 | 822.000 | 0.000 | 34.500 | 822.000 | 819.700 | 44.500 | 822.000 | 819.700 | 44.600 |
| BT | 822.000 | 0.000 | 45.400 | 822.000 | 0.000 | 45.500 | 822.000 | 819.700 | 73.000 | 822.000 |
| BT | 819.700 | 101.900 | 822.000 | 819.700 | 102.000 | 822.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 822.000 | 0.000 | 821.600 | 1.000 | 812.000 | 1.100 | 812.000 | 11.500 | 812.000 | 11.600 |
| GR | 812.000 | 12.400 | 812.000 | 12.500 | 812.000 | 22.500 | 812.000 | 22.600 | 812.000 | 23.400 |
| GR | 812.000 | 23.500 | 812.000 | 33.500 | 812.000 | 33.600 | 812.000 | 34.400 | 812.000 | 34.500 |
| GR | 810.500 | 44.500 | 810.500 | 44.600 | 810.500 | 45.400 | 810.500 | 65.500 | 809.300 | 73.000 |
| GR | 810.500 | 101.900 | 822.000 | 102.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.600 | 37.000 | 1.000 | 102.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 37.000 | 0.000 | 822.000 | 0.000 | 1.000 | 822.000 | 0.000 | 1.100 | 822.000 | 821.000 |
| BT | 11.500 | 822.000 | 821.000 | 11.600 | 822.000 | 0.000 | 12.400 | 822.000 | 0.000 | 12.500 |
| BT | 822.000 | 821.000 | 22.500 | 822.000 | 821.000 | 22.600 | 822.000 | 0.000 | 23.400 | 822.000 |
| BT | 0.000 | 23.500 | 822.000 | 821.000 | 33.500 | 822.000 | 821.000 | 33.600 | 822.000 | 0.000 |
| BT | 34.400 | 822.000 | 0.000 | 34.500 | 822.000 | 821.000 | 44.500 | 822.000 | 821.000 | 44.600 |
| BT | 822.000 | 0.000 | 45.600 | 822.000 | 0.000 | 45.500 | 822.000 | 821.000 | 66.500 | 822.000 |
| BT | 821.000 | 66.600 | 822.000 | 0.000 | 67.400 | 822.000 | 0.000 | 67.500 | 822.000 | 821.000 |
| BT | 69.500 | 822.000 | 821.000 | 69.600 | 822.000 | 0.000 | 70.400 | 822.000 | 0.000 | 70.500 |
| BT | 822.000 | 821.000 | 79.500 | 822.000 | 821.000 | 79.600 | 822.000 | 0.000 | 80.400 | 822.000 |
| BT | 0.000 | 80.500 | 822.000 | 821.000 | 95.500 | 822.000 | 821.000 | 95.600 | 822.000 | 0.000 |
| BT | 96.600 | 822.000 | 0.000 | 96.500 | 822.000 | 821.000 | 101.900 | 822.000 | 821.000 | 102.000 |
| BT | 822.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 822.000 | 0.000 | 822.000 | 1.000 | 812.800 | 1.100 | 812.000 | 11.500 | 812.000 | 11.600 |
| GR | 812.000 | 12.400 | 812.000 | 12.500 | 812.000 | 22.500 | 812.000 | 22.600 | 812.000 | 23.400 |
| GR | 812.000 | 23.500 | 812.000 | 33.500 | 812.000 | 33.600 | 812.000 | 34.400 | 812.000 | 34.500 |
| GR | 812.000 | 44.500 | 812.000 | 44.600 | 812.000 | 45.600 | 812.000 | 45.500 | 810.400 | 66.500 |
| GR | 810.400 | 66.600 | 810.400 | 67.400 | 810.400 | 67.500 | 810.400 | 69.500 | 810.400 | 69.600 |
| GR | 810.400 | 70.400 | 810.400 | 70.500 | 809.200 | 79.500 | 809.200 | 79.600 | 809.200 | 80.400 |
| GR | 809.200 | 80.500 | 810.000 | 95.500 | 810.000 | 95.600 | 810.000 | 96.400 | 810.000 | 96.500 |
| GR | 810.400 | 101.900 | 822.000 | 102.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

STRUCTURE OVER BATTLE CREEK STA.1+68.5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 31.700 | 0.000 | 0.000 | 0.000 | 47.000 | 47.000 | 47.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

D/S FACE MICHIGAN AVE. SURVEY SECTION 33

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 32.900 | 11.000 | 1.000 | 111.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 11.000 | 0.000 | 823.000 | 0.000 | 1.000 | 823.000 | 0.000 | 1.100 | 823.000 | 816.000 |
| BT | 27.000 | 823.000 | 820.600 | 52.000 | 823.000 | 816.000 | 52.100 | 823.000 | 0.000 | 57.900 |
| BT | 823.000 | 0.000 | 58.000 | 823.000 | 816.000 | 31.000 | 823.000 | 820.900 | 110.900 | 823.000 |
| BT | 816.800 | 111.000 | 823.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 823.000 | 0.000 | 823.000 | 1.000 | 813.200 | 1.100 | 810.400 | 27.000 | 809.700 | 52.000 |
| GR | 809.700 | 52.100 | 810.400 | 57.900 | 810.400 | 58.000 | 809.800 | 81.000 | 813.800 | 110.900 |
| GR | 823.000 | 111.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE MICHIGAN AVE. SURVEY SECTION 33

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 33.000 | 0.000 | 0.000 | 0.000 | 70.000 | 70.000 | 70.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

U/S MICHIGAN AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 33.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 34.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 34.000 | 6.000 | 692.000 | 773.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 822.200 | 607.000 | 814.300 | 692.000 | 814.200 | 711.000 | 811.800 | 719.000 | 810.200 | 736.000 |
| GR | 810.100 | 761.000 | 811.200 | 773.000 | 823.100 | 795.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 35

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.000 | 8.000 | 581.000 | 679.000 | 600.000 | 600.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| GR | 825.000 | 579.000 | 812.300 | 581.000 | 812.200 | 605.000 | 812.600 | 630.000 | 812.100 | 655.000 |
| GR | 813.100 | 679.000 | 815.000 | 688.000 | 825.300 | 689.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S MC CALMLY AVE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.800 | 15.000 | 1.000 | 111.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 826.000 | 0.000 | 826.000 | 1.000 | 813.200 | 1.100 | 812.300 | 12.000 | 812.300 | 27.000 |
| GR | 812.300 | 42.000 | 812.300 | 53.000 | 812.300 | 58.900 | 812.200 | 59.000 | 812.200 | 56.000 |
| GR | 812.200 | 70.000 | 812.200 | 85.000 | 812.200 | 100.000 | 812.800 | 110.900 | 826.000 | 111.000 |

D/S FACE MC CALMLY AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 35.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 15.000 | 0.000 | 826.000 | 0.000 | 1.000 | 826.000 | 0.000 | 1.100 | 826.000 | 817.300 |
| BT | 12.000 | 826.000 | 822.600 | 27.000 | 826.000 | 823.100 | 42.000 | 826.000 | 822.600 | 53.000 |
| BT | 826.000 | 817.300 | 53.100 | 826.000 | 0.000 | 58.900 | 826.000 | 0.000 | 59.000 | 826.000 |
| BT | 817.300 | 70.000 | 826.000 | 822.600 | 85.000 | 826.000 | 823.100 | 100.000 | 826.300 | 822.600 |
| BT | 110.900 | 826.000 | 817.300 | 111.000 | 826.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE MC CALMLY AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 36.000 | 0.000 | 0.000 | 0.000 | 65.000 | 65.000 | 65.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

D/S FACE PARKING LOT BRIDGE CROSS SECTION 37

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 36.100 | 11.000 | 1.000 | 111.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 9.000 | 0.000 | 827.000 | 0.000 | 1.000 | 827.000 | 0.000 | 1.100 | 827.000 | 823.300 |
| BT | 55.000 | 827.000 | 823.300 | 55.100 | 827.000 | 0.000 | 56.900 | 827.000 | 0.000 | 57.000 |
| BT | 827.000 | 823.300 | 110.900 | 827.000 | 823.300 | 111.000 | 827.000 | 0.000 | 0.000 | 0.000 |
| GR | 827.000 | 0.000 | 827.000 | 1.000 | 813.200 | 1.100 | 812.300 | 12.000 | 812.300 | 55.000 |
| GR | 812.300 | 55.100 | 812.300 | 56.900 | 812.300 | 57.000 | 812.300 | 100.000 | 812.800 | 110.900 |
| GR | 827.000 | 111.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE PARKING LOT BRIDGE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 36.200 | 9.000 | 1.000 | 71.000 | 74.000 | 74.000 | 74.000 | 0.000 | 0.000 | 0.000 |
| BT | 9.000 | 0.000 | 827.000 | 0.000 | 1.000 | 827.000 | 0.000 | 1.100 | 827.000 | 823.300 |
| BT | 35.000 | 827.000 | 823.300 | 35.100 | 827.000 | 0.000 | 36.900 | 827.000 | 0.000 | 37.000 |
| BT | 827.000 | 823.300 | 70.900 | 827.000 | 823.300 | 71.000 | 827.000 | 0.000 | 0.000 | 0.000 |
| GR | 827.000 | 0.000 | 812.300 | 1.000 | 812.300 | 1.100 | 812.300 | 35.000 | 812.300 | 35.100 |
| GR | 812.300 | 36.900 | 812.300 | 37.000 | 812.300 | 70.900 | 827.000 | 71.000 | 0.000 | 0.000 |

D/S FACE PARKING LOT STRUCTURE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 36.300 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 9.000 | 0.000 | 827.000 | 0.000 | 1.000 | 827.000 | 0.000 | 1.100 | 827.000 | 823.300 |
| BT | 70.900 | 827.000 | 823.300 | 71.000 | 827.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE PARKING LOT STRUCTURE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 37.000 | 0.000 | 0.000 | 0.000 | 570.000 | 570.000 | 570.000 | 0.000 | -0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

U/S PARKING LOT STRUCTURE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 37.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.200 | 0.500 |
| XC | 0.120 | 0.120 | 0.030 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.200 | 0.000 |

D/S BUILDING OVER RIVER D/S CAPITAL AVE CROSS SECTION 38

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 37.000 | 17.000 | 1.000 | 58.000 | 113.000 | 115.000 | 115.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 0.000 | 830.000 | 1.000 | 809.900 | 1.100 | 210.400 | 13.000 | 810.400 | 13.000 |
| GR | 810.400 | 16.900 | 810.500 | 15.000 | 809.000 | 29.000 | 809.000 | 29.100 | 809.000 | 30.000 |
| GR | 809.000 | 31.000 | 811.000 | 45.000 | 811.000 | 45.100 | 811.000 | 46.900 | 811.000 | 47.000 |
| GR | 814.400 | 57.900 | 830.000 | 58.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 37.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 17.000 | 0.000 | 830.000 | 0.000 | 1.000 | 830.000 | 0.000 | 1.100 | 830.000 | 823.800 |
| BT | 13.000 | 830.000 | 823.800 | 13.100 | 830.000 | 0.000 | 14.900 | 830.000 | 0.000 | 15.000 |
| BT | 830.000 | 823.800 | 29.000 | 830.000 | 823.800 | 29.100 | 830.000 | 0.000 | 30.900 | 830.000 |
| BT | 0.000 | 31.000 | 830.000 | 823.800 | 45.000 | 830.000 | 823.800 | 45.100 | 830.000 | 0.000 |
| BT | 46.900 | 830.000 | 0.000 | 47.000 | 830.000 | 823.800 | 57.900 | 830.000 | 823.800 | 58.000 |
| BT | 830.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 38.000 | 17.000 | 1.000 | 82.000 | 66.000 | 66.000 | 66.000 | 0.000 | 0.000 | 0.000 |
| BT | 17.000 | 0.000 | 830.000 | 0.000 | 1.000 | 830.000 | 0.000 | 1.100 | 830.000 | 823.800 |
| BT | 18.000 | 830.000 | 823.800 | 18.100 | 830.000 | 0.000 | 19.900 | 830.000 | 0.000 | 20.000 |
| BT | 830.000 | 823.800 | 41.000 | 830.000 | 823.800 | 41.100 | 830.000 | 0.000 | 42.900 | 830.000 |
| BT | 0.000 | 43.000 | 830.000 | 823.800 | 64.000 | 830.000 | 823.800 | 64.100 | 830.000 | 0.000 |
| BT | 65.900 | 830.000 | 0.000 | 66.000 | 830.000 | 823.800 | 81.900 | 830.000 | 823.800 | 82.000 |
| BT | 830.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 0.000 | 830.000 | 1.000 | 815.500 | 1.100 | 814.000 | 18.000 | 814.000 | 18.100 |
| GR | 814.000 | 19.900 | 814.000 | 20.000 | 812.400 | 41.000 | 812.400 | 41.100 | 812.400 | 42.900 |
| GR | 812.400 | 43.000 | 809.500 | 64.000 | 809.500 | 64.100 | 809.500 | 65.900 | 809.500 | 66.000 |
| GR | 813.700 | 81.900 | 830.000 | 82.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE CAPITAL AVE. CROSS SECTION 39

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 38.900 | 15.000 | 1.000 | 82.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| BT | 13.000 | 0.000 | 825.500 | 0.000 | 1.000 | 825.500 | 0.000 | 1.100 | 825.500 | 823.100 |
| BT | 28.000 | 825.500 | 823.100 | 28.100 | 825.500 | 0.000 | 31.400 | 825.500 | 0.000 | 31.500 |
| BT | 825.500 | 823.100 | 56.000 | 825.500 | 823.100 | 56.100 | 825.500 | 0.000 | 61.600 | 825.500 |
| BT | 0.000 | 61.500 | 825.500 | 823.100 | 81.900 | 825.500 | 823.100 | 82.000 | 825.500 | 0.000 |
| GR | 825.500 | 0.000 | 825.500 | 1.000 | 815.500 | 1.100 | 815.700 | 23.000 | 814.000 | 28.000 |
| GR | 814.000 | 28.100 | 814.000 | 31.400 | 814.000 | 31.500 | 812.400 | 43.000 | 809.500 | 56.000 |
| GR | 809.500 | 56.100 | 809.500 | 61.400 | 809.500 | 61.500 | 813.700 | 81.900 | 825.500 | 82.000 |

U/S FACE CAPITAL AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 39.000 | 0.000 | 0.000 | 0.000 | 66.000 | 66.000 | 66.000 | 0.000 | 0.000 | 0.000 |

FORM 1413-GP-PRINTED BY ROTARY MANIFOLD FORMS

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |

U/S CAPITAL AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 39.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 40

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 40.000 | 9.000 | 847.000 | 916.300 | 165.000 | 165.300 | 165.000 | 0.000 | 0.000 | 0.000 |
| GR | 826.000 | 819.000 | 816.700 | 820.300 | 816.400 | 847.000 | 811.000 | 855.000 | 812.300 | 868.000 |
| GR | 808.300 | 895.000 | 816.900 | 916.000 | 823.900 | 922.000 | 826.600 | 986.800 | 0.000 | 0.000 |

D/S FACE MONROE ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 40.900 | 6.300 | 1.000 | 79.000 | 135.000 | 135.000 | 135.000 | 0.000 | 0.000 | 0.000 |
| GR | 827.400 | 0.000 | 827.400 | 1.000 | 811.100 | 1.100 | 809.300 | 32.000 | 813.700 | 78.500 |
| GR | 827.400 | 79.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 0.000 | 1.620 | 3.000 | 0.000 | 78.100 | 0.100 | 790.000 | 0.000 | 811.600 | 811.600 |

U/S FACE MONROE ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 41.000 | 0.000 | 0.000 | 0.000 | 46.000 | 46.000 | 46.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 821.700 | 827.400 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 6.000 | 0.000 | 827.400 | 0.000 | 1.000 | 827.400 | 0.000 | 1.100 | 827.400 | 821.700 |
| BT | 39.000 | 827.400 | 821.700 | 78.900 | 827.400 | 821.700 | 78.000 | 827.400 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 42

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 42.000 | 9.000 | 724.000 | 841.000 | 225.000 | 225.000 | 225.000 | 0.000 | 0.000 | 0.000 |
| GR | 826.700 | 723.000 | 821.600 | 724.000 | 813.500 | 750.000 | 811.000 | 793.000 | 814.000 | 836.000 |
| GR | 816.200 | 841.000 | 818.200 | 860.000 | 824.200 | 861.000 | 826.800 | 986.000 | 0.000 | 0.000 |

D/S FACE DIVISION ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 43.900 | 11.000 | 1.000 | 33.000 | 225.000 | 225.000 | 225.000 | 0.000 | 0.000 | 0.000 |
| GR | 826.900 | 0.000 | 826.900 | 1.000 | 810.800 | 1.100 | 808.800 | 21.000 | 810.400 | 61.000 |
| GR | 810.600 | 41.100 | 810.400 | 42.900 | 810.400 | 43.000 | 809.500 | 63.000 | 814.100 | 82.900 |
| GR | 826.900 | 83.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 0.900 | 1.740 | 3.000 | 0.000 | 82.000 | 2.000 | 945.000 | 0.000 | 810.300 | 810.300 |

U/S FACE DIVISION ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 44.000 | 0.000 | 0.000 | 0.000 | 76.000 | 76.000 | 76.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 822.100 | 826.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 9.000 | 0.000 | 826.900 | 0.000 | 1.000 | 826.900 | 0.000 | 1.100 | 826.900 | 822.100 |
| BT | 41.000 | 826.900 | 822.100 | 41.100 | 826.900 | 0.000 | 82.900 | 826.900 | 0.000 | 43.000 |
| BT | 826.900 | 822.100 | 82.900 | 826.900 | 822.100 | 83.000 | 826.900 | 0.000 | 0.000 | 0.000 |

D/S FACE PENN CENTRAL R.R.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 44.900 | 16.000 | 1.000 | 93.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 824.000 | 0.000 | 824.000 | 1.000 | 815.700 | 1.100 | 813.100 | 15.000 | 812.200 | 30.000 |
| GR | 812.200 | 32.100 | 812.200 | 33.900 | 812.200 | 34.000 | 810.000 | 47.000 | 812.300 | 62.000 |
| GR | 812.000 | 62.100 | 812.800 | 65.900 | 812.800 | 66.000 | 812.000 | 80.000 | 816.000 | 92.900 |
| GR | 824.000 | 93.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 1.250 | 1.930 | 3.000 | 0.000 | 94.000 | 3.000 | 695.000 | 0.000 | 812.800 | 812.800 |

FORM 441-00-PRINTED BY HO ARY MANIFOLD FORMS.

U/S FACE PENN CENTRAL R.R.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 45.000 | 0.000 | 0.000 | 0.000 | 96.000 | 96.000 | 96.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 820.900 | 824.000 | 1.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 13.000 | 0.000 | 826.000 | 0.000 | 1.000 | 824.000 | 0.000 | 1.100 | 824.000 | 820.900 |
| BT | 30.000 | 824.000 | 820.900 | 30.100 | 824.000 | 0.000 | 33.900 | 824.000 | 0.000 | 34.000 |
| BT | 824.000 | 820.900 | 82.000 | 824.000 | 820.900 | 32.100 | 824.000 | 0.000 | 65.950 | 824.000 |
| BT | 0.000 | 66.000 | 824.000 | 820.900 | 92.900 | 824.000 | 820.900 | 93.000 | 826.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 817.000 | 1110.000 |

100 FT U/S PENN CENTRAL R.R. CROSS SECTION 46

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 46.000 | 10.000 | 928.000 | 1000.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 829.000 | 422.000 | 826.700 | 434.000 | 823.900 | 672.000 | 823.400 | 912.000 | 825.700 | 923.000 |
| GR | 809.800 | 967.000 | 313.500 | 1000.000 | 823.400 | 1012.000 | 825.900 | 1074.000 | 820.100 | 1196.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 1.400 | 5.100 | 0.200 | 0.000 | 1.200 | 543.000 |

VALLEY SECTION

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 46.500 | 10.000 | 215.000 | 315.000 | 700.000 | 700.000 | 700.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 0.000 | 826.000 | 1.000 | 823.000 | 200.000 | 814.000 | 215.000 | 310.500 | 265.000 |
| GR | 814.000 | 315.000 | 823.000 | 330.000 | 825.000 | 400.000 | 827.000 | 660.000 | 330.000 | 661.000 |

100 FT D/S ELM ST. CROSS SECTION 47

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 47.000 | 13.000 | 1439.000 | 1347.000 | 700.000 | 700.000 | 700.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1380.000 | 0.000 | 1605.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 1041.000 | 826.300 | 1042.000 | 825.200 | 1162.000 | 823.200 | 1412.000 | 821.600 | 1419.000 |
| GR | 813.300 | 1439.000 | 812.800 | 1461.000 | 811.300 | 1483.000 | 812.000 | 1513.000 | 814.500 | 1547.000 |
| GR | 826.600 | 1589.000 | 827.900 | 1668.000 | 829.800 | 1700.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE ELM ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 47.900 | 16.000 | 1.000 | 175.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 826.600 | 0.000 | 826.600 | 1.000 | 820.400 | 1.700 | 815.000 | 24.000 | 812.700 | 51.000 |
| GR | 812.700 | 51.100 | 812.700 | 52.900 | 812.700 | 53.000 | 810.600 | 91.000 | 810.700 | 129.000 |
| GR | 810.700 | 129.100 | 810.700 | 130.900 | 810.700 | 131.000 | 815.200 | 140.000 | 819.600 | 174.900 |
| GR | 826.600 | 175.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 0.900 | 1.740 | 3.000 | 0.000 | 174.000 | 4.000 | 1455.000 | 0.000 | 814.000 | 816.000 |

U/S FACE ELM ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 48.000 | 0.000 | 0.000 | 0.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 822.400 | 826.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 13.000 | 0.000 | 826.600 | 0.000 | 1.000 | 826.600 | 0.000 | 1.100 | 826.600 | 822.400 |
| BT | 51.000 | 826.600 | 822.400 | 51.100 | 826.600 | 0.000 | 52.900 | 826.600 | 0.000 | 53.000 |
| BT | 826.600 | 822.400 | 129.000 | 826.600 | 822.400 | 129.100 | 826.600 | 0.000 | 130.900 | 826.600 |
| BT | 0.000 | 131.000 | 826.600 | 822.400 | 174.900 | 826.600 | 822.400 | 175.000 | 826.600 | 0.000 |

D/S DAM 150 FT U/S ELM ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 48.200 | 10.000 | 275.000 | 344.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |
| GR | 829.600 | 0.000 | 827.000 | 250.000 | 819.400 | 250.000 | 815.400 | 263.000 | 810.600 | 275.000 |
| GR | 810.300 | 394.000 | 814.000 | 444.000 | 819.600 | 464.000 | 823.000 | 476.000 | 827.000 | 575.000 |

AT DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 48.300 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 810.300 | 816.500 | 0.200 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 48.400 | 10.000 | 275.000 | 394.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| GR | 829.600 | 0.000 | 827.000 | 200.000 | 819.400 | 250.000 | 816.500 | 243.000 | 815.600 | 275.000 |
| GR | 815.900 | 394.000 | 816.200 | 464.000 | 819.600 | 464.000 | 823.200 | 476.000 | 827.000 | 575.000 |

CROSS SECTION 49A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 48.900 | 3.000 | 370.000 | 470.000 | 520.000 | 520.000 | 520.000 | 0.000 | 0.000 | 0.000 |
| GR | 829.000 | 0.000 | 819.000 | 0.000 | 819.000 | 350.000 | 815.000 | 370.000 | 814.000 | 420.000 |
| GR | 815.000 | 470.000 | 819.000 | 490.000 | 829.000 | 520.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY CROSS SECTION 49

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 49.000 | 15.000 | 803.000 | 985.000 | 650.000 | 650.300 | 650.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 851.300 | 0.000 | 1279.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 650.000 | 826.300 | 651.000 | 825.200 | 855.000 | 820.600 | 865.000 | 819.500 | 871.000 |
| GR | 817.300 | 883.000 | 803.300 | 905.000 | 811.400 | 930.000 | 814.200 | 955.000 | 815.100 | 985.000 |
| GR | 816.600 | 991.000 | 817.200 | 1055.000 | 819.500 | 1113.000 | 825.800 | 1125.000 | 829.200 | 1272.000 |

D/S FACE UNION ST. CROSS SECTION 50

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 49.900 | 20.000 | 1.000 | 117.500 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 826.900 | 826.900 | 0.000 |
| GR | 826.900 | 0.000 | 826.900 | 1.000 | 816.900 | 1.100 | 815.300 | 14.000 | 814.600 | 27.500 |
| GR | 814.600 | 27.600 | 816.600 | 30.900 | 814.600 | 31.000 | 812.900 | 44.000 | 812.900 | 57.000 |
| GR | 812.900 | 57.100 | 812.900 | 60.600 | 812.900 | 60.500 | 815.300 | 87.500 | 815.300 | 87.600 |
| GR | 815.300 | 90.900 | 815.300 | 91.000 | 816.500 | 104.000 | 817.400 | 117.400 | 826.900 | 117.500 |
| SB | 0.900 | 1.750 | 3.000 | 0.000 | 116.500 | 10.500 | 1125.000 | 0.000 | 813.900 | 813.900 |

825.98
Q = 4200

D/S FACE UNION ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 50.000 | 0.000 | 0.000 | 0.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 824.500 | 826.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 826.900 | 826.900 | 0.000 |
| BT | 17.000 | 0.000 | 826.900 | 0.000 | 1.000 | 826.900 | 0.000 | 1.100 | 826.900 | 824.500 |
| BT | 27.500 | 825.900 | 826.500 | 27.600 | 826.900 | 0.000 | 30.900 | 826.900 | 0.000 | 31.000 |
| BT | 826.900 | 824.500 | 57.000 | 826.900 | 824.500 | 57.100 | 826.900 | 0.000 | 60.400 | 826.900 |
| BT | 0.000 | 60.500 | 826.900 | 824.500 | 87.500 | 826.900 | 824.500 | 87.600 | 826.900 | 0.000 |
| BT | 90.900 | 826.900 | 0.000 | 91.000 | 826.900 | 824.500 | 117.400 | 826.900 | 824.500 | 117.500 |
| BT | 826.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

100 FT D/S UNION ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 50.100 | 10.000 | 195.000 | 295.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 87.000 | 0.000 | 403.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 0.000 | 825.000 | 1.000 | 824.500 | 175.000 | 814.000 | 195.000 | 812.800 | 245.000 |
| GR | 814.000 | 295.000 | 819.000 | 315.000 | 819.000 | 450.300 | 825.000 | 465.000 | 829.000 | 650.000 |
| NC | 0.120 | 0.120 | 0.040 | 0.100 | 0.300 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 51

FORM 141-60 PRINTED BY ROTARY MANIFOLD FORMS

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 51.000 | 16.000 | 1474.000 | 1578.000 | 850.000 | 730.000 | 735.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 711.000 | 827.200 | 712.000 | 821.400 | 750.000 | 818.800 | 792.000 | 818.000 | 1034.000 |
| GR | 818.000 | 1302.000 | 818.700 | 1462.000 | 816.400 | 1474.000 | 815.000 | 1499.000 | 813.000 | 1526.000 |
| GR | 813.400 | 1557.000 | 815.100 | 1578.000 | 818.000 | 1588.000 | 822.800 | 1644.000 | 823.000 | 1842.000 |
| GR | 831.800 | 1870.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 52

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 52.000 | 15.000 | 2356.000 | 2456.000 | 800.000 | 800.000 | 800.000 | 0.000 | 0.000 | 0.000 |
| GR | 830.000 | 1000.000 | 823.700 | 1001.000 | 820.200 | 1202.000 | 813.100 | 1424.000 | 818.200 | 1772.000 |
| GR | 818.100 | 2024.000 | 813.600 | 2276.000 | 815.000 | 2364.000 | 816.300 | 2356.000 | 813.300 | 2379.000 |
| GR | 813.500 | 2414.000 | 813.900 | 2426.000 | 815.600 | 2456.000 | 819.600 | 2466.000 | 832.100 | 2500.000 |

SURVEY VALLEY SECTION 53

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 53.000 | 16.000 | 1454.000 | 1570.000 | 2300.000 | 2400.000 | 2600.000 | 0.000 | 0.000 | 0.000 |
| GR | 850.200 | 102.000 | 828.200 | 122.000 | 827.600 | 238.000 | 827.600 | 468.000 | 821.800 | 944.000 |
| GR | 820.200 | 780.000 | 820.000 | 1242.000 | 810.600 | 1429.000 | 822.800 | 1437.000 | 822.500 | 1447.000 |
| GR | 815.900 | 1454.000 | 812.300 | 1487.000 | 812.400 | 1512.000 | 816.200 | 1537.000 | 816.400 | 1570.000 |
| GR | 832.200 | 1600.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 54

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.000 | 16.000 | 739.000 | 840.000 | 1550.000 | 1100.000 | 1450.000 | 0.000 | 0.000 | 0.000 |
| GR | 831.600 | 528.000 | 829.600 | 576.000 | 825.500 | 596.000 | 823.000 | 660.000 | 822.400 | 734.000 |
| GR | 816.500 | 739.000 | 812.900 | 764.000 | 814.000 | 789.000 | 814.800 | 814.000 | 817.200 | 540.000 |
| GR | 819.400 | 850.000 | 819.600 | 996.000 | 820.000 | 1150.000 | 820.400 | 1502.000 | 827.500 | 1428.000 |
| GR | 831.200 | 1462.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

100 FT D/S EMMETT ST. CROSS SECTION 55

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 55.000 | 14.000 | 1948.000 | 2058.000 | 1650.000 | 1650.000 | 1650.000 | 0.000 | 0.000 | 0.000 |
| GR | 835.000 | 1707.000 | 830.200 | 1708.000 | 829.400 | 1872.000 | 823.500 | 1932.000 | 818.300 | 1948.000 |
| GR | 814.400 | 1970.000 | 814.600 | 1995.000 | 816.400 | 2020.000 | 816.800 | 2058.000 | 819.700 | 2061.000 |
| GR | 820.800 | 2067.000 | 822.600 | 2126.000 | 830.600 | 2145.000 | 835.000 | 2220.000 | 0.000 | 0.000 |

FILL

D/S EMMETT ST. CROSS SECTION 56

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 55.800 | 22.000 | 1945.000 | 2061.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 831.000 | 831.000 | 0.000 |
| GR | 835.000 | 1707.000 | 830.200 | 1708.000 | 829.400 | 1872.000 | 823.500 | 1932.000 | 817.700 | 1945.000 |
| GR | 817.700 | 1945.100 | 817.000 | 1956.000 | 816.200 | 1971.000 | 816.400 | 1984.000 | 816.600 | 1998.000 |
| GR | 816.600 | 1998.100 | 816.600 | 2007.900 | 816.600 | 2008.000 | 816.300 | 2021.000 | 815.500 | 2034.000 |
| GR | 816.000 | 2047.000 | 816.600 | 2060.900 | 816.600 | 2061.000 | 820.800 | 2067.000 | 822.600 | 2126.000 |
| GR | 830.600 | 2145.000 | 835.000 | 2220.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE EMMETT ST. CROSS SECTION 56

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 55.900 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 831.000 | 831.000 | 0.000 |
| BT | 22.000 | 1707.000 | 835.000 | 0.000 | 1708.000 | 830.200 | 0.000 | 1872.000 | 830.000 | 0.000 |
| BT | 1932.000 | 831.000 | 0.000 | 1945.000 | 831.000 | 0.000 | 1945.100 | 831.000 | 822.300 | 1958.000 |
| BT | 831.000 | 827.500 | 1971.000 | 831.000 | 826.600 | 1984.000 | 831.000 | 827.500 | 1998.000 | 831.000 |
| BT | 821.700 | 1998.100 | 831.000 | 0.000 | 2007.900 | 831.000 | 0.000 | 2008.000 | 831.000 | 821.700 |
| BT | 2021.000 | 831.000 | 827.500 | 2034.000 | 831.000 | 828.600 | 2067.000 | 831.000 | 827.500 | 2060.900 |
| BT | 831.000 | 821.800 | 2061.000 | 831.000 | 0.000 | 2067.000 | 831.000 | 0.000 | 2126.000 | 833.000 |
| BT | 0.000 | 2145.000 | 833.100 | 0.000 | 2220.000 | 835.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1211-SD PRINTED BY ROTARY MANIFOLD FORMS

U/S FACE EMMETT ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 56.000 | 0.000 | 0.000 | 0.000 | 51.000 | 51.000 | 51.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 831.000 | 831.000 | 0.000 |

U/S EMMETT ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 56.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 831.000 | 831.000 | 0.000 |

100 FT U/S EMMETT ST.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 36.200 | 14.000 | 1948.000 | 2038.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 835.000 | 1707.000 | 830.200 | 1700.000 | 829.400 | 1672.000 | 823.500 | 1932.000 | 818.300 | 1940.000 |
| GR | 816.400 | 1970.000 | 814.600 | 1995.000 | 816.400 | 2021.000 | 816.800 | 2058.000 | 819.700 | 2061.000 |
| GR | 820.800 | 2067.000 | 822.600 | 2126.000 | 830.600 | 2145.000 | 835.000 | 2220.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S VERONA DAM CROSS SECTION 57

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 56.900 | 9.000 | 2237.000 | 2363.000 | 350.000 | 350.000 | 350.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 835.000 | 835.000 | 0.000 |
| GR | 835.000 | 2170.000 | 829.100 | 2171.000 | 827.800 | 2237.000 | 818.200 | 2238.000 | 816.100 | 2362.000 |
| GR | 826.800 | 2363.000 | 827.000 | 2366.000 | 829.000 | 2376.000 | 835.000 | 2377.000 | 0.000 | 0.000 |
| SS | 0.000 | 1.500 | 3.300 | 0.000 | 10.000 | 0.000 | 0.100 | 0.000 | 816.100 | 816.100 |

AT VERONA DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 57.000 | 0.000 | 0.000 | 0.000 | 4.000 | 4.000 | 4.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 816.200 | 823.900 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 835.000 | 835.000 | 0.000 |
| BT | 9.000 | 2170.000 | 835.000 | 0.000 | 2171.000 | 829.100 | 0.000 | 2237.000 | 827.800 | 0.000 |
| BT | 2238.000 | 823.900 | 816.200 | 2362.000 | 823.900 | 816.200 | 2363.000 | 826.800 | 0.000 | 2366.000 |
| BT | 827.000 | 0.000 | 2376.000 | 829.000 | 0.000 | 2377.000 | 835.000 | 0.000 | 0.000 | 0.000 |

U/S VERONA DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 57.100 | 9.000 | 2237.000 | 2363.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 835.000 | 2170.000 | 829.100 | 2171.000 | 827.800 | 2237.000 | 823.200 | 2238.000 | 823.000 | 2362.000 |
| GR | 826.800 | 2363.000 | 827.000 | 2366.000 | 829.000 | 2376.000 | 835.000 | 2377.000 | 0.000 | 0.000 |
| X1 | 200.000 | 20.000 | 1930.000 | 2130.000 | 425.000 | 425.000 | 425.000 | 0.000 | 0.000 | 0.000 |
| GR | 833.200 | 1448.000 | 832.900 | 1570.000 | 831.800 | 1678.000 | 830.300 | 1830.000 | 828.400 | 1836.000 |
| GR | 828.000 | 1856.000 | 828.000 | 1918.000 | 825.000 | 1930.000 | 824.300 | 1941.000 | 822.000 | 1970.000 |
| GR | 821.000 | 2010.000 | 819.000 | 2040.000 | 820.000 | 2065.000 | 825.000 | 2090.000 | 828.700 | 2130.000 |
| GR | 828.900 | 2142.000 | 830.000 | 2170.000 | 830.500 | 2316.000 | 831.200 | 2360.000 | 833.200 | 2364.000 |
| NC | 0.120 | 0.120 | 0.040 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 201

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 201.000 | 29.000 | 1930.000 | 2130.000 | 425.000 | 425.000 | 425.000 | 0.000 | 0.000 | 0.000 |
| GR | 836.400 | 808.000 | 836.400 | 936.000 | 835.100 | 1036.000 | 833.800 | 1134.000 | 834.200 | 1260.000 |
| GR | 833.200 | 1448.000 | 832.900 | 1570.000 | 831.800 | 1678.000 | 830.300 | 1732.000 | 827.400 | 1836.000 |
| GR | 824.900 | 1856.000 | 825.100 | 1918.000 | 825.000 | 1930.000 | 824.300 | 1941.000 | 817.900 | 1970.000 |
| GR | 815.900 | 2010.000 | 815.100 | 2040.000 | 815.100 | 2065.000 | 818.100 | 2090.000 | 823.800 | 2130.000 |

FORM 1411-00-PRINTED BY COTARY MANIFOLD FORMS.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 825.900 | 2142.000 | 826.400 | 2212.000 | 828.700 | 2316.000 | 831.200 | 2360.000 | 833.200 | 2394.000 |
| GR | 832.000 | 2428.000 | 835.000 | 2436.000 | 839.400 | 2490.000 | 0.300 | 0.000 | 0.300 | 0.000 |

SURVEY VALLEY SECTION 202

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 202.000 | 19.000 | 1647.000 | 1801.000 | 1300.000 | 1300.000 | 1300.000 | 0.000 | 0.000 | 0.000 |
| GR | 835.000 | 1604.000 | 830.900 | 1626.000 | 825.300 | 1647.000 | 822.300 | 1699.000 | 822.300 | 1734.000 |
| GR | 821.300 | 1744.000 | 817.700 | 1784.000 | 813.700 | 1811.000 | 819.100 | 1857.000 | 819.300 | 1862.000 |
| GR | 824.600 | 1881.000 | 826.100 | 1889.000 | 830.300 | 2006.000 | 830.600 | 2160.000 | 831.900 | 2342.000 |
| GR | 831.200 | 2506.000 | 832.900 | 2638.000 | 833.200 | 2678.000 | 835.200 | 2740.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 203

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 203.000 | 36.000 | 1895.000 | 2105.000 | 2500.000 | 1500.000 | 2500.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 44.000 | 837.000 | 88.000 | 836.000 | 174.000 | 835.000 | 198.000 | 834.000 | 230.000 |
| GR | 832.000 | 366.000 | 832.000 | 544.000 | 830.600 | 650.000 | 833.200 | 1162.000 | 833.300 | 1426.000 |
| GR | 836.000 | 1470.000 | 833.000 | 1814.000 | 831.000 | 1879.000 | 829.900 | 1893.000 | 818.300 | 1935.000 |
| GR | 818.400 | 1980.000 | 818.400 | 2020.000 | 818.900 | 2065.000 | 821.300 | 2070.000 | 822.600 | 2080.000 |
| GR | 824.300 | 2105.000 | 825.800 | 2122.000 | 827.600 | 2194.000 | 827.800 | 2294.000 | 829.300 | 2406.000 |
| GR | 829.500 | 2636.000 | 830.600 | 2820.000 | 831.800 | 3002.000 | 833.600 | 3212.000 | 834.000 | 3444.000 |
| GR | 835.000 | 3530.000 | 837.400 | 3654.000 | 839.000 | 4026.000 | 841.200 | 4092.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 204

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 204.000 | 31.000 | 2469.000 | 2681.000 | 1200.000 | 1200.000 | 1200.000 | 0.000 | 0.000 | 0.000 |
| GR | 839.900 | 18.000 | 837.800 | 42.000 | 835.600 | 294.000 | 836.600 | 614.000 | 843.600 | 864.000 |
| GR | 835.000 | 946.000 | 834.000 | 1120.000 | 833.600 | 1404.000 | 834.800 | 1626.000 | 833.300 | 1852.000 |
| GR | 832.600 | 2054.000 | 830.600 | 2230.000 | 830.400 | 2437.000 | 832.900 | 2469.000 | 810.400 | 2515.000 |
| GR | 816.700 | 2555.000 | 820.100 | 2585.000 | 822.100 | 2600.000 | 822.100 | 2630.000 | 824.100 | 2681.000 |
| GR | 825.600 | 2700.000 | 827.300 | 2790.000 | 829.800 | 2862.000 | 830.400 | 3056.000 | 830.800 | 3242.000 |
| GR | 831.400 | 3486.000 | 833.500 | 3780.000 | 835.400 | 3928.000 | 835.400 | 4062.000 | 836.100 | 4160.000 |
| GR | 841.000 | 4268.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 205

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 205.000 | 34.000 | 2249.000 | 2501.000 | 1100.000 | 1800.000 | 1800.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 28.000 | 837.200 | 56.000 | 836.400 | 200.300 | 834.600 | 430.000 | 834.400 | 639.000 |
| GR | 836.400 | 864.000 | 836.300 | 1092.000 | 835.000 | 1280.000 | 834.400 | 1444.000 | 833.400 | 1572.000 |
| GR | 831.900 | 1606.000 | 832.200 | 1926.000 | 831.600 | 2132.000 | 831.600 | 2225.000 | 826.200 | 2238.000 |
| GR | 825.400 | 2243.000 | 824.800 | 2249.000 | 817.800 | 2305.000 | 817.300 | 2335.000 | 818.200 | 2350.000 |
| GR | 821.000 | 2400.000 | 822.700 | 2460.000 | 823.800 | 2501.000 | 824.900 | 2520.000 | 824.800 | 2748.000 |
| GR | 825.000 | 3036.000 | 825.200 | 3354.000 | 825.300 | 3550.000 | 830.600 | 3588.000 | 830.200 | 3758.000 |
| GR | 832.700 | 3922.000 | 836.400 | 4062.000 | 838.200 | 4118.000 | 842.000 | 4158.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 206

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 206.000 | 17.000 | 1375.000 | 1591.000 | 1525.000 | 1200.000 | 1525.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 250.000 | 835.000 | 650.000 | 830.300 | 1300.000 | 825.300 | 1355.000 | 823.900 | 1375.000 |
| GR | 822.900 | 1432.000 | 821.700 | 1471.000 | 821.300 | 1510.000 | 819.600 | 1549.000 | 819.000 | 1566.000 |
| GR | 822.600 | 1591.000 | 824.300 | 1618.000 | 824.300 | 1700.000 | 824.900 | 1900.000 | 829.800 | 1950.000 |
| GR | 830.200 | 2000.000 | 835.000 | 2050.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 207

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 207.000 | 20.000 | 1412.000 | 1552.000 | 1200.000 | 500.000 | 925.000 | 0.000 | 0.000 | 0.000 |
| GR | 837.300 | 566.000 | 835.200 | 628.000 | 835.000 | 702.000 | 835.000 | 949.000 | 825.800 | 950.000 |
| GR | 825.000 | 1266.000 | 825.300 | 1406.000 | 823.900 | 1412.000 | 816.300 | 1452.000 | 816.600 | 1477.000 |
| GR | 820.100 | 1512.000 | 823.400 | 1532.000 | 824.600 | 1562.000 | 825.600 | 1724.000 | 825.700 | 1950.000 |

FORM 7011-SM-PRINTED BY ROTARY MANIFOLD FORMS

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 825.600 | 2210.000 | 825.700 | 2332.300 | 830.200 | 2300.000 | 836.200 | 2510.000 | 836.700 | 2586.000 |

SURVEY VALLEY SECTION 208

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 208.000 | 23.000 | 1311.000 | 1309.000 | 1300.000 | 1300.000 | 1900.000 | 0.000 | 0.000 | 0.000 |
| GR | 839.800 | 14.000 | 835.600 | 90.000 | 833.100 | 218.000 | 827.800 | 266.000 | 825.300 | 430.000 |
| GR | 827.400 | 626.000 | 826.000 | 750.000 | 825.000 | 988.000 | 824.600 | 1234.000 | 824.800 | 1466.000 |
| GR | 825.400 | 1500.000 | 822.500 | 1511.000 | 816.300 | 1545.000 | 816.500 | 1560.000 | 822.100 | 1590.000 |
| GR | 824.000 | 1609.000 | 825.300 | 1620.000 | 825.000 | 1726.000 | 824.600 | 1904.000 | 824.800 | 2134.000 |
| GR | 826.100 | 2174.000 | 835.200 | 2220.000 | 837.200 | 2276.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 209

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 209.000 | 21.000 | 357.000 | 443.000 | 1900.000 | 2000.000 | 3700.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.600 | 14.000 | 835.100 | 70.000 | 828.500 | 147.000 | 826.400 | 230.000 | 826.300 | 344.000 |
| GR | 824.400 | 357.000 | 820.900 | 370.000 | 818.900 | 400.000 | 817.100 | 413.000 | 823.600 | 445.000 |
| GR | 823.700 | 457.000 | 825.200 | 652.300 | 825.000 | 822.300 | 825.800 | 1044.000 | 825.600 | 1296.000 |
| GR | 826.200 | 1460.000 | 829.400 | 1604.000 | 830.400 | 1720.000 | 835.500 | 1804.000 | 836.400 | 1894.000 |
| GR | 837.200 | 2090.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 210

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 210.000 | 23.000 | 2415.000 | 2505.000 | 1400.000 | 950.000 | 1450.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.100 | 454.000 | 638.200 | 688.000 | 835.300 | 774.000 | 835.400 | 980.000 | 836.000 | 1242.000 |
| GR | 836.200 | 1436.000 | 833.300 | 1654.000 | 832.400 | 1608.000 | 824.900 | 1682.000 | 824.800 | 1932.000 |
| GR | 825.400 | 2200.000 | 825.600 | 2413.000 | 823.500 | 2415.000 | 821.500 | 2455.000 | 821.300 | 2470.000 |
| GR | 820.700 | 2405.000 | 823.300 | 2505.000 | 825.300 | 2514.000 | 825.800 | 2428.000 | 826.600 | 2336.000 |
| GR | 830.600 | 2914.000 | 835.200 | 2930.000 | 839.000 | 2964.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 0.000 | 2108.000 | 3526.000 |

SURVEY VALLEY SECTION 211

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 211.000 | 17.000 | 2515.000 | 2595.000 | 1200.000 | 1100.000 | 2675.000 | 0.000 | 0.000 | 0.000 |
| GR | 849.100 | 2108.000 | 840.500 | 2310.000 | 837.900 | 2650.000 | 835.600 | 2492.000 | 833.800 | 2505.000 |
| GR | 824.500 | 2515.000 | 819.400 | 2540.000 | 819.200 | 2555.000 | 822.600 | 2575.000 | 823.800 | 2595.000 |
| GR | 825.000 | 2600.000 | 825.600 | 2612.000 | 825.800 | 2836.000 | 825.200 | 3080.000 | 826.600 | 3364.000 |
| GR | 835.000 | 3393.000 | 838.000 | 3526.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 212

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 212.000 | 14.000 | 3495.000 | 3649.000 | 900.000 | 2400.000 | 2400.000 | 0.000 | 0.000 | 0.000 |
| GR | 838.400 | 2466.000 | 827.000 | 2506.000 | 826.200 | 2722.000 | 826.600 | 2980.000 | 826.000 | 3220.000 |
| GR | 826.400 | 3491.000 | 825.600 | 3495.000 | 823.700 | 3522.000 | 821.600 | 3562.000 | 822.300 | 3592.000 |
| GR | 825.000 | 3649.000 | 827.100 | 3657.000 | 832.600 | 3675.000 | 841.300 | 3701.000 | 0.000 | 0.000 |
| NC | 0.120 | 0.120 | 0.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 5.000 | 1850.000 | 2890.000 | 3370.000 | 3370.000 | 4650.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEY VALLEY SECTION 213

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 213.000 | 12.000 | 2648.000 | 2736.000 | 2600.000 | 4000.000 | 4100.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 2250.000 | 827.500 | 2250.000 | 827.600 | 2450.000 | 828.600 | 2592.000 | 829.000 | 2632.000 |
| GR | 826.700 | 2648.000 | 822.300 | 2667.000 | 821.900 | 2692.000 | 823.000 | 2717.000 | 827.300 | 2736.000 |
| GR | 829.100 | 2746.000 | 840.000 | 2746.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 9.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D/S FACE MC ALLISTER ROAD SURVEY SECTION 215

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 214.900 | 12.000 | 1.000 | 106.000 | 800.000 | 800.000 | 800.000 | 0.000 | 0.000 | 0.000 |
| GR | 835.000 | 0.000 | 833.400 | 1.000 | 825.800 | 1.100 | 823.000 | 27.000 | 823.800 | 52.000 |
| GR | 823.800 | 52.100 | 823.800 | 53.900 | 823.800 | 54.000 | 822.000 | 80.000 | 825.700 | 105.900 |
| GR | 833.400 | 106.000 | 835.000 | 106.100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SD | 0.900 | 1.910 | 3.000 | 0.000 | 105.000 | 2.000 | 700.000 | 0.000 | 824.000 | 824.000 |

U/S FACE MC ALLISTER ROAD SURVEY SECTION 215

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 215.000 | 0.000 | 0.000 | 0.000 | 37.000 | 37.000 | 37.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 830.800 | 833.400 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 12.000 | 0.000 | 833.400 | 0.000 | 1.000 | 833.400 | 0.000 | 1.100 | 833.400 | 830.800 |
| BT | 27.000 | 833.400 | 830.800 | 52.000 | 833.400 | 830.800 | 52.100 | 833.400 | 0.000 | 53.900 |
| BT | 833.400 | 0.000 | 54.000 | 833.400 | 830.800 | 80.000 | 833.400 | 830.800 | 105.900 | 833.400 |
| BT | 830.800 | 106.000 | 833.400 | 0.000 | 106.100 | 833.400 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 215.100 | 12.000 | 1361.000 | 1449.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| GR | 840.000 | 1250.000 | 830.300 | 1250.000 | 829.800 | 1352.000 | 827.400 | 1361.000 | 822.400 | 1385.000 |
| GR | 822.600 | 1415.000 | 822.800 | 1430.000 | 824.900 | 1449.000 | 826.200 | 1453.000 | 826.300 | 1468.000 |
| GR | 827.100 | 1550.000 | 840.000 | 1550.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FORM 1411.00 PRINTED BY ROTARY MANIFOLD FORMS
PRINTED IN U.S.A.

*PROF 1

CCHV= 0.300 CEHV= 0.500

*SECNO 23.000

| SECNO | DEPTH | CWSEL | CRITS | WSELK | EG | FV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | ETM | ELMIN | SST4 |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

SURVEY VALLEY SECTION AT CONFLUENCE TO KALAMAZOO RIVER

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.00 | 5.60 | 807.80 | 0.00 | 807.80 | 808.37 | 0.57 | 0.00 | 0.00 | 804.00 |
| 4200. | 27. | 4141. | 32. | 13. | 678. | 21. | 0. | 0. | 803.70 |
| 0.00 | 1.66 | 6.11 | 1.93 | 0.000 | 0.035 | 0.000 | 0.000 | 802.20 | 20.34 |
| 0.002879 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 171.91 | 194.25 |

FLOW DISTRIBUTION FOR SECNO= 23.00 CWSEL= 807.80

| STA= | 20. | 30. | 164. | 194. |
|---|---|---|---|---|
| PER Q= | 0.5 | 98.6 | 0.8 | |
| AREA= | 10.4 | 677.8 | 21.0 | |
| VEL= | 1.5 | 6.1 | 1.5 | |

*SECNO 23.900

SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 23.90 | 6.52 | 809.72 | 0.00 | 0.00 | 810.26 | 0.55 | 1.88 | 0.01 | 807.30 |
| 4200. | 3. | 4196. | 1. | 3. | 707. | 2. | 11. | 3. | 808.00 |
| 0.03 | 0.88 | 5.94 | 0.73 | 0.080 | 0.035 | 0.080 | 0.035 | 803.20 | 12.68 |
| 0.002703 | 675. | 675. | 675. | 2 | 0 | 0 | 0.00 | 164.53 | 177.02 |

FLOW DISTRIBUTION FOR SECNO= 23.90 CWSEL= 809.72

| STA= | 12. | 15. | 175. | 177. |
|---|---|---|---|---|
| PER Q= | 0.1 | 99.9 | 0.0 | |
| AREA= | 3.0 | 706.9 | 1.7 | |
| VEL= | 0.9 | 5.9 | 0.7 | |

SPECIAL BRIDGE

| SA | XK | XKOR | CORD | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.50 | 2.64 | 0.00 | 10.00 | 0.00 | 0.10 | 0.00 | 803.20 | 803.20 |

*SECNO 24.000

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | CWEIR | OPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| ********** | 810.26 | 0.00 | 4201. | 1. | 0. | 1. | 803.30 | 808.60 |

SURVEY SPILLWAY LOCATED 13 FT D/S WASHINGTON AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24.00 | 9.79 | 812.99 | 0.00 | 0.00 | 813.17 | 0.18 | 2.91 | 0.00 | 807.30 |
| 4200. | 10. | 4181. | 9. | 17. | 1231. | 15. | 11. | 3. | 808.00 |

FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORM

```
     0.03      0.62      3.40      0.59     0.080     0.035     0.080     0.035    803.20      9.07
 0.003422        3.        3.        3.         2         0         0      0.00    171.81    180.88

FLOW DISTRIBUTION FOR SECNO=      24.00          CWSEL=     812.99

STA=        9.       15.      175.      181.
  PER Q=      0.2      99.5       0.2
   AREA=     16.9    1231.5      14.7
    VEL=      0.6       3.4       0.6

*SECNO 24.800

        D/S WASHINGTON AVE. SURVEY SECTION 25

    24.80      4.22    812.82      0.00      0.00    813.37      0.55      0.01      0.19    822.00
    4200.        0.     4200.        0.        0.      703.        0.       11.        3.    822.00
     0.03      0.00      3.97      0.00     0.080     0.035     0.080     0.035    808.60      0.57
 0.003100       11.       11.       11.         2         0         0      0.00    166.86    167.43

FLOW DISTRIBUTION FOR SECNO=      24.80          CWSEL=     812.32

STA=        1.      160.
  PER Q=    100.0
   AREA=    703.4
    VEL=      6.0

*SECNO 24.900
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        BLOSS    BANK ELEV
   Q         BLOB      TCH       CROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD=  822.00 MAX ELLC=  819.40

        D/S FACE WASHINGTON AVE. SURVEY SECTION 25

    24.90      4.10    812.70      0.00      0.00    813.49      0.79      0.00      0.12    822.00
    4200.        0.     4200.        0.        0.      387.        0.       11.        3.    822.00
     0.03      0.00      7.15      0.00     0.080     0.035     0.080     0.035    808.60      0.57
 0.005651        1.        1.        1.         2         0         0    -96.74    166.86    167.43

FLOW DISTRIBUTION FOR SECNO=      24.90          CWSEL=     812.70

STA=        1.      168.
  PER Q=    100.0
   AREA=    587.2
    VEL=      7.2

*SECNO 25.000

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD=  822.00 MAX ELLC=  819.40

        U/S FACE WASHINGTON AVE. SURVEY SECTION 25

    25.00      4.62    813.22      0.00      0.00    813.85      0.62      0.30      0.05    822.00
    4200.        0.     4200.        0.        0.      663.        0.       12.       13.    822.00
     0.04      0.00      6.34      0.00     0.080     0.035     0.080     0.035    808.60      0.57
```

```
0.003801      66.      66.      66.       2        0        0  -109.22   166.87   167.43

FLOW DISTRIBUTION FOR SECNO=      25.00          CWSEL=     813.22

STA=        1.      160.
  PER Q=     100.0
   AREA=     662.9
    VEL=       6.3

*SECNO 25.100

        U/S WASHINGTON AVE. SURVEY SECTION 25

     25.10      4.91    813.51      0.00      0.00    813.92      0.41      0.00      0.06    822.00
     4200.        0.     4200.        0.        0.      819.        0.       12.        3.    822.00
      0.04      0.00      5.13      0.00     0.080     0.035     0.080     0.035    800.60      0.56
 0.001884        1.        1.        1.         2         0         0      0.00    166.87    167.44

FLOW DISTRIBUTION FOR SECNO=      25.10          CWSEL=     813.51

STA=        1.      160.
  PER Q=     100.0
   AREA=     819.3
    VEL=       5.1

*SECNO 26.000

        SURVEY VALLEY SECTION 26

     26.00      6.62    813.62      0.00      0.00    814.43      0.81      0.31      0.20    808.60
     4200.       93.     4005.       102.       51.      543.       56.       15.        3.    808.70
      0.04      1.82      7.38      1.83     0.080     0.035     0.080     0.035    807.00      1.55
 0.002923      135.      135.      135.         2         0         0      0.00    141.86    143.41

FLOW DISTRIBUTION FOR SECNO=      26.00          CWSEL=     813.62

STA=        2.       22.      116.      124.      143.
  PER Q=       2.2      95.4       1.7       0.7
   AREA=      51.3     542.5      30.2      25.4
    VEL=       1.8       7.4       2.6       1.2

CCHV=   0.300 CEHV=   0.500
*SECNO 26.800

        D/S PENN CENTRAL RAILROAD SURVEY SECTION 27

     26.80      7.21    814.51      0.00      0.00    814.84      0.33      0.27      0.14    825.00
     4200.        0.     4200.        0.        0.      911.        0.       17.        4.    825.00
      0.05      0.00      4.61      0.00     0.100     0.035     0.100     0.035    807.30      1.90
 0.001455      135.      135.      135.         3         0         0      0.00    187.14    189.04

FLOW DISTRIBUTION FOR SECNO=      26.80          CWSEL=     814.51

STA=        2.      190.
  PER Q=     100.0
   AREA=     911.2
    VEL=       4.6

*SECNO 26.900
  SECNO    DEPTH    CWSEL    CRINS    WSELK    EQ       MV       HL       OLOSS    BANK ELEV
```

```
Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      THA   LEFT/RIGHT
TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN     SSTA
SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IH2      ICONT    CORAR    TOPWID    ENDST

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD=  825.00 MAX ELLC=  898.00

        D/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

    26.90     7.17   814.47     0.00     0.00   814.89     0.41     0.00     0.04   825.00
    4200.       0.    4200.       0.       0.     816.       0.      17.       4.   825.00
     0.05     0.00     5.15     0.00    0.100    0.035    0.100    0.035   807.30     1.90
 0.002104       1.       1.       1.        2        0        0   -88.33   187.13   189.03

FLOW DISTRIBUTION FOR SECNO=     26.90          CWSEL=    814.47

STA=        2.      190.
  PER Q=    100.0
   AREA=    815.7
    VEL=      5.1

*SECNO 27.000

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD=  825.00 MAX ELLC=  818.00

        U/S FACE PENN CENTRAL RAILROAD SURVEY SECTION 27

    27.00     7.25   814.55     0.00     0.00   814.95     0.40     0.06     0.00   825.00
    4200.       0.    4200.       0.       0.     829.       0.      18.       4.   825.00
     0.05     0.00     5.07     0.00    0.100    0.035    0.100    0.035   807.30     1.89
 0.001996      30.      30.      30.        2        0        0   -89.71   187.15   189.04

FLOW DISTRIBUTION FOR SECNO=     27.00          CWSEL=    814.55

STA=        2.      190.
  PER Q=    100.0
   AREA=    828.9
    VEL=      5.1

*SECNO 27.100

        U/S PENN CENTRAL RAILROAD SURVEY SECTION 27

    27.10     7.37   814.67     0.00     0.00   814.98     0.31     0.00     0.03   825.00
    4200.       0.    4200.       0.       0.     941.       0.      18.       4.   825.00
     0.05     0.00     4.46     0.00    0.100    0.035    0.100    0.035   807.30     1.88
 0.001312       1.       1.       1.        2        0        0     0.00   187.17   189.05

FLOW DISTRIBUTION FOR SECNO=     27.10          CWSEL=    814.67

STA=        2.      190.
  PER Q=    100.0
   AREA=    940.7
    VEL=      4.5

*SECNO 28.000

        SURVEY VALLEY SECTION 28
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.30 | 7.27 | 814.87 | 0.00 | 0.00 | 815.60 | 0.73 | 0.41 | 0.21 | 809.00 |
| 4200. | 57. | 4084. | 60. | 43. | 590. | 46. | 22. | 5. | 809.40 |
| 0.06 | 1.33 | 6.93 | 1.29 | 0.100 | 0.035 | 0.100 | 0.035 | 307.60 | 1026.45 |
| 0.002110 | 250. | 250. | 250. | 2 | 0 | 0 | 0.00 | 119.43 | 1145.03 |

FLOW DISTRIBUTION FOR SECNO= 28.00 CUSEL= 814.87

| STA= | 1026. | 1041. | 1129. | 1146. |
|---|---|---|---|---|
| PER Q= | 1.4 | 97.2 | 1.4 | |
| AREA= | 42.7 | 589.5 | 46.2 | |
| VEL= | 1.3 | 6.9 | 1.3 | |

*SECNO 28.800

D/S BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.80 | 7.22 | 815.72 | 0.00 | 0.00 | 816.25 | 0.53 | 0.60 | 0.76 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 716. | 0. | 27. | 6. | 822.00 |
| 0.07 | 0.00 | 5.87 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 800.50 | 8.85 |
| 0.001879 | 300. | 300. | 300. | 2 | 0 | 0 | 0.00 | 123.16 | 132.00 |

FLOW DISTRIBUTION FOR SECNO= 28.30 CUSEL= 815.72

| STA= | 9. | 141. |
|---|---|---|
| PER Q= | 100.0 | |
| AREA= | 715.9 | |
| VEL= | 5.9 | |

*SECNO 28.900

| SECNO | DEPTH | CUSEL | CRIWS | WSELK | EG | MV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | THA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTX | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 822.00 MAX ELLC= 821.60

D/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28.90 | 7.21 | 815.71 | 0.00 | 0.00 | 816.26 | 0.55 | 0.00 | 0.01 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 709. | 0. | 27. | 6. | 822.00 |
| 0.08 | 0.00 | 5.93 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 800.50 | 8.85 |
| 0.001943 | 1. | 1. | 1. | 0 | 3 | 0 | -7.15 | 123.15 | 132.00 |

FLOW DISTRIBUTION FOR SECNO= 28.90 CUSEL= 815.71

| STA= | 9. | 141. |
|---|---|---|
| PER Q= | 100.0 | |
| AREA= | 703.6 | |
| VEL= | 5.9 | |

*SECNO 29.000

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 822.00 MAX ELLC= 821.60

D/S FACE BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.00 | 7.23 | 815.73 | 0.00 | 0.00 | 816.27 | 0.54 | 0.01 | 0.00 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 709. | 0. | 27. | 6. | 822.00 |
| 0.08 | 0.00 | 5.92 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 8.83 |
| 0.001938 | 6. | 6. | 6. | 0 | 0 | 0 | -7.15 | 123.18 | 132.02 |

FLOW DISTRIBUTION FOR SECNO= 29.00 CHSEL= 815.73

STA= 9. 141.
PER Q= 100.0
AREA= 709.4
VEL= 5.9

*SECNO 29.100

U/S BARNEY ST FOOTBRIDGE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.10 | 7.24 | 815.74 | 0.00 | 0.00 | 816.28 | 0.53 | 0.00 | 0.00 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 708. | 0. | 27. | 6. | 822.70 |
| 0.08 | 0.00 | 5.85 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 8.81 |
| 0.001363 | 1. | 1. | 1. | 1 | 0 | 0 | 0.00 | 123.24 | 132.05 |

FLOW DISTRIBUTION FOR SECNO= 29.10 CHSEL= 815.74

STA= 9. 141.
PER Q= 100.0
AREA= 717.9
VEL= 5.9

*SECNO 29.200

SURVEY VALLEY SECTION 29

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.20 | 7.45 | 815.95 | 0.00 | 0.00 | 816.45 | 0.49 | 0.16 | 0.01 | 822.00 |
| 4200. | 0. | 4200. | 0. | 0. | 745. | 0. | 29. | 6. | 822.00 |
| 0.08 | 0.00 | 5.64 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 808.50 | 8.29 |
| 0.001670 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 124.33 | 132.63 |

FLOW DISTRIBUTION FOR SECNO= 29.20 CHSEL= 815.95

STA= 8. 141.
PER Q= 100.0
AREA= 744.6
VEL= 5.6

*SECNO 29.800

D/S JACKSON AVE. CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.80 | 8.75 | 816.35 | 0.00 | 0.00 | 816.61 | 0.27 | 0.10 | 0.07 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 1011. | 0. | 31. | 6. | 816.00 |
| 0.09 | 0.00 | 4.16 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.94 |
| 0.000806 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 156.11 | 957.06 |

FLOW DISTRIBUTION FOR SECNO= 29.80 CHSEL= 816.35

STA= 1. 957.
PER Q= 100.0
AREA= 1010.6
VEL= 4.2

*SECNO 29.900

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | CLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XLCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IT2 | ICONT | CORAR | TOPWID | ESDST |

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 822.10 MAX ELLC= 819.00

D/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 29.90 | 8.76 | 816.34 | 0.00 | 0.00 | 816.62 | 0.28 | 0.00 | 0.01 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 980. | 0. | 31. | 6. | 816.30 |
| 0.09 | 0.00 | 4.28 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.94 |
| 0.000692 | 1. | 1. | 1. | 0 | 0 | 0 | -30.20 | 156.11 | 157.05 |

FLOW DISTRIBUTION FOR SECNO= 29.90 CWSEL= 816.34

STA= 1. 157.
PER Q= 100.0
AREA= 980.5
VEL= 4.3

*SECNO 30.000

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 822.10 MAX ELLC= 819.00

U/S FACE JACKSON AVE. SURVEY SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.00 | 8.79 | 816.39 | 0.00 | 0.00 | 816.67 | 0.28 | 0.05 | 0.00 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 986. | 0. | 32. | 7. | 816.00 |
| 0.09 | 0.00 | 4.26 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.94 |
| 0.000875 | 54. | 54. | 54. | 0 | 0 | 0 | -30.36 | 156.13 | 157.06 |

FLOW DISTRIBUTION FOR SECNO= 30.00 CWSEL= 816.39

STA= 1. 157.
PER Q= 100.0
AREA= 986.2
VEL= 4.3

*SECNO 30.100

U/S JACKSON AVE. CROSS SECTION 30

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.10 | 8.82 | 816.42 | 0.00 | 0.00 | 816.68 | 0.26 | 0.00 | 0.01 | 816.00 |
| 4200. | 0. | 4200. | 0. | 0. | 1022. | 0. | 32. | 7. | 816.00 |
| 0.09 | 0.00 | 4.11 | 0.00 | 0.100 | 0.035 | 0.100 | 0.035 | 807.60 | 0.93 |
| 0.000778 | 1. | 1. | 1. | 2 | 0 | 2 | 0.00 | 156.14 | 157.07 |

FLOW DISTRIBUTION FOR SECNO= 30.10 CWSEL= 816.42

STA= 1. 157.
PER Q= 100.0
AREA= 1021.5
VEL= 4.1

CONV= 0.500 CEIV= 0.800

*SECNO 31.000

SURVEY VALLEY SECTION 31

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 31.00 | 9.76 | 816.44 | 0.00 | 0.00 | 817.00 | 0.56 | 0.00 | 0.24 | 810.00 |
| | 4200. | 46. | 4077. | 75. | 30. | 670. | 70. | 32. | 7. | 809.20 |
| | 0.09 | 0.93 | 6.09 | 1.07 | 0.120 | 0.035 | 0.120 | 0.035 | 806.70 | 807.02 |
| | 0.001467 | 80. | 30. | 50. | 2 | 0 | 0 | 0.00 | 120.42 | 1035.46 |

FLOW DISTRIBUTION FOR SECNO= 31.00 CHSEL= 816.44

| STA= | 907. | 924. | 1016. | 1035. |
|---|---|---|---|---|
| PER Q= | 1.1 | 97.1 | 1.8 | |
| AREA= | 49.6 | 669.7 | 70.4 | |
| VEL= | 0.9 | 6.1 | 1.1 | |

*SECNO 31.100

D/S STRUCTURE OVER BATTLE CREEK RIVER STA.2+74.3

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.10 | 8.55 | 816.95 | 0.00 | 0.00 | 817.21 | 0.36 | 0.11 | 0.10 | 817.60 |
| 4200. | 0. | 4200. | 0. | 0. | 864. | 0. | 35. | 7. | 820.00 |
| 0.10 | 0.00 | 4.94 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 1.01 |
| 0.001035 | 60. | 90. | 90. | 2 | 0 | 0 | 0.00 | 121.96 | 122.97 |

FLOW DISTRIBUTION FOR SECNO= 31.10 CHSEL= 816.85

| STA= | 1. | 123. |
|---|---|---|
| PER Q= | 100.0 | |
| AREA= | 867.5 | |
| VEL= | 4.8 | |

*SECNO 31.200

| SECNO | DEPTH | CHSEL | CRIMS | HSELK | ZR | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | IHA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | FLMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IN2 | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 820.00 MAX ELLC= 817.60

STRUCTURE OVER BATTLE CREEK STA.2+76.3

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.20 | 8.56 | 816.84 | 0.00 | 0.00 | 817.23 | 0.38 | 0.00 | 0.02 | 817.60 |
| 4200. | 0. | 4200. | 0. | 0. | 864. | 0. | 35. | 7. | 820.00 |
| 0.10 | 0.00 | 4.97 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 1.01 |
| 0.001187 | 1. | 1. | 1. | 0 | 0 | 0 | -23.03 | 121.96 | 122.97 |

FLOW DISTRIBUTION FOR SECNO= 31.20 CHSEL= 816.84

| STA= | 1. | 123. |
|---|---|---|
| PER Q= | 100.0 | |
| AREA= | 844.4 | |
| VEL= | 5.0 | |

*SECNO 31.300

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 820.00 MAX ELLC= 818.10

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STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 31.30 | 8.11 | 816.91 | 0.00 | 0.00 | 817.34 | 0.46 | 0.07 | 0.04 | 818.10 | |
| 4200. | 0. | 4200. | 0. | 0. | 792. | 0. | 38. | 7. | 820.50 | |
| 0.10 | 0.00 | 5.30 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.80 | 1.02 | |
| 0.001655 | 56. | 56. | 56. | 0 | 0 | 0 | -21.42 | 121.93 | 122.97 | |

FLOW DISTRIBUTION FOR SECNO= 31.30 CHSEL= 816.91

STA= 1. 123.
PER Q= 100.0
AREA= 792.3
VEL= 5.3

*SECNO 31.400

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 822.00 MAX ELLC= 819.70

STRUCTURE OVER BATTLE CREEK STA.2+17.8

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 31.40 | 8.17 | 816.97 | 0.00 | 0.00 | 817.37 | 0.39 | 0.00 | 0.02 | 819.70 | |
| 4200. | 0. | 4200. | 0. | 0. | 833. | 0. | 46. | 7. | 822.00 | |
| 0.10 | 0.00 | 5.04 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 808.80 | 1.03 | |
| 0.001242 | 1. | 1. | 1. | 2 | 0 | 0 | -21.77 | 121.93 | 122.96 | |

FLOW DISTRIBUTION FOR SECNO= 31.40 CHSEL= 816.97

STA= 1. 123.
PER Q= 100.0
AREA= 833.2
VEL= 5.0

*SECNO 31.500

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 822.00 MAX ELLC= 819.70

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 31.50 | 7.59 | 817.09 | 0.00 | 0.00 | 817.81 | 0.72 | 0.18 | 0.26 | 821.40 | |
| 4200. | 0. | 4200. | 0. | 0. | 616. | 0. | 38. | 7. | 822.00 | |
| 0.11 | 0.00 | 6.82 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.05 | |
| 0.002682 | 105. | 105. | 105. | 2 | 1 | 0 | -19.68 | 100.91 | 101.96 | |

FLOW DISTRIBUTION FOR SECNO= 31.50 CHSEL= 817.09

STA= 1. 102.
PER Q= 100.0
AREA= 615.6
VEL= 6.8

*SECNO 31.600

3370 NORMAL BRIDGE,NRD= 37 MIN ELTRD= 822.00 MAX ELLC= 821.00

STRUCTURE OVER BATTLE CREEK STA.1+16.5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 31.60 | 7.86 | 817.06 | 0.00 | 0.00 | 817.95 | 0.89 | 0.00 | 0.13 | 822.00 | |

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```
    4200.       0.     4200.       0.       0.      556.       0.      38.       7.     822.00
     0.11     0.00      7.55     0.00    0.120    0.035    0.120    0.035    809.20      1.05
 0.003731       1.        1.       1.        2        0        0   -43.64    100.90    101.96

FLOW DISTRIBUTION FOR SECNO=      31.60          CWSEL=     817.06

STA=        1.      102.
  PER Q=     100.0
   AREA=     556.2
    VEL=       7.6

*SECNO 31.700
    SECNO     DEPTH     CWSEL     CRIWS     LSELK     ES        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       HTN       FLMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     COPAR     TOPWID      FROST

3370 NORMAL BRIDGE,NRD= 37 MIN ELTRD=  822.00 MAX ELLC=  821.00

        STRUCTURE OVER BATTLE CREEK          STA.1+66.5

    31.70      8.14    817.34      0.00      0.00    818.15      0.81      0.14      0.04    822.00
    4200.        0.     4200.        0.        0.      582.        0.       39.        8.    822.00
     0.11      0.00      7.21      0.00     0.120     0.035     0.120     0.035    809.20      1.05
 0.003219       47.       47.       47.         2         0         0   -45.63    100.91    101.96

FLOW DISTRIBUTION FOR SECNO=      31.70          CWSEL=     817.34

STA=        1.      102.
  PER Q=     100.0
   AREA=     582.5
    VEL=       7.2

*SECNO 32.900

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD=  823.00 MAX ELLC=  820.90

        D/S FACE MICHIGAN AVE. SURVEY SECTION 33

    32.90      7.74    817.44      0.00      0.00    818.18      0.75      0.00      0.03    823.00
    4200.        0.     4200.        0.        0.      606.        0.       39.        3.    823.00
     0.11      0.00      6.93      0.00     0.120     0.035     0.120     0.035    809.70      1.06
 0.005016        1.        1.        1.         2         0         0  -106.39    109.88    110.94

FLOW DISTRIBUTION FOR SECNO=      32.90          CWSEL=     817.44

STA=        1.      111.
  PER Q=     100.0
   AREA=     606.1
    VEL=       6.9

*SECNO 33.000

3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD=  823.00 MAX ELLC=  820.90

        D/S FACE MICHIGAN AVE. SURVEY SECTION 33
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.00 | 5.14 | 817.84 | 0.00 | 0.00 | 818.54 | 0.70 | 0.33 | 0.02 | 823.00 |
| 4200. | 0. | 4200. | 0. | 0. | 627. | 0. | 40. | 8. | 823.00 |
| 0.11 | 0.00 | 6.70 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.70 | 1.05 |
| 0.006502 | 70. | 70. | 70. | 2 | 0 | 0 | -129.95 | 109.89 | 110.94 |

FLOW DISTRIBUTION FOR SECNO= 33.00 CHSEL= 817.84

STA= 1. 111.
PER Q= 100.0
AREA= 627.2
VEL= 6.7

*SECNO 33.100

U/S MICHIGAN AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.10 | 3.55 | 818.25 | 0.00 | 0.00 | 818.68 | 0.43 | 0.00 | 0.26 | 823.70 |
| 4200. | 0. | 4200. | 0. | 0. | 803. | 0. | 40. | 8. | 823.00 |
| 0.11 | 0.00 | 5.23 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.70 | 1.05 |
| 0.001203 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 109.90 | 110.95 |

FLOW DISTRIBUTION FOR SECNO= 33.10 CHSEL= 818.25

STA= 1. 111.
PER Q= 100.0
AREA= 802.5
VEL= 5.2

*SECNO 34.000

SURVEY VALLEY SECTION 34.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 34.00 | 8.23 | 818.33 | 0.00 | 0.00 | 819.22 | 0.89 | 0.17 | 0.37 | 814.30 |
| 4200. | 3. | 4133. | 63. | 5. | 541. | 47. | 41. | 8. | 813.23 |
| 0.11 | 0.66 | 7.63 | 1.35 | 0.120 | 0.035 | 0.120 | 0.035 | 810.10 | 689.65 |
| 0.002589 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 96.73 | 786.18 |

FLOW DISTRIBUTION FOR SECNO= 34.00 CHSEL= 818.33

| STA= | 689. | 692. | 773. | 786. |
|---|---|---|---|---|
| PER Q= | 0.1 | 98.4 | 1.5 | |
| AREA= | 5.1 | 541.4 | 47.0 | |
| VEL= | 0.7 | 7.6 | 1.3 | |

*SECNO 35.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IHS | ICONT | CORAR | TOPWID | ENDST |

SURVEY VALLEY SECTION 35

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35.00 | 7.05 | 819.95 | 0.00 | 0.00 | 820.42 | 0.47 | 0.99 | 0.21 | 812.30 |
| 4200. | 1. | 4127. | 72. | 5. | 745. | 54. | 51. | 9. | 313.10 |
| 0.14 | 0.30 | 5.58 | 1.32 | 0.120 | 0.035 | 0.120 | 0.035 | 812.10 | 579.80 |
| 0.001139 | 600. | 600. | 600. | 2 | 0 | 0 | 0.00 | 108.70 | 636.50 |

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FLOW DISTRIBUTION FOR SECNO=      35.00          CHSEL=     819.95

STA=      580.      581.      679.      688.      688.
  PER Q=       0.0      98.3       1.7       0.0
   AREA=       4.6     765.0      53.1       1.2
    VEL=       0.3       5.5       1.3       0.2

*SECNO 35.800

        D/S MC CALMLY AVE

     35.30      8.01    820.21      0.00      0.00    820.50      0.36      0.11      0.03    826.00
     4200.        0.     4200.        0.        0.      866.        0.       53.       10.    826.00
      0.15      0.00      4.85      0.00     0.120     0.035     0.120     0.035    812.20      1.05
  0.000979      100.      100.      100.         2         0         0      0.00    109.91    110.96

FLOW DISTRIBUTION FOR SECNO=      35.00          CHSEL=     820.21

STA=        1.      111.
  PER Q=     100.0
   AREA=     865.6
    VEL=       4.0

*SECNO 35.900

3370 NORMAL BRIDGE,NRD= 15 MIN ELTRD=  826.00 MAX ELLC=  823.10

        D/S FACE MC CALMLY AVE.

     35.90      7.99    820.19      0.00      0.00    820.67      0.48      0.00      0.09    826.00
     4200.        0.     4200.        0.        0.      753.        0.       53.       10.    826.00
      0.15      0.00      5.57      0.00     0.120     0.035     0.120     0.035    812.20      1.05
  0.001938        1.        1.        1.         2         0         0   -110.56    109.91    110.96

FLOW DISTRIBUTION FOR SECNO=      35.90          CHSEL=     820.19

STA=        1.      111.
  PER Q=     100.0
   AREA=     753.4
    VEL=       5.6

*SECNO 36.000

3370 NORMAL BRIDGE,NRD= 15 MIN ELTRD=  826.00 MAX ELLC=  823.10

        U/S FACE MC CALMLY AVE.

     36.00      8.13    820.33      0.00      0.00    820.80      0.47      0.12      0.01    826.00
     4200.        0.     4200.        0.        0.      765.        0.       54.       10.    826.00
      0.15      0.00      5.49      0.00     0.120     0.035     0.120     0.035    812.20      1.04
  0.001864       65.       65.       65.         2         0         0   -114.63    109.91    110.96

FLOW DISTRIBUTION FOR SECNO=      36.00          CHSEL=     820.33

STA=        1.      111.
  PER Q=     100.0
   AREA=     765.3
    VEL=       5.5
```

```
*SECNO 36.100

3370 NORMAL BRIDGE,NRD=  9 MIN ELTRD=  827.00 MAX ELLC=  823.30

        D/S FACE PARKING LOT BRIDGE CROSS SECTION 37

     36.10      0.20    820.50      0.00      0.00    820.86      0.36      0.00      0.06    827.00
     4200.        0.     4200.        0.        0.      878.        0.       54.       10.    827.00
      0.15      0.00      6.70      0.00     0.120     0.035     0.120     0.035    812.30      1.03
  0.000962        1.        1.        1.         2         0         0    -15.59    109.91    110.93

FLOW DISTRIBUTION FOR SECNO=      36.10          CWSEL=     820.50

STA=        1.      111.
  PER Q=     100.0
   AREA=     870.0
    VEL=       4.8

*SECNO 36.200

3301 HV CHANGED MORE THAN 8VINS

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     FR        HV        HL        CLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IHP       ICONT     CORAR     TOPWID    ENDST

3370 NORMAL BRIDGE,NRD=  9 MIN ELTRD=  827.00 MAX ELLC=  823.30

        U/S FACE PARKING LOT BRIDGE

     36.20      8.20    820.50      0.00      0.00    821.38      0.88      0.10      0.62    812.30
     4200.        0.     4200.        0.        0.      558.        0.       55.       10.    827.00
      0.16      0.00      7.53      0.00     0.120     0.035     0.120     0.035    812.30      0.64
  0.002289       74.       74.       74.         2         0         0    -18.28     70.51     70.96

FLOW DISTRIBUTION FOR SECNO=      36.20          CWSEL=     820.50

STA=        0.       71.
  PER Q=     100.0
   AREA=     557.6
    VEL=       7.5

*SECNO 36.300

3370 NORMAL BRIDGE,NRD=  5 MIN ELTRD=  827.00 MAX ELLC=  823.30

        D/S FACE PARKING LOT STRUCTURE

     36.30      8.31    820.61      0.00      0.00    821.42      0.81      0.00      0.03    812.30
     4200.        0.     4200.        0.        0.      581.        0.       55.       10.    827.00
      0.16      0.00      7.24      0.00     0.120     0.035     0.120     0.035    812.30      0.43
  0.002005        1.        1.        1.         2         0         0     -2.76     70.52     70.96

FLOW DISTRIBUTION FOR SECNO=      36.30          CWSEL=     820.61
```

STA= 0. 71.
PER Q= 100.0
AREA= 580.5
VEL= 7.2

*SECNO 37.000

3370 NORMAL BRIDGE,NRD= 5 MIN ELTRD= 827.00 MAX ELLC= 822.70

U/S FACE PARKING LOT STRUCTURE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 37.00 | 10.12 | 821.82 | 0.00 | 0.00 | 822.37 | 0.55 | 0.00 | 0.13 | 811.70 | |
| 4200. | 0. | 4200. | 0. | 0. | 708. | 0. | 64. | 11. | 826.40 | |
| 0.18 | 0.00 | 5.94 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 811.70 | 0.31 | |
| 0.001069 | 570. | 570. | 570. | 1 | 0 | 0 | -3.99 | 70.66 | 70.97 | |

FLOW DISTRIBUTION FOR SECNO= 37.00 CUSEL= 821.32

STA= 0. 71.
PER Q= 100.0
AREA= 707.6
VEL= 5.9

*SECNO 37.100

U/S PARKING LOT STRUCTURE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 37.10 | 10.12 | 821.82 | 0.00 | 0.00 | 822.37 | 0.55 | 0.00 | 0.00 | 811.70 | |
| 4200. | 1. | 4199. | 0. | 1. | 708. | 0. | 64. | 11. | 826.40 | |
| 0.18 | 0.20 | 5.93 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 811.70 | 0.31 | |
| 0.001067 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 70.66 | 70.97 | |

FLOW DISTRIBUTION FOR SECNO= 37.10 CUSEL= 821.82

STA= 0. 1. 71.
PER Q= 0.0 100.0
AREA= 3.5 707.8
VEL= 0.2 5.9

CCHV= 0.300 CEHV= 0.500

*SECNO 37.800

D/S BUILDING OVER RIVER D/S CAPITAL AVE CROSS SECTION 38

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 37.80 | 12.86 | 821.66 | 0.00 | 0.00 | 822.67 | 0.76 | 0.15 | 0.11 | 830.00 | |
| 4200. | 0. | 4200. | 0. | 0. | 599. | 0. | 65. | 11. | 830.00 | |
| 0.19 | 0.00 | 7.02 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.00 | 1.07 | |
| 0.001595 | 115. | 115. | 115. | 2 | 0 | 0 | 0.00 | 56.88 | 57.95 | |

FLOW DISTRIBUTION FOR SECNO= 37.80 CUSEL= 821.86

STA= 1. 58.
PER Q= 100.0
AREA= 598.6
VEL= 7.0

*SECNO 37.900

| SECNO | DEPTH | QUSEL | CRIWS | QSELK | EG | XV | FL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TLA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XLCH | XNR | LTN | ELMIN | SSTA |

| | SLOPE | XLCOL | XLCH | XLOBR | ITPIAL | IN2 | ICONT | CORAR | TOPWID | EXPST |
|---|---|---|---|---|---|---|---|---|---|---|

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 830.00 MAX ELLC= 823.00

D/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37.90 | 12.75 | 821.75 | 0.00 | 0.00 | 822.74 | 0.99 | 0.00 | 0.11 | 830.00 |
| 4200. | 0. | 4200. | 0. | 0. | 526. | 0. | 65. | 11. | 830.00 |
| 0.19 | 0.00 | 7.98 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.00 | 1.07 |
| 0.002464 | 1. | 1. | 1. | 2 | 0 | 0 | -66.22 | 56.08 | 57.99 |

FLOW DISTRIBUTION FOR SECNO= 37.90 CHSEL= 821.75

STA= 1. 58.
PER Q= 100.0
AREA= 526.0
VEL= 8.0

*SECNO 38.000

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 830.00 MAX ELLC= 823.00

U/S FACE BUILDING OVER RIVER D/S CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 38.00 | 13.01 | 822.51 | 0.00 | 0.00 | 823.00 | 0.49 | 0.11 | 0.19 | 830.00 |
| 4200. | 0. | 4200. | 0. | 0. | 746. | 0. | 66. | 11. | 830.00 |
| 0.19 | 0.00 | 5.63 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.05 |
| 0.001164 | 66. | 66. | 66. | 2 | 0 | 0 | -60.10 | 60.90 | 81.95 |

FLOW DISTRIBUTION FOR SECNO= 38.00 CHSEL= 822.51

STA= 1. 82.
PER Q= 100.0
AREA= 746.5
VEL= 5.6

*SECNO 38.900

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD= 825.50 MAX ELLC= 823.10

D/S FACE CAPITAL AVE. CROSS SECTION 39

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 38.90 | 12.95 | 822.45 | 0.00 | 0.00 | 823.06 | 0.61 | 0.00 | 0.06 | 825.50 |
| 4200. | 0. | 4200. | 0. | 0. | 668. | 0. | 66. | 11. | 825.50 |
| 0.19 | 0.00 | 6.29 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.03 |
| 0.001691 | 1. | 1. | 1. | 2 | 0 | 0 | -90.62 | 60.94 | 81.97 |

FLOW DISTRIBUTION FOR SECNO= 38.90 CHSEL= 822.45

STA= 1. 82.
PER Q= 100.0
AREA= 667.6
VEL= 6.3

*SECNO 39.000

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD= 825.50 MAX ELLC= 823.10

U/S FACE CAPITAL AVE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 39.00 | 13.03 | 822.56 | 0.00 | 0.00 | 823.17 | 0.60 | 0.11 | 0.01 | 825.50 |
| 4200. | 0. | 4200. | 0. | 0. | 677. | 0. | 67. | 11. | 825.50 |
| 0.19 | 0.00 | 6.20 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.50 | 1.00 |
| 0.001619 | 66. | 66. | 66. | 2 | 0 | 0 | -99.79 | 60.95 | 81.98 |

FLOW DISTRIBUTION FOR SECNO= 39.00 CHSEL= 822.56

STA= 1. 82.
PER Q= 100.0
AREA= 677.2
VEL= 6.2

*SECNO 39.100

U/S CAPITAL AVE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39.10 | 13.26 | 822.79 | 0.00 | 0.00 | 823.22 | 0.43 | 0.09 | 0.05 | 825.50 |
| 4200. | 0. | 4200. | 0. | 0. | 794. | 0. | 67. | 11. | 825.50 |
| 0.19 | 0.00 | 5.29 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.59 | 1.00 |
| 0.000957 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 60.95 | 81.98 |

FLOW DISTRIBUTION FOR SECNO= 39.10 CHSEL= 822.79

STA= 1. 82.
PER Q= 100.0
AREA= 794.2
VEL= 5.3

*SECNO 40.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRITHS | HSEL | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | LTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IP2 | ICONT | CORAR | TOPWID | ENDST |

SURVEY VALLEY SECTION 40

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 40.00 | 14.66 | 822.96 | 0.00 | 0.00 | 823.36 | 0.40 | 0.13 | 0.01 | 816.40 |
| 4200. | 185. | 4001. | 11. | 175. | 769. | 22. | 71. | 12. | 814.90 |
| 0.20 | 1.06 | 5.20 | 0.53 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 819.33 |
| 0.000626 | 165. | 165. | 165. | 2 | 0 | 0 | 0.00 | 102.05 | 921.37 |

FLOW DISTRIBUTION FOR SECNO= 40.00 CHSEL= 822.96

STA= 819. 847. 916. 921.
PER Q= 6.4 93.3 0.3
AREA= 175.2 769.2 21.7
VEL= 1.1 5.2 0.5

*SECNO 40.900

D/S FACE MONROE ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 40.90 | 13.93 | 823.19 | 0.00 | 0.00 | 823.44 | 0.34 | 0.08 | 0.02 | 827.40 |
| 4200. | 0. | 4200. | 0. | 0. | 902. | 0. | 74. | 12. | 827.40 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.21 | 0.00 | 4.66 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.03 |
| 0.000615 | 135. | 135. | 135. | 2 | 0 | 0 | 0.00 | 77.94 | 78.97 |

FLOW DISTRIBUTION FOR SECNO= 40.90 CWSEL= 823.13

STA= 1. 79.
PER Q= 100.0
AREA= 901.5
VEL= 4.7

SPECIAL BRIDGE

| SS | XK | XKOR | COFQ | RDLEN | BUC | BNP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.62 | 3.00 | 0.00 | 78.10 | 0.10 | 790.00 | 0.00 | 811.60 | 811.60 |

*SECNO 41.000
PRESSURE FLOW

| SGPRS | EGLEC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 823.84 | 823.44 | 0.00 | 0. | 4200. | 790. | 736. | 821.70 | 827.40 |

U/S FACE MONROE ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41.00 | 14.32 | 823.32 | 0.00 | 0.00 | 823.04 | 0.32 | 0.37 | 0.00 | 827.60 |
| 4200. | 0. | 4200. | 0. | 0. | 432. | 0. | 75. | 12. | 827.40 |
| 0.21 | 0.00 | 4.50 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 809.20 | 1.03 |
| 0.000555 | 46. | 46. | 46. | 2 | 0 | 0 | 0.00 | 77.94 | 78.97 |

FLOW DISTRIBUTION FOR SECNO= 41.00 CWSEL= 823.32

STA= 1. 79.
PER Q= 100.0
AREA= 932.4
VEL= 4.5

*SECNO 42.000

SURVEY VALLEY SECTION 42

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.00 | 12.79 | 823.79 | 0.00 | 0.00 | 823.97 | 0.18 | 0.09 | 0.04 | 821.60 |
| 4200. | 0. | 4106. | 96. | 0. | 1187. | 128. | 80. | 13. | 816.20 |
| 0.23 | 0.06 | 3.66 | 0.75 | 0.120 | 0.035 | 0.120 | 0.035 | 811.00 | 823.69 |
| 0.000308 | 225. | 225. | 225. | 2 | 0 | 0 | 0.00 | 137.24 | 860.93 |

FLOW DISTRIBUTION FOR SECNO= 42.00 CWSEL= 823.79

STA= 724. 724. 841. 862. 861.
PER Q= 0.0 97.7 2.3 0.0
AREA= 0.3 1187.1 125.2 2.6
VEL= 0.1 3.5 0.8 0.1

*SECNO 43.900

D/S FACE DIVISION ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.90 | 15.04 | 823.34 | 0.00 | 0.00 | 824.26 | 0.92 | 0.07 | 0.02 | 826.90 |

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    4200.       0.     4200.       0.       0.     1109.       0.       87.      13.     826.90
     0.25     0.00      3.79     0.00    0.120    0.035    0.120    0.035   808.80      1.02
 0.000344     225.      225.     225.        2        0        0     0.00    81.96     82.98

FLOW DISTRIBUTION FOR SECNO=      43.90          CHSEL=     823.84

STA=        1.       83.
  PER Q=     100.0
   AREA=    1109.4
    VEL=       3.0

SPECIAL BRIDGE

SB  XK        XKOR       COFO       RDLEN      BHC        BHF        BAREA      SS         ELCHU      ELCHD
     0.90       1.74       3.00       0.00      82.00       2.00     945.00      0.00     810.30     810.30

*SECNO 44.300
   SECNO     DEPTH     CWSEL     CRIMS     WSELK     EG        HV        HL        QLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CURAR     TOPWID     ENDST

PRESSURE FLOW

 EGPRS      EGLNC      HS        QUEIR      OHR       BAREA    TRAPEZOID      ELLC      ELTRD
                                                                  AREA
  824.37     824.07     0.00        0.      4200.      945.      944.      822.10     826.90

        U/S FACE DIVISION ST.

    44.00     15.36    824.16     0.00      0.00    824.37      0.21      0.31      0.00    826.90
    4200.        0.     4200.       0.        0.     1136.        0.       89.       13.     826.90
     0.25      0.00      3.70     0.00     0.120    0.035     0.120     0.035    008.80      1.02
 0.000321       76.       76.      76.         2        0         0      0.00     81.96     82.98

FLOW DISTRIBUTION FOR SECNO=      44.00          CHSEL=     824.16

STA=        1.       83.
  PER Q=     100.0
   AREA=    1135.7
    VEL=       3.7

*SECNO 44.900
3280 CROSS SECTION      44.90 EXTENDED      0.19 FEET

        D/S FACE PENN CENTRAL R.R.

    44.90     14.18    824.18     0.00      0.00    824.43      0.24      0.04      0.02    824.00
    4200.        0.     4200.       0.        0.     1062.        0.       91.       14.     824.00
     0.26      0.07      3.95     0.00     0.120    0.035     0.120     0.035    810.00      0.00
 0.000420      100.      100.     100.         1        0         0      0.00     93.00     93.00

FLOW DISTRIBUTION FOR SECNO=      44.90          CHSEL=     824.18
```

STA= 0. 1. 93.
PER Q= 0.0 100.0
AREA= 0.2 1062.0
VEL= 0.1 6.0

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | ROLEN | BUC | DWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.25 | 1.93 | 3.00 | 0.00 | 94.00 | 8.00 | 695.00 | 0.00 | 812.80 | 812.80 |

*SECNO 45.000
3280 CROSS SECTION 45.00 EXTENDED 0.90 FEET

PRESSURE AND WEIR FLOW

| SGPRS | EGLWC | P3 | QWEIR | QP3 | PAREA | TRAPEZOID AREA | FLTC | FLTCD |
|---|---|---|---|---|---|---|---|---|
| 825.28 | 824.47 | 0.05 | 323. | 3867. | 695. | 697. | 820.90 | 824.00 |

D/S FACE PENN CENTRAL R.R.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.00 | 14.90 | 824.90 | 0.00 | 0.00 | 825.11 | 0.22 | 0.69 | 0.00 | 824.00 |
| 4200. | 0. | 6200. | 0. | 1. | 1127. | 0. | 94. | 14. | 824.00 |
| 0.27 | 3.16 | 3.73 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 810.00 | 0.00 |
| 0.000343 | 96. | 96. | 96. | 2 | 0 | 2 | 0.00 | 93.00 | 93.00 |

FLOW DISTRIBUTION FOR SECNO= 45.00 CWSEL= 824.90

STA= 0. 97.
PER Q= 0.0 100.0
AREA= 0.9 1127.0
VEL= 0.1 3.7

*SECNO 46.000

100 FT U/S PENN CENTRAL R.R. CROSS SECTION 46

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 46.00 | 15.09 | 824.89 | 0.00 | 0.00 | 825.19 | 0.31 | 0.04 | 0.05 | 815.70 |
| 4200. | 42. | 4098. | 60. | 70. | 908. | 104. | 96. | 14. | 813.60 |
| 0.28 | 0.61 | 4.51 | 0.58 | 0.120 | 0.035 | 0.120 | 0.035 | 809.80 | 912.85 |
| 0.000389 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 135.99 | 1048.84 |

FLOW DISTRIBUTION FOR SECNO= 46.00 CWSEL= 824.89

STA= 913. 928. 1000. 1012. 1049.
PER Q= 1.0 97.6 1.3 0.1
AREA= 69.6 908.4 76.6 27.6
VEL= 0.6 4.5 0.7 0.2

*SECNO 46.500

VALLEY SECTION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 46.50 | 14.77 | 825.27 | 0.00 | 0.00 | 825.42 | 0.14 | 0.16 | 0.05 | 816.00 |
| 4200. | 84. | 4044. | 71. | 275. | 1302. | 196. | 119. | 18. | 814.00 |
| 0.34 | 0.31 | 3.11 | 0.36 | 0.120 | 0.035 | 0.120 | 0.035 | 810.50 | 49.15 |
| 0.000475 | 700. | 700. | 700. | 2 | 0 | 2 | 0.00 | 286.56 | 435.67 |

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FLOW DISTRIBUTION FOR SECNO=      46.50          CWSEL=     825.27

STA=       49.      200.      215.      315.      330.      400.      436.
  PER Q=      0.7       1.3      95.3       1.3       0.4       0.0
   AREA=    171.6     101.6    1392.4     101.6      39.2       4.9
    VEL=      0.2       0.5       3.1       0.5       0.2       0.0

*SECNO 47.000
   SECNO     DEPTH     CWSEL     CRIMS     WSELK     EG        HV        HL        QLOSS    SANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       THA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       MTN       ELTIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     CORAR     TOPWID     ENDST


3470 ENCROACHMENT STATIONS=     1380.0     1603.0  TYPE=      1  TARGET=      225.000

        100 FT D/S ELM ST. CROSS SECTION 67

    47.00     14.12    825.42      0.00      0.00    825.54      0.12      0.11      0.01    813.30
    4200.      114.     3991.       95.      247.     1393.      207.      140.       23.    814.30
     0.41      0.46      2.06      0.68     0.120     0.035     0.120     0.035    811.30   1380.00
 0.000131      700.      700.      700.         2         0         0      0.00    204.90   1504.90


FLOW DISTRIBUTION FOR SECNO=      47.00          CWSEL=     825.42

STA=     1380.     1412.     1419.     1439.     1547.     1585.
  PER Q=      0.4       0.2       2.2      95.0       2.3
   AREA=     66.9      21.1     159.4    1392.9     206.9
    VEL=      0.2       0.3       0.6       2.9       0.5

*SECNO 47.900

        D/S FACE ELM ST.

    47.90     14.90    825.50      0.00      0.00    825.57      0.07      0.01      0.02    826.60
    4200.        0.     4200.        0.        0.     2035.        0.      153.       23.    826.60
     0.42      0.00      2.06      0.00     0.120     0.035     0.120     0.035    810.60      1.02
 0.000090      100.      100.      100.         2         0         0      0.00    173.97    174.98


FLOW DISTRIBUTION FOR SECNO=      47.90          CWSEL=     825.50

STA=        1.      175.
  PER Q=     100.0
   AREA=    2035.4
    VEL=       2.1


SPECIAL BRIDGE

SB  XX        XKOR      COFC      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.90      1.74      3.00      0.00    174.00      4.00    1455.00     0.00    814.00    814.00

*SECNO 48.000
PRESSURE FLOW


 EGPRS      EGLWC      M3        QWEIR     QPR       BAREA     TRAPEZOID     ELLC      ELTRD
                                                                AREA
   825.73     825.57     0.00        0.     4200.     1455.     1428.      822.40    826.[illegible]0
```

```
        U/S FACE ELM ST.

     48.00     15.06    825.66      0.00      0.00    825.73      0.06      0.16      0.00    826.60
     4200.        0.     4200.        0.        0.     2063.        0.       155.       24.    826.40
      0.43      0.00      2.04      0.00     0.120     0.035     0.120     0.035    810.60      1.02
  0.000094       60.       60.       60.         2         0         0      0.00    173.97    176.99

 FLOW DISTRIBUTION FOR SECNO=      48.00          CWSEL=     825.66

 STA=        1.      175.
   PER Q=     100.0
    AREA=    2063.4
     VEL=       2.0

 *SECNO 48.200

        D/S DAM 150 FT U/S ELM ST.

     48.20     15.39    825.69      0.00      0.00    825.74      0.03      0.01      0.00    810.60
     4200.      161.     3626.      455.      390.     1813.      996.      164.       24.    810.30
      0.46      0.36      1.99      0.46     0.120     0.035     0.120     0.035    810.30    208.67
  0.000050       150.      150.      150.         1         0         0      0.00    333.72    542.39

 FLOW DISTRIBUTION FOR SECNO=      48.20          CWSEL=     825.69

 STA=      209.      250.      263.      275.      394.      444.      464.      476.      542.
   PER Q=       0.6       1.0       1.8      85.8       8.6       1.7       0.3       0.2
    AREA=     129.8     107.7     152.2    1812.6     676.6     177.6      52.6      89.0
     VEL=       0.2       0.4       0.5       2.0       0.5       0.4       0.2       0.1

 *SECNO 48.300

 3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  816.50 MAX ELLC=  810.30

        AT DAM

     48.30     15.35    825.65      0.00      0.00    825.78      0.12      0.00      0.03    810.60
     4200.      230.     3387.      583.      339.     1089.      749.      165.       24.    810.30
      0.46      0.68      3.11      0.78     0.120     0.035     0.120     0.035    810.30    208.86
  0.000280        2.        2.        2.         2         0         0  -1011.59    332.80    541.66

 FLOW DISTRIBUTION FOR SECNO=      48.30          CWSEL=     825.65

 STA=      209.      250.      263.      275.      394.      444.      464.      476.      542.
   PER Q=       1.3       1.9       2.3      80.6       9.9       2.8       0.7       0.5
    AREA=     128.6     100.1     109.8    1089.2     457.7     152.1      52.2      87.1
     VEL=       0.4       0.8       0.9       3.1       0.9       0.8       0.5       0.3

 *SECNO 48.400
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS   BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       ETN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     STRIAL    IN2       ICONT     CORAR     TOPWID      ENDST

        U/S DAM
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 48.40 | 10.07 | 825.67 | 0.00 | 0.00 | 825.70 | 0.11 | 0.00 | 0.00 | 815.60 |
| | 4200. | 217. | 3429. | 555. | 345. | 1180. | 776. | 165. | 25. | 815.90 |
| | 0.46 | 0.63 | 2.91 | 0.71 | 0.120 | 0.035 | 0.120 | 0.035 | 815.60 | 208.00 |
| | 0.000220 | 2. | 2. | 2. | 1 | 0 | 0 | 0.00 | 333.11 | 541.91 |

FLOW DISTRIBUTION FOR SECNO= 48.40 CHSEL= 825.67

| STA= | 209. | 250. | 263. | 275. | 394. | 464. | 466. | 476. | 542. |
|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 1.2 | 1.7 | 2.3 | 91.6 | 0.5 | 2.0 | 0.0 | 0.5 | |
| AREA= | 129.0 | 200.3 | 115.4 | 1179.6 | 400.6 | 155.9 | 52.4 | 87.7 | |
| VEL= | 0.4 | 0.7 | 0.8 | 2.9 | 0.0 | 0.7 | 0.5 | 0.2 | |

*SECNO 48.900

CROSS SECTION 49A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 48.90 | 11.82 | 825.82 | 0.00 | 0.00 | 825.85 | 0.04 | 0.09 | 0.01 | 815.00 |
| 4200. | 1312. | 2761. | 126. | 2556. | 1131. | 246. | 202. | 30. | 815.00 |
| 0.54 | 0.31 | 2.44 | 0.51 | 0.120 | 0.035 | 0.120 | 0.035 | 814.00 | 0.32 |
| 0.000130 | 520. | 520. | 520. | 1 | 0 | 0 | 0.00 | 510.11 | 510.43 |

FLOW DISTRIBUTION FOR SECNO= 48.90 CHSEL= 825.32

| STA= | 0. | 350. | 370. | 470. | 490. | 510. |
|---|---|---|---|---|---|---|
| PER Q= | 28.7 | 2.5 | 65.7 | 2.5 | 0.5 | |
| AREA= | 2379.4 | 176.2 | 1191.1 | 176.2 | 65.6 | |
| VEL= | 0.5 | 0.6 | 2.4 | 0.6 | 0.3 | |

*SECNO 49.000

3470 ENCROACHMENT STATIONS= 851.0 1017.0 TYPE= 1 TARGET= 166.000

SURVEY CROSS SECTION 49

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49.00 | 17.58 | 825.88 | 0.00 | 0.00 | 826.00 | 0.12 | 0.09 | 0.03 | 817.30 |
| 4200. | 79. | 3947. | 174. | 157. | 1352. | 298. | 245. | 35. | 815.10 |
| 0.60 | 0.50 | 2.92 | 0.58 | 0.120 | 0.035 | 0.120 | 0.035 | 808.30 | 851.00 |
| 0.000153 | 650. | 650. | 650. | 2 | 0 | 0 | 0.00 | 165.00 | 1017.00 |

FLOW DISTRIBUTION FOR SECNO= 49.00 CHSEL= 825.88

| STA= | 851. | 865. | 871. | 883. | 965. | 991. | 1017. |
|---|---|---|---|---|---|---|---|
| PER Q= | 0.2 | 0.4 | 1.2 | 94.0 | 1.0 | 3.1 | |
| AREA= | 32.5 | 35.0 | 39.8 | 1352.4 | 60.2 | 230.1 | |
| VEL= | 0.3 | 0.5 | 0.6 | 2.9 | 0.7 | 0.6 | |

*SECNO 49.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 826.90 ELREA= 826.90

D/S FACE UNION ST. CROSS SECTION 50

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 49.90 | 13.08 | 825.86 | 0.00 | 0.00 | 826.04 | 0.16 | 0.02 | 0.02 | 826.90 |
| 4200. | 0. | 4200. | 0. | 0. | 1293. | 0. | 248. | 35. | 826.90 |
| 0.61 | 0.00 | 3.25 | 0.00 | 0.120 | 0.035 | 0.120 | 0.035 | 812.80 | 1.01 |
| 0.000286 | 100. | 100. | 100. | 1 | 0 | 0 | 0.00 | 116.46 | 197.49 |

FLOW DISTRIBUTION FOR SECNO= 49.90 CHSEL= 825.93

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PRINTED IN U.S.A.

```
STA=        1.      118.
  PER Q=    100.0
   AREA=   1292.5
    VEL=      3.2

SPECIAL BRIDGE

SH  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.90      1.75      1.00      0.00    116.50     10.50   1125.00     0.00    813.90    813.90

*SECNO 50.000
PRESSURE FLOW

 EGPRS      EGLWC      HH        QWEIR     CPR       BAREA   TRAPEZOID     ELLC      ELTRD
                                                                AREA
  826.25    826.56     0.31        0.      4200.     1125.     1124.     826.30    826.90

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,FLLEA=      826.90 FLREA=      826.90

        U/S FACE UNION ST.

    50.00     13.30    826.10     0.00      0.00    826.26     0.16      0.21      0.00    826.90
    4200.        0.     4200.       0.        0.     1317.       0.       200.       35.    826.90
     0.62      0.00      3.19     0.00     0.120     0.035    0.120     0.035    812.80      1.01
 0.000269       50.       50.      50.         2         0        0      0.00    116.48    117.49

FLOW DISTRIBUTION FOR SECNO=      50.00          CWSEL=     826.10

STA=        1.      118.
  PER Q=    100.0
   AREA=   1317.5
    VEL=      3.2

*SECNO 50.100
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        FV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VCL       TWA       LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID    ENDST

3470 ENCROACHMENT STATIONS=      87.0      403.0  TYPE=      1  TARGET=     316.000

        100 FT U/S UNION ST.

    50.10     13.30    826.18     0.00      0.00    826.29     0.11      0.02      0.01    814.00
    4200.       98.     3632.      469.      276.     1278.      826.      254.       36.    814.00
     0.63      0.36      2.84     0.57     0.120     0.035    0.120     0.035    812.80     87.00
 0.000150      100.      100.      100.         2         0        0      0.00    316.00    403.00

FLOW DISTRIBUTION FOR SECNO=      50.10          CWSEL=     826.10

STA=      87.      175.      195.      295.      315.      403.
  PER Q=     0.7       1.7      86.5       3.1       8.1
   AREA=   137.1     138.7    1278.5     193.7     632.3
    VEL=     0.2       0.5       2.8       0.7       0.5
```

CCHV= 0.100 CEHV= 0.300
*SECNO 51.000

SURVEY VALLEY SECTION 51

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 51.00 | 13.35 | 826.35 | 0.00 | 0.00 | 820.37 | 0.32 | 0.57 | 3.01 | 816.40 | |
| 4200. | 2056. | 1055. | 289. | 3683. | 1261. | 1131. | 350. | 49. | 815.10 | |
| 0.88 | 0.36 | 1.47 | 0.26 | 0.120 | 0.040 | 0.120 | 0.035 | 813.00 | 717.60 | |
| 0.000056 | 850. | 730. | 730. | 0 | 0 | 0 | 0.00 | 1135.05 | 1852.65 | |

FLOW DISTRIBUTION FOR SECNO= 51.00 CHSEL= 826.3

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 710. | 750. | 792. | 1034. | 1302. | 1462. | 1474. | 1578. | 1588. | 1644. | 1842. | 1853. |
| PER Q= | 0.3 | 2.0 | 15.6 | 18.8 | 11.3 | 1.3 | 44.2 | 1.0 | 2.4 | 3.4 | 0.1 | |
| AREA= | 90.1 | 262.3 | 1026.1 | 2129.5 | 1279.4 | 132.3 | 1261.0 | 99.0 | 333.0 | 682.3 | 17.8 | |
| VEL= | 0.2 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 | 0.3 | 0.2 | 0.1 | |

*SECNO 52.000

SURVEY VALLEY SECTION 52

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 52.00 | 13.10 | 826.40 | 0.00 | 0.00 | 820.60 | 0.31 | 0.54 | 0.00 | 816.30 | |
| 4200. | 2001. | 1364. | 35. | 10091. | 1229. | 152. | 525. | 72. | 815.60 | |
| 1.20 | 0.27 | 1.13 | 0.23 | 0.120 | 0.040 | 0.120 | 0.035 | 813.30 | 1000.57 | |
| 0.000033 | 800. | 800. | 800. | 2 | 0 | 0 | 0.00 | 1483.92 | 2464.49 | |

FLOW DISTRIBUTION FOR SECNO= 52.00 CHSEL= 826.40

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 1001. | 1202. | 1424. | 1772. | 2024. | 2276. | 2346. | 2356. | 2456. | 2466. | 2664. |
| PER Q= | 4.1 | 10.2 | 19.9 | 14.4 | 13.9 | 3.5 | 0.6 | 32.5 | 0.6 | 0.2 | |
| AREA= | 894.4 | 1608.8 | 2869.9 | 2078.2 | 2027.8 | 531.8 | 87.5 | 1209.4 | 68.0 | 62.8 | |
| VEL= | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.1 | 0.3 | 0.2 | |

*SECNO 53.000

SURVEY VALLEY SECTION 53

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.00 | 14.19 | 826.69 | 0.00 | 0.00 | 820.51 | 0.08 | 0.11 | 0.00 | 816.90 |
| 4200. | 1902. | 2287. | 31. | 5881. | 1462. | 116. | 1028. | 142. | 816.40 |
| 1.96 | 0.32 | 1.55 | 0.27 | 0.120 | 0.060 | 0.120 | 0.037 | 812.30 | 482.42 |
| 0.000060 | 2300. | 2600. | 2400. | 1 | 0 | 0 | 0.00 | 1110.59 | 1593.01 |

FLOW DISTRIBUTION FOR SECNO= 53.00 CHSEL= 826.69

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STA= | 482. | 564. | 780. | 1242. | 1429. | 1437. | 1447. | 1454. | 1570. | 1593. |
| PER Q= | 0.6 | 9.2 | 23.2 | 11.4 | 0.3 | 0.2 | 0.4 | 54.0 | 0.7 | |
| AREA= | 144.7 | 1297.8 | 2956.5 | 1346.3 | 46.4 | 38.5 | 51.1 | 1462.5 | 116.2 | |
| VEL= | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.2 | 0.3 | 1.6 | 0.3 | |

*SECNO 54.000

SURVEY VALLEY SECTION 54

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 54.00 | 13.69 | 826.59 | 0.00 | 0.00 | 826.63 | 0.04 | 0.11 | 0.00 | 816.50 | |
| 4200. | 101. | 2596. | 1710. | 394. | 1206. | 3806. | 244. | 179. | 817.20 | |
| 2.26 | 0.26 | 1.93 | 0.45 | 0.120 | 0.060 | 0.120 | 0.037 | 812.50 | 589.21 | |
| 0.000105 | 1550. | 1450. | 1100. | 2 | 0 | 0 | 0.00 | 832.99 | 1422.12 | |

FLOW DISTRIBUTION FOR SECNO= 54.00 CHSEL= 826.59

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STA= | 589. | 680. | 736. | 759. | 840. | 850. | 996. | 1160. | 1382. | 1422. |
| PER Q= | 0.8 | 1.3 | 0.3 | 56.9 | 1.0 | 11.8 | 12.4 | 14.7 | 0.8 | |
| AREA= | 169.6 | 130.5 | 35.7 | 1206.0 | 82.9 | 1049.9 | 1130.2 | 1410.3 | 126.2 | |
| VEL= | 0.2 | 0.3 | 0.4 | 2.0 | 0.5 | 0.. | 0.5 | 0.4 | 0.3 | |

*SECNO 55.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CHSEL | CRIWS | LSELX | EG | HV | HL | CLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | PTN | PJMIN | SSTA |
| SLOPE | KLOBL | KLCH | KLOBR | ITRIAL | IC2 | ICONT | CORAR | TOPWID | ENDST |

100 FT D/S EMMETT ST. CROSS SECTION 55

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 12.39 | 826.79 | 0.00 | 0.00 | 826.96 | 0.13 | 0.28 | 0.03 | 818.60 |
| 4200. | 31. | 3971. | 248. | 149. | 1206. | 306. | 1379. | 194. | 816.60 |
| 2.41 | 0.54 | 3.21 | 0.64 | 0.120 | 0.040 | 0.120 | 0.038 | 814.40 | 1896.56 |
| 0.000308 | 1650. | 1650. | 1650. | 2 | 0 | 0 | 0.00 | 237.39 | 2135.95 |

FLOW DISTRIBUTION FOR SECNO= 55.00 CHSEL= 826.79

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| STA= | 1699. | 1932. | 1943. | 2059. | 2061. | 2067. | 2126. | 2136. |
| PER Q= | 0.4 | 1.5 | 92.2 | 0.4 | 0.7 | 4.6 | 0.2 | |
| AREA= | 55.0 | 94.2 | 1206.2 | 25.6 | 39.2 | 300.2 | 20.8 | |
| VEL= | 0.3 | 0.7 | 3.2 | 0.7 | 0.8 | 0.6 | 0.3 | |

*SECNO 55.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

D/S EMMETT ST. CROSS SECTION 56

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.30 | 11.30 | 826.80 | 0.00 | 0.00 | 826.96 | 0.19 | 0.26 | 0.01 | 817.70 |
| 4200. | 0. | 4200. | 0. | 0. | 1209. | 0. | 1383. | 194. | 816.60 |
| 2.42 | 0.00 | 3.47 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 815.50 | 1965.00 |
| 0.000424 | 100. | 100. | 100. | 1 | 0 | 0 | 0.00 | 116.00 | 2061.00 |

FLOW DISTRIBUTION FOR SECNO= 55.80 CHSEL= 826.80

| | | |
|---|---|---|
| STA= | 1945. | 2061. |
| PER Q= | 100.0 | |
| AREA= | 1209.2 | |
| VEL= | 3.5 | |

*SECNO 55.900

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 830.00 MAX ELLC= 828.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

D/S FACE EMMETT ST. CROSS SECTION 56

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.90 | 11.22 | 826.72 | 0.00 | 0.00 | 827.08 | 0.29 | 0.30 | 0.03 | 817.75 |
| 4200. | 0. | 4200. | 0. | 0. | 963. | 0. | 1383. | 194. | 816.60 |
| 2.42 | 0.00 | 4.34 | 0.00 | 0.120 | 0.040 | 0.120 | 0.038 | 815.50 | 1965.00 |
| 0.001168 | 1. | 1. | 1. | 2 | 0 | 0 | -280.42 | 116.00 | 2061.00 |

FLOW DISTRIBUTION FOR SECNO= 55.90 CHSEL= 826.72

STA= 1965. 2061.
PER Q= 100.0
AREA= 967.8
VEL= 4.3

*SECNO 56.000

3570 NORMAL BRIDGE,NRB= 22 MIN ELTRD= 833.00 MAX ELLC= 828.60

3695 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

U/S FACE EMMETT ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 56.00 | 11.29 | 826.79 | 0.00 | 0.00 | 827.05 | 0.29 | 0.06 | 0.00 | 817.72 |
| 4200. | 0. | 4200. | 0. | 0. | 973. | 0. | 1364. | 194. | 816.60 |
| 2.42 | 0.00 | 4.32 | 0.00 | 0.120 | 0.040 | 0.120 | 0.030 | 815.50 | 1965.00 |
| 0.001169 | 51. | 51. | 51. | 2 | 0 | 0 | -213.10 | 116.00 | 2061.00 |

FLOW DISTRIBUTION FOR SECNO= 56.05 CHSEL= 826.75

STA= 1965. 2061.
PER Q= 100.0
AREA= 972.7
VEL= 4.3

*SECNO 56.100

3695 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 831.00 ELREA= 831.00

U/S EMMETT ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 56.10 | 11.40 | 826.90 | 0.00 | 0.00 | 827.09 | 0.18 | 0.00 | 0.01 | 817.70 |
| 4200. | 0. | 4200. | 0. | 0. | 1221. | 0. | 1304. | 194. | 816.60 |
| 2.42 | 0.00 | 3.44 | 0.00 | 0.120 | 0.040 | 0.120 | 0.039 | 815.50 | 1965.00 |
| 0.000412 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 116.00 | 2061.00 |

FLOW DISTRIBUTION FOR SECNO= 56.10 CHSEL= 826.90

STA= 1965. 2061.
PER Q= 100.0
AREA= 1220.9
VEL= 3.4

*SECNO 56.200

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DSPTH | CHSEL | CRIWS | WSELK | EG | KV | IL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VCL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

100 FT U/S EMMETT ST.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 56.20 | 12.58 | 826.98 | 0.00 | 0.00 | 827.13 | 0.14 | 0.03 | 0.00 | 818.30 |
| 4200. | 85. | 3860. | 259. | 159. | 1227. | 401. | 1387. | 193. | 816.80 |
| 2.43 | 0.53 | 3.14 | 0.64 | 0.120 | 0.040 | 0.120 | 0.038 | 814.40 | 1896.60 |

```
0.000289     100.     100.     100.        0        0        0     0.00   239.81  2136.41

FLOW DISTRIBUTION FOR SECNO=      56.20          CWSEL=     826.98

STA=    1897.    1932.    1943.    2058.    2061.    2067.    2126.    2136.
  PER Q=      0.4      1.6     91.9      0.7      0.7      4.7      0.2
   AREA=     61.6     97.3   1227.4     26.2     40.4    311.6     22.3
    VEL=      0.3      0.7      3.1      0.7      0.7      0.6      0.3

CCHV=   0.300 CEHV=   0.500
*SECNO 56.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      835.00 ELREA=      835.00

        D/S VERONA DAM CROSS SECTION 57

    56.90    10.99   827.09     0.00     0.00   827.27     0.10     0.13     0.02   827.00
    4200.       0.    4200.       0.       0.    1243.       0.    1399.     196.   826.80
     2.46     0.00     3.30     0.00    0.120    0.040    0.120    0.038   816.10  2237.07
 0.000465     350.     350.     350.        1        0        0     0.00   125.93  2363.00

FLOW DISTRIBUTION FOR SECNO=      56.90          CWSEL=     827.09

STA=    2237.    2363.
  PER Q=     100.0
   AREA=    1243.5
    VEL=       3.4

SPECIAL BRIDGE

SS   XK       XKOR      COFQ      RDLEN     BNC       BNP       BAREA     SS        ELCHU     ELCHD
     0.00      1.50      3.50      0.00     10.00      0.00      0.10      0.00    816.10    816.10

*SECNO 57.000
PRESSURE AND WEIR FLOW

 EGPRS      EGLWC      H3       QWEIR      QPR       BAREA    TRAPEZOID      ELLC     ELTRD
                                                                 AREA
**********   827.27     0.00     4206.       1.        0.        1.       816.20    823.90

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      835.00 ELREA=      835.00

        AT VERONA DAM

    57.00    12.34   820.46     0.00     0.00   828.50     0.14     1.31     0.00   827.80
    4200.       0.    4200.       0.       0.    1413.       0.    1399.     196.   826.80
     2.46     0.00     2.97     0.00    0.120    0.040    0.120    0.038   816.10  2237.00
 0.000308       4.       4.       4.        2        0        3     0.00   126.00  2363.00

FLOW DISTRIBUTION FOR SECNO=      57.00          CWSEL=     828.44

STA=    2237.    2363.
  PER Q=     100.0
   AREA=    1412.8
    VEL=       3.0
```

```
*SECNO 57.100

3301 HV CHANGED MORE THAN XVI'S

        U/S VERONA DAM

     57.10      5.22    828.22      0.00      0.00    828.85      0.66      0.04      0.26    827.80
     4200.        1.     4193.        6.        4.      641.        0.     1401.      196.    826.00
      2.46      0.27      6.54      0.73     0.120     0.040     0.120     0.038    823.70   2215.78
  0.023801       50.       50.       50.         2         0         0      0.00    156.37   2372.39

FLOW DISTRIBUTION FOR SECNO=      57.10          CWSEL=     828.22

STA=     2216.     2237.     2363.     2366.     2372.
  PER Q=       0.0      99.8       0.1       0.0
   AREA=       4.4     640.7       4.0       3.7
    VEL=       0.3       6.5       0.9       0.5

*SECNO 200.000

3301 HV CHANGED MORE THAN XVI'S

    200.00     10.38    829.38      0.00      0.00    829.52      0.14      0.48      0.16    825.00
     4200.       58.     4141.        2.      145.     1349.       10.     1401.      199.    828.70
      2.50      0.40      3.07      0.17     0.120     0.040     0.120     0.038    819.00   1832.92
  0.000539      425.      425.      425.         2         0         0      0.00    321.19   2154.11

FLOW DISTRIBUTION FOR SECNO=     200.00          CWSEL=     829.38

STA=     1833.     1856.     1918.     1930.     2130.     2142.     2154.
  PER Q=       0.2       0.7       0.3      98.5       0.0       0.0
   AREA=      25.0      85.3      34.3    1340.6       6.9       2.9
    VEL=       0.3       0.4       0.6       3.1       0.2       0.1

CCHV=   0.100 CEHV=    0.300
*SECNO 201.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       FLTTN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST

        SURVEY VALLEY SECTION 201

    201.00     14.46    829.56      0.00      0.00    829.61      0.04      0.08      0.01    825.00
     4200.      136.     3964.      120.      489.     2258.      511.     1434.      203.    823.80
      2.57      0.28      1.75      0.24     0.120     0.040     0.120     0.038    815.10   1758.48
  0.000088      425.      425.      425.         2         0         0      0.00    572.69   2331.17

FLOW DISTRIBUTION FOR SECNO=     201.00          CWSEL=     829.56

STA=     1758.     1836.     1856.     1918.     1930.     2130.     2142.     2212.     2316.     2331.
  PER Q=       0.2       0.4       2.2       0.4      93.9       0.4       1.5       0.9       0.0
   AREA=      83.8      68.2     282.8      54.1    2257.8      56.5     238.8     209.2       6.5
    VEL=       0.1       0.3       0.3       0.3       1.7       0.3       0.3       0.2       0.1

*SECNO 202.000
```

SURVEY VALLEY SECTION 202

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 202.00 | 15.99 | 829.69 | 0.00 | 0.00 | 829.74 | 0.05 | 0.14 | 0.00 | 825.00 |
| 4200. | 9. | 4145. | 46. | 39. | 2230. | 196. | 1520. | 217. | 824.40 |
| 2.77 | 0.24 | 1.86 | 0.23 | 0.120 | 0.040 | 0.120 | 0.038 | 813.70 | 1630.30 |
| 0.000125 | 1300. | 1300. | 1300. | 2 | 0 | 0 | 0.00 | 348.10 | 1978.40 |

FLOW DISTRIBUTION FOR SECNO= 202.00 CWSEL= 829.69

| | | | | |
|---|---|---|---|---|
| STA= | 1630. | 1647. | 1801. | 1889. | 1978. |
| PER Q= | 0.2 | 90.7 | 0.3 | 0.8 |
| AREA= | 38.2 | 2230.6 | 35.5 | 160.5 |
| VEL= | 0.2 | 1.9 | 0.4 | 0.2 |

*SECNO 203.000

SURVEY VALLEY SECTION 203

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 203.00 | 11.69 | 829.99 | 0.00 | 0.00 | 830.04 | 0.05 | 0.29 | 0.00 | 823.90 |
| 4200. | 15. | 3990. | 194. | 57. | 2146. | 865. | 1654. | 241. | 824.30 |
| 3.16 | 0.27 | 1.86 | 0.22 | 0.120 | 0.040 | 0.120 | 0.038 | 810.30 | 1876.14 |
| 0.000114 | 2300. | 2300. | 1300. | 2 | 0 | 0 | 0.00 | 341.37 | 2717.51 |

FLOW DISTRIBUTION FOR SECNO= 203.00 CWSEL= 829.99

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STA= | 1876. | 1895. | 2103. | 2122. | 2194. | 2296. | 2406. | 2636. | 2718. |
| PER Q= | 0.4 | 95.0 | 0.8 | 1.6 | 1.2 | 0.6 | 0.3 | 0.0 |
| AREA= | 37.4 | 2146.1 | 83.9 | 236.7 | 228.7 | 161.2 | 135.1 | 19.9 |
| VEL= | 0.3 | 1.9 | 0.4 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 |

*SECNO 204.000

SURVEY VALLEY SECTION 204

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 204.00 | 13.43 | 830.13 | 0.00 | 0.00 | 830.19 | 0.06 | 0.15 | 0.00 | 822.90 |
| 4200. | 13. | 4004. | 184. | 42. | 2026. | 563. | 1742. | 260. | 824.10 |
| 3.33 | 0.31 | 1.98 | 0.33 | 0.120 | 0.040 | 0.120 | 0.038 | 816.70 | 2457.43 |
| 0.000140 | 1200. | 1200. | 1200. | 0 | 0 | 0 | 0.00 | 511.40 | 2968.83 |

FLOW DISTRIBUTION FOR SECNO= 204.00 CWSEL= 830.13

| | | | | | | |
|---|---|---|---|---|---|---|
| STA= | 2457. | 2469. | 2681. | 2700. | 2790. | 2862. | 2969. |
| PER Q= | 0.3 | 95.3 | 1.1 | 2.8 | 0.5 | 0.0 |
| AREA= | 41.8 | 2026.1 | 100.3 | 331.2 | 113.8 | 17.6 |
| VEL= | 0.3 | 2.0 | 0.4 | 0.3 | 0.2 | 0.0 |

*SECNO 205.000

3265 DIVIDED FLOW

SURVEY VALLEY SECTION 205

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 205.00 | 13.02 | 830.32 | 0.00 | 0.00 | 830.33 | 0.01 | 0.13 | 0.00 | 824.80 |
| 4200. | 16. | 2739. | 1445. | 74. | 2412. | 5674. | 1965. | 299. | 823.80 |
| 3.93 | 0.21 | 1.94 | 0.25 | 0.120 | 0.040 | 0.120 | 0.038 | 817.30 | 2228.07 |
| 0.000046 | 1100. | 1800. | 1800. | 1 | 0 | 0 | 0.00 | 1418.90 | 3766.15 |

FLOW DISTRIBUTION FOR SECNO= 205.00 CWSEL= 830.32

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 2228. | 2238. | 2243. | 2269. | 2501. | 2320. | 2748. | 3036. | 3354. | 3550. | 3586. | 3756. |
| PER Q= | 0.1 | 0.1 | 0.2 | 65.2 | 2.7 | 7.8 | 9.7 | 10.0 | 5.9 | 0.3 | 0.0 | |
| AREA= | 20.5 | 22.6 | 31.3 | 2411.9 | 113.5 | 1248.1 | 1562.2 | 1661.3 | 994.5 | 90.5 | 3.8 | |
| VEL= | 0.1 | 0.2 | 0.3 | 1.1 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.0 | |

*SECNO 206.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | C.SEL | SCINS | WSEL | EG | IW | J | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | LTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IHR | ICONT | CORAR | TOPWID | ENDST |

SURVEY VALLEY SECTION 206

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 206.00 | 11.40 | 830.40 | 0.00 | 0.00 | 830.44 | 0.04 | 0.10 | 0.01 | 823.90 |
| 4200. | 62. | 3262. | 875. | 251. | 1877. | 2510. | 2151. | 332. | 827.80 |
| 4.21 | 0.32 | 1.73 | 0.63 | 0.120 | 0.060 | 0.120 | 0.139 | 819.00 | 1247.79 |
| 0.000121 | 1525. | 1525. | 1200. | 2 | 2 | 0 | 0.20 | 756.31 | 2052.10 |

FLOW DISTRIBUTION FOR SECNO= 206.00 CHSEL= 830.40

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 1248. | 1300. | 1355. | 1375. | 1541. | 1611. | 1700. | 1800. | 1950. | 2700. | 2802. | |
| PER Q= | 0.0 | 0.0 | 0.1 | 77.2 | 2.2 | 5.7 | 12.2 | 1.7 | 0.0 | 0.0 | | |
| AREA= | 10.5 | 137.6 | 111.0 | 1876.6 | 185.0 | 500.3 | 1960.3 | 152.6 | 20.1 | 0.2 | | |
| VEL= | 0.0 | 0.3 | 0.4 | 1.7 | 0.5 | 0.5 | 0.4 | 0.3 | 0.1 | 0.0 | | |

*SECNO 207.000

SURVEY VALLEY SECTION 207

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 207.00 | 14.19 | 830.49 | 0.00 | 0.00 | 830.51 | 0.02 | 0.07 | 0.00 | 823.90 |
| 4200. | 724. | 2306. | 1170. | 2390. | 1560. | 4001. | 2259. | 351. | 823.40 |
| 4.46 | 0.30 | 1.53 | 0.29 | 0.120 | 0.040 | 0.120 | 0.039 | 816.30 | 949.49 |
| 0.000067 | 1200. | 925. | 500. | 1 | 1 | 0 | 0.00 | 1459.77 | 2389.26 |

FLOW DISTRIBUTION FOR SECNO= 207.00 CHSEL= 830.49

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 969. | 1266. | 1406. | 1412. | 1552. | 1562. | 1726. | 1950. | 2210. | 2382. | 2388. | 2389. |
| PER Q= | 11.5 | 5.5 | 0.3 | 54.9 | 0.5 | 6.5 | 7.5 | 8.7 | 4.1 | 0.5 | 0.0 | |
| AREA= | 1608.0 | 746.9 | 35.3 | 1540.6 | 66.8 | 883.1 | 1003.0 | 1257.1 | 589.9 | 121.7 | 1.3 | |
| VEL= | 0.3 | 0.3 | 0.3 | 1.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.0 | |

*SECNO 208.000

SURVEY VALLEY SECTION 208

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 208.00 | 14.30 | 830.60 | 0.00 | 0.00 | 830.61 | 0.01 | 0.10 | 0.00 | 822.50 |
| 4200. | 1750. | 1475. | 976. | 6321. | 1076. | 3290. | 2555. | 403. | 824.00 |
| 5.11 | 0.28 | 1.37 | 0.30 | 0.120 | 0.040 | 0.120 | 0.039 | 816.30 | 240.63 |
| 0.000057 | 1300. | 1900. | 1300. | 2 | 0 | 0 | 0.00 | 1956.12 | 2196.75 |

FLOW DISTRIBUTION FOR SECNO= 208.00 CHSEL= 830.60

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STA= | 241. | 438. | 626. | 988. | 1234. | 1466. | 1541. | 1609. | 1726. | 1904. | 2134. | 2197. |
| PER Q= | 4.2 | 4.0 | 0.6 | 13.2 | 9.9 | 1.9 | 13.1 | 4.4 | 7.4 | 9.6 | 1.6 | |
| AREA= | 749.5 | 818.0 | 1697.7 | 1627.0 | 1309.0 | 250.2 | 1078.3 | 663.2 | 1032.5 | 1357.2 | 257.2 | |
| VEL= | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.4 | 0.3 | 0.3 | 0.3 | 0.3 | |

*SECNO 209.000

SURVEY VALLEY SECTION 209

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 209.00 | 13.70 | 830.80 | 0.00 | 0.00 | 830.82 | 0.02 | 0.21 | 0.00 | 824.40 |
| 4200. | 300. | 1750. | 2150. | 895. | 917. | 5686. | 3003. | 487. | 823.60 |
| 5.04 | 0.34 | 1.91 | 0.38 | 0.120 | 0.040 | 0.120 | 0.041 | 617.10 | 118.25 |
| 0.000115 | 1900. | 3700. | 2000. | 2 | 0 | 0 | 0.00 | 1612.49 | 1730.74 |

FLOW DISTRIBUTION FOR SECNO= 209.00 CWSEL= 830.80

| STA= | 118. | 364. | 357. | 443. | 652. | 822. | 1064. | 1296. | 1440. | 1606. | 1731. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 6.5 | 0.7 | 41.7 | 11.0 | 8.4 | 9.9 | 12.0 | 6.4 | 3.2 | 0.3 | |
| AREA= | 824.2 | 70.8 | 917.2 | 1128.6 | 803.4 | 1007.0 | 1204.3 | 705.1 | 491.4 | 106.1 | |
| VEL= | 0.3 | 0.4 | 1.9 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.1 | |

*SECNO 210.000

SURVEY VALLEY SECTION 210

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 210.00 | 10.23 | 830.96 | 0.00 | 0.00 | 830.98 | 0.02 | 0.15 | 0.00 | 823.50 |
| 4200. | 2008. | 1474. | 719. | 4652. | 307. | 1823. | 3199. | 525. | 823.30 |
| 6.22 | 0.45 | 1.83 | 0.39 | 0.120 | 0.040 | 0.120 | 0.041 | 820.70 | 1622.25 |
| 0.000130 | 1600. | 1650. | 950. | 2 | 0 | 0 | 0.00 | 1292.99 | 2915.24 |

FLOW DISTRIBUTION FOR SECNO= 210.00 CWSEL= 830.96

| STA= | 1622. | 1682. | 1932. | 2200. | 2413. | 2615. | 2505. | 2514. | 2628. | 2838. | 2914. | 2915. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 1.3 | 17.2 | 17.1 | 12.1 | 0.1 | 33.1 | 0.7 | 5.9 | 9.3 | 1.1 | 0.0 | |
| AREA= | 180.9 | 1526.5 | 1569.4 | 1162.1 | 2.2 | 807.0 | 57.7 | 507.8 | 996.7 | 179.0 | 0.2 | |
| VEL= | 0.3 | 0.5 | 0.5 | 0.4 | 0.4 | 1.1 | 0.5 | 0.4 | 0.4 | 0.2 | 0.0 | |

*SECNO 211.000

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XWL | XNCH | XRB | WTA | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IH2 | ICONT | CORAR | TOPWID | ENDST |

SURVEY VALLEY SECTION 211

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 211.00 | 12.02 | 831.22 | 0.00 | 0.00 | 831.26 | 0.04 | 0.26 | 0.01 | 824.50 |
| 4200. | 8. | 1850. | 2343. | 24. | 777. | 4292. | 3387. | 556. | 823.80 |
| 6.58 | 0.32 | 2.38 | 0.55 | 0.120 | 0.040 | 0.120 | 0.042 | 819.20 | 2507.77 |
| 0.000201 | 1200. | 2675. | 1100. | 2 | 0 | 0 | 0.00 | 874.93 | 3382.70 |

FLOW DISTRIBUTION FOR SECNO= 211.00 CWSEL= 831.22

| STA= | 2508. | 2515. | 2595. | 2600. | 2612. | 2836. | 3080. | 3364. | 3383. |
|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 0.2 | 44.0 | 0.5 | 1.0 | 16.1 | 18.6 | 19.2 | 0.3 | |
| AREA= | 24.3 | 777.4 | 34.1 | 71.0 | 1236.5 | 1395.7 | 1510.9 | 43.2 | |
| VEL= | 0.3 | 2.4 | 0.6 | 0.6 | 0.5 | 0.6 | 0.5 | 0.3 | |

*SECNO 212.000

SURVEY VALLEY SECTION 212

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 212.00 | 9.94 | 831.54 | 0.00 | 0.00 | 831.56 | 0.02 | 0.30 | 0.00 | 823.60 |
| 4200. | 2028. | 2146. | 26. | 3155. | 1805. | 33. | 3618. | 595. | 825.00 |
| 7.12 | 0.39 | 1.64 | 0.32 | 0.120 | 0.040 | 0.120 | 0.042 | 821.60 | 2490.09 |
| 0.000113 | 900. | 2400. | 2400. | 0 | 0 | 0 | 0.00 | 1184.65 | 3674.74 |

```
FLOW DISTRIBUTION FOR SECNO=     212.00          CWSEL=     831.54

STA=     2490.     2506.     2722.     2990.     3220.     3491.     3495.     3649.     3657.     3673.
  PER Q=      0.2       9.7      12.4      11.9      13.9       0.3      31.1       0.4       0.2
   AREA=     36.1    1065.0    1324.7    1256.3    1445.6      26.1    1305.2      43.9      19.3
    VEL=      0.2       0.4       0.4       0.4       0.4       0.4       1.6       0.4       0.2

CCHV=   0.300 CEHV=   0.500
*SECNO 213.000

        SURVEY VALLEY SECTION 213

   213.00     10.22    832.12      0.00      0.00    832.22      0.10      0.62      0.04    826.70
    3370.     1044.     2307.       19.     1687.      770.       39.     3926.      650.    827.30
     7.56      0.62      3.00      0.49     0.120     0.040     0.120     0.043    821.90   2250.00
 0.000367     2600.     4000.     4500.         2         0         0      0.00    496.70   2746.00

FLOW DISTRIBUTION FOR SECNO=     213.00          CWSEL=     832.12

STA=     2250.     2450.     2592.     2632.     2640.     2736.     2746.
  PER Q=      17.5      13.7       2.1       1.3      63.5       0.6
   AREA=     914.5     571.2     132.9      60.4     740.7      39.2
    VEL=      0.6       0.6       0.5       0.6       3.0       0.5

*SECNO 214.900

        D/S FACE MC ALLISTER ROAD SURVEY SECTION 215

   214.90     10.44    832.44      0.00      0.00    832.65      0.21      0.38      0.15    833.40
    3370.        0.     3370.        0.        0.      923.        0.     3957.      656.    833.40
     7.62      0.00      3.65      0.00     0.120     0.040     0.120     0.043    822.00      1.01
 0.000627      800.      800.      800.         2         0         0      0.00    106.98    105.99

FLOW DISTRIBUTION FOR SECNO=     214.90          CWSEL=     832.44

STA=        1.      106.
  PER Q=     100.0
   AREA=     923.1
    VEL=       3.7

SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BUC       BUP       BAREA     SS        ELCHU     ELCHD
     0.90      1.91      3.00      0.00    105.00      2.00    700.00      0.00    824.00    824.00

*SECNO 215.000
PRESSURE FLOW

 ESPRS      EGLWC      K3       QWEIR      QPR       BAREA    TRAPEZOID     ELLC      ELTRD
                                                                 AREA
   833.13     832.65     0.00        0.     3370.      700.      700.      830.80    833.40

        U/S FACE MC ALLISTER ROAD SURVEY SECTION 215

   215.00     10.95    832.95      0.00      0.00    833.13      0.19      0.48      0.00    833.40
    3370.        0.     3370.        0.        0.      976.        0.     3950.      656.    833.40
     7.62      0.00      3.45      0.00     0.120     0.040     0.120     0.043    822.00      1.01
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.000527 | 37. | 37. | 37. | 2 | 0 | 0 | 0.00 | 104.99 | 105.99 |

FLOW DISTRIBUTION FOR SECNO= 215.00 CUSEL= 832.95

STA= 1. 106.
PER Q= 100.0
AREA= 975.8
VEL= 3.5

*SECNO 215.100

| SECNO | DEPTH | CUSEL | CHIWS | USELK | EG | HV | KL | LOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | CLOE | QCH | QROB | ALOB | ACH | AROB | WOH | TWA | LEFT/RIGHT |
| TIME | VLOE | VCH | VROB | XNL | XNCH | XNR | UTN | ELMIN | SSTA |
| SLOPE | XLOEL | XLCH | XLOBR | ITRIAL | IF2 | ICONT | CORAR | TOPWID | ENDST |
| 215.10 | 10.37 | 833.07 | 0.00 | 0.00 | 833.19 | 0.10 | 0.06 | 0.02 | 827.40 |
| 3370. | 166. | 2686. | 519. | 334. | 343. | 656. | 3941. | 656. | 824.90 |
| 7.63 | 0.49 | 3.13 | 0.79 | 0.120 | 0.040 | 0.120 | 0.043 | 822.40 | 1250.00 |
| 0.000364 | 100. | 100. | 100. | 2 | 0 | 0 | 0.00 | 300.00 | 1550.00 |

FLOW DISTRIBUTION FOR SECNO= 215.10 CUSEL= 833.07

| STA= | 1250. | 1352. | 1361. | 1449. | 1453. | 1468. | 1550. |
|---|---|---|---|---|---|---|---|
| PER Q= | 4.2 | 0.7 | 79.7 | 0.8 | 2.6 | 12.0 | |
| AREA= | 297.3 | 40.2 | 843.5 | 30.1 | 132.2 | 521.9 | |
| VEL= | 0.5 | 0.5 | 3.2 | 0.9 | 0.8 | 0.1 | |

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Battle Creek and Pennfield Twp

3) WATERCOURSE: Battle Creek

4) DOCUMENT TYPE: report

00BREAK00

# BATTLE CREEK RIVER BASIN
# HYDRAULIC ANALYSIS
# FOR
# CITY OF BATTLE CREEK
# AND
# PENNFIELD TOWNSHIP
# FLOOD INSURANCE STUDIES

Prepared By:

Wade, Trim & Associates, Inc.
25185 Goddard Road
Taylor, Michigan 48180

HUD 2021-07
HUD 2029-07

November, 1980

# I INTRODUCTION

This hydraulic study investigates the existence and severity of flood hazards along the Battle Creek River in the City of Battle Creek and Pennfield Township, Calhoun County, Michigan.

The City of Battle Creek covers an area of about 17 square miles and Pennfield Township covers approximately 35.5 square miles. The flood plain of the Battle Creek River within the study reach is basically undeveloped at present with the exception of a few residential and commercial structures.

## II DETAILED STUDY OF THE BATTLE CREEK RIVER

Detailed hydraulic studies were performed on approximately 8.2 miles of the Battle Creek River beginning at its confluence with the Kalamazoo River in the City of Battle Creek and ending upstream of the McAllister Road Bridge in Pennfield Township.

A total of 14 bridge, 3 structure and 30 valley cross sections were field surveyed by Wade, Trim & Associates, Inc. in April, 1980. These cross sections were supplemented by aerial topography and U.S.G.S. Quad Maps which consist of 10 foot contour intervals (Reference 1, 2 and 3).

Cross section locations are shown on Exhibit 1. Table 1 cross references section designations by showing the computer section number which corresponds to each cross section letter shown in Exhibit 1. Table 2 lists discharges which have been approved by the Michigan Department of Natural Resources (M.D.N.R.) for this stream.

### A. METHOD OF ANALYSIS

The HEC-2 backwater computer program was used in developing water surface profiles (Reference 4). Table 2 presents water surface elevations at selected locations for the four floods (10, 50, 100 and 500 year) analyzed in this report. HEC-2 printouts including computer cross section plots are presented as Exhibit 2. (Exhibit 2 is contained in the 11" x 15" folder enclosed with this report.) Water surface profiles resulting from the backwater analyses are presented as Exhibit 3.

TABLE 1

CITY OF BATTLE CREEK

AND

PENNFIELD TOWNSHIP

BATTLE CREEK RIVER

CROSS REFERENCE INDEX

| X-SECT. | COMPUTER NO. | DESCRIPTION |
|---|---|---|
| A | 23.0 | Confluence Kalamazoo River |
| B | 24.9 | D/S Face Washington Ave. Bridge |
| C | 25.0 | U/S Face Washington Ave. Bridge |
| D | 26.9 | D/S Face Penn Central R.R. Bridge |
| E | 27.0 | U/S Face Penn Central R.R. Bridge |
| F | 29.0 | Footbridge |
| G | 29.9 | D/S Face Jackson St. Bridge |
| H | 30.0 | U/S Face Jackson St. Bridge |
| I | 31.1 | D/S Face of Building Over River |
| J | 33.0 | U/S Face Michigan Ave. Bridge |
| K | 35.8 | D/S Face McCamly St. Bridge |
| L | 37.0 | U/S Face Parking Lot Structure |
| M | 37.9 | D/S Face of Building Over River |
| N | 39.0 | U/S Face Capital Ave. Bridge |
| O | 40.9 | D/S Face Monroe St. Bridge |
| P | 41.0 | U/S Face Monroe St. Bridge |
| Q | 43.9 | D/S Face Division St. Bridge |
| R | 44.0 | U/S Face Division St. Bridge |
| S | 44.9 | D/S Face Penn Central R.R. Bridge |
| T | 45.0 | U/S Face Penn Central R.R. Bridge |
| U | 47.9 | D/S Face Elm St. Bridge |
| V | 48.0 | U/S Face Elm St. Bridge |
| W | 48.4 | Dam |
| X | 49.9 | D/S Face Union St. Bridge |
| Y | 50.0 | U/S Face Union St. Bridge |
| Z | 51.0 | Valley Section |

TABLE 1
CITY OF BATTLE CREEK
AND
PENNFIELD TOWNSHIP
BATTLE CREEK RIVER
CROSS REFERENCE INDEX
(CONTINUED)

| X-SECT. | COMPUTER NO. | DESCRIPTION |
|---|---|---|
| AA | 52.0 | Valley Section |
| AB | 53.0 | Valley Section |
| AC | 54.0 | Valley Section |
| AD | 55.9 | D/S Face Emmett St. Bridge |
| AE | 56.0 | U/S Face Emmett St. Bridge |
| AF | 57.0 | Verona Dam |
| AG | 201.0 | Valley Section |
| AH | 202.0 | Valley Section |
| AI | 203.0 | Valley Section |
| AJ | 204.0 | Valley Section |
| AK | 205.0 | Valley Section |
| AL | 206.0 | Valley Section |
| AM | 207.0 | Valley Section |
| AN | 208.0 | Valley Section |
| AO | 209.0 | Valley Section |
| AP | 210.0 | Valley Section |
| AQ | 211.0 | Valley Section |
| AR | 212.0 | Valley Section |
| AS | 213.0 | Valley Section |
| AT | 214.9 | D/S Face McAllister Rd. Bridge |
| AU | 215.0 | U/S Face McAllister Rd. Bridge |

TABLE 2

CITY OF BATTLE CREEK AND

PENNFIELD TOWNSHIP

BATTLE CREEK RIVER FLOOD ELEVATIONS*

| LOCATION | Selected Frequencies 10 YEAR | 50 YEAR | 100 YEAR | 500 YEAR |
|---|---|---|---|---|
| | Q= 2,360 cfs | Q=3600 ~~Q= 3,430 cfs~~ | Q= 4200 ~~Q= 3,910 cfs~~ | Q= 5800 ~~Q= 5,110~~ cfs ok Hope |
| Confluence to Kalamazoo River | ~~809.58~~ | 810.99 | ~~811.56~~ | ~~812.85~~ |
| Union St. Bridge | 821.64 | ~~824.24~~ | ~~825.52~~ | ~~828.56~~ |
| Verona Dam | 826.77 | 827.58 | ~~827.98~~ | ~~829.74~~ |
| u/s of Waadoga Creek | Q= 1,850 cfs | 2890 ~~Q= 2,690~~ cfs | 3370 ~~Q= 3,070~~ cfs | 4650 ~~Q= 4,010~~ cfs ok Hope |
| McAllister Rd. Bridge | ~~830.54~~ | ~~832.04~~ | ~~832.66~~ | 834.16 |

See printout for correct elev. that coorespond to new Qs

*Elevations based on N.G.V.D.

## B. VARIABLES AND COEFFICIENTS

Roughness coefficients (Mannings "n") were estimated from field inspection, quad maps and photographs. Typical roughness values for the main channel and overbank areas of the Battle Creek River range from .035 to .040 and .08 to .12, respectively, for all floods. These values are indicative of summer month conditions and are consistent with values recommended and used in engineering practice (Reference 5). Contraction and expansion coefficients were selected as 0.3 and 0.5, respectively, at bridge sections, 0.1 and 0.3, respectively, for gradual channel transitions and .5 and .8, respectively, for abrupt channel transitions. Bridge loss coefficient computations are included in Exhibit 4.

## C. HIGH WATER MARKS

A 1975 flood high water mark (824.8 feet) for the Union Street Bridge was obtained from the City of Battle Creek engineering department. The 1975 storm discharge of 3,590 cfs (Reference 6) was then applied to the HEC-2 computer model for the Battle Creek River and the Union Street high water mark was matched; therefore, the backwater model has been calibrated with an historical event. The backwater analysis for the 1975 flood was run up to the Verona Dam gaging station, located 1.5 miles upstream of Union Street and tied into the rating curve for the Dam (Reference 7). Exhibit 5 presents the backup data generated for this analysis. HEC-2 printouts for the 1975 flood are presented as part of Exhibit 2.

D. STARTING CONDITIONS

The starting water surface elevation used in all backwater computations for the Battle Creek was the mean annual Kalamazoo River level. A storm frequency/discharge rating curve was developed for the Kalamazoo River (Reference 8) to determine the mean annual flow (2.33 year recurrence interval) of 2,700 cfs. This flow was then applied to the stage/discharge rating curve to obtain the mean annual elevation of 807.8 (Exhibit 6).

E. SPECIAL PROBLEM

A divided flow condition occurs along the Battle Creek River between cross sections AP and AS during the 100 year flood. A diversion analysis was performed to determine the distribution of flow between the main channel and the diversion area on the left overbank of the stream. Results of this analysis (Exhibit 7) indicate that the diversion area will carry a small percentage of the total flow (5.5%) and will not be considered as a portion of the floodway necessary to pass floodwater.

The HEC-2 computer backwater program was utilized for this analysis. Backwater analyses were performed for both the main channel and the diversion area. Exhibit 7 presents the data produced in this analysis including a location map, computer printouts, and rating curves. Stage/discharge rating curves were developed at the start of the divided flow area (cross section AS) for both flow paths. These curves were combined to form a total rating curve for the system thereby allowing for the determination of flow distribution for each flow path. Inspection of this graph indicates the following for the 100 year flood event:

1. The diversion area carries 170 cfs (5.5% of total flow).

2. The flood elevation at cross section AS is increased by 0.08 feet when the diversion area is considered ineffective for the passage of floodwater.

Therefore, the diversion area will not be considered as part of the floodway and will be delineated as a flood fringe area. Furthermore, encroachment within the 100 year flood plain along the main channel, upstream of cross section AQ, was not permitted.

F. GENERAL

Computed water surface elevations were developed to an accuracy of 0.5 feet for floods of the selected recurrence intervals.

All elevations are referenced to the U.S. Geological Survey (U.S.G.S.) Datum. This datum is equivalent to the National Geodetic Vertical Datum (N.G.V.D.).

The hydraulic analyses for this study were based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

# REFERENCES


1. Abrams Aerial Survey, Kalamazoo River in City of Battle Creek and Pennfield Township, 1979.

2. U.S. Geological Survey Topographical Maps - Battle Creek Quadrangle, Calhoun County, 7.5 Minute Series - Photo Revised, 1972.

3. U.S. Geological Survey Topographical Maps - Ceresco Quadrangle, Calhoun County, 7.5 Minute Series - Photo Revised, 1972.

4. HEC-2 Water Surface Profile - Users Manual - U.S. Army Corps of Engineers - 1976.

5. Open Channel Hydraulics, Chow, Ven Te, McGraw Hill, Inc., 1959.

6. Log Pearson Type III Distribution, U.S. Geological Survey, Computer Printouts, October, 1979.

7. United States Department of the Interior, Water Resources Data for Michigan - Part 1, Surface Water Records, 1974.

8. Hydraulic Analysis For Kalamazoo River, Bedford Township and City of Battle Creek, Wade, Trim & Associates, Inc., November, 1980.

BATTLE CREEK RIVER

INDEX OF EXHIBITS

| | |
|---|---|
| EXHIBIT 1 | Field Cross Section Location and 100 Year Flood Plain - Floodway Map, City of Battle Creek and Pennfield Township, 5 Sheets. |
| EXHIBIT 2 | Computer Printouts, HEC-2 Backwater Analysis with Cross Section Plots (in separate folder) City of Battle Creek and Pennfield Township. |
| EXHIBIT 3 | Stream Profile, City of Battle Creek and Pennfield Township, 6 Sheets. |
| EXHIBIT 4 | Bridge Notes and Sketches, City of Battle Creek and Pennfield Township, 59 Sheets. |
| EXHIBIT 5 | Documented High Water Data and Verona Dam Rating Curve, City of Battle Creek and Pennfield Township, 4 Sheets. |
| EXHIBIT 6 | Kalamazoo River Mean Flood Elevation, City of Battle Creek, 2 Sheets. |
| EXHIBIT 7 | Battle Creek River Divided Flow Analysis, Pennfield Township, 12 Sheets. |

BATTLE CREEK RIVER

CITY OF BATTLE CREEK

AND

PENNFIELD TOWNSHIP

EXHIBIT 1

Field Cross Section Location and

100 Year Flood Plain - Floodway Map

BATTLE CREEK RIVER

CITY OF BATTLE CREEK

AND

PENNFIELD TOWNSHIP

EXHIBIT 2

Computer Printouts

HEC-2 Backwater Analysis With

Cross Section Plots (See Separte Folder)

new submittal - Separate

BATTLE CREEK RIVER
CITY OF BATTLE CREEK
AND
PENNFIELD TOWNSHIP

EXHIBIT 3

Stream Profile

BATTLE CREEK RIVER

CITY OF BATTLE CREEK

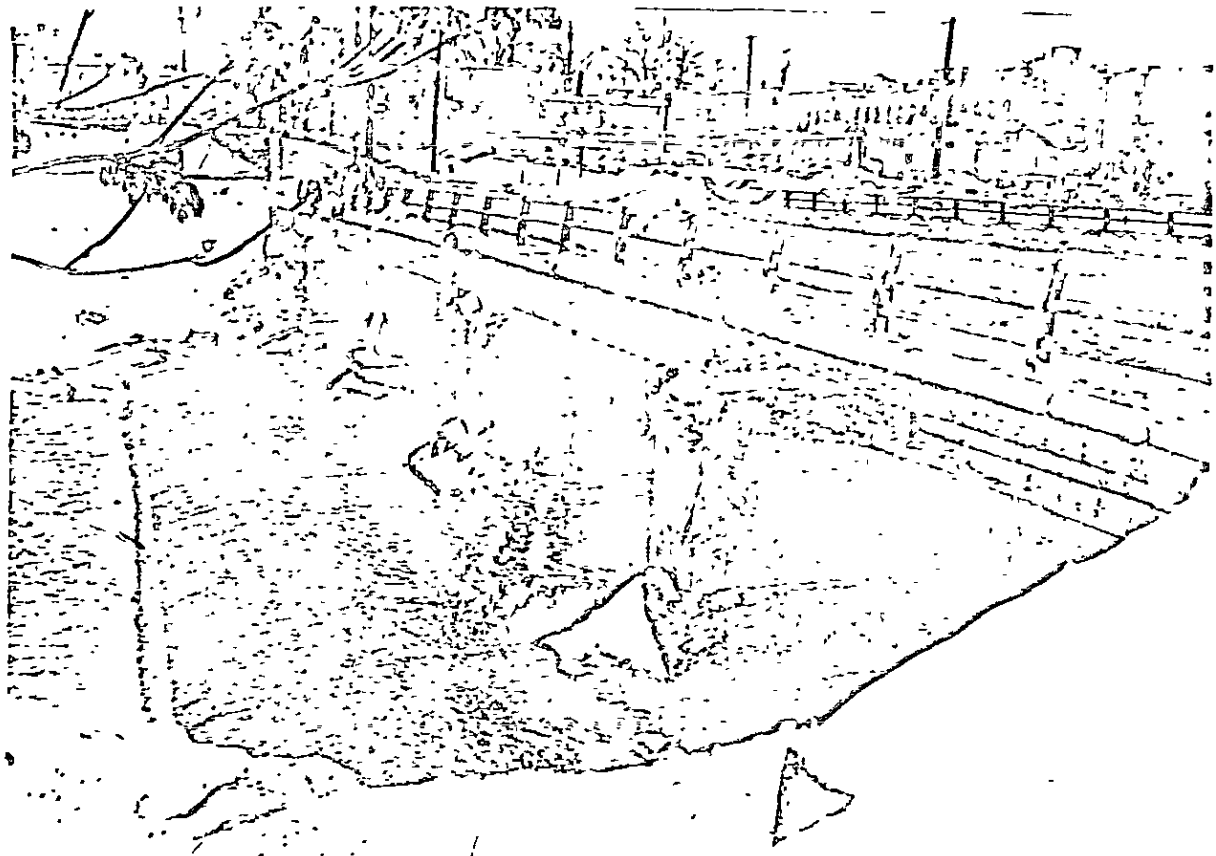
AND

PENNFIELD TOWNSHIP

EXHIBIT 4

Bridge Notes and Sketches

SEC #24



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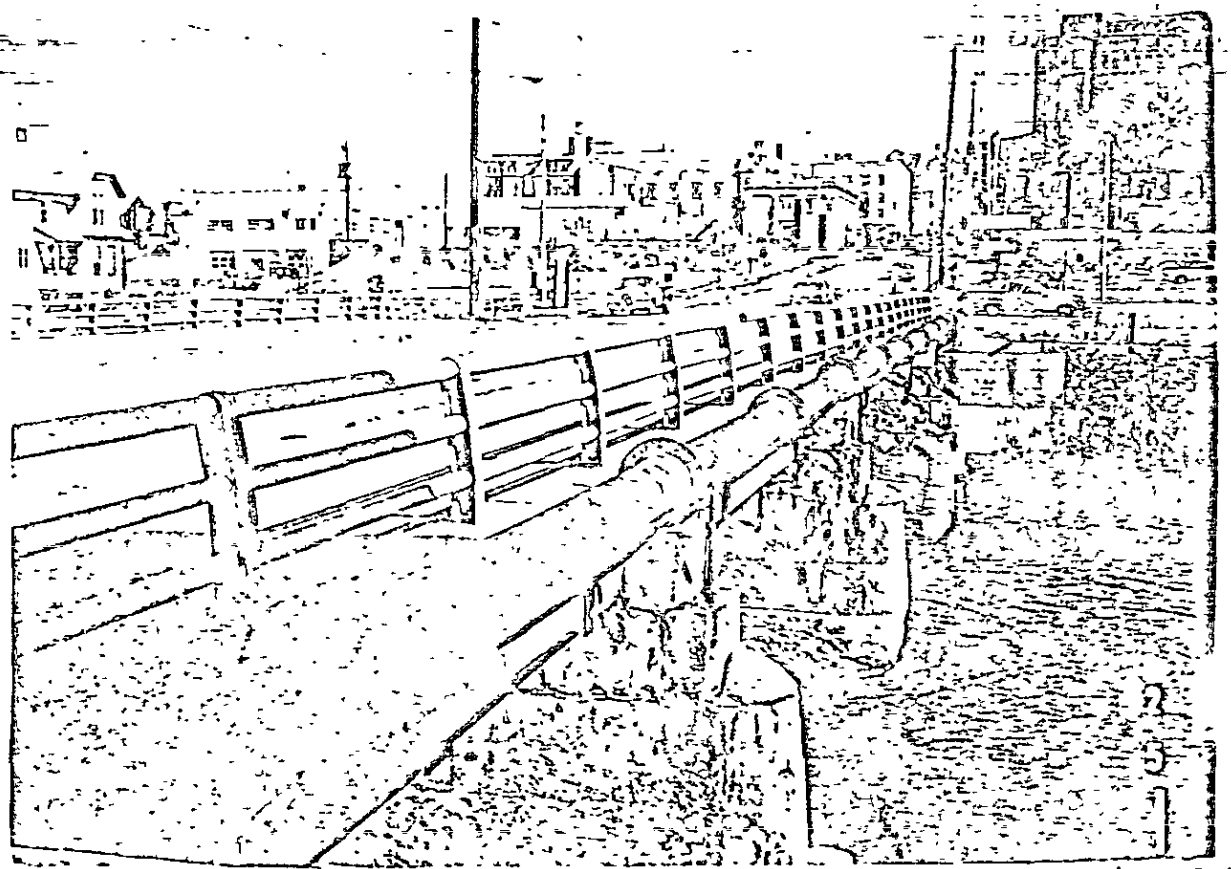
SECTION #25 BATTLE CREEK RIVER AT WASHINGTON

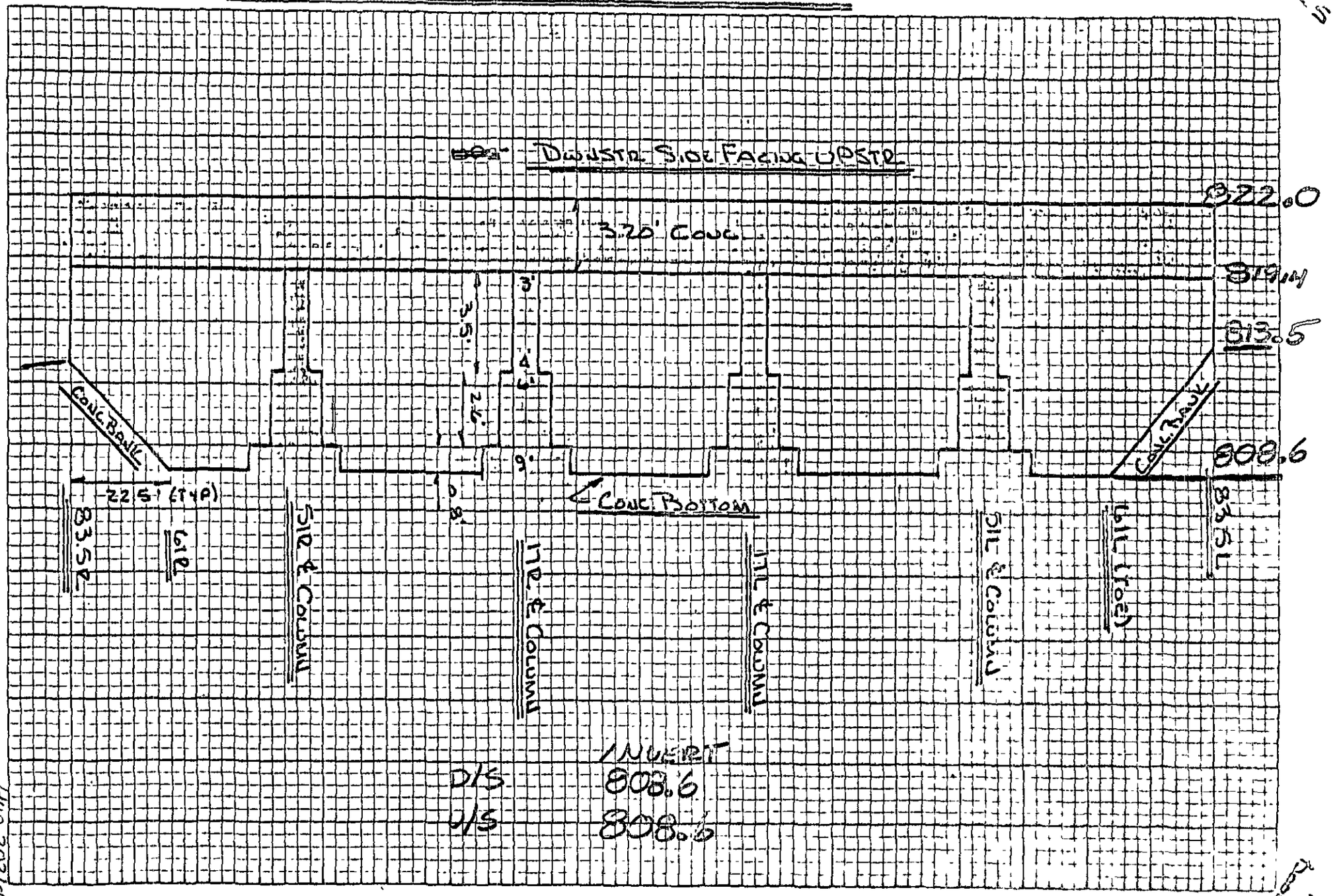


SEC #25 TOP VIEW OF WASHINGTON ST BRIDGE & BATTLE CREEK RIVER

HUD 2021-07
SHEET 1 OF 59

[redacted]

L&R OFFSETS FROM ℄ BRIDGE FACING DWNSTR.

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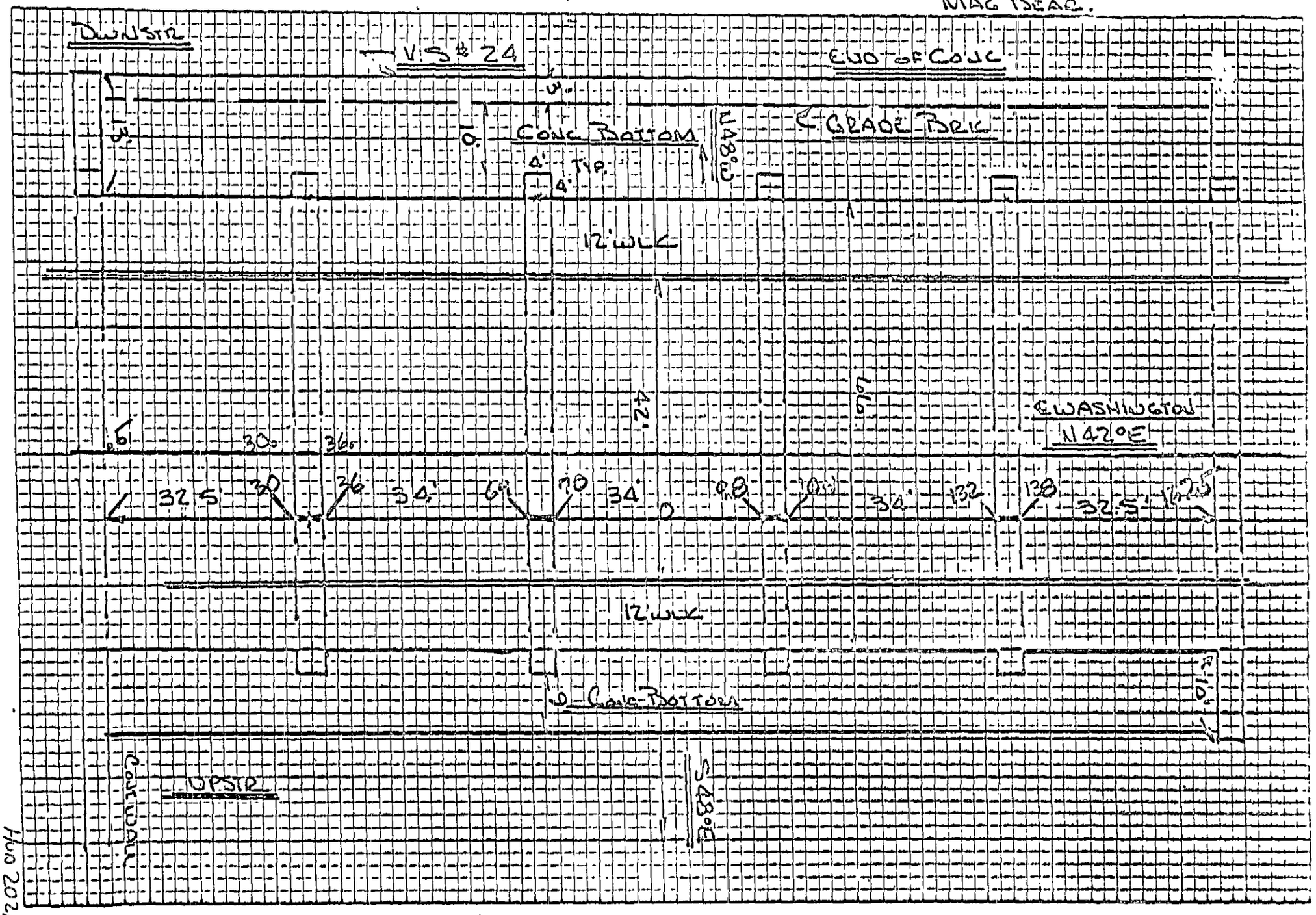


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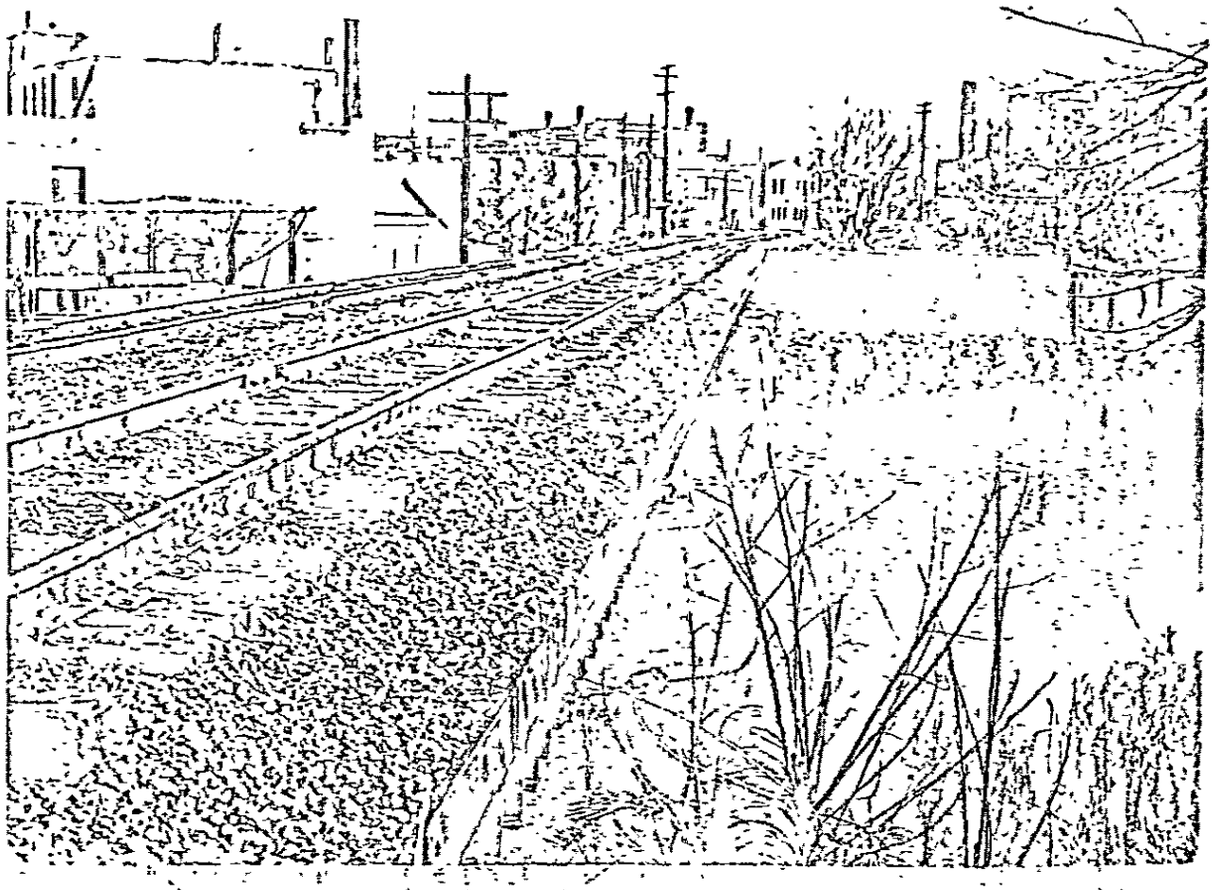
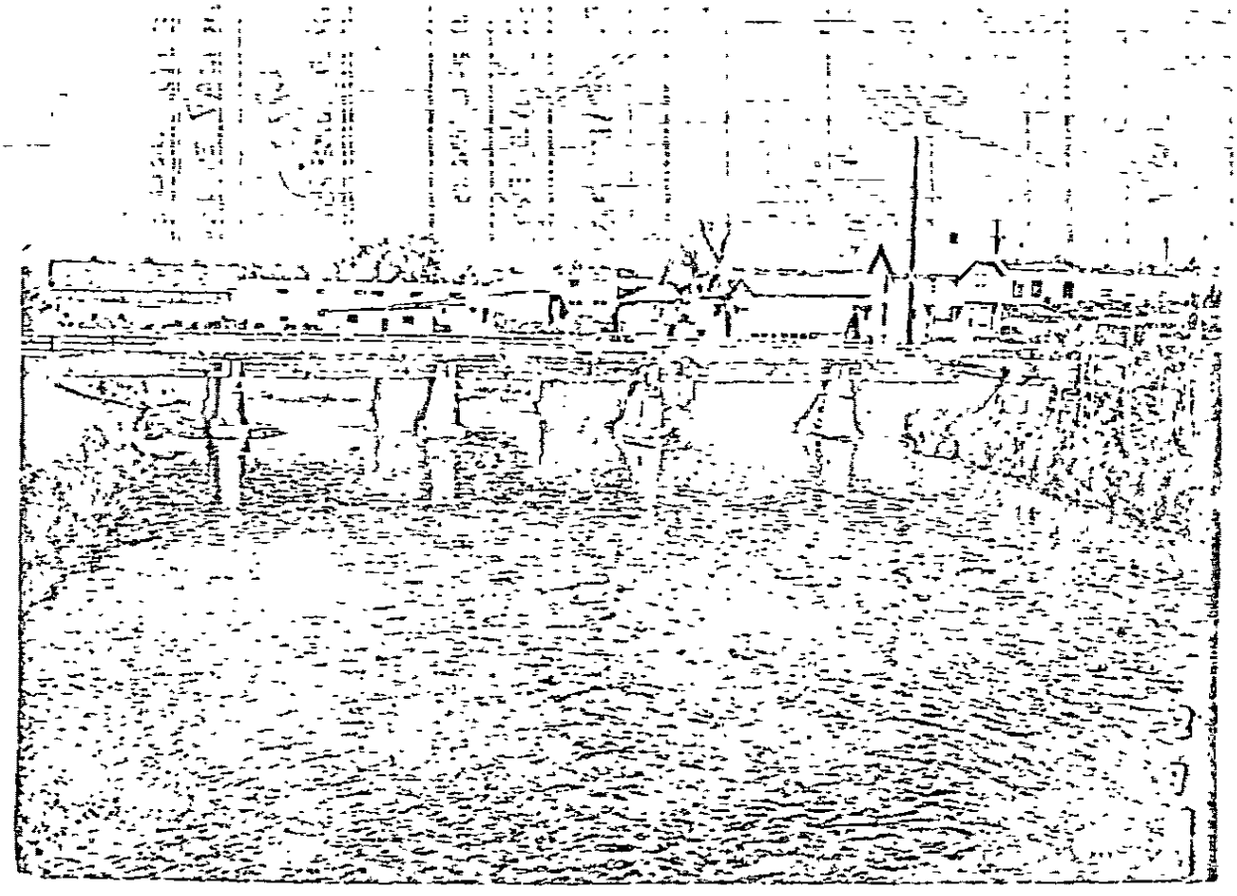
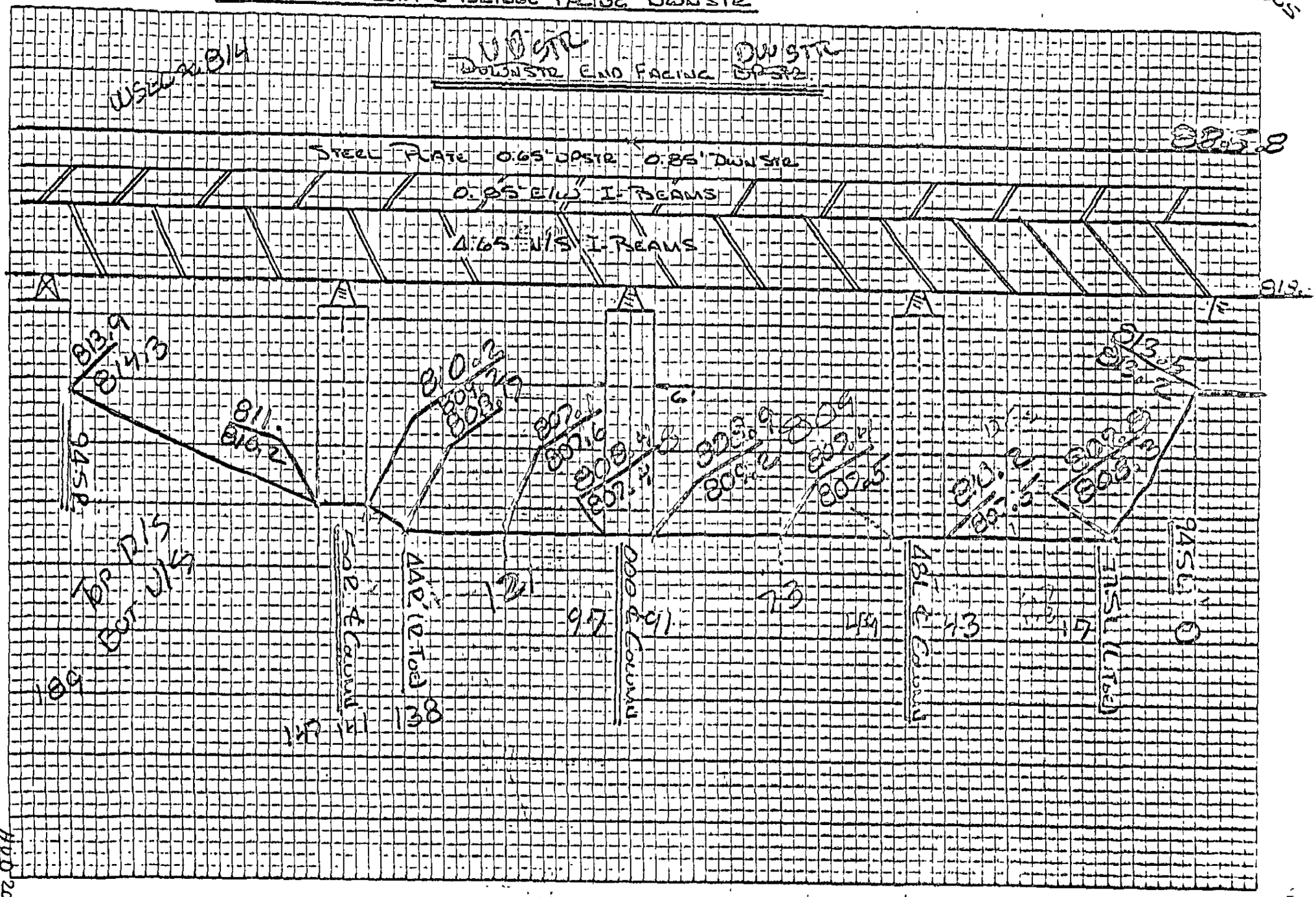


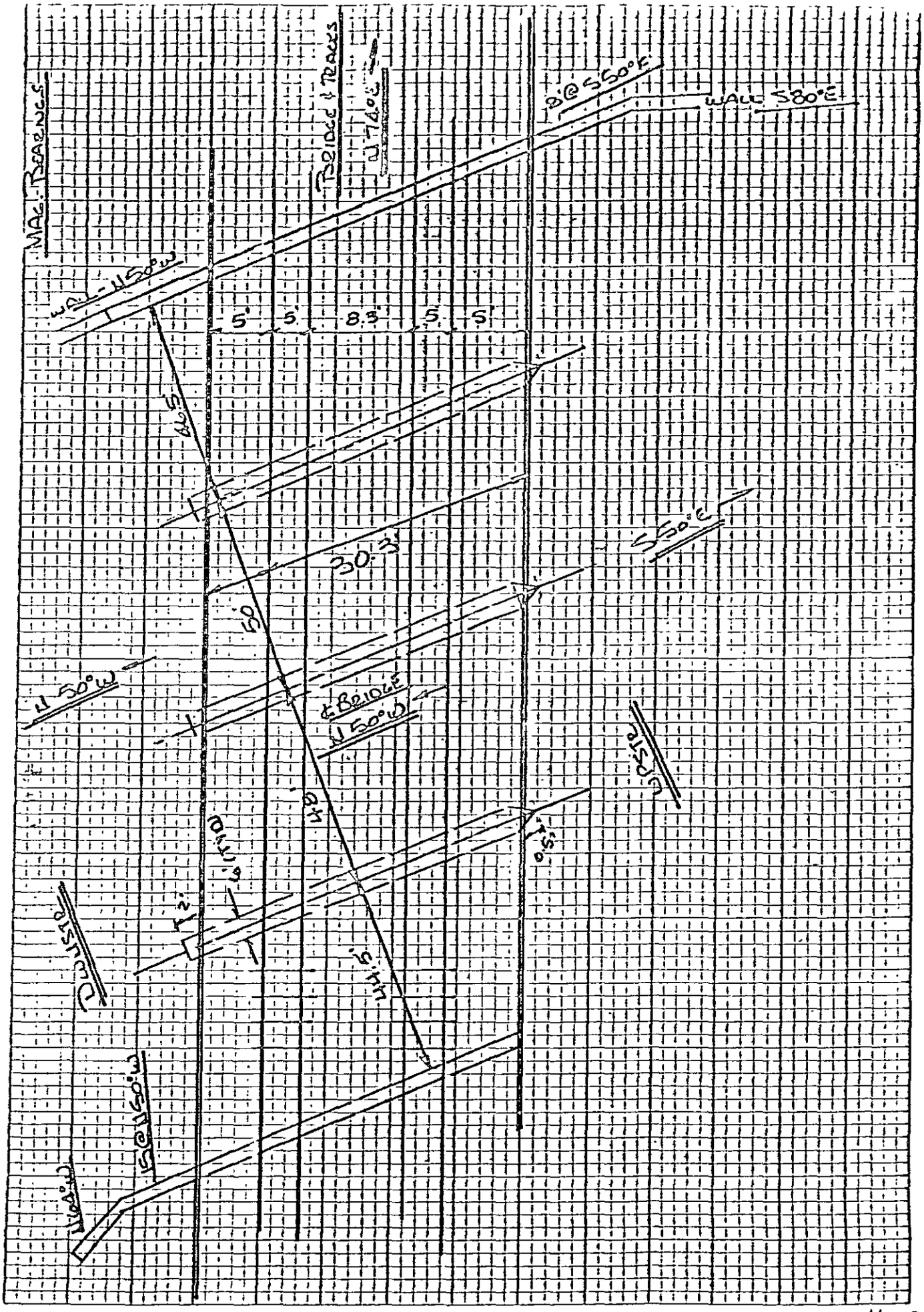
SEC #27 - TOP VIEW RAILROAD BRIDGE UPSTREAM FROM WASHINGTON

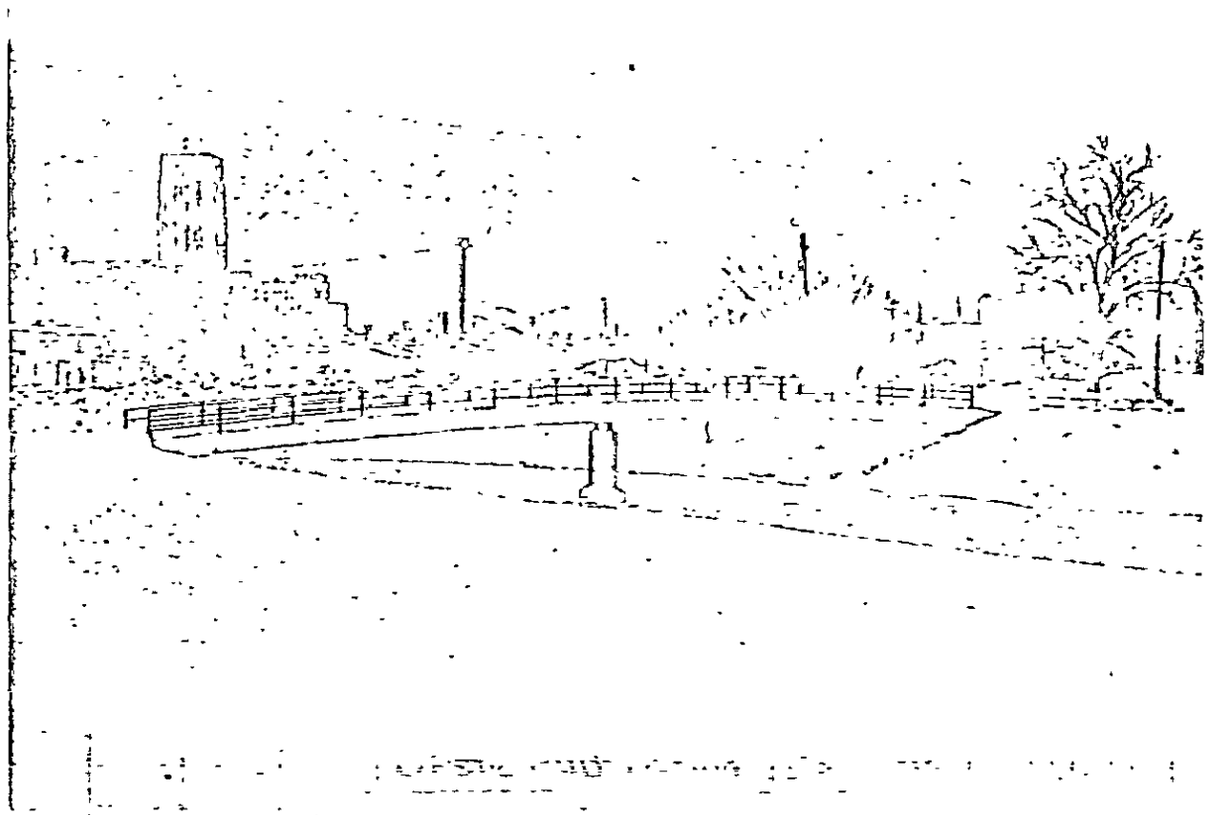


SEC #27 - DOWNSTREAM VIEW FROM RAILROAD BRIDGE

L&R. OFFSETS FROM ℄ BRIDGE FACING DOWNSTR.



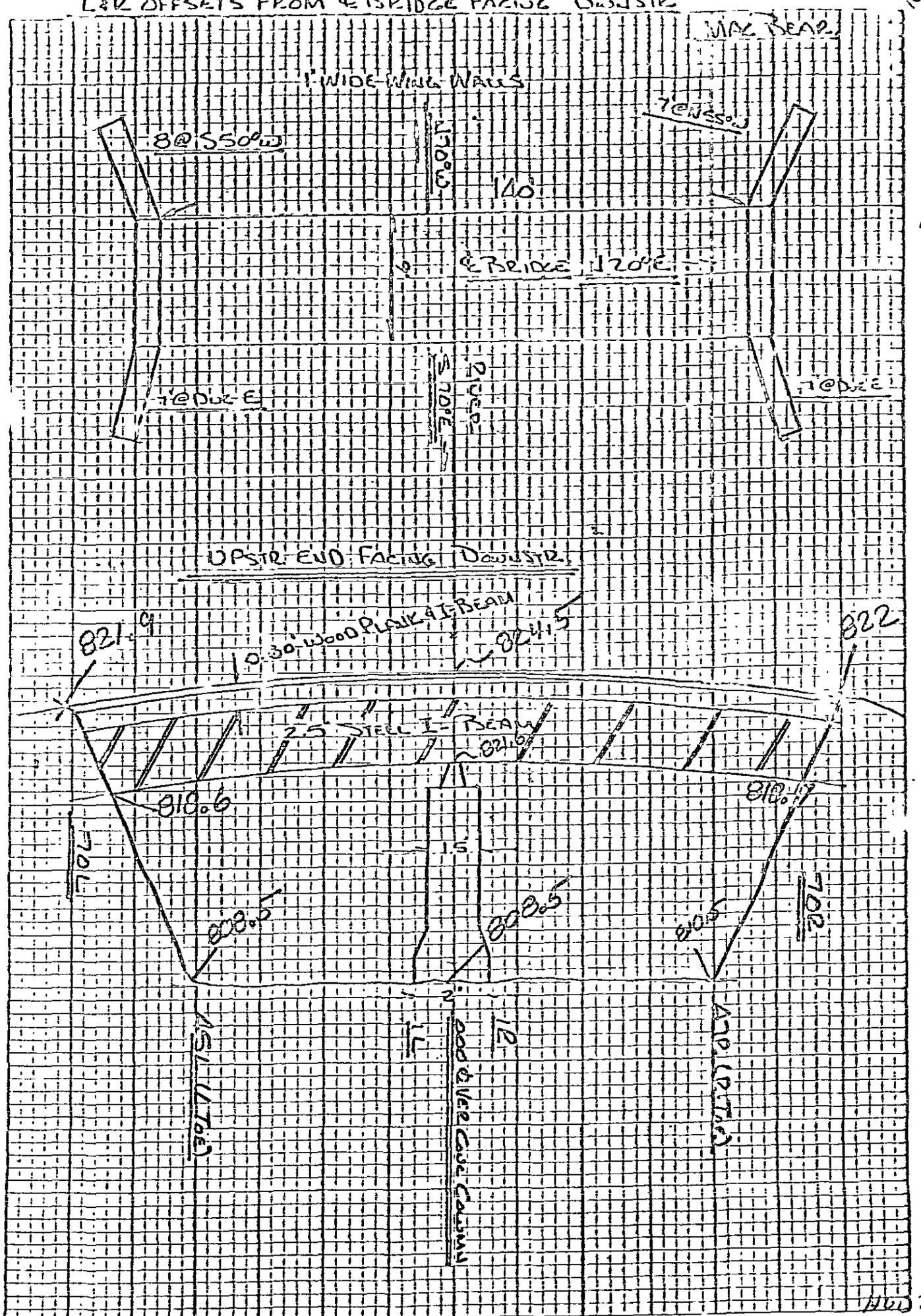

MAG. BEARINGS
BRIDGE & TRACKS
N 74°E
8' @ S 50°E
WALL S 80°E
WALL - N 50°W
5'
5'
8.5'
5'
5'
46.5'
30.3'
S 50°E
50'
N 50°W
℄ BRIDGE
N 50°W
UPSTR
48'
44.5'
DWNSTR
15' @ N 50°W
N 64°W



16

SECTION #29 BATTLE CREEK RIVER

L&R OFFSETS FROM ℄ BRIDGE FACING DOWNSTR




HUD 2021-02

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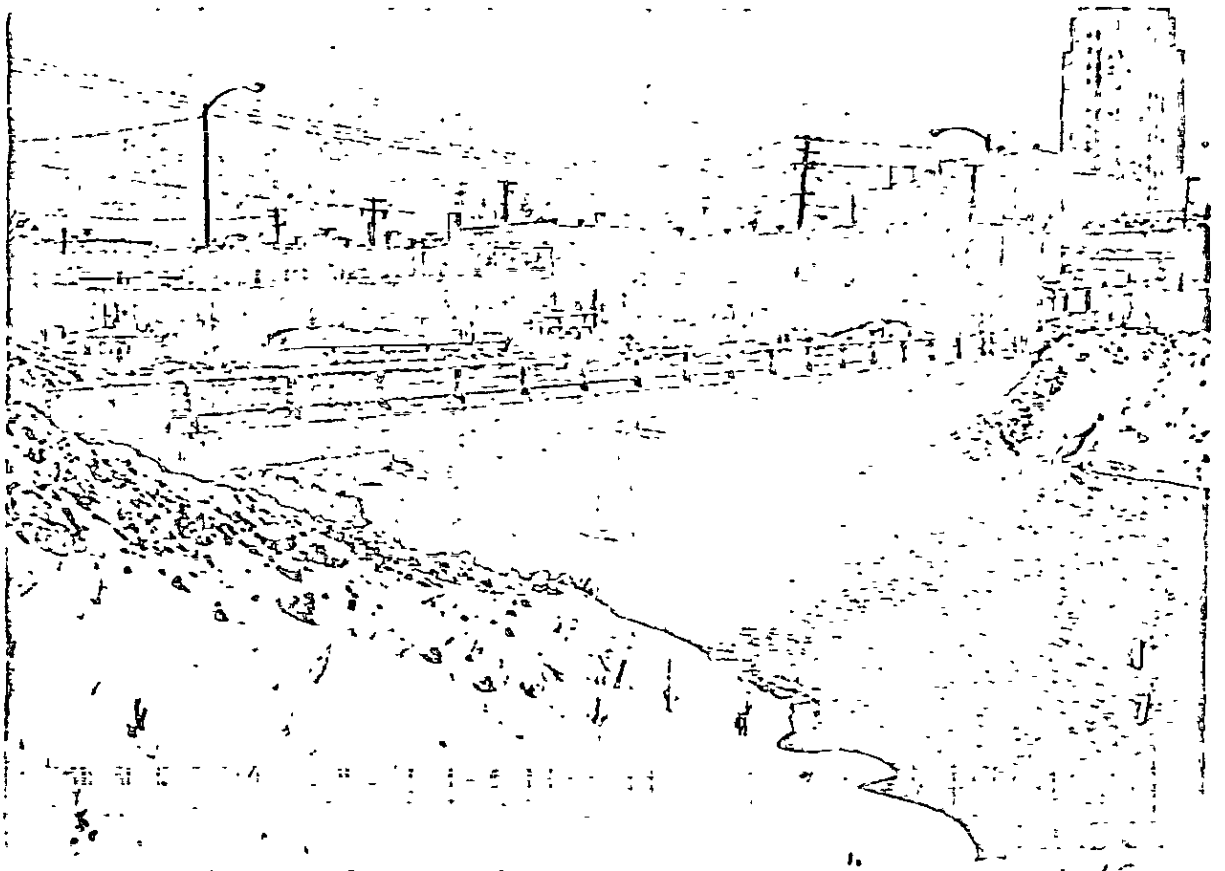
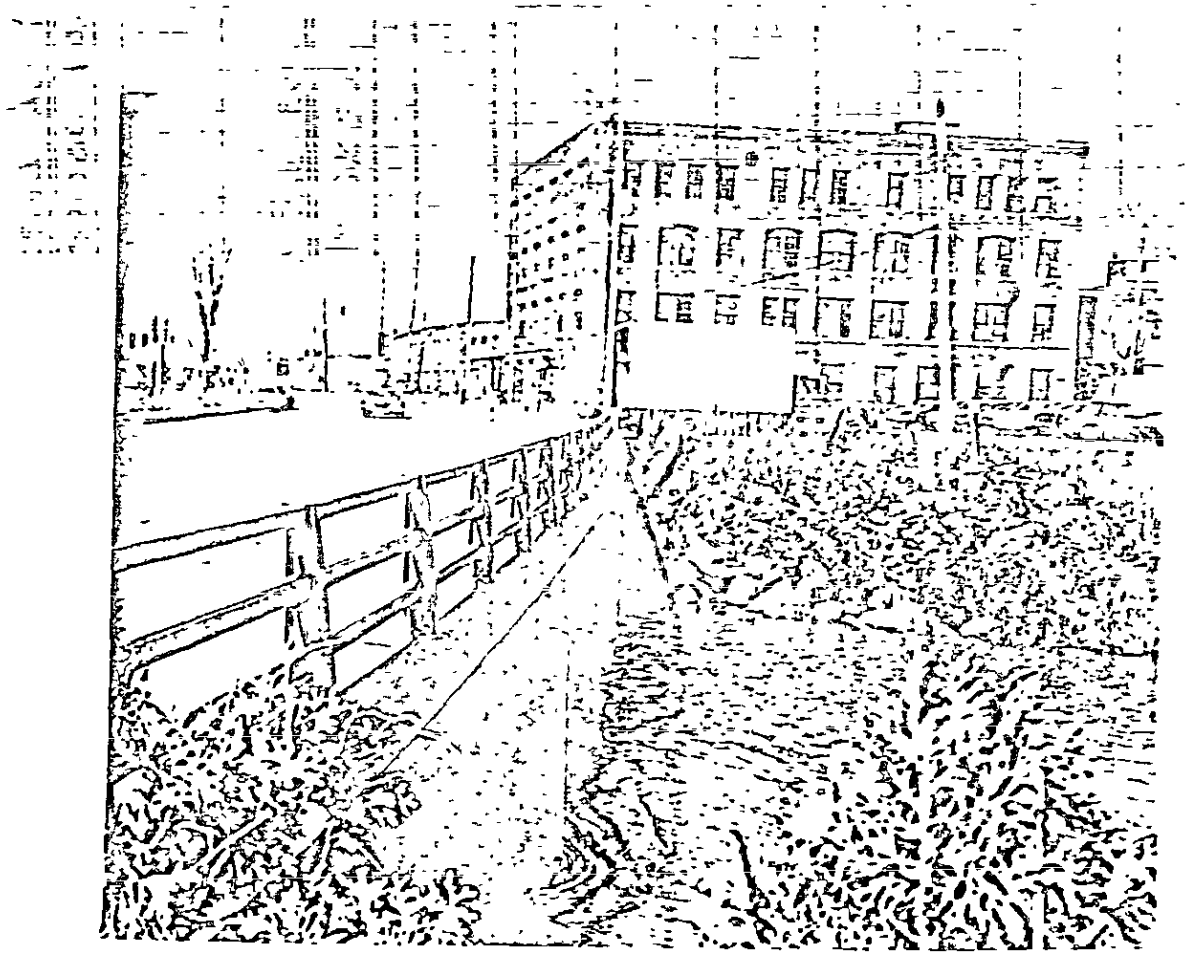


17

SEC. #30 BATTLE CREEK RIVER AT JACKSON



SEC #30 - TOP VIEW JACKSON ST BRIDGE + BATTLE CREEK RIVER

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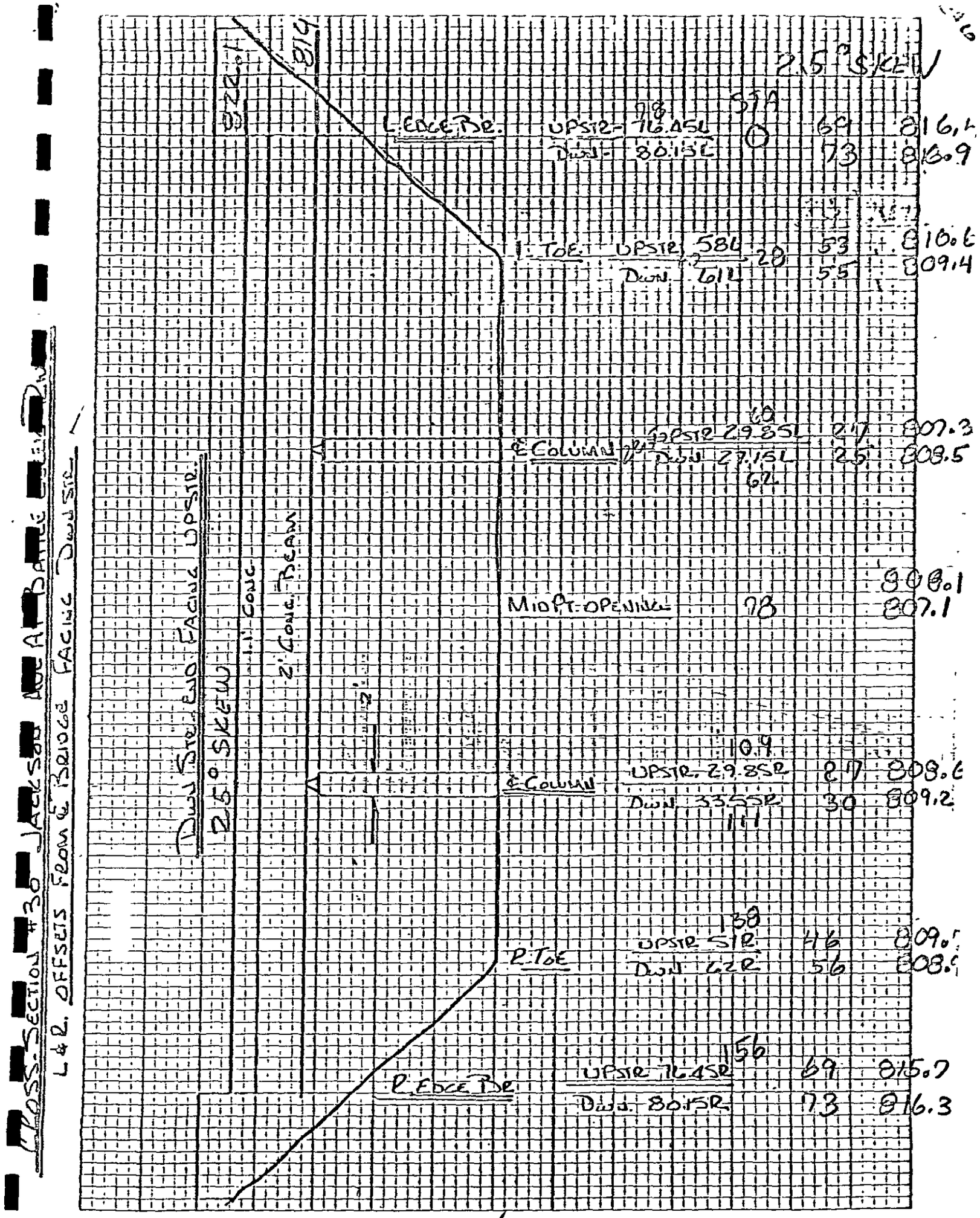
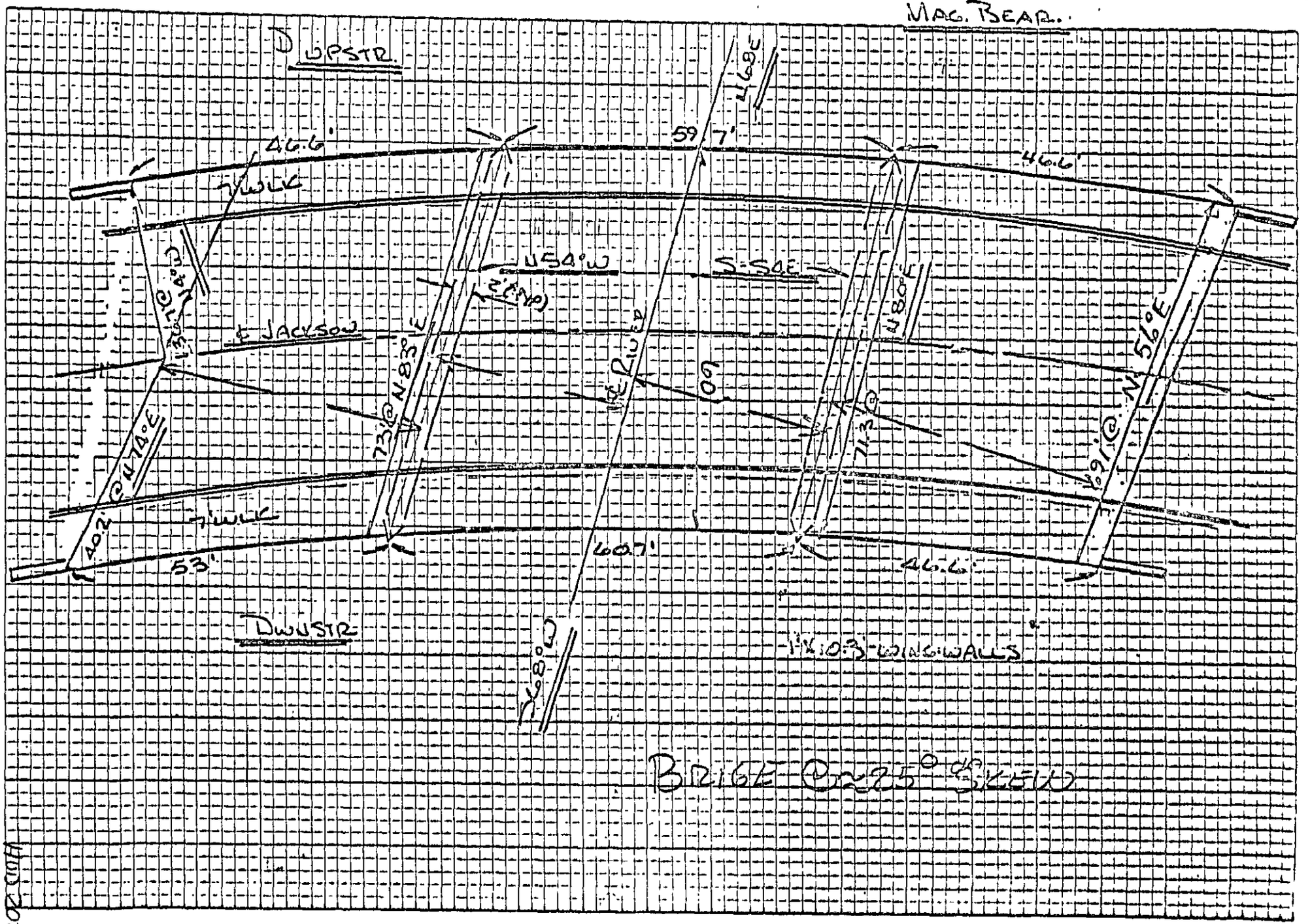
Cross-Section #30 Jackson Ave at Battle Creek Rd
L&R. Offsets from ℄ Bridge Facing Dwn Str.




MAG. BEAR.
DWPSTR.
46.6'
59.7'
46.6'
7'WLK
N54°W
S-S4E
℄ JACKSON
73'@N83°E
℄ RIVER
60'
71.3'
N80°E
N56°E
40.2'@N74°E
7'WLK
53'
60.7'
46.6'
DWNSTR
1'X10.3' WING WALLS
BRIGE @≈25° SKEW

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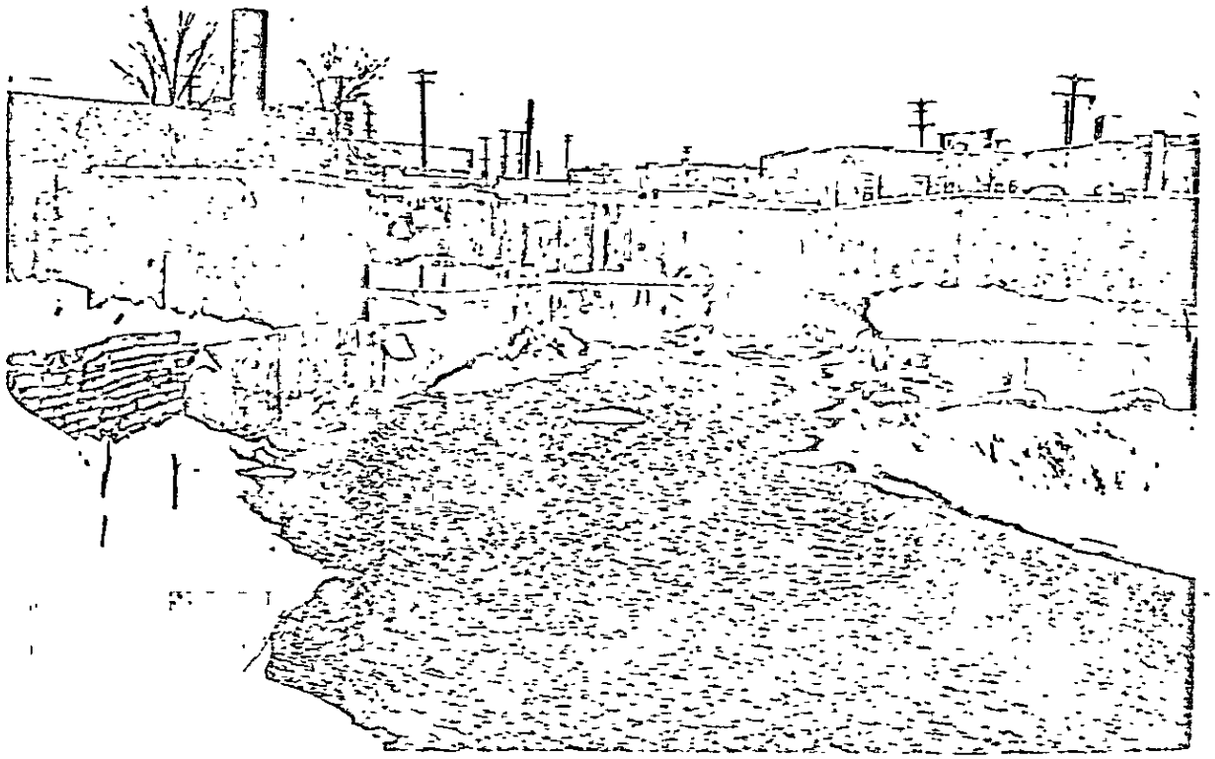
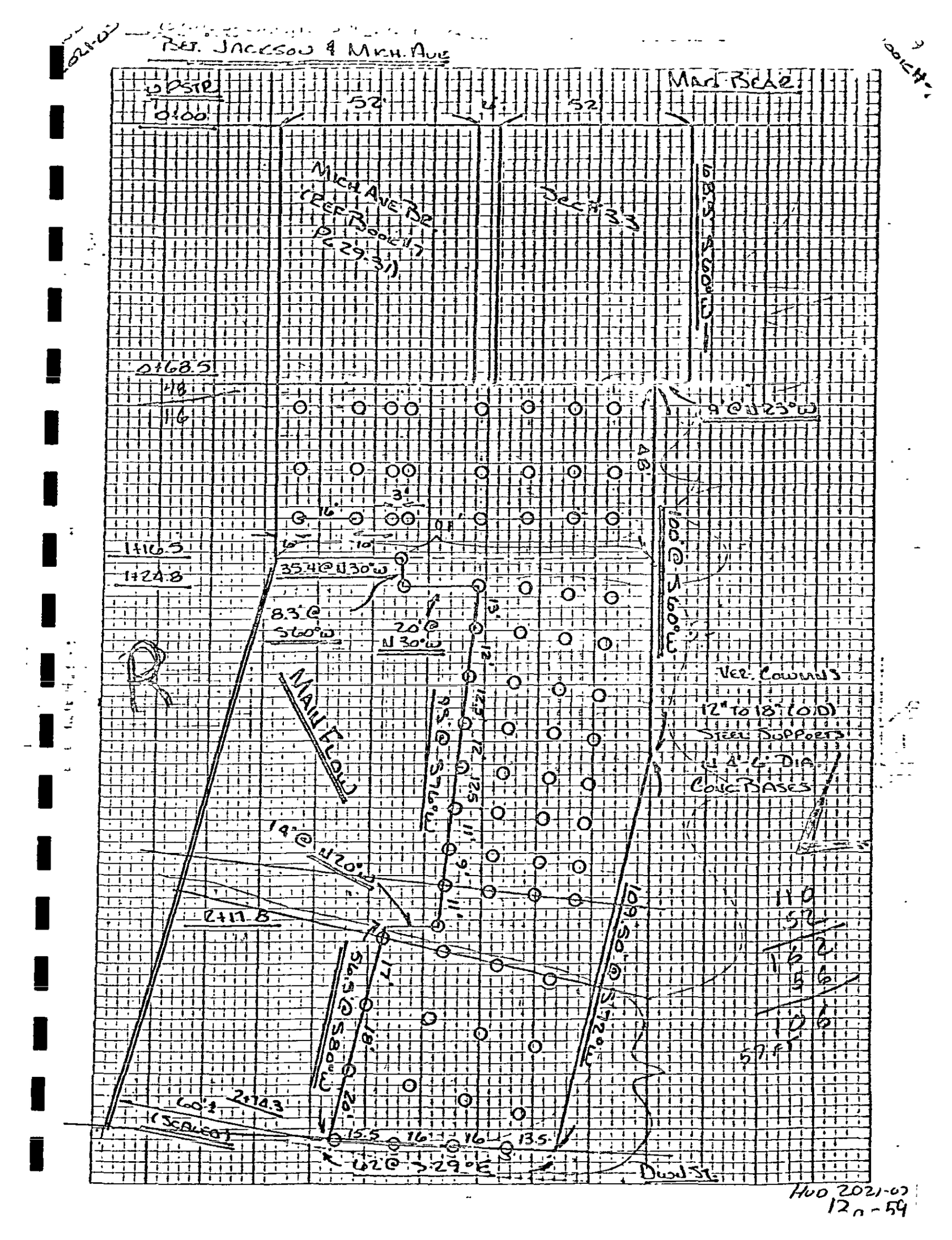
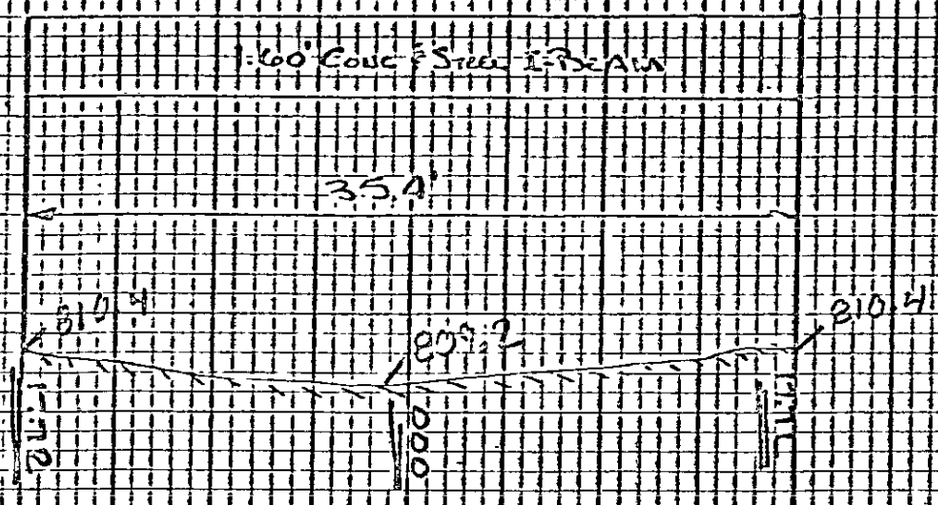


CROSS SEC # 32 - BIANCE CREEK RIVER


Ref. Jackson & Mich. Ave
Mad Bear
0+00
52'
32'
Mich Ave Br.
(Ref Book 17
Pg 29-31)
Dual 33
6 @ S 50° E
0+68.5
116
9' @ N 23° W
48'
3'
16'
10'
1+16.5
1+24.8
354' @ N 30° W
8.3' @ S 60° W
20' @ N 30° W
100' @ S 60° E
Main Flow
Ver. Columns
12" to 18" (O.D)
Steel Supports
4'-6" Dia
Conc. Bases
14' @ N 20° W
2+11.8
110
52
16
4
16
16
10
57 ft
60' ±
2+14.3
(Scaled)
15.5
16
16
13.5
42' @ S 29° E
Dual St.
HUD 2021-07
12n-59

CROSS-SECTION # 32 BATTLE CREEK RIVER

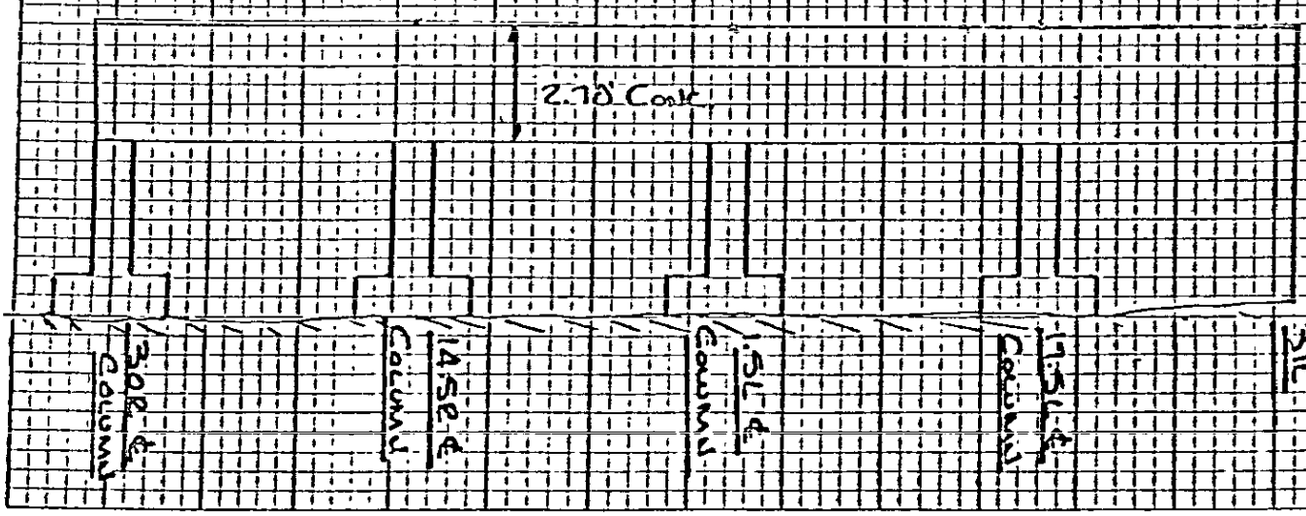
STA 1+16.5 DOWN STR. END FACING UPSTR.
(STRONGEST FLOW THROUGH THIS AREA)




STA 1+24.80 DOWN STR. END FACING UPSTR.




STA 2+74.3 (EXTREME DOWN STR. END) FACING UPSTR.




HUD 2021-4
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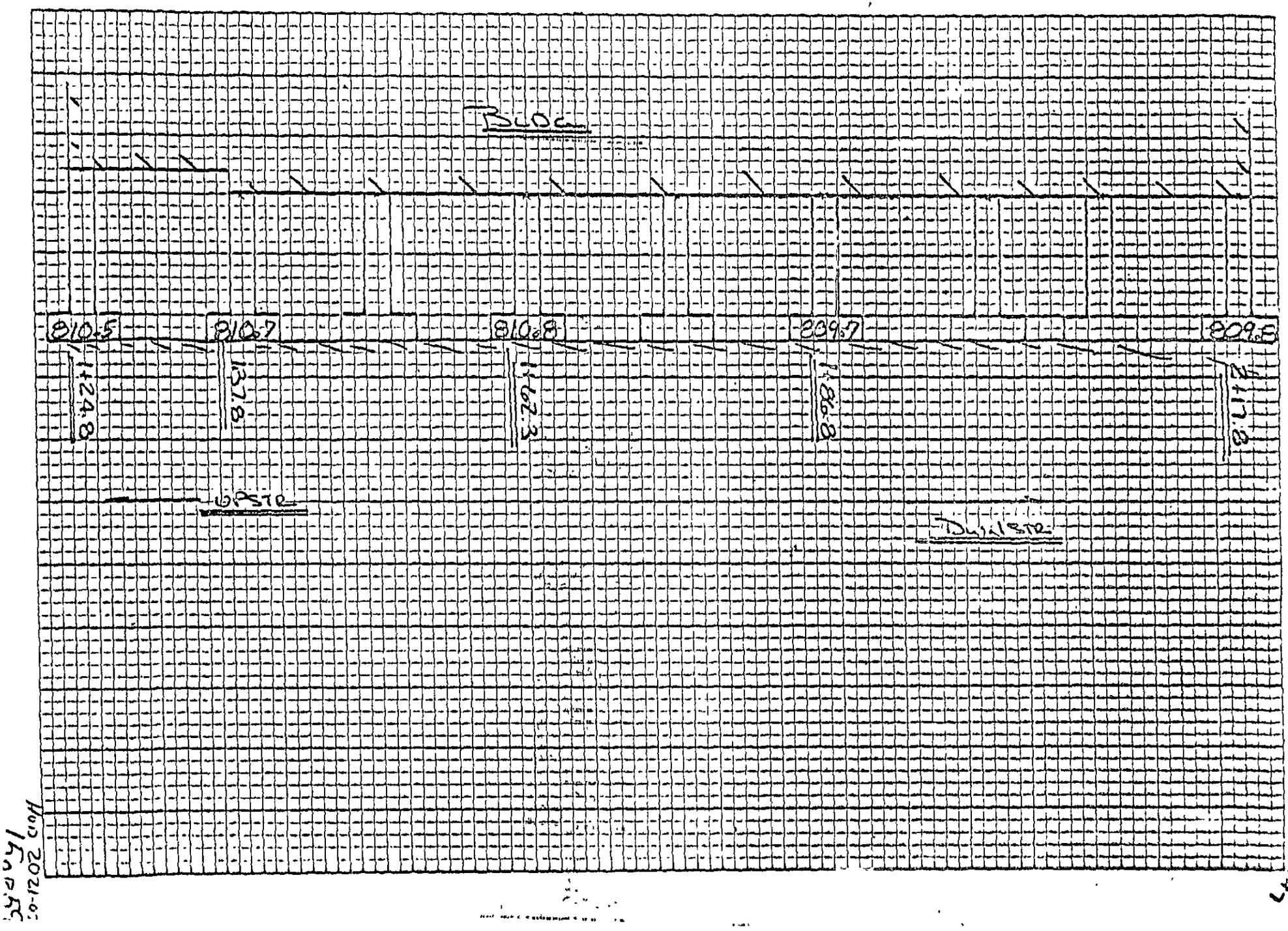

BLOCK
810-5
810-7
810-8
809-7
809-8
124.8
137.8
162.3
184.8
211.8
DRIVE
DRIVE

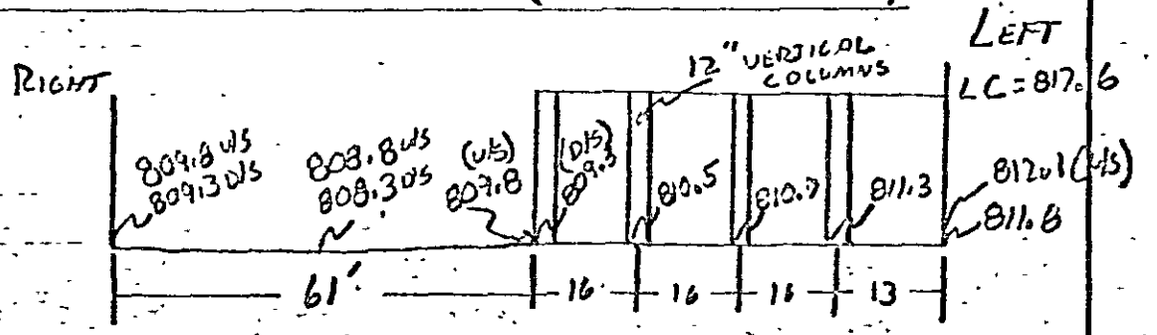
Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

REFERENCE

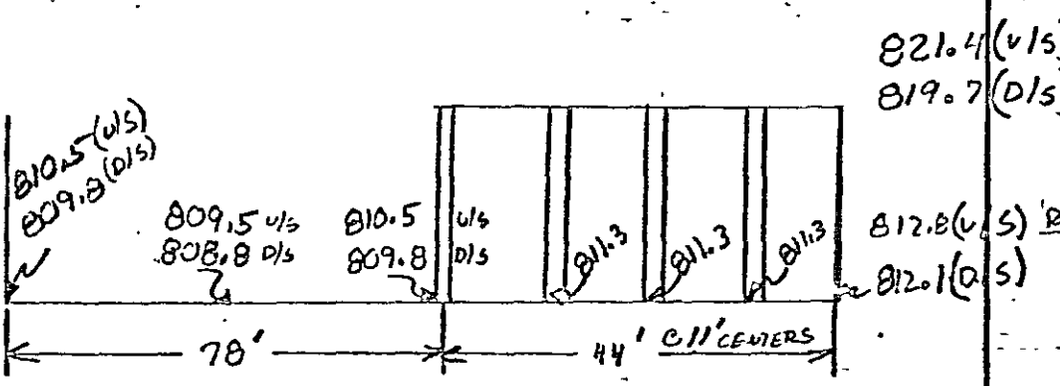
# MULTIPLE STRUCTURE BETW. JACKSON & MICHIGAN AVE.

## STARTING D/S END
## STATION 2+74.3 TO 2+12.8 (NORMAL BRIDGE)

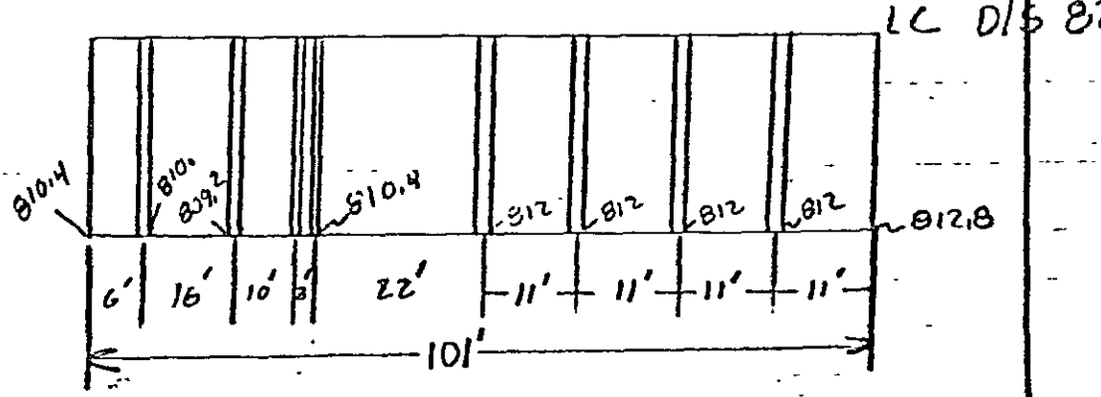



29
16
15
16
C1

## STATION 2+05 TO 1+24.8 (NORMAL BRIDGE)




## STATION 1+16.5 TO 68.5 (NORMAL BRIDGE)

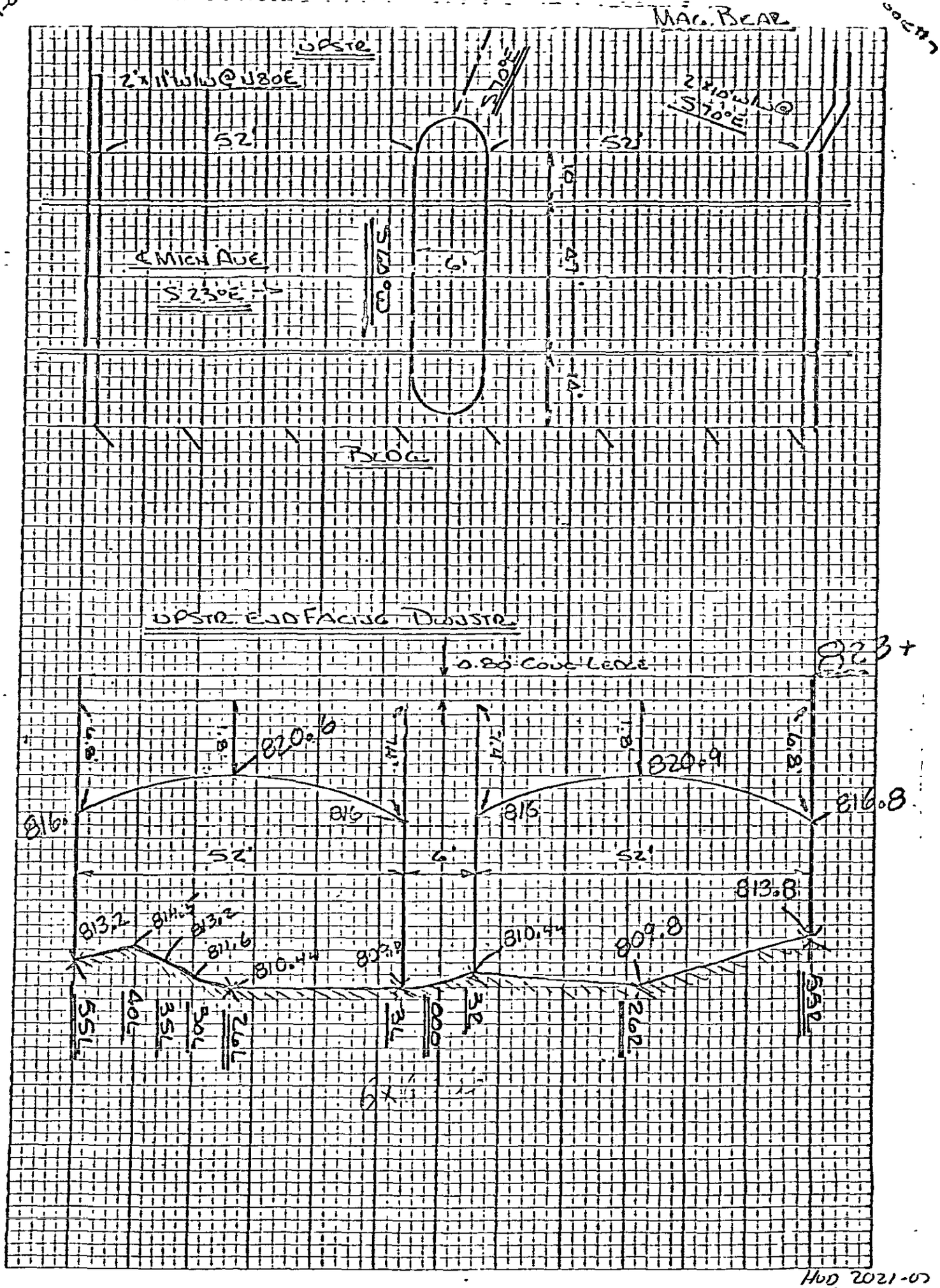


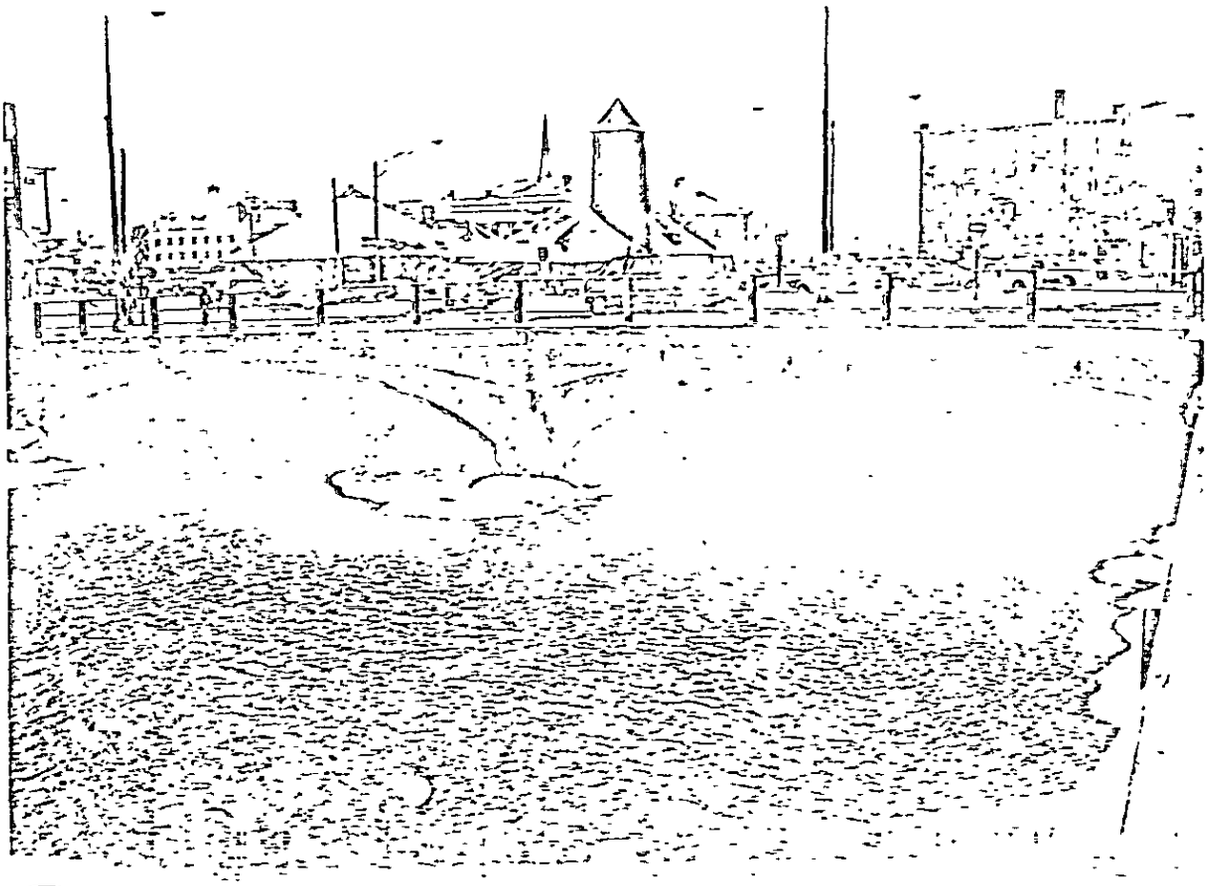

| SUBJECT | BY | CHK. | SHEET NO. | File Code No (Job No) Owner Project Suffix |
|---|---|---|---|---|
| BATTLE CR. RIVER | DATE 10-80 | DATE | 16 OF 59 | HUD • 2025 • 07 |



CROSS-SEC # 54 MICH AVE AT BATTLE CREEK RIVER

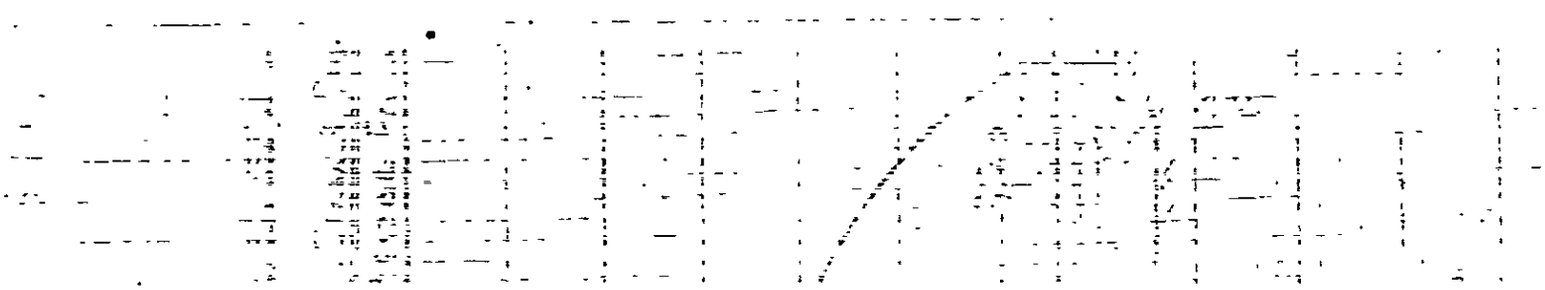
H00 2021-07
17n=59


MAG. BEAR
UPSTR
2'x11' W/W @ N80E
S70°E
2'x10' W/W @ S70°E
52'
52'
6'
℄ MICH AVE
S23°E
S60°E
BLDG
UPSTR. END FACING DWNSTR.
0.80' CONC LEDGE
823+
820.6
820.9
816.8
816
816
52'
6'
52'
813.8
813.2
813.2
811.6
810.44
810.44
809.8
55L
40L
35L
30L
26L
3L
000
3R
26R
55R

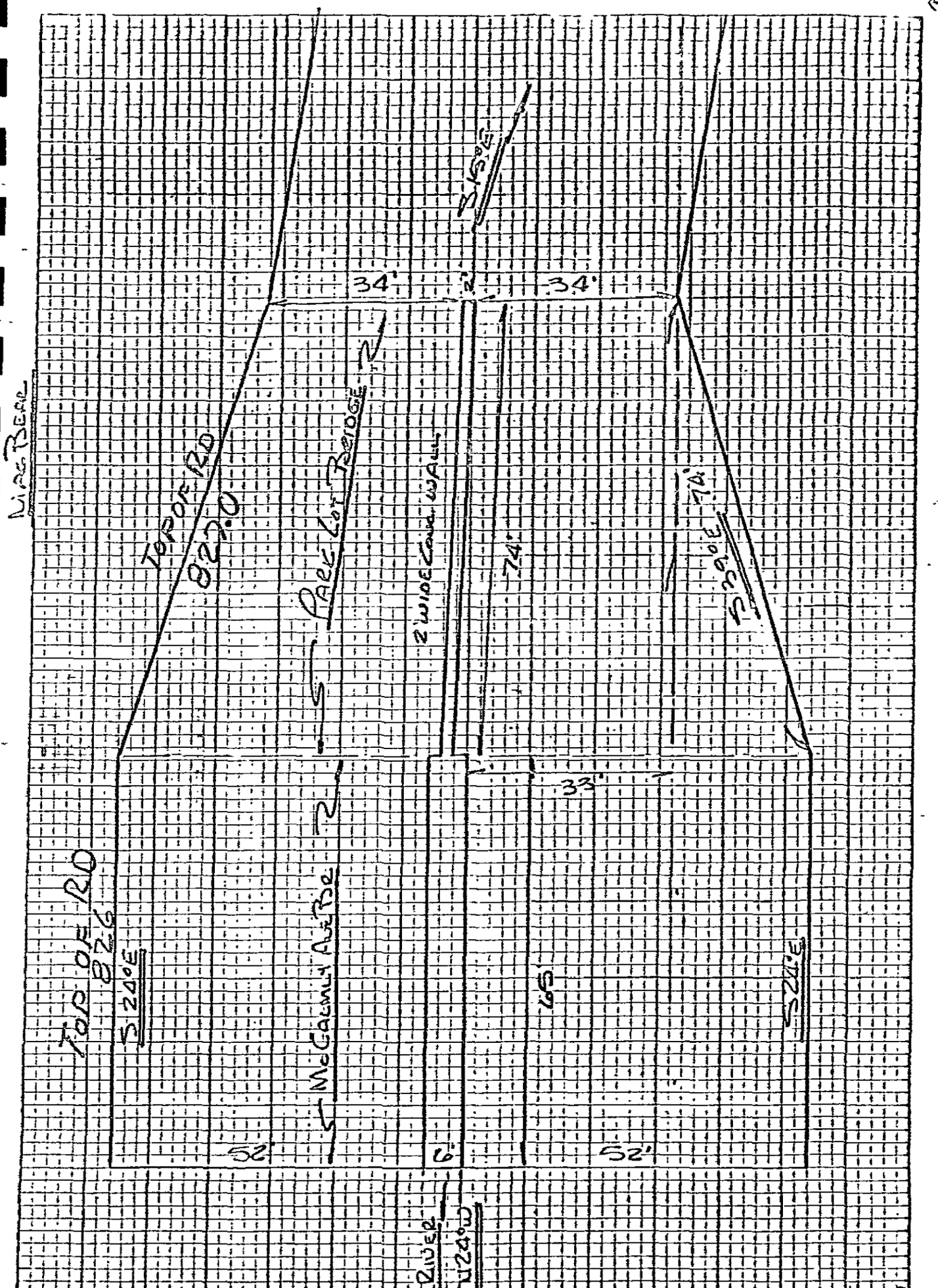


20

Sec# 36 McCalmly At B.C. River (Dwn Str)



[redacted] [redacted] [redacted] [

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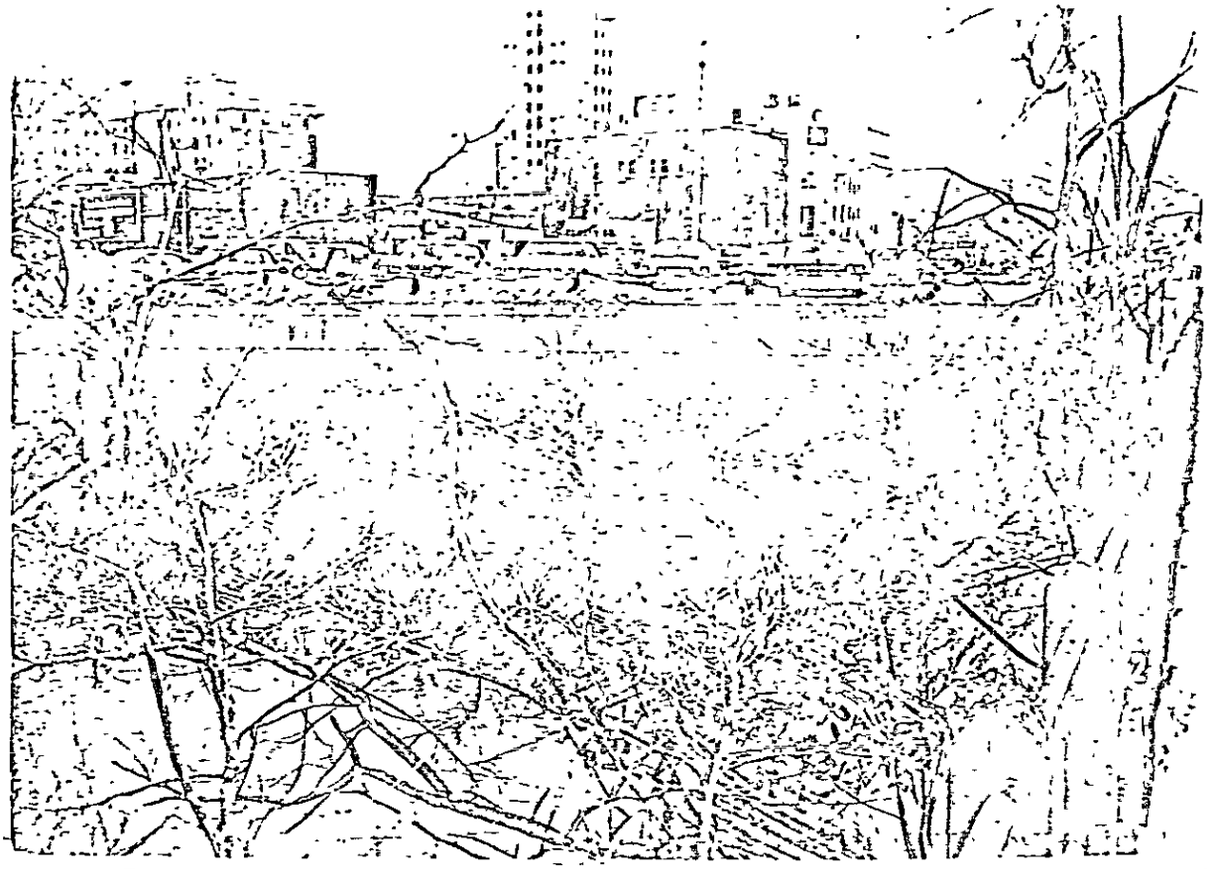
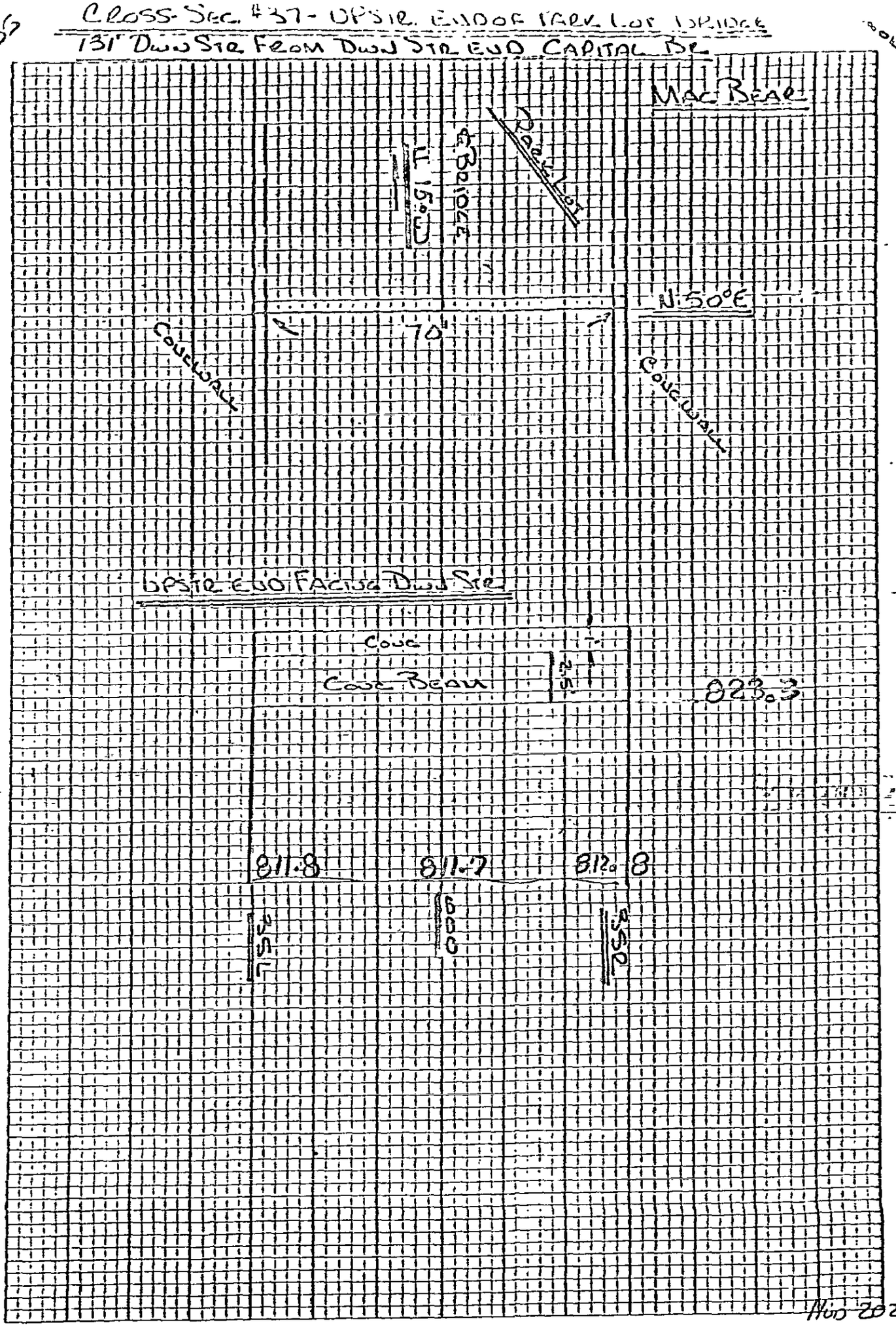


21

SECTION # ~~SG~~ 3T UPSTREAM

CROSS-SEC. #37 - UPSTR. END OF PARK LOT BRIDGE

131' DWN STR FROM DWN STR END CAPITAL BR.

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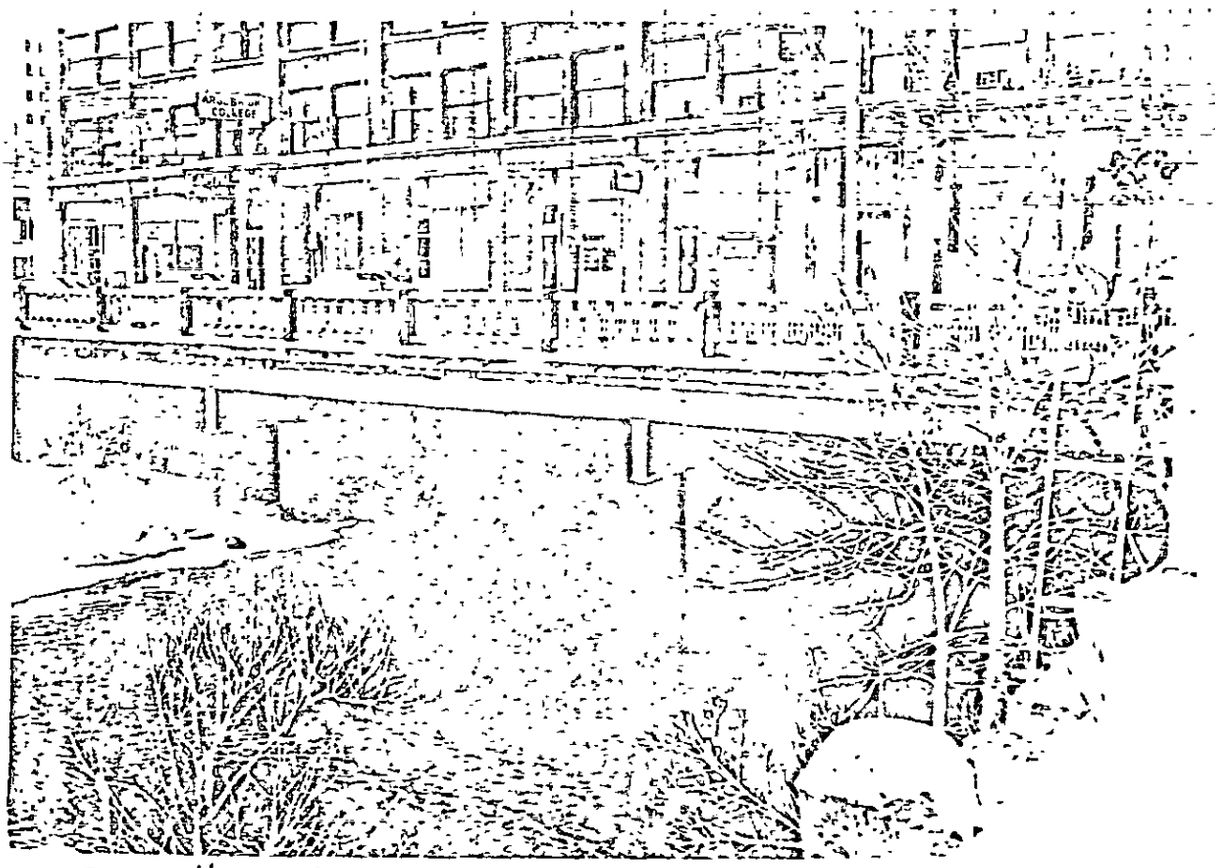
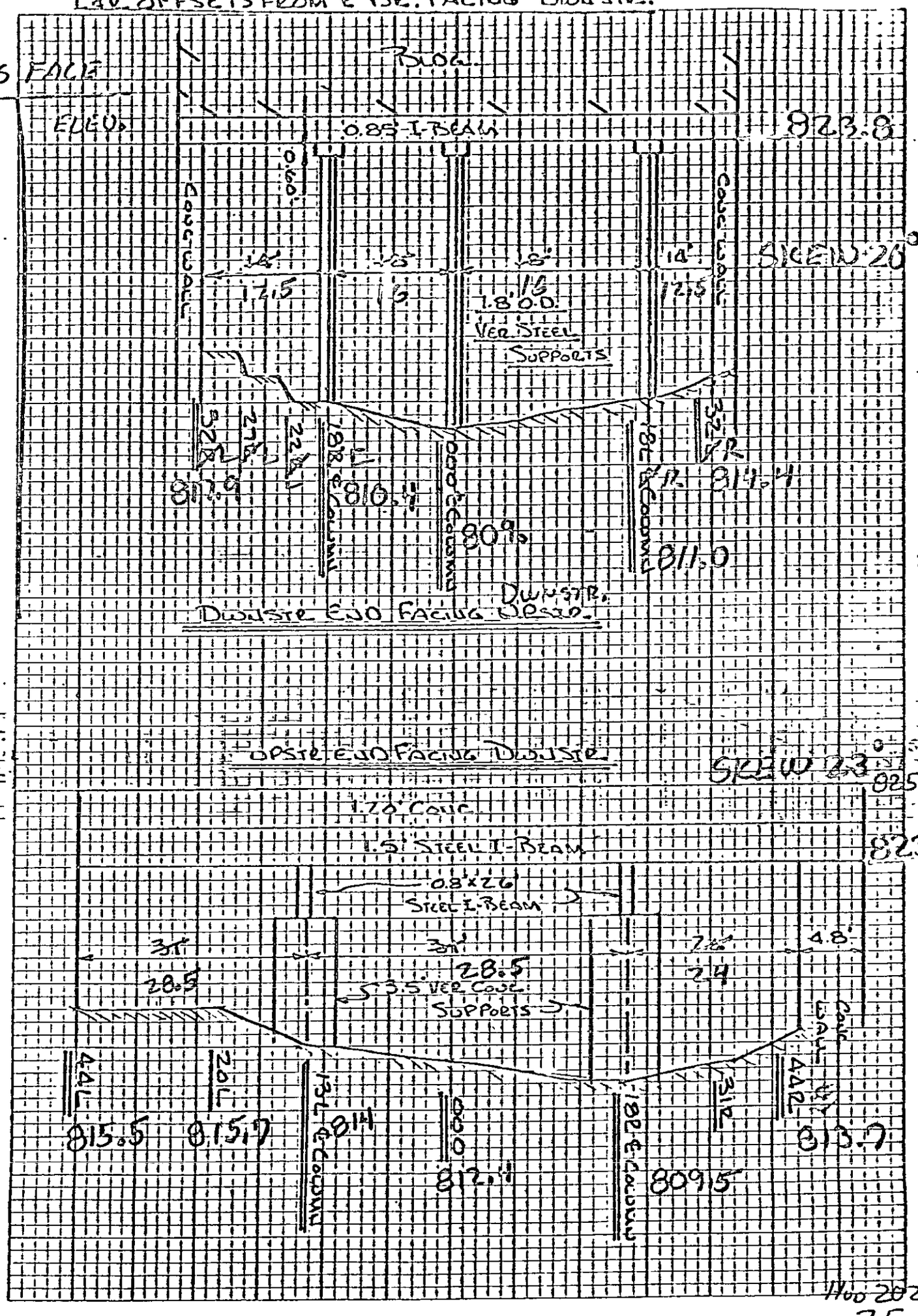
22

SECTION #39 (DOWN-STR) B.C. RIVER



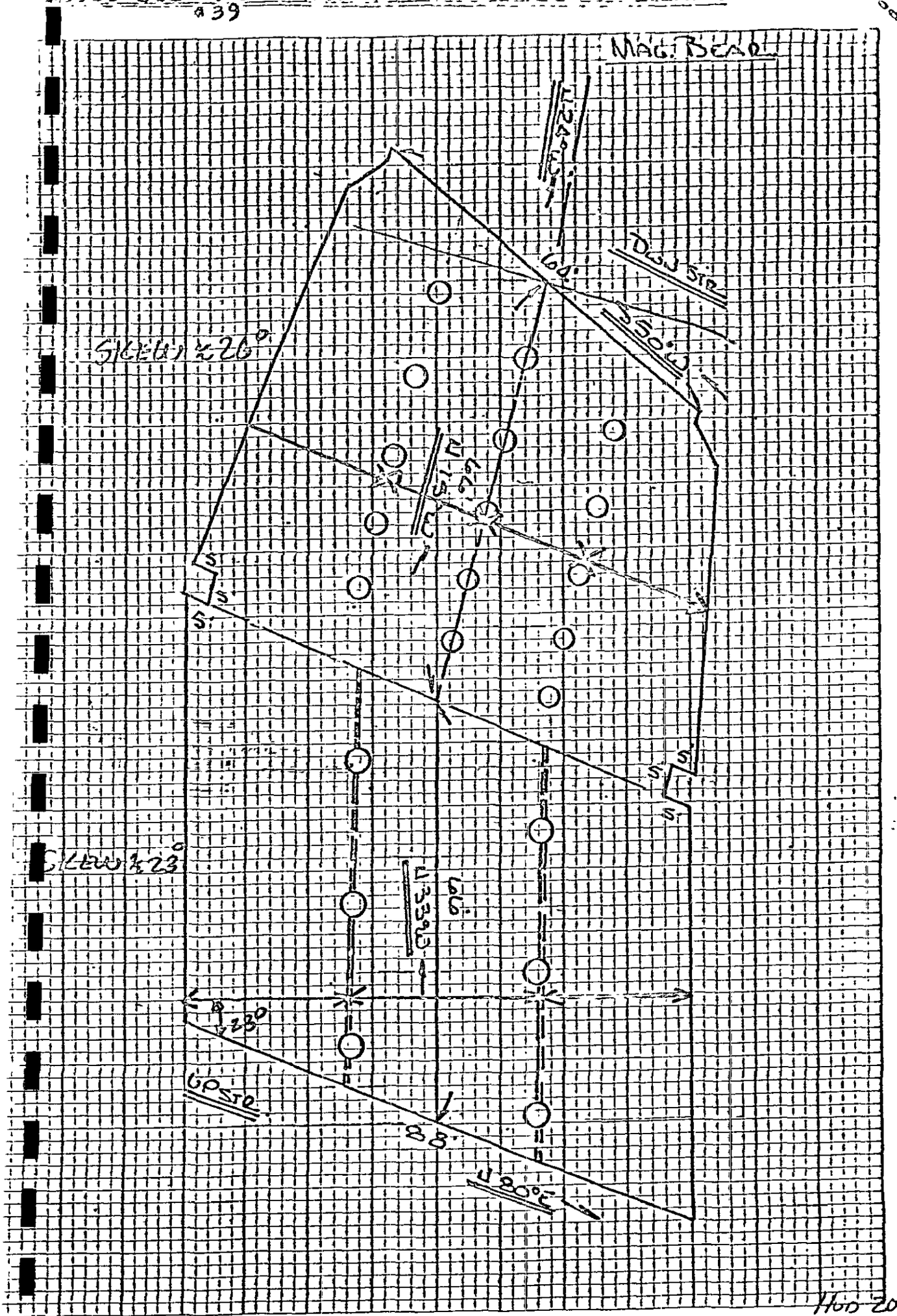
23

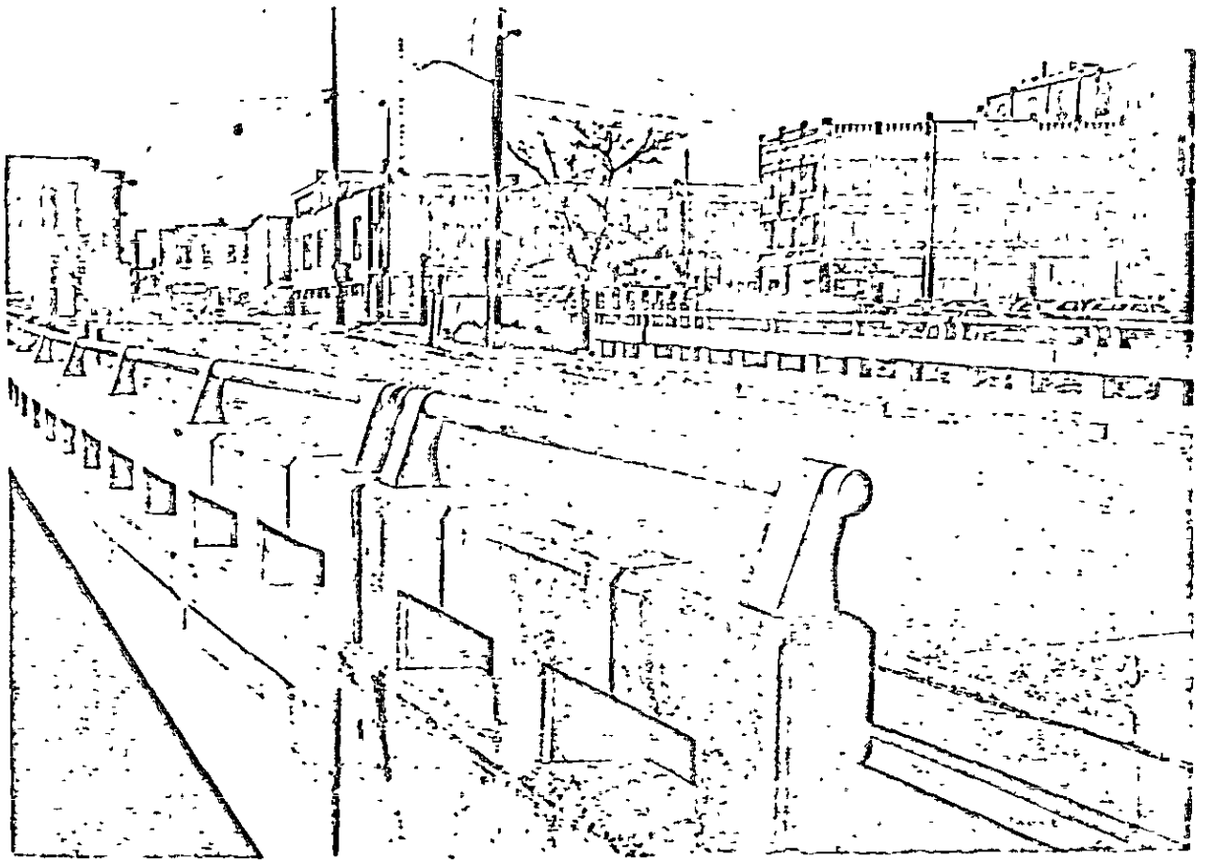
SEC #39 (UPSTR) BATTLE CREEK RIVER


LAD. OFFSETS FROM ℄ BR. FACING DWNSTR.
U/S FACE
ELEV.
R106.
0.85 I-BEAM
823.8
0.60
CONC. WALL
14'
12.5
1.8 O.D.
VER. STEEL
SUPPORTS
S1CE W 20°
32'R
811.1
18' ℄ CONC.
811.0
22'
18' ℄ CONC.
810.4
CONC. ℄ CONC.
80°
DWNSTR.
DWNSTR. END FACING UPSTR.
UPSTR. END FACING DWNSTR.
S2E W 23°
825.5
1.75' CONC.
1.5' STEEL I-BEAM
823.1
0.8'x26'
STEEL I-BEAM
31'
28.5
3.5 VER. CONC.
SUPPORTS
4.8'
7.5
24
CONC. WALL
44'
20'
34'
815.5
815.7
814
CONC. ℄ CONC.
812.4
18' ℄ CONC.
809.5
31'
44'
813.7

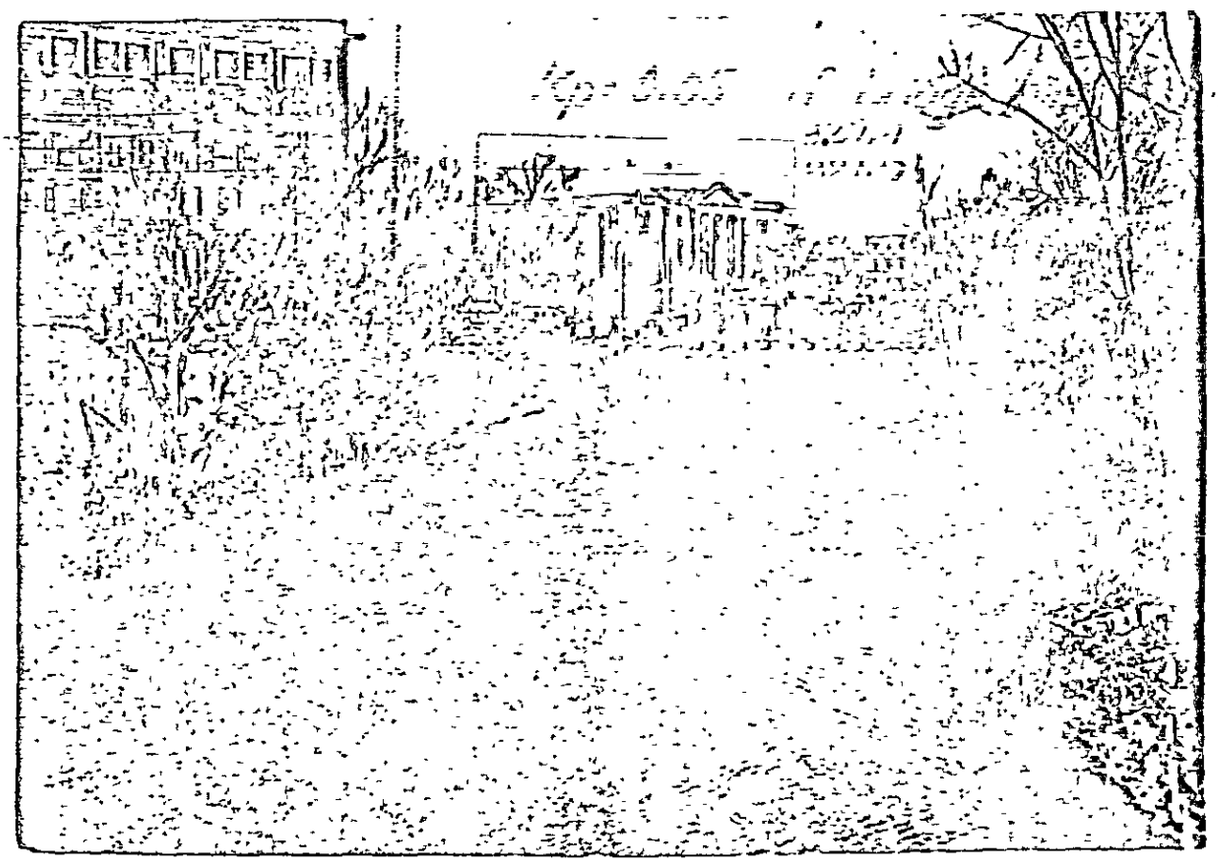
CROSS-SECTIONS CAPITAL IMPROVEMENT PROJECTS

#39


MAG. BEAD
SLEW ± 26°
SLEW ± 23°
66'
66'
66'
85'
S
S
S



SEC. #41 - TOP VIEW MONROE ST BRIDGE ON BATTLE CREEK RIVER



SEC #41 - DOWNSTREAM FROM MONROE BRIDGE

Bridge Location : Monroe St.

## Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + $\Sigma k$, $\Sigma k = k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge :

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 790 Wp = 178

$R = A/wp$ 790/178 $R^{4/3} = 7.3$ L =

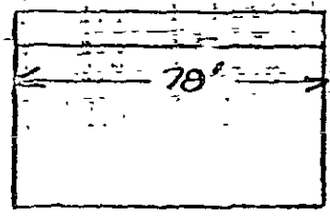
n (composite) =

$K_f = 29.1 \times (.025)^2 \times 46 / 7.3 = 0.12$

$K_e$ = 0.5 (HEADWALLS & WINGWALLS SQUARE EDGE) — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 43

$K_p$ = 0 if bridge has no intermediate piers

$K_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual




2. XKOE = 1 + 0.12 + 0.5 + 0 = 1.62

3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN = Length of weir = 0. (0 if read off BT cards)

5. BWC = bottom width of bridge opening (inc. piers) = 78.

6. [illegible] width of obstruction = 0. — field data

7. [illegible] = Bridge opening inc. piers = 790.

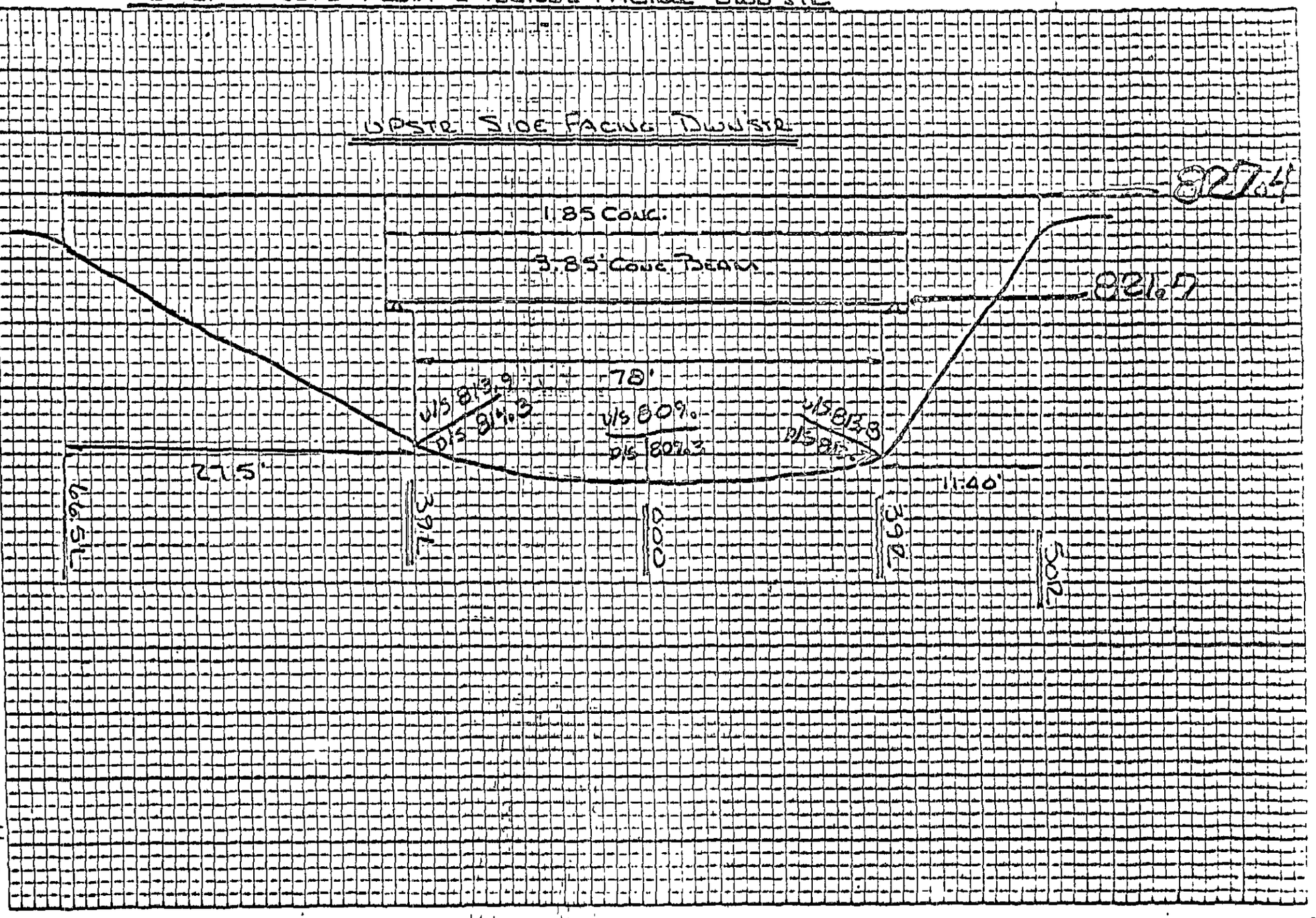
8. SS = side slope = 0.
(horizontal per 1 vertical unit)

9. ELCHU = Elevation of channel invert U/S side = 811.6
(0 if equal to minimum elevation in previous X-sect.)

10. ELCHD = Elevation of channel invert D/S side = 811.6
(0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No (Job No.) Owner Project Suffix |
|---|---|---|---|---|
| Monroe St, Battle Cr. | DRB | | | 1105 • 2021 • 07 |
| | DATE 9-80 | DATE | OF | |

L & R. OFFSETS FROM ℄ BRIDGE FACING DWNSTR.

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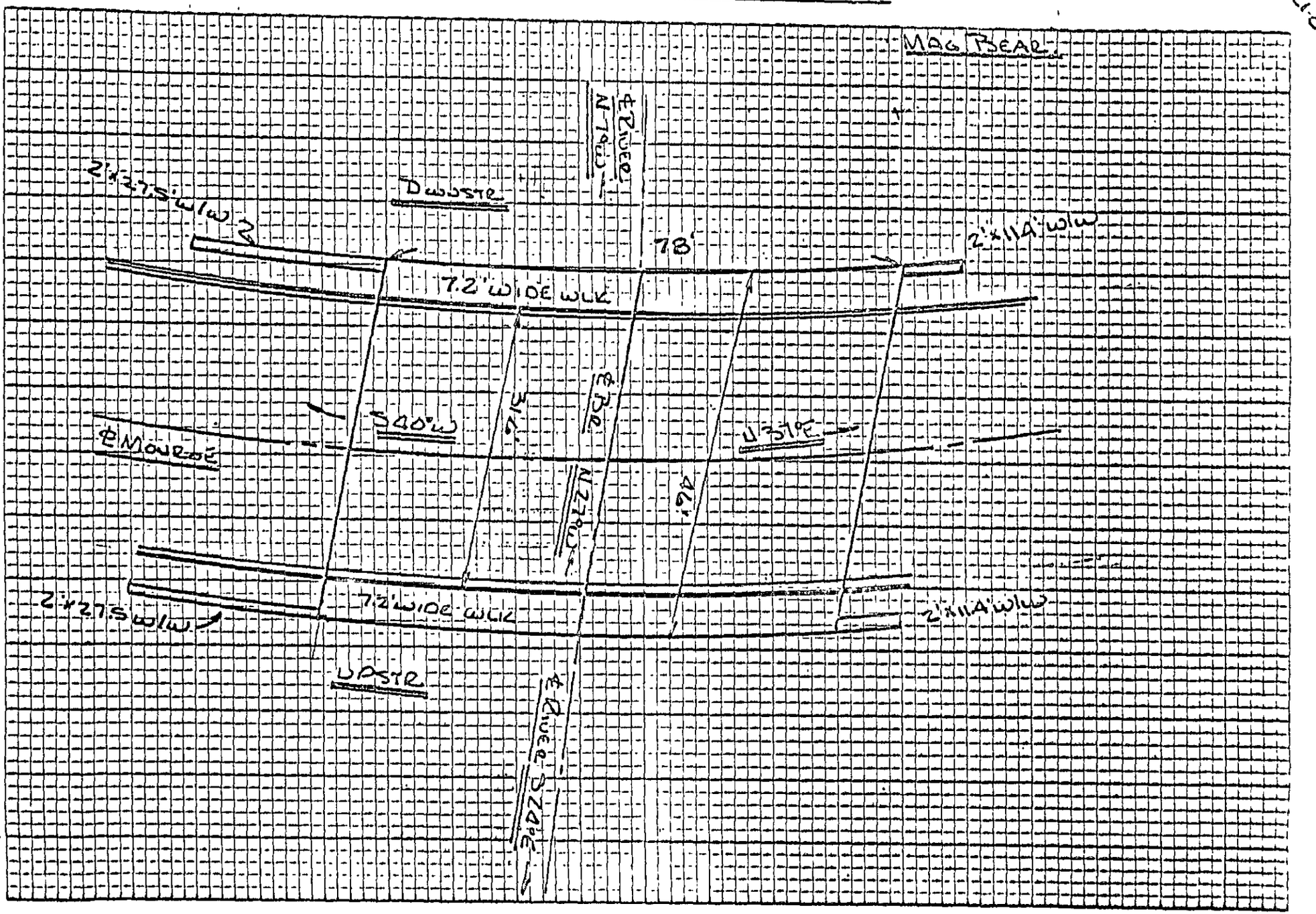
CROSS-SEC #41 MONROE ST AT BATTLE CREEK RIVER

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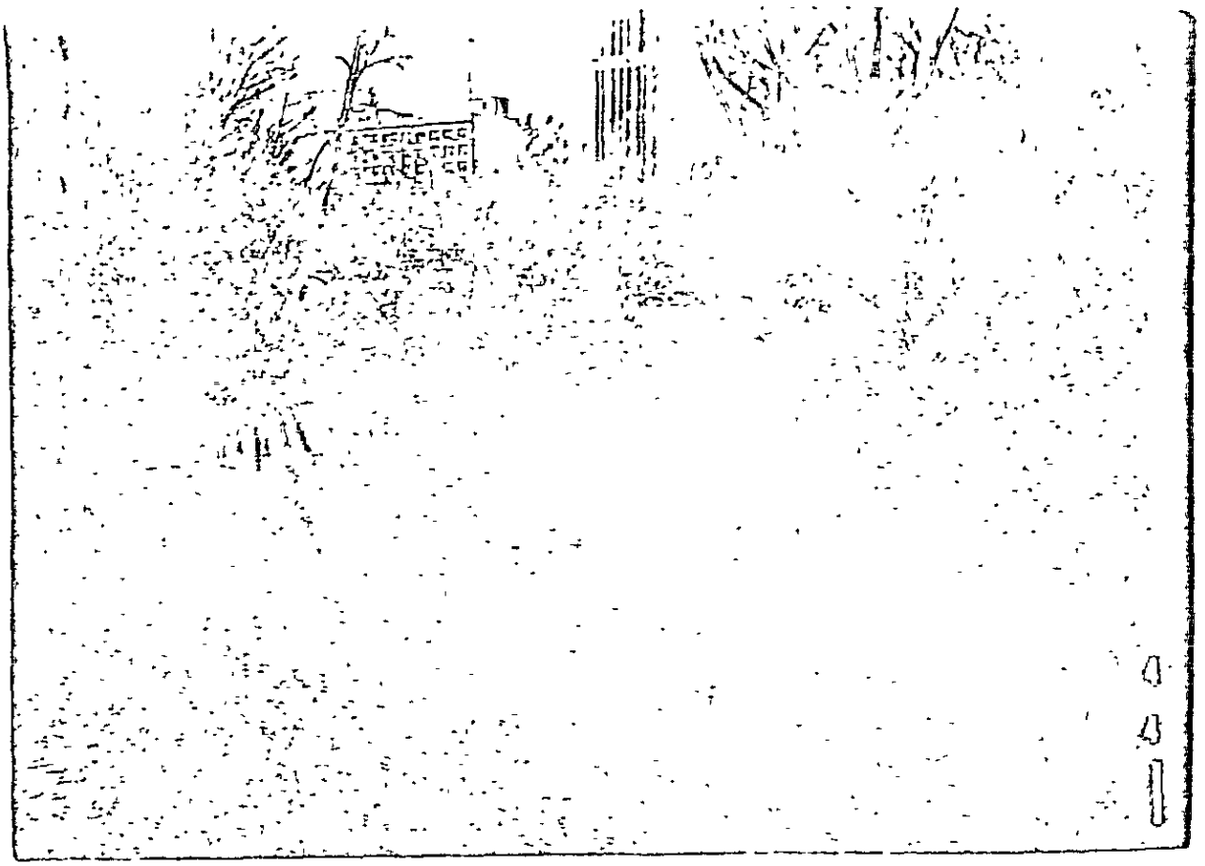
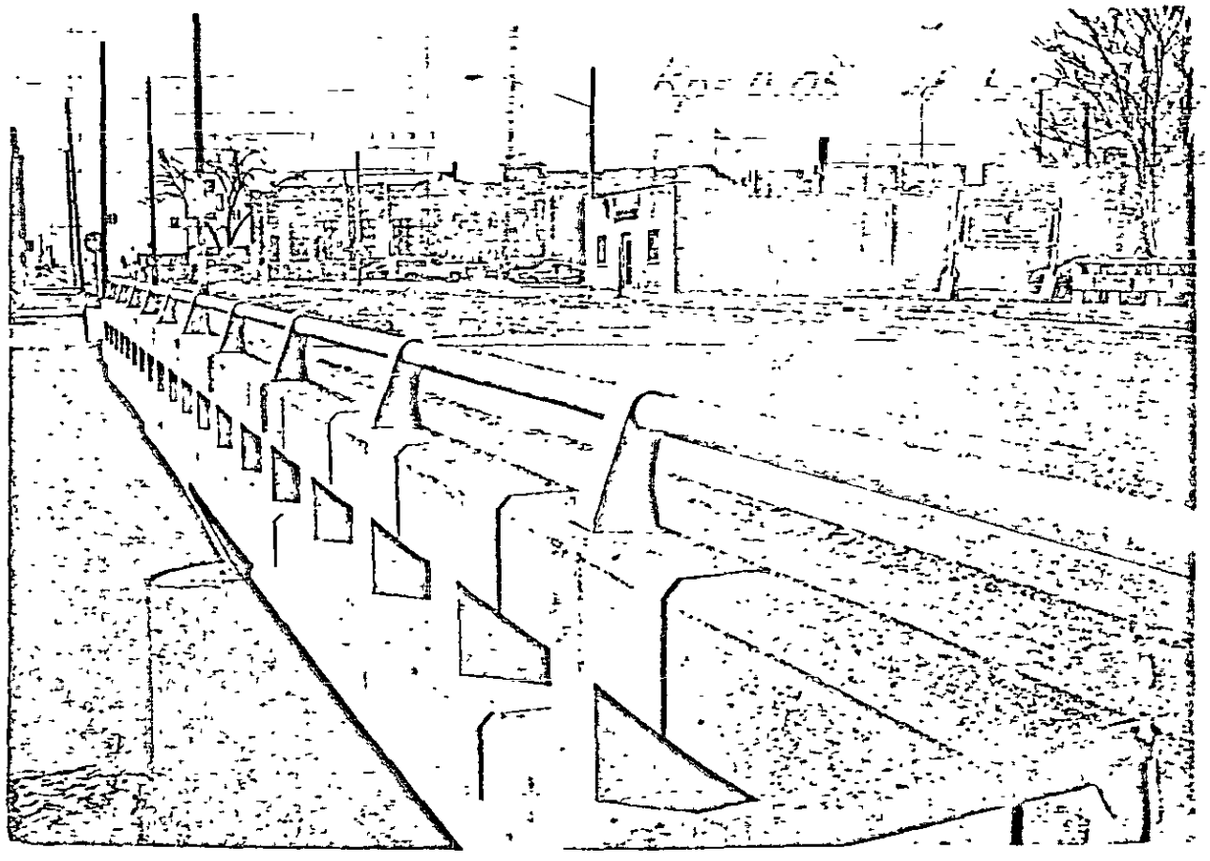


SEC #44 - DOWNSTREAM FROM DIVISION ST BRIDGE



SEC #41 - TOP VIEW DIVISION ST AND BATTLE CREEK RIVER

Bridge Location : Division St

Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.90 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk , Σk = $k_f$ + $k_e$ + $k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge :

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 945 WP = 211

R = A/wp 945/211 $R^{4/3}$ = 7.14 L = 76

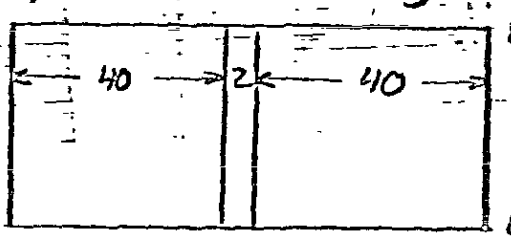
n (composite) =

$K_f = 29.1 \times (0.025)^2 \times 76 / 7.14 = 0.19$

$K_c$ = 0.5 WINGWALLS EXTENSION OF SIDES (11.0 EMBOUCHEMENT) — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 Pg. 43

$K_p$ = 0 if bridge has no intermediate piers

$K_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual




2. XKOE = 1 + 0.19 + 0.7 + 105 = 1.74

3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN = Length of weir = 0. (0 if read off BT cards)

5. BWC = bottom width of bridge opening (inc. piers) = 82.

6. [illegible] width of obstruction = 2.0 — field data

[illegible] = bridge opening inc. piers = 945

8. SS = side slope = 0.
(horizontal per 1 vertical unit)

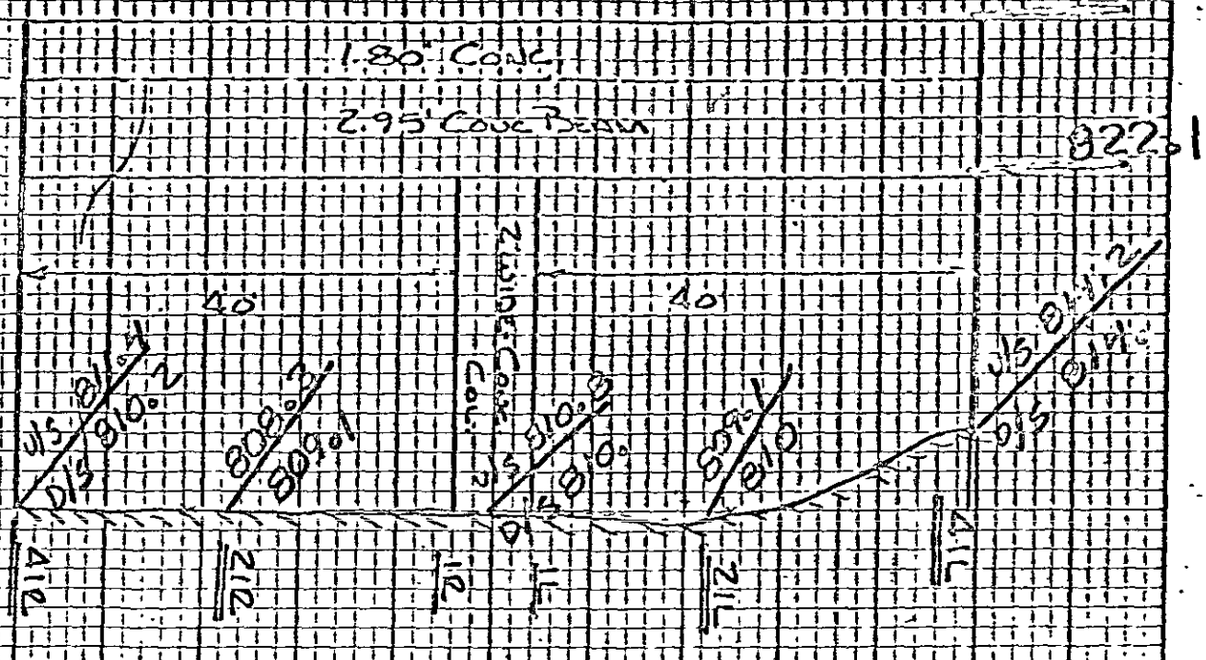
9. ELCHU = Elevation of channel invert U/S side = 810.3
(0 if equal to minimum elevation in previous X-sect.)

10. ELCHD = Elevation of channel invert D/S side = 810.3
(0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No (Job No.) Owner Project Suffix |
|---|---|---|---|---|
| Division St. | DRB | | 32 of 54 | HUD • 2021 • 07 |
| | DATE 10-80 | DATE | | |

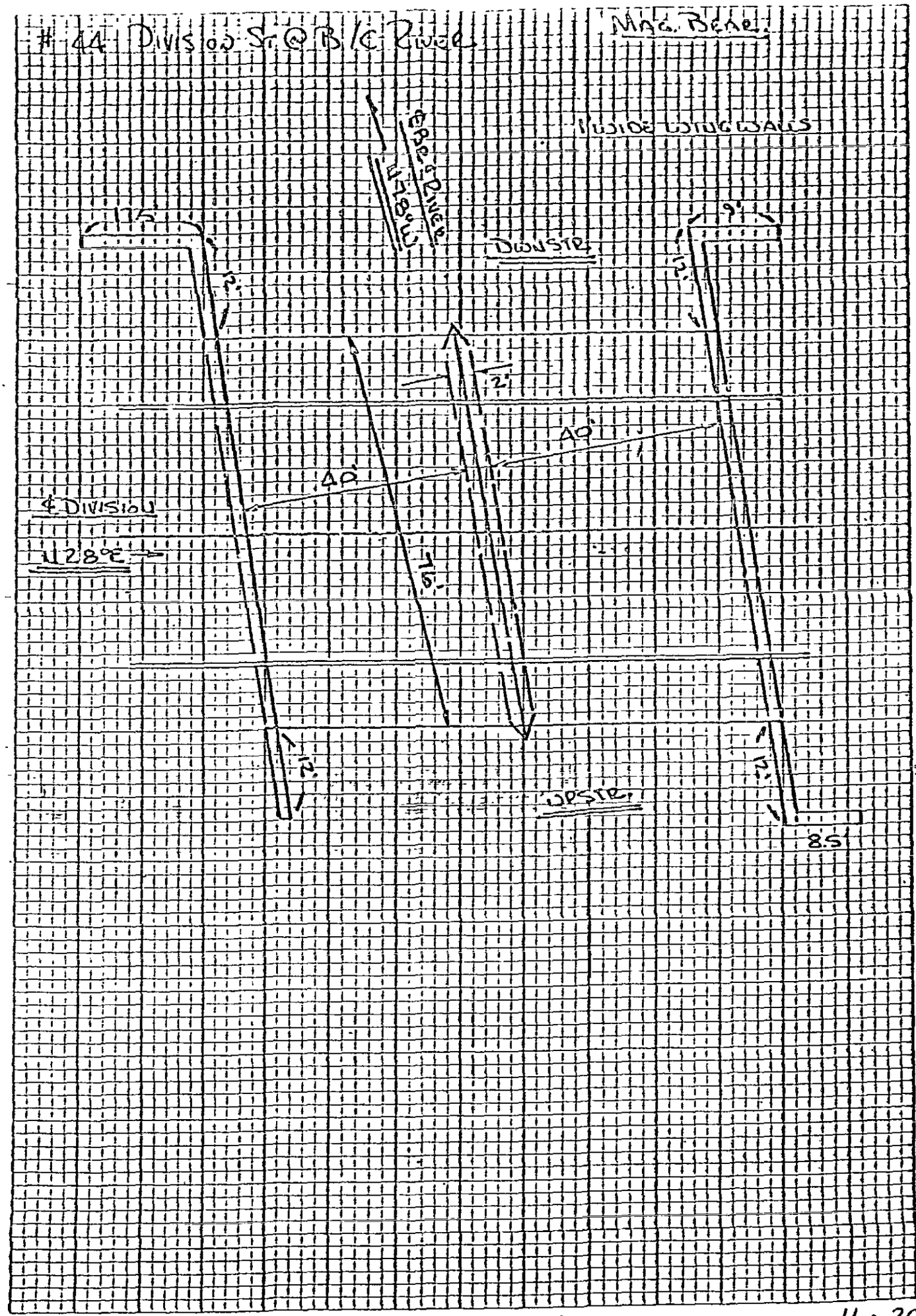
CROSS-SEC. #44 DIVISION ST AT B.C. RIVER

L&R OFFSETS FROM ℄ BR. FACING DWNSTR.

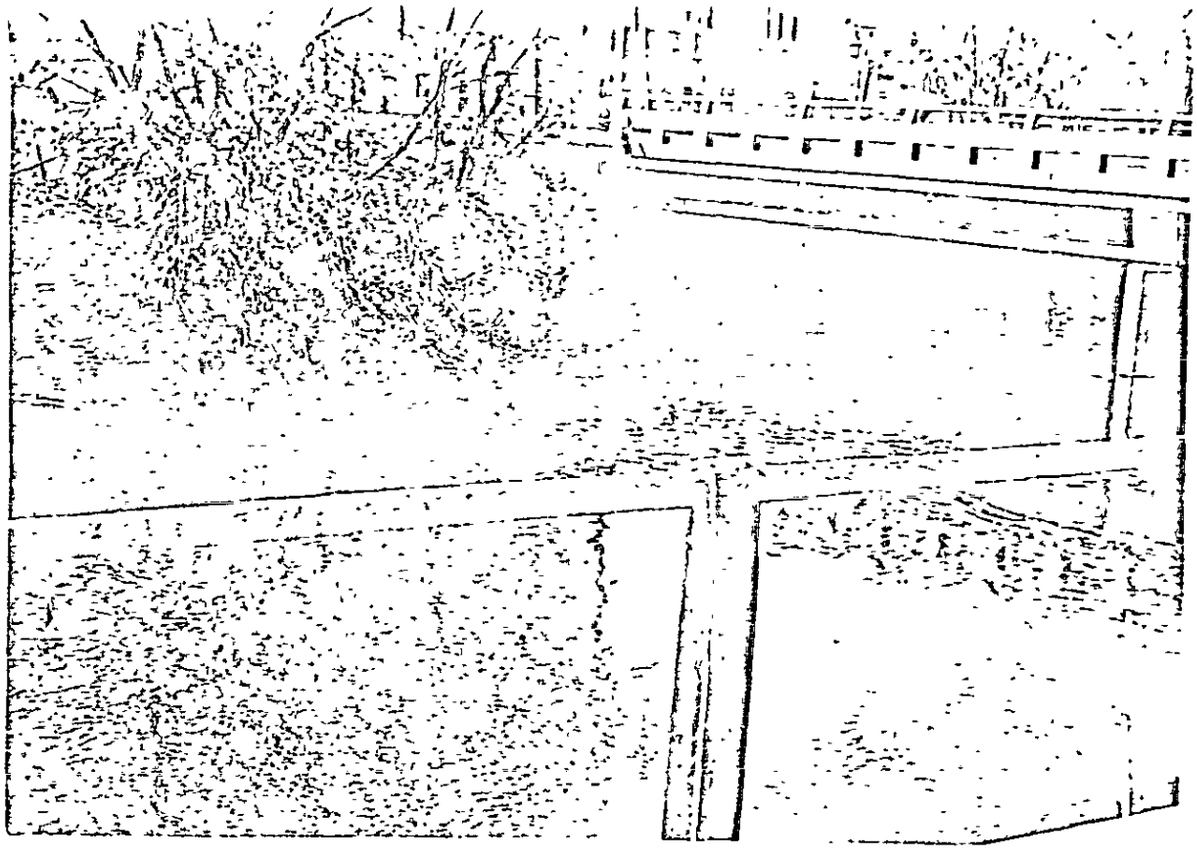



DWNSTR SIDE FACING UPSTR

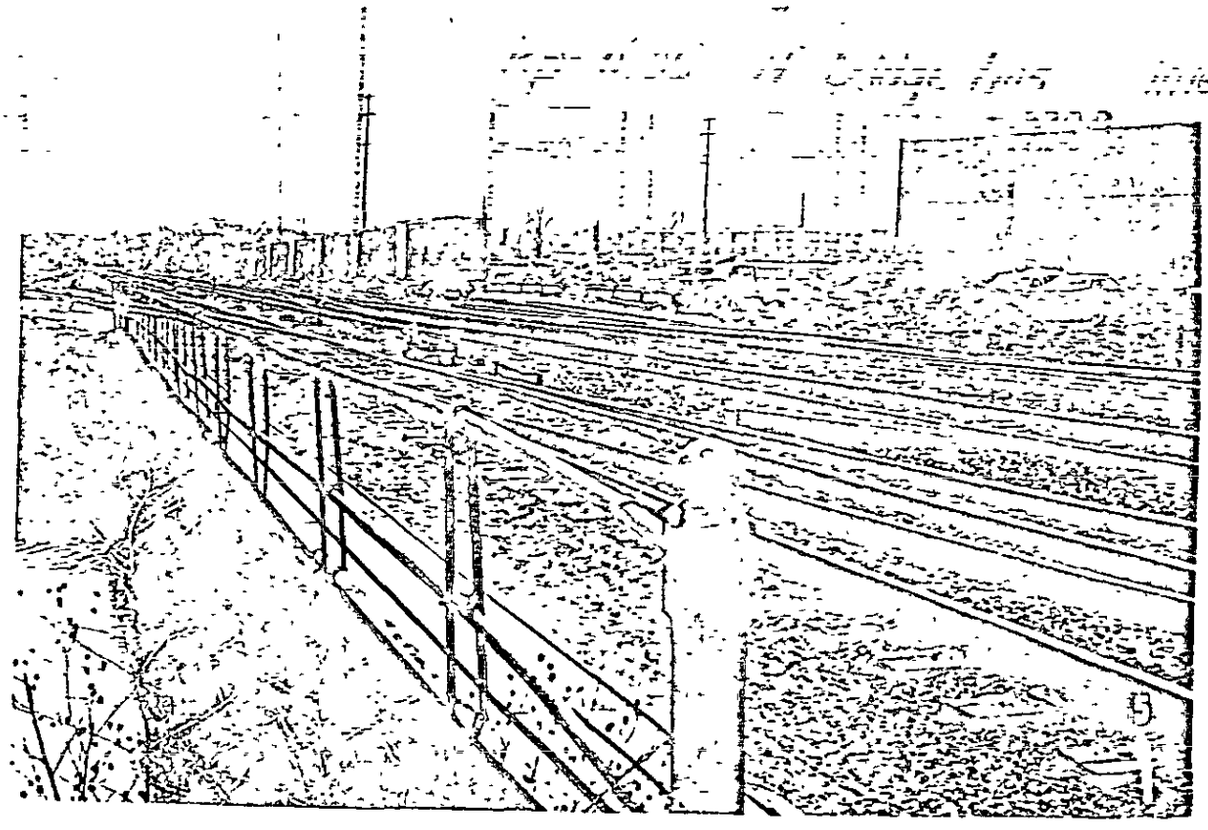
HWD 2021-07




HOD 2021-02
340F-59



SEC #15 - DOWNSTREAM FROM RAILROAD BRIDGE, (IN VIEW DIVISION ST BRIDGE)



SEC #15 - TOP VIEW OF RAILROAD BRIDGE @ BATTLE CREEK RIVER

Bridge Location : PENN. CENTRAL RR.

## Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 1.25 — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + Σk , Σk = $k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge :

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 695 Wp = 220

R = A/wp 695/220 $R^{4/3}$ = 4.16 L =

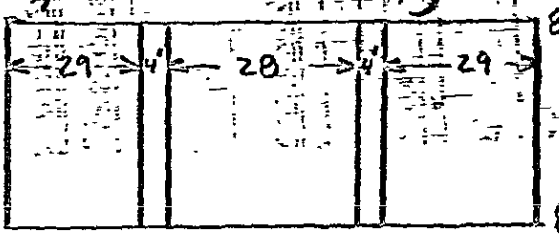
n (composite) =

$K_f = 29.1 \times (0.025)^2 \times 96 / 4.16 = .38$

$K_e$ = 0.5 (WINGWALLS PARALLEL TO EMBANKMENT) — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 43

$K_p$ = 0 if bridge has no intermediate piers

$K_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual




2. XKOE = 1 + .38 + .5 + .05 = 1.93

3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN : Length of weir = 0, (0 if read off BT cards)

5. BWC : Bottom width of bridge opening (inc. piers) : 94

6. [illegible] width of obstruction) = 8 — field data

7. [illegible] : bridge opening ~~inc. piers~~ = 695

8. SS = side slope = 0.
(horizontal per 1 vertical unit)

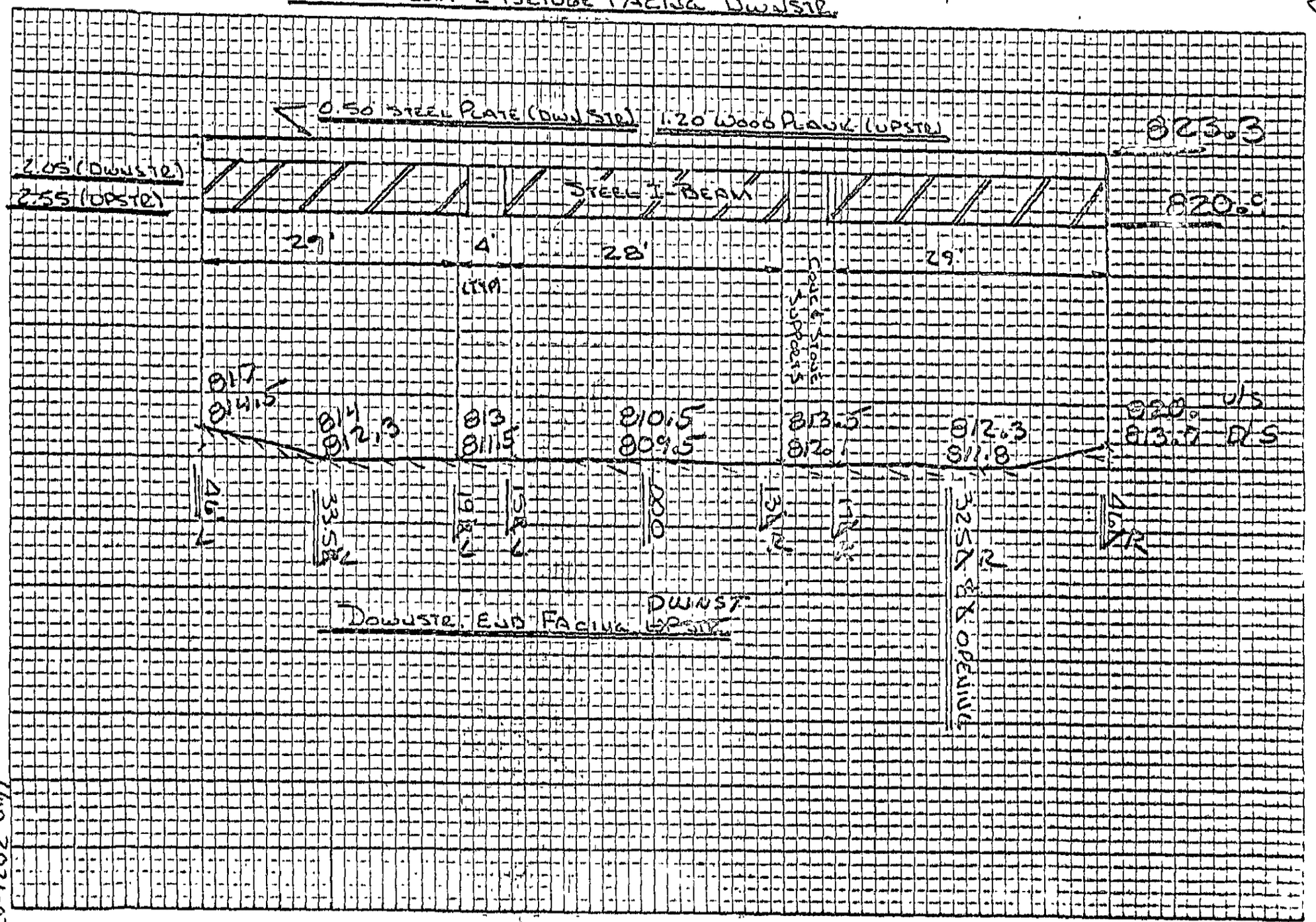
9. ELCHU = Elevation of channel invert U/S side = 812.8
(0 if equal to minimum elevation in previous x-sect.)

10. ELCHD = Elevation of channel invert D/S side = 812.8
(0 if equal to minimum elevation in previous x-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No (Job No.) Owner Project Suffix |
|---|---|---|---|---|
| PENN CENT RR-B.C. | DRB DATE 10-80 | DATE | 36 OF 59 | HUD • 2021 • 07 |

[redacted]

L&R OFFSETS FROM ℄ BRIDGE FACING DWNSTR.

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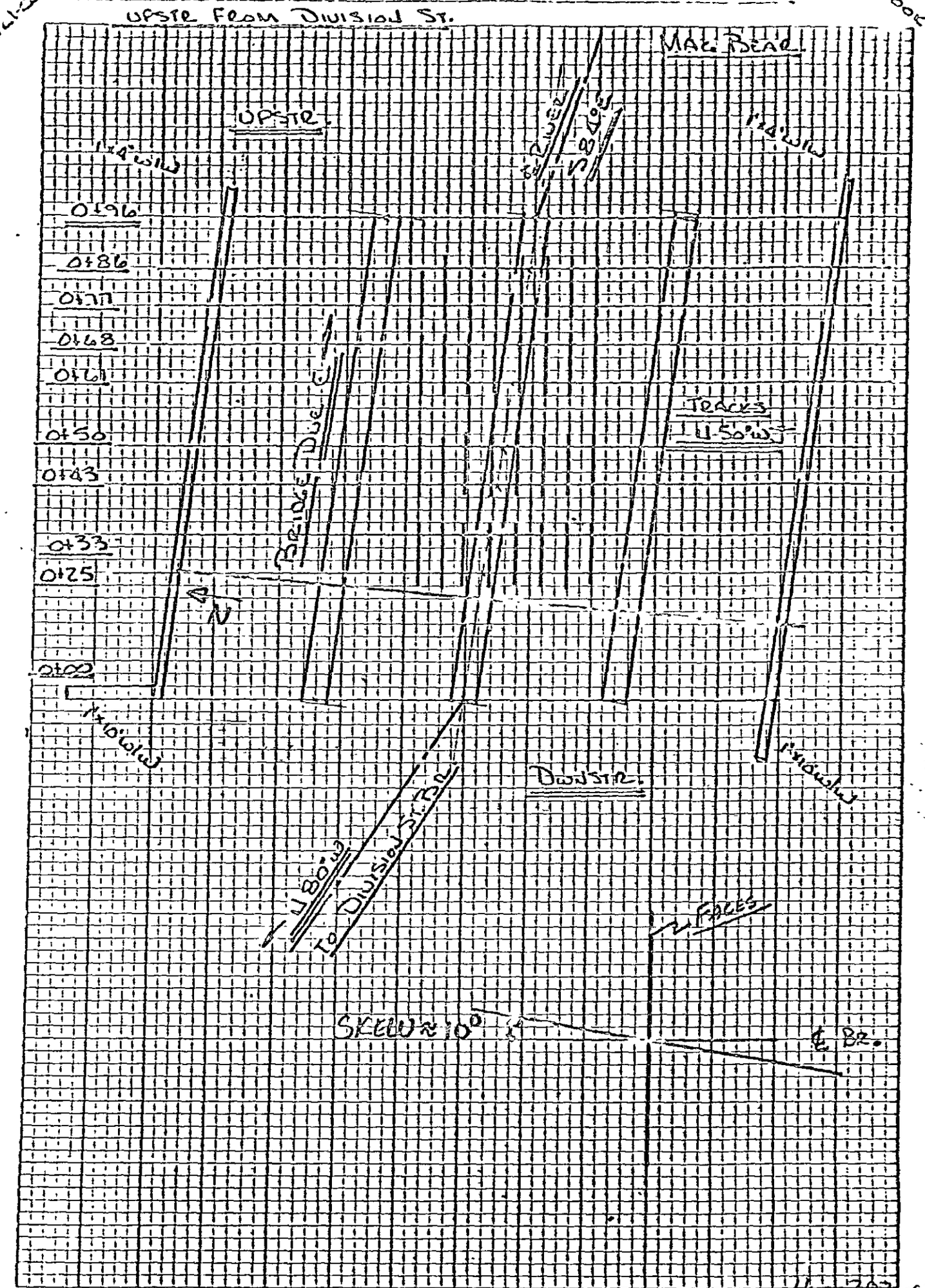
Cross-Sec. #45 R/R Bridge Over Battle Creek [illegible]

Upstr From Division St.





27

SECTION #48 BATTLE CREEK RIVER AT ELM



SEC #48 - DOWNSTREAM FROM ELM STREET BRIDGE

REFERENCE

Bridge Location : ELM ST.

Bridge Losses - SB Card

1. XK (Pier Shape Coefficient) .9 — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + Σk , Σk = $k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge :

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 1455 Wp = 392

$R = A/wp$ 1455/392 $R^{4/3}$ = 5.675 L =

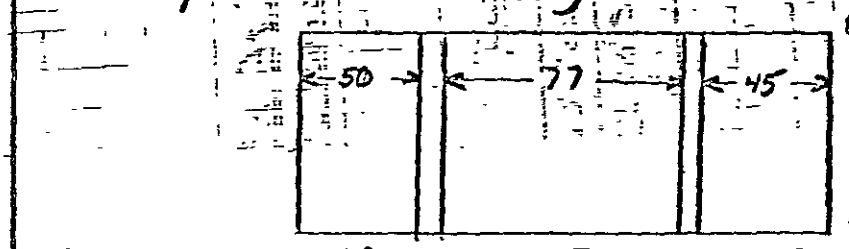
n (composite) =

$K_f = 29.1 \times (0.025)^2 \times 60 / 5.675 = 0.19$

$K_c = 0.5$ — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 43

$K_p = 0$ if bridge has no intermediate piers

$K_p = 0.05$ if bridge has intermediate piers — HEC-2 manual




2. XKOR = 1 + .19 + .5 + .05 = 1.74

COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN : Length of weir = 0. (0 if read off BT cards)

BWC : bottom width of bridge opening (inc. piers) : 174

[illegible] total width of (construction) = 4 — field data

[illegible] bridge opening inc. piers = 1755

8. SS = side slope = 0.
(horizontal per 1 vertical unit)

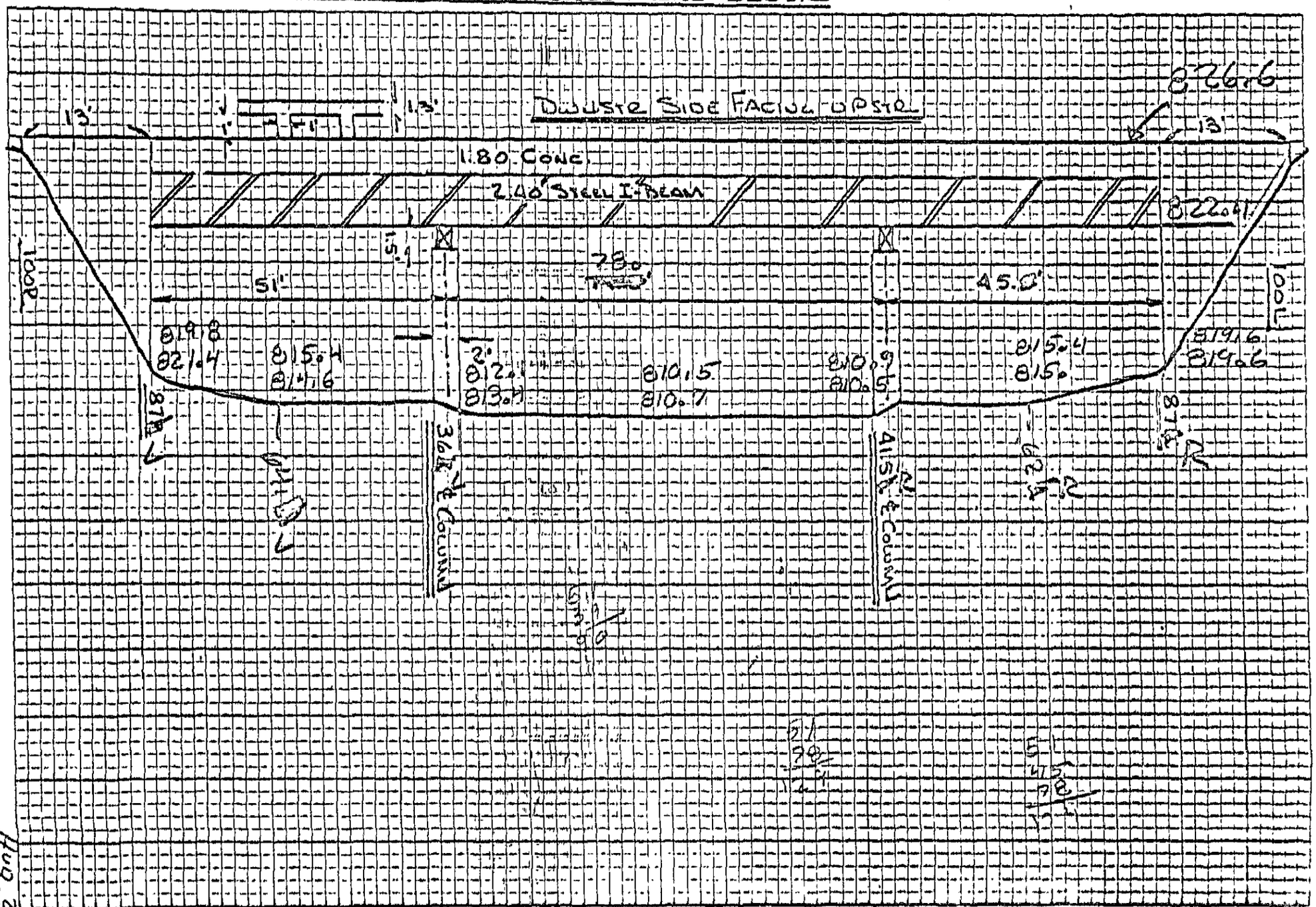
9. ELCHU = Elevation of channel invert U/S side = 814.
(0 if equal to minimum elevation in previous X-sect.)

10. ELCHD : Elevation of channel invert D/S side = 814.
(0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No (Job No.) Project Suffix |
|---|---|---|---|---|
| ELM ST. - BATTLE CR. | DRB | | 40 OF 59 | HUD • 2021 • 07 |
| | DATE 10-80 | DATE | | |

[redacted]

L&R OFFSETS FROM ℄ BRIDGE FACING DWNSTR

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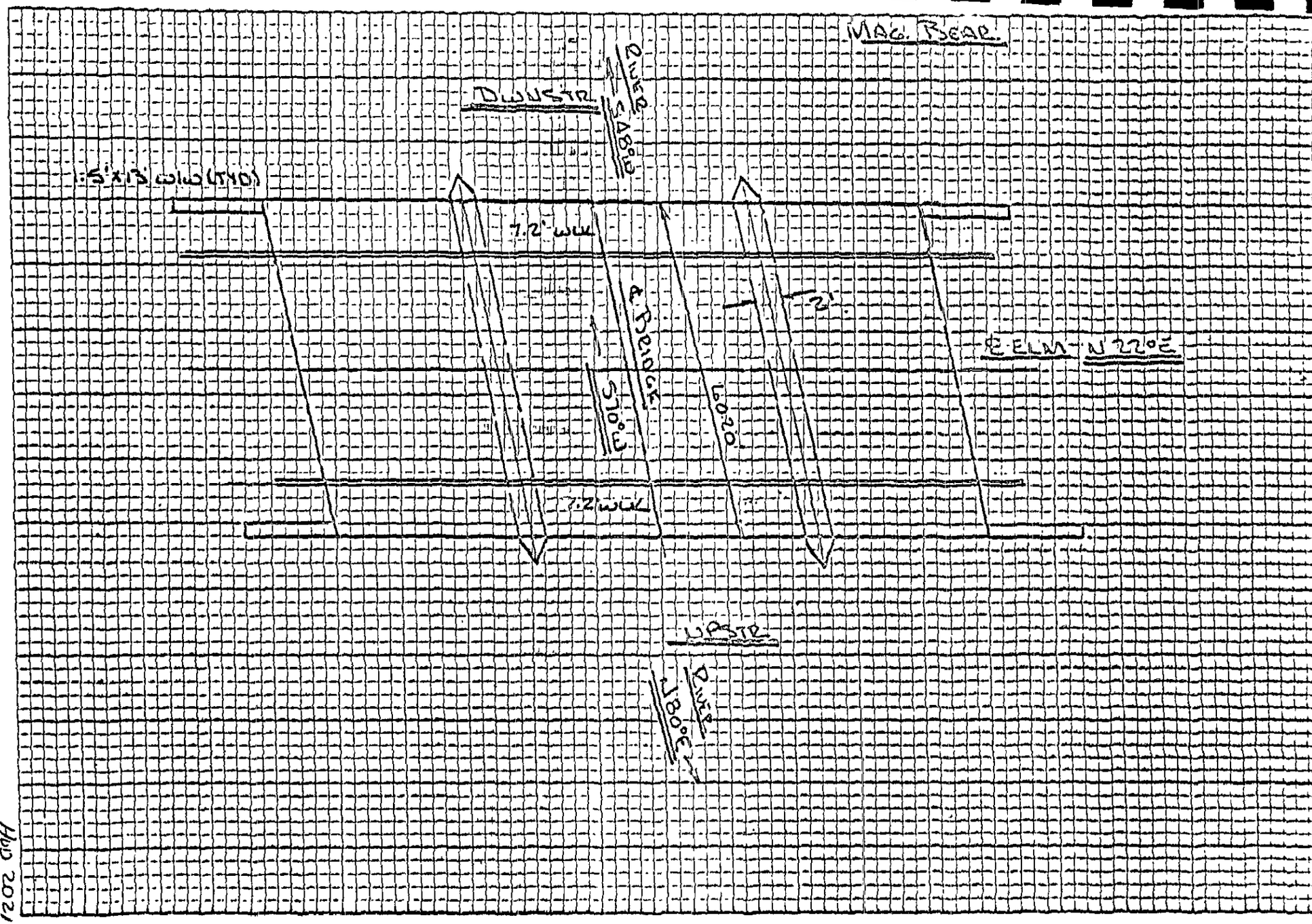
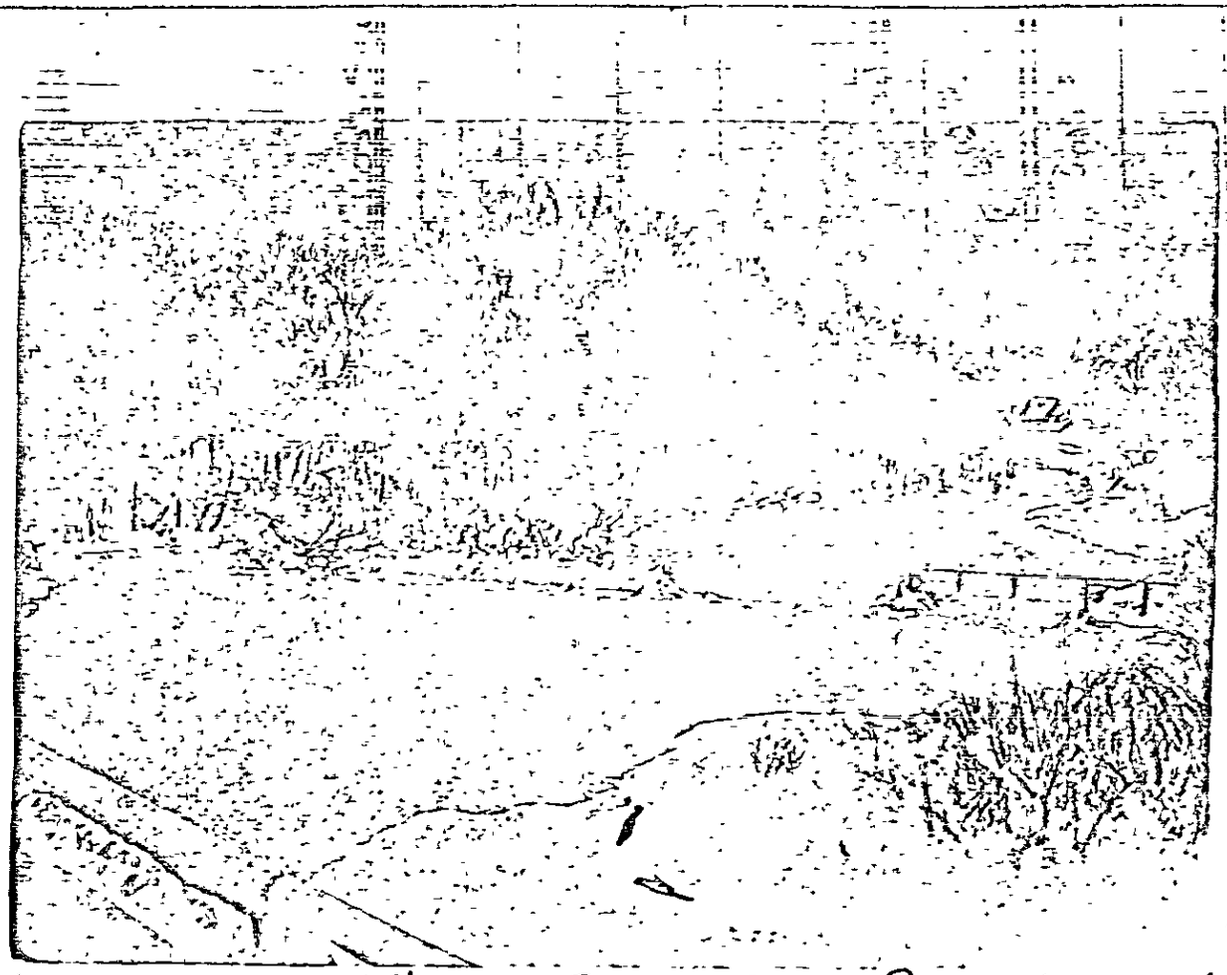

MAG. BEAR
DWNSTR
RIVER
S48°W
1.5'x13' W/W (TYD)
7.2' WLL
℄ BRIDGE
S70°W
60.20'
2'
℄ ELM N 22°E
7.2' WLL
UPSTR
RIVER
N80°E



28HUD2021-03
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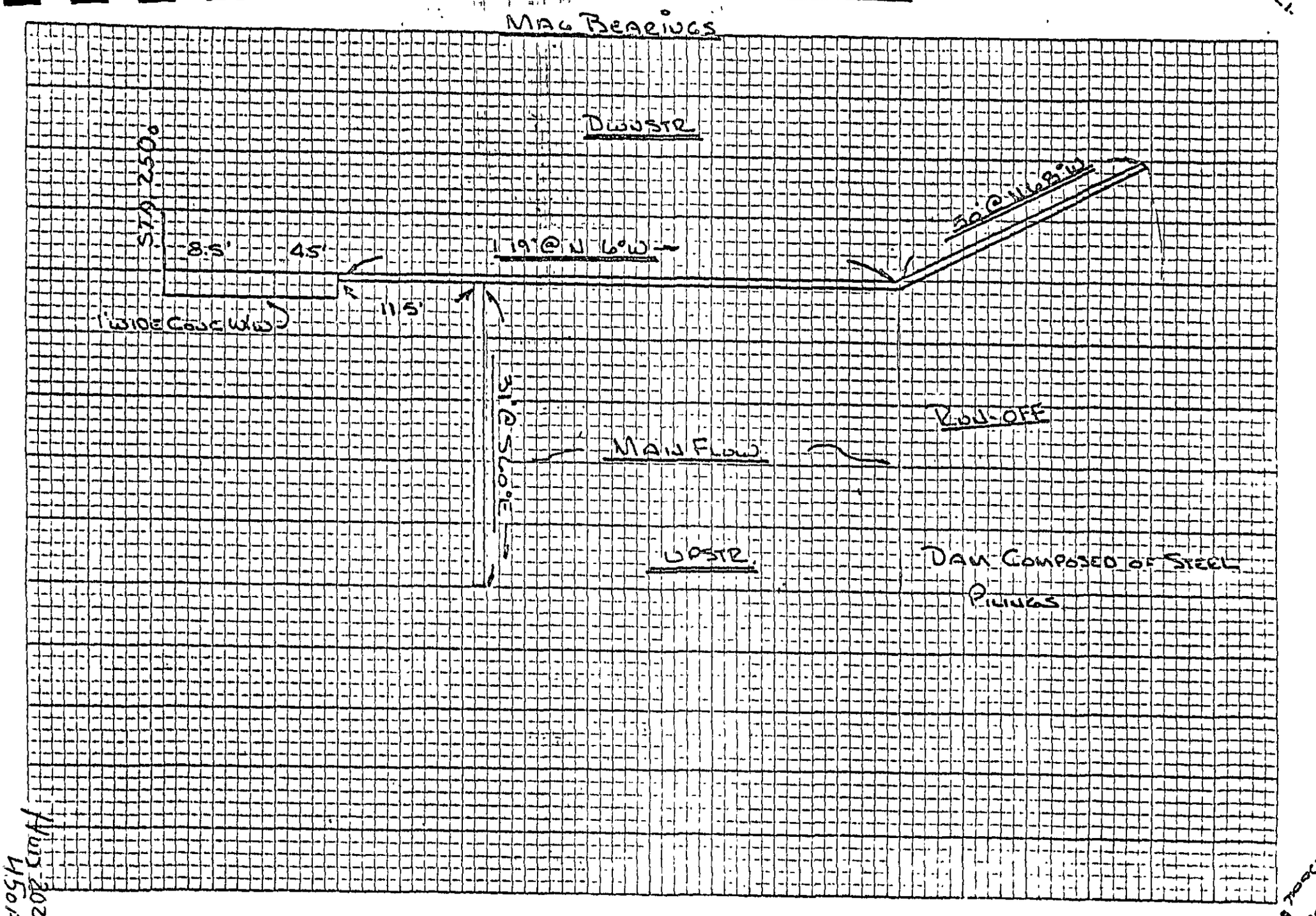
SECTION #48A BATTLE CREEK RIVER (UPSTR of 11, 6

LOCATION OF BLDGS.
Bldg. 1
Bldg. 2
Bldg. 3
Bldg. 4
Bldg. 5
Bldg. 6
Bldg. 7
Bldg. 8
Bldg. 9
Bldg. 10
Bldg. 11
Bldg. 12
Bldg. 13
Bldg. 14
Bldg. 15
Bldg. 16
Bldg. 17
Bldg. 18
Bldg. 19
Bldg. 20
Bldg.

[redacted] FROM ELM ST. BRIDGE

2021

MAG BEARINGS

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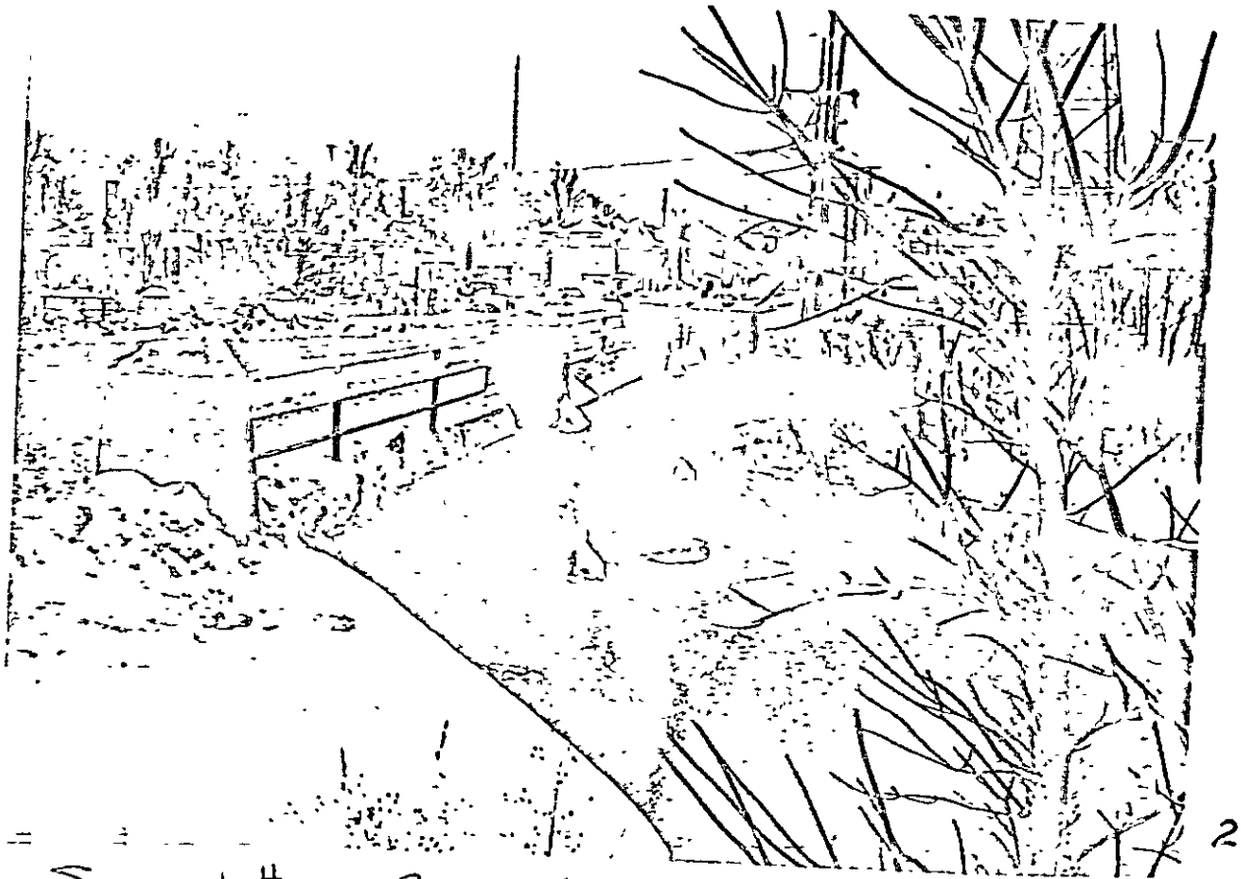


29

SECTION #50 BATTLE CREEK RIVER AT UNION



SEC #50 - TOP VIEW UNION ST BRIDGE

HOD 2021-07
4601-59

Bridge Location: UNION ST.

Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.090 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk, Σk = $k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge:

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 917 WP = 289

$R = A/wp$ 917/289 $R^{4/3} = 4.66$ $L = 50$

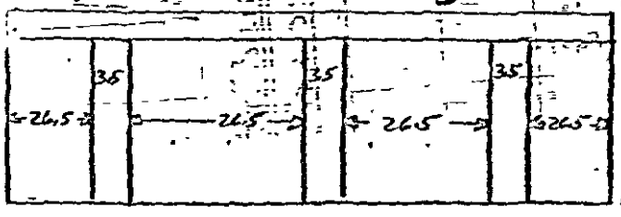
n (composite) =

$K_f = 29.1 \times (0.025)^2 \times 50 / 4.66 = 0.20$

$K_c$ = 0.5 (WINGWALL 10 TO 25° TO BARREL) — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 Pg. 43

$K_p$ = 0 if bridge has no intermediate piers

$K_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual




AREA TOTAL = $(9.6 \times 26.5 \times 4) - [5.6(3.5)3] = 917\ FT^2$

2. XKOR = 1 + 0.20 + 0.5 + 0.05 = 1.75

3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN = Length of weir = 0. (0 if read off BT cards)

5. BWC = bottom width of bridge opening (inc. piers) = 116.5

6. [illegible] width of obstruction = 10.5 — field data

7. [illegible] = bridge opening ~~inc. piers~~ = 1125.

8. SS = side slope = 0.
(horizontal per 1 vertical unit)

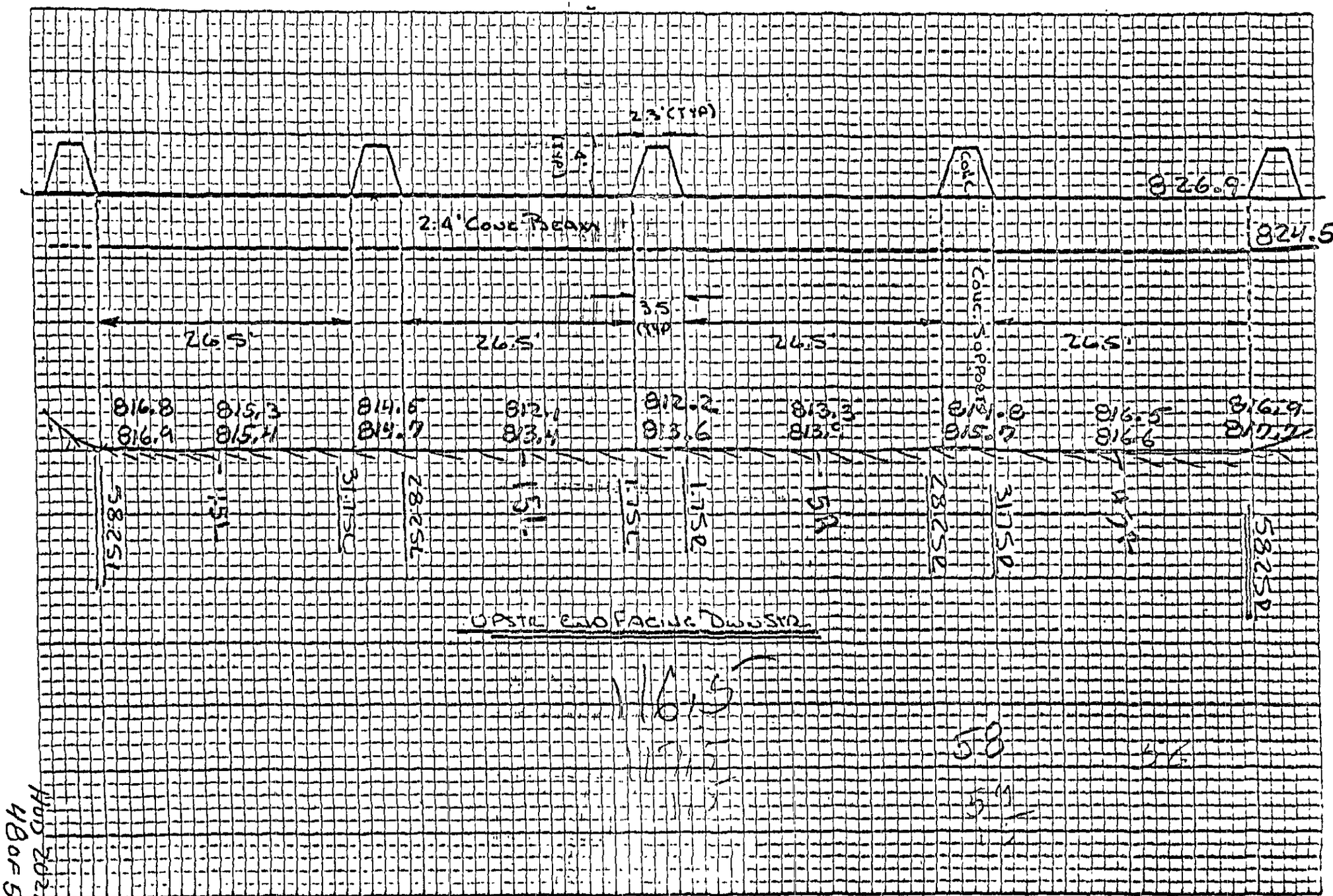
9. LCHU = Elevation of channel invert U/S side = 813.9
(0 if equal to minimum elevation in previous X-sect.)

10. LCHD = Elevation of channel invert D/S side = 813.9
(0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No. (Job No.) Owner Project Suffix |
|---|---|---|---|---|
| UNION ST, BATTLE CREEK CITY | DRB | | 42 OF 59 | HUD 2021 07 |
| | DATE 10/80 | DATE | | |

CROSS SECT. 50 UNION ST. BRIDGE A. B. RIVER

L&R OFFSET FROM ℄ BRIDGE FACING DWN STR.




HWD 2021-07
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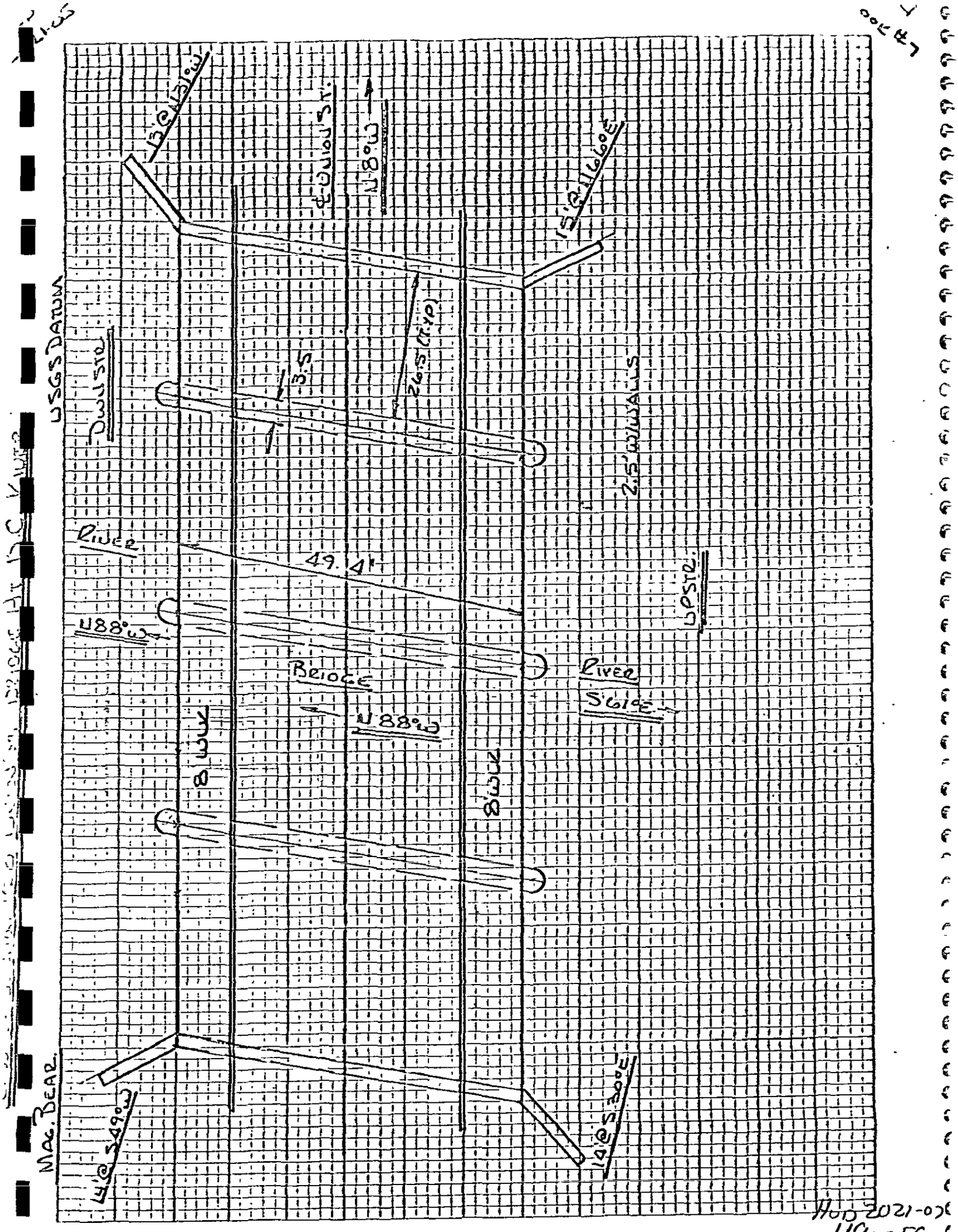
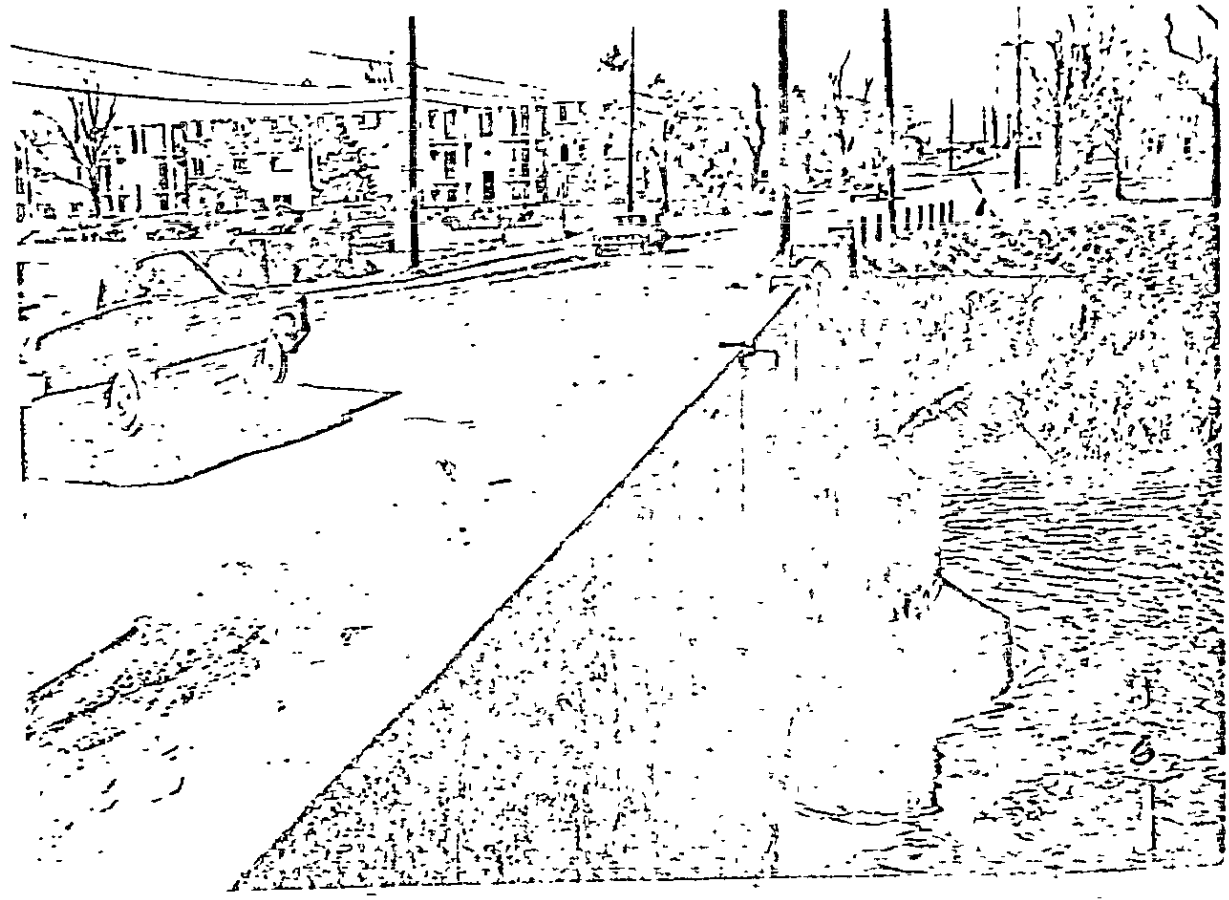
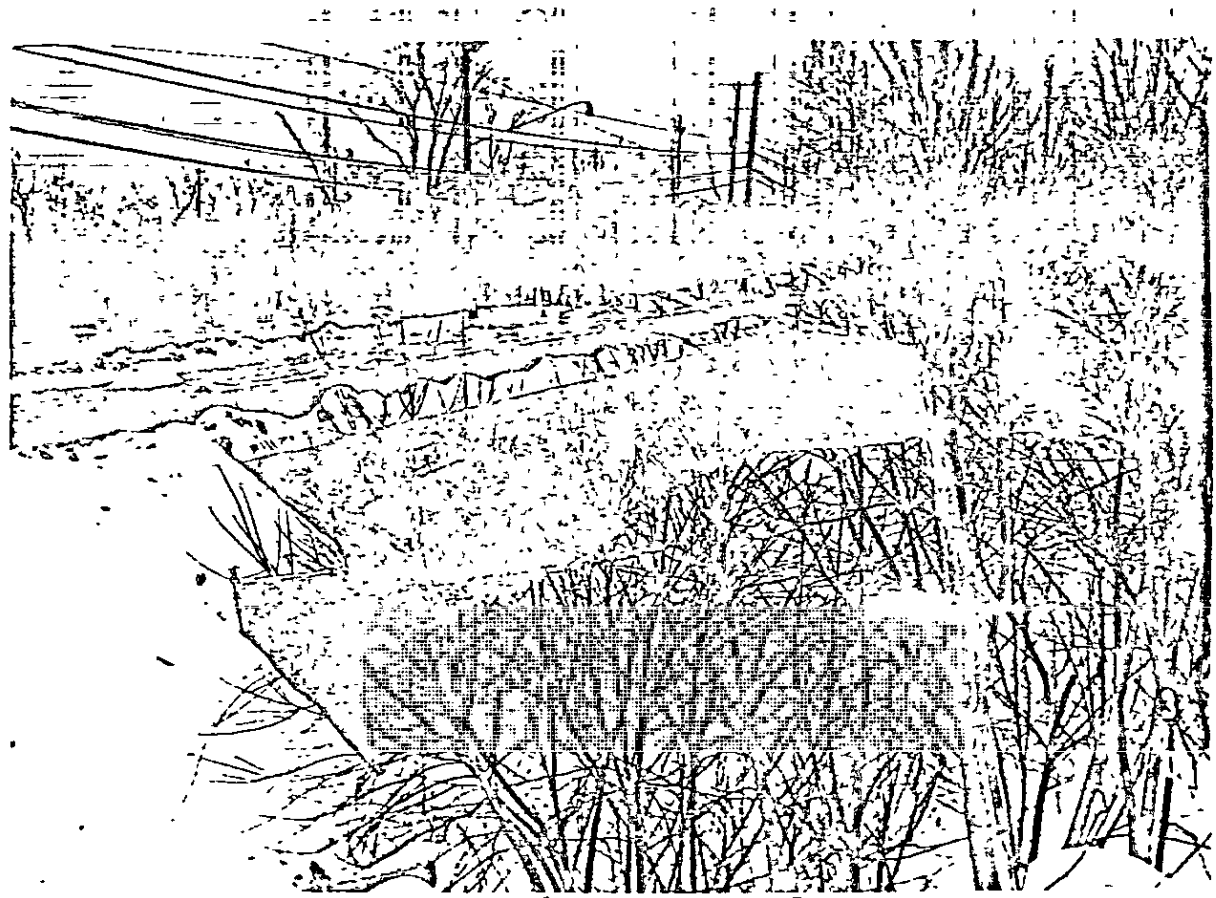


USGS DATUM
DWN STR.
13'@N31°W
℄ UNION ST.
N8°W
15'@N66°E
3.5
26.5 (TYP)
2.5' W/WALLS
RIVER
49.4'
UPSTR.
N88°W
BRIDGE
RIVER
S61°E
N88°W
8' WLK
8' WLK
MAG. BEAR
14'@S49°W
14'@S30°E



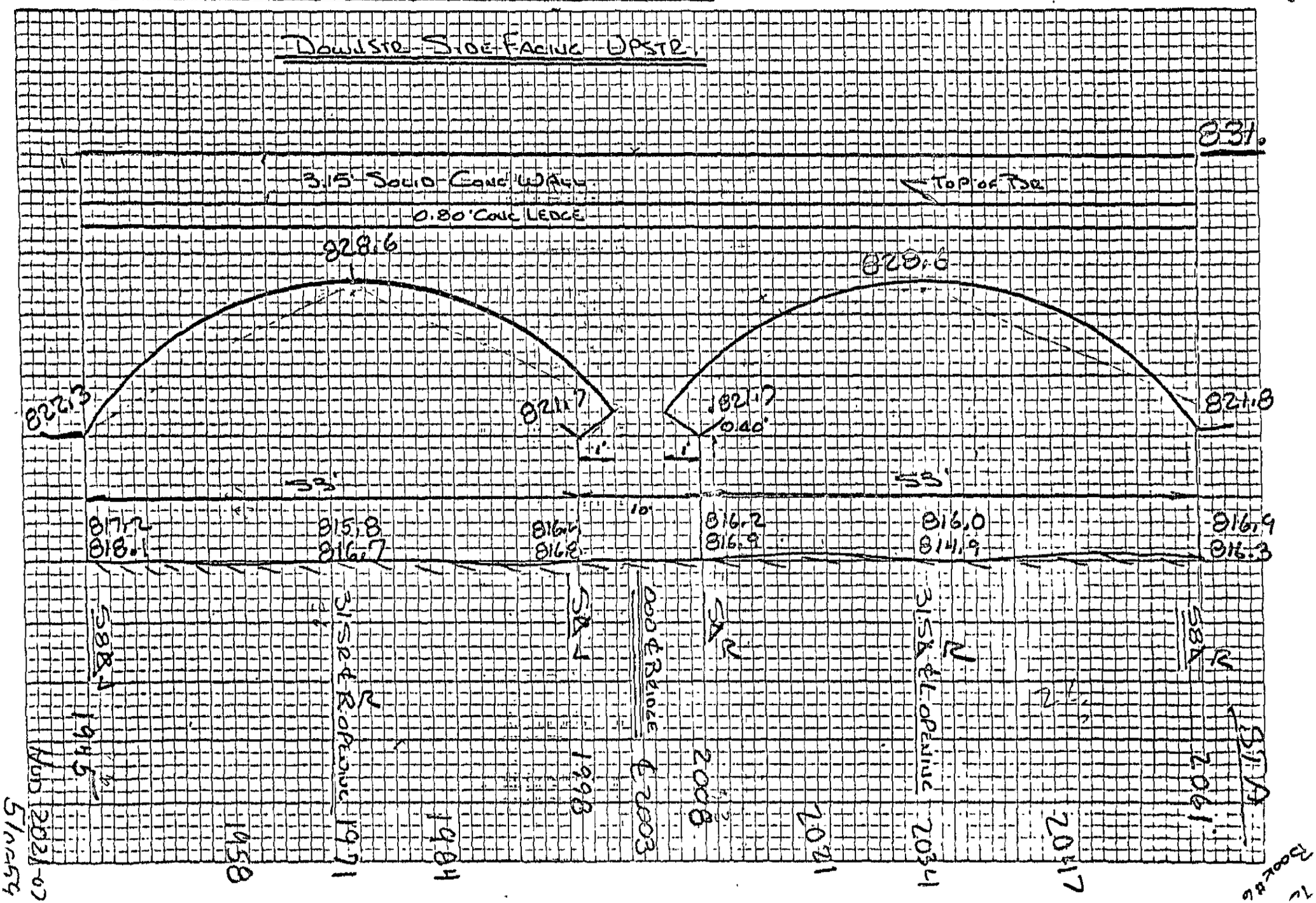
SEC. "E 6- TOP VIEW EMMETT ST BRIDGE @ BATTLE CREEK RIVER



SECTION #5 BATTLE CREEK RIVER AT EMMETT

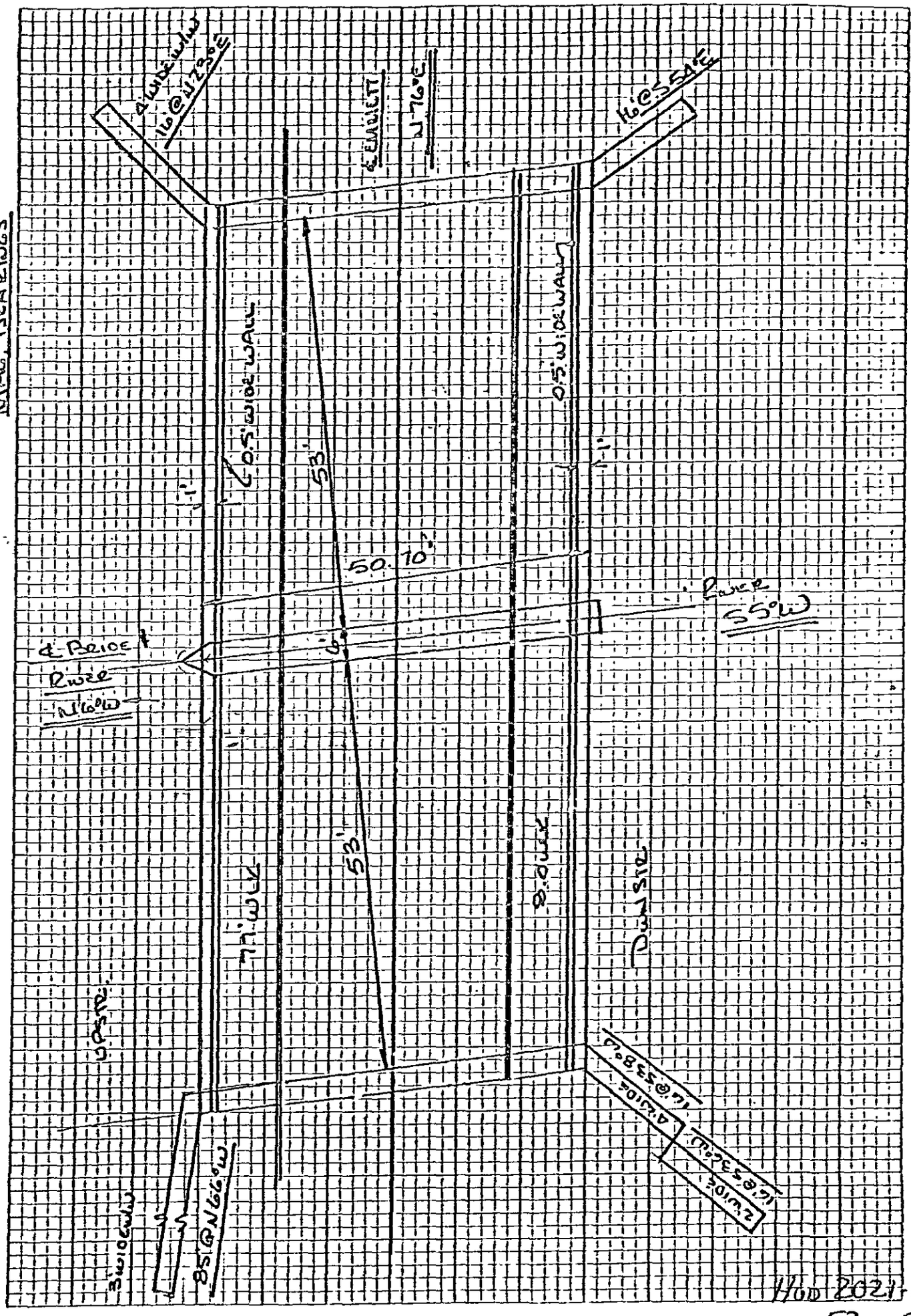
Cross Section #56 Emmett St At Battle Creek River

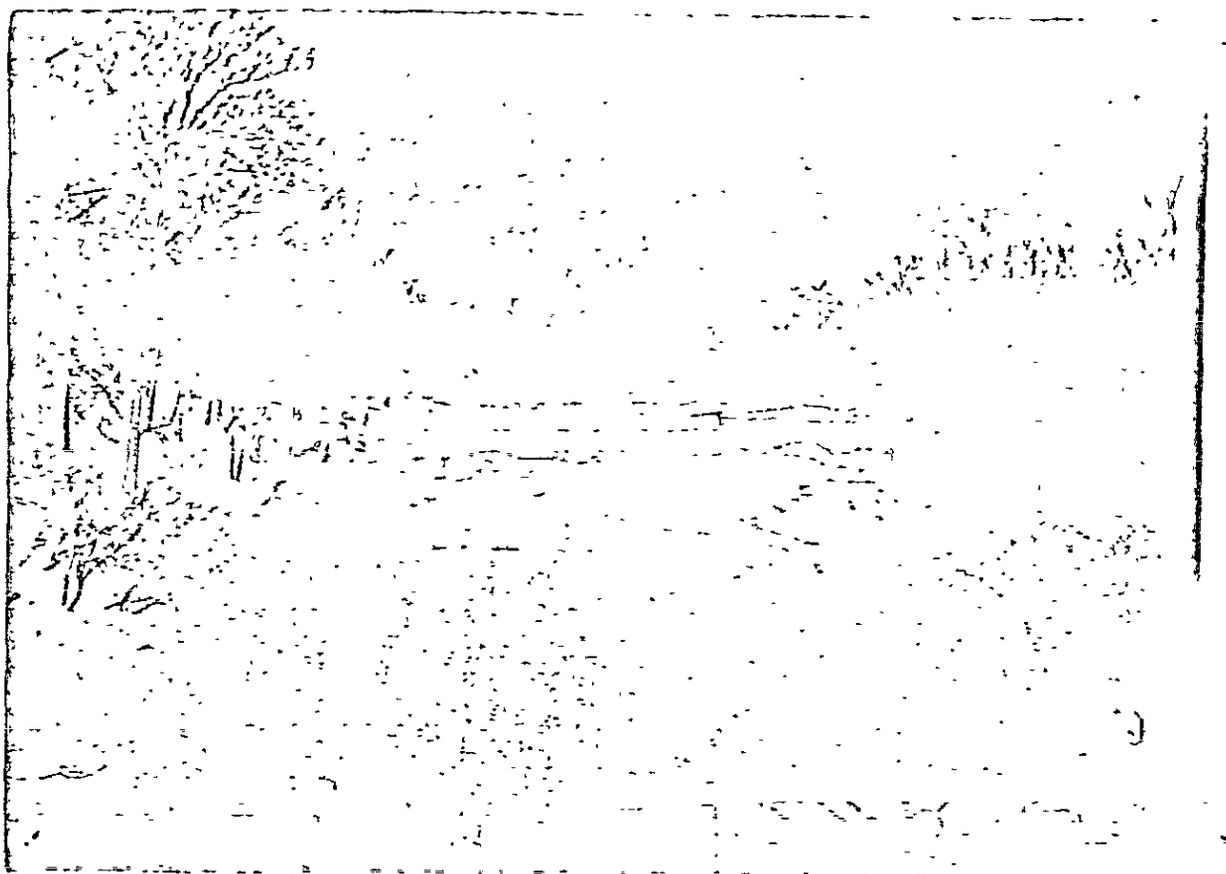
L&R. OFFSETS FROM ℄ BR. FACING DWN STR.



Cross Section #56 Emmett St At Battle Creek River

Mag. Bearings





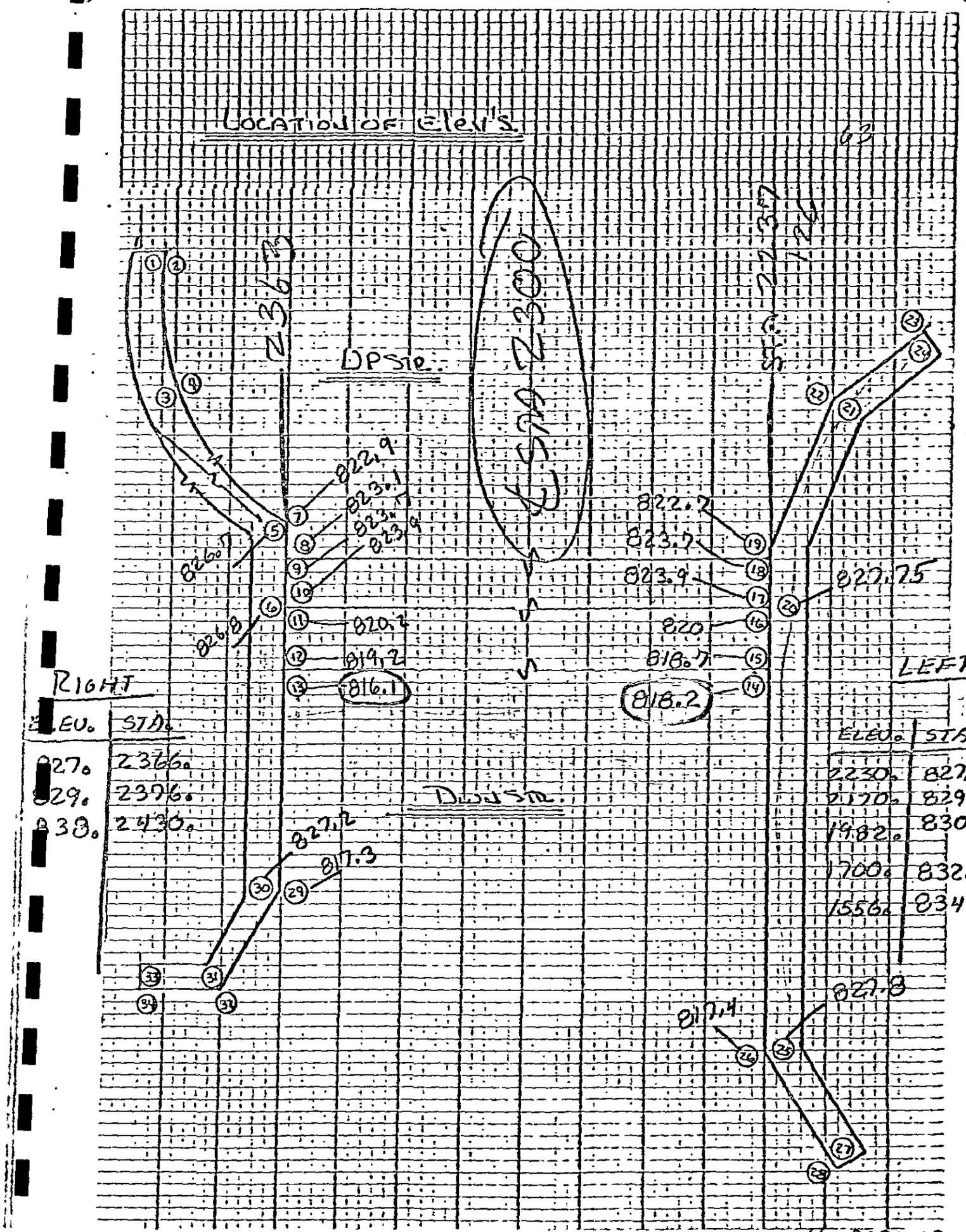
31

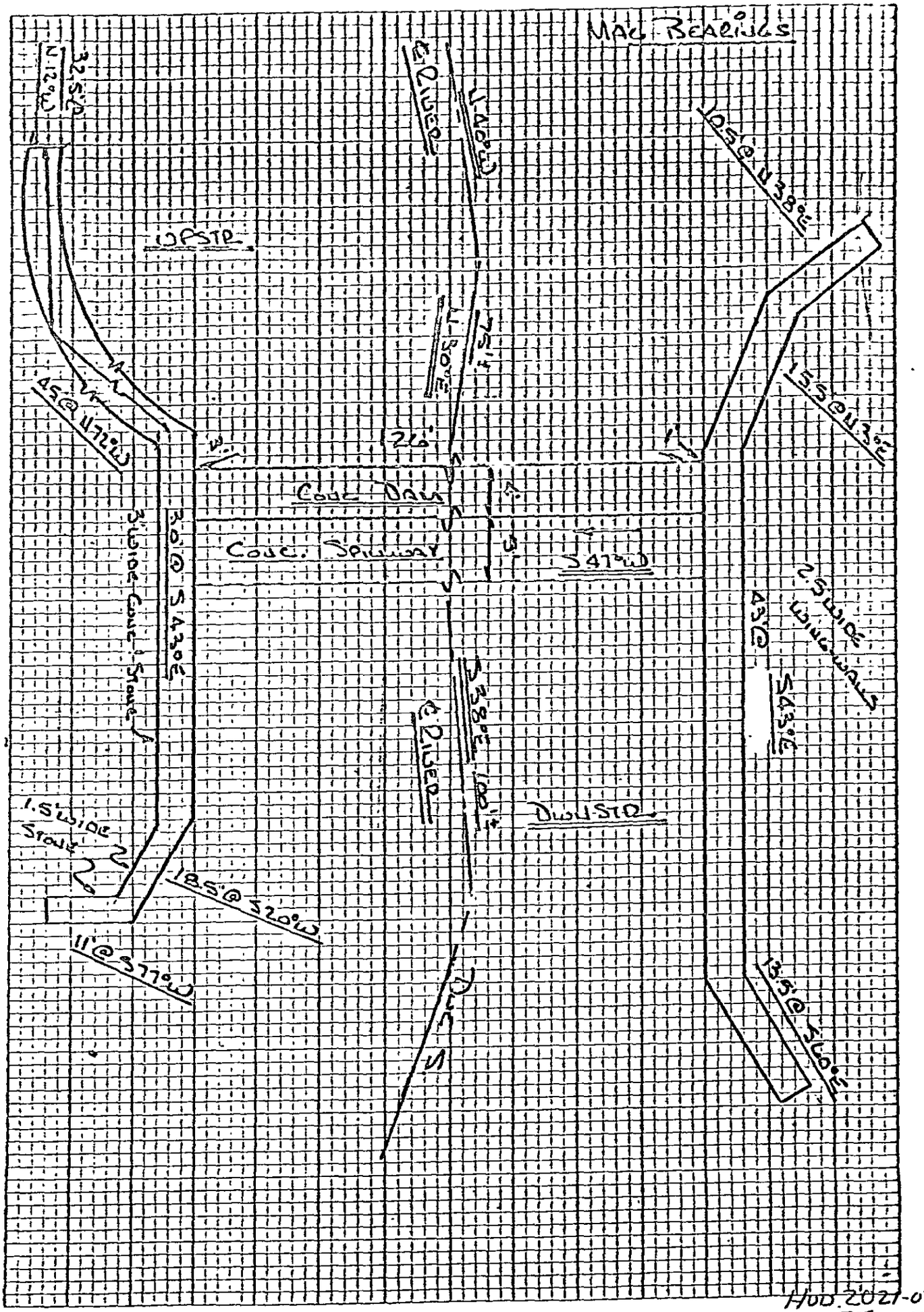
SECTION #57 BATTLE CREEK RIVER AT VARONA DAM

(

RIGHT

# Cross-Sec. #57 Varoja Dam




MAC Reeves
Court Drive
Court Square
Court Square
Court Drive
Court Square
Court Square
Court Square

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors

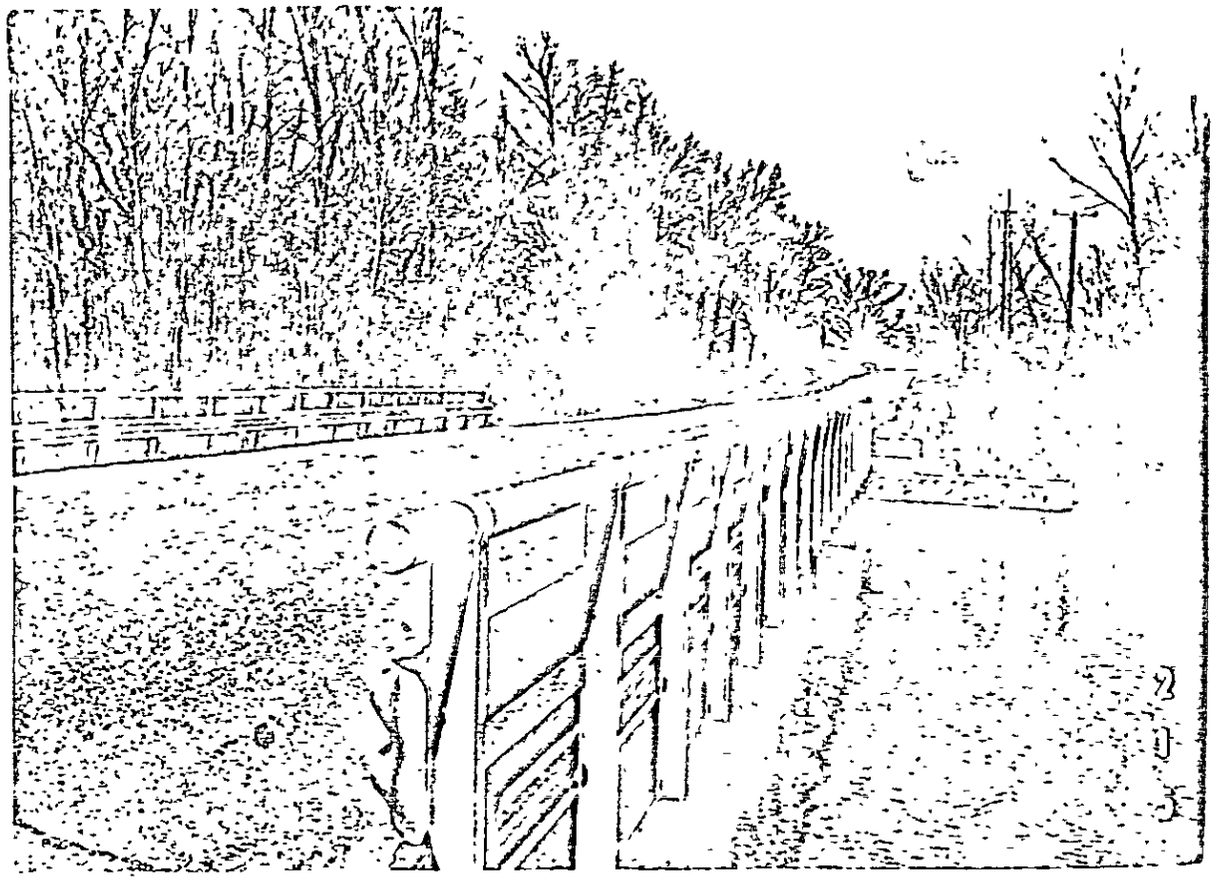
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

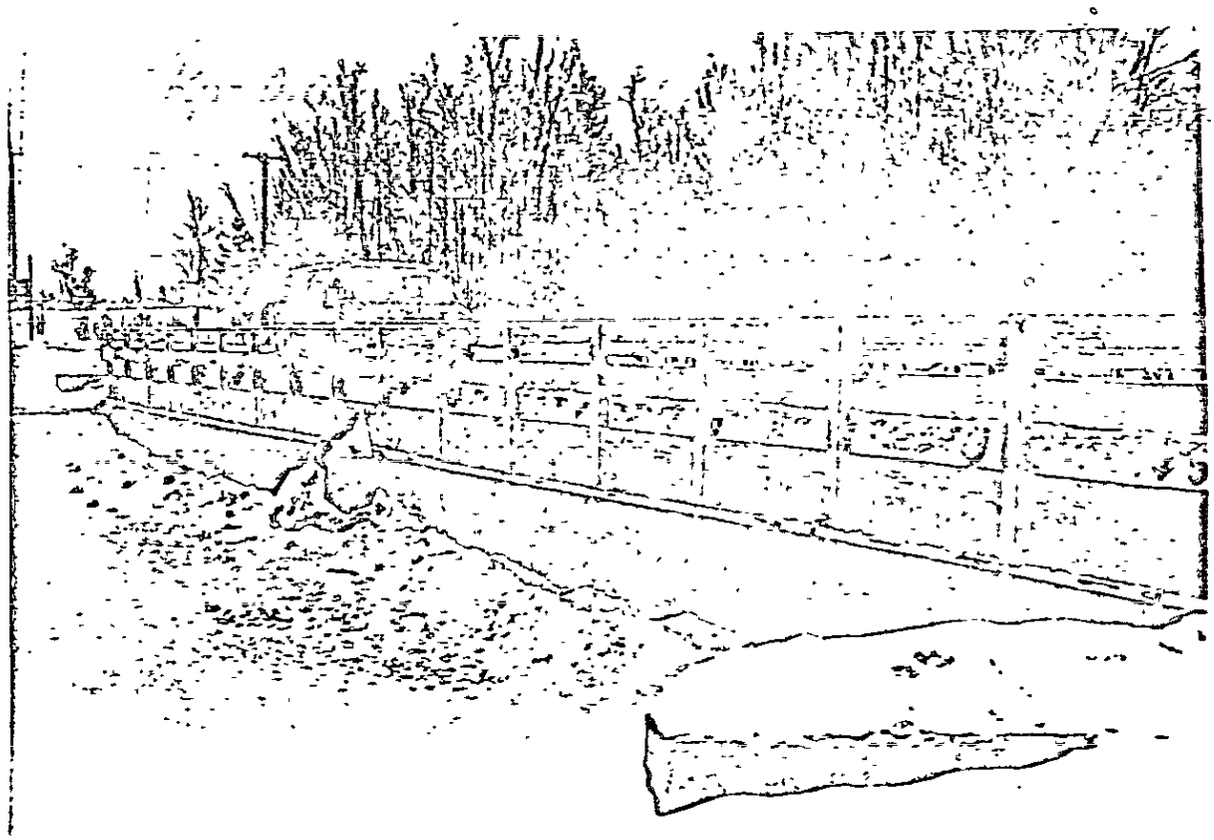
REFERENCE

# BATTLE CREEK RIVER
# PENNFIELD TOWNSHIP
# BRIDGE NOTES + SKETCHES

| SUBJECT | BY | CHK. | SHEET NO. | File Code No (Job No.) Owner Project Suffix |
|---|---|---|---|---|
| B.C. - PENNFIELD TWP | DRB | | 56 OF 59 | HUD • 2029 • 07 |
| | DATE 10-80 | DATE | | |



SEC #215 - TOP VIEW MCALLISTER ST AND BATTLE CREEK RIVER (UPSTREAM)



32

SEC #215 BATTLE CREEK RIVER AT MCALLISTER I.D.

Bridge Location: McALLISTER ROAD STA 215

REFERENCE

# Bridge Losses - SB Card

1. XK (Pier Shape Coefficient) 0.9 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + $\Sigma k$, $\Sigma k = k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge:

$K_f = 29.1 n^2 L / R^{4/3}$ for English units

Area = = 700 Wp = 233

$R = A/wp = 3.0$ $R^{4/3} = 4.33$ $L = 37$

n (composite) = .035(102.5/233) + 0.017(130/233)

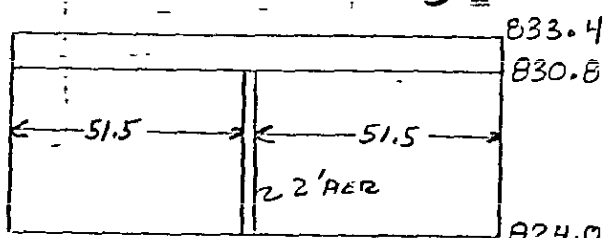
$K_f = 29.1 \times (0.025)^2 \times 37 / 4.33 = 0.16$

$K_c = 0.7$ (WINGWALLS PARALLEL)

Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 45

$K_p = 0$ if bridge has no intermediate piers

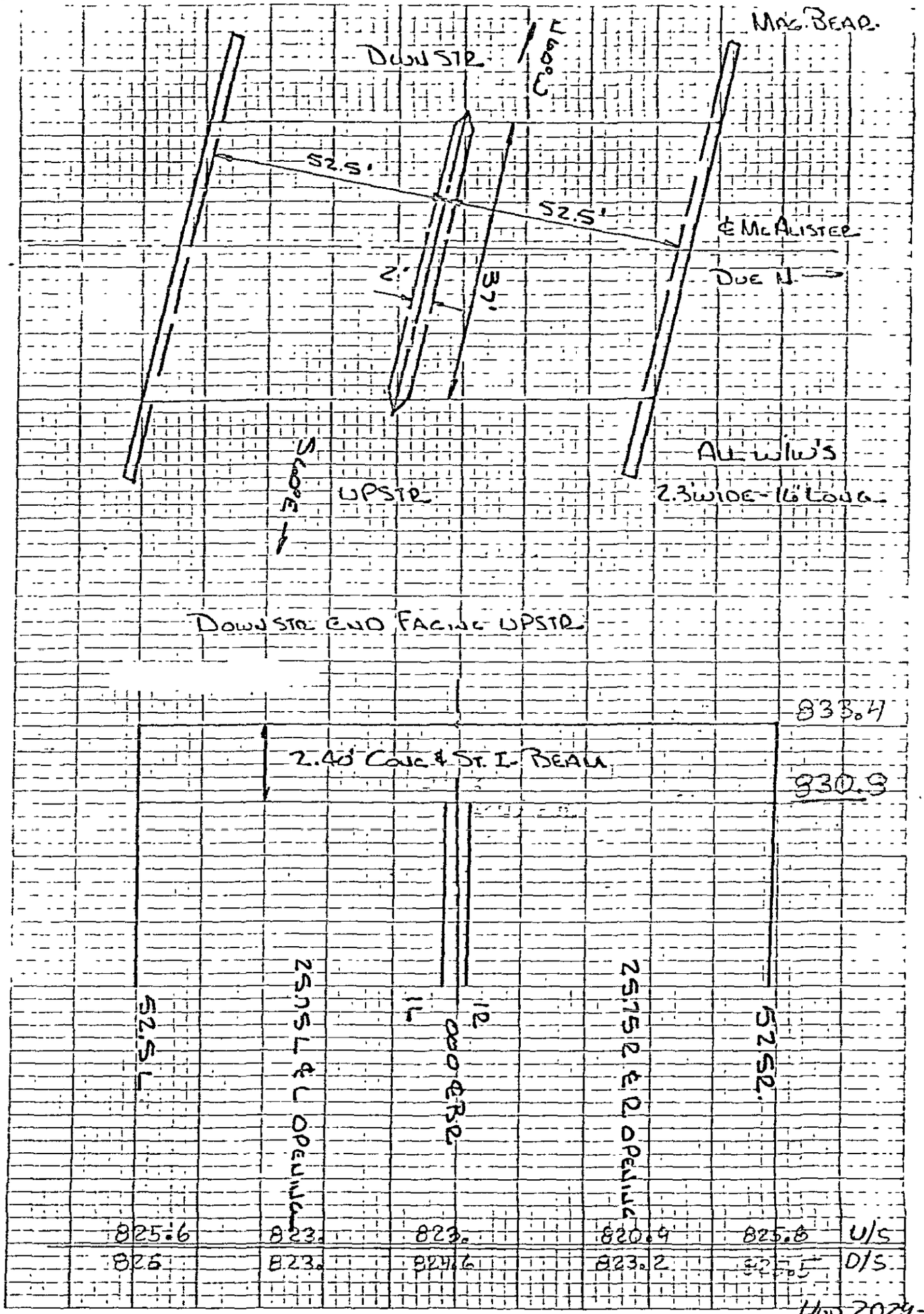
✓ $K_p = 0.05$ if bridge has intermediate piers — HEC-2 manual




2. XKOE = 1 + 0.16 + 0.7 + 0.05 = 1.91
3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0. (0 if read off BT cards)
5. BWC = Bottom width of bridge opening (inc. piers): 105.
   [illegible] width of obstruction: 2.
   [illegible] bridge opening ~~inc. piers~~ = 700. — field data
8. SS = side slope = 0.
   (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 824.
   (0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 824.
    (0 if equal to minimum elevation in previous X-sect.)

| SUBJECT | BY | CHK. | SHEET NO. | File Code No (Job No) Project Owner Suffix |
|---|---|---|---|---|
| BATTLE CREEK - PENNFIELD TWP | DRP | | 58 OF 59 | HUD • 2029 • CS |
| | DATE 5/80 | DATE | | |

202+05




HOD 2029-07
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BATTLE CREEK RIVER
CITY OF BATTLE CREEK
AND
PENNFIELD TOWNSHIP

EXHIBIT 5

Documented High Water Data
and
Verona Dam Rating Curve

UNION Q=3590 ≈60YR-TOTAL

# UNION ST. 1975 HIGH WATER ELEVATION

| | | |
|---|---|---|
| 4-20-75 | | |
| 12:40 P.M. | 13.40' | 823.070 |

See Eng. Notes

| | | |
|---|---|---|
| 10:25 P.M. | 14.60' | 824.270 |
| 11:15 P.M. | 14.65' | 824.320 |
| 4-21-75 | | |
| 12:07 A.M. | 14.70' | 824.370 |
| 1:00 " " | 14.75' | 824.420 |
| 4:20 " " | 14.95' | 824.620 |
| 6:15 " " | 15.00' | 824.670 |
| 7:45 " " | 15.00' | 824.670 |
| 10:15 " " | 15.10' | (Crest) 824.770 |
| Crest | 15.00' | 824.670 |

See Eng. Notes

| | | |
|---|---|---|
| 4-22-75 | | |
| 12:15 P.M. | 13.85' | 823.520 |
| 3:30 " " | 13.70' | 823.370 |
| 4:10 " " | 13.60' | 823.270 |
| 6:10 " " | 13.50' | 823.170 |
| 8:10 " " | 13.40' | 823.070 |
| 10:10 " " | 13.20' | 822.870 |
| 4-23-75 | | |
| 12:15 A.M. | 13.05' | 822.720 |
| 2:00 A.M. | 12.95' | 822.620 |

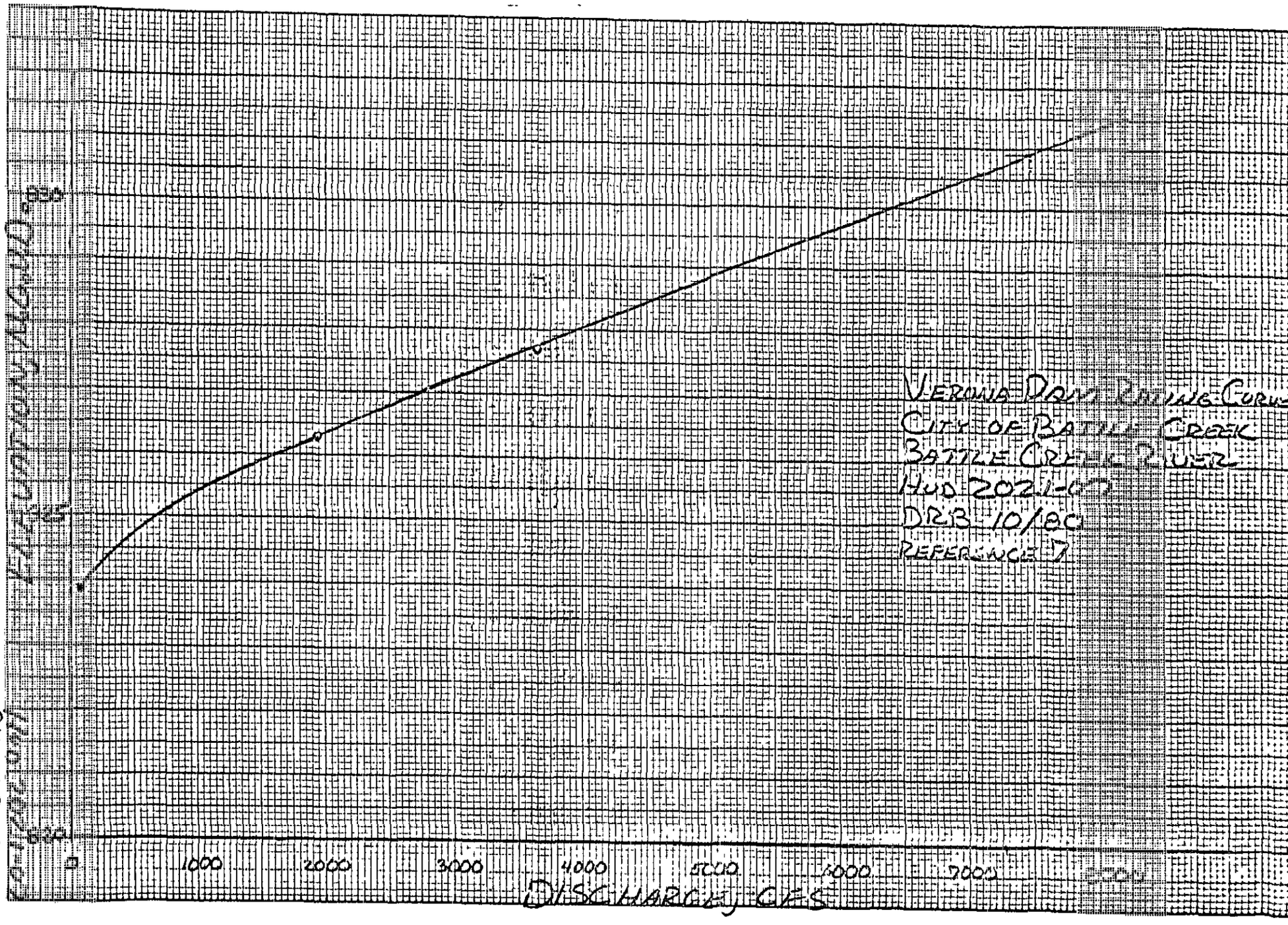
THIS FLOOD RECORDED THE HIGHEST KNOWN HIGH WATER ON THE BATTLE CREEK WITHIN THE CITY OF BATTLE CREEK. THE B.C. WILL PEAK ≈ 12 TO 16 HR AFTER IT PEAKS @ BELLEVUE

HUD 2021-07
SHEET 1-4

UNION

| | | |
|---|---|---|
| 4-23-75 | | |
| 4:15 A.M. | 12.85' | 822.520 |
| 6:10 " " | 12.65' | 822.320 |
| 7:00 " " | 12.60' | 822.270 |
| 9:00 " " | 12.40' | 822.070 |
| 12:30 P.M. | 12.25' | 821.920 |
| 3:30 " " | 12.10' | 821.770 |
| 4:15 " " | 12.05' | 821.720 |
| 6:15 " " | 11.95' | 821.620 |
| 8:15 " " | 11.80' | 821.470 |
| 10:15 " " | 11.75' | 821.420 |
| 4-24-75 | | |
| 12:18 A.M. | 11.65' | 821.320 |
| 2:00 " " | 11.50' | 821.170 |
| 4:00 " " | 11.45' | 821.120 |
| 6:15 " " | 11.40' | 821.070 |
| 6:45 " " | 11.40' | 821.070 |
| 1:00 P.M. | 11.10' | 820.770 |
| 4:10 P.M. | 10.95' | 820.620 |
| 4-25-75 | | |
| 1:00 A.M. | 10.65' | 820.320 |
| 10:10 P.M. | 10.50' | 820.170 |
| 1:15 P.M. | 10.40' | 820.070 |
| 5:12 P.M. | 10.30' | 819.970 |
| 4-26-75 | | |
| 12:05 A.M. | 10.20' | 819.870 |
| 8:21 A.M. | 9.90' | 819.570 |
| 5:43 P.M. | 9.72' | 819.390 |
| 4-27-75 | | |
| 12:10 A.M. | 9.60' | 819.270 |
| 9.25 A.M. | 9.40' | 819.070 |
| 4.53 P.M. | 9.35' | 819.020 |
| 4-28-75 | | |
| 1:15 A.M. | 9.20' | 818.870 |

HUD 2021-07
SHEET 2 OF 4


VERONA DAM RATING CURVE
CITY OF BATTLE CREEK
BATTLE CREEK RIVER
HUD 2021-07
DRB 10/80
REFERENCE 7
ELEVATION, MGD
DISCHARGE, CFS
0
1000
2000
3000
4000
5000
6000
7000
8000
830
825
820

SHEET 3 OF 4

04105000 Battle Creek at Battle Creek, Mich.

LOCATION.--Lat 42°19'55", long 85°09'15", in NW¼ sec.5, T.2 S., R.7 W., Calhoun County, on right bank 350 ft (107 m) upstream from Errett Street Bridge at Battle Creek, and 3.0 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--241 mi² (624 km²).

PERIOD OF RECORD.--October 1930 to September 1931, October 1932 to July 1933, January 1934 to current year. Monthly discharge only for some periods, published in WSP 1307.

GAGE.--Water-stage recorder. Datum of gage is 823.24 ft (250.924 m) above mean sea level (levels by Michigan Department of Natural Resources). Prior to May 14, 1951, nonrecording gage, at same site and datum.

AVERAGE DISCHARGE.--41 years (1930-31, 1934-74) 195 ft³/s (5.522 m³/s), 10.99 in/yr (279 mm/yr).

EXTREMES.--Current year: Maximum discharge, 1,940 ft³/s (54.9 m³/s) Mar. 10 (gage height, 3.05 ft or 0.930 m); minimum, 60 ft³/s (1.70 m³/s) Sept. 27; minimum gage height, 0.64 ft (0.195 m) Aug. 26, 27, Sept. 1, 2.
Period of record: Maximum discharge, 3,640 ft³/s (103 m³/s) Apr. 7, 1947 (gage height, 4.48 ft or 1.366 m, from floodmark); minimum, 22 ft³/s (0.62 m³/s) Aug. 14, 1934; minimum gage height, about -0.5 ft (-.152 m) in July 1936 and on Aug. 31, 1939, due to opening of gates at dam forming control.

REMARKS.--Records good except those for the winter period and those for period of no gage-height record, which are fair. Occasional slight regulation prior to November 1943.

REVISION (WATER YEARS).--WSP 1387: 1931, 1944. WSP 1507: 1956.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 216 | 156 | 483 | 505 | 700 | 712 | 795 | 280 | 289 | 131 | 81 | 65 |
| 2 | 234 | 172 | 514 | 500 | 576 | 766 | 976 | 270 | 278 | 124 | 87 | 68 |
| 3 | 234 | 184 | 472 | 460 | 568 | 829 | 986 | 270 | 252 | 120 | 98 | 75 |
| 4 | 220 | 192 | 431 | 370 | 528 | 892 | 1,060 | 260 | 232 | 121 | 92 | 72 |
| 5 | 192 | 194 | 408 | 300 | 415 | 1,030 | 1,050 | 250 | 213 | 123 | 93 | 72 |
| 6 | 171 | 191 | 404 | 270 | 370 | 1,190 | 1,080 | 250 | 198 | 123 | 86 | 72 |
| 7 | 159 | 184 | 399 | 250 | 330 | 1,300 | 976 | 250 | 198 | 121 | 80 | 72 |
| 8 | 151 | 175 | 398 | 240 | 310 | 1,300 | 884 | 250 | 218 | 115 | 80 | 66 |
| 9 | 144 | 165 | 381 | 230 | 294 | 1,290 | 852 | 260 | 223 | 108 | 96 | 66 |
| 10 | 138 | 158 | 356 | 220 | 294 | 1,770 | 828 | 270 | 257 | 104 | 101 | 66 |
| 11 | 132 | 151 | 329 | 210 | 289 | 1,830 | 736 | 280 | 289 | 102 | 97 | 66 |
| 12 | 127 | 146 | 296 | 200 | 284 | 1,510 | 643 | 300 | 305 | 100 | 97 | 67 |
| 13 | 138 | 142 | 257 | 200 | 273 | 1,220 | 598 | 320 | 289 | 96 | 91 | 69 |
| 14 | 165 | 138 | 212 | 200 | 257 | 1,030 | 550 | 340 | 268 | 93 | 87 | 81 |
| 15 | 185 | 164 | 237 | 200 | 247 | 867 | 500 | 360 | 242 | 90 | 84 | 81 |
| 16 | 200 | 195 | 234 | 200 | 242 | 759 | 480 | 450 | 223 | 87 | 89 | 78 |
| 17 | 211 | 216 | 202 | 200 | 228 | 690 | 450 | 550 | 210 | 82 | 97 | 78 |
| 18 | 208 | 250 | 183 | 210 | 223 | 638 | 428 | 650 | 200 | 78 | 99 | 75 |
| 19 | 190 | 292 | 165 | 230 | 237 | 618 | 400 | 780 | 192 | 78 | 93 | 71 |
| 20 | 169 | 307 | 154 | 300 | 257 | 584 | 390 | 820 | 197 | 77 | 89 | 69 |
| 21 | 154 | 294 | 159 | 450 | 316 | 550 | 370 | 650 | 216 | 75 | 82 | 68 |
| 22 | 144 | 269 | 159 | 700 | 360 | 509 | 350 | 600 | 250 | 77 | 77 | 68 |
| 23 | 137 | 251 | 161 | 1,100 | 520 | 485 | 330 | 500 | 290 | 82 | 74 | 68 |
| 24 | 132 | 259 | 168 | 1,200 | 721 | 452 | 320 | 440 | 287 | 84 | 72 | 68 |
| 25 | 126 | 268 | 202 | 1,100 | 1,140 | 392 | 310 | 400 | 249 | 81 | 71 | 69 |
| 26 | 124 | 281 | 249 | 1,000 | 991 | 399 | 290 | 350 | 209 | 84 | 78 | 69 |
| 27 | 122 | 303 | 317 | 950 | 775 | 371 | 280 | 310 | 181 | 95 | 71 | 68 |
| 28 | 120 | 344 | 474 | 950 | 739 | 352 | 280 | 290 | 164 | 84 | 74 | 78 |
| 29 | 126 | 373 | 803 | 950 | ------ | 345 | 280 | 290 | 151 | 86 | 75 | 83 |
| 30 | 133 | 403 | 909 | 900 | ------ | 391 | 280 | 294 | 140 | 85 | 74 | 82 |
| 31 | 142 | ------ | 835 | 800 | ------ | 500 | ------ | 294 | ------ | 84 | 70 | ------ |
| TOTAL | 5,044 | 6,817 | 10,951 | 15,595 | 12,484 | 25,571 | 17,744 | 11,878 | 6,910 | 2,990 | 2,619 | 2,142 |
| MEAN | 163 | 227 | 353 | 503 | 446 | 825 | 591 | 383 | 230 | 96.5 | 84.5 | 72.1 |
| MAX | 234 | 403 | 909 | 1,200 | 1,140 | 1,830 | 1,080 | 820 | 305 | 131 | 101 | 82 |
| MIN | 120 | 138 | 154 | 200 | 223 | 345 | 280 | 250 | 140 | 75 | 70 | 65 |
| CFSM | .68 | .94 | 1.46 | 2.09 | 1.85 | 3.42 | 2.45 | 1.59 | .95 | .40 | .35 | .30 |
| IN. | .78 | 1.05 | 1.69 | 2.41 | 1.93 | 3.95 | 2.74 | 1.83 | 1.07 | .46 | .40 | .33 |

CAL YR 1973 TOTAL 117,810 MEAN 323 MAX 1,500 MIN 53 CFSM 1.34 IN 18.18
WTR YR 1974 TOTAL 120,765 MEAN 331 MAX 1,830 MIN 65 CFSM 1.37 IN 18.64

NOTE.--No gage-height record Apr. 14 to May 29.

REFERENCE 7
EXHIBIT 5
SHEET 4 OF 4
HUD 2021-07

BATTLE CREEK RIVER

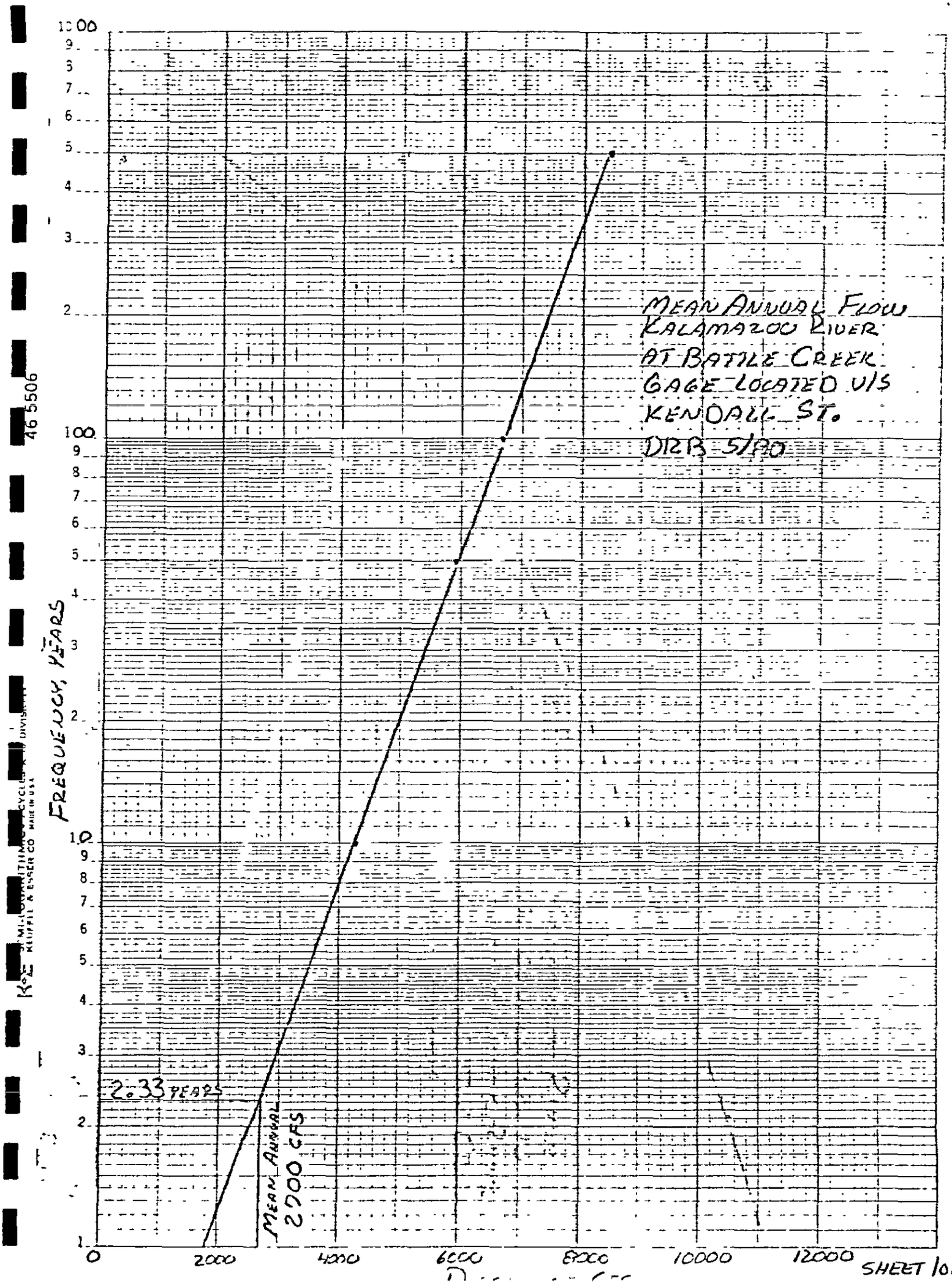
CITY OF BATTLE CREEK

AND

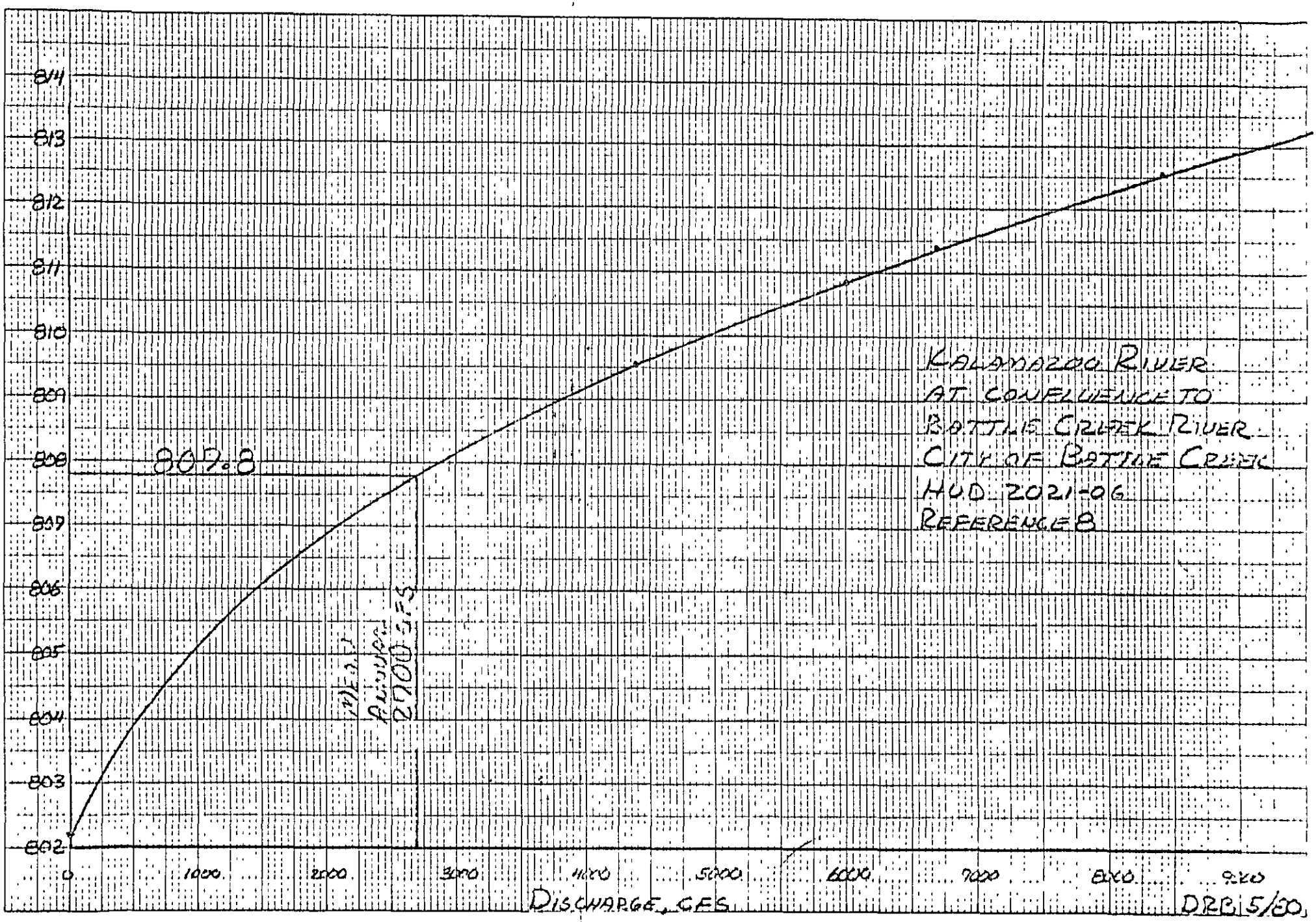
PENNFIELD TOWNSHIP

EXHIBIT 6

Kalamazoo River Mean Flood Elevation


MEAN ANNUAL FLOW
KALAMAZOO RIVER
AT BATTLE CREEK
GAGE LOCATED U/S
KENDALL ST.
DRB 5/80
FREQUENCY, YEARS
2.33 YEARS
MEAN ANNUAL
2700 CFS
0
2000
4000
6000
8000
10000
12000
100
10
1
46 5506

SHEET 1 OF 2




SHEET 2 OF 2
EXHIBIT 6

BATTLE CREEK RIVER

CITY OF BATTLE CREEK

AND

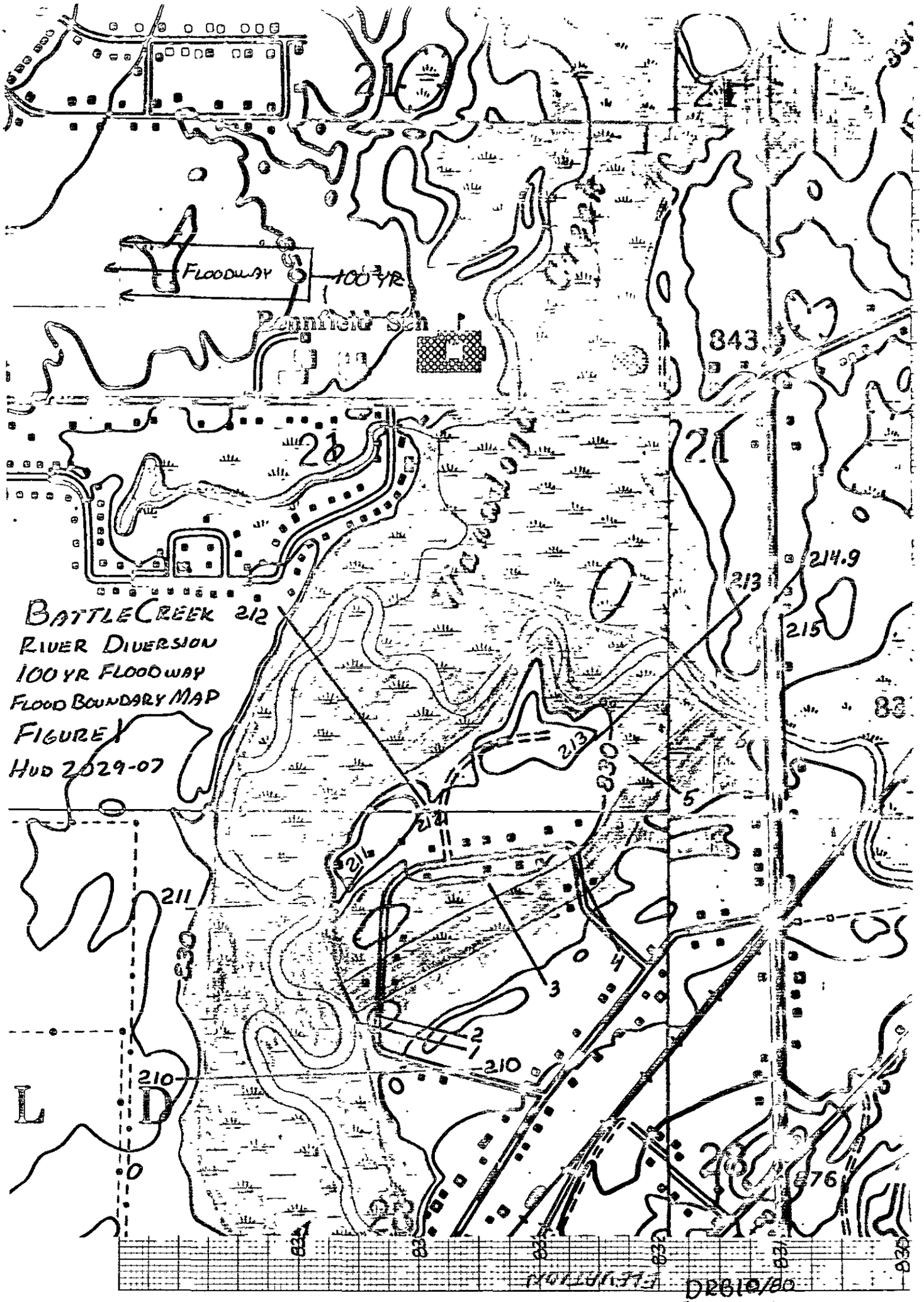
PENNFIELD TOWNSHIP

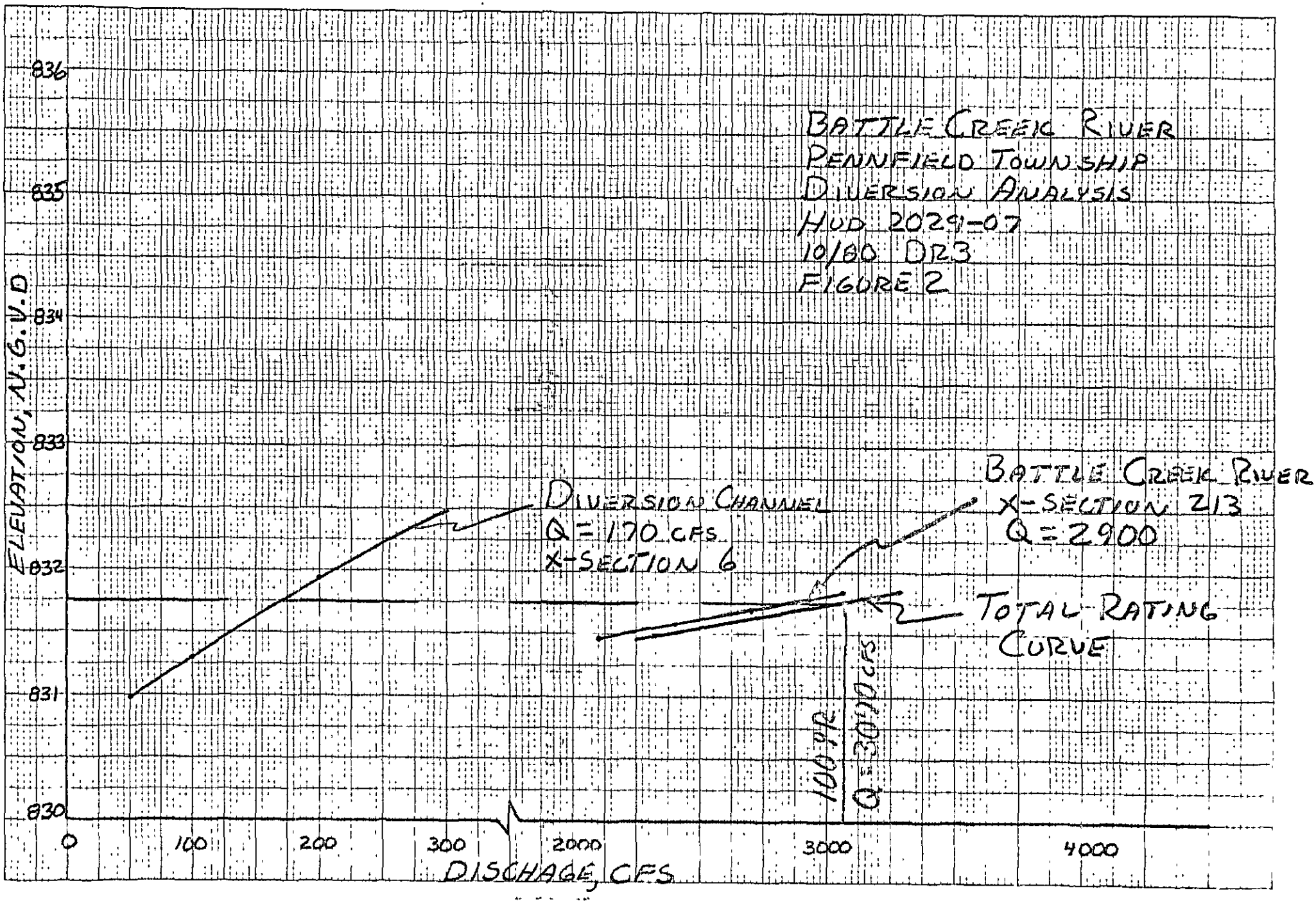
EXHIBIT 7

Divided Flow Analysis

INDEX


| | |
|---|---|
| Page 1 | Location Map showing cross section locations. |
| Page 2 | Rating curve resulting from HEC-2 backwater analysis. |
| Page 3 | Flood elevations with and without diversion. |
| Pages 4 - 7 | Battle Creek River, HEC-2 input and output for flood elevation with and without diversion. |
| Pages 8 - 9 | Battle Creek River, HEC-2 output for rating curve. |
| Pages 10 - 12 | Diversion Channel, HEC-2 input and output for rating curve. |


FLOODWAY
100 YR
Pennfield Sch
843
214.9
213
215
212
211
210
BATTLE CREEK
RIVER DIVERSION
100 YR FLOODWAY
FLOOD BOUNDARY MAP
FIGURE 1
HUD 2029-07
L
D
DR610/80
SHEET 1 OF 12


BATTLE CREEK RIVER
PENNFIELD TOWNSHIP
DIVERSION ANALYSIS
HUD 2029-07
10/80 DR3
FIGURE 2
ELEVATION, N.G.V.D
836
835
834
833
832
831
830
0
100
200
300
2000
3000
4000
DISCHAGE, CFS
DIVERSION CHANNEL
Q = 170 CFS.
X-SECTION 6
BATTLE CREEK RIVER
X-SECTION 213
Q = 2900
TOTAL RATING
CURVE
100 YR.
Q = 3070 CFS

SHEET 2 of 12.

REFERENCE

# TABLE 1
## BATTLE CREEK RIVER
## PENNFIELD TOWNSHIP
## HUD 2029-07

| HEC-2 X-SECTION | 100 YR FLOOD ELEVATION | | DIFF. |
|---|---|---|---|
| | WITHOUT DIVERSION | WITH DIVERSION | |
| 210 (AP) | 830.67 | 830.67 | -0.00 |
| 211 (AQ) | 830.94 | 830.93 | -0.01 |
| 212 (AR) | 831.26 | 831.23 | -0.03 |
| 213 (AS) | 831.84 | 831.76 | -0.08 |
| 214.9 (AT) | 832.15 | 832.06 | -0.09 |
| 215 (AU) | 832.55 | 832.46 | -0.09 |

BATTLE CREEK RIVER
FLOOD ELEVATION WITH AND
WITHOUT DIVERSION

FLOOD INSURANCE STUDY
DIVERSION ANALYSES
RIVER

| J | ICHECK | INQ | NINV | IDIR | STRT | METRIC | ITINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 630.670 | 0.000 |

| J | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | A | OC | IBW | CHNIM | XTRAC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 |

J CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0. | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| J | LPRNT | NUMSEC | ********REQUESTED SECTION NUMBERS******** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | 0.000 | 0.040 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | 3910.000 | 3910.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 210.000 | 23.000 | 2415.000 | 2505.000 | 1400.000 | | 0.000 | 1450.000 | 0.000 | 0.000 | 0.000 |
| | | 454.000 | 838.200 | 699.000 | 835.300 | | 0.000 | 835.410 | 980.000 | 836.000 | 1271.000 |
| 3 | | 30. | 14.000 | 833.300 | 1454.000 | 832.400 | 1 | 18.000 | 824.910 | 1652.000 | 824.100 | 1923.000 |
| 4 | | 0.000 | 0.000 | 825.600 | 2413.000 | 825.500 | 2 | 5.000 | 821.510 | 2455.000 | 821.500 | 2470.000 |
| 5 | | 20.000 | 2435.000 | 823.300 | 2505.000 | 825.800 | 2 | 4.000 | 825.800 | 2623.000 | 826.600 | 2353.000 |
| 6 | | 0.000 | 2914.000 | 835.200 | 2930.000 | 839.000 | 2 | 4.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | | 2.000 | 2918.000 | 3740.000 | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | | | 2513.000 | 2595.000 | 1200.000 | 1 | 00.000 | 2675.000 | 0.000 | 0.000 | 0.000 |
| 5 | | 24.000 | 838.500 | 2310.000 | 837.900 | 2 | 0.000 | 835.630 | 2492.000 | 833.300 | 2505.000 |
| 6 | | 0.000 | 815.000 | 819.700 | 2340.000 | 819.200 | 2 | 5.000 | 822.630 | 2545.000 | 833.800 | 2515.000 |
| 7 | | 15.000 | 2511.000 | 825.000 | 2612.000 | 825.300 | 2 | 56.000 | 825.200 | 3010.000 | 826.600 | 2364.000 |
| 8 | | | | 833.300 | 2626.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 3495.000 | 3549.000 | 900.000 | 2 | 00.000 | 2400.000 | 0.000 | 0.000 | 0.000 |
| 31 | | 34.000 | 827.000 | 2306.000 | 826.200 | 2 | 2.000 | 826.610 | 2910.000 | 826.000 | 2 0.000 |
| 32 | | 3491.000 | 823.600 | 3495.000 | 825.200 | 3 | 2.000 | 821.610 | 3562.000 | 826.000 | 3562.000 |
| | | | | 2657.000 | | 3 | | 840.300 | 3701. | | |
| | | | | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0. | 0. |
| 47 | | | 2900.000 | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0. | 0. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 10.000 | 2640.000 | 2734.000 | 2600.000 | 4 | 00.000 | 4100.000 | 0.000 | 0. | 0. |
| | | 824.000 | 827.000 | 2.000 | 2.000 | 2 | 00.000 | 830.500 | 2 | | |
| | 0.000 | 3491.000 | 823.000 | 2.000 | 2.000 | 2 | 22.000 | 3.000 | 27 | | |
| | | | | 2.000 | | | 0.000 | 1.000 | 0. | | |
| | | | 2.000 | 0.000 | 0.000 | | 0.000 | 0.000 | 0. | | 0. |

SHEET 4 OF 12

| | | |

[redacted]

[redacted] 1977

[redacted]

[redacted]

NOTE: (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST.

[redacted] RIVER

SUMMARY PRINTOUT TABLE 150

| RIVER | XLOC | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10 *S | VCH | AREA | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 210.000 | 1450.00 | 0.00 | 0.00 | 821.70 | 3910.00 | 830.67 | 0.00 | 830.69 | .32 | 1.80 | 6712.93 | 3407.38 |
| 210.000 | 1450.00 | 0.00 | 0.00 | 821.70 | 3910.00 | 830.67 | 0.00 | 830.69 | .32 | 1.80 | 6712.93 | 3407.38 |
| 211.000 | 2475.00 | 0.00 | 0.00 | 819.20 | 3910.00 | 830.94 | 0.00 | 830.98 | .00 | 2.33 | 4846.87 | [illegible] |
| 211.000 | 2475.00 | 0.00 | 0.00 | 819.20 | 3740.00 | 830.93 | 0.00 | 830.97 | .84 | 2.23 | 4833.77 | [illegible] |
| 212.000 | 2400.00 | 0.00 | 0.00 | 821.60 | 3910.00 | 831.26 | 0.00 | 831.28 | 1.14 | 1.61 | 6210.47 | 3660.75 |
| 212.000 | 2400.00 | 0.00 | 0.00 | 821.60 | 3740.00 | 831.23 | 0.00 | 831.25 | 1.06 | 1.55 | 6181.24 | 3634.39 |
| [illegible] | 4150.00 | 0.00 | 0.00 | 821.90 | 3070.00 | 831.84 | 0.00 | 831.93 | 3.54 | 2.88 | 2350.93 | [illegible] |
| [illegible] | 150.00 | 0.00 | 0.00 | 821.90 | 2900.00 | 831.76 | 0.00 | 831.85 | 3.29 | 2.76 | 2312.77 | [illegible] |
| 214.900 | 800.00 | 0.00 | 0.00 | 822.00 | 3070.00 | 832.15 | 0.00 | 832.33 | 5.79 | 3.44 | 892.11 | 1275.1 |
| 214.900 | 800.00 | 0.00 | 0.00 | 822.00 | 3070.00 | 832.06 | 0.00 | 832.25 | 5.98 | 3.48 | 882.81 | 1254.24 |
| [illegible] | 37.00 | 833.40 | 830.80 | 822.00 | 3070.00 | 832.55 | 0.00 | 832.72 | 5.00 | 3.29 | 934.40 | [illegible] |
| [illegible] | 37.00 | 833.40 | 830.80 | 822.00 | 3070.00 | 832.46 | 0.00 | 832.63 | 5.17 | 3.32 | 924.74 | [illegible] |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 3070.00 | 832.66 | 0.00 | 832.78 | 5.58 | 3.07 | 1712.72 | 1624.55 |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 3070.00 | 832.57 | 0.00 | 832.69 | 5.73 | 3.11 | 1685.62 | 1598.47 |

Sheet 6 of 12

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 3 | 910.00 | [illegible] | 0.01 | 0.00 | 0.00 | 1 | 89.17 | 1450.00 | |
| [illegible] | 0 | 910.00 | [illegible] | 0.01 | 0.00 | 0.00 | 1 | 89.17 | 1450.00 | |
| [illegible] | 0 | 910.00 | [illegible] | 0.01 | 0.27 | 0.00 | | 73.48 | 2675.00 | |
| [illegible] | 0 | 740.00 | 830.93 | 0.00 | 0.26 | 0.00 | | 73.44 | 2675.00 | |
| 212.[illegible] | 0 | 910.00 | 831.26 | 0.00 | 0.32 | 0.00 | 1 | 82.54 | 2400.00 | |
| 212.[illegible] | 0 | 740.00 | 831.23 | 0.01 | 0.30 | 0.00 | 1 | 82.35 | 2400.00 | |
| 213.[illegible] | 0 | 070.00 | 831.84 | 0.01 | 0.58 | 0.00 | | 96.00 | 4100.00 | |
| 213.[illegible] | 0 | 900.00 | 831.76 | 0.01 | 0.54 | 0.00 | | 96.00 | 4100.00 | |
| 214.[illegible] | 0 | 070.00 | 832.1[illegible] | 0.01 | 0.31 | 0.00 | | 04.97 | 800.00 | |
| 214.[illegible] | 0 | 020.00 | 832.0[illegible] | 0.01 | 0.30 | 0.00 | | 04.97 | 800.00 | |
| 215.[illegible] | 0 | 070.00 | 832.55 | 0.00 | 0.40 | 0.00 | | 04.98 | 37.00 | |
| 215.[illegible] | 0 | 020.00 | 832.46 | 0.00 | 0.40 | 0.00 | | 04.98 | 37.00 | |
| 215.1 | 0 | 070.00 | 832.66 | 0.00 | 0.10 | 0.00 | | 00.00 | 100.00 | |
| 215.1 | 0 | 070.00 | 832.57 | 0.01 | 0.11 | 0.00 | | 00.00 | 100.00 | |

SUMMARY OF ERRORS

Sheet Nr. 12

BATTLE CREEK RIVER
RATING CURVE @
X-SECTION 213

[illegible] 977
[illegible] 1
[illegible]

[illegible] OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

BATTLE CREEK RIVER

SUMMARY PRINTOUT TABLE 150

| [illegible] | [illegible] | [illegible] | ELTRD | ELLC | LMIN | Q | CWSEL | CRIWS | EG | 10KAS | VCH | APLA | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 210 | 00 | 1450.00 | 0.[illegible] | 0.[illegible]0 | 20.70 | 3910.00 | 830.67 | 0.00 | 830.69 | 1.32 | 1.80 | 6712.93 | 3[illegible] |
| 210 | 00 | 1450.00 | 0.[illegible] | 0.[illegible]0 | 20.70 | 3910.00 | 830.67 | 0.00 | 830.69 | 1.32 | 1.80 | 6712.93 | 340[illegible] |
| 210 | 00 | 1450.00 | 0.[illegible] | 0.[illegible]0 | 20.70 | 3910.00 | 830.67 | 0.00 | 830.69 | 1.32 | 1.80 | 6712.93 | [illegible] |
| 210 | 00 | 1450.00 | 0.[illegible] | 0.[illegible]0 | 20.70 | 3910.00 | 830.67 | 0.00 | 830.69 | 1.32 | 1.80 | 6712.93 | 340[illegible] |
| 211 | 00 | 2675.00 | 0.[illegible] | 0.[illegible]0 | 19.20 | 3000.00 | 830.89 | 0.00 | 830.91 | 1.21 | 1.80 | 4802.95 | [illegible] |
| 211 | 00 | 2675.00 | 0.[illegible] | 0.[illegible]0 | 19.20 | 3300.00 | 830.91 | 0.00 | 830.94 | 1.46 | 1.98 | 4811.05 | 273[illegible] |
| 211 | 00 | 2675.00 | 0.[illegible] | 0.[illegible]0 | 19.20 | 3600.00 | 830.92 | 0.00 | 830.96 | 1.71 | 2.15 | 4831.95 | 275[illegible] |
| 211 | 00 | 2675.00 | 0.[illegible] | 0.[illegible]0 | 19.20 | 3910.00 | 830.94 | 0.00 | 830.98 | 2.00 | 2.33 | 48[illegible] | [illegible] |
| 212 | 00 | 2400.00 | 0.[illegible] | 0.[illegible]0 | 21.60 | 3000.00 | 831.09 | 0.00 | 831.11 | 0.73 | 1.28 | 60[illegible] | [illegible] |
| 212 | 00 | 2400.00 | 0.[illegible] | 0.[illegible]0 | 21.60 | 3300.00 | 831.15 | 0.00 | 831.16 | 0.86 | 1.39 | 60[illegible] | 35[illegible] |
| 212 | 00 | 2400.00 | 0.[illegible] | 0.[illegible]0 | 21.60 | 3600.00 | 831.20 | 0.00 | 831.22 | 0.99 | 1.50 | 6158.17 | 361[illegible] |
| 212 | 00 | 2400.00 | 0.[illegible]0 | 0.[illegible]0 | 21.60 | 3910.00 | 831.26 | 0.00 | 831.28 | 1.14 | 1.61 | 62[illegible]0.42 | 366[illegible] |
| 213 | 00 | 4100.00 | 0.[illegible]0 | 0.[illegible]0 | 21.90 | 2100.00 | 831.45 | 0.00 | 831.50 | 2.05 | 2.12 | 2[illegible] | 146[illegible] |
| 213 | 00 | 4100.00 | 0.[illegible] | 0.[illegible]0 | 21.90 | 2400.00 | 831.57 | 0.00 | 831.63 | 2.50 | 2.37 | [illegible] | 151[illegible] |
| 213 | 00 | 4100.00 | 0.[illegible] | 0.[illegible]0 | 21.90 | 2700.00 | 831.69 | 0.00 | 831.77 | 2.96 | 2.60 | 2279.71 | [illegible] |
| 213 | 00 | 4100.00 | 0.[illegible]0 | 0.[illegible]0 | 21.90 | 3070.00 | 831.84 | 0.00 | 831.93 | 3.54 | 2.88 | 2350.92 | 163[illegible] |
| 214 | 00 | [illegible] | 0.[illegible]0 | 0.[illegible]0 | 22.00 | 3070.00 | 831.68 | 0.00 | 831.88 | 6.93 | 3.[illegible] | [illegible] | [illegible] |
| 214 | 0[illegible] | [illegible] | 0.[illegible]0 | 0.[illegible]0 | 22.00 | 3070.00 | 831.82 | 0.00 | 832.02 | 6.54 | 3.58 | [illegible] | [illegible] |
| 214 | 00 | [illegible] | 0.[illegible]0 | 0.[illegible]0 | 22.00 | 3070.00 | 831.97 | 0.00 | 832.16 | 6.18 | 3.51 | [illegible] | [illegible] |
| 214 | 00 | 800.00 | 0.[illegible]0 | 0.[illegible]0 | 22.00 | 3070.00 | 832.15 | 0.00 | 832.33 | 5.79 | 3.44 | 892.12 | 127[illegible] |

SHEET 8 of 12

[illegible] TABLE 150

| N | [illegible] | [illegible] | DIFWSP | DIFWSX | DIFKWS | T | PWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| [illegible] 0 0 | 3210 00 | 830.67 | 0.00 | 0.00 | 0.00 | 1 | 39.17 | 1450.00 |
| [illegible] 0 0 | 3210 00 | 830.67 | 0.00 | 0.00 | 0.00 | 1 | 39.17 | 1450.00 |
| [illegible] 0 0 | [illegible] | [illegible] | 0.00 | 0.00 | 0.00 | 1 | 39.17 | 1450.00 |
| [illegible] 0 0 | 3210 00 | 830.67 | 0.00 | 0.00 | 0.00 | 1 | 39.17 | 1450.00 |
| [illegible] 0 0 | 3[illegible]0 00 | 830.89 | 0.00 | 0.22 | 0.00 | | 73.23 | 2675.00 |
| [illegible] 0 0 | 3500 00 | 830.91 | 0.00 | 0.24 | 0.00 | | 73.27 | 2675.00 |
| [illegible] 0 0 | 3500 00 | 830.92 | 0.00 | 0.25 | 0.00 | | 73.40 | 2675.00 |
| [illegible] 0 0 | [illegible] | 830.94 | 0.00 | 0.27 | 0.00 | | 73.48 | 2675.00 |
| [illegible] 0 0 | 3[illegible]0 00 | 831.09 | 0.00 | 0.20 | 0.00 | 1 | 31.32 | 2400.00 |
| 212.0 0 | 3500 00 | 831.15 | 0.00 | 0.24 | 0.00 | 1 | 31.73 | 2400.00 |
| 212.0 0 | 3500 00 | 831.20 | 0.00 | 0.28 | 0.00 | 1 | 32.21 | 2400.00 |
| 212.0 0 | 3210 00 | 831.26 | 0.00 | 0.32 | 0.00 | 1 | 32.54 | 2400.00 |
| [illegible] 0 0 | 2[illegible]00 00 | 831.45 | 0.00 | 0.35 | 0.00 | | 96.00 | 4100.00 |
| [illegible] 0 0 | 2[illegible]00 00 | 831.57 | 0.00 | 0.42 | 0.00 | | 96.00 | 4100.00 |
| 213.0 0 | 2[illegible]00 00 | 831.69 | 0.00 | 0.49 | 0.00 | | 96.00 | 4100.00 |
| 213.0 0 | 3070 00 | 831.84 | 0.00 | 0.58 | 0.00 | | 96.00 | 4100.00 |
| [illegible] 0 | 3070 00 | 831.68 | 0.00 | 0.23 | 0.00 | | 04.95 | 800.00 |
| [illegible] 0 | 3070 00 | 831.82 | 0.00 | 0.26 | 0.00 | | 04.96 | 800.00 |
| [illegible] 0 | [illegible] 00 | 831.97 | 0.00 | 0.28 | 0.00 | | 04.96 | 800.00 |
| 214.9 0 | 3070 00 | 832.15 | 0.00 | 0.31 | 0.00 | | 04.97 | 800.00 |

[illegible] 0 [illegible]

SHEET 9 OF 12

DIVERSION CHANNEL
RATING CURVE @
X-SECTION 6

| | VINV | IDIR | STRT | METRIC | VINS | Q | WSEL | FQ | |
|---|---|---|---|---|---|---|---|---|---|
| | J. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 30.810 | 0.000 | |
| | PREVS | XSECV | XSECH | FN | LOC | IBW | CHNIM | ITRACE | |
| 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| FOR SUMMARY PRINTOUT | | | | | | | | | |
| 1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| 5 LPRNT | NUMSEC | ********REQUESTED SECTION NUMBERS******** | | | | | | | |
| | -10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| 0.100 | 0.150 | 0.100 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.100 | 30.000 | 100.000 | 200.000 | 300.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.100 | 0.120 | 0.100 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| 1.000 | 4.000 | 1.000 | 250.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.100 | 0.000 | 825.500 | 1.000 | 825.500 | 250.000 | 835.000 | 251.000 | 0.000 | 0.000 |
| 0.100 | 0.150 | 40.000 | 10.000 | 80.000 | 0.150 | 110.000 | 10.000 | 150.000 | 0.150 |
| 1.000 | 1.000 | 220.000 | 0.150 | 251.000 | 0.000 | 0.00 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| 0.100 | 80.000 | 110.000 | 250.000 | 0.000 | 250.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.100 | 0.000 | 829.000 | 1.000 | 829.000 | 40.000 | 829.00 | 80.000 | 829.000 | 110.000 |
| 0.100 | 151.000 | 829.000 | 180.000 | 829.000 | 20.000 | 829.00 | 250.000 | 835.000 | 251.000 |
| 0.100 | 0.150 | 0.100 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| 0.100 | 4.000 | 1.000 | 250.000 | 950.000 | 250.000 | 950.00 | 0.000 | 0.000 | 0.000 |
| 0.100 | 0.000 | 829.000 | 1.000 | 828.700 | 250.000 | 835.00 | 251.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| 4.000 | 4.000 | 1.000 | 151.000 | 550.000 | 250.000 | 550.000 | 0.000 | 0.000 | 0.000 |
| 835.000 | 0.000 | 830.000 | 1.000 | 829.500 | 50.000 | 835.000 | 151.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| 0.100 | 4.000 | 1.000 | 250.000 | 800.000 | 800.000 | 800.00 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.000 | 827.600 | 1.000 | 827.600 | 250.000 | 835.00 | 251.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| | | 1.000 | 250.000 | 600.000 | 600.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| | | 829.000 | 1.000 | 829.000 | 250.000 | 835.000 | 251.000 | 0.000 | 0.000 |
| | | 170.000 | 3070.000 | 3070.000 | 170.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| 1.900 | 12.000 | 1.000 | 106.000 | 200.000 | 200.000 | 210.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| 0.000 | 833.400 | 1.000 | 825.800 | 1.100 | 813.00 | 27.000 | 823.800 | 3.000 | |
| | 823.900 | 53.900 | 823.800 | 54.000 | 812.00 | 80.000 | 825.000 | 0.000 | |
| | 835.000 | 106.100 | 0.000 | 0.000 | 0.00 | 0.000 | 0.000 | 0.000 | |
| | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0.000 | 0.000 | |

SHEET 10 of 12

UPDATED FEB 1977

(*) RISE (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

EASTILL CREEK RIVER

SUMMARY PRINTOUT TABLE 150

| | LOB | ELTRD | ELLOC | ELMIN | Q | CWSEL | CRIWS | EG | TOPWS | VCH | AREA | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 0.00 | 0.00 | 0.00 | 825.50 | 50.00 | 830.81 | 0.00 | 830 81 | 0 01 | 0.04 | 1325. | |
| 1.000 | 0.00 | 0.00 | 0.00 | 825.50 | 100.00 | 830.81 | 0.00 | 830 81 | 0.04 | 0.08 | 1325. | |
| [illegible] | 0.00 | 0.00 | 0.00 | 825.50 | 200.00 | 830.81 | 0.00 | 830 81 | 0.16 | 0.15 | 1325. | |
| [illegible] | 0.00 | 0.00 | 0.00 | 825.50 | 300.00 | 830.81 | 0.00 | 830 81 | 0.36 | 0.23 | 1325. | 6 |
| 2.000 | 250.00 | 0.00 | 0.00 | 829.00 | 50.00 | 830.81 | 0.00 | 830 81 | 2 06 | 0.21 | 451.3 | 54. |
| 2.000 | 250.00 | 0.00 | 0.00 | 829.00 | 100.00 | 830.81 | 0.00 | 830 81 | 8.22 | 0.42 | 451.4 | 34. |
| 2.000 | 250.00 | 0.00 | 0.00 | 829.00 | 200.00 | 830.82 | 0.00 | 830 83 | 32.70 | 0.84 | 452.2 | 34.0 |
| [illegible] | 250.00 | 0.00 | 0.00 | 829.00 | 300.00 | 830.84 | 0.00 | 830 85 | 71.01 | 1.25 | 455.5 | [illegible] |
| [illegible] | 950.00 | 0.00 | 0.00 | 828.70 | 50.00 | 830.88 | 0.00 | 830 88 | 0.39 | 0.10 | 506. | [illegible] |
| 3.000 | 950.00 | 0.00 | 0.00 | 828.70 | 100.00 | 831.05 | 0.00 | 831 05 | 1.19 | 0.18 | 548. | [illegible] |
| 3.000 | 950.00 | 0.00 | 0.00 | 828.70 | 200.00 | 831.45 | 0.00 | 831 45 | 2.71 | 0.31 | 648. | [illegible] |
| 3.000 | 950.00 | 0.00 | 0.00 | 828.70 | 300.00 | 831.82 | 0.00 | 831 82 | 5.90 | 0.40 | 742. | [illegible] |
| [illegible] | 550.00 | 0.00 | 0.00 | 827.50 | 50.00 | 830.94 | 0.00 | 830 94 | 6.43 | 0.20 | 177. | [illegible] |
| [illegible] | 550.00 | 0.00 | 0.00 | 827.50 | 100.00 | 831.20 | 0.00 | 831 21 | 13.35 | 0.44 | 216. | [illegible] |
| [illegible] | 550.00 | 0.00 | 0.00 | 827.50 | 200.00 | 831.75 | 0.00 | 831 76 | 31.50 | 0.67 | 295. | [illegible] |
| [illegible] | 550.00 | 0.00 | 0.00 | 827.50 | 300.00 | 832.23 | 0.00 | 832 24 | 61.41 | 0.81 | 370. | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 827.60 | 50.00 | 830.96 | 0.00 | 830.96 | [illegible] | 0.06 | 837. | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 827.60 | 100.00 | 831.26 | 0.00 | 831.26 | [illegible] | 0.11 | 913. | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 827.60 | 200.00 | 831.88 | 0.00 | 831.88 | [illegible] | 0.19 | 1067. | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 827.60 | 300.00 | 832.41 | 0.00 | 832.42 | [illegible] | 0.25 | 1200. | [illegible] |
| 6.000 | 600.00 | 0.00 | 0.00 | 829.00 | 50.00 | 830.97 | 0.00 | 830.97 | [illegible] | 0.10 | 489. | 76.07 |
| [illegible] | [illegible] | 0.00 | 0.00 | 829.00 | 100.00 | 831.29 | 0.00 | 831.29 | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 829.00 | 200.00 | 831.94 | 0.00 | 831.94 | [illegible] | 0.2[illegible] | 732. | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 829.00 | 300.00 | 832.49 | 0.00 | 832.49 | [illegible] | 0.3[illegible] | [illegible] | [illegible] |
| [illegible] | 200.00 | 0.00 | 0.00 | 822.00 | 3070.00 | 832.01 | 0.00 | 832.20 | 85.88 | 3.50 | 877.[illegible] | [illegible] |
| [illegible] | 200.00 | 0.00 | 0.00 | 822.00 | 3070.00 | 832.19 | 0.00 | 832.38 | 80.11 | 3.4[illegible] | 896. | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 822.00 | 3070.00 | 832.67 | 0.00 | 832.88 | 67.[illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 0.00 | 0.00 | 822.00 | 3070.00 | 833.03 | 0.00 | 833.18 | 59.87 | 3.[illegible] | 9[illegible] | [illegible] |

Sheet 11 of 12

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1.00 | | 50.00 | 830.81 | 0.00 | 0.00 | 0.00 | 50.12 | 0.00 |
| 1.00 | | 00.00 | 830.81 | 0.00 | 0.00 | 0.00 | 50.12 | 0.00 |
| 1.00 | | 00.00 | 830.81 | 0.00 | 0.00 | 0.00 | 50.12 | 0.00 |
| 1.00 | | 00.00 | 830.81 | 0.00 | 0.00 | 0.00 | 50.12 | 0.00 |
| 2.00 | | 50.00 | 830.81 | 0.00 | 0.00 | 0.00 | 49.60 | 250.00 |
| 2.00 | | 00.00 | 830.81 | 0.00 | 0.00 | 0.00 | 49.60 | 250.00 |
| 2.00 | | 00.00 | 830.82 | 0.00 | 0.01 | 0.00 | 49.60 | 250.00 |
| 2.00 | | 00.00 | 830.84 | 0.00 | 0.03 | 0.00 | 49.61 | 250.00 |
| 3.00 | | 50.00 | 830.38 | 0.00 | 0.07 | 0.00 | 49.66 | 950.00 |
| 3.00 | | 00.00 | 831.05 | 0.00 | 0.24 | 0.00 | 49.71 | 950.00 |
| 3.00 | | 00.00 | 831.45 | 0.00 | 0.63 | 0.00 | 49.85 | 950.00 |
| 3.00 | | 00.00 | 831.82 | 0.00 | 0.98 | 0.00 | 49.97 | 950.00 |
| 4.00 | | 50.00 | 830.94 | 0.00 | 0.05 | 0.00 | 49.45 | 550.00 |
| 4.00 | | 100.00 | 831.20 | 0.00 | 0.15 | 0.00 | 49.55 | 550.00 |
| 4.00 | | 200.00 | 831.75 | 0.00 | 0.31 | 0.00 | 49.76 | 550.00 |
| 4.00 | | 300.00 | 832.23 | 0.00 | 0.41 | 0.00 | 49.94 | 550.00 |
| 5.00 | | 50.00 | 830.96 | 0.00 | 0.02 | 0.00 | 49.91 | 800.00 |
| 5.00 | | 00.00 | 831.26 | 0.00 | 0.06 | 0.00 | 49.99 | 800.00 |
| 5.00 | | 00.00 | 831.88 | 0.00 | 0.13 | 0.00 | 50.16 | 800.00 |
| 5.00 | | 00.00 | 832.41 | 0.00 | 0.19 | 0.00 | 50.30 | 800.00 |
| 6.00 | | 50.00 | 830.97 | 0.00 | 0.01 | 0.00 | 49.66 | 600.00 |
| 6.00 | | 00.00 | 831.29 | 0.00 | 0.02 | 0.00 | 49.76 | 600.00 |
| 6.00 | | 00.00 | 831.94 | 0.00 | 0.05 | 0.00 | 49.98 | 600.00 |
| 6.00 | | 00.00 | 832.49 | 0.00 | 0.07 | 0.00 | 50.16 | 600.00 |
| 214.9 | | 370.00 | 832.01 | 0.00 | .04 | 0.00 | 14.96 | 200.00 |
| 214.9 | | 370.00 | 832.19 | 0.00 | .91 | 0.00 | 14.97 | 200.00 |
| 214.9 | | 370.00 | 832.62 | 0.00 | 0.68 | 0.00 | 14.98 | 200.00 |
| 214.9 | | 370.00 | 833.03 | 0.00 | 0.54 | 0.00 | 14.99 | 200.00 |

SUMMARY OF ERRORS

SHEET 12 OF 12

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Battle Creek and Pennfield Twp

3) WATERCOURSE: Battle Creek River

4) DOCUMENT TYPE: Summary

00BREAK00

PRINTED IN U.S.A.
FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS.

[illegible]

[illegible]

[illegible]

[illegible]

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

[illegible]

SUMMARY PRINTOUT [illegible] 15

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 23.200 | 0.00 | 0.00 | 0.00 | 304.20 | 3600.00 | 307.60 | 0.00 | 303.22 | 21.36 | 9.24 | 718.13 | 782.95 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 4200.00 | [illegible] | 0.00 | [illegible] | 28.70 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23.900 | 675.00 | 0.00 | 0.00 | 803.20 | 2360.00 | 808.64 | 0.00 | 808.94 | 21.62 | 4.41 | 536.29 | 507.57 |
| 23.900 | 675.00 | 0.00 | 0.00 | 803.20 | 3600.00 | 809.36 | 0.00 | 809.83 | 26.30 | 5.54 | 653.17 | 701.98 |
| 23.900 | 675.00 | 0.00 | 0.00 | 803.20 | 4200.00 | 809.72 | 0.00 | 810.26 | 27.03 | 5.94 | 711.64 | 807.78 |
| 23.900 | 675.00 | 0.00 | 0.00 | 803.20 | 5800.00 | 810.76 | 0.00 | 811.64 | 25.35 | 6.62 | 884.86 | 1152.00 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 24.000 | 3.00 | 808.60 | 303.30 | 803.20 | 5800.00 | 814.05 | 0.00 | 814.32 | 5.22 | 4.11 | 1446.66 | 2539.79 |
| 24.900 | 11.00 | 0.00 | 0.00 | 808.60 | 2360.00 | 811.50 | 0.00 | 811.87 | 33.26 | 4.87 | 484.42 | 409.22 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 24.900 | 1.00 | 822.00 | 819.40 | 808.60 | 2360.00 | 811.43 | 0.00 | 811.96 | 60.28 | 5.83 | 405.12 | 303.96 |
| 24.900 | 1.00 | 822.00 | 819.40 | 808.60 | 3600.00 | 812.50 | 0.00 | 813.02 | 57.86 | 6.79 | 530.53 | 473.27 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 25.000 | 66.00 | 822.00 | 819.40 | 808.60 | 2360.00 | 811.92 | 0.00 | 812.30 | 35.69 | 4.97 | 475.17 | 305.02 |
| 25.000 | 86.00 | 822.00 | 819.40 | 808.60 | 3600.00 | 812.82 | 0.00 | 813.37 | 37.55 | 5.95 | 605.65 | 587.47 |
| 25.000 | 96.00 | 822.00 | 819.40 | 808.60 | 4200.00 | 813.22 | 0.00 | 813.85 | 38.01 | 6.34 | 662.91 | 681.24 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 25.100 | 1.00 | 0.00 | 0.00 | 808.60 | 3600.00 | 813.07 | 0.00 | 813.43 | 18.78 | 4.82 | 746.23 | 830.71 |
| 25.100 | 1.00 | 0.00 | 0.00 | 808.60 | 4200.00 | 813.51 | 0.00 | 813.92 | 18.86 | 5.13 | 819.32 | 967.60 |
| 25.100 | 1.00 | 0.00 | 0.00 | 808.60 | 5800.00 | 814.60 | 0.00 | 815.12 | 18.68 | 5.79 | 1001.80 | 1341.80 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 25.100 | 135.00 | 0.00 | 0.00 | 807.00 | 4200.00 | 813.62 | 0.00 | 814.45 | 29.23 | 7.38 | 649.45 | 776.00 |
| 25.100 | 135.00 | 0.00 | 0.00 | 807.00 | 5800.00 | 814.65 | 0.00 | 815.71 | 31.24 | 8.51 | 797.52 | 1037.62 |

PRINTED IN U.S.A.

FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CUSEL | CRILS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26.800 | 135.00 | 1.00 | 0.00 | 807.30 | 2360.00 | 812.31 | 0.00 | 813.04 | 15.36 | 3.92 | 602.75 | 592.58 |
| 26.900 | 135.00 | 0.00 | 0.00 | 807.30 | 3600.00 | 814.00 | 0.00 | 814.30 | 15.27 | 4.61 | 815.74 | 929.26 |
| 26.900 | 135.00 | 0.00 | 0.00 | 807.30 | 4200.00 | 814.51 | 0.00 | 814.82 | 14.35 | 4.61 | 911.44 | 1101.74 |
| 26.900 | 135.00 | 0.00 | 0.00 | 807.30 | 5800.00 | 815.77 | 0.00 | 816.17 | 13.30 | 5.06 | 1147.37 | 1402.33 |
| 26.900 | 1.00 | 825.00 | 818.80 | 807.30 | 2360.00 | 812.76 | 0.00 | 813.08 | 22.06 | 4.37 | 539.43 | 603.40 |
| 26.900 | 1.00 | 825.00 | 818.80 | 807.30 | 3600.00 | 813.96 | 0.00 | 814.34 | 22.12 | 4.96 | 728.59 | 765.46 |
| 26.900 | 1.00 | 825.00 | 818.80 | 807.30 | 4200.00 | 814.57 | 0.00 | 814.89 | 21.07 | 5.15 | 815.65 | 915.60 |
| 26.900 | 1.00 | 825.00 | 818.80 | 807.30 | 5800.00 | 816.24 | 0.00 | 816.58 | 19.87 | 5.64 | 1026.20 | 1335.11 |
| 27.000 | 30.00 | 825.00 | 818.80 | 807.30 | 2360.00 | 812.87 | 0.00 | 813.15 | 21.37 | 4.27 | 552.28 | 510.50 |
| 27.000 | 30.00 | 825.00 | 818.80 | 807.30 | 3600.00 | 814.04 | 0.00 | 814.41 | 20.92 | 4.85 | 742.51 | 787.03 |
| 27.000 | 30.00 | 825.00 | 818.80 | 807.30 | 4200.00 | 814.55 | 0.00 | 814.95 | 19.96 | 5.07 | 828.93 | 940.06 |
| 27.000 | 30.00 | 825.00 | 818.80 | 807.30 | 5800.00 | 816.01 | 0.00 | 816.28 | 18.13 | 5.51 | 1140.00 | 1380.28 |
| 27.100 | 1.00 | 0.00 | 0.00 | 807.30 | 2360.00 | 812.53 | 0.00 | 813.17 | 14.19 | 3.77 | 626.50 | 526.71 |
| 27.100 | 1.00 | 0.00 | 0.00 | 807.30 | 3600.00 | 814.15 | 0.00 | 814.63 | 13.76 | 4.27 | 843.63 | 970.60 |
| 27.100 | 1.00 | 0.00 | 0.00 | 807.30 | 4200.00 | 814.67 | 0.00 | 814.98 | 13.12 | 4.46 | 940.67 | 1159.65 |
| 27.100 | 1.00 | 0.00 | 0.00 | 807.30 | 5800.00 | 816.34 | 0.00 | 816.31 | 12.03 | 4.82 | 1178.06 | 1672.51 |
| 27.800 | 250.00 | 0.00 | 0.00 | 807.60 | 2360.00 | 812.87 | 0.00 | 813.65 | 17.23 | 3.90 | 677.67 | 560.67 |
| 27.800 | 250.00 | 0.00 | 0.00 | 807.60 | 3600.00 | 814.39 | 0.00 | 815.09 | 16.51 | 4.49 | 871.70 | 875.29 |
| 27.800 | 250.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 814.87 | 0.00 | 815.60 | 21.10 | 6.93 | 678.44 | 914.33 |
| 27.800 | 250.00 | 0.00 | 0.00 | 807.60 | 5800.00 | 816.04 | 0.00 | 817.02 | 23.19 | 8.08 | 821.97 | 1204.36 |
| 28.000 | 500.00 | 0.00 | 0.00 | 807.60 | 2360.00 | 813.23 | 0.00 | 813.83 | 18.23 | 4.27 | 494.35 | 552.56 |
| 28.000 | 500.00 | 0.00 | 0.00 | 807.60 | 3600.00 | 814.76 | 0.00 | 815.64 | 18.56 | 5.36 | 667.47 | 833.55 |
| 28.000 | 500.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 815.22 | 0.00 | 816.23 | 18.79 | 5.77 | 771.35 | 964.91 |
| 28.000 | 500.00 | 0.00 | 0.00 | 807.60 | 5800.00 | 816.38 | 0.00 | 817.74 | 18.78 | 6.52 | 809.12 | 1338.21 |
| 28.900 | 1.00 | 822.00 | 821.60 | 808.50 | 2360.00 | 813.09 | 0.00 | 814.21 | 18.87 | 4.82 | 489.14 | 543.31 |
| 28.900 | 1.00 | 822.00 | 821.60 | 808.50 | 3600.00 | 815.12 | 0.00 | 815.64 | 19.29 | 5.62 | 641.14 | 819.57 |
| 28.900 | 1.00 | 822.00 | 821.60 | 808.50 | 4200.00 | 815.71 | 0.00 | 816.26 | 19.43 | 5.93 | 708.65 | 952.72 |
| 28.900 | 1.00 | 822.00 | 821.60 | 808.50 | 5800.00 | 817.20 | 0.00 | 817.75 | 19.45 | 6.59 | 838.14 | 1335.91 |
| 29.000 | 6.00 | 822.00 | 821.60 | 808.50 | 2360.00 | 813.80 | 0.00 | 814.22 | 18.77 | 4.82 | 490.00 | 544.76 |
| 29.000 | 6.00 | 822.00 | 821.60 | 808.50 | 3600.00 | 815.17 | 0.00 | 815.66 | 19.22 | 5.61 | 641.92 | 821.09 |
| 29.000 | 6.00 | 822.00 | 821.60 | 808.50 | 4200.00 | 815.73 | 0.00 | 816.27 | 19.33 | 5.92 | 709.36 | 954.16 |
| 29.000 | 6.00 | 822.00 | 821.60 | 808.50 | 5800.00 | 817.20 | 0.00 | 817.74 | 19.30 | 6.59 | 839.74 | 1317.23 |
| 29.100 | 1.00 | 0.00 | 0.00 | 808.50 | 2360.00 | 813.87 | 0.00 | 814.22 | 17.99 | 4.75 | 496.36 | 556.44 |
| 29.100 | 1.00 | 0.00 | 0.00 | 808.50 | 3600.00 | 815.18 | 0.00 | 815.66 | 18.47 | 5.54 | 649.79 | 837.66 |
| 29.100 | 1.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.74 | 0.00 | 816.28 | 18.63 | 5.85 | 717.87 | 973.00 |
| 29.100 | 1.00 | 0.00 | 0.00 | 808.50 | 5800.00 | 817.12 | 0.00 | 817.77 | 18.56 | 6.56 | 892.71 | 1346.22 |
| 29.200 | 90.00 | 0.00 | 0.00 | 808.50 | 2360.00 | 814.43 | 0.00 | 814.91 | 15.72 | 4.55 | 518.79 | 595.32 |
| 29.200 | 90.00 | 0.00 | 0.00 | 808.50 | 3600.00 | 815.39 | 0.00 | 815.83 | 16.45 | 5.33 | 675.27 | 887.61 |
| 29.200 | 90.00 | 0.00 | 0.00 | 808.50 | 4200.00 | 815.95 | 0.00 | 816.45 | 16.70 | 5.64 | 744.64 | 1027.84 |
| 29.200 | 90.00 | 0.00 | 0.00 | 808.50 | 5800.00 | 817.33 | 0.00 | 817.94 | 16.97 | 6.30 | 920.26 | 1408.11 |
| 29.600 | 90.00 | 0.00 | 0.00 | 807.60 | 2360.00 | 814.35 | 0.00 | 814.52 | 7.62 | 3.33 | 709.28 | 566.31 |
| 29.600 | 90.00 | 0.00 | 0.00 | 807.60 | 3600.00 | 815.75 | 0.00 | 815.99 | 8.03 | 3.92 | 917.95 | 1270.17 |
| 29.600 | 90.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 816.35 | 0.00 | 816.61 | 8.06 | 4.16 | 1010.63 | 1478.96 |
| 29.600 | 90.00 | 0.00 | 0.00 | 807.60 | 5800.00 | 817.79 | 0.00 | 818.12 | 7.89 | 4.70 | 1234.96 | 2064.31 |

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS, INC.

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRILS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29.900 | 1.00 | 822.10 | 819.00 | 807.60 | 2360.00 | 814.35 | 0.00 | 814.53 | 8.26 | 3.44 | 686.71 | 820.95 |
| 29.900 | 1.00 | 822.10 | 819.00 | 807.60 | 3600.00 | 815.77 | 0.00 | 816.00 | 8.90 | 4.09 | 880.05 | 1305.41 |
| 29.900 | 1.00 | 822.10 | 819.00 | 807.60 | 4200.00 | 816.34 | 0.00 | 816.62 | 8.92 | 4.21 | 940.50 | 1406.11 |
| 29.900 | 1.00 | 822.10 | 819.00 | 807.60 | 5300.00 | 817.77 | 0.00 | 818.14 | 8.72 | 4.24 | 1198.00 | 1963.15 |
| 30.000 | 56.00 | 822.10 | 819.00 | 807.60 | 2360.00 | 814.39 | 0.00 | 814.57 | 8.09 | 3.41 | 691.77 | 830.02 |
| 30.000 | 56.00 | 822.10 | 819.00 | 807.60 | 3600.00 | 815.80 | 0.00 | 816.05 | 8.74 | 4.02 | 895.70 | 1217.73 |
| 30.000 | 56.00 | 822.10 | 819.00 | 807.60 | 4200.00 | 816.39 | 0.00 | 816.67 | 8.75 | 4.26 | 986.30 | 1419.63 |
| 30.000 | 56.00 | 822.10 | 819.00 | 807.60 | 5300.00 | 817.75 | 0.00 | 818.19 | 8.53 | 4.32 | 1207.69 | 1910.54 |
| 30.100 | 1.00 | 0.00 | 0.00 | 807.60 | 2360.00 | 814.41 | 0.00 | 814.58 | 7.20 | 3.29 | 716.53 | 879.69 |
| 30.100 | 1.00 | 0.00 | 0.00 | 807.60 | 3600.00 | 815.82 | 0.00 | 816.09 | 7.77 | 3.88 | 928.43 | 1291.51 |
| 30.100 | 1.00 | 0.00 | 0.00 | 807.60 | 4200.00 | 816.42 | 0.00 | 816.68 | 7.78 | 4.11 | 1021.57 | 1505.71 |
| 30.100 | 1.00 | 0.00 | 0.00 | 807.60 | 5300.00 | 817.77 | 0.00 | 818.19 | 7.65 | 4.24 | 1236.67 | 2056.56 |
| 31.300 | 56.00 | 0.00 | 0.00 | 806.70 | 2360.00 | 814.63 | 0.00 | 814.80 | 13.62 | 4.75 | 566.52 | 639.46 |
| 31.300 | 56.00 | 0.00 | 0.00 | 806.70 | 3600.00 | 815.85 | 0.00 | 816.34 | 14.37 | 5.70 | 714.42 | 969.51 |
| 31.300 | 56.00 | 0.00 | 0.00 | 806.70 | 4200.00 | 816.44 | 0.00 | 817.00 | 14.67 | 6.09 | 789.68 | 1096.55 |
| 31.300 | 56.00 | 0.00 | 0.00 | 806.70 | 5300.00 | 817.81 | 0.00 | 818.59 | 15.23 | 6.99 | 977.67 | 1466.31 |
| 31.400 | 56.00 | 0.00 | 0.00 | 807.40 | 2360.00 | 814.71 | 0.00 | 814.90 | 10.87 | 3.69 | 604.39 | 721.46 |
| 31.400 | 56.00 | 0.00 | 0.00 | 807.40 | 3600.00 | 815.82 | 0.00 | 816.04 | 10.73 | 4.55 | 790.42 | 1093.73 |
| 31.400 | 56.00 | 0.00 | 0.00 | 807.40 | 4200.00 | 816.65 | 0.00 | 817.21 | 10.85 | 4.74 | 867.51 | 1275.06 |
| 31.400 | 56.00 | 0.00 | 0.00 | 807.40 | 5300.00 | 818.37 | 0.00 | 818.84 | 11.09 | 5.51 | 1053.18 | 1741.76 |
| 31.500 | 1.00 | 820.00 | 817.60 | 807.30 | 2360.00 | 814.72 | 0.00 | 814.97 | 11.65 | 3.98 | 633.31 | 669.53 |
| 31.500 | 1.00 | 820.00 | 817.60 | 807.30 | 3600.00 | 816.21 | 0.00 | 816.38 | 11.73 | 4.69 | 759.06 | 1051.79 |
| 31.500 | 1.00 | 820.00 | 817.60 | 807.30 | 4200.00 | 816.84 | 0.00 | 817.04 | 11.87 | 4.97 | 844.41 | 1212.98 |
| 31.500 | 1.00 | 820.00 | 817.60 | 807.30 | 5300.00 | 818.34 | 0.00 | 818.94 | 38.01 | 6.21 | 933.45 | 940.77 |
| 31.300 | 56.00 | 820.00 | 818.10 | 808.80 | 2360.00 | 814.79 | 0.00 | 815.08 | 15.68 | 4.36 | 541.23 | 596.04 |
| 31.300 | 56.00 | 820.00 | 818.10 | 808.80 | 3600.00 | 816.28 | 0.00 | 816.47 | 15.69 | 5.02 | 717.52 | 939.24 |
| 31.300 | 56.00 | 820.00 | 818.10 | 808.80 | 4200.00 | 816.91 | 0.00 | 817.24 | 14.55 | 5.30 | 792.32 | 1101.05 |
| 31.300 | 56.00 | 820.00 | 818.10 | 808.80 | 5300.00 | 818.36 | 0.00 | 819.15 | 37.53 | 6.21 | 933.44 | 941.66 |
| 31.400 | 1.00 | 822.00 | 819.70 | 808.00 | 2360.00 | 814.85 | 0.00 | 815.11 | 12.41 | 4.05 | 582.30 | 669.97 |
| 31.400 | 1.00 | 822.00 | 819.70 | 808.80 | 3600.00 | 816.34 | 0.00 | 816.69 | 12.34 | 4.75 | 758.31 | 1024.93 |
| 31.400 | 1.00 | 822.00 | 819.70 | 808.80 | 4200.00 | 816.97 | 0.00 | 817.37 | 12.43 | 5.04 | 933.24 | 1191.21 |
| 31.400 | 1.00 | 822.00 | 819.70 | 808.80 | 5300.00 | 818.36 | 0.00 | 819.22 | 11.03 | 5.57 | 1042.10 | 1700.55 |
| 31.500 | 105.00 | 822.00 | 819.70 | 809.50 | 2360.00 | 814.99 | 0.00 | 815.50 | 30.71 | 5.73 | 411.97 | 425.87 |
| 31.500 | 105.00 | 822.00 | 819.70 | 809.50 | 3600.00 | 816.46 | 0.00 | 817.12 | 27.36 | 6.48 | 555.41 | 688.27 |
| 31.500 | 105.00 | 822.00 | 819.70 | 809.50 | 4200.00 | 817.09 | 0.00 | 817.81 | 27.82 | 6.82 | 615.60 | 911.04 |
| 31.500 | 105.00 | 822.00 | 819.70 | 809.50 | 5300.00 | 818.53 | 0.00 | 819.68 | 23.49 | 7.39 | 785.00 | 1191.74 |
| 31.600 | 1.00 | 822.00 | 821.00 | 809.20 | 2360.00 | 814.97 | 0.00 | 815.63 | 47.73 | 6.56 | 359.99 | 361.67 |
| 31.600 | 1.00 | 822.00 | 821.00 | 809.20 | 3600.00 | 816.45 | 0.00 | 817.25 | 39.15 | 7.24 | 497.51 | 575.36 |
| 31.600 | 1.00 | 822.00 | 821.00 | 809.20 | 4200.00 | 817.06 | 0.00 | 817.95 | 37.31 | 7.55 | 556.17 | 687.62 |
| 31.600 | 1.00 | 822.00 | 821.00 | 809.20 | 5800.00 | 818.80 | 0.00 | 819.61 | 31.44 | 8.06 | 719.31 | 1034.35 |
| 31.700 | 47.00 | 822.00 | 821.00 | 809.20 | 2360.00 | 815.32 | 0.00 | 815.80 | 35.74 | 6.99 | 353.68 | 394.78 |
| 31.700 | 47.00 | 822.00 | 821.00 | 809.20 | 3600.00 | 816.73 | 0.00 | 817.46 | 32.99 | 8.06 | 525.01 | 627.11 |
| 31.700 | 47.00 | 822.00 | 821.00 | 809.20 | 4200.00 | 817.34 | 0.00 | 818.15 | 32.19 | 7.21 | 582.48 | 740.21 |
| 31.700 | 47.00 | 822.00 | 821.00 | 809.20 | 5300.00 | 819.05 | 0.00 | 819.98 | 28.68 | 7.83 | 740.59 | 1083.03 |

PRINTED IN U.S.A.
FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | XLCH | ELTRD | ELLC | ELMIN | R | CWSEL | CRIUS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32.900 | 1.00 | 823.00 | 823.90 | 809.70 | 2360.00 | 815.60 | 0.00 | 815.97 | 20.13 | 6.94 | 477.35 | 526.00 |
| 32.900 | 1.00 | 823.00 | 823.90 | 809.70 | 3600.00 | 816.97 | 0.00 | 819.53 | 42.35 | 8.21 | 380.05 | 155.43 |
| 32.900 | 1.00 | 824.00 | 823.90 | 809.70 | 4200.00 | 817.44 | 0.00 | 820.10 | 50.16 | 8.73 | 806.07 | 953.17 |
| 32.900 | 1.00 | 826.00 | 823.90 | 809.70 | 5300.00 | 818.00 | 0.00 | 820.11 | 65.31 | 8.62 | 807.56 | 722.14 |
| 33.000 | 77.00 | 823.00 | 823.90 | 809.70 | 2360.00 | 815.77 | 0.00 | 816.12 | 17.93 | 6.76 | 495.29 | 557.29 |
| 33.000 | 95.00 | 823.00 | 823.90 | 809.70 | 3600.00 | 817.24 | 0.00 | 817.83 | 38.62 | 8.23 | 597.04 | 579.26 |
| 33.000 | 74.00 | 823.00 | 823.90 | 809.70 | 4200.00 | 817.64 | 0.00 | 818.24 | 45.02 | 8.70 | 827.15 | 825.53 |
| 33.000 | 74.00 | 823.00 | 823.90 | 809.70 | 5300.00 | 817.15 | 0.00 | 820.57 | 66.04 | 8.10 | 736.78 | 770.64 |
| 33.100 | 1.00 | 0.00 | 0.00 | 809.70 | 2360.00 | 815.45 | 0.00 | 816.15 | 13.68 | 4.39 | 538.11 | 639.27 |
| 33.100 | 1.00 | 0.00 | 0.00 | 809.70 | 3600.00 | 817.53 | 0.00 | 817.92 | 12.29 | 4.98 | 723.30 | 1026.77 |
| 33.100 | 1.00 | 0.00 | 0.00 | 809.70 | 4200.00 | 818.26 | 0.00 | 818.68 | 12.03 | 5.23 | 802.53 | 1210.95 |
| 33.100 | 1.00 | 0.00 | 0.00 | 809.70 | 5300.00 | 817.54 | 0.00 | 820.77 | 11.56 | 5.62 | 1132.62 | 1671.19 |
| 34.300 | 100.00 | 0.00 | 0.00 | 812.10 | 2360.00 | 815.95 | 0.00 | 816.16 | 34.97 | 7.65 | 373.09 | 358.07 |
| 34.300 | 100.00 | 0.00 | 0.00 | 812.10 | 3600.00 | 817.62 | 0.00 | 818.45 | 27.66 | 7.33 | 525.91 | 694.51 |
| 34.300 | 100.00 | 0.00 | 0.00 | 812.10 | 4200.00 | 818.33 | 0.00 | 819.22 | 25.89 | 7.63 | 593.47 | 825.51 |
| 34.300 | 100.00 | 0.00 | 0.00 | 812.10 | 5300.00 | 820.35 | 0.00 | 821.37 | 19.95 | 8.02 | 798.56 | 1298.66 |
| 34.900 | 100.00 | 0.00 | 0.00 | 812.10 | 2360.00 | 817.11 | 0.00 | 817.73 | 11.84 | 6.61 | 557.47 | 615.68 |
| 34.900 | 600.00 | 0.00 | 0.00 | 812.10 | 3600.00 | 818.48 | 0.00 | 819.07 | 11.36 | 5.23 | 725.07 | 1016.62 |
| 35.000 | 600.00 | 0.00 | 0.00 | 812.10 | 4200.00 | 819.95 | 0.00 | 820.42 | 11.39 | 5.54 | 803.96 | 1244.67 |
| 35.000 | 600.00 | 0.00 | 0.00 | 812.10 | 5300.00 | 821.94 | 0.00 | 822.41 | 10.31 | 6.11 | 1010.22 | 1806.17 |
| 35.000 | 100.00 | 0.00 | 0.00 | 812.20 | 2360.00 | 817.91 | 0.00 | 818.12 | 9.32 | 7.09 | 612.77 | 772.00 |
| 35.000 | 100.00 | 0.00 | 0.00 | 812.20 | 3600.00 | 819.58 | 0.00 | 819.12 | 9.70 | 4.57 | 768.28 | 1155.71 |
| 35.000 | 100.00 | 0.00 | 0.00 | 812.20 | 4200.00 | 820.31 | 0.00 | 820.59 | 9.79 | 4.85 | 850.58 | 1362.45 |
| 35.000 | 100.00 | 0.00 | 0.00 | 812.20 | 5300.00 | 822.12 | 0.00 | 822.57 | 9.43 | 5.39 | 1076.20 | 1888.50 |
| 35.900 | 1.00 | 826.00 | 823.10 | 812.20 | 2360.00 | 817.89 | 0.00 | 818.16 | 15.27 | 4.17 | 565.40 | 603.97 |
| 35.900 | 1.00 | 826.00 | 823.10 | 812.20 | 3600.00 | 819.56 | 0.00 | 819.92 | 10.28 | 5.17 | 696.30 | 841.93 |
| 35.900 | 1.00 | 826.00 | 823.10 | 812.20 | 4200.00 | 820.19 | 0.00 | 820.47 | 10.32 | 5.57 | 753.39 | 953.56 |
| 35.900 | 1.00 | 826.00 | 823.10 | 812.20 | 5300.00 | 822.00 | 0.00 | 822.28 | 20.41 | 6.31 | 908.49 | 1281.63 |
| 36.000 | 65.00 | 826.00 | 823.10 | 812.20 | 2360.00 | 818.07 | 0.00 | 818.26 | 14.58 | 4.11 | 573.66 | 613.16 |
| 36.000 | 65.00 | 826.00 | 823.10 | 812.20 | 3600.00 | 819.62 | 0.00 | 820.02 | 17.45 | 5.09 | 706.58 | 861.75 |
| 36.000 | 65.00 | 826.00 | 823.10 | 812.20 | 4200.00 | 820.32 | 0.00 | 820.70 | 15.74 | 5.48 | 765.31 | 927.95 |
| 36.000 | 65.00 | 826.00 | 823.10 | 812.20 | 5300.00 | 822.24 | 0.00 | 822.86 | 19.00 | 6.29 | 921.51 | 1310.08 |
| 36.100 | 1.00 | 827.00 | 823.30 | 812.30 | 2360.00 | 818.05 | 0.00 | 818.28 | 9.37 | 3.85 | 612.45 | 771.12 |
| 36.100 | 1.00 | 827.00 | 823.30 | 812.30 | 3600.00 | 819.75 | 0.00 | 820.06 | 9.43 | 4.52 | 796.26 | 1172.16 |
| 36.100 | 1.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.50 | 0.00 | 820.86 | 9.42 | 4.78 | 878.02 | 1368.39 |
| 36.100 | 1.00 | 827.00 | 823.30 | 812.30 | 5300.00 | 822.51 | 0.00 | 822.85 | 8.93 | 5.40 | 1094.18 | 1935.62 |
| 36.200 | 74.00 | 827.00 | 823.30 | 812.30 | 2360.00 | 818.00 | 0.00 | 818.66 | 22.26 | 6.01 | 395.93 | 500.24 |
| 36.200 | 74.00 | 827.00 | 823.30 | 812.30 | 3600.00 | 819.75 | 0.00 | 820.54 | 22.81 | 7.10 | 596.91 | 753.70 |
| 36.200 | 74.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.50 | 0.00 | 821.38 | 22.89 | 7.53 | 557.61 | 877.06 |
| 36.200 | 74.00 | 827.00 | 823.30 | 812.30 | 5300.00 | 822.48 | 0.00 | 823.57 | 21.97 | 8.38 | 692.03 | 1237.40 |
| 36.300 | 1.00 | 827.00 | 823.30 | 812.30 | 2360.00 | 818.15 | 0.00 | 818.46 | 10.59 | 5.78 | 408.42 | 533.23 |
| 36.300 | 1.00 | 827.00 | 823.30 | 812.30 | 3600.00 | 819.81 | 0.00 | 820.57 | 30.00 | 6.02 | 527.54 | 804.97 |
| 36.300 | 1.00 | 827.00 | 823.30 | 812.30 | 4200.00 | 820.61 | 0.00 | 821.42 | 20.05 | 7.24 | 580.50 | 937.90 |
| 36.300 | 1.00 | 827.00 | 823.30 | 812.30 | 5800.00 | 822.61 | 0.00 | 823.61 | 19.26 | 8.05 | 720.40 | 1321.67 |

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37.000 | 370.00 | 827.00 | 822.70 | 811.70 | 2360.00 | 819.17 | 0.00 | 819.49 | 8.89 | 4.52 | 522.05 | 791.50 |
| | 37.000 | 370.00 | 827.00 | 822.70 | 811.70 | 3600.00 | 821.02 | 0.00 | 821.49 | 10.23 | 5.52 | 650.34 | 1175.51 |
| | 37.000 | 370.00 | 827.00 | 822.70 | 811.70 | 4200.00 | 821.82 | 0.00 | 822.37 | 10.90 | 5.96 | 717.41 | 1284.57 |
| | 37.000 | 370.00 | 827.00 | 822.70 | 811.70 | 5800.00 | 824.26 | 0.00 | 825.13 | 16.58 | 7.54 | 748.52 | 960.76 |
| | 37.100 | 1.00 | 0.00 | 0.00 | 811.70 | 2360.00 | 819.17 | 0.00 | 819.49 | 8.86 | 4.52 | 524.43 | 792.78 |
| | 37.100 | 1.00 | 0.00 | 0.00 | 811.70 | 3600.00 | 821.02 | 0.00 | 821.49 | 10.20 | 5.52 | 654.48 | 1127.35 |
| | 37.100 | 1.00 | 0.00 | 0.00 | 811.70 | 4200.00 | 821.82 | 0.00 | 822.37 | 10.87 | 5.97 | 721.50 | 1225.03 |
| | 37.100 | 1.00 | 0.00 | 0.00 | 811.70 | 5800.00 | 824.26 | 0.00 | 825.27 | 8.30 | 8.49 | 910.59 | 1892.03 |
| | 37.800 | 115.00 | 0.00 | 0.00 | 809.00 | 2360.00 | 819.23 | 0.00 | 819.66 | 11.36 | 5.25 | 449.20 | 685.91 |
| | 37.800 | 115.00 | 0.00 | 0.00 | 809.00 | 3600.00 | 821.07 | 0.00 | 821.72 | 14.78 | 6.51 | 553.52 | 936.47 |
| | 37.800 | 115.00 | 0.00 | 0.00 | 809.00 | 4200.00 | 821.86 | 0.00 | 822.65 | 15.95 | 7.02 | 598.55 | 1051.55 |
| | 37.800 | 115.00 | 0.00 | 0.00 | 809.00 | 5800.00 | 824.30 | 0.00 | 825.55 | 15.41 | 7.07 | 758.37 | 1477.29 |
| | 37.900 | 1.00 | 830.00 | 823.80 | 809.50 | 2360.00 | 819.23 | 0.00 | 819.66 | 10.24 | 5.99 | 394.11 | 552.23 |
| | 37.900 | 1.00 | 830.00 | 823.80 | 809.50 | 3600.00 | 820.97 | 0.00 | 821.82 | 22.67 | 7.41 | 486.12 | 756.08 |
| | 37.900 | 1.00 | 830.00 | 823.80 | 809.50 | 4200.00 | 821.76 | 0.00 | 822.74 | 26.44 | 7.98 | 525.02 | 849.63 |
| | 37.900 | 1.00 | 830.00 | 823.80 | 809.50 | 5800.00 | 824.44 | 0.00 | 825.75 | 55.53 | 9.19 | 630.99 | 778.35 |
| | 38.000 | 66.00 | 830.00 | 823.80 | 809.50 | 2360.00 | 819.31 | 0.00 | 819.74 | 10.11 | 4.76 | 521.34 | 716.76 |
| | 38.000 | 66.00 | 830.00 | 823.80 | 809.50 | 3600.00 | 821.11 | 0.00 | 822.06 | 11.42 | 5.30 | 679.32 | 1065.31 |
| | 38.000 | 66.00 | 830.00 | 823.80 | 809.50 | 4200.00 | 822.51 | 0.00 | 823.00 | 11.64 | 5.63 | 746.68 | 1231.20 |
| | 38.000 | 66.00 | 830.00 | 823.80 | 809.50 | 5800.00 | 825.47 | 0.00 | 826.20 | 33.08 | 6.88 | 843.58 | 1700.61 |
| | 38.900 | 1.00 | 825.50 | 823.10 | 809.50 | 2360.00 | 819.54 | 0.00 | 819.94 | 17.25 | 5.16 | 457.68 | 566.71 |
| | 38.900 | 1.00 | 825.50 | 823.10 | 809.50 | 3600.00 | 821.36 | 0.00 | 822.16 | 18.57 | 5.76 | 603.55 | 873.92 |
| | 38.900 | 1.00 | 825.50 | 823.10 | 809.50 | 4200.00 | 822.15 | 0.00 | 823.04 | 18.97 | 6.29 | 667.66 | 1021.21 |
| | 38.900 | 1.00 | 825.50 | 823.10 | 809.50 | 5800.00 | 825.33 | 0.00 | 826.35 | 56.09 | 8.11 | 715.02 | 774.44 |
| | 39.000 | 66.00 | 825.50 | 823.10 | 809.50 | 2360.00 | 819.66 | 0.00 | 820.06 | 16.25 | 5.05 | 467.00 | 585.38 |
| | 39.000 | 66.00 | 825.50 | 823.10 | 809.50 | 3600.00 | 821.64 | 0.00 | 822.22 | 18.18 | 5.87 | 612.97 | 895.54 |
| | 39.000 | 66.00 | 825.50 | 823.10 | 809.50 | 4200.00 | 822.54 | 0.00 | 823.17 | 18.19 | 6.27 | 677.18 | 1043.12 |
| | 39.000 | 66.00 | 825.50 | 823.10 | 809.50 | 5800.00 | 825.52 | 0.00 | 826.31 | 77.79 | 7.79 | 743.24 | 857.59 |
| | 39.100 | 1.00 | 0.00 | 0.00 | 809.50 | 2360.00 | 819.61 | 0.00 | 820.10 | 9.28 | 4.27 | 553.27 | 774.81 |
| | 39.100 | 1.00 | 0.00 | 0.00 | 809.50 | 3600.00 | 821.66 | 0.00 | 822.27 | 9.48 | 5.00 | 720.65 | 1169.02 |
| | 39.100 | 1.00 | 0.00 | 0.00 | 809.50 | 4200.00 | 822.79 | 0.00 | 823.22 | 9.97 | 5.25 | 794.16 | 1357.67 |
| | 39.100 | 1.00 | 0.00 | 0.00 | 809.50 | 5800.00 | 826.56 | 0.00 | 827.46 | 6.77 | 5.29 | 1007.96 | 2269.11 |
| | 40.000 | 165.00 | 0.00 | 0.00 | 808.30 | 2360.00 | 819.97 | 0.00 | 820.22 | 5.79 | 4.07 | 664.85 | 900.58 |
| | 40.000 | 165.00 | 0.00 | 0.00 | 808.30 | 3600.00 | 822.05 | 0.00 | 822.40 | 6.15 | 4.80 | 873.39 | 1450.90 |
| | 40.000 | 165.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 822.96 | 0.00 | 823.36 | 6.24 | 5.20 | 965.99 | 1681.04 |
| | 40.000 | 165.00 | 0.00 | 0.00 | 808.30 | 5800.00 | 826.65 | 0.00 | 827.06 | 6.36 | 5.29 | 1429.35 | 2766.66 |
| | 40.900 | 135.00 | 0.00 | 0.00 | 809.20 | 2360.00 | 820.12 | 0.00 | 820.31 | 4.80 | 3.54 | 667.15 | 1070.55 |
| | 40.900 | 135.00 | 0.00 | 0.00 | 809.20 | 3600.00 | 822.21 | 0.00 | 822.50 | 5.79 | 4.34 | 830.15 | 1495.51 |
| | 40.900 | 135.00 | 0.00 | 0.00 | 809.20 | 4200.00 | 823.13 | 0.00 | 823.46 | 6.15 | 4.66 | 901.52 | 1694.17 |
| | 40.900 | 135.00 | 0.00 | 0.00 | 809.20 | 5800.00 | 826.76 | 0.00 | 827.13 | 5.19 | 4.90 | 1184.80 | 2545.60 |
| | 41.000 | 46.00 | 827.40 | 821.70 | 809.20 | 2360.00 | 820.12 | 0.00 | 820.31 | 4.80 | 3.56 | 667.15 | 1070.55 |
| | 41.000 | 46.00 | 827.40 | 821.70 | 809.20 | 3600.00 | 822.45 | 0.00 | 822.73 | 5.51 | 4.24 | 869.16 | 1567.72 |
| | 41.000 | 46.00 | 827.40 | 821.70 | 809.20 | 4200.00 | 823.52 | 0.00 | 823.84 | 5.55 | 4.50 | 932.38 | 1782.23 |
| | 41.000 | 46.00 | 827.40 | 821.70 | 809.20 | 5800.00 | 827.73 | 0.00 | 828.06 | 4.31 | 4.60 | 1260.56 | 2792.74 |

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | XLCH | ELTRD | ELLC | ELTIN | Q | CHSEL | CRIMS | EG | 10K*S | VCH | AREA | .01P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42.300 | 225.00 | 0.00 | 0.00 | 811.00 | 2360.00 | 821.29 | 0.00 | 820.43 | 3.82 | 2.98 | 859.78 | 1207.50 |
| 42.300 | 225.00 | 0.00 | 0.00 | 811.00 | 3600.00 | 822.96 | 0.00 | 822.36 | 3.32 | 3.27 | 1175.05 | 1972.54 |
| 42.300 | 225.00 | 0.00 | 0.00 | 811.00 | 4200.00 | 823.78 | 0.00 | 823.97 | 3.08 | 3.44 | 1315.17 | 2391.[illegible] |
| 42.300 | 225.00 | 0.00 | 0.00 | 811.00 | 5800.00 | 825.88 | 0.00 | 826.17 | 2.76 | 3.87 | 2204.96 | 4567.27 |
| 43.900 | 225.00 | 0.00 | 0.00 | 808.30 | 2360.00 | 821.37 | 0.00 | 820.50 | 2.65 | 2.66 | 826.01 | 1448.92 |
| 43.900 | 225.00 | 0.00 | 0.00 | 808.30 | 3600.00 | 822.75 | 0.00 | 822.95 | 3.25 | 3.53 | 1020.37 | 1996.90 |
| 43.900 | 225.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 823.54 | 0.00 | 823.76 | 3.48 | 3.90 | 1179.36 | 2263.98 |
| 43.900 | 225.00 | 0.00 | 0.00 | 808.30 | 5800.00 | 825.64 | 0.00 | 825.96 | 2.93 | 4.02 | 1652.46 | 3509.45 |
| 44.000 | 76.00 | 826.90 | 822.10 | 808.30 | 2360.00 | 820.36 | 0.00 | 820.50 | 2.66 | 2.66 | 825.63 | 1447.90 |
| 44.000 | 76.00 | 826.90 | 822.10 | 808.30 | 3600.00 | 822.96 | 0.00 | 823.15 | 3.09 | 3.47 | 1037.15 | 2046.53 |
| 44.000 | 76.00 | 826.90 | 822.10 | 808.30 | 4200.00 | 824.16 | 0.00 | 824.37 | 3.21 | 3.70 | 1135.73 | 2344.72 |
| 44.000 | 76.00 | 826.90 | 822.10 | 808.30 | 5800.00 | 828.34 | 0.00 | 828.57 | 2.85 | 3.87 | 1499.65 | 3505.56 |
| 44.900 | 100.00 | 0.00 | 0.00 | 810.30 | 2360.00 | 820.39 | 0.00 | 820.53 | 2.56 | 2.31 | 713.20 | 1205.76 |
| 44.900 | 100.00 | 0.00 | 0.00 | 810.30 | 3600.00 | 822.98 | 0.00 | 823.20 | 4.36 | 3.78 | 951.18 | 1726.71 |
| 44.900 | 100.00 | 0.00 | 0.00 | 810.30 | 4200.00 | 824.18 | 0.00 | 824.43 | 4.20 | 3.95 | 1062.16 | 2049.03 |
| 44.900 | 100.00 | 0.00 | 0.00 | 810.30 | 5800.00 | 828.37 | 0.00 | 828.64 | 2.87 | 3.95 | 1473.12 | 3425.98 |
| 45.000 | 96.00 | 824.00 | 820.90 | 810.00 | 2360.00 | 820.43 | 0.00 | 820.57 | 2.51 | 2.30 | 715.45 | 1211.32 |
| 45.000 | 96.00 | 824.00 | 820.90 | 810.00 | 3600.00 | 823.01 | 0.00 | 823.22 | 3.05 | 3.36 | 1006.27 | 1876.72 |
| 45.000 | 96.00 | 824.00 | 820.90 | 810.00 | 4200.00 | 824.90 | 0.00 | 825.11 | 3.43 | 3.75 | 1127.67 | 2252.69 |
| 45.000 | 96.00 | 824.00 | 820.90 | 810.00 | 5800.00 | 829.09 | 0.00 | 829.32 | 2.45 | 3.83 | 1518.26 | 3701.75 |
| 46.300 | 100.00 | 0.00 | 0.00 | 809.30 | 2360.00 | 820.43 | 0.00 | 820.57 | 2.39 | 2.37 | 694.93 | 1116.65 |
| 46.300 | 100.00 | 0.00 | 0.00 | 809.30 | 3600.00 | 823.01 | 0.00 | 823.22 | 4.15 | 3.34 | 926.77 | 1706.41 |
| 46.300 | 100.00 | 0.00 | 0.00 | 809.30 | 4200.00 | 824.20 | 0.00 | 824.42 | 3.93 | 3.71 | 1081.95 | 2129.40 |
| 46.300 | 100.00 | 0.00 | 0.00 | 809.30 | 5800.00 | 828.40 | 0.00 | 828.64 | 2.46 | 4.34 | 2198.72 | 3701.32 |
| 46.500 | 700.00 | 0.00 | 0.00 | 810.50 | 2360.00 | 820.64 | 0.00 | 820.95 | 2.33 | 2.71 | 937.02 | 1547.20 |
| 46.500 | 700.00 | 0.00 | 0.00 | 810.50 | 3600.00 | 823.22 | 0.00 | 823.48 | 1.89 | 3.08 | 1331.82 | 2622.56 |
| 46.500 | 700.00 | 0.00 | 0.00 | 810.50 | 4200.00 | 824.27 | 0.00 | 824.42 | 1.75 | 3.11 | 1771.55 | 3174.02 |
| 46.500 | 700.00 | 0.00 | 0.00 | 810.50 | 5800.00 | 828.41 | 0.00 | 828.52 | 1.06 | 3.98 | 3956.92 | 5676.01 |
| 47.000 | 700.00 | 0.00 | 0.00 | 811.30 | 2360.00 | 821.01 | 0.00 | 821.11 | 2.02 | 2.51 | 1062.60 | 1659.95 |
| 47.000 | 700.00 | 0.00 | 0.00 | 811.30 | 3600.00 | 824.11 | 0.00 | 824.23 | 1.61 | 2.76 | 1582.85 | 2835.70 |
| 47.000 | 700.00 | 0.00 | 0.00 | 811.30 | 4200.00 | 825.12 | 0.00 | 825.24 | 1.51 | 2.86 | 1827.10 | 3420.06 |
| 47.000 | 700.00 | 0.00 | 0.00 | 811.30 | 5800.00 | 829.40 | 0.00 | 829.67 | 1.03 | 2.91 | 2737.02 | 5575.05 |
| 47.900 | 100.00 | 0.00 | 0.00 | 810.60 | 2360.00 | 821.09 | 0.00 | 821.14 | 1.41 | 1.86 | 1267.34 | 1990.33 |
| 47.900 | 100.00 | 0.00 | 0.00 | 810.60 | 3600.00 | 824.19 | 0.00 | 824.26 | 1.05 | 1.99 | 1807.87 | 3517.44 |
| 47.900 | 100.00 | 0.00 | 0.00 | 810.60 | 4200.00 | 825.53 | 0.00 | 825.57 | 0.98 | 2.06 | 2035.41 | 4245.76 |
| 47.900 | 100.00 | 0.00 | 0.00 | 810.60 | 5800.00 | 829.55 | 0.00 | 829.62 | 0.72 | 2.12 | 2743.27 | 6044.75 |
| 48.000 | 60.00 | 826.60 | 822.40 | 810.60 | 2360.00 | 821.09 | 0.00 | 821.14 | 1.40 | 1.66 | 1267.42 | 1991.05 |
| 48.000 | 60.00 | 826.60 | 822.40 | 810.60 | 3600.00 | 824.30 | 0.00 | 824.36 | 1.01 | 1.97 | 1826.13 | 3574.14 |
| 48.000 | 60.00 | 826.60 | 822.40 | 810.60 | 4200.00 | 825.66 | 0.00 | 825.73 | 0.94 | 2.04 | 2063.36 | 4338.40 |
| 48.000 | 60.00 | 826.60 | 822.40 | 810.60 | 5800.00 | 829.72 | 0.00 | 829.78 | 0.69 | 2.09 | 2771.72 | 6959.02 |
| 48.200 | 150.00 | 0.00 | 0.00 | 810.30 | 2360.00 | 821.12 | 0.00 | 821.16 | 0.64 | 1.55 | 1962.74 | 2930.72 |
| 48.200 | 150.00 | 0.00 | 0.00 | 810.30 | 3600.00 | 824.33 | 0.00 | 824.37 | 0.62 | 1.80 | 2772.47 | 4662.40 |
| 48.200 | 150.00 | 0.00 | 0.00 | 810.30 | 4200.00 | 825.69 | 0.00 | 825.74 | 0.58 | 1.99 | 3198.23 | 5511.60 |
| 48.200 | 150.00 | 0.00 | 0.00 | 810.30 | 5800.00 | 829.74 | 0.00 | 829.80 | 0.46 | 2.07 | 4977.26 | 8571.53 |

PRINTED IN U.S.A.
FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIUS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 43.300 | 2.00 | 816.50 | 812.30 | 812.30 | 2360.00 | 821.03 | 0.00 | 821.23 | 0.81 | 3.65 | 936.92 | 753.34 |
| 43.300 | 2.00 | 816.50 | 812.30 | 812.30 | 3600.00 | 824.25 | 0.00 | 824.42 | 1.33 | 3.81 | 1751.02 | 1420.77 |
| 43.300 | 2.00 | 816.50 | 812.30 | 812.30 | 4200.00 | 825.65 | 0.00 | 825.78 | 1.30 | 3.11 | 2176.47 | 2509.13 |
| 43.300 | 2.00 | 816.50 | 812.30 | 812.30 | 5800.00 | 829.72 | 0.00 | 829.82 | 1.38 | 2.75 | 3966.69 | 4962.77 |
| 43.400 | 2.00 | 0.00 | 0.00 | 815.60 | 2360.00 | 821.11 | 0.00 | 821.24 | 5.80 | 3.15 | 1070.23 | 972.96 |
| 43.400 | 2.00 | 0.00 | 0.00 | 815.60 | 3600.00 | 824.31 | 0.00 | 824.42 | 2.71 | 2.93 | 1878.25 | 2166.32 |
| 43.400 | 2.00 | 0.00 | 0.00 | 815.60 | 4200.00 | 825.69 | 0.00 | 825.78 | 2.20 | 2.91 | 2330.27 | 2831.27 |
| 43.400 | 2.00 | 0.00 | 0.00 | 815.60 | 5800.00 | 829.73 | 0.00 | 829.82 | 1.38 | 2.66 | 4079.56 | 5340.91 |
| 43.900 | 520.00 | 0.00 | 0.00 | 814.00 | 2360.00 | 821.30 | 0.00 | 821.49 | 3.31 | 2.79 | 1701.57 | 1297.57 |
| 43.900 | 520.00 | 0.00 | 0.00 | 814.00 | 3600.00 | 824.47 | 0.00 | 824.54 | 1.60 | 2.49 | 3253.54 | 2847.53 |
| 43.900 | 520.00 | 0.00 | 0.00 | 814.00 | 4200.00 | 825.82 | 0.00 | 825.83 | 1.30 | 2.44 | 3932.50 | 3680.21 |
| 43.900 | 520.00 | 0.00 | 0.00 | 814.00 | 5800.00 | 829.65 | 0.00 | 829.68 | 0.75 | 2.26 | 5825.35 | 6717.83 |
| 44.000 | 650.00 | 0.00 | 0.00 | 808.30 | 2360.00 | 821.35 | 0.00 | 821.67 | 1.92 | 2.49 | 1117.79 | 1704.04 |
| 44.000 | 650.00 | 0.00 | 0.00 | 808.30 | 3600.00 | 824.55 | 0.00 | 824.67 | 1.64 | 2.80 | 1590.95 | 2814.97 |
| 44.000 | 650.00 | 0.00 | 0.00 | 808.30 | 4200.00 | 825.96 | 0.00 | 826.00 | 1.55 | 2.92 | 1807.97 | 3376.10 |
| 44.000 | 650.00 | 0.00 | 0.00 | 808.30 | 5800.00 | 829.95 | 0.00 | 829.98 | 1.20 | 3.06 | 2466.25 | 5297.76 |
| 49.000 | 100.00 | 0.00 | 0.00 | 812.80 | 2360.00 | 821.63 | 0.00 | 821.73 | 2.30 | 2.08 | 717.65 | 1137.47 |
| 49.000 | 100.00 | 0.00 | 0.00 | 812.80 | 3600.00 | 824.81 | 0.00 | 824.91 | 1.72 | 2.16 | 1158.51 | 2037.09 |
| 49.000 | 100.00 | 0.00 | 0.00 | 812.80 | 4200.00 | 826.18 | 0.00 | 826.04 | 2.86 | 3.25 | 1292.53 | 2404.24 |
| 49.000 | 100.00 | 0.00 | 0.00 | 812.80 | 5800.00 | 829.84 | 0.00 | 830.01 | 2.07 | 3.31 | 1757.00 | 4033.45 |
| 50.000 | 100.00 | 826.90 | 824.50 | 812.80 | 2360.00 | 821.60 | 0.00 | 821.70 | 4.20 | 2.98 | 788.41 | 1160.15 |
| 50.000 | 100.00 | 826.90 | 824.50 | 812.80 | 3600.00 | 824.84 | 0.00 | 824.91 | 3.01 | 3.12 | 1152.26 | 2076.28 |
| 50.000 | 100.00 | 826.90 | 824.50 | 812.80 | 4200.00 | 826.19 | 0.00 | 826.24 | 2.39 | 3.19 | 1317.50 | 2559.29 |
| 50.000 | 100.00 | 826.90 | 824.50 | 812.80 | 5800.00 | 830.08 | 0.00 | 830.24 | 1.97 | 3.26 | 1784.03 | 4132.33 |
| 50.100 | 100.00 | 0.00 | 0.00 | 812.80 | 2360.00 | 821.64 | 0.00 | 821.74 | 2.37 | 2.47 | 1214.68 | 1533.57 |
| 50.100 | 100.00 | 0.00 | 0.00 | 812.80 | 3600.00 | 824.79 | 0.00 | 824.87 | 1.71 | 2.81 | 1950.34 | 2752.41 |
| 50.100 | 100.00 | 0.00 | 0.00 | 812.80 | 4200.00 | 826.13 | 0.00 | 826.20 | 1.50 | 2.94 | 2350.26 | 3431.19 |
| 50.100 | 100.00 | 0.00 | 0.00 | 812.80 | 5800.00 | 830.11 | 0.00 | 830.21 | 1.03 | 2.82 | 3561.33 | 5723.93 |
| 51.000 | 730.00 | 0.00 | 0.00 | 813.00 | 2360.00 | 821.66 | 0.00 | 821.90 | 1.67 | 1.86 | 3293.13 | 1828.39 |
| 51.000 | 730.00 | 0.00 | 0.00 | 813.00 | 3600.00 | 824.94 | 0.00 | 826.96 | 0.74 | 1.55 | 6492.35 | 4178.74 |
| 51.000 | 730.00 | 0.00 | 0.00 | 813.00 | 4200.00 | 826.50 | 0.00 | 826.57 | 0.56 | 1.47 | 8275.06 | 5591.47 |
| 51.000 | 730.00 | 0.00 | 0.00 | 813.00 | 5800.00 | 830.51 | 0.00 | 830.52 | 0.30 | 1.30 | 12625.54 | 10593.02 |
| 52.000 | 800.00 | 0.00 | 0.00 | 813.30 | 2360.00 | 821.99 | 0.00 | 822.00 | 1.02 | 1.46 | 5024.74 | 2331.75 |
| 52.000 | 800.00 | 0.00 | 0.00 | 813.30 | 3600.00 | 825.00 | 0.00 | 825.01 | 0.44 | 1.19 | 9385.97 | 5433.61 |
| 52.000 | 800.00 | 0.00 | 0.00 | 813.30 | 4200.00 | 826.40 | 0.00 | 826.40 | 0.33 | 1.13 | 11658.68 | 7250.09 |
| 52.000 | 800.00 | 0.00 | 0.00 | 813.30 | 5800.00 | 830.34 | 0.00 | 830.34 | 0.19 | 1.30 | 17329.02 | 13673.27 |
| 53.000 | 2600.00 | 0.00 | 0.00 | 812.30 | 2360.00 | 821.28 | 0.00 | 822.38 | 1.94 | 1.50 | 2910.93 | 1900.37 |
| 53.000 | 2600.00 | 0.00 | 0.00 | 812.30 | 3600.00 | 825.13 | 0.00 | 825.15 | 0.77 | 1.64 | 5958.01 | 4091.87 |
| 53.000 | 2600.00 | 0.00 | 0.00 | 812.30 | 4200.00 | 826.49 | 0.00 | 826.51 | 0.60 | 1.55 | 7459.88 | 5441.62 |
| 53.000 | 2600.00 | 0.00 | 0.00 | 812.30 | 5800.00 | 830.39 | 0.00 | 830.40 | 0.31 | 1.33 | 12809.98 | 10502.00 |
| 54.000 | 1450.00 | 0.00 | 0.00 | 812.90 | 2360.00 | 822.53 | 0.00 | 822.59 | 2.36 | 2.26 | 2308.39 | 1535.66 |
| 54.000 | 1450.00 | 0.00 | 0.00 | 812.90 | 3600.00 | 825.78 | 0.00 | 825.80 | 1.34 | 2.07 | 4303.66 | 3105.43 |
| 54.000 | 1450.00 | 0.00 | 0.00 | 812.90 | 4200.00 | 826.59 | 0.00 | 826.63 | 1.05 | 1.98 | 5405.88 | 4103.08 |
| 54.000 | 1450.00 | 0.00 | 0.00 | 812.90 | 5800.00 | 830.44 | 0.00 | 830.46 | 0.56 | 1.75 | 8677.70 | 7717.52 |

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRIDS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55.300 | 1650.00 | 0.00 | 0.00 | 814.40 | 2360.00 | 823.01 | 0.00 | 823.14 | 4.46 | 2.92 | 932.40 | 1116.98 |
| 55.000 | 1650.00 | 0.00 | 0.00 | 814.40 | 3600.00 | 825.31 | 0.00 | 825.47 | 3.37 | 2.17 | 1450.61 | 1737.61 |
| 55.700 | 1650.00 | 0.00 | 0.00 | 814.40 | 4200.00 | 826.79 | 0.00 | 826.94 | 3.01 | 3.21 | 1761.25 | 2354.19 |
| 55.300 | 1650.00 | 0.00 | 0.00 | 814.40 | 5300.00 | 830.56 | 0.00 | 830.65 | 1.99 | 3.13 | 2823.35 | 4115.45 |
| 55.300 | 100.00 | 0.00 | 0.00 | 815.50 | 2360.00 | 824.05 | 0.00 | 823.19 | 5.72 | 3.05 | 772.81 | 906.56 |
| 55.000 | 100.00 | 0.00 | 0.00 | 815.50 | 3600.00 | 825.54 | 0.00 | 825.72 | 4.72 | 3.39 | 1063.30 | 1656.44 |
| 55.300 | 100.00 | 0.00 | 0.00 | 815.50 | 4200.00 | 826.32 | 0.00 | 826.48 | 4.24 | 3.47 | 1209.23 | 2038.66 |
| 55.000 | 100.00 | 0.00 | 0.00 | 815.50 | 5300.00 | 830.52 | 0.00 | 830.70 | 3.05 | 3.56 | 1636.17 | 3516.20 |
| 55.900 | 1.00 | 830.00 | 820.60 | 815.50 | 2360.00 | 823.02 | 0.00 | 823.21 | 11.64 | 3.50 | 674.97 | 685.29 |
| 55.900 | 1.00 | 830.00 | 820.60 | 815.50 | 3600.00 | 825.40 | 0.00 | 825.74 | 12.13 | 4.14 | 969.42 | 1033.66 |
| 55.900 | 1.00 | 830.00 | 820.60 | 815.50 | 4200.00 | 826.72 | 0.00 | 827.02 | 11.68 | 4.34 | 967.78 | 1229.12 |
| 55.900 | 1.00 | 830.00 | 820.60 | 815.50 | 5300.00 | 830.41 | 0.00 | 830.77 | 21.24 | 3.46 | 1057.20 | 1072.57 |
| 56.000 | 51.00 | 830.00 | 820.60 | 815.50 | 2360.00 | 823.04 | 0.00 | 823.27 | 11.62 | 3.47 | 679.21 | 692.31 |
| 56.000 | 51.00 | 830.00 | 820.60 | 815.50 | 3600.00 | 825.34 | 0.00 | 825.61 | 11.90 | 4.12 | 874.50 | 1043.47 |
| 56.000 | 51.00 | 830.00 | 820.60 | 815.50 | 4200.00 | 826.70 | 0.00 | 827.08 | 11.49 | 4.32 | 972.69 | 1239.21 |
| 56.000 | 51.00 | 830.00 | 820.60 | 815.50 | 5300.00 | 830.41 | 0.00 | 830.93 | 29.27 | 5.48 | 1057.80 | 1072.13 |
| 56.100 | 1.00 | 0.00 | 0.00 | 815.50 | 2360.00 | 823.12 | 0.00 | 823.27 | 5.57 | 3.01 | 773.35 | 1003.15 |
| 56.100 | 1.00 | 0.00 | 0.00 | 815.50 | 3600.00 | 825.64 | 0.00 | 825.82 | 6.37 | 3.35 | 1076.43 | 1624.51 |
| 56.100 | 1.00 | 0.00 | 0.00 | 815.50 | 4200.00 | 826.99 | 0.00 | 827.09 | 4.12 | 3.44 | 1220.90 | 2070.44 |
| 56.100 | 1.00 | 0.00 | 0.00 | 815.50 | 5300.00 | 830.77 | 0.00 | 830.96 | 2.88 | 3.47 | 1669.13 | 3416.95 |
| 56.000 | 100.00 | 0.00 | 0.00 | 814.40 | 2360.00 | 823.22 | 0.00 | 823.32 | 5.05 | 3.43 | 771.23 | 1172.73 |
| 56.000 | 100.00 | 0.00 | 0.00 | 814.40 | 3600.00 | 825.72 | 0.00 | 825.86 | 3.89 | 3.69 | 1495.61 | 1987.90 |
| 56.000 | 100.00 | 0.00 | 0.00 | 814.40 | 4200.00 | 826.97 | 0.00 | 827.13 | 2.87 | 3.76 | 1737.51 | 2471.52 |
| 56.000 | 100.00 | 0.00 | 0.00 | 814.40 | 5800.00 | 830.86 | 0.00 | 830.98 | 1.81 | 3.84 | 2974.91 | 4308.59 |
| 56.000 | 350.00 | 0.00 | 0.00 | 816.10 | 2360.00 | 823.37 | 0.00 | 823.51 | 6.65 | 3.05 | 774.54 | 915.42 |
| 56.000 | 350.00 | 0.00 | 0.00 | 816.10 | 3600.00 | 825.81 | 0.00 | 826.02 | 5.25 | 3.31 | 1086.94 | 1572.07 |
| 56.000 | 350.00 | 0.00 | 0.00 | 816.10 | 4200.00 | 827.09 | 0.00 | 827.27 | 4.65 | 3.50 | 1243.69 | 1947.15 |
| 56.000 | 350.00 | 0.00 | 0.00 | 816.10 | 5800.00 | 830.91 | 0.00 | 831.09 | 3.09 | 3.56 | 1724.24 | 3299.36 |
| 57.000 | 4.00 | 823.90 | 816.20 | 816.10 | 2360.00 | 826.92 | 0.00 | 826.98 | 1.56 | 1.93 | 1221.39 | 1891.36 |
| 57.000 | 4.00 | 823.90 | 816.20 | 816.10 | 3600.00 | 827.95 | 0.00 | 828.06 | 2.62 | 2.67 | 1350.43 | 2225.37 |
| 57.000 | 4.00 | 823.90 | 816.20 | 816.10 | 4200.00 | 828.46 | 0.00 | 828.56 | 3.08 | 2.97 | 1417.78 | 2393.32 |
| 57.000 | 4.00 | 823.90 | 816.20 | 816.10 | 5800.00 | 831.24 | 0.00 | 831.44 | 2.04 | 3.28 | 1749.69 | 3440.59 |
| 57.100 | 50.00 | 0.00 | 0.00 | 823.00 | 2360.00 | 826.77 | 0.00 | 827.18 | 36.40 | 5.15 | 458.22 | 391.17 |
| 57.100 | 50.00 | 0.00 | 0.00 | 823.00 | 3600.00 | 827.74 | 0.00 | 828.33 | 38.88 | 6.20 | 544.23 | 577.34 |
| 57.100 | 50.00 | 0.00 | 0.00 | 823.00 | 4200.00 | 828.22 | 0.00 | 828.88 | 38.01 | 6.54 | 652.77 | 681.25 |
| 57.100 | 50.00 | 0.00 | 0.00 | 823.00 | 5800.00 | 831.19 | 0.00 | 831.62 | 14.77 | 5.52 | 1235.33 | 1511.47 |
| 200.000 | 425.00 | 0.00 | 0.00 | 819.00 | 2360.00 | 827.60 | 0.00 | 827.69 | 4.36 | 2.96 | 1013.60 | 1130.55 |
| 200.000 | 425.00 | 0.00 | 0.00 | 819.00 | 3600.00 | 828.83 | 0.00 | 828.96 | 5.31 | 2.88 | 1332.12 | 1561.68 |
| 200.000 | 425.00 | 0.00 | 0.00 | 819.00 | 4200.00 | 829.38 | 0.00 | 829.52 | 5.39 | 3.07 | 1503.18 | 1808.68 |
| 200.000 | 425.00 | 0.00 | 0.00 | 819.00 | 5800.00 | 831.85 | 0.00 | 831.97 | 3.28 | 2.95 | 2738.62 | 3203.60 |
| 201.000 | 425.00 | 0.00 | 0.00 | 815.10 | 2360.00 | 827.72 | 0.00 | 827.74 | 2.54 | 2.22 | 2937.32 | 3207.44 |
| 201.000 | 425.00 | 0.00 | 0.00 | 815.10 | 3600.00 | 829.50 | 0.00 | 829.64 | 2.79 | 2.40 | 2943.67 | 4050.41 |
| 201.000 | 425.00 | 0.00 | 0.00 | 815.10 | 4200.00 | 829.56 | 0.00 | 829.61 | 0.88 | 1.75 | 3257.95 | 4475.13 |
| 201.000 | 425.00 | 0.00 | 0.00 | 815.10 | 5800.00 | 831.99 | 0.00 | 832.06 | 0.78 | 1.87 | 4809.06 | 6565.68 |

PRINTED IN U.S.A.
FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | XLCH | ELTPD | ELLC | ELMIN | Q | CUSEL | CRINS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 202.000 | 1300.00 | 0.00 | 0.00 | 813.70 | 2360.00 | 827.80 | 0.00 | 827.83 | 0.84 | 1.31 | 1859.43 | 2578.60 |
| 202.000 | 1300.00 | 0.00 | 0.00 | 813.70 | 3600.00 | 829.52 | 0.00 | 829.56 | 1.07 | 1.70 | 2269.70 | 3374.26 |
| 202.000 | 1300.00 | 0.00 | 0.00 | 813.70 | 4200.00 | 830.10 | 0.00 | 830.14 | 1.25 | 1.86 | 2465.82 | 3751.77 |
| 202.000 | 1300.00 | 0.00 | 0.00 | 813.70 | 5800.00 | 831.10 | 0.00 | 831.14 | 1.05 | 1.58 | 4026.43 | 5667.35 |
| 203.000 | 2500.00 | 0.00 | 0.00 | 818.30 | 2360.00 | 823.01 | 0.00 | 828.03 | 0.80 | 1.35 | 1932.85 | 2646.66 |
| 203.000 | 2500.00 | 0.00 | 0.00 | 818.30 | 3600.00 | 829.39 | 0.00 | 829.43 | 1.06 | 1.72 | 2600.46 | 3504.14 |
| 203.000 | 2500.00 | 0.00 | 0.00 | 818.30 | 4200.00 | 828.59 | 0.00 | 828.64 | 1.14 | 1.85 | 3068.75 | 3938.57 |
| 203.000 | 2500.00 | 0.00 | 0.00 | 818.30 | 5800.00 | 832.34 | 0.00 | 832.39 | 0.89 | 1.48 | 4036.94 | 6101.13 |
| 204.000 | 1200.00 | 0.00 | 0.00 | 816.70 | 2360.00 | 826.11 | 0.00 | 828.14 | 1.03 | 1.45 | 1838.46 | 2322.64 |
| 204.000 | 1200.00 | 0.00 | 0.00 | 816.70 | 3600.00 | 829.52 | 0.00 | 829.57 | 1.31 | 1.83 | 2366.92 | 3150.69 |
| 204.000 | 1200.00 | 0.00 | 0.00 | 816.70 | 4200.00 | 830.13 | 0.00 | 830.19 | 1.40 | 1.98 | 2630.94 | 3549.59 |
| 204.000 | 1200.00 | 0.00 | 0.00 | 816.70 | 5800.00 | 832.10 | 0.00 | 832.15 | 1.11 | 2.01 | 5312.92 | 5581.22 |
| 205.000 | 1300.00 | 0.00 | 0.00 | 817.30 | 2360.00 | 825.25 | 0.00 | 828.25 | 0.82 | 1.32 | 5367.27 | 3620.67 |
| 205.000 | 1300.00 | 0.00 | 0.00 | 817.30 | 3600.00 | 829.69 | 0.00 | 829.71 | 0.65 | 1.08 | 7311.29 | 5348.56 |
| 205.000 | 1300.00 | 0.00 | 0.00 | 817.30 | 4200.00 | 830.32 | 0.00 | 830.33 | 0.46 | 1.14 | 8160.29 | 6183.73 |
| 205.000 | 1300.00 | 0.00 | 0.00 | 817.30 | 5800.00 | 832.60 | 0.00 | 832.62 | 0.35 | 1.16 | 12260.95 | 9860.68 |
| 206.000 | 1525.00 | 0.00 | 0.00 | 819.00 | 2360.00 | 824.31 | 0.00 | 826.36 | 1.07 | 1.36 | 2617.74 | 2279.37 |
| 206.000 | 1525.00 | 0.00 | 0.00 | 819.00 | 3600.00 | 829.73 | 0.00 | 829.81 | 1.19 | 1.72 | 3794.64 | 3309.60 |
| 206.000 | 1525.00 | 0.00 | 0.00 | 819.00 | 4200.00 | 830.40 | 0.00 | 830.44 | 1.27 | 1.73 | 4154.23 | 3812.36 |
| 206.000 | 1525.00 | 0.00 | 0.00 | 819.00 | 5800.00 | 832.66 | 0.00 | 832.70 | 0.94 | 1.77 | 6218.88 | 5986.15 |
| 207.000 | 925.00 | 0.00 | 0.00 | 816.30 | 2360.00 | 826.41 | 0.00 | 828.43 | 0.63 | 1.07 | 4991.61 | 2937.79 |
| 207.000 | 925.00 | 0.00 | 0.00 | 816.30 | 3600.00 | 829.87 | 0.00 | 829.89 | 0.97 | 1.44 | 7035.63 | 4408.10 |
| 207.000 | 925.00 | 0.00 | 0.00 | 816.30 | 4200.00 | 830.41 | 0.00 | 830.43 | 0.97 | 1.50 | 7931.42 | 5131.36 |
| 207.000 | 925.00 | 0.00 | 0.00 | 816.30 | 5800.00 | 832.74 | 0.00 | 832.76 | 0.50 | 1.47 | 11261.94 | 8169.34 |
| 208.000 | 1900.00 | 0.00 | 0.00 | 816.30 | 2360.00 | 826.52 | 0.00 | 828.53 | 0.63 | 1.25 | 6667.79 | 2981.77 |
| 208.000 | 1900.00 | 0.00 | 0.00 | 816.30 | 3600.00 | 829.93 | 0.00 | 829.99 | 0.91 | 1.74 | 9467.49 | 4716.97 |
| 208.000 | 1900.00 | 0.00 | 0.00 | 816.30 | 4200.00 | 830.67 | 0.00 | 830.71 | 0.97 | 1.87 | 10607.79 | 5582.09 |
| 208.000 | 1900.00 | 0.00 | 0.00 | 816.30 | 5800.00 | 832.83 | 0.00 | 832.85 | 0.60 | 1.70 | 15859.75 | 9166.36 |
| 209.000 | 3700.00 | 0.00 | 0.00 | 817.10 | 2360.00 | 826.76 | 0.00 | 828.79 | 1.31 | 1.77 | 4399.54 | 2063.45 |
| 209.000 | 3700.00 | 0.00 | 0.00 | 817.10 | 3600.00 | 830.19 | 0.00 | 830.21 | 1.20 | 1.87 | 6517.02 | 3291.81 |
| 209.000 | 3700.00 | 0.00 | 0.00 | 817.10 | 4200.00 | 830.73 | 0.00 | 830.77 | 1.14 | 1.93 | 7490.17 | 3982.06 |
| 209.000 | 3700.00 | 0.00 | 0.00 | 817.10 | 5800.00 | 832.99 | 0.00 | 833.01 | 0.71 | 1.79 | 11045.05 | 6563.63 |
| 210.000 | 1450.00 | 0.00 | 0.00 | 820.70 | 2360.00 | 828.95 | 0.00 | 828.97 | 1.44 | 1.62 | 4534.34 | 1966.89 |
| 210.000 | 1450.00 | 0.00 | 0.00 | 820.70 | 3600.00 | 830.36 | 0.00 | 830.37 | 1.34 | 1.77 | 6300.85 | 3112.03 |
| 210.000 | 1450.00 | 0.00 | 0.00 | 820.70 | 4200.00 | 830.96 | 0.00 | 830.98 | 1.30 | 1.83 | 7062.04 | 3682.00 |
| 210.000 | 1450.00 | 0.00 | 0.00 | 820.70 | 5800.00 | 833.05 | 0.00 | 833.07 | 0.94 | 1.79 | 9859.67 | 5964.19 |
| 211.000 | 2675.00 | 0.00 | 0.00 | 819.20 | 2360.00 | 829.25 | 0.00 | 829.26 | 1.99 | 2.02 | 3379.76 | 1559.50 |
| 211.000 | 2675.00 | 0.00 | 0.00 | 819.20 | 3600.00 | 830.62 | 0.00 | 830.66 | 2.00 | 2.28 | 4572.24 | 2545.87 |
| 211.000 | 2675.00 | 0.00 | 0.00 | 819.20 | 4200.00 | 831.22 | 0.00 | 831.26 | 2.01 | 2.38 | 5093.17 | 2965.73 |
| 211.000 | 2675.00 | 0.00 | 0.00 | 819.20 | 5800.00 | 833.24 | 0.00 | 833.28 | 1.60 | 2.41 | 6871.42 | 4569.25 |
| 212.000 | 2400.00 | 0.00 | 0.00 | 821.60 | 2360.00 | 829.91 | 0.00 | 829.93 | 1.19 | 1.41 | 4233.29 | 2167.09 |
| 212.000 | 2400.00 | 0.00 | 0.00 | 821.60 | 3600.00 | 830.95 | 0.00 | 830.97 | 1.15 | 1.58 | 5841.53 | 3357.71 |
| 212.000 | 2400.00 | 0.00 | 0.00 | 821.60 | 4200.00 | 831.54 | 0.00 | 831.56 | 1.13 | 1.64 | 6543.02 | 3943.08 |
| 212.000 | 2400.00 | 0.00 | 0.00 | 821.60 | 5800.00 | 833.49 | 0.00 | 833.51 | 0.89 | 1.67 | 8870.82 | 6149.57 |

PRINTED IN U.S.A.
FORM 1411.68 PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CHSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 213.000 | 4100.00 | 0.00 | 0.00 | 821.90 | 1050.00 | 830.20 | 0.00 | 830.27 | 3.41 | 2.45 | 1541.77 | 1001.81 |
| 213.000 | 4100.00 | 0.00 | 0.00 | 821.90 | 2890.00 | [illegible] | 0.00 | 831.63 | 3.68 | 2.86 | 2208.27 | 1510.69 |
| 213.000 | 4100.00 | 0.00 | 0.00 | 821.90 | 3370.00 | 833.12 | 0.00 | 832.22 | 3.67 | 3.00 | 2495.74 | 1759.[illegible] |
| 213.000 | 4100.00 | 0.00 | 0.00 | 821.90 | 4650.00 | 833.94 | 0.00 | 834.04 | 3.03 | 3.12 | 3395.47 | 2648.[illegible] |
| 214.900 | 800.00 | 0.00 | 0.00 | 822.00 | 1850.00 | 830.49 | 0.00 | 830.59 | 4.19 | 2.58 | 717.48 | 904.64 |
| 214.900 | 800.00 | 0.00 | 0.00 | 822.00 | 2890.00 | 831.86 | 0.00 | 832.04 | 5.71 | 3.35 | 862.06 | 1209.16 |
| 214.900 | [illegible] | 0.00 | 0.00 | 822.00 | 3370.00 | 832.44 | 0.00 | 832.63 | 6.27 | 3.65 | 923.05 | 1346.22 |
| 214.900 | [illegible] | 0.00 | 0.00 | 822.00 | 4650.00 | 834.20 | 0.00 | 834.47 | 6.64 | 4.20 | 1187.57 | 1804.11 |
| 215.000 | 37.00 | 833.40 | 830.00 | 822.00 | 1850.00 | 830.49 | 0.00 | 830.59 | 4.18 | 2.58 | 717.69 | 905.05 |
| 215.000 | 37.00 | 833.40 | 830.00 | 822.00 | 2890.00 | 832.21 | 0.00 | 832.37 | 5.02 | 3.22 | 898.24 | 1289.89 |
| 215.000 | 37.00 | 833.40 | 830.00 | 822.00 | 3370.00 | 832.95 | 0.00 | 833.13 | 5.27 | 3.45 | 975.80 | 1468.59 |
| 215.000 | 37.00 | 833.40 | 830.00 | 822.00 | 4650.00 | [illegible] | 0.00 | 835.14 | 5.57 | 3.94 | 1180.10 | 2008.64 |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 1050.00 | 830.54 | 0.00 | 830.63 | 3.63 | 2.59 | 1076.31 | 971.15 |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 2890.00 | 832.31 | 0.00 | 832.42 | 3.70 | 3.04 | 1607.69 | 1502.65 |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 3370.00 | 833.07 | 0.00 | 833.19 | 3.64 | 3.10 | 1835.25 | 1765.58 |
| 215.100 | 100.00 | 0.00 | 0.00 | 822.40 | 4650.00 | 835.06 | 0.00 | 835.21 | 3.33 | 3.46 | 2634.88 | 2547.70 |

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

BATTLE CREEK RIVER

SUMMARY PRINTOUT TABLE 150

| SECND | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23.000 | 2360.00 | 807.80 | 0.00 | 0.00 | 0.00 | 173.91 | 0.00 |
| 23.000 | 3600.00 | 807.80 | 0.00 | 0.00 | 0.00 | 173.91 | 0.00 |
| 23.000 | 4200.00 | 807.80 | 0.00 | 0.00 | 0.00 | 173.91 | 0.00 |
| 23.000 | 5800.00 | 807.80 | 0.00 | 0.00 | 0.00 | 173.91 | 0.00 |
| 23.900 | 2360.00 | 808.64 | 0.00 | 0.84 | 0.00 | 162.15 | 675.00 |
| 23.900 | 3600.00 | 809.36 | 0.00 | 1.56 | 0.00 | 163.74 | 675.00 |
| 23.900 | 4200.00 | 809.72 | 0.00 | 1.92 | 0.00 | 164.53 | 675.00 |
| 23.900 | 5800.00 | 810.56 | 0.00 | 2.76 | 0.00 | 166.15 | 675.00 |
| 24.000 | 2360.00 | 811.66 | 0.00 | 3.20 | 0.00 | 168.00 | 3.00 |
| 24.000 | 3600.00 | 812.57 | 0.00 | 3.22 | 0.00 | 170.38 | 3.00 |
| 24.000 | 4200.00 | 812.99 | 0.00 | 3.26 | 0.00 | 171.61 | 3.00 |
| 24.000 | 5800.00 | 814.05 | 0.00 | 3.29 | 0.00 | 174.16 | 3.00 |
| 24.100 | 2360.00 | 811.51 | 0.00 | -0.14 | 0.00 | 166.64 | 11.00 |
| 24.100 | 3600.00 | 812.43 | 0.00 | -0.12 | 0.00 | 166.86 | 11.00 |
| 24.100 | 4200.00 | 812.92 | 0.00 | -0.16 | 0.00 | 166.64 | 11.00 |
| 24.100 | 5800.00 | 813.86 | 0.00 | -0.20 | 0.00 | 166.63 | 11.00 |
| 24.900 | 2360.00 | 811.64 | 0.00 | -0.17 | 0.00 | 166.85 | 1.00 |
| 24.900 | 3600.00 | 812.30 | 0.00 | -0.10 | 0.00 | 166.96 | 1.00 |
| 24.900 | 4200.00 | 812.70 | 0.00 | -0.12 | 0.00 | 166.96 | 1.00 |
| 24.900 | 5800.00 | 813.71 | 0.00 | -0.14 | 0.00 | 166.88 | 1.00 |
| 25.000 | 2360.00 | 811.92 | 0.00 | 0.49 | 0.00 | 166.85 | 66.00 |
| 25.000 | 3600.00 | 812.87 | 0.00 | 0.57 | 0.00 | 166.96 | 66.00 |
| 25.000 | 4200.00 | 813.28 | 0.00 | 0.53 | 0.00 | 166.97 | 66.00 |
| 25.000 | 5800.00 | 814.22 | 0.00 | 0.52 | 0.00 | 166.86 | 66.00 |
| 25.100 | 2360.00 | 812.08 | 0.00 | 0.17 | 0.00 | 166.85 | 1.00 |
| 25.100 | 3600.00 | 813.07 | 0.00 | 0.25 | 0.00 | 166.97 | 1.00 |
| 25.100 | 4200.00 | 813.51 | 0.00 | 0.25 | 0.00 | 166.97 | 1.00 |
| 25.100 | 5800.00 | 814.63 | 0.00 | 0.27 | 0.00 | 166.89 | 1.00 |
| 26.000 | 2360.00 | 812.26 | 0.00 | 0.16 | 0.00 | 126.24 | 135.00 |
| 26.000 | 3600.00 | 813.21 | 0.00 | 0.14 | 0.00 | 137.12 | 135.00 |
| 26.000 | 4200.00 | 813.62 | 0.00 | 0.11 | 0.00 | 141.66 | 135.00 |
| 26.000 | 5800.00 | 814.69 | 0.00 | 0.09 | 0.00 | 144.05 | 135.00 |
| 26.800 | 2360.00 | 812.81 | 0.00 | 0.53 | 0.00 | 168.98 | 135.00 |
| 26.800 | 3600.00 | 814.00 | 0.00 | 0.79 | 0.00 | 185.91 | 135.00 |
| 26.800 | 4200.00 | 814.51 | 0.00 | 0.79 | 0.00 | 187.14 | 135.00 |
| 26.800 | 5800.00 | 815.77 | 0.00 | 0.13 | 0.00 | 187.36 | 135.00 |
| 26.900 | 2360.00 | 812.70 | 0.00 | -0.03 | 0.00 | 166.95 | 1.00 |
| 26.900 | 3600.00 | 813.96 | 0.00 | -0.04 | 0.00 | 166.85 | 1.00 |
| 26.900 | 4200.00 | 814.47 | 0.00 | -0.04 | 0.00 | 187.15 | 1.00 |
| 26.900 | 5800.00 | 815.73 | 0.00 | -0.06 | 0.00 | 187.36 | 1.00 |
| 27.000 | 2360.00 | 812.86 | 0.00 | 0.33 | 0.00 | 170.65 | 30.00 |
| 27.000 | 3600.00 | 814.04 | 0.00 | 0.08 | 0.00 | 186.33 | 30.00 |
| 27.000 | 4200.00 | 814.85 | 0.00 | 0.04 | 0.00 | 187.15 | 30.00 |
| 27.000 | 5800.00 | 815.80 | 0.00 | 0.07 | 0.00 | 187.37 | 30.00 |

PRINTED IN U.S.A.
FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | Q | CHSEL | DIFHSP | DIFHSX | DIFKJS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 27.100 | 2360.00 | 812.95 | 0.00 | 0.08 | 0.00 | 172.15 | 1.00 |
| 27.100 | 3600.00 | 814.15 | 0.00 | 0.11 | 0.00 | 177.19 | 1.00 |
| 27.100 | 4200.00 | 814.67 | 0.00 | 0.12 | 0.00 | 177.17 | 1.00 |
| 27.100 | 5800.00 | 815.94 | 0.00 | 0.14 | 0.00 | 177.71 | 1.00 |
| 28.000 | 2360.00 | 813.24 | 0.00 | 0.29 | 0.00 | 110.36 | 250.00 |
| 28.000 | 3600.00 | 814.39 | 0.00 | 0.26 | 0.00 | 116.76 | 250.00 |
| 28.000 | 4200.00 | 814.57 | 0.00 | 0.20 | 0.00 | 119.41 | 250.00 |
| 28.000 | 5800.00 | 816.74 | 0.00 | 0.10 | 0.00 | 125.94 | 250.00 |
| 28.800 | 2360.00 | 813.85 | 0.00 | 0.61 | 0.00 | 113.69 | 300.00 |
| 28.800 | 3600.00 | 815.16 | 0.00 | 0.77 | 0.00 | 120.32 | 300.00 |
| 28.800 | 4200.00 | 815.72 | 0.00 | 0.84 | 0.00 | 123.16 | 300.00 |
| 28.800 | 5800.00 | 817.05 | 0.00 | 1.04 | 0.00 | 130.00 | 300.00 |
| 28.900 | 2360.00 | 813.85 | 0.00 | -0.00 | 0.00 | 113.72 | 1.00 |
| 28.900 | 3600.00 | 815.15 | 0.00 | -0.00 | 0.00 | 120.33 | 1.00 |
| 28.900 | 4200.00 | 815.71 | 0.00 | -0.00 | 0.00 | 123.15 | 1.00 |
| 28.900 | 5800.00 | 817.08 | 0.00 | -0.00 | 0.00 | 130.04 | 1.00 |
| 29.000 | 2360.00 | 813.85 | 0.00 | 0.01 | 0.00 | 113.74 | 6.00 |
| 29.000 | 3600.00 | 815.17 | 0.00 | 0.01 | 0.00 | 120.34 | 6.00 |
| 29.000 | 4200.00 | 815.73 | 0.00 | 0.01 | 0.00 | 123.16 | 6.00 |
| 29.000 | 5800.00 | 817.09 | 0.00 | 0.01 | 0.00 | 130.06 | 6.00 |
| 29.100 | 2360.00 | 813.87 | 0.00 | 0.01 | 0.00 | 113.78 | 1.00 |
| 29.100 | 3600.00 | 815.18 | 0.00 | 0.02 | 0.00 | 120.41 | 1.00 |
| 29.100 | 4200.00 | 815.74 | 0.00 | 0.02 | 0.00 | 123.24 | 1.00 |
| 29.100 | 5800.00 | 817.12 | 0.00 | 0.03 | 0.00 | 130.22 | 1.00 |
| 29.200 | 2360.00 | 814.06 | 0.00 | 0.19 | 0.00 | 114.78 | 90.00 |
| 29.200 | 3600.00 | 815.38 | 0.00 | 0.20 | 0.00 | 125.48 | 90.00 |
| 29.200 | 4200.00 | 815.95 | 0.00 | 0.21 | 0.00 | 124.33 | 90.00 |
| 29.200 | 5800.00 | 817.33 | 0.00 | 0.21 | 0.00 | 130.22 | 90.00 |
| 29.800 | 2360.00 | 814.35 | 0.00 | 0.29 | 0.00 | 143.88 | 90.00 |
| 29.800 | 3600.00 | 815.75 | 0.00 | 0.36 | 0.00 | 154.17 | 90.00 |
| 29.800 | 4200.00 | 816.35 | 0.00 | 0.39 | 0.00 | 156.17 | 90.00 |
| 29.800 | 5800.00 | 817.78 | 0.00 | 0.46 | 0.00 | 156.51 | 90.00 |
| 29.900 | 2360.00 | 814.35 | 0.00 | -0.00 | 0.00 | 143.88 | 1.00 |
| 29.900 | 3600.00 | 815.74 | 0.00 | -0.01 | 0.00 | 154.18 | 1.00 |
| 29.900 | 4200.00 | 816.34 | 0.00 | -0.01 | 0.00 | 156.11 | 1.00 |
| 29.900 | 5800.00 | 817.77 | 0.00 | -0.01 | 0.00 | 156.58 | 1.00 |
| 30.000 | 2360.00 | 814.39 | 0.00 | 0.05 | 0.00 | 144.15 | 54.00 |
| 30.000 | 3600.00 | 815.80 | 0.00 | 0.05 | 0.00 | 154.45 | 54.00 |
| 30.000 | 4200.00 | 816.39 | 0.00 | 0.05 | 0.00 | 156.13 | 54.00 |
| 30.000 | 5800.00 | 817.82 | 0.00 | 0.05 | 0.00 | 156.60 | 54.00 |
| 30.100 | 2360.00 | 814.41 | 0.00 | 0.02 | 0.00 | 144.25 | 1.00 |
| 30.100 | 3600.00 | 815.82 | 0.00 | 0.02 | 0.00 | 154.67 | 1.00 |
| 30.100 | 4200.00 | 816.42 | 0.00 | 0.03 | 0.00 | 156.14 | 1.00 |
| 30.100 | 5800.00 | 817.86 | 0.00 | 0.03 | 0.00 | 156.61 | 1.00 |

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS

| SECNO | Q | CUSEL | DIFWSP | DIFWSX | DIFKUS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 31.000 | 2360.00 | 814.45 | 0.00 | 0.04 | 0.00 | 117.35 | 80.00 |
| 31.000 | 3600.00 | 815.[illegible] | 0.00 | 0.0[illegible] | 0.00 | 12[illegible].12 | 80.00 |
| 31.000 | 4200.00 | 816.4[illegible] | 0.00 | 0.02 | 0.00 | 12[illegible].42 | 80.00 |
| 31.000 | 5200.00 | 817.[illegible] | 0.00 | 0.0[illegible] | 0.00 | 1[illegible].3[illegible] | 80.00 |
| 31.100 | 2360.00 | 814.72 | 0.00 | 0.27 | 0.00 | 121.90 | 90.00 |
| 31.100 | 3600.00 | 816.22 | 0.00 | 0.56 | 0.00 | 121.94 | 90.00 |
| 31.100 | 4200.00 | 816.[illegible] | 0.00 | 0.[illegible]1 | 0.00 | 121.9[illegible] | 90.00 |
| 31.100 | 5[illegible].00 | 813.37 | 0.00 | 0.[illegible]1 | 0.00 | 12[illegible].31 | 90.00 |
| 31.200 | 2360.00 | 814.72 | 0.00 | -0.00 | 0.00 | 121.9[illegible] | 1.00 |
| 31.200 | 3600.00 | 816.21 | 0.00 | -0.00 | 0.00 | 121.94 | 1.00 |
| 31.200 | 4200.00 | 816.86 | 0.00 | -0.00 | 0.00 | 121.96 | 1.00 |
| 31.200 | 5800.00 | [illegible] | 0.00 | -0.0[illegible] | 0.00 | 12[illegible] | 1.00 |
| 31.300 | 2360.00 | 814.79 | 0.00 | 0.07 | 0.00 | 121.[illegible] | 56.00 |
| 31.300 | 3600.00 | 816.28 | 0.00 | 0.06 | 0.00 | 121.93 | 56.00 |
| 31.300 | 4200.00 | 816.91 | 0.00 | 0.06 | 0.00 | 121.95 | 56.00 |
| 31.300 | 5800.00 | 818.56 | 0.00 | 0.21 | 0.00 | 122.17 | 56.00 |
| 31.400 | [illegible] | 81[illegible].[illegible]5 | 0.00 | 0.0[illegible] | 0.00 | 121.[illegible] | 1.00 |
| 31.400 | 3600.00 | 8[illegible] | 0.00 | 0.0[illegible] | 0.00 | 121.[illegible]1 | 1.00 |
| 31.400 | 4200.00 | 816.97 | 0.00 | 0.06 | 0.00 | 121.93 | 1.00 |
| 31.400 | 5800.00 | 818.74 | 0.00 | 0.18 | 0.00 | 121.95 | 1.00 |
| 31.500 | 2360.00 | 814.[illegible] | 0.00 | 0.1[illegible] | 0.00 | 100.[illegible] | 1[illegible].00 |
| 31.500 | 3600.00 | 816.46 | 0.00 | 0.13 | 0.00 | 100.90 | 105.00 |
| 31.500 | 4200.00 | 817.09 | 0.00 | 0.12 | 0.00 | 100.91 | 105.00 |
| 31.500 | 5800.00 | 818.83 | 0.00 | 0.10 | 0.00 | 100.95 | 105.00 |
| 31.600 | 2360.00 | 814.97 | 0.00 | -0.03 | 0.00 | 100.86 | 1.00 |
| 31.600 | 3600.00 | 81[illegible] | 0.00 | -0.03 | 0.00 | 100.[illegible] | 1.00 |
| 31.600 | 4200.00 | 817.0[illegible] | 0.00 | -0.03 | 0.00 | 100.90 | 1.00 |
| 31.600 | 5800.00 | 81[illegible] | 0.00 | -0.03 | 0.00 | 100.[illegible] | 1.00 |
| 31.700 | 2360.00 | 815.32 | 0.00 | 0.36 | 0.00 | 100.87 | 47.00 |
| 31.700 | 3600.00 | 816.73 | 0.00 | 0.29 | 0.00 | 100.90 | 47.00 |
| 31.700 | 4200.00 | 817.[illegible] | 0.00 | 0.2[illegible] | 0.00 | 100.91 | 47.00 |
| 31.700 | 5800.00 | 819.03 | 0.00 | 0.23 | 0.00 | 100.94 | 47.00 |
| 32.900 | 2360.00 | 815.60 | 0.00 | 0.27 | 0.00 | 109.84 | 1.00 |
| 32.900 | 3600.00 | 816.93 | 0.00 | 0.20 | 0.00 | 109.87 | 1.00 |
| 32.900 | 4200.00 | 817.44 | 0.00 | 0.10 | 0.00 | 109.88 | 1.00 |
| 32.900 | 5800.00 | 819.0[illegible] | 0.00 | -0.03 | 0.00 | 109.92 | 1.00 |
| 33.000 | 2360.00 | 815.77 | 0.00 | 0.17 | 0.00 | 109.85 | 70.00 |
| 33.000 | 3600.00 | 817.26 | 0.00 | 0.33 | 0.00 | 109.88 | 70.00 |
| 33.000 | 4200.00 | 817.84 | 0.00 | 0.41 | 0.00 | 109.89 | 70.00 |
| 33.000 | 5800.00 | 819.55 | 0.00 | 0.55 | 0.00 | 109.93 | 70.00 |
| 33.100 | 2360.00 | 815.[illegible] | 0.00 | 0.0[illegible] | 0.00 | 109.[illegible] | 1.00 |
| 33.100 | 3600.00 | 817.53 | 0.00 | 0.2[illegible] | 0.00 | 109.[illegible] | 1.00 |
| 33.100 | 4200.00 | 818.25 | 0.00 | 0.41 | 0.00 | 109.92 | 1.00 |
| 33.100 | 5800.00 | 820.35 | 0.00 | 0.60 | 0.00 | 109.94 | 1.00 |

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | O | CMSEL | DIFUSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 34.000 | 2360.00 | 815.93 | 0.00 | 0.13 | 0.00 | 90.90 | 100.00 |
| 34.000 | 3600.00 | 817.82 | 0.00 | 0.09 | 0.00 | [illegible] | 100.00 |
| 34.000 | 4200.00 | 820.33 | 0.00 | 0.06 | 0.00 | [illegible] | 100.00 |
| 34.000 | 5800.00 | 820.39 | 0.00 | 0.04 | 0.00 | [illegible] | 100.00 |
| 35.000 | 2360.00 | 817.60 | 0.00 | 1.70 | 0.00 | 108.11 | 600.00 |
| 35.000 | 3600.00 | 819.25 | 0.00 | 1.63 | 0.00 | 108.32 | 600.00 |
| 35.000 | 4200.00 | 819.95 | 0.00 | 1.62 | 0.00 | 108.70 | 600.00 |
| 35.000 | 5800.00 | 821.84 | 0.00 | 1.45 | 0.00 | 109.19 | 600.00 |
| 35.800 | 2360.00 | 817.89 | 0.00 | 0.22 | 0.00 | 109.88 | 100.00 |
| 35.800 | 3600.00 | 819.50 | 0.00 | 0.25 | 0.00 | 109.90 | 100.00 |
| 35.800 | 4200.00 | 820.21 | 0.00 | 0.26 | 0.00 | 109.90 | 100.00 |
| 35.800 | 5800.00 | 822.12 | 0.00 | 0.23 | 0.00 | 109.94 | 100.00 |
| 35.900 | 2360.00 | 817.89 | 0.00 | -0.01 | 0.00 | 109.90 | 1.00 |
| 35.900 | 3600.00 | 819.48 | 0.00 | -0.02 | 0.00 | 109.90 | 1.00 |
| 35.900 | 4200.00 | 820.19 | 0.00 | -0.02 | 0.00 | 109.91 | 1.00 |
| 35.900 | 5800.00 | 822.09 | 0.00 | -0.03 | 0.00 | 109.94 | 1.00 |
| 36.000 | 2360.00 | 818.00 | 0.00 | 0.11 | 0.00 | 109.88 | 65.00 |
| 36.000 | 3600.00 | 819.62 | 0.00 | 0.12 | 0.00 | 109.90 | 65.00 |
| 36.000 | 4200.00 | 820.33 | 0.00 | 0.15 | 0.00 | 109.91 | 65.00 |
| 36.000 | 5800.00 | 822.24 | 0.00 | 0.16 | 0.00 | 109.94 | 65.00 |
| 36.100 | 2360.00 | 818.03 | 0.00 | 0.03 | 0.00 | 109.87 | 1.00 |
| 36.100 | 3600.00 | 819.73 | 0.00 | 0.13 | 0.00 | 109.90 | 1.00 |
| 36.100 | 4200.00 | 820.30 | 0.00 | 0.17 | 0.00 | 109.91 | 1.00 |
| 36.100 | 5800.00 | 822.51 | 0.00 | 0.27 | 0.00 | 109.94 | 1.00 |
| 36.200 | 2360.00 | 818.08 | 0.00 | 0.04 | 0.00 | 70.33 | 74.00 |
| 36.200 | 3600.00 | 819.76 | 0.00 | 0.01 | 0.00 | 70.56 | 74.00 |
| 36.200 | 4200.00 | 820.39 | 0.00 | -0.00 | 0.00 | 70.51 | 74.00 |
| 36.200 | 5800.00 | 822.44 | 0.00 | -0.03 | 0.00 | 70.56 | 74.00 |
| 36.300 | 2360.00 | 818.15 | 0.00 | 0.06 | 0.00 | 70.34 | 1.00 |
| 36.300 | 3600.00 | 819.85 | 0.00 | 0.09 | 0.00 | 70.46 | 1.00 |
| 36.300 | 4200.00 | 820.61 | 0.00 | 0.10 | 0.00 | 70.52 | 1.00 |
| 36.300 | 5800.00 | 822.61 | 0.00 | 0.13 | 0.00 | 70.57 | 1.00 |
| 37.000 | 2360.00 | 819.17 | 0.00 | 1.03 | 0.00 | 70.46 | 570.00 |
| 37.000 | 3600.00 | 821.02 | 0.00 | 1.17 | 0.00 | 70.60 | 570.00 |
| 37.000 | 4200.00 | 821.82 | 0.00 | 1.21 | 0.00 | 70.66 | 570.00 |
| 37.000 | 5800.00 | 824.26 | 0.00 | 1.60 | 0.00 | 70.87 | 570.00 |
| 37.100 | 2360.00 | 819.17 | 0.00 | 0.00 | 0.00 | 70.46 | 1.00 |
| 37.100 | 3600.00 | 821.02 | 0.00 | 0.00 | 0.00 | 70.60 | 1.00 |
| 37.100 | 4200.00 | 821.82 | 0.00 | 0.00 | 0.00 | 70.66 | 1.00 |
| 37.100 | 5800.00 | 824.64 | 0.00 | 0.37 | 0.00 | 70.87 | 1.00 |
| 37.800 | 2360.00 | 819.23 | 0.00 | 0.06 | 0.00 | 56.84 | 115.00 |
| 37.800 | 3600.00 | 821.07 | 0.00 | 0.05 | 0.00 | 56.87 | 115.00 |
| 37.800 | 4200.00 | 821.66 | 0.00 | 0.04 | 0.00 | 56.88 | 115.00 |
| 37.800 | 5800.00 | 824.63 | 0.00 | -0.00 | 0.00 | 56.92 | 115.00 |

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FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | Q | CHSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 37.900 | 2360.00 | 819.17 | 0.00 | -0.06 | 0.00 | 56.34 | 1.00 |
| 37.900 | 3600.00 | 821.97 | 0.00 | -0.11 | 0.00 | 56.87 | 1.00 |
| 37.900 | 4200.00 | 822.96 | 0.00 | -0.11 | 0.00 | 56.1[illegible] | 1.00 |
| 37.900 | 5800.00 | 825.49 | 0.00 | -0.05 | 0.00 | 56.52 | 1.00 |
| 38.000 | 2360.00 | 819.58 | 0.00 | 0.47 | 0.00 | 80.86 | 66.00 |
| 38.000 | 3600.00 | 821.61 | 0.00 | 0.64 | 0.00 | 80.89 | 66.00 |
| 38.100 | 4200.00 | 822.61 | 0.00 | 0.76 | 0.00 | 80.90 | 66.00 |
| 38.100 | 5800.00 | 825.69 | 0.00 | 1.03 | 0.00 | 80.97 | 66.00 |
| 38.900 | 2360.00 | 819.53 | 0.00 | -0.05 | 0.00 | 80.89 | 1.00 |
| 38.900 | 3600.00 | 821.56 | 0.00 | -0.06 | 0.00 | 80.93 | 1.00 |
| 38.900 | 4200.00 | 822.45 | 0.00 | -0.06 | 0.00 | 80.94 | 1.00 |
| 38.900 | 5800.00 | 825.57 | 0.00 | -0.14 | 0.00 | 81.05 | 1.00 |
| 39.000 | 2360.00 | 819.63 | 0.00 | 0.13 | 0.00 | 80.88 | 66.00 |
| 39.000 | 3600.00 | 821.69 | 0.00 | 0.33 | 0.00 | 80.93 | 66.00 |
| 39.000 | 4200.00 | 822.50 | 0.00 | 0.44 | 0.00 | 80.95 | 66.00 |
| 39.000 | 5800.00 | 825.36 | 0.00 | 0.56 | 0.00 | 82.00 | 66.00 |
| 39.100 | 2360.00 | 819.31 | 0.00 | 0.11 | 0.00 | 80.89 | 1.00 |
| 39.100 | 3600.00 | 821.45 | 0.00 | 0.29 | 0.00 | 80.91 | 1.00 |
| 39.100 | 4200.00 | 822.79 | 0.00 | 0.21 | 0.00 | 80.95 | 1.00 |
| 39.100 | 5800.00 | 826.53 | 0.00 | 0.66 | 0.00 | 82.00 | 1.00 |
| 40.000 | 2360.00 | 819.57 | 0.00 | 0.10 | 0.00 | 80.94 | 165.00 |
| 40.000 | 3600.00 | 822.14 | 0.00 | 0.43 | 0.00 | 161.24 | 165.00 |
| 40.000 | 4200.00 | 823.33 | 0.00 | 0.47 | 0.00 | 132.51 | 165.00 |
| 40.000 | 5800.00 | 826.65 | 0.00 | 0.13 | 0.00 | 163.76 | 165.00 |
| 40.900 | 2360.00 | 820.12 | 0.00 | 0.14 | 0.00 | 77.89 | 135.00 |
| 40.900 | 3600.00 | 822.21 | 0.00 | 0.16 | 0.00 | 77.92 | 135.00 |
| 40.900 | 4200.00 | 823.13 | 0.00 | 0.17 | 0.00 | 77.94 | 135.00 |
| 40.900 | 5800.00 | 826.73 | 0.00 | 0.11 | 0.00 | 77.99 | 135.00 |
| 41.000 | 2360.00 | 820.12 | 0.00 | 0.00 | 0.00 | 77.89 | 66.00 |
| 41.000 | 3600.00 | 822.65 | 0.00 | 0.24 | 0.00 | 77.93 | 66.00 |
| 41.000 | 4200.00 | 823.57 | 0.00 | 0.40 | 0.00 | 77.94 | 66.00 |
| 41.000 | 5800.00 | 827.73 | 0.00 | 0.09 | 0.00 | 79.00 | 66.00 |
| 42.000 | 2360.00 | 820.29 | 0.00 | 0.17 | 0.00 | 132.14 | 225.00 |
| 42.000 | 3600.00 | 822.63 | 0.00 | 0.24 | 0.00 | 136.90 | 225.00 |
| 42.000 | 4200.00 | 823.79 | 0.00 | 0.26 | 0.00 | 137.24 | 225.00 |
| 42.000 | 5800.00 | 827.01 | 0.00 | 0.21 | 0.00 | 202.90 | 225.00 |
| 43.900 | 2360.00 | 820.37 | 0.00 | 0.08 | 0.00 | 81.91 | 225.00 |
| 43.900 | 3600.00 | 822.75 | 0.00 | 0.06 | 0.00 | 81.94 | 225.00 |
| 43.900 | 4200.00 | 823.84 | 0.00 | 0.05 | 0.00 | 81.96 | 225.00 |
| 43.900 | 5800.00 | 828.01 | 0.00 | 0.01 | 0.00 | 83.00 | 225.00 |
| 44.000 | 2360.00 | 820.30 | 0.00 | 0.07 | 0.00 | 81.91 | 76.00 |
| 44.000 | 3600.00 | 822.96 | 0.00 | 0.21 | 0.00 | 81.96 | 76.00 |
| 44.000 | 4200.00 | 824.16 | 0.00 | 0.32 | 0.00 | 81.96 | 76.00 |
| 44.000 | 5800.00 | 828.58 | 0.00 | 0.57 | 0.00 | 83.00 | 76.00 |

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FORM.1411.GB PRINTED BY ROTARY MANIFOLD FORMS,

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 44.900 | 2360.00 | 820.39 | 0.00 | 0.01 | 0.00 | 91.91 | 100.00 |
| 44.900 | 3600.00 | 822.98 | 0.00 | 0.02 | 0.00 | 91.9[illegible] | 100.00 |
| 44.900 | 4200.00 | 824.10 | 0.00 | 0.02 | 0.00 | [illegible] | 100.00 |
| 44.900 | 5800.00 | 828.69 | 0.00 | 0.02 | 0.00 | [illegible] | 100.00 |
| 45.000 | 2360.00 | 820.42 | 0.00 | 0.03 | 0.00 | 91.91 | 96.00 |
| 45.000 | 3600.00 | 823.58 | 0.00 | 0.01 | 0.00 | 91.99 | 96.00 |
| 45.000 | 4200.00 | 824.90 | 0.00 | 0.71 | 0.00 | [illegible] | 96.00 |
| 45.000 | 5800.00 | 829.09 | 0.00 | 0.49 | 0.00 | 95.00 | 96.00 |
| 46.000 | 2360.00 | 820.43 | 0.00 | 0.01 | 0.00 | 80.10 | 100.00 |
| 46.000 | 3600.00 | 823.58 | 0.00 | -0.01 | 0.00 | 101.41 | 100.00 |
| 46.000 | 4200.00 | 824.89 | 0.00 | -0.01 | 0.00 | 135.99 | 100.00 |
| 46.000 | 5800.00 | 829.1[illegible] | 0.00 | 0.0[illegible] | 0.00 | [illegible] | 100.00 |
| 46.500 | 2360.00 | 820.[illegible] | 0.00 | 0.4[illegible] | 0.00 | [illegible] | 700.00 |
| 46.500 | 3600.00 | 823.96 | 0.00 | 0.33 | 0.00 | 227.42 | 700.00 |
| 46.500 | 4200.00 | 825.27 | 0.00 | 0.39 | 0.00 | 306.54 | 700.00 |
| 46.500 | 5800.00 | 829.41 | 0.00 | 0.31 | 0.57 | 544.00 | 700.00 |
| 47.000 | 2360.00 | 821.01 | 0.00 | 0.17 | 0.00 | [illegible] | 700.00 |
| 47.000 | 3600.00 | 824.[illegible] | 0.00 | 0.15 | 0.00 | [illegible] | 700.00 |
| 47.000 | 4200.00 | 825.42 | 0.00 | 0.14 | 0.00 | 2[illegible]4.90 | 700.00 |
| 47.000 | 5800.00 | 829.46 | 0.00 | 0.07 | 8.45 | 225.00 | 700.00 |
| 47.900 | 2360.00 | 821.07 | 0.00 | 0.07 | 0.00 | 173.[illegible] | 100.00 |
| 47.900 | 3600.00 | 824.1[illegible] | 0.00 | 0.0[illegible] | 0.00 | 173.[illegible] | 100.00 |
| 47.900 | 4200.00 | 825.5[illegible] | 0.00 | 0.0[illegible] | 0.00 | 173.97 | 100.00 |
| 47.900 | 5800.00 | 829.55 | 0.00 | 0.08 | 8.47 | 175.00 | 100.00 |
| 48.000 | 2360.00 | 821.09 | 0.00 | 0.00 | 0.00 | 173.83 | 60.00 |
| 48.000 | 3600.00 | 824.3[illegible] | 0.00 | 0.1[illegible] | 0.00 | 173.93 | 60.00 |
| 48.000 | 4200.00 | 825.66 | 0.00 | 0.16 | 0.00 | 173.97 | 60.00 |
| 48.000 | 5800.00 | 829.72 | 0.00 | 0.1[illegible] | 8.[illegible] | 175.00 | 60.00 |
| 48.200 | 2360.00 | 821.12 | 0.00 | 0.03 | 0.00 | 230.62 | 150.00 |
| 48.200 | 3600.00 | 824.33 | 0.00 | 0.03 | 0.00 | 291.04 | 150.00 |
| 48.200 | 4200.00 | 825.69 | 0.00 | 0.0[illegible] | 0.00 | 333.7[illegible] | 150.00 |
| 48.200 | 5800.00 | 829.74 | 0.00 | 0.03 | 8.62 | 575.00 | 150.00 |
| 48.300 | 2360.00 | 821.03 | 0.00 | -0.07 | 0.00 | 229.99 | 2.00 |
| 48.300 | 3600.00 | 824.29 | 0.00 | -0.04 | 0.00 | 289.95 | 2.00 |
| 48.300 | 4200.00 | 825.65 | 0.00 | -0.03 | 0.00 | 332.30 | 2.00 |
| 48.300 | 5800.00 | 829.7[illegible] | 0.00 | -0.0[illegible] | 8.57 | 575.00 | 2.00 |
| 48.400 | 2360.00 | 821.1[illegible] | 0.00 | 0.0[illegible] | 0.00 | 230.57 | 2.00 |
| 48.400 | 3600.00 | 824.31 | 0.00 | 0.02 | 0.00 | 290.72 | 2.00 |
| 48.400 | 4200.00 | 825.67 | 0.00 | 0.02 | 0.00 | 333.11 | 2.00 |
| 48.400 | 5800.00 | 829.73 | 0.00 | 0.01 | 8.62 | 575.00 | 2.00 |
| 48.900 | 2360.00 | 821.3[illegible] | 0.00 | 0.27 | 0.00 | 496.37 | 520.00 |
| 48.900 | 3600.00 | 824.47 | 0.00 | 0.1[illegible] | 0.00 | 505.97 | 520.00 |
| 48.900 | 4200.00 | 825.82 | 0.00 | 0.15 | 0.00 | 510.11 | 520.00 |
| 48.900 | 5800.00 | 829.83 | 0.00 | 0.10 | 8.45 | 520.00 | 520.00 |

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 49.000 | 2360.00 | 821.55 | 0.00 | 0.17 | 0.00 | 154.06 | 650.00 |
| 49.000 | 3600.00 | 824.55 | 0.00 | 0.00 | 0.00 | 160.61 | 650.00 |
| 49.000 | 4200.00 | 825.[illegible] | 0.00 | 0.06 | 0.00 | 166.00 | 650.00 |
| 49.000 | 5800.00 | 829.[illegible] | 0.00 | 0.0[illegible] | 0.00 | 166.00 | 650.00 |
| 49.900 | 2360.00 | 821.55 | 0.00 | 0.00 | 0.00 | 116.39 | 100.00 |
| 49.900 | 3600.00 | 824.56 | 0.00 | 0.00 | 0.00 | 116.45 | 100.00 |
| 49.900 | 4200.00 | 825.88 | 0.00 | 0.00 | 0.00 | 116.4[illegible] | 100.00 |
| 49.900 | 5800.00 | 829.64 | 0.00 | -0.0[illegible] | 8.2[illegible] | 117.50 | 100.00 |
| 50.000 | 2360.00 | 821.56 | 0.00 | 0.01 | 0.00 | 116.39 | 50.00 |
| 50.000 | 3600.00 | 824.63 | 0.00 | 0.13 | 0.00 | 116.45 | 50.00 |
| 50.000 | 4200.00 | 826.10 | 0.00 | 0.22 | 0.00 | 116.48 | 50.00 |
| 50.000 | 5800.00 | 830.[illegible] | 0.00 | 0.26 | 0.32 | 117.50 | 50.00 |
| 50.100 | 2360.00 | 821.66 | 0.00 | 0.00 | 0.00 | 222.[illegible] | 100.00 |
| 50.100 | 3600.00 | 824.76 | 0.00 | 0.08 | 0.00 | 316.00 | 100.00 |
| 50.100 | 4200.00 | 826.10 | 0.00 | 0.01 | 0.00 | 316.00 | 100.00 |
| 50.100 | 5800.00 | 830.18 | 0.00 | 0.1[illegible] | 0.34 | 316.00 | 100.00 |
| 51.000 | 2360.00 | 821.[illegible] | 0.00 | 0.2[illegible] | 0.00 | [illegible] | 730.00 |
| 51.000 | 3600.00 | 824.9[illegible] | 0.00 | 0.1[illegible] | 0.00 | 12[illegible].4[illegible] | 730.00 |
| 51.000 | 4200.00 | 826.35 | 0.00 | 0.17 | 0.00 | 1135.05 | 730.00 |
| 51.000 | 5800.00 | 830.31 | 0.00 | 0.14 | 0.45 | 1154.27 | 730.00 |
| 52.000 | 2360.00 | 821.39 | 0.00 | 0.[illegible] | 0.00 | 1373.[illegible] | 800.00 |
| 52.000 | 3600.00 | 825.00 | 0.00 | 0.06 | 0.00 | 1479.39 | 800.00 |
| 52.000 | 4200.00 | 826.60 | 0.00 | 0.0[illegible] | 0.00 | 1483.[illegible] | 800.00 |
| 52.000 | 5800.00 | 830.34 | 0.00 | 0.02 | 8.35 | 1495.21 | 800.00 |
| 53.000 | 2360.00 | 822.28 | 0.00 | 0.29 | 0.00 | 1034.39 | 2600.00 |
| 53.000 | 3600.00 | 825.[illegible] | 0.00 | 0.15 | 0.00 | 1309.39 | 2600.00 |
| 53.000 | 4200.00 | 826.49 | 0.00 | 0.10 | 0.00 | 1110.39 | 2600.00 |
| 53.000 | 5800.00 | 830.39 | 0.00 | 0.0[illegible] | 0.11 | 1499.39 | 2600.00 |
| 54.000 | 2360.00 | 822.53 | 0.00 | 0.26 | 0.00 | 666.92 | 1450.00 |
| 54.000 | 3600.00 | 825.25 | 0.00 | 0.13 | 0.00 | 807.05 | 1450.00 |
| 54.000 | 4200.00 | 826.[illegible] | 0.00 | 0.1[illegible] | 0.00 | 302.90 | 1450.00 |
| 54.000 | 5800.00 | 830.44 | 0.00 | 0.05 | 7.9[illegible] | 302.9[illegible] | 1450.00 |
| 55.000 | 2360.00 | 823.01 | 0.00 | 0.47 | 0.00 | 193.45 | 1650.00 |
| 55.000 | 3600.00 | 825.52 | 0.00 | 0.27 | 0.00 | 221.48 | 1650.00 |
| 55.000 | 4200.00 | 826.79 | 0.00 | 0.20 | 0.00 | 237.39 | 1650.00 |
| 55.000 | 5800.00 | 830.52 | 0.00 | 0.08 | 7.51 | 436.00 | 1650.00 |
| 55.800 | 2360.00 | 823.05 | 0.00 | 0.04 | 0.00 | 116.00 | 100.00 |
| 55.800 | 3600.00 | 825.54 | 0.00 | 0.02 | 0.00 | 116.00 | 100.00 |
| 55.800 | 4200.00 | 826.80 | 0.00 | 0.01 | 0.00 | 116.00 | 100.00 |
| 55.800 | 5800.00 | 830.50 | 0.00 | -0.02 | 7.65 | 116.00 | 100.00 |
| 55.900 | 2360.00 | 823.02 | 0.00 | -0.03 | 0.00 | 116.00 | 1.00 |
| 55.900 | 3600.00 | 825.43 | 0.00 | -0.06 | 0.00 | 116.00 | 1.00 |
| 55.900 | 4200.00 | 826.72 | 0.00 | -0.07 | 0.00 | 116.00 | 1.00 |
| 55.900 | 5800.00 | 830.31 | 0.00 | -0.19 | 7.32 | 116.00 | 1.00 |

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| SECNO | Q | CWSEL | DIFUSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 56.000 | 2360.00 | 823.08 | 0.00 | 0.06 | 0.00 | 116.00 | 51.00 |
| 56.000 | 3600.00 | 823.54 | 0.00 | 0.06 | 0.00 | 116.00 | 51.00 |
| 56.000 | 4200.00 | 826.72 | 0.00 | 0.06 | 0.00 | 116.00 | 51.00 |
| 56.000 | 5800.00 | 830.46 | 0.00 | 0.15 | 7.3[illegible] | 116.00 | 51.00 |
| 56.100 | 2360.00 | 823.13 | 0.00 | 0.05 | 0.00 | 116.00 | 1.00 |
| 56.100 | 3600.00 | 825.64 | 0.00 | 0.10 | 0.00 | 116.00 | 1.00 |
| 56.100 | 4200.00 | 826.90 | 0.00 | 0.12 | 0.00 | 116.00 | 1.00 |
| 56.100 | 5800.00 | 830.77 | 0.00 | 0.31 | 7.64 | 116.00 | 1.00 |
| 56.200 | 2360.00 | 823.20 | 0.00 | 0.07 | 0.00 | 194.54 | 100.00 |
| 56.200 | 3600.00 | 825.72 | 0.00 | 0.08 | 0.00 | 224.03 | 100.00 |
| 56.200 | 4200.00 | 826.99 | 0.00 | 0.08 | 0.00 | 239.81 | 100.00 |
| 56.200 | 5800.00 | [illegible] | 0.00 | 0.09 | 7.[illegible] | 447.5[illegible] | 100.00 |
| 56.900 | 2360.00 | 823.37 | 0.00 | 0.17 | 0.00 | 125.22 | 350.00 |
| 56.900 | 3600.00 | 825.85 | 0.00 | 0.13 | 0.00 | 125.71 | 350.00 |
| 56.900 | 4200.00 | 827.09 | 0.00 | 0.11 | 0.00 | 125.93 | 350.00 |
| 56.900 | 5800.00 | 830.91 | 0.00 | 0.06 | 7.55 | 126.00 | 350.00 |
| 57.000 | 2360.00 | 826.92 | 0.00 | 3.16 | 0.00 | 125.71 | 4.00 |
| 57.000 | 3600.00 | 827.95 | 0.00 | 2.10 | 0.00 | 126.00 | 4.00 |
| 57.000 | 4200.00 | 828.44 | 0.00 | 1.35 | 0.00 | 126.00 | 4.00 |
| 57.000 | 5800.00 | 831.28 | 0.00 | 0.36 | 4.35 | 126.00 | 4.00 |
| 57.100 | 2360.00 | 826.77 | 0.00 | -0.16 | 0.00 | 125.77 | 50.00 |
| 57.100 | 3600.00 | 827.74 | 0.00 | -0.21 | 0.00 | 132.6[illegible] | 50.00 |
| 57.100 | 4200.00 | 828.22 | 0.00 | -0.23 | 0.00 | 156.3[illegible] | 50.00 |
| 57.100 | 5800.00 | 831.16 | 0.00 | -0.12 | 4.39 | 205.71 | 50.00 |
| 200.000 | 2360.00 | 827.60 | 0.00 | 0.83 | 0.00 | 198.52 | 425.00 |
| 200.000 | 3600.00 | 828.02 | 0.00 | 1.09 | 0.00 | 303.12 | 425.00 |
| 200.000 | 4200.00 | 829.30 | 0.00 | 1.16 | 0.00 | 321.19 | 425.00 |
| 200.000 | 5800.00 | 832.08 | 0.00 | 0.69 | 4.25 | 657.55 | 425.00 |
| 201.000 | 2360.00 | 827.72 | 0.00 | 0.12 | 0.00 | 447.21 | 425.00 |
| 201.000 | 3600.00 | 829.00 | 0.00 | 0.17 | 0.00 | 542.54 | 425.00 |
| 201.000 | 4200.00 | 829.56 | 0.00 | 0.19 | 0.00 | 572.69 | 425.00 |
| 201.000 | 5800.00 | 831.98 | 0.00 | 0.15 | 4.27 | 714.36 | 425.00 |
| 202.000 | 2360.00 | 827.80 | 0.00 | 0.08 | 0.00 | 294.41 | 1300.00 |
| 202.000 | 3600.00 | 829.12 | 0.00 | 0.12 | 0.00 | 331.70 | 1300.00 |
| 202.000 | 4200.00 | 829.69 | 0.00 | 0.13 | 0.00 | 348.10 | 1300.00 |
| 202.000 | 5800.00 | 832.10 | 0.00 | 0.11 | 4.30 | 1018.50 | 1300.00 |
| 203.000 | 2360.00 | 828.01 | 0.00 | 0.20 | 0.00 | 627.15 | 2500.00 |
| 203.000 | 3600.00 | 829.39 | 0.00 | 0.27 | 0.00 | 627.70 | 2500.00 |
| 203.000 | 4200.00 | 829.99 | 0.00 | 0.30 | 0.00 | 841.37 | 2500.00 |
| 203.000 | 5800.00 | 832.34 | 0.00 | 0.24 | 4.34 | 1944.12 | 2500.00 |
| 204.000 | 2360.00 | 828.10 | 0.00 | 0.10 | 0.00 | 352.50 | 1200.00 |
| 204.000 | 3600.00 | 829.52 | 0.00 | 0.14 | 0.00 | 395.46 | 1200.00 |
| 204.000 | 4200.00 | 830.13 | 0.00 | 0.15 | 0.00 | 511.40 | 1200.00 |
| 204.000 | 5800.00 | 832.46 | 0.00 | 0.11 | 4.34 | 1564.50 | 1200.00 |

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| SECNO | Q | CUSEL | DIFWSP | DIFWSK | DIFKHS | TOPUID | XLCH |
|---|---|---|---|---|---|---|---|
| 205.000 | 2360.00 | 828.25 | 0.00 | 0.14 | 0.20 | 1338.14 | 1800.00 |
| 205.000 | 3600.00 | 829.69 | 0.00 | 0.17 | 0.00 | 1351.9[illegible] | 1800.00 |
| 205.000 | 4200.00 | 830.32 | 0.00 | 0.[illegible] | 0.00 | 1[illegible]6.90 | 1800.00 |
| 205.000 | 5800.00 | 832.00 | 0.00 | 0.15 | 4.35 | 2326.0[illegible] | 1800.00 |
| 206.000 | 2360.00 | 829.53 | 0.00 | 0.06 | 0.00 | 613.19 | 1525.00 |
| 206.000 | 3600.00 | 829.78 | 0.00 | 0.09 | 0.00 | 666.86 | 1525.00 |
| 206.000 | 4200.00 | 830.40 | 0.00 | 0.09 | 0.00 | 754.51 | 1525.00 |
| 206.000 | 5800.00 | 832.66 | 0.00 | 0.06 | 4.34 | 1071.68 | 1525.00 |
| 207.000 | 2360.00 | 828.41 | 0.00 | 0.03 | 0.00 | 1411.13 | 925.00 |
| 207.000 | 3600.00 | 829.87 | 0.00 | 0.09 | 0.00 | 1426.81 | 925.00 |
| 207.000 | 4200.00 | 830.49 | 0.00 | 0.09 | 0.00 | 1439.77 | 925.00 |
| 207.000 | 5800.00 | 832.24 | 0.00 | 0.[illegible] | 4.35 | 1[illegible]3.35 | 925.00 |
| 208.000 | 2360.00 | 829.32 | 0.00 | 0.11 | 0.00 | 1320.00 | 1300.00 |
| 208.000 | 3600.00 | 829.98 | 0.00 | 0.11 | 0.00 | 1947.29 | 1900.00 |
| 208.000 | 4200.00 | 830.69 | 0.00 | 0.11 | 0.00 | 1956.12 | 1900.00 |
| 208.000 | 5800.00 | 832.82 | 0.00 | 0.08 | 4.30 | 1987.40 | 1900.00 |
| 209.000 | 2360.00 | 829.29 | 0.00 | 0.14 | 0.00 | 1[illegible]1.0[illegible] | 3700.00 |
| 209.000 | 3600.00 | 830.41 | 0.00 | 0.20 | 0.00 | 1[illegible]0.6[illegible] | 3700.00 |
| 209.000 | 4200.00 | 830.80 | 0.00 | 0.22 | 0.00 | 1612.49 | 3700.00 |
| 209.000 | 5800.00 | 832.95 | 0.00 | 0.13 | 4.19 | 1694.62 | 3700.00 |
| 210.000 | 2360.00 | 829.81 | 0.00 | 0.19 | 0.00 | 1[illegible]0.56 | 1450.00 |
| 210.000 | 3600.00 | 830.32 | 0.00 | 0.17 | 0.00 | 1[illegible]1.20 | 1450.00 |
| 210.000 | 4200.00 | 830.96 | 0.00 | 0.26 | 0.00 | 1[illegible]2.50 | 1450.00 |
| 210.000 | 5800.00 | 833.05 | 0.00 | 0.11 | 4.11 | 1426.52 | 1450.00 |
| 211.000 | 2360.00 | 829.25 | 0.00 | 0.30 | 0.00 | 664.96 | 2675.00 |
| 211.000 | 3600.00 | 830.52 | 0.00 | 0.27 | 0.00 | 971.97 | 2675.00 |
| 211.000 | 4200.00 | 831.22 | 0.00 | 0.26 | 0.00 | 976.96 | 2675.00 |
| 211.000 | 5800.00 | 833.24 | 0.00 | 0.19 | 3.99 | 975.21 | 2675.00 |
| 212.000 | 2360.00 | 829.56 | 0.00 | 0.33 | 0.00 | 1169.92 | 2400.00 |
| 212.000 | 3600.00 | 830.95 | 0.00 | 0.32 | 0.00 | 1140.19 | 2400.00 |
| 212.000 | 4200.00 | 831.54 | 0.00 | 0.32 | 0.00 | 1[illegible]4.38 | 2400.00 |
| 212.000 | 5800.00 | 833.49 | 0.00 | 0.25 | 3.91 | 1196.01 | 2400.00 |
| 213.000 | 1850.00 | 830.20 | 0.00 | 0.62 | 0.00 | 496.00 | 4100.00 |
| 213.000 | 2890.00 | 831.54 | 0.00 | 0.60 | 0.00 | 496.00 | 4100.00 |
| 213.000 | 3370.00 | 832.12 | 0.00 | 0.58 | 0.00 | 496.00 | 4100.00 |
| 213.000 | 4650.00 | 833.94 | 0.00 | 0.45 | 3.74 | 496.00 | 4100.00 |
| 214.900 | 1850.00 | 830.49 | 0.00 | 0.29 | 0.00 | 104.92 | 800.00 |
| 214.900 | 2890.00 | 831.86 | 0.00 | 0.32 | 0.00 | 104.96 | 800.00 |
| 214.900 | 3370.00 | 832.44 | 0.00 | 0.32 | 0.00 | 104.98 | 800.00 |
| 214.900 | 4650.00 | 834.20 | 0.00 | 0.26 | 3.71 | 105.55 | 800.00 |
| 215.000 | 1850.00 | 830.49 | 0.00 | 0.00 | 0.00 | 104.72 | 37.00 |
| 215.000 | 2890.00 | 832.29 | 0.00 | 0.74 | 0.00 | 104.99 | 37.00 |
| 215.000 | 3370.00 | 832.95 | 0.00 | 0.50 | 0.00 | 104.99 | 37.00 |
| 215.000 | 4650.00 | 834.89 | 0.00 | 0.70 | 4.41 | 106.03 | 37.00 |

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| SECNO | Q | CUSEL | DIFUSP | DIFWSX | DIFKWS | TOPWID | XLCP |
|---|---|---|---|---|---|---|---|
| 215.100 | 1850.00 | 830.54 | 0.00 | 0.05 | 0.00 | 300.00 | 100.00 |
| 215.100 | 2[illegible].00 | 832.[illegible] | 0.00 | 0.10 | 0.00 | 300.00 | 100.00 |
| 215.100 | 3[illegible].00 | [illegible] | 0.00 | 0.12 | 0.00 | 300.00 | 100.00 |
| 215.100 | 4[illegible].00 | [illegible] | 0.00 | 0.17 | 4.32 | 300.00 | 100.00 |

SUMMARY OF ERRORS

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

FLOOD INSURANCE ZONE DATA FOR BATTLE CREEK RIVER

FLOOD HAZARD FACTOR FOR ENTIRE REACH BASIC SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10% | 2% | 0.2% |
|---|---|---|---|---|
| 23.000 | 0. | 0.0 | 0.0 | 0.0 |
| 23.500 | 575. | -1.1 | -0.4 | 1.0 |
| 24.000 | 678. | -1.4 | -0.4 | 1.1 |
| 24.800 | 689. | -1.3 | -0.4 | 1.0 |
| 24.900 | 690. | -1.3 | -0.4 | 1.0 |
| 25.000 | 756. | -1.3 | -0.4 | 1.0 |
| 25.100 | 757. | -1.4 | -0.4 | 1.1 |
| 26.000 | 932. | -1.4 | -0.4 | 1.0 |
| 26.800 | 1027. | -1.7 | -0.5 | 1.3 |
| 26.900 | 1028. | -1.7 | -0.5 | 1.3 |
| 27.000 | 1550. | -1.7 | -0.5 | 1.2 |
| 27.100 | 1139. | -1.7 | -0.5 | 1.3 |
| 28.000 | 1196. | -1.8 | -0.5 | 1.3 |
| 28.100 | 1 09. | -1.8 | -0.5 | 1.4 |
| 28.900 | 1510. | -1.9 | -0.6 | 1.4 |
| 29.000 | 1616. | -1.9 | -0.6 | 1.4 |
| 29.100 | 1617. | -1.9 | -0.6 | 1.4 |
| 29.200 | 1707. | -1.9 | -0.6 | 1.4 |
| 29.300 | 1797. | -2.0 | -0.6 | 1.4 |
| 29.900 | 175.. | -2.0 | -0.6 | 1.4 |
| 30.000 | 1852. | -2.0 | -0.6 | 1.4 |
| 30.100 | 1853. | -2.0 | -0.6 | 1.4 |
| 31.000 | 1933. | -2.0 | -0.6 | 1.4 |
| 31.100 | 2025. | -2.1 | -0.6 | 1.5 |
| 31.200 | 2026. | -2.1 | -0.6 | 1.5 |
| 31.300 | 2150. | -2.1 | -0.6 | 1.6 |
| 31.400 | 2001. | -2.1 | -0.6 | 1.8 |
| 31.500 | 2186. | -2.1 | -0.6 | 1.7 |
| 31.600 | 2187. | -2.1 | -0.6 | 1.7 |
| 31.700 | 2254. | -2.0 | -0.6 | 1.7 |
| 32.900 | 2355. | -1.9 | -0.5 | 1.6 |
| 33.500 | 2305. | -2.1 | -0.6 | 1.7 |
| 33.100 | 2306. | -2.4 | -0.7 | 2.1 |
| 34.000 | 2406. | -2.3 | -0.7 | 2.1 |
| 35.000 | 3006. | -2.3 | -0.7 | 1.9 |
| 35.800 | 3104. | -2.3 | -0.7 | 1.9 |
| 35.900 | 3107. | -2.3 | -0.7 | 1.9 |
| 36.000 | 3173. | -2.3 | -0.7 | 1.9 |
| 36.100 | 3173. | -2.5 | -0.8 | 2.0 |
| 36.200 | 3247. | -2.4 | -0.7 | 2.0 |
| 36.300 | 3249. | -2.5 | -0.8 | 2.0 |
| 37.000 | 3819. | -2.6 | -0.8 | 2.4 |
| 37.100 | 3819. | -2.7 | -0.8 | 2.5 |
| 37.800 | 3926. | -2.6 | -0.8 | 2.5 |
| 37.900 | 3935. | -2.6 | -0.8 | 2.7 |
| 38.000 | 4001. | -2.9 | -0.9 | 3.0 |
| 38.900 | 4002. | -2.9 | -0.9 | 2.9 |
| 39.000 | 4068. | -2.9 | -0.9 | 3.3 |
| 39.100 | 4069. | -3.0 | -0.9 | 3.7 |
| 40.000 | 4236. | -3.2 | -0.9 | 3.7 |
| 40.900 | 4369. | -3.0 | -0.9 | 3.6 |
| 41.000 | 4435. | -3.4 | -1.1 | 4.2 |
| 42.000 | 4640. | -3.5 | -1.1 | 4.2 |

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| | | | | |
|---|---|---|---|---|
| 43.900 | 4865. | -3.5 | -1.1 | 4.2 |
| 44.000 | 4941. | -3.8 | -1.2 | 4.4 |
| 44.900 | 5041. | -3.8 | -1.2 | 4.4 |
| 45.000 | 5137. | -4.5 | -1.3 | 4.2 |
| 46.000 | 5237. | -4.5 | -1.3 | 4.2 |
| 46.500 | 5937. | -4.4 | -1.3 | 4.1 |
| 47.000 | 6637. | -4.4 | -1.3 | 4.1 |
| 47.900 | 6737. | -4.4 | -1.3 | 4.1 |
| 48.000 | 6797. | -4.6 | -1.4 | 4.1 |
| 48.200 | 6947. | -4.6 | -1.4 | 4.1 |
| 48.300 | 6949. | -4.6 | -1.4 | 4.1 |
| 48.400 | 6951. | -4.6 | -1.4 | 4.1 |
| 48.800 | 7471. | -4.6 | -1.3 | 4.0 |
| 49.000 | 8121. | -4.3 | -1.3 | 4.0 |
| 49.900 | 8221. | -4.3 | -1.3 | 4.0 |
| 50.000 | 8271. | -4.5 | -1.4 | 4.0 |
| 50.100 | 8371. | -4.5 | -1.4 | 4.0 |
| 51.000 | 9101. | -4.5 | -1.4 | 4.0 |
| 52.000 | 9901. | -4.4 | -1.4 | 3.9 |
| 53.000 | 12501. | -4.2 | -1.4 | 3.9 |
| 54.000 | 13951. | -4.1 | -1.3 | 3.8 |
| 55.000 | 15601. | -3.8 | -1.3 | 3.7 |
| 55.100 | 15601. | -3.8 | -1.3 | 3.7 |
| 55.900 | 15702. | -3.7 | -1.2 | 3.6 |
| 56.000 | 15733. | -3.7 | -1.2 | 3.7 |
| 56.100 | 15754. | -3.8 | -1.3 | 3.9 |
| 56.200 | 15754. | -3.8 | -1.3 | 3.9 |
| 56.900 | 16204. | -3.7 | -1.2 | 3.8 |
| 57.000 | 16203. | -3.5 | -0.5 | 3.8 |
| 57.100 | 16253. | -1.5 | -0.5 | 2.9 |
| 200.000 | 16653. | -1.5 | -0.5 | 2.5 |
| 201.000 | 17108. | -1.8 | -0.6 | 2.4 |
| 202.000 | 18408. | -1.9 | -0.6 | 2.4 |
| 203.000 | 20908. | -2.0 | -0.6 | 2.4 |
| 204.000 | 22108. | -2.0 | -0.6 | 2.3 |
| 205.000 | 23908. | -2.1 | -0.6 | 2.3 |
| 206.000 | 25433. | -2.1 | -0.6 | 2.3 |
| 207.000 | 26358. | -2.1 | -0.6 | 2.2 |
| 208.000 | 28258. | -2.1 | -0.6 | 2.2 |
| 209.000 | 31950. | -2.0 | -0.6 | 2.2 |
| 210.000 | 35400. | -2.0 | -0.6 | 2.1 |
| 211.000 | 36783. | -2.0 | -0.6 | 2.0 |
| 212.000 | 38403. | -2.0 | -0.6 | 2.0 |
| 213.000 | 42583. | -1.9 | -0.6 | 1.8 |
| 214.900 | 43303. | -2.0 | -0.6 | 1.8 |
| 215.000 | 43420. | -2.5 | -0.7 | 1.9 |
| 215.100 | 43520. | -2.5 | -0.8 | 2.0 |
| WEIGHTED AVG FOR REACH | | -2.6 | -0.8 | 2.6 |

FHF FOR THE REACH = 025 WITH 71.5¢ OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 5

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | AVG ELEVATION DATA 10¢ | 1¢ | DIFF. | WTD. AVG. | FHF | PERCENT WITHIN |
|---|---|---|---|---|---|---|---|

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0. | | | | | SEC. | 23.000 | |
| 1 | 100. | 807.9 | 807.9 | -0.1 | -0.1 | 005 | 100. | |
| 2 | 200. | 808.0 | 808.2 | -0.2 | -0.2 | 005 | 100. | |
| 3 | 300. | 808.1 | 808.5 | -0.4 | -0.2 | 005 | 100. | |
| 4 | 400. | 808.2 | 808.7 | -0.5 | -0.3 | 005 | 100. | |
| 5 | 500. | 808.4 | 809.1 | -0.7 | -0.4 | 005 | 100. | |
| 6 | 600. | 808.5 | 809.4 | -0.9 | -0.5 | 005 | 100. | |
| | 675. | | | | | SEC. | 23.900 | |
| | 675. | | | | | SEC. | 24.000 | |
| | 689. | | | | | SEC. | 24.800 | |
| | 695. | | | | | SEC. | 24.900 | |
| 7 | 700. | 811.5 | 812.7 | -1.3 | -0.9 | 005 | 71. | |
| | 754. | | | | | SEC. | 25.300 | |
| | 757. | | | | | SEC. | 25.400 | |
| 8 | 800. | 812.1 | 813.5 | -1.4 | -0.7 | 005 | 68. | |
| | 832. | | | | | SEC. | 26.000 | |
| 9 | 900. | 812.2 | 813.6 | -1.4 | -0.8 | 010 | 66. | |
| 10 | 1000. | 812.5 | 814.0 | -1.5 | -0.8 | 010 | 60. | |
| | 1027. | | | | | SEC. | 26.600 | |
| | 1028. | | | | | SEC. | 26.900 | |
| | 1058. | | | | | SEC. | 27.000 | |
| | 1059. | | | | | SEC. | 27.100 | |
| 11 | 1100. | 813.0 | 814.7 | -1.7 | -1.0 | 010 | 55. | |
| 12 | 1200. | 813.2 | 814.7 | -1.5 | -1.1 | 010 | 50. | |
| 13 | 1300. | 813.2 | 814.8 | -1.6 | -1.2 | 010 | 54. | |
| | 1330. | | | | | SEC. | 28.000 | |
| 14 | 1400. | 813.3 | 815.0 | -1.7 | -1.1 | 010 | 45. | |
| 15 | 1500. | 813.5 | 815.3 | -1.7 | -1.2 | 010 | 40. | |
| 16 | 1600. | 813.7 | 815.7 | -1.9 | -1.3 | 010 | 40. | |
| | 1609. | | | | | SEC. | 28.600 | |
| | 1611. | | | | | SEC. | 28.900 | |
| | 1616. | | | | | SEC. | 29.000 | |
| | 1617. | | | | | SEC. | 29.100 | |
| 17 | 1700. | 814.0 | 815.8 | -1.9 | -1.2 | 010 | 53. | |
| | 1707. | | | | | SEC. | 29.200 | |
| | 1707. | | | | | SEC. | 29.800 | |
| | 1711. | | | | | SEC. | 29.900 | |
| 18 | 1800. | 814.3 | 816.3 | -2.0 | -1.3 | 015 | 56. | |
| | 1852. | | | | | SEC. | 30.000 | |
| | 1853. | | | | | SEC. | 30.100 | |
| 19 | 1901. | 814.4 | 816.4 | -2.0 | -1.3 | 015 | 53.0 | |
| | 1930. | | | | | SEC. | 31.000 | |
| 20 | 2000. | 814.5 | 816.5 | -2.0 | -1.3 | 015 | 55. | |
| | 2023. | | | | | SEC. | 31.100 | |
| | 2026. | | | | | SEC. | 31.200 | |
| | 2080. | | | | | SEC. | 31.300 | |
| | 2077. | | | | | SEC. | 31.400 | |
| 21 | 2100. | 814.6 | 816.6 | -2.1 | -1.4 | 015 | 52. | |
| | 2136. | | | | | SEC. | 31.500 | |
| | 2187. | | | | | SEC. | 31.600 | |
| 22 | 2200. | 815.0 | 817.1 | -2.1 | -1.4 | 015 | 50. | |
| | 2234. | | | | | SEC. | 31.700 | |
| | 2235. | | | | | SEC. | 32.400 | |
| 23 | 2300. | 815.7 | 817.8 | -2.0 | -1.4 | 015 | 49. | |
| | 2305. | | | | | SEC. | 33.000 | |
| | 2306. | | | | | SEC. | 33.100 | |
| 24 | 2400. | 815.9 | 818.3 | -2.4 | -1.5 | 015 | 50. | |
| | 2406. | | | | | SEC. | 34.000 | |
| 25 | 2500. | 816.1 | 818.5 | -2.3 | -1.5 | 015 | 52. | |
| 26 | 2600. | 816.4 | 818.7 | -2.3 | -1.5 | 015 | 54. | |
| 27 | 2700. | 816.7 | 819.0 | -2.3 | -1.6 | 015 | 56. | |
| 28 | 2800. | 817.0 | 819.3 | -2.3 | -1.6 | 015 | 57. | |
| 29 | 2900. | 817.2 | 819.5 | -2.3 | -1.6 | 015 | 55. | |
| 30 | 3000. | 817.3 | 819.8 | -2.5 | -1.6 | 015 | 57. | |

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|---|---|---|---|---|---|---|---|---|
| | 3006. | | | | | SEC. | 35.000 | |
| 31 | 3100. | 817.8 | 820.1 | -2.3 | -1.7 | 015 | | 55. |
| | 3106. | | | | | SEC. | 35.300 | |
| | 3107. | | | | | SEC. | 35.900 | |
| | 3172. | | | | | SEC. | 36.000 | |
| | 3173. | | | | | SEC. | 36.100 | |
| 32 | 3200. | 818.1 | 820.8 | -2.7 | -1.7 | 015 | | 51. |
| | 3247. | | | | | SEC. | 36.200 | |
| | 3248. | | | | | SEC. | 36.300 | |
| 33 | 3300. | 818.2 | 820.7 | -2.5 | -1.7 | 015 | | 52. |
| 34 | 3400. | 818.3 | 820.8 | -2.5 | -1.7 | 015 | | 50. |
| 35 | 3500. | 818.5 | 821.0 | -2.5 | -1.7 | 020 | | 49. |
| 36 | 3600. | 818.7 | 821.2 | -2.5 | -1.7 | 020 | | 47. |
| 37 | 3700. | 818.9 | 821.5 | -2.6 | -1.8 | 020 | | 51. |
| 38 | 3800. | 819.0 | 821.7 | -2.6 | -1.8 | 020 | | 53. |
| | 3818. | | | | | SEC. | 37.000 | |
| | 3819. | | | | | SEC. | 37.900 | |
| 39 | 3900. | 819.2 | 821.8 | -2.6 | -1.8 | 020 | | 56. |
| | 3934. | | | | | SEC. | 37.300 | |
| | 3935. | | | | | SEC. | 37.900 | |
| 40 | 4000. | 819.4 | 822.1 | -2.7 | -1.9 | 020 | | 51. |
| | 4001. | | | | | SEC. | 38.000 | |
| | 4002. | | | | | SEC. | 38.900 | |
| | 4003. | | | | | SEC. | 39.000 | |
| | 4004. | | | | | SEC. | 39.100 | |
| 41 | 4100. | 819.6 | 822.9 | -3.0 | -1.9 | 020 | | 59. |
| 42 | 4200. | 819.9 | 822.9 | -3.0 | -1.9 | 020 | | 52. |
| | 4234. | | | | | SEC. | 40.000 | |
| 43 | 4300. | 820.0 | 823.1 | -3.1 | -1.9 | 020 | | 47. |
| | 4369. | | | | | SEC. | 40.400 | |
| 44 | 4400. | 820.2 | 823.2 | -3.1 | -2.0 | 020 | | 52. |
| | 4415. | | | | | SEC. | 41.000 | |
| 45 | 4500. | 820.2 | 823.5 | -3.4 | -2.0 | 020 | | 56. |
| 46 | 4600. | 820.2 | 823.7 | -3.5 | -2.0 | 020 | | 30. |
| | 4640. | | | | | SEC. | 42.300 | |
| 47 | 4730. | 820.3 | 823.8 | -3.5 | -2.0 | 020 | | 79. |
| 48 | 4800. | 820.3 | 823.8 | -3.5 | -2.1 | 020 | | 77. |
| | 4865. | | | | | SEC. | 43.900 | |
| 49 | 4900. | 820.4 | 823.9 | -3.5 | -2.1 | 020 | | 76. |
| | 4961. | | | | | SEC. | 44.300 | |
| 50 | 5000. | 820.4 | 824.1 | -3.7 | -2.2 | 020 | | 76. |
| | 5061. | | | | | SEC. | 44.800 | |
| 51 | 5100. | 820.4 | 824.4 | -4.0 | -2.2 | 020 | | 75. |
| | 5137. | | | | | SEC. | 45.000 | |
| 52 | 5200. | 820.4 | 824.8 | -4.3 | -2.2 | 020 | | 73. |
| | 5237. | | | | | SEC. | 46.000 | |
| 53 | 5300. | 820.5 | 824.9 | -4.5 | -2.3 | 025 | | 72. |
| 54 | 5400. | 820.5 | 824.9 | -4.4 | -2.3 | 025 | | 69. |
| 55 | 5500. | 820.6 | 825.0 | -4.4 | -2.4 | 025 | | 67. |
| 56 | 5600. | 820.6 | 825.1 | -4.4 | -2.4 | 025 | | 68. |
| 57 | 5700. | 820.7 | 825.1 | -4.4 | -2.4 | 025 | | 63. |
| 58 | 5800. | 820.7 | 825.2 | -4.4 | -2.5 | 025 | | 62. |
| 59 | 5900. | 820.8 | 825.2 | -4.4 | -2.5 | 025 | | 66. |
| | 5937. | | | | | SEC. | 46.500 | |
| 60 | 6000. | 820.8 | 825.3 | -4.4 | -2.5 | 025 | | 65. |
| 61 | 6100. | 820.9 | 825.3 | -4.4 | -2.6 | 025 | | 64. |
| 62 | 6200. | 820.9 | 825.3 | -4.4 | -2.6 | 025 | | 63. |
| 63 | 6300. | 820.9 | 825.3 | -4.4 | -2.6 | 025 | | 62. |
| 64 | 6400. | 820.9 | 825.4 | -4.4 | -2.6 | 025 | | 61. |
| 65 | 6500. | 821.0 | 825.4 | -4.4 | -2.7 | 025 | | 57. |
| 66 | 6600. | 821.0 | 825.4 | -4.4 | -2.7 | 025 | | 53. |
| | 6637. | | | | | SEC. | 47.000 | |
| 67 | 6700. | 821.0 | 825.4 | -4.4 | -2.7 | 025 | | 54. |
| | 6737. | | | | | SEC. | 47.900 | |

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| | 6797. | | | | SEC. | 43.300 | |
| 68 | 6800. | 821.1 | 825.7 | -4.6 | -2.7 | 025 | 51. |
| 69 | 6900. | 821.1 | 825.7 | -4.6 | -2.8 | 030 | 51. |
| | 6947. | | | | SEC. | 45.200 | |
| | 6949. | | | | SEC. | 45.300 | |
| | 6951. | | | | SEC. | 45.400 | |
| 70 | 7000. | 821.1 | 825.7 | -4.6 | -2.9 | 030 | 50. |
| 71 | 7100. | 821.2 | 825.7 | -4.5 | -2.8 | 030 | 48. |
| 72 | 7200. | 821.2 | 825.7 | -4.5 | -2.8 | 030 | 47. |
| 73 | 7300. | 821.3 | 825.8 | -4.5 | -2.9 | 030 | 47. |
| 74 | 7400. | 821.3 | 825.8 | -4.5 | -2.9 | 030 | 45. |
| | 7494. | | | | SEC. | 47.900 | |
| 75 | 7500. | 821.4 | 825.8 | -4.4 | -2.9 | 030 | 44. |
| 76 | 7600. | 821.4 | 825.8 | -4.4 | -2.9 | 030 | 43. |
| 77 | 7700. | 821.4 | 825.8 | -4.4 | -3.0 | 030 | 42. |
| 78 | 7800. | 821.5 | 825.8 | -4.4 | -3.0 | 030 | 41. |
| 79 | 7900. | 821.5 | 825.9 | -4.4 | -3.0 | 030 | 40. |
| 80 | 8000. | 821.5 | 825.9 | -4.4 | -3.0 | 030 | 39. |
| 81 | 8100. | 821.5 | 825.9 | -4.3 | -3.0 | 030 | 38. |
| | 8121. | | | | SEC. | 49.300 | |
| 82 | 8200. | 821.5 | 825.9 | -4.3 | -3.0 | 030 | 38. |
| | 8221. | | | | SEC. | 49.900 | |
| | 8271. | | | | SEC. | 50.200 | |
| 83 | 8300. | 821.6 | 826.1 | -4.5 | -3.1 | 030 | 36. |
| | 8321. | | | | SEC. | 50.100 | |
| 84 | 8400. | 821.6 | 826.2 | -4.5 | -3.1 | 030 | 36. |
| 85 | 8500. | 821.7 | 826.2 | -4.5 | -3.1 | 030 | 34. |
| 86 | 8600. | 821.7 | 826.2 | -4.5 | -3.1 | 030 | 34. |
| 87 | 8700. | 821.7 | 826.2 | -4.5 | -3.1 | 030 | 33. |
| 88 | 8800. | 821.8 | 826.2 | -4.5 | -3.1 | 030 | 32. |
| 89 | 8900. | 821.8 | 826.2 | -4.5 | -3.2 | 030 | 32. |
| 90 | 9000. | 821.8 | 826.3 | -4.5 | -3.2 | 030 | 31. |
| 91 | 9100. | 821.8 | 826.3 | -4.5 | -3.2 | 030 | 31. |
| | 9101. | | | | SEC. | 51.000 | |
| 92 | 9200. | 821.9 | 826.4 | -4.5 | -3.2 | 030 | 30. |
| 93 | 9300. | 821.9 | 826.4 | -4.5 | -3.2 | 030 | 30. |
| 94 | 9400. | 821.9 | 826.4 | -4.5 | -3.2 | 030 | 29. |
| 95 | 9500. | 821.9 | 826.4 | -4.5 | -3.2 | 030 | 29. |
| 96 | 9600. | 821.9 | 826.4 | -4.4 | -3.3 | 035 | 29. |
| 97 | 9700. | 821.9 | 826.4 | -4.4 | -3.3 | 035 | 29. |
| 98 | 9800. | 822.0 | 826.4 | -4.4 | -3.3 | 035 | 28. |
| 99 | 9900. | 822.0 | 826.4 | -4.4 | -3.3 | 035 | 27. |
| | 9901. | | | | SEC. | 52.000 | |
| 100 | 10000. | 822.0 | 826.4 | -4.4 | -3.3 | 035 | 25. |
| 101 | 10100. | 822.0 | 826.4 | -4.4 | -3.3 | 035 | 24. |
| 102 | 10200. | 822.0 | 826.4 | -4.4 | -3.3 | 035 | 23. |
| 103 | 10300. | 822.0 | 826.4 | -4.4 | -3.3 | 035 | 21. |
| 104 | 10400. | 822.0 | 826.4 | -4.4 | -3.3 | 035 | 22. |
| 105 | 10500. | 822.0 | 826.4 | -4.4 | -3.4 | 035 | 22. |
| 106 | 10600. | 822.1 | 826.4 | -4.4 | -3.4 | 035 | 23. |
| 107 | 10700. | 822.1 | 826.4 | -4.4 | -3.4 | 035 | 25. |
| 108 | 10800. | 822.1 | 826.4 | -4.3 | -3.4 | 035 | 27. |
| 109 | 10900. | 822.1 | 826.4 | -4.3 | -3.4 | 035 | 29. |
| 110 | 11000. | 822.1 | 826.4 | -4.3 | -3.4 | 035 | 32. |
| 111 | 11100. | 822.1 | 826.4 | -4.3 | -3.4 | 035 | 33. |
| 112 | 11200. | 822.1 | 826.4 | -4.3 | -3.4 | 035 | 38. |
| 113 | 11300. | 822.1 | 826.4 | -4.3 | -3.4 | 035 | 41. |
| 114 | 11400. | 822.1 | 826.5 | -4.3 | -3.4 | 035 | 44. |
| 115 | 11500. | 822.2 | 826.5 | -4.3 | -3.4 | 035 | 47. |
| 116 | 11600. | 822.2 | 826.5 | -4.3 | -3.4 | 035 | 51. |
| 117 | 11700. | 822.2 | 826.5 | -4.3 | -3.5 | 035 | 54. |
| 118 | 11800. | 822.2 | 826.5 | -4.3 | -3.5 | 035 | 57. |
| 119 | 11900. | 822.2 | 826.5 | -4.3 | -3.5 | 035 | 57. |
| 120 | 12000. | 822.2 | 826.5 | -4.3 | -3.5 | 035 | 58. |

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|---|---|---|---|---|---|---|---|---|
| | 121 | 12100. | 822.2 | 826.5 | -4.3 | -3.5 | 035 | 60. |
| | 122 | 12200. | 822.2 | 826.5 | -4.2 | -3.5 | 035 | 60. |
| | 123 | 12300. | 822.2 | 826.5 | -4.2 | -3.5 | 035 | 61. |
| | 124 | 12400. | 822.3 | 826.5 | -4.2 | -3.5 | 035 | 62. |
| | 125 | 12500. | 822.3 | 826.5 | -4.2 | -3.5 | 035 | 63. |
| | | 12501. | | | | SEC. | 50.700 | |
| | 126 | 12600. | 822.3 | 826.5 | -4.2 | -3.5 | 035 | 64. |
| | 127 | 12700. | 822.3 | 826.5 | -4.2 | -3.5 | 035 | 65. |
| | 128 | 12800. | 822.3 | 826.5 | -4.2 | -3.5 | 035 | 66. |
| | 129 | 12900. | 822.3 | 826.5 | -4.2 | -3.5 | 035 | 67. |
| | 130 | 13000. | 822.4 | 826.5 | -4.2 | -3.5 | 035 | 67. |
| | 131 | 13100. | 822.4 | 826.5 | -4.2 | -3.5 | 035 | 68. |
| | 132 | 13200. | 822.4 | 826.5 | -4.1 | -3.5 | 035 | 69. |
| | 133 | 13300. | 822.4 | 826.5 | -4.1 | -3.5 | 035 | 71. |
| | 134 | 13400. | 822.4 | 826.6 | -4.1 | -3.5 | 035 | 72. |
| | 135 | 13500. | 822.4 | 826.6 | -4.1 | -3.6 | 035 | 72. |
| | 136 | 13600. | 822.5 | 826.6 | -4.1 | -3.6 | 035 | 72. |
| | 137 | 13700. | 822.5 | 826.6 | -4.1 | -3.6 | 035 | 73. |
| | 138 | 13800. | 822.5 | 826.6 | -4.1 | -3.6 | 035 | 73. |
| | 139 | 13900. | 822.5 | 826.6 | -4.1 | -3.6 | 035 | 73. |
| | | 13951. | | | | SEC. | 54.000 | |
| | 140 | 14000. | 822.5 | 826.6 | -4.1 | -3.6 | 035 | 73. |
| | 141 | 14100. | 822.6 | 826.6 | -4.0 | -3.6 | 035 | 74. |
| | 142 | 14200. | 822.6 | 826.6 | -4.0 | -3.6 | 035 | 74. |
| | 143 | 14300. | 822.6 | 826.6 | -4.0 | -3.6 | 035 | 75. |
| | 144 | 14400. | 822.6 | 826.6 | -4.0 | -3.6 | 035 | 75. |
| | 145 | 14500. | 822.7 | 826.7 | -4.0 | -3.6 | 035 | 75. |
| | 146 | 14600. | 822.7 | 826.7 | -4.0 | -3.6 | 035 | 75. |
| | 147 | 14700. | 822.7 | 826.7 | -3.9 | -3.6 | 035 | 76. |
| | 148 | 14800. | 822.8 | 826.7 | -3.9 | -3.6 | 035 | 76. |
| | 149 | 14900. | 822.8 | 826.7 | -3.9 | -3.6 | 035 | 76. |
| | 150 | 15000. | 822.8 | 826.7 | -3.9 | -3.6 | 035 | 75. |
| | 151 | 15100. | 822.8 | 826.7 | -3.9 | -3.6 | 035 | 75. |
| | 152 | 15200. | 822.9 | 826.7 | -3.9 | -3.6 | 035 | 76. |
| | 153 | 15300. | 822.9 | 826.7 | -3.8 | -3.6 | 035 | 76. |
| | 154 | 15400. | 822.9 | 826.7 | -3.8 | -3.6 | 035 | 76. |
| | 155 | 15500. | 823.0 | 826.7 | -3.8 | -3.6 | 035 | 76. |
| | 156 | 15600. | 823.0 | 826.8 | -3.8 | -3.6 | 035 | 76. |
| | | 15601. | | | | SEC. | 55.000 | |
| | 157 | 15700. | 823.0 | 826.8 | -3.8 | -3.6 | 035 | 76. |
| | | 15701. | | | | SEC. | 55.100 | |
| | | 15702. | | | | SEC. | 55.900 | |
| | | 15703. | | | | SEC. | 56.000 | |
| | | 15754. | | | | SEC. | 56.100 | |
| | 158 | 15800. | 823.1 | 826.9 | -3.8 | -3.6 | 035 | 77. |
| | | 15854. | | | | SEC. | 56.200 | |
| | 159 | 15900. | 823.2 | 827.0 | -3.8 | -3.6 | 035 | 77. |
| | 160 | 16000. | 823.2 | 827.0 | -3.8 | -3.6 | 035 | 77. |
| | 161 | 16100. | 823.3 | 827.0 | -3.8 | -3.6 | 035 | 77. |
| | 162 | 16200. | 823.3 | 827.1 | -3.7 | -3.6 | 035 | 77. |
| | | 16204. | | | | SEC. | 56.900 | |
| | | 16208. | | | | SEC. | 57.000 | |
| | | 16358. | | | | SEC. | 57.100 | |
| | 163 | 16300. | 826.3 | 828.5 | -1.6 | -3.6 | 035 | 77. |
| | 164 | 16400. | 826.5 | 828.7 | -1.6 | -3.6 | 035 | 77. |
| | 165 | 16500. | 827.1 | 828.7 | -1.6 | -3.6 | 035 | 75. |
| | 166 | 16600. | 827.3 | 829.0 | -1.7 | -3.6 | 035 | 75. |
| | | 16683. | | | | SEC. | 200.000 | |
| | 167 | 16700. | 827.5 | 829.3 | -1.7 | -3.6 | 035 | 74. |
| | 168 | 16800. | 827.6 | 829.4 | -1.8 | -3.5 | 035 | 72. |
| | 169 | 16900. | 827.6 | 829.4 | -1.8 | -3.5 | 035 | 70. |
| | 170 | 17000. | 827.7 | 829.5 | -1.8 | -3.5 | 035 | 70. |
| | 171 | 17100. | 827.7 | 829.5 | -1.8 | -3.5 | 035 | 65. |
| | | 17108. | | | | SEC. | 201.000 | |

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| 172 | 17200. | 827.7 | 829.6 | -1.8 | -3.5 | 035 | 67. |
| 173 | 17300. | 827.7 | 829.6 | -1.8 | -3.5 | 035 | 66. |
| 174 | 17400. | 827.7 | 829.6 | -1.8 | -3.5 | 035 | 65. |
| 175 | 17500. | 827.7 | 829.6 | -1.9 | -3.5 | 035 | 64. |
| 176 | 17600. | 827.7 | 829.6 | -1.9 | -3.5 | 035 | 63. |
| 177 | 17700. | 827.8 | 829.6 | -1.9 | -3.5 | 035 | 62. |
| 178 | 17800. | 827.8 | 829.6 | -1.9 | -3.4 | 035 | 60. |
| 179 | 17900. | 827.8 | 829.6 | -1.9 | -3.4 | 035 | 57. |
| 180 | 18000. | 827.8 | 829.6 | -1.9 | -3.4 | 035 | 54. |
| 181 | 18100. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 52. |
| 182 | 18200. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 50. |
| 183 | 18300. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 48. |
| 184 | 18400. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 47. |
| | 18408. | | | | SEC. 202.030 | | |
| 185 | 18500. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 46. |
| 186 | 18600. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 44. |
| 187 | 18700. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 44. |
| 188 | 18800. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 43. |
| 189 | 18900. | 827.8 | 829.7 | -1.9 | -3.4 | 035 | 42. |
| 190 | 19000. | 827.8 | 829.8 | -1.9 | -3.3 | 035 | 41. |
| 191 | 19100. | 827.9 | 829.8 | -1.9 | -3.3 | 035 | 40. |
| 192 | 19200. | 827.9 | 829.8 | -1.9 | -3.3 | 035 | 39. |
| 193 | 19300. | 827.9 | 829.8 | -1.9 | -3.3 | 035 | 38. |
| 194 | 19400. | 827.9 | 829.8 | -1.9 | -3.3 | 035 | 38. |
| 195 | 19500. | 827.9 | 829.8 | -1.9 | -3.3 | 035 | 37. |
| 196 | 19600. | 827.9 | 829.8 | -1.9 | -3.3 | 035 | 37. |
| 197 | 19700. | 827.9 | 829.8 | -1.9 | -3.3 | 035 | 37. |
| 198 | 19800. | 827.9 | 829.9 | -1.9 | -3.3 | 035 | 37. |
| 199 | 19900. | 827.9 | 829.9 | -1.9 | -3.3 | 035 | 37. |
| 200 | 20000. | 827.9 | 829.9 | -1.9 | -3.3 | 035 | 37. |
| 201 | 20100. | 827.9 | 829.9 | -1.9 | -3.3 | 035 | 36. |
| 202 | 20200. | 827.9 | 829.9 | -2.0 | -3.3 | 035 | 35. |
| 203 | 20300. | 828.0 | 829.9 | -2.0 | -3.3 | 035 | 34. |
| 204 | 20400. | 828.0 | 829.9 | -2.0 | -3.2 | 030 | 34. |
| 205 | 20500. | 828.0 | 829.9 | -2.0 | -3.2 | 030 | 34. |
| 206 | 20600. | 828.0 | 829.9 | -2.0 | -3.2 | 030 | 34. |
| 207 | 20700. | 828.0 | 829.9 | -2.0 | -3.2 | 030 | 34. |
| 208 | 20800. | 828.0 | 830.0 | -2.0 | -3.2 | 030 | 32. |
| 209 | 20900. | 828.0 | 830.0 | -2.0 | -3.2 | 030 | 31. |
| | 20908. | | | | SEC. 203.030 | | |
| 210 | 21000. | 828.0 | 830.0 | -2.0 | -3.2 | 030 | 31. |
| 211 | 21100. | 828.0 | 830.0 | -2.0 | -3.2 | 030 | 30. |
| 212 | 21200. | 828.0 | 830.0 | -2.0 | -3.2 | 030 | 30. |
| 213 | 21300. | 828.0 | 830.0 | -2.0 | -3.2 | 030 | 30. |
| 214 | 21400. | 828.0 | 830.0 | -2.0 | -3.2 | 030 | 29. |
| 215 | 21500. | 828.1 | 830.1 | -2.0 | -3.2 | 030 | 29. |
| 216 | 21600. | 828.1 | 830.1 | -2.0 | -3.2 | 030 | 28. |
| 217 | 21700. | 828.1 | 830.1 | -2.0 | -3.2 | 030 | 28. |
| 218 | 21800. | 828.1 | 830.1 | -2.0 | -3.2 | 030 | 28. |
| 219 | 21900. | 828.1 | 830.1 | -2.0 | -3.2 | 030 | 27. |
| 220 | 22000. | 828.1 | 830.1 | -2.0 | -3.2 | 030 | 27. |
| 221 | 22100. | 828.1 | 830.1 | -2.0 | -3.2 | 030 | 27. |
| | 22103. | | | | SEC. 204.030 | | |
| 222 | 22200. | 828.1 | 830.1 | -2.0 | -3.1 | 030 | 27. |
| 223 | 22300. | 828.1 | 830.1 | -2.0 | -3.1 | 030 | 26. |
| 224 | 22400. | 828.1 | 830.2 | -2.0 | -3.1 | 030 | 26. |
| 225 | 22500. | 828.1 | 830.2 | -2.0 | -3.1 | 030 | 25. |
| 226 | 22600. | 828.1 | 830.2 | -2.0 | -3.1 | 030 | 25. |
| 227 | 22700. | 828.2 | 830.2 | -2.0 | -3.1 | 030 | 24. |
| 228 | 22800. | 828.2 | 830.2 | -2.0 | -3.1 | 030 | 24. |
| 229 | 22900. | 828.2 | 830.2 | -2.0 | -3.1 | 030 | 24. |
| 230 | 23000. | 828.2 | 830.2 | -2.0 | -3.1 | 030 | 24. |
| 231 | 23100. | 828.2 | 830.2 | -2.0 | -3.1 | 030 | 24. |
| 232 | 23200. | 828.2 | 830.2 | -2.0 | -3.1 | 030 | 24. |

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|---|---|---|---|---|---|---|---|
| 233 | 23300. | 828.2 | 830.2 | -2.1 | -3.1 | 030 | 24. |
| 234 | 23400. | 828.2 | 830.3 | -2.1 | -3.1 | 030 | 23. |
| 235 | 23500. | 828.2 | 830.3 | -2.1 | -3.1 | 030 | 23. |
| 236 | 23600. | 828.2 | 830.3 | -2.1 | -3.1 | 030 | 23. |
| 237 | 23700. | 828.2 | 830.3 | -2.1 | -3.1 | 030 | 23. |
| 238 | 23800. | 828.2 | 830.3 | -2.1 | -3.1 | 030 | 23. |
| 239 | 23900. | 828.2 | 830.3 | -2.1 | -3.1 | 030 | 22. |
| | 23903. | | | | SEC. 205.000 | | |
| 240 | 24000. | 828.3 | 830.3 | -2.1 | -3.1 | 030 | 23. |
| 241 | 24100. | 828.3 | 830.3 | -2.1 | -3.1 | 030 | 24. |
| 242 | 24200. | 828.3 | 830.3 | -2.1 | -3.1 | 030 | 24. |
| 243 | 24300. | 828.3 | 830.3 | -2.1 | -3.1 | 030 | 26. |
| 244 | 24400. | 828.3 | 830.3 | -2.1 | -3.0 | 030 | 26. |
| 245 | 24500. | 828.3 | 830.3 | -2.1 | -3.0 | 030 | 27. |
| 246 | 24600. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 28. |
| 247 | 24700. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 29. |
| 248 | 24800. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 30. |
| 249 | 24900. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 31. |
| 250 | 25000. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 31. |
| 251 | 25100. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 32. |
| 252 | 25200. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 33. |
| 253 | 25300. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 34. |
| 254 | 25400. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 34. |
| | 25435. | | | | SEC. 206.000 | | |
| 255 | 25500. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 35. |
| 256 | 25600. | 828.3 | 830.4 | -2.1 | -3.0 | 030 | 35. |
| 257 | 25700. | 828.4 | 830.4 | -2.1 | -3.0 | 030 | 36. |
| 258 | 25800. | 828.4 | 830.4 | -2.1 | -3.0 | 030 | 37. |
| 259 | 25900. | 828.4 | 830.4 | -2.1 | -3.0 | 030 | 37. |
| 260 | 26000. | 828.4 | 830.4 | -2.1 | -3.0 | 030 | 38. |
| 261 | 26100. | 828.4 | 830.4 | -2.1 | -3.0 | 030 | 38. |
| 262 | 26200. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 39. |
| 263 | 26300. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 40. |
| | 26358. | | | | SEC. 207.000 | | |
| 264 | 26400. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 40. |
| 265 | 26500. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 40. |
| 266 | 26600. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 41. |
| 267 | 26700. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 42. |
| 268 | 26800. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 42. |
| 269 | 26900. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 42. |
| 270 | 27000. | 828.4 | 830.5 | -2.1 | -3.0 | 030 | 43. |
| 271 | 27100. | 828.5 | 830.5 | -2.1 | -3.0 | 030 | 44. |
| 272 | 27200. | 828.5 | 830.5 | -2.1 | -2.9 | 030 | 44. |
| 273 | 27300. | 828.5 | 830.5 | -2.1 | -2.9 | 030 | 45. |
| 274 | 27400. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 45. |
| 275 | 27500. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 45. |
| 276 | 27600. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 46. |
| 277 | 27700. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 47. |
| 278 | 27800. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 47. |
| 279 | 27900. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 47. |
| 280 | 28000. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 48. |
| 281 | 28100. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 48. |
| 282 | 28200. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 49. |
| | 28258. | | | | SEC. 208.000 | | |
| 283 | 28300. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 49. |
| 284 | 28400. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 49. |
| 285 | 28500. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 50. |
| 286 | 28600. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 50. |
| 287 | 28700. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 51. |
| 288 | 28800. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 51. |
| 289 | 28900. | 828.5 | 830.6 | -2.1 | -2.9 | 030 | 51. |
| 290 | 29000. | 828.6 | 830.6 | -2.1 | -2.9 | 030 | 52. |
| 291 | 29100. | 828.6 | 830.6 | -2.1 | -2.9 | 030 | 52. |
| 292 | 29200. | 828.6 | 830.6 | -2.1 | -2.9 | 030 | 52. |

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|---|---|---|---|---|---|---|---|
| 293 | 29300. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 53. |
| 294 | 29400. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 53. |
| 295 | 29500. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 54. |
| 296 | 29600. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 54. |
| 297 | 29700. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 55. |
| 298 | 29800. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 55. |
| 299 | 29900. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 55. |
| 300 | 30000. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 56. |
| 301 | 30100. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 56. |
| 302 | 30200. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 56. |
| 303 | 30300. | 828.6 | 830.7 | -2.1 | -2.9 | 030 | 57. |
| 304 | 30400. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 57. |
| 305 | 30500. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 57. |
| 306 | 30600. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 58. |
| 307 | 30700. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 58. |
| 308 | 30800. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 58. |
| 309 | 30900. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 59. |
| 310 | 31000. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 59. |
| 311 | 31100. | 828.7 | 830.7 | -2.1 | -2.9 | 030 | 59. |
| 312 | 31200. | 828.7 | 830.8 | -2.0 | -2.8 | 030 | 59. |
| 313 | 31300. | 828.7 | 830.8 | -2.0 | -2.8 | 030 | 59. |
| 314 | 31400. | 828.7 | 830.8 | -2.0 | -2.8 | 030 | 60. |
| 315 | 31500. | 828.7 | 830.8 | -2.0 | -2.8 | 030 | 60. |
| 316 | 31600. | 828.7 | 830.8 | -2.0 | -2.8 | 030 | 60. |
| 317 | 31700. | 828.7 | 830.8 | -2.0 | -2.8 | 030 | 60. |
| 318 | 31800. | 828.7 | 830.8 | -2.0 | -2.8 | 030 | 60. |
| 319 | 31900. | 828.8 | 830.8 | -2.0 | -2.8 | 030 | 60. |
| | 31950. | | | | SEC. | 209.000 | |
| 320 | 32000. | 828.8 | 830.8 | -2.0 | -2.8 | 030 | 61. |
| 321 | 32100. | 828.8 | 830.8 | -2.0 | -2.8 | 030 | 61. |
| 322 | 32200. | 828.8 | 830.8 | -2.0 | -2.8 | 030 | 61. |
| 323 | 32300. | 828.8 | 830.8 | -2.0 | -2.8 | 030 | 61. |
| 324 | 32400. | 828.8 | 830.8 | -2.0 | -2.8 | 030 | 61. |
| 325 | 32500. | 828.8 | 830.9 | -2.0 | -2.8 | 030 | 61. |
| 326 | 32600. | 828.8 | 830.9 | -2.0 | -2.8 | 030 | 61. |
| 327 | 32700. | 828.8 | 830.8 | -2.0 | -2.8 | 030 | 61. |
| 328 | 32800. | 828.9 | 830.9 | -2.0 | -2.8 | 030 | 62. |
| 329 | 32900. | 828.9 | 830.9 | -2.0 | -2.8 | 030 | 62. |
| 330 | 33000. | 828.9 | 830.9 | -2.0 | -2.8 | 030 | 62. |
| 331 | 33100. | 828.9 | 830.9 | -2.0 | -2.8 | 030 | 62. |
| 332 | 33200. | 828.9 | 830.9 | -2.0 | -2.8 | 030 | 62. |
| 333 | 33300. | 828.9 | 830.9 | -2.0 | -2.8 | 030 | 62. |
| 334 | 33400. | 828.9 | 830.9 | -2.0 | -2.8 | 030 | 62. |
| | 33408. | | | | SEC. | 210.000 | |
| 335 | 33500. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 336 | 33600. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 337 | 33700. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 338 | 33800. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 339 | 33900. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 340 | 34000. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 341 | 34100. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 342 | 34200. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 343 | 34300. | 829.0 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 344 | 34400. | 829.1 | 831.0 | -2.0 | -2.8 | 030 | 62. |
| 345 | 34500. | 829.1 | 831.1 | -2.0 | -2.8 | 030 | 62. |
| 346 | 34600. | 829.1 | 831.1 | -2.0 | -2.8 | 030 | 62. |
| 347 | 34700. | 829.1 | 831.1 | -2.0 | -2.8 | 030 | 63. |
| 348 | 34800. | 829.1 | 831.1 | -2.0 | -2.8 | 030 | 62. |
| 349 | 34900. | 829.1 | 831.1 | -2.0 | -2.7 | 025 | 62. |
| 350 | 35000. | 829.1 | 831.1 | -2.0 | -2.7 | 025 | 63. |
| 351 | 35100. | 829.1 | 831.1 | -2.0 | -2.7 | 025 | 63. |
| 352 | 35200. | 829.1 | 831.1 | -2.0 | -2.7 | 025 | 63. |
| 353 | 35300. | 829.2 | 831.1 | -2.0 | -2.7 | 025 | 63. |
| 354 | 35400. | 829.2 | 831.1 | -2.0 | -2.7 | 025 | 64. |

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| 355 | 35500. | 829.2 | 831.2 | -2.0 | -2.7 | 025 | 63. |
| 356 | 35600. | 829.2 | 831.2 | -2.0 | -2.7 | 025 | 63. |
| 357 | 35700. | 829.2 | 831.2 | -2.0 | -2.7 | 025 | 64. |
| 358 | 35800. | 829.2 | 831.2 | -2.0 | -2.7 | 025 | 64. |
| 359 | 35900. | 829.2 | 831.2 | -2.0 | -2.7 | 025 | 64. |
| 360 | 36000. | 829.2 | 831.2 | -2.0 | -2.7 | 025 | 64. |
| | 36083. | | | | SEC. | 211.000 | |
| 361 | 36100. | 829.2 | 831.2 | -2.0 | -2.7 | 025 | 64. |
| 362 | 36200. | 829.3 | 831.2 | -2.0 | -2.7 | 025 | 64. |
| 363 | 36300. | 829.3 | 831.2 | -2.0 | -2.7 | 025 | 64. |
| 364 | 36400. | 829.3 | 831.3 | -2.0 | -2.7 | 025 | 64. |
| 365 | 36500. | 829.3 | 831.3 | -2.0 | -2.7 | 025 | 65. |
| 366 | 36600. | 829.3 | 831.3 | -2.0 | -2.7 | 025 | 65. |
| 367 | 36700. | 829.3 | 831.3 | -2.0 | -2.7 | 025 | 65. |
| 368 | 36800. | 829.3 | 831.3 | -2.0 | -2.7 | 025 | 65. |
| 369 | 36900. | 829.4 | 831.3 | -2.0 | -2.7 | 025 | 65. |
| 370 | 37000. | 829.4 | 831.3 | -2.0 | -2.7 | 025 | 65. |
| 371 | 37100. | 829.4 | 831.3 | -2.0 | -2.7 | 025 | 65. |
| 372 | 37200. | 829.4 | 831.4 | -2.0 | -2.7 | 025 | 65. |
| 373 | 37300. | 829.4 | 831.4 | -2.0 | -2.7 | 025 | 65. |
| 374 | 37400. | 829.4 | 831.4 | -2.0 | -2.7 | 025 | 65. |
| 375 | 37500. | 829.4 | 831.4 | -2.0 | -2.7 | 025 | 65. |
| 376 | 37600. | 829.5 | 831.4 | -2.0 | -2.7 | 025 | 65. |
| 377 | 37700. | 829.5 | 831.4 | -2.0 | -2.7 | 025 | 66. |
| 378 | 37800. | 829.5 | 831.4 | -2.0 | -2.7 | 025 | 66. |
| 379 | 37900. | 829.5 | 831.5 | -2.0 | -2.7 | 025 | 66. |
| 380 | 38000. | 829.5 | 831.5 | -2.0 | -2.7 | 025 | 66. |
| 381 | 38100. | 829.5 | 831.5 | -2.0 | -2.7 | 025 | 66. |
| 382 | 38200. | 829.5 | 831.5 | -2.0 | -2.7 | 025 | 66. |
| 383 | 38300. | 829.6 | 831.5 | -2.0 | -2.7 | 025 | 66. |
| 384 | 38400. | 829.6 | 831.5 | -2.0 | -2.7 | 025 | 66. |
| | 38483. | | | | SEC. | 212.000 | |
| 385 | 38500. | 829.6 | 831.5 | -2.0 | -2.7 | 025 | 66. |
| 386 | 38600. | 829.6 | 831.6 | -2.0 | -2.7 | 025 | 67. |
| 387 | 38700. | 829.6 | 831.6 | -2.0 | -2.7 | 025 | 67. |
| 388 | 38800. | 829.6 | 831.6 | -2.0 | -2.7 | 025 | 67. |
| 389 | 38900. | 829.6 | 831.6 | -2.0 | -2.7 | 025 | 67. |
| 390 | 39000. | 829.7 | 831.6 | -2.0 | -2.7 | 025 | 67. |
| 391 | 39100. | 829.7 | 831.6 | -2.0 | -2.7 | 025 | 68. |
| 392 | 39200. | 829.7 | 831.6 | -2.0 | -2.7 | 025 | 68. |
| 393 | 39300. | 829.7 | 831.7 | -2.0 | -2.7 | 025 | 68. |
| 394 | 39400. | 829.7 | 831.7 | -2.0 | -2.7 | 025 | 68. |
| 395 | 39500. | 829.7 | 831.7 | -2.0 | -2.7 | 025 | 68. |
| 396 | 39600. | 829.7 | 831.7 | -2.0 | -2.7 | 025 | 68. |
| 397 | 39700. | 829.8 | 831.7 | -1.9 | -2.7 | 025 | 68. |
| 398 | 39800. | 829.8 | 831.7 | -1.9 | -2.7 | 025 | 68. |
| 399 | 39900. | 829.8 | 831.7 | -1.9 | -2.7 | 025 | 68. |
| 400 | 40000. | 829.8 | 831.7 | -1.9 | -2.6 | 025 | 69. |
| 401 | 40100. | 829.8 | 831.8 | -1.9 | -2.6 | 025 | 69. |
| 402 | 40200. | 829.8 | 831.8 | -1.9 | -2.6 | 025 | 69. |
| 403 | 40300. | 829.8 | 831.8 | -1.9 | -2.6 | 025 | 69. |
| 404 | 40400. | 829.9 | 831.8 | -1.9 | -2.6 | 025 | 69. |
| 405 | 40500. | 829.9 | 831.8 | -1.9 | -2.6 | 025 | 69. |
| 406 | 40600. | 829.9 | 831.8 | -1.9 | -2.6 | 025 | 69. |
| 407 | 40700. | 829.9 | 831.8 | -1.9 | -2.6 | 025 | 69. |
| 408 | 40800. | 829.9 | 831.9 | -1.9 | -2.6 | 025 | 69. |
| 409 | 40900. | 829.9 | 831.9 | -1.9 | -2.6 | 025 | 69. |
| 410 | 41000. | 830.0 | 831.9 | -1.9 | -2.6 | 025 | 69. |
| 411 | 41100. | 830.0 | 831.9 | -1.9 | -2.6 | 025 | 69. |
| 412 | 41200. | 830.0 | 831.9 | -1.9 | -2.6 | 025 | 69. |
| 413 | 41300. | 830.0 | 831.9 | -1.9 | -2.6 | 025 | 69. |
| 414 | 41400. | 830.0 | 831.9 | -1.9 | -2.6 | 025 | 70. |
| 415 | 41500. | 830.0 | 832.0 | -1.9 | -2.6 | 025 | 70. |
| 416 | 41600. | 830.0 | 832.0 | -1.9 | -2.6 | 025 | 70. |

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 417 | 41700. | 830.1 | 832.0 | -1.9 | -2.6 | 025 | 70. |
| 418 | 41800. | 830.1 | 832.0 | -1.9 | -2.6 | 025 | 70. |
| 419 | 41900. | 830.1 | 832.0 | -1.9 | -2.6 | 025 | 70. |
| 420 | 42000. | 830.1 | 832.0 | -1.9 | -2.6 | 025 | 70. |
| 421 | 42100. | 830.1 | 832.0 | -1.9 | -2.6 | 025 | 70. |
| 422 | 42200. | 830.2 | 832.1 | -1.9 | -2.6 | 025 | 70. |
| 423 | 42300. | 830.2 | 832.1 | -1.9 | -2.6 | 025 | 70. |
| 424 | 42400. | 830.2 | 832.1 | -1.9 | -2.6 | 025 | 70. |
| 425 | 42500. | 830.2 | 832.1 | -1.9 | -2.6 | 025 | 70. |
| | 42583. | | | | SEC. | 213.000 | |
| 426 | 42600. | 830.2 | 832.1 | -1.9 | -2.6 | 025 | 70. |
| 427 | 42700. | 830.2 | 832.1 | -1.9 | -2.6 | 025 | 70. |
| 428 | 42800. | 830.3 | 832.2 | -1.9 | -2.6 | 025 | 71. |
| 429 | 42900. | 830.3 | 832.2 | -1.9 | -2.6 | 025 | 71. |
| 430 | 43000. | 830.3 | 832.3 | -1.9 | -2.6 | 025 | 71. |
| 431 | 43100. | 830.4 | 832.3 | -1.9 | -2.6 | 025 | 71. |
| 432 | 43200. | 830.4 | 832.4 | -1.9 | -2.6 | 025 | 71. |
| 433 | 43300. | 830.4 | 832.4 | -2.0 | -2.6 | 025 | 71. |
| | 43382. | | | | SEC. | 214.000 | |
| 434 | 43400. | 830.5 | 832.5 | -2.1 | -2.6 | 025 | 71. |
| | 43420. | | | | SEC. | 215.000 | |
| 435 | 43500. | 830.5 | 832.9 | -2.3 | -2.6 | 025 | 71. |
| | 43581. | | | | SEC. | 215.170 | |

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FLO REQUIREMENTS
INPUT 20N WHERE N IS THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE: 252 46 435
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

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FORM 1411 GB PRINTED BY ROTARY MANIFOLD FORMS.

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Battle Creek

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: Report

00BREAK00

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors • Community Planners
Taylor, Michigan

RECEIVED
NOV 17 1980
WATER MANAGEMENT

November 14, 1980

Michigan Department of Natural Resources
Flood Insurance & Flood Plain Delineation Unit
Water Management Division
Stevens T. Mason Building
Lansing, Michigan 48909

Attention: Mr. Dan Morgan

Re: Engineering Contract H-4802
Bedford Township/City of Battle Creek
Flood Insurance Studies

Gentlemen:

Enclosed is a report which describes the hydraulic studies for the Kalamazoo River associated with the Bedford Township/ City of Battle Creek - Michigan, Flood Insurance Administration Studies performed by our office. Your review and approval of this report are requested.

Please contact Dan Brooks of this office if you have any questions regarding this report.

Very truly yours,

WADE, TRIM & ASSOCIATES, INC.

William J. Weaver, P.E.

WJW:DB:jmr
HUD 2023-07
HUD 2021-07
Enclosure
cc: Mr. Wallace Weaver, Federal Emergency Management Agency
Mr. Martin Gunn, Federal Emergency Management Agency

# KALAMAZOO RIVER BASIN
# HYDRAULIC ANALYSIS
# FOR
# BEDFORD TOWNSHIP
# AND
# CITY OF BATTLE CREEK
# FLOOD INSURANCE STUDIES

HUD 2023-07
HUD 2021-07

November, 1980

Prepared By:

Wade, Trim & Associates, Inc.
25185 Goddard Road
Taylor, Michigan 48180

# I INTRODUCTION

This hydraulic study investigates the existence and severity of flood hazards along the Kalamazoo River in Bedford Township and the City of Battle Creek, Calhoun County, Michigan.

Bedford Township covers an area of approximately 29.5 square miles and the City of Battle Creek covers approximately 17 square miles. The flood plain of the Kalamazoo River within the study reach is basically undeveloped at present with the exception of a few residential structures.

# II DETAILED STUDY OF THE KALAMAZOO RIVER

Detailed hydraulic studies were performed for approximately 7.4 miles of the Kalamazoo River. The study begins at the Kalamazoo/Calhoun County boundary and ends at the confluence with the Battle Creek River in the City of Battle Creek.

A total of 5 bridge and 19 valley cross sections were field surveyed by Wade, Trim & Associates, Inc. in March, 1980. These cross sections were supplemented by aerial topography and U.S.G.S. Quad Maps which consist of 10-foot contour intervals (Reference 1, 2 and 3).

Cross section locations are shown on Exhibit 1. Table 1 cross references section designations by showing the computer section number which corresponds to each cross section letter shown in Exhibit 1. Table 2 lists discharges which have been approved by the Michigan Department of Natural Resources (M.D.N.R.) for this stream.

## A. METHOD OF ANALYSIS

The HEC-2 backwater computer program was used in developing water surface profiles (Reference 4). Table 2 presents water surface elevations at selected locations for the four storms (10, 50, 100 and 500-year) analyzed in this report. HEC-2 printouts including computer cross section plots are presented as Exhibit 2. (Exhibit 2 is contained in the 11" x 15" folder enclosed with this report.) Water surface profiles resulting from the backwater analyses are presented as Exhibit 3.

TABLE 1
BEDFORD TOWNSHIP
AND THE
CITY OF BATTLE CREEK

KALAMAZOO RIVER

CROSS REFERENCE INDEX

| X-SECT. | COMPUTER NO. | DESCRIPTION |
|---|---|---|
| A | 102.0 | Valley Section |
| B | 102.5 | Valley Section |
| C | 103.0 | Valley Section |
| D | 104.0 | Valley Section |
| E | 105.0 | Valley Section |
| F | 106.0 | Valley Section |
| G | 107.0 | Valley Section |
| H | 108.9 | D/S Face Custer Rd. Bridge |
| I | 109.0 | U/S Face Custer Rd. Bridge |
| J | 110.0 | Valley Section |
| K | 111.0 | Enclosed Sewer Crossing |
| L | 112.0 | Valley Section |
| M | 113.0 | Valley Section |
| N | 114.0 | Valley Section |
| O | 115.0 | Valley Section |
| P | 115.9 | D/S Face Bedford Rd. Bridge |
| Q | 116.0 | U/S Face Bedford Rd. Bridge |
| R | 117.0 | Valley Section |
| S | 117.9 | D/S Face 20th St. Bridge |
| T | 118.0 | U/S Face 20th St. Bridge |
| U | 119.0 | Valley Section |
| V | 120.0 | Valley Section |
| W | 121.0 | Valley Section |
| X | 121.9 | D/S Face Angell St. Bridge |
| Y | 122.0 | U/S Face Angell St. Bridge |
| Z | 123.0 | Valley Section |
| AA | 123.9 | D/S Face Kendell St. Bridge |
| AB | 124.0 | U/S Face Kendell St. Bridge |
| AC | 125.0 | Valley Section - Confluence to Battle Creek River |

TABLE 2

BEDFORD TOWNSHIP

AND THE

CITY OF BATTLE CREEK

KALAMAZOO RIVER FLOOD ELEVATIONS*

| LOCATION | Selected Frequencies 10-YEAR | 50-YEAR | 100-YEAR | 500-YEAR |
|---|---|---|---|---|
| | Q= 4,390 cfs | Q= 6,000 cfs | Q= 6,700 cfs | Q= 8,420 cfs |
| Kalamazoo/Calhoun County Boundary (D/S Limit of Study) | 797.86 | 798.58 | 798.85 | 799.46 |
| Bedford Township/ Battle Cr[illegible] | 803.02 | 804.16 | 804.61 | 805.63 |
| | 4,270 cfs | Q= 5,920 cfs | Q= 6,650 cfs | Q= 8,420 cfs |
| Kal #1055 | 808.43 | 809.87 | 810.43 | 811.73 |

nal Geodetic Vertical Datum.

## B. VARIABLES AND COEFFICIENTS

Roughness coefficients (Mannings "n") were estimated from field inspections, quad maps, and photographs. Typical roughness values for the main channel and overbank areas of the Kalamazoo River range from .035 to .040 and .08 to .12, respectively, for all floods. These values are indicative of summer month conditions and are consistent with values recommended and used in engineering practice (Reference 5). Contraction and expansion coefficients were selected as 0.3 and 0.5, respectively, at bridge sections and 0.1 and 0.3, respectively, for gradual channel transitions. Bridge loss coefficient computations are included in Exhibit 4.

## C. HIGH WATER MARKS

There are no documented high water marks for this reach of the Kalamazoo River.

## D. STARTING CONDITIONS

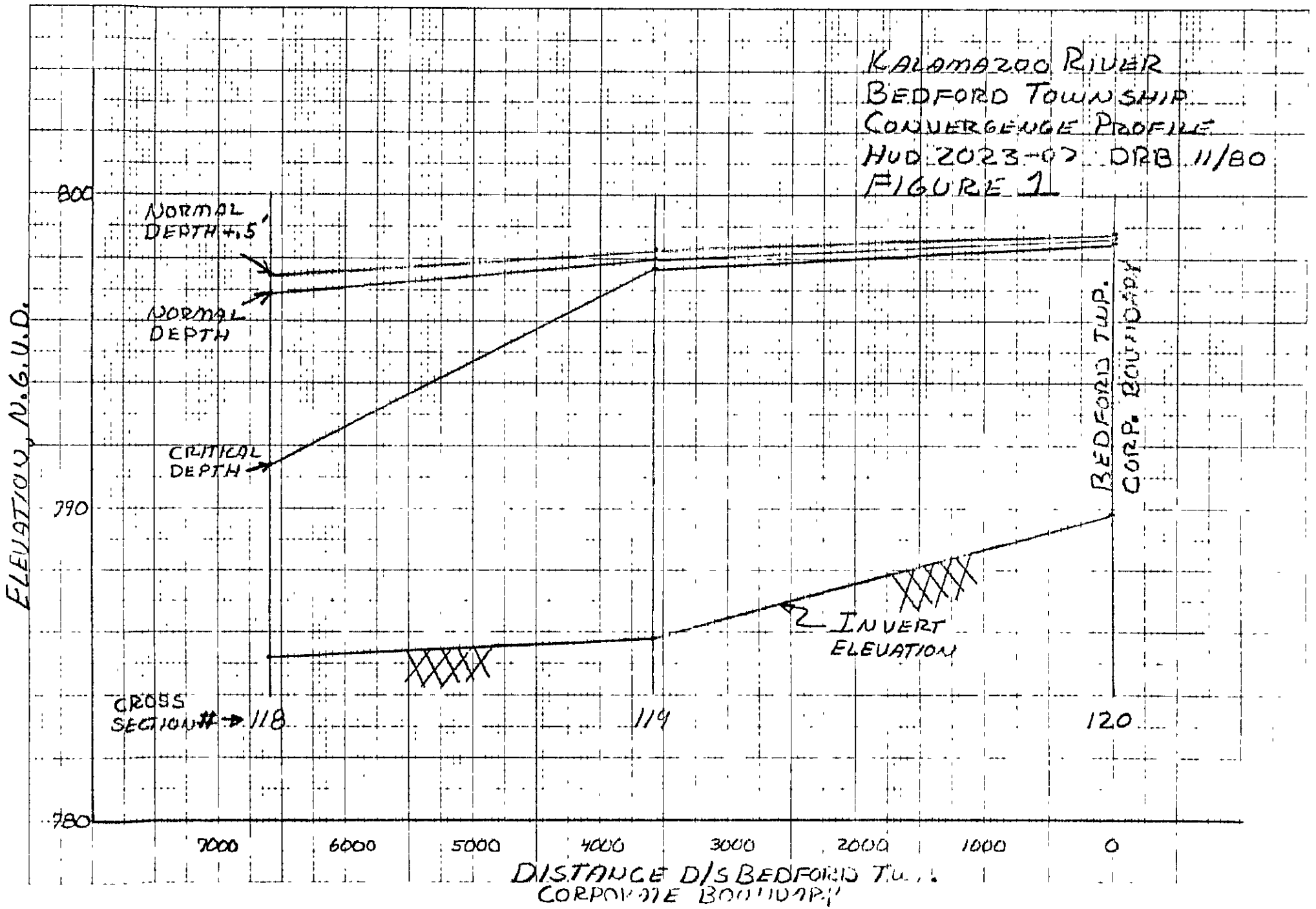
Starting water surface elevations at the downstream limit of detailed study for the 10, 50, 100 and 500-year storms were obtained by performance of a convergence analysis. This analysis was begun at a cross section located approximately 6,600 feet downstream from the Bedford Township corporate boundary. Cross sectional data were obtained from a field survey conducted by Wade, Trim & Associates, Inc. in March, 1980.

Three conditions were applied to the start of the computer model for this analysis: critical depth, normal depth and .5 feet above normal depth. Flows corresponding to the 100-year storm were utilized for this analysis. Results of this analysis (Figure 1) indicated that convergence was achieved at the downstream limit of detailed study. The friction slope resulting from this analysis, located at the Bedford Township corporate boundary, was utilized for the starting condition for all floods analyzed as part of this Flood Insurance Study. Computer printouts resulting from this analysis are presented in Exhibit 2.

## E. SPECIAL PROBLEMS

There is an oxbow located immediately downstream of Custer Road which is separated from the main channel by a levee. During the 100-year storm, the levee will not become inundated; therefore, a divided flow condition will occur. A divided flow analysis was performed to determine the impact of this diversion upon flood levels and obtain the distribution of flow between the main channel and oxbow.

Results of this analysis, as presented in Exhibit 5, indicated that 900 cfs will be diverted through the oxbow during the 100-year flood. If a floodway is not provided and flow is not allowed to pass through the oxbow, 100-year flood elevations will increase approximately 0.13 feet. Therefore, the oxbow has been delineated as part of the floodway.


KALAMAZOO RIVER
BEDFORD TOWNSHIP
CONVERGENCE PROFILE
HUD 2023-02 DRB 11/80
FIGURE 1
NORMAL DEPTH +.5'
NORMAL DEPTH
CRITICAL DEPTH
INVERT ELEVATION
BEDFORD TWP. CORP. BOUNDARY
CROSS SECTION # → 118
119
120
ELEVATION, N.G.V.D.
800
790
780
7000
6000
5000
4000
3000
2000
1000
0
DISTANCE D/S BEDFORD TWP. CORPORATE BOUNDARY

There is a similar problem along the banks of the stream located between Custer and Bedford Roads. During the 100-year storm, portions of the levee system become inundated and a divided flow situation occurs between cross sections 110 and 111. Therefore, a divided flow analysis was performed to determine the distribution of flow between the main channel and diversion area within the right overbank.

Results of this analysis, as presented in Exhibit 6, indicated that 5 percent (350 cfs) of the 100-year flow rate will be transported through the diversion. Furthermore, if a floodway is not provided and flow is disallowed through the diversion area, elevations within the main channel for the 100-year flood will increase only 0.03 feet. Therefore, the diversion area was not delineated as a floodway but was included within the 100-year flood hazard area.

F. GENERAL

Computed water surface elevations were developed to an accuracy of 0.5 feet for floods of the selected recurrence intervals.

All elevations are referenced to the U.S. Geological Survey (U.S.G.S.) Datum. This datum is equivalent to the National Geodetic Vertical Datum (N.G.V.D.).

The hydraulic analyses for this study were based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

# REFERENCES


1. Abrams Aerial Survey, Kalamazoo River in Bedford Township and City of Battle Creek, 1979.

2. U.S. Geological Survey Topographical Maps - Augusta Quadrangle, Kalamazoo/Calhoun County, 7.5 Minute Series - Photo Revised, 1972.

3. U.S. Geological Survey Topographical Maps - Battle Creek Quadrangle, Calhoun County, 7.5 Minute Series - Photo Revised, 1972.

4. HEC-2 Water Surface Profile - Users Manual - U.S. Army Corps of Engineers - 1976.

5. Open Channel Hydraulics, Chow, Ven Te, McGraw Hill, Inc., 1959.

KALAMAZOO RIVER

INDEX OF EXHIBITS


| | |
|---|---|
| EXHIBIT 1 | Field Cross Section Location and 100-Year Flood Plain - Flooodway Map, Bedford Township, 2 Sheets, City of Battle Creek, 5 Sheets. |
| EXHIBIT 2 | Computer Printouts, HEC-2 Backwater Analysis With Cross Section Plots (In Separate Folder) Bedford Township and City of Battle Creek. |
| EXHIBIT 3 | Stream Profiles, Bedford Township and City of Battle Creek, 5 Sheets. |
| EXHIBIT 4 | Bridge Notes and Sketches, Bedford Township and City of Battle Creek, 16 Sheets. |
| EXHIBIT 5 | Divided Flow Analysis for Oxbow D/S Custer Road, 8 Sheets. |
| EXHIBIT 6 | Divided Flow Analysis for Levee System U/S Custer Road, 8 Sheets. |

KALAMAZOO RIVER

BEDFORD TOWNSHIP

AND THE

CITY OF BATTLE CREEK

EXHIBIT 1

Field Cross Section Location and

100-Year Flood Plain - Floodway Map

KALAMAZOO RIVER
BEDFORD TOWNSHIP
AND THE
CITY OF BATTLE CREEK

EXHIBIT 2

Computer Printouts
HEC-2 Backwater Analysis With
Cross Section Plots (See Separate Folder)

KALAMAZOO RIVER

BEDFORD TOWNSHIP

AND THE

CITY OF BATTLE CREEK

EXHIBIT 3

Stream Profile

# KALAMAZOO RIVER PROFILE

BEDFORD TOWNSHIP

REACH 1 ZONE AE

ELEVATION (FEET) NGVD

810
805
800
795
790
785
780

A
B
C

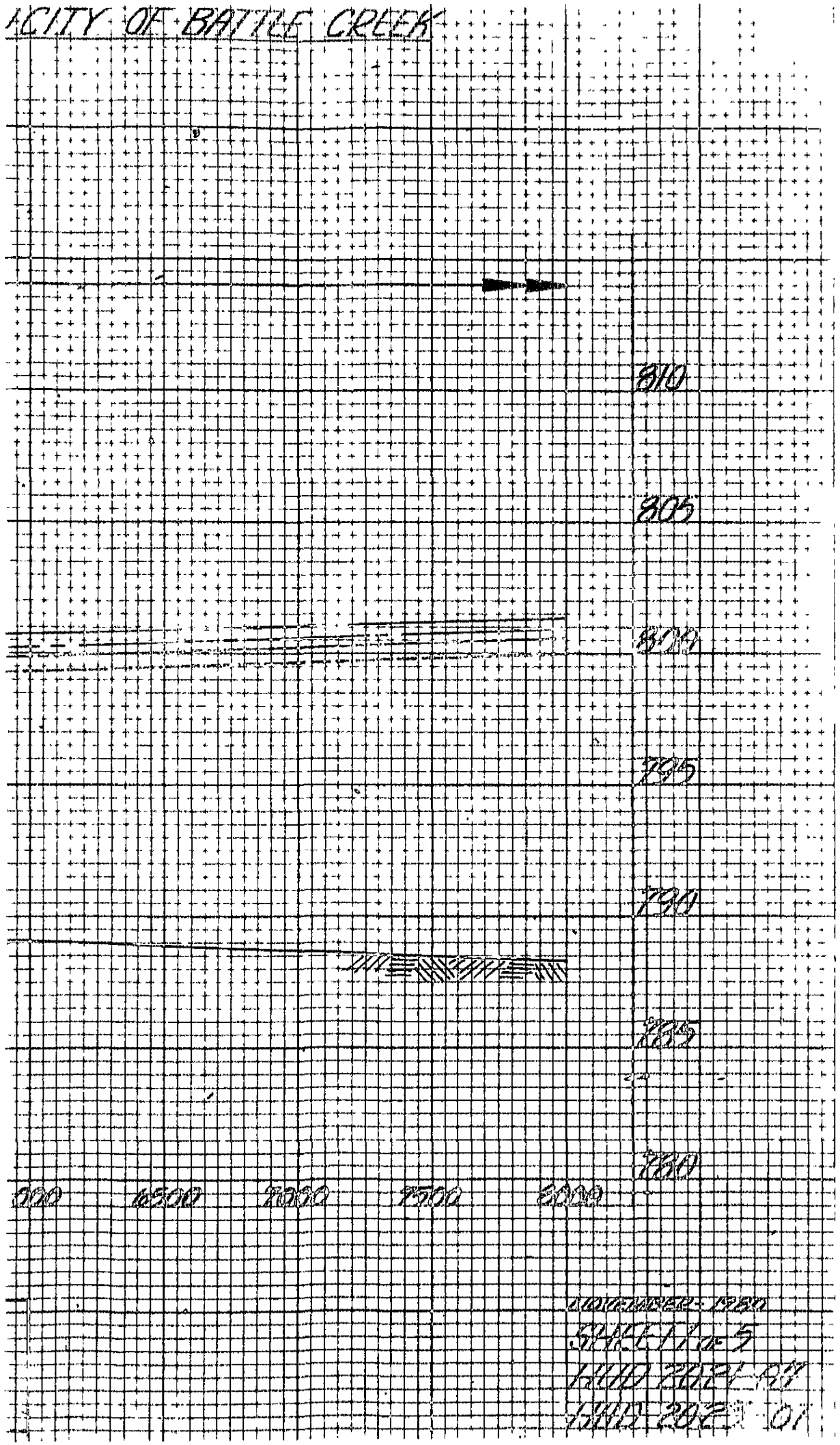
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500

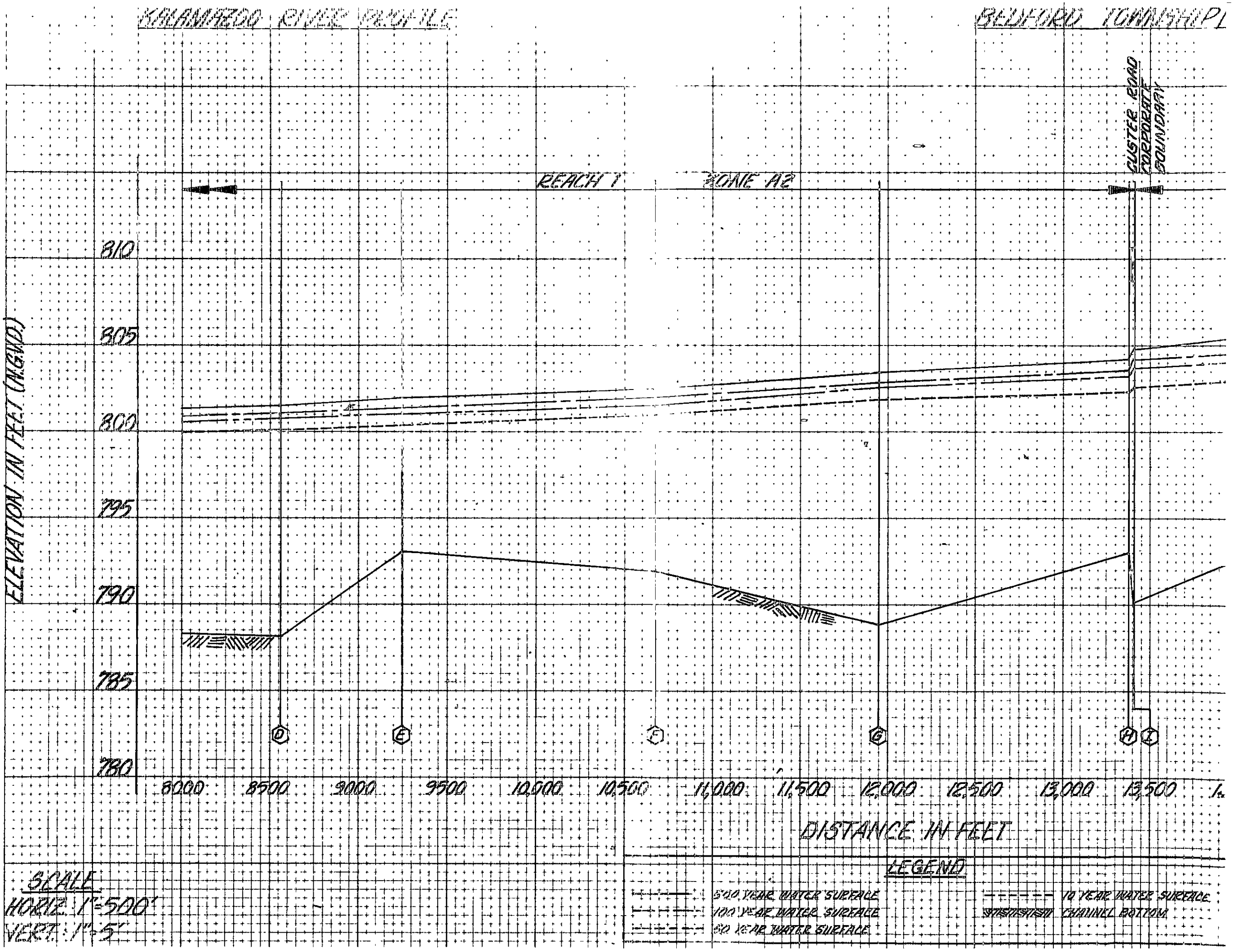
DISTANCE IN FEET

SCALE
HORIZ. 1"=500'
VERT. 1"=5'

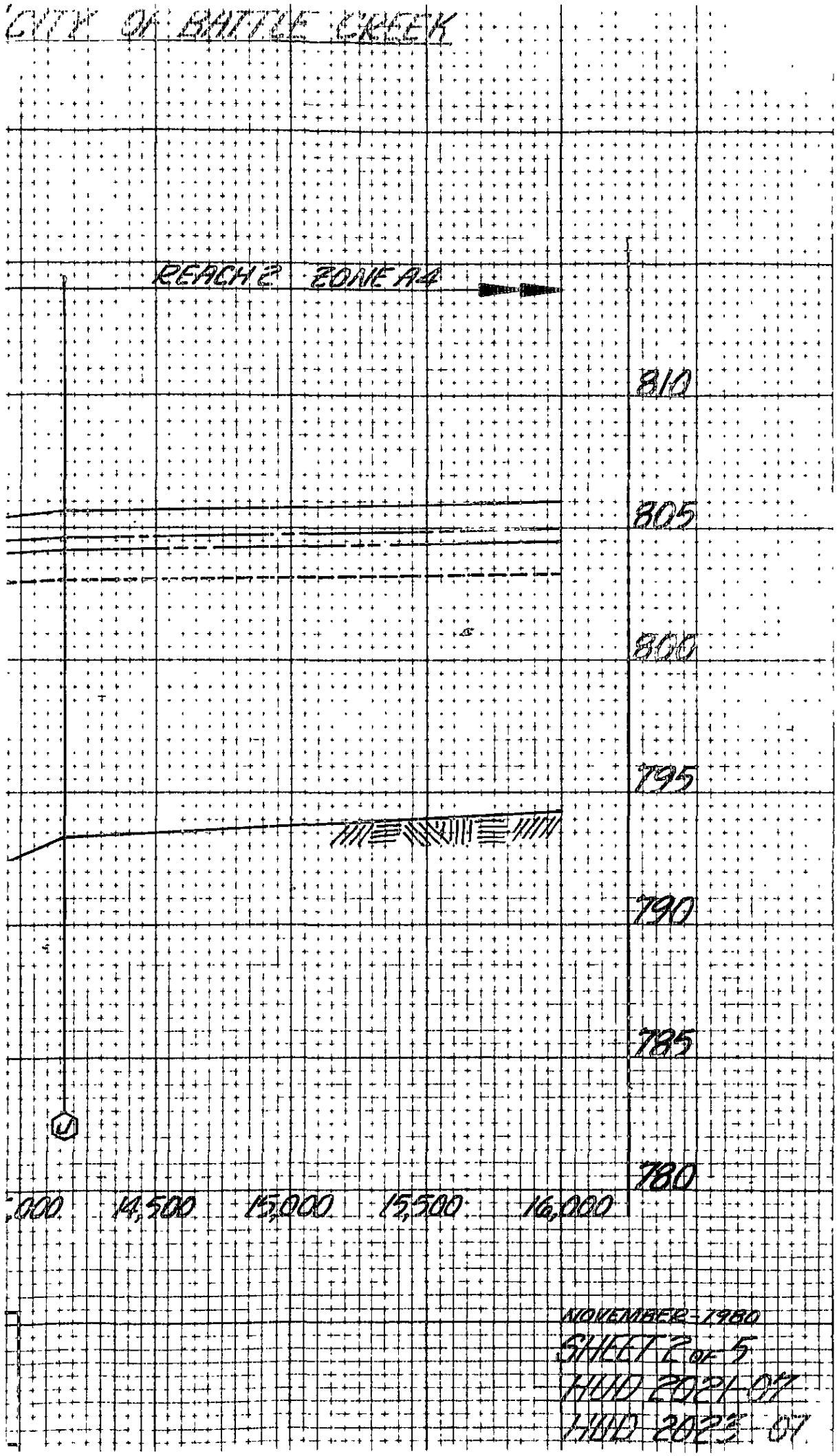
LEGEND

100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
IN YEAR WATER SURFACE
SUSQUEHANNA CHANNEL BOTTOM


CITY OF BATTLE CREEK
810
805
800
795
790
785
780
6500
7000
7500
8000
NOVEMBER 1980
SHEET 1 of 5
HUD 2021-07
HUD 2023-07


KALAMAZOO RIVER PROFILE
BEDFORD TOWNSHIP
CUSTER ROAD
CORPORATE
BOUNDARY
REACH 1
ZONE A2
ELEVATION IN FEET (N.G.V.D.)
810
805
800
795
790
785
780
D
E
F
G
H
I
8000
8500
9000
9500
10,000
10,500
11,000
11,500
12,000
12,500
13,000
13,500
DISTANCE IN FEET
SCALE
HORIZ. 1"=500'
VERT. 1"=5'
LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM

CITY OF BATTLE CREEK




NOVEMBER 1980
SHEET 2 OF 5
HUD 2021-07
HUD 2023-07

# KALAMAZOO RIVER PROFILE

BEDFORD TOWNSHIP

ENCLOSED SEWER CROSSING

DEARE ZONE AA

ELEVATION IN FEET (M.S.W.D.)

870
815
810
805
800
795
790

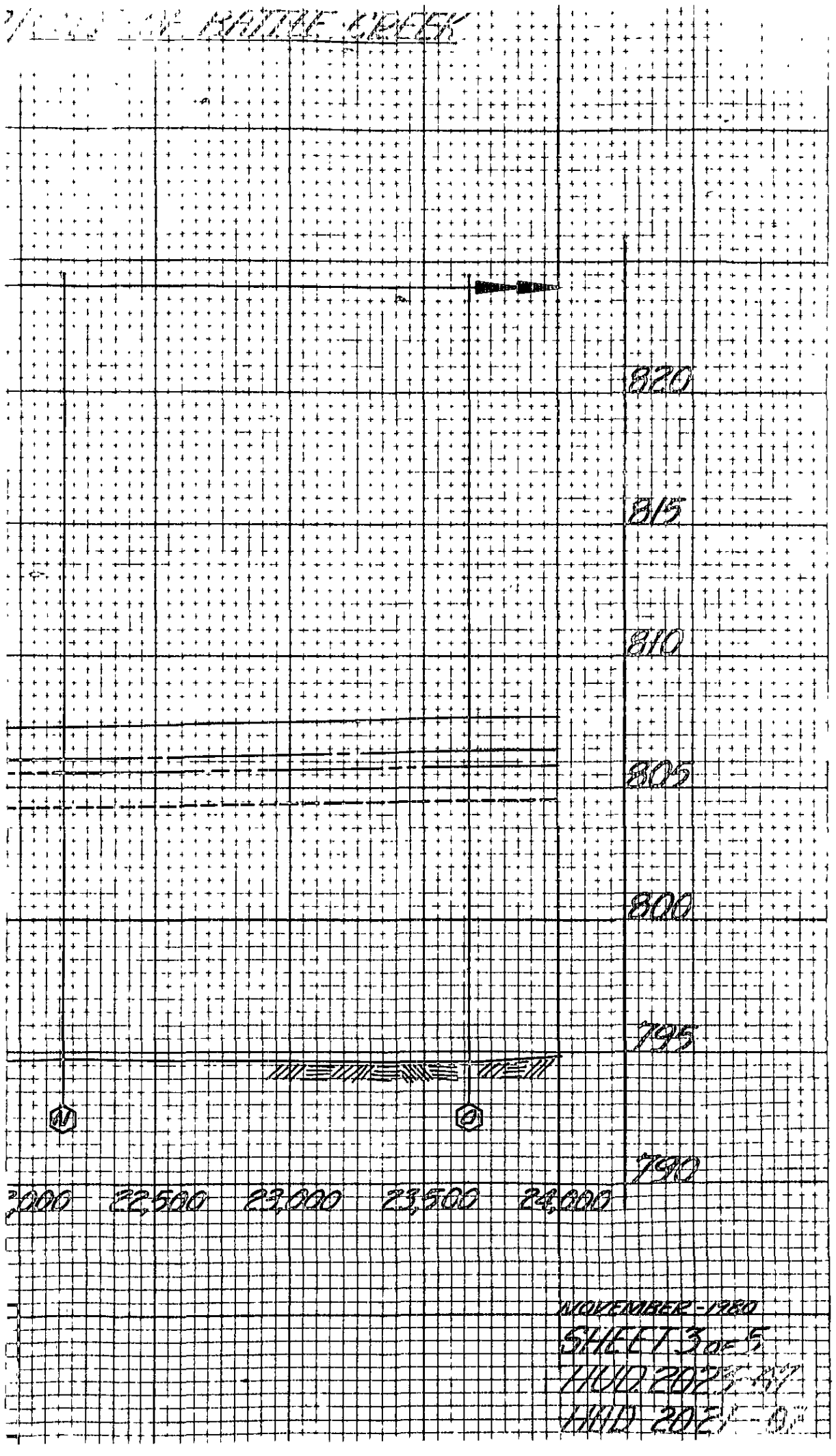
16,000 16,500 17,000 17,500 18,000 18,500 19,000 19,500 20,000 20,500 21,000 21,500 22

DISTANCE IN FEET

SCALE
HORIZ. 1"=500'
VERT. 1"=5'

LEGEND

100 YEAR WATER SURFACE
10 YEAR WATER SURFACE
2 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM



BATTLE CREEK
820
815
810
805
800
795
790
22,500
23,000
23,500
24,000
NOVEMBER-1980
SHEET 3 OF 5

# KALAMAZOO RIVER PROFILE

REACH 2 ZONE A4

REDFORD ROAD

ELEVATION IN FEET (N.G.V.D.)

825
820
815
810
805
800
795

24,000 24,500 25,000 25,500 26,000 26,500 27,000 27,500 28,000 28,500 29,000 29,500

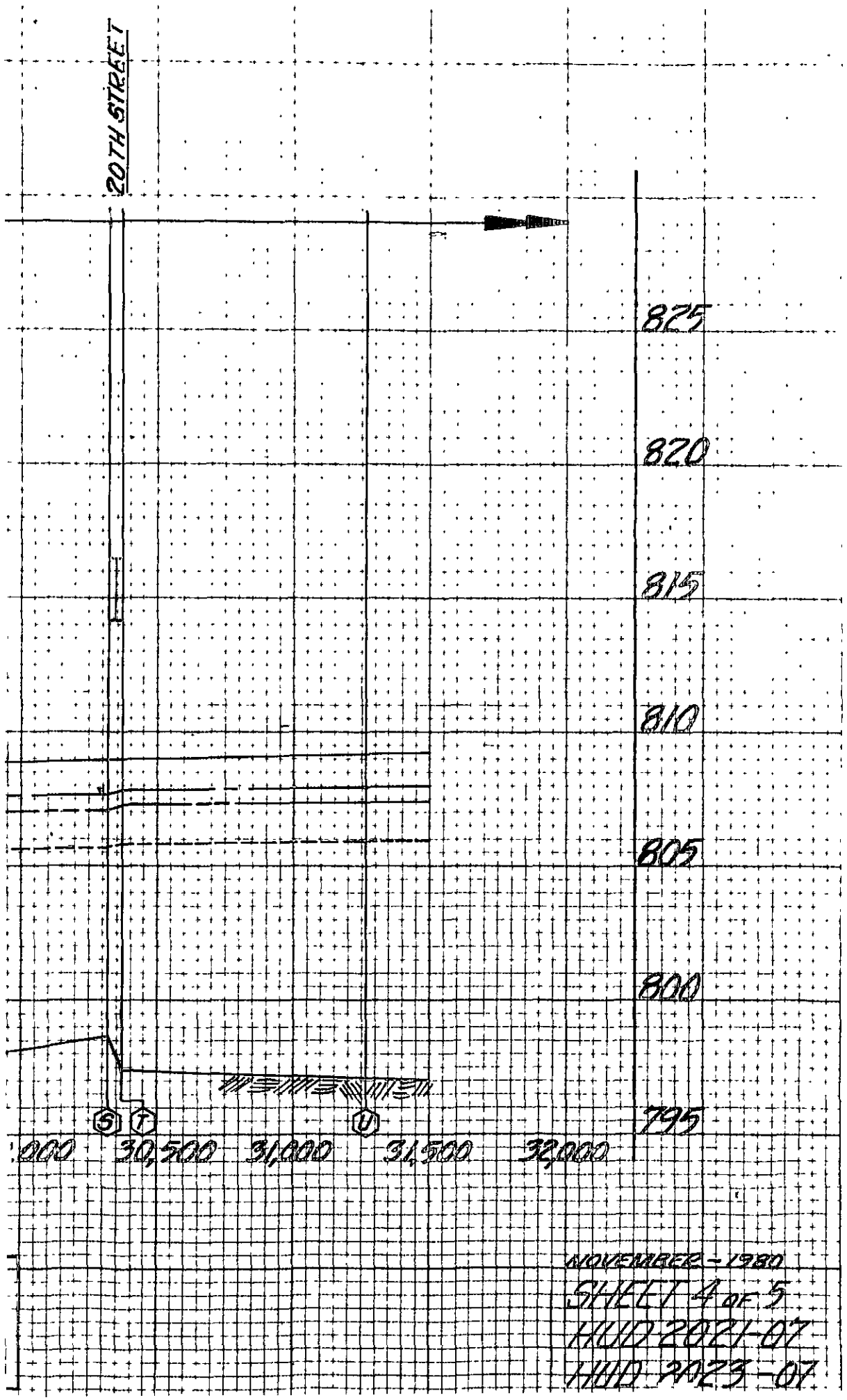
DISTANCE IN FEET

SCALE
HORIZ. 1"=500'
VERT. 1"=5'

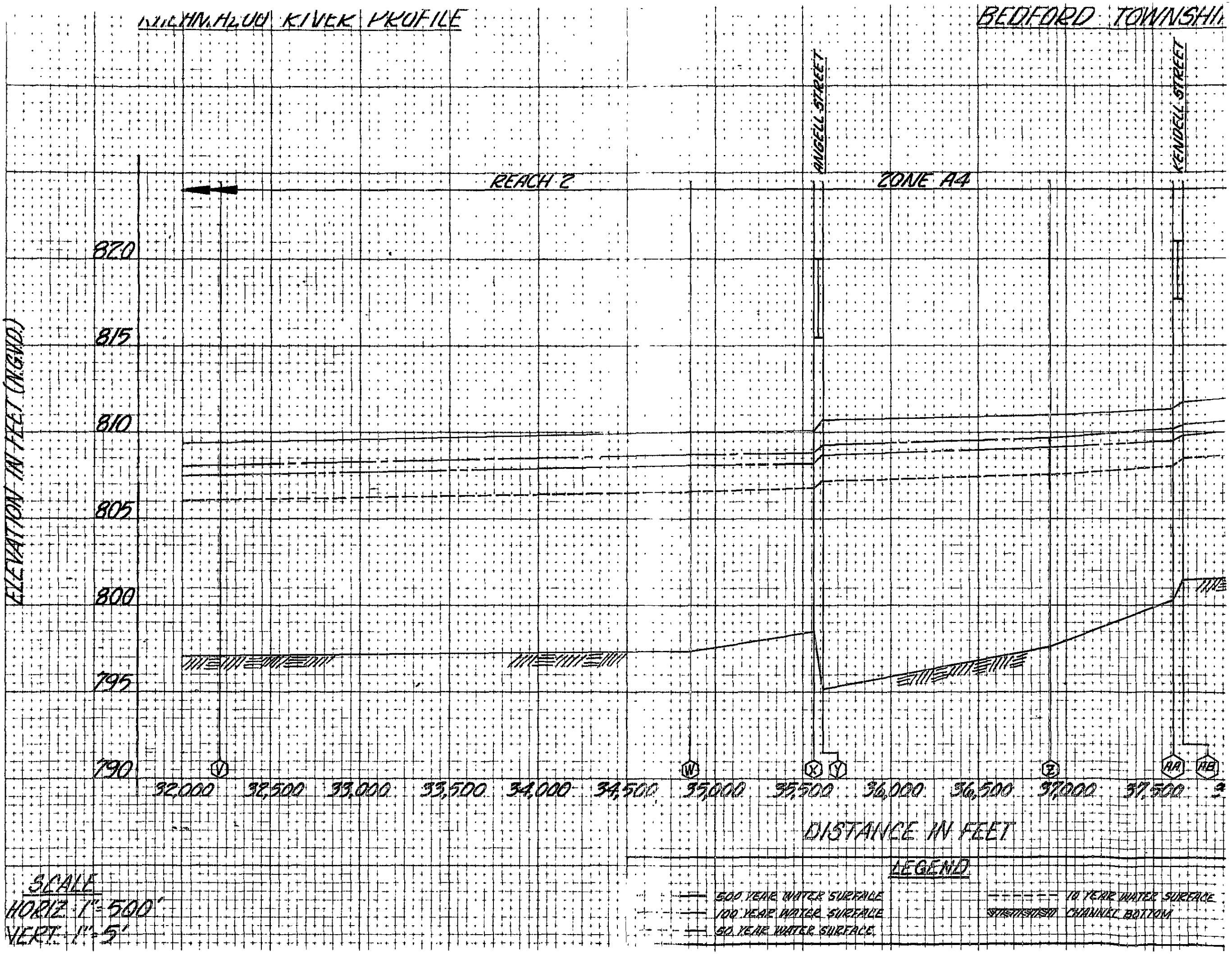
LEGEND

500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
STREAMBED CHANNEL BOTTOM

CITY OF BATTLE CREEK

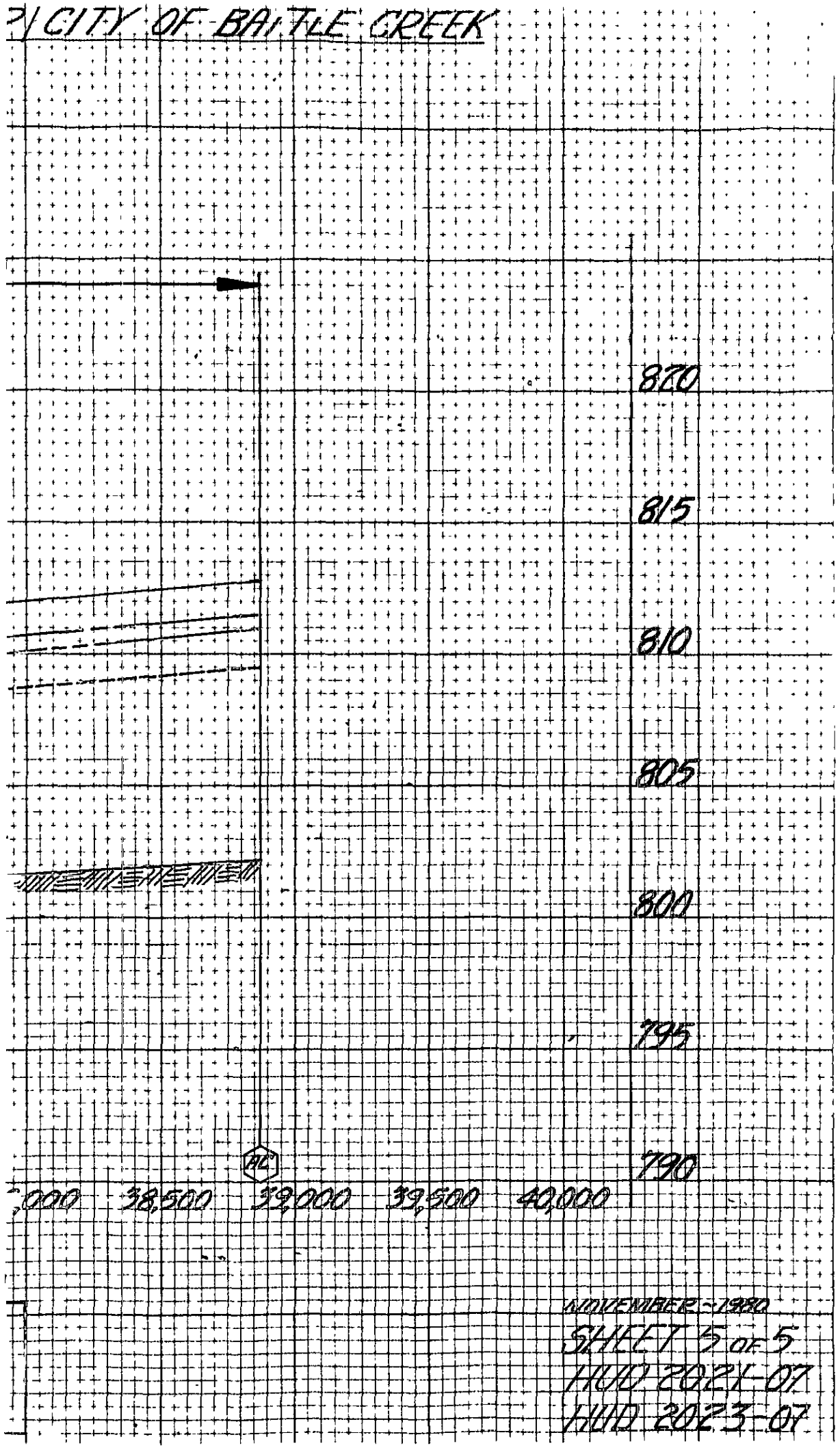



NOVEMBER - 1980
SHEET 4 OF 5
HUD 2021-07
HUD 2023-07



KILCHMAZOO RIVER PROFILE
BEDFORD TOWNSHIP
ANGELL STREET
KENDELL STREET
REACH 2
ZONE A4
ELEVATION IN FEET (N.G.V.D.)
820
815
810
805
800
795
790
V
W
X
Y
Z
AA
AB
32,000
32,500
33,000
33,500
34,000
34,500
35,000
35,500
36,000
36,500
37,000
37,500
DISTANCE IN FEET
SCALE
HORIZ. 1" = 500'
VERT. 1" = 5'
LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM

CITY OF BATTLE CREEK




NOVEMBER - 1980
SHEET 5 OF 5
HUD 2021-07
HUD 2023-07

KALAMAZOO RIVER

BEDFORD TOWNSHIP

AND THE

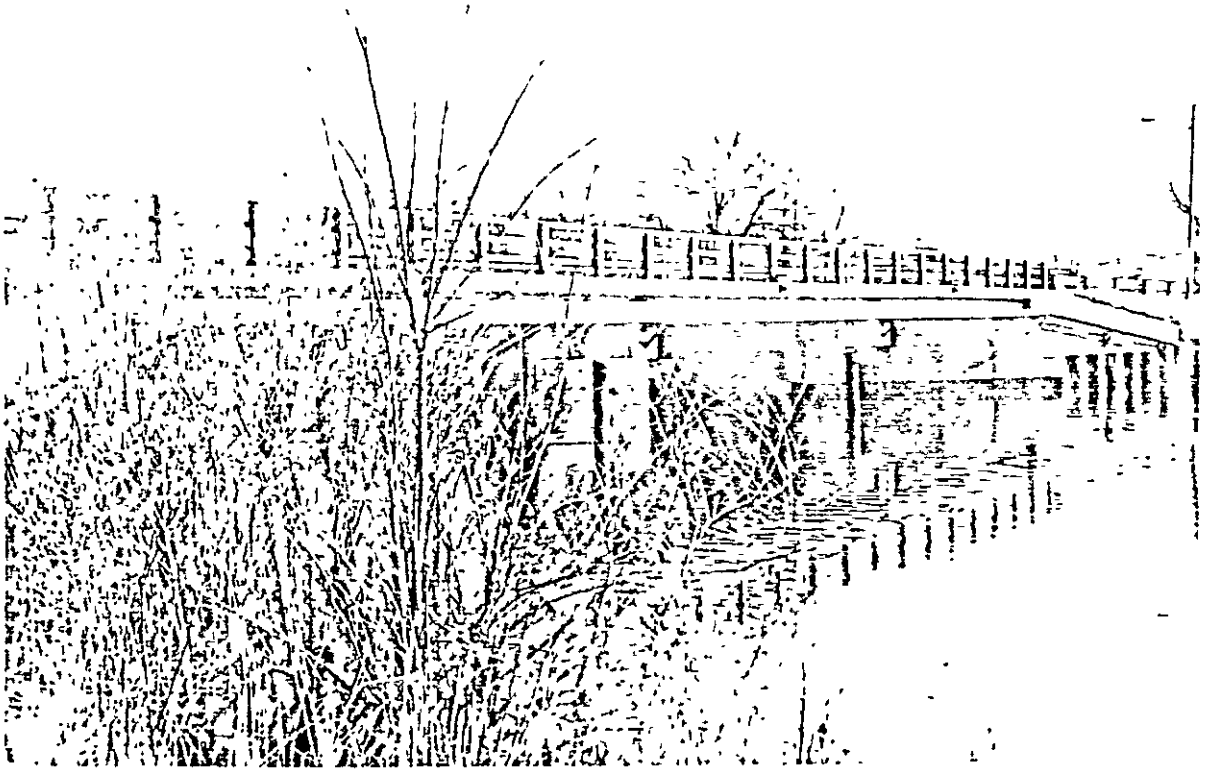
CITY OF BATTLE CREEK

EXHIBIT 4

Bridge Notes and Sketches



SEC #109 - TOP VIEW OF COSTER RD. BRIDGE AT THE KALAMAZOO RIVER

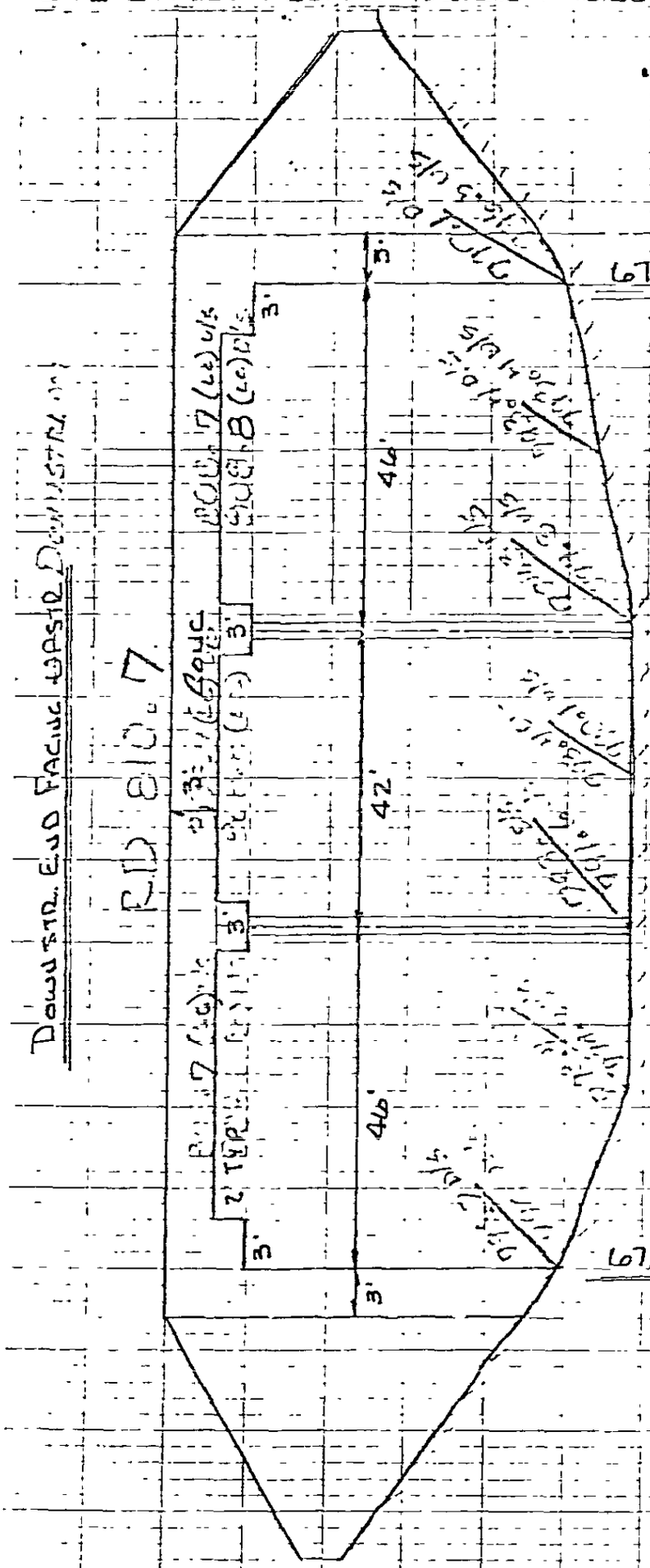


SEC #109 - UPSTREAM VIEW OF COSTER RD. BRIDGE

HUC 2023-05

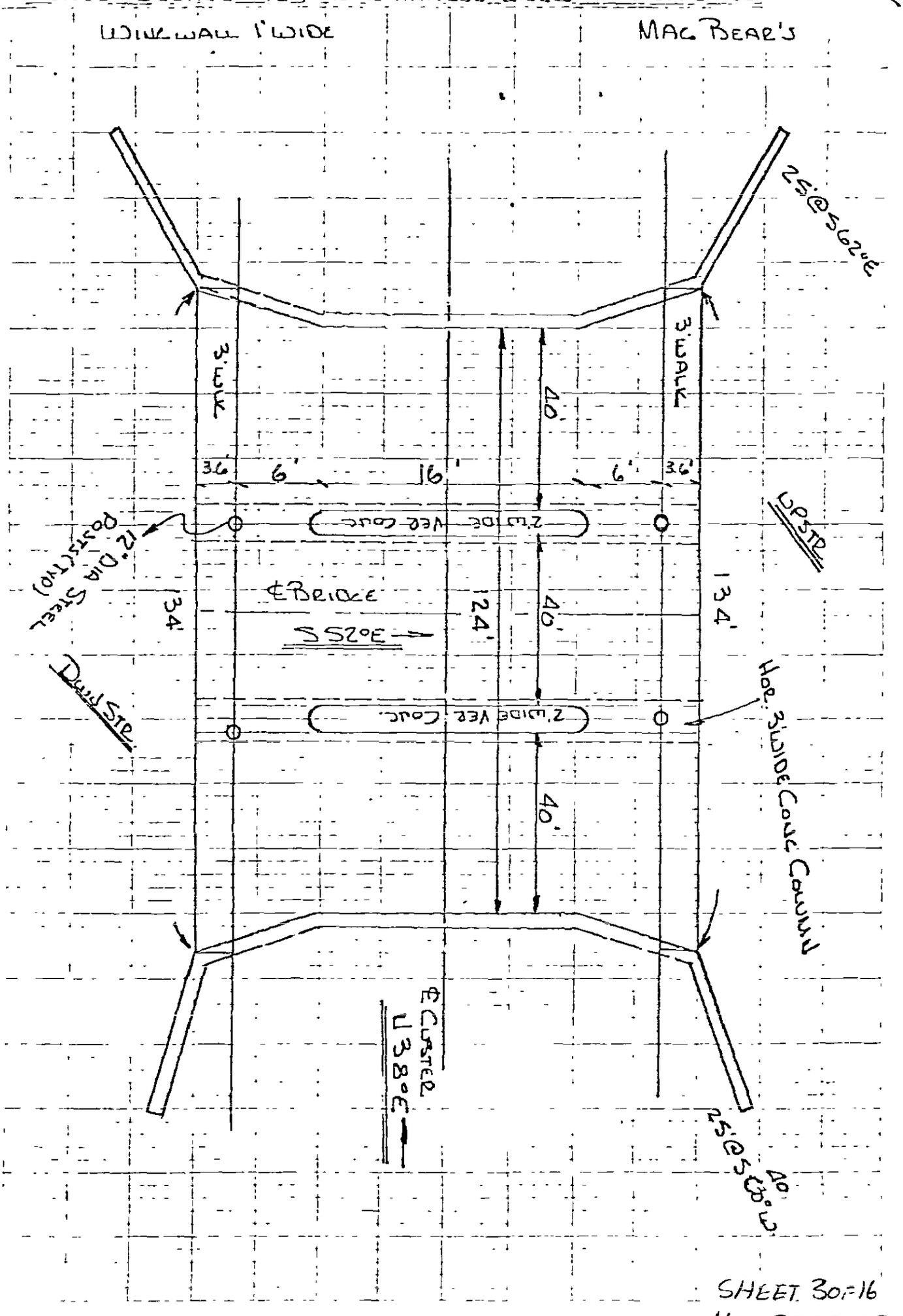
# CROSS-SECTION #109 KALAMAZOO RIVER AT CUSTER

L&R OFFSET FROM ℄ BRIDGE FACING DOWNSTR.


DOWNSTR. END FACING UPSTR. DIRECTION
RD 810.7
3'
3'
3'

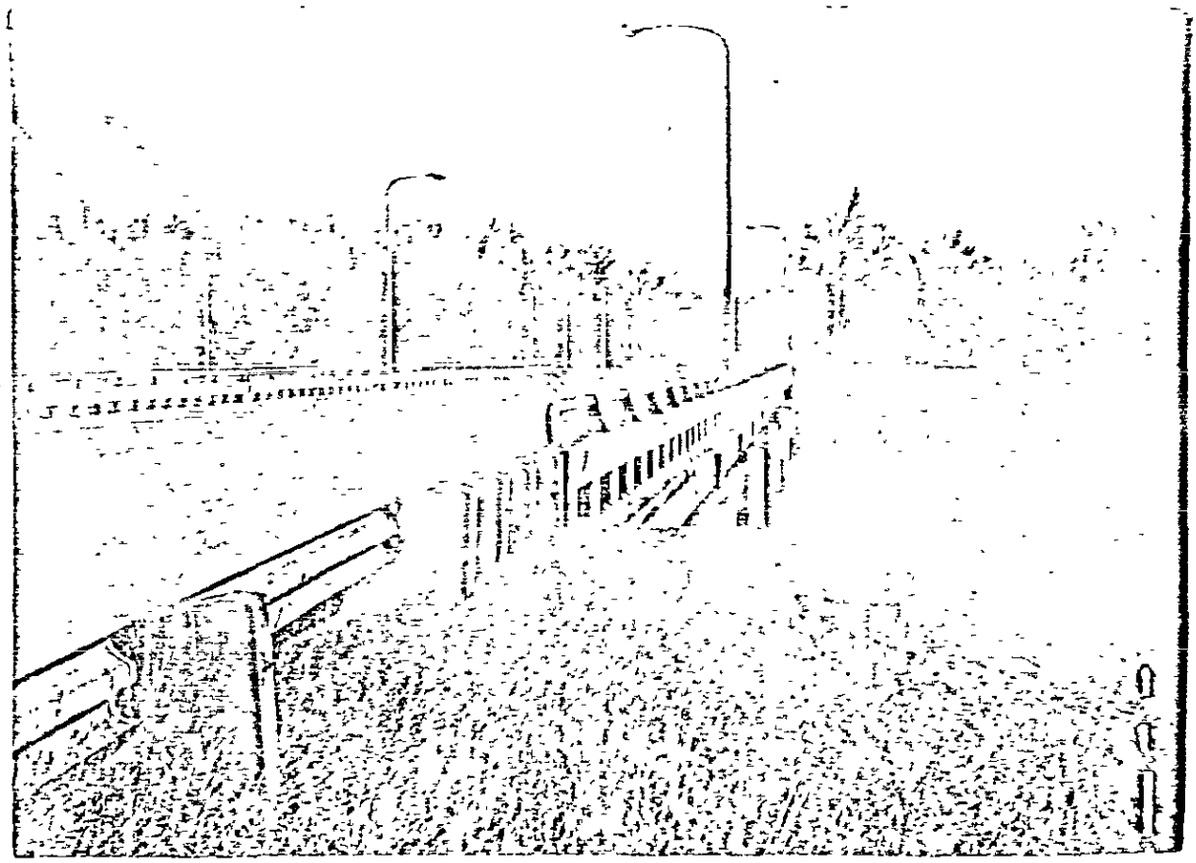
HUD 2023-05

# Cross-Section #109 Kalamazoo River At Custer Rd

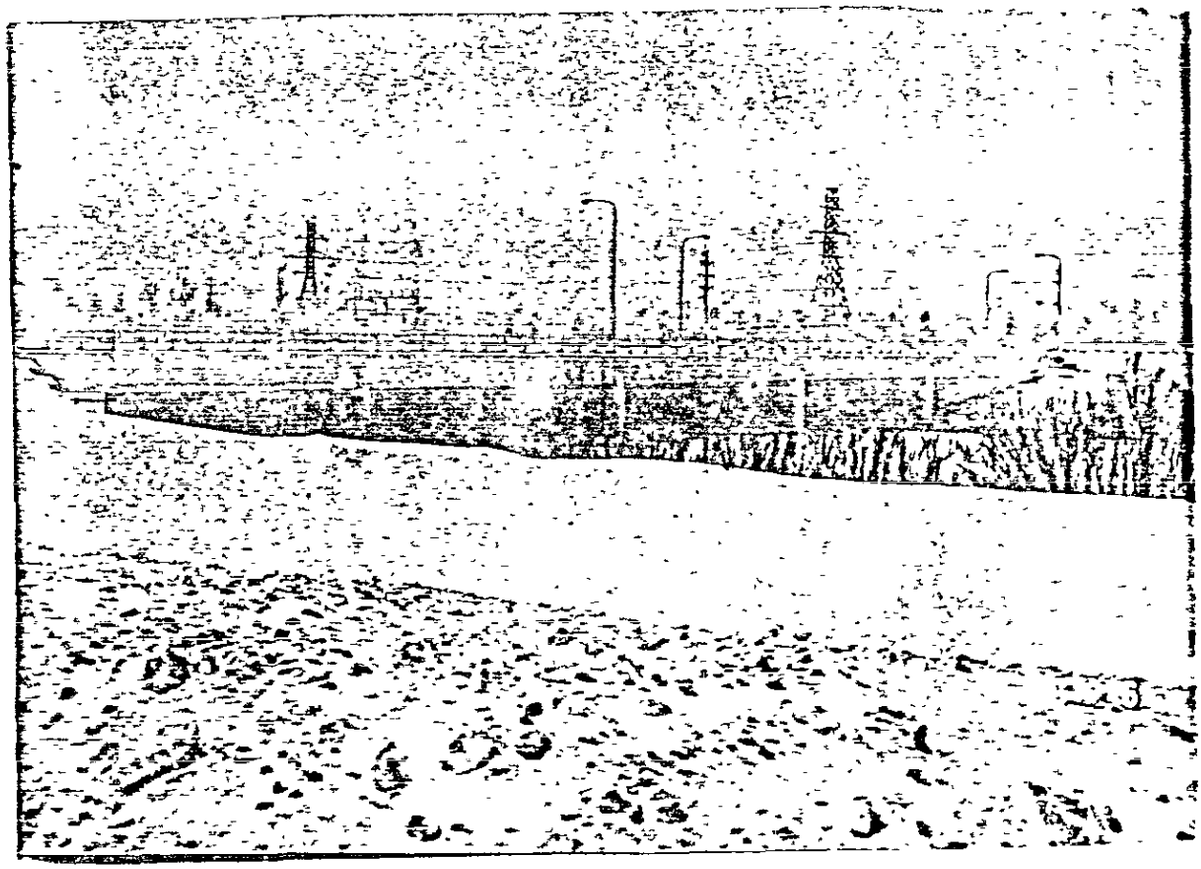



SHEET 30 of 46

HUD 2023-05



SEC #11 - TOP VIEW BEDFORD RD AND KALAMAZOO RIVER BRIDGE (UPSTREAM)



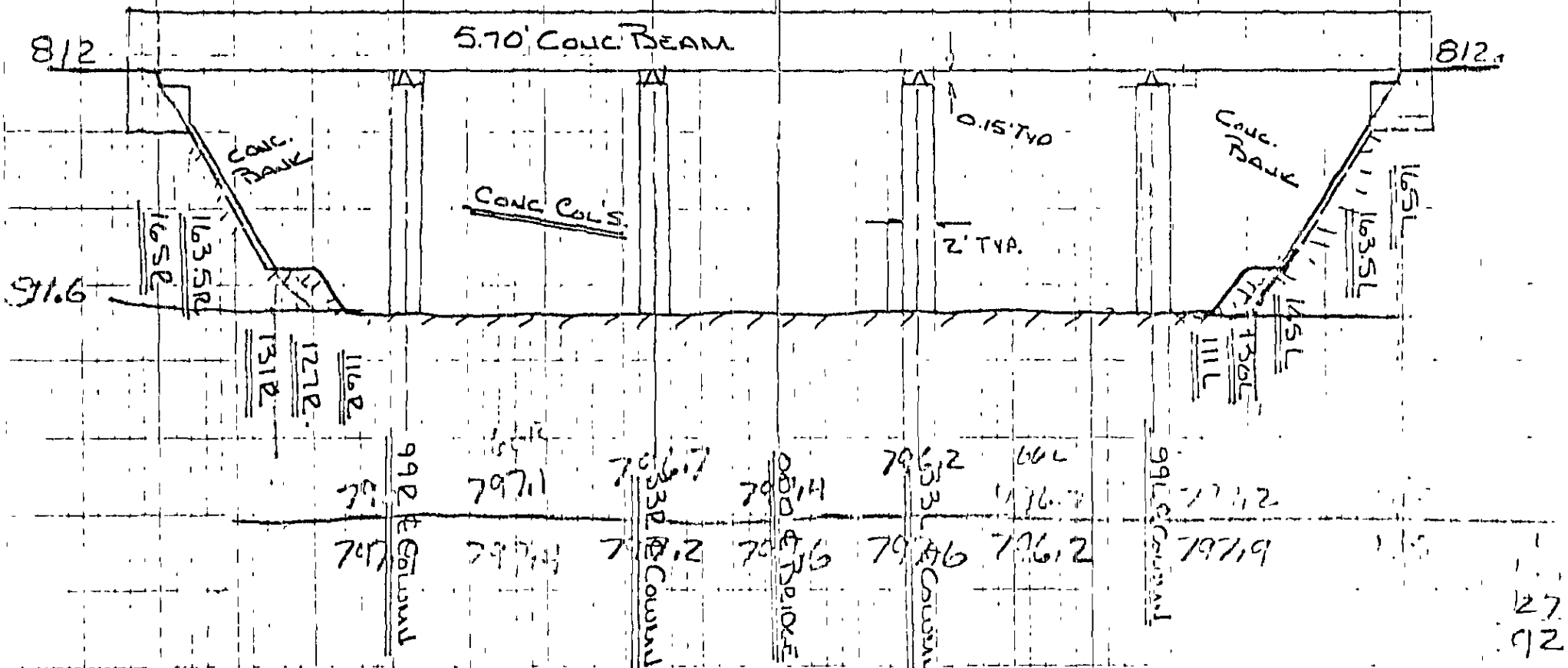
6

Sec # 11 KALAMAZOO RIVER AT BEDFORD SHEET 4 OF 16

[redacted]

L&R OFFSETS FROM ℄ BRIDGE FACING DWNSTR

DOWN STR END FACING UPSTR




INVERT AVE D/S 797.4 LOW CORD 812.0

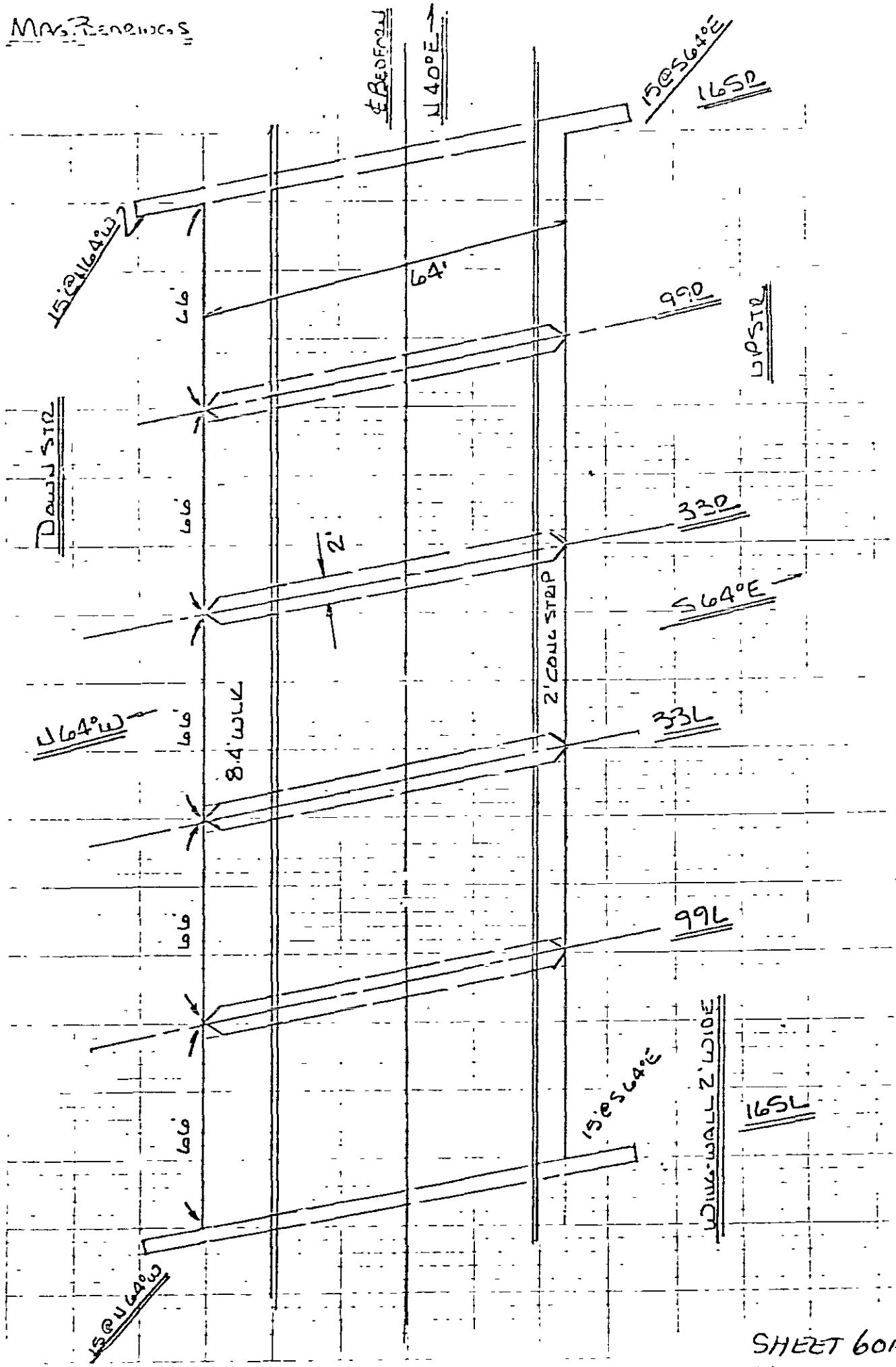
U/S 796.7 811.6

SHEET 5 OF 16

HUD 2021-07

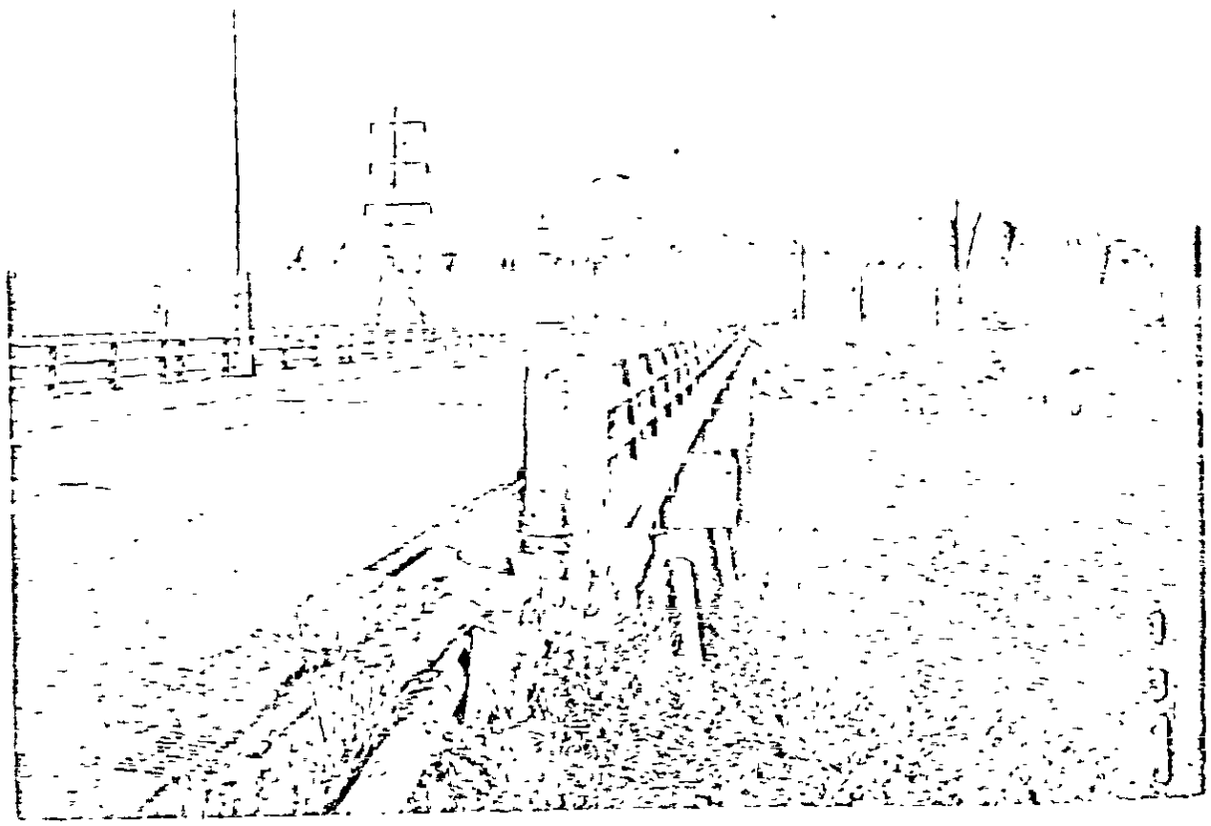
2021-02 Cross-Section 11 Bedford Rd @ Kalamazoo River

Mag. Bearings

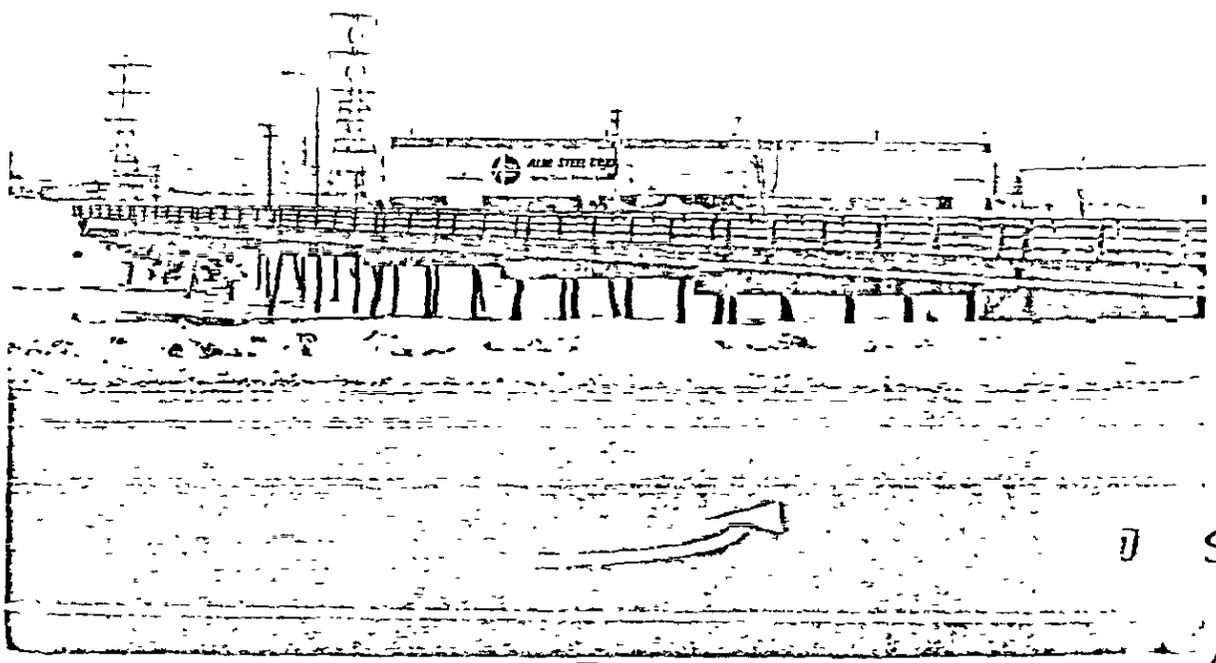



SHEET 6 OF 16

Hud 2021-02



SEC #13 - TOP VIEW 20th ST BRIDGE + KALAMAZOO RIVER (UPSTREAM)



SEC #13 K[illegible]

SHEET 7 OF 16

7

HUD 2021-07

FORM 25 D
(313) 291 5400
Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

Bridge Location: 20TH STREET STA 118.

REFERENCE

Bridge Losses - SB Card

1. XK (Pier Shape Coefficient) 1.05 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + $\Sigma k$, $\Sigma k = k_f + k_e + k_p$

where $k_f$ = friction loss coefficient
$k_e$ = entrance loss coefficient
$k_p$ = loss from intermediate piers

Description of Bridge:

$k_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = = ____ Wp =

$R = A/wp$ $R^{4/3}$ = L =

n (composite) =

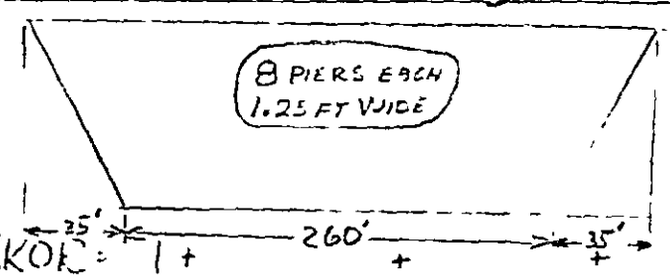
$k_f = 29.1 \times (\quad)^2 \times \quad / \quad =$

$k_e$ =

Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 45

$k_p$ = 0 if bridge has no intermediate piers

$k_p$ = 0.05 if bridge has intermediate piers — HEC-2 manual




260(15.9) = 4134
35(15.9) = 556
4690
− Piers 8(1.25)(15.9) 160
4530

2. XKOR = 1 + + + = 1.5

3. COFQ Coefficient of discharge = 3.0 — HEC-2 manual

4. RDLEN - Length of weir = 0. (0 if read off BT cards) — 15.9

5. BWC - bottom width of bridge opening (inc. piers): 260.

[illegible] of obstruction = 10. — field data

[illegible] bridge opening ~~inc. piers~~ = 4530.

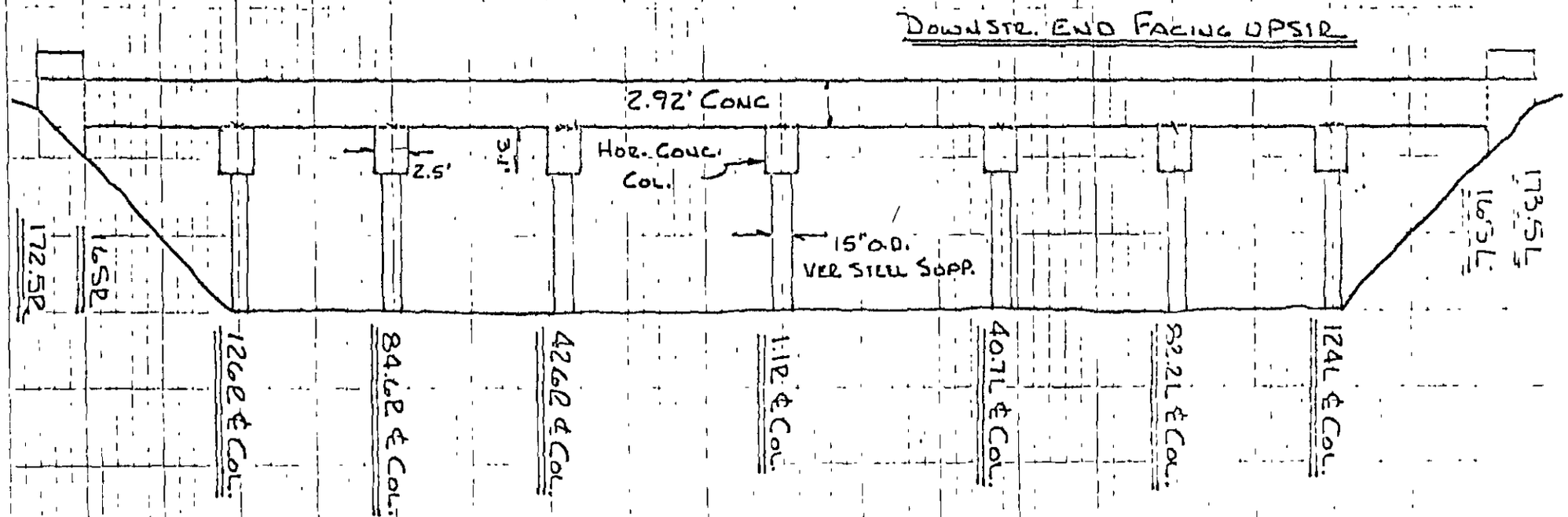
8. SS = side slope = 2.20
(horizontal per 1 vertical unit)

9. ELCHU = Elevation of channel invert U/S side = 798.3
(0 if equal to minimum elevation in previous x-sect.)

ELCHD = Elevation of channel invert D/S side = 798.6
(0 if equal to minimum elevation in previous x-sect.)

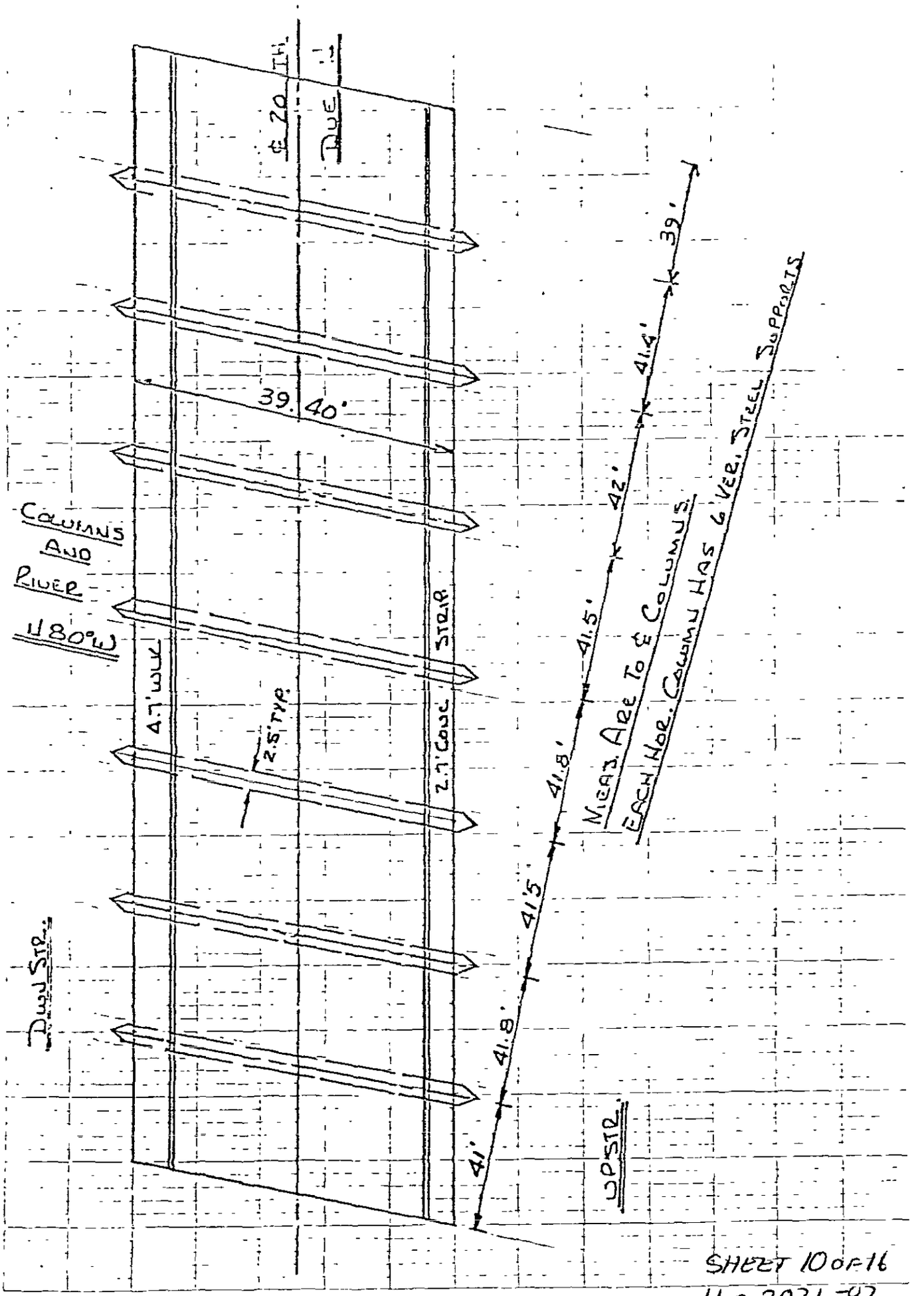
# CROSS-SECTION #13 20TH ST. BR AT KALAMAZOO RIVER

L&R OFFSETS FROM ℄ BRIDGE FACING DOWNSTR.

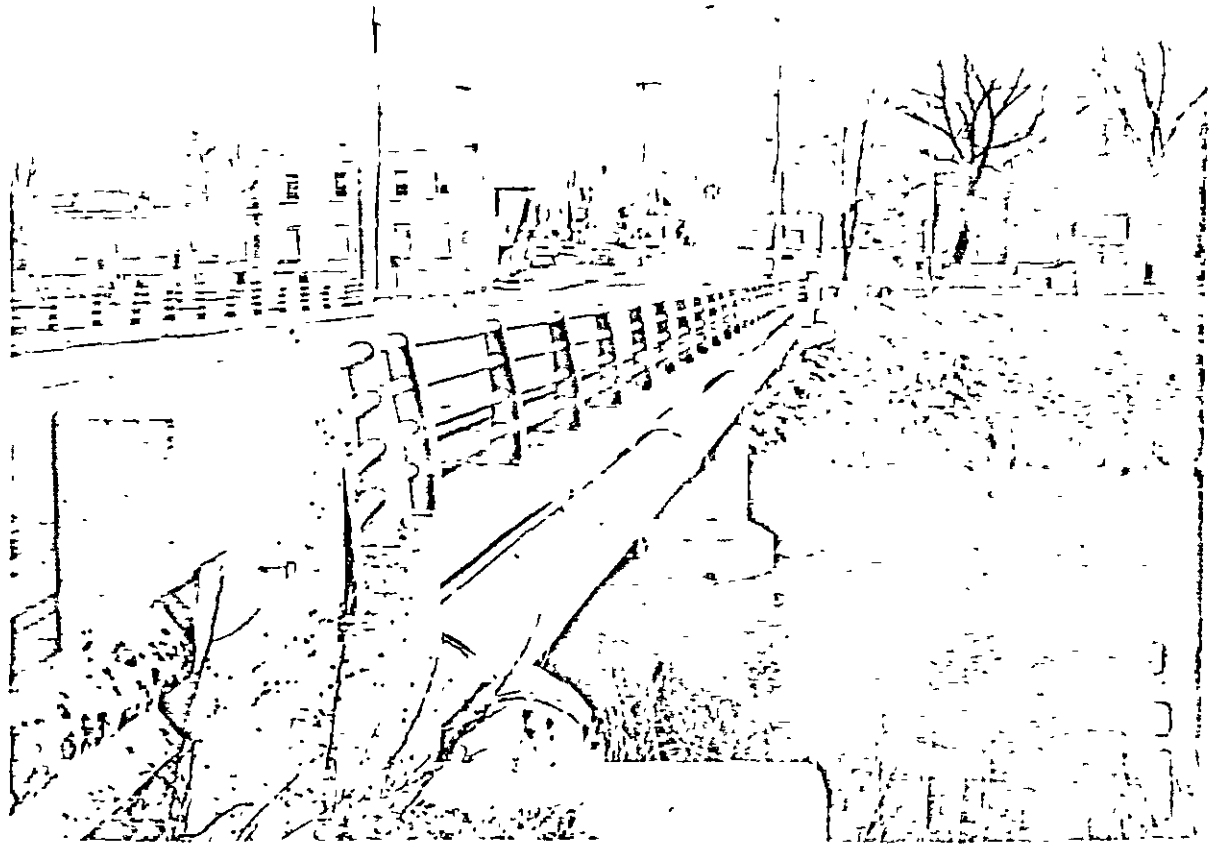



| | INVERT | LOW CORD | TOP RD |
|---|---|---|---|
| D/S | 798.6 | 814.3 | 816.5 |
| U/S | 798.3 | 814.2 | 816.5 |

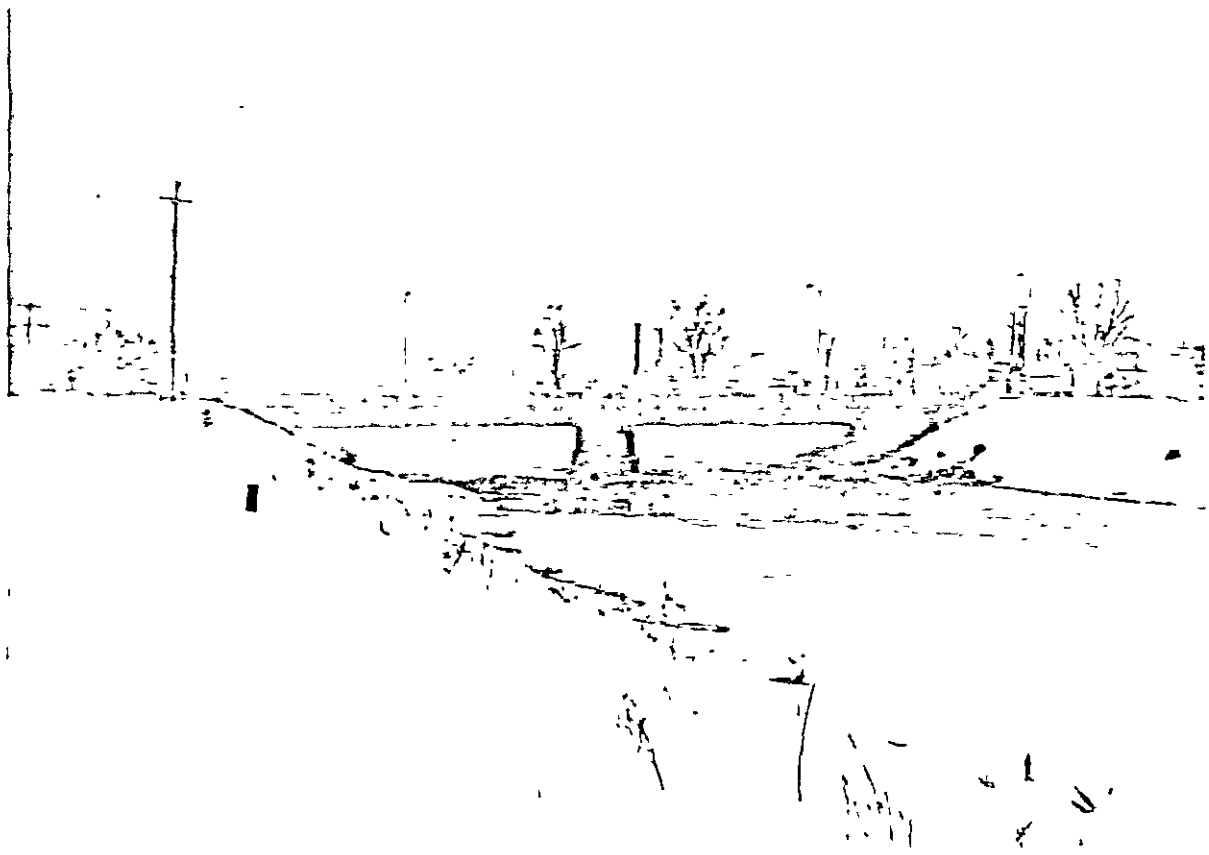
SHEET 9 OF 16
HUD 2021-07




SHEET 10 OF 16
HUD 2021-07



SEC #19 - TOP VIEW ANGELL ST AND KALAMAZOO RIVER BRIDGE - WESTERN



10

SECTION #19 KALAMAZOO RIVER AT ANGELL SHEET 16 OF 16

HUD 2021-07

Cross-Section #19 Angell St. At Kalamazoo River

L&R Offsets From ℄ Bridge Facing Downstr.

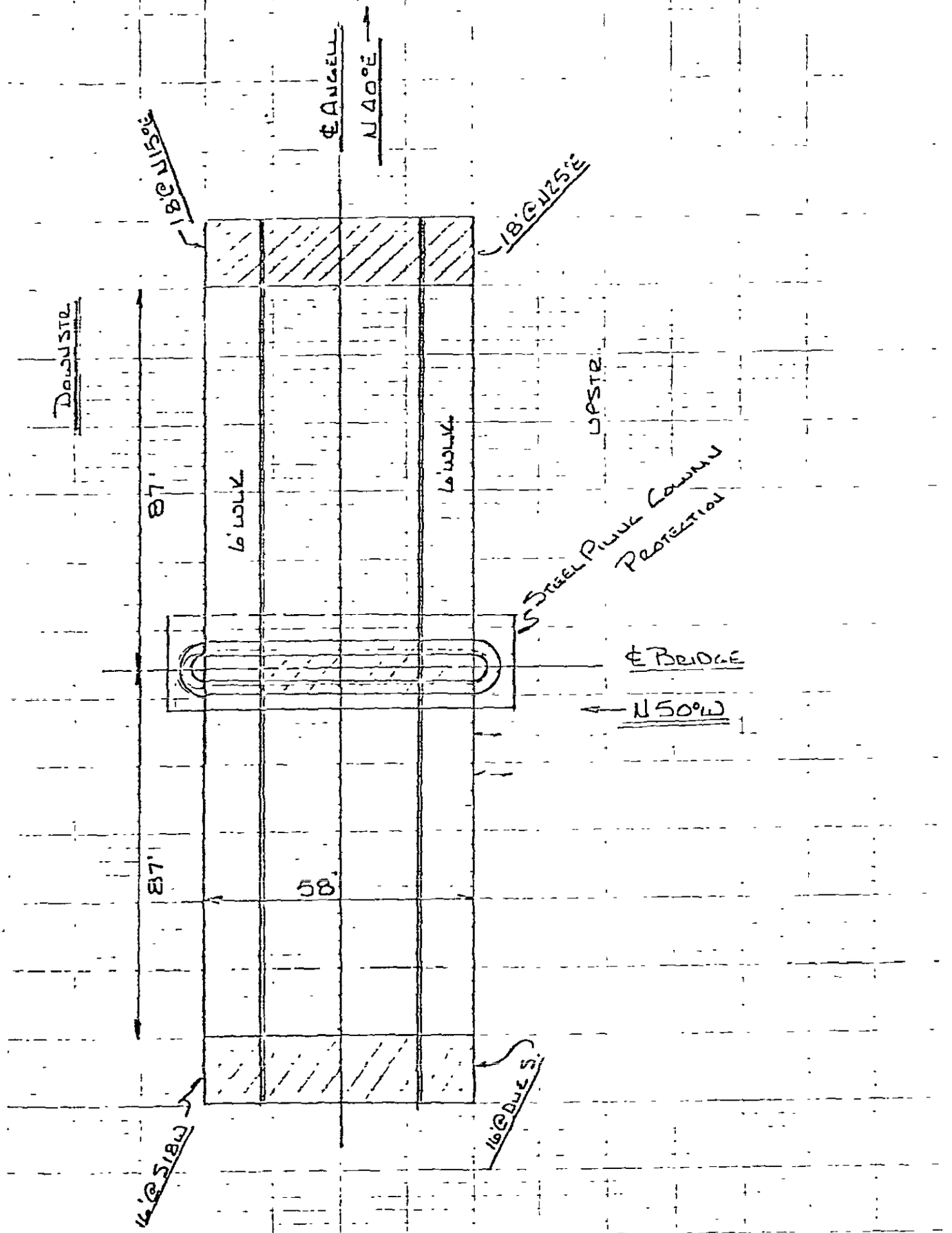
℄ Downstr. End Facing Upstr.




SHEET 120-16
HOD 2021-07

BRIDGE SECTION #19 ALGELL ST. @ KALAMAZOO RIVER

MAG. BEARINGS




SHEET B OF 16

HUD 2021-07

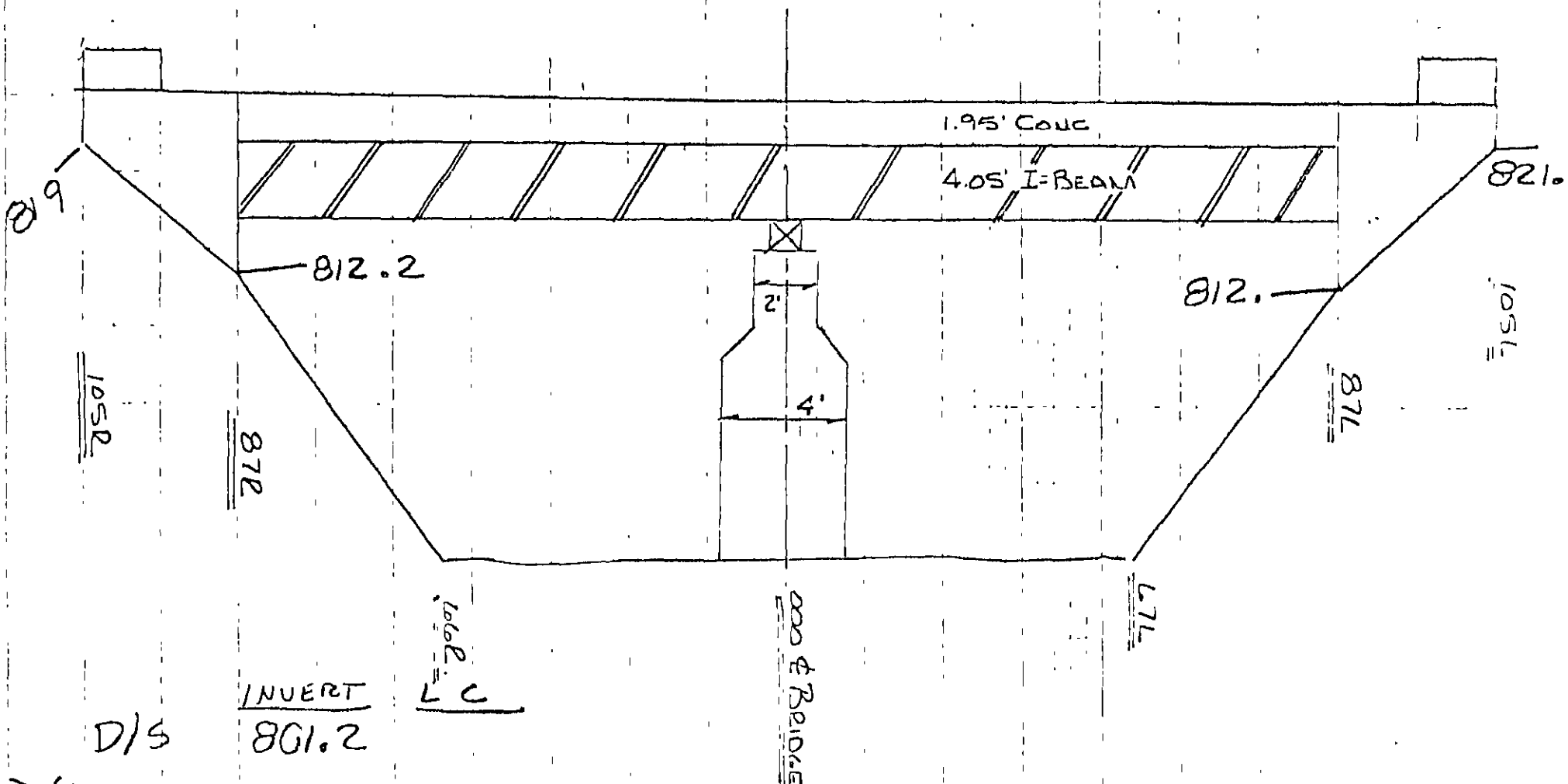


11

SECTION #22 KALAMAZOO RIVER AT KENDALL

CROSS-SECTION #22 KENDALL ST AT KALAMAZOO RIVER

L & R OFFSETS FROM ℄ BRIDGE FACING DOWNSTR



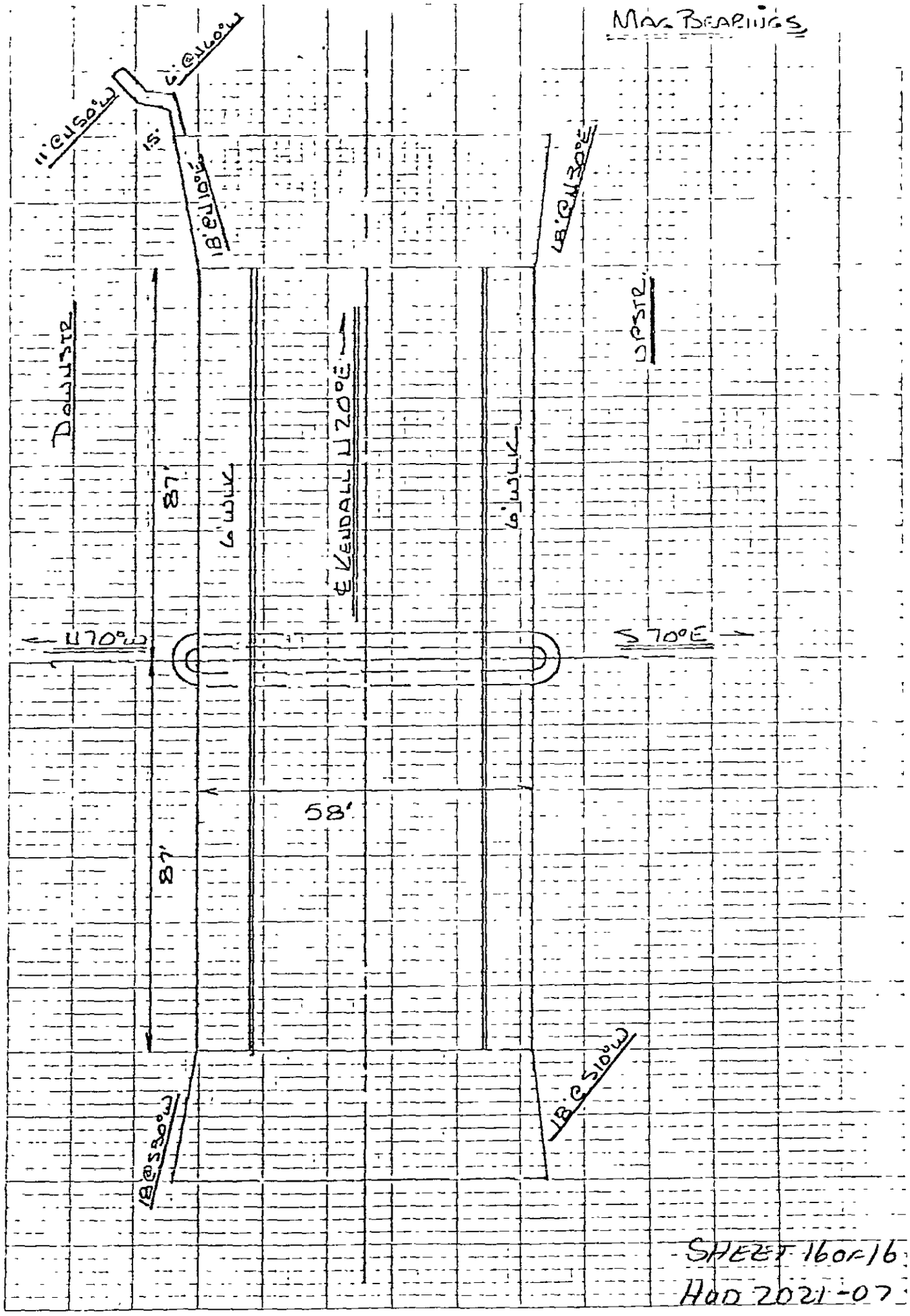

| | INVERT | L C |
|---|---|---|
| D/S | 801.2 | |
| U/S | 802.4 | 817.7 |

DOWNSTR END FACING UPSTR.

SHEET 15 OF 16
HUD 2021-07

2021-07

CROSS SECTION #22 KENDALL ST AT KALAMAZOO [illegible]




SHEET 16 OF 16

HUD 2021-07

KALAMAZOO RIVER

BEDFORD TOWNSHIP

AND THE

CITY OF BATTLE CREEK

EXHIBIT 5

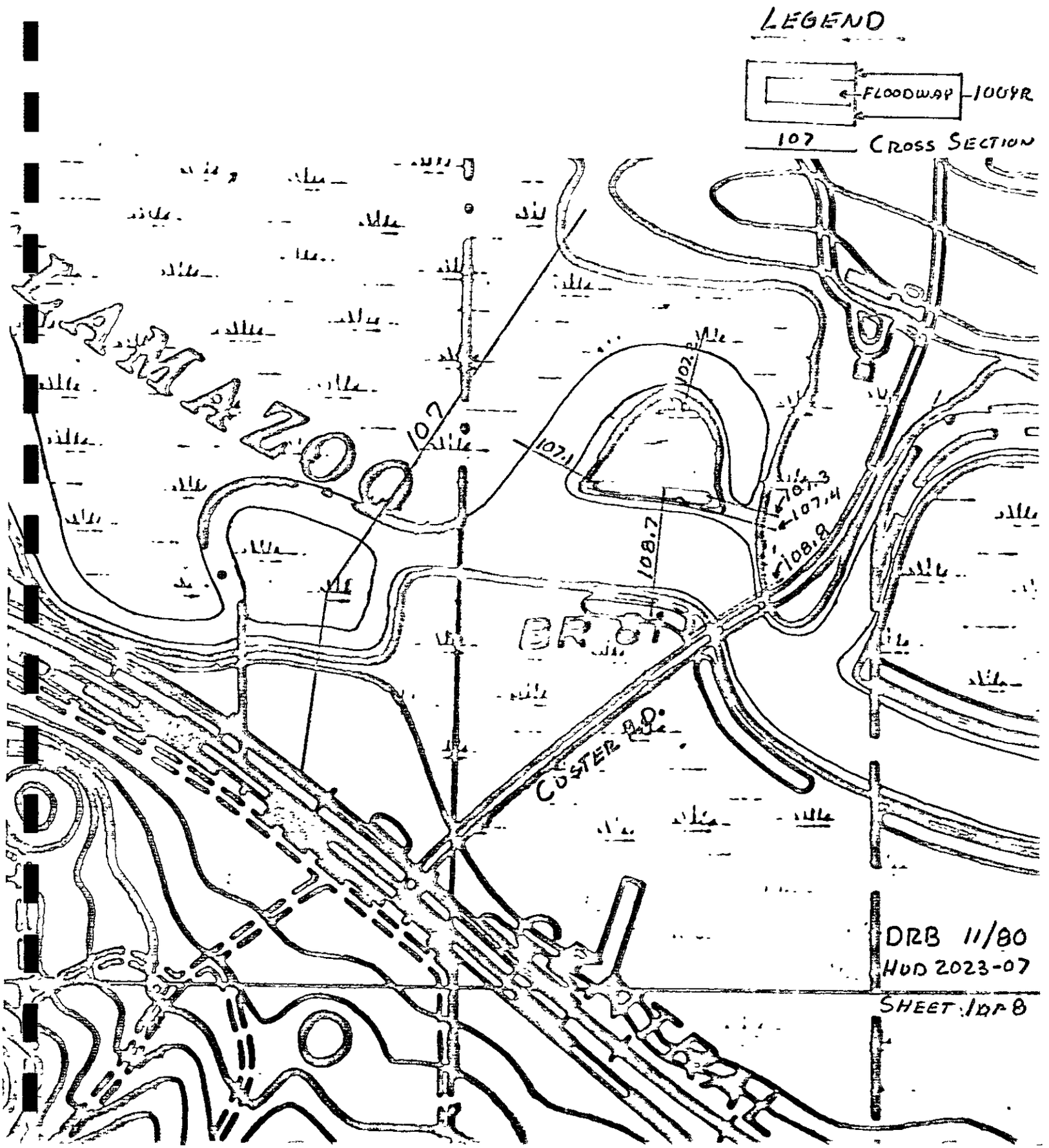
Oxbow Analysis

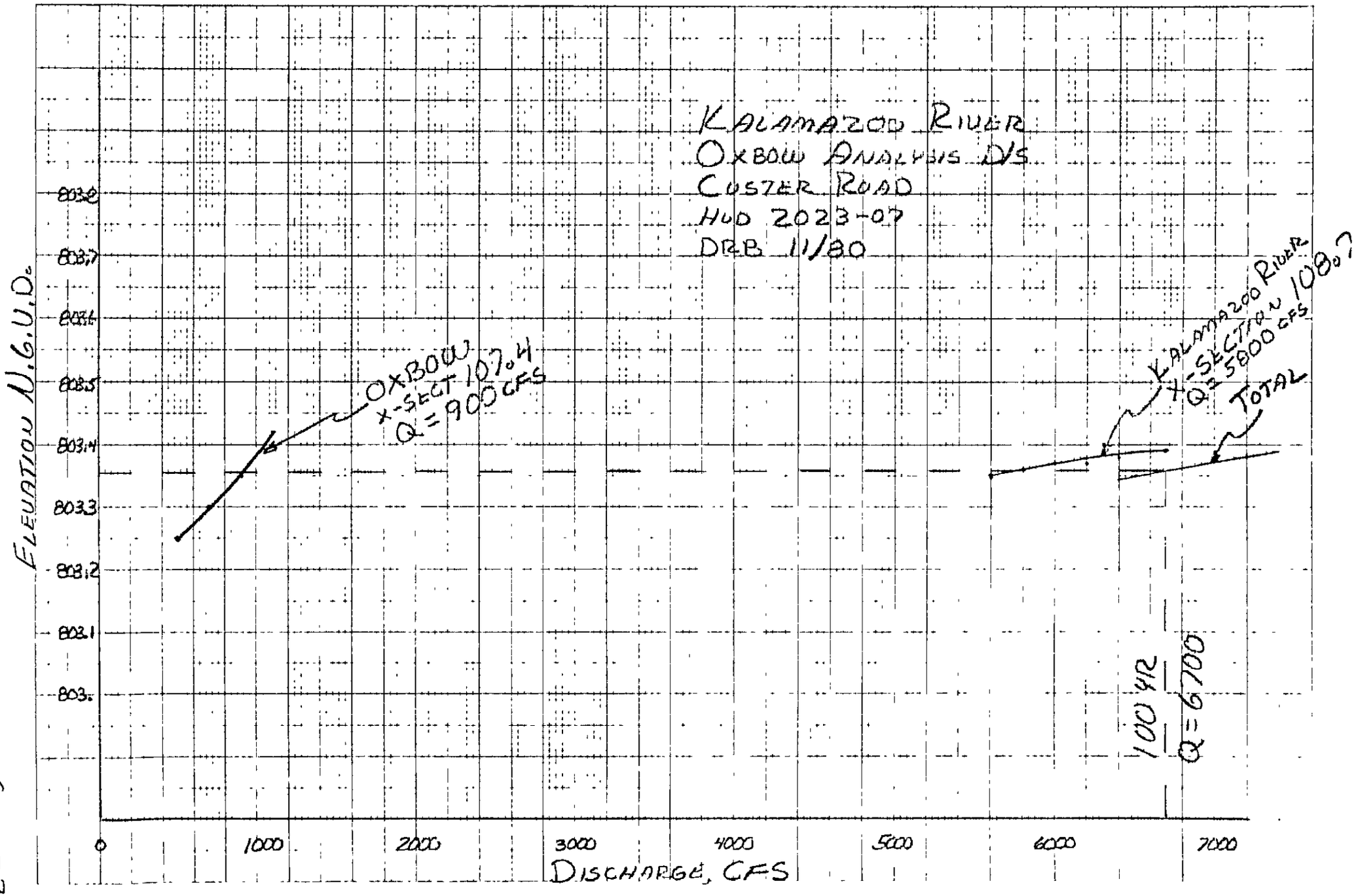
D/S of Custer Road

INDEX


| | |
|---|---|
| PAGE 1 | Location Map with Cross Section Locations |
| PAGE 2 | Rating Curve for Oxbow Analysis |
| PAGES 3-5 | HEC-2 Backwater, Kalamazoo River |
| PAGES 6-8 | HEC-2 Backwater, Oxbow |

KALAMAZOO RIVER
OXBOW ANALYSIS D/S
CUSTER ROAD
LOCATION MAP




KALAMAZOO RIVER
OXBOW ANALYSIS D/S
CUSTER ROAD
HUD 2023-07
DRB 11/80
ELEVATION U.S.G.S.D.
803.6
803.7
803.6
803.5
803.4
803.3
803.2
803.1
803.
OXBOW
X-SECT 107.4
Q = 900 CFS
KALAMAZOO RIVER
X-SECTION 108.7
Q = 5800 CFS
TOTAL
100 YR
Q = 6700
0
1000
2000
3000
4000
5000
6000
7000
DISCHARGE, CFS

SHEET 7 OF 5

KALAMAZOO RIVER
RATING CURVE @
X-SECT 108.7

R LEVEE ID 01 20 UPDATED FEB 1977
ORD = F1
FI AIRON = 50.51.52

TOWNSHIP KALAMAZOO RIVER
HALYS S D/S CUSTER RD.
KALAMAZOO RIVER

| I | LHEK | FQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 2. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 802.870 | 0.000 |

| J2 | NPRO | PLOT | PRFVS | XSECV | XSECH | FN | ALLOC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.00 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

I3 NRI ILF CARDS FOR SUMMARY PRINTOUT

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 150.00 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

I5 LPRN NINSEC ********REQUESTED SECTION NUMBERS********

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | -10.00 | -10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| | CT | .000 | 6700.000 | 6700.000 | 6700.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | NH | .000 | 0.120 | 429.000 | 0.040 | 485.000 | 0.120 | 808.000 | 0.040 | 916.000 | 0.120 | |
| | NN | 160 .000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |

SURVEY CROSS SECTION 107

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | .000 | 27.000 | 808.000 | 216.000 | 550.000 | 600.000 | 1275.000 | 0.000 | 0.000 | 0.000 |
| | 82 | .000 | 0.000 | 813.000 | 90.000 | 815.200 | 130.000 | 808.200 | 164.000 | 810.000 | 216.000 |
| | 80 | .400 | 374.000 | 798.600 | 400.000 | 800.300 | 424.000 | 797.100 | 429.000 | 795.800 | 444.000 |
| | 79 | .300 | 457.000 | 796.200 | 374.000 | 796.300 | 485.000 | 799.300 | 489.000 | 796.700 | 614.000 |
| | 79 | .400 | 764.000 | 802.100 | 803.000 | 797.100 | 808.000 | 788.900 | 833.000 | 794.200 | 862.000 |
| | 79 | .900 | 893.000 | 796.200 | 916.000 | 800.200 | 923.000 | 800.200 | 1172.000 | 799.700 | 1429.000 |
| GR | 79 | .100 | 1599.000 | 810.200 | 1500.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | | .120 | 0.120 | 1.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| CT | | .000 | 5600.000 | 5800.000 | 6100.000 | 6200.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

0 FT D/S CUSTER RD.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | .700 | 10.000 | 85.000 | 36.000 | 700.000 | 1075.000 | 1075.000 | 0.000 | 0.000 | 0.000 |
| | 81 | .000 | 0.000 | 797.500 | 85.000 | 794.400 | 100.000 | 792.800 | 156.000 | 793.100 | 175.000 |
| | 0. | .510 | 205.000 | 798.500 | 119.000 | 793.900 | 236.000 | 800.500 | 268.000 | 810.000 | 350.000 |
| | | .000 | 6700.000 | 6700.000 | 6700.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

S CO ILF RD.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | 2 | 1411.400 | 796.700 | 1410.500 | 793.400 | 1426.000 | 793.000 | 1445.000 | 794.100 | |
| | 3 | 1442.600 | 79 .300 | 1446.700 | 795.400 | 1464.000 | 794.300 | 1481.300 | 795.9 | |
| | 4 | 1432.000 | 79 .300 | 1483.000 | 795.000 | 1502.000 | 797.100 | 1517.500 | 800.00 | |
| | 0 | 0.000 | .000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | |

SHEET 30 OF 8
HYD2023-07

[redacted]

SUMMARY PRINTOUT TABLE 150

| SE NO | | CUSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 108 700 | 5600.00 | 803.35 | 0.00 | 0.48 | 0.00 | 247.36 | 1075.00 |
| 108 700 | 5800.00 | 803.36 | 0.00 | 0.49 | 0.00 | 247.48 | 1075.00 |
| 108 700 | 6000.00 | 803.37 | 0.00 | 0.50 | 0.00 | 247.62 | 1075.00 |
| 108 700 | 6200.00 | 803.37 | 0.00 | 0.50 | 0.00 | 247.74 | 1075.00 |
| 108 800 | 6700.00 | 803.53 | 0.00 | 0.18 | 0.00 | 107.10 | 350.00 |
| 108 800 | 6700.00 | 803.56 | 0.00 | 0.20 | 0.00 | 107.10 | 350.00 |
| 108 800 | 6700.00 | 803.59 | 0.00 | 0.22 | 0.00 | 107.10 | 350.00 |
| 108 800 | 6700.00 | 803.62 | 0.00 | 0.24 | 0.00 | 107.10 | 350.00 |

SUMMARY OF ERRORS

SHEET 4 OF 8
HUD 2023-07

[illegible] RINGOUT TABLE 150

| SE NO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 108 700 | 6400.00 | 803.38 | 0.00 | 0.51 | 0.00 | 247.86 | 1075.00 |
| 108 700 | 6500.00 | 803.39 | 0.00 | 0.52 | 0.00 | 247.93 | 1075.00 |
| 108 700 | 6600.00 | 803.39 | 0.00 | 0.52 | 0.00 | 248.00 | 1075.00 |
| 108 700 | 6700.00 | 803.39 | 0.00 | 0.52 | 0.00 | 248.06 | 1075.00 |
| 108 300 | 6700.00 | 803.65 | 0.00 | 0.27 | 0.00 | 107.10 | 350.00 |
| 108 300 | 6700.00 | 803.66 | 0.00 | 0.28 | 0.00 | 107.10 | 350.00 |
| 108 300 | 6700.00 | 803.68 | 0.00 | 0.29 | 0.00 | 107.10 | 350.00 |
| 108 300 | 6700.00 | 803.70 | 0.00 | 0.30 | 0.00 | 107.10 | 350.00 |

SUMMARY OF ERRORS

SHEET 5 OF 8
HUD 2023-07

OXBOW
RATING @
X-SECT 107.4

```
*****************************************************
  [illegible] RELEASE DATED NOV 76 UPDATED FEB 1977
  [illegible] - 01
  [illegible] + 50,51,52
*****************************************************

C
[illegible] TOWNSHIP KALAMAZOO RIVER
[illegible] ANALYSIS D/S CUSTER RD.
T3      KALAMAZOO RIVER

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       2.       0.       0.  0.000000     0.00      0.0      0.   802.870   0.000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     1.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000

J5  LPRNT     NUMSEC                 ********REQUESTED SECTION NUMBERS********

    -10.000  -10.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
      4.000  6700.000  6700.000  6700.000  6700.000    0.000    0.000    0.000    0.000    0.000
NH    5.000     0.120   429.000     0.040   485.000    0.120   808.000    0.040   916.000    0.120
NH 1600.000     0.000     0.000     0.000     0.000    0.000    0.000    0.000    0.000    0.000

      SURVEY CROSS SECTION 107

X1  107.000   27.000   808.000   916.000   550.000   [illegible]00.000  1275.000    0.000    0.000    0.000
GR  820.000    0.000   813.000    90.000   815.200   130.000   808.200   164.000   810.000  216.000
GR  807.[illegible]00  374.000   798.600   400.000   800.300   424.000   797.100   429.000   795.800  444.000
[illegible]  [illegible]  457.000   796.200   474.000   796.300   485.000   799.300   489.000   798.700  628.000
[illegible]  [illegible]  [illegible]  802.100   803.000   797.100   808.000   788.900   833.000   794.200  862.000
[illegible]  [illegible]  [illegible]  796.200   916.000   800.200   923.000   800.200  1172.000   799.700 1428.000
GR  [illegible]  1599.000   810.200  1600.000     0.000     0.000     0.000     0.000     0.000     0.000
NC    0.120     0.120     0.040     0.100     0.300     0.000     0.000     0.000     0.000     0.000
RT    4.000   500.000   700.000   900.000  1100.000     0.000     0.000     0.000     0.000     0.000

      [illegible] D/S CUSTER RD.

X1  [illegible]  [illegible]  125.000   225.000   900.000   450.000   900.000    0.000    0.000    0.000
GR  [illegible]  0.000   800.000     1.000   800.000   120.000   793.000   125.000   793.000  22[illegible].000
[illegible]  [illegible]  800.000   349.000   810.000   350.000     0.000     0.000     0.000     [illegible]

      [illegible] D/S CUSTER RD.

[illegible]  0.000     0.000     0.000   450.000   450.000   450.000    0.000    0.000    [illegible].000
[illegible]  [illegible]  0.120     0.100     0.300     0.000     0.000     0.000     [illegible]
```

SHEET 6 OF 8
HUD 2023-07

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DRLOW D.S CUSTER RD. | | | | | | | | | |
| [illegible] | 1 | 7.500 | 6.000 | 50.000 | 150.000 | 450.000 | 450.000 | 450.000 | 0.000 | 0.000 | 0.000 |
| GR | 8 | 0.000 | 0.000 | 800.000 | 50.000 | 793.000 | 60.000 | 793.000 | 140.000 | 800.000 | 150.000 |
| GR | 8 | 0.000 | 200.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | | 0.000 | 1.500 | 3.000 | 0.000 | 1.000 | 0.000 | 0.100 | 0.000 | 793.000 | 793.000 |
| X1 | 1 | 7.400 | 0.000 | 0.000 | 0.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| X2 | | 0.000 | 0.000 | 1.000 | 793.100 | 800.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| OT | | 4.000 | 0.000 | 810.000 | 0.000 | 50.000 | 800.000 | 0.000 | 60.000 | 800.000 | 0.000 |
| OT | 1 | 0.000 | 800.000 | 0.000 | 150.000 | 800.000 | 0.000 | 200.000 | 810.000 | 0.000 | 0.000 |
| OT | | 4.000 | 6700.000 | 6700.000 | 6700.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | | 0.120 | 0.120 | 0.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | D/S CUSTER RD. | | | | | | | | | |
| X1 | 1 | 6.800 | 15.000 | 1410.400 | 1517.600 | 300.000 | 300.000 | 300.000 | 0.000 | 0.000 | 0.000 |
| GR | 8 | 1.700 | 1410.400 | 796.700 | 1410.500 | 793.400 | 1426.000 | 793.000 | 1445.000 | 793.000 | 1445.100 |
| GR | 7 | 3.000 | 1446.600 | 793.000 | 1446.700 | 793.400 | 1464.000 | 794.300 | 1481.300 | 794.300 | 1481.400 |
| GR | 7 | 4.300 | 1482.900 | 794.300 | 1483.000 | 793.000 | 1502.000 | 797.100 | 1517.500 | 810.700 | 1517.600 |
| EJ | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

1553 STARTING NC CARD OMITTED

SHEET 7 OF 8

HUD 2023-07

O RIVER

RIVER AT ARIE 150

| E | ID | | CHSEL | DIFW P | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| 107 | 000 | 6700.00 | 802.87 | 0 00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 | 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 | 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 | 000 | 6700.00 | 802.87 | 0.00 | 0.00 | 0.00 | 1212.01 | 1275.00 |
| 107 | 100 | 500.00 | 803.15 | 0.00 | 0.28 | 0.00 | 348.63 | 900.00 |
| 107 | 100 | 700.00 | 803.15 | 0 00 | 0.28 | 0.00 | 348.63 | 900.00 |
| 107 | 100 | 900.00 | 803.16 | 0 00 | 0.29 | 0.00 | 348.63 | 900.00 |
| 107 | 100 | 1100.00 | 803.17 | 0 00 | 0.30 | 0.00 | 348.63 | 900.00 |
| 107 | 200 | 500.00 | 803.15 | 0 00 | 0.00 | 0.00 | 348.63 | 450.00 |
| 107 | 200 | 700.00 | 803.16 | 0 00 | 0.01 | 0.00 | 348.63 | 450.00 |
| 107 | 200 | 900.00 | 803.17 | 0 00 | 0.01 | 0.00 | 348.63 | 450.00 |
| 107 | 200 | 1100.00 | 803.18 | 0 00 | 0.01 | 0.00 | 348.64 | 450.00 |
| 107 | 300 | 500.00 | 803.16 | 0 00 | 0.01 | 0.00 | 131.54 | 450.00 |
| 107 | 300 | 700.00 | 803.17 | 0.00 | 0.01 | 0.00 | 131.66 | 450.00 |
| 107 | 300 | 900.00 | 803.19 | 0 00 | 0.02 | 0.00 | 131.84 | 450.00 |
| 107 | 300 | 1100.00 | 803.21 | 0 00 | 0.03 | 0.00 | 132.01 | 450.00 |
| 107 | 400 | 500.00 | 803.25 | 0 00 | 0.09 | 0.00 | 132.55 | 30.00 |
| 107 | 400 | 700.00 | 803.30 | 0 00 | 0.13 | 0.00 | 133.10 | 30.00 |
| 107 | 400 | 900.00 | 803.35 | 0 00 | 0.17 | 0.00 | 133.61 | 30.00 |
| 107 | 400 | 1100.00 | 803.42 | 0 00 | 0.21 | 0.00 | 134.30 | 30.00 |
| 108 | 800 | 6700.00 | 803.28 | 0 00 | 0.02 | 0.00 | 107.09 | 300.00 |
| 108 | 800 | 6700.00 | 803.35 | 0 00 | 0.04 | 0.00 | 107.09 | 300.00 |
| 108 | 800 | 6700.00 | 803.42 | 0 00 | 0.06 | 0.00 | 107.09 | 300.00 |
| 108 | 800 | 6700.00 | 803.50 | 0 00 | 0.08 | 0.00 | 107.10 | 300.00 |

SUMMARY OF ERROR

SHEET 8 OF 8
HUD 2023-07

KALAMAZOO RIVER

BEDFORD TOWNSHIP

AND THE

CITY OF BATTLE CREEK

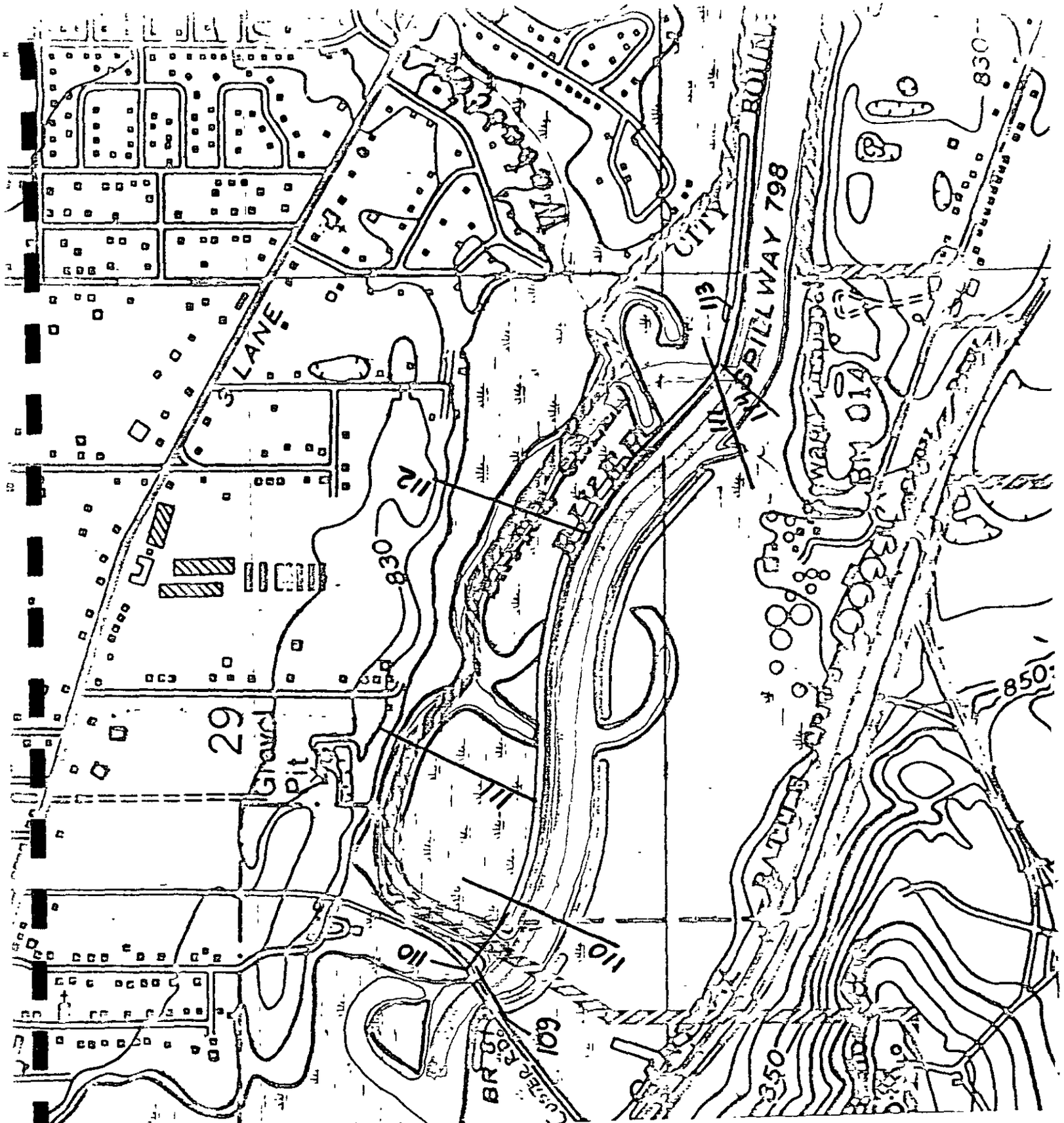
EXHIBIT 6

Divided Flow Analysis For

Levee System U/S Custer Road

# INDEX


| | |
|---|---|
| PAGE 1 | Location Map with Cross Section Locations |
| PAGE 2 | Rating Curve for Divided Flow Analysis |
| PAGES 3-5 | HEC-2 Backwater for Kalamazoo River |
| PAGES 6-8 | HEC-2 Backwater for Diversion Channel |




DIVIDED FLOW ANALYSIS FOR LEVEE SYSTEM U/S CUSTER ROAD

110 CROSS SECTION LOCATION

MAIN CHANNEL

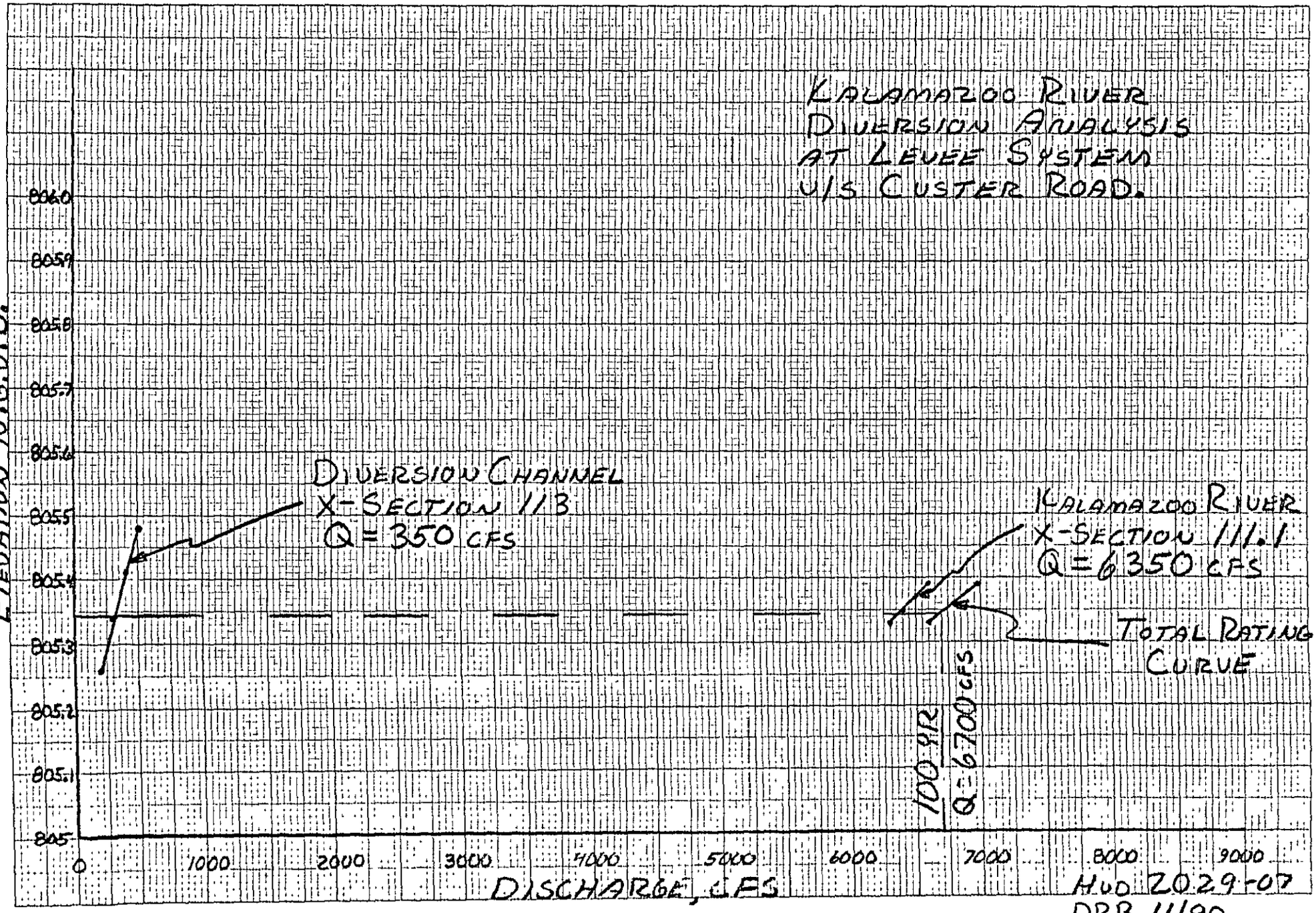
DIVERSION CHANNEL

SHEET 1 OF 108

HUD 2023-07

HUD 2021-09

K+E 10 X 10 TO ¼ INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. U.S.A.
45-1320




HUD 2029-07
DRB 11/80
SHEET 2 OF 8

KALAMAZOO RIVER

DIVIDED FLOW ANALYSIS

AT LEVEE SYSTEM U/S

CUSTER ROAD

RATING CURVE @ X-SECT 111.1

RIVER CITY OF BATTLE CREEK

KALAMAZOO RIVER

| ICR | IPU | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|
| | 2. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 803.740 | 0.000 |

| IPRT | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.000 | 6700.000 | 6700.000 | 6700.000 | 6700.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.120 | 0.120 | 0.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S FACE CUSTER RD. CROSS SECTION 108 & 109

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 100.100 | 15.000 | 1410.400 | 1517.600 | 35.000 | 35.000 | 35.000 | 0.000 | 0.000 | 0.000 |
| 1.000 | 1410.400 | 810.700 | 0.000 | 1410.500 | 810.700 | 808.700 | 1445.000 | 810.700 | 808.700 |
| 1445.100 | 810.700 | 0.000 | 1446.600 | 810.700 | 0.000 | 1446.700 | 810.700 | 808.700 | 1481.300 |
| 810.700 | 808.700 | 1481.400 | 810.700 | 0.000 | 1482.900 | 810.700 | 0.000 | 1483.000 | 810.700 |
| 808.700 | 1517.500 | 810.700 | 808.700 | 1517.600 | 810.700 | 0.000 | 0.000 | 0.000 | 0.000 |
| 810.700 | 1410.400 | 796.700 | 1410.500 | 794.200 | 1426.000 | 791.600 | 1445.000 | 791.600 | 1475.100 |
| 791.600 | 1446.600 | 791.600 | 1446.700 | 790.100 | 1464.000 | 794.300 | 1481.300 | 794.300 | 1481.400 |
| 794.300 | 1482.900 | 794.300 | 1483.000 | 793.400 | 1502.000 | 796.500 | 1517.500 | 810.700 | 1517.600 |

U/S CUSTER RD. ACROSS SECTION 108

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 100.100 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |

100 FT U/S CUSTER RD.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 0.000 | 1410.500 | 1517.500 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| 1.000 | 1700.000 | 796.700 | 1410.500 | 794.200 | 1426.000 | 791.600 | 1445.000 | 790.100 | 1464.000 |
| 100.100 | 1701.000 | 793.400 | 1502.000 | 796.500 | 1517.500 | 808.000 | 1625.000 | 0.000 | 0.000 |
| 1.000 | 6500.000 | 6400.000 | 6500.000 | 6600.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.100 | 0.100 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SECTION 111 SURVEY SECTION 4

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 71.000 | 1698.000 | 1937.000 | 650.000 | 650.000 | 650.000 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.000 | 1632.000 | 0.000 | 1994.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1.000 | 802.400 | 702.000 | 805.700 | 712.000 | 803.600 | 820.000 | 803.700 | 0.000 |
| 1.000 | 1.000 | 1305.000 | 799.900 | 1500.000 | 0.000 | 1702.000 | 80 | 1.000 |
| 1.000 | 0.000 | 1703.000 | 802.400 | 1966.000 | 0.000 | 1688.000 | 79 | 0.000 |
| 1.000 | 803.500 | 1706.000 | 793.400 | 1983.000 | 0.000 | 1713.000 | 79 | 0.000 |
| 1.000 | 901.500 | 1966.000 | 805.700 | 1980.000 | 805.500 | 1994.000 | 80 | 0.000 |
| 1.000 | 801.100 | 2100.000 | 802.400 | 2420.000 | 802.800 | 2500.000 | 80 | 0.000 |
| 1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0. | 0.000 |

SHEET 3 OF 8

HUD 702 1-1

T S 0 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | [illegible] | [illegible] | 1140.000 | 1185.000 | 3150.000 | 3750.000 | 3450.000 | 0.000 | [illegible] | [illegible] |
| | [illegible] | 0 [illegible] | 0.000 | 1138.000 | 0.000 | 1488.000 | 0.000 | 0.000 | [illegible] | [illegible] |
| | [illegible] | 320 [illegible] | [illegible] | 82.000 | 803.200 | 930.000 | 798.600 | 990.000 | [illegible] | [illegible] |
| | [illegible] | 1108.000 | [illegible] | 1113.000 | 799.200 | 1120.000 | 796.300 | 1151.000 | 795.100 | 1198.000 |
| | [illegible] | 1233.000 | 795.600 | 1177.000 | 796.100 | 1329.000 | 799.600 | 1385.000 | 802.700 | 1400.000 |
| | [illegible] | 1408.000 | 804.600 | 1488.000 | 802.700 | 1562.000 | 803.600 | 1734.000 | 804.400 | 1896.000 |
| | [illegible] | [illegible] | 802.900 | 2248.000 | 802.900 | 2290.000 | 806.200 | 2310.000 | 810.400 | 2494.000 |

TOP OF 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 111.000 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| | [illegible] | 0.000 | 0.000 | 95.100 | 797.300 | 0.000 | 0.000 | 0.000 | 0.000 | [illegible] |
| | [illegible] | 0.000 | 0.000 | 1138.000 | 0.000 | 1488.000 | 0.000 | 0.000 | 0.000 | 0.000 |

U/S 60 INCH ENCLOSED SEWER CROSSING CROSS SECTION 5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XS | 111.100 | 0.000 | 0.000 | 0.000 | 2.000 | 2.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| XS | [illegible] 000 | 0.000 | 0.000 | 1138.000 | 0.000 | 1488.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| PT | 4.000 | 6700.000 | 6700.000 | 6700.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

[illegible] LAMA CO RIVER UPSTREAM ENCLOSED SEWER CROSSING

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| XS | 111.000 | 25.000 | 112[illegible].000 | 1385.000 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| XS | [illegible].000 | 0.000 | [illegible].000 | 1138.000 | 0.000 | 1488.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 81.800 | 1220.000 | 80[illegible].800 | 1182.000 | 803.200 | 1330.000 | 798.600 | 990.000 | 802.800 | 1038.000 |
| GR | 80[illegible].600 | 1108.000 | 80[illegible].600 | 1113.000 | 799.200 | 1120.000 | 796.300 | 1151.000 | 795.100 | 1198.000 |
| GR | 79.300 | 1233.000 | 79[illegible].600 | 1177.000 | 796.100 | 1329.000 | 799.600 | 1385.000 | 802.700 | 1400.000 |
| GR | 80.400 | 1408.000 | 80[illegible].600 | 1488.000 | 802.700 | 1562.000 | 803.600 | 1734.000 | 804.400 | 1896.000 |
| GR | 80.700 | 2086.000 | 80[illegible].900 | 2248.000 | 802.900 | 2290.000 | 806.200 | 2310.000 | 810.600 | 2494.000 |
| GR | [illegible].000 | 0.000 | [illegible].000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SHEET 4 of 8

C0-1202-[illegible] Hyd 2021-07

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 109 | 000 | 6700.00 | 803.74 | 0.00 | 0.00 | 0.00 | 107.10 | 35.00 |
| 109 | 000 | 6700.00 | 803.74 | 0.00 | 0.00 | 0.00 | 107.10 | 35.00 |
| 109 | 000 | 6700.00 | 803.74 | 0.00 | 0.00 | 0.00 | 107.10 | 35.00 |
| 109 | 000 | 6700.00 | 803.74 | 0.00 | 0.00 | 0.00 | 107.10 | 35.00 |
| 109 | 100 | 6700.00 | 803.80 | 0.00 | 0.06 | 0.00 | 107.10 | 1.00 |
| 109 | 100 | 6700.00 | 803.80 | 0.00 | 0.06 | 0.00 | 107.10 | 1.00 |
| 109 | 100 | 6700.00 | 803.80 | 0.00 | 0.06 | 0.00 | 107.10 | 1.00 |
| 109 | 100 | 6700.00 | 803.80 | 0.00 | 0.06 | 0.00 | 107.10 | 1.00 |
| 109 | 200 | 6700.00 | 804.08 | 0.00 | 0.28 | 0.00 | 249.96 | 100.00 |
| 109 | 200 | 6700.00 | 804.08 | 0.00 | 0.28 | 0.00 | 249.96 | 100.00 |
| 109 | 200 | 6700.00 | 804.08 | 0.00 | 0.28 | 0.00 | 249.96 | 100.00 |
| 109 | 200 | 6700.00 | 804.08 | 0.00 | 0.28 | 0.00 | 249.96 | 100.00 |
| 110 | 000 | 6300.00 | 804.65 | 0.00 | 0.58 | 0.00 | 344.88 | 650.00 |
| 110 | 000 | 6400.00 | 804.65 | 0.00 | 0.58 | 0.00 | 344.88 | 650.00 |
| 110 | 000 | 6500.00 | 804.65 | 0.00 | 0.58 | 0.00 | 344.88 | 650.00 |
| 110 | 000 | 6600.00 | 804.65 | 0.00 | 0.58 | 0.00 | 344.88 | 650.00 |
| 110 | 900 | 6300.00 | 805.31 | 0.00 | 0.66 | 0.00 | 450.00 | 3450.00 |
| 110 | 900 | 6400.00 | 805.33 | 0.00 | 0.68 | 0.00 | 450.00 | 3450.00 |
| 110 | 900 | 6500.00 | 805.35 | 0.00 | 0.70 | 0.00 | 450.00 | 3450.00 |
| 110 | 900 | 6600.00 | 805.37 | 0.00 | 0.72 | 0.00 | 450.00 | 3450.00 |
| 111 | 000 | 6300.00 | 805.29 | 0.00 | -0.02 | 0.00 | 450.00 | 2.00 |
| 111 | 000 | 6400.00 | 805.31 | 0.00 | -0.02 | 0.00 | 450.00 | 2.00 |
| 111 | 000 | 6500.00 | 805.33 | 0.00 | -0.03 | 0.00 | 450.00 | 2.00 |
| 111 | 000 | 6600.00 | 805.34 | 0.00 | -0.03 | 0.00 | 450.00 | 2.00 |
| 111 | 100 | 6300.00 | 805.33 | 0.00 | 0.04 | 0.00 | 450.00 | 2.00 |
| 111 | 100 | 6400.00 | 805.35 | 0.00 | 0.04 | 0.00 | 450.00 | 2.00 |
| 111 | 100 | 6500.00 | 805.37 | 0.00 | 0.04 | 0.00 | 450.00 | 2.00 |
| 111 | 100 | 6600.00 | 805.39 | 0.00 | 0.04 | 0.00 | 450.00 | 2.00 |
| 114 | 000 | 6700.00 | 805.34 | 0.00 | 0.01 | 0.00 | 450.00 | 100.00 |
| 114 | 000 | 6700.00 | 805.36 | 0.00 | 0.01 | 0.00 | 450.00 | 100.00 |
| 114 | 000 | 6700.00 | 805.38 | 0.00 | 0.02 | 0.00 | 450.00 | 100.00 |
| 114 | 000 | 6700.00 | 805.41 | 0.00 | 0.02 | 0.00 | 450.00 | 100.00 |

SUMMARY OF ERROR

HUD-2021-07

SHEET 5 OF 8

DIVERSION CHANNEL
DIVIDED FLOW ANALYSIS
AT LEVEE SYSTEM U/S
CUSTER ROAD
RATING CURVE @ X-SECT 113

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | IDIP | STRT | METRIC | HV NS | Q | WSEL | FQ | |
| | 0. | 0. | 0.000000 | 0.00 | .0 | 0. | 803.740 | 0.000 | |
| | PREVS | XSECV | XSECH | FN | ALLC | IBW | CHNIM | ITRACE | |
| 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| | | 6700.000 | 6700.000 | 6700.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | 0.040 | 0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| U/S CUSTER RD. CROSS SECTION 108 & 109 | | | | | | | | | |
| | | 1410.400 | 1517.600 | 35.000 | 35.000 | 35.000 | 0.000 | 0.000 | 0.000 |
| | | 810.700 | 0.000 | 1410.500 | 810.700 | 808.700 | 1445.000 | 810.700 | [illegible] |
| | 810.700 | 0.000 | 1446.600 | 810.700 | 0.000 | 1446.700 | 810.700 | 808.700 | 1481.300 |
| | 808.700 | 1481.400 | 810.700 | 0.000 | 1482.900 | 810.700 | 0.000 | 1483.000 | 810.700 |
| | 1517.500 | 810.700 | 808.700 | 1517.600 | 810.700 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | 796.700 | 1410.300 | 794.200 | 142.000 | 791.600 | 1445.000 | 791.600 | [illegible] |
| | | 791.600 | 1446.700 | 790.100 | 1464.000 | 794.300 | 1481.300 | 794.300 | [illegible] |
| | | 794.300 | 1483.000 | 793.400 | 1500.000 | 796.500 | 1517.500 | 800.700 | [illegible] |
| U/S CUSTER RD. ACROSS SECTION 108 | | | | | | | | | |
| | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| U/S CUSTER RD. | | | | | | | | | |
| | | [illegible] | [illegible] | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 | [illegible] |
| | | [illegible] | [illegible] | 794.200 | 142.000 | 791.600 | 1445.000 | 790.[illegible] | [illegible] |
| | | [illegible] | [illegible] | 796.300 | 1517.500 | 800.000 | 1625.000 | 0.000 | 0.000 |
| | | 0.040 | 0.100 | 0.300 | .000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | 300.000 | 400.000 | 500.000 | 600.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] AMAZON RIV | | | | | | | | | |
| | | [illegible] | [illegible] | 200.000 | 200.000 | 200.000 | 0.000 | 0.000 | 0.000 |
| | | [illegible] | 539.000 | 805.700 | 56[illegible].000 | 805.000 | 546.000 | 799.[illegible] | 57[illegible].000 |
| | | [illegible] | 623.000 | 793.400 | 65[illegible].000 | 794.000 | 683.000 | 798.[illegible] | [illegible] |
| | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | | [illegible] | 1061.000 | 1200.000 | 2000.000 | 1640.000 | 0.000 | 0.000 | 0.000 |

SHEET 6 OF 8
HUD 7071-07

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | 82.000 | 803.200 | 116.000 | 801.100 | 220.000 | 801.100 | [illegible] |
| [illegible] | [illegible] | [illegible] | 44.000 | 802.200 | 673.000 | 801.000 | 764.000 | 802.700 | [illegible] |
| 1.8[illegible] | [illegible] | [illegible] | 05.000 | 796.200 | 943.000 | 794.400 | 983.000 | 793.[illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 1[illegible]61.000 | 800.700 | 10[illegible]3.000 | 803.900 | 1073.000 | 808.500 | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible]42.000 | 815.900 | 1[illegible]4.000 | 817.200 | 1190.000 | 817.[illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | 1[illegible]00.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CROSS SECTION 112

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 543.000 | [illegible]83.000 | 1200.000 | 10[illegible].000 | 1200.000 | 0.000 | 0.000 | 0.000 |
| 11.8[illegible] | [illegible] | 803.600 | 82.000 | 799.600 | 106.000 | 800.000 | 176.000 | 801.300 | 2[illegible]6.000 |
| 11.4[illegible] | [illegible] | 802.[illegible] | [illegible]60.000 | 802.600 | 5[illegible]3.000 | 802.700 | 536.000 | [illegible] | [illegible] |
| [illegible] | 573.000 | 799.100 | [illegible]03.000 | 795.300 | 6[illegible]3.000 | 796.400 | 663.000 | 797.900 | 6[illegible]3.000 |
| [illegible] | 718.000 | 801.900 | [illegible]28.000 | 806.400 | 7[illegible]6.000 | 811.400 | 760.000 | 813.800 | 770.000 |
| 16.6[illegible] | [illegible] | 818.000 | [illegible]32.000 | 825.000 | 8[illegible]0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.150 | 0.150 | [illegible]0.300 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

T/S OF LEVEE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 [illegible].900 | 6.000 | 1.000 | [illegible]99.000 | 2000.000 | 2000.000 | 2000.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.[illegible]00 | 805.000 | [illegible]1.000 | 800.000 | 2.000 | 800.000 | 498.000 | 805.000 | 499.000 |
| [illegible] | 5[illegible]0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 1.500 | 3.000 | 0.000 | 1.000 | 0.000 | 0.100 | 0.000 | 800.000 | 800.000 |

TOP OF LEVEE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11[illegible].000 | 0.000 | 0.000 | 0.000 | 40.000 | 0.000 | 40.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | 0.000 | 1.000 | 00.100 | 805.000 | 0.000 | 0.000 | 0.000 | 0.000 | [illegible] |
| [illegible].000 | 0.000 | 808.000 | 0.000 | 1.000 | 8[illegible]5.000 | 0.000 | 2.000 | 805.000 | 0.000 |
| 49[illegible].000 | 8[illegible]5.000 | 0.000 | 99.000 | 805.000 | 0.000 | 500.000 | 808.000 | 0.000 | 0.000 |
| [illegible].120 | 0.120 | 0.035 | 0.100 | 0.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| [illegible] | [illegible]700.000 | 6700.000 | 6[illegible]00.000 | 6700.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

PALAMA OO RIVER UPSTREAM ENCLOSED SEWER CROSSING

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 11[illegible].000 | [illegible]5.000 | 1120.000 | 1[illegible]85.000 | 100.000 | 1[illegible]0.000 | 100.000 | 0.000 | 0.000 | 0.000 |
| 11.8[illegible] | [illegible] | 802.8[illegible] | 82.000 | 803.200 | 9[illegible]0.000 | 798.600 | [illegible]90.000 | 80[illegible] | [illegible] |
| [illegible] | [illegible] | [illegible]00.600 | 1[illegible].000 | 799.200 | 11[illegible]0.000 | 796.300 | 1151.000 | 795.100 | 11[illegible] |
| [illegible] | [illegible] | 795.600 | 1[illegible]77.000 | 796.100 | 13[illegible]2.000 | 799.600 | 1385.000 | 80[illegible].700 | [illegible] |
| 3.400 | 14[illegible].000 | 804.600 | 1[illegible]88.000 | 802.700 | 15[illegible]2.000 | 803.600 | 1734.000 | 804.400 | 1896.000 |
| [illegible]4.700 | 2036.000 | 802.900 | 2[illegible]48.000 | 802.900 | 22[illegible].000 | 806.200 | 2310.000 | 810.600 | 2494.000 |
| 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SHEET 7 OF 8
HUD 2021-07

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
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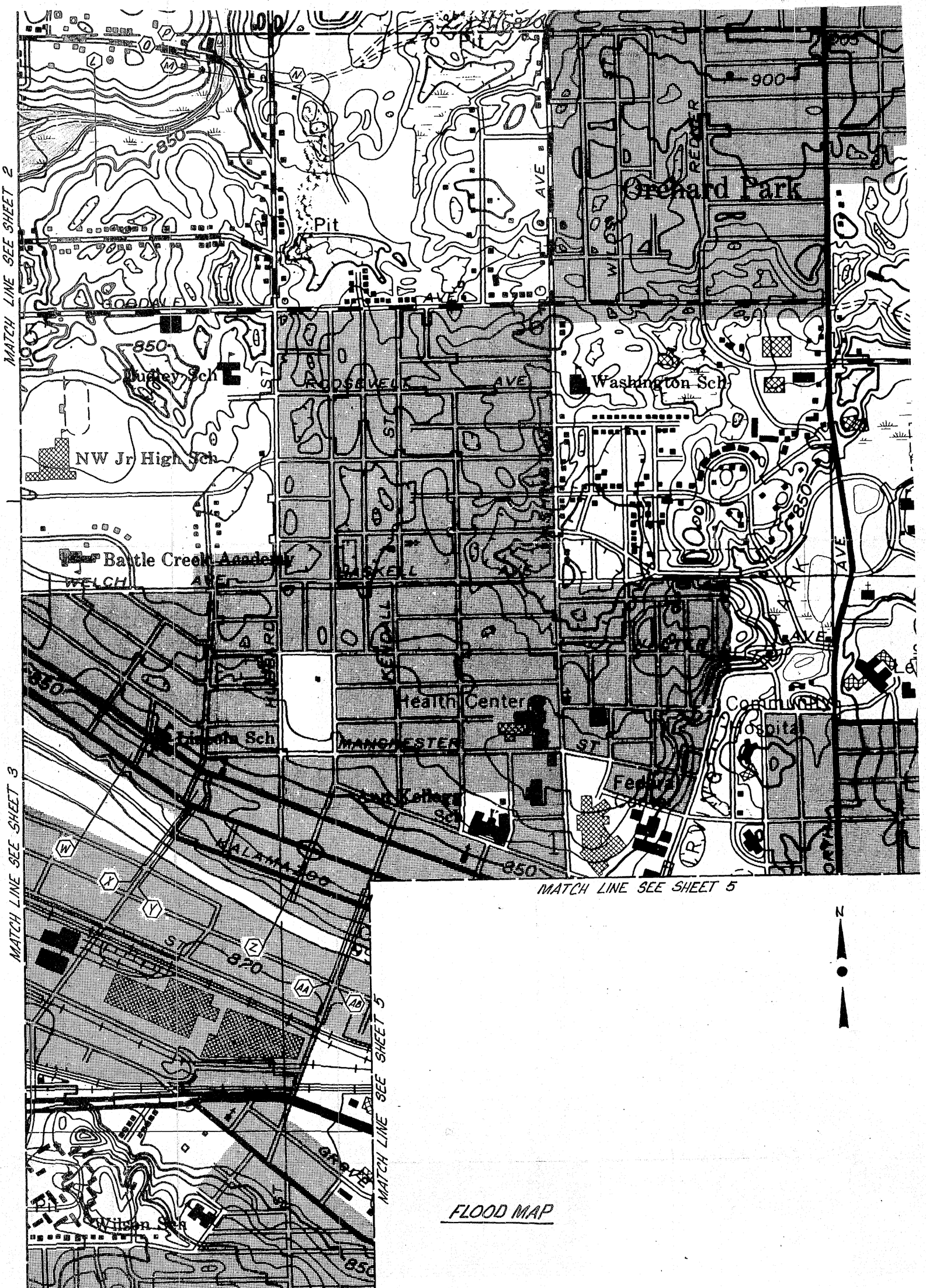



N

## FLOOD MAP

### LEGEND

FLOODWAY — 100 YR. BOUNDARY — 500 YR. BOUNDARY

A — A CROSS SECTION

CORPORATE BOUNDARY

**CITY OF BATTLE CREEK**

CALHOUN COUNTY, MICHIGAN

SCALE: 1"=400'

SPERRY DRAIN 2/81

BATTLE CREEK RIVER 11/80

KALAMAZOO RIVER 11/80

00BREAK00

1) COUNTY: Calhoun

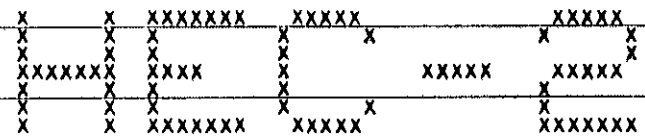
2) STUDY NAME: city of Marshall

3) WATERCOURSE: Flow Division between Rice creek and mill Race

4) DOCUMENT TYPE: 10 50 100 & 500 yr. profiles

00BREAK00

```
**********************************************************
*  HEC2 WATER SURFACE PROFILES                           *
*  VERSION OF NOVEMBER 1976                              *
*  UPDATED JULY 1979                                     *
*  ERROR CORR - 01,02,03                                 *
*  MODIFICATION - 50,51,52,53                            *
*                                                        *
*  RUN DATE  80/02/19. TIME  06.44.34.                   *
**********************************************************
```



Flow Division between
Rice Creek And Mill Race
2/19/80

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN RICE CREEK AND MILL RACE
T3      RICE CREEK

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
        0.       2.         0.         0.  0.000000       0.00       0.0         0.  893.400     0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
    1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
J5  LPRNT      NUMSEC                        ********REQUESTED SECTION NUMBERS********
   -10.000    -10.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
NC     .080       .080       .045       .100       .300      0.000      0.000      0.000      0.000      0.000
QT    5.000    400.000    600.000    800.000   1000.000   1200.000      0.000      0.000      0.000      0.000

X1    54.400     14.000   2084.000   2117.000      0.000      0.000      0.000      0.000      0.000      0.000
GR   897.300   2050.000    897.300   2050.000    897.300   2050.000    897.300   2050.000    897.300   2050.000
GR   888.800   2084.000    886.800   2094.000    887.200   2104.000    887.600   2112.000    890.700   2117.000
GR   894.800   2150.000    897.900   2200.000    898.700   2250.000    901.900   2300.000      0.000      0.000

X1    54.600     16.000   2143.000   2168.000     60.000     60.000     60.000      0.000      0.000      0.000
GR   898.400   2072.000    898.400   2072.000    898.400   2072.000    898.400   2072.000    898.400   2072.000
GR   898.040   2082.000    898.000   2090.000    889.300   2118.000    887.800   2143.000    886.600   2151.000
GR   886.300   2162.000    887.600   2168.000    891.700   2186.000    895.000   2231.000    896.700   2246.000
GR   899.200   2319.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
NC     .060       .060      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1    54.650     19.000   2625.000   2650.000    500.000    650.000    635.000      0.000      0.000      0.000
GR   897.500   2074.000    895.900   2086.000    895.300   2280.000    895.280   2498.000    895.200   2560.000
GR   894.500   2590.000    892.300   2610.000    889.200   2625.000    888.600   2630.000    888.100   2635.000
GR   888.200   2640.000    888.700   2645.000    889.500   2650.000    892.000   2658.000    895.000   2693.000
GR   897.000   2723.000    899.400   2782.000    899.500   2793.000    902.200   2926.000      0.000      0.000

X1    54.680     29.000   2624.000   2658.600    500.000    650.000    635.000      0.000      0.000      0.000
GR   897.500   2074.000    895.900   2086.000    895.300   2280.000    895.280   2498.000    895.120   2602.700
GR   894.900   2619.000    894.600   2624.000    892.000   2628.500    890.220   2633.000    890.100   2633.700
GR   889.800   2634.700    889.700   2635.500    889.260   2637.400    889.300   2639.000    889.400   2640.100
GR   889.400   2641.700    889.510   2642.800    889.800   2644.400    889.900   2645.000    890.000   2645.500
GR   890.210   2647.200    890.600   2648.300    893.700   2658.600    895.090   2663.600    897.000   2714.000
GR   898.700   2753.700    899.400   2782.000    899.500   2793.000    902.200   2926.000      0.000      0.000

X1    54.690     40.000   2624.000   2658.600     50.000     50.000     50.000      0.000      0.000      0.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.000 | 894.000 | 0.000 |
| GR | 897.800 | 2022.000 | 897.800 | 2026.000 | 897.800 | 2038.000 | 897.800 | 2048.000 | 897.800 | 2054.000 |
| GR | 897.500 | 2074.000 | 895.900 | 2086.000 | 895.300 | 2280.000 | 895.280 | 2498.000 | 895.120 | 2602.700 |
| GR | 894.900 | 2619.000 | 894.600 | 2624.000 | 892.000 | 2628.500 | 891.050 | 2633.000 | 890.220 | 2633.000 |
| GR | 890.100 | 2633.700 | 889.850 | 2634.700 | 889.700 | 2635.500 | 891.050 | 2635.500 | 891.430 | 2636.900 |
| GR | 892.000 | 2639.000 | 890.390 | 2639.000 | 889.350 | 2640.100 | 889.400 | 2641.700 | 889.450 | 2642.100 |
| GR | 890.390 | 2642.800 | 892.000 | 2642.800 | 892.090 | 2644.400 | 890.480 | 2644.400 | 889.900 | 2645.000 |
| GR | 890.000 | 2645.500 | 890.210 | 2647.200 | 890.600 | 2648.300 | 892.090 | 2648.300 | 895.500 | 2658.600 |
| GR | 897.000 | 2714.400 | 898.700 | 2753.700 | 899.400 | 2782.000 | 899.500 | 2793.000 | 902.200 | 2926.000 |
| NC | 0.000 | 0.000 | .020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 54.700 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.000 | 894.000 | 0.000 |
| BT | 31.000 | 2022.000 | 897.800 | 0.000 | 2026.000 | 897.800 | 0.000 | 2038.000 | 897.800 | 0.000 |
| BT | 2048.000 | 897.800 | 0.000 | 2054.000 | 897.800 | 0.000 | 2074.000 | 897.500 | 0.000 | 2086.000 |
| BT | 895.900 | 0.000 | 2280.000 | 895.300 | 0.000 | 2498.000 | 895.280 | 0.000 | 2602.700 | 895.120 |
| BT | 0.000 | 2619.000 | 894.900 | 0.000 | 2624.000 | 894.600 | 0.000 | 2628.500 | 895.500 | 0.000 |
| BT | 2633.000 | 895.600 | 891.050 | 2633.700 | 895.600 | 891.760 | 2634.700 | 895.700 | 891.760 | 2635.500 |
| BT | 895.700 | 891.050 | 2639.000 | 895.800 | 892.000 | 2640.100 | 895.900 | 893.140 | 2641.700 | 896.000 |
| BT | 893.140 | 2642.800 | 896.000 | 892.000 | 2644.400 | 896.000 | 892.090 | 2645.500 | 896.000 | 893.230 |
| BT | 2647.200 | 896.000 | 893.230 | 2648.300 | 896.000 | 892.090 | 2658.600 | 896.000 | 0.000 | 2714.400 |
| BT | 897.000 | 0.000 | 2753.700 | 898.700 | 0.000 | 2782.000 | 899.400 | 0.000 | 2793.000 | 899.500 |
| BT | 0.000 | 2926.000 | 902.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 54.710 | 0.000 | 0.000 | 0.000 | 18.000 | 18.000 | 18.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.660 | 894.660 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 54.720 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.660 | 894.660 | 0.000 |
| X1 | 54.730 | 28.000 | 2624.000 | 2658.600 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.550 | 2074.000 | 895.950 | 2086.000 | 895.350 | 2280.000 | 895.330 | 2498.000 | 895.170 | 2602.700 |
| GR | 894.950 | 2619.000 | 894.650 | 2624.000 | 892.050 | 2628.500 | 890.270 | 2633.000 | 890.150 | 2633.700 |
| GR | 889.850 | 2634.700 | 889.750 | 2635.500 | 889.310 | 2637.400 | 889.350 | 2639.000 | 889.450 | 2640.100 |
| GR | 889.450 | 2641.700 | 889.560 | 2642.800 | 889.850 | 2644.400 | 889.950 | 2645.000 | 890.050 | 2645.500 |
| GR | 890.260 | 2647.200 | 890.650 | 2648.300 | 893.750 | 2658.600 | 897.050 | 2714.400 | 898.750 | 2753.700 |
| GR | 899.450 | 2782.000 | 899.550 | 2793.000 | 902.250 | 2926.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .080 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 55.000 | 18.000 | 2512.000 | 2562.000 | 600.000 | 900.000 | 810.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.800 | 2054.000 | 897.500 | 2074.000 | 895.900 | 2086.000 | 892.400 | 2313.000 | 892.100 | 2377.000 |
| GR | 890.300 | 2482.000 | 889.500 | 2512.000 | 888.200 | 2518.000 | 888.900 | 2530.000 | 888.700 | 2542.000 |
| GR | 889.200 | 2562.000 | 890.300 | 2565.000 | 895.000 | 2636.000 | 896.100 | 2666.000 | 898.800 | 2718.000 |
| GR | 899.000 | 2732.000 | 898.900 | 2748.000 | 901.000 | 2784.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .100 | .100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 56.400 | 21.000 | 2184.000 | 2222.000 | 2800.000 | 3600.000 | 3520.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.900 | 2067.000 | 897.900 | 2067.000 | 897.900 | 2067.000 | 897.900 | 2067.000 | 896.500 | 2074.000 |
| GR | 893.600 | 2086.000 | 892.700 | 2184.000 | 891.300 | 2186.000 | 890.500 | 2194.000 | 891.200 | 2206.000 |
| GR | 893.300 | 2222.000 | 894.500 | 2264.000 | 897.100 | 2294.000 | 899.000 | 2366.000 | 903.600 | 2492.000 |
| GR | 904.400 | 2502.000 | 912.300 | 2841.000 | 914.300 | 2933.000 | 922.000 | 3033.000 | 929.400 | 3095.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 934.200 | 3124.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 56.200 | 22.000 | 2000.000 | 2080.000 | 190.000 | 190.000 | 190.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.700 | 1982.000 | 897.700 | 1982.000 | 897.800 | 1991.000 | 897.900 | 2000.000 | 891.200 | 2000.000 |
| GR | 891.300 | 2006.000 | 890.500 | 2014.000 | 890.600 | 2025.000 | 890.600 | 2038.000 | 890.800 | 2048.000 |
| GR | 890.600 | 2058.000 | 891.300 | 2070.000 | 896.000 | 2080.000 | 897.000 | 2117.000 | 900.000 | 2190.000 |
| GR | 904.600 | 2344.000 | 905.600 | 2398.000 | 909.900 | 2542.000 | 912.300 | 2642.000 | 912.200 | 2698.000 |
| GR | 928.800 | 2932.000 | 932.900 | 2958.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| SB | 0.000 | 1.500 | 3.080 | 0.000 | .200 | 0.000 | .300 | 0.000 | 890.500 | 890.500 |
| X1 | 56.100 | 20.000 | 1892.000 | 2078.000 | 10.000 | 10.000 | 10.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 892.000 | 895.400 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 9.000 | 2000.000 | 900.000 | 0.000 | 2000.000 | 895.500 | 0.000 | 2031.000 | 895.500 | 0.000 |
| BT | 2067.000 | 895.400 | 0.000 | 2067.000 | 897.800 | 0.000 | 2078.000 | 896.400 | 0.000 | 2117.000 |
| BT | 897.000 | 0.000 | 2190.000 | 900.000 | 0.000 | 2344.000 | 904.600 | 0.000 | 0.000 | 0.000 |
| GR | 903.300 | 1475.000 | 899.300 | 1606.000 | 897.600 | 1661.000 | 896.300 | 1722.000 | 896.400 | 1776.000 |
| GR | 894.400 | 1892.000 | 893.000 | 1914.000 | 890.500 | 1926.000 | 890.400 | 1940.000 | 891.400 | 1956.000 |
| GR | 891.400 | 1968.000 | 891.200 | 1982.000 | 891.200 | 2000.000 | 890.500 | 2031.000 | 890.800 | 2067.000 |
| GR | 891.300 | 2067.000 | 896.000 | 2078.000 | 897.000 | 2117.000 | 900.000 | 2190.000 | 904.600 | 2344.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN RICE CREEK AND MILL RACE
T3      RICE CREEK
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | -10. | 3. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 893.400 | 0.000 |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLOC | IBW | CHNIM | ITRACE |
| | 2.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN RICE CREEK AND MILL RACE
T3      RICE CREEK
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10. | 4. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 893.400 | 0.000 |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | 3.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN RICE CREEK AND MILL RACE
T3      RICE CREEK
J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       5.        0.        0.  0.000000      0.00      0.0       0.    893.400     0.000
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN RICE CREEK AND MILL RACE
T3      RICE CREEK
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10. | 6. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 893.400 | 0.000 |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | 15.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

RICE CREEK

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 54.400 | 0.00 | 0.00 | 0.00 | 886.80 | 400.00 | 893.40 | 0.00 | 893.45 | 3.43 | 1.92 | 260.91 | 215.96 |
| | 54.400 | 0.00 | 0.00 | 0.00 | 886.80 | 600.00 | 893.40 | 0.00 | 893.52 | 7.72 | 2.88 | 260.91 | 215.96 |
| | 54.400 | 0.00 | 0.00 | 0.00 | 886.80 | 800.00 | 893.40 | 0.00 | 893.61 | 13.72 | 3.83 | 260.91 | 215.96 |
| | 54.400 | 0.00 | 0.00 | 0.00 | 886.80 | 1000.00 | 893.40 | 0.00 | 893.73 | 21.44 | 4.79 | 260.91 | 215.96 |
| | 54.400 | 0.00 | 0.00 | 0.00 | 886.80 | 1200.00 | 893.40 | 0.00 | 893.87 | 30.88 | 5.75 | 260.91 | 215.96 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 400.00 | 893.44 | 0.00 | 893.47 | 1.78 | 1.55 | 404.79 | 299.50 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 600.00 | 893.50 | 0.00 | 893.56 | 3.88 | 2.29 | 410.62 | 304.74 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 800.00 | 893.58 | 0.00 | 893.68 | 6.56 | 3.01 | 419.07 | 312.35 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 1000.00 | 893.68 | 0.00 | 893.83 | 9.61 | 3.68 | 430.42 | 322.60 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 1200.00 | 893.81 | 0.00 | 894.01 | 12.77 | 4.29 | 445.06 | 335.85 |
| | 54.650 | 635.00 | 0.00 | 0.00 | 888.10 | 400.00 | 893.60 | 0.00 | 893.67 | 6.48 | 2.45 | 213.29 | 157.11 |
| | 54.650 | 635.00 | 0.00 | 0.00 | 888.10 | 600.00 | 893.82 | 0.00 | 893.97 | 12.10 | 3.45 | 231.25 | 172.49 |
| | 54.650 | 635.00 | 0.00 | 0.00 | 888.10 | 800.00 | 894.10 | 0.00 | 894.32 | 17.12 | 4.25 | 255.46 | 193.36 |
| | 54.650 | 635.00 | 0.00 | 0.00 | 888.10 | 1000.00 | 894.42 | 0.00 | 894.70 | 20.91 | 4.87 | 284.54 | 218.69 |
| | 54.650 | 635.00 | 0.00 | 0.00 | 888.10 | 1200.00 | 894.75 | 0.00 | 895.08 | 23.41 | 5.35 | 318.24 | 248.02 |
| | 54.680 | 635.00 | 0.00 | 0.00 | 889.26 | 400.00 | 894.24 | 0.00 | 894.45 | 27.40 | 3.65 | 109.95 | 76.41 |
| | 54.680 | 635.00 | 0.00 | 0.00 | 889.26 | 600.00 | 894.89 | 0.00 | 895.20 | 33.69 | 4.53 | 135.18 | 103.37 |
| | 54.680 | 635.00 | 0.00 | 0.00 | 889.26 | 800.00 | 895.45 | 893.54 | 895.81 | 33.65 | 4.96 | 234.88 | 137.90 |
| | 54.680 | 635.00 | 0.00 | 0.00 | 889.26 | 1000.00 | 895.86 | 0.00 | 896.11 | 25.57 | 4.59 | 445.34 | 197.76 |
| | 54.680 | 635.00 | 0.00 | 0.00 | 889.26 | 1200.00 | 896.19 | 0.00 | 896.37 | 19.34 | 4.17 | 645.29 | 272.88 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 400.00 | 894.36 | 0.00 | 894.71 | 81.18 | 4.75 | 84.19 | 44.39 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 600.00 | 895.02 | 0.00 | 895.52 | 92.89 | 5.67 | 107.38 | 62.25 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 800.00 | 895.81 | 0.00 | 896.01 | 41.09 | 4.28 | 365.22 | 124.81 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 1000.00 | 896.13 | 0.00 | 896.25 | 28.14 | 3.75 | 557.57 | 188.53 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 1200.00 | 896.38 | 0.00 | 896.48 | 22.56 | 3.49 | 712.25 | 252.64 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 400.00 | 895.71 | 895.71 | 895.89 | 79.34 | 5.13 | 220.81 | 44.91 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 600.00 | 895.85 | 895.85 | 896.02 | 97.53 | 5.63 | 288.54 | 60.75 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 800.00 | 895.98 | 895.98 | 896.14 | 98.27 | 5.75 | 359.83 | 80.70 |
| | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 1000.00 | 896.14 | 0.00 | 896.26 | 84.39 | 4.80 | 452.04 | 108.86 |
| | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 1200.00 | 896.39 | 0.00 | 896.48 | 51.12 | 4.25 | 598.22 | 167.83 |

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 400.00 | 895.93 | 0.00 | 895.98 | 29.12 | 3.12 | 337.75 | 74.12 |
| 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 600.00 | 896.09 | 0.00 | 896.14 | 36.50 | 3.07 | 425.78 | 99.32 |
| 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 800.00 | 896.20 | 0.00 | 896.26 | 42.00 | 3.51 | 490.53 | 123.44 |
| 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 1000.00 | 896.30 | 0.00 | 896.37 | 46.78 | 3.90 | 547.31 | 146.21 |
| 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 1200.00 | 896.49 | 0.00 | 896.56 | 37.40 | 3.82 | 661.55 | 196.23 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 400.00 | 895.95 | 0.00 | 895.99 | 7.07 | 1.82 | 450.08 | 150.40 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 600.00 | 896.09 | 0.00 | 896.14 | 10.88 | 2.32 | 540.03 | 181.92 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 800.00 | 896.20 | 0.00 | 896.27 | 14.82 | 2.75 | 606.74 | 207.78 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 1000.00 | 896.30 | 0.00 | 896.38 | 18.61 | 3.13 | 664.53 | 231.78 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 1200.00 | 896.49 | 0.00 | 896.57 | 17.89 | 3.16 | 779.76 | 283.70 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 400.00 | 895.98 | 0.00 | 896.01 | 3.35 | 1.68 | 510.35 | 218.42 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 600.00 | 896.13 | 0.00 | 896.18 | 5.64 | 2.22 | 601.84 | 252.72 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 800.00 | 896.25 | 0.00 | 896.32 | 7.93 | 2.67 | 677.58 | 284.12 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 1000.00 | 896.36 | 0.00 | 896.45 | 10.14 | 3.07 | 744.77 | 314.09 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 1200.00 | 896.55 | 0.00 | 896.64 | 10.46 | 3.19 | 862.37 | 371.06 |
| 55.000 | 810.00 | 0.00 | 0.00 | 888.20 | 400.00 | 896.03 | 0.00 | 896.04 | .10 | .39 | 1996.39 | 1260.88 |
| 55.000 | 810.00 | 0.00 | 0.00 | 888.20 | 600.00 | 896.22 | 0.00 | 896.22 | .20 | .56 | 2105.66 | 1352.67 |
| 55.000 | 810.00 | 0.00 | 0.00 | 888.20 | 800.00 | 896.39 | 0.00 | 896.39 | .31 | .71 | 2201.00 | 1434.97 |
| 55.000 | 810.00 | 0.00 | 0.00 | 888.20 | 1000.00 | 896.54 | 0.00 | 896.54 | .44 | .85 | 2287.91 | 1511.70 |
| 55.000 | 810.00 | 0.00 | 0.00 | 888.20 | 1200.00 | 896.74 | 0.00 | 896.75 | .55 | .97 | 2409.17 | 1621.37 |
| 56.400 | 3520.00 | 0.00 | 0.00 | 890.50 | 400.00 | 896.11 | 0.00 | 896.13 | 2.13 | 1.32 | 585.76 | 274.32 |
| 56.400 | 3520.00 | 0.00 | 0.00 | 890.50 | 600.00 | 896.37 | 0.00 | 896.40 | 3.77 | 1.82 | 640.07 | 309.21 |
| 56.400 | 3520.00 | 0.00 | 0.00 | 890.50 | 800.00 | 896.61 | 0.00 | 896.66 | 5.40 | 2.25 | 692.64 | 344.29 |
| 56.400 | 3520.00 | 0.00 | 0.00 | 890.50 | 1000.00 | 896.85 | 0.00 | 896.92 | 6.92 | 2.63 | 744.48 | 380.05 |
| 56.400 | 3520.00 | 0.00 | 0.00 | 890.50 | 1200.00 | 897.13 | 0.00 | 897.21 | 8.02 | 2.92 | 805.95 | 423.80 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.50 | 400.00 | 896.14 | 0.00 | 896.16 | 1.18 | 1.00 | 400.37 | 368.02 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.50 | 600.00 | 896.42 | 0.00 | 896.45 | 2.22 | 1.42 | 425.93 | 402.74 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.50 | 800.00 | 896.69 | 0.00 | 896.74 | 3.33 | 1.80 | 453.76 | 438.07 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.50 | 1000.00 | 896.95 | 0.00 | 897.02 | 4.48 | 2.14 | 482.38 | 472.52 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.50 | 1200.00 | 897.24 | 0.00 | 897.34 | 5.46 | 2.44 | 517.29 | 513.35 |
| 56.100 | 10.00 | 895.40 | 892.00 | 890.40 | 400.00 | 896.99 | 0.00 | 896.99 | .13 | .37 | 1281.84 | 1104.28 |
| 56.100 | 10.00 | 895.40 | 892.00 | 890.40 | 600.00 | 897.37 | 0.00 | 897.37 | .23 | .51 | 1446.78 | 1251.05 |
| 56.100 | 10.00 | 895.40 | 892.00 | 890.40 | 800.00 | 897.69 | 0.00 | 897.70 | .33 | .64 | 1598.90 | 1388.74 |
| 56.100 | 10.00 | 895.40 | 892.00 | 890.40 | 1000.00 | 897.96 | 0.00 | 897.97 | .44 | .76 | 1732.78 | 1512.61 |
| 56.100 | 10.00 | 895.40 | 892.00 | 890.40 | 1200.00 | 898.22 | 0.00 | 898.23 | .54 | .86 | 1858.70 | 1631.08 |

RICE CREEK

SUMMARY PRINTOUT TABLE 150

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 54.400 | 400.00 | 893.40 | 0.00 | 0.00 | 0.00 | 73.13 | 0.00 |
| | 54.400 | 600.00 | 893.40 | 0.00 | 0.00 | 0.00 | 73.13 | 0.00 |
| | 54.400 | 800.00 | 893.40 | 0.00 | 0.00 | 0.00 | 73.13 | 0.00 |
| | 54.400 | 1000.00 | 893.40 | 0.00 | 0.00 | 0.00 | 73.13 | 0.00 |
| | 54.400 | 1200.00 | 893.40 | 0.00 | 0.00 | 0.00 | 73.13 | 0.00 |
| | 54.600 | 400.00 | 893.44 | 0.00 | .04 | 0.00 | 105.11 | 60.00 |
| | 54.600 | 600.00 | 893.50 | .06 | .10 | 0.00 | 106.04 | 60.00 |
| | 54.600 | 800.00 | 893.58 | .08 | .18 | 0.00 | 107.37 | 60.00 |
| | 54.600 | 1000.00 | 893.68 | .10 | .28 | 0.00 | 109.14 | 60.00 |
| | 54.600 | 1200.00 | 893.81 | .13 | .41 | 0.00 | 111.38 | 60.00 |
| | 54.650 | 400.00 | 893.60 | 0.00 | .15 | 0.00 | 78.45 | 635.00 |
| | 54.650 | 600.00 | 893.82 | .22 | .32 | 0.00 | 83.07 | 635.00 |
| | 54.650 | 800.00 | 894.10 | .28 | .52 | 0.00 | 88.91 | 635.00 |
| | 54.650 | 1000.00 | 894.42 | .32 | .74 | 0.00 | 95.46 | 635.00 |
| | 54.650 | 1200.00 | 894.75 | .33 | .93 | 0.00 | 110.69 | 635.00 |
| | 54.680 | 400.00 | 894.24 | 0.00 | .64 | 0.00 | 35.92 | 635.00 |
| | 54.680 | 600.00 | 894.89 | .65 | 1.07 | 0.00 | 43.77 | 635.00 |
| | 54.680 | 800.00 | 895.45 | .57 | 1.35 | 0.00 | 442.67 | 635.00 |
| | 54.680 | 1000.00 | 895.86 | .40 | 1.44 | 0.00 | 585.80 | 635.00 |
| | 54.680 | 1200.00 | 896.19 | .34 | 1.45 | 0.00 | 608.94 | 635.00 |
| | 54.690 | 400.00 | 894.36 | 0.00 | .12 | 0.00 | 30.73 | 50.00 |
| | 54.690 | 600.00 | 895.02 | .66 | .14 | 0.00 | 47.14 | 50.00 |
| | 54.690 | 800.00 | 895.81 | .79 | .35 | 0.00 | 550.72 | 50.00 |
| | 54.690 | 1000.00 | 896.13 | .32 | .27 | 0.00 | 597.61 | 50.00 |
| | 54.690 | 1200.00 | 896.38 | .25 | .19 | 0.00 | 609.07 | 50.00 |
| * | 54.700 | 400.00 | 895.71 | 0.00 | 1.36 | 0.00 | 520.41 | 1.00 |
| * | 54.700 | 600.00 | 895.85 | .13 | .82 | 0.00 | 567.97 | 1.00 |
| * | 54.700 | 800.00 | 895.98 | .13 | .17 | 0.00 | 590.85 | 1.00 |
| | 54.700 | 1000.00 | 896.14 | .17 | .02 | 0.00 | 598.02 | 1.00 |
| | 54.700 | 1200.00 | 896.39 | .25 | .01 | 0.00 | 609.10 | 1.00 |
| | 54.710 | 400.00 | 895.93 | 0.00 | .22 | 0.00 | 589.07 | 18.00 |
| | 54.710 | 600.00 | 896.09 | .16 | .24 | 0.00 | 596.00 | 18.00 |
| | 54.710 | 800.00 | 896.20 | .11 | .23 | 0.00 | 600.97 | 18.00 |
| | 54.710 | 1000.00 | 896.30 | .10 | .15 | 0.00 | 605.28 | 18.00 |
| | 54.710 | 1200.00 | 896.49 | .19 | .10 | 0.00 | 613.81 | 18.00 |
| | 54.720 | 400.00 | 895.95 | 0.00 | .02 | 0.00 | 589.52 | 1.00 |
| | 54.720 | 600.00 | 896.09 | .14 | .00 | 0.00 | 596.30 | 1.00 |
| | 54.720 | 800.00 | 896.20 | .11 | .00 | 0.00 | 601.28 | 1.00 |
| | 54.720 | 1000.00 | 896.30 | .10 | -.00 | 0.00 | 605.56 | 1.00 |
| | 54.720 | 1200.00 | 896.49 | .19 | .00 | 0.00 | 614.01 | 1.00 |
| | 54.730 | 400.00 | 895.98 | 0.00 | .03 | 0.00 | 610.52 | 50.00 |
| | 54.730 | 600.00 | 896.13 | .15 | .04 | 0.00 | 614.17 | 50.00 |
| | 54.730 | 800.00 | 896.25 | .12 | .05 | 0.00 | 617.17 | 50.00 |
| | 54.730 | 1000.00 | 896.36 | .11 | .06 | 0.00 | 619.82 | 50.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 54.730 | 1200.00 | 896.55 | .19 | .06 | 0.00 | 624.43 | 50.00 |

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 55.000 | 400.00 | 896.03 | 0.00 | .05 | 0.00 | 579.19 | 810.00 |
| 55.000 | 600.00 | 896.22 | .19 | .09 | 0.00 | 584.75 | 810.00 |
| 55.000 | 800.00 | 896.39 | .16 | .13 | 0.00 | 589.09 | 810.00 |
| 55.000 | 1000.00 | 896.54 | .15 | .17 | 0.00 | 593.03 | 810.00 |
| 55.000 | 1200.00 | 896.74 | .20 | .19 | 0.00 | 598.48 | 810.00 |
| 56.400 | 400.00 | 896.11 | 0.00 | .08 | 0.00 | 206.97 | 3520.00 |
| 56.400 | 600.00 | 896.37 | .26 | .15 | 0.00 | 211.04 | 3520.00 |
| 56.400 | 800.00 | 896.61 | .25 | .23 | 0.00 | 215.01 | 3520.00 |
| 56.400 | 1000.00 | 896.85 | .24 | .32 | 0.00 | 218.96 | 3520.00 |
| 56.400 | 1200.00 | 897.13 | .28 | .39 | 0.00 | 224.45 | 3520.00 |
| 56.200 | 400.00 | 896.14 | 0.00 | .03 | 0.00 | 84.86 | 190.00 |
| 56.200 | 600.00 | 896.42 | .28 | .05 | 0.00 | 95.35 | 190.00 |
| 56.200 | 800.00 | 896.69 | .27 | .08 | 0.00 | 105.60 | 190.00 |
| 56.200 | 1000.00 | 896.95 | .26 | .10 | 0.00 | 115.19 | 190.00 |
| 56.200 | 1200.00 | 897.24 | .29 | .11 | 0.00 | 122.93 | 190.00 |
| 56.100 | 400.00 | 896.99 | 0.00 | .85 | 0.00 | 427.39 | 10.00 |
| 56.100 | 600.00 | 897.37 | .37 | .94 | 0.00 | 454.13 | 10.00 |
| 56.100 | 800.00 | 897.69 | .32 | 1.00 | 0.00 | 476.02 | 10.00 |
| 56.100 | 1000.00 | 897.96 | .27 | 1.01 | 0.00 | 491.71 | 10.00 |
| 56.100 | 1200.00 | 898.22 | .26 | .98 | 0.00 | 506.01 | 10.00 |

SUMMARY OF ERRORS

CAUTION SECNO= 54.700 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 54.700 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 54.700 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 54.700 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 54.700 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 54.700 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 54.700 PROFILE= 3 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 54.700 PROFILE= 3 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 54.700 PROFILE= 3 20 TRIALS ATTEMPTED TO BALANCE WSEL

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

I1      FIS CITY OF MARSHALL
I2      FLOW DIVISON BETWEEN MILL RACE AND RICE CREEK
I3      MILL RACE

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
        0.      2.         0.         0.  0.000000       0.00       0.0        0.   893.400    0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
    1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
J5  LPRNT      NUMSEC                        ********REQUESTED SECTION NUMBERS********
   -10.000    -10.000     0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
NC      .080       .080       .035       .100       .300     0.000      0.000      0.000      0.000      0.000
QT     5.000    200.000    300.000    400.000    500.000     0.000      0.000      0.000      0.000      0.000

X1    54.300     20.000   2000.000   2093.000      0.000     0.000      0.000      0.000      0.000      0.000
GR   902.500   1950.000    902.000   1960.000    900.600  1970.000    897.300   1980.000    891.500   1990.000
GR   887.500   2000.000    886.200   2010.000    885.900  2020.000    885.900   2030.000    886.400   2040.000
GR   886.600   2050.000    887.000   2060.000    886.300  2070.000    885.800   2080.000    886.300   2090.000
GR   887.600   2093.000    887.500   2093.000    891.800  2100.000    895.500   2110.000    900.300   2120.000
SB     0.000      1.500      3.300      0.000      2.000     0.000       .300      0.000    891.100    891.100

X1    54.500      4.000      0.000     36.000      1.000     1.000      1.000      0.000      0.000      0.000
X2     0.000      0.000      1.000    892.000    894.500     0.000      0.000      0.000      0.000      0.000
BT    11.000      0.000    898.600      0.000      0.000   894.700      0.000      7.000    894.700      0.000
BT    14.000    894.700      0.000     18.000    894.500     0.000     18.000    898.600      0.000     21.000
BT   898.600      0.000     21.000    894.500      0.000    28.000    894.500      0.000     36.000    894.700
BT     0.000     36.000    898.500      0.000      0.000     0.000      0.000      0.000      0.000      0.000
GR   898.600      0.000    891.100      0.000    891.100    36.000    898.600     36.000      0.000      0.000

X1    54.600     20.000   2000.000   2072.000     50.000    50.000     50.000      0.000      0.000      0.000
GR   922.900   1798.000    922.500   1805.000    920.200  1812.000    920.000   1818.000    917.400   1824.000
GR   907.500   1842.000    917.900   1845.000    917.100  1858.000    904.600   1911.000    904.700   1917.000
GR   904.800   1921.000    903.400   1963.000    901.600  1984.000    896.100   2000.000    892.100   2015.000
GR   891.100   2025.000    890.900   2040.000    891.200  2055.000    893.300   2072.000    898.400   2072.000
NC      .060       .060      0.000      0.000      0.000     0.000      0.000      0.000      0.000      0.000

X1    55.000     11.000   2004.000   2048.000   1490.000  1510.000   1500.000      0.000      0.000      0.000
GR   916.300   1682.000    911.400   1722.000    901.500  1766.000    897.700   1806.000    896.400   2000.000
GR   894.600   2004.000    890.800   2022.000    890.500  2026.000    892.100   2038.000    894.600   2048.000
GR   897.800   2054.000      0.000      0.000      0.000     0.000      0.000      0.000      0.000      0.000
NC      .080       .080      0.000      0.000      0.000     0.000      0.000      0.000      0.000      0.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 56.400 | 14.000 | 2000.000 | 2067.000 | 2800.000 | 2800.000 | 2800.000 | 0.000 | 0.000 | 0.000 |
| GR | 919.800 | 1227.000 | 915.100 | 1339.000 | 907.100 | 1625.000 | 899.900 | 1733.000 | 896.300 | 1833.000 |
| GR | 897.900 | 2000.000 | 895.100 | 2000.000 | 894.300 | 2002.000 | 891.800 | 2019.000 | 891.900 | 2030.000 |
| GR | 891.900 | 2044.000 | 894.300 | 2064.000 | 895.100 | 2067.000 | 897.900 | 2067.000 | 0.000 | 0.000 |
| NC | .080 | .060 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 56.200 | 18.000 | 1892.000 | 1968.000 | 190.000 | 190.000 | 190.000 | 0.000 | 0.000 | 0.000 |
| GR | 918.900 | 803.000 | 917.100 | 905.000 | 914.500 | 1097.000 | 914.800 | 1195.000 | 910.300 | 1251.000 |
| GR | 903.400 | 1475.000 | 899.300 | 1606.000 | 897.600 | 1661.000 | 896.300 | 1722.000 | 896.400 | 1776.000 |
| GR | 894.400 | 1892.000 | 893.000 | 1914.000 | 890.500 | 1926.000 | 890.400 | 1940.000 | 891.400 | 1956.000 |
| GR | 894.400 | 1968.000 | 897.700 | 1982.000 | 897.900 | 2000.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .100 | .100 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 56.100 | 20.000 | 1892.000 | 2078.000 | 10.000 | 10.000 | 10.000 | 0.000 | 0.000 | 0.000 |
| GR | 903.300 | 1475.000 | 899.300 | 1606.000 | 897.600 | 1661.000 | 896.300 | 1722.000 | 896.400 | 1776.000 |
| GR | 894.400 | 1892.000 | 893.000 | 1914.000 | 890.500 | 1926.000 | 890.400 | 1940.000 | 891.400 | 1956.000 |
| GR | 891.400 | 1968.000 | 891.200 | 1982.000 | 891.200 | 2000.000 | 890.500 | 2031.000 | 890.800 | 2067.000 |
| GR | 891.300 | 2067.000 | 896.000 | 2078.000 | 897.000 | 2117.000 | 900.000 | 2190.000 | 904.600 | 2344.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN MILL RACE AND RICE CREEK
T3      MILL RACE
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10. | 3. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 893.400 | 0.000 |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | 2.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN MILL RACE AND RICE CREEK
T3      MILL RACE
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10. | 4. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 893,400 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      FLOW DIVISON BETWEEN MILL RACE AND RICE CREEK
T3      MILL RACE
J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       5.        0.        0.  0.000000      0.00      0.0       0.      893.400   0.000
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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**********
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********
```

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MILL RACE

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 200.00 | 893.40 | 0.00 | 893.40 | .04 | .30 | 727.17 | 1047.52 |
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 300.00 | 893.40 | 0.00 | 893.40 | .08 | .45 | 727.17 | 1047.52 |
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 400.00 | 893.40 | 0.00 | 893.41 | .15 | .59 | 727.17 | 1047.52 |
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 500.00 | 893.40 | 0.00 | 893.41 | .23 | .74 | 727.17 | 1047.52 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 200.00 | 896.09 | 0.00 | 896.11 | 1.11 | 1.11 | 179.84 | 189.53 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 300.00 | 896.53 | 0.00 | 896.57 | 1.94 | 1.53 | 195.63 | 215.34 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 400.00 | 896.94 | 0.00 | 897.00 | 2.78 | 1.90 | 210.26 | 240.07 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 500.00 | 897.30 | 0.00 | 897.37 | 3.63 | 2.24 | 223.09 | 262.37 |
| 54.600 | 50.00 | 0.00 | 0.00 | 890.90 | 200.00 | 896.10 | 0.00 | 896.11 | .43 | .68 | 292.39 | 306.19 |
| 54.600 | 50.00 | 0.00 | 0.00 | 890.90 | 300.00 | 896.57 | 0.00 | 896.58 | .67 | .92 | 326.51 | 365.90 |
| 54.600 | 50.00 | 0.00 | 0.00 | 890.90 | 400.00 | 896.99 | 0.00 | 897.01 | .89 | 1.12 | 357.79 | 423.11 |
| 54.600 | 50.00 | 0.00 | 0.00 | 890.90 | 500.00 | 897.36 | 0.00 | 897.39 | 1.10 | 1.30 | 385.95 | 476.40 |
| 55.000 | 1500.00 | 0.00 | 0.00 | 890.50 | 200.00 | 896.19 | 0.00 | 896.22 | 1.23 | 1.15 | 177.46 | 180.48 |
| 55.000 | 1500.00 | 0.00 | 0.00 | 890.50 | 300.00 | 896.71 | 0.00 | 896.74 | 1.81 | 1.52 | 210.67 | 222.89 |
| 55.000 | 1500.00 | 0.00 | 0.00 | 890.50 | 400.00 | 897.17 | 0.00 | 897.22 | 2.20 | 1.79 | 271.99 | 269.46 |
| 55.000 | 1500.00 | 0.00 | 0.00 | 890.50 | 500.00 | 897.58 | 0.00 | 897.63 | 2.43 | 1.99 | 353.20 | 320.74 |
| 56.400 | 2800.00 | 0.00 | 0.00 | 891.80 | 200.00 | 896.45 | 0.00 | 896.46 | .67 | .81 | 249.71 | 244.30 |
| 56.400 | 2800.00 | 0.00 | 0.00 | 891.80 | 300.00 | 897.07 | 0.00 | 897.09 | .91 | 1.03 | 327.70 | 315.18 |
| 56.400 | 2800.00 | 0.00 | 0.00 | 891.80 | 400.00 | 897.61 | 0.00 | 897.63 | 1.05 | 1.18 | 437.00 | 390.51 |
| 56.400 | 2800.00 | 0.00 | 0.00 | 891.80 | 500.00 | 898.06 | 0.00 | 898.09 | 1.13 | 1.29 | 560.74 | 470.21 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.40 | 200.00 | 896.47 | 0.00 | 896.47 | .24 | .56 | 474.79 | 404.95 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.40 | 300.00 | 897.09 | 0.00 | 897.10 | .31 | .69 | 650.07 | 537.03 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.40 | 400.00 | 897.63 | 0.00 | 897.64 | .35 | .79 | 816.83 | 671.75 |
| 56.200 | 190.00 | 0.00 | 0.00 | 890.40 | 500.00 | 898.09 | 0.00 | 898.10 | .39 | .87 | 971.93 | 802.57 |
| 56.100 | 10.00 | 0.00 | 0.00 | 890.40 | 200.00 | 896.47 | 0.00 | 896.47 | .05 | .21 | 1068.65 | 917.52 |
| 56.100 | 10.00 | 0.00 | 0.00 | 890.40 | 300.00 | 897.10 | 0.00 | 897.10 | .07 | .27 | 1325.23 | 1142.64 |
| 56.100 | 10.00 | 0.00 | 0.00 | 890.40 | 400.00 | 897.64 | 0.00 | 897.64 | .09 | .32 | 1570.22 | 1362.50 |
| 56.100 | 10.00 | 0.00 | 0.00 | 890.40 | 500.00 | 898.10 | 0.00 | 898.10 | .10 | .37 | 1790.88 | 1567.04 |

MILL RACE

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 54.300 | 200.00 | 893.40 | 0.00 | 0.00 | 0.00 | 117.60 | 0.00 |
| 54.300 | 300.00 | 893.40 | 0.00 | 0.00 | 0.00 | 117.60 | 0.00 |
| 54.300 | 400.00 | 893.40 | 0.00 | 0.00 | 0.00 | 117.60 | 0.00 |
| 54.300 | 500.00 | 893.40 | 0.00 | 0.00 | 0.00 | 117.60 | 0.00 |
| 54.500 | 200.00 | 896.09 | 0.00 | 2.69 | 0.00 | 36.00 | 1.00 |
| 54.500 | 300.00 | 896.53 | .45 | 3.13 | 0.00 | 36.00 | 1.00 |
| 54.500 | 400.00 | 896.94 | .41 | 3.54 | 0.00 | 36.00 | 1.00 |
| 54.500 | 500.00 | 897.30 | .36 | 3.90 | 0.00 | 36.00 | 1.00 |
| 54.600 | 200.00 | 896.10 | 0.00 | .02 | 0.00 | 71.98 | 50.00 |
| 54.600 | 300.00 | 896.57 | .46 | .03 | 0.00 | 73.35 | 50.00 |
| 54.600 | 400.00 | 896.99 | .42 | .05 | 0.00 | 74.58 | 50.00 |
| 54.600 | 500.00 | 897.36 | .37 | .07 | 0.00 | 75.67 | 50.00 |
| 55.000 | 200.00 | 896.19 | 0.00 | .09 | 0.00 | 50.53 | 1500.00 |
| 55.000 | 300.00 | 896.71 | .51 | .14 | 0.00 | 97.52 | 1500.00 |
| 55.000 | 400.00 | 897.17 | .46 | .18 | 0.00 | 167.46 | 1500.00 |
| 55.000 | 500.00 | 897.58 | .41 | .21 | 0.00 | 229.31 | 1500.00 |
| 56.400 | 200.00 | 896.45 | 0.00 | .26 | 0.00 | 87.39 | 2800.00 |
| 56.400 | 300.00 | 897.07 | .62 | .37 | 0.00 | 168.08 | 2800.00 |
| 56.400 | 400.00 | 897.61 | .53 | .44 | 0.00 | 239.04 | 2800.00 |
| 56.400 | 500.00 | 898.06 | .45 | .48 | 0.00 | 283.05 | 2800.00 |
| 56.200 | 200.00 | 896.47 | 0.00 | .01 | 0.00 | 262.88 | 190.00 |
| 56.200 | 300.00 | 897.09 | .63 | .02 | 0.00 | 295.03 | 190.00 |
| 56.200 | 400.00 | 897.63 | .54 | .02 | 0.00 | 322.06 | 190.00 |
| 56.200 | 500.00 | 898.09 | .45 | .03 | 0.00 | 355.02 | 190.00 |
| 56.100 | 200.00 | 896.47 | 0.00 | .00 | 0.00 | 382.14 | 10.00 |
| 56.100 | 300.00 | 897.10 | .63 | .01 | 0.00 | 434.64 | 10.00 |
| 56.100 | 400.00 | 897.64 | .54 | .01 | 0.00 | 472.59 | 10.00 |
| 56.100 | 500.00 | 898.10 | .46 | .01 | 0.00 | 498.36 | 10.00 |

SUMMARY OF ERRORS

00BREAK00

1) COUNTY: Calhoun

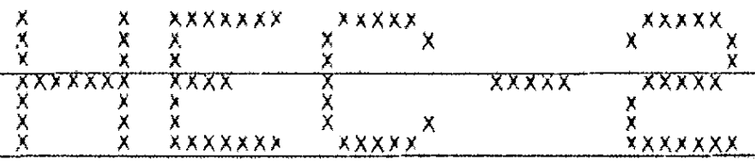
2) STUDY NAME: City of Marshall

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 10, 50, 100, 500 yr profiles

00BREAK00

```
**********************************************************
*  HEC2 WATER SURFACE PROFILES                           *
*  VERSION OF NOVEMBER 1976                              *
*  UPDATED JULY 1979                                     *
*  ERROR CORR - 01,02,03                                 *
*  MODIFICATION - 50,51,52,53                            *
*                                                        *
*  RUN DATE  80/03/10. TIME  08.47.32.                   *
**********************************************************
```



FIS City of Marshall
Calhoun County, MI
Kalamazoo River
10, 50, 100 & 500 year Profiles
7-21-80

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
*****************************************************

C
T1      FIS CITY OF MARSHALL
T2      10 -YEAR FLOOD
T3      KALAMAZCO RIVER

J1  ICHECK    INQ       NINV      IDIR      STPT      METRIC    HVINS     Q         WSEL      FQ
      0.        2.        0.        0.  0.000000      0.00       0.0       0.   879.360     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSFCH     FN        ALLDC     IBW       CHNIM     ITRACE
     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    150.000   201.000    38.000     1.000    53.000    21.000    22.000    54.000     4.000    39.000

J5  LPRNT     NUMSEC                 ********REQUESTED SECTION NUMBERS********
    -10.000   -10.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
ET      0.000     0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000
QT-at 0.05 5.000  1520.000  1980.000  2170.000  2610.000  2170.000     0.000     0.000     0.000     0.000
NC gage 0.000     0.000     0.000      .100      .300     0.000     0.000     0.000     0.000     0.000
NH DA-449 6.000      .050  1933.000      .080  2000.000      .040  2087.000      .080  3297.000      .040
NH   3407.000      .080  3733.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

        SURVEYED VALLEY SECTION AT CORPORATE BOUNDARY      (A)

X1       .100    33.000  2000.000  3407.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    900.330  1313.000   891.620  1680.000   891.730  1873.000   889.500  1933.000   878.500  2000.000
GR    876.600  2004.000   875.490  2030.000   875.290  2047.000   875.220  2067.000   876.100  2087.000
GR    878.710  2089.000   879.200  2107.000   878.780  2194.000   880.000  2391.000   880.000  2560.000
GR    879.140  2628.000   878.600  2728.000   878.070  2788.000   878.360  2881.000   877.890  2954.000
GR    878.240  3051.000   878.360  3174.000   878.500  3224.000   879.300  3297.000   877.320  3297.000
GR    876.080  3334.000   874.590  3357.000   875.580  3387.000   878.320  3407.000   880.080  3438.000
GR    881.110  3546.000   882.280  3669.000   888.010  3733.000     0.000     0.000     0.000     0.000
NH      8.000      .045  1946.000      .090  2000.000      .045  2040.000      .090  2069.000      .045
NH   2140.000      .090  2152.000      .045  2242.000      .090  3517.000     0.000     0.000     0.000

        SURVEYED VALLEY SECTION  (B)

X1      1.000    37.000  2000.000  2242.000  1880.000  2370.000  1970.000     0.000     0.000     0.000
GR    897.800  1741.000   897.300  1803.000   897.100  1825.000   883.800  1946.000   881.600  1964.000
GR    880.500  2000.000   879.900  2002.000   877.800  2009.000   877.900  2035.000   879.900  2040.000
GR    881.200  2048.000   880.600  2068.000   879.800  2069.000   877.700  2076.000   877.800  2088.000
GR    878.800  2116.000   879.800  2140.000   881.000  2146.000   879.900  2150.000   878.100  2152.000
GR    875.600  2177.000   876.200  2192.000   876.700  2207.000   877.200  2222.000   878.300  2237.000
GR    881.200  2242.000   880.900  2296.000   882.600  2444.000   886.000  2544.000   887.800  2736.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 887.900 | 2814.000 | 890.600 | 2880.000 | 892.600 | 2960.000 | 894.000 | 3028.000 | 892.300 | 3167.000 |
| GR | 899.500 | 3371.000 | 901.300 | 3517.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1684.000 | .080 | 2000.000 | .045 | 2092.000 | .070 | 2222.000 | 0.000 |

SURVEYED VALLEY SECTION (C)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 1.800 | 23.000 | 2004.000 | 2092.000 | 3190.000 | 3190.000 | 3190.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1924.000 | 0.000 | 2172.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 902.800 | 1518.000 | 898.200 | 1684.000 | 890.000 | 1766.000 | 885.200 | 1800.000 | 883.400 | 1836.000 |
| GR | 880.500 | 1848.000 | 880.100 | 1855.000 | 880.500 | 1865.000 | 881.100 | 1910.000 | 882.600 | 2000.000 |
| GR | 880.100 | 2004.000 | 878.600 | 2016.000 | 878.300 | 2028.000 | 878.300 | 2038.000 | 878.300 | 2052.000 |
| GR | 878.400 | 2061.000 | 878.500 | 2072.000 | 878.700 | 2083.000 | 880.300 | 2092.000 | 881.500 | 2097.000 |
| GR | 896.400 | 2126.000 | 898.700 | 2177.000 | 899.900 | 2222.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .040 | 2080.000 | .070 | 2320.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 1.900 | 20.000 | 2000.000 | 2080.000 | 319.000 | 319.000 | 319.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 892.000 | 892.000 | 0.000 |
| GR | 902.500 | 1448.000 | 901.500 | 1498.000 | 899.000 | 1600.000 | 897.500 | 1718.000 | 897.100 | 1750.000 |
| GR | 895.300 | 1785.000 | 894.300 | 1893.000 | 894.500 | 1897.000 | 894.600 | 1980.000 | 886.300 | 1993.000 |
| GR | 880.800 | 2000.000 | 879.800 | 2020.000 | 878.500 | 2040.000 | 879.300 | 2060.000 | 880.600 | 2080.000 |
| GR | 882.000 | 2100.000 | 896.600 | 2120.000 | 896.600 | 2213.000 | 899.000 | 2306.000 | 902.300 | 2320.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .035 | 2080.000 | .070 | 2320.000 | 0.000 |

SURVEYED BRIDGE SECTION D/S

SOUTH KALAMAZOO AVE BRIDGE CONC ARCH 80' SPAN

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 892.000 | 892.000 | 0.000 |
| BT | 11.000 | 1980.000 | 894.600 | 0.000 | 1993.000 | 894.600 | 0.000 | 2000.000 | 894.600 | 880.800 |
| BT | 2000.000 | 894.600 | 882.200 | 2020.000 | 894.700 | 889.200 | 2040.000 | 894.700 | 890.900 | 2060.000 |
| BT | 894.800 | 889.100 | 2080.000 | 894.900 | 882.500 | 2080.000 | 894.900 | 880.600 | 2100.000 | 895.700 |
| BT | 0.000 | 2120.000 | 896.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .035 | 2080.000 | .070 | 2320.000 | 0.000 |

BRIDGE SECTION (D)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.100 | 0.000 | 0.000 | 0.000 | 33.000 | 33.000 | 33.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.300 | 894.900 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .040 | 2080.000 | .070 | 2320.000 | 0.000 |

1' U/S OF BRIDGE (USGS GAGE)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.300 | 894.900 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .040 | 2080.000 | .070 | 2320.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.300 | 0.000 | 0.000 | 0.000 | 79.000 | 79.000 | 79.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1920.000 | 0.000 | 2160.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .080 | 2000.000 | .045 | 2078.000 | .080 | 2102.000 | .045 | 2134.000 | 0.000 |

SURVEYED VALLEY SECTION U/S OF RICE CREEK (E)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.000 | 25.000 | 2000.000 | 2078.000 | 930.000 | 930.000 | 930.000 | 0.000 | 0.000 | 0.000 |
| GR | 904.500 | 1236.000 | 899.100 | 1381.000 | 897.100 | 1424.000 | 895.000 | 1538.000 | 898.200 | 1548.000 |
| GR | 885.700 | 1577.000 | 884.800 | 1646.000 | 884.800 | 1768.000 | 884.300 | 1843.000 | 882.600 | 1919.000 |
| GR | 881.200 | 1940.000 | 882.600 | 1953.000 | 883.300 | 1968.000 | 883.000 | 2000.000 | 882.700 | 2001.000 |
| GR | 879.100 | 2020.000 | 879.500 | 2030.000 | 879.800 | 2045.000 | 880.600 | 2065.000 | 883.000 | 2078.000 |
| GR | 883.400 | 2085.000 | 884.500 | 2102.000 | 896.100 | 2125.000 | 900.500 | 2134.000 | 900.600 | 2150.000 |
| QT | 5.000 | 1210.000 | 1570.000 | 1720.000 | 2070.000 | 1720.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.100 | 0.000 | 0.000 | 0.000 | 55.000 | 55.000 | 55.000 | 0.000 | 0.000 | 0.000 |
| NH | 3.000 | .080 | 1980.000 | .045 | 2080.000 | .080 | 2100.000 | 0.000 | 0.000 | 0.000 |

MANUFACTURED VALLEY SECTION (F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.500 | 6.000 | 1980.000 | 2080.000 | 950.000 | 1150.000 | 1010.000 | 0.000 | 0.000 | 0.000 |
| GR | 890.000 | 1920.000 | 884.000 | 1980.000 | 881.000 | 2030.000 | 881.000 | 2060.000 | 886.000 | 2080.000 |
| GR | 890.000 | 2100.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1818.000 | .080 | 2000.000 | .045 | 2062.000 | .070 | 2228.000 | 0.000 |
| FT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.100 | 0.000 | 0.000 | 1993.000 | 2081.000 |

SURVEYED VALLEY SECTION AT CONFLUENCE OF POWER PLANT CANAL (G)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.700 | 13.000 | 2000.000 | 2062.000 | 670.000 | 670.000 | 670.000 | 0.000 | 0.000 | 0.000 |
| GR | 906.900 | 1788.000 | 907.000 | 1804.000 | 907.200 | 1818.000 | 900.700 | 1850.000 | 898.500 | 1912.000 |
| GR | 896.200 | 1978.000 | 884.600 | 2000.000 | 882.300 | 2022.000 | 882.500 | 2040.000 | 884.600 | 2062.000 |
| GR | 888.000 | 2080.000 | 897.000 | 2116.000 | 901.100 | 2228.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GT | 5.000 | 1060.000 | 1420.000 | 1570.000 | 1920.000 | 1570.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1940.000 | 0.000 | 2122.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.800 | 0.000 | 0.000 | 0.000 | 175.000 | 175.000 | 175.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .040 | 2060.000 | .070 | 2689.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.900 | 19.000 | 2000.000 | 2060.000 | 239.000 | 239.000 | 239.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| GR | 905.500 | 1482.000 | 903.600 | 1602.000 | 901.200 | 1728.000 | 900.000 | 1872.000 | 898.600 | 1971.000 |
| GR | 887.600 | 2000.000 | 884.600 | 2005.000 | 883.900 | 2015.000 | 883.200 | 2025.000 | 883.500 | 2030.000 |
| GR | 884.000 | 2045.000 | 884.500 | 2058.000 | 886.400 | 2060.000 | 890.600 | 2090.000 | 898.300 | 2150.000 |
| GR | 899.300 | 2210.000 | 904.600 | 2428.000 | 905.400 | 2480.000 | 911.900 | 2689.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .035 | 2060.000 | .070 | 2689.000 | 0.000 |

SURVEYED BRIDGE SECTION D/S OF BRIDGE

SOUTH MARSHALL AVE BRIDGE CONC ARCH 60' SPAN

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| BT | 12.000 | 1872.000 | 900.000 | 0.000 | 1971.000 | 899.700 | 0.000 | 2000.000 | 899.500 | 887.600 |
| BT | 2000.000 | 899.500 | 890.000 | 2015.000 | 899.500 | 895.200 | 2030.000 | 899.400 | 897.200 | 2045.000 |
| BT | 899.300 | 895.200 | 2060.000 | 899.300 | 889.000 | 2060.000 | 899.300 | 886.400 | 2090.000 | 899.300 |
| BT | 0.000 | 2150.000 | 899.300 | 0.000 | 2210.000 | 899.300 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .035 | 2060.000 | .070 | 2689.000 | 0.000 |

BRIDGE SECTION (H)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.100 | 0.000 | 0.000 | 0.000 | 45.500 | 45.500 | 45.500 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 899.500 | 899.300 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .060 | 2000.000 | .035 | 2060.000 | .070 | 2689.000 | 0.000 |
| X1 | 4.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 899.500 | 899.300 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1970.000 | 0.000 | 2090.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .060 | 2000.000 | .045 | 2060.000 | .070 | 2689.000 | 0.000 |
| FT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1990.000 | 2085.000 |
| X1 | 4.300 | 13.000 | 2000.000 | 2062.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| GR | 906.900 | 1788.000 | 907.000 | 1804.000 | 907.200 | 1818.000 | 900.700 | 1850.000 | 898.500 | 1912.000 |
| GR | 896.200 | 1978.000 | 884.600 | 2000.000 | 882.300 | 2022.000 | 882.500 | 2040.000 | 884.600 | 2062.000 |
| GR | 888.000 | 2080.000 | 897.000 | 2116.000 | 901.100 | 2228.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 3.000 | .045 | 1648.000 | .090 | 2000.000 | .045 | 2091.000 | 0.000 | 0.000 | 0.000 |
| FT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION D/S OF DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.900 | 15.000 | 1448.000 | 2091.000 | 600.000 | 100.000 | 350.000 | 0.000 | 0.000 | 0.000 |
| GR | 902.730 | 1448.000 | 888.210 | 1448.000 | 887.860 | 1477.000 | 887.910 | 1545.000 | 887.650 | 1587.000 |
| GR | 887.190 | 1648.000 | 887.190 | 1648.000 | 885.650 | 2000.000 | 885.650 | 2000.000 | 885.510 | 2024.000 |
| GR | 885.510 | 2024.000 | 885.850 | 2046.000 | 885.520 | 2066.000 | 886.320 | 2091.000 | 902.500 | 2091.000 |
| SB | 0.000 | 1.500 | 3.090 | 0.000 | 20.000 | 0.000 | .300 | 0.000 | 885.510 | 885.510 |
| NC | .090 | .090 | .035 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SPILLWAY #1 200' LONG INVERT ELEV 900.05

SPILLWAY #2 91' LONG INVERT ELEV 899.69 (I)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.000 | 0.000 | 0.000 | 0.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 885.670 | 899.690 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 17.000 | 1448.000 | 902.730 | 0.000 | 1448.000 | 900.060 | 0.000 | 1477.000 | 900.060 | 0.000 |
| BT | 1545.000 | 900.060 | 0.000 | 1587.000 | 900.050 | 0.000 | 1587.000 | 900.050 | 0.000 | 1587.000 |
| BT | 900.050 | 0.000 | 1648.000 | 900.050 | 0.000 | 1648.000 | 903.260 | 0.000 | 2000.000 | 902.860 |
| BT | 885.650 | 2000.000 | 899.700 | 885.670 | 2024.000 | 899.700 | 885.530 | 2024.000 | 899.700 | 885.510 |
| BT | 2046.000 | 899.700 | 0.000 | 2066.000 | 899.700 | 0.000 | 2091.000 | 899.690 | 0.000 | 2091.000 |
| BT | 902.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 1210.000 | 1570.000 | 1720.000 | 2070.000 | 1720.000 | 0.000 | 0.000 | 0.000 | 0.000 |

above Rice Creek DAM 52

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.100 | 0.000 | 0.000 | 0.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION AT CORPORATE BOUNDARY (J)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.000 | 15.000 | 2000.000 | 2616.000 | 2270.000 | 2550.000 | 2270.000 | 0.000 | 0.000 | 0.000 |
| GR | 909.890 | 1810.000 | 903.520 | 2000.000 | 899.530 | 2008.000 | 894.230 | 2078.000 | 892.030 | 2148.000 |
| GR | 891.330 | 2208.000 | 890.280 | 2288.000 | 893.080 | 2408.000 | 896.630 | 2478.000 | 898.330 | 2538.000 |
| GR | 899.230 | 2560.000 | 899.620 | 2616.000 | 900.710 | 2744.000 | 904.880 | 2826.000 | 910.700 | 2836.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

T1      FIS CITY OF MARSHALL
T2      50 -YEAR FLOOD
T3      KALAMAZOO RIVER

J1  ICHECK     INQ       NINV      IPTR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       3.        0.        0.  0.000000      0.00      0.0       0.    879.930     0.000
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

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**********************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
 ERROR CORR -  01.02.03
 MODIFICATION -  50.51.52.53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      100-YEAR FLOOD
T3      KALAMAZOO RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.      4.        0.        0.  0.000000      0.00      0.0       0.    880.160   0.000
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

T1      FIS CITY OF MARSHALL
T2      500-YEAR FLOOD
T3      KALAMAZOO RIVER

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       5.        0.        0.  0.000000      0.00      0.0       0.    880.620     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01.02.03
  MODIFICATION -  50.51.52.53
**************************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

KALAMAZOO RIVER

SUMMARY PRINTOUT
```

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLOB |
|---|---|---|---|---|---|---|---|
| .100 | 879.36 | 1994.76 | 2000.00 | 3407.00 | 3425.32 | 1107.61 | 0.00 |
| .100 | 879.93 | 1991.29 | 2000.00 | 3407.00 | 3435.36 | 1258.23 | 0.00 |
| .100 | 880.16 | 1989.89 | 2000.00 | 3407.00 | 3446.39 | 1456.50 | 0.00 |
| .100 | 880.62 | 1987.09 | 2000.00 | 3407.00 | 3494.62 | 1507.53 | 0.00 |
| 1.000 | 880.75 | 1991.81 | 2000.00 | 2242.00 | 2241.22 | 229.49 | 1970.00 |
| 1.000 | 881.12 | 1979.56 | 2000.00 | 2242.00 | 2315.54 | 319.25 | 1970.00 |
| 1.000 | 881.34 | 1972.62 | 2000.00 | 2242.00 | 2334.01 | 361.38 | 1970.00 |
| 1.000 | 881.64 | 1963.65 | 2000.00 | 2242.00 | 2360.67 | 397.02 | 1970.00 |
| 1.800 | 883.99 | 1924.00 | 2004.00 | 2092.00 | 2101.86 | 177.86 | 3190.00 |
| 1.800 | 884.69 | 1924.00 | 2004.00 | 2092.00 | 2103.21 | 179.21 | 3190.00 |
| 1.800 | 884.93 | 1924.00 | 2004.00 | 2092.00 | 2103.67 | 179.67 | 3190.00 |
| 1.800 | 885.47 | 1924.00 | 2004.00 | 2092.00 | 2104.72 | 180.72 | 3190.00 |
| 1.900 | 884.26 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 319.00 |
| 1.900 | 884.96 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 319.00 |
| 1.900 | 885.20 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 319.00 |
| 1.900 | 885.74 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 319.00 |
| 2.000 | 884.26 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.000 | 884.95 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.000 | 885.18 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.000 | 885.71 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.100 | 884.32 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 33.00 |
| 2.100 | 885.02 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 33.00 |
| 2.100 | 885.26 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 33.00 |
| 2.100 | 885.81 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 33.00 |
| 2.200 | 884.34 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.200 | 885.07 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.200 | 885.33 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.200 | 885.91 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.300 | 884.52 | 1995.27 | 2000.00 | 2080.00 | 2103.45 | 108.19 | 79.00 |
| 2.300 | 885.29 | 1994.29 | 2000.00 | 2080.00 | 2104.50 | 110.22 | 79.00 |
| 2.300 | 885.56 | 1993.94 | 2000.00 | 2080.00 | 2104.88 | 110.94 | 79.00 |
| 2.300 | 886.18 | 1993.15 | 2000.00 | 2080.00 | 2105.73 | 112.58 | 79.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 3.000 | 885.48 | 1593.98 | 2000.00 | 2078.00 | 2103.94 | 509.96 | 930.00 |
| 3.000 | 886.23 | 1575.78 | 2000.00 | 2078.00 | 2105.42 | 529.64 | 930.00 |
| 3.000 | 886.50 | 1575.14 | 2000.00 | 2078.00 | 2105.97 | 530.83 | 930.00 |
| 3.000 | 887.13 | 1573.70 | 2000.00 | 2078.00 | 2107.20 | 533.50 | 930.00 |
| 3.100 | 885.55 | 1589.38 | 2000.00 | 2078.00 | 2104.06 | 514.68 | 55.00 |
| 3.100 | 886.28 | 1575.67 | 2000.00 | 2078.00 | 2105.52 | 529.85 | 55.00 |
| 3.100 | 886.56 | 1575.02 | 2000.00 | 2078.00 | 2106.07 | 531.05 | 55.00 |
| 3.100 | 887.17 | 1573.59 | 2000.00 | 2078.00 | 2107.30 | 533.71 | 55.00 |
| 3.500 | 886.21 | 1957.92 | 1980.00 | 2080.00 | 2081.04 | 123.12 | 1010.00 |
| 3.500 | 886.84 | 1951.61 | 1980.00 | 2080.00 | 2084.20 | 132.59 | 1010.00 |
| 3.500 | 887.08 | 1949.19 | 1980.00 | 2080.00 | 2085.40 | 136.21 | 1010.00 |
| 3.500 | 887.63 | 1943.75 | 1980.00 | 2080.00 | 2088.13 | 144.38 | 1010.00 |
| 3.700 | 887.35 | 1994.79 | 2000.00 | 2062.00 | 2076.55 | 81.76 | 670.00 |
| 3.700 | 887.98 | 1993.60 | 2000.00 | 2062.00 | 2079.87 | 86.28 | 670.00 |
| 3.700 | 888.22 | 1993.14 | 2000.00 | 2062.00 | 2080.86 | 87.72 | 670.00 |
| 3.700 | 888.74 | 1992.14 | 2000.00 | 2062.00 | 2082.97 | 90.83 | 670.00 |
| 3.800 | 887.84 | 1993.85 | 2000.00 | 2062.00 | 2079.17 | 85.32 | 175.00 |
| 3.800 | 888.51 | 1992.58 | 2000.00 | 2062.00 | 2082.04 | 89.46 | 175.00 |
| 3.800 | 888.76 | 1992.11 | 2000.00 | 2062.00 | 2083.05 | 90.94 | 175.00 |
| 3.800 | 889.31 | 1991.06 | 2000.00 | 2062.00 | 2085.25 | 94.19 | 175.00 |
| 3.900 | 888.21 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 239.00 |
| 3.900 | 888.90 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 239.00 |
| 3.900 | 889.16 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 239.00 |
| 3.900 | 889.72 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 239.00 |
| 4.000 | 888.22 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 4.000 | 888.91 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 4.000 | 889.16 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 4.000 | 889.73 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 4.100 | 888.31 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 45.50 |
| 4.100 | 889.01 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 45.50 |
| 4.100 | 889.27 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 45.50 |
| 4.100 | 889.85 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 45.50 |
| 4.200 | 888.32 | 1998.12 | 2000.00 | 2060.00 | 2073.68 | 75.56 | 1.00 |
| 4.200 | 889.04 | 1996.19 | 2000.00 | 2060.00 | 2078.89 | 82.70 | 1.00 |
| 4.200 | 889.32 | 1995.47 | 2000.00 | 2060.00 | 2080.85 | 85.39 | 1.00 |
| 4.200 | 889.93 | 1993.87 | 2000.00 | 2060.00 | 2085.18 | 91.31 | 1.00 |
| 4.300 | 888.61 | 1992.40 | 2000.00 | 2062.00 | 2082.42 | 90.02 | 60.00 |
| 4.300 | 889.38 | 1990.93 | 2000.00 | 2062.00 | 2085.53 | 94.60 | 60.00 |
| 4.300 | 889.68 | 1990.37 | 2000.00 | 2062.00 | 2086.72 | 96.35 | 60.00 |
| 4.300 | 890.33 | 1989.13 | 2000.00 | 2062.00 | 2089.32 | 100.18 | 60.00 |
| 4.900 | 888.98 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 350.00 |
| 4.900 | 889.75 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 350.00 |
| 4.900 | 890.05 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 350.00 |
| 4.900 | 890.72 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 350.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 5.000 | 901.05 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 30.00 |
| 5.000 | 901.29 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 30.00 |
| 5.000 | 901.39 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 30.00 |
| 5.000 | 901.60 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 30.00 |
| 5.100 | 901.05 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 50.00 |
| 5.100 | 901.29 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 50.00 |
| 5.100 | 901.39 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 50.00 |
| 5.100 | 901.60 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 50.00 |
| 6.000 | 901.06 | 2004.94 | 2000.00 | 2616.00 | 2750.78 | 745.83 | 2270.00 |
| 6.000 | 901.30 | 2004.46 | 2000.00 | 2616.00 | 2755.49 | 751.03 | 2270.00 |
| 6.000 | 901.39 | 2004.27 | 2000.00 | 2616.00 | 2757.34 | 753.06 | 2270.00 |
| 6.000 | 901.60 | 2003.86 | 2000.00 | 2616.00 | 2761.44 | 757.58 | 2270.00 |

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | XLOB | ELTRD | ELLOB | FLMIN | Q | CWSEL | CRIWS | EG | TOP*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| .100 | 0.00 | 0.00 | 0.00 | 874.59 | 1520.00 | 879.36 | 0.00 | 879.38 | 4.69 | 1.08 | 1411.92 | 701.82 |
| .100 | 0.00 | 0.00 | 0.00 | 874.59 | 1980.00 | 879.93 | 0.00 | 879.94 | 3.56 | .96 | 2086.19 | 1050.05 |
| .100 | 0.00 | 0.00 | 0.00 | 874.59 | 2170.00 | 880.16 | 0.00 | 880.17 | 3.53 | .91 | 2406.81 | 1154.76 |
| .100 | 0.00 | 0.00 | 0.00 | 874.59 | 2610.00 | 880.62 | 0.00 | 880.63 | 2.88 | .86 | 3088.54 | 1538.35 |
| 1.000 | 1970.00 | 0.00 | 0.00 | 875.60 | 1520.00 | 880.75 | 0.00 | 880.85 | 13.13 | 2.51 | 605.64 | 419.43 |
| 1.000 | 1970.00 | 0.00 | 0.00 | 875.60 | 1980.00 | 881.12 | 0.00 | 881.25 | 15.22 | 2.86 | 703.98 | 507.57 |
| 1.000 | 1970.00 | 0.00 | 0.00 | 875.60 | 2170.00 | 881.34 | 0.00 | 881.47 | 14.83 | 2.91 | 777.31 | 563.50 |
| 1.000 | 1970.00 | 0.00 | 0.00 | 875.60 | 2610.00 | 881.64 | 0.00 | 881.79 | 16.01 | 3.16 | 893.61 | 652.23 |
| 1.800 | 3190.00 | 0.00 | 0.00 | 878.30 | 1520.00 | 883.99 | 0.00 | 884.10 | 8.12 | 2.87 | 656.92 | 533.47 |
| 1.800 | 3190.00 | 0.00 | 0.00 | 878.30 | 1980.00 | 884.69 | 0.00 | 884.83 | 8.59 | 3.21 | 780.92 | 675.41 |
| 1.800 | 3190.00 | 0.00 | 0.00 | 878.30 | 2170.00 | 884.93 | 0.00 | 885.08 | 8.90 | 3.35 | 823.42 | 727.23 |
| 1.800 | 3190.00 | 0.00 | 0.00 | 878.30 | 2610.00 | 885.47 | 0.00 | 885.64 | 9.39 | 3.63 | 920.83 | 851.80 |
| 1.900 | 319.00 | 0.00 | 0.00 | 878.50 | 1520.00 | 884.26 | 0.00 | 884.52 | 15.20 | 4.05 | 375.04 | 389.88 |
| 1.900 | 319.00 | 0.00 | 0.00 | 878.50 | 1980.00 | 884.96 | 0.00 | 885.29 | 16.21 | 4.59 | 431.10 | 491.78 |
| 1.900 | 319.00 | 0.00 | 0.00 | 878.50 | 2170.00 | 885.20 | 0.00 | 885.56 | 16.84 | 4.82 | 450.28 | 528.78 |
| 1.900 | 319.00 | 0.00 | 0.00 | 878.50 | 2610.00 | 885.74 | 0.00 | 886.18 | 17.97 | 5.29 | 493.36 | 615.76 |
| 2.000 | 1.00 | 894.60 | 890.90 | 878.50 | 1520.00 | 884.26 | 0.00 | 884.53 | 16.15 | 4.17 | 364.33 | 378.20 |
| 2.000 | 1.00 | 894.60 | 890.90 | 878.50 | 1980.00 | 884.95 | 0.00 | 885.31 | 19.52 | 4.82 | 410.56 | 448.12 |
| 2.000 | 1.00 | 894.60 | 890.90 | 878.50 | 2170.00 | 885.18 | 0.00 | 885.59 | 21.28 | 5.11 | 425.04 | 470.35 |
| 2.000 | 1.00 | 894.60 | 890.90 | 878.50 | 2610.00 | 885.71 | 0.00 | 886.21 | 25.14 | 5.70 | 457.51 | 520.58 |
| 2.100 | 33.00 | 894.60 | 890.90 | 878.50 | 1520.00 | 884.32 | 0.00 | 884.58 | 15.77 | 4.14 | 367.39 | 382.76 |
| 2.100 | 33.00 | 894.60 | 890.90 | 878.50 | 1980.00 | 885.02 | 0.00 | 885.38 | 19.04 | 4.78 | 414.21 | 453.72 |
| 2.100 | 33.00 | 894.60 | 890.90 | 878.50 | 2170.00 | 885.26 | 0.00 | 885.66 | 20.67 | 5.05 | 429.52 | 477.26 |
| 2.100 | 33.00 | 894.60 | 890.90 | 878.50 | 2610.00 | 885.81 | 0.00 | 886.30 | 24.28 | 5.63 | 463.39 | 529.72 |
| 2.200 | 1.00 | 0.00 | 0.00 | 878.50 | 1520.00 | 884.34 | 0.00 | 884.59 | 14.38 | 3.99 | 381.34 | 400.86 |
| 2.200 | 1.00 | 0.00 | 0.00 | 878.50 | 1980.00 | 885.07 | 0.00 | 885.39 | 15.14 | 4.50 | 439.98 | 508.78 |
| 2.200 | 1.00 | 0.00 | 0.00 | 878.50 | 2170.00 | 885.33 | 0.00 | 885.68 | 15.62 | 4.71 | 460.60 | 549.14 |
| 2.200 | 1.00 | 0.00 | 0.00 | 878.50 | 2610.00 | 885.91 | 0.00 | 886.33 | 16.38 | 5.15 | 507.19 | 644.79 |
| 2.300 | 79.00 | 0.00 | 0.00 | 878.50 | 1520.00 | 884.52 | 0.00 | 884.71 | 10.97 | 3.57 | 473.12 | 458.91 |
| 2.300 | 79.00 | 0.00 | 0.00 | 878.50 | 1980.00 | 885.29 | 0.00 | 885.52 | 11.26 | 3.98 | 557.00 | 589.93 |
| 2.300 | 79.00 | 0.00 | 0.00 | 878.50 | 2170.00 | 885.56 | 0.00 | 885.81 | 11.49 | 4.15 | 587.37 | 640.09 |
| 2.300 | 79.00 | 0.00 | 0.00 | 878.50 | 2610.00 | 886.12 | 0.00 | 886.47 | 11.81 | 4.49 | 656.55 | 759.41 |
| 3.000 | 930.00 | 0.00 | 0.00 | 879.10 | 1520.00 | 885.48 | 0.00 | 885.56 | 7.59 | 2.66 | 993.47 | 551.66 |
| 3.000 | 930.00 | 0.00 | 0.00 | 879.10 | 1980.00 | 886.23 | 0.00 | 886.30 | 6.25 | 2.64 | 1385.78 | 792.27 |
| 3.000 | 930.00 | 0.00 | 0.00 | 879.10 | 2170.00 | 886.50 | 0.00 | 886.57 | 5.87 | 2.64 | 1532.79 | 895.48 |
| 3.000 | 930.00 | 0.00 | 0.00 | 879.10 | 2610.00 | 887.13 | 0.00 | 887.19 | 5.14 | 2.64 | 1862.78 | 1150.78 |
| 3.100 | 55.00 | 0.00 | 0.00 | 879.10 | 1210.00 | 885.55 | 0.00 | 885.59 | 4.53 | 2.07 | 1024.23 | 568.80 |
| 3.100 | 55.00 | 0.00 | 0.00 | 879.10 | 1570.00 | 886.28 | 0.00 | 886.33 | 3.75 | 2.06 | 1412.39 | 810.45 |
| 3.100 | 55.00 | 0.00 | 0.00 | 879.10 | 1720.00 | 886.56 | 0.00 | 886.60 | 3.53 | 2.06 | 1559.46 | 914.92 |
| 3.100 | 55.00 | 0.00 | 0.00 | 879.10 | 2070.00 | 887.17 | 0.00 | 887.21 | 3.12 | 2.07 | 1889.23 | 1172.59 |
| 3.500 | 1010.00 | 0.00 | 0.00 | 881.00 | 1210.00 | 886.21 | 0.00 | 886.35 | 13.41 | 3.01 | 420.30 | 330.37 |
| 3.500 | 1010.00 | 0.00 | 0.00 | 881.00 | 1570.00 | 886.84 | 0.00 | 887.01 | 13.57 | 3.34 | 501.03 | 426.22 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.500 | 1010.00 | 0.00 | 0.00 | 881.00 | 1720.00 | 887.08 | 0.00 | 887.26 | 13.63 | 3.47 | 533.43 | 465.81 |
| 3.500 | 1010.00 | 0.00 | 0.00 | 881.00 | 2070.00 | 887.63 | 0.00 | 887.83 | 13.60 | 3.72 | 609.82 | 561.27 |

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.700 | 670.00 | 0.00 | 0.00 | 882.30 | 1210.00 | 887.35 | 0.00 | 887.66 | 28.38 | 4.55 | 285.51 | 227.12 |
| 3.700 | 670.00 | 0.00 | 0.00 | 882.30 | 1570.00 | 887.98 | 0.00 | 888.36 | 29.28 | 5.07 | 338.30 | 290.16 |
| 3.700 | 670.00 | 0.00 | 0.00 | 882.30 | 1720.00 | 888.22 | 0.00 | 888.63 | 29.54 | 5.26 | 359.15 | 316.45 |
| 3.700 | 670.00 | 0.00 | 0.00 | 882.30 | 2070.00 | 888.74 | 0.00 | 889.21 | 29.99 | 5.66 | 406.16 | 377.99 |
| 3.800 | 175.00 | 0.00 | 0.00 | 882.30 | 1060.00 | 887.84 | 0.00 | 888.03 | 14.72 | 3.53 | 326.91 | 276.24 |
| 3.800 | 175.00 | 0.00 | 0.00 | 882.30 | 1420.00 | 888.51 | 0.00 | 888.76 | 16.44 | 4.08 | 385.25 | 350.27 |
| 3.800 | 175.00 | 0.00 | 0.00 | 882.30 | 1570.00 | 888.76 | 0.00 | 889.03 | 17.03 | 4.28 | 407.95 | 380.39 |
| 3.800 | 175.00 | 0.00 | 0.00 | 882.30 | 1920.00 | 889.31 | 0.00 | 889.64 | 18.19 | 4.71 | 458.87 | 450.23 |
| 3.900 | 239.00 | 0.00 | 0.00 | 883.20 | 1060.00 | 888.21 | 0.00 | 888.50 | 21.51 | 4.32 | 245.13 | 228.53 |
| 3.900 | 239.00 | 0.00 | 0.00 | 883.20 | 1420.00 | 888.90 | 0.00 | 889.28 | 22.94 | 4.96 | 286.56 | 296.47 |
| 3.900 | 239.00 | 0.00 | 0.00 | 883.20 | 1570.00 | 889.16 | 0.00 | 889.58 | 23.52 | 5.20 | 302.10 | 323.74 |
| 3.900 | 239.00 | 0.00 | 0.00 | 883.20 | 1920.00 | 889.72 | 0.00 | 890.23 | 24.73 | 5.72 | 335.77 | 386.10 |
| 4.000 | 1.00 | 899.30 | 897.20 | 883.20 | 1060.00 | 888.22 | 0.00 | 888.51 | 17.32 | 4.32 | 245.24 | 254.73 |
| 4.000 | 1.00 | 899.30 | 897.20 | 883.20 | 1420.00 | 888.91 | 0.00 | 889.29 | 19.00 | 4.95 | 286.68 | 325.77 |
| 4.000 | 1.00 | 899.30 | 897.20 | 883.20 | 1570.00 | 889.16 | 0.00 | 889.58 | 19.80 | 5.20 | 302.19 | 352.85 |
| 4.000 | 1.00 | 899.30 | 897.20 | 883.20 | 1920.00 | 889.73 | 0.00 | 890.23 | 21.80 | 5.73 | 335.26 | 411.19 |
| 4.100 | 45.50 | 899.30 | 897.20 | 883.20 | 1060.00 | 888.31 | 0.00 | 888.59 | 16.18 | 4.23 | 250.57 | 263.53 |
| 4.100 | 45.50 | 899.30 | 897.20 | 883.20 | 1420.00 | 889.01 | 0.00 | 889.38 | 17.85 | 4.86 | 292.44 | 336.08 |
| 4.100 | 45.50 | 899.30 | 897.20 | 883.20 | 1570.00 | 889.27 | 0.00 | 889.68 | 18.70 | 5.10 | 308.07 | 363.08 |
| 4.100 | 45.50 | 899.30 | 897.20 | 883.20 | 1920.00 | 889.85 | 0.00 | 890.34 | 20.61 | 5.62 | 341.79 | 422.95 |
| 4.200 | 1.00 | 0.00 | 0.00 | 883.20 | 1060.00 | 888.32 | 0.00 | 888.59 | 14.87 | 4.18 | 264.99 | 274.84 |
| 4.200 | 1.00 | 0.00 | 0.00 | 883.20 | 1420.00 | 889.04 | 0.00 | 889.38 | 15.36 | 4.72 | 322.73 | 362.37 |
| 4.200 | 1.00 | 0.00 | 0.00 | 883.20 | 1570.00 | 889.32 | 0.00 | 889.69 | 15.54 | 4.93 | 345.85 | 398.30 |
| 4.200 | 1.00 | 0.00 | 0.00 | 883.20 | 1920.00 | 889.93 | 0.00 | 890.36 | 15.79 | 5.35 | 399.42 | 483.19 |
| 4.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1060.00 | 888.61 | 0.00 | 888.73 | 17.39 | 2.91 | 393.81 | 254.17 |
| 4.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1420.00 | 889.38 | 0.00 | 889.54 | 19.31 | 3.33 | 465.52 | 323.14 |
| 4.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1570.00 | 889.68 | 0.00 | 889.85 | 19.94 | 3.48 | 493.80 | 351.59 |
| 4.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1920.00 | 890.33 | 0.00 | 890.53 | 21.08 | 3.80 | 557.71 | 418.21 |
| 4.900 | 350.00 | 0.00 | 0.00 | 885.51 | 1060.00 | 888.98 | 0.00 | 888.99 | 3.32 | .73 | 1442.27 | 581.70 |
| 4.900 | 350.00 | 0.00 | 0.00 | 885.51 | 1420.00 | 889.75 | 0.00 | 889.76 | 2.28 | .73 | 1940.58 | 940.81 |
| 4.900 | 350.00 | 0.00 | 0.00 | 885.51 | 1570.00 | 890.05 | 0.00 | 890.06 | 2.04 | .74 | 2134.50 | 1100.31 |
| 4.900 | 350.00 | 0.00 | 0.00 | 885.51 | 1920.00 | 890.72 | 0.00 | 890.73 | 1.66 | .75 | 2564.11 | 1490.16 |
| 5.000 | 30.00 | 899.69 | 885.67 | 885.51 | 1060.00 | 901.05 | 0.00 | 901.05 | .00 | .12 | 9208.92 | 22422.90 |
| 5.000 | 30.00 | 899.69 | 885.67 | 885.51 | 1420.00 | 901.29 | 0.00 | 901.29 | .00 | .15 | 9362.88 | 23040.23 |
| 5.000 | 30.00 | 899.69 | 885.67 | 885.51 | 1570.00 | 901.39 | 0.00 | 901.39 | .00 | .17 | 9423.22 | 23283.89 |
| 5.000 | 30.00 | 899.69 | 885.67 | 885.51 | 1920.00 | 901.60 | 0.00 | 901.60 | .01 | .20 | 9557.15 | 23828.21 |
| 5.100 | 50.00 | 0.00 | 0.00 | 885.51 | 1210.00 | 901.05 | 0.00 | 901.05 | .00 | .13 | 9214.13 | 22443.68 |
| 5.100 | 50.00 | 0.00 | 0.00 | 885.51 | 1570.00 | 901.29 | 0.00 | 901.29 | .00 | .17 | 9366.32 | 23054.08 |
| 5.100 | 50.00 | 0.00 | 0.00 | 885.51 | 1720.00 | 901.39 | 0.00 | 901.39 | .01 | .18 | 9426.22 | 23296.04 |
| 5.100 | 50.00 | 0.00 | 0.00 | 885.51 | 2070.00 | 901.60 | 0.00 | 901.60 | .01 | .22 | 9559.43 | 23837.50 |
| 6.000 | 2270.00 | 0.00 | 0.00 | 890.28 | 1210.00 | 901.06 | 0.00 | 901.06 | .04 | .29 | 4261.51 | 6322.51 |
| 6.000 | 2270.00 | 0.00 | 0.00 | 890.28 | 1570.00 | 901.30 | 0.00 | 901.30 | .05 | .36 | 4440.90 | 6702.96 |
| 6.000 | 2270.00 | 0.00 | 0.00 | 890.28 | 1720.00 | 901.39 | 0.00 | 901.39 | .06 | .39 | 4511.55 | 6854.82 |
| 6.000 | 2270.00 | 0.00 | 0.00 | 890.28 | 2070.00 | 901.60 | 0.00 | 901.60 | .08 | .46 | 4669.10 | 7197.41 |

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| .100 | 1520.00 | 879.36 | 0.00 | 0.00 | 0.00 | 1107.61 | 0.00 |
| .100 | 1980.00 | 879.93 | .57 | 0.00 | 0.00 | 1258.23 | 0.00 |
| .100 | 2170.00 | 880.16 | .23 | 0.00 | 0.00 | 1456.50 | 0.00 |
| .100 | 2610.00 | 880.62 | .46 | 0.00 | 0.00 | 1507.53 | 0.00 |
| 1.000 | 1520.00 | 880.75 | 0.00 | 1.39 | 0.00 | 229.49 | 1970.00 |
| 1.000 | 1980.00 | 881.12 | .37 | 1.19 | 0.00 | 319.25 | 1970.00 |
| 1.000 | 2170.00 | 881.34 | .21 | 1.18 | 0.00 | 361.38 | 1970.00 |
| 1.000 | 2610.00 | 881.64 | .31 | 1.02 | 0.00 | 397.02 | 1970.00 |
| 1.800 | 1520.00 | 883.99 | 0.00 | 3.23 | 0.00 | 177.86 | 3190.00 |
| 1.800 | 1980.00 | 884.69 | .70 | 3.57 | 0.00 | 179.21 | 3190.00 |
| 1.800 | 2170.00 | 884.93 | .24 | 3.59 | 0.00 | 179.67 | 3190.00 |
| 1.800 | 2610.00 | 885.47 | .54 | 3.83 | 0.00 | 180.72 | 3190.00 |
| 1.900 | 1520.00 | 884.26 | 0.00 | .28 | 0.00 | 80.00 | 319.00 |
| 1.900 | 1980.00 | 884.96 | .70 | .27 | 0.00 | 80.00 | 319.00 |
| 1.900 | 2170.00 | 885.20 | .24 | .28 | 0.00 | 80.00 | 319.00 |
| 1.900 | 2610.00 | 885.74 | .54 | .27 | 0.00 | 80.00 | 319.00 |
| 2.000 | 1520.00 | 884.26 | 0.00 | -.01 | 0.00 | 80.00 | 1.00 |
| 2.000 | 1980.00 | 884.95 | .69 | -.02 | 0.00 | 80.00 | 1.00 |
| 2.000 | 2170.00 | 885.18 | .23 | -.02 | 0.00 | 80.00 | 1.00 |
| 2.000 | 2610.00 | 885.71 | .53 | -.03 | 0.00 | 80.00 | 1.00 |
| 2.100 | 1520.00 | 884.32 | 0.00 | .06 | 0.00 | 80.00 | 33.00 |
| 2.100 | 1980.00 | 885.02 | .71 | .07 | 0.00 | 80.00 | 33.00 |
| 2.100 | 2170.00 | 885.26 | .24 | .08 | 0.00 | 80.00 | 33.00 |
| 2.100 | 2610.00 | 885.81 | .54 | .10 | 0.00 | 80.00 | 33.00 |
| 2.200 | 1520.00 | 884.34 | 0.00 | .03 | 0.00 | 80.00 | 1.00 |
| 2.200 | 1980.00 | 885.07 | .73 | .05 | 0.00 | 80.00 | 1.00 |
| 2.200 | 2170.00 | 885.33 | .26 | .07 | 0.00 | 80.00 | 1.00 |
| 2.200 | 2610.00 | 885.91 | .58 | .11 | 0.00 | 80.00 | 1.00 |
| 2.300 | 1520.00 | 884.52 | 0.00 | .18 | 0.00 | 108.19 | 79.00 |
| 2.300 | 1980.00 | 885.29 | .77 | .21 | 0.00 | 110.22 | 79.00 |
| 2.300 | 2170.00 | 885.56 | .27 | .23 | 0.00 | 110.94 | 79.00 |
| 2.300 | 2610.00 | 886.18 | .62 | .27 | 0.00 | 112.58 | 79.00 |
| 3.000 | 1520.00 | 885.48 | 0.00 | .96 | 0.00 | 509.96 | 930.00 |
| 3.000 | 1980.00 | 886.23 | .75 | .94 | 0.00 | 529.64 | 930.00 |
| 3.000 | 2170.00 | 886.50 | .28 | .94 | 0.00 | 530.83 | 930.00 |
| 3.000 | 2610.00 | 887.13 | .62 | .94 | 0.00 | 533.50 | 930.00 |
| 3.100 | 1210.00 | 885.55 | 0.00 | .07 | 0.00 | 514.68 | 55.00 |
| 3.100 | 1570.00 | 886.28 | .74 | .06 | 0.00 | 529.85 | 55.00 |
| 3.100 | 1720.00 | 886.56 | .28 | .05 | 0.00 | 531.05 | 55.00 |
| 3.100 | 2070.00 | 887.17 | .62 | .05 | 0.00 | 533.71 | 55.00 |
| 3.500 | 1210.00 | 886.21 | 0.00 | .66 | 0.00 | 123.12 | 1010.00 |
| 3.500 | 1570.00 | 886.84 | .63 | .56 | 0.00 | 132.59 | 1010.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3.500 | 1720.00 | 887.08 | .24 | .52 | 0.00 | 136.21 | 1010.00 |
| 3.500 | 2070.00 | 887.63 | .54 | .45 | 0.00 | 144.38 | 1010.00 |

| SECNO | Q | C.SEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 3.700 | 1210.00 | 887.35 | 0.00 | 1.14 | 0.00 | 81.76 | 670.00 |
| 3.700 | 1570.00 | 887.98 | .63 | 1.14 | 0.00 | 86.28 | 670.00 |
| 3.700 | 1720.00 | 888.22 | .24 | 1.13 | 0.00 | 87.72 | 670.00 |
| 3.700 | 2070.00 | 888.74 | .53 | 1.12 | 0.00 | 90.83 | 670.00 |
| 3.800 | 1060.00 | 887.84 | 0.00 | .49 | 0.00 | 85.32 | 175.00 |
| 3.800 | 1420.00 | 888.51 | .67 | .53 | .67 | 89.46 | 175.00 |
| 3.800 | 1570.00 | 888.76 | .25 | .55 | .92 | 90.94 | 175.00 |
| 3.800 | 1920.00 | 889.31 | .55 | .57 | 1.47 | 94.19 | 175.00 |
| 3.900 | 1060.00 | 888.21 | 0.00 | .37 | 0.00 | 60.00 | 239.00 |
| 3.900 | 1420.00 | 888.90 | .69 | .39 | 0.00 | 60.00 | 239.00 |
| 3.900 | 1570.00 | 889.16 | .26 | .40 | 0.00 | 60.00 | 239.00 |
| 3.900 | 1920.00 | 889.72 | .56 | .41 | 0.00 | 60.00 | 239.00 |
| 4.000 | 1060.00 | 888.22 | 0.00 | .00 | 0.00 | 60.00 | 1.00 |
| 4.000 | 1420.00 | 888.91 | .69 | .00 | 0.00 | 60.00 | 1.00 |
| 4.000 | 1570.00 | 889.16 | .26 | .00 | 0.00 | 60.00 | 1.00 |
| 4.000 | 1920.00 | 889.73 | .56 | .00 | 0.00 | 60.00 | 1.00 |
| 4.100 | 1060.00 | 888.31 | 0.00 | .09 | 0.00 | 60.00 | 45.50 |
| 4.100 | 1420.00 | 889.01 | .70 | .10 | 0.00 | 60.00 | 45.50 |
| 4.100 | 1570.00 | 889.27 | .26 | .11 | 0.00 | 60.00 | 45.50 |
| 4.100 | 1920.00 | 889.85 | .57 | .12 | 0.00 | 60.00 | 45.50 |
| 4.200 | 1060.00 | 888.32 | 0.00 | .01 | 0.00 | 75.56 | 1.00 |
| 4.200 | 1420.00 | 889.04 | .72 | .04 | 0.00 | 82.70 | 1.00 |
| 4.200 | 1570.00 | 889.32 | .28 | .05 | 0.00 | 85.39 | 1.00 |
| 4.200 | 1920.00 | 889.93 | .61 | .08 | 0.00 | 91.31 | 1.00 |
| 4.300 | 1060.00 | 888.61 | 0.00 | .28 | 0.00 | 90.02 | 60.00 |
| 4.300 | 1420.00 | 889.38 | .78 | .34 | 0.00 | 94.60 | 60.00 |
| 4.300 | 1570.00 | 889.68 | .30 | .36 | 0.00 | 96.35 | 60.00 |
| 4.300 | 1920.00 | 890.33 | .65 | .40 | 0.00 | 100.18 | 60.00 |
| 4.900 | 1060.00 | 888.98 | 0.00 | .37 | 0.00 | 643.00 | 350.00 |
| 4.900 | 1420.00 | 889.75 | .77 | .37 | 0.00 | 643.00 | 350.00 |
| 4.900 | 1570.00 | 890.05 | .30 | .38 | 0.00 | 643.00 | 350.00 |
| 4.900 | 1920.00 | 890.72 | .67 | .39 | 0.00 | 643.00 | 350.00 |
| 5.000 | 1060.00 | 901.05 | 0.00 | 12.08 | 0.00 | 643.00 | 30.00 |
| 5.000 | 1420.00 | 901.29 | .24 | 11.54 | 0.00 | 643.00 | 30.00 |
| 5.000 | 1570.00 | 901.39 | .09 | 11.33 | 0.00 | 643.00 | 30.00 |
| 5.000 | 1920.00 | 901.60 | .21 | 10.87 | 0.00 | 643.00 | 30.00 |
| 5.100 | 1210.00 | 901.05 | 0.00 | -.00 | 0.00 | 643.00 | 50.00 |
| 5.100 | 1570.00 | 901.29 | .24 | -.00 | 0.00 | 643.00 | 50.00 |
| 5.100 | 1720.00 | 901.39 | .09 | -.00 | 0.00 | 643.00 | 50.00 |
| 5.100 | 2070.00 | 901.60 | .21 | -.00 | 0.00 | 643.00 | 50.00 |
| 6.000 | 1210.00 | 901.06 | 0.00 | .00 | 0.00 | 745.83 | 2270.00 |
| 6.000 | 1570.00 | 901.30 | .24 | .00 | 0.00 | 751.03 | 2270.00 |
| 6.000 | 1720.00 | 901.39 | .09 | .00 | 0.00 | 753.06 | 2270.00 |
| 6.000 | 2070.00 | 901.60 | .21 | .00 | 0.00 | 757.58 | 2270.00 |

FLOOD INSURANCE ZONE DATA FOR KALAMAZOO RIVER

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10 | 2 | 0.2 |
|---|---|---|---|---|
| .100 | 0. | -.80 | -.23 | .46 |
| 1.000 | 1970. | -.58 | -.21 | .31 |
| 1.800 | 5160. | -.94 | -.24 | .54 |
| 1.900 | 5479. | -.94 | -.24 | .54 |
| 2.000 | 5480. | -.93 | -.23 | .53 |
| 2.100 | 5513. | -.95 | -.24 | .54 |
| 2.200 | 5514. | -.99 | -.26 | .58 |
| 2.300 | 5593. | -1.04 | -.27 | .62 |
| 3.000 | 6523. | -1.03 | -.28 | .62 |
| 3.100 | 6578. | -1.01 | -.28 | .62 |
| 3.500 | 7588. | -.87 | -.24 | .54 |
| 3.700 | 8252. | -.87 | -.24 | .53 |
| 3.800 | 8433. | -.92 | -.25 | .55 |
| 3.900 | 8672. | -.95 | -.26 | .56 |
| 4.000 | 8673. | -.95 | -.26 | .56 |
| 4.100 | 8719. | -.97 | -.25 | .57 |
| 4.200 | 8720. | -1.00 | -.28 | .61 |
| 4.300 | 8780. | -1.07 | -.30 | .65 |
| 4.900 | 9129. | -1.08 | -.30 | .67 |
| 5.000 | 9160. | -.33 | -.09 | .21 |
| 5.100 | 9209. | -.33 | -.09 | .21 |
| 6.000 | 11480. | -.33 | -.09 | .21 |
| WEIGHTED AVG FOR REACH | | -.73 | -.21 | .43 |

FHF FOR THE REACH = 005 WITH 100.0 OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 1

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Marshall

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: 100-yr encroached

00BREAK00

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORP -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL
T2      100-YEAR ENCROACHED FLOODWAY
T3      KALAMAZOO RIVER
J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
       0.       6.        0.        0.  0.000000      0.00      0.0       0.   880.160     0.000
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    15.000     0.000    =1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

```
*PROF 2

CCHV=     .100 CEHV=     .300
1490 NH CARD USED
*SECNO .100
 2800 NAT Q1=    1154.76  WSEL=     880.16  ENC Q1=    1224.94  WSEL=     880.26  RATIO=  -.0608
 NAT Q1=    1233.  RATIOS LOB,CH,ROB=    .0013    .9935    .0052  WSEL=     880.26
    SECNO      DEPTH      CWSEL      CRIWS      WSELR      EG         HV         HL          QLOSS    BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL         TWA    LEFT/RIGHT
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN         ELMIN       SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR       TOPWID      ENDST


3470 ENCROACHMENT STATIONS=     2000.0     3407.0  TYPE=      4  TARGET=          .006

         SURVEYED VALLEY SECTION AT CORPORATE BOUNDARY      (A)

       .10       5.57     860.16       0.00     880.16     880.17       .01       0.00       0.00     878.50
     2170.         0.     2170.         0.         0.     2368.         0.         0.         0.     878.32
      0.00       0.00       .92       0.00       .080       .068       .080     0.000     874.59    2000.00
   .000360         0.         0.         0.          0          0          0      0.00    1407.00    3407.00

1490 NH CARD USED
*SECNO 1.000
 2800 NAT Q1=     563.50  WSEL=     881.34  ENC Q1=     586.99  WSEL=     881.44  RATIO=  -.0417
 NAT Q1=     591.  RATIOS LOB,CH,ROB=    .0024    .9931    .0045  WSEL=     881.44

3470 ENCROACHMENT STATIONS=     2000.0     2242.0  TYPE=      4  TARGET=          .007

         SURVEYED VALLEY SECTION  (B)

       1.00       5.75     881.35       0.00     881.34     881.48       .13       1.27       .04     880.50
     2170.         0.     2170.         0.         0.      745.         0.       70.       37.      881.20
       .19       0.00       2.91       0.00       .090       .090       .090       .000     875.60    2000.00
   .001487       1880.      1970.      2370.          2          0          0      0.00     242.00    2242.00

1490 NH CARD USED
*SECNO 1.800

3470 ENCROACHMENT STATIONS=     1924.0     2172.0  TYPE=      1  TARGET=        248.000

         SURVEYED VALLEY SECTION  (C)

       1.80       6.64     884.94       0.00     884.93     885.09       .15       3.60       .01     880.10
     2170.       279.      1849.        41.       240.       553.        32.       128.        53.     880.30
       .48       1.16       3.34       1.31       .076       .045       .070       .000     878.30    1924.00
   .000885       3190.      3190.      3190.          3          0          0      0.00     179.69    2103.69

CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 1.900
 2800 NAT Q1=     528.78  WSEL=     885.20  ENC Q1=     544.53  WSEL=     885.30  RATIO=  -.0298
 NAT Q1=     545.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     885.30

3470 ENCROACHMENT STATIONS=     2000.0     2080.0  TYPE=      4  TARGET=          0.000
```

```
 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      892.00 ELREA=      892.00

    1.90      6.71    885.21      0.00    885.20    885.57      .36       .38       .10    880.80
  2170.         0.      2170.       0.        0.       451.       0.      133.       54.    880.60
    .50      0.00      4.81      0.00      .076      .070      .070      .000    878.50   2000.00
.001676       319.      319.      319.         2         0         0      0.00     80.00   2080.00

 1490 NH CARD USED
 *SECNO 2.000
    3700.   BRIDGE STENCL=   2000.00    STENCR=   2080.00
 2800 NAT Q1=     470.35  WSEL=    885.18  ENC Q1=     539.05  WSEL=    885.28  RATIO=  -.1461
 NAT Q1=     539.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    885.28
   SECNO     DEPTH     CWSEL     CRIWS     WSELR     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROR      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST

 3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD=  894.60 MAX ELLC=  890.90

 3470 ENCROACHMENT STATIONS=    2000.0    2080.0  TYPE=     4  TARGET=        0.000
 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      892.00 ELREA=      892.00

        SURVEYED BRIDGE SECTION D/S

        SOUTH KALAMAZOO AVE BRIDGE  CONC ARCH 80' SPAN

    2.00      6.70    885.20      0.00    885.18    885.58      .38       .00       .01    880.80
  2170.         0.      2170.       0.        0.       440.       0.      133.       54.    880.60
    .50      0.00      4.93      0.00      .076      .070      .070      .000    878.50   2000.00
.001678         1.        1.        1.         0         0         0   -11.15     80.00   2080.00

 1490 NH CARD USED
 *SECNO 2.100
 2800 NAT Q1=     477.26  WSEL=    885.26  ENC Q1=     549.65  WSEL=    885.36  RATIO=  -.1517
 NAT Q1=     550.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=    885.36

 3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD=  894.60 MAX ELLC=  890.90

 3470 ENCROACHMENT STATIONS=    2000.0    2080.0  TYPE=     4  TARGET=        0.000
 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      894.30 ELREA=      894.90

        BRIDGE SECTION (D)

    2.10      6.77    885.27      0.00    885.26    885.64      .37       .05       .00    880.80
  2170.         0.      2170.       0.        0.       443.       0.      133.       54.    880.60
    .50      0.00      4.90      0.00      .076      .070      .070      .000    878.50   2000.00
.001641        33.       33.       33.         0         0         0   -11.52     80.00   2080.00
```

Channel "n" values different from natural run, not apparent why. Has not affected profile or SF

1490 NH CARD USED
*SECNO 2.200
2800 NAT Q1= 549.14 WSEL= 885.33 ENC Q1= 565.11 WSEL= 885.43 RATIO= -.0291
NAT Q1= 565. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 885.43

3470 ENCROACHMENT STATIONS= 2000.0 2080.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 894.30 ELREA= 894.90

872094 x 2 x 885.29 / Q = 2130 cfs

1' U/S OF BRIDGE (USGS GAGE) ←

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.20 | 6.80 | 885.30 | 0.00 | 885.33 | 885.65 | .35 | .00 | .01 | 880.80 |
| 2170. | 0. | 2170. | 0. | 0. | 458. | 0. | 133. | 54. | 880.60 |
| .50 | 0.00 | 4.74 | 0.00 | .076 | .070 | .070 | .000 | 878.50 | 2000.00 |
| .001593 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 80.00 | 2080.00 |

64

1490 NH CARD USED
*SECNO 2.300

3470 ENCROACHMENT STATIONS= 1920.0 2160.0 TYPE= 1 TARGET= 240.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.30 | 7.03 | 885.53 | 0.00 | 885.56 | 885.78 | .25 | .11 | .03 | 880.80 |
| 2170. | 14. | 1988. | 168. | 14. | 477. | 93. | 134. | 54. | 880.60 |
| .51 | .96 | 4.17 | 1.81 | .080 | .040 | .070 | .000 | 878.50 | 1993.98 |
| .001170 | 79. | 79. | 79. | 2 | 0 | 0 | 0.00 | 110.86 | 2104.84 |

CCHV= .100 CEHV= .300
1490 NH CARD USED
*SECNO 3.000
2800 NAT Q1= 895.48 WSEL= 886.51 ENC Q1= 895.48 WSEL= 886.60 RATIO= 0.0000
NAT Q1= 935. RATIOS LOB,CH,ROB= .4045 .5662 .0293 WSEL= 886.60

3470 ENCROACHMENT STATIONS= 1643.0 2084.8 TYPE= 4 TARGET= .043

SURVEYED VALLEY SECTION U/S OF RICE CREEK (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 7.41 | 886.51 | 0.00 | 886.50 | 886.58 | .08 | .78 | .02 | 883.00 |
| 2170. | 852. | 1300. | 18. | 910. | 472. | 23. | 155. | 60. | 883.00 |
| .63 | .94 | 2.75 | .81 | .080 | .045 | .080 | .000 | 879.10 | 1642.97 |
| .000635 | 930. | 930. | 930. | 2 | 0 | 0 | 0.00 | 441.83 | 2084.80 |

*SECNO 3.100
2800 NAT Q1= 914.92 WSEL= 886.56 ENC Q1= 914.92 WSEL= 886.66 RATIO= 0.0000
NAT Q1= 957. RATIOS LOB,CH,ROB= .4088 .5616 .0296 WSEL= 886.66

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3470 ENCROACHMENT STATIONS= 1642.4 2084.5 TYPE= 4 TARGET= .044

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.10 | 7.47 | 886.57 | 0.00 | 886.56 | 886.61 | .05 | .03 | .00 | 883.00 |
| 1720. | 684. | 1022. | 14. | 933. | 477. | 22. | 157. | 60. | 883.00 |
| .64 | .73 | 2.14 | .63 | .080 | .045 | .080 | .000 | 879.10 | 1642.37 |
| .000380 | 55. | 55. | 55. | 2 | 0 | 0 | 0.00 | 442.17 | 2084.55 |

```
1490 NH CARD USED
*SECNO 3.500
 2800 NAT Q1=     465.81  WSEL=     887.08  ENC Q1=     469.50  WSEL=     887.18  RATIO=  -.0079
 NAT Q1=     483.  RATIOS LOB,CH,ROB=    .0264    .9726    .0009  WSEL=     887.18

3470 ENCROACHMENT STATIONS=     1980.0     2080.0  TYPE=      4  TARGET=          .027

        MANUFACTURED VALLEY SECTION    (F)

     3.50      6.13    887.13      0.00    887.08    887.32       .19       .66       .04    884.00
    1720.        0.     1720.        0.        0.      488.        0.      179.       66.    886.00
      .72      0.00      3.53      0.00      .080      .080      .080      .000    881.00   1980.00
  .001448      950.     1010.     1150.         2         0         0      0.00    100.00   2080.00

1490 NH CARD USED
*SECNO 3.700

3470 ENCROACHMENT STATIONS=     1993.0     2081.0  TYPE=      1  TARGET=        88.000

        SURVEYED VALLEY SECTION AT CONFLUENCE OF POWER PLANT CANAL (G)

     3.70      6.00    888.30      0.00    888.22    888.69       .40      1.31       .06    884.60
    1720.       18.     1639.       63.       13.      317.       36.      185.       68.    884.60
      .76      1.36      5.17      1.75      .080      .045      .070      .000    882.30   1993.00
  .002790      670.      670.      670.         2         0         0      0.00     88.00   2081.00

*SECNO 3.800

3470 ENCROACHMENT STATIONS=     1940.0     2122.0  TYPE=      1  TARGET=       182.000
     3.80      6.52    888.82      0.00    888.76    889.08       .26       .37       .01    884.60
    1570.       19.     1479.       72.       17.      349.       47.      187.       68.    884.60
      .77      1.14      4.23      1.54      .080      .045      .070      .000    882.30   1992.00
  .001645      175.      175.      175.         2         0         0      0.00     91.27   2083.27

CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 3.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       898.00 ELREA=       898.00

     3.90      6.00    889.20      0.00    889.16    889.62       .41       .46       .07    887.60
    1570.        0.     1570.        0.        0.      305.        0.      189.       69.    886.40
      .79      0.00      5.16      0.00      .080      .040      .070      .000    883.20   2000.00
  .002290      239.      239.      239.         2         0         0      0.00     60.00   2060.00

1490 NH CARD USED
*SECNO 4.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD=  899.30 MAX ELLC=  897.20
```

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 898.00 ELREA= 898.00

SURVEYED BRIDGE SECTION D/SOF BRIDGE

SOUTH MARSHALL AVE BRIDGE CONC ARCH 60' SPAN

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.00 | 6.01 | 889.21 | 0.00 | 889.16 | 889.62 | .41 | .00 | .00 | 887.60 |
| 1570. | 0. | 1570. | 0. | 0. | 305. | 0. | 189. | 69. | 886.40 |
| .79 | 0.00 | 5.15 | 0.00 | .080 | .035 | .070 | .000 | 883.20 | 2000.00 |
| .001934 | 1. | 1. | 1. | 0 | 0 | 0 | -28.15 | 60.00 | 2060.00 |

1490 NH CARD USED
*SECNO 4.100

3370 NORMAL BRIDGE.NRD= 12 MIN FLTRD= 899.30 MAX FLLC= 897.20

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 899.50 ELREA= 899.30

BRIDGE SECTION (H)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.10 | 6.11 | 889.31 | 0.00 | 889.27 | 889.71 | .40 | .09 | .00 | 887.60 |
| 1570. | 0. | 1570. | 0. | 0. | 310. | 0. | 189. | 69. | 886.40 |
| .79 | 0.00 | 5.06 | 0.00 | .080 | .035 | .070 | .000 | 883.20 | 2000.00 |
| .001830 | 46. | 46. | 46. | 0 | 0 | 0 | -30.18 | 60.00 | 2060.00 |

1490 NH CARD USED
*SECNO 4.200

3470 ENCROACHMENT STATIONS= 1970.0 2090.0 TYPE= 1 TARGET= 120.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.20 | 6.16 | 889.36 | 0.00 | 889.32 | 889.72 | .36 | .00 | .01 | 887.60 |
| 1570. | 3. | 1534. | 33. | 4. | 314. | 31. | 189. | 69. | 886.40 |
| .79 | .63 | 4.89 | 1.07 | .080 | .035 | .070 | .000 | 883.20 | 1995.37 |
| .001515 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 85.75 | 2081.12 |

1490 NH CARD USED
*SECNO 4.300

3470 ENCROACHMENT STATIONS= 1990.0 2085.0 TYPE= 1 TARGET= 95.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.30 | 7.41 | 889.71 | 0.00 | 889.68 | 889.88 | .17 | .10 | .06 | 884.60 |
| 1570. | 35. | 1401. | 134. | 25. | 405. | 67. | 190. | 69. | 884.60 |
| .79 | 1.42 | 3.46 | 2.01 | .080 | .070 | .070 | .000 | 882.30 | 1990.31 |
| .001960 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 94.69 | 2085.00 |

1490 NH CARD USED
*SECNO 4.900
2800 NAT Q1= 1100.31 WSEL= 890.05 ENC Q1= 1156.23 WSEL= 890.15 RATIO= -.0508
NAT Q1= 1156. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 890.15

3470 ENCROACHMENT STATIONS= 1448.0 2091.0 TYPE= 4 TARGET= 0.000

SURVEYED VALLEY SECTION D/S OF DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.90 | 4.57 | 896.08 | 0.00 | 890.05 | 890.09 | .01 | .16 | .05 | 902.73 |
| 1570. | 0. | 1570. | 0. | 0. | 2155. | 0. | 200. | 72. | 902.50 |
| .92 | 0.00 | .73 | 0.00 | .080 | .056 | .070 | .000 | 885.51 | 1448.00 |
| .000197 | 600. | 350. | 100. | 0 | 0 | 0 | 0.00 | 643.00 | 2091.00 |

SPECIAL BRIDGE

| SB | XK | XKOR | COFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.50 | 3.09 | 0.00 | 20.00 | 0.00 | .30 | 0.00 | 885.51 | 885.51 |

*SECNO 5.000
3700. BRIDGE STENCL= 1448.00 STENCR= 2091.00
2800 NAT Q1= 23283.85 WSEL= 901.39 ENC Q1= 23543.49 WSEL= 901.49 RATIO= -.0111
NAT Q1= 23543. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 901.49

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 638804.16 | 901.50 | 0.00 | 1567. | 7. | 0. | 3. | 885.67 | 899.69 |

3470 ENCROACHMENT STATIONS= 1448.0 2091.0 TYPE= 4 TARGET= 0.000
SPILLWAY #1 200' LONG INVERT ELEV 900.05

SPILLWAY #2 91' LONG INVERT ELEV 899.69 (I)

Hwm = 901.44

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.00 | 15.88 | 901.39 | 0.00 | 901.39 | 901.39 | .00 | 11.30 | 0.00 | 902.73 |
| 1570. | 0. | 1570. | 0. | 0. | 9423. | 0. | 204. | 72. | 902.50 |
| .97 | 0.00 | .17 | 0.00 | .090 | .035 | .090 | .000 | 885.51 | 1448.00 |
| .000000 | 30. | 30. | 30. | 2 | 0 | 10 | 0.00 | 643.00 | 2091.00 |

*SECNO 5.100
2800 NAT Q1= 23296.04 WSEL= 901.39 ENC Q1= 23543.44 WSEL= 901.49 RATIO= -.0106
NAT Q1= 23543. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 901.49

3470 ENCROACHMENT STATIONS= 1448.0 2091.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.10 | 15.88 | 901.39 | 0.00 | 901.39 | 901.39 | .00 | .00 | .00 | 902.73 |
| 1720. | 0. | 1720. | 0. | 0. | 9423. | 0. | 215. | 73. | 902.50 |
| 1.05 | 0.00 | .18 | 0.00 | .090 | .035 | .090 | .000 | 885.51 | 1448.00 |
| .000001 | 50. | 50. | 50. | 0 | 0 | 0 | 0.00 | 643.00 | 2091.00 |

*SECNO 6.000
2800 NAT Q1= 6854.82 WSEL= 901.39 ENC Q1= 6985.24 WSEL= 901.49 RATIO= -.0190
NAT Q1= 7020. RATIOS LOB,CH,ROB= 0.0000 .9951 .0049 WSEL= 901.49

3470 ENCROACHMENT STATIONS= 2000.0 2616.0 TYPE= 4 TARGET= .005

VALLEY SECTION AT CORPORATE BOUNDARY (J)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.00 | 11.11 | 901.39 | 0.00 | 901.39 | 901.39 | .00 | .00 | .00 | 903.52 |
| 1720. | 0. | 1720. | 0. | 0. | 4354. | 0. | 574. | 106. | 899.62 |
| 2.65 | 0.00 | .39 | 0.00 | .090 | .035 | .090 | .007 | 890.28 | 2004.26 |
| .000006 | 2270. | 2270. | 2550. | 0 | 0 | 0 | 0.00 | 611.74 | 2616.00 |

00BREAK00

1) COUNTY: Calhoun

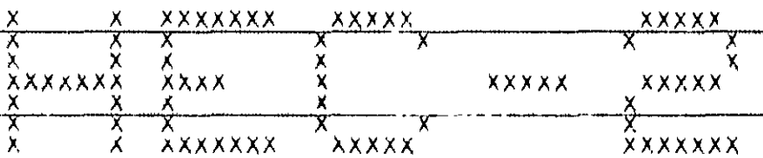
2) STUDY NAME: City of Marshall

3) WATERCOURSE: ~~000~~ Kalamazoo River

4) DOCUMENT TYPE: 100-yr natural

00BREAK00

```
*********************************************
*  HEC2 WATER SURFACE PROFILES              *
*  VERSION OF NOVEMBER 1976                 *
*  UPDATED JULY 1979                        *
*  ERROR CORR - 01.02.03                    *
*  MODIFICATION - 50.51.52.53               *
*                                           *
*  RUN DATE  80/03/10. TIME  06.50.37.      *
*********************************************
```



FIS City of Marshall
Calhoun County, MI
Kalamazoo River
Floodway
7-21-80

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

C
T1      FIS CITY OF MARSHALL
T2      100-YEAR NATURAL FLOODWAY
T3      KALAMAZOO RIVER

J1  ICHECK      INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.      4.        0.        0.   0.000000      0.00      0.0       0.     880.160     0.000
J2  NPROF       IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000    15.000
J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    110.000   200.000    38.000     1.000    53.000    21.000    22.000    54.000     4.000    39.000

ET      0.000     0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000
QT      5.000  1520.000  1980.000  2170.000  2610.000  2170.000     0.000     0.000     0.000     0.000
NC      0.000     0.000     0.000      .100      .300     0.000     0.000     0.000     0.000     0.000
NH      6.000      .050  1933.000      .080  2000.000      .040  2087.000      .080  3297.000      .040
NH   3407.000      .080  3733.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

        SURVEYED VALLEY SECTION AT CORPORATE BOUNDARY      (A)

X1      .100    33.000  2000.000  3407.000     0.000     0.000     0.000     0.000     0.000     0.000
GR   900.330  1313.000   891.620  1680.000   891.730  1873.000   889.500  1933.000   878.500  2000.000
GR   876.600  2004.000   875.490  2030.000   875.290  2047.000   875.220  2067.000   876.100  2087.000
GR   878.710  2089.000   879.200  2107.000   878.780  2194.000   880.000  2391.000   880.000  2560.000
GR   879.140  2628.000   878.600  2728.000   878.070  2788.000   878.360  2881.000   877.890  2954.000
GR   878.240  3051.000   878.360  3174.000   876.500  3224.000   879.300  3297.000   877.320  3297.000
GR   876.080  3334.000   874.590  3357.000   875.580  3387.000   878.320  3407.000   880.080  3438.000
GR   881.110  3546.000   882.280  3669.000   888.010  3733.000     0.000     0.000     0.000     0.000
NH     8.000      .045  1946.000      .090  2000.000      .045  2040.000      .090  2069.000      .045
NH  2140.000      .090  2152.000      .045  2242.000      .090  3517.000     0.000     0.000     0.000

        SURVEYED VALLEY SECTION  (B)

X1      1.000    37.000  2000.000  2242.000  1880.000  2370.000  1970.000     0.000     0.000     0.000
GR   897.800  1741.000   897.300  1803.000   897.100  1825.000   883.800  1946.000   881.600  1964.000
GR   880.500  2000.000   879.900  2002.000   877.800  2009.000   877.900  2035.000   879.900  2040.000
GR   881.200  2048.000   880.600  2068.000   879.800  2069.000   877.700  2076.000   877.800  2088.000
GR   878.800  2116.000   879.800  2140.000   881.000  2146.000   879.900  2150.000   878.100  2152.000
GR   875.600  2177.000   876.200  2192.000   876.700  2207.000   877.200  2222.000   878.300  2237.000
GR   881.200  2242.000   880.900  2296.000   882.600  2444.000   886.000  2544.000   887.800  2736.000
GR   887.900  2814.000   890.600  2860.000   892.600  2960.000   894.000  3028.000   892.300  3167.000
GR   899.500  3371.000   901.300  3517.000     0.000     0.000     0.000     0.000     0.000     0.000
NH     4.000      .060  1684.000      .080  2000.000      .045  2092.000      .070  2222.000     0.000
```

879.14 2458
878 2558
876.37 2618
876.24 2711

SURVEYED VALLEY SECTION (C)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 1.800 | 23.000 | 2004.000 | 2092.000 | 3190.000 | 3190.000 | 3190.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1924.000 | 0.000 | 2172.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 902.800 | 1518.000 | 898.200 | 1684.000 | 890.000 | 1766.000 | 885.200 | 1800.000 | 883.400 | 1836.000 |
| GR | 880.500 | 1848.000 | 880.100 | 1855.000 | 880.500 | 1865.000 | 881.100 | 1910.000 | 882.600 | 2000.000 |
| GR | 860.100 | 2004.000 | 878.600 | 2016.000 | 878.300 | 2028.000 | 878.300 | 2038.000 | 878.300 | 2052.000 |
| GR | 878.400 | 2061.000 | 878.500 | 2072.000 | 878.700 | 2083.000 | 880.300 | 2092.000 | 881.500 | 2097.000 |
| GR | 896.400 | 2126.000 | 898.700 | 2177.000 | 899.900 | 2222.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .040 | 2080.000 | .070 | 2320.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 1.900 | 20.000 | 2000.000 | 2080.000 | 319.000 | 319.000 | 319.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 892.000 | 892.000 | 0.000 |
| GR | 902.500 | 1448.000 | 901.500 | 1498.000 | 899.000 | 1600.000 | 897.500 | 1718.000 | 897.100 | 1750.000 |
| GR | 895.300 | 1785.000 | 894.300 | 1893.000 | 894.500 | 1897.000 | 894.600 | 1980.000 | 886.300 | 1993.000 |
| GR | 880.800 | 2000.000 | 879.800 | 2020.000 | 878.500 | 2040.000 | 879.300 | 2060.000 | 880.600 | 2080.000 |
| GR | 862.000 | 2100.000 | 896.600 | 2120.000 | 896.600 | 2213.000 | 899.000 | 2306.000 | 902.300 | 2320.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .035 | 2080.000 | .070 | 2320.000 | 0.000 |

SURVEYED BRIDGE SECTION D/S

SOUTH KALAMAZOO AVE BRIDGE CONC ARCH 80' SPAN

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 892.000 | 892.000 | 0.000 |
| BT | 11.000 | 1980.000 | 894.600 | 0.000 | 1993.000 | 894.600 | 0.000 | 2000.000 | 894.600 | 880.800 |
| BT | 2000.000 | 894.600 | 882.200 | 2020.000 | 894.700 | 889.200 | 2040.000 | 894.700 | 890.900 | 2060.000 |
| BT | 894.800 | 889.100 | 2080.000 | 894.900 | 882.500 | 2080.000 | 894.900 | 880.600 | 2100.000 | 895.700 |
| BT | 0.000 | 2120.000 | 896.600 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .035 | 2080.000 | .070 | 2320.000 | 0.000 |

BRIDGE SECTION (D)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.100 | 0.000 | 0.000 | 0.000 | 33.000 | 33.000 | 33.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.300 | 894.900 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .040 | 2080.000 | .070 | 2320.000 | 0.000 |

1' U/S OF BRIDGE (USGS GAGE)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.300 | 894.900 | 0.000 |
| NH | 4.000 | .065 | 1980.000 | .080 | 2000.000 | .040 | 2080.000 | .070 | 2320.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 2.300 | 0.000 | 0.000 | 0.000 | 79.000 | 79.000 | 79.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1920.000 | 0.000 | 2160.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .080 | 2000.000 | .045 | 2078.000 | .080 | 2102.000 | .045 | 2134.000 | 0.000 |

SURVEYED VALLEY SECTION U/S OF RICE CREEK (E)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.000 | 25.000 | 2000.000 | 2078.000 | 930.000 | 930.000 | 930.000 | 0.000 | 0.000 | 0.000 |
| GR | 904.500 | 1236.000 | 899.100 | 1381.000 | 897.100 | 1424.000 | 895.000 | 1538.000 | 898.200 | 1548.000 |
| GR | 885.700 | 1577.000 | 884.800 | 1646.000 | 884.800 | 1768.000 | 884.300 | 1843.000 | 882.600 | 1919.000 |
| GR | 881.200 | 1940.000 | 882.600 | 1953.000 | 883.300 | 1968.000 | 883.000 | 2000.000 | 882.700 | 2001.000 |
| GR | 879.100 | 2020.000 | 879.500 | 2030.000 | 879.800 | 2045.000 | 880.600 | 2065.000 | 883.000 | 2078.000 |
| GR | 863.400 | 2085.000 | 884.500 | 2102.000 | 896.100 | 2125.000 | 900.500 | 2134.000 | 900.600 | 2150.000 |
| QT | 5.000 | 1210.000 | 1570.000 | 1720.000 | 2070.000 | 1720.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 3.100 | 0.000 | 0.000 | 0.000 | 55.000 | 55.000 | 55.000 | 0.000 | 0.000 | 0.000 |
| NH | 3.000 | .080 | 1980.000 | .045 | 2080.000 | .080 | 2100.000 | 0.000 | 0.000 | 0.000 |

MANUFACTURED VALLEY SECTION (F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.500 | 6.000 | 1980.000 | 2060.000 | 950.000 | 1150.000 | 1010.000 | 0.000 | 0.000 | 0.000 |
| GR | 890.000 | 1920.000 | 884.000 | 1960.000 | 881.000 | 2030.000 | 881.000 | 2060.000 | 886.000 | 2080.000 |
| GR | 890.000 | 2100.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1818.000 | .080 | 2000.000 | .045 | 2062.000 | .070 | 2228.000 | 0.000 |
| FT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1993.000 | 2081.000 |

SURVEYED VALLEY SECTION AT CONFLUENCE OF POWER PLANT CANAL (G)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.700 | 13.000 | 2000.000 | 2062.000 | 670.000 | 670.000 | 670.000 | 0.000 | 0.000 | 0.000 |
| GR | 906.900 | 1788.000 | 907.000 | 1804.000 | 907.200 | 1818.000 | 900.700 | 1850.000 | 898.500 | 1912.000 |
| GR | 896.200 | 1978.000 | 884.600 | 2000.000 | 882.300 | 2022.000 | 882.500 | 2040.000 | 884.600 | 2062.000 |
| GR | 888.000 | 2080.000 | 897.000 | 2116.000 | 901.100 | 2228.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 1060.000 | 1420.000 | 1570.000 | 1920.000 | 1570.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1940.000 | 0.000 | 2122.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 3.800 | 0.000 | 0.000 | 0.000 | 175.000 | 175.000 | 175.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .040 | 2060.000 | .070 | 2689.000 | 0.000 |
| X1 | 3.900 | 19.000 | 2000.000 | 2060.000 | 239.000 | 239.000 | 239.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| GR | 905.500 | 1482.000 | 903.600 | 1602.000 | 901.200 | 1728.000 | 900.000 | 1872.000 | 898.600 | 1971.000 |
| GR | 867.600 | 2000.000 | 884.600 | 2005.000 | 883.900 | 2015.000 | 883.200 | 2025.000 | 883.500 | 2030.000 |
| GR | 884.000 | 2045.000 | 884.500 | 2058.000 | 886.400 | 2060.000 | 890.600 | 2090.000 | 898.300 | 2150.000 |
| GR | 899.300 | 2210.000 | 904.600 | 2428.000 | 905.400 | 2480.000 | 911.900 | 2689.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .035 | 2060.000 | .070 | 2689.000 | 0.000 |

SURVEYED BRIDGE SECTION D/SOF BRIDGE

SOUTH MARSHALL AVE BRIDGE CONC ARCH 60' SPAN

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| BT | 12.000 | 1872.000 | 900.000 | 0.000 | 1971.000 | 899.700 | 0.000 | 2000.000 | 899.500 | 887.600 |
| BT | 2000.000 | 899.500 | 890.000 | 2015.000 | 899.500 | 895.200 | 2030.000 | 899.400 | 897.200 | 2045.000 |
| BT | 899.300 | 895.200 | 2060.000 | 899.300 | 889.000 | 2060.000 | 899.300 | 886.400 | 2090.000 | 899.300 |
| BT | 0.000 | 2150.000 | 899.300 | 0.000 | 2210.000 | 899.300 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .035 | 2060.000 | .070 | 2689.000 | 0.000 |

BRIDGE SECTION (H)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.100 | 0.000 | 0.000 | 0.000 | 45.500 | 45.500 | 45.500 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 899.500 | 899.300 | 0.000 |
| NA | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .035 | 2060.000 | .070 | 2689.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 899.500 | 899.300 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1970.000 | 0.000 | 2090.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 4.000 | .060 | 1971.000 | .080 | 2000.000 | .045 | 2060.000 | .070 | 2689.000 | 0.000 |
| FT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1990.000 | 2085.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.300 | 13.000 | 2000.000 | 2062.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| GR | 906.900 | 1788.000 | 907.000 | 1804.000 | 907.200 | 1818.000 | 900.700 | 1850.000 | 898.500 | 1912.000 |
| GR | 896.200 | 1978.000 | 884.600 | 2000.000 | 882.300 | 2022.000 | 882.500 | 2040.000 | 884.600 | 2062.000 |
| GR | 828.000 | 2080.000 | 897.000 | 2116.000 | 901.100 | 2228.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NH | 3.000 | .045 | 1648.000 | .090 | 2000.000 | .045 | 2091.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

SURVEYED VALLEY SECTION D/S OF DAM

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 4.900 | 15.000 | 1448.000 | 2091.000 | 600.000 | 100.000 | 350.000 | 0.000 | 0.000 | 0.000 |
| GR | 902.730 | 1448.000 | 888.210 | 1448.000 | 887.860 | 1477.000 | 887.910 | 1545.000 | 887.650 | 1587.000 |
| GR | 887.190 | 1648.000 | 887.190 | 1648.000 | 885.650 | 2000.000 | 885.650 | 2000.000 | 885.510 | 2024.000 |
| GR | 885.510 | 2024.000 | 885.850 | 2046.000 | 885.520 | 2066.000 | 886.320 | 2091.000 | 902.500 | 2091.000 |
| SB | 0.000 | 1.500 | 3.090 | 0.000 | 20.000 | 0.000 | .300 | 0.000 | 885.510 | 885.510 |
| NC | .090 | .090 | .035 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

SPILLWAY #1 200' LONG INVERT ELEV 900.05

SPILLWAY #2 91' LONG INVERT ELEV 899.69 (I)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.000 | 0.000 | 0.000 | 0.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 1.000 | 885.670 | 899.690 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| BT | 17.000 | 1448.000 | 902.730 | 0.000 | 1448.000 | 900.060 | 0.000 | 1477.000 | 900.060 | 0.000 |
| BT | 1545.000 | 900.060 | 0.000 | 1587.000 | 900.050 | 0.000 | 1587.000 | 900.050 | 0.000 | 1587.000 |
| BT | 900.050 | 0.000 | 1648.000 | 900.050 | 0.000 | 1648.000 | 903.260 | 0.000 | 2000.000 | 902.860 |
| BT | 885.650 | 2000.000 | 899.700 | 885.670 | 2024.000 | 899.700 | 885.530 | 2024.000 | 899.700 | 885.510 |
| BT | 2046.000 | 899.700 | 0.000 | 2066.000 | 899.700 | 0.000 | 2091.000 | 899.690 | 0.000 | 2091.000 |
| BT | 902.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GT | 5.000 | 1210.000 | 1570.000 | 1720.000 | 2070.000 | 1720.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 5.100 | 0.000 | 0.000 | 0.000 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |

VALLEY SECTION AT CORPORATE BOUNDARY (J)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 6.000 | 15.000 | 2000.000 | 2616.000 | 2270.000 | 2550.000 | 2270.000 | 0.000 | 0.000 | 0.000 |
| GR | 909.890 | 1810.000 | 903.520 | 2000.000 | 899.530 | 2008.000 | 894.230 | 2078.000 | 892.030 | 2148.000 |
| GR | 891.330 | 2208.000 | 890.280 | 2288.000 | 893.080 | 2408.000 | 896.630 | 2478.000 | 898.330 | 2538.000 |
| GR | 899.230 | 2560.000 | 899.620 | 2616.000 | 900.710 | 2744.000 | 904.880 | 2826.000 | 910.700 | 2836.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*PROF 1

CCHV= .100 CEHV= .300
1490 NH CARD USED
*SECNO .100

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV | |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT | |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA | |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST | |
| | SURVEYED VALLEY SECTION AT CORPORATE BOUNDARY | | | | | | | | (A) | |
| .10 | 5.57 | 880.16 | 0.00 | 880.16 | 880.17 | .01 | 0.00 | 0.00 | 878.50 | |
| 2170. | 3. | 2157. | 10. | 8. | 2368. | 30. | 0. | 0. | 878.32 | |
| 0.00 | .31 | .91 | .34 | .080 | .053 | .080 | 0.000 | 674.59 | 1989.89 | |
| .000353 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 1456.50 | 3446.39 | |

Floodway run reviewed

FLOW DISTRIBUTION FOR SECNO= .10 CWSEL= 880.16

| | | | | |
|---|---|---|---|---|
| STA= | 1990. | 2000. | 3407. | 3446. |
| PER Q= | .1 | 99.4 | .5 | |
| AREA= | 8.4 | 2368.3 | 30.1 | |
| VEL= | .3 | .9 | .3 | |

1490 NH CARD USED
*SECNO 1.000

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SURVEYED VALLEY SECTION (B) | | | | | | | | | |
| 1.00 | 5.74 | 881.34 | 0.00 | 0.00 | 881.47 | .13 | 1.26 | .04 | 880.50 | |
| 2170. | 4. | 2160. | 6. | 11. | 742. | 24. | 72. | 42. | 881.20 | |
| .19 | .38 | 2.91 | .26 | .090 | .062 | .090 | .000 | 875.60 | 1972.62 | |
| .001483 | 1880. | 1970. | 2370. | 2 | 0 | 0 | 0.00 | 361.38 | 2334.01 | |

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 881.34

| | | | | |
|---|---|---|---|---|
| STA= | 1973. | 2000. | 2242. | 2334. |
| PER Q= | .2 | 99.5 | .3 | |
| AREA= | 11.5 | 742.1 | 23.8 | |
| VEL= | .4 | 2.9 | .3 | |

1490 NH CARD USED
*SECNO 1.800

3470 ENCROACHMENT STATIONS= 1924.0 2172.0 TYPE= 1 TARGET= 248.000

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SURVEYED VALLEY SECTION (C) | | | | | | | | | |
| 1.80 | 6.63 | 884.93 | 0.00 | 0.00 | 885.08 | .15 | 3.61 | .01 | 880.10 | |
| 2170. | 279. | 1850. | 41. | 239. | 553. | 32. | 131. | 61. | 880.30 | |
| .48 | 1.17 | 3.35 | 1.31 | .076 | .045 | .070 | .000 | 878.30 | 1924.00 | |
| .000890 | 3190. | 3190. | 3190. | 3 | 0 | 0 | 0.00 | 179.67 | 2103.67 | |

FLOW DISTRIBUTION FOR SECNO= 1.80 CWSEL= 884.93

```
STA=     1924.     2000.     2004.     2092.     2104.
  PER Q=    11.5       1.4      85.2       1.9
   AREA=   225.0      14.3     552.6      31.6
    VEL=     1.1       2.1       3.3       1.3

CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 1.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=      892.00 ELREA=      892.00

     1.90      6.70    885.20      0.00      0.00    885.56       .36       .38       .10    880.80
   2170.         0.    2170.         0.         0.    450.         0.    136.      62.      880.60
     .50      0.00      4.82      0.00      .076      .040      .070      .000    878.50   2000.00
 .001684      319.      319.      319.         2         0         0      0.00     80.00   2080.00

FLOW DISTRIBUTION FOR SECNO=      1.90          CWSEL=    885.20

STA=     2000.     2080.
  PER Q=    100.0
   AREA=    450.3
    VEL=      4.8

1490 NH CARD USED
*SECNO 2.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        ULOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD=  11 MIN ELTRD=   894.60 MAX ELLC=   890.90

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=      892.00 ELREA=      892.00

          SURVEYED BRIDGE SECTION D/S

          SOUTH KALAMAZOO AVE BRIDGE  CONC ARCH PD' SPAN

     2.00      6.68    885.18      0.00      0.00    885.59       .40       .00       .02    880.80
   2170.         0.    2170.         0.         0.    425.         0.    136.      62.      880.60
     .50      0.00      5.11      0.00      .076      .035      .070      .000    878.50   2000.00
 .002128         1.        1.        1.         2         0         0   -101.29     80.00   2080.00

FLOW DISTRIBUTION FOR SECNO=      2.00          CWSEL=    865.18

STA=     2000.     2080.
  PER Q=    100.0
   AREA=    425.0
    VEL=      5.1

1490 NH CARD USED
*SECNO 2.100
```

```
3370 NORMAL BRIDGE,NRD= 11 MIN ELTRD=  894.60 MAX ELLC=  890.90

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      894.30 ELREA=      894.90

        BRIDGE SECTION (D)

      2.10      6.76    885.26      0.00      0.00    885.66      .40       .07       .00    880.80
    2170.        0.      2170.        0.        0.      430.        0.      136.       62.     880.60
      .50      0.00      5.05      0.00      .076      .035      .070      .000    878.50   2000.00
  .002067       33.       33.       33.         1         0         0   -103.91     80.00   2080.00

FLOW DISTRIBUTION FOR SECNO=      2.10          CWSEL=    885.26

STA=    2000.    2080.
  PER Q=   100.0
   AREA=   429.5
    VEL=     5.1

1490 NH CARD USED
*SECNO 2.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      894.30 ELREA=      894.90

        1' U/S OF BRIDGE (USGS GAGE)

      2.20      6.83    885.33      0.00      0.00    885.68      .34       .00       .02    880.80
    2170.        0.      2170.        0.        0.      461.        0.      136.       62.     880.60
      .50      0.00      4.71      0.00      .076      .040      .070      .000    878.50   2000.00
  .001562         1.        1.        1.         2         0         0      0.00     80.00   2080.00

FLOW DISTRIBUTION FOR SECNO=      2.20          CWSEL=    885.33

STA=    2000.    2080.
  PER Q=   100.0
   AREA=   460.6
    VEL=     4.7

1490 NH CARD USED
*SECNO 2.300

3470 ENCROACHMENT STATIONS=    1920.0    2160.0  TYPE=      1  TARGET=      240.000
      2.30      7.06    885.56      0.00      0.00    885.81      .25       .11       .03    880.80
    2170.       14.      1987.       169.       14.       479.       94.      137.       63.     880.60
      .51       .96      4.15      1.80      .080      .040      .070      .000    878.50   1993.94
  .001149        79.       79.       79.         2         0         0      0.00    110.94   2104.88

FLOW DISTRIBUTION FOR SECNO=      2.30          CWSEL=    885.56

STA=    1994.    2000.    2080.    2100.    2105.
  PER Q=      .6     91.6      7.4       .4
   AREA=    14.4    479.0     85.2      8.7
    VEL=     1.0      4.1      1.9       .9
```

CCHV= .100 CEHV= .300
1490 NH CARD USED
*SECNO 3.000

SURVEYED VALLEY SECTION U/S OF RICE CREEK (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 7.40 | 886.50 | 0.00 | 0.00 | 886.57 | .07 | .74 | .02 | 883.00 |
| 2170. | 660. | 1248. | 62. | 990. | 472. | 70. | 159. | 70. | 883.00 |
| .64 | .87 | 2.64 | .89 | .080 | .045 | .078 | .000 | 879.10 | 1575.14 |
| .000587 | 930. | 930. | 930. | 2 | 0 | 0 | 0.00 | 530.83 | 2105.97 |

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 886.50

| STA= | 1575. | 1768. | 1843. | 1919. | 1940. | 1953. | 2000. | 2078. | 2106. |
|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 8.2 | 4.7 | 10.1 | 5.5 | 3.4 | 7.6 | 57.5 | 2.9 | |
| AREA= | 294.8 | 146.4 | 232.0 | 96.6 | 59.8 | 160.6 | 472.1 | 70.5 | |
| VEL= | .6 | .7 | .9 | 1.2 | 1.2 | 1.0 | 2.6 | .9 | |

*SECNO 3.100

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| C | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 3.10 | 7.46 | 886.56 | 0.00 | 0.00 | 886.60 | .04 | .03 | .00 | 883.00 |
| 1720. | 688. | 982. | 50. | 1012. | 476. | 72. | 161. | 70. | 883.00 |
| .65 | .68 | 2.06 | .70 | .080 | .045 | .078 | .000 | 879.10 | 1575.02 |
| .000353 | 55. | 55. | 55. | 0 | 0 | 0 | 0.00 | 531.05 | 2106.07 |

FLOW DISTRIBUTION FOR SECNO= 3.10 CWSEL= 886.56

| STA= | 1575. | 1768. | 1843. | 1919. | 1940. | 1953. | 2000. | 2078. | 2106. |
|---|---|---|---|---|---|---|---|---|---|
| PER Q= | 8.5 | 4.8 | 10.2 | 5.5 | 3.4 | 7.6 | 57.1 | 2.9 | |
| AREA= | 304.5 | 150.2 | 235.8 | 97.7 | 60.5 | 162.9 | 476.0 | 71.9 | |
| VEL= | .5 | .6 | .7 | 1.0 | 1.0 | .8 | 2.1 | .7 | |

1490 NH CARD USED
*SECNO 3.500

MANUFACTURED VALLEY SECTION (F)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.50 | 6.08 | 887.08 | 0.00 | 0.00 | 887.26 | .18 | .62 | .04 | 884.00 |
| 1720. | 43. | 1675. | 1. | 47. | 483. | 3. | 185. | 78. | 886.00 |
| .74 | .91 | 3.47 | .45 | .080 | .045 | .080 | .000 | 881.00 | 1949.19 |
| .001363 | 950. | 1010. | 1150. | 2 | 0 | 0 | 0.00 | 136.21 | 2085.40 |

FLOW DISTRIBUTION FOR SECNO= 3.50 CWSEL= 887.08

| STA= | 1949. | 1980. | 2080. | 2085. |
|---|---|---|---|---|
| PER Q= | 2.5 | 97.4 | .1 | |
| AREA= | 47.5 | 483.1 | 2.9 | |
| VEL= | .9 | 3.5 | .4 | |

1490 NH CARD USED
*SECNO 3.700

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 898.00 ELREA= 898.00

SURVEYED BRIDGE SECTION D/SOF BRIDGE

SOUTH MARSHALL AVE BRIDGE CONC ARCH 60' SPAN

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.00 | 5.96 | 889.16 | 0.00 | 0.00 | 889.58 | .42 | .00 | .00 | 887.60 |
| 1570. | 0. | 1570. | 0. | 0. | 302. | 0. | 195. | 80. | 886.40 |
| .80 | 0.00 | 5.20 | 0.00 | .080 | .035 | .070 | .000 | 883.20 | 2000.00 |
| .001980 | 1. | 1. | 1. | 0 | 0 | 0 | -27.33 | 60.00 | 2060.00 |

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 889.16

STA= 2000. 2060.
PER Q= 100.0
AREA= 302.2
VEL= 5.2

1490 NH CARD USED
*SECNO 4.100

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 899.30 MAX ELLC= 897.20

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 899.50 ELREA= 899.30

BRIDGE SECTION (H)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.10 | 6.07 | 889.27 | 0.00 | 0.00 | 889.68 | .40 | .09 | .00 | 887.60 |
| 1570. | 0. | 1570. | 0. | 0. | 308. | 0. | 196. | 80. | 886.40 |
| .80 | 0.00 | 5.10 | 0.00 | .080 | .035 | .070 | .000 | 883.20 | 2000.00 |
| .001870 | 46. | 46. | 46. | 0 | 0 | 0 | -29.37 | 60.00 | 2060.00 |

FLOW DISTRIBUTION FOR SECNO= 4.10 CWSEL= 889.27

STA= 2000. 2060.
PER Q= 100.0
AREA= 308.1
VEL= 5.1

1490 NH CARD USED
*SECNO 4.200

3470 ENCROACHMENT STATIONS= 1970.0 2090.0 TYPE= 1 TARGET= 120.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.20 | 6.12 | 889.32 | 0.00 | 0.00 | 889.69 | .37 | .00 | .01 | 887.60 |
| 1570. | 2. | 1535. | 33. | 4. | 312. | 30. | 196. | 80. | 886.40 |
| .80 | .63 | 4.93 | 1.07 | .080 | .035 | .070 | .000 | 883.20 | 1995.47 |
| .001554 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 85.39 | 2080.85 |

FLOW DISTRIBUTION FOR SECNO= 4.20 CWSEL= 889.32

| STA= | 1995. | 2000. | 2060. | 2081. |
|---|---|---|---|---|
| PER Q= | .2 | 97.8 | 2.1 | |
| AREA= | 3.9 | 311.5 | 30.4 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| VEL= | .6 | 4.9 | 1.1 | | | | | | |

1490 NH CARD USED
*SECNO 4.300

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.30 | 7.38 | 889.68 | 0.00 | 0.00 | 889.85 | .17 | .11 | .06 | 884.60 |
| 1570. | 35. | 1402. | 133. | 24. | 403. | 66. | 196. | 80. | 884.60 |
| .80 | 1.42 | 3.48 | 2.00 | .080 | .070 | .070 | .000 | 882.30 | 1990.37 |
| .001994 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 96.35 | 2086.72 |

FLOW DISTRIBUTION FOR SECNO= 4.30 CWSEL= 889.68

| STA= | 1990. | 2000. | 2062. | 2080. | 2087. |
|---|---|---|---|---|---|
| PER Q= | 2.2 | 89.3 | 8.2 | .3 | |
| AREA= | 24.5 | 402.9 | 60.8 | 5.6 | |
| VEL= | 1.4 | 3.5 | 2.1 | .8 | |

1490 NH CARD USED
*SECNO 4.900

SURVEYED VALLEY SECTION D/S OF DAM

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.90 | 4.54 | 890.05 | 0.00 | 0.00 | 890.06 | .01 | .16 | .05 | 902.73 |
| 1570. | 0. | 1570. | 0. | 0. | 2134. | 0. | 207. | 83. | 902.50 |
| .93 | 0.00 | .74 | 0.00 | .080 | .056 | .070 | .000 | 885.51 | 1448.00 |
| .000204 | 600. | 350. | 100. | 2 | 0 | 0 | 0.00 | 643.00 | 2091.00 |

FLOW DISTRIBUTION FOR SECNO= 4.90 CWSEL= 890.05

| STA= | 1448. | 2091. |
|---|---|---|
| PER Q= | 100.0 | |
| AREA= | 2134.5 | |
| VEL= | .7 | |

SPECIAL BRIDGE

| SB | XK | XKOK | COFQ | RDLEN | BWC | BWP | BAREA | SS | FLCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.50 | 3.09 | 0.00 | 20.00 | 0.00 | .30 | 0.00 | 885.51 | 885.51 |

*SECNO 5.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 638804.13 | 890.06 | 0.00 | 1567. | 7. | 0. | 3. | 885.67 | 899.69 |

SPILLWAY #1 200' LONG INVERT ELEV 900.05

SPILLWAY #2 91' LONG INVERT ELEV 899.69 (I)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5.00 | 15.88 | 901.39 | 0.00 | 0.00 | 901.39 | .00 | 11.33 | 0.00 | 902.73 |
| 1570. | 0. | 1570. | 0. | 0. | 9423. | 0. | 211. | 84. | 902.50 |
| .58 | 0.00 | .17 | 0.00 | .090 | .035 | .090 | .000 | 885.51 | 1448.00 |
| .000000 | 30. | 30. | 30. | 0 | 0 | 10 | 0.00 | 643.00 | 2091.00 |

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 901.39

STA= 1448. 2091.
PER Q= 100.0
AREA= 9423.2
VEL= .2

*SECNO 5.100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5.10 | 15.88 | 901.39 | 0.00 | 0.00 | 901.39 | .00 | .00 | .00 | 902.73 |
| 1720. | 0. | 1720. | 0. | 0. | 9426. | 0. | 222. | 84. | 902.50 |
| 1.06 | 0.00 | .18 | 0.00 | .090 | .035 | .090 | .000 | 885.51 | 1448.00 |
| .000001 | 50. | 50. | 50. | 0 | 0 | 0 | 0.00 | 643.00 | 2091.00 |

FLOW DISTRIBUTION FOR SECNO= 5.10 CWSEL= 901.39

STA= 1448. 2091.
PER Q= 100.0
AREA= 9426.2
VEL= .2

*SECNO 6.000

VALLEY SECTION AT CORPORATE BOUNDARY (J)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6.00 | 11.11 | 901.39 | 0.00 | 0.00 | 901.39 | .00 | .00 | .00 | 903.52 |
| 1720. | 0. | 1712. | 8. | 0. | 4350. | 161. | 585. | 121. | 899.62 |
| 2.67 | 0.00 | .39 | .05 | .090 | .035 | .090 | .007 | 890.28 | 2004.27 |
| .000006 | 2270. | 2270. | 2550. | 0 | 0 | 0 | 0.00 | 753.06 | 2757.34 |

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 901.39

| | | | | |
|---|---|---|---|---|
| STA= | 2004. | 2616. | 2744. | 2757. |
| PER Q= | 99.6 | .4 | .0 | |
| AREA= | 4350.4 | 156.6 | 4.5 | |
| VEL= | .4 | .0 | .0 | |

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: city of marshall

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: convergence Test
For starting WSEL

00BREAK00

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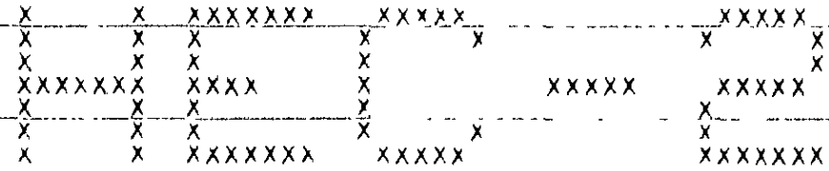
*****************************************
*  HEC2 WATER SURFACE PROFILES          *
*    VERSION OF NOVEMBER 1976           *
*    UPDATED JULY 1979                  *
*    ERROR CORR - 01,02,03              *
*    MODIFICATION - 50,51,52,53         *
*                                       *
*    RUN DATE  80/02/04.  TIME  08.25.10.*
*****************************************
```



FIS CITY OF MARSHALL
CALHOUN COUNTY, MICHIGAN

KALAMAZOO RIVER
STARTING WSEL ANALYSIS

Limited ND+.5±

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01.02.03
  MODIFICATION -  50.51.52.53
**************************************************
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308 shows 877.5

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T1      FIS CITY OF MARSHALL
T2      CONVERGENCE TEST FOR STARTING WSEL
T3      KALAMAZOO RIVER AT CITY OF MARSHALL
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0. | 4. | 0. | 0. | .000700 | 0.00 | 0.0 | 0. | 878.000 | 0.000 |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSFCH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | .090 | .090 | .045 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 5.000 | 1520.000 | 1980.000 | 2170.000 | 2610.000 | 2170.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 5.000 | .040 | 1746.000 | .080 | 2000.000 | .040 | 2107.000 | .080 | 2386.000 | .040 |
| GR | 2523.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | .001 | 24.000 | 2000.000 | 2107.000 | 0.000 | 0.000 | 0.000 | 0.000 | -1.000 | 0.000 |
| GR | 886.950 | 1407.000 | 887.630 | 1520.000 | 886.480 | 1687.000 | 883.620 | 1746.000 | 879.620 | 1793.000 |
| GR | 877.720 | 1915.000 | 877.390 | 1995.000 | 876.510 | 2000.000 | 875.530 | 2002.000 | 874.440 | 2019.000 |
| GR | 874.060 | 2036.000 | 873.450 | 2054.000 | 874.210 | 2071.000 | 874.480 | 2089.000 | 875.540 | 2106.000 |
| GR | 875.720 | 2107.000 | 877.510 | 2107.000 | 877.370 | 2123.000 | 876.990 | 2196.000 | 877.730 | 2306.000 |
| GR | 879.000 | 2339.000 | 891.340 | 2366.000 | 893.690 | 2433.000 | 898.290 | 2523.000 | 0.000 | 0.000 |
| X1 | .002 | 0.000 | 0.000 | 0.000 | 500.000 | 500.000 | 500.000 | 0.000 | .500 | 0.000 |
| X1 | .010 | 0.000 | 0.000 | 0.000 | 500.000 | 500.000 | 500.000 | 0.000 | 0.000 | 0.000 |
| NH | 3.000 | .060 | 1983.000 | .040 | 2099.000 | .060 | 2625.000 | 0.000 | 0.000 | 0.000 |
| X1 | .011 | 30.000 | 2000.000 | 2099.000 | 220.000 | 220.000 | 220.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1989.000 | 0.000 | 2110.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 890.000 | 1250.000 | 886.300 | 1350.000 | 883.000 | 1500.000 | 881.200 | 1700.000 | 879.800 | 1851.000 |
| GR | 879.000 | 1917.000 | 878.100 | 1983.000 | 877.900 | 1997.000 | 876.700 | 2000.000 | 874.700 | 2006.000 |
| GR | 874.000 | 2010.000 | 873.500 | 2020.000 | 873.700 | 2040.000 | 874.000 | 2049.000 | 874.000 | 2049.100 |
| GR | 874.000 | 2052.000 | 874.000 | 2052.100 | 873.700 | 2060.000 | 874.000 | 2090.000 | 874.700 | 2095.000 |
| GR | 876.700 | 2099.000 | 877.500 | 2106.000 | 878.000 | 2116.000 | 878.200 | 2182.000 | 879.000 | 2248.000 |
| GR | 890.000 | 2381.000 | 881.000 | 2440.000 | 883.200 | 2500.000 | 887.500 | 2570.000 | 890.000 | 2625.000 |
| EX | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| CR | 3.000 | .025 | 2000.000 | .020 | 2101.000 | .025 | 2120.000 | 0.000 | 0.000 | 0.000 |
| X1 | .012 | 22.000 | 2000.000 | 2101.000 | 80.000 | 80.000 | 80.000 | 0.000 | 0.000 | 0.000 |
| GR | 890.040 | 1600.000 | 887.340 | 1900.000 | 886.890 | 1950.000 | 886.440 | 2000.000 | 876.700 | 2000.000 |
| GR | 876.700 | 2000.100 | 876.700 | 2002.000 | 874.700 | 2006.000 | 874.000 | 2010.000 | 873.500 | 2020.000 |
| GR | 873.700 | 2040.000 | 874.000 | 2049.000 | 882.000 | 2049.100 | 882.000 | 2052.000 | 874.000 | 2052.100 |
| GR | 873.700 | 2060.000 | 874.000 | 2090.000 | 874.700 | 2095.000 | 876.700 | 2099.000 | 876.700 | 2101.000 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 885.960 | 2101.100 | 885.800 | 2120.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3.000 | .025 | 2000.000 | .020 | 2101.000 | .025 | 2120.000 | 0.000 | 0.000 | 0.000 |
| .022 | 0.000 | 2000.000 | 2101.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |
| 3.000 | .050 | 1983.000 | .040 | 2099.000 | .050 | 2625.000 | 0.000 | 0.000 | 0.000 |
| .024 | 30.000 | 2000.000 | 2099.000 | 90.000 | 90.000 | 90.000 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.000 | 0.000 | 1910.000 | 0.000 | 2189.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 890.000 | 1250.000 | 886.300 | 1350.000 | 883.000 | 1500.000 | 881.200 | 1700.000 | 879.800 | 1851.000 |
| 879.000 | 1917.000 | 878.100 | 1983.000 | 877.900 | 1997.000 | 876.700 | 2000.000 | 874.700 | 2006.000 |
| 874.000 | 2010.000 | 873.500 | 2020.000 | 873.700 | 2040.000 | 874.000 | 2049.000 | 874.000 | 2049.100 |
| 874.000 | 2052.000 | 874.000 | 2052.100 | 873.700 | 2060.000 | 874.000 | 2090.000 | 874.700 | 2095.000 |
| 876.700 | 2099.000 | 877.500 | 2106.000 | 878.000 | 2116.000 | 878.200 | 2182.000 | 879.000 | 2248.000 |
| 880.000 | 2381.000 | 881.000 | 2440.000 | 883.200 | 2500.000 | 887.500 | 2570.000 | 890.000 | 2625.000 |
| 3.000 | .050 | 2012.000 | .040 | 2207.000 | .050 | 2397.000 | 0.000 | 0.000 | 0.000 |
| .060 | 25.000 | 2012.000 | 2207.000 | 160.000 | 160.000 | 160.000 | 0.000 | 0.000 | 0.000 |
| 898.130 | 833.000 | 893.700 | 873.000 | 892.140 | 914.000 | 888.720 | 1060.000 | 886.940 | 1187.000 |
| 883.670 | 1760.000 | 881.830 | 1880.000 | 882.470 | 2000.000 | 880.790 | 2003.000 | 876.290 | 2012.000 |
| 874.060 | 2030.000 | 873.810 | 2049.000 | 874.740 | 2068.000 | 875.140 | 2087.000 | 874.470 | 2111.000 |
| 873.520 | 2135.000 | 873.600 | 2159.000 | 873.910 | 2183.000 | 876.240 | 2207.000 | 878.350 | 2211.000 |
| 878.680 | 2220.000 | 878.280 | 2287.000 | 887.480 | 2304.000 | 888.270 | 2364.000 | 888.340 | 2397.000 |
| 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7.000 | .050 | 1933.000 | .080 | 2000.000 | .040 | 2087.000 | .080 | 3127.000 | .040 |
| 3237.000 | .080 | 3563.000 | .050 | 3909.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| .100 | 40.000 | 2000.000 | 3237.000 | 880.000 | 1700.000 | 1050.000 | 0.000 | 0.000 | 0.000 |
| 900.330 | 1313.000 | 891.620 | 1680.000 | 891.730 | 1873.000 | 889.500 | 1933.000 | 878.500 | 2000.000 |
| 876.600 | 2004.000 | 875.490 | 2030.000 | 875.290 | 2047.000 | 875.220 | 2067.000 | 876.100 | 2087.000 |
| 878.710 | 2089.000 | 879.200 | 2107.000 | 878.780 | 2194.000 | 880.000 | 2391.000 | 879.140 | 2458.000 |
| 878.600 | 2558.000 | 878.070 | 2618.000 | 878.360 | 2711.000 | 877.890 | 2784.000 | 878.240 | 2891.000 |
| 878.360 | 3004.000 | 878.500 | 3054.000 | 879.300 | 3127.000 | 877.320 | 3127.000 | 876.080 | 3164.000 |
| 874.590 | 3187.000 | 875.580 | 3217.000 | 878.320 | 3237.000 | 887.080 | 3268.000 | 888.420 | 3270.000 |
| 887.650 | 3343.000 | 881.110 | 3376.000 | 882.280 | 3499.000 | 888.010 | 3563.000 | 905.050 | 3639.000 |
| 906.730 | 3666.000 | 904.810 | 3699.000 | 903.330 | 3812.000 | 913.110 | 3862.000 | 916.270 | 3909.000 |
| 8.000 | .045 | 1946.000 | .090 | 2000.000 | .040 | 2040.000 | .090 | 2069.000 | .040 |
| 2140.000 | .090 | 2152.000 | .040 | 2242.000 | .090 | 3517.000 | 0.000 | 0.000 | 0.000 |
| 1.000 | 37.000 | 2000.000 | 2242.000 | 1880.000 | 2370.000 | 1950.000 | 0.000 | 0.000 | 0.000 |
| 897.800 | 1741.000 | 897.300 | 1803.000 | 897.100 | 1825.000 | 883.800 | 1946.000 | 881.600 | 1964.000 |
| 880.500 | 2000.000 | 879.900 | 2002.000 | 877.800 | 2009.000 | 877.900 | 2035.000 | 879.900 | 2040.000 |
| 881.200 | 2048.000 | 880.600 | 2068.000 | 879.800 | 2069.000 | 877.700 | 2076.000 | 877.800 | 2088.000 |
| 876.800 | 2116.000 | 879.800 | 2140.000 | 881.000 | 2146.000 | 879.900 | 2150.000 | 878.100 | 2152.000 |
| 875.600 | 2177.000 | 876.200 | 2192.000 | 876.700 | 2207.000 | 877.200 | 2222.000 | 878.300 | 2237.000 |
| 881.200 | 2242.000 | 880.900 | 2296.000 | 882.600 | 2444.000 | 886.000 | 2544.000 | 887.800 | 2736.000 |
| 887.900 | 2814.000 | 890.600 | 2880.000 | 892.600 | 2960.000 | 894.000 | 3028.000 | 892.300 | 3167.000 |
| 899.500 | 3371.000 | 901.300 | 3517.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4.000 | .060 | 1884.000 | .080 | 2000.000 | .040 | 2062.000 | .070 | 2222.000 | 0.000 |
| 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

```
*PROF 1

CCHV=     .100 CEHV=     .300
1490 NH CARD USED
*SECNO .001
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
   Q          OLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

     .00       6.07     878.52       0.00     878.00     878.62       .10       0.00       0.00     875.51
   2170.        183.       1593.       394.       275.       548.       481.         0.         0.     876.51
    0.00         .66       2.91        .82        .080       .040       .080     0.000     872.45    1799.22
 .000711          0.         0.         0.          0          0          4      0.00     541.77    2340.99

*SECNO .002
     .00       5.94     878.89       0.00       0.00     879.00       .11       .38        .00     876.01
   2170.        169.       1624.       377.       248.       534.       449.       15.         6.     877.01
     .06         .68       3.04        .84        .080       .040       .080      .045     872.95    1807.98
 .000809        500.       500.       500.          1          0          0      0.00     532.49    2340.47

 SECNO .010
     .01       6.31     879.26       0.00       0.00     879.34       .08       .34        .00     876.01
   2170.        208.       1539.       423.       325.       574.       538.       30.        12.     877.01
     .12         .64       2.68        .79        .080       .040       .080      .045     872.95    1791.27
 .000568        500.       500.       500.          1          0          0      0.00     550.65    2341.92

1490 NH CARD USED
*SECNO .011

3470 ENCROACHMENT STATIONS=     1989.0     2110.0  TYPE=       1  TARGET=      121.000
     .01       5.83     879.33       0.00       0.00     879.57       .25       .18        .05     876.70
   2170.         29.       2111.        31.        17.       525.        22.       35.        14.     876.70
     .14        1.68       4.02       1.36        .040       .040       .060      .045     873.50    1989.00
 .001284         220.       220.       220.          2          0          0      0.00     121.00    2110.00

CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO .012

2265 DIVIDED FLOW

   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
   Q          OLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

     .01       5.84     879.34       0.00       0.00     879.62       .28       .03        .02     886.44
   2170.          0.       2170.         0.         0.       513.         0.       36.        14.     876.70
     .14        0.00       4.23        .01        .040       .020       .025      .045     873.50    2000.00
 .000189         80.        80.        80.          2          0          0      0.00      98.06    2101.03
```

1490-NH CARD USED
*SECNO .022

3465 DIVIDED FLOW

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .02 | 5.86 | 879.38 | 0.00 | 0.00 | 879.65 | .27 | .03 | .00 | 886.44 |
| 2170. | 0. | 2170. | 0. | 0. | 517. | 0. | 38. | 15. | 876.70 |
| .15 | 0.00 | 4.20 | .01 | .040 | .020 | .025 | .045 | 873.50 | 2000.00 |
| .000185 | 150. | 150. | 150. | 2 | 0 | 0 | 0.00 | 98.06 | 2101.03 |

1490 NH CARD USED
*SECNO .024

3470 ENCROACHMENT STATIONS= 1910.0 2189.0 TYPE= 1 TARGET= 279.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .02 | 6.05 | 879.55 | 0.00 | 0.00 | 879.71 | .17 | .03 | .03 | 876.70 |
| 2170. | 105. | 1695. | 169. | 98. | 547. | 140. | 39. | 15. | 876.70 |
| .16 | 1.08 | 3.47 | 1.21 | .046 | .040 | .050 | .045 | 873.50 | 1910.00 |
| .000903 | 90. | 90. | 90. | 2 | 0 | 0 | 0.00 | 279.00 | 2189.00 |

1490 NH CARD USED
*SECNO .060

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .06 | 6.24 | 879.76 | 0.00 | 0.00 | 879.82 | .06 | .08 | .03 | 876.29 |
| 2170. | 8. | 2093. | 69. | 12. | 1052. | 109. | 43. | 16. | 876.24 |
| .18 | .69 | 1.99 | .63 | .050 | .040 | .050 | .045 | 873.52 | 2005.05 |
| .000303 | 160. | 160. | 160. | 2 | 0 | 0 | 0.00 | 284.69 | 2289.74 |

CHV= .100 CEHV= .300
1490 NH CARD USED
*SECNO .100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| .10 | 5.57 | 880.16 | 0.00 | 0.00 | 880.17 | .01 | .34 | .00 | 878.50 |
| 2170. | 3. | 2166. | 2. | 8. | 2333. | 6. | 86. | 35. | 878.32 |
| .50 | .30 | .93 | .32 | .080 | .053 | .080 | .045 | 874.59 | 1989.93 |
| .000344 | 880. | 1050. | 1700. | 2 | 0 | 0 | 0.00 | 1253.56 | 3243.49 |

1490 NH CARD USED
*SECNO 1.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
| Q | QLOF | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNP | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 1.00 | 5.64 | 881.24 | 0.00 | 0.00 | 881.38 | .14 | 1.17 | .04 | 880.50 |
| 2170. | 3. | 2164. | 3. | 9. | 718. | 15. | 155. | 71. | 881.20 |
| .68 | .31 | 3.02 | .19 | .090 | .059 | .090 | .045 | 875.60 | 1975.91 |
| .001296 | 1880. | 1950. | 2370. | 2 | 0 | 0 | 0.00 | 349.35 | 2325.26 |

1490 NH CARD USED

HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
ERROR CORR - 01,02,03
MODIFICATION - 50,51,52,53

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

KALAMAZOO RIVER AT CITY

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| .001 | 0.00 | 0.00 | 0.00 | 872.45 | 2170.00 | 878.52 | 0.00 | 878.62 | 7.11 | 2.91 | 1303.95 | 813.80 |
| .001 | 0.00 | 0.00 | 0.00 | 872.45 | 2170.00 | 879.00 | 0.00 | 879.07 | 4.63 | 2.49 | 1566.29 | 1009.00 |
| .001 | 0.00 | 0.00 | 0.00 | 872.45 | 2170.00 | 878.00 | 0.00 | 878.15 | 11.88 | 3.50 | 1029.88 | 629.50 |
| .001 | 0.00 | 0.00 | 0.00 | 872.45 | 1520.00 | 877.82 | 0.00 | 877.91 | 7.02 | 2.62 | 941.73 | 573.82 |
| .001 | 0.00 | 0.00 | 0.00 | 872.45 | 1980.00 | 878.34 | 0.00 | 878.43 | 7.07 | 2.83 | 1203.95 | 744.75 |
| .001 | 0.00 | 0.00 | 0.00 | 872.45 | 2610.00 | 878.94 | 0.00 | 879.04 | 7.08 | 3.05 | 1530.39 | 981.03 |
| .002 | 500.00 | 0.00 | 0.00 | 872.95 | 2170.00 | 878.89 | 0.00 | 879.00 | 8.09 | 3.04 | 1230.68 | 763.02 |
| .002 | 500.00 | 0.00 | 0.00 | 872.95 | 2170.00 | 879.25 | 0.00 | 879.33 | 5.82 | 2.70 | 1422.72 | 899.36 |
| .002 | 500.00 | 0.00 | 0.00 | 872.95 | 2170.00 | 878.58 | 0.00 | 878.72 | 10.87 | 3.39 | 1073.98 | 658.07 |
| .002 | 500.00 | 0.00 | 0.00 | 872.95 | 1520.00 | 878.19 | 0.00 | 878.29 | 8.16 | 2.76 | 874.34 | 532.27 |
| .002 | 500.00 | 0.00 | 0.00 | 872.95 | 1980.00 | 878.71 | 0.00 | 878.81 | 8.09 | 2.97 | 1131.57 | 696.03 |
| .002 | 500.00 | 0.00 | 0.00 | 872.95 | 2610.00 | 879.30 | 0.00 | 879.42 | 8.00 | 3.19 | 1453.79 | 922.59 |
| .010 | 500.00 | 0.00 | 0.00 | 872.95 | 2170.00 | 879.26 | 0.00 | 879.34 | 5.68 | 2.68 | 1437.78 | 910.58 |
| .010 | 500.00 | 0.00 | 0.00 | 872.95 | 2170.00 | 879.52 | 0.00 | 879.59 | 4.56 | 2.47 | 1575.14 | 1015.95 |
| .010 | 500.00 | 0.00 | 0.00 | 872.95 | 2170.00 | 879.06 | 0.00 | 879.15 | 6.89 | 2.87 | 1322.69 | 826.04 |
| .010 | 500.00 | 0.00 | 0.00 | 872.95 | 1520.00 | 878.55 | 0.00 | 878.63 | 5.47 | 2.39 | 1061.68 | 650.06 |
| .010 | 500.00 | 0.00 | 0.00 | 872.95 | 1980.00 | 879.07 | 0.00 | 879.15 | 5.63 | 2.60 | 1333.79 | 834.77 |
| .010 | 500.00 | 0.00 | 0.00 | 872.95 | 2610.00 | 879.67 | 0.00 | 879.76 | 5.75 | 2.83 | 1666.37 | 1088.86 |
| .011 | 220.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.33 | 0.00 | 879.57 | 12.84 | 4.02 | 564.32 | 605.54 |
| .011 | 220.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.56 | 0.00 | 879.79 | 11.03 | 3.84 | 592.76 | 653.26 |
| .011 | 220.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.15 | 0.00 | 879.42 | 14.45 | 4.17 | 543.10 | 570.03 |
| .011 | 220.00 | 0.00 | 0.00 | 873.50 | 1520.00 | 878.65 | 0.00 | 878.81 | 10.16 | 3.27 | 482.34 | 476.84 |
| .011 | 220.00 | 0.00 | 0.00 | 873.50 | 1980.00 | 879.15 | 0.00 | 879.37 | 12.06 | 3.81 | 542.55 | 570.05 |
| .011 | 220.00 | 0.00 | 0.00 | 873.50 | 2610.00 | 879.71 | 0.00 | 880.01 | 14.56 | 4.49 | 610.62 | 684.02 |
| .012 | 80.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.34 | 0.00 | 879.62 | 1.89 | 4.23 | 513.43 | 1579.51 |
| .012 | 80.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.57 | 0.00 | 879.83 | 1.65 | 4.05 | 536.10 | 1689.27 |
| .012 | 80.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.17 | 0.00 | 879.47 | 2.09 | 4.37 | 496.58 | 1499.58 |
| .012 | 80.00 | 0.00 | 0.00 | 873.50 | 1520.00 | 878.67 | 0.00 | 878.85 | 1.43 | 3.40 | 447.09 | 1272.52 |
| .012 | 80.00 | 0.00 | 0.00 | 873.50 | 1980.00 | 879.16 | 0.00 | 879.41 | 1.75 | 3.99 | 495.42 | 1495.03 |
| .012 | 80.00 | 0.00 | 0.00 | 873.50 | 2610.00 | 879.72 | 0.00 | 880.07 | 2.19 | 4.74 | 550.91 | 1761.77 |

| SECNO | XLCH | ELTRD | ELLC | FLMIN | Q | CRSFL | CRIWS | EG | 10K*S | VCH | AREA | .01F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| .022 | 150.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.38 | 0.00 | 879.65 | 1.85 | 4.20 | 516.63 | 1594.84 |
| .022 | 150.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.60 | 0.00 | 879.85 | 1.62 | 4.03 | 538.84 | 1702.71 |
| .022 | 150.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.21 | 0.00 | 879.50 | 2.05 | 4.34 | 500.19 | 1516.40 |
| .022 | 150.00 | 0.00 | 0.00 | 873.50 | 1520.00 | 878.69 | 0.00 | 878.87 | 1.40 | 3.38 | 449.41 | 1282.93 |
| .022 | 150.00 | 0.00 | 0.00 | 873.50 | 1980.00 | 879.19 | 0.00 | 879.44 | 1.72 | 3.97 | 498.76 | 1506.74 |
| .022 | 150.00 | 0.00 | 0.00 | 873.50 | 2610.00 | 879.76 | 0.00 | 880.11 | 2.15 | 4.71 | 554.63 | 1780.76 |
| .024 | 90.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.55 | 0.00 | 879.71 | 9.03 | 3.47 | 784.44 | 722.08 |
| .024 | 90.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.77 | 0.00 | 879.91 | 7.54 | 3.25 | 846.61 | 799.52 |
| .024 | 90.00 | 0.00 | 0.00 | 873.50 | 2170.00 | 879.38 | 0.00 | 879.57 | 10.38 | 3.64 | 738.18 | 673.66 |
| .024 | 90.00 | 0.00 | 0.00 | 873.50 | 1520.00 | 878.76 | 0.00 | 878.90 | 8.72 | 3.08 | 569.66 | 514.69 |
| .024 | 90.00 | 0.00 | 0.00 | 873.50 | 1980.00 | 879.33 | 0.00 | 879.49 | 9.00 | 3.37 | 724.60 | 659.86 |
| .024 | 90.00 | 0.00 | 0.00 | 873.50 | 2610.00 | 880.01 | 0.00 | 880.19 | 9.00 | 3.65 | 915.02 | 870.11 |
| .060 | 160.00 | 0.00 | 0.00 | 873.52 | 2170.00 | 879.76 | 0.00 | 879.82 | 3.03 | 1.99 | 1173.53 | 1245.83 |
| .060 | 160.00 | 0.00 | 0.00 | 873.52 | 2170.00 | 879.95 | 0.00 | 880.01 | 2.67 | 1.91 | 1227.46 | 1327.22 |
| .060 | 160.00 | 0.00 | 0.00 | 873.52 | 2170.00 | 879.63 | 0.00 | 879.69 | 3.33 | 2.05 | 1134.81 | 1188.88 |
| .060 | 160.00 | 0.00 | 0.00 | 873.52 | 1520.00 | 878.96 | 0.00 | 879.00 | 2.67 | 1.68 | 946.36 | 930.44 |
| .060 | 160.00 | 0.00 | 0.00 | 873.52 | 1980.00 | 879.55 | 0.00 | 879.60 | 2.94 | 1.90 | 1111.71 | 1155.51 |
| .060 | 160.00 | 0.00 | 0.00 | 873.52 | 2610.00 | 880.23 | 0.00 | 880.30 | 3.23 | 2.17 | 1308.07 | 1453.18 |
| .100 | 1050.00 | 0.00 | 0.00 | 874.59 | 2170.00 | 880.16 | 0.00 | 880.17 | 3.44 | .93 | 2347.58 | 1170.14 |
| .100 | 1050.00 | 0.00 | 0.00 | 874.59 | 2170.00 | 880.30 | 0.00 | 880.31 | 2.90 | .86 | 2523.29 | 1274.92 |
| .100 | 1050.00 | 0.00 | 0.00 | 874.59 | 2170.00 | 880.06 | 0.00 | 880.08 | 3.89 | .98 | 2226.80 | 1100.82 |
| .100 | 1050.00 | 0.00 | 0.00 | 874.59 | 1520.00 | 879.36 | 0.00 | 879.37 | 4.74 | 1.09 | 1398.12 | 697.97 |
| .100 | 1050.00 | 0.00 | 0.00 | 874.59 | 1980.00 | 879.93 | 0.00 | 879.94 | 3.53 | .96 | 2079.33 | 1053.73 |
| .100 | 1050.00 | 0.00 | 0.00 | 874.59 | 2610.00 | 880.62 | 0.00 | 880.63 | 2.89 | .89 | 2932.77 | 1536.40 |
| 1.000 | 1950.00 | 0.00 | 0.00 | 875.60 | 2170.00 | 881.24 | 0.00 | 881.38 | 12.96 | 3.02 | 741.62 | 602.69 |
| 1.000 | 1950.00 | 0.00 | 0.00 | 875.60 | 2170.00 | 881.24 | 0.00 | 881.38 | 12.85 | 3.01 | 744.84 | 605.44 |
| 1.000 | 1950.00 | 0.00 | 0.00 | 875.60 | 2170.00 | 881.24 | 0.00 | 881.38 | 12.94 | 3.01 | 742.25 | 603.23 |
| 1.000 | 1950.00 | 0.00 | 0.00 | 875.60 | 1520.00 | 880.66 | 0.00 | 880.77 | 11.44 | 2.60 | 585.20 | 445.38 |
| 1.000 | 1950.00 | 0.00 | 0.00 | 875.60 | 1980.00 | 881.04 | 0.00 | 881.17 | 13.11 | 2.95 | 677.86 | 546.04 |
| 1.000 | 1950.00 | 0.00 | 0.00 | 875.60 | 2610.00 | 881.57 | 0.00 | 881.73 | 13.56 | 3.23 | 866.44 | 708.74 |

KALAMAZOO RIVER AT CITY

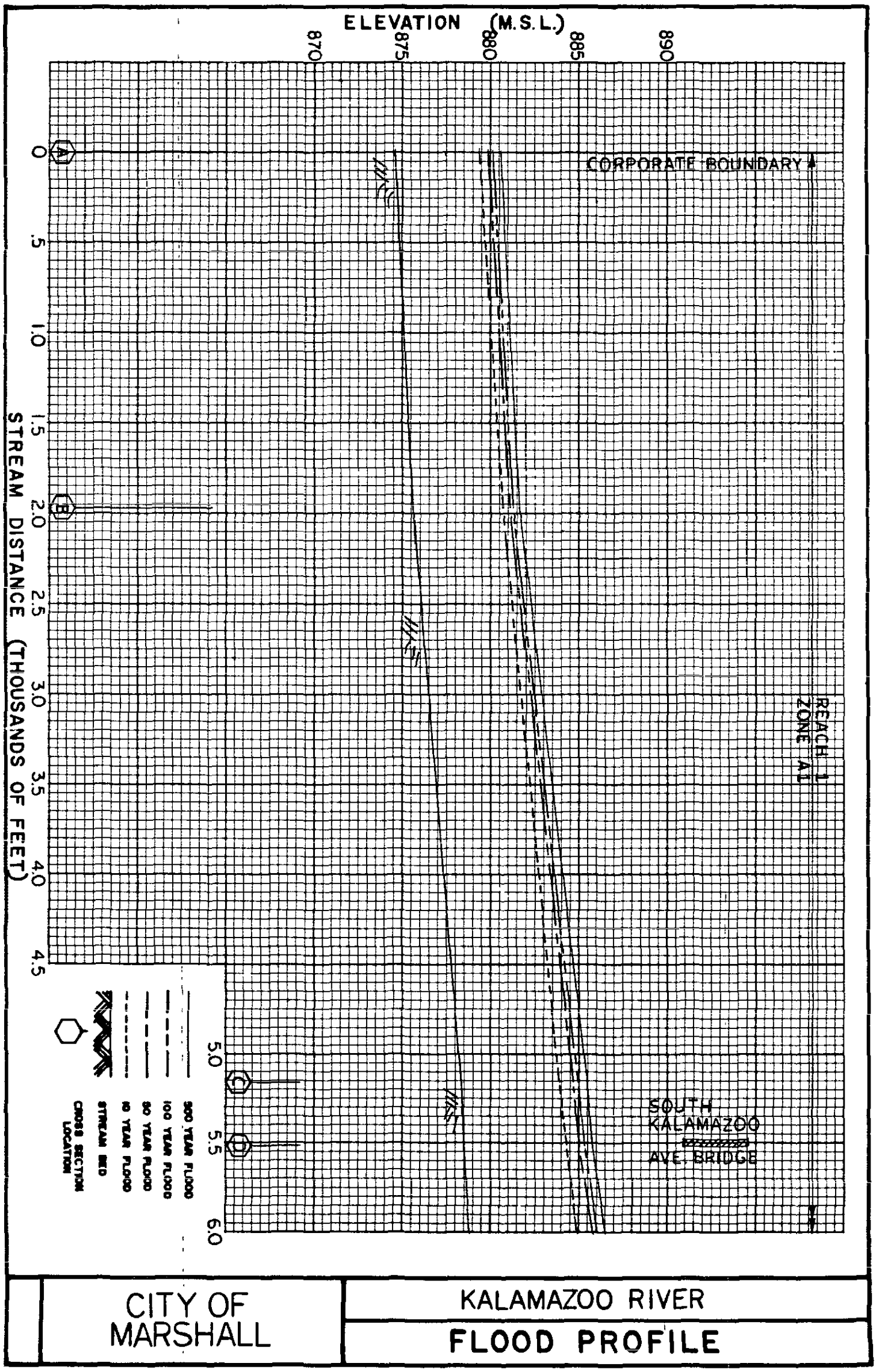
SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| .001 | 2170.00 | 878.52 | 0.00 | 0.00 | .52 | 541.77 | 0.00 |
| .001 | 2170.00 | 879.00 | .48 | 0.00 | 0.00 | 554.27 | 0.00 |
| .001 | 2170.00 | 878.00 | -1.00 | 0.00 | 0.00 | 506.19 | 0.00 |
| .001 | 1520.00 | 877.82 | -.18 | 0.00 | 1.82 | 490.23 | 0.00 |
| .001 | 1980.00 | 878.34 | .51 | 0.00 | 2.34 | 529.06 | 0.00 |
| .001 | 2610.00 | 878.94 | .60 | 0.00 | .94 | 553.27 | 0.00 |
| .002 | 2170.00 | 878.89 | 0.00 | .37 | 0.00 | 532.49 | 500.00 |
| .002 | 2170.00 | 879.25 | .35 | .25 | 0.00 | 550.23 | 500.00 |
| .002 | 2170.00 | 878.58 | -.67 | .58 | 0.00 | 512.09 | 500.00 |
| .002 | 1520.00 | 878.19 | -.39 | .37 | 0.00 | 477.67 | 500.00 |
| .002 | 1980.00 | 878.71 | .51 | .37 | 0.00 | 519.67 | 500.00 |
| .002 | 2610.00 | 879.30 | .60 | .37 | 0.00 | 551.11 | 500.00 |
| .010 | 2170.00 | 879.26 | 0.00 | .37 | 0.00 | 550.65 | 500.00 |
| .010 | 2170.00 | 879.52 | .26 | .27 | 0.00 | 554.52 | 500.00 |
| .010 | 2170.00 | 879.06 | -.46 | .48 | 0.00 | 544.11 | 500.00 |
| .010 | 1520.00 | 878.55 | -.50 | .36 | 0.00 | 510.45 | 500.00 |
| .010 | 1980.00 | 879.07 | .52 | .37 | 0.00 | 545.50 | 500.00 |
| .010 | 2610.00 | 879.67 | .60 | .37 | 0.00 | 557.08 | 500.00 |
| .011 | 2170.00 | 879.33 | 0.00 | .07 | 0.00 | 121.00 | 220.00 |
| .011 | 2170.00 | 879.56 | .24 | .04 | 0.00 | 121.00 | 220.00 |
| .011 | 2170.00 | 879.15 | -.41 | .09 | 0.00 | 121.00 | 220.00 |
| .011 | 1520.00 | 878.65 | -.50 | .10 | 0.00 | 121.00 | 220.00 |
| .011 | 1980.00 | 879.15 | .50 | .08 | 0.00 | 121.00 | 220.00 |
| .011 | 2610.00 | 879.71 | .56 | .04 | 0.00 | 121.00 | 220.00 |
| .012 | 2170.00 | 879.34 | 0.00 | .02 | 0.00 | 98.06 | 80.00 |
| .012 | 2170.00 | 879.57 | .23 | .01 | 0.00 | 98.07 | 80.00 |
| .012 | 2170.00 | 879.17 | -.40 | .02 | 0.00 | 98.06 | 80.00 |
| .012 | 1520.00 | 878.67 | -.50 | .02 | 0.00 | 98.04 | 80.00 |
| .012 | 1980.00 | 879.16 | .50 | .02 | 0.00 | 98.06 | 80.00 |
| .012 | 2610.00 | 879.72 | .56 | .01 | 0.00 | 98.08 | 80.00 |
| .022 | 2170.00 | 879.38 | 0.00 | .03 | 0.00 | 98.06 | 150.00 |
| .022 | 2170.00 | 879.60 | .23 | .03 | 0.00 | 98.07 | 150.00 |
| .022 | 2170.00 | 879.21 | -.39 | .04 | 0.00 | 98.06 | 150.00 |
| .022 | 1520.00 | 878.69 | -.52 | .02 | 0.00 | 98.04 | 150.00 |
| .022 | 1980.00 | 879.19 | .50 | .03 | 0.00 | 98.06 | 150.00 |
| .022 | 2610.00 | 879.76 | .57 | .04 | 0.00 | 98.08 | 150.00 |
| .024 | 2170.00 | 879.55 | 0.00 | .17 | 0.00 | 279.00 | 90.00 |
| .024 | 2170.00 | 879.77 | .22 | .17 | 0.00 | 279.00 | 90.00 |
| .024 | 2170.00 | 879.38 | -.39 | .17 | 0.00 | 279.00 | 90.00 |
| .024 | 1520.00 | 878.76 | -.62 | .07 | 0.00 | 254.73 | 90.00 |
| .024 | 1980.00 | 879.33 | .57 | .14 | 0.00 | 279.00 | 90.00 |
| .024 | 2610.00 | 880.01 | .68 | .25 | 0.00 | 279.00 | 90.00 |

| SECNO | Q | CWSEL | DIFWSP | DIFWSx | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| .060 | 2170.00 | 879.76 | 0.00 | .22 | 0.00 | 284.69 | 160.00 |
| .060 | 2170.00 | 879.95 | .19 | .18 | 0.00 | 285.42 | 160.00 |
| .060 | 2170.00 | 879.63 | -.33 | .25 | 0.00 | 284.16 | 160.00 |
| .060 | 1520.00 | 878.96 | -.67 | .20 | 0.00 | 281.60 | 160.00 |
| .060 | 1980.00 | 879.55 | .58 | .21 | 0.00 | 283.85 | 160.00 |
| .060 | 2610.00 | 880.23 | .69 | .22 | 0.00 | 286.50 | 160.00 |
| .100 | 2170.00 | 880.16 | 0.00 | .39 | 0.00 | 1253.56 | 1050.00 |
| .100 | 2170.00 | 880.30 | .14 | .34 | 0.00 | 1254.91 | 1050.00 |
| .100 | 2170.00 | 880.06 | -.23 | .43 | 0.00 | 1252.64 | 1050.00 |
| .100 | 1520.00 | 879.36 | -.71 | .39 | 0.00 | 1091.31 | 1050.00 |
| .100 | 1980.00 | 879.93 | .58 | .38 | 0.00 | 1237.02 | 1050.00 |
| .100 | 2610.00 | 880.62 | .69 | .39 | 0.00 | 1258.05 | 1050.00 |
| 1.000 | 2170.00 | 881.24 | 0.00 | 1.08 | 0.00 | 349.35 | 1950.00 |
| 1.000 | 2170.00 | 881.24 | .01 | .95 | 0.00 | 350.45 | 1950.00 |
| 1.000 | 2170.00 | 881.24 | -.01 | 1.18 | 0.00 | 349.57 | 1950.00 |
| 1.000 | 1520.00 | 880.66 | -.57 | 1.31 | 0.00 | 222.04 | 1950.00 |
| 1.000 | 1980.00 | 881.04 | .38 | 1.11 | 0.00 | 290.01 | 1950.00 |
| 1.000 | 2610.00 | 881.57 | .53 | .95 | 0.00 | 389.81 | 1950.00 |

At Cross Section 0.10
Downstream Study limit

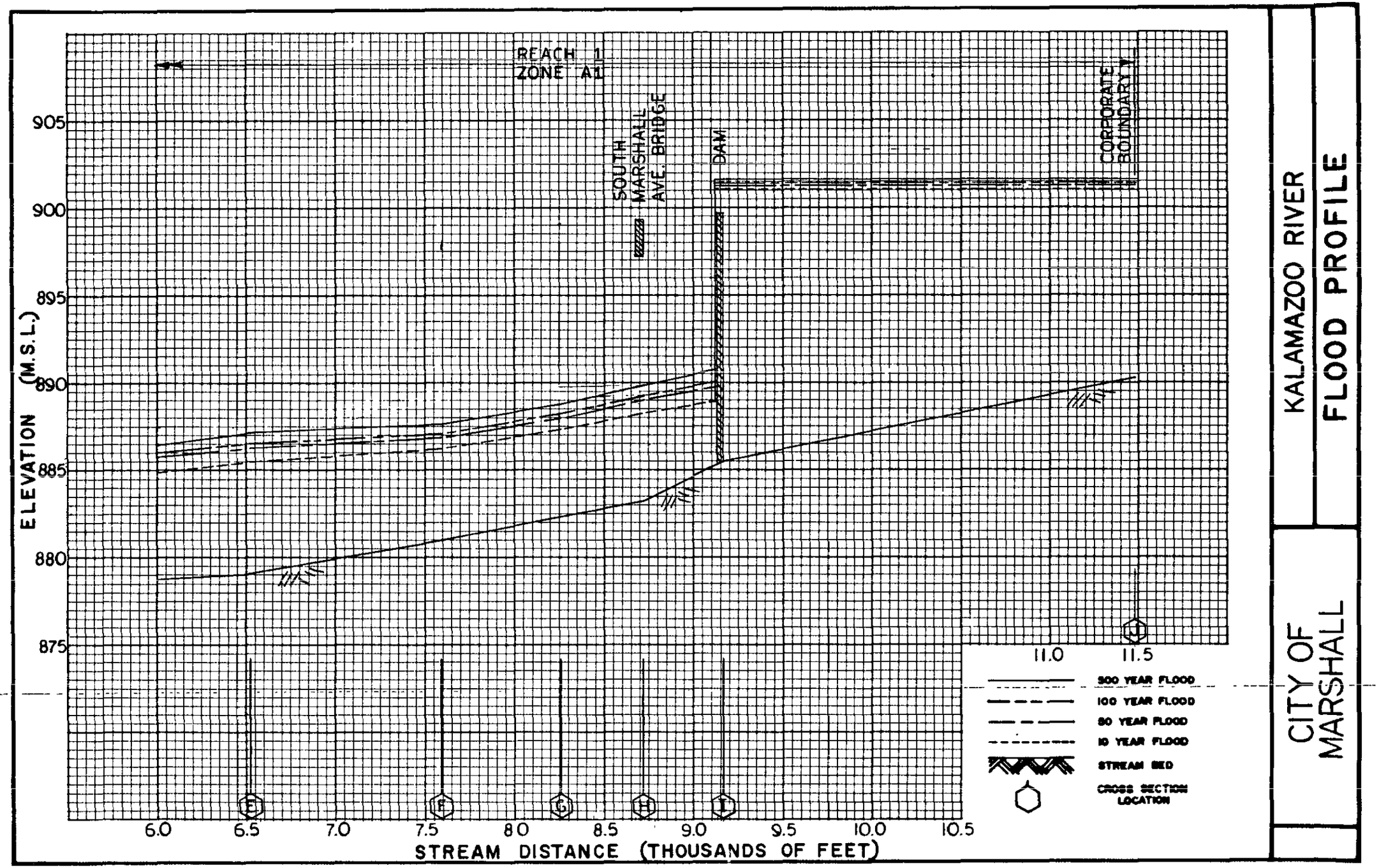
SUMMARY OF ERRORS




CITY OF MARSHALL

KALAMAZOO RIVER

**FLOOD PROFILE**


REACH 1
ZONE A1
SOUTH MARSHALL AVE. BRIDGE
DAM
CORPORATE BOUNDARY
ELEVATION (M.S.L.)
905
900
895
890
885
880
875
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10.0
10.5
11.0
11.5
STREAM DISTANCE (THOUSANDS OF FEET)
E
F
G
H
I
J
500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION
KALAMAZOO RIVER
FLOOD PROFILE
CITY OF MARSHALL

KEY TO SYMBOLS

FLOOD BOUNDARY AND FLOODWAY DATA

500 Yr Flood Boundary

100 Yr Flood Boundary

FLOODWAY FRINGE

FLOODWAY

500 Yr Flood Boundary

Approximate 100 Yr Flood Boundary

Cross Section Line

FLOOD BOUNDARY AND FLOODWAY MAP

MAP INDEX

# CITY OF MARSHALL KALAMAZOO RIVER

ZONE A1

KALAMAZOO RIVER

CITY OF MARSHALL

R6W Marshall

R5W Marengo Twp

2000 0 2000

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: city of marshall

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: report

00BREAK00

**Gilbert/Commonwealth** engineers/consultants/architects

COMMONWEALTH ASSOCIATES INC, 209 E Washington Avenue, Jackson, MI 49201/Tel 517 788-3000

July 23, 1980

Mr. Daniel H. Morgan, P.E., Chief
Flood Insurance Unit
Water Management Division
Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

RECEIVED
JUL 25 1980
WATER MANAGEMENT

Dear Mr. Morgan:

Enclosed is a copy of the Hydraulic Analyses for the Kalamazoo River within the communities of Albion Township, Village of Homer, City of Albion, and the City of Marshall. Included with this report for your review are computer printouts (HEC-2), plotted cross sections, flood plain maps, profiles, and bridge sketches.

In accordance with our contract with FEMA/FIA, CAI will be submitting the draft FIS for these communities on September 1, 1980. If any questions or comments arise prior to this date, please contact me. If any comments arise after September 1, 1980, contact Frank Finch or Wally Weaver of FEMA/FIA.

Very truly yours,

R. D. Landis
Project Manager

RDL/lft

CC: W. Weaver w/o attach

RECEIVED
JUL 25 1980
WATER MANAGEMENT

# HYDRAULIC ANALYSIS REPORT

## KALAMAZOO RIVER AT MARSHALL

## CALHOUN COUNTY, MICHIGAN

Prepared By

COMMONWEALTH ASSOCIATES INC.
209 East Washington Avenue
Jackson, Michigan 49201

July, 1980

## Introduction

Hydraulic calculations were performed for the Kalamazoo River within the entire corporate boundaries of Marshall City. Field cross section data were surveyed by Commonwealth Associates in September-October, 1978. The flood flows for 10, 50, 100 and 500-year recurrence intervals were approved by the Michigan Department of Natural Resources. This study was performed by Commonwealth Associates Inc., Jackson, Michigan and the Project Manager was R. D. Landis.

## Method of Analysis

The HEC-2 computer program was used for the entire hydraulic analysis.

## Variables and Coefficients

Manning's Roughness Coefficient

| | |
|---|---|
| For channel | 0.035-0.062 |
| For overbanks | 0.070-0.090 |

Coefficients for Floodway

| | |
|---|---|
| Contraction | 0.1 |
| Expansion | 0.3 |

Coefficients for Bridges

| | |
|---|---|
| Contraction | 0.3 |
| Expansion | 0.5 |

Ratios

| | |
|---|---|
| Contraction | 1:1 |
| Expansion | 1:4 |

Coefficients for Weir Flow

No weir flow over bridges
C = 3.09 was used for spillways

## High-Water Marks

Recorded high-water elevations at the USGS gage and HEC-2 results were plotted in Figure 1. One high-water mark at the dam was plotted in Figure 2 along with the results of the present study. The estimated flood elevations compare very well with high-water marks.

| Gilbert Commonwealth Companies | Commonwealth Associates Inc. engineers/consultants/architects | OHIO EDISON COMPANY ERIE NUCLEAR PLANT | FILING CODE / JOB NO |
|---|---|---|---|
| | ESTIMATED BY/DATE / DWG NO/REV | SUBJECT | SHEET ___ OF ___ / BOOK NO / REV |

FIGURE 1. KALAMAZOO RIVER AT MARSHALL USGS GAGE

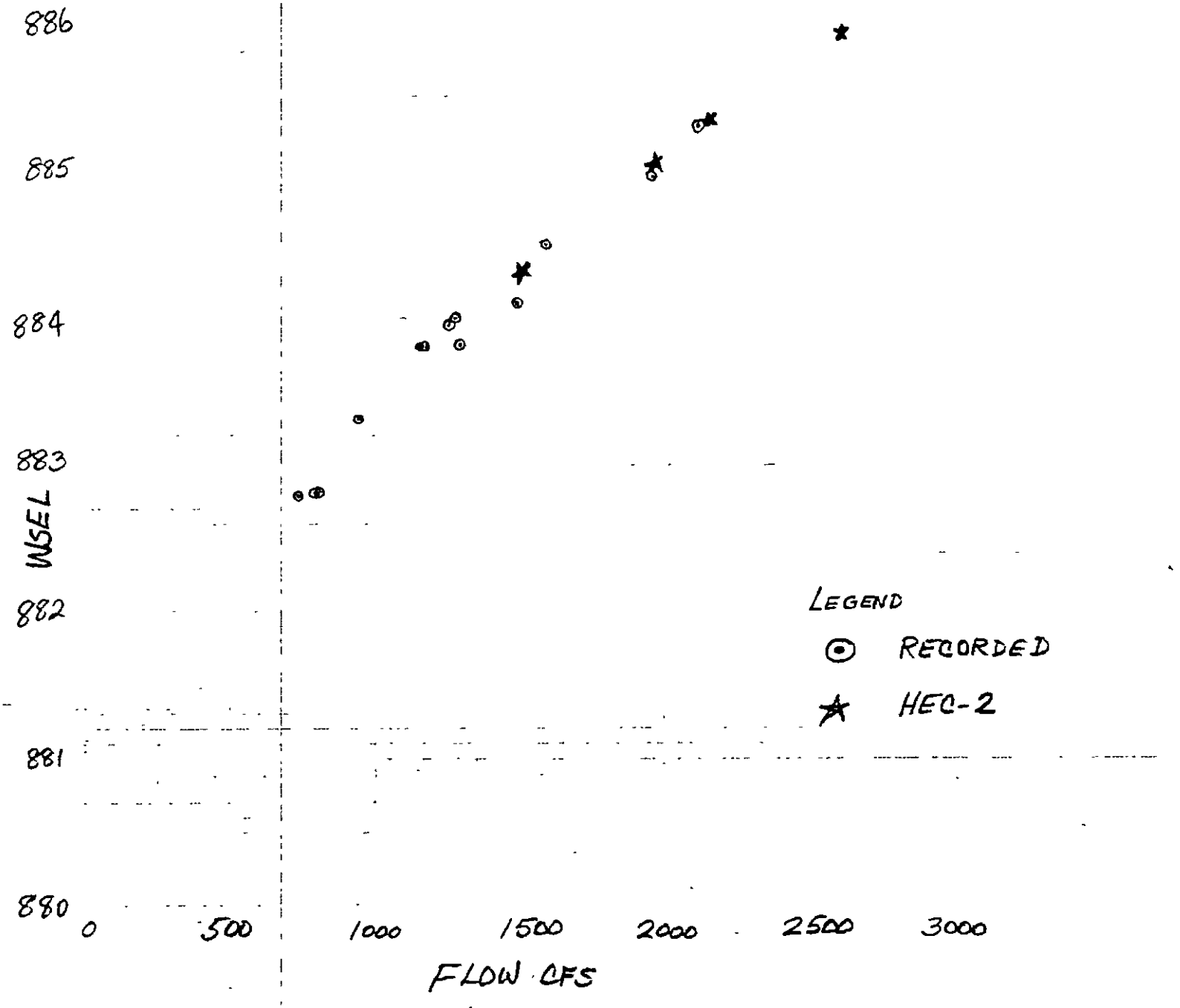
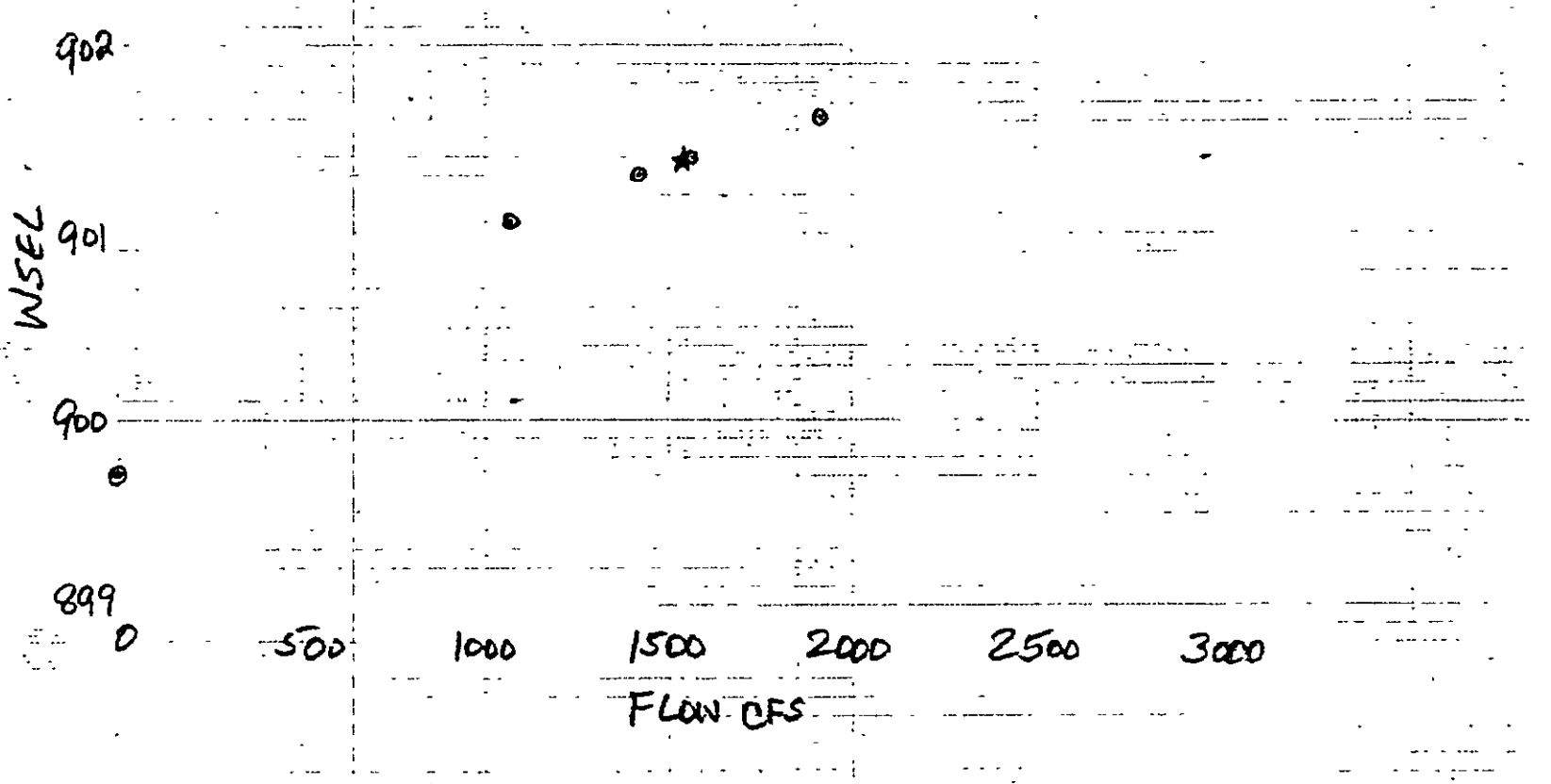


FIGURE 2. KALAMAZOO RIVER AT MARSHALL DAM

Minimum Elev of Spillway = 899.69

High water mark 21" above spillway } : 1.75

HWM Elev : 901.44



## Starting Conditions

The profile convergence method was used to estimate the starting water surface elevation at the downstream study limit, Cross Section 0.10. An hydraulic analysis was performed starting at about 2,700 feet downstream of Cross Section 0.10. Normal depth was used along with Elevations ±0.5 feet above normal depth for 100-year flood. There was perfect convergence of profiles at Cross Section 1.0 about 2,000 feet upstream of Cross Section 0.1. For ±0.5 foot difference in starting elevation, differences of +0.14 and -0.10 foot were estimated at the downstream study limit. The following elevations were used to start the hydraulics at Cross Section 0.10.

| Recurrence Interval Years | Flow cfs | Starting Elevation |
|---|---|---|
| 10 | 1,520 | 879.36 |
| 50 | 1,980 | 879.93 |
| 100 | 2,170 | 880.16 |
| 500 | 2,610 | 880.62 |

DA = 449 @ gage

## Special Problems

There were no special problems.

## References

None

Cross Section Reference

| Cross Section ID in Profile | SECNO in HEC-2 | Description |
|---|---|---|
| A | 0.1 | Surveyed Valley Section at downstream corporate boundary |
| B | 1.0 | Surveyed Valley Section |
| C | 1.8 | Surveyed Valley Section |
| | 1.9 | Surveyed Valley Section |
| | 2.0 | Surveyed Bridge Section |
| D | 2.1 | Surveyed Bridge Section - South Kalamazoo Avenue |
| | 2.2 | Bridge. Concrete arch 80' x 12.5'. Repeated Section 2.1 - USGS Gage |
| | 2.3 | Repeated Section 2.1 |
| E | 3.0 | Surveyed Valley Section |
| | 3.1 | Repeated Section 3.0 |
| F | 3.5 | Manufactured Valley Section |
| G | 3.7 | Surveyed Valley Section |
| | 3.8 | Repeated Section 3.7 |
| | 3.9 | Surveyed Valley Section |
| | 4.0 | Surveyed Bridge Section |
| H | 4.1 | Surveyed Bridge Section - South Marshall Avenue |
| | 4.2 | Bridge. Concrete arch 60' X 14'. Repeated Valley Section 3.9 |
| | 4.3 | Surveyed Valley Section |
| | 4.9 | Surveyed Valley Section downstream of dam |
| I | 5.0 | Surveyed Dam Section |
| | 5.1 | Spillway 1. 200' long, Elev. 900.05<br>Spillway 2. 91' long, Elev. 899.69<br>Repeated Section 4.9 |
| J | 6.0 | Surveyed Valley Section at upstream corporate boundary |

Bridge Notes and Sketches

1. Bridge Section 2. South Kalamazoo Avenue bridge
   Normal Bridge Routine used. Figures 3 and 4 attached

2. Bridge Section 4. South Marshall Avenue bridge.
   Normal Bridge Routine used. Figures 5 and 6 attached.

3. Bridge Section 5. Marshall dam.
   Figures 7 and 8 attached.

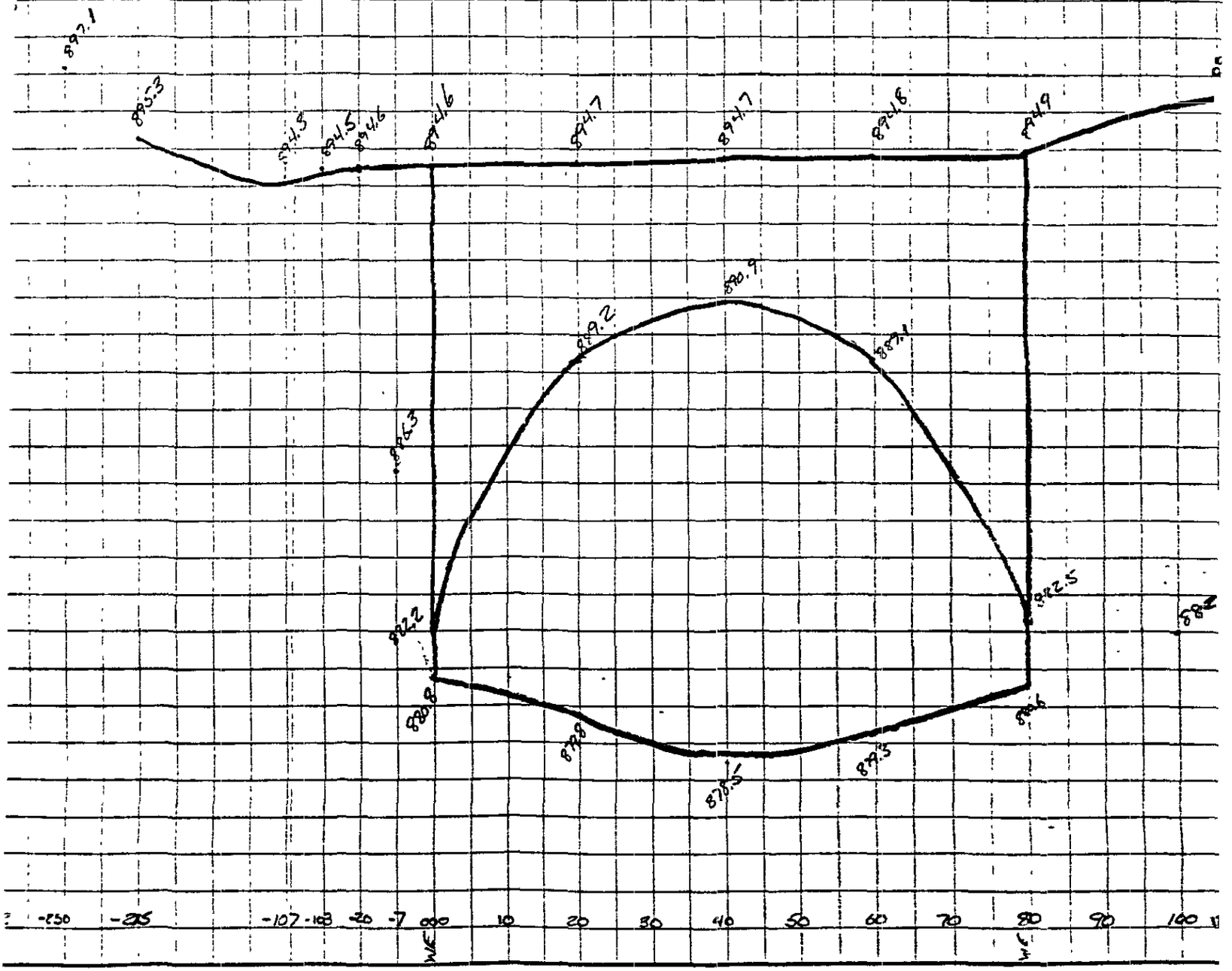
   Coefficient for weir flow over Marshall dam

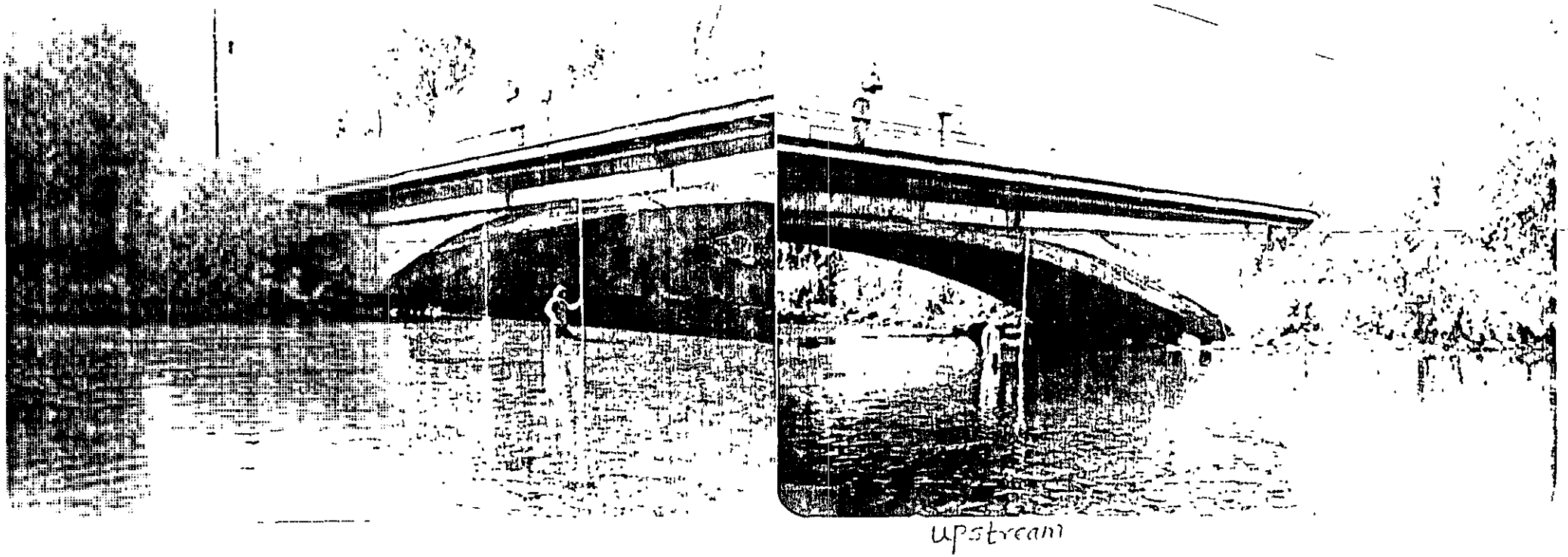
| | |
|---|---|
| Expected head over spillway | $\approx 1.5'$ |
| Width of spillway crest | $= 6'$ |
| $\frac{h}{\ell}$ | $= 0.25$ |
| Paved surface | |
| C | $= 3.09$ |

# CALCULATION SHEET

| CLIENT/OWNER | |
|---|---|
| Crossfor... #2, MARSHALL U.I. - D/S FACE | |
| CALC. BY/DATE | SUBJECT |
| REVIEW BY/DATE | |

Figure 3. South Kalamazoo Ave Bridge





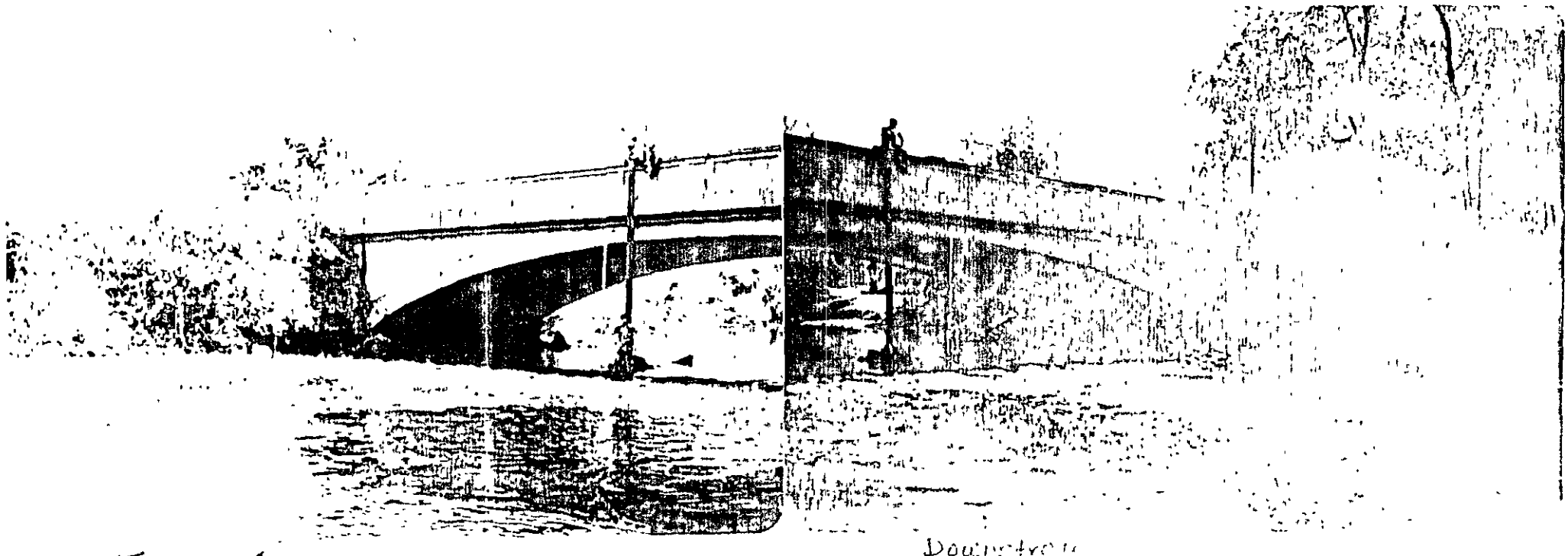
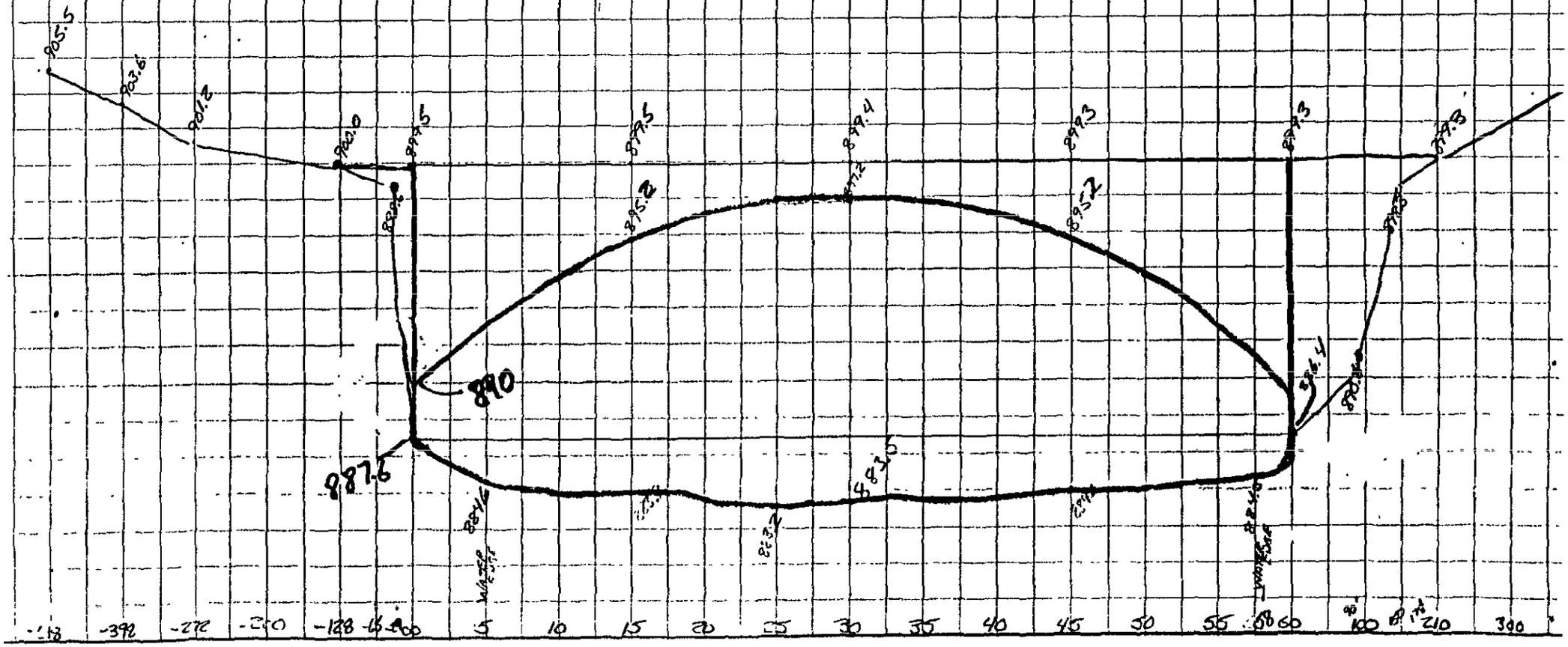
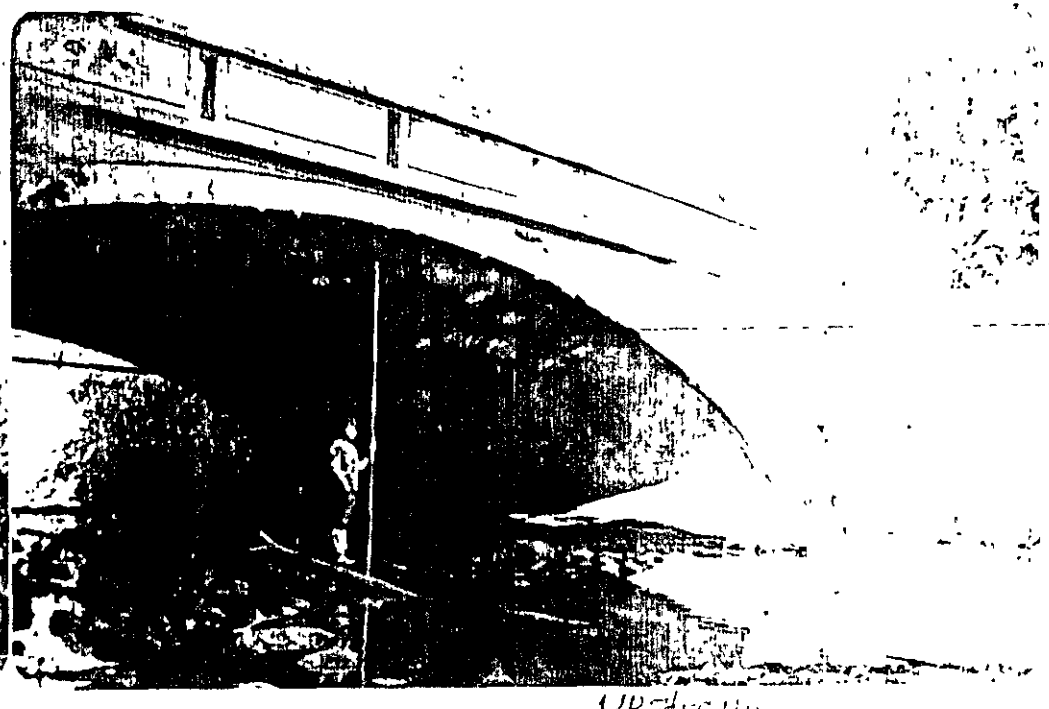




Figure 4
Bridge Section 2. South Kalamazoo Ave. Bridge

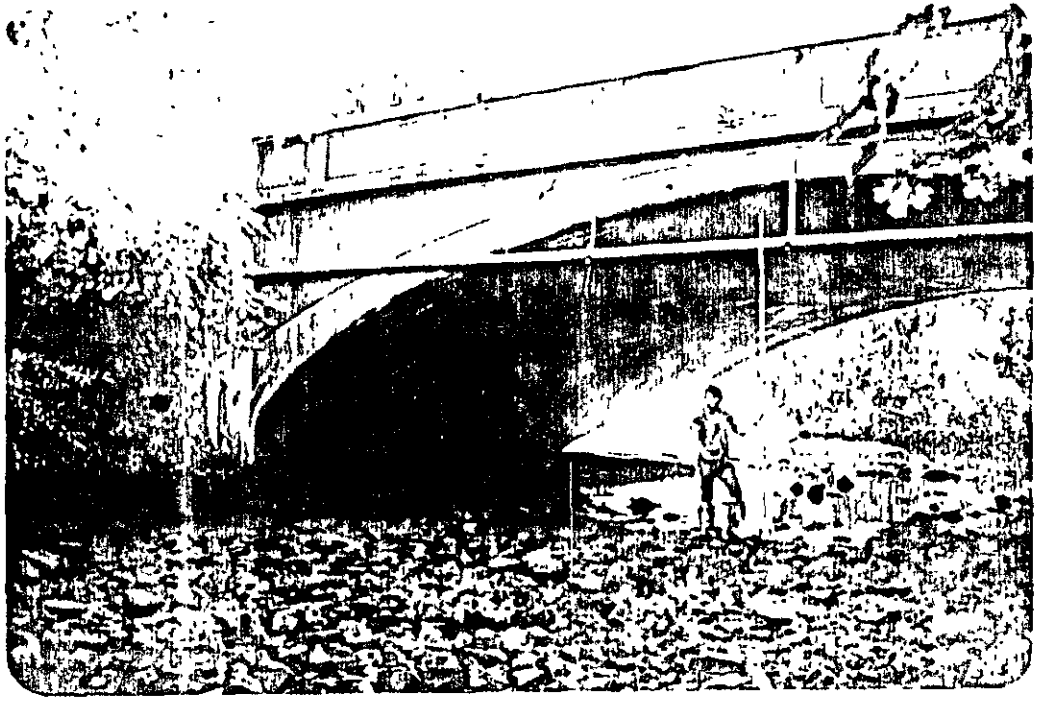
Figure 5.
Bridge Section 4
South Marshall Ave Bridge







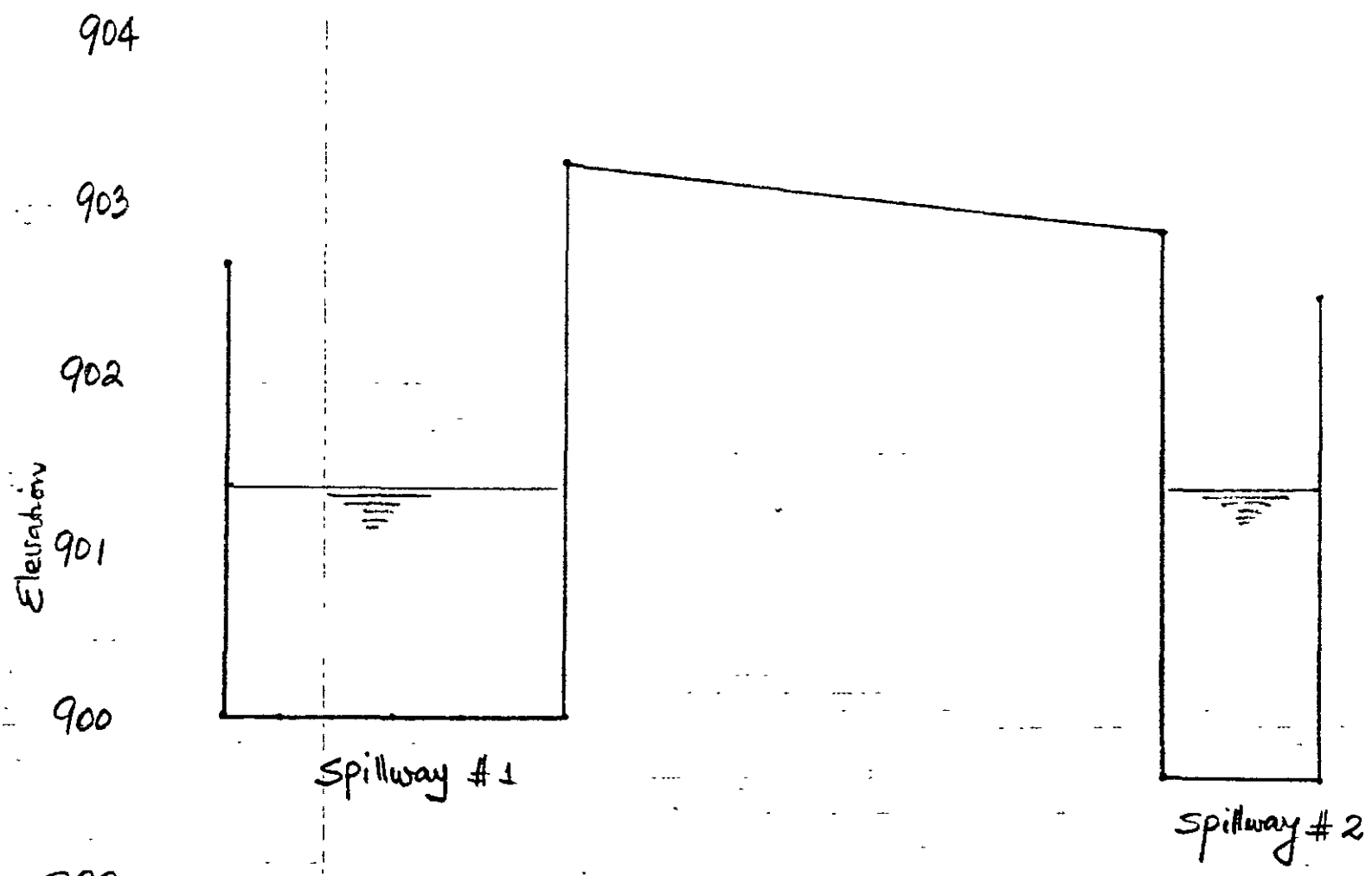
Upstream

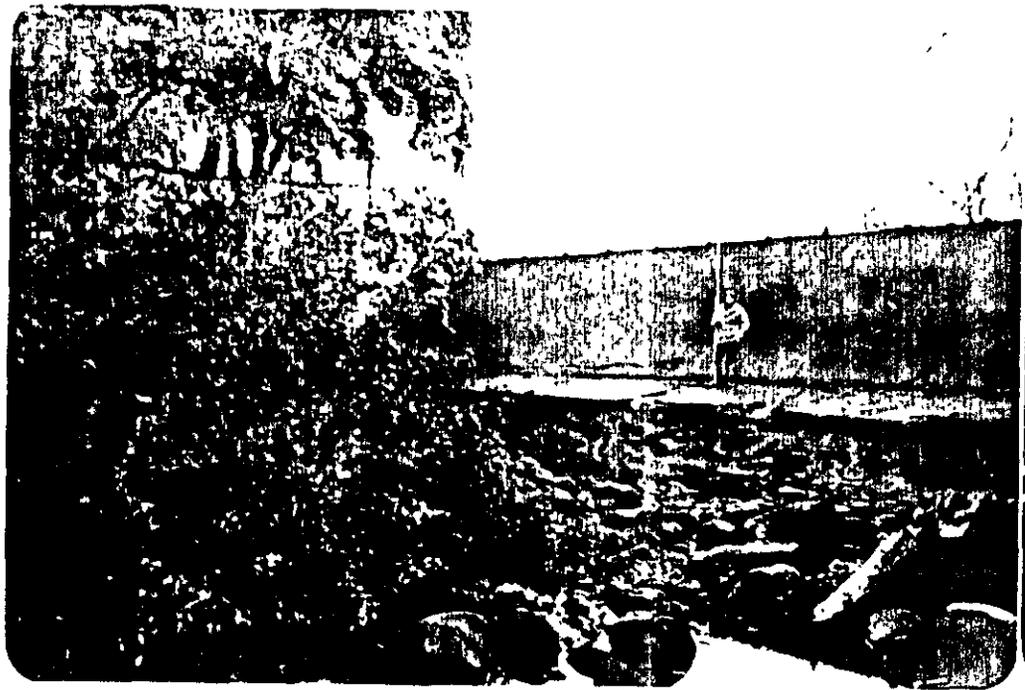


Downstream

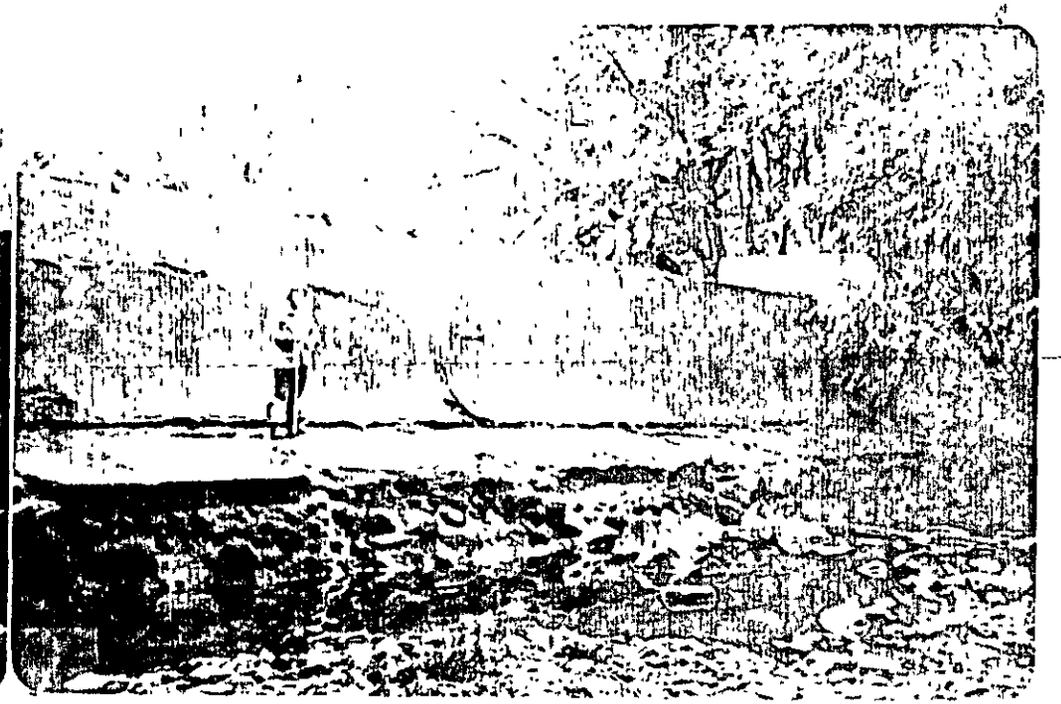
Figure 6.
Bridge Section 4. South Marshall Ave Bridge.

Figure 7.
Bridge Section 5
Marshall Dam





Spillway #1





Spillway #2



Power Plant Gates

Figure 8. Bridge Section S. Marshall Dam

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Marshall

3) WATERCOURSE: Kalamazoo River

4) DOCUMENT TYPE: ~~Study~~ Summary

00BREAK00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

KALAMAZOO RIVER

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| .100 | 880.16 | 1989.89 | 2000.00 | 3407.00 | 3446.39 | 1456.50 | 0.00 |
| .100 | 880.16 | 2000.00 | 2000.00 | 3407.00 | 3407.00 | 1407.00 | 0.00 |
| 1.000 | 881.34 | 1972.62 | 2000.00 | 2242.00 | 2334.01 | 361.38 | 1970.00 |
| 1.000 | 881.35 | 2000.00 | 2000.00 | 2242.00 | 2242.00 | 242.00 | 1970.00 |
| 1.800 | 884.93 | 1924.00 | 2004.00 | 2092.00 | 2103.67 | 179.67 | 3190.00 |
| 1.800 | 884.94 | 1924.00 | 2004.00 | 2092.00 | 2103.69 | 179.69 | 3190.00 |
| 1.900 | 885.20 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 319.00 |
| 1.900 | 885.21 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 319.00 |
| 2.000 | 885.18 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.000 | 885.20 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.100 | 885.26 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 33.00 |
| 2.100 | 885.27 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 33.00 |
| 2.200 | 885.33 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.200 | 885.30 | 2000.00 | 2000.00 | 2080.00 | 2080.00 | 80.00 | 1.00 |
| 2.300 | 885.56 | 1993.94 | 2000.00 | 2080.00 | 2104.88 | 110.94 | 79.00 |
| 2.300 | 885.53 | 1993.98 | 2000.00 | 2080.00 | 2104.84 | 110.86 | 79.00 |
| 3.000 | 886.50 | 1575.14 | 2000.00 | 2078.00 | 2105.97 | 530.83 | 930.00 |
| 3.000 | 886.51 | 1642.97 | 2000.00 | 2078.00 | 2084.80 | 441.83 | 930.00 |
| 3.100 | 886.56 | 1575.02 | 2000.00 | 2078.00 | 2106.07 | 531.05 | 55.00 |
| 3.100 | 886.57 | 1642.37 | 2000.00 | 2078.00 | 2084.55 | 442.17 | 55.00 |
| 3.500 | 887.08 | 1949.19 | 1980.00 | 2080.00 | 2085.40 | 136.21 | 1010.00 |
| 3.500 | 887.13 | 1980.00 | 1980.00 | 2080.00 | 2080.00 | 100.00 | 1010.00 |
| 3.700 | 888.22 | 1993.14 | 2000.00 | 2062.00 | 2080.86 | 87.72 | 670.00 |
| 3.700 | 888.30 | 1993.00 | 2000.00 | 2062.00 | 2081.00 | 88.00 | 670.00 |
| 3.800 | 888.76 | 1992.11 | 2000.00 | 2062.00 | 2083.05 | 90.94 | 175.00 |
| 3.800 | 888.82 | 1992.00 | 2000.00 | 2062.00 | 2083.27 | 91.27 | 175.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 3.900 | 889.16 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 239.00 |
| 3.900 | 889.20 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 239.00 |
| 4.000 | 889.16 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 4.000 | 889.21 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 1.00 |
| 4.100 | 889.27 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 45.50 |
| 4.100 | 889.31 | 2000.00 | 2000.00 | 2060.00 | 2060.00 | 60.00 | 45.50 |
| 4.200 | 889.32 | 1995.47 | 2000.00 | 2060.00 | 2080.85 | 85.39 | 1.00 |
| 4.200 | 889.36 | 1995.37 | 2000.00 | 2060.00 | 2081.12 | 85.75 | 1.00 |
| 4.300 | 889.68 | 1990.37 | 2000.00 | 2062.00 | 2086.72 | 96.35 | 60.00 |
| 4.300 | 889.71 | 1990.31 | 2000.00 | 2062.00 | 2085.00 | 94.69 | 60.00 |
| 4.900 | 890.05 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 350.00 |
| 4.900 | 890.08 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 350.00 |
| 5.000 | 901.39 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 30.00 |
| 5.000 | 901.39 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 30.00 |
| 5.100 | 901.39 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 50.00 |
| 5.100 | 901.39 | 1448.00 | 1448.00 | 2091.00 | 2091.00 | 643.00 | 50.00 |
| 6.000 | 901.39 | 2004.27 | 2000.00 | 2616.00 | 2757.34 | 753.06 | 2270.00 |
| 6.000 | 901.39 | 2004.26 | 2000.00 | 2616.00 | 2616.00 | 611.74 | 2270.00 |

KALAMAZOO RIVER

SUMMARY PRINTOUT TABLE 110

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOB | QCH | QROB | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| .100 | 880.16 | 0.00 | 880.17 | 1456.50 | 2.56 | 2157.32 | 10.11 | 0.00 | 0.00 | 2000.00 | 3407.00 | 0.00 |
| .100 | 880.16 | 0.00 | 880.17 | 1407.00 | 0.00 | 2170.00 | 0.00 | .01 | 2000.00 | 2000.00 | 3407.00 | 3407.00 |
| 1.000 | 881.34 | 0.00 | 881.47 | 361.38 | 4.07 | 2159.74 | 6.19 | 0.00 | 0.00 | 2000.00 | 2242.00 | 0.00 |
| 1.000 | 881.35 | .02 | 881.48 | 242.00 | 0.00 | 2170.00 | 0.00 | .01 | 2000.00 | 2000.00 | 2242.00 | 2242.00 |
| 1.800 | 884.93 | 0.00 | 885.08 | 179.67 | 278.82 | 1849.91 | 41.27 | 248.00 | 1924.00 | 2004.00 | 2092.00 | 2172.00 |
| 1.800 | 884.94 | .01 | 885.09 | 179.69 | 279.46 | 1849.19 | 41.35 | 248.00 | 1924.00 | 2004.00 | 2092.00 | 2172.00 |
| 1.900 | 885.20 | 0.00 | 885.56 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 1.900 | 885.21 | .01 | 885.57 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2080.00 | 2080.00 |
| 2.000 | 885.18 | 0.00 | 885.59 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 2.000 | 885.20 | .02 | 885.58 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2080.00 | 2080.00 |
| 2.100 | 885.26 | 0.00 | 885.66 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 2.100 | 885.27 | .00 | 885.64 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2080.00 | 2080.00 |
| 2.200 | 885.33 | 0.00 | 885.68 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2080.00 | 0.00 |
| 2.200 | 885.30 | -.03 | 885.65 | 80.00 | 0.00 | 2170.00 | 0.00 | 0.00 | 2000.00 | 2000.00 | 2080.00 | 2080.00 |
| 2.300 | 885.56 | 0.00 | 885.81 | 110.94 | 13.81 | 1987.19 | 169.00 | 240.00 | 1920.00 | 2000.00 | 2080.00 | 2160.00 |
| 2.300 | 885.53 | -.03 | 885.78 | 110.86 | 13.69 | 1987.91 | 168.39 | 240.00 | 1920.00 | 2000.00 | 2080.00 | 2160.00 |
| 3.000 | 886.50 | 0.00 | 886.57 | 530.83 | 859.62 | 1247.95 | 62.42 | 0.00 | 0.00 | 2000.00 | 2078.00 | 0.00 |
| 3.000 | 886.51 | .00 | 886.58 | 441.83 | 852.05 | 1299.75 | 18.20 | .04 | 1642.97 | 2000.00 | 2078.00 | 2084.80 |
| 3.100 | 886.56 | 0.00 | 886.60 | 531.05 | 688.45 | 981.57 | 49.97 | 0.00 | 0.00 | 2000.00 | 2078.00 | 0.00 |
| 3.100 | 886.57 | .01 | 886.61 | 442.17 | 683.90 | 1022.25 | 13.84 | .04 | 1642.37 | 2000.00 | 2078.00 | 2084.55 |
| 3.500 | 887.08 | 0.00 | 887.26 | 136.21 | 43.27 | 1675.42 | 1.31 | 0.00 | 0.00 | 1980.00 | 2080.00 | 0.00 |
| 3.500 | 887.13 | .05 | 887.32 | 100.00 | 0.00 | 1720.00 | 0.00 | .03 | 1980.00 | 1980.00 | 2080.00 | 2080.00 |
| 3.700 | 888.22 | 0.00 | 888.63 | 87.72 | 17.12 | 1642.22 | 60.66 | 0.00 | 0.00 | 2000.00 | 2062.00 | 0.00 |
| 3.700 | 888.30 | .08 | 888.69 | 88.00 | 17.66 | 1639.10 | 63.23 | 88.00 | 1993.00 | 2000.00 | 2062.00 | 2081.00 |
| 3.800 | 888.76 | 0.00 | 889.03 | 90.94 | 18.92 | 1480.58 | 70.50 | 182.00 | 0.00 | 2000.00 | 2062.00 | 0.00 |
| 3.800 | 888.82 | .05 | 889.08 | 91.27 | 19.25 | 1478.79 | 71.96 | 182.00 | 1940.00 | 2000.00 | 2062.00 | 2122.00 |
| 3.900 | 889.16 | 0.00 | 889.58 | 60.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2060.00 | 0.00 |
| 3.900 | 889.20 | .04 | 889.62 | 60.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2060.00 | 0.00 |
| 4.000 | 889.16 | 0.00 | 889.58 | 60.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2060.00 | 0.00 |
| 4.000 | 889.21 | .04 | 889.62 | 60.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2060.00 | 0.00 |
| 4.100 | 889.27 | 0.00 | 889.68 | 60.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2060.00 | 0.00 |
| 4.100 | 889.31 | .04 | 889.71 | 60.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 2000.00 | 2060.00 | 0.00 |
| 4.200 | 889.32 | 0.00 | 889.69 | 85.39 | 2.47 | 1534.97 | 32.56 | 120.00 | 1970.00 | 2000.00 | 2060.00 | 2090.00 |
| 4.200 | 889.36 | .04 | 889.72 | 85.75 | 2.58 | 1534.15 | 33.27 | 120.00 | 1970.00 | 2000.00 | 2060.00 | 2090.00 |
| 4.300 | 889.68 | 0.00 | 889.85 | 96.35 | 34.80 | 1402.22 | 132.97 | 0.00 | 0.00 | 2000.00 | 2062.00 | 0.00 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.300 | 889.71 | .03 | 889.88 | 94.69 | 35.06 | 1400.84 | 134.11 | 95.00 | 1990.00 | 2000.00 | 2062.00 | 2085.00 |

| SECNO | CWSEL | DIFKWS | EG | TOPWID | QLOH | QCH | QROH | PERENC | STENCL | STCHL | STCHR | STENCR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.900 | 890.05 | 0.00 | 890.06 | 643.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 1448.00 | 2091.00 | 0.00 |
| 4.900 | 890.08 | .02 | 890.09 | 643.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 1448.00 | 1448.00 | 2091.00 | 2091.00 |
| 5.000 | 901.39 | 0.00 | 901.39 | 643.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 0.00 | 1448.00 | 2091.00 | 0.00 |
| 5.000 | 901.39 | .00 | 901.39 | 643.00 | 0.00 | 1570.00 | 0.00 | 0.00 | 1448.00 | 1448.00 | 2091.00 | 2091.00 |
| 5.100 | 901.39 | 0.00 | 901.39 | 643.00 | 0.00 | 1720.00 | 0.00 | 0.00 | 0.00 | 1448.00 | 2091.00 | 0.00 |
| 5.100 | 901.39 | .00 | 901.39 | 643.00 | 0.00 | 1720.00 | 0.00 | 0.00 | 1448.00 | 1448.00 | 2091.00 | 2091.00 |
| 6.000 | 901.39 | 0.00 | 901.39 | 753.06 | 0.00 | 1712.49 | 7.51 | 0.00 | 0.00 | 2000.00 | 2616.00 | 0.00 |
| 6.000 | 901.39 | -.00 | 901.39 | 611.74 | 0.00 | 1720.00 | 0.00 | .00 | 2000.00 | 2000.00 | 2616.00 | 2616.00 |

SUMMARY OF ERRORS

FLOODWAY DATA, KALAMAZOO RIVER
PROFILE NO. 2

| STATION | FLOODWAY WIDTH (FT) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| .100 | 1407. | 2368. | .9 | 880.2 | 880.2 | 0.0 |
| 1.000 | 242. | 745. | 2.9 | 881.3 | 881.3 | 0.0 |
| 1.800 | 180. | 825. | 2.6 | 884.9 | 884.9 | 0.0 |
| 1.900 | 80. | 451. | 4.8 | 885.2 | 885.2 | 0.0 |
| 2.000 | 80. | 440. | 4.9 | 885.2 | 885.2 | 0.0 |
| 2.100 | 80. | 443. | 4.9 | 885.3 | 885.3 | 0.0 |
| 2.200 | 80. | 458. | 4.7 | 885.3 | 885.3 | 0.0 |
| 2.300 | 111. | 584. | 3.7 | 885.6 | 885.6 | 0.0 |
| 3.000 | 442. | 1405. | 1.5 | 886.5 | 886.5 | 0.0 |
| 3.100 | 442. | 1432. | 1.2 | 886.6 | 886.6 | 0.0 |
| 3.500 | 100. | 488. | 3.5 | 887.1 | 887.1 | 0.0 |
| 3.700 | 88. | 366. | 4.7 | 888.3 | 888.2 | .1 |
| 3.800 | 91. | 413. | 3.8 | 888.9 | 888.8 | .1 |
| 3.900 | 60. | 305. | 5.2 | 889.2 | 889.2 | 0.0 |
| 4.000 | 60. | 305. | 5.2 | 889.2 | 889.2 | 0.0 |
| 4.100 | 60. | 310. | 5.1 | 889.3 | 889.3 | 0.0 |
| 4.200 | 86. | 349. | 4.5 | 889.3 | 889.3 | 0.0 |
| 4.300 | 95. | 496. | 3.2 | 889.7 | 889.7 | 0.0 |
| 4.900 | 643. | 2155. | .7 | 890.1 | 890.1 | 0.0 |
| 5.000 | 643. | 9423. | .2 | 901.4 | 901.4 | 0.0 |
| 5.100 | 643. | 9423. | .2 | 901.4 | 901.4 | 0.0 |
| 6.000 | 612. | 4354. | .4 | 901.4 | 901.4 | 0.0 |

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Marshall

3) WATERCOURSE: Mill Rail

4) DOCUMENT TYPE: 10.50 100 +500 yr. profiles

00BREAK00

```
**********************************************************
*  HEC2 WATER SURFACE PROFILES                           *
*  VERSION OF NOVEMBER 1976                              *
*  UPDATED JULY 1979                                     *
*  ERROR CORR - 01,02,03                                 *
*  MODIFICATION - 50,51,52,53                            *
*                                                        *
*  RUN DATE  80/04/16. TIME  08.45.29.                   *
**********************************************************
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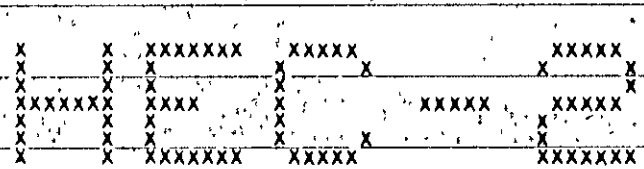

FIS City of Marshall

Calhoun County, Michigan

10, 50, 100 & 500 yr Profiles for Mill Race

(Branch of Rice Creek)

8-18-80

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**********************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
 ERROR CORR -  01,02,03
 MODIFICATION -  50,51,52,53
**********************************************************

I1      FIS CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN.
T2       10-YEAR FLOOD
T3      MILL RACE

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        2.        0.        0.  0.000000      0.00      0.0       0.   890.930     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
   38.000     1.000    53.000    21.000    22.000    54.000     4.000    39.000   150.000   201.000

QT      5.000   290.000   380.000   430.000   530.000   430.000     0.000     0.000     0.000     0.000
NC       .080      .080      .035      .100      .300     0.000     0.000     0.000     0.000     0.000

X1     54.300    20.000  2000.000  2093.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    902.500  1950.000   902.000  1960.000   900.600  1970.000   897.300  1980.000   891.500  1990.000
GR    887.500  2000.000   886.200  2010.000   885.900  2020.000   885.900  2030.000   886.400  2040.000
GR    886.600  2050.000   887.000  2060.000   886.300  2070.000   885.800  2080.000   886.300  2090.000
GR    887.600  2093.000   887.500  2093.000   891.800  2100.000   895.500  2110.000   900.300  2120.000
SB      0.000     1.500     3.300     0.000     2.000     0.000      .300     0.000   891.100   891.100

X1     54.500     4.000     0.000    36.000     1.000     1.000     1.000     0.000     0.000     0.000
X2      0.000     0.000     1.000   892.000   894.500     0.000     0.000     0.000     0.000     0.000
BT     11.000     0.000   898.600     0.000     0.000   894.700     0.000     7.000   894.700     0.000
BT     14.000   894.700     0.000    18.000   894.500     0.000    18.000   898.600     0.000    21.000
BT    898.600     0.000    21.000   894.500     0.000    28.000   894.500     0.000    36.000   894.700
BT      0.000    36.000   898.500     0.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    898.600     0.000   891.100     0.000   891.100    36.000   898.600    36.000     0.000     0.000
ET      0.000     0.000     0.000     0.000     0.000     1.410     0.000     0.000     0.000     0.000

X1     54.600    20.000  2000.000  2072.000   120.000   120.000   120.000     0.000     0.000     0.000
GR    922.900  1798.000   922.500  1805.000   920.200  1812.000   920.000  1818.000   917.400  1824.000
GR    907.500  1842.000   917.900  1845.000   917.100  1858.000   904.600  1911.000   904.700  1917.000
GR    904.800  1921.000   903.400  1963.000   901.600  1984.000   896.100  2000.000   892.100  2015.000
GR    891.100  2025.000   890.900  2040.000   891.200  2055.000   893.300  2072.000   898.400  2072.000
NC       .060      .060     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1     55.000    11.000  2004.000  2048.000  1380.000  1380.000  1380.000     0.000     0.000     0.000
GR    916.300  1682.000   911.400  1722.000   901.500  1766.000   897.700  1806.000   896.400  2000.000
GR    894.600  2004.000   890.800  2022.000   890.500  2026.000   892.100  2038.000   894.600  2048.000
GR    897.800  2054.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NC | .080 | .080 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 55.100 | 14.000 | 2000.000 | 2067.000 | 1200.000 | 1200.000 | 1200.000 | 0.000 | 0.000 | 0.000 |
| GR | 919.800 | 1227.000 | 915.100 | 1339.000 | 907.100 | 1625.000 | 899.900 | 1733.000 | 896.300 | 1833.000 |
| GR | 897.900 | 2000.000 | 895.100 | 2000.000 | 894.300 | 2002.000 | 891.800 | 2019.000 | 891.900 | 2030.000 |
| GR | 891.900 | 2044.000 | 894.300 | 2064.000 | 895.100 | 2067.000 | 897.900 | 2067.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 54.300

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 54.30 | 5.13 | 890.93 | 0.00 | 890.93 | 890.94 | .01 | 0.00 | 0.00 | 887.50 |
| 290. | 2. | 287. | 1. | 15. | 426. | 10. | 0. | 0. | 887.50 |
| 0.00 | .15 | .67 | .14 | .080 | .035 | .080 | 0.000 | 885.80 | 1991.43 |
| .000033 | 0. | 0. | 0. | 0 | 0 | 0 | 0.00 | 107.16 | 2098.58 |

SPECIAL BRIDGE

| SB | XK | XKOR | COEQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 1.50 | 3.30 | 0.00 | 2.00 | 0.00 | .30 | 0.00 | 891.10 | 891.10 |

*SECNO 54.500

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 22655.94 | 896.24 | 0.00 | 285. | 5. | 0. | 2. | 892.00 | 894.50 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.50 | 5.39 | 896.49 | 0.00 | 0.00 | 896.52 | .03 | 5.58 | 0.00 | 898.60 |
| 290. | 0. | 290. | 0. | 0. | 194. | 0. | 0. | 0. | 898.60 |
| .00 | 0.00 | 1.50 | 0.00 | .080 | .035 | .080 | .018 | 891.10 | 0.00 |
| .000186 | 1. | 1. | 1. | 2 | 0 | 9 | 0.00 | 36.00 | 36.00 |

*SECNO 54.600

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 5.62 | 896.52 | 0.00 | 0.00 | 896.54 | .01 | .01 | .00 | 896.10 |
| 290. | 0. | 290. | 0. | 0. | 323. | 0. | 1. | 0. | 898.40 |
| .04 | .05 | .90 | 0.00 | .080 | .035 | .080 | .034 | 890.90 | 1998.77 |
| .000065 | 120. | 120. | 120. | 2 | 0 | 0 | 0.00 | 73.23 | 2072.00 |

*SECNO 55.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 6.15 | 896.65 | 0.00 | 0.00 | 896.68 | .03 | .14 | .01 | 894.60 |
| 290. | 2. | 287. | 1. | 9. | 192. | 4. | 9. | 3. | 894.60 |
| .30 | .21 | 1.49 | .31 | .060 | .035 | .060 | .035 | 890.50 | 1963.10 |
| .000177 | 1380. | 1380. | 1380. | 2 | 0 | 0 | 0.00 | 88.74 | 2051.84 |

*SECNO 55.100

3265 DIVIDED FLOW

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 55.10 | 5.03 | 896.83 | 0.00 | 0.00 | 896.84 | .02 | .16 | .00 | 897.90 | |
| 290. | 1. | 289. | 0. | 18. | 273. | 0. | 16. | 6. | 897.90 | |
| .61 | .08 | 1.06 | 0.00 | .080 | .035 | .080 | .035 | 891.80 | 1818.41 | |
| .000103 | 1200. | 1200. | 1200. | 2 | 0 | 0 | 0.00 | 136.40 | 2067.00 | |

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**********************************************************

T1      FIS CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN.
T2       50-YEAR FLOOD
T3      MILL RACE

J1  ICHECK     INQ        NINV       IDIR      STRT       METRIC     HVINS      Q          WSEL       FQ
      -10.       3.         0.         0.   0.000000       0.00       0.0        0.      892.420    0.000

J2  NPROF      IPLOT      PRFVS      XSECV     XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
     2.000      0.000     -1.000      0.000     0.000      0.000      0.000      0.000      0.000      0.000

*PROF 2

CCHV=    .100 CEHV=    .300
*SECNO 54.300
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

    54.30       6.62     892.42       0.00     892.42     892.43        .01       0.00       0.00     887.50
      380.         5.       372.         3.        30.       564.        20.         0.         0.     887.50
     0.00         .17        .66        .15       .080       .035       .080      0.000     885.80    1988.41
  .000022          0.         0.         0.          0          0          0       0.00     113.26    2101.68

SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      0.00       1.50       3.30       0.00       2.00       0.00        .30       0.00     891.10     891.10
*SECNO 54.500
PRESSURE AND WEIR FLOW

  EGPRS      EGLWC      H3         QWEIR      QPR        BAREA      TRAPEZOID AREA      ELLC       ELTRD
 38263.02    897.73       0.00        379.          4.         0.          2.        892.00     894.50

    54.50       5.76     896.86       0.00       0.00     896.92        .05       4.49       0.00     898.60
      380.         0.       380.         0.         0.       207.         0.         0.         0.     898.60
      .00       0.00       1.83       0.00       .080       .035       .080       .018     891.10       0.00
  .000261          1.         1.         1.          2          0          8       0.00      36.00      36.00

*SECNO 54.600
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 6.02 | 896.92 | 0.00 | 0.00 | 896.94 | .02 | .02 | .00 | 896.10 |
| 380. | 0. | 380. | 0. | 1. | 352. | 0. | 1. | 0. | 898.40 |
| .03 | .09 | 1.08 | 0.00 | .080 | .035 | .080 | .034 | 890.90 | 1997.62 |
| .000085 | 120. | 120. | 120. | 2 | 0 | 0 | 0.00 | 74.38 | 2072.00 |

*SECNO 55.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 6.57 | 897.07 | 0.00 | 0.00 | 897.12 | .05 | .18 | .01 | 894.60 |
| 380. | 9. | 369. | 2. | 40. | 211. | 6. | 10. | 4. | 894.60 |
| .26 | .22 | 1.75 | .39 | .060 | .035 | .060 | .035 | 890.50 | 1899.37 |
| .000215 | 1380. | 1380. | 1380. | 2 | 0 | 0 | 0.00 | 153.26 | 2052.64 |

*SECNO 55.100

3265 DIVIDED FLOW

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV. |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 55.10 | 5.49 | 897.29 | 0.00 | 0.00 | 897.31 | .02 | .19 | .00 | 897.90 |
| 380. | 8. | 372. | 0. | 65. | 304. | 0. | 19. | 9. | 897.90 |
| .53 | .13 | 1.22 | 0.00 | .080 | .035 | .080 | .035 | 891.80 | 1805.50 |
| .000121 | 1200. | 1200. | 1200. | 2 | 0 | 0 | 0.00 | 197.82 | 2067.00 |

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

T1      FIS CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN.
T2      100-YEAR FLOOD
T3      MILL RACE

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       4.        0.        0.   0.000000      0.00      0.0       0.    893.070     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

*PROF 3

CCHV=    .100 CEHV=    .300
*SECNO 54.300
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         CLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

    54.30      7.27    893.07      0.00    893.07    893.08       .01      0.00      0.00    887.50
      430.        7.       419.        4.        38.       625.       26.        0.        0.    887.50
     0.00        .18        .67        .16      .080      .035      .080     0.000    885.80   1987.29
  .000020         0.         0.         0.         0         0         0      0.00    116.14   2103.43

SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      0.00      1.50      3.30      0.00      2.00      0.00       .30      0.00    891.10    891.10

*SECNO 54.500
PRESSURE AND WEIR FLOW

  EGPRS     EGLWC     H3        QWEIR     QPR       BAREA     TRAPEZOID AREA     ELLC      ELTRD
 48745.04   898.38      0.00       428.        4.         0.         2.    892.00    894.50

    54.50      5.95    897.05      0.00      0.00    897.11       .06      4.04      0.00    898.60
      430.        0.       430.        0.        0.       214.        0.        0.        0.    898.60
      .00       0.00       2.01       0.00      .080      .035      .080      .018    891.10      0.00
  .000303         1.         1.         1.         2         0         8      0.00     36.00     36.00

*SECNO 54.600
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 6.21 | 897.11 | 0.00 | 0.00 | 897.14 | .02 | .02 | .00 | 896.10 |
| 430. | 0. | 430. | 0. | 1. | 366. | 0. | 1. | 0. | 898.40 |
| .03 | .11 | 1.18 | 0.00 | .080 | .035 | .080 | .034 | 890.90 | 1997.05 |
| .000095 | 120. | 120. | 120. | 2 | 0 | 0 | 0.00 | 74.95 | 2072.00 |

*SECNO 55.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 6.79 | 897.29 | 0.00 | 0.00 | 897.34 | .05 | .19 | .01 | 894.60 |
| 430. | 17. | 411. | 3. | 66. | 220. | 7. | 11. | 4. | 894.60 |
| .24 | .25 | 1.86 | .42 | .060 | .035 | .060 | .035 | 890.50 | 1867.57 |
| .000230 | 1380. | 1380. | 1380. | 2 | 0 | 0 | 0.00 | 185.47 | 2053.04 |

*SECNO 55.100

3265 DIVIDED FLOW

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 55.10 | 5.72 | 897.52 | 0.00 | 0.00 | 897.54 | .03 | .20 | .00 | 897.90 |
| 430. | 15. | 415. | 0. | 98. | 319. | 0. | 21. | 10. | 897.90 |
| .51 | .15 | 1.30 | 0.00 | .080 | .035 | .080 | .035 | 891.80 | 1799.13 |
| .000129 | 1200. | 1200. | 1200. | 2 | 0 | 0 | 0.00 | 228.12 | 2067.00 |

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************

T1      FIS CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN.
T2      500-YEAR FLOOD
T3      MILL RACE

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
      =10.       5.         0.         0.    0.000000       0.00       0.0        0.      894.560     0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
     15.000     0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

*PROF 4

CCHV=     .100 CEHV=     .300
*SECNO 54.300
    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         QLOSS      BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        LEFT/RIGHT
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IOC        ICONT      CORAR      TOPWID     ENDST

     54.30       8.76     894.56       0.00     894.56     894.57        .01       0.00       0.00     887.50
      530.         11.        512.         7.        59.        763.        45.         0.         0.     887.50
      0.00        .19        .67        .16       .080       .035       .080      0.000     885.80    1984.72
   .000015         0.         0.         0.          0          0          0       0.00     122.74    2107.46

SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      0.00       1.50       3.30       0.00       2.00       0.00        .30       0.00     891.10     891.10

*SECNO 54.500
PRESSURE AND WEIR FLOW

  EGPRS      EGLWC      H3         QWEIR      QPR        BAREA      TRAPEZOID AREA      ELLC       ELTRD
 73591.25     899.87       0.00        528.          3.         0.          2.      892.00     894.50

     54.50       6.30     897.40       0.00       0.00     897.49        .08       2.92       0.00     898.60
      530.         0.        530.         0.         0.        227.         0.         0.         0.     898.60
       .00       0.00       2.34       0.00       .080       .035       .080       .018     891.10       0.00
   .000388          1.         1.         1.          2          0          8       0.00      36.00      36.00

*SECNO 54.600
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 6.59 | 897.49 | 0.00 | 0.00 | 897.51 | .03 | .02 | .01 | 896.10 | |
| 530. | 0. | 530. | 0. | 3. | 393. | 0. | 1. | 0. | 898.40 | |
| .02 | .15 | 1.35 | 0.00 | .080 | .035 | .080 | .034 | 890.90 | 1995.97 | |
| .000115 | 120. | 120. | 120. | 2 | 0 | 0 | 0.00 | 76.03 | 2072.00 | |

*SECNO 55.000

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 7.19 | 897.69 | 0.00 | 0.00 | 897.75 | .06 | .22 | .01 | 894.60 | |
| 530. | 41. | 484. | 4. | 133. | 238. | 9. | 13. | 5. | 894.60 | |
| .23 | .31 | 2.03 | .48 | .060 | .035 | .060 | .035 | 890.50 | 1807.58 | |
| .000248 | 1380. | 1380. | 1380. | 2 | 0 | 0 | 0.00 | 246.21 | 2053.79 | |

*SECNO 55.100

3280 CROSS SECTION 55.10 EXTENDED .04 FEET

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 55.10 | 6.14 | 897.94 | 0.00 | 0.00 | 897.97 | .03 | .22 | .00 | 897.90 | |
| 530. | 35. | 495. | 0. | 178. | 348. | 0. | 26. | 13. | 897.90 | |
| .48 | .20 | 1.42 | 0.00 | .080 | .035 | .080 | .035 | 891.80 | 1787.41 | |
| .000141 | 1200. | 1200. | 1200. | 2 | 0 | 0 | 0.00 | 279.59 | 2067.00 | |

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY 1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MILL RACE

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 54.300 | 890.93 | 1991.43 | 2000.00 | 2093.00 | 2098.58 | 107.16 | 0.00 |
| 54.300 | 892.42 | 1988.41 | 2000.00 | 2093.00 | 2101.68 | 113.26 | 0.00 |
| 54.300 | 893.07 | 1987.29 | 2000.00 | 2093.00 | 2103.43 | 116.14 | 0.00 |
| 54.300 | 894.56 | 1984.72 | 2000.00 | 2093.00 | 2107.46 | 122.74 | 0.00 |
| 54.500 | 896.49 | 0.00 | 0.00 | 36.00 | 36.00 | 36.00 | 1.00 |
| 54.500 | 896.86 | 0.00 | 0.00 | 36.00 | 36.00 | 36.00 | 1.00 |
| 54.500 | 897.05 | 0.00 | 0.00 | 36.00 | 36.00 | 36.00 | 1.00 |
| 54.500 | 897.40 | 0.00 | 0.00 | 36.00 | 36.00 | 36.00 | 1.00 |
| 54.600 | 896.52 | 1998.77 | 2000.00 | 2072.00 | 2072.00 | 73.23 | 120.00 |
| 54.600 | 896.92 | 1997.62 | 2000.00 | 2072.00 | 2072.00 | 74.38 | 120.00 |
| 54.600 | 897.11 | 1997.05 | 2000.00 | 2072.00 | 2072.00 | 74.95 | 120.00 |
| 54.600 | 897.49 | 1995.97 | 2000.00 | 2072.00 | 2072.00 | 76.03 | 120.00 |
| 55.000 | 896.65 | 1963.10 | 2004.00 | 2048.00 | 2051.84 | 88.74 | 1380.00 |
| 55.000 | 897.07 | 1899.37 | 2004.00 | 2048.00 | 2052.64 | 153.26 | 1380.00 |
| 55.000 | 897.29 | 1867.57 | 2004.00 | 2048.00 | 2053.04 | 185.47 | 1380.00 |
| 55.000 | 897.69 | 1807.58 | 2004.00 | 2048.00 | 2053.79 | 246.21 | 1380.00 |
| 55.100 | 896.83 | 1818.41 | 2000.00 | 2067.00 | 2067.00 | 136.40 | 1200.00 |
| 55.100 | 897.29 | 1805.50 | 2000.00 | 2067.00 | 2067.00 | 197.82 | 1200.00 |
| 55.100 | 897.52 | 1799.13 | 2000.00 | 2067.00 | 2067.00 | 228.12 | 1200.00 |
| 55.100 | 897.94 | 1787.41 | 2000.00 | 2067.00 | 2067.00 | 279.59 | 1200.00 |

MILL RACE

SUMMARY PRINTOUT TABLE 150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 290.00 | 890.93 | 0.00 | 890.94 | .33 | .67 | 449.92 | 502.29 |
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 380.00 | 892.42 | 0.00 | 892.43 | .22 | .66 | 614.05 | 810.86 |
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 430.00 | 893.07 | 0.00 | 893.08 | .20 | .67 | 688.60 | 964.96 |
| 54.300 | 0.00 | 0.00 | 0.00 | 885.80 | 530.00 | 894.56 | 0.00 | 894.57 | .15 | .67 | 866.57 | 1360.42 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 290.00 | 896.49 | 0.00 | 896.52 | 1.86 | 1.50 | 193.93 | 212.50 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 380.00 | 896.86 | 0.00 | 896.92 | 2.61 | 1.83 | 207.50 | 235.34 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 430.00 | 897.05 | 0.00 | 897.11 | 3.03 | 2.01 | 214.19 | 246.84 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 530.00 | 897.40 | 0.00 | 897.49 | 3.88 | 2.34 | 226.84 | 268.98 |
| 54.600 | 120.00 | 0.00 | 0.00 | 890.90 | 290.00 | 896.52 | 0.00 | 896.54 | .65 | .90 | 323.46 | 360.44 |
| 54.600 | 120.00 | 0.00 | 0.00 | 890.90 | 380.00 | 896.92 | 0.00 | 896.94 | .85 | 1.08 | 352.54 | 413.35 |
| 54.600 | 120.00 | 0.00 | 0.00 | 890.90 | 430.00 | 897.11 | 0.00 | 897.14 | .95 | 1.18 | 367.19 | 440.70 |
| 54.600 | 120.00 | 0.00 | 0.00 | 890.90 | 530.00 | 897.49 | 0.00 | 897.51 | 1.15 | 1.35 | 395.31 | 494.48 |
| 55.000 | 1380.00 | 0.00 | 0.00 | 890.50 | 290.00 | 896.65 | 0.00 | 896.68 | 1.77 | 1.49 | 205.26 | 217.72 |
| 55.000 | 1380.00 | 0.00 | 0.00 | 890.50 | 380.00 | 897.07 | 0.00 | 897.12 | 2.15 | 1.75 | 256.93 | 259.14 |
| 55.000 | 1380.00 | 0.00 | 0.00 | 890.50 | 430.00 | 897.29 | 0.00 | 897.34 | 2.30 | 1.86 | 293.03 | 283.29 |
| 55.000 | 1380.00 | 0.00 | 0.00 | 890.50 | 530.00 | 897.69 | 0.00 | 897.75 | 2.48 | 2.03 | 379.79 | 336.73 |
| 55.100 | 1200.00 | 0.00 | 0.00 | 891.80 | 290.00 | 896.83 | 0.00 | 896.84 | 1.03 | 1.06 | 291.21 | 285.76 |
| 55.100 | 1200.00 | 0.00 | 0.00 | 891.80 | 380.00 | 897.29 | 0.00 | 897.31 | 1.21 | 1.22 | 368.88 | 345.05 |
| 55.100 | 1200.00 | 0.00 | 0.00 | 891.80 | 430.00 | 897.52 | 0.00 | 897.54 | 1.29 | 1.30 | 417.71 | 377.99 |
| 55.100 | 1200.00 | 0.00 | 0.00 | 891.80 | 530.00 | 897.94 | 0.00 | 897.97 | 1.41 | 1.42 | 525.70 | 446.56 |

MILL RACE

SUMMARY PRINTOUT TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 54.300 | 290.00 | 890.93 | 0.00 | 0.00 | 0.00 | 107.16 | 0.00 |
| 54.300 | 380.00 | 892.42 | 1.49 | 0.00 | 0.00 | 113.26 | 0.00 |
| 54.300 | 430.00 | 893.07 | .65 | 0.00 | 0.00 | 116.14 | 0.00 |
| 54.300 | 530.00 | 894.56 | 1.49 | 0.00 | 0.00 | 122.74 | 0.00 |
| 54.500 | 290.00 | 896.49 | 0.00 | 5.56 | 0.00 | 36.00 | 1.00 |
| 54.500 | 380.00 | 896.86 | .38 | 4.44 | 0.00 | 36.00 | 1.00 |
| 54.500 | 430.00 | 897.05 | .19 | 3.98 | 0.00 | 36.00 | 1.00 |
| 54.500 | 530.00 | 897.40 | .35 | 2.84 | 0.00 | 36.00 | 1.00 |
| 54.600 | 290.00 | 896.52 | 0.00 | .04 | 0.00 | 73.23 | 120.00 |
| 54.600 | 380.00 | 896.92 | .39 | .05 | 0.00 | 74.38 | 120.00 |
| 54.600 | 430.00 | 897.11 | .20 | .06 | 0.00 | 74.95 | 120.00 |
| 54.600 | 530.00 | 897.49 | .37 | .09 | 0.00 | 76.03 | 120.00 |
| 55.000 | 290.00 | 896.65 | 0.00 | .12 | 0.00 | 88.74 | 1380.00 |
| 55.000 | 380.00 | 897.07 | .43 | .16 | 0.00 | 153.26 | 1380.00 |
| 55.000 | 430.00 | 897.29 | .21 | .17 | 0.00 | 185.47 | 1380.00 |
| 55.000 | 530.00 | 897.69 | .40 | .20 | 0.00 | 246.21 | 1380.00 |
| 55.100 | 290.00 | 896.83 | 0.00 | .18 | 0.00 | 136.40 | 1200.00 |
| 55.100 | 380.00 | 897.29 | .46 | .22 | 0.00 | 197.82 | 1200.00 |
| 55.100 | 430.00 | 897.52 | .23 | .23 | 0.00 | 228.12 | 1200.00 |
| 55.100 | 530.00 | 897.94 | .42 | .25 | 0.00 | 279.59 | 1200.00 |

SUMMARY OF ERRORS

FLOOD INSURANCE ZONE DATA FOR MILL RACE

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND@ 10_ | 2_ | 0.2_ |
|---|---|---|---|---|
| 54.300 | 0. | -2.14 | -.65 | 1.49 |
| 54.500 | 1. | -.56 | -.19 | .35 |
| 54.600 | 121. | -.59 | -.20 | .37 |
| 55.000 | 1501. | -.64 | -.21 | .40 |
| 55.100 | 2701. | -.69 | -.23 | .42 |
| WEIGHTED AVG FOR REACH | | -.64 | -.21 | .40 |

FHF FOR THE REACH = 005 WITH 100.0_ OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 1

THIS RUN EXECUTED 07/22/80

FIS City of Marshall
Calhoun County, Michigan
Floodway for Mill Race
(Branch of Rice Creek)
8-18-80

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
*****************************************************

T1      FIS CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN.
T2      100-YEAR NATURAL FLOOD PROFILE
T3      MILL RACE

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
      0.       4.       0.       0.  0.0          0.0      0.0      0.   893.070   0.0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
    1.000     0.0     -1.000    0.0      0.0      0.0      0.0      0.0      0.0      0.0

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
   38.000    1.000   53.000   21.000   22.000   54.000    4.000   39.000  150.000  200.000

QT     5.000   290.000   380.000   430.000   530.000   430.000     0.0       0.0       0.0       0.0
NC     0.080     0.080     0.035     0.100     0.300     0.0       0.0       0.0       0.0       0.0

X1    54.300    20.000  2000.000  2093.000     0.0       0.0       0.0       0.0       0.0       0.0
GR   902.500  1950.000   902.000  1960.000   900.600  1970.000   897.300  1980.000   891.500  1990.000
GR   887.500  2000.000   886.200  2010.000   885.900  2020.000   885.900  2030.000   886.400  2040.000
GR   886.600  2050.000   887.000  2060.000   886.300  2070.000   885.800  2080.000   886.300  2090.000
GR   887.600  2093.000   887.500  2093.000   891.800  2100.000   895.500  2110.000   900.300  2120.000
SB     0.0       1.500     3.300     0.0       2.000     0.0       0.300     0.0     891.100   891.100

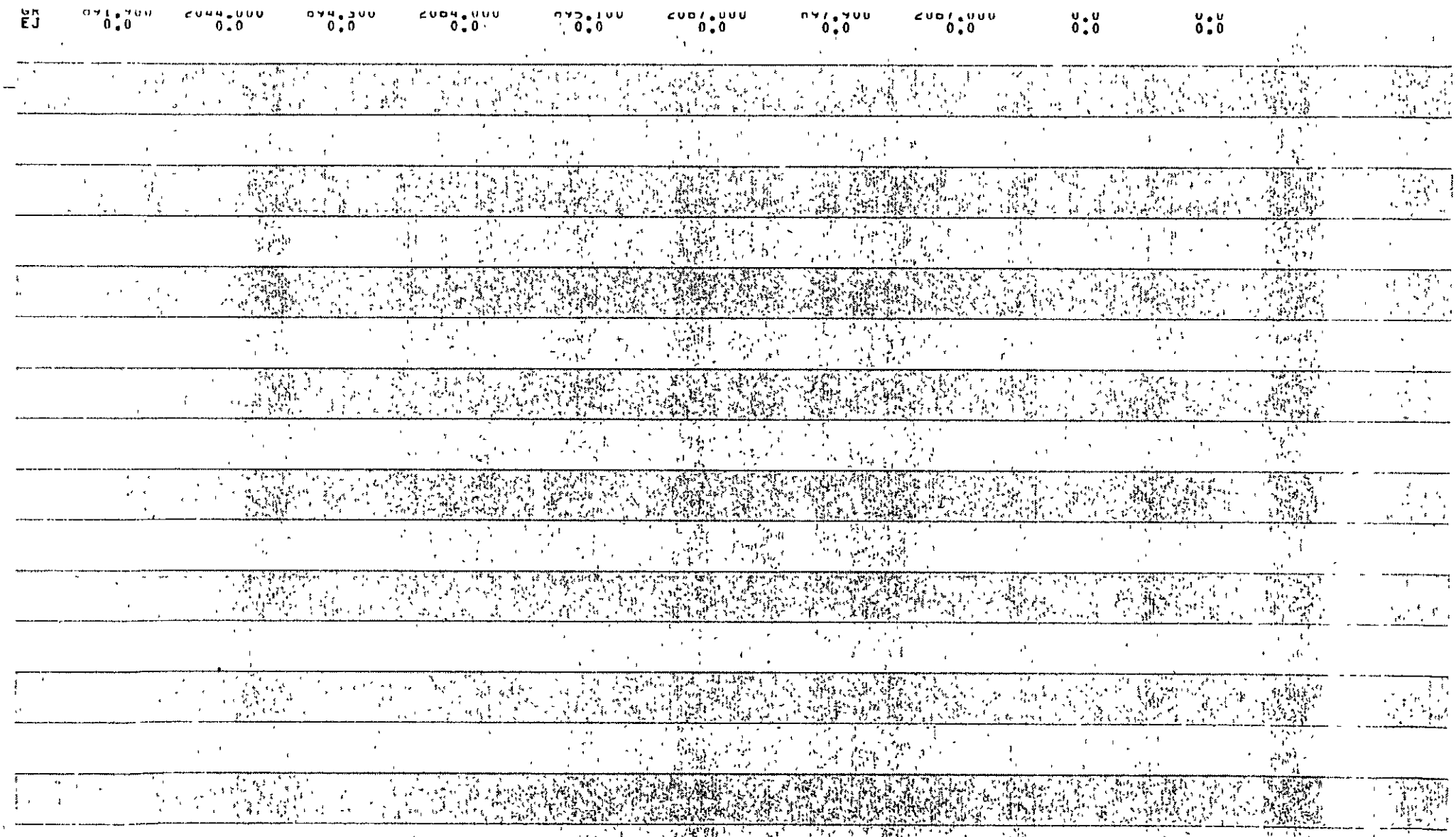
X1    54.500     4.000     0.0      36.000     1.000     1.000     1.000     0.0       0.0       0.0
X2     0.0       0.0       1.000   892.000   894.500     0.0       0.0       0.0       0.0       0.0
BT    11.000     0.0     898.600     0.0       0.0     894.700     0.0       7.000   894.700     0.0
BT    14.000   894.700     0.0      18.000   894.500     0.0      18.000   898.600     0.0      21.000
BT   898.600     0.0      21.000   894.500     0.0      28.000   894.500     0.0      36.000   894.700
BT     0.0      36.000   898.500     0.0       0.0       0.0       0.0       0.0       0.0       0.0
GR   898.600     0.0     891.100     0.0     891.100    36.000   898.600    36.000     0.0       0.0
ET     0.0       0.0       0.0       0.0       0.0       1.410     0.0       0.0       0.0       0.0

X1    54.600    20.000  2000.000  2072.000   120.000   120.000   120.000     0.0       0.0       0.0
GR   922.900  1798.000   922.500  1805.000   920.200  1812.000   920.000  1818.000   917.400  1824.000
GR   907.500  1842.000   917.900  1845.000   917.100  1858.000   904.600  1911.000   904.700  1917.000
GR   904.800  1921.000   903.400  1963.000   901.600  1984.000   896.100  2000.000   892.100  2015.000
GR   891.100  2025.000   890.900  2040.000   891.200  2055.000   893.300  2072.000   898.400  2072.000
NC     0.060     0.060     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0

X1    55.000    11.000  1948.000  2048.000  1380.000  1380.000  1380.000     0.0       0.0       0.0
GR   901.500  1777.000   901.500  1777.000   897.700  1806.000   897.000  1948.000   896.400  2000.000
GR   894.600  2004.000   890.800  2022.000   890.500  2026.000   892.100  2038.000   894.600  2048.000
GR   897.800  2054.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
NC     0.080     0.080     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0

X1    55.100    14.000  2000.000  2067.000  1200.000  1200.000  1200.000     0.0       0.0       0.0
GR   900.000  1900.000   900.000  1900.000   900.000  1900.000   900.000  1900.000   897.000  1900.000
GR   897.900  2000.000   895.100  2000.000   894.300  2002.000   891.800  2019.000   891.900  2030.000
```

MOORE BUSINESS FORMS INC 23


GR
EJ
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0

*PROF 1

CCHV=---0.100--CEHV=----0.300

*SECNO 54.300

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 54.30 | 7.27 | 893.07 | 0.0 | 893.07 | 893.08 | 0.01 | 0.0 | 0.0 | 887.50 |
| 430. | 7. | 419. | 4. | 38. | 625. | 26. | 0. | 0. | 887.50 |
| 0.0 | 0.18 | 0.67 | 0.16 | 0.080 | 0.035 | 0.080 | 0.0 | 885.80 | 1987.29 |
| 0.000020 | 0. | 0. | 0. | 0 | 0 | 0 | 0.0 | 116.14 | 2103.43 |

SPECIAL BRIDGE

| SB | XK | XKOR | COEQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.0 | 1.50 | 3.30 | 0.0 | 2.00 | 0.0 | 0.30 | 0.0 | 891.10 | 891.10 |

*SECNO 54.500

PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QBR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 48745.02 | 898.38 | 0.0 | 429. | 4. | 0. | 2. | 892.00 | 894.50 |
| 54.50 | 5.95 | 897.05 | 0.0 | 0.0 | 897.11 | 0.06 | 4.04 | 0.0 | 898.60 |
| 430. | 0. | 430. | 0. | 0. | 214. | 0. | 0. | 0. | 898.60 |
| 0.00 | 0.0 | 2.01 | 0.0 | 0.080 | 0.035 | 0.080 | 0.018 | 891.10 | 0.0 |
| 0.000303 | 1. | 1. | 1. | 2 | 0 | 6 | 0.0 | 36.00 | 36.00 |

*SECNO 54.600

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 6.22 | 897.12 | 0.0 | 0.0 | 897.14 | 0.02 | 0.02 | 0.00 | 896.10 |
| 430. | 0. | 430. | 0. | 2. | 366. | 0. | 1. | 0. | 898.40 |
| 0.03 | 0.11 | 1.17 | 0.0 | 0.080 | 0.035 | 0.080 | 0.034 | 890.90 | 1997.04 |
| 0.000095 | 120. | 120. | 120. | 2 | 0 | 0 | 0.0 | 74.96 | 2072.00 |

*SECNO 55.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 6.84 | 897.34 | 0.0 | 0.0 | 897.38 | 0.04 | 0.24 | 0.01 | 897.00 |
| 430. | 2. | 424. | 4. | 12. | 261. | 7. | 11. | 4. | 894.60 |
| 0.27 | 0.15 | 1.61 | 0.56 | 0.060 | 0.035 | 0.060 | 0.035 | 890.50 | 1878.89 |
| 0.000402 | 1380. | 1380. | 1380. | 2 | 0 | 0 | 0.0 | 174.25 | 2053.14 |

*SECNO 55.100

3265 DIVIDED FLOW

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 55.10 | 5.81 | 897.61 | 0.0 | 0.0 | 897.63 | 0.03 | 0.25 | 0.00 | 897.90 |
| 430. | 2. | 428. | 0. | 21. | 325. | 0. | 20. | 8. | 897.90 |
| 0.52 | 0.10 | 1.32 | 0.0 | 0.080 | 0.035 | 0.080 | 0.035 | 891.80 | 1900.00 |
| 0.000130 | 1200. | 1200. | 1200. | 2 | 0 | 0 | 0.0 | 134.57 | 2067.00 |

Mill Race 100 yr encroached. Use w/FIS

THIS RUN EXECUTED 07/22/80

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR =  01,02
  MODIFICATION =  50,51,52,53
**************************************************
```

Millrace

T1
T2  100-YEAR ENCROACHED FLOODWAY
T3

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10. | 6. | 0. | 0. | 0.0 | 0.0 | 0.0 | 0. | 893.070 | 0.0 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 15.000 | 0.0 | -1.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

*PROF=2

CCHV= 0.100 CEHV= 0.300
*SECNO 54.300

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 54.30 | 7.27 | 893.07 | 0.0 | 893.07 | 893.08 | 0.01 | 0.0 | 0.0 | 887.50 |
| 430. | 7. | 419. | 4. | 38. | 625. | 26. | 0. | 0. | 887.50 |
| 0.0 | 0.18 | 0.67 | 0.16 | 0.080 | 0.035 | 0.080 | 0.0 | 885.80 | 1987.29 |
| 0.000020 | 0. | 0. | 0. | 0 | 0 | 0 | 0.0 | 116.14 | 2103.43 |

A

SPECIAL BRIDGE

| SB | XK | XKOR | CQFQ | RDLEN | BWC | BWP | BAREA | SS | ELCHU | ELCHD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.0 | 1.60 | 3.30 | 0.0 | 2.00 | 0.0 | 0.30 | 0.0 | 891.10 | 891.10 |

*SECNO 54.500
PRESSURE AND WEIR FLOW

| EGPRS | EGLWC | H3 | QWEIR | QPR | BAREA | TRAPEZOID AREA | ELLC | ELTRD |
|---|---|---|---|---|---|---|---|---|
| 48745.02 | 898.38 | 0.0 | 429. | 4. | 0. | 2. | 892.00 | 894.50 |
| 54.50 | 5.95 | 897.05 | 0.0 | 0.0 | 897.11 | 0.06 | 4.04 | 0.0 | 898.60 |
| 430. | 0. | 430. | 0. | 0. | 214. | 0. | 0. | 0. | 898.60 |
| 0.00 | 0.0 | 2.01 | 0.0 | 0.080 | 0.035 | 0.080 | 0.018 | 891.10 | 0.0 |
| 0.000303 | 1. | 1. | 1. | 2 | 0 | 6 | 0.0 | 36.00 | 36.00 |

w.s. x length = 36

*SECNO 54.600
2800 NAT Q1= 441.01 WSEL= 897.12 ENC Q1= 454.94 WSEL= 897.22 RATIO= -0.0316
NAT Q1= 455. RATIOS LOB,CH,ROB= 0.0005 0.9995 0.0 WSELS= 897.22

3470 ENCROACHMENT STATIONS= 2000.0 2072.0 TYPE= 4 TARGET= 0.000

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 6.22 | 897.12 | 0.0 | 897.12 | 897.14 | 0.02 | 0.02 | 0.00 | 896.10 |
| 430. | 0. | 430. | 0. | 0. | 366. | 0. | 1. | 0. | 898.40 |

```
     0.03      0.0      1.18      0.0      0.080     0.035     0.080     0.034    890.90   2000.00
 0.000097     120.     120.     120.         2         0         0       0.0      72.00   2072.00

*SECNO 55.000
 2800 NAT Q1=    214.42  WSEL=    897.34  ENC Q1=    225.04  WSEL=    897.44  RATIO= -0.0495
 NAT Q1=    229.  RATIOS LOB,CH,ROB=  0.0077  0.9827  0.0095  WSEL=    897.44

3470 ENCROACHMENT STATIONS=    1948.0    2048.0  TYPE=     4  TARGET=      0.017
    55.00      6.85    897.35      0.0     897.34    897.39      0.04      0.25      0.01    897.00
     430.        0.     430.        0.         0.      264.        0.       11.        3.    894.60
     0.26      0.0      1.63      0.0      0.060     0.035     0.060     0.035    890.50   1948.00
 0.000427     1380.    1380.    1380.         2         0         0       0.0     100.00   2048.00

*SECNO 55.100
 2800 NAT Q1=    377.38  WSEL=    897.61  ENC Q1=    387.89  WSEL=    897.71  RATIO= -0.0278
 NAT Q1=    390.  RATIOS LOB,CH,ROB=  0.0066  0.9934  0.0     WSEL=    897.71
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST

3470 ENCROACHMENT STATIONS=    2000.0    2067.0  TYPE=     4  TARGET=      0.007
    55.10      5.82    897.62      0.0     897.61    897.65      0.03      0.26      0.00    897.90
     430.        0.     430.        0.         0.      326.        0.       19.        5.    897.90
     0.52      0.0      1.32      0.0      0.080     0.035     0.080     0.035    891.80   2000.00
 0.000130     1200.    1200.    1200.         2         0         0       0.0      67.00   2067.00
```

MOORE BUSINESS FORMS INC 23

THIS RUN EXECUTED 07/22/80

```
**********************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR =  01,02
  MODIFICATION =  50,51,52,53
**********************************************
```

NOTE= ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MILL RACE

SUMMARY PRINTOUT

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 54.300 | 893.07 | 1987.29 | 2000.00 | 2093.00 | 2103.43 | 116.14 | 0.0 |
| 54.300 | 893.07 | 1987.29 | 2000.00 | 2093.00 | 2103.43 | 116.14 | 0.0 |
| 54.500 | 897.05 | 0.0 | 0.0 | 36.00 | 36.00 | 36.00 | 1.00 |
| 54.500 | 897.05 | 0.0 | 0.0 | 36.00 | 36.00 | 36.00 | 1.00 |
| 54.600 | 897.12 | 1997.04 | 2000.00 | 2072.00 | 2072.00 | 74.96 | 120.00 |
| 54.600 | 897.12 | 2000.00 | 2000.00 | 2072.00 | 2072.00 | 72.00 | 120.00 |
| 55.000 | 897.34 | 1878.89 | 1948.00 | 2048.00 | 2053.14 | 174.25 | 1380.00 |
| 55.000 | 897.35 | 1948.00 | 1948.00 | 2048.00 | 2048.00 | 100.00 | 1380.00 |
| 55.100 | 897.61 | 1900.00 | 2000.00 | 2067.00 | 2067.00 | 134.57 | 1200.00 |
| 55.100 | 897.62 | 2000.00 | 2000.00 | 2067.00 | 2067.00 | 67.00 | 1200.00 |

MOORE BUSINESS FORMS INC 23

MILL RACE

SUMMARY-PRINTOUT-TABLE-E---150

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54.300 | 0.0 | 0.0 | 0.0 | 885.80 | 430.00 | 893.07 | 0.0 | 893.08 | 0.20 | 0.67 | 688.61 | 965.05 |
| 54.300 | 0.0 | 0.0 | 0.0 | 885.80 | 430.00 | 893.07 | 0.0 | 893.08 | 0.20 | 0.67 | 688.61 | 965.05 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 430.00 | 897.05 | 0.0 | 897.11 | 3.03 | 2.01 | 214.26 | 246.96 |
| 54.500 | 1.00 | 894.50 | 892.00 | 891.10 | 430.00 | 897.05 | 0.0 | 897.11 | 3.03 | 2.01 | 214.26 | 246.96 |
| 54.600 | 120.00 | 0.0 | 0.0 | 890.90 | 430.00 | 897.12 | 0.0 | 897.14 | 0.95 | 1.17 | 367.35 | 441.01 |
| 54.600 | 120.00 | 0.0 | 0.0 | 890.90 | 430.00 | 897.12 | 0.0 | 897.14 | 0.97 | 1.18 | 365.87 | 436.64 |
| 55.000 | 1380.00 | 0.0 | 0.0 | 890.50 | 430.00 | 897.34 | 0.0 | 897.38 | 4.02 | 1.61 | 282.18 | 214.42 |
| 55.000 | 1380.00 | 0.0 | 0.0 | 890.50 | 430.00 | 897.35 | 0.0 | 897.39 | 4.27 | 1.63 | 264.05 | 207.97 |
| 55.100 | 1200.00 | 0.0 | 0.0 | 891.80 | 430.00 | 897.61 | 0.0 | 897.63 | 1.30 | 1.32 | 345.99 | 377.38 |
| 55.100 | 1200.00 | 0.0 | 0.0 | 891.80 | 430.00 | 897.62 | 0.0 | 897.65 | 1.30 | 1.32 | 326.35 | 377.32 |

MILL RACE

SUMMARY-PRINTOUT-TABLE 150

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 54.300 | 430.00 | 893.07 | 0.0 | 0.0 | 0.0 | 116.14 | 0.0 |
| 54.300 | 430.00 | 893.07 | 0.0 | 0.0 | 0.0 | 116.14 | 0.0 |
| 54.500 | 430.00 | 897.05 | 0.0 | 3.98 | 0.0 | 36.00 | 1.00 |
| 54.500 | 430.00 | 897.05 | 0.0 | 3.98 | 0.0 | 36.00 | 1.00 |
| 54.600 | 430.00 | 897.12 | 0.0 | 0.06 | 0.0 | 74.96 | 120.00 |
| 54.600 | 430.00 | 897.12 | 0.00 | 0.06 | 0.00 | 72.00 | 120.00 |
| 55.000 | 430.00 | 897.34 | 0.0 | 0.22 | 0.0 | 174.25 | 1380.00 |
| 55.000 | 430.00 | 897.35 | 0.01 | 0.23 | 0.01 | 100.00 | 1380.00 |
| 55.100 | 430.00 | 897.61 | 0.0 | 0.27 | 0.0 | 134.57 | 1200.00 |
| 55.100 | 430.00 | 897.62 | 0.01 | 0.27 | 0.01 | 67.00 | 1200.00 |

SUMMARY OF ERRORS

MOORE BUSINESS FORMS INC 23

FLOODWAY DATA, MILL RACE
PROFILE NO. 2

| STATION | FLOODWAY WIDTH (FT) | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 54.300 | 116. | 689. | 0.6 | 893.1 | 893.1 | 0.0 |
| 54.500 | 36. | 214. | 2.0 | 897.1 | 897.1 | 0.0 |
| 54.600 | 72. | 366. | 1.2 | 897.1 | 897.1 | 0.0 |
| 55.000 | 100. | 264. | 1.6 | 897.3 | 897.3 | 0.0 |
| 55.100 | 67. | 326. | 1.3 | 897.6 | 897.6 | 0.0 |

MOORE BUSINESS FORMS, INC. 23

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Marshall

3) WATERCOURSE: Rice Creek

4) DOCUMENT TYPE: 10, 50, 100, 500 yr profiles

00BREAK00

Rice Creek - 100 yr
encroached - use w/FIS

80/10/20. 05.50.54. PAGE 1

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
*****************************************************
```

Floodway

10/?-/80

```
C
T1      FIS  CITY OF MARSHALL
T2      100 YEAR FLOOD PROFILE
T3      RICE CREEK
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0. | 4. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 883.100 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 38.000 | 1.000 | 53.000 | 21.000 | 22.000 | 54.000 | 4.000 | 39.000 | 150.000 | 200.000 |
| NC | .100 | .100 | .040 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 745.000 | 1140.000 | 1330.000 | 1790.000 | 1330.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

ABANDONED RAILROAD EMBANKMENT (A)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 50.000 | 24.000 | 2000.000 | 2039.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 903.300 | 768.000 | 901.300 | 1000.000 | 901.700 | 1153.000 | 901.500 | 1289.000 | 901.200 | 1404.000 |
| GR | 900.600 | 1500.000 | 900.000 | 1659.000 | 900.000 | 1799.000 | 900.400 | 1971.000 | 882.200 | 2000.000 |
| GR | 881.600 | 2005.000 | 881.000 | 2010.000 | 880.100 | 2015.000 | 879.500 | 2020.000 | 879.300 | 2025.000 |
| GR | 879.500 | 2030.000 | 880.300 | 2035.000 | 882.200 | 2039.000 | 884.700 | 2046.000 | 896.800 | 2067.000 |
| GR | 901.300 | 2069.000 | 901.200 | 2175.000 | 902.000 | 2323.000 | 902.800 | 2423.000 | 0.000 | 0.000 |
| X1 | 2.900 | 14.000 | 2000.000 | 2047.000 | 65.000 | 55.000 | 60.000 | 0.000 | -.500 | 0.000 |
| GR | 900.600 | 1963.000 | 884.600 | 1990.000 | 883.100 | 2000.000 | 880.300 | 2006.000 | 881.600 | 2015.000 |
| GR | 882.300 | 2023.000 | 882.000 | 2032.000 | 883.100 | 2047.000 | 884.000 | 2054.000 | 883.900 | 2094.000 |
| GR | 888.200 | 2124.000 | 890.100 | 2139.000 | 903.700 | 2158.000 | 906.300 | 2171.000 | 0.000 | 0.000 |
| X1 | 3.000 | 0.000 | 0.000 | 0.000 | 65.000 | 55.000 | 50.000 | 0.000 | .500 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1989.000 | 2101.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.100 | 0.000 | 0.000 | 0.000 | 110.000 | 85.000 | 85.000 | 0.000 | 1.600 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1974.000 | 2054.000 |
| X1 | 50.800 | 18.000 | 2000.000 | 2029.000 | 110.000 | 85.000 | 85.000 | 0.000 | 0.000 | 0.000 |
| GR | 907.500 | 1800.000 | 903.900 | 1900.000 | 902.400 | 1950.000 | 901.400 | 1960.000 | 899.900 | 1970.000 |
| GR | 897.400 | 1980.000 | 891.400 | 1990.000 | 884.100 | 2000.000 | 883.400 | 2010.000 | 883.500 | 2020.000 |
| GR | 884.000 | 2029.000 | 887.300 | 2040.000 | 889.700 | 2050.000 | 893.500 | 2060.000 | 893.900 | 2070.000 |
| GR | 895.100 | 2100.000 | 904.600 | 2200.000 | 906.900 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 50.900 | 16.000 | 2000.000 | 2050.000 | 60.000 | 40.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.000 | 902.000 | 0.000 |
| GR | 905.100 | 1800.000 | 905.100 | 1900.000 | 905.100 | 2000.000 | 891.400 | 2000.000 | 886.000 | 2010.000 |
| GR | 884.600 | 2016.000 | 883.800 | 2020.000 | 883.800 | 2030.000 | 884.200 | 2040.000 | 888.400 | 2050.000 |
| GR | 888.900 | 2051.500 | 905.200 | 2051.500 | 905.300 | 2075.000 | 905.500 | 2100.000 | 905.900 | 2200.000 |
| GR | 906.000 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | .025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

RAILROAD BRIDGE (B)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 51.000 | 16.000 | 2000.000 | 2050.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.000 | 902.000 | 0.000 |
| BT | 4.000 | 2000.000 | 905.600 | 905.600 | 2000.000 | 905.600 | 898.400 | 2051.500 | 905.700 | 898.400 |
| BT | 2051.500 | 905.700 | 905.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 905.600 | 1800.000 | 905.600 | 1900.000 | 905.600 | 2000.000 | 891.400 | 2000.000 | 886.900 | 2010.000 |
| GR | 884.600 | 2016.000 | 883.800 | 2020.000 | 883.800 | 2030.000 | 884.200 | 2040.000 | 888.400 | 2050.000 |
| GR | 888.900 | 2051.500 | 905.700 | 2051.500 | 905.800 | 2075.000 | 906.000 | 2100.000 | 906.400 | 2200.000 |
| GR | 906.500 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 51.100 | 0.000 | 0.000 | 0.000 | 31.000 | 31.000 | 31.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.600 | 905.600 | 0.000 |
| BT | 4.000 | 2000.000 | 905.600 | 905.600 | 2000.000 | 905.600 | 898.400 | 2051.500 | 905.700 | 898.400 |
| BT | 2051.500 | 905.700 | 905.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 51.200 | 16.000 | 2000.000 | 2050.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.600 | 905.600 | 0.000 |
| GR | 905.100 | 1800.000 | 905.100 | 1900.000 | 905.100 | 2000.000 | 891.400 | 2000.000 | 886.900 | 2010.000 |
| GR | 884.600 | 2016.000 | 883.800 | 2020.000 | 883.800 | 2030.000 | 884.200 | 2040.000 | 888.400 | 2050.000 |
| GR | 888.900 | 2051.500 | 905.200 | 2051.500 | 905.300 | 2075.000 | 905.500 | 2100.000 | 905.900 | 2200.000 |
| GR | 906.000 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1946.000 | 2061.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 51.500 | 11.000 | 2000.000 | 2029.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| GR | 905.200 | 1600.000 | 902.400 | 1800.000 | 890.000 | 1960.000 | 884.600 | 2000.000 | 882.700 | 2010.000 |
| GR | 882.300 | 2014.500 | 882.000 | 2020.000 | 884.400 | 2029.000 | 889.700 | 2050.000 | 898.000 | 2100.000 |
| GR | 905.000 | 2200.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 51.900 | 20.000 | 2000.000 | 2029.000 | 130.000 | 130.000 | 130.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| GR | 905.200 | 1600.000 | 902.400 | 1800.000 | 900.500 | 1993.000 | 900.500 | 2000.000 | 884.600 | 2000.000 |
| GR | 883.500 | 2006.000 | 882.700 | 2010.000 | 882.300 | 2014.500 | 882.500 | 2020.000 | 883.500 | 2023.000 |
| GR | 884.400 | 2029.000 | 900.000 | 2029.000 | 900.100 | 2037.000 | 899.700 | 2050.000 | 899.300 | 2250.000 |
| GR | 903.000 | 2450.000 | 904.100 | 2650.000 | 905.000 | 2850.000 | 906.900 | 3050.000 | 907.800 | 3350.000 |
| NC | 0.000 | 0.000 | .025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MONROE ST. BRIDGE (C)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 52.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| BT | 9.000 | 1993.000 | 900.500 | 900.500 | 2000.000 | 900.500 | 900.500 | 2000.000 | 900.500 | 884.600 |
| BT | 2006.000 | 900.400 | 893.000 | 2014.500 | 900.300 | 895.700 | 2023.000 | 900.100 | 893.000 | 2029.000 |
| BT | 900.000 | 884.400 | 2029.000 | 900.000 | 900.000 | 2037.000 | 900.100 | 900.100 | 0.000 | 0.000 |
| X1 | 52.100 | 0.000 | 0.000 | 0.000 | 28.000 | 28.000 | 28.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 900.600 | 900.600 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 52.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 900.600 | 900.600 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1947.000 | 2078.000 |
| X1 | 52.300 | 15.000 | 2000.000 | 2025.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1950.000 | 0.000 | 2076.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 905.200 | 1600.000 | 902.400 | 1800.000 | 890.000 | 1960.000 | 884.500 | 2000.000 | 883.700 | 2007.000 |
| GR | 882.300 | 2013.000 | 883.700 | 2019.000 | 883.800 | 2020.000 | 884.700 | 2025.000 | 890.000 | 2060.000 |
| GR | 899.300 | 2250.000 | 903.000 | 2450.000 | 904.100 | 2650.000 | 905.000 | 2850.000 | 906.900 | 3050.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

(D)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 53.000 | 31.000 | 2132.000 | 2190.000 | 725.000 | 1040.000 | 725.000 | 0.000 | 0.000 | 0.000 |
| GR | 916.400 | 1882.000 | 913.000 | 1932.000 | 911.400 | 1952.000 | 907.500 | 1964.000 | 906.300 | 1970.000 |
| GR | 905.800 | 2000.000 | 902.700 | 2046.000 | 898.400 | 2098.000 | 886.100 | 2132.000 | 884.100 | 2146.000 |
| GR | 883.800 | 2155.000 | 884.600 | 2166.000 | 886.100 | 2180.000 | 888.200 | 2190.000 | 890.000 | 2228.000 |
| GR | 894.200 | 2300.000 | 899.200 | 2392.000 | 900.500 | 2440.000 | 901.000 | 2540.000 | 901.900 | 2640.000 |
| GR | 901.100 | 2738.000 | 902.100 | 2838.000 | 902.900 | 2938.000 | 903.800 | 3032.000 | 904.600 | 3126.000 |
| GR | 905.200 | 3226.000 | 904.700 | 3278.000 | 906.100 | 3348.000 | 907.400 | 3446.000 | 908.900 | 3546.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 910.000 | 3626.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2063.000 | 2258.000 |
| X1 | 53.500 | 0.000 | 0.000 | 0.000 | 270.000 | 270.000 | 270.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .090 | .045 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 53.900 | 35.000 | 2025.000 | 2070.000 | 320.000 | 320.000 | 320.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.900 | 902.900 | 0.000 |
| GR | 910.100 | 1870.000 | 908.700 | 1900.000 | 906.600 | 1950.000 | 905.600 | 2000.000 | 887.300 | 2000.000 |
| GR | 887.000 | 2005.000 | 886.800 | 2010.000 | 886.600 | 2015.000 | 886.200 | 2020.000 | 888.700 | 2020.000 |
| GR | 888.600 | 2025.000 | 886.000 | 2025.000 | 886.100 | 2030.000 | 886.200 | 2035.000 | 886.200 | 2040.000 |
| GR | 886.200 | 2045.000 | 888.700 | 2045.000 | 888.600 | 2050.000 | 885.400 | 2050.000 | 885.500 | 2055.000 |
| GR | 885.700 | 2060.000 | 886.100 | 2065.000 | 886.500 | 2070.000 | 904.900 | 2070.000 | 903.900 | 2078.000 |
| GR | 903.800 | 2100.000 | 902.700 | 2200.000 | 902.400 | 2300.000 | 902.700 | 2400.000 | 902.500 | 2500.000 |
| GR | 902.800 | 2700.000 | 903.700 | 2900.000 | 905.600 | 3100.000 | 907.500 | 3300.000 | 908.400 | 3500.000 |
| NC | 0.000 | 0.000 | .025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MARSHALL AVE. BRIDGE (E)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.900 | 902.900 | 0.000 |
| BT | 19.000 | 1950.000 | 906.600 | 906.600 | 2000.000 | 905.700 | 905.700 | 2000.000 | 905.700 | 887.300 |
| BT | 2005.000 | 905.600 | 887.000 | 2010.000 | 905.600 | 886.800 | 2015.000 | 905.600 | 886.600 | 2020.000 |
| BT | 905.500 | 886.200 | 2025.000 | 905.500 | 888.600 | 2030.000 | 905.400 | 898.200 | 2035.000 | 905.400 |
| BT | 900.500 | 2040.000 | 905.300 | 898.200 | 2045.000 | 905.200 | 888.700 | 2050.000 | 905.100 | 888.600 |
| BT | 2055.000 | 905.100 | 898.200 | 2060.000 | 905.000 | 900.600 | 2065.000 | 905.000 | 898.200 | 2070.000 |
| BT | 904.900 | 888.700 | 2070.000 | 904.900 | 904.900 | 2078.000 | 903.900 | 903.900 | 0.000 | 0.000 |
| X1 | 54.100 | 32.000 | 2025.000 | 2070.000 | 42.800 | 42.800 | 42.800 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.200 | 905.200 | 0.000 |
| BT | 17.000 | 1950.000 | 906.600 | 906.600 | 2000.000 | 905.400 | 905.400 | 2000.000 | 905.400 | 903.100 |
| BT | 2010.000 | 905.200 | 899.900 | 2020.000 | 905.000 | 891.300 | 2025.000 | 904.900 | 888.700 | 2030.000 |
| BT | 904.800 | 898.200 | 2035.000 | 904.700 | 900.800 | 2040.000 | 904.600 | 898.200 | 2045.000 | 904.600 |
| BT | 888.700 | 2050.000 | 904.500 | 888.700 | 2055.000 | 904.400 | 898.200 | 2060.000 | 904.300 | 900.800 |
| BT | 2065.000 | 904.200 | 898.200 | 2070.000 | 904.100 | 888.700 | 2070.000 | 904.100 | 904.100 | 2079.000 |
| BT | 904.300 | 904.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 910.100 | 1870.000 | 908.700 | 1900.000 | 906.600 | 1950.000 | 905.400 | 2000.000 | 903.100 | 2000.000 |
| GR | 899.900 | 2010.000 | 891.300 | 2020.000 | 888.700 | 2025.000 | 887.300 | 2025.000 | 886.700 | 2030.000 |
| GR | 886.200 | 2035.000 | 886.400 | 2040.000 | 886.500 | 2045.000 | 888.700 | 2045.000 | 888.700 | 2050.000 |
| GR | 886.600 | 2050.000 | 886.300 | 2055.000 | 885.900 | 2060.000 | 886.000 | 2065.000 | 886.600 | 2070.000 |
| GR | 904.100 | 2070.000 | 904.300 | 2079.000 | 903.800 | 2100.000 | 902.700 | 2200.000 | 902.400 | 2300.000 |
| GR | 902.700 | 2400.000 | 902.500 | 2500.000 | 902.800 | 2700.000 | 903.700 | 2900.000 | 905.600 | 3100.000 |
| GR | 907.500 | 3300.000 | 908.400 | 3500.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.200 | 905.200 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1947.000 | 2145.000 |
| X1 | 54.250 | 20.000 | 2000.000 | 2093.000 | 65.000 | 65.000 | 65.000 | 0.000 | 0.000 | 0.000 |
| GR | 902.500 | 1950.000 | 902.000 | 1960.000 | 900.600 | 1970.000 | 897.300 | 1980.000 | 891.500 | 1990.000 |
| GR | 887.500 | 2000.000 | 886.200 | 2010.000 | 885.900 | 2020.000 | 885.900 | 2030.000 | 886.400 | 2040.000 |
| GR | 886.600 | 2050.000 | 887.000 | 2060.000 | 886.300 | 2070.000 | 885.800 | 2080.000 | 886.300 | 2090.000 |
| GR | 887.600 | 2093.000 | 887.500 | 2093.000 | 891.800 | 2100.000 | 895.500 | 2110.000 | 900.300 | 2120.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 420.000 | 700.000 | 840.000 | 1180.000 | 840.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .045 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 54.400 | 14.000 | 2084.000 | 2117.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.300 | 2050.000 | 897.300 | 2050.000 | 897.300 | 2050.000 | 897.300 | 2050.000 | 897.300 | 2050.000 |
| GR | 888.800 | 2084.000 | 886.800 | 2094.000 | 887.200 | 2104.000 | 887.600 | 2112.000 | 890.700 | 2117.000 |
| GR | 894.800 | 2150.000 | 897.900 | 2200.000 | 898.700 | 2250.000 | 901.900 | 2300.000 | 0.000 | 0.000 |
| X1 | 54.600 | 16.000 | 2143.000 | 2168.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| GR | 898.400 | 2072.000 | 898.400 | 2072.000 | 898.400 | 2072.000 | 898.400 | 2072.000 | 898.400 | 2072.000 |
| GR | 898.040 | 2082.000 | 898.000 | 2090.000 | 889.300 | 2118.000 | 887.800 | 2143.000 | 886.600 | 2151.000 |
| GR | 886.300 | 2162.000 | 887.600 | 2168.000 | 891.700 | 2186.000 | 895.000 | 2231.000 | 896.700 | 2246.000 |
| GR | 899.200 | 2319.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 54.650 | 19.000 | 2625.000 | 2650.000 | 500.000 | 650.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.500 | 2074.000 | 895.900 | 2086.000 | 895.300 | 2280.000 | 895.280 | 2498.000 | 895.200 | 2560.000 |
| GR | 894.500 | 2590.000 | 892.300 | 2610.000 | 889.200 | 2625.000 | 888.600 | 2630.000 | 888.100 | 2635.000 |
| GR | 888.200 | 2640.000 | 888.700 | 2645.000 | 889.500 | 2650.000 | 892.000 | 2658.000 | 895.000 | 2693.000 |
| GR | 897.000 | 2723.000 | 899.400 | 2782.000 | 899.500 | 2793.000 | 902.200 | 2926.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2564.000 | 2659.000 |

(F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.680 | 29.000 | 2624.000 | 2658.600 | 500.000 | 650.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.500 | 2074.000 | 895.900 | 2086.000 | 895.300 | 2280.000 | 895.280 | 2498.000 | 895.120 | 2602.700 |
| GR | 894.900 | 2619.000 | 894.600 | 2624.000 | 892.000 | 2628.500 | 890.220 | 2633.000 | 890.100 | 2633.700 |
| GR | 889.800 | 2634.700 | 889.700 | 2635.500 | 889.260 | 2637.400 | 889.300 | 2639.000 | 889.400 | 2640.100 |
| GR | 889.400 | 2641.700 | 889.510 | 2642.800 | 889.800 | 2644.400 | 889.900 | 2645.000 | 890.000 | 2645.500 |
| GR | 890.210 | 2647.200 | 890.600 | 2648.300 | 893.700 | 2658.600 | 895.090 | 2663.600 | 897.000 | 2714.000 |
| GR | 898.700 | 2753.700 | 899.400 | 2782.000 | 899.500 | 2793.000 | 902.200 | 2926.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2464.000 | 2659.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.690 | 40.000 | 2624.000 | 2658.600 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.000 | 894.000 | 0.000 |
| GR | 897.800 | 2022.000 | 897.800 | 2026.000 | 897.800 | 2038.000 | 897.800 | 2048.000 | 897.800 | 2054.000 |
| GR | 897.500 | 2074.000 | 895.900 | 2086.000 | 895.300 | 2280.000 | 895.280 | 2498.000 | 895.120 | 2602.700 |
| GR | 894.900 | 2619.000 | 894.600 | 2624.000 | 892.000 | 2628.500 | 891.050 | 2633.000 | 890.220 | 2633.000 |
| GR | 890.100 | 2633.700 | 889.850 | 2634.700 | 889.700 | 2635.500 | 891.050 | 2635.500 | 891.430 | 2636.900 |
| GR | 892.000 | 2639.000 | 890.390 | 2639.000 | 889.350 | 2640.100 | 889.400 | 2641.700 | 889.450 | 2642.100 |
| GR | 890.390 | 2642.800 | 892.000 | 2642.800 | 892.090 | 2644.400 | 890.480 | 2644.400 | 889.900 | 2645.000 |
| GR | 890.000 | 2645.500 | 890.210 | 2647.200 | 890.600 | 2648.300 | 892.090 | 2648.300 | 895.500 | 2658.600 |
| GR | 897.000 | 2714.400 | 898.700 | 2753.700 | 899.400 | 2782.000 | 899.500 | 2793.000 | 902.200 | 2926.000 |
| NC | 0.000 | 0.000 | .020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2464.000 | 2659.000 |

PRIVATE DRIVE (G)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.700 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.000 | 894.000 | 0.000 |
| BT | 31.000 | 2022.000 | 897.800 | 0.000 | 2026.000 | 897.800 | 0.000 | 2038.000 | 897.800 | 0.000 |
| BT | 2048.000 | 897.800 | 0.000 | 2054.000 | 897.800 | 0.000 | 2074.000 | 897.500 | 0.000 | 2086.000 |
| BT | 895.900 | 0.000 | 2280.000 | 895.300 | 0.000 | 2498.000 | 895.280 | 0.000 | 2602.700 | 895.120 |
| BT | 0.000 | 2619.000 | 894.900 | 0.000 | 2624.000 | 894.600 | 0.000 | 2628.500 | 895.500 | 0.000 |
| BT | 2633.000 | 895.600 | 891.050 | 2633.700 | 895.600 | 891.760 | 2634.700 | 895.700 | 891.760 | 2635.500 |
| BT | 895.700 | 891.050 | 2639.000 | 895.800 | 892.000 | 2640.100 | 895.900 | 893.140 | 2641.700 | 896.000 |
| BT | 893.140 | 2642.800 | 896.000 | 892.000 | 2644.400 | 896.000 | 892.090 | 2645.500 | 896.000 | 893.230 |
| BT | 2647.200 | 896.000 | 893.230 | 2648.300 | 896.000 | 892.090 | 2658.600 | 896.000 | 0.000 | 2714.400 |
| BT | 897.000 | 0.000 | 2753.700 | 898.700 | 0.000 | 2782.000 | 899.400 | 0.000 | 2793.000 | 899.500 |
| BT | 0.000 | 2926.000 | 902.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2428.000 | 2659.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.710 | 0.000 | 0.000 | 0.000 | 18.000 | 18.000 | 18.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.660 | 894.660 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2428.000 | 2659.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.720 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.660 | 894.660 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2332.000 | 2662.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.730 | 28.000 | 2624.000 | 2658.600 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.550 | 2074.000 | 895.950 | 2086.000 | 895.350 | 2280.000 | 895.330 | 2498.000 | 895.170 | 2602.700 |
| GR | 894.950 | 2619.000 | 894.650 | 2624.000 | 892.050 | 2628.500 | 890.270 | 2633.000 | 890.150 | 2633.700 |
| GR | 889.850 | 2634.700 | 889.750 | 2635.500 | 889.310 | 2637.400 | 889.350 | 2639.000 | 889.450 | 2640.100 |
| GR | 889.450 | 2641.700 | 889.560 | 2642.800 | 889.850 | 2644.400 | 889.950 | 2645.000 | 890.050 | 2645.500 |
| GR | 890.260 | 2647.200 | 890.650 | 2648.300 | 893.750 | 2658.600 | 897.050 | 2714.400 | 898.750 | 2753.700 |
| GR | 899.450 | 2782.000 | 899.550 | 2793.000 | 902.250 | 2926.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .080 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| FT | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 2335.000 | 2608.000 |

(H)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 55.000 | 18.000 | 2512.000 | 2562.000 | 600.000 | 900.000 | 780.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.800 | 2054.000 | 897.500 | 2074.000 | 895.900 | 2086.000 | 892.400 | 2313.000 | 892.100 | 2377.000 |
| GR | 890.300 | 2482.000 | 889.500 | 2512.000 | 888.200 | 2518.000 | 888.900 | 2530.000 | 888.700 | 2542.000 |
| GR | 889.200 | 2562.000 | 890.300 | 2565.000 | 895.000 | 2636.000 | 896.100 | 2666.000 | 898.800 | 2718.000 |
| GR | 899.000 | 2732.000 | 898.900 | 2748.000 | 901.000 | 2784.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .100 | .100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 2087.000 | 2260.000 |

CORPORATE BOUNDARY (I)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 55.100 | 21.000 | 2184.000 | 2222.000 | 1820.000 | 1820.000 | 1820.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.900 | 2067.000 | 897.900 | 2067.000 | 897.900 | 2067.000 | 897.900 | 2067.000 | 896.500 | 2074.000 |
| GR | 893.600 | 2086.000 | 892.700 | 2184.000 | 891.300 | 2186.000 | 890.500 | 2194.000 | 891.200 | 2206.000 |
| GR | 893.300 | 2222.000 | 894.500 | 2264.000 | 897.100 | 2294.000 | 899.000 | 2366.000 | 903.600 | 2492.000 |
| GR | 904.400 | 2502.000 | 912.300 | 2841.000 | 914.300 | 2933.000 | 922.000 | 3033.000 | 929.400 | 3095.000 |
| GR | 934.200 | 3124.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 50.000

3720 CRITICAL DEPTH ASSUMED

ABANDONED RAILROAD EMBANKMENT (A)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50.00 | 4.44 | 883.74 | 883.74 | 883.10 | 885.35 | 1.60 | 0.00 | 0.00 | 882.20 |
| 1330. | 3. | 1322. | 5. | 2. | 130. | 3. | 0. | 0. | 882.20 |
| 0.00 | 1.39 | 10.19 | 1.50 | .100 | .040 | .100 | 0.000 | 879.30 | 1997.54 |
| .015516 | 0. | 0. | 0. | 0 | 7 | 0 | 0.00 | 45.78 | 2043.32 |

*SECNO 2.900

3301 HV CHANGED MORE THAN HVINS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.90 | 5.61 | 885.41 | 0.00 | 0.00 | 885.91 | .50 | .45 | .11 | 882.60 |
| 1330. | 34. | 1133. | 163. | 22. | 186. | 109. | 0. | 0. | 882.60 |
| .00 | 1.53 | 6.10 | 1.50 | .100 | .040 | .100 | .040 | 879.80 | 1987.80 |
| .004422 | 65. | 60. | 55. | 3 | 0 | 0 | 0.00 | 120.20 | 2107.99 |

*SECNO 3.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 5.28 | 885.58 | 0.00 | 0.00 | 886.21 | .63 | .26 | .04 | 883.10 |
| 1330. | 29. | 1159. | 142. | 18. | 170. | 89. | 1. | 0. | 883.10 |
| .01 | 1.62 | 6.81 | 1.59 | .100 | .040 | .100 | .039 | 880.30 | 1988.35 |
| .006189 | 65. | 50. | 55. | 2 | 0 | 0 | 0.00 | 117.34 | 2105.69 |

*SECNO 3.100

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.10 | 4.61 | 886.51 | 886.51 | 0.00 | 887.62 | 1.11 | .75 | .14 | 884.70 |
| 1330. | 19. | 1223. | 88. | 11. | 139. | 51. | 1. | 0. | 884.70 |
| .01 | 1.77 | 8.82 | 1.72 | .100 | .040 | .100 | .039 | 881.90 | 1989.48 |
| .013612 | 110. | 85. | 85. | 20 | 15 | 0 | 0.00 | 111.54 | 2101.02 |

*SECNO 50.800

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 1974.0 2054.0 TYPE= 1 TARGET= 80.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50.80 | 4.20 | 887.60 | 887.60 | 0.00 | 889.36 | 1.76 | 1.18 | .19 | 884.10 |
| 1330. | 18. | 1254. | 57. | 8. | 115. | 22. | 1. | 1. | 884.00 |
| .01 | 2.21 | 10.95 | 2.64 | .100 | .040 | .100 | .039 | 883.40 | 1995.21 |
| .013938 | 110. | 85. | 85. | 3 | 11 | 0 | 0.00 | 46.03 | 2041.24 |

CCHV= .300 CEHV= .500
*SECNO 50.900

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 902.00 ELREA= 902.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50.90 | 5.55 | 889.35 | 0.00 | 0.00 | 890.07 | .73 | .40 | .31 | 905.10 |
| 1330. | 0. | 1330. | 0. | 0. | 195. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 6.84 | 0.00 | .100 | .040 | .100 | .039 | 883.80 | 2003.81 |
| .005260 | 60. | 50. | 40. | 4 | 0 | 0 | 0.00 | 46.19 | 2050.00 |

#SECNO 51.000

3370 NORMAL BRIDGE.NRD= 4 MIN ELTRD= 905.60 MAX ELLC= 905.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 902.00 ELREA= 902.00

RAILROAD BRIDGE (B)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.00 | 5.52 | 889.32 | 0.00 | 0.00 | 890.11 | .79 | .00 | .03 | 905.60 |
| 1330. | 0. | 1330. | 0. | 0. | 187. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 7.11 | 0.00 | .100 | .025 | .100 | .039 | 883.80 | 2004.62 |
| .002287 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 45.38 | 2050.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WIN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 51.100

3370 NORMAL BRIDGE,NRD= 4 MIN ELTRD= 905.60 MAX ELLC= 905.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 905.60 ELREA= 905.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.10 | 5.64 | 889.44 | 0.00 | 0.00 | 890.19 | .74 | .07 | .01 | 905.60 |
| 1330. | 0. | 1330. | 0. | 0. | 192. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 6.92 | 0.00 | .100 | .025 | .100 | .038 | 883.80 | 2004.36 |
| .002099 | 31. | 31. | 31. | 0 | 0 | 0 | 0.00 | 45.64 | 2050.00 |

*SECNO 51.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 905.60 ELREA= 905.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.20 | 5.65 | 889.45 | 0.00 | 0.00 | 890.19 | .74 | .00 | .00 | 905.10 |
| 1330. | 0. | 1330. | 0. | 0. | 193. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 6.90 | 0.00 | .100 | .045 | .100 | .038 | 883.80 | 2004.34 |
| .006759 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 45.66 | 2050.00 |

*SECNO 51.500

3470 ENCROACHMENT STATIONS= 1946.0 2061.0 TYPE= 1 TARGET= 115.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.50 | 8.01 | 890.01 | 0.00 | 0.00 | 890.40 | .39 | .10 | .11 | 884.60 |
| 1330. | 143. | 1101. | 86. | 109. | 202. | 63. | 2. | 1. | 884.40 |
| .02 | 1.32 | 5.45 | 1.37 | -.100 | .045 | .100 | .038 | 882.00 | 1959.76 |
| .002092 | 30. | 30. | 30. | 2 | 0 | 0 | 0.00 | 92.16 | 2051.92 |

*SECNO 51.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 898.00 ELREA= 898.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.90 | 7.96 | 890.26 | 0.00 | 0.00 | 890.93 | .66 | .39 | .14 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 204. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 6.52 | 0.00 | .100 | .045 | .100 | .040 | 882.30 | 2000.00 |
| .004595 | 130. | 130. | 130. | 2 | 0 | 0 | 0.00 | 29.00 | 2029.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 52.000

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 900.00 MAX ELLC= 900.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 898.00 ELREA= 898.00

MONROE ST. BRIDGE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.00 | 7.87 | 890.17 | 0.00 | 0.00 | 891.03 | .86 | .00 | .10 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 178. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 7.46 | 0.00 | .100 | .025 | .100 | .040 | 882.30 | 2000.00 |
| .002803 | 1. | 1. | 1. | 2 | 0 | 0 | -22.67 | 29.00 | 2029.00 |

*SECNO 52.100

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 900.00 MAX ELLC= 900.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 900.60 ELREA= 900.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.10 | 7.97 | 890.27 | 0.00 | 0.00 | 891.11 | .84 | .08 | .01 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 180. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 7.37 | 0.00 | .100 | .025 | .100 | .039 | 882.30 | 2000.00 |
| .002719 | 28. | 28. | 28. | 0 | 0 | 0 | -23.50 | 29.00 | 2029.00 |

*SECNO 52.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 900.60 ELREA= 900.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.20 | 8.28 | 890.58 | 0.00 | 0.00 | 891.19 | .60 | .00 | .07 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 213. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 6.24 | 0.00 | .100 | .045 | .100 | .039 | 882.30 | 2000.00 |
| .004040 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 29.00 | 2029.00 |

*SECNO 52.300

3470 ENCROACHMENT STATIONS= 1950.0 2076.0 TYPE= 1 TARGET= 126.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.30 | 8.87 | 891.17 | 0.00 | 0.00 | 891.43 | .26 | .14 | .10 | 884.50 |
| 1330. | 225. | 915. | 191. | 165. | 190. | 147. | 3. | 1. | 884.70 |
| .03 | 1.36 | 4.82 | 1.30 | .100 | .045 | .100 | .039 | 882.30 | 1950.00 |
| .001463 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 126.00 | 2076.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | OLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

CCHV= .100 CEHV= .300
*SECNO 53.000
(D)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.00 | 8.22 | 892.02 | 0.00 | 0.00 | 892.15 | .13 | .71 | .01 | 886.10 |
| 1330. | 36. | 1195. | 99. | 48. | 398. | 146. | 14. | 4. | 888.20 |
| .10 | .75 | 3.00 | .68 | .100 | .045 | .100 | .041 | 883.80 | 2115.63 |
| .000642 | 725. | 725. | 1040. | 3 | 0 | 0 | 0.00 | 147.04 | 2262.67 |

*SECNO 53.500

3470 ENCROACHMENT STATIONS= 2063.0 2258.0 TYPE= 1 TARGET= 195.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.50 | 8.40 | 892.20 | 0.00 | 0.00 | 892.31 | .12 | .17 | .00 | 886.10 |
| 1330. | 37. | 1186. | 107. | 51. | 408. | 157. | 17. | 5. | 888.20 |
| .13 | .72 | 2.91 | .68 | .100 | .045 | .100 | .042 | 883.80 | 2115.15 |
| .000582 | 270. | 270. | 270. | 2 | 0 | 0 | 0.00 | 142.85 | 2258.00 |

CCHV= .300 CEHV= .500
*SECNO 53.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 902.90 ELREA= 902.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.90 | 7.02 | 892.42 | 0.00 | 0.00 | 892.78 | .36 | .35 | .12 | 888.60 |
| 1330. | 0. | 1330. | 0. | 0. | 277. | 0. | 21. | 5. | 904.90 |
| .15 | 0.00 | 4.81 | 0.00 | .060 | .045 | .090 | .042 | 885.40 | 2025.00 |
| .002718 | 320. | 320. | 320. | 2 | 0 | 0 | 0.00 | 45.00 | 2070.00 |

*SECNO 54.000

3370 NORMAL BRIDGE,NRD= 19 MIN ELTRD= 903.90 MAX ELLC= 906.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 902.90 ELREA= 902.90

MARSHALL AVE. BRIDGE (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.00 | 6.97 | 892.37 | 0.00 | 0.00 | 892.84 | .47 | .00 | .06 | 888.60 |
| 1330. | 0. | 1330. | 0. | 0. | 241. | 0. | 21. | 5. | 904.90 |
| .15 | 0.00 | 5.52 | 0.00 | .060 | .025 | .090 | .042 | 885.40 | 2025.00 |
| .001573 | 1. | 1. | 1. | 2 | 0 | 0 | -33.09 | 45.00 | 2070.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VPOB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 54.100

3370 NORMAL BRIDGE.NRD= 17 MIN ELTRD= 904.10 MAX ELLC= 906.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 905.20 ELREA= 905.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.10 | 6.51 | 892.41 | 0.00 | 0.00 | 892.94 | .53 | .07 | .03 | 888.70 |
| 1330. | 0. | 1330. | 0. | 0. | 227. | 0. | 21. | 5. | 904.10 |
| .15 | 0.00 | 5.86 | 0.00 | .060 | .025 | .090 | .042 | 885.90 | 2025.00 |
| .001823 | 43. | 43. | 43. | 2 | 0 | 0 | -33.06 | 45.00 | 2070.00 |

*SECNO 54.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 905.20 ELREA= 905.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.20 | 6.71 | 892.61 | 0.00 | 0.00 | 892.99 | .38 | .00 | .05 | 888.70 |
| 1330. | 0. | 1330. | 0. | 0. | 269. | 0. | 21. | 5. | 904.10 |
| .15 | 0.00 | 4.94 | 0.00 | .060 | .045 | .090 | .042 | 885.90 | 2025.00 |
| .002815 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 45.00 | 2070.00 |

*SECNO 54.250

3470 ENCROACHMENT STATIONS= 1947.0 2145.0 TYPE= 1 TARGET= 198.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.25 | 7.27 | 893.07 | 0.00 | 0.00 | 893.13 | .06 | .05 | .09 | 887.50 |
| 1330. | 35. | 1280. | 14. | 38. | 625. | 26. | 22. | 6. | 887.50 |
| .16 | .93 | 2.05 | .55 | .060 | .045 | .090 | .042 | 885.80 | 1987.29 |
| .000306 | 65. | 65. | 65. | 2 | 0 | 0 | 0.00 | 116.14 | 2103.43 |

CCHV= .100 CEHV= .300
CCHV= .100 CEHV= .300

*SECNO 54.400

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.40 | 6.20 | 893.00 | 0.00 | 0.00 | 893.28 | .28 | .08 | .06 | 888.80 |
| 840. | 47. | 774. | 19. | 35. | 176. | 21. | 23. | 6. | 890.70 |
| .17 | 1.33 | 4.40 | .90 | .080 | .045 | .080 | .042 | 886.80 | 2067.20 |
| .001987 | 150. | 150. | 150. | 2 | 0 | 0 | 0.00 | 68.30 | 2135.51 |

*SECNO 54.600

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 6.94 | 893.24 | 0.00 | 0.00 | 893.37 | .13 | .08 | .02 | 887.80 |
| 840. | 204. | 546. | 90. | 142. | 161. | 81. | 24. | 6. | 887.60 |
| .18 | 1.43 | 3.39 | 1.12 | .080 | .045 | .080 | .042 | 886.30 | 2105.31 |
| .000894 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 101.72 | 2207.03 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| *SECNO 54.650 | | | | | | | | | |
| 54.65 | 5.82 | 893.92 | 0.00 | 0.00 | 894.19 | .27 | .78 | .04 | 889.20 |
| 840. | 129. | 625. | 86. | 59. | 133. | 47. | 28. | 7. | 889.50 |
| .22 | 2.17 | 4.69 | 1.83 | .060 | .045 | .060 | .043 | 888.10 | 2595.27 |
| .002186 | 500. | 600. | 650. | 2 | 0 | 0 | 0.00 | 85.13 | 2680.40 |
| *SECNO 54.680 | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= | | 2564.0 | 2659.0 | TYPE= | 1 | TARGET= | | 95.000 | |
| (F) | | | | | | | | | |
| 54.68 | 6.24 | 895.50 | 0.00 | 0.00 | 895.93 | .43 | 1.69 | .05 | 894.60 |
| 840. | 23. | 817. | 1. | 25. | 153. | 1. | 31. | 8. | 893.70 |
| .25 | .90 | 5.34 | .74 | .060 | .045 | .060 | .043 | 889.26 | 2564.00 |
| .003851 | 500. | 600. | 650. | 2 | 0 | 0 | 0.00 | 95.00 | 2659.00 |
| *SECNO 54.690 | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= | | 2464.0 | 2659.0 | TYPE= | 1 | TARGET= | | 195.000 | |
| 54.69 | 6.47 | 895.82 | 0.00 | 0.00 | 896.17 | .35 | .24 | .01 | 894.60 |
| 840. | 147. | 693. | 0. | 102. | 133. | 0. | 31. | 9. | 895.50 |
| .25 | 1.44 | 5.22 | .61 | .060 | .045 | .060 | .043 | 889.35 | 2464.00 |
| .006051 | 50. | 50. | 50. | 3 | 0 | 0 | 0.00 | 195.00 | 2659.00 |
| *SECNO 54.700 | | | | | | | | | |
| 3370 NORMAL BRIDGE,NRD= 31 MIN ELTRD= 894.60 MAX ELLC= 893.23 | | | | | | | | | |
| 3685 20 TRIALS ATTEMPTED WSEL,CWSEL | | | | | | | | | |
| 3693 PROBABLE MINIMUM SPECIFIC ENERGY | | | | | | | | | |
| 3720 CRITICAL DEPTH ASSUMED | | | | | | | | | |
| 3470 ENCROACHMENT STATIONS= | | 2464.0 | 2659.0 | TYPE= | 1 | TARGET= | | 195.000 | |
| PRIVATE DRIVE (G) | | | | | | | | | |
| 54.70 | 6.72 | 896.07 | 896.07 | 0.00 | 896.59 | .52 | .01 | .05 | 894.60 |
| 840. | 533. | 307. | 0. | 142. | 38. | 0. | 31. | 9. | 895.50 |
| .25 | 3.75 | 8.19 | .04 | .060 | .020 | .060 | .043 | 889.35 | 2464.00 |
| .026508 | 1. | 1. | 1. | 20 | 10 | 0 | -104.21 | 195.00 | 2659.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 54.710

3370 NORMAL BRIDGE,NRD= 31 MIN ELTRD= 894.60 MAX ELLC= 893.23

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3470 ENCROACHMENT STATIONS= | | | 2428.0 | 2659.0 | TYPE= | 1 | TARGET= | 231.000 | |
| 54.71 | 7.30 | 896.65 | 0.00 | 0.00 | 896.79 | .14 | .16 | .04 | 894.60 |
| 840. | 588. | 252. | 0. | 284. | 58. | 0. | 31. | 9. | 895.50 |
| .25 | 2.07 | 4.37 | .64 | .060 | .020 | .060 | .043 | 889.35 | 2428.00 |
| .004281 | 18. | 18. | 18. | 2 | 0 | 0 | -104.21 | 231.00 | 2659.00 |

*SECNO 54.720

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3470 ENCROACHMENT STATIONS= | | | 2428.0 | 2659.0 | TYPE= | 1 | TARGET= | 231.000 | |
| 54.72 | 7.36 | 896.71 | 0.00 | 0.00 | 896.79 | .09 | .00 | .01 | 894.60 |
| 840. | 363. | 477. | 0. | 295. | 164. | 0. | 31. | 9. | 895.50 |
| .25 | 1.23 | 2.92 | .42 | .060 | .045 | .060 | .043 | 889.35 | 2428.00 |
| .001431 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 231.00 | 2659.00 |

*SECNO 54.730

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3470 ENCROACHMENT STATIONS= | | | 2332.0 | 2662.0 | TYPE= | 1 | TARGET= | 330.000 | |
| 54.73 | 7.47 | 896.78 | 0.00 | 0.00 | 896.84 | .06 | .04 | .00 | 894.65 |
| 840. | 347. | 485. | 8. | 438. | 196. | 10. | 32. | 9. | 893.75 |
| .26 | .79 | 2.48 | .83 | .060 | .045 | .060 | .043 | 889.31 | 2332.00 |
| .000597 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 330.00 | 2662.00 |

CCHV= .100 CEHV= .300

*SECNO 55.000 (H)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 8.69 | 896.89 | 0.00 | 0.00 | 896.89 | .00 | .05 | .01 | 889.50 |
| 840. | 492. | 264. | 84. | 1729. | 404. | 369. | 56. | 16. | 889.20 |
| .75 | .28 | .65 | .23 | .070 | .045 | .080 | .044 | 888.20 | 2078.58 |
| .000024 | 600. | 780. | 900. | 2 | 0 | 0 | 0.00 | 602.61 | 2681.19 |

*SECNO 55.100 CORPORATE BOUNDARY (I)

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |
| 55.10 | 6.48 | 896.98 | 0.00 | 0.00 | 897.02 | .04 | .12 | .01 | 892.70 |
| 840. | 298. | 443. | 98. | 399. | 208. | 165. | 124. | 33. | 893.30 |
| 1.10 | .75 | 2.13 | .60 | .100 | .045 | .100 | .045 | 890.50 | 2071.60 |
| .000443 | 1820. | 1820. | 1820. | 2 | 0 | 0 | 0.00 | 221.01 | 2292.62 |

MOORE BUSINESS FORMS, INC. 23

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1      FIS  CITY OF MARSHALL
T2      100-YEAR FLOODWAY
T3      RICE CREEK
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10. | 6. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 883.100 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 15.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*PROF 2

CCHV= .100 CEHV= .300

*SECNO 50.000
2800 NAT Q1= 106.77 WSEL= 883.74 ENC Q1= 111.53 WSEL= 883.84 RATIO= -.0446
NAT Q1= 112. RATIOS LOB,CH,ROB= .0022 .9935 .0042 WSEL= 883.84
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 2000.0 2039.0 TYPE= 4 TARGET= .006
ABANDONED RAILROAD EMBANKMENT (A)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50.00 | 4.42 | 883.72 | 883.72 | 883.74 | 885.37 | 1.65 | 0.00 | 0.00 | 882.20 |
| 1330. | 0. | 1330. | 0. | 0. | 129. | 0. | 0. | 0. | 882.20 |
| 0.00 | 0.00 | 10.31 | 0.00 | .100 | .040 | .100 | 0.000 | 879.30 | 2000.00 |
| .017670 | 0. | 0. | 0. | 0 | 7 | 0 | 0.00 | 39.00 | 2039.00 |

*SECNO 2.900
2800 NAT Q1= 200.01 WSEL= 885.41 ENC Q1= 200.01 WSEL= 885.51 RATIO= 0.0000
NAT Q1= 210. RATIOS LOB,CH,ROB= .0262 .8463 .1276 WSEL= 885.51

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 1999.3 2090.1 TYPE= 4 TARGET= .049

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2.90 | 5.61 | 885.41 | 0.00 | 885.41 | 885.98 | .57 | .50 | .11 | 882.60 |
| 1330. | 1. | 1189. | 140. | 2. | 186. | 87. | 0. | 0. | 882.60 |
| .00 | .69 | 6.40 | 1.61 | .100 | .040 | .100 | .040 | 879.80 | 1999.34 |
| .004851 | 65. | 60. | 55. | 4 | 0 | 0 | 0.00 | 90.72 | 2090.05 |

*SECNO 3.000
2800 NAT Q1= 169.06 WSEL= 885.58 ENC Q1= 169.06 WSEL= 885.68 RATIO= 0.0000
NAT Q1= 178. RATIOS LOB,CH,ROB= .0231 .8651 .1118 WSEL= 885.68

3470 ENCROACHMENT STATIONS= 2000.0 2085.3 TYPE= 4 TARGET= .053

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 5.30 | 885.60 | 0.00 | 885.58 | 886.32 | .72 | .29 | .04 | 883.10 |
| 1330. | 0. | 1215. | 115. | 0. | 171. | 66. | 1. | 0. | 883.10 |
| .00 | 0.00 | 7.09 | 1.75 | .100 | .040 | .100 | .039 | 880.30 | 2000.00 |
| .007095 | 65. | 50. | 55. | 2 | 0 | 0 | 0.00 | 85.28 | 2085.28 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 3.100
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 1989.0 2101.0 TYPE= 1 TARGET= 112.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3.10 | 4.61 | 886.51 | 886.51 | 886.51 | 887.62 | 1.11 | .81 | .12 | 884.70 |
| 1330. | 19. | 1222. | 89. | 11. | 139. | 52. | 1. | 0. | 884.70 |
| .01 | 1.77 | 8.80 | 1.72 | .100 | .040 | .100 | .039 | 881.90 | 1989.47 |
| .013532 | 110. | 85. | 85. | 20 | 15 | 0 | 0.00 | 111.52 | 2101.00 |

*SECNO 50.800

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 1974.0 2054.0 TYPE= 1 TARGET= 80.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50.80 | 4.20 | 887.60 | 887.60 | 887.60 | 889.36 | 1.76 | 1.17 | .20 | 884.10 |
| 1330. | 18. | 1254. | 57. | 8. | 115. | 22. | 1. | 1. | 884.00 |
| .01 | 2.21 | 10.95 | 2.64 | .100 | .040 | .100 | .039 | 883.40 | 1995.21 |
| .013938 | 110. | 85. | 85. | 3 | 11 | 0 | 0.00 | 46.03 | 2041.24 |

CCHV= .300 CEHV= .500
*SECNO 50.900

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 902.00 ELREA= 902.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50.90 | 5.55 | 889.35 | 0.00 | 889.35 | 890.07 | .73 | .40 | .31 | 905.10 |
| 1330. | 0. | 1330. | 0. | 0. | 195. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 6.84 | 0.00 | .100 | .040 | .100 | .039 | 883.80 | 2003.81 |
| .005260 | 60. | 50. | 40. | 4 | 0 | 0 | 0.00 | 46.19 | 2050.00 |

*SECNO 51.000

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

3370 NORMAL BRIDGE,NRD= 4 MIN ELTRD= 905.60 MAX ELLC= 905.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 902.00 ELREA= 902.00

RAILROAD BRIDGE (B)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.00 | 5.52 | 889.32 | 0.00 | 889.32 | 890.11 | .79 | .00 | .03 | 905.60 |
| 1330. | 0. | 1330. | 0. | 0. | 187. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 7.11 | 0.00 | .100 | .025 | .100 | .039 | 883.80 | 2004.62 |
| .002287 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 45.38 | 2050.00 |

*SECNO 51.100

3370 NORMAL BRIDGE,NRD= 4 MIN ELTRD= 905.60 MAX ELLC= 905.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 905.60 ELREA= 905.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.10 | 5.64 | 889.44 | 0.00 | 889.44 | 890.19 | .74 | .07 | .01 | 905.60 |
| 1330. | 0. | 1330. | 0. | 0. | 192. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 6.92 | 0.00 | .100 | .025 | .100 | .038 | 883.80 | 2004.36 |
| .002099 | 31. | 31. | 31. | 0 | 0 | 0 | 0.00 | 45.64 | 2050.00 |

*SECNO 51.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 905.60 ELREA= 905.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.20 | 5.65 | 889.45 | 0.00 | 889.45 | 890.19 | .74 | .00 | .00 | 905.10 |
| 1330. | 0. | 1330. | 0. | 0. | 193. | 0. | 2. | 1. | 888.40 |
| .01 | 0.00 | 6.90 | 0.00 | .100 | .045 | .100 | .038 | 883.80 | 2004.34 |
| .006759 | 1. | 1. | 1. | 0 | 0 | 0 | 0.00 | 45.66 | 2050.00 |

*SECNO 51.500

3470 ENCROACHMENT STATIONS= 1946.0 2061.0 TYPE= 1 TARGET= 115.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.50 | 8.01 | 890.01 | 0.00 | 890.01 | 890.40 | .39 | .10 | .11 | 884.60 |
| 1330. | 143. | 1101. | 86. | 109. | 202. | 63. | 2. | 1. | 884.40 |
| .02 | 1.32 | 5.45 | 1.37 | .100 | .045 | .100 | .038 | 882.00 | 1959.76 |
| .002092 | 30. | 30. | 30. | 2 | 0 | 0 | 0.00 | 92.16 | 2051.92 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 51.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 898.00 ELREA= 898.00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51.90 | 7.96 | 890.26 | 0.00 | 890.26 | 890.93 | .66 | .39 | .14 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 204. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 6.52 | 0.00 | .100 | .045 | .100 | .040 | 882.30 | 2000.00 |
| .004595 | 130. | 130. | 130. | 2 | 0 | 0 | 0.00 | 29.00 | 2029.00 |

*SECNO 52.000

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 900.00 MAX ELLC= 900.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 898.00 ELREA= 898.00

MONROE ST. BRIDGE (C)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.00 | 7.87 | 890.17 | 0.00 | 890.17 | 891.03 | .86 | .00 | .10 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 178. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 7.46 | 0.00 | .100 | .025 | .100 | .040 | 882.30 | 2000.00 |
| .002803 | 1. | 1. | 1. | 2 | 0 | 0 | -22.67 | 29.00 | 2029.00 |

*SECNO 52.100

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 900.00 MAX ELLC= 900.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 900.60 ELREA= 900.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.10 | 7.97 | 890.27 | 0.00 | 890.27 | 891.11 | .84 | .08 | .01 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 180. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 7.37 | 0.00 | .100 | .025 | .100 | .039 | 882.30 | 2000.00 |
| .002719 | 28. | 28. | 28. | 0 | 0 | 0 | -23.50 | 29.00 | 2029.00 |

*SECNO 52.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 900.60 ELREA= 900.60

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.20 | 8.28 | 890.58 | 0.00 | 890.58 | 891.19 | .60 | .00 | .07 | 900.50 |
| 1330. | 0. | 1330. | 0. | 0. | 213. | 0. | 3. | 1. | 900.00 |
| .02 | 0.00 | 6.24 | 0.00 | .100 | .045 | .100 | .039 | 882.30 | 2000.00 |
| .004040 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 29.00 | 2029.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 52.300

3470 ENCROACHMENT STATIONS= 1950.0 2076.0 TYPE= 1 TARGET= 126.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.30 | 8.87 | 891.17 | 0.00 | 891.17 | 891.43 | .26 | .14 | .10 | 884.50 |
| 1330. | 225. | 915. | 191. | 165. | 190. | 147. | 3. | 1. | 884.70 |
| .03 | 1.36 | 4.82 | 1.30 | .100 | .045 | .100 | .039 | 882.30 | 1950.00 |
| .001463 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 126.00 | 2076.00 |

CCHV= .100 CEHV= .300

*SECNO 53.000

2800 NAT Q1= 524.74 WSEL= 892.02 ENC Q1= 524.74 WSEL= 892.12 RATIO= 0.0000

NAT Q1= 540. RATIOS LOB,CH,ROB= .0276 .8953 .0771 WSEL= 892.12

3470 ENCROACHMENT STATIONS= 2127.6 2227.7 TYPE= 4 TARGET= .027

(D)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.00 | 8.23 | 892.03 | 0.00 | 892.02 | 892.17 | .14 | .73 | .01 | 886.10 |
| 1330. | 16. | 1229. | 85. | 23. | 398. | 111. | 13. | 3. | 888.20 |
| .10 | .71 | 3.09 | .76 | .100 | .045 | .100 | .041 | 883.80 | 2127.60 |
| .000676 | 725. | 725. | 1040. | 0 | 0 | 0 | 0.00 | 100.10 | 2227.71 |

*SECNO 53.500

3470 ENCROACHMENT STATIONS= 2063.0 2258.0 TYPE= 1 TARGET= 195.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.50 | 8.42 | 892.22 | 0.00 | 892.20 | 892.34 | .12 | .17 | .00 | 886.10 |
| 1330. | 37. | 1185. | 107. | 52. | 409. | 159. | 16. | 4. | 888.20 |
| .13 | .72 | 2.90 | .68 | .100 | .045 | .100 | .042 | 883.80 | 2115.08 |
| .000574 | 270. | 270. | 270. | 2 | 0 | 0 | 0.00 | 142.92 | 2258.00 |

CCHV= .300 CEHV= .500

*SECNO 53.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 902.90 ELREA= 902.90

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.90 | 7.05 | 892.45 | 0.00 | 892.42 | 892.80 | .36 | .34 | .12 | 888.60 |
| 1330. | 0. | 1330. | 0. | 0. | 278. | 0. | 20. | 5. | 904.90 |
| .15 | 0.00 | 4.79 | 0.00 | .060 | .045 | .090 | .042 | 885.40 | 2025.00 |
| .002689 | 320. | 320. | 320. | 2 | 0 | 0 | 0.00 | 45.00 | 2070.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VCL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 54.000

3370 NORMAL BRIDGE.NRD= 19 MIN ELTRD= 903.90 MAX ELLC= 906.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 902.90 ELREA= 902.90

MARSHALL AVE. BRIDGE (E)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.00 | 6.99 | 892.39 | 0.00 | 892.37 | 892.86 | .47 | .00 | .06 | 888.60 |
| 1330. | 0. | 1330. | 0. | 0. | 242. | 0. | 20. | 5. | 904.90 |
| .15 | 0.00 | 5.50 | 0.00 | .060 | .025 | .090 | .042 | 885.40 | 2025.00 |
| .001562 | 1. | 1. | 1. | 2 | 0 | 0 | -33.35 | 45.00 | 2070.00 |

*SECNO 54.100

3370 NORMAL BRIDGE.NRD= 17 MIN ELTRD= 904.10 MAX ELLC= 906.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 905.20 ELREA= 905.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.10 | 6.53 | 892.43 | 0.00 | 892.41 | 892.96 | .53 | .07 | .03 | 888.70 |
| 1330. | 0. | 1330. | 0. | 0. | 228. | 0. | 20. | 5. | 904.10 |
| .15 | 0.00 | 5.84 | 0.00 | .060 | .025 | .090 | .042 | 885.90 | 2025.00 |
| .001809 | 43. | 43. | 43. | 2 | 0 | 0 | -33.32 | 45.00 | 2070.00 |

*SECNO 54.200

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 905.20 ELREA= 905.20

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.20 | 6.73 | 892.63 | 0.00 | 892.61 | 893.01 | .38 | .00 | .05 | 888.70 |
| 1330. | 0. | 1330. | 0. | 0. | 270. | 0. | 20. | 5. | 904.10 |
| .15 | 0.00 | 4.92 | 0.00 | .060 | .045 | .090 | .042 | 885.90 | 2025.00 |
| .002785 | -1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 45.00 | 2070.00 |

*SECNO 54.250

3470 ENCROACHMENT STATIONS= 1947.0 2145.0 TYPE= 1 TARGET= 198.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.25 | 7.29 | 893.09 | 0.00 | 893.07 | 893.15 | .06 | .04 | .09 | 887.50 |
| 1330. | 35. | 1280. | 15. | 38. | 626. | 26. | 21. | 5. | 887.50 |
| .16 | .93 | 2.04 | .55 | .060 | .045 | .090 | .042 | 885.80 | 1987.26 |
| .000304 | 65. | 65. | 65. | 2 | 0 | 0 | 0.00 | 116.21 | 2103.48 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | QLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAP | TOPWID | ENDST |

CCHV= .100 CEHV= .300
CCHV= .100 CEHV= .300
*SECNO 54.400
2800 NAT Q1= 188.46 WSEL= 893.00 ENC Q1= 188.46 WSEL= 893.10 RATIO= 0.0000
NAT Q1= 195. RATIOS LOB,CH,ROB= .0574 .9178 .0247 WSEL= 893.10

3470 ENCROACHMENT STATIONS= 2077.5 2119.5 TYPE= 4 TARGET= .034

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.40 | 6.19 | 892.99 | 0.00 | 893.00 | 893.30 | .31 | .08 | .07 | 888.80 |
| 840. | 33. | 801. | 5. | 22. | 176. | 5. | 22. | 5. | 890.70 |
| .17 | 1.53 | 4.56 | .97 | .080 | .045 | .080 | .042 | 886.80 | 2077.51 |
| .002137 | 150. | 150. | 150. | 2 | 0 | 0 | 0.00 | 42.02 | 2119.54 |

*SECNO 54.600
2800 NAT Q1= 280.87 WSEL= 893.24 ENC Q1= 280.87 WSEL= 893.34 RATIO= -.0000
NAT Q1= 290. RATIOS LOB,CH,ROB= .2439 .6458 .1103 WSEL= 893.34

3470 ENCROACHMENT STATIONS= 2115.5 2186.0 TYPE= 4 TARGET= .032

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.60 | 6.96 | 893.26 | 0.00 | 893.24 | 893.40 | .14 | .08 | .02 | 887.80 |
| 840. | 194. | 560. | 85. | 127. | 161. | 65. | 23. | 5. | 887.60 |
| .17 | 1.53 | 3.47 | 1.31 | .080 | .045 | .080 | .042 | 886.30 | 2115.50 |
| .000931 | 60. | 60. | 60. | 2 | 0 | 0 | 0.00 | 70.52 | 2186.02 |

*SECNO 54.650
2800 NAT Q1= 179.66 WSEL= 893.92 ENC Q1= 179.66 WSEL= 894.02 RATIO= 0.0000
NAT Q1= 187. RATIOS LOB,CH,ROB= .1571 .7373 .1056 WSEL= 894.02

3470 ENCROACHMENT STATIONS= 2608.8 2661.6 TYPE= 4 TARGET= .040

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.65 | 5.86 | 893.96 | 0.00 | 893.92 | 894.26 | .29 | .81 | .05 | 889.20 |
| 840. | 124. | 644. | 73. | 50. | 134. | 32. | 26. | 6. | 889.50 |
| .21 | 2.46 | 4.79 | 2.26 | .060 | .045 | .060 | .043 | 888.10 | 2608.78 |
| .002257 | 500. | 600. | 650. | 2 | 0 | 0 | 0.00 | 52.79 | 2661.57 |

*SECNO 54.680

3470 ENCROACHMENT STATIONS= 2564.0 2659.0 TYPE= 1 TARGET= 95.000
(F)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.68 | 6.30 | 895.56 | 0.00 | 895.50 | 895.97 | .41 | 1.68 | .04 | 894.60 |
| 840. | 27. | 812. | 1. | 29. | 155. | 1. | 29. | 7. | 893.70 |
| .24 | .94 | 5.24 | .72 | .060 | .045 | .060 | .043 | 889.26 | 2564.00 |
| .003641 | 500. | 600. | 650. | 2 | 0 | 0 | 0.00 | 95.00 | 2659.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 54.690

3470 ENCROACHMENT STATIONS= 2464.0 2659.0 TYPE= 1 TARGET= 195.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.69 | 6.52 | 895.87 | 0.00 | 895.82 | 896.20 | .33 | .22 | .01 | 894.60 |
| 840. | 159. | 681. | 0. | 109. | 134. | 0. | 29. | 7. | 895.50 |
| .25 | 1.45 | 5.07 | .62 | .060 | .045 | .060 | .043 | 889.35 | 2464.00 |
| .005610 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 195.00 | 2659.00 |

*SECNO 54.700

3370 NORMAL BRIDGE,NRD= 31 MIN ELTRD= 894.60 MAX ELLC= 893.23

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 2464.0 2659.0 TYPE= 1 TARGET= 195.000
PRIVATE DRIVE (G)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.70 | 6.72 | 896.07 | 896.07 | 896.07 | 896.59 | .52 | .01 | .06 | 894.60 |
| 840. | 533. | 307. | 0. | 142. | 38. | 0. | 29. | 7. | 895.50 |
| .25 | 3.75 | 8.19 | .04 | .060 | .020 | .060 | .043 | 889.35 | 2464.00 |
| .026508 | 1. | 1. | 1. | 20 | 10 | 0 | -104.21 | 195.00 | 2659.00 |

*SECNO 54.710

3370 NORMAL BRIDGE,NRD= 31 MIN ELTRD= 894.60 MAX ELLC= 893.23

3470 ENCROACHMENT STATIONS= 2428.0 2659.0 TYPE= 1 TARGET= 231.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.71 | 7.30 | 896.65 | 0.00 | 896.65 | 896.79 | .14 | .16 | .04 | 894.60 |
| 840. | 588. | 252. | 0. | 284. | 58. | 0. | 29. | 7. | 895.50 |
| .25 | 2.07 | 4.37 | .64 | .060 | .020 | .060 | .043 | 889.35 | 2428.00 |
| .004281 | 18. | 18. | 18. | 2 | 0 | 0 | -104.21 | 231.00 | 2659.00 |

*SECNO 54.720

3470 ENCROACHMENT STATIONS= 2428.0 2659.0 TYPE= 1 TARGET= 231.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.72 | 7.36 | 896.71 | 0.00 | 896.71 | 896.79 | .09 | .00 | .01 | 894.60 |
| 840. | 363. | 477. | 0. | 295. | 164. | 0. | 29. | 7. | 895.50 |
| .25 | 1.23 | 2.92 | .42 | .060 | .045 | .060 | .043 | 889.35 | 2428.00 |
| .001431 | 1. | 1. | 1. | 2 | 0 | 0 | 0.00 | 231.00 | 2659.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | DEPTH | CWSEL | CRIWS | WSELK | EG | HV | HL | OLOSS | BANK ELEV |
|---|---|---|---|---|---|---|---|---|---|
| Q | QLOB | QCH | QROB | ALOB | ACH | AROB | VOL | TWA | LEFT/RIGHT |
| TIME | VLOB | VCH | VROB | XNL | XNCH | XNR | WTN | ELMIN | SSTA |
| SLOPE | XLOBL | XLCH | XLOBR | ITRIAL | IDC | ICONT | CORAR | TOPWID | ENDST |

*SECNO 54.730

3470 ENCROACHMENT STATIONS= 2332.0 2662.0 TYPE= 1 TARGET= 330.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 54.73 | 7.47 | 896.78 | 0.00 | 896.78 | 896.84 | .06 | .04 | .00 | 894.65 |
| 840. | 347. | 485. | 8. | 438. | 196. | 10. | 30. | 7. | 893.75 |
| .26 | .79 | 2.48 | .83 | .060 | .045 | .060 | .043 | 889.31 | 2332.00 |
| .000597 | 50. | 50. | 50. | 2 | 0 | 0 | 0.00 | 330.00 | 2662.00 |

CCHV= .100 CEHV= .300
*SECNO 55.000

3470 ENCROACHMENT STATIONS= (H) 2335.0 2608.0 TYPE= 1 TARGET= 273.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.00 | 8.71 | 896.91 | 0.00 | 896.89 | 896.92 | .01 | .07 | .01 | 889.50 |
| 840. | 423. | 335. | 82. | 1007. | 405. | 244. | 48. | 12. | 889.20 |
| .60 | .42 | .83 | .33 | .070 | .045 | .080 | .044 | 888.20 | 2335.00 |
| .000039 | 600. | 780. | 900. | 2 | 0 | 0 | 0.00 | 273.00 | 2608.00 |

*SECNO 55.100

3470 ENCROACHMENT STATIONS= CORPORATE BOUNDARY (I) 2087.0 2260.0 TYPE= 1 TARGET= 173.000

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.10 | 6.55 | 897.05 | 0.00 | 896.98 | 897.10 | .05 | .17 | .01 | 892.70 |
| 840. | 294. | 464. | 81. | 379. | 211. | 122. | 98. | 21. | 893.30 |
| .92 | .78 | 2.21 | .67 | .100 | .045 | .100 | .045 | 890.50 | 2087.00 |
| .000465 | 1820. | 1820. | 1820. | 2 | 0 | 0 | 0.00 | 173.00 | 2260.00 |

MOORE BUSINESS FORMS, INC 23

**********
HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
ERROR CORR - 01,02,03,04
MODIFICATION - 50,51,52,53,54
**********

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

RICE CREEK

SUMMARY PRINTOUT

| | SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| * | 50.000 | 883.74 | 1997.54 | 2000.00 | 2039.00 | 2043.32 | 45.78 | 0.00 |
| * | 50.000 | 883.72 | 2000.00 | 2000.00 | 2039.00 | 2039.00 | 39.00 | 0.00 |
| | 2.900 | 885.41 | 1987.80 | 2000.00 | 2047.00 | 2107.99 | 120.20 | 60.00 |
| | 2.900 | 885.41 | 1999.34 | 2000.00 | 2047.00 | 2090.05 | 90.72 | 60.00 |
| | 3.000 | 885.58 | 1988.35 | 2000.00 | 2047.00 | 2105.69 | 117.34 | 50.00 |
| | 3.000 | 885.60 | 2000.00 | 2000.00 | 2047.00 | 2085.28 | 85.28 | 50.00 |
| * | 3.100 | 886.51 | 1989.48 | 2000.00 | 2047.00 | 2101.02 | 111.54 | 85.00 |
| * | 3.100 | 886.51 | 1989.47 | 2000.00 | 2047.00 | 2101.00 | 111.52 | 85.00 |
| * | 50.800 | 887.60 | 1995.21 | 2000.00 | 2029.00 | 2041.24 | 46.03 | 85.00 |
| * | 50.800 | 887.60 | 1995.21 | 2000.00 | 2029.00 | 2041.24 | 46.03 | 85.00 |
| | 50.900 | 889.35 | 2003.81 | 2000.00 | 2050.00 | 2050.00 | 46.19 | 50.00 |
| | 50.900 | 889.35 | 2003.81 | 2000.00 | 2050.00 | 2050.00 | 46.19 | 50.00 |
| | 51.000 | 889.32 | 2004.62 | 2000.00 | 2050.00 | 2050.00 | 45.38 | 1.00 |
| | 51.000 | 889.32 | 2004.62 | 2000.00 | 2050.00 | 2050.00 | 45.38 | 1.00 |
| | 51.100 | 889.44 | 2004.36 | 2000.00 | 2050.00 | 2050.00 | 45.64 | 31.00 |
| | 51.100 | 889.44 | 2004.36 | 2000.00 | 2050.00 | 2050.00 | 45.64 | 31.00 |
| | 51.200 | 889.45 | 2004.34 | 2000.00 | 2050.00 | 2050.00 | 45.66 | 1.00 |
| | 51.200 | 889.45 | 2004.34 | 2000.00 | 2050.00 | 2050.00 | 45.66 | 1.00 |
| | 51.500 | 890.01 | 1959.76 | 2000.00 | 2029.00 | 2051.92 | 92.16 | 30.00 |
| | 51.500 | 890.01 | 1959.76 | 2000.00 | 2029.00 | 2051.92 | 92.16 | 30.00 |
| | 51.900 | 890.26 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 130.00 |
| | 51.900 | 890.26 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 130.00 |

MOORE BUSINESS FORMS, INC 23

| | SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 52.000 | 890.17 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| | 52.000 | 890.17 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| | 52.100 | 890.27 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 28.00 |
| | 52.100 | 890.27 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 28.00 |
| | 52.200 | 890.58 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| | 52.200 | 890.58 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| | 52.300 | 891.17 | 1950.00 | 2000.00 | 2025.00 | 2076.00 | 126.00 | 60.00 |
| | 52.300 | 891.17 | 1950.00 | 2000.00 | 2025.00 | 2076.00 | 126.00 | 60.00 |
| | 53.000 | 892.02 | 2115.63 | 2132.00 | 2190.00 | 2262.67 | 147.04 | 725.00 |
| | 53.000 | 892.03 | 2127.60 | 2132.00 | 2190.00 | 2227.71 | 100.10 | 725.00 |
| | 53.500 | 892.20 | 2115.15 | 2132.00 | 2190.00 | 2258.00 | 142.85 | 270.00 |
| | 53.500 | 892.22 | 2115.08 | 2132.00 | 2190.00 | 2258.00 | 142.92 | 270.00 |
| | 53.900 | 892.42 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 320.00 |
| | 53.900 | 892.45 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 320.00 |
| | 54.000 | 892.37 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| | 54.000 | 892.39 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| | 54.100 | 892.41 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 42.80 |
| | 54.100 | 892.43 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 42.80 |
| | 54.200 | 892.61 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| | 54.200 | 892.63 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| | 54.250 | 893.07 | 1987.29 | 2000.00 | 2093.00 | 2103.43 | 116.14 | 65.00 |
| | 54.250 | 893.09 | 1987.26 | 2000.00 | 2093.00 | 2103.48 | 116.21 | 65.00 |
| | 54.400 | 893.00 | 2067.20 | 2084.00 | 2117.00 | 2135.51 | 68.30 | 150.00 |
| | 54.400 | 892.99 | 2077.51 | 2084.00 | 2117.00 | 2119.54 | 42.02 | 150.00 |
| | 54.600 | 893.24 | 2105.31 | 2143.00 | 2168.00 | 2207.03 | 101.72 | 60.00 |
| | 54.600 | 893.26 | 2115.50 | 2143.00 | 2168.00 | 2186.02 | 70.52 | 60.00 |
| | 54.650 | 893.92 | 2595.27 | 2625.00 | 2650.00 | 2680.40 | 85.13 | 600.00 |
| | 54.650 | 893.96 | 2608.78 | 2625.00 | 2650.00 | 2661.57 | 52.79 | 600.00 |
| | 54.680 | 895.50 | 2564.00 | 2624.00 | 2658.60 | 2659.00 | 95.00 | 600.00 |
| | 54.680 | 895.56 | 2564.00 | 2624.00 | 2658.60 | 2659.00 | 95.00 | 600.00 |
| | 54.690 | 895.82 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 50.00 |
| | 54.690 | 895.87 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 50.00 |
| * | 54.700 | 896.07 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 1.00 |
| * | 54.700 | 896.07 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 1.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 54.710 | 896.65 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 18.00 |
| 54.710 | 896.65 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 18.00 |
| 54.720 | 896.71 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 1.00 |
| 54.720 | 896.71 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 1.00 |
| 54.730 | 896.78 | 2332.00 | 2624.00 | 2658.60 | 2662.00 | 330.00 | 50.00 |
| 54.730 | 896.78 | 2332.00 | 2624.00 | 2658.60 | 2662.00 | 330.00 | 50.00 |
| 55.000 | 896.89 | 2078.58 | 2512.00 | 2562.00 | 2681.19 | 602.61 | 780.00 |
| 55.000 | 896.91 | 2335.00 | 2512.00 | 2562.00 | 2608.00 | 273.00 | 780.00 |
| 55.100 | 896.98 | 2071.60 | 2184.00 | 2222.00 | 2292.62 | 221.01 | 1820.00 |
| 55.100 | 897.05 | 2087.00 | 2184.00 | 2222.00 | 2260.00 | 173.00 | 1820.00 |

RICE CREEK

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * | 50.000 | 0.00 | 0.00 | 0.00 | 879.30 | 1330.00 | 883.74 | 883.74 | 885.35 | 155.16 | 10.19 | 134.96 | 106.77 |
| * | 50.000 | 0.00 | 0.00 | 0.00 | 879.30 | 1330.00 | 883.72 | 883.72 | 885.37 | 176.70 | 10.31 | 128.96 | 100.05 |
| | 2.900 | 60.00 | 0.00 | 0.00 | 879.80 | 1330.00 | 885.41 | 0.00 | 885.91 | 44.22 | 6.10 | 316.36 | 200.01 |
| | 2.900 | 60.00 | 0.00 | 0.00 | 879.80 | 1330.00 | 885.41 | 0.00 | 885.98 | 48.51 | 6.40 | 274.61 | 190.96 |
| | 3.000 | 50.00 | 0.00 | 0.00 | 880.30 | 1330.00 | 885.58 | 0.00 | 886.21 | 61.89 | 6.81 | 277.17 | 169.06 |
| | 3.000 | 50.00 | 0.00 | 0.00 | 880.30 | 1330.00 | 885.60 | 0.00 | 886.32 | 70.95 | 7.09 | 237.14 | 157.89 |
| * | 3.100 | 85.00 | 0.00 | 0.00 | 881.90 | 1330.00 | 886.51 | 886.51 | 887.62 | 136.12 | 8.82 | 200.62 | 114.00 |
| * | 3.100 | 85.00 | 0.00 | 0.00 | 881.90 | 1330.00 | 886.51 | 886.51 | 887.62 | 135.32 | 8.80 | 201.12 | 114.33 |
| * | 50.800 | 85.00 | 0.00 | 0.00 | 883.40 | 1330.00 | 887.60 | 887.60 | 889.36 | 139.38 | 10.95 | 144.53 | 112.65 |
| * | 50.800 | 85.00 | 0.00 | 0.00 | 883.40 | 1330.00 | 887.60 | 887.60 | 889.36 | 139.38 | 10.95 | 144.53 | 112.65 |
| | 50.900 | 50.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 889.35 | 0.00 | 890.07 | 52.60 | 6.84 | 194.54 | 183.38 |
| | 50.900 | 50.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 889.35 | 0.00 | 890.07 | 52.60 | 6.84 | 194.54 | 183.38 |
| | 51.000 | 1.00 | 905.60 | 905.70 | 883.80 | 1330.00 | 889.32 | 0.00 | 890.11 | 22.87 | 7.11 | 187.01 | 278.13 |
| | 51.000 | 1.00 | 905.60 | 905.70 | 883.80 | 1330.00 | 889.32 | 0.00 | 890.11 | 22.87 | 7.11 | 187.01 | 278.12 |
| | 51.100 | 31.00 | 905.60 | 905.70 | 883.80 | 1330.00 | 889.44 | 0.00 | 890.19 | 20.99 | 6.92 | 192.33 | 290.27 |
| | 51.100 | 31.00 | 905.60 | 905.70 | 883.80 | 1330.00 | 889.44 | 0.00 | 890.19 | 20.99 | 6.92 | 192.33 | 290.27 |
| | 51.200 | 1.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 889.45 | 0.00 | 890.19 | 67.59 | 6.90 | 192.74 | 161.78 |
| | 51.200 | 1.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 889.45 | 0.00 | 890.19 | 67.59 | 6.90 | 192.74 | 161.78 |
| | 51.500 | 30.00 | 0.00 | 0.00 | 882.00 | 1330.00 | 890.01 | 0.00 | 890.40 | 20.92 | 5.45 | 373.56 | 290.82 |
| | 51.500 | 30.00 | 0.00 | 0.00 | 882.00 | 1330.00 | 890.01 | 0.00 | 890.40 | 20.92 | 5.45 | 373.55 | 290.82 |
| | 51.900 | 130.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 890.26 | 0.00 | 890.93 | 45.95 | 6.52 | 203.84 | 196.21 |
| | 51.900 | 130.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 890.26 | 0.00 | 890.93 | 45.95 | 6.52 | 203.84 | 196.21 |
| | 52.000 | 1.00 | 900.00 | 900.50 | 882.30 | 1330.00 | 890.17 | 0.00 | 891.03 | 28.03 | 7.46 | 178.32 | 251.22 |
| | 52.000 | 1.00 | 900.00 | 900.50 | 882.30 | 1330.00 | 890.17 | 0.00 | 891.03 | 28.03 | 7.46 | 178.31 | 251.22 |
| | 52.100 | 28.00 | 900.00 | 900.50 | 882.30 | 1330.00 | 890.27 | 0.00 | 891.11 | 27.19 | 7.37 | 180.48 | 255.09 |
| | 52.100 | 28.00 | 900.00 | 900.50 | 882.30 | 1330.00 | 890.27 | 0.00 | 891.11 | 27.19 | 7.37 | 180.48 | 255.08 |
| | 52.200 | 1.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 890.58 | 0.00 | 891.19 | 40.40 | 6.24 | 213.18 | 209.24 |
| | 52.200 | 1.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 890.58 | 0.00 | 891.19 | 40.40 | 6.24 | 213.18 | 209.24 |
| | 52.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 891.17 | 0.00 | 891.43 | 14.63 | 4.82 | 501.26 | 347.74 |
| | 52.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 891.17 | 0.00 | 891.43 | 14.63 | 4.82 | 501.26 | 347.74 |
| | 53.000 | 725.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 892.02 | 0.00 | 892.15 | 6.42 | 3.00 | 592.31 | 524.74 |
| | 53.000 | 725.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 892.03 | 0.00 | 892.17 | 6.76 | 3.09 | 531.75 | 511.50 |

MOORE BUSINESS FORMS, INC 23

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 53.500 | 270.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 892.20 | 0.00 | 892.31 | 5.82 | 2.91 | 616.55 | 551.25 |
| | 53.500 | 270.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 892.22 | 0.00 | 892.34 | 5.74 | 2.90 | 620.05 | 554.88 |
| | 53.900 | 320.00 | 0.00 | 0.00 | 885.40 | 1330.00 | 892.42 | 0.00 | 892.78 | 27.18 | 4.81 | 276.59 | 255.10 |
| | 53.900 | 320.00 | 0.00 | 0.00 | 885.40 | 1330.00 | 892.45 | 0.00 | 892.80 | 26.89 | 4.79 | 277.53 | 256.48 |
| | 54.000 | 1.00 | 903.90 | 906.60 | 885.40 | 1330.00 | 892.37 | 0.00 | 892.84 | 15.73 | 5.52 | 241.04 | 335.30 |
| | 54.000 | 1.00 | 903.90 | 906.60 | 885.40 | 1330.00 | 892.39 | 0.00 | 892.86 | 15.62 | 5.50 | 241.71 | 336.55 |
| | 54.100 | 42.80 | 904.10 | 906.60 | 885.90 | 1330.00 | 892.41 | 0.00 | 892.94 | 18.23 | 5.86 | 226.97 | 311.46 |
| | 54.100 | 42.80 | 904.10 | 906.60 | 885.90 | 1330.00 | 892.43 | 0.00 | 892.96 | 18.09 | 5.84 | 227.63 | 312.68 |
| | 54.200 | 1.00 | 0.00 | 0.00 | 885.90 | 1330.00 | 892.61 | 0.00 | 892.99 | 28.15 | 4.94 | 269.19 | 250.69 |
| | 54.200 | 1.00 | 0.00 | 0.00 | 885.90 | 1330.00 | 892.63 | 0.00 | 893.01 | 27.85 | 4.92 | 270.08 | 252.02 |
| | 54.250 | 65.00 | 0.00 | 0.00 | 885.80 | 1330.00 | 893.07 | 0.00 | 893.13 | 3.06 | 2.05 | 688.61 | 759.92 |
| | 54.250 | 65.00 | 0.00 | 0.00 | 885.80 | 1330.00 | 893.09 | 0.00 | 893.15 | 3.04 | 2.04 | 690.53 | 763.17 |
| | 54.400 | 150.00 | 0.00 | 0.00 | 886.80 | 840.00 | 893.00 | 0.00 | 893.28 | 19.87 | 4.40 | 232.56 | 188.46 |
| | 54.400 | 150.00 | 0.00 | 0.00 | 886.80 | 840.00 | 892.99 | 0.00 | 893.30 | 21.37 | 4.56 | 203.22 | 181.73 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 840.00 | 893.24 | 0.00 | 893.37 | 8.94 | 3.39 | 384.02 | 280.87 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 840.00 | 893.26 | 0.00 | 893.40 | 9.31 | 3.47 | 353.29 | 275.32 |
| | 54.650 | 600.00 | 0.00 | 0.00 | 888.10 | 840.00 | 893.92 | 0.00 | 894.19 | 21.86 | 4.69 | 239.59 | 179.66 |
| | 54.650 | 600.00 | 0.00 | 0.00 | 888.10 | 840.00 | 893.96 | 0.00 | 894.26 | 22.57 | 4.79 | 216.62 | 176.82 |
| | 54.680 | 600.00 | 0.00 | 0.00 | 889.26 | 840.00 | 895.50 | 0.00 | 895.93 | 38.51 | 5.34 | 178.93 | 135.37 |
| | 54.680 | 600.00 | 0.00 | 0.00 | 889.26 | 840.00 | 895.56 | 0.00 | 895.97 | 36.41 | 5.24 | 184.60 | 139.21 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 840.00 | 895.82 | 0.00 | 896.17 | 60.51 | 5.22 | 234.69 | 107.99 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 840.00 | 895.87 | 0.00 | 896.20 | 56.10 | 5.07 | 243.84 | 112.15 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 840.00 | 896.07 | 896.07 | 896.59 | 265.08 | 8.19 | 179.78 | 51.59 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 840.00 | 896.07 | 896.07 | 896.59 | 265.08 | 8.19 | 179.78 | 51.59 |
| | 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 840.00 | 896.65 | 0.00 | 896.79 | 42.81 | 4.37 | 341.71 | 128.39 |
| | 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 840.00 | 896.65 | 0.00 | 896.79 | 42.81 | 4.37 | 341.71 | 128.39 |
| | 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 840.00 | 896.71 | 0.00 | 896.79 | 14.31 | 2.92 | 459.34 | 222.09 |
| | 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 840.00 | 896.71 | 0.00 | 896.79 | 14.31 | 2.92 | 459.34 | 222.09 |
| | 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 840.00 | 896.78 | 0.00 | 896.84 | 5.97 | 2.48 | 643.58 | 343.71 |
| | 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 840.00 | 896.78 | 0.00 | 896.84 | 5.97 | 2.48 | 643.58 | 343.71 |
| | 55.000 | 780.00 | 0.00 | 0.00 | 888.20 | 840.00 | 896.89 | 0.00 | 896.89 | .24 | .65 | 2502.01 | 1707.32 |
| | 55.000 | 780.00 | 0.00 | 0.00 | 888.20 | 840.00 | 896.91 | 0.00 | 896.92 | .39 | .83 | 1657.04 | 1349.85 |
| | 55.100 | 1820.00 | 0.00 | 0.00 | 890.50 | 840.00 | 896.98 | 0.00 | 897.02 | 4.43 | 2.13 | 771.75 | 399.27 |
| | 55.100 | 1820.00 | 0.00 | 0.00 | 890.50 | 840.00 | 897.05 | 0.00 | 897.10 | 4.65 | 2.21 | 711.44 | 389.47 |

MOORE BUSINESS FORMS, INC 23

RICE CREEK

SUMMARY PRINTOUT TABLE 150

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| * | 50.000 | 1330.00 | 883.74 | 0.00 | 0.00 | .64 | 45.78 | 0.00 |
| * | 50.000 | 1330.00 | 883.72 | -.02 | 0.00 | -.02 | 39.00 | 0.00 |
| | 2.900 | 1330.00 | 885.41 | 0.00 | 1.67 | 0.00 | 120.20 | 60.00 |
| | 2.900 | 1330.00 | 885.41 | .00 | 1.69 | .00 | 90.72 | 60.00 |
| | 3.000 | 1330.00 | 885.58 | 0.00 | .17 | 0.00 | 117.34 | 50.00 |
| | 3.000 | 1330.00 | 885.60 | .02 | .19 | .02 | 85.28 | 50.00 |
| * | 3.100 | 1330.00 | 886.51 | 0.00 | .93 | 0.00 | 111.54 | 85.00 |
| * | 3.100 | 1330.00 | 886.51 | .00 | .91 | .00 | 111.52 | 85.00 |
| * | 50.800 | 1330.00 | 887.60 | 0.00 | 1.09 | 0.00 | 46.03 | 85.00 |
| * | 50.800 | 1330.00 | 887.60 | .00 | 1.09 | .00 | 46.03 | 85.00 |
| | 50.900 | 1330.00 | 889.35 | 0.00 | 1.75 | 0.00 | 46.19 | 50.00 |
| | 50.900 | 1330.00 | 889.35 | -.00 | 1.75 | -.00 | 46.19 | 50.00 |
| | 51.000 | 1330.00 | 889.32 | 0.00 | -.03 | 0.00 | 45.38 | 1.00 |
| | 51.000 | 1330.00 | 889.32 | -.00 | -.03 | -.00 | 45.38 | 1.00 |
| | 51.100 | 1330.00 | 889.44 | 0.00 | .12 | 0.00 | 45.64 | 31.00 |
| | 51.100 | 1330.00 | 889.44 | -.00 | .12 | -.00 | 45.64 | 31.00 |
| | 51.200 | 1330.00 | 889.45 | 0.00 | .01 | 0.00 | 45.66 | 1.00 |
| | 51.200 | 1330.00 | 889.45 | -.00 | .01 | -.00 | 45.66 | 1.00 |
| | 51.500 | 1330.00 | 890.01 | 0.00 | .56 | 0.00 | 92.16 | 30.00 |
| | 51.500 | 1330.00 | 890.01 | -.00 | .56 | -.00 | 92.16 | 30.00 |
| | 51.900 | 1330.00 | 890.26 | 0.00 | .25 | 0.00 | 29.00 | 130.00 |
| | 51.900 | 1330.00 | 890.26 | -.00 | .25 | -.00 | 29.00 | 130.00 |
| | 52.000 | 1330.00 | 890.17 | 0.00 | -.10 | 0.00 | 29.00 | 1.00 |
| | 52.000 | 1330.00 | 890.17 | -.00 | -.10 | -.00 | 29.00 | 1.00 |
| | 52.100 | 1330.00 | 890.27 | 0.00 | .10 | 0.00 | 29.00 | 28.00 |
| | 52.100 | 1330.00 | 890.27 | -.00 | .10 | -.00 | 29.00 | 28.00 |
| | 52.200 | 1330.00 | 890.58 | 0.00 | .31 | 0.00 | 29.00 | 1.00 |
| | 52.200 | 1330.00 | 890.58 | -.00 | .31 | -.00 | 29.00 | 1.00 |
| | 52.300 | 1330.00 | 891.17 | 0.00 | .59 | 0.00 | 126.00 | 60.00 |
| | 52.300 | 1330.00 | 891.17 | -.00 | .59 | -.00 | 126.00 | 60.00 |
| | 53.000 | 1330.00 | 892.02 | 0.00 | .85 | 0.00 | 147.04 | 725.00 |
| | 53.000 | 1330.00 | 892.03 | .01 | .86 | .01 | 100.10 | 725.00 |

MOORE BUSINESS FORMS, INC 23

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 53.500 | 1330.00 | 892.20 | 0.00 | .17 | 0.00 | 142.85 | 270.00 |
| | 53.500 | 1330.00 | 892.22 | .02 | .19 | .02 | 142.92 | 270.00 |
| | 53.900 | 1330.00 | 892.42 | 0.00 | .23 | 0.00 | 45.00 | 320.00 |
| | 53.900 | 1330.00 | 892.45 | .02 | .22 | .02 | 45.00 | 320.00 |
| | 54.000 | 1330.00 | 892.37 | 0.00 | -.05 | 0.00 | 45.00 | 1.00 |
| | 54.000 | 1330.00 | 892.39 | .02 | -.05 | .02 | 45.00 | 1.00 |
| | 54.100 | 1330.00 | 892.41 | 0.00 | .04 | 0.00 | 45.00 | 42.80 |
| | 54.100 | 1330.00 | 892.43 | .02 | .04 | .02 | 45.00 | 42.80 |
| | 54.200 | 1330.00 | 892.61 | 0.00 | .20 | 0.00 | 45.00 | 1.00 |
| | 54.200 | 1330.00 | 892.63 | .02 | .20 | .02 | 45.00 | 1.00 |
| | 54.250 | 1330.00 | 893.07 | 0.00 | .46 | 0.00 | 116.14 | 65.00 |
| | 54.250 | 1330.00 | 893.09 | .02 | .45 | .02 | 116.21 | 65.00 |
| | 54.400 | 840.00 | 893.00 | 0.00 | -.07 | 0.00 | 68.30 | 150.00 |
| | 54.400 | 840.00 | 892.99 | -.00 | -.09 | -.00 | 42.02 | 150.00 |
| | 54.600 | 840.00 | 893.24 | 0.00 | .24 | 0.00 | 101.72 | 60.00 |
| | 54.600 | 840.00 | 893.26 | .02 | .27 | .02 | 70.52 | 60.00 |
| | 54.650 | 840.00 | 893.92 | 0.00 | .68 | 0.00 | 85.13 | 600.00 |
| | 54.650 | 840.00 | 893.96 | .04 | .70 | .04 | 52.79 | 600.00 |
| | 54.680 | 840.00 | 895.50 | 0.00 | 1.58 | 0.00 | 95.00 | 600.00 |
| | 54.680 | 840.00 | 895.56 | .06 | 1.59 | .06 | 95.00 | 600.00 |
| | 54.690 | 840.00 | 895.82 | 0.00 | .32 | 0.00 | 195.00 | 50.00 |
| | 54.690 | 840.00 | 895.87 | .05 | .32 | .05 | 195.00 | 50.00 |
| * | 54.700 | 840.00 | 896.07 | 0.00 | .25 | 0.00 | 195.00 | 1.00 |
| * | 54.700 | 840.00 | 896.07 | 0.00 | .20 | 0.00 | 195.00 | 1.00 |
| | 54.710 | 840.00 | 896.65 | 0.00 | .58 | 0.00 | 231.00 | 18.00 |
| | 54.710 | 840.00 | 896.65 | 0.00 | .58 | 0.00 | 231.00 | 18.00 |
| | 54.720 | 840.00 | 896.71 | 0.00 | .06 | 0.00 | 231.00 | 1.00 |
| | 54.720 | 840.00 | 896.71 | 0.00 | .06 | 0.00 | 231.00 | 1.00 |
| | 54.730 | 840.00 | 896.78 | 0.00 | .07 | 0.00 | 330.00 | 50.00 |
| | 54.730 | 840.00 | 896.78 | 0.00 | .07 | 0.00 | 330.00 | 50.00 |
| | 55.000 | 840.00 | 896.89 | 0.00 | .11 | 0.00 | 602.61 | 780.00 |
| | 55.000 | 840.00 | 896.91 | .02 | .13 | .02 | 273.00 | 780.00 |
| | 55.100 | 840.00 | 896.98 | 0.00 | .09 | 0.00 | 221.01 | 1820.00 |
| | 55.100 | 840.00 | 897.05 | .07 | .14 | .07 | 173.00 | 1820.00 |

SUMMARY OF ERRORS

| | | | | |
|---|---|---|---|---|
| CAUTION | SECNO= | 50.000 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.000 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 1 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 3.100 | PROFILE= 1 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 3.100 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 2 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 3.100 | PROFILE= 2 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 50.800 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.800 | PROFILE= 1 | MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 50.800 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.800 | PROFILE= 2 | MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 54.700 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 54.700 | PROFILE= 1 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 54.700 | PROFILE= 1 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 54.700 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 54.700 | PROFILE= 2 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 54.700 | PROFILE= 2 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |

MOORE BUSINESS FORMS, INC.

FLOODWAY DATA, RICE CREEK
PROFILE NO. 2

| STATION | FLOODWAY WIDTH | FLOODWAY SECTION AREA | FLOODWAY MEAN VELOCITY | WATER SURFACE ELEVATION WITH FLOODWAY | WITHOUT FLOODWAY | DIFFERENCE |
|---|---|---|---|---|---|---|
| 50.000 | 39. | 129. | 10.3 | 883.7 | 883.7 | 0.0 |
| 2.900 | 91. | 275. | 4.8 | 885.4 | 885.4 | 0.0 |
| 3.000 | 85. | 237. | 5.6 | 885.6 | 885.6 | 0.0 |
| 3.100 | 112. | 201. | 6.6 | 886.5 | 886.5 | 0.0 |
| 50.800 | 46. | 145. | 9.2 | 887.6 | 887.6 | 0.0 |
| 50.900 | 46. | 195. | 6.8 | 889.3 | 889.3 | 0.0 |
| 51.000 | 45. | 187. | 7.1 | 889.3 | 889.3 | 0.0 |
| 51.100 | 46. | 192. | 6.9 | 889.4 | 889.4 | 0.0 |
| 51.200 | 46. | 193. | 6.9 | 889.5 | 889.5 | 0.0 |
| 51.500 | 92. | 374. | 3.6 | 890.0 | 890.0 | 0.0 |
| 51.900 | 29. | 204. | 6.5 | 890.3 | 890.3 | 0.0 |
| 52.000 | 29. | 178. | 7.5 | 890.2 | 890.2 | 0.0 |
| 52.100 | 29. | 180. | 7.4 | 890.3 | 890.3 | 0.0 |
| 52.200 | 29. | 213. | 6.2 | 890.6 | 890.6 | 0.0 |
| 52.300 | 126. | 501. | 2.7 | 891.2 | 891.2 | 0.0 |
| 53.000 | 100. | 532. | 2.5 | 892.0 | 892.0 | 0.0 |
| 53.500 | 143. | 620. | 2.1 | 892.2 | 892.2 | 0.0 |
| 53.900 | 45. | 278. | 4.8 | 892.4 | 892.4 | 0.0 |
| 54.000 | 45. | 242. | 5.5 | 892.4 | 892.4 | 0.0 |
| 54.100 | 45. | 228. | 5.8 | 892.4 | 892.4 | 0.0 |
| 54.200 | 45. | 270. | 4.9 | 892.6 | 892.6 | 0.0 |
| 54.250 | 116. | 691. | 1.9 | 893.1 | 893.1 | 0.0 |
| 54.400 | 42. | 203. | 4.1 | 893.0 | 893.0 | 0.0 |
| 54.600 | 71. | 353. | 2.4 | 893.2 | 893.2 | 0.0 |
| 54.650 | 53. | 217. | 3.9 | 893.9 | 893.9 | 0.0 |
| 54.680 | 95. | 185. | 4.6 | 895.6 | 895.5 | .1 |
| 54.690 | 195. | 244. | 3.4 | 895.9 | 895.8 | .1 |
| 54.700 | 195. | 180. | 4.7 | 896.1 | 896.1 | 0.0 |
| 54.710 | 231. | 342. | 2.5 | 896.7 | 896.7 | 0.0 |
| 54.720 | 231. | 459. | 1.8 | 896.7 | 896.7 | 0.0 |
| 54.730 | 330. | 644. | 1.3 | 896.8 | 896.8 | 0.0 |
| 55.000 | 273. | 1657. | .5 | 896.9 | 896.9 | 0.0 |
| 55.100 | 173. | 711. | 1.2 | 897.1 | 897.0 | .1 |

MOORE BUSINESS FORMS, INC 23

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**************************************************
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MOORE BUSINESS FORMS, INC 23

**********
HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
ERROR CORR - 01,02,03,04
MODIFICATION - 50,51,52,53,54
**********

Profiles

10/24/80

C
T1 FIS CITY OF MARSHALL
T2 10-YEAR FLOW
T3 RICE CREEK

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0. | 2. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 883.100 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 38.000 | 1.000 | 53.000 | 21.000 | 22.000 | 54.000 | 4.000 | 39.000 | 150.000 | 202.000 |
| 34.000 | 61.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

| J5 | LPRNT | NUMSEC | ********REQUESTED SECTION NUMBERS******** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | -10.000 | -10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| NC | .100 | .100 | .040 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 745.000 | 1140.000 | 1330.000 | 1790.000 | 1330.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

ABANDONED RAILROAD EMBANKMENT (A)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 50.000 | 24.000 | 2000.000 | 2039.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 903.300 | 768.000 | 901.300 | 1000.000 | 901.700 | 1153.000 | 901.500 | 1289.000 | 901.200 | 1404.000 |
| GR | 900.600 | 1500.000 | 900.000 | 1659.000 | 900.000 | 1799.000 | 900.400 | 1971.000 | 882.200 | 2000.000 |
| GR | 881.600 | 2005.000 | 881.000 | 2010.000 | 880.100 | 2015.000 | 879.500 | 2020.000 | 879.300 | 2025.000 |
| GR | 879.500 | 2030.000 | 880.300 | 2035.000 | 882.200 | 2039.000 | 884.700 | 2046.000 | 896.800 | 2067.000 |
| GR | 901.300 | 2069.000 | 901.200 | 2175.000 | 902.000 | 2323.000 | 902.800 | 2423.000 | 0.000 | 0.000 |
| X1 | 2.900 | 14.000 | 2000.000 | 2047.000 | 65.000 | 55.000 | 60.000 | 0.000 | -.500 | 0.000 |
| GR | 900.600 | 1963.000 | 884.600 | 1990.000 | 883.100 | 2000.000 | 880.300 | 2006.000 | 881.600 | 2015.000 |
| GR | 882.300 | 2023.000 | 882.000 | 2032.000 | 883.100 | 2047.000 | 884.000 | 2054.000 | 883.900 | 2094.000 |
| GR | 888.200 | 2124.000 | 890.100 | 2139.000 | 903.700 | 2158.000 | 906.300 | 2171.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 3.000 | 0.000 | 0.000 | 0.000 | 65.000 | 55.000 | 50.000 | 0.000 | .500 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 1989.000 | 2101.000 |
| X1 | 3.100 | 0.000 | 0.000 | 0.000 | 110.000 | 85.000 | 85.000 | 0.000 | 1.600 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1974.000 | 2054.000 |
| X1 | 50.800 | 18.000 | 2000.000 | 2029.000 | 110.000 | 85.000 | 85.000 | 0.000 | 0.000 | 0.000 |
| GR | 907.500 | 1800.000 | 903.900 | 1900.000 | 902.400 | 1950.000 | 901.400 | 1960.000 | 899.900 | 1970.000 |
| GR | 897.400 | 1980.000 | 891.400 | 1990.000 | 884.100 | 2000.000 | 883.400 | 2010.000 | 883.500 | 2020.000 |
| GR | 884.000 | 2029.000 | 887.300 | 2040.000 | 889.700 | 2050.000 | 893.500 | 2060.000 | 893.900 | 2070.000 |
| GR | 895.100 | 2100.000 | 904.600 | 2200.000 | 906.900 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 50.900 | 16.000 | 2000.000 | 2050.000 | 60.000 | 40.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.000 | 902.000 | 0.000 |
| GR | 905.100 | 1800.000 | 905.100 | 1900.000 | 905.100 | 2000.000 | 891.400 | 2000.000 | 886.000 | 2010.000 |
| GR | 884.600 | 2016.000 | 883.800 | 2020.000 | 883.800 | 2030.000 | 884.200 | 2040.000 | 888.400 | 2050.000 |
| GR | 888.900 | 2051.500 | 905.200 | 2051.500 | 905.300 | 2075.000 | 905.500 | 2100.000 | 905.900 | 2200.000 |
| GR | 906.000 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | .025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

RAILROAD BRIDGE (B)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 51.000 | 16.000 | 2000.000 | 2050.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.000 | 902.000 | 0.000 |
| BT | 4.000 | 2000.000 | 905.600 | 905.600 | 2000.000 | 905.600 | 898.400 | 2051.500 | 905.700 | 898.400 |
| BT | 2051.500 | 905.700 | 905.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 905.600 | 1800.000 | 905.600 | 1900.000 | 905.600 | 2000.000 | 891.400 | 2000.000 | 886.900 | 2010.000 |
| GR | 884.600 | 2016.000 | 883.800 | 2020.000 | 883.800 | 2030.000 | 884.200 | 2040.000 | 888.400 | 2050.000 |
| GR | 888.900 | 2051.500 | 905.700 | 2051.500 | 905.800 | 2075.000 | 906.000 | 2100.000 | 906.400 | 2200.000 |
| GR | 906.500 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 51.100 | 0.000 | 0.000 | 0.000 | 31.000 | 31.000 | 31.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.600 | 905.600 | 0.000 |
| BT | 4.000 | 2000.000 | 905.600 | 905.600 | 2000.000 | 905.600 | 898.400 | 2051.500 | 905.700 | 898.400 |
| BT | 2051.500 | 905.700 | 905.700 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 51.200 | 16.000 | 2000.000 | 2050.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.600 | 905.600 | 0.000 |
| GR | 905.100 | 1800.000 | 905.100 | 1900.000 | 905.100 | 2000.000 | 891.400 | 2000.000 | 886.900 | 2010.000 |
| GR | 884.600 | 2016.000 | 883.800 | 2020.000 | 883.800 | 2030.000 | 884.200 | 2040.000 | 888.400 | 2050.000 |
| GR | 888.900 | 2051.500 | 905.200 | 2051.500 | 905.300 | 2075.000 | 905.500 | 2100.000 | 905.900 | 2200.000 |
| GR | 906.000 | 2224.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1946.000 | 2061.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 51.500 | 11.000 | 2000.000 | 2029.000 | 30.000 | 30.000 | 30.000 | 0.000 | 0.000 | 0.000 |
| GR | 905.200 | 1600.000 | 902.400 | 1800.000 | 890.000 | 1960.000 | 884.600 | 2000.000 | 882.700 | 2010.000 |
| GR | 882.300 | 2014.500 | 882.000 | 2020.000 | 884.400 | 2029.000 | 889.700 | 2050.000 | 898.000 | 2100.000 |
| GR | 905.000 | 2200.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 51.900 | 20.000 | 2000.000 | 2029.000 | 130.000 | 130.000 | 130.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| GR | 905.200 | 1600.000 | 902.400 | 1800.000 | 900.500 | 1993.000 | 900.500 | 2000.000 | 884.600 | 2000.000 |
| GR | 883.500 | 2006.000 | 882.700 | 2010.000 | 882.300 | 2014.500 | 882.500 | 2020.000 | 883.500 | 2023.000 |
| GR | 884.400 | 2029.000 | 900.000 | 2029.000 | 900.100 | 2037.000 | 899.700 | 2050.000 | 899.300 | 2250.000 |
| GR | 903.000 | 2450.000 | 904.100 | 2650.000 | 905.000 | 2850.000 | 906.900 | 3050.000 | 907.800 | 3350.000 |
| NC | 0.000 | 0.000 | .025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MONROE ST. BRIDGE (C)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 52.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 898.000 | 898.000 | 0.000 |
| BT | 9.000 | 1993.000 | 900.500 | 900.500 | 2000.000 | 900.500 | 900.500 | 2000.000 | 900.500 | 884.600 |
| BT | 2006.000 | 900.400 | 893.000 | 2014.500 | 900.300 | 895.700 | 2023.000 | 900.100 | 893.000 | 2029.000 |
| BT | 900.000 | 884.400 | 2029.000 | 900.000 | 900.000 | 2037.000 | 900.100 | 900.100 | 0.000 | 0.000 |
| X1 | 52.100 | 0.000 | 0.000 | 0.000 | 28.000 | 28.000 | 28.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 900.600 | 900.600 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 52.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 900.600 | 900.600 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1947.000 | 2078.000 |
| X1 | 52.300 | 15.000 | 2000.000 | 2025.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| X3 | 0.000 | 0.000 | 0.000 | 1950.000 | 0.000 | 2076.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 905.200 | 1600.000 | 902.400 | 1800.000 | 890.000 | 1960.000 | 884.500 | 2000.000 | 883.700 | 2007.000 |
| GR | 882.300 | 2013.000 | 883.700 | 2019.000 | 883.800 | 2020.000 | 884.700 | 2025.000 | 890.000 | 2060.000 |
| GR | 899.300 | 2250.000 | 903.000 | 2450.000 | 904.100 | 2650.000 | 905.000 | 2850.000 | 906.900 | 3050.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |

(D)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 53.000 | 31.000 | 2132.000 | 2190.000 | 725.000 | 1040.000 | 725.000 | 0.000 | 0.000 | 0.000 |
| GR | 916.400 | 1882.000 | 913.000 | 1932.000 | 911.400 | 1952.000 | 907.500 | 1964.000 | 906.300 | 1970.000 |
| GR | 905.800 | 2000.000 | 902.700 | 2046.000 | 898.400 | 2098.000 | 886.100 | 2132.000 | 884.100 | 2146.000 |
| GR | 883.800 | 2155.000 | 884.600 | 2166.000 | 886.100 | 2180.000 | 888.200 | 2190.000 | 890.000 | 2228.000 |
| GR | 894.200 | 2300.000 | 899.200 | 2392.000 | 900.500 | 2440.000 | 901.000 | 2540.000 | 901.900 | 2640.000 |
| GR | 901.100 | 2738.000 | 902.100 | 2838.000 | 902.900 | 2938.000 | 903.800 | 3032.000 | 904.600 | 3126.000 |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GR | 905.200 | 3226.000 | 904.700 | 3278.000 | 906.100 | 3348.000 | 907.400 | 3446.000 | 908.900 | 3546.000 |
| GR | 910.000 | 3626.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2063.000 | 2258.000 |
| X1 | 53.500 | 0.000 | 0.000 | 0.000 | 270.000 | 270.000 | 270.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .090 | .045 | .300 | .500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 53.900 | 35.000 | 2025.000 | 2070.000 | 320.000 | 320.000 | 320.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.900 | 902.900 | 0.000 |
| GR | 910.100 | 1870.000 | 908.700 | 1900.000 | 906.600 | 1950.000 | 905.600 | 2000.000 | 887.300 | 2000.000 |
| GR | 887.000 | 2005.000 | 886.800 | 2010.000 | 886.600 | 2015.000 | 886.200 | 2020.000 | 888.700 | 2020.000 |
| GR | 888.600 | 2025.000 | 886.000 | 2025.000 | 886.100 | 2030.000 | 886.200 | 2035.000 | 886.200 | 2040.000 |
| GR | 886.200 | 2045.000 | 888.700 | 2045.000 | 888.600 | 2050.000 | 885.400 | 2050.000 | 885.500 | 2055.000 |
| GR | 885.700 | 2060.000 | 886.100 | 2065.000 | 886.500 | 2070.000 | 904.900 | 2070.000 | 903.900 | 2078.000 |
| GR | 903.800 | 2100.000 | 902.700 | 2200.000 | 902.400 | 2300.000 | 902.700 | 2400.000 | 902.500 | 2500.000 |
| GR | 902.800 | 2700.000 | 903.700 | 2900.000 | 905.600 | 3100.000 | 907.500 | 3300.000 | 908.400 | 3500.000 |
| NC | 0.000 | 0.000 | .025 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MARSHALL AVE. BRIDGE (E)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 902.900 | 902.900 | 0.000 |
| BT | 19.000 | 1950.000 | 906.600 | 906.600 | 2000.000 | 905.700 | 905.700 | 2000.000 | 905.700 | 887.300 |
| BT | 2005.000 | 905.600 | 887.000 | 2010.000 | 905.600 | 886.800 | 2015.000 | 905.600 | 886.600 | 2020.000 |
| BT | 905.500 | 886.200 | 2025.000 | 905.500 | 888.600 | 2030.000 | 905.400 | 898.200 | 2035.000 | 905.400 |
| BT | 900.500 | 2040.000 | 905.300 | 898.200 | 2045.000 | 905.200 | 888.700 | 2050.000 | 905.100 | 888.600 |
| BT | 2055.000 | 905.100 | 898.200 | 2060.000 | 905.000 | 900.600 | 2065.000 | 905.000 | 898.200 | 2070.000 |
| BT | 904.900 | 888.700 | 2070.000 | 904.900 | 904.900 | 2078.000 | 903.900 | 903.900 | 0.000 | 0.000 |
| X1 | 54.100 | 32.000 | 2025.000 | 2070.000 | 42.800 | 42.800 | 42.800 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.200 | 905.200 | 0.000 |
| BT | 17.000 | 1950.000 | 906.600 | 906.600 | 2000.000 | 905.400 | 905.400 | 2000.000 | 905.400 | 903.100 |
| BT | 2010.000 | 905.200 | 899.900 | 2020.000 | 905.000 | 891.300 | 2025.000 | 904.900 | 888.700 | 2030.000 |
| BT | 904.800 | 898.200 | 2035.000 | 904.700 | 900.800 | 2040.000 | 904.600 | 898.200 | 2045.000 | 904.600 |
| BT | 888.700 | 2050.000 | 904.500 | 888.700 | 2055.000 | 904.400 | 898.200 | 2060.000 | 904.300 | 900.800 |
| BT | 2065.000 | 904.200 | 898.200 | 2070.000 | 904.100 | 888.700 | 2070.000 | 904.100 | 904.100 | 2079.000 |
| BT | 904.300 | 904.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GR | 910.100 | 1870.000 | 908.700 | 1900.000 | 906.600 | 1950.000 | 905.400 | 2000.000 | 903.100 | 2000.000 |
| GR | 899.900 | 2010.000 | 891.300 | 2020.000 | 888.700 | 2025.000 | 887.300 | 2025.000 | 886.700 | 2030.000 |
| GR | 886.200 | 2035.000 | 886.400 | 2040.000 | 886.500 | 2045.000 | 888.700 | 2045.000 | 888.700 | 2050.000 |
| GR | 886.600 | 2050.000 | 886.300 | 2055.000 | 885.900 | 2060.000 | 886.000 | 2065.000 | 886.600 | 2070.000 |
| GR | 904.100 | 2070.000 | 904.300 | 2079.000 | 903.800 | 2100.000 | 902.700 | 2200.000 | 902.400 | 2300.000 |
| GR | 902.700 | 2400.000 | 902.500 | 2500.000 | 902.800 | 2700.000 | 903.700 | 2900.000 | 905.600 | 3100.000 |
| GR | 907.500 | 3300.000 | 908.400 | 3500.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.200 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 905.200 | 905.200 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 1947.000 | 2145.000 |
| X1 | 54.250 | 20.000 | 2000.000 | 2093.000 | 65.000 | 65.000 | 65.000 | 0.000 | 0.000 | 0.000 |
| GR | 902.500 | 1950.000 | 902.000 | 1960.000 | 900.600 | 1970.000 | 897.300 | 1980.000 | 891.500 | 1990.000 |
| GR | 887.500 | 2000.000 | 886.200 | 2010.000 | 885.900 | 2020.000 | 885.900 | 2030.000 | 886.400 | 2040.000 |
| GR | 886.600 | 2050.000 | 887.000 | 2060.000 | 886.300 | 2070.000 | 885.800 | 2080.000 | 886.300 | 2090.000 |
| GR | 887.600 | 2093.000 | 887.500 | 2093.000 | 891.800 | 2100.000 | 895.500 | 2110.000 | 900.300 | 2120.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.410 | 0.000 | 0.000 | 0.000 | 0.000 |
| QT | 5.000 | 420.000 | 700.000 | 840.000 | 1180.000 | 840.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .080 | .080 | .045 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 54.400 | 14.000 | 2084.000 | 2117.000 | 150.000 | 150.000 | 150.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.300 | 2050.000 | 897.300 | 2050.000 | 897.300 | 2050.000 | 897.300 | 2050.000 | 897.300 | 2050.000 |
| GR | 888.800 | 2084.000 | 886.800 | 2094.000 | 887.200 | 2104.000 | 887.600 | 2112.000 | 890.700 | 2117.000 |
| GR | 894.800 | 2150.000 | 897.900 | 2200.000 | 898.700 | 2250.000 | 901.900 | 2300.000 | 0.000 | 0.000 |
| X1 | 54.600 | 16.000 | 2143.000 | 2168.000 | 60.000 | 60.000 | 60.000 | 0.000 | 0.000 | 0.000 |
| GR | 898.400 | 2072.000 | 898.400 | 2072.000 | 898.400 | 2072.000 | 898.400 | 2072.000 | 898.400 | 2072.000 |
| GR | 898.040 | 2082.000 | 898.000 | 2090.000 | 889.300 | 2118.000 | 887.800 | 2143.000 | 886.600 | 2151.000 |
| GR | 886.300 | 2162.000 | 887.600 | 2168.000 | 891.700 | 2186.000 | 895.000 | 2231.000 | 896.700 | 2246.000 |
| GR | 899.200 | 2319.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .060 | .060 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| X1 | 54.650 | 19.000 | 2625.000 | 2650.000 | 500.000 | 650.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.500 | 2074.000 | 895.900 | 2086.000 | 895.300 | 2280.000 | 895.280 | 2498.000 | 895.200 | 2560.000 |
| GR | 894.500 | 2590.000 | 892.300 | 2610.000 | 889.200 | 2625.000 | 888.600 | 2630.000 | 888.100 | 2635.000 |
| GR | 888.200 | 2640.000 | 888.700 | 2645.000 | 889.500 | 2650.000 | 892.000 | 2658.000 | 895.000 | 2693.000 |
| GR | 897.000 | 2723.000 | 899.400 | 2782.000 | 899.500 | 2793.000 | 902.200 | 2926.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2564.000 | 2659.000 |

(F)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.680 | 29.000 | 2624.000 | 2658.600 | 500.000 | 650.000 | 600.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.500 | 2074.000 | 895.900 | 2086.000 | 895.300 | 2280.000 | 895.280 | 2498.000 | 895.120 | 2602.700 |
| GR | 894.900 | 2619.000 | 894.600 | 2624.000 | 892.000 | 2628.500 | 890.220 | 2633.000 | 890.100 | 2633.700 |
| GR | 889.800 | 2634.700 | 889.700 | 2635.500 | 889.260 | 2637.400 | 889.300 | 2639.000 | 889.400 | 2640.100 |
| GR | 889.400 | 2641.700 | 889.510 | 2642.800 | 889.800 | 2644.400 | 889.900 | 2645.000 | 890.000 | 2645.500 |
| GR | 890.210 | 2647.200 | 890.600 | 2648.300 | 893.700 | 2658.600 | 895.090 | 2663.600 | 897.000 | 2714.000 |
| GR | 898.700 | 2753.700 | 899.400 | 2782.000 | 899.500 | 2793.000 | 902.200 | 2926.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2464.000 | 2659.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.690 | 40.000 | 2624.000 | 2658.600 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.000 | 894.000 | 0.000 |
| GR | 897.800 | 2022.000 | 897.800 | 2026.000 | 897.800 | 2038.000 | 897.800 | 2048.000 | 897.800 | 2054.000 |
| GR | 897.500 | 2074.000 | 895.900 | 2086.000 | 895.300 | 2280.000 | 895.280 | 2498.000 | 895.120 | 2602.700 |
| GR | 894.900 | 2619.000 | 894.600 | 2624.000 | 892.000 | 2628.500 | 891.050 | 2633.000 | 890.220 | 2633.000 |
| GR | 890.100 | 2633.700 | 889.850 | 2634.700 | 889.700 | 2635.500 | 891.050 | 2635.500 | 891.430 | 2636.900 |
| GR | 892.000 | 2639.000 | 890.390 | 2639.000 | 889.350 | 2640.100 | 889.400 | 2641.700 | 889.450 | 2642.100 |
| GR | 890.390 | 2642.800 | 892.000 | 2642.800 | 892.090 | 2644.400 | 890.480 | 2644.400 | 889.900 | 2645.000 |
| GR | 890.000 | 2645.500 | 890.210 | 2647.200 | 890.600 | 2648.300 | 892.090 | 2648.300 | 895.500 | 2658.600 |
| GR | 897.000 | 2714.400 | 898.700 | 2753.700 | 899.400 | 2782.000 | 899.500 | 2793.000 | 902.200 | 2926.000 |
| NC | 0.000 | 0.000 | .020 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2464.000 | 2659.000 |

PRIVATE DRIVE (G)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.700 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.000 | 894.000 | 0.000 |
| BT | 31.000 | 2022.000 | 897.800 | 0.000 | 2026.000 | 897.800 | 0.000 | 2038.000 | 897.800 | 0.000 |
| BT | 2048.000 | 897.800 | 0.000 | 2054.000 | 897.800 | 0.000 | 2074.000 | 897.500 | 0.000 | 2086.000 |
| BT | 895.900 | 0.000 | 2280.000 | 895.300 | 0.000 | 2498.000 | 895.280 | 0.000 | 2602.700 | 895.120 |
| BT | 0.000 | 2619.000 | 894.900 | 0.000 | 2624.000 | 894.600 | 0.000 | 2628.500 | 895.500 | 0.000 |
| BT | 2633.000 | 895.600 | 891.050 | 2633.700 | 895.600 | 891.760 | 2634.700 | 895.700 | 891.760 | 2635.500 |
| BT | 895.700 | 891.050 | 2639.000 | 895.800 | 892.000 | 2640.100 | 895.900 | 893.140 | 2641.700 | 896.000 |
| BT | 893.140 | 2642.800 | 896.000 | 892.000 | 2644.400 | 896.000 | 892.090 | 2645.500 | 896.000 | 893.230 |
| BT | 2647.200 | 896.000 | 893.230 | 2648.300 | 896.000 | 892.090 | 2658.600 | 896.000 | 0.000 | 2714.400 |
| BT | 897.000 | 0.000 | 2753.700 | 898.700 | 0.000 | 2782.000 | 899.400 | 0.000 | 2793.000 | 899.500 |
| BT | 0.000 | 2926.000 | 902.200 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2428.000 | 2659.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.710 | 0.000 | 0.000 | 0.000 | 18.000 | 18.000 | 18.000 | 0.000 | 0.000 | 0.000 |
| X2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.660 | 894.660 | 0.000 |
| NC | 0.000 | 0.000 | .045 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2428.000 | 2659.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.720 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 0.000 | 0.000 | 0.000 |
| X3 | 10.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 894.660 | 894.660 | 0.000 |
| ET | 0.000 | 9.100 | 9.100 | 9.100 | 9.100 | 9.100 | 0.000 | 0.000 | 2332.000 | 2662.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 54.730 | 28.000 | 2624.000 | 2658.600 | 50.000 | 50.000 | 50.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.550 | 2074.000 | 895.950 | 2086.000 | 895.350 | 2280.000 | 895.330 | 2498.000 | 895.170 | 2602.700 |
| GR | 894.950 | 2619.000 | 894.650 | 2624.000 | 892.050 | 2628.500 | 890.270 | 2633.000 | 890.150 | 2633.700 |
| GR | 889.850 | 2634.700 | 889.750 | 2635.500 | 889.310 | 2637.400 | 889.350 | 2639.000 | 889.450 | 2640.100 |
| GR | 889.450 | 2641.700 | 889.560 | 2642.800 | 889.850 | 2644.400 | 889.950 | 2645.000 | 890.050 | 2645.500 |
| GR | 890.260 | 2647.200 | 890.650 | 2648.300 | 893.750 | 2658.600 | 897.050 | 2714.400 | 898.750 | 2753.700 |
| GR | 899.450 | 2782.000 | 899.550 | 2793.000 | 902.250 | 2926.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | 0.000 | 0.000 | 0.000 | .100 | .300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .070 | .080 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC. 23

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 2335.000 | 2608.000 |

(H)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 55.000 | 18.000 | 2512.000 | 2562.000 | 600.000 | 900.000 | 780.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.800 | 2054.000 | 897.500 | 2074.000 | 895.900 | 2086.000 | 892.400 | 2313.000 | 892.100 | 2377.000 |
| GR | 890.300 | 2482.000 | 889.500 | 2512.000 | 888.200 | 2518.000 | 888.900 | 2530.000 | 888.700 | 2542.000 |
| GR | 889.200 | 2562.000 | 890.300 | 2565.000 | 895.000 | 2636.000 | 896.100 | 2666.000 | 898.800 | 2718.000 |
| GR | 899.000 | 2732.000 | 898.900 | 2748.000 | 901.000 | 2784.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| NC | .100 | .100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ET | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 9.100 | 0.000 | 0.000 | 2087.000 | 2260.000 |

CORPORATE BOUNDARY (I)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X1 | 55.100 | 21.000 | 2184.000 | 2222.000 | 1820.000 | 1820.000 | 1820.000 | 0.000 | 0.000 | 0.000 |
| GR | 897.900 | 2067.000 | 897.900 | 2067.000 | 897.900 | 2067.000 | 897.900 | 2067.000 | 896.500 | 2074.000 |
| GR | 893.600 | 2086.000 | 892.700 | 2184.000 | 891.300 | 2186.000 | 890.500 | 2194.000 | 891.200 | 2206.000 |
| GR | 893.300 | 2222.000 | 894.500 | 2264.000 | 897.100 | 2294.000 | 899.000 | 2366.000 | 903.600 | 2492.000 |
| GR | 904.400 | 2502.000 | 912.300 | 2841.000 | 914.300 | 2933.000 | 922.000 | 3033.000 | 929.400 | 3095.000 |
| GR | 934.200 | 3124.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| EJ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1      FIS  CITY OF MARSHALL
T2       50-YEAR FLOW
T3      RICE CREEK
```

| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10. | 3. | 0. | 0. | 0.000000 | 0.00 | 0.0 | 0. | 883.100 | 0.000 |

| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2.000 | 0.000 | -1.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

MOORE BUSINESS FORMS, INC 23

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1      FIS  CITY OF MARSHALL
T2      100-YEAR FLOW
T3      RICE CREEK

J1  ICHECK    INQ      NINV     IDIR     STRT      METRIC   HVINS    Q        WSEL     FQ
      -10.      4.       0.       0.  0.000000      0.00     0.0      0.   883.100   0.000
J2  NPROF     IPLOT    PRFVS    XSECV    XSECH     FN       ALLDC    IBW      CHNIM    ITRACE
     3.000     0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

MOORE BUSINESS FORMS, INC. 23

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**************************************************

T1      FIS  CITY OF MARSHALL
T2      500-YEAR FLOW
T3      RICE CREEK

J1  ICHECK    INQ      NINV     IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.      5.       0.       0.  0.000000      0.00      0.0       0.   883.100     0.000

J2  NPROF     IPLOT    PRFVS    XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    15.000    0.000   -1.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

MOORE BUSINESS FORMS, INC. 23

MOORE BUSINESS FORMS, INC 23

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**************************************************
```

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

RICE CREEK

SUMMARY PRINTOUT

| | SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 50.000 | 883.10 | 1998.57 | 2000.00 | 2039.00 | 2041.52 | 42.95 | 0.00 |
| * | 50.000 | 883.40 | 1998.09 | 2000.00 | 2039.00 | 2042.35 | 44.26 | 0.00 |
| * | 50.000 | 883.74 | 1997.54 | 2000.00 | 2039.00 | 2043.32 | 45.78 | 0.00 |
| * | 50.000 | 884.45 | 1996.41 | 2000.00 | 2039.00 | 2045.30 | 48.89 | 0.00 |
| | 2.900 | 883.88 | 1991.42 | 2000.00 | 2047.00 | 2097.40 | 105.98 | 60.00 |
| | 2.900 | 884.97 | 1988.53 | 2000.00 | 2047.00 | 2104.95 | 116.42 | 60.00 |
| | 2.900 | 885.41 | 1987.80 | 2000.00 | 2047.00 | 2107.99 | 120.20 | 60.00 |
| | 2.900 | 886.42 | 1986.10 | 2000.00 | 2047.00 | 2115.02 | 128.93 | 60.00 |
| | 3.000 | 884.32 | 1991.86 | 2000.00 | 2047.00 | 2096.93 | 105.07 | 50.00 |
| | 3.000 | 885.18 | 1989.02 | 2000.00 | 2047.00 | 2102.93 | 113.90 | 50.00 |
| | 3.000 | 885.58 | 1988.35 | 2000.00 | 2047.00 | 2105.69 | 117.34 | 50.00 |
| | 3.000 | 886.54 | 1986.72 | 2000.00 | 2047.00 | 2112.43 | 125.70 | 50.00 |
| * | 3.100 | 885.62 | 1993.89 | 2000.00 | 2047.00 | 2094.81 | 100.91 | 85.00 |
| * | 3.100 | 886.27 | 1989.88 | 2000.00 | 2047.00 | 2099.36 | 109.48 | 85.00 |
| * | 3.100 | 886.51 | 1989.48 | 2000.00 | 2047.00 | 2101.02 | 111.54 | 85.00 |
| * | 3.100 | 887.02 | 1988.62 | 2000.00 | 2047.00 | 2104.58 | 115.95 | 85.00 |
| | 50.800 | 886.68 | 1996.47 | 2000.00 | 2029.00 | 2037.93 | 41.46 | 85.00 |
| * | 50.800 | 887.22 | 1995.73 | 2000.00 | 2029.00 | 2039.72 | 43.99 | 85.00 |
| * | 50.800 | 887.60 | 1995.21 | 2000.00 | 2029.00 | 2041.24 | 46.03 | 85.00 |
| * | 50.800 | 888.41 | 1994.09 | 2000.00 | 2029.00 | 2044.63 | 50.53 | 85.00 |
| | 50.900 | 887.60 | 2007.04 | 2000.00 | 2050.00 | 2048.09 | 41.06 | 50.00 |
| | 50.900 | 888.88 | 2004.67 | 2000.00 | 2050.00 | 2050.00 | 45.33 | 50.00 |
| | 50.900 | 889.35 | 2003.81 | 2000.00 | 2050.00 | 2050.00 | 46.19 | 50.00 |
| | 50.900 | 890.39 | 2001.87 | 2000.00 | 2050.00 | 2050.00 | 48.13 | 50.00 |
| | 51.000 | 887.57 | 2008.50 | 2000.00 | 2050.00 | 2048.03 | 39.53 | 1.00 |
| | 51.000 | 888.85 | 2005.66 | 2000.00 | 2050.00 | 2050.00 | 44.34 | 1.00 |
| | 51.000 | 889.32 | 2004.62 | 2000.00 | 2050.00 | 2050.00 | 45.38 | 1.00 |
| | 51.000 | 890.37 | 2002.29 | 2000.00 | 2050.00 | 2050.00 | 47.71 | 1.00 |

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 51.100 | 887.79 | 2008.03 | 2000.00 | 2050.00 | 2048.54 | 40.51 | 31.00 |
| 51.100 | 888.98 | 2005.39 | 2000.00 | 2050.00 | 2050.00 | 44.61 | 31.00 |
| 51.100 | 889.44 | 2004.36 | 2000.00 | 2050.00 | 2050.00 | 45.64 | 31.00 |
| 51.100 | 890.48 | 2002.06 | 2000.00 | 2050.00 | 2050.00 | 47.94 | 31.00 |
| 51.200 | 887.79 | 2008.02 | 2000.00 | 2050.00 | 2048.55 | 40.52 | 1.00 |
| 51.200 | 888.99 | 2005.36 | 2000.00 | 2050.00 | 2050.00 | 44.64 | 1.00 |
| 51.200 | 889.45 | 2004.34 | 2000.00 | 2050.00 | 2050.00 | 45.66 | 1.00 |
| 51.200 | 890.48 | 2002.05 | 2000.00 | 2050.00 | 2050.00 | 47.95 | 1.00 |
| 51.500 | 888.33 | 1972.35 | 2000.00 | 2029.00 | 2044.58 | 72.23 | 30.00 |
| 51.500 | 889.53 | 1963.46 | 2000.00 | 2029.00 | 2049.34 | 85.87 | 30.00 |
| 51.500 | 890.01 | 1959.76 | 2000.00 | 2029.00 | 2051.92 | 92.16 | 30.00 |
| 51.500 | 891.13 | 1946.00 | 2000.00 | 2029.00 | 2058.63 | 112.63 | 30.00 |
| 51.900 | 888.60 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 130.00 |
| 51.900 | 889.79 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 130.00 |
| 51.900 | 890.26 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 130.00 |
| 51.900 | 891.31 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 130.00 |
| 52.000 | 888.57 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.000 | 889.72 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.000 | 890.17 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.000 | 891.13 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.100 | 888.62 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 28.00 |
| 52.100 | 889.80 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 28.00 |
| 52.100 | 890.27 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 28.00 |
| 52.100 | 891.29 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 28.00 |
| 52.200 | 888.72 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.200 | 890.03 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.200 | 890.58 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.200 | 891.86 | 2000.00 | 2000.00 | 2029.00 | 2029.00 | 29.00 | 1.00 |
| 52.300 | 888.98 | 1967.42 | 2000.00 | 2025.00 | 2053.26 | 85.85 | 60.00 |
| 52.300 | 890.51 | 1953.44 | 2000.00 | 2025.00 | 2070.38 | 116.94 | 60.00 |
| 52.300 | 891.17 | 1950.00 | 2000.00 | 2025.00 | 2076.00 | 126.00 | 60.00 |
| 52.300 | 892.71 | 1950.00 | 2000.00 | 2025.00 | 2076.00 | 126.00 | 60.00 |
| 53.000 | 889.99 | 2121.24 | 2132.00 | 2190.00 | 2227.85 | 106.61 | 725.00 |
| 53.000 | 891.42 | 2117.31 | 2132.00 | 2190.00 | 2252.27 | 134.96 | 725.00 |
| 53.000 | 892.02 | 2115.63 | 2132.00 | 2190.00 | 2262.67 | 147.04 | 725.00 |
| 53.000 | 893.43 | 2111.75 | 2132.00 | 2190.00 | 2286.72 | 174.97 | 725.00 |
| 53.500 | 890.19 | 2120.69 | 2132.00 | 2190.00 | 2231.27 | 110.57 | 270.00 |
| 53.500 | 891.60 | 2116.81 | 2132.00 | 2190.00 | 2255.37 | 138.57 | 270.00 |
| 53.500 | 892.20 | 2115.15 | 2132.00 | 2190.00 | 2258.00 | 142.85 | 270.00 |
| 53.500 | 893.58 | 2111.33 | 2132.00 | 2190.00 | 2258.00 | 146.67 | 270.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 53.900 | 890.50 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 320.00 |
| 53.900 | 891.85 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 320.00 |
| 53.900 | 892.42 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 320.00 |
| 53.900 | 893.75 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 320.00 |
| 54.000 | 890.48 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.000 | 891.81 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.000 | 892.37 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.000 | 893.65 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.100 | 890.51 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 42.80 |
| 54.100 | 891.85 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 42.80 |
| 54.100 | 892.41 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 42.80 |
| 54.100 | 893.71 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 42.80 |
| 54.200 | 890.58 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.200 | 892.00 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.200 | 892.61 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.200 | 894.03 | 2025.00 | 2025.00 | 2070.00 | 2070.00 | 45.00 | 1.00 |
| 54.250 | 890.93 | 1991.42 | 2000.00 | 2093.00 | 2098.59 | 107.17 | 65.00 |
| 54.250 | 892.42 | 1988.41 | 2000.00 | 2093.00 | 2101.69 | 113.28 | 65.00 |
| 54.250 | 893.07 | 1987.29 | 2000.00 | 2093.00 | 2103.43 | 116.14 | 65.00 |
| 54.250 | 894.56 | 1984.72 | 2000.00 | 2093.00 | 2107.46 | 122.74 | 65.00 |
| 54.400 | 890.90 | 2075.60 | 2084.00 | 2117.00 | 2118.61 | 43.01 | 150.00 |
| 54.400 | 892.36 | 2069.76 | 2084.00 | 2117.00 | 2130.37 | 60.61 | 150.00 |
| 54.400 | 893.00 | 2067.20 | 2084.00 | 2117.00 | 2135.51 | 68.30 | 150.00 |
| 54.400 | 894.48 | 2061.26 | 2084.00 | 2117.00 | 2147.47 | 86.21 | 150.00 |
| 54.600 | 891.13 | 2112.09 | 2143.00 | 2168.00 | 2183.52 | 71.43 | 60.00 |
| 54.600 | 892.60 | 2107.37 | 2143.00 | 2168.00 | 2198.31 | 90.94 | 60.00 |
| 54.600 | 893.24 | 2105.31 | 2143.00 | 2168.00 | 2207.03 | 101.72 | 60.00 |
| 54.600 | 894.72 | 2100.57 | 2143.00 | 2168.00 | 2227.14 | 126.57 | 60.00 |
| 54.650 | 892.07 | 2611.10 | 2625.00 | 2650.00 | 2658.84 | 47.73 | 600.00 |
| 54.650 | 893.35 | 2600.47 | 2625.00 | 2650.00 | 2673.73 | 73.27 | 600.00 |
| 54.650 | 893.92 | 2595.27 | 2625.00 | 2650.00 | 2680.40 | 85.13 | 600.00 |
| 54.650 | 895.25 | 2523.10 | 2625.00 | 2650.00 | 2696.71 | 173.62 | 600.00 |
| 54.680 | 894.07 | 2624.93 | 2624.00 | 2658.60 | 2659.00 | 34.07 | 600.00 |
| 54.680 | 895.09 | 2605.21 | 2624.00 | 2658.60 | 2659.00 | 53.79 | 600.00 |
| 54.680 | 895.50 | 2564.00 | 2624.00 | 2658.60 | 2659.00 | 95.00 | 600.00 |
| 54.680 | 896.40 | 2564.00 | 2624.00 | 2658.60 | 2659.00 | 95.00 | 600.00 |
| 54.690 | 894.23 | 2624.63 | 2624.00 | 2658.60 | 2654.78 | 30.15 | 50.00 |
| 54.690 | 895.26 | 2515.55 | 2624.00 | 2658.60 | 2657.85 | 142.31 | 50.00 |
| 54.690 | 895.82 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 50.00 |
| 54.690 | 896.84 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 50.00 |

MOORE BUSINESS FORMS, INC 23

| | SECNO | CWSEL | SSTA | STCHL | STCHR | ENDST | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| * | 54.700 | 895.82 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 1.00 |
| * | 54.700 | 896.06 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 1.00 |
| * | 54.700 | 896.07 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 1.00 |
| | 54.700 | 896.75 | 2464.00 | 2624.00 | 2658.60 | 2659.00 | 195.00 | 1.00 |
| | 54.710 | 896.23 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 18.00 |
| | 54.710 | 896.48 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 18.00 |
| | 54.710 | 896.65 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 18.00 |
| | 54.710 | 897.02 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 18.00 |
| | 54.720 | 896.27 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 1.00 |
| | 54.720 | 896.54 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 1.00 |
| | 54.720 | 896.71 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 1.00 |
| | 54.720 | 897.09 | 2428.00 | 2624.00 | 2658.60 | 2659.00 | 231.00 | 1.00 |
| | 54.730 | 896.30 | 2332.00 | 2624.00 | 2658.60 | 2662.00 | 330.00 | 50.00 |
| | 54.730 | 896.60 | 2332.00 | 2624.00 | 2658.60 | 2662.00 | 330.00 | 50.00 |
| | 54.730 | 896.78 | 2332.00 | 2624.00 | 2658.60 | 2662.00 | 330.00 | 50.00 |
| | 54.730 | 897.18 | 2332.00 | 2624.00 | 2658.60 | 2662.00 | 330.00 | 50.00 |
| | 55.000 | 896.35 | 2082.66 | 2512.00 | 2562.00 | 2670.74 | 588.08 | 780.00 |
| | 55.000 | 896.69 | 2080.08 | 2512.00 | 2562.00 | 2677.36 | 597.28 | 780.00 |
| | 55.000 | 896.89 | 2078.58 | 2512.00 | 2562.00 | 2681.19 | 602.61 | 780.00 |
| | 55.000 | 897.32 | 2075.34 | 2512.00 | 2562.00 | 2689.52 | 614.18 | 780.00 |
| | 55.100 | 896.38 | 2074.50 | 2184.00 | 2222.00 | 2285.69 | 211.19 | 1820.00 |
| | 55.100 | 896.76 | 2072.69 | 2184.00 | 2222.00 | 2290.11 | 217.42 | 1820.00 |
| | 55.100 | 896.98 | 2071.60 | 2184.00 | 2222.00 | 2292.62 | 221.01 | 1820.00 |
| | 55.100 | 897.45 | 2069.22 | 2184.00 | 2222.00 | 2307.47 | 238.25 | 1820.00 |

MOORE BUSINESS FORMS, INC 23

RICE CREEK

SUMMARY PRINTOUT TABLE 150

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 50.000 | 0.00 | 0.00 | 0.00 | 879.30 | 745.00 | 883.10 | 0.00 | 883.88 | 100.40 | 7.11 | 106.43 | 74.35 |
| * | 50.000 | 0.00 | 0.00 | 0.00 | 879.30 | 1140.00 | 883.40 | 883.40 | 884.88 | 165.27 | 9.78 | 119.36 | 88.68 |
| * | 50.000 | 0.00 | 0.00 | 0.00 | 879.30 | 1330.00 | 883.74 | 883.74 | 885.35 | 155.16 | 10.19 | 134.96 | 106.77 |
| * | 50.000 | 0.00 | 0.00 | 0.00 | 879.30 | 1790.00 | 884.45 | 884.45 | 886.39 | 146.08 | 11.25 | 168.47 | 148.10 |
| | 2.900 | 60.00 | 0.00 | 0.00 | 879.80 | 745.00 | 883.88 | 0.00 | 884.47 | 89.42 | 6.28 | 143.91 | 78.79 |
| | 2.900 | 60.00 | 0.00 | 0.00 | 879.80 | 1140.00 | 884.97 | 0.00 | 885.48 | 51.00 | 6.06 | 264.77 | 159.63 |
| | 2.900 | 60.00 | 0.00 | 0.00 | 879.80 | 1330.00 | 885.41 | 0.00 | 885.91 | 44.22 | 6.10 | 316.36 | 200.01 |
| | 2.900 | 60.00 | 0.00 | 0.00 | 879.80 | 1790.00 | 886.42 | 0.00 | 886.90 | 33.48 | 6.18 | 441.89 | 309.36 |
| | 3.000 | 50.00 | 0.00 | 0.00 | 880.30 | 745.00 | 884.32 | 884.02 | 884.96 | 99.15 | 6.49 | 136.92 | 74.82 |
| | 3.000 | 50.00 | 0.00 | 0.00 | 880.30 | 1140.00 | 885.18 | 0.00 | 885.82 | 71.14 | 6.76 | 231.34 | 135.16 |
| | 3.000 | 50.00 | 0.00 | 0.00 | 880.30 | 1330.00 | 885.58 | 0.00 | 886.21 | 61.89 | 6.81 | 277.17 | 169.06 |
| | 3.000 | 50.00 | 0.00 | 0.00 | 880.30 | 1790.00 | 886.54 | 0.00 | 887.14 | 45.14 | 6.81 | 394.50 | 266.41 |
| * | 3.100 | 85.00 | 0.00 | 0.00 | 881.90 | 745.00 | 885.62 | 885.62 | 886.51 | 164.08 | 7.62 | 105.53 | 58.16 |
| * | 3.100 | 85.00 | 0.00 | 0.00 | 881.90 | 1140.00 | 886.27 | 886.27 | 887.30 | 138.19 | 8.40 | 174.30 | 96.98 |
| * | 3.100 | 85.00 | 0.00 | 0.00 | 881.90 | 1330.00 | 886.51 | 886.51 | 887.62 | 136.12 | 8.82 | 200.62 | 114.00 |
| * | 3.100 | 85.00 | 0.00 | 0.00 | 881.90 | 1790.00 | 887.02 | 887.02 | 888.32 | 133.42 | 9.71 | 258.55 | 154.97 |
| | 50.800 | 85.00 | 0.00 | 0.00 | 883.40 | 745.00 | 886.68 | 0.00 | 887.67 | 109.50 | 8.14 | 104.47 | 71.20 |
| * | 50.800 | 85.00 | 0.00 | 0.00 | 883.40 | 1140.00 | 887.22 | 887.22 | 888.84 | 146.03 | 10.48 | 127.43 | 94.34 |
| * | 50.800 | 85.00 | 0.00 | 0.00 | 883.40 | 1330.00 | 887.60 | 887.60 | 889.36 | 139.38 | 10.95 | 144.53 | 112.65 |
| * | 50.800 | 85.00 | 0.00 | 0.00 | 883.40 | 1790.00 | 888.41 | 888.41 | 890.49 | 130.27 | 12.00 | 183.84 | 156.83 |
| | 50.900 | 50.00 | 0.00 | 0.00 | 883.80 | 745.00 | 887.60 | 0.00 | 888.22 | 74.76 | 6.34 | 117.53 | 86.16 |
| | 50.900 | 50.00 | 0.00 | 0.00 | 883.80 | 1140.00 | 888.88 | 0.00 | 889.55 | 55.39 | 6.58 | 173.19 | 153.17 |
| | 50.900 | 50.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 889.35 | 0.00 | 890.07 | 52.60 | 6.84 | 194.54 | 183.38 |
| | 50.900 | 50.00 | 0.00 | 0.00 | 883.80 | 1790.00 | 890.39 | 0.00 | 891.23 | 47.66 | 7.34 | 243.78 | 259.28 |
| | 51.000 | 1.00 | 905.60 | 905.70 | 883.80 | 745.00 | 887.57 | 0.00 | 888.26 | 32.69 | 6.65 | 111.96 | 130.30 |
| | 51.000 | 1.00 | 905.60 | 905.70 | 883.80 | 1140.00 | 888.85 | 0.00 | 889.58 | 24.16 | 6.86 | 166.07 | 231.92 |
| | 51.000 | 1.00 | 905.60 | 905.70 | 883.80 | 1330.00 | 889.32 | 0.00 | 890.11 | 22.87 | 7.11 | 187.01 | 278.13 |
| | 51.000 | 1.00 | 905.60 | 905.70 | 883.80 | 1790.00 | 890.37 | 0.00 | 891.26 | 20.53 | 7.59 | 235.77 | 395.09 |
| | 51.100 | 31.00 | 905.60 | 905.70 | 883.80 | 745.00 | 887.79 | 0.00 | 888.38 | 26.48 | 6.18 | 120.50 | 144.77 |
| | 51.100 | 31.00 | 905.60 | 905.70 | 883.80 | 1140.00 | 888.98 | 0.00 | 889.67 | 21.87 | 6.65 | 171.55 | 243.76 |
| | 51.100 | 31.00 | 905.60 | 905.70 | 883.80 | 1330.00 | 889.44 | 0.00 | 890.19 | 20.99 | 6.92 | 192.33 | 290.27 |
| | 51.100 | 31.00 | 905.60 | 905.70 | 883.80 | 1790.00 | 890.48 | 0.00 | 891.34 | 19.26 | 7.43 | 240.82 | 407.90 |
| | 51.200 | 1.00 | 0.00 | 0.00 | 883.80 | 745.00 | 887.79 | 0.00 | 888.38 | 85.59 | 6.18 | 120.61 | 80.53 |
| | 51.200 | 1.00 | 0.00 | 0.00 | 883.80 | 1140.00 | 888.99 | 0.00 | 889.67 | 70.30 | 6.63 | 172.00 | 135.97 |
| | 51.200 | 1.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 889.45 | 0.00 | 890.19 | 67.59 | 6.90 | 192.74 | 161.78 |
| | 51.200 | 1.00 | 0.00 | 0.00 | 883.80 | 1790.00 | 890.48 | 0.00 | 891.34 | 62.16 | 7.42 | 241.12 | 227.03 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | FG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51.500 | 30.00 | 0.00 | 0.00 | 882.00 | 745.00 | 888.33 | 0.00 | 888.59 | 19.13 | 4.33 | 235.52 | 170.33 |
| 51.500 | 30.00 | 0.00 | 0.00 | 882.00 | 1140.00 | 889.53 | 0.00 | 889.88 | 20.47 | 5.13 | 330.37 | 251.99 |
| 51.500 | 30.00 | 0.00 | 0.00 | 882.00 | 1330.00 | 890.01 | 0.00 | 890.40 | 20.92 | 5.45 | 373.56 | 290.82 |
| 51.500 | 30.00 | 0.00 | 0.00 | 882.00 | 1790.00 | 891.13 | 0.00 | 891.57 | 20.30 | 5.92 | 488.03 | 397.26 |
| 51.900 | 130.00 | 0.00 | 0.00 | 882.30 | 745.00 | 888.60 | 0.00 | 888.95 | 31.76 | 4.79 | 155.46 | 132.20 |
| 51.900 | 130.00 | 0.00 | 0.00 | 882.30 | 1140.00 | 889.79 | 0.00 | 890.35 | 41.30 | 6.00 | 190.07 | 177.38 |
| 51.900 | 130.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 890.26 | 0.00 | 890.93 | 45.95 | 6.52 | 203.84 | 196.21 |
| 51.900 | 130.00 | 0.00 | 0.00 | 882.30 | 1,790.00 | 891.31 | 0.00 | 892.21 | 56.07 | 7.65 | 234.08 | 239.05 |
| 52.000 | 1.00 | 900.00 | 900.50 | 882.30 | 745.00 | 888.57 | 0.00 | 888.99 | 15.68 | 5.21 | 142.89 | 188.13 |
| 52.000 | 1.00 | 900.00 | 900.50 | 882.30 | 1140.00 | 889.72 | 0.00 | 890.43 | 23.71 | 6.76 | 168.75 | 234.14 |
| 52.000 | 1.00 | 900.00 | 900.50 | 882.30 | 1330.00 | 890.17 | 0.00 | 891.03 | 28.03 | 7.46 | 178.32 | 251.22 |
| 52.000 | 1.00 | 900.00 | 900.50 | 882.30 | 1790.00 | 891.13 | 0.00 | 892.40 | 39.16 | 9.04 | 197.91 | 286.06 |
| 52.100 | 28.00 | 900.00 | 900.50 | 882.30 | 745.00 | 888.62 | 0.00 | 889.03 | 15.28 | 5.16 | 144.30 | 190.61 |
| 52.100 | 28.00 | 900.00 | 900.50 | 882.30 | 1140.00 | 889.80 | 0.00 | 890.50 | 23.01 | 6.68 | 170.71 | 237.64 |
| 52.100 | 28.00 | 900.00 | 900.50 | 882.30 | 1330.00 | 890.27 | 0.00 | 891.11 | 27.19 | 7.37 | 180.48 | 255.09 |
| 52.100 | 28.00 | 900.00 | 900.50 | 882.30 | 1790.00 | 891.29 | 0.00 | 892.52 | 37.71 | 8.91 | 200.98 | 291.48 |
| 52.200 | 1.00 | 0.00 | 0.00 | 882.30 | 745.00 | 888.72 | 0.00 | 889.06 | 29.75 | 4.69 | 158.94 | 136.58 |
| 52.200 | 1.00 | 0.00 | 0.00 | 882.30 | 1140.00 | 890.03 | 0.00 | 890.55 | 37.17 | 5.78 | 197.13 | 186.98 |
| 52.200 | 1.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 890.58 | 0.00 | 891.19 | 40.40 | 6.24 | 213.18 | 209.24 |
| 52.200 | 1.00 | 0.00 | 0.00 | 882.30 | 1790.00 | 891.86 | 0.00 | 892.65 | 46.54 | 7.16 | 250.06 | 262.40 |
| 52.300 | 60.00 | 0.00 | 0.00 | 882.30 | 745.00 | 888.98 | 0.00 | 889.23 | 19.54 | 4.44 | 268.27 | 168.52 |
| 52.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1140.00 | 890.51 | 0.00 | 890.77 | 16.27 | 4.78 | 418.16 | 282.65 |
| 52.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1330.00 | 891.17 | 0.00 | 891.43 | 14.63 | 4.82 | 501.26 | 347.74 |
| 52.300 | 60.00 | 0.00 | 0.00 | 882.30 | 1790.00 | 892.71 | 0.00 | 892.95 | 11.66 | 4.87 | 694.53 | 524.11 |
| 53.000 | 725.00 | 0.00 | 0.00 | 883.80 | 745.00 | 889.99 | 0.00 | 890.09 | 7.50 | 2.57 | 334.91 | 272.09 |
| 53.000 | 725.00 | 0.00 | 0.00 | 883.80 | 1140.00 | 891.42 | 0.00 | 891.53 | 6.72 | 2.89 | 506.77 | 439.67 |
| 53.000 | 725.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 892.02 | 0.00 | 892.15 | 6.42 | 3.00 | 592.31 | 524.74 |
| 53.000 | 725.00 | 0.00 | 0.00 | 883.80 | 1790.00 | 893.43 | 0.00 | 893.56 | 5.63 | 3.18 | 818.20 | 754.37 |
| 53.500 | 270.00 | 0.00 | 0.00 | 883.80 | 745.00 | 890.19 | 0.00 | 890.28 | 6.48 | 2.45 | 356.38 | 292.77 |
| 53.500 | 270.00 | 0.00 | 0.00 | 883.80 | 1140.00 | 891.60 | 0.00 | 891.71 | 6.03 | 2.79 | 531.55 | 464.20 |
| 53.500 | 270.00 | 0.00 | 0.00 | 883.80 | 1330.00 | 892.20 | 0.00 | 892.31 | 5.82 | 2.91 | 616.55 | 551.25 |
| 53.500 | 270.00 | 0.00 | 0.00 | 883.80 | 1790.00 | 893.58 | 0.00 | 893.71 | 5.26 | 3.12 | 816.62 | 780.80 |
| 53.900 | 320.00 | 0.00 | 0.00 | 885.40 | 745.00 | 890.50 | 0.00 | 890.74 | 28.62 | 3.92 | 189.84 | 139.27 |
| 53.900 | 320.00 | 0.00 | 0.00 | 885.40 | 1140.00 | 891.85 | 0.00 | 892.17 | 27.35 | 4.55 | 250.71 | 217.97 |
| 53.900 | 320.00 | 0.00 | 0.00 | 885.40 | 1330.00 | 892.42 | 0.00 | 892.78 | 27.18 | 4.81 | 276.59 | 255.10 |
| 53.900 | 320.00 | 0.00 | 0.00 | 885.40 | 1790.00 | 893.75 | 0.00 | 894.19 | 26.41 | 5.32 | 336.38 | 348.28 |
| 54.000 | 1.00 | 903.90 | 906.60 | 885.40 | 745.00 | 890.48 | 0.00 | 890.76 | 11.60 | 4.21 | 176.78 | 218.78 |
| 54.000 | 1.00 | 903.90 | 906.60 | 885.40 | 1140.00 | 891.81 | 0.00 | 892.22 | 14.31 | 5.12 | 222.62 | 301.31 |
| 54.000 | 1.00 | 903.90 | 906.60 | 885.40 | 1330.00 | 892.37 | 0.00 | 892.84 | 15.73 | 5.52 | 241.04 | 335.30 |
| 54.000 | 1.00 | 903.90 | 906.60 | 885.40 | 1790.00 | 893.65 | 0.00 | 894.28 | 19.17 | 6.38 | 280.62 | 408.88 |

MOORE BUSINESS FORMS, INC 23

| | SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 54.100 | 42.80 | 904.10 | 906.60 | 885.90 | 745.00 | 890.51 | 0.00 | 890.84 | 14.58 | 4.60 | 161.91 | 195.09 |
| | 54.100 | 42.80 | 904.10 | 906.60 | 885.90 | 1140.00 | 891.85 | 0.00 | 892.31 | 16.87 | 5.47 | 208.41 | 277.56 |
| | 54.100 | 42.80 | 904.10 | 906.60 | 885.90 | 1330.00 | 892.41 | 0.00 | 892.94 | 18.23 | 5.86 | 226.97 | 311.46 |
| | 54.100 | 42.80 | 904.10 | 906.60 | 885.90 | 1790.00 | 893.71 | 0.00 | 894.40 | 21.61 | 6.71 | 266.83 | 385.03 |
| | 54.200 | 1.00 | 0.00 | 0.00 | 885.90 | 745.00 | 890.58 | 0.00 | 890.86 | 33.54 | 4.19 | 177.78 | 128.65 |
| | 54.200 | 1.00 | 0.00 | 0.00 | 885.90 | 1140.00 | 892.00 | 0.00 | 892.35 | 29.21 | 4.72 | 241.65 | 210.93 |
| | 54.200 | 1.00 | 0.00 | 0.00 | 885.90 | 1330.00 | 892.61 | 0.00 | 892.99 | 28.15 | 4.94 | 269.19 | 250.69 |
| | 54.200 | 1.00 | 0.00 | 0.00 | 885.90 | 1790.00 | 894.03 | 0.00 | 894.48 | 25.91 | 5.37 | 333.08 | 351.68 |
| | 54.250 | 65.00 | 0.00 | 0.00 | 885.80 | 745.00 | 890.93 | 0.00 | 890.98 | 3.59 | 1.72 | 450.20 | 393.37 |
| | 54.250 | 65.00 | 0.00 | 0.00 | 885.80 | 1140.00 | 892.42 | 0.00 | 892.48 | 3.19 | 1.96 | 614.45 | 637.91 |
| | 54.250 | 65.00 | 0.00 | 0.00 | 885.80 | 1330.00 | 893.07 | 0.00 | 893.13 | 3.06 | 2.05 | 688.61 | 759.92 |
| | 54.250 | 65.00 | 0.00 | 0.00 | 885.80 | 1790.00 | 894.56 | 0.00 | 894.63 | 2.77 | 2.23 | 866.68 | 1076.04 |
| | 54.400 | 150.00 | 0.00 | 0.00 | 886.80 | 420.00 | 890.90 | 0.00 | 891.12 | 29.66 | 3.85 | 115.75 | 77.12 |
| | 54.400 | 150.00 | 0.00 | 0.00 | 886.80 | 700.00 | 892.36 | 0.00 | 892.63 | 22.07 | 4.26 | 191.42 | 149.00 |
| | 54.400 | 150.00 | 0.00 | 0.00 | 886.80 | 840.00 | 893.00 | 0.00 | 893.28 | 19.87 | 4.40 | 232.56 | 188.46 |
| | 54.400 | 150.00 | 0.00 | 0.00 | 886.80 | 1180.00 | 894.48 | 0.00 | 894.77 | 15.32 | 4.55 | 347.39 | 301.46 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 420.00 | 891.13 | 0.00 | 891.24 | 11.28 | 2.93 | 205.60 | 125.03 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 700.00 | 892.60 | 0.00 | 892.72 | 9.58 | 3.28 | 322.40 | 226.10 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 840.00 | 893.24 | 0.00 | 893.37 | 8.94 | 3.39 | 384.02 | 280.87 |
| | 54.600 | 60.00 | 0.00 | 0.00 | 886.30 | 1180.00 | 894.72 | 0.00 | 894.84 | 7.38 | 3.54 | 552.30 | 434.48 |
| | 54.650 | 600.00 | 0.00 | 0.00 | 888.10 | 420.00 | 892.07 | 0.00 | 892.32 | 31.33 | 4.23 | 117.61 | 75.03 |
| | 54.650 | 600.00 | 0.00 | 0.00 | 888.10 | 700.00 | 893.35 | 0.00 | 893.62 | 24.66 | 4.62 | 194.34 | 140.95 |
| | 54.650 | 600.00 | 0.00 | 0.00 | 888.10 | 840.00 | 893.92 | 0.00 | 894.19 | 21.86 | 4.69 | 239.59 | 179.66 |
| | 54.650 | 600.00 | 0.00 | 0.00 | 888.10 | 1180.00 | 895.25 | 0.00 | 895.48 | 15.52 | 4.59 | 381.27 | 299.48 |
| | 54.680 | 600.00 | 0.00 | 0.00 | 889.26 | 420.00 | 894.07 | 0.00 | 894.32 | 35.91 | 4.06 | 103.64 | 70.09 |
| | 54.680 | 600.00 | 0.00 | 0.00 | 889.26 | 700.00 | 895.09 | 0.00 | 895.48 | 39.03 | 5.04 | 142.08 | 112.04 |
| | 54.680 | 600.00 | 0.00 | 0.00 | 889.26 | 840.00 | 895.50 | 0.00 | 895.93 | 38.51 | 5.34 | 178.93 | 135.37 |
| | 54.680 | 600.00 | 0.00 | 0.00 | 889.26 | 1180.00 | 896.40 | 0.00 | 896.84 | 33.82 | 5.66 | 264.47 | 202.91 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 420.00 | 894.23 | 0.00 | 894.66 | 101.96 | 5.22 | 80.47 | 41.60 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 700.00 | 895.26 | 894.10 | 895.83 | 99.58 | 6.09 | 125.53 | 70.15 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 840.00 | 895.82 | 0.00 | 896.17 | 60.51 | 5.22 | 234.69 | 107.99 |
| | 54.690 | 50.00 | 0.00 | 0.00 | 889.35 | 1180.00 | 896.84 | 0.00 | 897.02 | 27.78 | 4.14 | 434.02 | 223.87 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 420.00 | 895.82 | 895.82 | 896.17 | 128.49 | 6.43 | 133.76 | 37.05 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 700.00 | 896.06 | 896.06 | 896.43 | 194.03 | 6.94 | 176.86 | 50.25 |
| * | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 840.00 | 896.07 | 896.07 | 896.59 | 265.08 | 8.19 | 179.78 | 51.59 |
| | 54.700 | 1.00 | 894.60 | 893.23 | 889.35 | 1180.00 | 896.75 | 0.00 | 897.07 | 88.50 | 6.53 | 311.21 | 125.43 |
| | 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 420.00 | 896.23 | 0.00 | 896.30 | 31.59 | 3.10 | 244.78 | 74.73 |
| | 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 700.00 | 896.48 | 0.00 | 896.60 | 44.32 | 4.14 | 302.25 | 105.15 |
| | 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 840.00 | 896.65 | 0.00 | 896.79 | 42.81 | 4.37 | 341.71 | 128.39 |
| | 54.710 | 18.00 | 894.60 | 893.23 | 889.35 | 1180.00 | 897.02 | 0.00 | 897.19 | 40.60 | 4.87 | 427.65 | 185.19 |

MOORE BUSINESS FORMS, INC 23

| SECNO | XLCH | ELTRD | ELLC | ELMIN | Q | CWSEL | CRIWS | EG | 10K*S | VCH | AREA | .01K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 420.00 | 896.27 | 0.00 | 896.30 | 6.82 | 1.89 | 356.75 | 160.82 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 700.00 | 896.54 | 0.00 | 896.61 | 12.65 | 2.67 | 419.18 | 196.81 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 840.00 | 896.71 | 0.00 | 896.79 | 14.31 | 2.92 | 459.34 | 222.09 |
| 54.720 | 1.00 | 0.00 | 0.00 | 889.35 | 1180.00 | 897.09 | 0.00 | 897.20 | 17.44 | 3.39 | 546.78 | 282.54 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 420.00 | 896.30 | 0.00 | 896.33 | 2.87 | 1.62 | 483.72 | 247.84 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 700.00 | 896.60 | 0.00 | 896.65 | 5.26 | 2.28 | 582.94 | 305.11 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 840.00 | 896.78 | 0.00 | 896.84 | 5.97 | 2.48 | 643.58 | 343.71 |
| 54.730 | 50.00 | 0.00 | 0.00 | 889.31 | 1180.00 | 897.18 | 0.00 | 897.25 | 7.31 | 2.87 | 775.45 | 436.41 |
| 55.000 | 780.00 | 0.00 | 0.00 | 888.20 | 420.00 | 896.35 | 0.00 | 896.35 | .09 | .38 | 2178.72 | 1415.56 |
| 55.000 | 780.00 | 0.00 | 0.00 | 888.20 | 700.00 | 896.69 | 0.00 | 896.69 | .19 | .57 | 2382.57 | 1597.05 |
| 55.000 | 780.00 | 0.00 | 0.00 | 888.20 | 840.00 | 896.89 | 0.00 | 896.89 | .24 | .65 | 2502.01 | 1707.32 |
| 55.000 | 780.00 | 0.00 | 0.00 | 888.20 | 1180.00 | 897.32 | 0.00 | 897.33 | .36 | .83 | 2765.09 | 1959.81 |
| 55.100 | 1820.00 | 0.00 | 0.00 | 890.50 | 420.00 | 896.38 | 0.00 | 896.39 | 1.83 | 1.27 | 641.99 | 310.47 |
| 55.100 | 1820.00 | 0.00 | 0.00 | 890.50 | 700.00 | 896.76 | 0.00 | 896.79 | 3.66 | 1.89 | 724.10 | 365.87 |
| 55.100 | 1820.00 | 0.00 | 0.00 | 890.50 | 840.00 | 896.98 | 0.00 | 897.02 | 4.43 | 2.13 | 771.75 | 399.27 |
| 55.100 | 1820.00 | 0.00 | 0.00 | 890.50 | 1180.00 | 897.45 | 0.00 | 897.52 | 6.10 | 2.65 | 880.39 | 477.93 |

MOORE BUSINESS FORMS, INC. 23

RICE CREEK

SUMMARY PRINTOUT TABLE 150

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 50.000 | 745.00 | 883.10 | 0.00 | 0.00 | 0.00 | 42.95 | 0.00 |
| * | 50.000 | 1140.00 | 883.40 | .30 | 0.00 | .30 | 44.26 | 0.00 |
| * | 50.000 | 1330.00 | 883.74 | .35 | 0.00 | .64 | 45.78 | 0.00 |
| * | 50.000 | 1790.00 | 884.45 | .71 | 0.00 | 1.35 | 48.89 | 0.00 |
| | 2.900 | 745.00 | 883.88 | 0.00 | .78 | 0.00 | 105.98 | 60.00 |
| | 2.900 | 1140.00 | 884.97 | 1.09 | 1.58 | 0.00 | 116.42 | 60.00 |
| | 2.900 | 1330.00 | 885.41 | .44 | 1.67 | 0.00 | 120.20 | 60.00 |
| | 2.900 | 1790.00 | 886.42 | 1.01 | 1.97 | 0.00 | 128.93 | 60.00 |
| | 3.000 | 745.00 | 884.32 | 0.00 | .44 | 0.00 | 105.07 | 50.00 |
| | 3.000 | 1140.00 | 885.18 | .86 | .21 | 0.00 | 113.90 | 50.00 |
| | 3.000 | 1330.00 | 885.58 | .40 | .17 | 0.00 | 117.34 | 50.00 |
| | 3.000 | 1790.00 | 886.54 | .96 | .12 | 0.00 | 125.70 | 50.00 |
| * | 3.100 | 745.00 | 885.62 | 0.00 | 1.30 | 0.00 | 100.91 | 85.00 |
| * | 3.100 | 1140.00 | 886.27 | .65 | 1.09 | 0.00 | 109.48 | 85.00 |
| * | 3.100 | 1330.00 | 886.51 | .24 | .93 | 0.00 | 111.54 | 85.00 |
| * | 3.100 | 1790.00 | 887.02 | .51 | .48 | 0.00 | 115.95 | 85.00 |
| | 50.800 | 745.00 | 886.68 | 0.00 | 1.06 | 0.00 | 41.46 | 85.00 |
| * | 50.800 | 1140.00 | 887.22 | .54 | .95 | .54 | 43.99 | 85.00 |
| * | 50.800 | 1330.00 | 887.60 | .38 | 1.09 | .92 | 46.03 | 85.00 |
| * | 50.800 | 1790.00 | 888.41 | .81 | 1.39 | 1.73 | 50.53 | 85.00 |
| | 50.900 | 745.00 | 887.60 | 0.00 | .92 | 0.00 | 41.06 | 50.00 |
| | 50.900 | 1140.00 | 888.88 | 1.28 | 1.66 | 1.28 | 45.33 | 50.00 |
| | 50.900 | 1330.00 | 889.35 | .47 | 1.75 | 1.75 | 46.19 | 50.00 |
| | 50.900 | 1790.00 | 890.39 | 1.05 | 1.98 | 2.79 | 48.13 | 50.00 |
| | 51.000 | 745.00 | 887.57 | 0.00 | -.03 | 0.00 | 39.53 | 1.00 |
| | 51.000 | 1140.00 | 888.85 | 1.28 | -.03 | 1.28 | 44.34 | 1.00 |
| | 51.000 | 1330.00 | 889.32 | .47 | -.03 | 1.75 | 45.38 | 1.00 |
| | 51.000 | 1790.00 | 890.37 | 1.05 | -.03 | 2.79 | 47.71 | 1.00 |
| | 51.100 | 745.00 | 887.79 | 0.00 | .21 | 0.00 | 40.51 | 31.00 |
| | 51.100 | 1140.00 | 888.98 | 1.20 | .13 | 1.20 | 44.61 | 31.00 |
| | 51.100 | 1330.00 | 889.44 | .46 | .12 | 1.66 | 45.64 | 31.00 |
| | 51.100 | 1790.00 | 890.48 | 1.03 | .11 | 2.69 | 47.94 | 31.00 |
| | 51.200 | 745.00 | 887.79 | 0.00 | .01 | 0.00 | 40.52 | 1.00 |
| | 51.200 | 1140.00 | 888.99 | 1.20 | .01 | 1.20 | 44.64 | 1.00 |
| | 51.200 | 1330.00 | 889.45 | .46 | .01 | 1.66 | 45.66 | 1.00 |
| | 51.200 | 1790.00 | 890.48 | 1.03 | .01 | 2.69 | 47.95 | 1.00 |

MOORE BUSINESS FORMS, INC. 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 51.500 | 745.00 | 888.33 | 0.00 | .54 | 0.00 | 72.23 | 30.00 |
| 51.500 | 1140.00 | 889.53 | 1.20 | .53 | 1.20 | 85.87 | 30.00 |
| 51.500 | 1330.00 | 890.01 | .49 | .56 | 1.69 | 92.16 | 30.00 |
| 51.500 | 1790.00 | 891.13 | 1.12 | .65 | 2.80 | 112.63 | 30.00 |
| 51.900 | 745.00 | 888.60 | 0.00 | .27 | 0.00 | 29.00 | 130.00 |
| 51.900 | 1140.00 | 889.79 | 1.19 | .26 | 1.19 | 29.00 | 130.00 |
| 51.900 | 1330.00 | 890.26 | .47 | .25 | 1.67 | 29.00 | 130.00 |
| 51.900 | 1790.00 | 891.31 | 1.04 | .17 | 2.71 | 29.00 | 130.00 |
| 52.000 | 745.00 | 888.57 | 0.00 | -.03 | 0.00 | 29.00 | 1.00 |
| 52.000 | 1140.00 | 889.72 | 1.15 | -.07 | 1.15 | 29.00 | 1.00 |
| 52.000 | 1330.00 | 890.17 | .45 | -.10 | 1.60 | 29.00 | 1.00 |
| 52.000 | 1790.00 | 891.13 | .96 | -.18 | 2.56 | 29.00 | 1.00 |
| 52.100 | 745.00 | 888.62 | 0.00 | .05 | 0.00 | 29.00 | 28.00 |
| 52.100 | 1140.00 | 889.80 | 1.18 | .09 | 1.18 | 29.00 | 28.00 |
| 52.100 | 1330.00 | 890.27 | .47 | .10 | 1.65 | 29.00 | 28.00 |
| 52.100 | 1790.00 | 891.29 | 1.02 | .16 | 2.67 | 29.00 | 28.00 |
| 52.200 | 745.00 | 888.72 | 0.00 | .10 | 0.00 | 29.00 | 1.00 |
| 52.200 | 1140.00 | 890.03 | 1.32 | .23 | 1.32 | 29.00 | 1.00 |
| 52.200 | 1330.00 | 890.58 | .55 | .31 | 1.87 | 29.00 | 1.00 |
| 52.200 | 1790.00 | 891.86 | 1.27 | .57 | 3.14 | 29.00 | 1.00 |
| 52.300 | 745.00 | 888.98 | 0.00 | .26 | 0.00 | 85.85 | 60.00 |
| 52.300 | 1140.00 | 890.51 | 1.53 | .47 | 1.53 | 116.94 | 60.00 |
| 52.300 | 1330.00 | 891.17 | .67 | .59 | 2.19 | 126.00 | 60.00 |
| 52.300 | 1790.00 | 892.71 | 1.53 | .85 | 3.73 | 126.00 | 60.00 |
| 53.000 | 745.00 | 889.99 | 0.00 | 1.01 | 0.00 | 106.61 | 725.00 |
| 53.000 | 1140.00 | 891.42 | 1.42 | .91 | 1.42 | 134.96 | 725.00 |
| 53.000 | 1330.00 | 892.02 | .61 | .85 | 2.03 | 147.04 | 725.00 |
| 53.000 | 1790.00 | 893.43 | 1.40 | .72 | 3.43 | 174.97 | 725.00 |
| 53.500 | 745.00 | 890.19 | 0.00 | .20 | 0.00 | 110.57 | 270.00 |
| 53.500 | 1140.00 | 891.60 | 1.41 | .18 | 1.41 | 138.57 | 270.00 |
| 53.500 | 1330.00 | 892.20 | .60 | .17 | 2.01 | 142.85 | 270.00 |
| 53.500 | 1790.00 | 893.58 | 1.38 | .15 | 3.39 | 146.67 | 270.00 |
| 53.900 | 745.00 | 890.50 | 0.00 | .31 | 0.00 | 45.00 | 320.00 |
| 53.900 | 1140.00 | 891.85 | 1.35 | .25 | 1.35 | 45.00 | 320.00 |
| 53.900 | 1330.00 | 892.42 | .58 | .23 | 1.93 | 45.00 | 320.00 |
| 53.900 | 1790.00 | 893.75 | 1.32 | .17 | 3.25 | 45.00 | 320.00 |
| 54.000 | 745.00 | 890.48 | 0.00 | -.02 | 0.00 | 45.00 | 1.00 |
| 54.000 | 1140.00 | 891.81 | 1.33 | -.04 | 1.33 | 45.00 | 1.00 |
| 54.000 | 1330.00 | 892.37 | .56 | -.05 | 1.89 | 45.00 | 1.00 |
| 54.000 | 1790.00 | 893.65 | 1.28 | -.09 | 3.17 | 45.00 | 1.00 |

MOORE BUSINESS FORMS, INC 23

| | SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|---|
| | 54.100 | 745.00 | 890.51 | 0.00 | .03 | 0.00 | 45.00 | 42.80 |
| | 54.100 | 1140.00 | 891.85 | 1.34 | .04 | 1.34 | 45.00 | 42.80 |
| | 54.100 | 1330.00 | 892.41 | .57 | .04 | 1.90 | 45.00 | 42.80 |
| | 54.100 | 1790.00 | 893.71 | 1.29 | .05 | 3.20 | 45.00 | 42.80 |
| | 54.200 | 745.00 | 890.58 | 0.00 | .08 | 0.00 | 45.00 | 1.00 |
| | 54.200 | 1140.00 | 892.00 | 1.42 | .16 | 1.42 | 45.00 | 1.00 |
| | 54.200 | 1330.00 | 892.61 | .61 | .20 | 2.03 | 45.00 | 1.00 |
| | 54.200 | 1790.00 | 894.03 | 1.42 | .33 | 3.45 | 45.00 | 1.00 |
| | 54.250 | 745.00 | 890.93 | 0.00 | .35 | 0.00 | 107.17 | 65.00 |
| | 54.250 | 1140.00 | 892.42 | 1.49 | .42 | 1.49 | 113.28 | 65.00 |
| | 54.250 | 1330.00 | 893.07 | .65 | .46 | 2.14 | 116.14 | 65.00 |
| | 54.250 | 1790.00 | 894.56 | 1.49 | .53 | 3.63 | 122.74 | 65.00 |
| | 54.400 | 420.00 | 890.90 | 0.00 | -.03 | 0.00 | 43.01 | 150.00 |
| | 54.400 | 700.00 | 892.36 | 1.46 | -.06 | 1.46 | 60.61 | 150.00 |
| | 54.400 | 840.00 | 893.00 | .64 | -.07 | 2.10 | 68.30 | 150.00 |
| | 54.400 | 1180.00 | 894.48 | 1.49 | -.08 | 3.59 | 86.21 | 150.00 |
| | 54.600 | 420.00 | 891.13 | 0.00 | .24 | 0.00 | 71.43 | 60.00 |
| | 54.600 | 700.00 | 892.60 | 1.47 | .24 | 1.47 | 90.94 | 60.00 |
| | 54.600 | 840.00 | 893.24 | .64 | .24 | 2.11 | 101.72 | 60.00 |
| | 54.600 | 1180.00 | 894.72 | 1.47 | .23 | 3.58 | 126.57 | 60.00 |
| | 54.650 | 420.00 | 892.07 | 0.00 | .94 | 0.00 | 47.73 | 600.00 |
| | 54.650 | 700.00 | 893.35 | 1.28 | .75 | 1.28 | 73.27 | 600.00 |
| | 54.650 | 840.00 | 893.92 | .57 | .68 | 1.85 | 85.13 | 600.00 |
| | 54.650 | 1180.00 | 895.25 | 1.33 | .53 | 3.18 | 173.62 | 600.00 |
| | 54.680 | 420.00 | 894.07 | 0.00 | 2.00 | 0.00 | 34.07 | 600.00 |
| | 54.680 | 700.00 | 895.09 | 1.02 | 1.74 | 1.02 | 53.79 | 600.00 |
| | 54.680 | 840.00 | 895.50 | .41 | 1.58 | 1.43 | 95.00 | 600.00 |
| | 54.680 | 1180.00 | 896.40 | .90 | 1.15 | 2.33 | 95.00 | 600.00 |
| | 54.690 | 420.00 | 894.23 | 0.00 | .17 | 0.00 | 30.15 | 50.00 |
| | 54.690 | 700.00 | 895.26 | 1.03 | .17 | 1.03 | 142.31 | 50.00 |
| | 54.690 | 840.00 | 895.82 | .56 | .32 | 1.59 | 195.00 | 50.00 |
| | 54.690 | 1180.00 | 896.84 | 1.02 | .45 | 2.61 | 195.00 | 50.00 |
| * | 54.700 | 420.00 | 895.82 | 0.00 | 1.59 | 0.00 | 195.00 | 1.00 |
| * | 54.700 | 700.00 | 896.06 | .24 | .80 | .24 | 195.00 | 1.00 |
| * | 54.700 | 840.00 | 896.07 | .02 | .25 | .25 | 195.00 | 1.00 |
| | 54.700 | 1180.00 | 896.75 | .67 | -.10 | .93 | 195.00 | 1.00 |
| | 54.710 | 420.00 | 896.23 | 0.00 | .41 | 0.00 | 231.00 | 18.00 |
| | 54.710 | 700.00 | 896.48 | .25 | .42 | .25 | 231.00 | 18.00 |
| | 54.710 | 840.00 | 896.65 | .17 | .58 | .42 | 231.00 | 18.00 |
| | 54.710 | 1180.00 | 897.02 | .37 | .28 | .79 | 231.00 | 18.00 |

MOORE BUSINESS FORMS, INC 23

| SECNO | Q | CWSEL | DIFWSP | DIFWSX | DIFKWS | TOPWID | XLCH |
|---|---|---|---|---|---|---|---|
| 54.720 | 420.00 | 896.27 | 0.00 | .03 | 0.00 | 231.00 | 1.00 |
| 54.720 | 700.00 | 896.54 | .27 | .05 | .27 | 231.00 | 1.00 |
| 54.720 | 840.00 | 896.71 | .17 | .06 | .44 | 231.00 | 1.00 |
| 54.720 | 1180.00 | 897.09 | .38 | .07 | .82 | 231.00 | 1.00 |
| 54.730 | 420.00 | 896.30 | 0.00 | .03 | 0.00 | 330.00 | 50.00 |
| 54.730 | 700.00 | 896.60 | .30 | .06 | .30 | 330.00 | 50.00 |
| 54.730 | 840.00 | 896.78 | .18 | .07 | .48 | 330.00 | 50.00 |
| 54.730 | 1180.00 | 897.18 | .40 | .09 | .88 | 330.00 | 50.00 |
| 55.000 | 420.00 | 896.35 | 0.00 | .05 | 0.00 | 588.08 | 780.00 |
| 55.000 | 700.00 | 896.69 | .34 | .09 | .34 | 597.28 | 780.00 |
| 55.000 | 840.00 | 896.89 | .20 | .11 | .54 | 602.61 | 780.00 |
| 55.000 | 1180.00 | 897.32 | .43 | .14 | .98 | 614.18 | 780.00 |
| 55.100 | 420.00 | 896.38 | 0.00 | .03 | 0.00 | 211.19 | 1820.00 |
| 55.100 | 700.00 | 896.76 | .38 | .07 | .38 | 217.42 | 1820.00 |
| 55.100 | 840.00 | 896.98 | .22 | .09 | .60 | 221.01 | 1820.00 |
| 55.100 | 1180.00 | 897.45 | .48 | .13 | 1.08 | 238.25 | 1820.00 |

MOORE BUSINESS FORMS, INC. 23

SUMMARY OF ERRORS

| | | | | |
|---|---|---|---|---|
| CAUTION | SECNO= | 50.000 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.000 | PROFILE= 3 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.000 | PROFILE= 4 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 1 | MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 3.100 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 2 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 3.100 | PROFILE= 2 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 3.100 | PROFILE= 3 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 3 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 3.100 | PROFILE= 3 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 3.100 | PROFILE= 4 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 3.100 | PROFILE= 4 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 3.100 | PROFILE= 4 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 50.800 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.800 | PROFILE= 2 | MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 50.800 | PROFILE= 3 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.800 | PROFILE= 3 | MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 50.800 | PROFILE= 4 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 50.800 | PROFILE= 4 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 50.800 | PROFILE= 4 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 54.700 | PROFILE= 1 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 54.700 | PROFILE= 1 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 54.700 | PROFILE= 1 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 54.700 | PROFILE= 2 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 54.700 | PROFILE= 2 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 54.700 | PROFILE= 2 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |
| CAUTION | SECNO= | 54.700 | PROFILE= 3 | CRITICAL DEPTH ASSUMED |
| CAUTION | SECNO= | 54.700 | PROFILE= 3 | PROBABLE MINIMUM SPECIFIC ENERGY |
| CAUTION | SECNO= | 54.700 | PROFILE= 3 | 20 TRIALS ATTEMPTED TO BALANCE WSEL |

MOORE BUSINESS FORMS, INC 23

FLOOD INSURANCE ZONE DATA FOR RICE CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

| SECTION NUMBER | CUMULATIVE DISTANCE | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10 | 2 | 0.2 |
|---|---|---|---|---|
| 50.000 | 0. | -.64 | -.35 | .71 |
| 2.900 | 60. | -1.53 | -.44 | 1.01 |
| 3.000 | 110. | -1.26 | -.40 | .96 |
| 3.100 | 195. | -.89 | -.24 | .51 |
| 50.800 | 280. | -.92 | -.38 | .81 |
| 50.900 | 330. | -1.75 | -.47 | 1.05 |
| 51.000 | 331. | -1.75 | -.47 | 1.05 |
| 51.100 | 362. | -1.66 | -.46 | 1.03 |
| 51.200 | 363. | -1.66 | -.46 | 1.03 |
| 51.500 | 393. | -1.69 | -.49 | 1.12 |
| 51.900 | 523. | -1.67 | -.47 | 1.04 |
| 52.000 | 524. | -1.60 | -.45 | .96 |
| 52.100 | 552. | -1.65 | -.47 | 1.02 |
| 52.200 | 553. | -1.87 | -.55 | 1.27 |
| 52.300 | 613. | -2.19 | -.67 | 1.53 |
| 53.000 | 1338. | -2.03 | -.61 | 1.40 |
| 53.500 | 1608. | -2.01 | -.60 | 1.38 |
| 53.900 | 1928. | -1.93 | -.58 | 1.32 |
| 54.000 | 1929. | -1.89 | -.56 | 1.28 |
| 54.100 | 1972. | -1.90 | -.57 | 1.29 |
| 54.200 | 1973. | -2.03 | -.61 | 1.42 |
| 54.250 | 2038. | -2.14 | -.65 | 1.49 |
| 54.400 | 2188. | -2.10 | -.64 | 1.49 |
| 54.600 | 2248. | -2.11 | -.64 | 1.47 |
| 54.650 | 2848. | -1.85 | -.57 | 1.33 |
| 54.680 | 3448. | -1.43 | -.41 | .90 |
| 54.690 | 3498. | -1.59 | -.56 | 1.02 |
| 54.700 | 3499. | -.25 | -.02 | .67 |
| 54.710 | 3517. | -.42 | -.17 | .37 |
| 54.720 | 3518. | -.44 | -.17 | .38 |
| 54.730 | 3568. | -.48 | -.18 | .40 |
| 55.000 | 4348. | -.54 | -.20 | .43 |
| 55.100 | 6168. | -.60 | -.22 | .48 |
| WEIGHTED AVG FOR REACH | | -1.29 | -.40 | .92 |

FHF FOR THE REACH = 015 WITH 19.5 PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 3

MOORE BUSINESS FORMS, INC 23

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

| INC NO. | TOTAL LENGTH | AVG ELEVATION DATA 10 | 1 | DIFF. | WTD. AVG. | FHF | PERCENT WITHIN |
|---|---|---|---|---|---|---|---|
| | 0. | | | | | SEC. | 50.000 |
| | 60. | | | | | SEC. | 2.900 |
| 1 | 100. | 883.67 | 884.64 | -.97 | -.97 | 010 | 100. |
| | 110. | | | | | SEC. | 3.000 |
| | 195. | | | | | SEC. | 3.100 |
| 2 | 200. | 884.96 | 886.06 | -1.10 | -1.03 | 010 | 100. |
| | 280. | | | | | SEC. | 50.800 |
| 3 | 300. | 886.36 | 887.43 | -1.07 | -1.05 | 010 | 100. |
| | 330. | | | | | SEC. | 50.900 |
| | 331. | | | | | SEC. | 51.000 |
| | 362. | | | | | SEC. | 51.100 |
| | 363. | | | | | SEC. | 51.200 |
| | 393. | | | | | SEC. | 51.500 |
| 4 | 400. | 887.69 | 889.16 | -1.47 | -1.15 | 010 | 100. |
| 5 | 500. | 888.45 | 890.12 | -1.67 | -1.26 | 015 | 100. |
| | 523. | | | | | SEC. | 51.900 |
| | 524. | | | | | SEC. | 52.000 |
| | 552. | | | | | SEC. | 52.100 |
| | 553. | | | | | SEC. | 52.200 |
| 6 | 600. | 888.74 | 890.63 | -1.89 | -1.36 | 015 | 83. |
| | 613. | | | | | SEC. | 52.300 |
| 7 | 700. | 889.01 | 891.16 | -2.15 | -1.47 | 015 | 86. |
| 8 | 800. | 889.17 | 891.33 | -2.16 | -1.56 | 015 | 63. |
| 9 | 900. | 889.31 | 891.45 | -2.14 | -1.62 | 015 | 33. |
| 10 | 1000. | 889.45 | 891.57 | -2.12 | -1.67 | 015 | 70. |
| 11 | 1100. | 889.59 | 891.68 | -2.09 | -1.71 | 015 | 73. |
| 12 | 1200. | 889.73 | 891.80 | -2.07 | -1.74 | 015 | 75. |
| 13 | 1300. | 889.87 | 891.92 | -2.05 | -1.77 | 020 | 77. |
| | 1338. | | | | | SEC. | 53.000 |
| 14 | 1400. | 889.99 | 892.02 | -2.03 | -1.78 | 020 | 79. |
| 15 | 1500. | 890.07 | 892.09 | -2.02 | -1.80 | 020 | 80. |
| 16 | 1600. | 890.15 | 892.16 | -2.01 | -1.81 | 020 | 81. |
| | 1608. | | | | | SEC. | 53.500 |
| 17 | 1700. | 890.23 | 892.23 | -2.00 | -1.82 | 020 | 82. |
| 18 | 1800. | 890.33 | 892.30 | -1.97 | -1.83 | 020 | 83. |
| 19 | 1900. | 890.42 | 892.37 | -1.95 | -1.84 | 020 | 84. |
| | 1928. | | | | | SEC. | 53.900 |
| | 1929. | | | | | SEC. | 54.000 |
| | 1972. | | | | | SEC. | 54.100 |
| | 1973. | | | | | SEC. | 54.200 |
| 20 | 2000. | 890.60 | 892.60 | -2.00 | -1.85 | 020 | 85. |
| | 2038. | | | | | SEC. | 54.250 |
| 21 | 2100. | 890.82 | 892.92 | -2.10 | -1.86 | 020 | 86. |
| | 2188. | | | | | SEC. | 54.400 |
| 22 | 2200. | 890.93 | 893.04 | -2.11 | -1.87 | 020 | 86. |
| | 2248. | | | | | SEC. | 54.600 |
| 23 | 2300. | 891.08 | 893.17 | -2.09 | -1.88 | 020 | 87. |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24 | 2400. | 891.29 | 893.36 | -2.07 | -1.89 | 020 | 88. |
| 25 | 2500. | 891.45 | 893.47 | -2.02 | -1.89 | 020 | 88. |
| 26 | 2600. | 891.61 | 893.58 | -1.97 | -1.90 | 020 | 88. |
| 27 | 2700. | 891.76 | 893.70 | -1.94 | -1.90 | 020 | 89. |
| 28 | 2800. | 891.92 | 893.81 | -1.89 | -1.90 | 020 | 89. |
| | 2848. | | | | SEC. | 54.650 | |
| 29 | 2900. | 892.12 | 893.96 | -1.84 | -1.90 | 020 | 90. |
| 30 | 3000. | 892.41 | 894.19 | -1.78 | -1.89 | 020 | 90. |
| 31 | 3100. | 892.74 | 894.45 | -1.71 | -1.89 | 020 | 90. |
| 32 | 3200. | 893.08 | 894.71 | -1.63 | -1.88 | 020 | 91. |
| 33 | 3300. | 893.41 | 894.98 | -1.57 | -1.87 | 020 | 91. |
| 34 | 3400. | 893.74 | 895.24 | -1.50 | -1.86 | 020 | 91. |
| | 3448. | | | | SEC. | 54.680 | |
| | 3498. | | | | SEC. | 54.690 | |
| | 3499. | | | | SEC. | 54.700 | |

ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND

| | 10 | 2 | 0.2 |
|---|---|---|---|
| WEIGHTED AVG FOR REACH | -1.86 | -.56 | 1.29 |

FHF FOR REACH 1 = 020 WITH 91. PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 35 | 3500. | 894.88 | 895.74 | -.86 | -.86 | 010 | 100. |
| | 3517. | | | | SEC. | 54.710 | |
| | 3518. | | | | SEC. | 54.720 | |
| | 3568. | | | | SEC. | 54.730 | |
| 36 | 3600. | 896.07 | 896.45 | -.38 | -.62 | 005 | 100. |
| 37 | 3700. | 896.30 | 896.79 | -.49 | -.58 | 005 | 100. |
| 38 | 3800. | 896.31 | 896.81 | -.50 | -.56 | 005 | 100. |
| 39 | 3900. | 896.31 | 896.82 | -.51 | -.55 | 005 | 100. |
| 40 | 4000. | 896.32 | 896.83 | -.51 | -.54 | 005 | 100. |
| 41 | 4100. | 896.33 | 896.85 | -.52 | -.54 | 005 | 100. |
| 42 | 4200. | 896.33 | 896.86 | -.53 | -.54 | 005 | 100. |
| 43 | 4300. | 896.34 | 896.88 | -.54 | -.54 | 005 | 100. |
| | 4348. | | | | SEC. | 55.000 | |
| 44 | 4400. | 896.35 | 896.89 | -.54 | -.54 | 005 | 100. |
| 45 | 4500. | 896.35 | 896.90 | -.55 | -.54 | 005 | 100. |
| 46 | 4600. | 896.35 | 896.90 | -.55 | -.54 | 005 | 100. |
| 47 | 4700. | 896.35 | 896.91 | -.56 | -.54 | 005 | 100. |
| 48 | 4800. | 896.35 | 896.91 | -.56 | -.54 | 005 | 100. |
| 49 | 4900. | 896.36 | 896.91 | -.55 | -.54 | 005 | 100. |
| 50 | 5000. | 896.36 | 896.92 | -.56 | -.54 | 005 | 100. |
| 51 | 5100. | 896.36 | 896.92 | -.56 | -.55 | 005 | 100. |
| 52 | 5200. | 896.36 | 896.93 | -.57 | -.55 | 005 | 100. |
| 53 | 5300. | 896.36 | 896.93 | -.57 | -.55 | 005 | 100. |
| 54 | 5400. | 896.36 | 896.94 | -.58 | -.55 | 005 | 100. |
| 55 | 5500. | 896.37 | 896.94 | -.57 | -.55 | 005 | 100. |
| 56 | 5600. | 896.37 | 896.95 | -.58 | -.55 | 005 | 100. |
| 57 | 5700. | 896.37 | 896.95 | -.58 | -.55 | 005 | 100. |
| 58 | 5800. | 896.37 | 896.96 | -.59 | -.55 | 005 | 100. |
| 59 | 5900. | 896.37 | 896.96 | -.59 | -.56 | 005 | 100. |

MOORE BUSINESS FORMS, INC 23

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 60 | 6000. | 896.38 | 896.97 | -.59 | -.56 | 005 | 100. |
| 61 | 6100. | 896.38 | 896.97 | -.59 | -.56 | 005 | 100. |
| | 6168. | | | | SEC. | 55.100 | |

| | ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND | | |
|---|---|---|---|
| | 10 | 2 | 0.2 |
| WEIGHTED AVG FOR REACH | -.56 | -.20 | .46 |

FHF FOR REACH 2 = 005 WITH 100. PERCENT OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 1

MOORE BUSINESS FORMS, INC 23

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED APRI 1980
  ERROR CORR -  01,02,03,04
  MODIFICATION -  50,51,52,53,54
**********************************************************
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MOORE BUSINESS FORMS, INC. 29

**********
IF YOU HAVE DIFFICULTY WITH OUR SYSTEM, CALL YOUR LOCAL BCS REPRESENTATIVE OR CONTACT MAINSTREAM-EKS CONSULTATION ON THE CUSTOMER SERVICES NUMBERS LISTED BELOW.
**********

APRIL 9,1980
MAINSTREAM-EKS SERVICE SCHEDULE, EXCLUSIVE OF HOLIDAYS
(TIMES GIVEN IN LOCAL PACIFIC TIME)

REGULAR SERVICE SCHEDULE FOR MAINSTREAM-EKS COMPUTER SERVICE (BATCH, RJE, AND KIT) AND CONSULTATION.

| DAY OF WEEK | MAINSTREAM-EKS SERVICE | EKS CONSULTATION | CAD/CAM SERVICE |
|---|---|---|---|
| MONDAY | 0000-2400 | 0500-1730 | 0300-2400 |
| TUESDAY THROUGH FRIDAY | 0000-2400 | 0500-1730 | 0000-2400 |
| SATURDAY | 0500-1800 | 0800-1700 | 0500-1800 |
| SUNDAY | 0500-1800 | CLOSED | 0500-1800 |

NOTE: DUE TO SYSTEM MAINTENANCE REQUIREMENTS, KIT OR RJE SERVICE MAY BE BRIEFLY INTERRUPTED (WITH ADVANCE WARNING) BETWEEN 8:00 PM AND 5:00 AM ON WEEKDAYS.

FOR MAINSTREAM-EKS CUSTOMER SERVICES, THE TELEPHONE NUMBERS ARE:

| | |
|---|---|
| DIALING WITHIN SEATTLE AREA | 206-237-5611 |
| TOLL-FREE DIALING WITHIN WASHINGTON STATE | 800-562-0307 |
| TOLL-FREE DIALING OUTSIDE WASHINGTON STATE | 800-426-7676 |
| TOLL-FREE DIALING FROM ALASKA AND HAWAII | 800-426-6353 |

ASK FOR EKS CONSULTATION. OFF-HOURS ASSISTANCE IS PROVIDED BY THE OPERATIONS STAFF.

**********
*** SYSTEM 2000 USERS SEE MSG,S2K. ***
**********

MOORE BUSINESS FORMS, INC. 23

MOORE BUSINESS FORMS, INC 23

```
BDIYDOA. 80/10/20.EKS1 7508.N0501.166A 80/10/19.DS-0 00.18.05. 80/10/20.

07.47.00.TESTJOB,TS,CM160000,P02.
07.47.15.*
07.47.15.*****************************************
07.47.15.* M A I L I N G  I N F O R M A T I O N *
07.47.15.*.....................................*
07.47.15.*                                       *
07.47.15.* NAME     - 62-0104-016(6231)          *
07.47.15.* PHONE    - (517)7885458               *
07.47.15.* MAIL TO - JACKSON.MICH.               *
07.47.15.*                                       *
07.47.15.*****************************************
07.47.15.*
07.47.15.USER,GCAHEC,.      62-0104-016(6231)/(51
07.47.15.7)7885458/JACKSON,MICH.
07.47.19. CHARGE LIMITS OVERRIDDEN
07.47.19.
07.47.19. JOB ENTRY 80/10/20.  7.30.12.
07.47.22.* V.DANUSHKODI 209 E. WASHINGTON -- 5E37
07.47.22.GET,HEC2/UN=EKSAPP.
07.47.26.HEC2.
07.47.27./PRG USED/HEC2
07.47.58.     STOP
07.47.58.       3.835 CP SECONDS EXECUTION TIME
07.47.59.REPLACE,OUTPUT=TEMP.
07.48.02.GET,TEMP.
07.48.04.COPYBF,TEMP,OUTPUT.
07.48.04. EOI ENCOUNTERED.
07.48.04.REWIND,TEMP.
07.48.04.COPYBF,TEMP,OUTPUT.
07.48.05. EOI ENCOUNTERED.
07.48.05.REWIND,TEMP.
07.48.05.COPYBF,TEMP,OUTPUT.
07.48.05. EOI ENCOUNTERED.
07.48.05.PURGE,TEMP.
07.48.08.
07.48.08. RUN DATE  80/10/20.  RUT SECS     15.909
07.48.08. UNITS          NUMBER      CCUS   PERCENT
07.48.08. CPU SECS         3.910    29.679    59.651
07.48.08. CMP UNITS        2.777    14.722    29.589
07.48.08. DISK REQS          316     3.406     6.845
07.48.08. DISK SECT         4418     0.593     1.191
07.48.08. JOB INITIATION             1.350     2.713
07.48.08. JOB PROCESSING CCUS       49.754
07.48.08.
07.48.08. AVERAGE CM USED (DECIMAL)            29922
07.48.08. AVERAGE CM USED (OCTAL)              72342
07.48.08. ITEMS CHARGED SEPARATELY
07.48.08. PRINT SECT         475
07.48.09.
07.48.09. PRIORITY REQUESTED              2
07.48.09. PRIORITY BILLED                 2
```

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Marshall

3) WATERCOURSE: Rice Creek

4) DOCUMENT TYPE: 100 yr. natural and encroachment

00BREAK00

00BREAK00

1) COUNTY: Calhoun

2) STUDY NAME: City of Marshall

3) WATERCOURSE: Rice creek

4) DOCUMENT TYPE: report

00BREAK00

13.

hydraulic report
X-sect Plots
10, 50, 100, 500 yr.
HEC-2 I/O
Rice Creek Flooding 10, 50, 100, 500 yr Profile
Mill Creek - Natural & Encroached 10, 50, 100, 500 yr Profile

In Attached Folder

# HYDRAULIC ANALYSIS REPORT

## RICE CREEK AT CITY OF MARSHALL
## CALHOUN COUNTY, MICHIGAN

Prepared by

COMMONWEALTH ASSOCIATES INC.
209 East Washington Avenue
Jackson, Michigan 49201

August, 1980

## Introduction

Hydraulic calculations were performed for the Rice Creek within the entire corporate boundaries of Marshall city. Field cross section data were surveyed by Commonwealth Associates in September-October, 1978. The flood flows for 10-, 50-, 100-, and 500-year recurrence intervals were approved by the Michigan Department of Natural Resources. A 7-1/2 minute U.S.G.S. topographic map (preliminary) available for the Marshall area was utilized. This study was performed by Commonwealth Associates Inc., Jackson, Michigan, and the Project Manager was V. Danushkodi, P.E.

## Method Of Analysis

The HEC-2 computer program was utilized in the entire hydraulic analysis.

## Variables and Coefficients

Manning's Roughness Coefficient

| | |
|---|---|
| For channel | 0.040-0.045 |
| For overbanks | 0.060-0.100 |

Coefficients for Floodway

| | |
|---|---|
| Contraction | 0.10 |
| Expansion | 0.30 |

Coefficients for Bridges

| | |
|---|---|
| Contraction | 0.30 |
| Expansion | 0.50 |

Ratios

| | |
|---|---|
| Contraction | 1:1 |
| Expansion | 1:4 |

Coefficients for Weir Flow

None. All bridges were analyzed as normal bridges.

## High-Water Marks

None

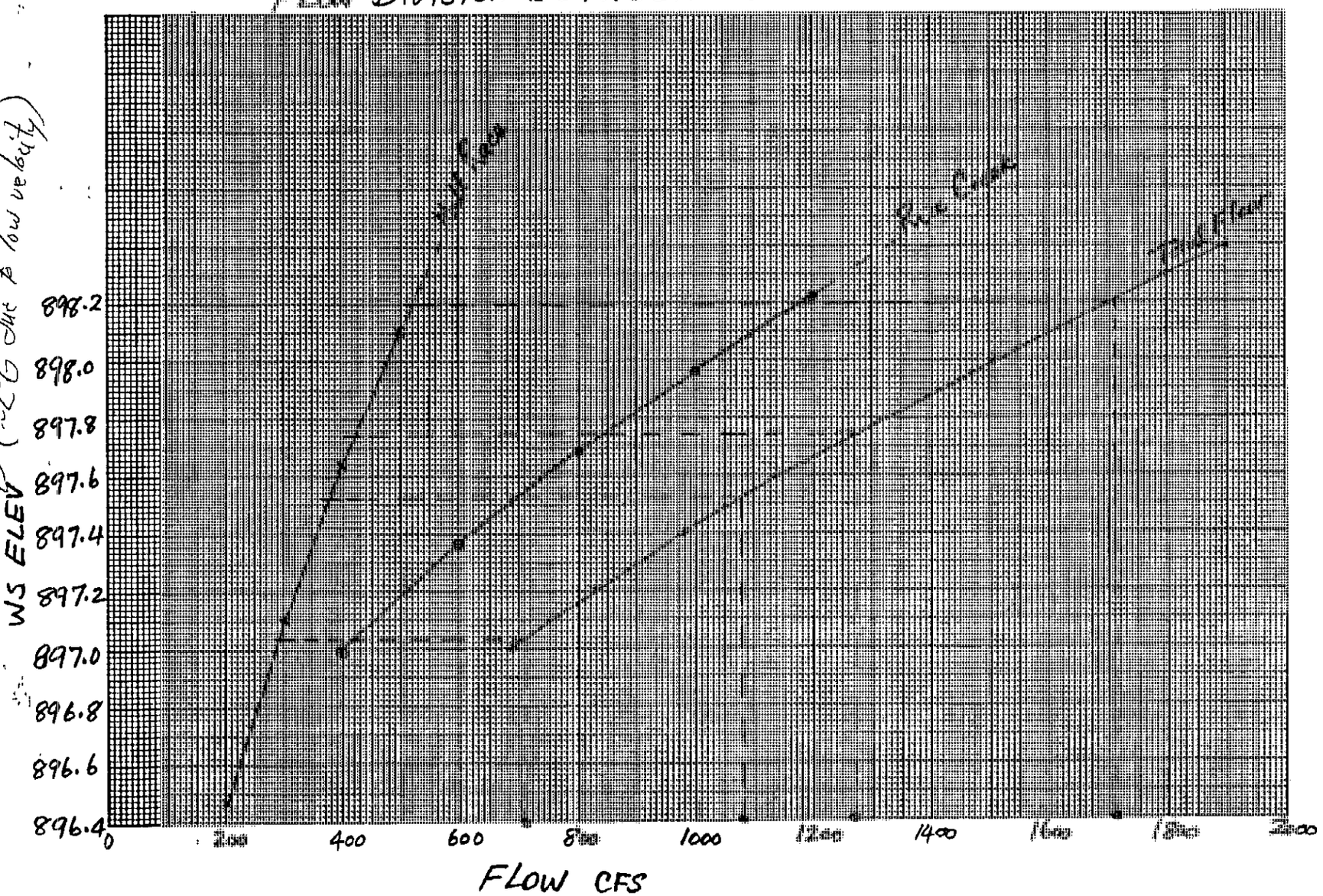
Starting Conditions

Mean annual flood level for the Kalamazoo River at the confluence of Rice Creek was used as starting elevation for Rice Creek. However, the program used critical depth.

Special Problems

A mill race channel was built adjacent to Rice Creek. A low dam in Rice Creek within the corporate boundaries of Marengo Township, upstream of the Marshall study, serves to divide flows between Rice Creek and Mill race. The mill race has a dam at the confluence of Mill Race and Rice Creek. The flood flows were divided between Rice Creek and Mill Race by island flow analysis.

# Flow Division Between Rice Creek and Mill Race



FIS CITY OF MARSHALL

FLOW DIVISION BETWEEN
RICE CREEK AND MILL RACE

STAGE-DISCHARGE U/S OF DAM (SEC. 56)

(a) Rice Creek

| Q cfs | Elevation |
|---|---|
| 400 | 897.99 |
| 600 | 897.37 |
| 800 | 897.69 |
| 1,000 | 897.96 |
| 1,200 | 898.22 |

(b) Mill Race

| Q cfs | Elevation |
|---|---|
| 200 | 896.47 |
| 300 | 897.10 |
| 400 | 897.64 |
| 500 | 898.10 |

Flow Division from Graph

| Record Interval | Total Flow cfs | Elev. U/S of Weir | Flow in Rice Ck. | Flow in Mill Race |
|---|---|---|---|---|
| 10-Yr | 710 | 897.03 | 420 | 290 |
| 50-Yr | 1,080 | 897.52 | 700 | 380 |
| 100-Yr | 1,270 | 897.75 | 840 | 430 |
| 500-Yr | 1,710 | 898.20 | 1,180 | 530 |

References

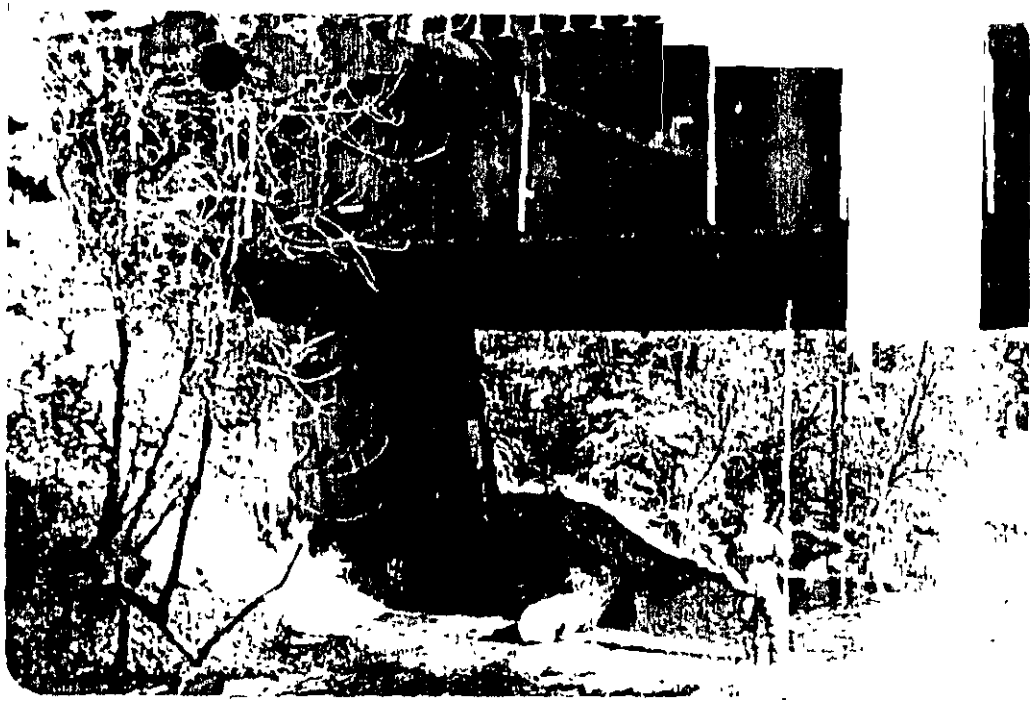
None

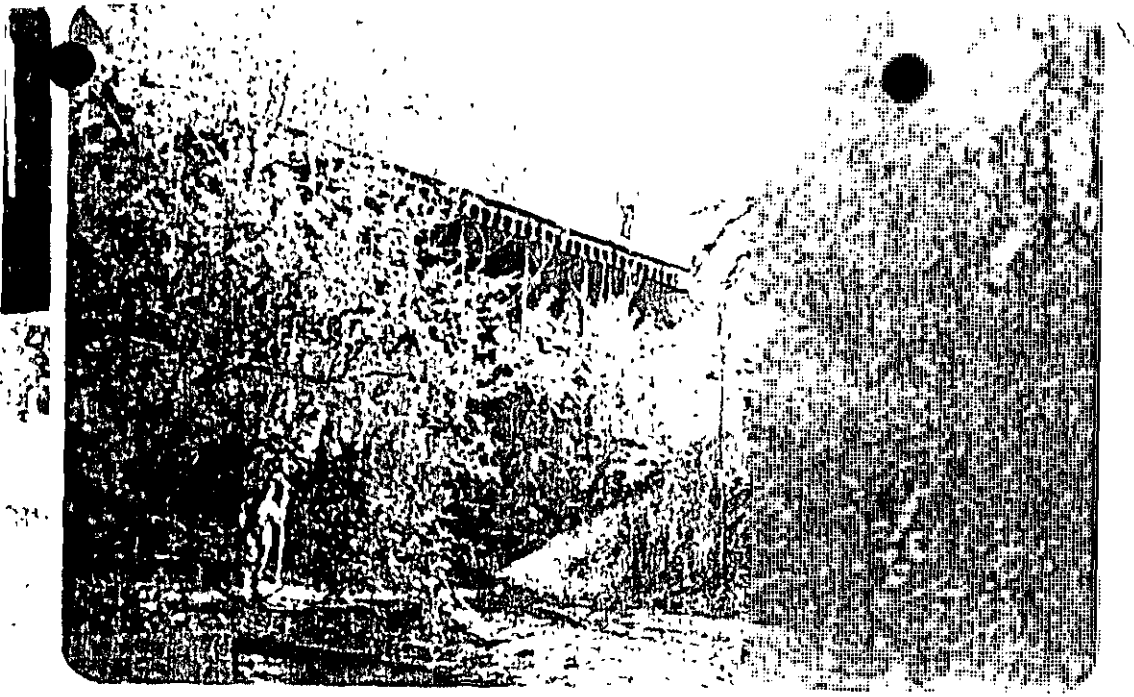
Cross Section Reference

| SECNO | ID in Profile | Description |
|---|---|---|
| 50.0 | A | Surveyed valley section at mouth |
| 2.9 | - | Made up valley section - Section 3.0 lowered by 0.5 feet |
| 3.0 | - | Surveyed valley section |
| 3.1 | - | Repeated valley section - Section 3.0 raised by 1.6 feet |
| 50.8 | - | Surveyed bridge sections. Railroad bridge. Steel girders with concrete abutments. 50 feet X 14 feet box. |
| 50.9 | - | |
| 51.0 | B | |
| 51.1 | - | |
| 51.2 | - | |
| 51.5 | - | |
| 51.9 | - | Surveyed bridge sections at Monroe Street. 29-foot span X 11-foot high concrete arch. |
| 52.0 | C | |
| 52.1 | - | |
| 52.2 | - | |
| 52.3 | - | |
| 53.0 | D | Surveyed valley section |
| 53.5 | - | Repeated valley section - same as 53.0 |
| 53.9 | - | Surveyed bridge sections at Marshall Avenue. Concrete arch 20-foot span X 14-foot high. Two spans |
| 54.0 | E | |
| 54.1 | - | |
| 54.2 | - | |
| 54.25 | - | |
| 54.4 | - | Surveyed valley section |
| 54.6 | - | Surveyed valley section |
| 54.65 | - | Made up valley section from topographic map |
| 54.68 | F | Surveyed bridge section - Private drive. Two 4-foot diameter pipes and one 2.5-foot diameter pipe |
| 54.69 | - | |
| 54.70 | G | |
| 54.71 | - | |
| 54.72 | - | |
| 54.73 | - | |
| 55.0 | H | Surveyed valley section |
| 55.1 | I | Made up valley section at corporate boundary from topographic map |

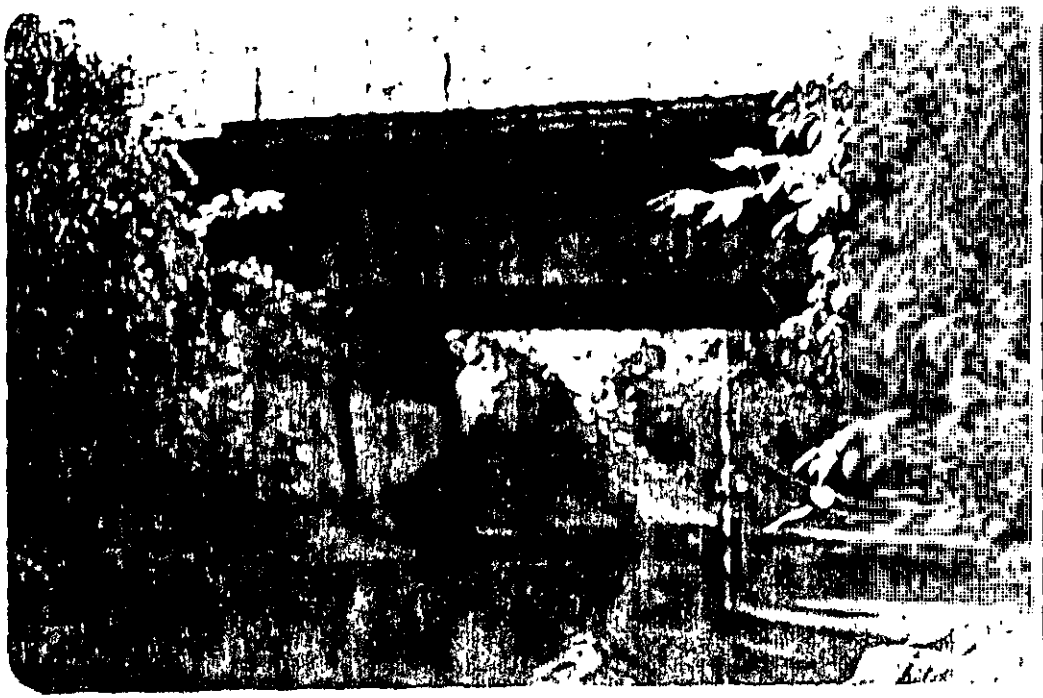
| SECNO | ID in Profile | Description |
|---|---|---|
| | | Mill Race Sections |
| 54.3 | - | Surveyed valley section downstream of dam |
| 54.5 | A | Dam. 36 feet long spillway |
| 54.6 | B | Surveyed valley section |
| 55.0 | C | Surveyed valley section |
| 55.1 | D | Made up valley section at corporate boundry |

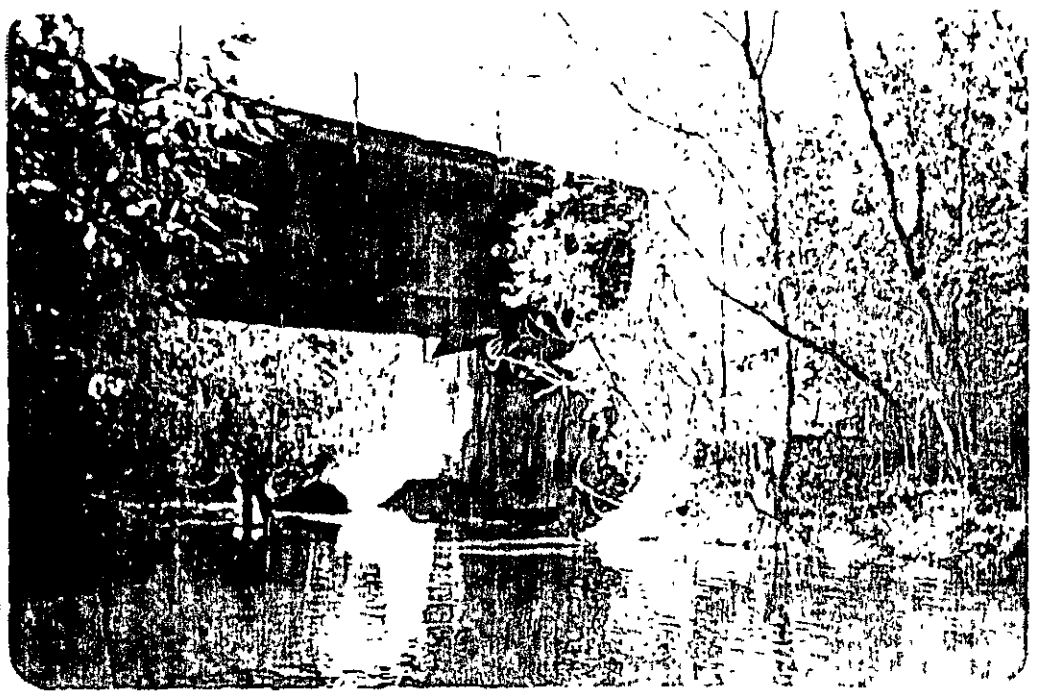
Bridge Notes and Sketches





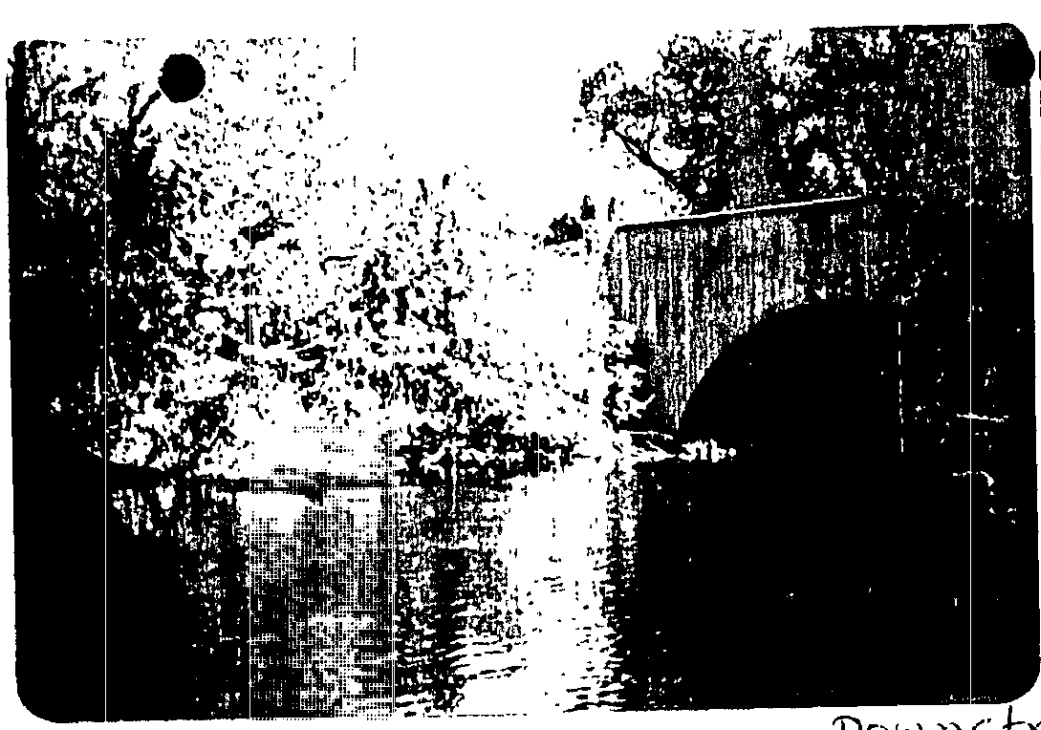
Downstream





51. RR Bridge

Upstream





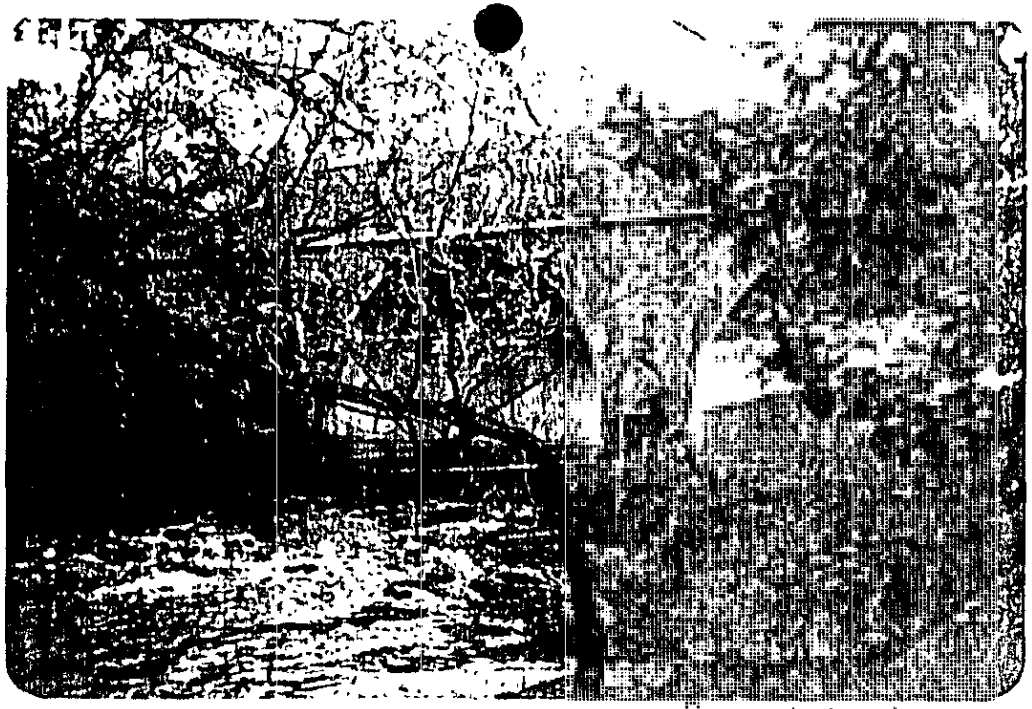
Downstream



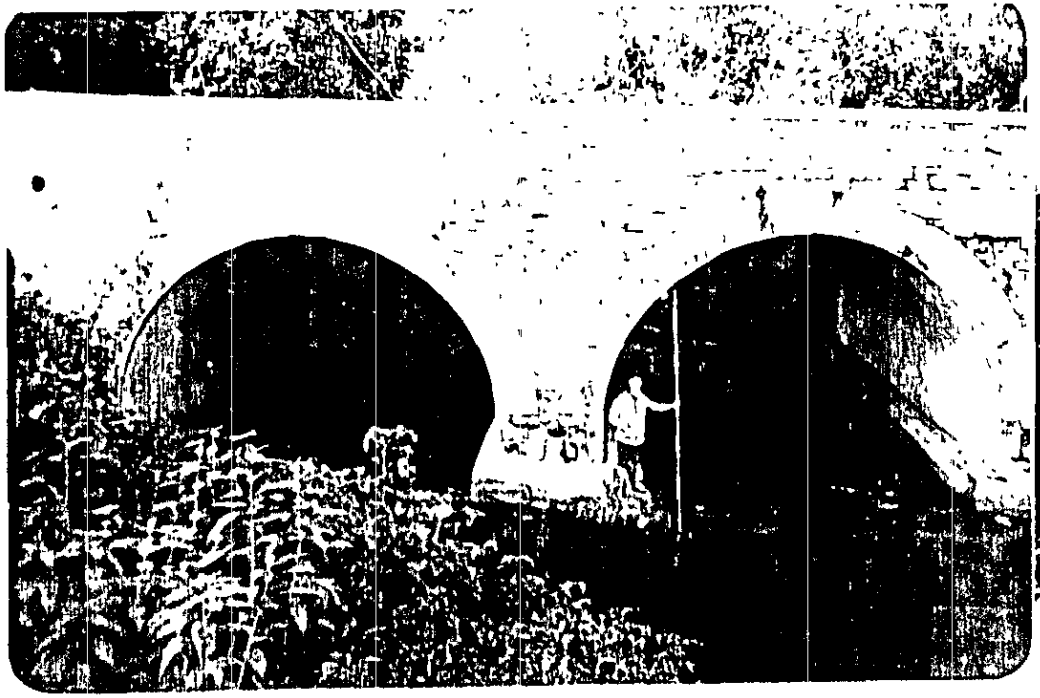


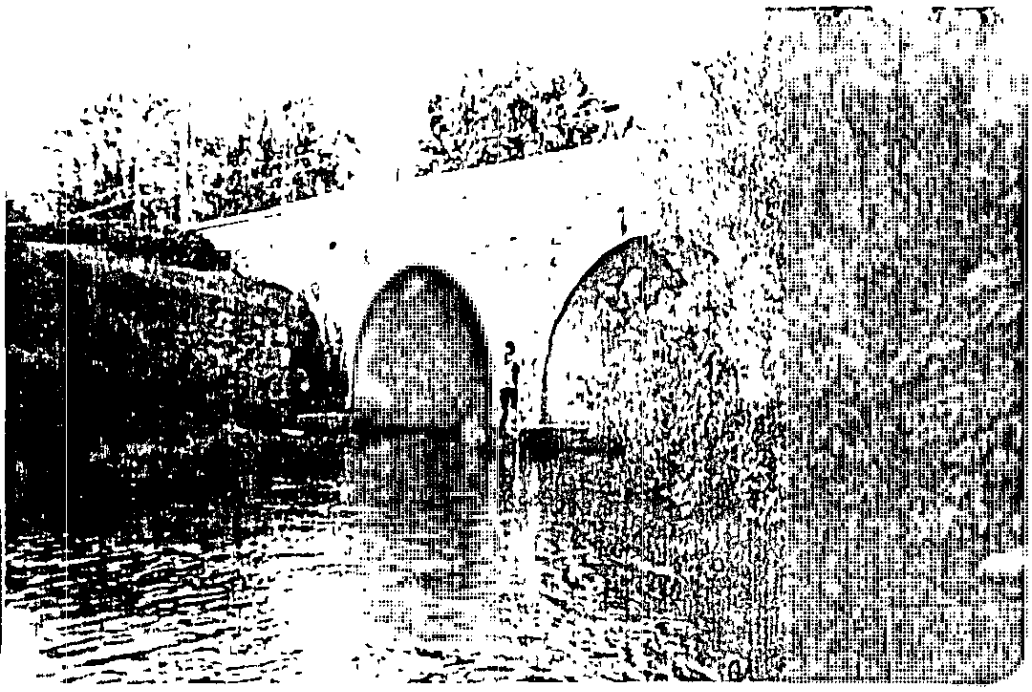
52. Monroe St Bridge

Upstream



downstream

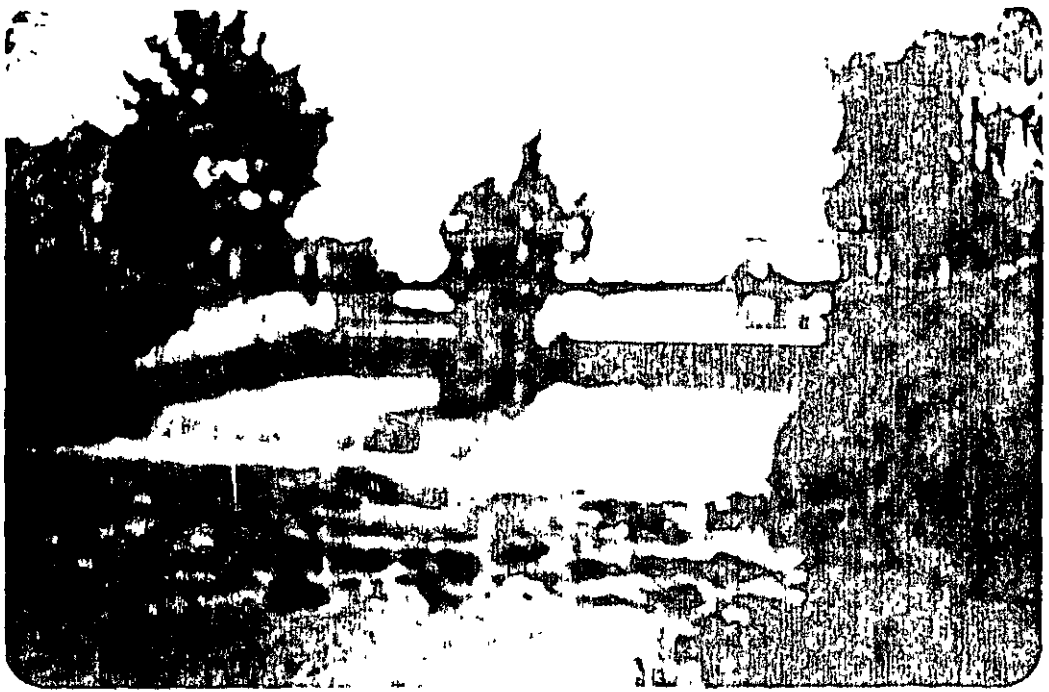




upstream

54. Marshall Ave Bridge





54.5 Mill Race Dam