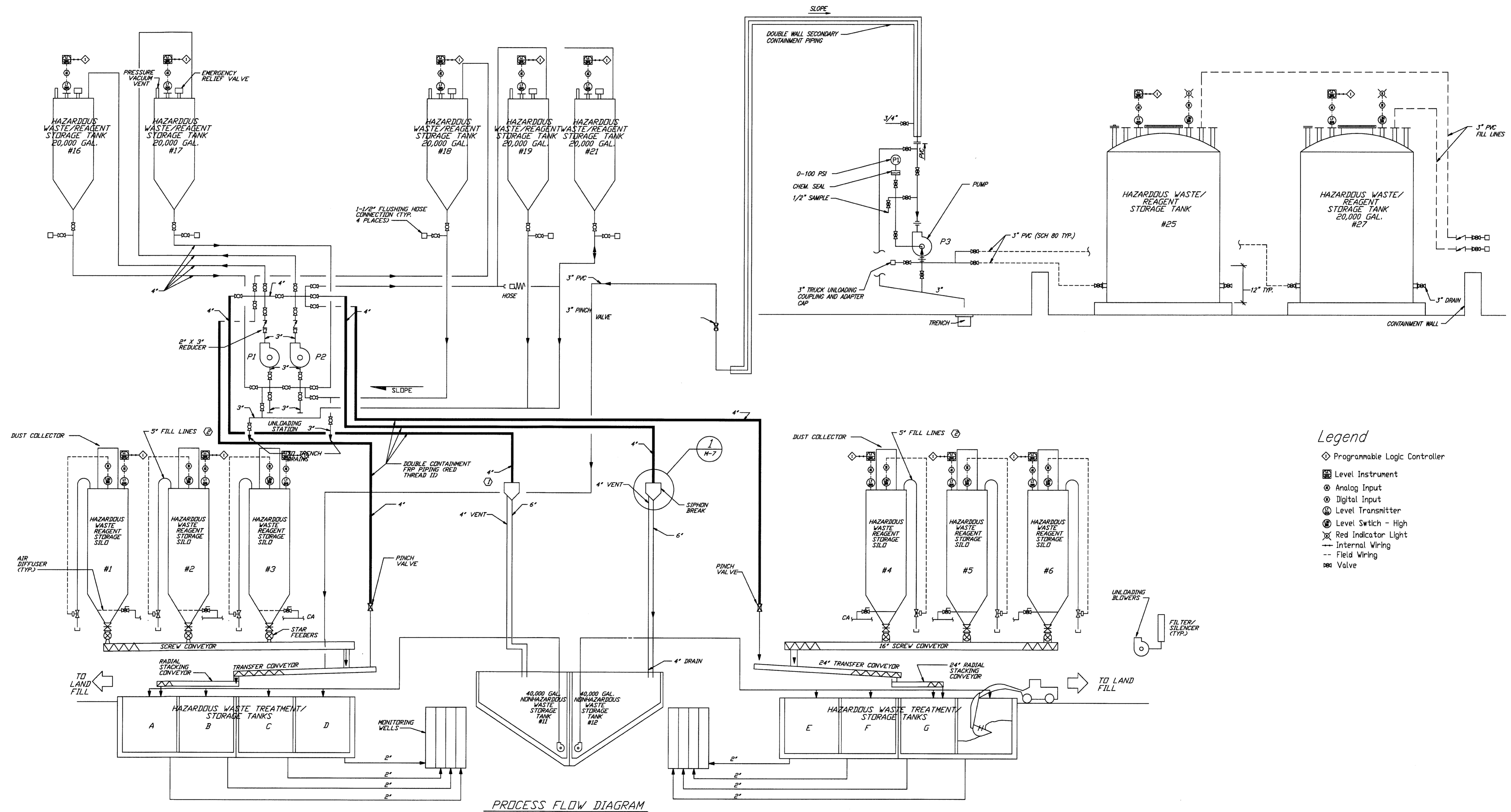


M.A. Olson
01/17/2019



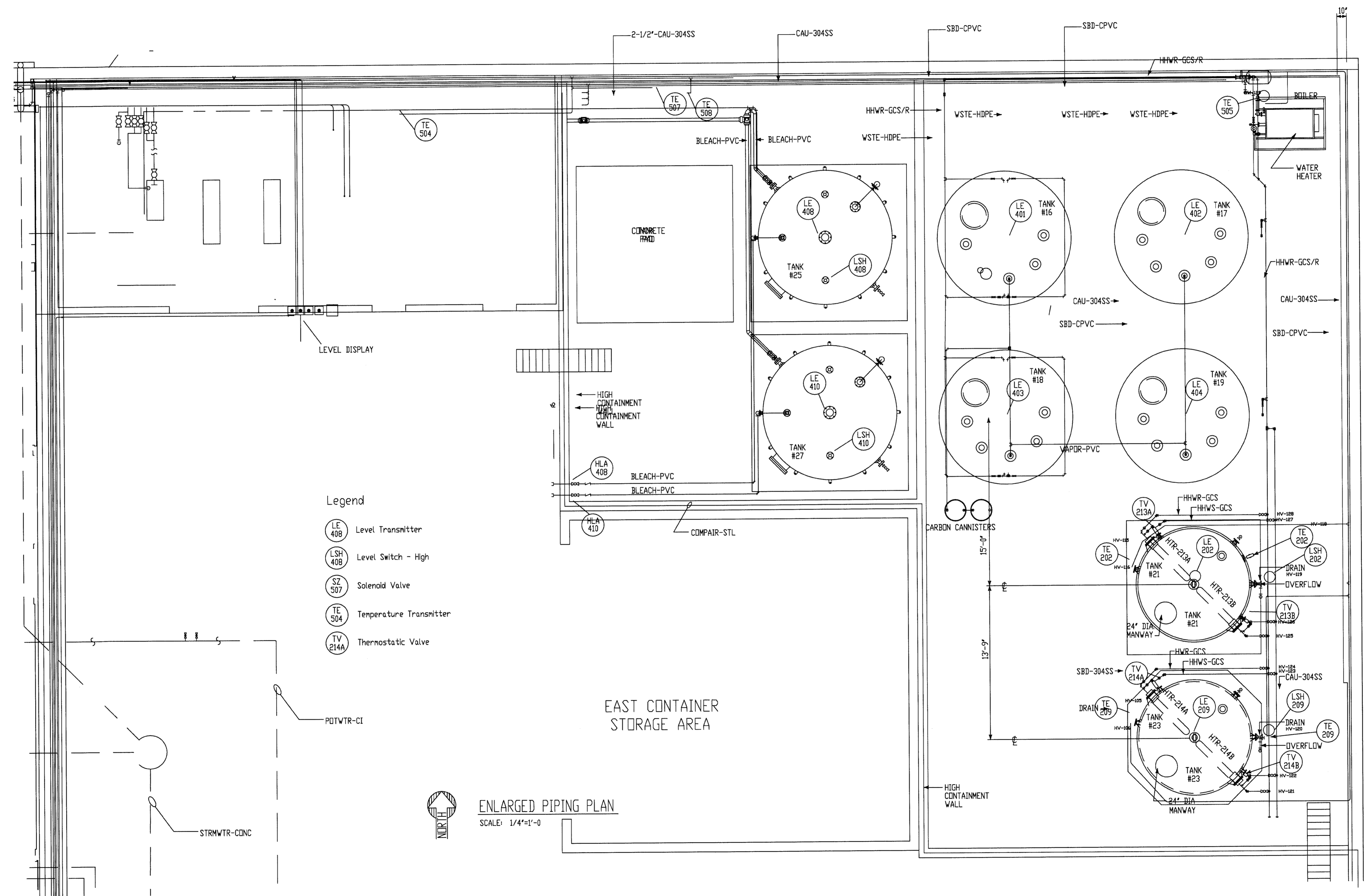
MICHIGAN DISPOSAL WASTE TREATMENT PLANT

7/19/02	Revised	size
A	B	C
D	E	
REVISION		

FILENAME:	PROC. FILE	DATE: 8/19/02	SCALE: N.T.S.
LIC	LIC	SHEET	OF
MICHIGAN DISPOSAL WASTE TREATMENT PLANT		DRN BY: CAG	

WASTE TREATMENT P&ID

STATE OF MICHIGAN
 MICHAEL A. OLSON
 ENGINEER
 NO. 24819
 M.A. Olson
 6/17/2019

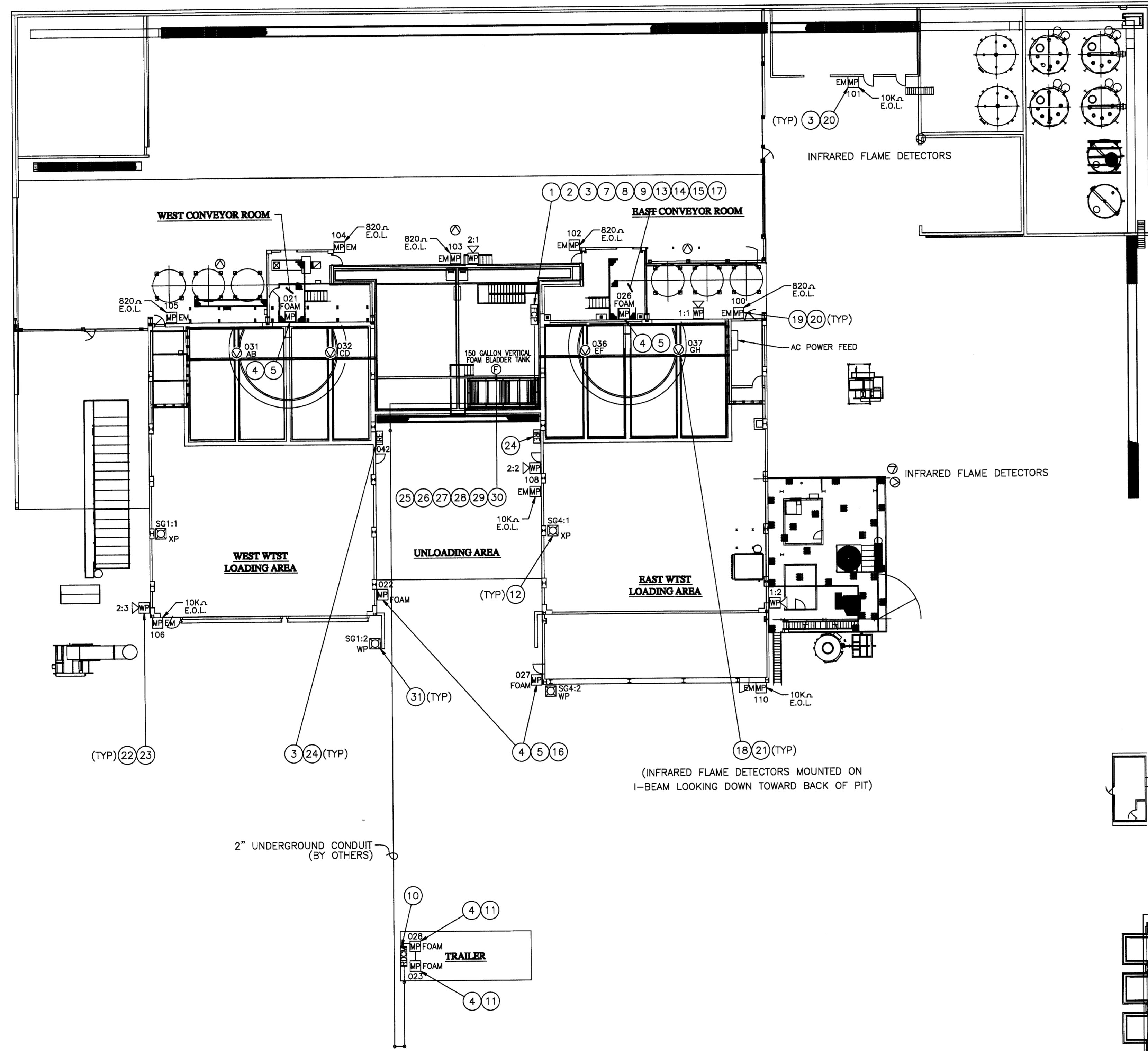


- Legend**
- LE 408 Level Transmitter
 - LSH 408 Level Switch - High
 - SZ 507 Solenoid Valve
 - TE 504 Temperature Transmitter
 - TV 214A Thermostatic Valve

ENLARGED PIPING PLAN
 SCALE: 1/4"=1'-0"

MATCH LINE
 FOR CONT. SEE DWG. PP-9

2/23/00	As-Built				
A	B	C	D	E	F
REVISIONS					
FILENAME:	PROD. FILE	DATE: 2/14/00	SCALE: 1/4"=1'-0"	SHEET	OF
	LTC				
MICHIGAN DISPOSAL WASTE TREATMENT PLANT			TANK FARM PIPING PLAN		

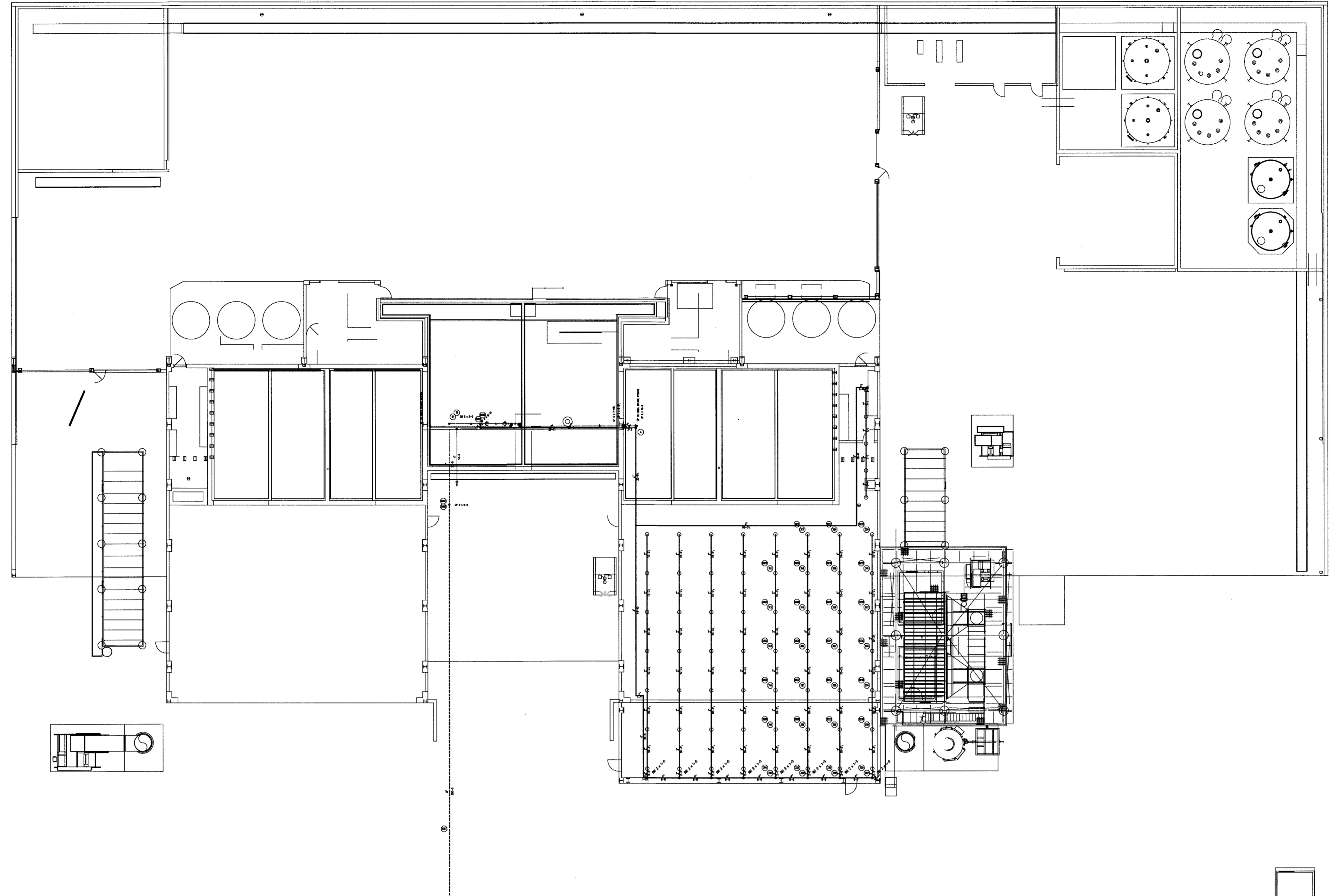
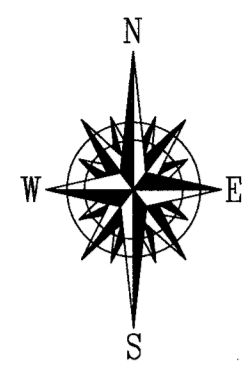


**MICHIGAN DISPOSAL WASTE TREATMENT PLANT
 PARTIAL PLAN VIEW - DEVICE LAYOUT**

MATERIAL LIST					
ITEM	PART NO.	VENDOR	DESCRIPTION	QTY.	REMARKS
1	74-600000-001	FENWAL	FENWALNET 6000 CONTROL PANEL WITH BLUE ENCLOSURE	1	
2	89-300022-001	FENWAL	MULTIZONE POWER SUPPLY	1	
3	70-407018-001	FENWAL	AI MONITOR MODULE, N.O. (NON-SILICONE)	22	
4	30-330002-001	FENWAL	ADDRESSABLE MANUAL PULL STATION, SERIES 3300, SELECTABLE LABEL	6	
5	84-100009-002	KIDDE	508-302C OUTDOOR WEATHERPROOF BACKBOX	4	
6	06-220023-001	FENWAL	IN LINE RESISTOR/DIODE ASSEMBLY	2	
7	FCPS-24FSB	FIRE-LITE	REMOTE POWER SUPPLY, 24 VOLT, 8 AMP	1	
8	42"H x 60"W x 12"D	HEALEY	CONTROL PANEL ENCLOSURE, 42"H x 60"W x 12"D	1	
9	38"H x 56"W	HEALEY	BACKPLATE, 38"H x 56"W	1	
10	74-600000-005	FENWAL	REMOTE DISPLAY/CONTROL MODULE IN BLUE ENCLOSURE	1	
11	84-100009-001	KIDDE	508-302C INDOOR BACKBOX	2	REV. 9
12	FL60-B-D50-C-UL	CLIFFORD & SNELL	EXPLOSION PROOF STROBE	2	
13	12CE7.5	EMBASSY	BATTERY, 7.5 AH, 12 VDC	2	
14	12CE18	EMBASSY	BATTERY, 18.0 AH, 12 VDC	2	
15	12CE33	EMBASSY	BATTERY, 33.0 AH, 12 VDC	4	
16	STI-3150	STI	WEATHER STOPPER, WITHOUT HORN, WITH SPACER	2	
17	800T-H31A	ALLEN-BRADLEY	KEY SWITCH	4	SUPPLIED BY CUSTOMER
18	007240-001	DET-TRONICS	Q1116 UNIVERSAL AIR SHIELD ASSEMBLY	5	
19	70-407002-001	FENWAL	AI MONITOR MODULE, N.O.	5	
20	29-320000-280	FENWAL	MANUAL PULL STATION	9	
21	008100-001	DET-TRONICS	X3301A4N11W1 MULTISPECTRUM INFRARED FLAME DETECTOR	4	SUPPLIED BY CUSTOMER
22	5520D-AW	EDWARDS	DUOTRONIC HORN/SIREN, WEATHERPROOF	5	
23	349	EDWARDS	WEATHERPROOF BACK BOX	5	(WP HORN/SIREN)
24	068789	ANSUL	NEMA 12 ENCLOSURE (FOR IR FLAME DETECTORS)	2	SUPPLIED BY CUSTOMER
25	074200	ANSUL	2" WATER INLET BALL VALVE	1	
26	074200	ANSUL	2" CONCENTRATE ISOLATION BALL VALVE	1	
27	403782	ANSUL	2" SWING CHECK VALVE	1	
28	416495	ANSUL	55 GALLON 3X3 LOW VISC. AR-AFF	3	
29	433907	ANSUL	FLOWMAX CL PROPORTIONER	1	
30	403487	ANSUL	2" HYDRAULIC CONCENTRATE BALL VALVE	1	
31	403487	ANSUL	WEATHER PROOF STROBE W/WEATHER PROOF BACKBOX	2	SUPPLIED BY CUSTOMER

SYMBOLS
 SCALE: NONE

- FN6000 FIRE ALARM/SUPPRESSION SYSTEM CONTROL PANEL
- REMOTE DISPLAY CONTROL MODULE
- AFFF MANUAL PULL STATION (WEATHER PROOF WHERE REQUIRED)
- EMERGENCY MANUAL PULL STATION (YELLOW)
- COMMON ALARM SIREN (WEATHERPROOF)
- 150 GALLON VERTICAL FOAM BLADDER TANK
- INFRARED FLAME DETECTOR A.I. ENCLOSURE
- INFRARED FLAME DETECTOR
- ALARM STROBE (EXPLOSION PROOF)
- ALARM STROBE (WEATHER PROOF)



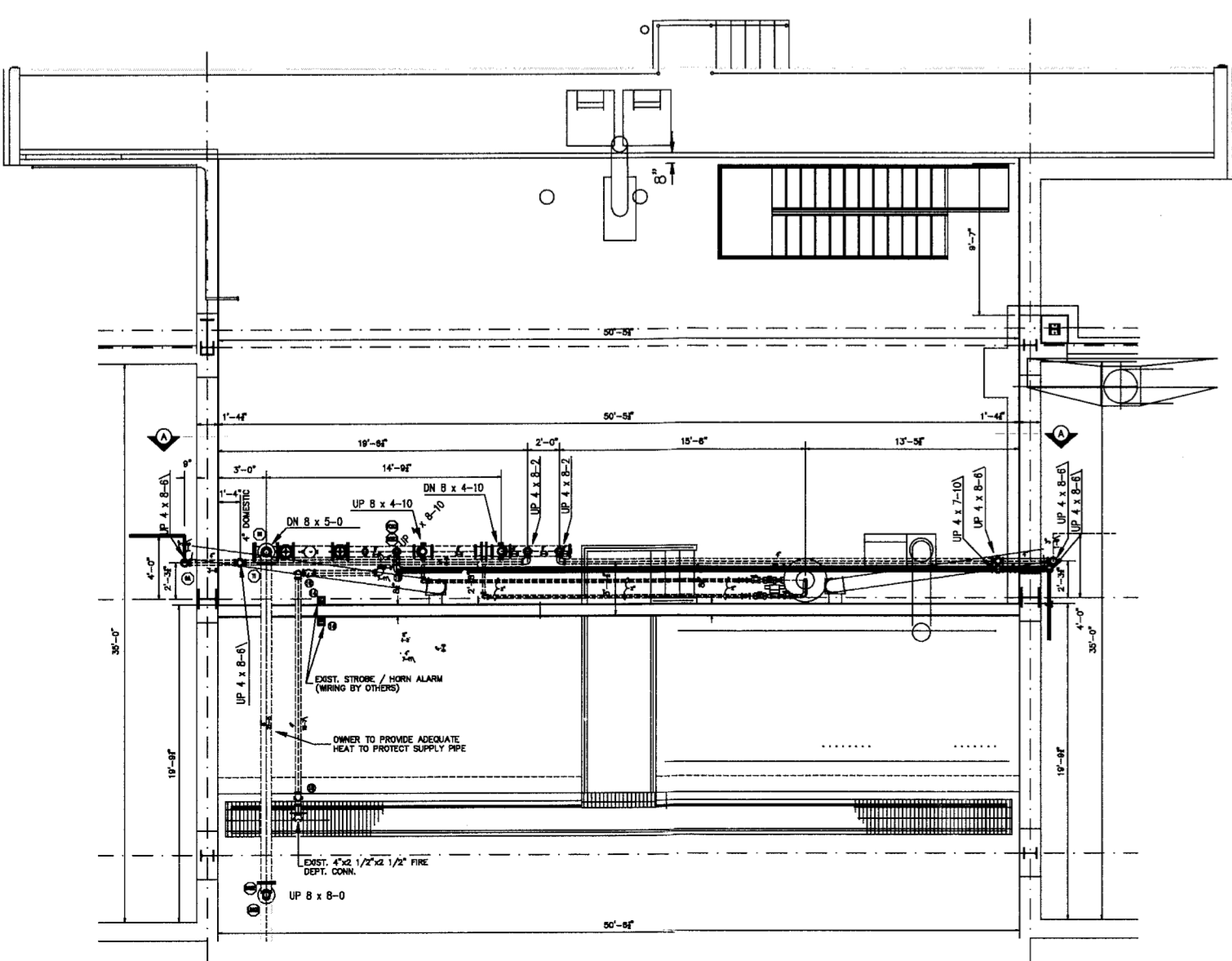
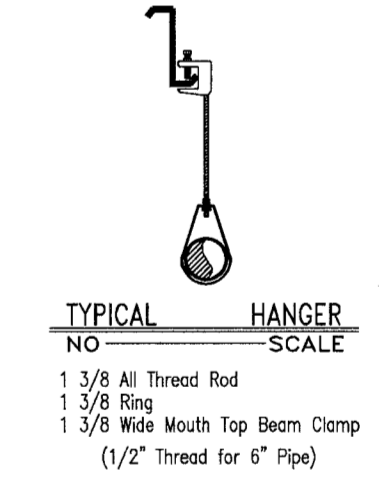
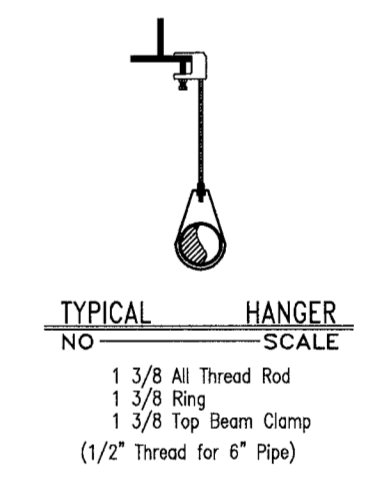
MICHIGAN DISPOSAL WASTE TREATMENT PLANT
BAY PLAN VIEW
SCALE 1" = 18'-0" NORTH

GENERAL NOTES

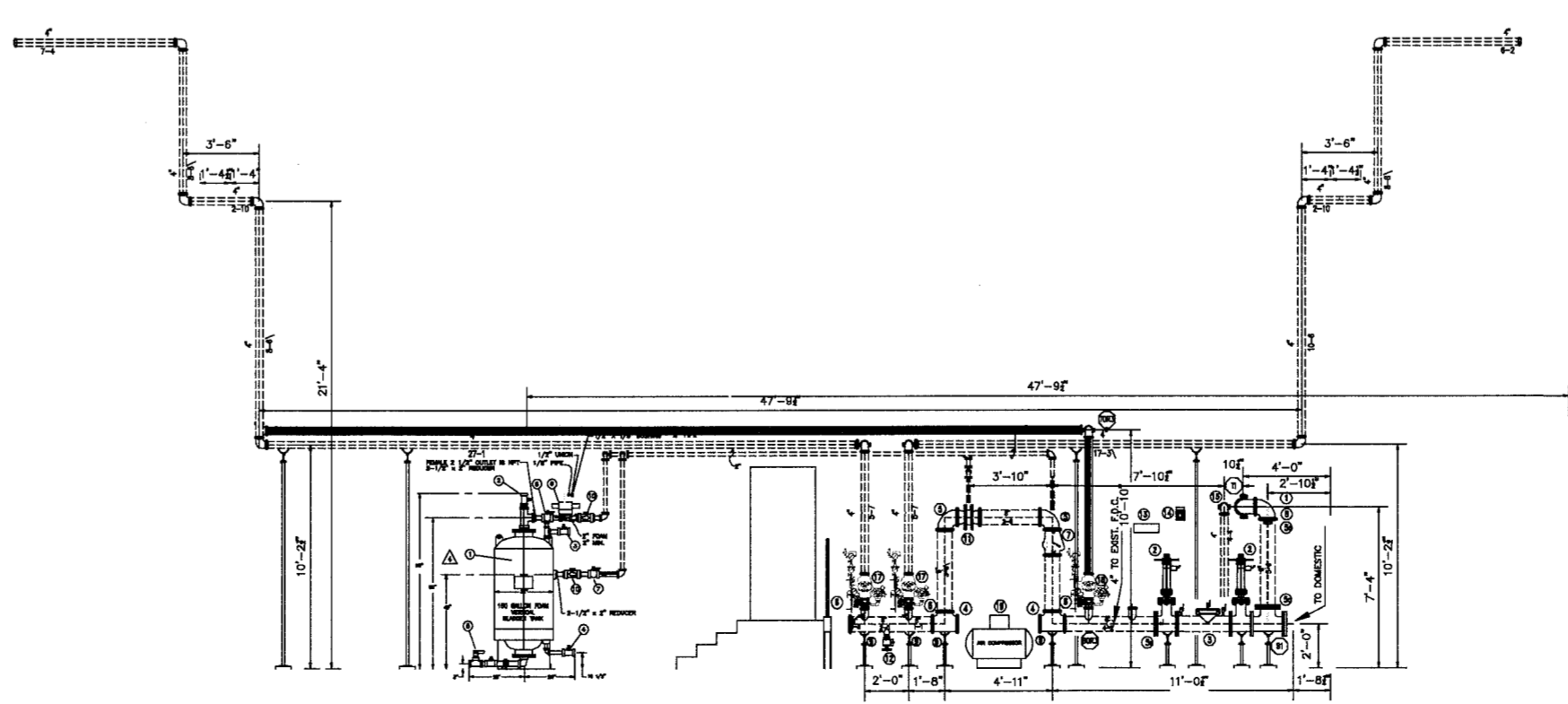
STATE OF MICHIGAN
MICHAELA OLSON
ENGINEER
No. 34973
PROFESSIONAL ENGINEER

- LEGEND
- ① - VFP CONTRACT TO START AT 6" FLANGED WATER SERVICE CONNECTION (BY OTHERS)
 - ② - 8" FLANGED OS&Y VALVE W/ TAMPER SWITCH
 - ③ - 8" AMES MODEL 2000SS DOUBLE CHECK BACKFLOW
 - ④ - 8" VICTAULIC FIRELOCK #002 TEE
 - ⑤ - 8" VICTAULIC FIRELOCK #001 90 ELL
 - ⑥ - 8" VICTAULIC #744 FIRELOCK FLANGE
 - ⑦ - 4" VICTAULIC #705W BUTTERFLY VALVE
 - ⑧ - 8" VICTAULIC #717R CHECK VALVE W/ DRAIN
 - ⑨ - 8" FLANGED 90 ELL
 - ⑩ - 8" PIPE STANDS
 - ⑪ - 4" RELIABLE MODEL DDX DRY PIPE VALVE ASSEMBLY W/ DRAIN, FLOW & PRESSURE SWITCHES
 - ⑫ - 6" AFFX ANSUL CL. VARIABLE RANGE FLOW PROPORTION
 - ⑬ - 2 1/2" FLUSHING CONNECTION
 - ⑭ - SPARE HEAD CABINET
 - ⑮ - STROBE / HORN ALARM
 - ⑯ - 4"x 2 1/2"x 2 1/2" FIRE DEPT. CONN.
 - ⑰ - 4" FIRELOCK GROOVED CHECK VALVE TO FDC
 - ⑱ - 4" RELIABLE DDX DELUGE VALVE
 - ⑳ - 6" RELIABLE MODEL D DRY VALVE
 - ㉑ - AIR COMPRESSOR FOR MODEL D DRY VALVE

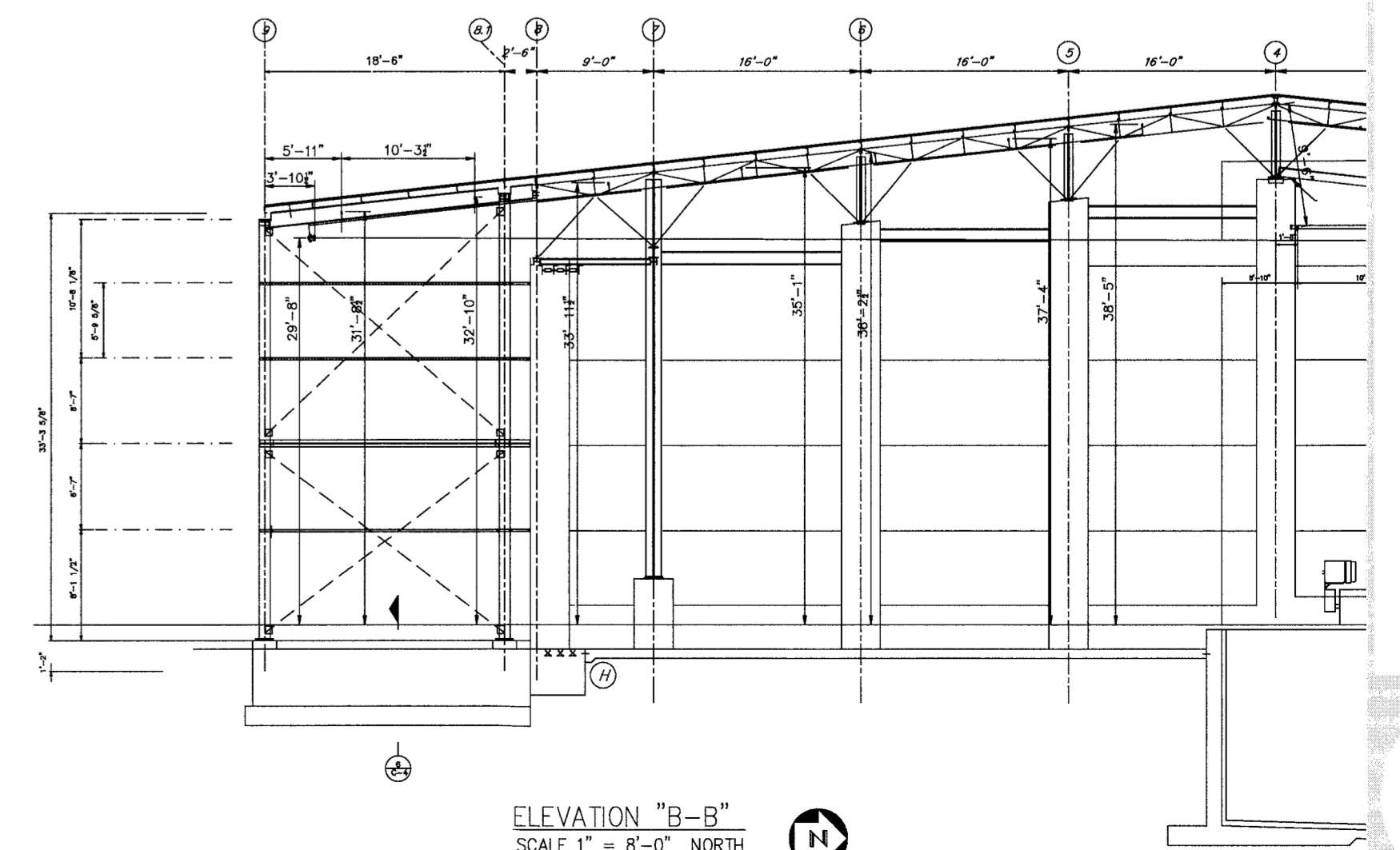
SYSTEM DESIGN SUMMARY	
CALCULATED AREA - SOUTH EAST REMOTE AREA 3	
OCCUPANCY	CHEM FIX
HAZARD	ORDINARY 2
AREA / SPRINKLER	87.47 SQ.FT. (MAX.)
DENSITY	20 GPM / 50 FT.
AREA OF OPERATION	6550 SQ.FT.
# HEADS FLOWING	23
SYSTEM DEMAND	437.63 GPM @ 49.39PSI
	0 CITY SUPPLY
INSIDE HOSE	0 GPM
OUTSIDE HOSE	250 GPM
SPRINKLER HEAD	RELIABLE MODEL T-1" SSJ
ORFICE	1/2"
K FACTOR	5.6
TEMPERATURE	DEGREE 155F



EXIST. RISER PLAN VIEW
SCALE 1" = 10'-0" NORTH



ELEVATION "A-A"
SCALE 1" = 8'-0" NORTH



ELEVATION "B-B"
SCALE 1" = 8'-0" NORTH