00BREAK00

1) COUNTY: LEELANAU

2) STUDY NAME: NORTHPORT, VILLAGE OF

3) WATERCOURSE: NORTHPORT CREEK

4) DOCUMENT TYPE: REPORT

00BREAK00

12-1-06

LO-FIS Village of Northport $Q_{100} = 260$

Section	Distance	Area	Conveyance	Channel bottom	Velocity	Width	Water surface elevation
A	0	152	10139	580.60	1.71	113	583.80
B	70	158	10716	580.60	1.64	115	583.85
C	140	121	4618	580.00	2.14	170	583.94
D	220	114	6288	580.20	2.28	170	584.09
Railroad crossing							
E	260	183	11611	581.50	1.42	170	585.80 ✓
F	310	185	11767	581.50	1.41	170	585.81
Rose Street							
G	355	152	9636	580.60	1.72	100	586.42 ✓
H	495	60	3056	582.30	4.30	60	586.79
Township Driveway							
I	510	118	6815	582.50	2.20	94	587.72
J	700	48	3371	584.30	5.44	24	588.09
K	790	51	4289	585.40	5.12	25	588.46
Mill Street							
L	845	97	9582	586.00	2.67	31	591.43
M	880	79	7343	586.60	3.30	29	591.43
N	940	73	4856	588.70	3.56	38	592.56
O	1045	42	2789	589.80	6.16	24	592.99
Pond Street							
P	1080	249	23761	591.20	1.05	112	597.90
Q	1340	83	7697	592.60	3.12	27	597.91
R	1600	92	8852	594.20	2.82	37	598.68
Fish Ladder							

LO-FIS Village of Northport -- Continued $Q_{100} = 260$

Section	Distance	Area	Conveyance	Velocity	channel bottom	Width	water surface elevation
Fish Ladder							
S	1690	393	53177	0.66	600.80	63	611.66
T	1735	213	21162	1.22	606.40	91	611.66
U	1745	543	100629	0.48	602.00	103	611.67
V	2080	543	100686	0.48	602.00	103	611.68

Railroad Crossing

Road Overflow

LT cfs	RT cfs	Total cfs	WS E
87	84	171	585.72
100	97	197	585.76
114	110	224	585.80
127	123	250	585.84

Culvert flow (Arch)

Q cfs	HWE
25	585.53
50	590.21
75	598.01
100	608.94

Q	HWE
15	584.53
20	584.97
30	586.22
35	587.03

$A = 4.957^2$

$L = 32.5'$

$K_{OR} = 14.9 + \frac{29.1(.026)^2 32.5}{(25/9)^{4/3}} = 3.10$

100 yr WSL: 584.09

Culvert flow (Pipe)

Q	HWE
2	584.02
4	584.17
6	584.43
8	584.79
10	585.25
12	585.81 ←
14	586.48
16	587.25

Township Hall Driveway

Road Over Flow

LT	RT	TOTAL	WS elevation
195	6	201	587.71
219	7	226	587.77
250	9	259	587.85

Culvert Flow

20	586.90
30	587.05
40	587.24
50	587.50
60	587.81

Village of Northport FIS

Rose Street Bridge

Culvert Flow

Q	HWE
10	585.89
25	586.07
50	586.74
75	587.84
100	589.39

Road Overflow

200	586.37	219	586.41
220	586.42	243	586.46
240	586.46	263	586.50

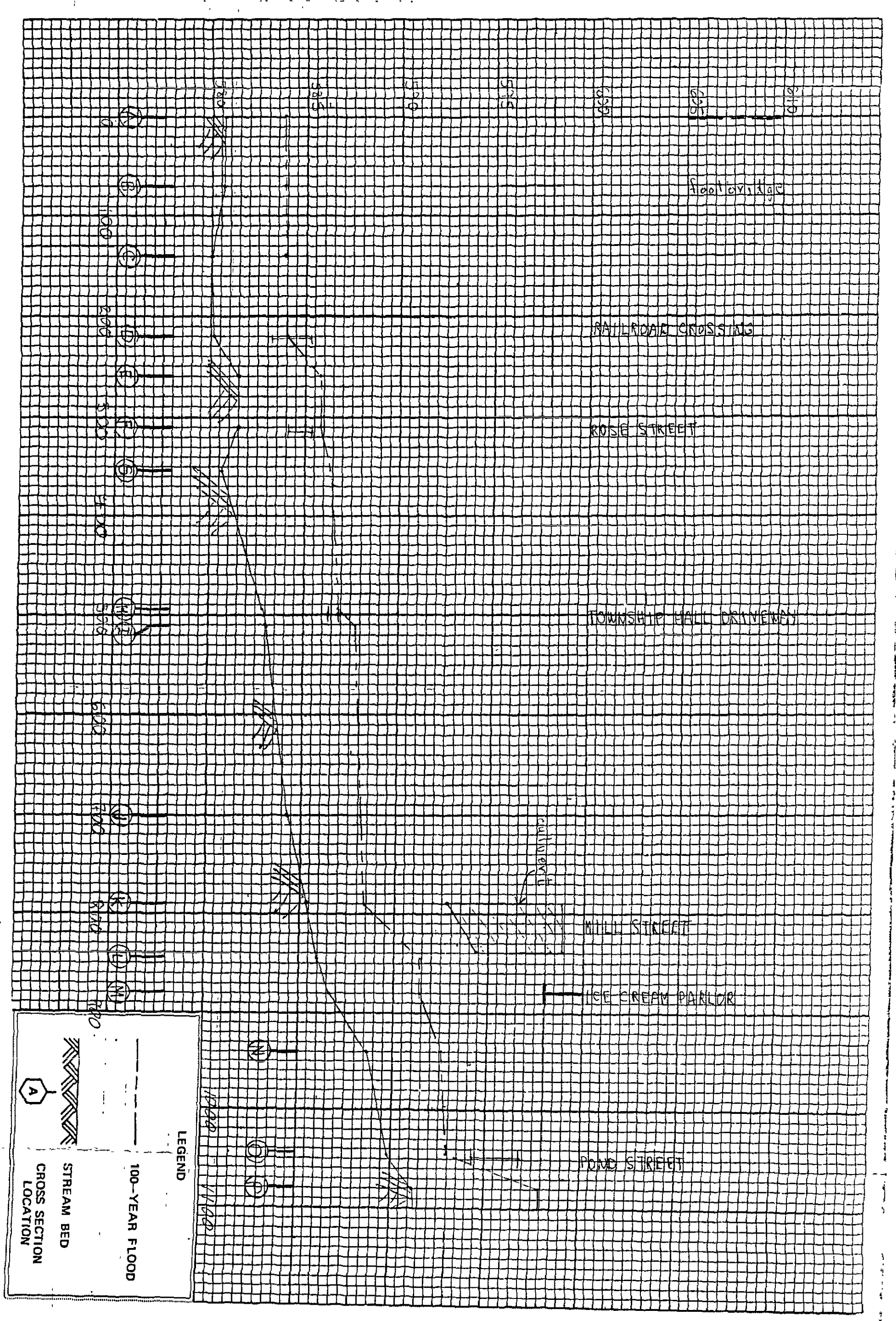
Flood Insurance Study- Village of Northport
Flow through Pond Road Culvert

Culvert Barrel

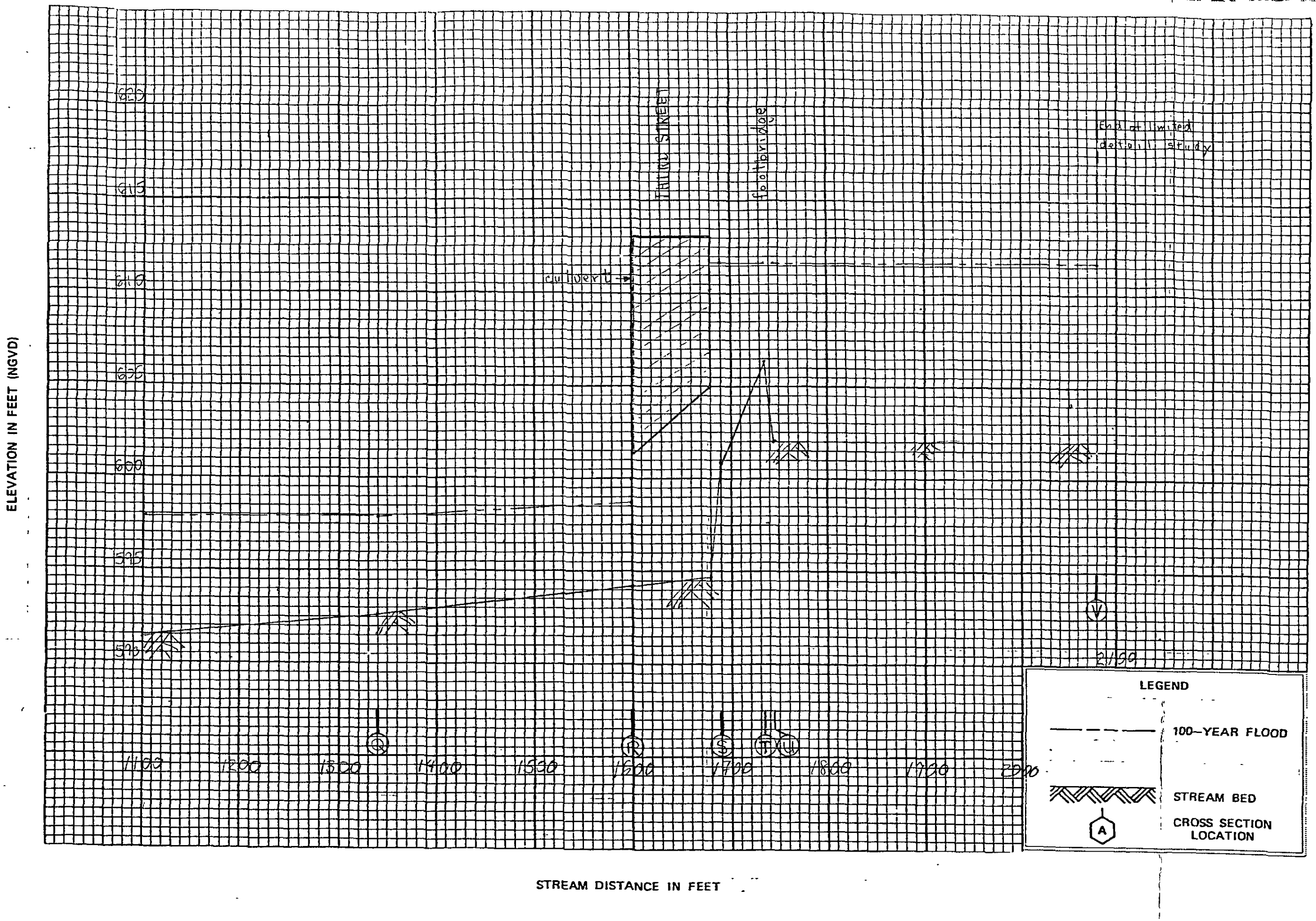
Q	HWE
40	593.33
60	597.81 ←
80	599.07

Road Overflow

Q			
LT	RT	TOTAL	Stage
138	11	149	597.76
163	14	187	597.85
190	17	207	597.93



01P	FEDERAL EMERGENCY MANAGEMENT AGENCY VILLAGE OF NORTHPORT, MI (LEELANAU CO.)	FLOOD PROFILES NORTHPORT CREEK



FLOOD PROFILES

NORTHPORT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

VILLAGE OF NORTHPORT, MI
(LEELANAU CO.)

00BREAK00

1) COUNTY: LEELANAU

2) STUDY NAME: NORTHPORT, VILLAGE OF

3) WATERCOURSE: NORTHPORT CREEK

4) DOCUMENT TYPE: WSPRO ANALYSIS, 10, 50, & 100 YEAR

00BREAK00

Includes Analysis of Culverts

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T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
T3          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
Q         260.
WS         583.8
XT   TEMPA   0.
GR        -78.0,586.      -78.,584.4      0,584.4         42,583.3        58,582.5
GR        64,582.0        69,580.6        72.5,580.7      80,581.4        85.5,581.6
GR        96,582.2        118,582.5       136,583.4       136,586.0
XS   A    0.
GT        0.
SA        40              120
N         .035            .030            .032
XS   B    70.
XT   TEMPE    0.0
GR        -54,589.0       -54,585.1       0,584 9         27.5,585        33,584.4
GR        38,582.9        43,582.5        44,581.9        45,581.5        48,582.5
GR        55,584 9        80,585.1        115,584.8       120,589.0
XS   C    140.
GT         -1 5
XS   D    220.
GT        -1.3
SA          33            55
N           .027          .030            .027
PX   A
PX   D
EX
EJ
```

580.0 Mean Lake Level

582.5 10yr

583.5 50yr

583.8 100yr

1986: 582.5

```
T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK·  FLOW ACROSS POND STREET
T3          **************  ROAD OVERFLOW RATING ANALYSIS ***************
Q           160   190   220
WS          592.99  592.99  592.99
XT   TMPLT    0.
GR         -50.,600.      -50,597.1       -24.5,597.1      0,596 1      9,595.4
GR          16, 591.8      19,591.2          22,591.6     41,595.7  61.4,597.4
GR          62,600.
XS   O      1045
GT          -1.4
SA           9        41
N           .035        .032       .035
XS   O1     1050.
GT           -1.4
BR   PONDB 1050       592.5
GR           20,592.5   20,591.5   21,591.5   21,592.5  20,592.5
CD           1      1
N            .025
XR   PONDR 1055      10   2
GR           -50,600    -50,597 1   -24.5,597.1   -5,596.9      20,596.8
GR           45,598.7   62,600
AS   P     1080
GT          0.0
PX   O
EX
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```
T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK: POND STREET TO FISH LADDER
T3
Q            260
WS           597.90
XT   TMPL1    0.
GR         -50.,600.      -50,597.1       -24.5,597.1      0,596.1      9,595.4
GR          16, 591.8      19,591.2          22,591.6     41,595.7  61.4,597 4
GR          62,600.
XS   P      1080
GT          0.0
SA          9     41
N           .035   .032   .035
XT   TMPL2    0.
GR            -23.6,602.    0,600.5      19.2,598.5     26,596.2       29,592.8
GR             35,592.3     38,593.0     62.6,603.2
XS   Q      1240.
GT           0.0
SA          29       38
N           .075     .030     .075
XS   Q1     1340.
GT          0.3
XS   Q2      1440.
GT           0 6
XS   R1    1510
GR         -21.6,605.9      -17.6,604.4     0,603.9      14,603.8       29,597.0
GR         39.4,596.0        54.,596 5    81,604.2
SA          29      54
N          .075     .030      .075
XS   R2    1600.
GR         -21.6,605.9      -17.6,604 4     0,603.9      14,603.8       29,597.0
GR         39.4,594 2        54.,596.5    81,604 2
PX   P
PX   Q
PX   R1
PX   R2
EX
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```
T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK.  RAILROAD CROSSING
T3          ********** ROAD OVERFLOW RATING ANALYSIS ************
Q          175    200    225    250
WS         584.09  584.09  584.09  584.09
XT   TEMPE     0.0
GR        -54,589.0       -54,585.1     0,584.9         27.5,585       33,584.4
GR        38,582.9        43,582.5      44,581 9        45,581.5       48,582.5
GR        55,584.9        80,585.1      115,584.8     120,589.0
XS   D    220.
GT        -1.3
SA        33                55
N           .027              .030              027
XS   D1   225.
GT        -1.3
BR   RRBR 225             583.
GR        44,583          44,582        45,582          45,583         44,583
N         .025
CD        1               1
XR   RRRD 240             20            1
GR        -54,586.0       -54,585.3     140,585.3       140,586
AS   E    260
GT         0.0
PX   D
PX   E
EX
ER
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```
T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK: UPSTREAM FROM FISH LADDER
T3
Q           260
WS          611.66
XS   S      1690.
GR          -26,612.8     27,612.1     43,602.3     53,600.8     61,601.5
GR           76,607.6     103,615.
SA            27        76
N           .028        .038        055
XS   T      1735.
GR          -26,612.8   0,610.4      42,607.6     43,606.4     48,606.4
GR           49,607.6   101,615.
SA           42         49
N            .028        .025        028
XT   TMPLT    0.
GR          -26,612.8    -16,610.0      -1,605.7     38.5,603.5     46,602.0
GR          53.4,605.6    68.8,609.6     101,615.
XS   U      1745.
GT          0.0
SA          -1       53
N           .040      .025        .040
XS   V      2080.
GT          0.0
PX   S
PX   T
PX   U
EX
ER
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T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK:  ROSE STREET
T3          ********** ROAD OVERFLOW RATING ANALYSIS ************
Q          200   220    240     260
WS         585.80   585.80   585.80   585.80
XT   TEMPE   0.
GR        -54,589.0      -54,585.1     0,584.9        27.5,585      33,584.4
GR        38,582.9       43,582.5      44,581.9       45,581.5      48,582.5
GR        55,584.9       80,585.1      115,584.8     120,589.0
XS   E    260
GT        0.0
SA        33             55
N         .027           .030          .027
XS   F1   310
XS   F2   315
BR   ROSB 315            583
GR        17,583         17,582        18,582        18,583       17,583
CD        1              1
N         .025
XR   ROSR 330          30                i
GR        -70,588       -70,586.1      -34,585.6     30,585.6     57,586.6
AS   G    355.
GR        -70,588       -70,586.1      -7,585.2      0,585.3      9,583
GR        13,582.4       17,581.6      19,580.6      20,582.7     25,583.4
GR        30,585.6      35,587
SA        0              30
N         .022           .045           035
PX   E
PX   G
EX
ER
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T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2            NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
T3            ********** ROAD OVERFLOW RATING ANALYSIS ************
Q            200      225       260
WS           586.42     586.42     586.42
XS    G     355.
GR          -70,588        -70,586.1        -7,585.2        0,585.3      9,583
GR          13,582.4        17,581.6        19,580.6        20,582.7     25,583.4
GR          30,585.6
SA          0               30
N           .022            .045            .035
XT    TEM1   0
GR           -36.3,588.2    0,587 2         39.5,586.6      55.2,586.1
GR           64,583.5       67,582.5        69,583.7        71,585.7
GR           77,588.4       114.5,589.7
XS    G1     420.
GT           -1.0
SA           55             77
N              .022           .045           .030
XS    G2     455.
GT           -0.6
XS    H1     490
GT           -.2
SA           55             77
N            .022            045            .030
XS    H2     495
GT           -.2
BR    DWYB   495            584
GR           67,584        67,583        67.1,583        67.1,584        67,584
CD           1              1
XR    DWYR   505            15              1
GR           -36.3,588.2    0,587.2         39.5,586.6      67,586.8        77,588 4
GR           114.5,589.7
AS    I      510
GT           0.0
SA           55             77
N            .022           .045            .030
EX
ER
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T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2            NORTHPORT CREEK:  USS DRIVEWAY CULVERT TO DSS MILL STREET
T3                              NORMAL VALLEY SECTIONS
Q             260.
WS            587.72
XS    I       510
GR            -36,588.2      0,587.2        39.5,586.6     55.2,586.1     64,583.5
GR            67,582.5       69,583.7       71,585.7       77,588.4       114.5,589.7
SA            55             77
N             .022           .050           .025
XS    J       700
GR            -36,593.4      -13,592.7      0,591.1        18 5,588.9     27,585
GR            31,584.3       35,584.9       35,585.9       46,588.6       82,590.7
SA            18.5           46
N             .035           .032           .035
XS    K       790
GR            1.3,598.9      1.3,589.0      12.5,585.6     17.2,585.4     22.7,585.8
GR            30,589.2       40,590.8       50,593.0       60,592.8       88.2,594.5
GR            88.2,598.9
SA            12.5           22.7
N             .035           .028           .035
PX    I
PX    J
PX    K
EX
ER
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T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2           NORTHPORT CREEK.  FLOW THROUGH ICE CREAM PARLOR MILL
T3
Q         260
WS        591.43
XT   TEMP 0
GR        0,599.5        11,596.1       37,586.5       41,586.0       45,586 8
GR        70,598.1
XS   L    845
GT        0.0
SA        37             45
N          045           .028           .045
XS   M1   880
GT        0.6
XS   M2   895
GT        1.0
BR   ICE1 910            598.1
GR        20,598.1      20,588         23,588         26.5,588.2     26.5,588.2
GR        37.6,594       37.6,598.1    20,598.1
N         .032
CD        1         1       *      *      25     20      *
AS   ICE2 935
GR        0,597.9        0,592.1        10,589.9       15,589.3       20,589.3
GR        20,590.6       30,592.7       40,595         50,596.5       50,597.9
N         .032
XS   N    940
GR        0,600          0,594          11.5,590.9     20,590.1       24,588.7
GR        30,589.8       43.5,592.7     45.5,597.6     46.5,600
SA        20             30
N         .048           .032           .048
XT   TMPLT    0.
GR        -50.,600.      -50,597.1       -24.5,597.1      0,596.1       9,595.4
GR        16,  591.8      19,591.2          22,591 6     41,595.7   61.4,597.4
GR        62,600.
XS   N1   990.
GT        -2.0
SA         9        41
N         .035          032        .035
XS   O    1045.
GT         -1.4
PX   L
PX   M1
PX   M2
PX   ICE1
PX   ICE2
PX   N
PX   O
EX
ER
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/17/86 13:45
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
  T3           STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
  Q          260.
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          583.8
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME: 12/17/86 13:45


*** START PROCESSING CROSS SECTION - "TEMPA"
  XT   TEMPA   0.
  GR        -78.0,586      -78.,584.4    0,584.4       42,583.3      58,582.5
  GR        64,582 0       69,580.6      72.5,580.7    80,581.4      85.5,581.6
  GR        96,582.2       118,582.5     136,583.4     136,586.0

*** FINISH PROCESSING CROSS SECTION - "TEMPA"
*** TEMPLATE CROSS SECTION "TEMPA" SAVED INTERNALLY
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME: 12/17/86 13:45


*** START PROCESSING CROSS SECTION - "A    "
  XS   A    0.
  GT        0.
  SA        40              120
  N         .035            .030          .032

*** FINISH PROCESSING CROSS SECTION - "A    "
*** CROSS SECTION "A    " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "A    " AT SRD =      0.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y          X       Y          X       Y          X       Y
    -78.0  586.00     -78 0  584.40       0 0  584.40      42.0  583.30
     58.0  582.50      64.0  582.00      69.0  580.60      72.5  580.70
     80.0  581.40      85.5  581.60      96.0  582.20     118.0  582.50
    136.0  583 40     136.0  586.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -78.0  586.00      69.0  580.60     136.0  583.40     -78.0  586.00

SUBAREA BREAKPOINTS (NSA =  3):
          40.     120.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.030   0.032
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME: 12/17/86 13:45


*** START PROCESSING CROSS SECTION - "B     "
  XS   B    70.

*** FINISH PROCESSING CROSS SECTION - "B     "
*** CROSS SECTION "B     " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "B     " AT SRD =     70.   ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y          X       Y          X       Y          X       Y
    -78.0  586.00      -78.0  584.40       0.0  584.40      42.0  583.30
     58.0  582.50       64.0  582.00      69.0  580.60      72.5  580.70
     80.0  581.40       85.5  581.60      96.0  582.20     118.0  582.50
    136.0  583.40      136.0  586.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -78.0  586.00       69.0  580.60     136.0  583.40     -78.0  586.00

SUBAREA BREAKPOINTS (NSA =  3):
         40.     120.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.030   0.032
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME· 12/17/86 13:45


*** START PROCESSING CROSS SECTION - "TEMPE"
  XT   TEMPE     0.0
  GR         -54,589.0       -54,585.1      0,584.9        27.5,585       33,584.4
  GR         38,582.9        43,582 5       44,581.9       45,581.5       48,582 5
  GR         55,584.9        80,585.1       115,584.8     120,589.0

*** FINISH PROCESSING CROSS SECTION - "TEMPE"
*** TEMPLATE CROSS SECTION "TEMPE" SAVED INTERNALLY.
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME: 12/17/86 13:45


*** START PROCESSING CROSS SECTION - "C     "
  XS   C    140.
  GT         -1.5

*** FINISH PROCESSING CROSS SECTION - "C     "
*** CROSS SECTION "C     " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    1

--- DATA SUMMARY FOR SECID "C     " AT SRD =    140.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y          X       Y          X       Y          X       Y
   -54.0   587.50     -54.0   583.60       0.0   583.40      27.5   583.50
    33.0   582.90      38 0   581.40      43 0   581.00      44.0   580.40
    45.0   580.00      48 0   581.00      55.0   583.40      80.0   583.60
   115.0   583.30     120 0   587.50

 X-Y MAX-MIN POINTS.
     XMIN       Y          X     YMIN       XMAX       Y          X     YMAX
   -54.0   587.50       45.0   580.00     120.0   587.50     -54.0   587.50

SUBAREA BREAKPOINTS (NSA =  3):
         40.     120.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.030   0.032
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK·  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME:  12/17/86 13:45


*** START PROCESSING CROSS SECTION - "D    "
  XS   D    220.
  GT        -1.3
  SA          33          55
  N           .027        .030        .027
  PX   A

*** FINISH PROCESSING CROSS SECTION - "D    "
*** CROSS SECTION "D    " ADDED TO DAF, RECORD NO. =    4, IXTYPE =    1

--- DATA SUMMARY FOR SECID "D    " AT SRD =    220   ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0 0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y           X       Y           X       Y           X       Y
    -54.0  587.70      -54.0  583.80       0.0  583.60      27.5  583.70
     33.0  583.10       38.0  581.60      43.0  581.20      44.0  580.60
     45.0  580.20       48.0  581.20      55.0  583.60      80.0  583.80
    115.0  583 50      120 0  587.70

 X-Y MAX-MIN POINTS:
     XMIN        Y           X    YMIN       XMAX        Y           X    YMAX
    -54 0  587.70       45.0  580.20     120.0  587.70     -54.0  587.70

SUBAREA BREAKPOINTS (NSA =  3):
          33       55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027    0.030    0.027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME. 12/17/86 13:45


 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
       SRD    FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

A     : XS   ******     23.      152.   0.05  *****   583.85   582.70    260.   583.80
         0.  ******    136    10139.   1.08  ***** *******     0.27    1.71

B     : XS      70.     21.      158.   0.05   0.04   583.90 *******    260.   583.85
         70.     70.    136.    10716.   1.08   0.00     0.01     0.26    1.64

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                                "C     "      KRATIO =   0.43

C     : XS      70.    -54.      121.   0 08   0.10   584.02 *******    260.   583.94
        140.     70.    116.     4618.   1.12   0.02     0 01     0.47    2.14

D     : XS      80.    -54.      114.   0.14   0.19   584.23 *******    260.   584.09
        220.     80.    116.     6288.   1.72   0 03     0.00     0 64    2.28
  EJ

 NPROF, NQV  =       1      4

 +++ BEGINNING PROFILE CALCULATIONS --      1
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  MOUTH TO DSS RAILROAD CROSSING
          STARTING ELEVATIONS BASED ON 100-YR LAKE ELEVATIONS
           *** RUN DATE & TIME:  12/17/86 13:45


 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

A     : XS    ******     23.      152.   0.05 *****  583.85   582.70    260.   583.80
         0.   ******    136.    10139.   1.08 ***** *******     0.27    1.71

B     : XS      70.      21       158    0 05  0 04  583.90 *******    260.   583.85
        70.     70.     136.    10716.   1.08  0.00    0.01     0.26    1.64

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                                "C     "     KRATIO =  0.43

C     : XS      70.     -54.      121.   0.08  0.10  584.02 *******    260.   583.94
       140.     70.     116.     4618    1.12  0.02    0.01     0.47    2.14

D     : XS      80.     -54.      114.   0.14  0.19  584.23 *******    260.   584.09
       220      80.     116.     6288.   1.72  0.03    0.00     0.64    2.28
      END OF FILE ON PRIMARY INPUT UNIT   5
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/10/86 13:47
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  RAILROAD CROSSING
  T3           ********** ROAD OVERFLOW RATING ANALYSIS ************
  Q           100   150   200   250
*** Q-DATA FOR SEC-ID, ISEQ =            1
  WS          583.97  583.97  583 97  583.97
```

```
WSPRO        FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286          MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/10/86 13:47


*** START PROCESSING CROSS SECTION - "TEMPB"
  XT   TEMPB   0.
  GR        -54,586        -54,585.1     0,584.9        27.5,585      33,584.4
  GR        38,582 9       43,582 5      44,581.9       45,581.5      48,582.5
  GR        55,584.9       80,585.1      115,584.8

*** FINISH PROCESSING CROSS SECTION - "TEMPB"
*** TEMPLATE CROSS SECTION "TEMPB" SAVED INTERNALLY
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME. 12/10/86 13·47


*** START PROCESSING CROSS SECTION - "C1    "
  XS   C1   240.
  GT
  SA        33              55
  N         .027            .030          .027

*** FINISH PROCESSING CROSS SECTION - "C1    "
*** CROSS SECTION "C1    " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "C1    " AT SRD =    240.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  13):
       X       Y           X       Y           X       Y           X       Y
    -54 0  586.00      -54.0  585.10        0.0  584.90       27.5  585.00
     33.0  584.40       38.0  582.90       43.0  582.50       44.0  581.90
     45.0  581.50       48.0  582.50       55.0  584 90       80.0  585 10
    115 0  584.80

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -54.0  586.00       45.0  581.50      115.0  584.80      -54.0  586.00

SUBAREA BREAKPOINTS (NSA =  3).
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027   0.030   0 027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME. 12/10/86 13:47


*** START PROCESSING CROSS SECTION - "C2   "
  XS   C2   245
  GT

*** FINISH PROCESSING CROSS SECTION - "C2   "
*** CROSS SECTION "C2   " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "C2   " AT SRD =    245.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0 0000      0 50      0.00

X-Y COORDINATE PAIRS  (NGP =  13):
       X       Y          X       Y          X       Y          X       Y
    -54.0  586.00     -54.0  585.10       0.0  584.90      27.5  585.00
     33.0  584.40      38.0  582.90      43 0  582.50      44 0  581 90
     45.0  581 50      48.0  582.50      55.0  584.90      80.0  585.10
    115.0  584.80

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0  586.00      45.0  581.50     115.0  584.80     -54.0  586.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3).
        0.027   0.030   0.027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME:  12/10/86 13:47


*** START PROCESSING CROSS SECTION - "RRBR "
  BR    RRBR 245              583.
  GR          44,583          44,582        45,582          45,583         44,583
  N           .025
  CD          1               1

*** FINISH PROCESSING CROSS SECTION - "RRBR "
*** CROSS SECTION "RRBR " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    2

--- DATA SUMMARY FOR SECID "RRBR " AT SRD =    245.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE         EK         CK
      0.0          0     0.0000       0.50       0.00

X-Y COORDINATE PAIRS  (NGP =   5):
       X       Y            X       Y            X       Y            X       Y
     44.0   583.00       44.0   582.00       45.0   582.00       45.0   583.00
     44.0   583.00

 X-Y MAX-MIN POINTS:
     XMIN       Y            X    YMIN       XMAX       Y            X    YMAX
     44.0   583.00       44.0   582.00       45.0   582.00       44.0   583.00

SUBAREA BREAKPOINTS (NSA =  3):
          33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.025    0.025    0.025

BRIDGE PARAMETERS:
 BRTYPE  BRWDTH     LSEL  USERCD  WWANGL  WWWID  CRRAD
    1       1.0   583.00 ******* ******* ****** ******

PIER DATA:  NPW =  0   PCODE = **
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/10/86 13:47


*** START PROCESSING CROSS SECTION - "RRRD "
  XR   RRRD 255            20            1
  GR        -54,586.0      -54,585.3     115,585.3      115,586

*** FINISH PROCESSING CROSS SECTION - "RRRD "
*** CROSS SECTION "RRRD " ADDED TO DAF, RECORD NO. =    4, IXTYPE =    4

--- DATA SUMMARY FOR SECID "RRRD " AT SRD =    255.  ERR-CODE =      0

     SKEW      IHFNO    VSLOPE        EK        CK
      0.0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   4):
       X       Y          X       Y          X       Y          X       Y
    -54.0   586.00     -54.0   585.30     115.0   585.30     115.0   586.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0   586.00     -54.0   585.30     115.0   585.30     -54.0   586.00

SUBAREA BREAKPOINTS (NSA =  3):
        33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027    0.030    0.027

ROAD GRADE DATA:   IPAVE  RDWID  USERCF
                      1.   20.0 *******

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/10/86 13:47


*** START PROCESSING CROSS SECTION - "E    "
  AS   E    285
  SA        33              55
  N         .027            .030          .027
  PX   C1

*** FINISH PROCESSING CROSS SECTION - "E    "
*** CROSS SECTION "E    " ADDED TO DAF, RECORD NO. =    5, IXTYPE =    5

--- DATA SUMMARY FOR SECID "E    " AT SRD =    285.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0 00

X-Y COORDINATE PAIRS  (NGP =  13):
       X       Y          X       Y          X       Y          X       Y
    -54.0  586.00     -54.0  585.10       0.0  584.90      27.5  585.00
     33.0  584.40      38.0  582.90      43.0  582.50      44.0  581.90
     45.0  581.50      48.0  582.50      55.0  584.90      80.0  585.10
    115.0  584.80

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0  586 00      45 0  581 50     115.0  584.80     -54.0  586.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0 027   0.030   0.027

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME:  12/10/86 13:47


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS      Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#    VEL

C1    :XS   ******    34.      21.  0.34 *****  584.31  583.74   100.  583.97
      240   ******    52.    1160.  1.00 ***** *******    0.75   4.68

C2    :FV        5.    34.      22.  0.31  0.03  584.34 *******   100.  584.03
      245        5.    52.    1236.  1.00  0.00   -0.01    0.71   4.47
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

E     :AS       40.    33.      28.  0.20  0.19  584.53 *******   100.  584.33
      285.      40.    53.    1706.  1.00  0.00    0.00    0.53   3.54
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N,LSEL =   584.03     583 00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                   QRD,QRDMAX,RATIO =      92.        40.     2.29

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>
 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS      Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#    VEL

RRBR .BR        5.    44.       1.  0.67 *****  583.67  583.00     7.  583.00
      245.  ******    45.      24.  1.00 ***** *******    1.16   6.58

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1. ****   6.  0.800 ******  583.00 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL
   RRRD :RG     255.    20.  0.00  0.01  585.62   -0.01     92.  585.57

            Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:     54.    98.   -54.    44.   0.3   0.3   2.5   2.0   0.3   3.0
   RT:     39.    70.    44.   115.   0.3   0 3   2.5   2.0   0.3   3.0

===140 AT SECID "E    ":  END OF CROSS SECTION EXTENDED VERTICALLY.
                             WSEL,YLT,YRT =   585 61      586.0      584.8

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS      Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#    VEL

E     :AS       39.   -54.     151.  0.01  0.55  585.62  583.74   100.  585.61
      285.      40.   115.    8921.  1.51  0.00   -0 01    0.15   0.66

       M(G)   M(K)       KQ   XLKQ   XRKQ    OTEL
     ****** ****** ******** ****** ****** ********

                   <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME:  12/10/86 13:47


 ===015 WSI IN WRONG FLOW REGIME AT SECID "C1    ":  USED WSI = CRWS.
                              WSI,CRWS =   583.97      584.08

 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS        Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#      VEL

C1    : XS    ******    34.        23.   0.64 *****  584.72  584.08     150.   584.08
       240.   ******    53.      1318.   1.00 ***** *******    1 00     6.40

 ===125 FR# EXCEEDS FNTEST AT SECID "C2    ":  TRIALS CONTINUED
              FNTEST,FR#,WSEL,CRWS =  0.80     0.80      584.32      584.08

 ===110 WSEL NOT FOUND AT SECID "C2    ":  REDUCED DELTAY.
                   WSLIM1,WSLIM2,DELTAY =   583.58      586.00     0.50

 ===115 WSEL NOT FOUND AT SECID "C2    ".  USED WSMIN = CRWS
                   WSLIM1,WSLIM2,CRWS =   583.58      586.00      584.08

C2    : FV        5.      33.        28.   0.45  0.05  584.76  584.08     150.   584.31
       245        5.      53.      1669.   1.00  0.00   -0 01    0.81     5.40
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "E     "     KRATIO =  1.49

E     : AS       40.      30.        37.   0.26  0.22  584.98 *******     150.   584.71
       285.      40.      54.      2481.   1 02  0.00    0.00    0.59     4.09
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                         WS3N,LSEL =   584.31      583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                   QRD,QRDMAX,RATIO =      146.         73      1.99

          <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS        Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#      VEL

RRBR  : BR        5.      44.         1   0.30 *****  583.30  582.86       4.   583.00
       245.   ******    45.        24.   1.00 ***** *******    0.78     4 42

     TYPE PPCD FLOW       C     P/A     LSEL    BLEN    XLAB    XRAB
       1.  ****   6.   0.800 ******   583.00 ****** ****** ******

    XSID: CODE     SRD    FLEN     HF    VHD     EGL     ERR        Q    WSEL
   RRRD  : RG     255.     20.   0.00   0.02  585.74    0.01     146.  585.66

              Q    WLEN     LEW     REW   DMAX   DAVG   VMAX   VAVG   HAVG   CAVG
   LT:       85.     98.    -54.     44.    0.4    0.4    3.0    2.4    0.4    3.0
   RT:       61.     70.     44.    115.    0.4    0 4    3.0    2 4    0.4    3 0

===140 AT SECID "E     ":  END OF CROSS SECTION EXTENDED VERTICALLY.
                              WSEL,VLT,VRT =   585.72      574.6      581.7
```

```
 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS        Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#      VEL

E     .AS      39.     -54       169.   0.02   0.96   585.74   584.08     150.   585.72
       285.     40.     115.    10429.   1 42   0.00     0 01     0.19     0.89

        M(G)    M(K)        KQ    XLKQ    XRKQ     OTEL
      ****** ****** ******** ****** ****** ********

                      <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/10/86 13:47


 ===015 WSI IN WRONG FLOW REGIME AT SECID "C1    ":  USED WSI = CRWS.
                              WSI,CRWS =   583.97     584.38

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

C1   :XS   ******    33.      29.  0.72 *****  585.11  584.38    200.  584.38
      240. ******    53     1794.  1.00 ***** *******    1.01    6.83

 ===125 FR# EXCEEDS FNTEST AT SECID "C2    ":  TRIALS CONTINUED.
              FNTEST,FR#,WSEL,CRWS =  0.80    0.85     584.60     584.38

 ===110 WSEL NOT FOUND AT SECID "C2    ":  REDUCED DELTAY.
                  WSLIM1,WSLIM2,DELTAY =   583.88     586.00    0.50

 ===115 WSEL NOT FOUND AT SECID "C2    ".  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   583.88     586.00     584.38

C2   :FV       5.     31.      35.  0.53  0.05  585.15  584.38    200.  584.62
      245      5.     54.    2278   1.01  0.00   -0.01    0 84    5.80
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===125 FR# EXCEEDS FNTEST AT SECID "E     ":  TRIALS CONTINUED.
              FNTEST,FR#,WSEL,CRWS =  0.80    1.06     585.12     584 38

 ===110 WSEL NOT FOUND AT SECID "E     ":  REDUCED DELTAY.
                  WSLIM1,WSLIM2,DELTAY =   584.12     586.00    0.50

 ===115 WSEL NOT FOUND AT SECID "E     ":  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   584.12     586.00     584.38

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "E     "     KRATIO =  1.58

 ===140 AT SECID "E     ":  END OF CROSS SECTION EXTENDED VERTICALLY.
                              WSEL,YLT,YRT =   585.08     586.00     584.80

E    :AS      40.    -48.      60.  0.26  0.19  585.34  584.38    200.  585.08
      285.    40.    115.    3603.  1.56  0.00    0.00    1.17    3 31
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                         WS3N,LSEL =   584.62     583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                  QRD,QRDMAX,RATIO =     200.        110.     1.82

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

RRBR :BR       5.     44.       1.  0.00 *****  583.00  582.08      0.  583.00
      245. ******    45.      24.  1.00 ***** *******    0.00    0.00
```

```
     TYPE PPCD FLOW       C     P/A     LSEL    BLEN    XLAB    XRAB
       1.  ****   6.   0 800 ******  583.00 ****** ****** ******

    XSID.CODE     SRD    FLEN     HF    VHD     EGL     ERR       Q    WSEL
   RRRD :RG      255.     20.   0.01   0.02  585.84    0.00    200.  585.75

              Q   WLEN    LEW     REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      117.    98.   -54.     44.   0.4   0.4   3 3   2.7   0 5   3.0
   RT        84.    70.    44.    115.   0.4   0.4   3.3   2.7   0.5   3.0

===140 AT SECID "E     ":  END OF CROSS SECTION EXTENDED VERTICALLY.
                              WSEL, YLT, YRT =    585.82      586.0      584.8

 XSID: CODE    SRDL    LEW     AREA   VHD    HF     EGL    CRWS      Q    WSEL
       SRD    FLEN    REW        K  ALPH    HO     ERR     FR#    VEL

E     :AS      39.   -54.      185.  0.02  1.48  585.84  584 38   200.  585.82
      285.     42.   115.    11840.  1.36  0.00    0.00    0.21   1.08

       M(G)   M(K)       KQ   XLKQ   XRKQ    OTEL
     ****** ****** ******** ****** ****** ********

                    <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK.  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME:  12/10/86 13:47


 ===015 WSI IN WRONG FLOW REGIME AT SECID "C1    ":  USED WSI = CRWS.
                              WSI,CRWS =    583.97      584.66

 XSID:CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS        Q     WSEL
       SRD    FLEN     REW         K   ALPH     HO      ERR      FR#      VEL

C1    :XS    ******    31.       35.   0.78 *****  585.45   584.66     250.   584.66
      240.   ******    54.     2363.   1.01 ***** *******     1.02     7.06

 ===125 FR# EXCEEDS FNTEST AT SECID "C2    ":  TRIALS CONTINUED.
              FNTEST,FR#,WSEL,CRWS =  0.80     1.18      585.16      584 66

 ===125 FR# EXCEEDS FNTEST AT SECID "C2    ".  TRIALS CONTINUED.
              FNTEST,FR#,WSEL,CRWS =  0.80     0.83      585.28      584 66

 ===110 WSEL NOT FOUND AT SECID "C2    ":  REDUCED DELTAY.
                  WSLIM1,WSLIM2,DELTAY =   584.16      586.00     0.50

 ===115 WSEL NOT FOUND AT SECID "C2    ":  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   584.16      586.00      584.66

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "C2    "      KRATIO =  1 76

 ===140 AT SECID "C2    ":  END OF CROSS SECTION EXTENDED VERTICALLY.
                              WSEL,YLT,YRT =   585.16      586 00      584.80

C2    :FV       5.    -54.       75.   0 31  0.03  585.47  584.66     250.   585 16
      245       5.    115.     4155.   1.76  0.00   -0.01    1.18     3.35
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "E     "      KRATIO =  1.64

 ===140 AT SECID "E     ".  END OF CROSS SECTION EXTENDED VERTICALLY.
                              WSEL,YLT,YRT =   585.44      586.00      584.80

E     :AS      40.    -54.      122.   0.11  0.09  585.55 *******     250.   585.44
      285.     40.    115.     6824.   1.67  0.00    0.00    0 55     2.04
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                          WS3N,LSEL =   585.16      583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                      QRD,QRDMAX,RATIO =     250.        148.     1.68

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS        Q     WSEL
       SRD    FLEN     REW         K   ALPH     HO      ERR      FR#      VEL

RRBR  :BR       5      44.        1.   0.00 *****  583.00   582.08       0.   583.00
      245.   ******    45.       24.   1.00 ***** *******     0.00     0.00
```

```
     TYPE PPCD FLOW       C     P/A     LSEL    BLEN    XLAB    XRAB
       1.  ****   6.   0.800 ******  583.00 ****** ****** ******

    XSID:CODE     SRD    FLEN     HF    VHD      EGL      ERR        Q     WSEL
   RRRD :RG      255.     20.   0.01   0.03   585.92     0.00     250.   585.82

              Q    WLEN     LEW     REW   DMAX   DAVG   VMAX   VAVG   HAVG   CAVG
   LT:      146.     98.    -54.     44.    0.5    0.5    3.6    2.9    0.6    3.0
   RT:      104.     70.     44.    115.    0.5    0.5    3.6    2.9    0.6    3.0

===14Q AT SECID "E     "·  END OF CROSS SECTION EXTENDED VERTICALLY.
                              WSEL,YLT,YRT =    585.90       586.0       584.8

 XSID:CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS        Q     WSEL
       SRD    FLEN     REW         K   ALPH     HO      ERR      FR#      VEL

E     :AS      39.    -54.      199.   0.03   2 30   585.93   584 66     250.   585.90
      285.     45.    115.    13079.   1.31   0 00     0.00    0 23     1.26

       M(G)    M(K)        KQ    XLKQ    XRKQ     OTEL
     ****** ****** ******** ****** ****** ********

                    <<<<<END OF BRIDGE COMPUTATIONS>>>>>
  ER
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/17/86 13:52
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  RAILROAD CROSSING
  T3           ********** ROAD OVERFLOW RATING ANALYSIS ************
  Q           175   200   225   250
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          584.09  584.09  584.09  584.09
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME. 12/17/86 13:52


*** START PROCESSING CROSS SECTION - "TEMPE"
  XT   TEMPE     0.0
  GR        -54,589.0       -54,585.1     0,584.9        27.5,585      33,584.4
  GR        38,582.9        43,582.5      44,581.9       45,581.5      48,582.5
  GR        55,584.9        80,585.1      115,584.8     120,589.0

*** FINISH PROCESSING CROSS SECTION - "TEMPE"
*** TEMPLATE CROSS SECTION "TEMPE" SAVED INTERNALLY.
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME.  12/17/86 13:52


*** START PROCESSING CROSS SECTION - "D    "
  XS   D    220.
  GT        -1.3
  SA        33                55
  N           .027              .030            .027

*** FINISH PROCESSING CROSS SECTION - "D    "
*** CROSS SECTION "D    " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "D    " AT SRD =    220.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y          X       Y          X       Y          X       Y
    -54.0  587.70     -54.0  583.80       0.0  583.60      27.5  583.70
     33.0  583.10      38.0  581.60      43.0  581.20      44 0  580.60
     45.0  580.20      48.0  581.20      55.0  583.60      80.0  583.80
    115.0  583.50     120 0  587.70

 X-Y MAX-MIN POINTS.
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0  587.70      45.0  580 20     120.0  587.70     -54.0  587.70

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027   0.030   0.027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
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        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 13:52


*** START PROCESSING CROSS SECTION - "D1    "
  XS   D1    225.
  GT         -1 3

*** FINISH PROCESSING CROSS SECTION - "D1    "
*** CROSS SECTION "D1    " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "D1    " AT SRD =    225.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y           X       Y           X       Y           X       Y
    -54.0  587.70      -54.0  583.80       0.0  583.60      27.5  583.70
     33.0  583.10       38.0  581.60      43.0  581.20      44.0  580.60
     45.0  580.20       48.0  581.20      55.0  583.60      80.0  583.80
    115.0  583.50      120.0  587.70

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0  587.70       45.0  580.20     120.0  587.70     -54.0  587.70

SUBAREA BREAKPOINTS (NSA =  3):
          33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
         0.027    0.030    0.027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
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        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 13:52


*** START PROCESSING CROSS SECTION - "RRBR "
  BR   RRBR 225              583.
  GR        44,583           44,582       45,582          45,583        44,583
  N         .025
  CD        1                1

*** FINISH PROCESSING CROSS SECTION - "RRBR "
*** CROSS SECTION "RRBR " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    2

--- DATA SUMMARY FOR SECID "RRBR " AT SRD =    225.  ERR-CODE =      0

     SKEW      IHFNO    VSLOPE        EK        CK
      0.0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   5):
       X       Y          X       Y          X       Y          X       Y
     44.0  583.00      44.0  582.00      45.0  582.00      45.0  583.00
     44.0  583.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
     44.0  583.00      44.0  582.00      45.0  582.00      44.0  583.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.025   0.025   0.025

BRIDGE PARAMETERS:
 BRTYPE  BRWDTH     LSEL  USERCD  WWANGL  WWWID  CRRAD
    1       1.0   583.00 ******* ******* ****** ******

PIER DATA:  NPW =  0   PCODE = **
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
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        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 13:52


*** START PROCESSING CROSS SECTION - "RRRD "
  XR   RRRD 240            20            1
  GR        -54,586.0      -54,585.3     140,585.3      140,586

*** FINISH PROCESSING CROSS SECTION - "RRRD "
*** CROSS SECTION "RRRD " ADDED TO DAF, RECORD NO. =    4, IXTYPE =    4

--- DATA SUMMARY FOR SECID "RRRD " AT SRD =    240.   ERR-CODE =      0

     SKEW      IHFND     VSLOPE        EK         CK
      0.0          0     0.0000      0.50       0.00

X-Y COORDINATE PAIRS  (NGP =   4):
       X       Y           X       Y           X       Y           X       Y
    -54 0  586.00      -54 0  585 30      140.0  585.30      140 0  586.00

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -54 0  586.00      -54.0  585.30      140.0  585.30      -54.0  586.00

SUBAREA BREAKPOINTS (NSA =  3):
          33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027    0.030    0.027

ROAD GRADE DATA:   IPAVE  RDWID  USERCF
                      1.    20.0 *******

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
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        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 13:52


*** START PROCESSING CROSS SECTION - "E    "
  AS   E    260
  GT          0.0
  PX   D

*** FINISH PROCESSING CROSS SECTION - "E    "
*** CROSS SECTION "E    " ADDED TO DAF, RECORD NO  =    5, IXTYPE =    5

--- DATA SUMMARY FOR SECID "E    " AT SRD =    260.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y          X       Y          X       Y          X       Y
    -54.0  589.00     -54.0  585.10       0.0  584.90      27.5  585.00
     33.0  584.40      38.0  582.90      43.0  582.50      44.0  581.90
     45.0  581.50      48.0  582.50      55.0  584.90      80.0  585.10
    115.0  584.80     120.0  589 00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0  589.00      45.0  581.50     120 0  589.00     -54.0  589.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027   0.030   0.027

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
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        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 13:52


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

D     .XS   ******   -54      113.  0.06 *****  584.15  582.95    175.  584.09
      220.  ******   116.    6237.  1.72 ***** *******    0.44    1.54

D1    :FV       5.   -54      114.  0.06  0.00  584.16 *******    175.  584.09
      225.      5.   116.    6275.  1.72  0.00    0.00    0.43    1 54
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===110 WSEL NOT FOUND AT SECID "E    ":  REDUCED DELTAY
                  WSLIM1,WSLIM2,DELTAY =   583.59     589.00    0.50

 ===115 WSEL NOT FOUND AT SECID "E    ":  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   583.59     589.00     584.25

 ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
             ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "E    "
                  WSBEG,WSEND,CRWS =   584.25     589.00     584.25

E     :AS      35.    34.       27.  0.68 *****  584.92  584.25    175   584.25
      260      35.    53.     1568.  1.00 ***** *******    1.00    6.59
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                       WS3N,LSEL =   584.09     583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                  QRD,QRDMAX,RATIO =     172.        86.     2.00

           <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

RRBR :BR       5.    44.        1  0.34 *****  583.34  582.88      5.  583.00
      225.  ******   45.       24.  1.00 ***** *******    0.82    4.67

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1. ****   6.  0.800 ******  583.00 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL.
   RRRD :RG     240.    15.  0.00  0.02  585.74    0.01    172.  585.67

             Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT.      87.    98.   -54.    44.   0.4   0.4   3.0   2.4   0.4   3.0
   RT:      84.    95.    44.   140.   0.4   0.4   3.0   2.4   0.4   3.0

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

E     :AS      34.   -54.      170.  0.02  1.12  585 75  584.25    175.  585.72
      260.     35.   116.    10454.  1.42  0.00    0.01    0.22    1.03
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****** ****** ******** ****** ****** ********

<<<<<END OF BRIDGE COMPUTATIONS>>>>>

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK   RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 13:52


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

D    :XS   ******   -54.     113.  0.08 *****  584.17  583.09    200.  584.09
      220. ******   116.    6237.  1.72 ***** *******    0.50    1.76

D1   :FV       5    -54      114.  0.08  0 01  584.18 *******    200.  584.09
      225.      5    116.    6283   1.72  0.00    0.00    0.49    1 75
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===110 WSEL NOT FOUND AT SECID "E    ":  REDUCED DELTAY.
                   WSLIM1,WSLIM2,DELTAY =   583.59     589.00     0.50

 ===115 WSEL NOT FOUND AT SECID "E    ":  USED WSMIN = CRWS.
                   WSLIM1,WSLIM2,CRWS =   583.59     589.00     584.39

 ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
              ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "E    "
                   WSBEG,WSEND,CRWS =   584.39     589.00     584.39

E    :AS      35.     33.       29.  0.72 *****  585.11  584.39    200.  584 39
      260.    35.     54.     1810.  1.00 ***** *******    1.00    6.78
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N,LSEL =   584.09     583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                   QRD,QRDMAX,RATIO =     197.       103.     1.91

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL.   CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

RRBR :BR      5.     44.       1   0.21 *****  583.21  582.74     4.  583.00
      225. ******    45.      24.  1.00 ***** *******    0.64    3.64

     TYPE PPCD FLOW      C     P/A    LSEL   BLEN   XLAB   XRAB
       1. ****   6.  0.800 ******  583.00 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL
   RRRD :RG     240.    15.  0.00  0.03  585 78    0.00    197.  585.70

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      100.    98.   -54.    44.   0.4   0.4   3.1   2.5   0.5   3.0
   RT:       97.    95.    44.   140.   0.4   0.4   3.1   2.5   0.5   3.0

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

E    :AS      34.    -54.      176.  0.03  1.37  585.79  584.39    200.  585.76
      260.    35.    116.    11027.  1.39  0.00    0.00    0.23    1.13
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME:  12/17/86 13:52


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

D     :XS   ******   -54.     113.  0.11 *****  584.20  583.22    225.  584.09
      220.  ******   116.   6237.  1.72 ***** *******    0.56    1.98

D1    :FV       5.   -54.     114.  0 10  0.01  584.20 *******    225.  584.09
      225.      5.   116.   6285.  1.72  0.00    0.00    0.56    1.97
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===110 WSEL NOT FOUND AT SECID "E    ":  REDUCED DELTAY.
                  WSLIM1,WSLIM2,DELTAY =   583.59     589.00     0.50

 ===115 WSEL NOT FOUND AT SECID "E    ":  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   583.59     589.00     584.52

 ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
             ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "E    "
                  WSBEG,WSEND,CRWS =   584.52     589.00     584.52

E     :AS      35     32.      32.  0.76 *****  585.28  584.52    225.  584.52
      260.     35     54.    2059.  1.00 ***** *******    1.02    7.00
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                       WS3N,LSEL =   584.09     583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                  QRD,QRDMAX,RATIO =     224.       122.     1.84

           <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

RRBR  :BR       5.    44.      1.  0.07 *****  583.07  582.52      2.  583.00
      225.  ******    45.     24.  1.00 ***** *******    0.38    2.14

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1  ****   6.  0.800 ******  583.00 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL
   RRRD :RG      240     15  0.01  0.03  585.83    0.00    224.  585.74

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      114     98.   -54     44.   0.4   0.4   3.3   2.6   0.5   3.0
   RT:      110     95.    44.   140.   0.4   0 4   3.3   2.6   0.5   3.0

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

E     :AS      34.   -54.     183.  0.03  1.63  585.83  584.52    225.  585.80
      260.     35.   116.   11609.  1.37  0.00    0.00    0 24    1.23
```

looks reasonable

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      WSEL     WSK       KO    XLKO    XRKO    STFL
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  RAILROAD CROSSING
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 13:52


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

D    :XS   ******   -54      113.  0.13 *****  584.22  583.37    250.  584.09
      220. ******   116     6237.  1.72 ***** *******    0.62    2.21

D1   :FV       5.   -54.      114.  0.13  0.01  584.22 *******    250.  584.09
      225.      5    116     6275.  1 72  0.00   -0.01    0.62    2.19
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===110 WSEL NOT FOUND AT SECID "E    ".  REDUCED DELTAY.
                   WSLIM1,WSLIM2,DELTAY =   583.59     589.00    0.50

 ===115 WSEL NOT FOUND AT SECID "E    ":  USED WSMIN = CRWS.
                   WSLIM1,WSLIM2,CRWS =   583.59     589.00     584.67

 ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
              ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "E    "
                   WSBEG,WSEND,CRWS =   584.67     589.00     584.67

E    :AS      35.    31.       36.  0 78 *****  585 45  584.67    250.  584 67
      260.    35.    54.     2371.  1.01 ***** *******    1.02    7.04
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N,LSEL =   584 09     583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                   QRD,QRDMAX,RATIO =     251.       141.     1.78

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

RRBR :BR       5     44.        1.  0.00 *****  583.00  582.08      0.  583.00
      225. ******    45.       24.  1.00 ***** *******    0.00    0.00

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1. ****   6   0.800 ******  583.00 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL
   RRRD :RG     240.    15.  0.01  0.04  585.87    0.00    251.  585.77

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:     127.    98.   -54.    44.   0.5   0.5   3.4   2.7   0.6   3.0
   RT:     123.    95.    44    140.   0.5   0.5   3.4   2.7   0.6   3 0

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

E    :AS      34.   -54       189.  0.04  1.88  585.87  584.67    250.  585.84
      260.    35.   116     12196.  1.35  0.00    0.00    0.26    1.32
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/17/86 14:29
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK·  ROSE STREET
  T3           ********** ROAD OVERFLOW RATING ANALYSIS ************
  Q           200   220    240     260
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          585.80   585.80   585.80   585.80
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14:29


*** START PROCESSING CROSS SECTION - "TEMPE"
  XT   TEMPE   0.
  GR        -54,589 0       -54,585.1     0,584.9        27.5,585      33,584.4
  GR        38,582.9        43,582 5      44,581.9       45,581.5      48,582.5
  GR        55,584.9        80,585.1      115,584.8     120,589.0

*** FINISH PROCESSING CROSS SECTION - "TEMPE"
*** TEMPLATE CROSS SECTION "TEMPE" SAVED INTERNALLY.
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14:29


*** START PROCESSING CROSS SECTION - "E    "
  XS   E    260
  GT        0.0
  SA        33              55
  N         .027             030          .027

*** FINISH PROCESSING CROSS SECTION - "E    "
*** CROSS SECTION "E    " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "E    " AT SRD =    260.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK         CK
      0.0          0     0.0000      0 50       0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y           X       Y           X       Y           X       Y
    -54.0  589.00      -54.0  585.10        0.0  584.90       27.5  585 00
     33.0  584.40       38.0  582.90       43.0  582.50       44.0  581.90
     45.0  581.50       48.0  582.50       55.0  584.90       80.0  585.10
    115.0  584.80      120.0  589.00

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -54.0  589.00       45.0  581.50      120.0  589.00      -54.0  589.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027   0.030   0.027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14:29


*** START PROCESSING CROSS SECTION - "F1    "
  XS   F1   310

*** FINISH PROCESSING CROSS SECTION - "F1    "
*** CROSS SECTION "F1    " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "F1    " AT SRD =    310.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y          X       Y          X       Y          X       Y
    -54.0  589.00     -54.0  585.10       0 0  584.90      27.5  585 00
     33.0  584.40      38.0  582.90      43.0  582.50      44.0  581 90
     45 0  581.50      48.0  582.50      55.0  584.90      80.0  585.10
    115.0  584.80     120.0  589.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0  589.00      45.0  581.50     120.0  589.00     -54.0  589.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027    0.030    0.027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14·29


*** START PROCESSING CROSS SECTION - "F2    "
  XS   F2   315

*** FINISH PROCESSING CROSS SECTION - "F2    "
*** CROSS SECTION "F2    " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    1

--- DATA SUMMARY FOR SECID "F2    " AT SRD =    315.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  14):
       X       Y          X       Y          X       Y          X       Y
    -54.0  589.00     -54.0  585.10       0.0  584.90      27.5  585.00
     33.0  584.40      38.0  582.90      43.0  582.50      44.0  581.90
     45.0  581.50      48.0  582.50      55.0  584.90      80.0  585.10
    115.0  584.80     120.0  589.00

 X-Y MAX-MIN POINTS.
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -54.0  589.00      45.0  581.50     120.0  589.00     -54.0  589 00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027    0.030    0.027
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14:29


*** START PROCESSING CROSS SECTION - "ROSB "
  BR   ROSB 315            583
  GR        17,583         17,582       18,582       18,583      17,583
  CD        1              1
  N         .025

*** FINISH PROCESSING CROSS SECTION - "ROSB "
*** CROSS SECTION "ROSB " ADDED TO DAF, RECORD NO. =    4, IXTYPE =    2

--- DATA SUMMARY FOR SECID "ROSB " AT SRD =    315.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK         CK
      0.0          0     0.0000      0 50       0 00

X-Y COORDINATE PAIRS  (NGP =   5).
       X       Y          X       Y          X       Y          X       Y
     17.0  583.00       17.0  582.00       18.0  582.00       18.0  583.00
     17.0  583.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
     17.0  583.00       17.0  582.00       18.0  582.00       17.0  583.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.025   0.025   0.025

BRIDGE PARAMETERS.
 BRTYPE  BRWDTH     LSEL  USERCD  WWANGL  WWWID  CRRAD
    1       1.0   583.00 ******* ******* ****** ******

PIER DATA:  NPW =  0   PCODE = **
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S.  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14:29


*** START PROCESSING CROSS SECTION - "ROSR "
  XR   ROSR 330          30                1
  GR        -70,588       -70,586.1       -34,585.6     30,585.6    57,586.6

*** FINISH PROCESSING CROSS SECTION - "ROSR "
*** CROSS SECTION "ROSR " ADDED TO DAF, RECORD NO. =    5, IXTYPE =    4

--- DATA SUMMARY FOR SECID "ROSR " AT SRD =    330.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0 00

X-Y COORDINATE PAIRS  (NGP =   5):
       X      Y          X      Y          X      Y          X      Y
    -70.0  588.00     -70.0  586 10     -34.0  585.60      30.0  585.60
     57.0  586.60

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -70.0  588.00     -34.0  585.60      57.0  586.60     -70.0  588.00

SUBAREA BREAKPOINTS (NSA =  3):
         33.      55.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.027   0.030   0.027

ROAD GRADE DATA:  IPAVE  RDWID  USERCF
                     1.    30.0 *******

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME:  12/17/86 14:29


*** START PROCESSING CROSS SECTION - "G    "
  AS   G    355.
  GR        -70,588        -70,586.1       -7,585.2       0,585.3     9,583
  GR        13,582 4        17,581.6       19,580.6       20,582.7    25,583.4
  GR        30,585.6       35,587
  SA        0               30
  N         .022             045           .035
  PX   E

*** FINISH PROCESSING CROSS SECTION - "G    "
*** CROSS SECTION "G    " ADDED TO DAF, RECORD NO.  =    6, IXTYPE =    5

--- DATA SUMMARY FOR SECID "G    " AT SRD =    355.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0 0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  12)·
       X       Y          X       Y          X       Y          X       Y
    -70.0  588.00     -70.0  586.10      -7.0  585.20       0.0  585 30
      9.0  583.00      13.0  582.40      17.0  581.60      19.0  580.60
     20.0  582.70      25.0  583.40      30.0  585.60      35.0  587.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -70.0  588.00      19.0  580.60      35.0  587.00     -70.0  588.00

SUBAREA BREAKPOINTS (NSA =  3):
          0.      30.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.022   0.045   0.035

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME:  12/17/86 14:29


 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

E     : XS   ******   -54.     183.  0.03 *****  585.83  584.39    200.  585.80
       260.  ******   116.   11611.  1.37 ***** *******    0.22    1.09

F1    : XS     50.    -54.     184.  0.03  0 01  585.83 *******    200.  585.81
       310.     50.    116.   11698.  1.37  0.00   -0.01    0.22    1.09

F2    : FV      5.    -54.     182.  0 03  0 00  585.82 *******    200.  585.79
       315       5.    116.   11493.  1.37  0.00   -0.01    0.22    1.10
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G    "     KRATIO =  0.43

G     : AS     40.    -48.      92.  0 08  0.03  585.87 *******    200.  585.79
       355.    40.     31.    4925.  1.09  0.03   -0.01    0.37    2.18
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N, LSEL =    585.79      583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                     QRD, QRDMAX, RATIO =     202.        112.     1.79

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

ROSB  : BR       5.     17.       1.  0.00 *****  583.00  582.08      0.  583.00
       315.  ******     18.      24.  1.00 ***** *******    0.00    0.00

      TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
        1.  ****   6.  0.800 ******  583.00 ****** ****** ******

    XSID: CODE    SRD   FLEN    HF    VHD     EGL     ERR       Q    WSEL
   ROSR  : RG    330.    10.  0.00  0.03  586.40    0.01    202.  586.27

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      157.    87.   -70.     17   0.7   0.6   3.8   3.2   0.7   3.1
   RT.       45.    31.    17      48.  0.7   0.5   3.6   3.1   0.6   3.1

 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

G     : AS     39.    -70.     148.  0.03  1.83  586.41  584.07    200.  586.38
       355.    41.     33.    9349.  1.03  0.00    0.01    0.20    1.35

        M(Q)   M(K)       KQ   XLKQ   XRKQ    OTEL
      ****** ****** ******** ****** ****** ********

                     <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14:29


 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

E     : XS   ******   -54.     183.  0.03 *****  585.83  584.50    220.  585.80
       260.  ******   116.   11611.  1.37 ***** *******    0.24    1.20

F1     XS      50.    -54      184.  0 03  0.02  585.84 *******    220.  585.81
       310.    50.    116.   11717.  1.36  0.00   -0.01    0.24    1.19

F2    : FV      5.    -54.     181.  0.03  0.00  585.82 *******    220.  585.79
       315.     5.    116.   11467.  1.38  0.00   -0.02    0.24    1.21
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G    "     KRATIO =  0.43

G     : AS     40.    -48.      91.  0.10  0.03  585.88 *******    220.  585.78
       355.    40.     31.    4909.  1.09  0.03   -0.01    0.41    2.41
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N, LSEL =    585.79      583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                     QRD, QRDMAX, RATIO =     218.        127.     1.72

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

ROSB  · BR      5.     17.       1.  0.00 *****  583.00  582.08      0.  583.00
       315  ******    18.      24.  1.00 ***** *******    0.00    0.00

      TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
        1.  ****   6.  0.800 ******  583.00 ****** ****** ******

    XSID. CODE    SRD   FLEN    HF   VHD    EGL     ERR       Q    WSEL
   ROSR  : RG    330.    10.  0.01  0.03  586.44   -0.01    218.  586.30

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:     170.    87.   -70.    17.   0.7   0.6   3.9   3 2   0.7   3.1
   RT:      49     31.    17.    49.   0.7   0.5   3.7   3.2   0.6   3.1

 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

G     · AS     39.    -70.     152.  0.03  2.21  586.45  584.18    220.  586.41
       355.    41.     33.    9687.  1.02  0.00   -0.01    0.21    1.45

        M(G)   M(K)       KQ   XLKQ   XRKQ    OTEL
      ****** ****** ******** ****** ****** ********

                     <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 14:29


 XSID.CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

E    :XS   ******   -54.      183.  0.04 *****  585.84  584.61    240.  585.80
      260. ******   116    11611   1.37 ***** *******    0.26    1.31

F1   :XS      50.   -54.      184.  0.04  0.02  585.84 *******    240.  585.81
      310.     50.   116.   11737.  1.36  0 00   -0.01    0.26    1.30

F2   :FV       5.   -54.      185.  0.04  0.00  585.85 *******    240.  585.81
      315.      5.   116    11771.  1.36  0.00    0.00    0.26    1.30
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G    "     KRATIO =  0.42

G    :AS      40.   -49.       93.  0.11  0.04  585.91 *******    240.  585.80
      355.     40.    31.     4996.  1.09  0.04   -0 01    0.44    2.59
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N,LSEL =   585.81      583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                     QRD,QRDMAX,RATIO =     242.        144.     1.69

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

ROSB :BR       5.    17.        1.  0.00 *****  583.00  582.08      0.  583.00
      315. ******    18.       24.  1.00 ***** *******    0.00    0.00

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1.  ****   6.  0.800 ******  583.00 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD    EGL     ERR       Q    WSEL
   ROSR :RG     330.    10.  0.01  0.04  586 49    0.01    242.  586.34

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:     188.    87.   -70.    17.   0.7   0.6   4.1   3.3   0.8   3.1
   RT:      55.    33.    17.    50.   0.7   0.5   3.8   3.3   0.7   3.1

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

G    .AS      39.   -70.      157.  0.04  2.42  586.50  584.28    240.  586.46
      355.     41.    33.    10189.  1.02  0.00    0.01    0.22    1.53

       M(G)   M(K)       KQ   XLKQ   XRKQ    OTEL
     ****** ****** ******** ****** ****** ********

                     <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME· 12/17/86 14:29


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS      Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#    VEL

E    :XS   ******   -54.      183.  0.04 *****  585.84  585.23    260   585.80
      260. ******   116.    11611.  1.37 ***** *******    0.28    1.42

F1   :XS      50.   -54.      185.  0.04  0.02  585.85 *******    260.  585.81
      310.    50.   116.    11762.  1.36  0.00   -0.02    0.28    1.41

F2   .FV       5    -54.      185.  0.04  0.00  585.85 *******    260.  585.81
      315.     5.   116.    11801.  1.36  0.00    0.00    0.28    1.40
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G     "     KRATIO =  0.42

G    :AS      40.   -49.       93.  0.13  0.05  585 93 *******    260.  585.80
      355.    40.    31      4995.  1.09  0.05   -0.01    0.48    2.80
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N,LSEL =    585.81      583.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                    QRD,QRDMAX,RATIO =      261.        159.     1.64

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS      Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#    VEL

ROSB .BR       5.     17.        1.  0.00 *****  583 00  582.08     0.  583.00
      315. ******    18.       24.  1 00 ***** *******    0.00   0 00

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
      1.  ****  6.  0.800 ******  583.00 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR      Q    WSEL
   ROSR :RG     330.    10.  0.01  0.04  586.53    0 00   261.  586.38

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT.     202.    87.   -70.     17   0.8   0 7   4.2   3.4   0.8   3.1
   RT:      59.    33.    17.     51.  0.8   0.5   3.9   3 3   0.7   3.1

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS      Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#    VEL

G    :AS      39.   -70.      161.  0.04  2.77  586.54  584.37    260.  586.50
      355.    41.    33.    10568.  1.02  0.00    0.00    0.23    1.62

       M(G)   M(K)       KQ   XLKQ   XRKQ    OTEL
     ****** ****** ******** ****** ****** ********

                  <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/17/86 16:06
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
  T3           ********** ROAD OVERFLOW RATING ANALYSIS ************
  Q           200      225       260
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          586.42    586.42    586.42
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "G    "
  XS   G    355.
  GR        -70,588        -70,586.1       -7,585.2       0,585.3      9,583
  GR        13,582.4        17,581.6       19,580.6       20,582.7     25,583.4
  GR        30,585.6
  SA        0               30
  N         .022            .045           .035

*** FINISH PROCESSING CROSS SECTION - "G    "
*** CROSS SECTION "G    " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "G    " AT SRD =    355.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y          X       Y          X       Y          X       Y
    -70.0  588.00      -70.0  586.10      -7.0  585.20       0.0  585.30
      9.0  583 00       13.0  582.40      17.0  581.60      19.0  580.60
     20.0  582.70       25.0  583.40      30.0  585.60

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -70.0  588.00       19.0  580.60      30.0  585.60     -70.0  588.00

SUBAREA BREAKPOINTS (NSA =  3):
          0.      30

ROUGHNESS COEFFICIENTS (NSA =  3)·
        0.022   0.045   0.035
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "TEM1 "
  XT    TEM1  0
  GR          -36.3,588.2    0,587.2        39.5,586.6     55.2,586.1
  GR          64,583.5       67,582.5       69,583.7       71,585.7
  GR          77,588.4       114.5,589.7

*** FINISH PROCESSING CROSS SECTION - "TEM1 "
*** TEMPLATE CROSS SECTION "TEM1 " SAVED INTERNALLY.
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "G1    "
  XS   G1     420
  GT          -1.0
  SA          55              77
  N             .022            045          .030

*** FINISH PROCESSING CROSS SECTION - "G1    "
*** CROSS SECTION "G1    " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "G1    " AT SRD =    420.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE         EK         CK
      0.0          0     0.0000       0.50       0 00

X-Y COORDINATE PAIRS  (NGP =  10)·
       X       Y           X       Y           X       Y           X       Y
    -36.3  587.20        0.0  586.20       39 5  585.60       55.2  585.10
     64 0  582.50       67.0  581.50       69.0  582 70       71.0  584.70
     77.0  587.40      114 5  588.70

 X-Y MAX-MIN POINTS:

      XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -36.3  587.20       67.0  581 50      114.5  588.70      114.5  588.70

SUBAREA BREAKPOINTS (NSA =  3):
          55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.022   0.045   0.030
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "G2   "
  XS   G2    455.
  GT         -0 6

*** FINISH PROCESSING CROSS SECTION - "G2   "
*** CROSS SECTION "G2   " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    1

--- DATA SUMMARY FOR SECID "G2   " AT SRD =    455.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  10):
       X       Y          X       Y          X       Y          X       Y
    -36.3  587.60       0.0  586.60       39.5  586 00       55.2  585 50
     64.0  582.90      67.0  581.90       69.0  583.10       71.0  585.10
     77 0  587.80     114.5  589.10

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -36.3  587.60      67.0  581.90      114.5  589.10      114 5  589.10

SUBAREA BREAKPOINTS (NSA =  3):
         55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.022    0.045    0.030
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "H1    "
  XS   H1     490
  GT          -.2
  SA          55              77
  N           .022            .045            .030

*** FINISH PROCESSING CROSS SECTION - "H1    "
*** CROSS SECTION "H1    " ADDED TO DAF, RECORD NO. =    4, IXTYPE =    1

--- DATA SUMMARY FOR SECID "H1    " AT SRD =    490.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE         EK         CK
      0.0          0     0.0000       0.50       0.00

X-Y COORDINATE PAIRS  (NGP =  10):
       X       Y           X       Y           X       Y           X       Y
    -36.3  588.00        0.0  587.00        39.5  586.40        55.2  585.90
     64.0  583.30       67.0  582.30        69.0  583.50        71.0  585 50
     77.0  588.20      114 5  589.50

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX        Y           X    YMAX
    -36.3  588.00       67.0  582.30      114.5  589 50      114.5  589.50

SUBAREA BREAKPOINTS (NSA =  3):
         55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.022   0.045   0.030
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "H2    "
  XS   H2     495
  GT          -.2

*** FINISH PROCESSING CROSS SECTION - "H2    "
*** CROSS SECTION "H2    " ADDED TO DAF, RECORD NO  =     5, IXTYPE =     1

--- DATA SUMMARY FOR SECID "H2    " AT SRD =     495.   ERR-CODE =       0

     SKEW      IHFND     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  10):
       X       Y          X       Y          X       Y          X       Y
    -36.3  588.00       0.0  587.00       39.5  586.40       55.2  585.90
     64.0  583 30      67.0  582.30       69.0  583.50       71.0  585.50
     77.0  588 20     114.5  589.50

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -36.3  588 00      67.0  582 30      114.5  589.50      114.5  589.50

SUBAREA BREAKPOINTS (NSA =  3):
         55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.022   0.045   0.030
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "DWYB "
  BR   DWYB  495            584
  GR         67,584        67,583        67.1,583        67.1,584        67,584
  CD         1              1

*** FINISH PROCESSING CROSS SECTION - "DWYB "
*** CROSS SECTION "DWYB " ADDED TO DAF, RECORD NO. =    6, IXTYPE =    2

--- DATA SUMMARY FOR SECID "DWYB " AT SRD =    495.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0 50      0 00

X-Y COORDINATE PAIRS  (NGP =   5):
       X       Y          X       Y          X       Y          X       Y
     67.0  584.00      67.0  583.00      67.1  583.00      67.1  584.00
     67 0  584.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
     67.0  584.00      67.0  583.00      67.1  583.00      67.0  584.00

SUBAREA BREAKPOINTS (NSA =  3):
         55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3).
        0.022   0.045   0.030

BRIDGE PARAMETERS:
 BRTYPE  BRWDTH     LSEL  USERCD  WWANGL  WWWID  CRRAD
    1       1.0   584.00 ******* ******* ****** ******

PIER DATA:  NPW =  0   PCODE = **
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME· 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "DWYR "
  XR   DWYR  505            15            1                          72
  GR         -36.3,588 2    0,587.2       39 5,586.6    67,586.8       77,588.4      587.7
  GR         114.5,589.7

*** FINISH PROCESSING CROSS SECTION - "DWYR "
*** CROSS SECTION "DWYR " ADDED TO DAF, RECORD NO. =    7, IXTYPE =    4

--- DATA SUMMARY FOR SECID "DWYR " AT SRD =    505.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   6):
       X       Y          X       Y          X       Y          X       Y
    -36.3  588.20       0.0  587.20       39.5  586.60       67 0  586.80
     77.0  588 40     114 5  589 70

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -36.3  588.20       39.5  586.60     114.5  589.70     114.5  589.70

SUBAREA BREAKPOINTS (NSA =  3):
         55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.022   0.045   0 030

ROAD GRADE DATA:  IPAVE  RDWID  USERCF
                     1.    15.0 *******

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK·  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


*** START PROCESSING CROSS SECTION - "I     "
  AS   I      510
  GT          0.0
  SA          55              77
  N           .022            .045            .030
  EX

*** FINISH PROCESSING CROSS SECTION - "I     "
*** CROSS SECTION "I     " ADDED TO DAF, RECORD NO. =    8, IXTYPE =    5

--- DATA SUMMARY FOR SECID "I     " AT SRD =    510.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK         CK
      0.0          0     0.0000      0.50       0.00

X-Y COORDINATE PAIRS  (NGP =  10):
       X       Y           X       Y           X       Y           X       Y
    -36.3  588.20        0.0  587.20       39.5  586.60       55.2  586.10
     64.0  583.50       67.0  582.50       69.0  583 70       71.0  585.70
     77.0  588.40      114 5  589.70

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -36.3  588.20       67.0  582.50      114.5  589.70      114.5  589.70

SUBAREA BREAKPOINTS (NSA =  3):
         55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3).
        0.022   0.045   0.030

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******

 NPROF, NQV  =      3     6


+++ BEGINNING PROFILE CALCULATIONS --      3
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME. 12/17/86 16:06


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

G     :XS   ******   -70.     152.  0.03 *****  586.45  584 07    200.  586.42
      355.  ******    30.    9636.  1.01 ***** *******    0.19    1.32

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G1    "     KRATIO =  0.54

G1    :XS      65.     -9.      93.  0.07  0.05  586.51 *******    200.  586.44
      420.     65.     75.    5186.  1.03  0.02   -0.01    0.36    2.15

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G2    "     KRATIO =  0.65

G2    :XS      35.      8.      66.  0.16  0.08  586.63 *******    200.  586 47
      455.     35.     74.    3358.  1.09  0.04    0.00    0.56    3.04

H1    :XS      35.     28.      49.  0.28  0 17  586.85 *******    200.  586.58
      490.     35.     73.    2445.  1.08  0.06   -0.01    0.72    4.06

H2    :FV       5.     23.      53.  0.25  0.03  586.89 *******    200   586.65
      495.      5.     74.    2624.  1.09  0.00    0.01    0 68    3.80
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

I     :AS      15.     31.      47.  0.30  0.10  587.03 *******    200.  586.73
      510.     15.     73.    2330.  1.08  0.03    0.01    0 74    4.25
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                         WS3N,LSEL =   586.65     584.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                    QRD,QRDMAX,RATIO =     196.       141.     1.39

             <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

DWYB :BR       5.     67.       0.  0.00 *****  584.00  583.08      0.  584.00
      495. ******     67.       0.  1.00 ***** *******    0 00    0.00

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1. ****   6.  0.800 ******  584.00 ****** ****** ******

    XSID.CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL
   DWYR :RG     505.     0.  0.00  0.05  587.74   -0.02    196.  587.55

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      190.    80.   -13.    67.   1.0   0.6   4.3   3.7   0.8   3.1
   RT:        6.     5.    67.    72.   0.7   0.4   3.4   3.4   0 6   3.0

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL
```

```
I     :AS       14.    -18.      116.   0.05 53.41   587.74   585.93     200.   587.70
       510.     15.     75.     7007.   1.01  0.00    -0.02     0.27     1.72

        M(G)    M(K)        KQ    XLKQ    XRKQ     OTEL
      ****** ****** ******** ****** ****** ********

                      <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

G     : XS   ******   -70.     152   0.03 *****  586.45  584.21     225.  586.42
       355.  ******    30.    9636.  1.01 ***** *******    0.21     1.48

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G1    "     KRATIO =  0.54

G1    : XS      65.     -9.      94.  0.09  0.07  586.53 *******     225   586.44
       420.     65.     75.    5213.  1.03  0.03   -0 02    0.41     2.41

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G2    "     KRATIO =  0.66

G2    : XS      35.      7.      67.  0.19  0.10  586.68 *******     225.  586.49
       455.     35.     74.    3415.  1.09  0 05    0.00    0.62     3.37

H1    : XS      35.     25.      51.  0.33  0.20  586.94 *******     225.  586.62
       490.     35.     73.    2541.  1.09  0.07   -0.01    0 79     4.41

H2    : FV       5.     20.      55.  0.28  0.04  586.98 *******     225.  586.70
       495.      5.     74.    2779.  1.09  0.00    0.00    0.74     4.06
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===125 FR# EXCEEDS FNTEST AT SECID "I     ":  TRIALS CONTINUED.
              FNTEST,FR#,WSEL,CRWS =  0.80    0.80     586 79     586 11

 ===110 WSEL NOT FOUND AT SECID "I     ":  REDUCED DELTAY.
                  WSLIM1,WSLIM2,DELTAY =   586.20     589.70    0.50

 ===115 WSEL NOT FOUND AT SECID "I     ":  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   586.20     589.70     586.11

I     : AS      15.     27.      50.  0.34  0.11  587.13  586.11     225.  586.79
       510.     15.     73.    2480.  1.09  0.03    0.01    0.80     4.51
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                       WS3N,LSEL =   586.70     584.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                  QRD,QRDMAX,RATIO =     228.        164.     1.39

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
        SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

DWYB  : BR       5.     67.       0.  0.00 *****  584.00  583.08       0.  584.00
       495.  ******    67.       0.  1.00 ***** *******    0.00    0.00

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1.  ****   6.  0.800 ******  584.00 ****** ****** ******
```

```
 XSID: CODE     SRD    FLEN     HF    VHD      EGL      ERR        Q     WSEL
DWYR  : RG     505.      0.   0.00   0.05   587 83     0.01     228.   587.62

              Q    WLEN     LEW     REW   DMAX   DAVG   VMAX   VAVG   HAVG   CAVG
LT·      221.     82.    -15.     67.    1.0    0.7    4.5    3 8    0.9    3.1
RT·        7.      5.     67      72.    0.8    0 4    3.6    3.6    0.6    3.0

XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
      SRD    FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

I     : AS      14.    -21.      124.   0.05  58.13   587.83   586.11     225.   587.78
      510.      15.     76.     7672.   1.00   0.00     0.01     0 28     1.81

       M(G)    M(K)        KQ    XLKQ    XRKQ     OTEL
      ****** ****** ******** ****** ****** ********

                    <<<<<END OF BRIDGE COMPUTATIONS>>>>>
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286·           MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** ROAD OVERFLOW RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/17/86 16:06


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

G     :XS   ******   -70.     152.  0.05 *****  586.47  584.37    260.  586.42
      355.  ******    30.    9636.  1.01 ***** *******    0.25    1.72

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G1    "     KRATIO =  0 56

G1    :XS     65.    -10.      96.  0.12  0.08  586.59 *******    260.  586.47
      420.    65.     75     5396.  1 03  0.04    0.00    0.45    2.71

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                              "G2    "     KRATIO =  0.66

G2    :XS     35       5.      70.  0.24  0.12  586.77 *******    260.  586.53
      455.    35.     74.    3583.  1.08  0.06    0.00    0.69    3.74

 ===125 FR# EXCEEDS FNTEST AT SECID "H1    ":  TRIALS CONTINUED.
              FNTEST,FR#,WSEL,CRWS =  0 80    0.87     586.68     586.36

 ===110 WSEL NOT FOUND AT SECID "H1    ":  REDUCED DELTAY.
                   WSLIM1,WSLIM2,DELTAY =   586.03     589.50    0.50

 ===115 WSEL NOT FOUND AT SECID "H1    ":  USED WSMIN = CRWS.
                   WSLIM1,WSLIM2,CRWS =   586.03     589.50     586.36

H1    :XS     35.     20.      55.  0.38  0 24  587.07  586.36    260.  586.69
      490.    35.     74.    2746.  1.09  0 07   -0.01    0.86    4.74

H2    :FV      5.     14.      60.  0.31  0.04  587.10 *******    260.  586.79
      495.     5.     74.    3056.  1.09  0.00   -0.01    0.79    4.30
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===125 FR# EXCEEDS FNTEST AT SECID "I     "   TRIALS CONTINUED.
              FNTEST,FR#,WSEL,CRWS =  0.80    0.87     586.87     586.56

 ===110 WSEL NOT FOUND AT SECID "I     ":  REDUCED DELTAY.
                   WSLIM1,WSLIM2,DELTAY =   586.29     589.70    0.50

 ===115 WSEL NOT FOUND AT SECID "I     ":  USED WSMIN = CRWS
                   WSLIM1,WSLIM2,CRWS =   586 29     589.70     586.56

I     :AS     15.     21.      54.  0.39  0.12  587.27  586.56    260.  586.88
      510.    15      74.    2708.  1.09  0.04    0.00    0.87    4 80
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N,LSEL =   586.79     584.00

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                   QRD,QRDMAX,RATIO =     262.        195.     1.34

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>
```

~ 90' weir length

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 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
       SRD     FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

DWYB  .BR        5.     67.         0.   0.00 *****  584.00   583.08      0.   584.00
      495.   ******     67.         0.   1.00 ***** *******     0.00    0.00

     TYPE PPCD FLOW       C     P/A     LSEL    BLEN    XLAB    XRAB
       1.  ****   6   0.800 ******   584.00 ****** ****** ******

    XSID: CODE     SRD    FLEN     HF    VHD     EGL     ERR       Q    WSEL
   DWYR  :RG      505.      0.   0.00   0.06  587.92    0.01    262.  587.70

              Q    WLEN     LEW     REW   DMAX   DAVG   VMAX   VAVG   HAVG   CAVG
   LT:      253.     85.    -18.     67.    1.1    0.7    4.6    4.0    1.0    3.1
   RT:        9.      6.     67.     73.    0.9    0 4    3.7    3 7    0.7    3.0

 XSID· CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
       SRD     FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

I     :AS       14.    -24.       132.   0.06  72.74  587.92   586.56    260.  587.86
      510.      15.     76      8346.   1.00   0.00    0.01     0.30    1.97

       M(G)    M(K)        KQ    XLKQ    XRKQ     OTEL
     ****** ****** ******** ****** ****** ********

                    <<<<<END OF BRIDGE COMPUTATIONS>>>>>
  ER
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587.72 ok ✓

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/18/86 14:17
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  USS DRIVEWAY CULVERT TO DSS MILL STREET
  T3                             NORMAL VALLEY SECTIONS
  Q            260.
*** Q-DATA FOR SEC-ID,) ISEQ =              1
  WS           587.72
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  USS DRIVEWAY CULVERT TO DSS MILL STREET
                            NORMAL VALLEY SECTIONS
           *** RUN DATE & TIME: 12/18/86 14:17


*** START PROCESSING CROSS SECTION - "I     "
  XS   I      510
  GR          -36,588.2      0,587 2        39.5,586.6     55.2,586.1     64,583.5
  GR          67,582 5       69,583.7       71,585.7       77,588.4       114.5,589.7
  SA          55             77
  N           .022           .050           .025

*** FINISH PROCESSING CROSS SECTION - "I     "
*** CROSS SECTION "I     " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "I     " AT SRD =    510   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE         EK         CK
      0.0          0     0.0000       0.50       0.00

X-Y COORDINATE PAIRS  (NGP =  10):
       X       Y           X       Y           X       Y           X       Y
    -36.0   588.20        0.0   587.20       39.5   586.60       55.2   586.10
     64 0   583.50       67.0   582.50       69.0   583.70       71.0   585.70
     77.0   588.40      114.5   589.70

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -36.0   588 20       67.0   582.50      114.5   589.70      114.5   589.70

SUBAREA BREAKPOINTS (NSA =  3):
          55.      77.

ROUGHNESS COEFFICIENTS (NSA =  3):
         0.022    0.050    0.025
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  USS DRIVEWAY CULVERT TO DSS MILL STREET
                            NORMAL VALLEY SECTIONS
           *** RUN DATE & TIME: 12/18/86 14:17


*** START PROCESSING CROSS SECTION - "J    "
  XS   J      700
  GR          -36,593.4      -13,592.7      0,591.1        18.5,588.9     27,585
  GR          31,584.3       35,584.9       35,585.9       46,588.6       82,590.7
  SA          18.5           46
  N           .035            032           .035

*** FINISH PROCESSING CROSS SECTION - "J    "
*** CROSS SECTION "J    " ADDED TO DAF, RECORD NO.  =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "J    " AT SRD =    700.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  10):
       X       Y          X       Y          X       Y          X       Y
    -36.0  593.40     -13.0  592.70       0.0  591.10      18.5  588.90
     27 0  585.00      31.0  584 30      35.0  584.90      35.0  585.90
     46.0  588.60      82.0  590.70

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -36.0  593.40      31 0  584.30      82.0  590.70     -36.0  593.40

SUBAREA BREAKPOINTS (NSA =  3).
         18      46.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.032   0.035
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK.  USS DRIVEWAY CULVERT TO DSS MILL STREET
                            NORMAL VALLEY SECTIONS
           *** RUN DATE & TIME:  12/18/86 14:17


*** START PROCESSING CROSS SECTION - "K     "
  XS   K      790
  GR          1.3,598.9      1.3,589.0      12.5,585.6     17.2,585.4     22.7,585.8
  GR          30,589.2       40,590.8       50,593.0       60,592.8       88.2,594.5
  GR          88.2,598.9
  SA          12.5           22.7
  N           .035           .028           .035
  PX   I

*** FINISH PROCESSING CROSS SECTION - "K     "
*** CROSS SECTION "K     " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    1

--- DATA SUMMARY FOR SECID "K     " AT SRD =    790.   ERR-CODE =      0

     SKEW      IHFND     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y          X       Y          X       Y          X       Y
      1.3  598.90       1.3  589.00      12.5  585.60      17.2  585.40
     22.7  585.80      30.0  589.20      40.0  590.80      50.0  593.00
     60.0  592.80      88.2  594.50      88.2  598.90

  X-Y MAX-MIN POINTS:
     XMIN        Y          X    YMIN      XMAX        Y          X    YMAX
      1 3   598 90      17 2  585.40      88.2  594.50        1.3  598.90

 SUBAREA BREAKPOINTS (NSA =  3):
          12.      23.

 ROUGHNESS COEFFICIENTS (NSA =  3):
         0.035    0.028    0.035
```

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK USS DRIVEWAY CULVERT TO DSS MILL STREET
NORMAL VALLEY SECTIONS
*** RUN DATE & TIME: 12/18/86 14:17

XSID:	CODE SRD	SRDL FLEN	LEW REW	AREA K	VHD ALPH	HF HO	EGL ERR	CRWS FR#	Q VEL	WSEL
I :	XS	******	-19.	118.	0.07	*****	587.79	586.56	260.	587.72
	510.	******	75.	6815.	1.00	*****	*******	0.35	2.20	
===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.										
				"J	"	KRATIO =	0.49			
J :	XS	190.	20.	48	0.46	0.56	588.55	*******	260.	588 09
	700.	190.	44. 24	3371.	1.00	0.19	0.00	0.67	5.44	
K :	XS	90.	3.	51.	0.54	0.42	589.00	*******	260.	588.46
	790.	90.	28. 25	4289.	1.32	0.04	-0.01	0.73	5.12	
ER										

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME: 12/19/86 11:46
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2            NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL
  T3
  Q           260
*** Q-DATA FOR SEC-ID, ISEQ =            1
  WS          591.43
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME: 12/19/86 11:46


*** START PROCESSING CROSS SECTION - "TEMP "
  XT    TEMP  0
  GR          0,599.5        11,596.1       37,586.5       41,586.0       45,586.8
  GR          70,598.1

*** FINISH PROCESSING CROSS SECTION - "TEMP "
*** TEMPLATE CROSS SECTION "TEMP " SAVED INTERNALLY.
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME: 12/19/86 11:46


*** START PROCESSING CROSS SECTION - "L     "
  XS   L      845
  GT          0.0
  SA          37             45
  N           .045           .028           .045

*** FINISH PROCESSING CROSS SECTION - "L     "
*** CROSS SECTION "L     " ADDED TO DAF, RECORD NO. =     1, IXTYPE =     1

--- DATA SUMMARY FOR SECID "L     " AT SRD =     845.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK         CK
      0.0          0     0.0000      0.50       0.00

X-Y COORDINATE PAIRS  (NGP =   6):
       X       Y           X       Y           X       Y           X       Y
      0.0  599.50        11.0  596.10        37.0  586.50        41.0  586.00
     45.0  586.80        70.0  598 10

 X-Y MAX-MIN POINTS:
     XMIN        Y           X     YMIN       XMAX        Y           X     YMAX
      0.0  599.50        41.0  586.00        70.0  598.10         0.0  599.50

 SUBAREA BREAKPOINTS (NSA =  3):
          37.      45.

 ROUGHNESS COEFFICIENTS (NSA =  3):
         0.045    0.028    0.045
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME: 12/19/86 11:46


*** START PROCESSING CROSS SECTION - "M1    "
  XS   M1     880
  GT          0.6

*** FINISH PROCESSING CROSS SECTION - "M1    "
*** CROSS SECTION "M1    " ADDED TO DAF, RECORD NO  =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "M1    " AT SRD =    880.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   6).
       X       Y          X       Y          X       Y          X       Y
      0.0  600.10       11.0  596.70       37.0  587.10       41.0  586.60
     45.0  587.40       70.0  598.70

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
      0.0  600 10       41.0  586 60       70.0  598.70        0.0  600.10

SUBAREA BREAKPOINTS (NSA =  3):
          37.      45.

ROUGHNESS COEFFICIENTS (NSA =  3):
         0 045   0.028   0.045
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME: 12/19/86 11:46


*** START PROCESSING CROSS SECTION - "M2   "
  XS   M2    895
  GT         1.0

*** FINISH PROCESSING CROSS SECTION - "M2   "
*** CROSS SECTION "M2   " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    1

--- DATA SUMMARY FOR SECID "M2   " AT SRD =    895.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   6).
       X       Y          X       Y          X       Y          X       Y
      0.0  600.50       11.0  597.10       37.0  587.50       41.0  587.00
     45.0  587.80       70.0  599.10

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
      0.0  600.50       41.0  587.00       70.0  599.10        0.0  600.50

SUBAREA BREAKPOINTS (NSA =  3):
         37.      45.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.045    0.028    0.045
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK   FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME:  12/19/86 11:46


*** START PROCESSING CROSS SECTION - "ICE1 "
  BR   ICE1  910            598.1
  GR         20,598.1      20,588        23,588        26.5,588.2    26.5,588.2
  GR         37.6,594       37.6,598.1   20,598.1
  N          .032
  CD         1        1      *     *     25    20     *

*** FINISH PROCESSING CROSS SECTION - "ICE1 "
*** CROSS SECTION "ICE1 " ADDED TO DAF, RECORD NO  =    4, IXTYPE =    2

--- DATA SUMMARY FOR SECID "ICE1 " AT SRD =    910.  ERR-CODE =      0

     SKEW      IHFND     VSLOPE        EK        CK
      0.0          0     0.0000      0 50      0.00

X-Y COORDINATE PAIRS  (NGP =   8):
       X       Y          X       Y          X       Y          X       Y
     20 0  598.10       20.0  588.00       23.0  588.00       26.5  588.20
     26.5  588.20       37.6  594.00       37.6  598.10       20.0  598.10

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
     20.0  598.10       20.0  588.00       37.6  594.00       20.0  598.10

SUBAREA BREAKPOINTS (NSA =  3):
         37.      45.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.032   0.032   0.032

BRIDGE PARAMETERS:
 BRTYPE  BRWDTH     LSEL  USERCD  WWANGL  WWWID  CRRAD
    1       1.0   598.10 *******    25.0  20.00 ******

PIER DATA:  NPW =  0   PCODE = **
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME: 12/19/86 11:46


*** START PROCESSING CROSS SECTION - "ICE2 "
  AS   ICE2  935
  GR         0,597.9        0,592.1        10,589.9       15,589.3       20,589.3
  GR         20,590.6       30,592.7       40,595         50,596.5       50,597.9
  N          .032

*** FINISH PROCESSING CROSS SECTION - "ICE2 "
*** CROSS SECTION "ICE2 " ADDED TO DAF, RECORD NO. =    5, IXTYPE =    5

--- DATA SUMMARY FOR SECID "ICE2 " AT SRD =    935.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0 0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  10):
       X       Y          X       Y          X       Y          X       Y
      0.0   597.90       0.0   592.10      10.0   589.90      15.0   589.30
     20 0   589.30      20.0   590 60      30.0   592.70      40.0   595.00
     50 0   596.50      50.0   597.90

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
      0.0   597.90      15.0   589.30      50.0   596.50       0.0   597.90

SUBAREA BREAKPOINTS (NSA =  3):
         37.      45.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.032    0.032    0 032

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S.  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME:  12/19/86 11:46


*** START PROCESSING CROSS SECTION - "N     "
  XS   N      940
  GR          0,600          0,594          11.5,590.9     20,590.1       24,588.7
  GR          30,589.8       43.5,592.7     45.5,597.6     46.5,600
  SA          20             30
  N           .048           .032           .048

*** FINISH PROCESSING CROSS SECTION - "N     "
*** CROSS SECTION "N     " ADDED TO DAF, RECORD NO.  =     6,  IXTYPE =     1

--- DATA SUMMARY FOR SECID "N     " AT SRD =     940.   ERR-CODE =       0

     SKEW      IHFNO     VSLOPE        EK        CK
      0 0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   9):
       X       Y          X       Y          X       Y          X       Y
      0 0   600.00       0.0   594.00      11.5   590.90      20.0   590 10
     24.0   588 70      30.0   589.80      43.5   592.70      45.5   597.60
     46.5   600 00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X     YMIN      XMAX       Y          X     YMAX
      0.0   600.00      24.0   588.70      46.5   600 00       0 0   600.00

SUBAREA BREAKPOINTS (NSA =  3):
         20.      30.

ROUGHNESS COEFFICIENTS (NSA =  3)·
        0.048    0.032    0.048
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME:  12/19/86 11:46


*** START PROCESSING CROSS SECTION - "TMPLT"
  XT   TMPLT     0.
  GR          -50.,600.      -50,597.1       -24.5,597.1      0,596.1      9,595.4
  GR           16, 591.8      19,591.2          22,591.6     41,595.7  61.4,597.4
  GR           62,600.

*** FINISH PROCESSING CROSS SECTION - "TMPLT"
*** TEMPLATE CROSS SECTION "TMPLT" SAVED INTERNALLY.
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME. 12/19/86 11:46


*** START PROCESSING CROSS SECTION - "N1    "
  XS   N1      990.
  GT           -2.0
  SA            9        41
  N            .035       .032      .035

*** FINISH PROCESSING CROSS SECTION - "N1    "
*** CROSS SECTION "N1    " ADDED TO DAF, RECORD NO. =    7, IXTYPE =    1

--- DATA SUMMARY FOR SECID "N1    " AT SRD =    990.   ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y           X       Y           X       Y           X       Y
    -50.0  598.00      -50.0  595.10      -24.5  595.10       0.0  594.10
      9.0  593.40       16.0  589.80       19.0  589.20      22.0  589.60
     41.0  593.70       61.4  595.40       62.0  598.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -50.0  598.00       19.0  589.20      62.0  598.00     -50.0  598.00

SUBAREA BREAKPOINTS (NSA =  3):
          9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.032   0.035
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME: 12/19/86 11:46


*** START PROCESSING CROSS SECTION - "0     "
  XS   0       1045.
  GT            -1.4
  PX   L

*** FINISH PROCESSING CROSS SECTION - "0     "
*** CROSS SECTION "0     " ADDED TO DAF, RECORD NO. =     8, IXTYPE =     1

--- DATA SUMMARY FOR SECID "0     " AT SRD =   1045.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0 0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y          X       Y          X       Y          X       Y
    -50.0  598.60     -50.0  595 70     -24.5  595.70       0.0  594.70
      9.0  594.00      16.0  590 40      19.0  589.80      22.0  590.20
     41.0  594.30      61.4  596.00      62.0  598.60

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -50.0  598.60      19.0  589.80      62.0  598.60     -50.0  598.60

SUBAREA BREAKPOINTS (NSA =  3):
           9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3):
         0.035   0.032   0.035
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:  FLOW THROUGH ICE CREAM PARLOR MILL

           *** RUN DATE & TIME:  12/19/86 11:46

 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

L     : XS    ******    24.      97.   0.20 *****  591.63  589.20    260.   591.43
       845.   ******    55.    9582.   1.80 ***** *******    0.36   12.67

M1    : XS      35.     25.      79.   0.30   0.03  591.70 *******   260.   591.41
       880      35      54.    7343.   1.74   0.05   -0.01    0.46    3.30

M2    : FV      15.     27.      67.   0.40   0.02  591.77 *******   260.   591.36
       895.     15.     53.    5959.   1.70   0.05   -0.01    0.56    3.91
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

  ===110 WSEL NOT FOUND AT SECID "ICE2 ":  REDUCED DELTAY
                    WSLIM1,WSLIM2,DELTAY =   590.86     597.90     0.50

  ===115 WSEL NOT FOUND AT SECID "ICE2 ".  USED WSMIN = CRWS.
                    WSLIM1,WSLIM2,CRWS =   590.86     597.90     591.91

  ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
            ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "ICE2 "
                    WSBEG,WSEND,CRWS =   591.91     597.90     591.91

ICE2  : AS      40.      1.      38.   0.74 *****  592.64  591.91    260.   591.91
       935.     40.     26.    2198.   1.00 ***** *******    0.99    6.88
          <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

  ===285 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D !!!!!
                    SECID "ICE1 "     Q,CRWS =     260.     591.25

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID. CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

ICE1  : BR      15.     20.      30.   1.19 *****  592.44  591.25    260.   591.25
       910.     15.     32.    2056.   1.00 ***** *******    1.00    8.76

     TYPE PPCD FLOW      C     P/A    LSEL   BLEN   XLAB   XRAB
       1.  ****   1.  1.000 ******  598.10 ****** ****** ******

 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#     VEL

ICE2  : AS      39.      0.      55.   0.35   0.41  592.87  591.91    260.   592.51
       935      46.     29.    3673.   1.00   0.02    0.02    0.61    4.77

       M(Q)    M(K)       KQ    XLKQ    XRKQ    OTEL
      0.505   0.178    2981.     10.     22.  592.31

                    <<<<<END OF BRIDGE COMPUTATIONS>>>>>

 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL     CRWS       Q     WSEL
        SRD    FLEN     REW         K   ALPH     HO      ERR      FR#     VEL
```

TWEL = 588.46

586.0 invert

589.3 invert

```
N     : XS        5.      5.       73.   0.32   0.02   592.88 *******     260.   592.56
      940.        5.     43.     4856.   1.63   0.00     0.00     0.58    3.56

N1    : XS       50.     10.       50.   0.42   0.20   593.12 *******     260.   592.70
      990.       50.     36      3489.   1.00   0 05    -0.01     0.66    5.21

 ===125 FR# EXCEEDS FNTEST AT SECID "0     ":   TRIALS CONTINUED.
              FNTEST, FR#, WSEL, CRWS =   0.80     0.82      593.00      592.72

 ===110 WSEL NOT FOUND AT SECID "0     "·   REDUCED DELTAY.
                  WSLIM1, WSLIM2, DELTAY =    592.20      598.60     0.50

 ===115 WSEL NOT FOUND AT SECID "0     ":   USED WSMIN = CRWS.
                  WSLIM1, WSLIM2, CRWS =    592.20      598.60      592 72

0     : XS       55.     11.       42   0.59   0.38   593.58   592.72     260.   592.99
     1045.       55.     35.     2789.   1.00   0.08    -0.01     0.82    6.16
  ER
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

           *** RUN DATE & TIME:  12/19/86 08:31
  T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2          NORTHPORT CREEK:  FLOW ACROSS POND STREET
  T3          **************  ROAD OVERFLOW RATING ANALYSIS ***************
  Q           160    190    220
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          592.99  592.99  592.99.
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME: 12/19/86 08:31


*** START PROCESSING CROSS SECTION - "TMPLT"
  XT   TMPLT    0.
  GR          -50.,600.      -50,597.1       -24.5,597.1      0,596.1      9,595.4
  GR           16, 591.8      19,591.2          22,591.6     41,595.7  61.4,597.4
  GR           62,600.

*** FINISH PROCESSING CROSS SECTION - "TMPLT"
*** TEMPLATE CROSS SECTION "TMPLT" SAVED INTERNALLY
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME: 12/19/86 08:31


*** START PROCESSING CROSS SECTION - "0     "
  XS   0       1045
  GT           -1.4
  SA            9        41
  N            .035       .032      .035

*** FINISH PROCESSING CROSS SECTION - "0     "
*** CROSS SECTION "0     " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "0     " AT SRD =   1045.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK         CK
      0.0          0     0.0000      0.50       0 00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y          X       Y          X       Y          X       Y
    -50 0  598.60     -50.0  595.70     -24 5  595 70       0.0  594.70
      9.0  594.00      16.0  590.40      19.0  589.80      22.0  590.20
     41.0  594.30      61.4  596.00      62.0  598.60

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -50.0  598.60      19.0  589.80      62.0  598.60     -50.0  598.60

SUBAREA BREAKPOINTS (NSA =  3):
           9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.032   0.035
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME: 12/19/86 08:31


*** START PROCESSING CROSS SECTION - "01    "
  XS   01      1050.
  GT            -1.4

*** FINISH PROCESSING CROSS SECTION - "01    "
*** CROSS SECTION "01    " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "01    " AT SRD =   1050.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y           X       Y           X       Y           X       Y
    -50.0  598.60      -50.0  595 70      -24.5  595.70        0.0  594 70
      9.0  594.00       16.0  590.40       19.0  589.80       22.0  590.20
     41.0  594.30       61.4  596.00       62.0  598.60

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -50.0  598.60       19.0  589.80       62.0  598 60      -50.0  598.60

SUBAREA BREAKPOINTS (NSA =  3):
          9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3).
        0.035   0.032   0.035
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME: 12/19/86 08:31


*** START PROCESSING CROSS SECTION - "PONDB"
  BR   PONDB 1050       592.5
  GR            20,592.5   20,591.5   21,591.5   21,592.5  20,592 5
  CD            1      1
  N             .025

*** FINISH PROCESSING CROSS SECTION - "PONDB"
*** CROSS SECTION "PONDB" ADDED TO DAF, RECORD NO. =    3, IXTYPE =    2

--- DATA SUMMARY FOR SECID "PONDB" AT SRD =   1050.  ERR-CODE =      0

     SKEW     IHFNO    VSLOPE        EK        CK
      0.0         0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   5):
       X       Y          X       Y          X       Y          X       Y
     20.0  592.50       20.0  591.50       21.0  591.50       21.0  592.50
     20.0  592.50

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
     20.0  592.50       20.0  591.50       21.0  591.50       20.0  592.50

SUBAREA BREAKPOINTS (NSA =  3):
          9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0 025   0.025   0.025

BRIDGE PARAMETERS:
 BRTYPE  BRWDTH     LSEL  USERCD  WWANGL  WWWID  CRRAD
    1       1.0   592.50 ******* ******* ****** ******

PIER DATA:  NPW =  0   PCODE = **
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME: 12/19/86 08:31


*** START PROCESSING CROSS SECTION - "PONDR"
  XR   PONDR 1055      10   2
  GR            -50,600     -50,597.1    -24.5,597.1    -5,596.9      20,596.8
  GR             45,598.7    62,600

*** FINISH PROCESSING CROSS SECTION - "PONDR"
*** CROSS SECTION "PONDR" ADDED TO DAF, RECORD NO. =    4, IXTYPE =    4

--- DATA SUMMARY FOR SECID "PONDR" AT SRD =   1055.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   7):
       X       Y          X       Y          X       Y          X       Y
    -50.0  600.00     -50.0  597.10     -24.5  597.10      -5.0  596.90
     20.0  596.80      45.0  598.70      62.0  600.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -50.0  600.00      20.0  596.80      62.0  600.00     -50.0  600.00

SUBAREA BREAKPOINTS (NSA =  3).
          9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.032   0.035

ROAD GRADE DATA:   IPAVE  RDWID  USERCF
                      2.    10.0 *******

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
```

road profile

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME: 12/19/86 08:31


*** START PROCESSING CROSS SECTION - "P     "
  AS   P     1080
  GT          0 0
  PX   0

*** FINISH PROCESSING CROSS SECTION - "P     "
*** CROSS SECTION "P     " ADDED TO DAF, RECORD NO. =    5, IXTYPE =    5

--- DATA SUMMARY FOR SECID "P     " AT SRD =   1080.  ERR-CODE =      0

     SKEW      IHFNO    VSLOPE        EK         CK
      0.0          0    0.0000      0.50       0 00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y           X       Y           X       Y           X       Y
    -50.0  600.00      -50.0  597.10      -24.5  597.10       0 0  596.10
      9.0  595.40       16.0  591.80       19.0  591.20      22.0  591.60
     41.0  595.70       61.4  597.40       62.0  600.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -50.0  600.00       19.0  591.20       62.0  600.00     -50 0  600.00

SUBAREA BREAKPOINTS (NSA =  3):
          9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.035   0.032   0.035

BRIDGE PROJECTION DATA:  XREFLT  XREFRT  FDSTLT  FDSTRT
                        ******* ******* ******* *******
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME:  12/19/86 08:31


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

O     :XS   ******    11       42.  0.22 *****  593.21  592.16    160.  592.99
     1045.  ******    35     2787.  1.00 ***** *******    0.50    3.79

O1    :FV       5.    11.       43.  0.22  0.02  593.23 *******    160.  593.01
     1050.       5.    35     2831.  1.00  0.00    0.00    0.50    3.75
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===110 WSEL NOT FOUND AT SECID "P    ".  REDUCED DELTAY
                   WSLIM1,WSLIM2,DELTAY =   592.51     600.00    0.50

 ===115 WSEL NOT FOUND AT SECID "P    ".  USED WSMIN = CRWS.
                   WSLIM1,WSLIM2,CRWS =   592.51     600.00     593.56

 ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
              ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "P    "
                   WSBEG,WSEND,CRWS =   593.56     600.00     593.56

P     :AS      30     13.       25.  0.66 *****  594.22  593.56    160.  593.56
     1080.     30.    31.     1350.  1.00 ***** *******    0.99    6.50
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                        WS3N,LSEL =   593.01     592.50

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                   QRD,QRDMAX,RATIO =     149.        67.     2.22

            <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

PONDB:BR       5.    20.        1.  2.78 *****  595.28  592.50     13.  592.50
     1050.  ******    21       24.  1.00 ***** *******    2.36   13.38

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1.  ****   6  0.800 ******  592.50 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL
   PONDR:RG     1055.    20.  0.00  0.01  597.77    0.01    149.  597.61

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      138.    70.   -50.    20.   0.8   0.6   3.7   3.1   0.8   2.8
   RT:       11.    10     20.    31.   0.8   0.4   3.0   2.8   0.5   2.7

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

P     :AS      29.   -50.      233  0.01  0.42  597.77  593.56    160.  597.76
     1080.     30.    61.    21979.  1.46  0.00    0.01    0.10    0.69

      M/(S)   M/(L)        KO   XLKO   XRKO    STFI
```

4' cir culvert
L = 22ft

$XKO12 = 1.4 + \frac{29.1(.031)^2 22}{1} = 2.52$

$12.9\sqrt{\frac{4.91(64.4)}{2.52}} = 140$

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME:  12/19/86 08:31


 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

0     :XS   ******    11.      42.  0.32 *****  593.31  592.35     190   592.99
     1045.  ******    35.    2787.  1.00 ***** *******    0.60    4.50

01     FV       5.    11.      43.  0.30  0.02  593.33 *******     190.  593 02
     1050.      5.    35     2854.  1.00  0.00    0.00    0.59    4.42
        <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===110 WSEL NOT FOUND AT SECID "P     ":  REDUCED DELTAY.
                  WSLIM1,WSLIM2,DELTAY =   592.52     600.00    0.50

 ===115 WSEL NOT FOUND AT SECID "P     ":  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   592.52     600 00     593.75

 ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
             ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "P     "
                  WSBEG,WSEND,CRWS =   593.75     600.00     593.75

P     :AS      30.    12.      28.  0.70 *****  594.46  593.75     190.   593.75
     1080.     30.    32.    1628.  1.00 ***** *******    0.99    6.72
        <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                       WS3N,LSEL =   593.02     592.50

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                  QRD,QRDMAX,RATIO =     177.        85.     2.09

           <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

PONDB:BR       5.    20.       1.  2.74 *****  595.24  592.50      13.   592.50
     1050.  ******    21.      24.  1.00 ***** *******    2.34   13.28

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1.  ****   6.  0.800 ******  592.50 ****** ****** ******

    XSID:CODE    SRD   FLEN    HF   VHD     EGL     ERR       Q    WSEL
   PONDR:RG     1055    20.  0.00  0.01  597.86    0.00    177.  597.68

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      163.    70.   -50.    20.   0.9   0.7   4.0   3.3   0.9   2.8
   RT:       14.    11.    20.    32.   0.8   0.4   3.1   3.0   0.6   2.7

 XSID:CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

P     :AS      29.   -50.     243.  0.01  0.56  597.86  593.75     190   597.85
     1080.     30.    62.   23064.  1.45  0.00    0.00    0.11    0.78
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  FLOW ACROSS POND STREET
          **************  ROAD OVERFLOW RATING ANALYSIS ***************
           *** RUN DATE & TIME. 12/19/86 08:31


 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

0     .XS   ******    11.      42.  0.42 *****  593.41  592.51    220.  592.99
     1045.  ******    35.    2787.  1.00 ***** *******    0.69    5.21

01    :FV       5.    11.      43.  0.40  0.03  593.44 *******    220   593.04
     1050.      5.    35.    2889.  1.00  0.00    0.00    0.67    5.08
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===110 WSEL NOT FOUND AT SECID "P     ":  REDUCED DELTAY.
                  WSLIM1,WSLIM2,DELTAY =   592.54     600.00    0.50

 ===115 WSEL NOT FOUND AT SECID "P     ":  USED WSMIN = CRWS.
                  WSLIM1,WSLIM2,CRWS =   592.54     600.00     593.91

 ===130 CRITICAL WATER-SURFACE ELEVATION  A _ S _ S _ U _ M _ E _ D  !!!!!
             ENERGY EQUATION  N_O_T  B_A_L_A_N_C_E_D  AT SECID "P     "
                  WSBEG,WSEND,CRWS =   593.91     600.00     593.91

P     :AS      30.    12.      31.  0.77 *****  594.67  593.91    220.  593.91
     1080.     30.    33.    1872.  1.00 ***** *******    1.01    7.01
         <<<<<THE ABOVE RESULTS REFLECT "NORMAL" (UNCONSTRICTED) FLOW>>>>>

 ===255 ATTEMPTING FLOW CLASS 3 (6) SOLUTION.
                       WS3N,LSEL =   593.04     592.50

 ===265 ROAD OVERFLOW APPEARS EXCESSIVE.
                  QRD,QRDMAX,RATIO =     207.       104.     1.99

           <<<<<RESULTS REFLECTING THE CONSTRICTED FLOW FOLLOW>>>>>

 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

PONDB: BR       5.    20.       1.  2.70 *****  595.20  592.50     13.  592.50
     1050.  ******    21       24.  1.00 ***** *******    2.32   13.17

     TYPE PPCD FLOW      C    P/A    LSEL   BLEN   XLAB   XRAB
       1.  ****   6.  0.800 ******  592.50 ****** ****** ******

    XSID: CODE    SRD   FLEN    HF    VHD     EGL     ERR       Q    WSEL
   PONDR: RG     1055.    20.  0.00  0.02  597.95    0.00    207.  597.76

              Q   WLEN    LEW    REW  DMAX  DAVG  VMAX  VAVG  HAVG  CAVG
   LT:      190.    70.   -50.    20.   1.0   0.8   4.2   3.5   1.0   2.8
   RT.       17.    12.    20     33.   0.9   0.5   3.3   3.1   0.7   2.7

 XSID: CODE   SRDL    LEW     AREA   VHD    HF     EGL    CRWS       Q    WSEL
       SRD   FLEN    REW        K  ALPH    HO     ERR     FR#     VEL

P     :AS      29.   -50.     252.  0.02  0.71  597.95  593.91    220.  597.93
     1080.     30.    62.   24196.  1.45  0.00    0.00    0.12    0.87

       ...(Q)   M(K)       KO    XLKO    XRKO    STFL
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

           *** RUN DATE & TIME: 12/19/86 11:24
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2         NORTHPORT CREEK: UPSTREAM FROM FISH LADDER
  T3
  Q          260
*** Q-DATA FOR SEC-ID, ISEQ =            1
  WS         611.66
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
         NORTHPORT CREEK. UPSTREAM FROM FISH LADDER

           *** RUN DATE & TIME: 12/19/86 11:24


*** START PROCESSING CROSS SECTION - "S    "
  XS   S      1690.
  GR          -26,612.8      27,612.1      43,602.3     53,600.8      61,601.5
  GR           76,607.6      103,615.
  SA            27        76
  N           .028        .038       .055

*** FINISH PROCESSING CROSS SECTION - "S    "
*** CROSS SECTION "S    " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    1

--- DATA SUMMARY FOR SECID "S    " AT SRD =   1690.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   7):
       X       Y           X       Y           X       Y           X       Y
    -26.0  612.80       27.0  612.10       43.0  602.30       53.0  600.80
     61.0  601.50       76.0  607.60      103.0  615.00

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -26.0  612.80       53.0  600 80      103.0  615.00      103.0  615.00

SUBAREA BREAKPOINTS (NSA =  3):
         27.      76.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.028   0.038   0.055
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
         NORTHPORT CREEK. UPSTREAM FROM FISH LADDER

           *** RUN DATE & TIME: 12/19/86 11:24


*** START PROCESSING CROSS SECTION - "T     "
  XS    T      1735.
  GR          -26,612.8   0,610.4       42,607.6      43,606.4      48,606.4
  GR           49,607.6   101,615.
  SA           42         49
  N            .028       .025         028

*** FINISH PROCESSING CROSS SECTION - "T     "
*** CROSS SECTION "T     " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "T     " AT SRD =   1735.  ERR-CODE =      0

     SKEW      IHFND     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   7):
       X       Y           X       Y           X       Y           X       Y
   -26.0  612.80        0.0  610.40        42.0  607.60        43.0  606.40
    48.0  606.40       49.0  607.60       101.0  615.00

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN        XMAX       Y           X    YMAX
   -26.0  612 80        43.0  606.40       101.0  615.00       101.0  615.00

SUBAREA BREAKPOINTS (NSA =  3):
         42.      49.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.028   0.025   0.028
```

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
         NORTHPORT CREEK: UPSTREAM FROM FISH LADDER

           *** RUN DATE & TIME: 12/19/86 11:24


*** START PROCESSING CROSS SECTION - "TMPLT"
  XT    TMPLT     0.
  GR          -26,612.8     -16,610.0       -1,605 7      38.5,603.5      46,602.0
  GR          53.4,605 6     68.8,609.6      101,615.

*** FINISH PROCESSING CROSS SECTION - "TMPLT"
*** TEMPLATE CROSS SECTION "TMPLT" SAVED INTERNALLY.
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
         NORTHPORT CREEK: UPSTREAM FROM FISH LADDER

           *** RUN DATE & TIME. 12/19/86 11:24


*** START PROCESSING CROSS SECTION - "U    "
  XS   U     1745
  GT         0.0
  SA         -1       53
  N          .040     .025       .040

*** FINISH PROCESSING CROSS SECTION - "U    "
*** CROSS SECTION "U    " ADDED TO DAF, RECORD NO  =    3, IXTYPE =    1

--- DATA SUMMARY FOR SECID "U    " AT SRD =   1745.  ERR-CODE =      0

     SKEW      IHFNO    VSLOPE        EK        CK
      0.0          0    0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   8):
       X       Y          X       Y          X       Y          X       Y
    -26.0  612.80      -16.0  610.00      -1 0  605.70      38.5  603.50
     46.0  602.00       53.4  605.60      68.8  609.60     101.0  615.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X     YMIN      XMAX       Y          X     YMAX
    -26.0  612.80       46 0  602.00     101 0  615.00     101.0  615.00

SUBAREA BREAKPOINTS (NSA =  3):
         -1.      53.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.040   0.025   0.040
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
         NORTHPORT CREEK: UPSTREAM FROM FISH LADDER

           *** RUN DATE & TIME: 12/19/86 11:24


*** START PROCESSING CROSS SECTION - "V    "
  XS   V      2080.
  GT          0.0
  PX   S

*** FINISH PROCESSING CROSS SECTION - "V    "
*** CROSS SECTION "V    " ADDED TO DAF, RECORD NO. =    4, IXTYPE =    1

--- DATA SUMMARY FOR SECID "V    " AT SRD =   2080.   ERR-CODE =      0

     SKEW      IHFND     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   8):
       X       Y          X       Y          X       Y          X       Y
    -26.0  612.80     -16.0  610.00      -1.0  605.70      38.5  603.50
     46.0  602.00      53.4  605.60      68.8  609.60     101.0  615.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -26.0  612.80      46.0  602.00     101.0  615.00     101.0  615.00

SUBAREA BREAKPOINTS (NSA =  3):
         -1.      53.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.040   0.025   0.040
```

WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: UPSTREAM FROM FISH LADDER

*** RUN DATE & TIME: 12/19/86 11:24

XSID:	CODE SRD	SRDL FLEN	LEW REW	AREA K	VHD ALPH	HF HO	EGL ERR	CRWS FR#	Q VEL	WSEL
S	.XS	******	28.	393.	0.01	*****	611.67	603.19	260.	611.66
	1690.	******	91.	53177.	1.09	*****	*******	0.05	0.66	

===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
"T " KRATIO = 0.40

T	:XS	45.	-14.	213.	0.03	0.00	611.68	*******	260.	611.65
	1735.	45.	77	21162.	1.26	0.01	0.00	0.16	1.22	

===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
"U " KRATIO = 4.76

U	:XS	10.	-22.	543.	0.00	0.00	611.68	*******	260.	611.67
	1745.	10.	81.	100629.	1.33	0.00	0.00	0.04	0.48	
V	:XS	335.	-22.	543.	0.00	0.00	611.68	*******	260.	611.68
	2080.	335.	81	100686.	1.33	0.00	0.00	0.04	0.48	

ER

Qevent = 600 cfs

597.6

2.59 × 3.8 = 9.84'

u/s invert = 602.4

9.84 ← Nomograph

612.24

Maybe .3 to .6 ft low

$Q = CA_o\sqrt{2gh}$

$260 = .54(3.8 \times 5.1)\sqrt{2gh}$

$\Rightarrow h = \dfrac{\left(\dfrac{260}{.54(3.8\times5.1)}\right)^2}{2(32.2)} = 9.6$

H.W. = 602.4 + 9.6 = 612.0

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S.  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/19/86 10:57
  T1           VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK· POND STREET TO FISH LADDER
  T3
  Q             260
*** Q-DATA FOR SEC-ID,  ISEQ =            1
  WS            597 90
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK. POND STREET TO FISH LADDER

           *** RUN DATE & TIME:  12/19/86 10:57


*** START PROCESSING CROSS SECTION - "TMPL1"
  XT    TMPL1     0.
  GR          -50.,600.      -50,597 1       -24.5,597 1      0,596.1      9,595.4
  GR           16,  591.8      19,591.2          22,591.6    41,595.7  61.4,597.4
  GR           62,600.

*** FINISH PROCESSING CROSS SECTION - "TMPL1"
*** TEMPLATE CROSS SECTION "TMPL1" SAVED INTERNALLY.
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK: POND STREET TO FISH LADDER

           *** RUN DATE & TIME: 12/19/86 10:57


*** START PROCESSING CROSS SECTION - "P     "
  XS   P      1080
  GT           0.0
  SA           9     41
  N            .035  .032   035

*** FINISH PROCESSING CROSS SECTION - "P     "
*** CROSS SECTION "P     " ADDED TO DAF, RECORD NO. =     1, IXTYPE =     1

--- DATA SUMMARY FOR SECID "P     " AT SRD =   1080.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =  11):
       X       Y          X       Y          X       Y          X       Y
    -50.0  600.00     -50.0  597.10     -24.5  597.10       0.0  596.10
      9.0  595.40      16.0  591.80      19.0  591.20      22.0  591.60
     41.0  595.70      61.4  597.40      62.0  600.00

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN      XMAX       Y          X    YMAX
    -50.0  600.00      19.0  591.20      62.0  600.00     -50.0  600.00

SUBAREA BREAKPOINTS (NSA =  3):
           9.      41.

ROUGHNESS COEFFICIENTS (NSA =  3):
         0.035   0.032   0.035
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK: POND STREET TO FISH LADDER

           *** RUN DATE & TIME: 12/19/86 10:57


*** START PROCESSING CROSS SECTION - "TMPL2"
  XT    TMPL2     0.
  GR              -23.6,602.     0,600.5      19.2,598.5     26,596.2       29,592.8
  GR               35,592.3     38,593.0      62.6,603.2

*** FINISH PROCESSING CROSS SECTION - "TMPL2"
*** TEMPLATE CROSS SECTION "TMPL2" SAVED INTERNALLY.
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK: POND STREET TO FISH LADDER

           *** RUN DATE & TIME: 12/19/86 10:57


*** START PROCESSING CROSS SECTION - "Q     "
  XS   Q       1240.
  GT            0.0
  SA           29       38
  N            .075     .030     .075

*** FINISH PROCESSING CROSS SECTION - "Q     "
*** CROSS SECTION "Q     " ADDED TO DAF, RECORD NO. =    2, IXTYPE =    1

--- DATA SUMMARY FOR SECID "Q     " AT SRD =   1240.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   8):
       X       Y           X       Y           X       Y           X       Y
    -23.6  602.00        0.0  600.50        19.2  598.50        26.0  596.20
     29.0  592.80       35.0  592.30        38.0  593.00        62.6  603.20

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN        XMAX       Y           X    YMAX
    -23.6  602.00       35.0  592.30        62.6  603.20        62.6  603.20

 SUBAREA BREAKPOINTS (NSA =  3):
          29       38.

 ROUGHNESS COEFFICIENTS (NSA =  3):
         0.075    0.030    0.075
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK: POND STREET TO FISH LADDER

           *** RUN DATE & TIME: 12/19/86 10.57


*** START PROCESSING CROSS SECTION - "Q1    "
  XS   Q1      1340.
  GT           0.3

*** FINISH PROCESSING CROSS SECTION - "Q1    "
*** CROSS SECTION "Q1    " ADDED TO DAF, RECORD NO. =    3, IXTYPE =    1

--- DATA SUMMARY FOR SECID "Q1    " AT SRD =   1340.   ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =   8):
       X       Y          X       Y          X       Y          X       Y
    -23.6  602.30        0.0  600.80       19.2  598.80       26.0  596.50
     29.0  593.10       35.0  592.60       38.0  593.30       62.6  603.50

 X-Y MAX-MIN POINTS:
     XMIN       Y          X    YMIN       XMAX       Y          X    YMAX
    -23.6  602.30       35.0  592.60       62.6  603.50       62.6  603.50

SUBAREA BREAKPOINTS (NSA =  3).
         29.      38.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0.075    0.030    0.075
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK· POND STREET TO FISH LADDER

           *** RUN DATE & TIME:  12/19/86 10:57


*** START PROCESSING CROSS SECTION - "Q2    "
  XS   Q2       1440.
  GT            0.6

*** FINISH PROCESSING CROSS SECTION - "Q2    "
*** CROSS SECTION "Q2    " ADDED TO DAF, RECORD NO.  =     4, IXTYPE =     1

--- DATA SUMMARY FOR SECID "Q2    " AT SRD =    1440.   ERR-CODE =       0

     SKEW      IHFND     VSLOPE         EK         CK
      0.0          0     0.0000       0.50       0.00

X-Y COORDINATE PAIRS  (NGP =    8):
       X       Y           X       Y           X       Y           X       Y
    -23.6  602.60        0.0  601.10        19.2  599.10        26.0  596.80
     29.0  593.40       35.0  592.90        38.0  593.60        62.6  603.80

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN        XMAX       Y           X    YMAX
    -23.6  602.60       35.0  592.90        62.6  603.80        62.6  603.80

SUBAREA BREAKPOINTS (NSA =  3):
         29.      38.

ROUGHNESS COEFFICIENTS (NSA =  3):
        0 075    0.030    0.075
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK: POND STREET TO FISH LADDER

           *** RUN DATE & TIME:  12/19/86 10.57


*** START PROCESSING CROSS SECTION - "R1    "
  XS   R1    1510.
  GR         -21.6,605.9      -17.6,604.4     0,603.9      14,603.8       29,597.0
  GR         39.4,596.0        54.,596.5    81,604.2
  SA          29      54
  N          .075     .030      .075

*** FINISH PROCESSING CROSS SECTION - "R1    "
*** CROSS SECTION "R1    " ADDED TO DAF, RECORD NO. =     5, IXTYPE =     1

--- DATA SUMMARY FOR SECID "R1    " AT SRD =    1510.   ERR-CODE =       0

     SKEW      IHFNO     VSLOPE        EK        CK
      0.0          0     0.0000      0.50      0.00

X-Y COORDINATE PAIRS  (NGP =    8):
       X       Y           X       Y           X       Y           X       Y
    -21.6  605.90      -17.6  604.40        0.0  603.90       14.0  603.80
     29.0  597.00       39.4  596.00       54.0  596.50       81.0  604.20

 X-Y MAX-MIN POINTS:
     XMIN       Y           X    YMIN       XMAX       Y           X    YMAX
    -21.6  605.90       39.4  596.00       81.0  604.20      -21.6  605.90

SUBAREA BREAKPOINTS (NSA =  3):
          29.      54.

ROUGHNESS COEFFICIENTS (NSA =  3):
         0.075    0.030    0.075
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK: POND STREET TO FISH LADDER

           *** RUN DATE & TIME: 12/19/86 10:57


*** START PROCESSING CROSS SECTION - "R2    "
  XS   R2   1600.
  GR        -21.6,605.9      -17.6,604.4     0,603.9      14,603.8       29,597.0
  GR        39.4,594.2        54.,596.5    81,604.2
  PX   P

*** FINISH PROCESSING CROSS SECTION - "R2    "
*** CROSS SECTION "R2    " ADDED TO DAF, RECORD NO.  =    6, IXTYPE =    1

--- DATA SUMMARY FOR SECID "R2    " AT SRD =   1600.  ERR-CODE =      0

     SKEW      IHFNO     VSLOPE        EK         CK
      0.0          0     0.0000      0 50       0.00

X-Y COORDINATE PAIRS  (NGP =   8):
       X       Y           X       Y           X       Y           X       Y
    -21.6  605 90       -17.6  604.40        0.0  603.90       14.0  603.80
     29.0  597.00        39.4  594.20       54.0  596.50       81.0  604.20

 X-Y MAX-MIN POINTS:
     XMIN        Y           X     YMIN       XMAX        Y           X     YMAX
    -21.6  605.90        39.4  594.20       81.0  604.20      -21.6  605.90

 SUBAREA BREAKPOINTS (NSA =  3):
          29.       54.

 ROUGHNESS COEFFICIENTS (NSA =  3).
         0 075    0.030    0.075
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK: POND STREET TO FISH LADDER

           *** RUN DATE & TIME: 12/19/86 10·57


 XSID: CODE    SRDL     LEW      AREA    VHD     HF      EGL.     CRWS        Q     WSEL
       SRD     FLEN     REW         K   ALPH     HO      ERR      FR#      VEL.

P     : XS    ******   -50       249.   0.02 *****  597.92   594.12     260.   597.90
      1080.   ******    62.    23761.   1.45 ***** *******     0.15     1.05

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                                "Q     "     KRATIO =  0.35

Q     : XS     160.     21.       89.   0.29  0.05  598.11 *******     260.   597.82
      1240.    160.     50.     8305   2 16  0.13    0.00     0.43     2.92

Q1    : XS     100.     22.       83.   0.32  0.11  598.23 *******     260.   597.91
      1340.    100.     49.     7697.   2.10  0.02    0.00     0.46     3.12

Q2    : XS     100.     22.       78.   0.35  0.12  598.38 *******     260.   598.02
      1440.    100.     49.     7161.   2.05  0.02    0.00     0.49     3.33

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS.
                                "R1    "     KRATIO =  0.48

R1    : XS      70.     26.       51   0.47  0.19  598.63 *******     260.   598.16
      1510.     70      60.     3413.   1.19  0.06    0.00     0.78     5.06

 ===135 CONVEYANCE RATIO OUTSIDE OF RECOMMENDED LIMITS
                                "R2    "     KRATIO =  2 59

R2    · XS      90      25.       92.   0.15  0.20  598.83 *******     260.   598.68
      1600.     90      62.     8852.   1.21  0.00    0.00     0.34     2.82
      END OF FILE ON PRIMARY INPUT UNIT   5
```

```
T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK·  RAILROAD CROSSING
T3          ***********  PIPE ARCH CULVERT ANALYSIS *************
Q          15  20  30  35
WS         584.09  584 09  584.09  584.09
CV   RR   245.          44.          32.5          580.7         582.3     1
CG        327           20.5         48.0
EX
ER
```

```
T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK·  CULVERT COMPUTATION AT RAILROAD BRIDGE
T3          ***********  CIRCULAR PIPE CULVERT ANALYSIS *************
Q          10 12 14 16
WS         584.09   584.09   584.09   584.09
CV   CIR  245.            47            32.5            581.3         580.7     1
*         TOTAL CULVERT AREA REDUCED BY 50% BECAUSE ENTRANCE IS RESTRICTED
CG        223             21.2
EX
ER
```

```
T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK:  ROSE STREET CULVERT ANALYSIS
T3
Q          10.   25.   50.   75.   100.
WS         585.85  585.85  585.85  585.85  585 85
CV   ROSE  315            17            34.5          581 7         581 8   1
CG         312            30            48
EX
ER
```

```
T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
T3          ********** CULVERT RATING ANALYSIS ************
Q           20  30  40  50  60
WS          586.79 586.79 586.79 586.79 586.79
CV   DWYC  495          67          24          582.1       582.0       1
CG         327          36          60
EX
ER
```

```
T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2           NORTHPORT CREEK:    MILL STREET CULVERT
T3
Q          260
WS         588.46
CV   MILL  790          40          55          585.6       586.5     1
CG         117          86.4        96
EX
ER
```

```
T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2         NORTHPORT CREEK.   FISH LADDER
T3
Q          260.
WS         598.68
CV   FISH  1700.   0.      80.      597.6    602.4
CG         111     45.6     61 2
EX
ER
```

```
T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
T2          NORTHPORT CREEK:  FLOW THROUGH POND ROAD CULVERT
T3          *************  CULVERT RATING ANALYSIS  ******************
Q           62  64  66
WS          592.99   592 99   592 99
CV    POND  1045.    20.    21.7     589.8    590.5      1
CG         211   48.
EX
ER
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME: 12/11/86 12:27
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  ROSE STREET CULVERT ANALYSIS
  T3
  Q           10.   25.   50.   75.   100.
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          585.85  585.85  585.85  585.85  585.85
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  ROSE STREET CULVERT ANALYSIS

           *** RUN DATE & TIME:  12/11/86 12:27


*** START PROCESSING CROSS SECTION - "ROSE "
  CV   ROSE  315          17            34.5          581.7         581.8   1
  CG         312          30            48
  EX

*** FINISH PROCESSING CROSS SECTION - "ROSE "
*** NOTE -- CULVERT INPUT PRESUMED COMPLETE.
*** CROSS SECTION "ROSE " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    6

--- DATA SUMMARY FOR SECID "ROSE " AT SRD =    315.  ERR-CODE =      0


CULVERT PARAMETERS:  ISHAPE   IEQNO     CKE  CVALPH      CN
                        3.      2.    0.20    1.05   0.012

                      NBBL  CVLENG   USINV   DSINV    XCTR
                        1.    34.5  581.80  581.70    17.0

                      RISE    SPAN  BOTRAD  TOPRAD  CORNER
                     30 00   48.00   68.36   25.16    7 89

 NPROF, NQV  =       5      8

+++ BEGINNING PROFILE CALCULATIONS --      5
```

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK. ROSE STREET CULVERT ANALYSIS

*** RUN DATE & TIME: 12/11/86 12:27

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	30.00	48.00	68.36	25.16	7.89

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
2	0.20	0.012	1.05	34.50	0.0029

TWDEP	QBBL	HWIC	HWOC	OTFULL
4.15	10.00	1.04	4.19	1.56

DSUBC	ASUBC	DSUBN	ASUBN
0.73	2.35	0.73	2.34

VELOT	AOUT	VELIN	AIN	HWE
1.27	7.87	1.27	7.87	585.89

WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: ROSE STREET CULVERT ANALYSIS

*** RUN DATE & TIME: 12/11/86 12:27

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	30.00	48.00	68 36	25.16	7.89

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
2	0.20	0.012	1.05	34.50	0.0029

TWDEP	QBBL	HWIC	HWOC	OTFULL
4 15	25.00	1.80	4 37	1.58

DSUBC	ASUBC	DSUBN	ASUBN
1.22	4.28	1.25	4.41

VELOT	AOUT	VELIN	AIN	HWE
3.18	7.87	3.18	7 87	586 07

WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: ROSE STREET CULVERT ANALYSIS

*** RUN DATE & TIME: 12/11/86 12:27

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	30 00	48.00	68.36	25.16	7.89

IEQND	CKE	CN	CVALPH	CVLENG	CVSLPE
2	0.20	0.012	1.05	34.50	0.0029

TWDEP	QBBL	HWIC	HWOC	OTFULL
4.15	50.00	3.01	5.04	1.68

DSUBC	ASUBC	DSUBN	ASUBN
1.80	6.34	2.50	7.87

VELOT	AOUT	VELIN	AIN	HWE
6.35	7 87	6 35	7.87	586.74

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: ROSE STREET CULVERT ANALYSIS

*** RUN DATE & TIME: 12/11/86 12:27

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	30 00	48.00	68.36	25.16	7 89

IEQND	CKE	CN	CVALPH	CVLENG	CVSLPE
2	0 20	0.012	1.05	34.50	0.0029

TWDEP	QBBL	HWIC	HWOC	OTFULL
4.15	75.00	4.51	6.14	1.85

DSUBC	ASUBC	DSUBN	ASUBN
2.19	7.40	2.50	7.87

VELOT	AOUT	VELIN	AIN	HWE
9.53	7.87	9.53	7.87	587.84

WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK· ROSE STREET CULVERT ANALYSIS

*** RUN DATE & TIME: 12/11/86 12:27

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	30 00	48. 00	68. 36	25. 16	7. 89

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
2	0. 20	0. 012	1. 05	34. 50	0. 0029

TWDEP	QBBL	HWIC	HWOC	OTFULL
4. 15	100. 00	6. 49	7. 69	2. 08

DSUBC	ASUBC	DSUBN	ASUBN
2. 37	7. 75	2. 50	7. 87

VELOT	AOUT	VELIN	AIN	HWE
12. 71	7. 87	12. 71	7. 87	589. 39

ER

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/19/86 14:52
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  RAILROAD CROSSING
  T3           ***********  PIPE ARCH CULVERT ANALYSIS *************
  Q           15  20  30  35
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          584.09  584.09  584.09  584.09
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK.  RAILROAD CROSSING
          ***********  PIPE ARCH CULVERT ANALYSIS *************
           *** RUN DATE & TIME:  12/19/86 14:52


*** START PROCESSING CROSS SECTION - "RR    "
  CV    RR    245.            44            32.5            580.7          582.3      1
  CG          327             20.5          48.0
  EX

*** FINISH PROCESSING CROSS SECTION - "RR    "
*** NOTE -- CULVERT INPUT PRESUMED COMPLETE.
*** CROSS SECTION "RR    " ADDED TO DAF, RECORD NO. =     1, IXTYPE =     6

--- DATA SUMMARY FOR SECID "RR    " AT SRD =     245.  ERR-CODE =       0


CULVERT PARAMETERS:  ISHAPE   IEQNO     CKE  CVALPH      CN
                        3.     12.    0 50    1 16   0.035

                      NBBL  CVLENG   USINV   DSINV    XCTR
                        1.    32.5  582.30  580.70    44.0

                      RISE    SPAN  BOTRAD  TOPRAD  CORNER
                     20.50   48.00   96.83   24.50    5.34


 NPROF, NQV  =       4      7


+++ BEGINNING PROFILE CALCULATIONS --       4
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WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: RAILROAD CROSSING
********** PIPE ARCH CULVERT ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 14:52

CULVERT SUMMARY·

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	20.50	48.00	96.83	24.50	5.34

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0.50	0.035	1.16	32.50	0.0492

TWDEP	QBBL	HWIC	HWOC	OTFULL
3.39	15.00	2.91	3.95	0.44

DSUBC	ASUBC	DSUBN	ASUBN
0.85	2.99	0.71	2.46

VELOT	AOUT	VELIN	AIN	HWE
3.00	5.00	3.00	5.00	584.65

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: RAILROAD CROSSING
********** PIPE ARCH CULVERT ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 14:52

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	20.50	48.00	96.83	24.50	5.34

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0 50	0.035	1.16	32.50	0.0492

TWDEP	QBBL	HWIC	HWOC	OTFULL
3.39	20.00	3.21	4 39	0.71

DSUBC	ASUBC	DSUBN	ASUBN
1.02	3.53	0.85	3.00

VELOT	AOUT	VELIN	AIN	HWE
4.00	5.00	4.00	5.00	585.09

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: RAILROAD CROSSING
********** PIPE ARCH CULVERT ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 14:52

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	20.50	48.00	96 83	24.50	5.34

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0 50	0.035	1.16	32.50	0.0492

TWDEP	QBBL	HWIC	HWOC	OTFULL
3.39	30.00	3.89	5.64	1.49

DSUBC	ASUBC	DSUBN	ASUBN
1.29	4.30	1.22	4.11

VELOT	AOUT	VELIN	AIN	HWE
6.00	5.00	6.00	5.00	586.34

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: RAILROAD CROSSING
********** PIPE ARCH CULVERT ANALYSIS **********
*** RUN DATE & TIME. 12/19/86 14:52

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	20 50	48.00	96.83	24.50	5.34

IEQND	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0.50	0.035	1.16	32.50	0.0492

TWDEP	QBBL	HWIC	HWOC	OTFULL
3.39	35.00	4.32	6.45	2 00

DSUBC	ASUBC	DSUBN	ASUBN
1.40	4.56	1.71	5.00

VELOT	AOUT	VELIN	AIN	HWE
7.00	5.00	7.00	5.00	587.15

ER

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME: 12/19/86 14:53
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2           NORTHPORT CREEK:  CULVERT COMPUTATION AT RAILROAD BRIDGE
  T3           ***********  CIRCULAR PIPE CULVERT ANALYSIS *************
  Q           10 12 14 16
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          584 09   584.09   584.09   584.09
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  CULVERT COMPUTATION AT RAILROAD BRIDGE
          ***********  CIRCULAR PIPE CULVERT ANALYSIS *************
           *** RUN DATE & TIME:  12/19/86 14:53


*** START PROCESSING CROSS SECTION - "CIR  "
  CV   CIR  245.            47            32.5            581.3          580.7      1
  *         TOTAL CULVERT AREA REDUCED BY 50% BECAUSE ENTRANCE IS RESTRICTED
  CG        223             21.2
  EX

*** FINISH PROCESSING CROSS SECTION - "CIR  "
*** NOTE -- CULVERT INPUT PRESUMED COMPLETE.
*** CROSS SECTION "CIR  " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    6

--- DATA SUMMARY FOR SECID "CIR  " AT SRD =    245.  ERR-CODE =      0


CULVERT PARAMETERS·  ISHAPE   IEQNO     CKE  CVALPH      CN
                        2.     10.    0.50    1.12   0.035

                      NBBL  CVLENG   USINV   DSINV    XCTR
                        1.    32.5  580.70  581.30    47.0

                      RISE    SPAN  BOTRAD  TOPRAD  CORNER
                     21.20    0.00    0.00    0.00    0.00

 NPROF, NQV  =      4     7

+++ BEGINNING PROFILE CALCULATIONS --      4
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WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: CULVERT COMPUTATION AT RAILROAD BRIDGE
********** CIRCULAR PIPE CULVERT ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 14·53

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
2	21.20	0.00	0.00	0 00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
10	0.50	0.035	1.12	32.50	0.0000

TWDEP	QBBL	HWIC	HWOC	OTFULL
2.79	10.00	1.84	4.07	1.92

DSUBC	ASUBC	DSUBN	ASUBN
1.21	1.79	1.77	2.45

VELOT	AOUT	VELIN	AIN	HWE
4.08	2.45	4.08	2.45	585.37

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: CULVERT COMPUTATION AT RAILROAD BRIDGE
********** CIRCULAR PIPE CULVERT ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 14:53

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
2	21.20	0.00	0.00	0.00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
10	0.50	0.035	1.12	32.50	0.0000

TWDEP	QBBL	HWIC	HWOC	OTFULL
2.79	12.00	2.13	4.63	2.31

DSUBC	ASUBC	DSUBN	ASUBN
1.32	1.97	1.77	2.45

VELOT	AOUT	VELIN	AIN	HWE
4.90	2.45	4.90	2.45	585.93

WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: CULVERT COMPUTATION AT RAILROAD BRIDGE
********** CIRCULAR PIPE CULVERT ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 14:53

CULVERT SUMMARY.

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
2	21.20	0.00	0.00	0.00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
10	0.50	0.035	1.12	32.50	0.0000

TWDEP	QBBL	HWIC	HWOC	OTFULL
2.79	14.00	2.46	5.30	2.77

DSUBC	ASUBC	DSUBN	ASUBN
1.42	2.12	1.77	2.45

VELOT	AOUT	VELIN	AIN	HWE
5.71	2.45	5.71	2.45	586.60

WSPRO
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FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: CULVERT COMPUTATION AT RAILROAD BRIDGE
********** CIRCULAR PIPE CULVERT ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 14:53

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
2	21.20	0.00	0.00	0.00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
10	0.50	0.035	1.12	32.50	0.0000

TWDEP	QBBL	HWIC	HWOC	OTFULL
2.79	16.00	2.84	6.07	3.31

DSUBC	ASUBC	DSUBN	ASUBN
1.51	2.23	1.77	2.45

VELOT	AOUT	VELIN	AIN	HWE
6.53	2 45	6.53	2.45	587 37

ER

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

           *** RUN DATE & TIME:  12/18/86 13:02
  T1        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
  T3          ********** CULVERT RATING ANALYSIS ************
  Q           20  30  40  50  60
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          586.79 586.79 586.79 586.79 586.79
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
          NORTHPORT CREEK:  DRIVEWAY TO TOWNSHIP OFFICE
          ********** CULVERT RATING ANALYSIS ************
           *** RUN DATE & TIME: 12/18/86 13:02


*** START PROCESSING CROSS SECTION - "DWYC "
  CV   DWYC  495          67          24        582.1        582.0       1
  CG         327          36          60
  EX

*** FINISH PROCESSING CROSS SECTION - "DWYC "
*** NOTE -- CULVERT INPUT PRESUMED COMPLETE.
*** CROSS SECTION "DWYC " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    6

--- DATA SUMMARY FOR SECID "DWYC " AT SRD =    495   ERR-CODE =      0


CULVERT PARAMETERS:  ISHAPE   IEQNO     CKE  CVALPH      CN
                        3.     12.    0.50    1.16   0.035

                      NBBL  CVLENG   USINV   DSINV    XCTR
                        1.    24.0  582.00  582.10    67.0

                      RISE    SPAN  BOTRAD  TOPRAD  CORNER
                     36.00   60.00   98.16   30.47    8.52

 NPROF, NQV  =      5     8

+++ BEGINNING PROFILE CALCULATIONS --      5
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WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: DRIVEWAY TO TOWNSHIP OFFICE
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/18/86 13:02

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	36.00	60.00	98.16	30.47	8.52

IEQND	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0.50	0.035	1.16	24.00	0.0000

TWDEP	QBBL	HWIC	HWOC	DTFULL
4.69	20.00	1.46	4.80	1.73

DSUBC	ASUBC	DSUBN	ASUBN
0.98	4.16	3.00	11.66

VELOT	AOUT	VELIN	AIN	HWE
1.72	11.66	1.72	11.66	586.90

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: DRIVEWAY TO TOWNSHIP OFFICE
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/18/86 13:02

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	36.00	60.00	98.16	30.47	8.52

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0.50	0.035	1.16	24.00	0.0000

TWDEP	QBBL	HWIC	HWOC	OTFULL
4.69	30.00	1.88	4.95	1.79

DSUBC	ASUBC	DSUBN	ASUBN
1.23	5.39	3.00	11.66

VELOT	AOUT	VELIN	AIN	HWE
2.57	11.66	2.57	11.66	587.05

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: DRIVEWAY TO TOWNSHIP OFFICE
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/18/86 13:02

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	36.00	60.00	98.16	30.47	8 52

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0.50	0.035	1.16	24.00	0.0000

TWDEP	GBBL	HWIC	HWOC	OTFULL
4.69	40.00	2.25	5.14	1.87

DSUBC	ASUBC	DSUBN	ASUBN
1.46	6.45	3.00	11.66

VELOT	AOUT	VELIN	AIN	HWE
3.43	11.66	3 43	11 66	587 24

WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: DRIVEWAY TO TOWNSHIP OFFICE
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/18/86 13:02

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	36.00	60.00	98.16	30.47	8.52

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0.50	0.035	1.16	24.00	0.0000

TWDEP	QBBL	HWIC	HWOC	OTFULL
4.69	50.00	2.61	5.40	1.97

DSUBC	ASUBC	DSUBN	ASUBN
1.66	7.38	3.00	11.66

VELOT	AOUT	VELIN	AIN	HWE
4.29	11.66	4.29	11.66	587.50

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: DRIVEWAY TO TOWNSHIP OFFICE
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/18/86 13:02

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
3	36.00	60.00	98 16	30 47	8.52

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
12	0.50	0.035	1.16	24.00	0.0000

TWDEP	GBBL	HWIC	HWOC	OTFULL
4.69	60.00	2.96	5.71	2.09

DSUBC	ASUBC	DSUBN	ASUBN
1.85	8.20	3.00	11.66

VELOT	AOUT	VELIN	AIN	HWE
5.15	11.66	5.15	11.66	587.81

ER

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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S  GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME: 12/19/86 11:01
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2          NORTHPORT CREEK.   FISH LADDER
  T3
  Q           260.
*** Q-DATA FOR SEC-ID, ISEQ =             1
  WS          598.68
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WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U  S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
         NORTHPORT CREEK:  FISH LADDER

           *** RUN DATE & TIME: 12/19/86 11:01


*** START PROCESSING CROSS SECTION - "FISH "
  CV   FISH  1700.   0.      80.      597.6    602.4
  CG         111     45.6    61.2
  EX

*** FINISH PROCESSING CROSS SECTION - "FISH "
*** NOTE -- CULVERT INPUT PRESUMED COMPLETE.
*** CROSS SECTION "FISH " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    6

--- DATA SUMMARY FOR SECID "FISH " AT SRD =   1700.  ERR-CODE =      0


CULVERT PARAMETERS:  ISHAPE   IEQNO     CKE  CVALPH      CN
                        1.      1.    0.40    1.00   0.012

                      NBBL  CVLENG   USINV   DSINV    XCTR
                        1.    80.0  602.40  597.60     0.0

                      RISE    SPAN  BOTRAD  TOPRAD  CORNER
                     45.60   61.20    0.00    0.00    0.00

 NPROF, NQV  =       1      4

+++ BEGINNING PROFILE CALCULATIONS --      1
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WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: FISH LADDER

*** RUN DATE & TIME: 12/19/86 11:01

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
1	45.60	61.20	0 00	0.00	0 00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
1	0.40	0.012	1.00	80.00	0.0600

TWDEP	QBBL	HWIC	HWOC	OTFULL
1.08	260.00	14.06	0.00	-999 00

DSUBC	ASUBC	DSUBN	ASUBN
3.80	19.38	1.67	8.52

VELOT	AOUT	VELIN	AIN	HWE
*********	*********	13.42	19.38	611.66

ER

612.2 nomograph
612.0 USGS Pub.

$d_c = 4.32$

stage maybe .3 - .6ft low

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME:  12/18/86 14:36
  T1         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2            NORTHPORT CREEK:     MILL STREET CULVERT
  T3
  Q           260
*** Q-DATA FOR SEC-ID, ISEQ =             1
  WS          588 46
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

        VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
           NORTHPORT CREEK:     MILL STREET CULVERT

           *** RUN DATE & TIME:  12/18/86 14:36


*** START PROCESSING CROSS SECTION - "MILL "
  CV    MILL  790            40             55             585.6          586.5      1
  CG          117            86.4           96
  EX

*** FINISH PROCESSING CROSS SECTION - "MILL "
*** NOTE -- CULVERT INPUT PRESUMED COMPLETE.
*** CROSS SECTION "MILL " ADDED TO DAF, RECORD NO. =     1, IXTYPE =     6

--- DATA SUMMARY FOR SECID "MILL " AT SRD =     790.   ERR-CODE =       0


CULVERT PARAMETERS:   ISHAPE    IEQNO      CKE   CVALPH       CN
                         1.       7.     0.20     1.00    0.012

                       NBBL   CVLENG    USINV    DSINV     XCTR
                         1.     55.0   586.50   585.60     40.0
                     7.2'        9'
                       RISE    SPAN   BOTRAD   TOPRAD   CORNER
                      86.40   96.00     0.00     0.00     0.00

 NPROF, NQV  =       1      4


+++ BEGINNING PROFILE CALCULATIONS --       1
```

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: MILL STREET CULVERT

*** RUN DATE & TIME: 12/18/86 14:36

CULVERT SUMMARY.

8

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
1	86 40	96.00	0.00	0.00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
7	0.20	0.012	1 00	55.00	0.0164

TWDEP	QBBL	HWIC	HWOC	OTFULL
2.86	260.00	5.83	0.00	-999.00

	DSUBC	ASUBC	DSUBN	ASUBN
Dc	3.20	25.59	1.78	14.26

VELOT	AOUT	VELIN	AIN	HWE
*********	*********	10.16	25.59	.591 43

ER

260/8 = 32.5 cfs/ft

Inlet control N_{Omo} = .76×7.2 = 5.47

5.47 + 586.5 = 592

~.5 ft low

d_c = 3.2 A = 25.59

$E6 = 32 + \frac{(10.16)^2}{64.4}(1+.5) = 5.6$

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

            *** RUN DATE & TIME: 12/19/86 08:48
  T1          VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
  T2          NORTHPORT CREEK:  FLOW THROUGH POND ROAD CULVERT
  T3          *************  CULVERT RATING ANALYSIS  *******************
  Q           62  64  66
*** Q-DATA FOR SEC-ID, ISEQ =              1
  WS          592.99   592.99   592.99
```

```
WSPRO          FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286            MODEL  FOR  WATER-SURFACE  PROFILE  COMPUTATIONS

         VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
         NORTHPORT CREEK:  FLOW THROUGH POND ROAD CULVERT
         *************  CULVERT RATING ANALYSIS  *******************
           *** RUN DATE & TIME: 12/19/86 08:48


*** START PROCESSING CROSS SECTION - "POND "
  CV   POND  1045.    20.    21.7     589.8    590.5      1
  CG         211    48.
  EX

*** FINISH PROCESSING CROSS SECTION - "POND "
*** NOTE -- CULVERT INPUT PRESUMED COMPLETE.
*** CROSS SECTION "POND " ADDED TO DAF, RECORD NO. =    1, IXTYPE =    6

--- DATA SUMMARY FOR SECID "POND " AT SRD =   1045.  ERR-CODE =      0


CULVERT PARAMETERS:  ISHAPE   IEQNO     CKE  CVALPH      CN
                        2.      1.    0.20    1.04   0.012

                      NBBL  CVLENG   USINV   DSINV    XCTR
                        1.    21.7  590 50  589.80    20.0

                      RISE    SPAN  BOTRAD  TOPRAD  CORNER
                     48.00    0.00    0.00    0.00    0.00

 NPROF, NQV  =       3      6


+++ BEGINNING PROFILE CALCULATIONS --      3
```

WSPRO
V050286

FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: FLOW THROUGH POND ROAD CULVERT
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 08:48

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
2	48.00	0 00	0 00	0.00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
1	0.20	0.012	1.04	21.70	0.0323

TWDEP	QBBL	HWIC	HWOC	OTFULL
3.19	62.00	4.09	8.15	-1.47

DSUBC	ASUBC	DSUBN	ASUBN
2.40	7 86	1.28	3.46

VELOT	AOUT	VELIN	AIN	HWE
5.77	10.75	17 90	3.46	597.95

12.57ft²

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: FLOW THROUGH POND ROAD CULVERT
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 08:48

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
2	48.00	0.00	0.00	0.00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
1	0 20	0.012	1.04	21.70	0.0323

TWDEP	QBBL	HWIC	HWOC	OTFULL
3 19	64.00	4.15	8.27	-1.44

DSUBC	ASUBC	DSUBN	ASUBN
2.44	8.02	1.30	3.55

VELOT	AOUT	VELIN	AIN	HWE
5.96	10.75	18.05	3.55	598.07

WSPRO FEDERAL HIGHWAY ADMINISTRATION - U. S. GEOLOGICAL SURVEY
V050286 MODEL FOR WATER-SURFACE PROFILE COMPUTATIONS

VILLAGE OF NORTHPORT - LIMITED DETAIL FLOOD INSURANCE STUDY
NORTHPORT CREEK: FLOW THROUGH POND ROAD CULVERT
********** CULVERT RATING ANALYSIS **********
*** RUN DATE & TIME: 12/19/86 08:48

CULVERT SUMMARY:

ISHAPE	RISE	SPAN	BOTRAD	TOPRAD	CORNER
2	48.00	0.00	0.00	0.00	0.00

IEQNO	CKE	CN	CVALPH	CVLENG	CVSLPE
1	0.20	0.012	1.04	21.70	0.0323

TWDEP	QBBL	HWIC	HWOC	OTFULL
3.19	66.00	4.22	8.41	-1.42

DSUBC	ASUBC	DSUBN	ASUBN
2.48	8.17	1.32	3.62

VELOT	AOUT	VELIN	AIN	HWE
6.14	10.75	18 22	3.62	598.21

ER