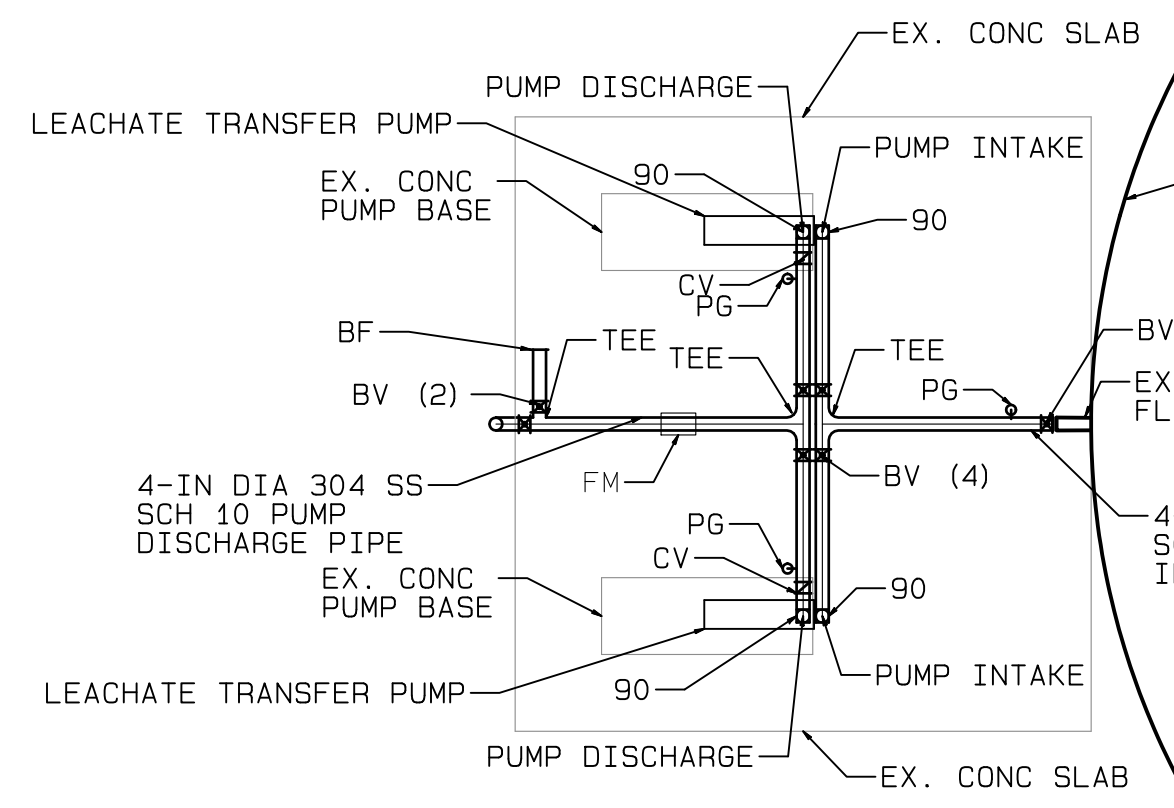
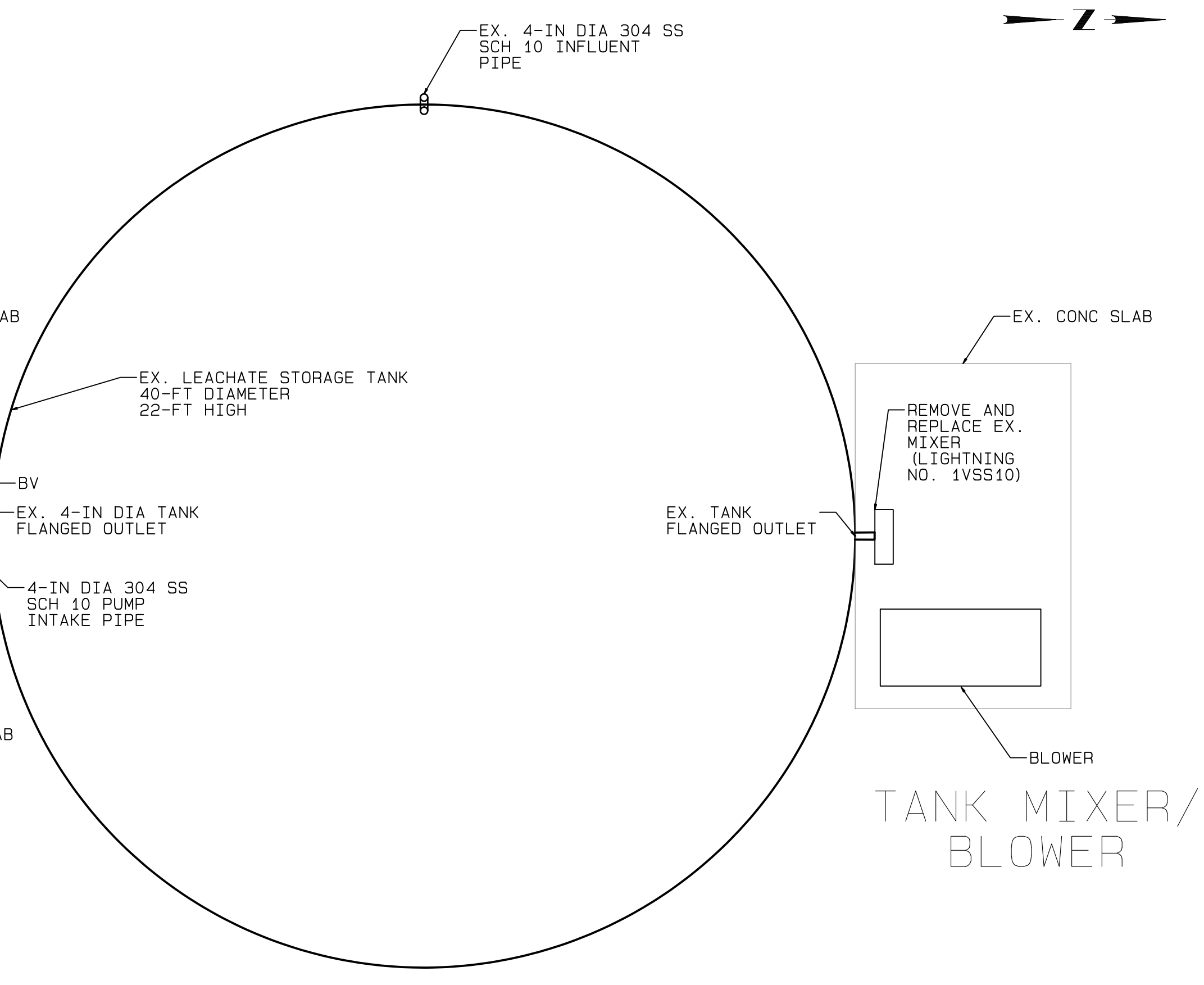


SITE PLAN
1"=20'

LEGEND
 90 = 90-DEGREE BEND
 CV = CHECK VALVE
 BV = BALL VALVE
 BF = BLIND FLANGE
 PG = PRESSURE GAGE
 FM = SEAMETRICS IMAG4600-300 FLOW METER



TANK EFFLUENT PUMP STATION

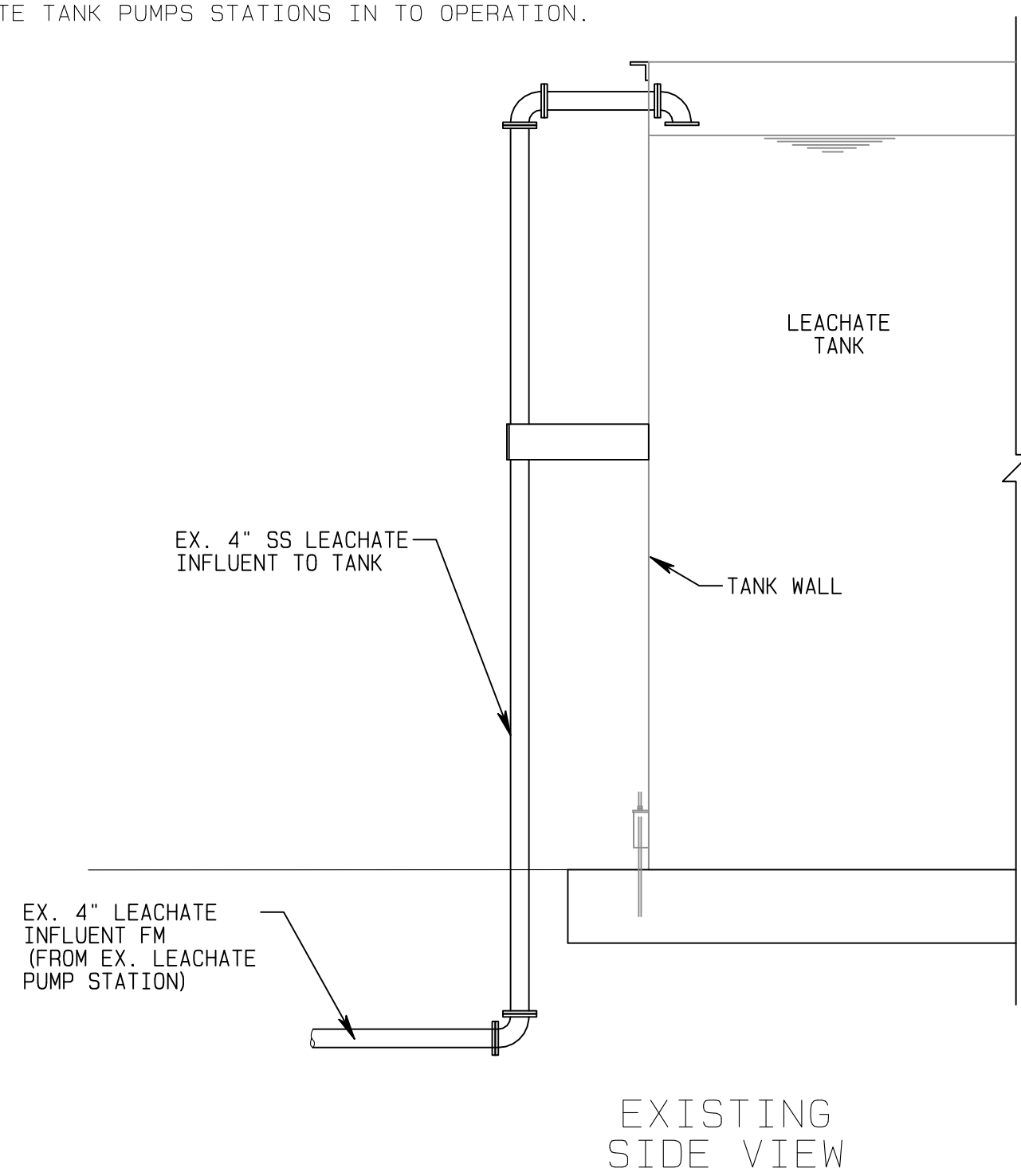


PLAN
1"=5'

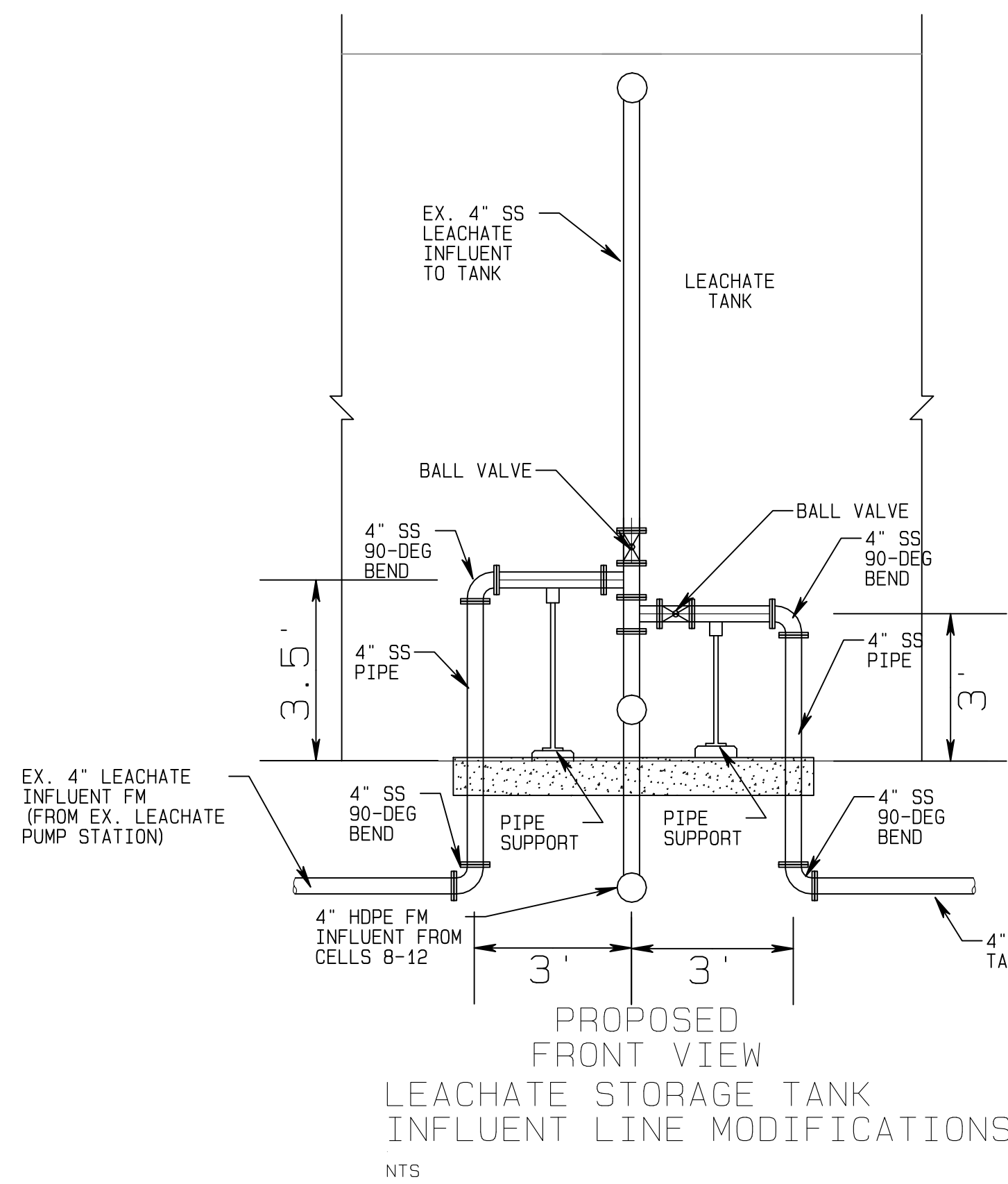
TANK MIXER/ BLOWER

- GENERAL CONSTRUCTION SEQUENCE**
1. PROVIDE A TANKER TRUCK FOR HAULING LEACHATE FROM THE EX. MANHOLE NO. 2 PUMP STATION TO THE ONSITE GCWSD PUMP STATION.
 2. INSTALL LEACHATE TANK INFLUENT LINE MODIFICATIONS.
 3. SHUT DOWN TANK EFFLUENT PUMPS AND CLOSE TANK EFFLUENT VALVES.
 4. INSTALL 50 FEET OF 4-INCH HDPE FM TANK BYPASS LINE.
 5. REMOVE ALL TANK EFFLUENT PIPING, VALVE, AND PUMPS EXCEPT TANK EFFLUENT VALVE.
 6. DRAIN TANK USING TANKER TRUCK AND EX. TANK EFFLUENT VALVE.
 7. INSTALL 4-INCH SS BALL VALVE AT TANK EFFLUENT STUB OUT.
 8. INSTALL TANK EFFLUENT PIPING, VALVES, PUMPS, ELECTRICAL, AND OTHER APPERTENANCES.
 9. INSTALL BLOWER PIPING CONNECTIONS AT TANK.
 10. REMOVE EX. MIXER AND INSTALL NEW MIXER.
 11. PLACE EX. LEACHATE COLLECTION MANHOLE NO. 2 PUMP STATION AND LEACHATE TANK PUMPS STATIONS IN TO OPERATION.
 12. INSTALL LANDFILL SUBMERSTIBLE PUMPS.
 13. INSTALL BLOWER.

- GENERAL CONSTRUCTION NOTES**
1. ALL BELOW GROUND PIPING SHALL BE HDPE DR 17
 2. ALL ABOVE GROUND PIPING SHALL BE 304 STAINLESS STEEL SCHEDULE 10
 3. BALL VALVES SHALL BE CLASS 150 STAINLESS STEEL FLANGED
 4. CHECK VALVES SHALL BE CLASS 150 STAINLESS STEEL SWING CHECK

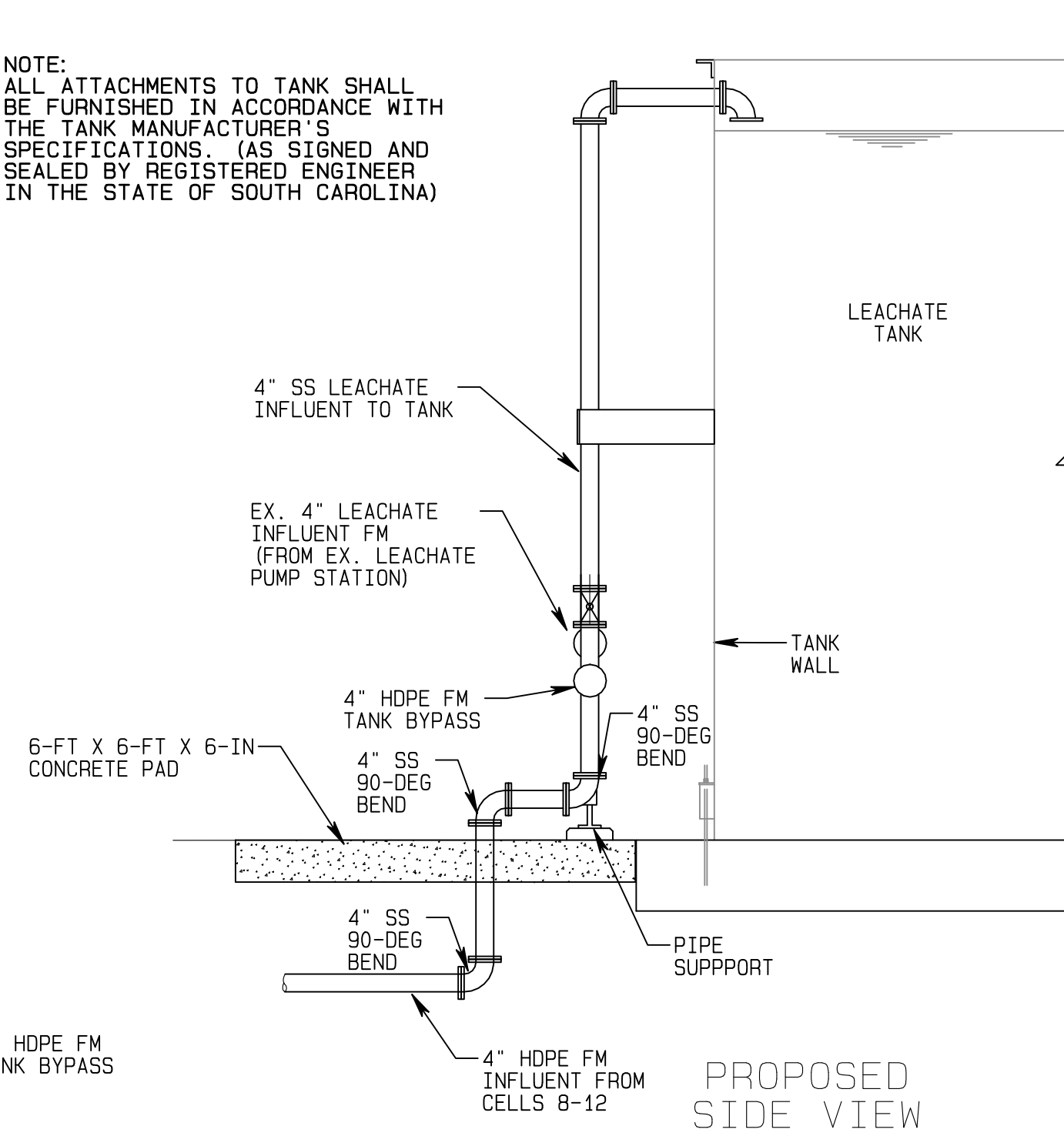


EXISTING SIDE VIEW

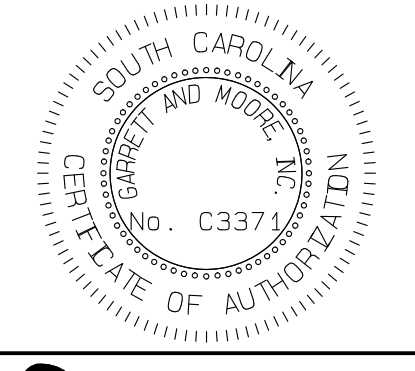
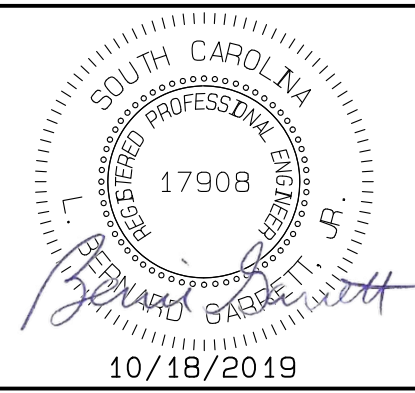


PROPOSED FRONT VIEW
LEACHATE STORAGE TANK INFLUENT LINE MODIFICATIONS
NTS

NOTE:
ALL ATTACHMENTS TO TANK SHALL BE FURNISHED IN ACCORDANCE WITH THE TANK MANUFACTURER'S SPECIFICATIONS. (AS SIGNED AND SEALED BY REGISTERED ENGINEER IN THE STATE OF SOUTH CAROLINA)



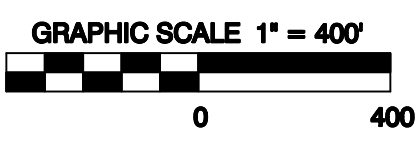
PROPOSED SIDE VIEW



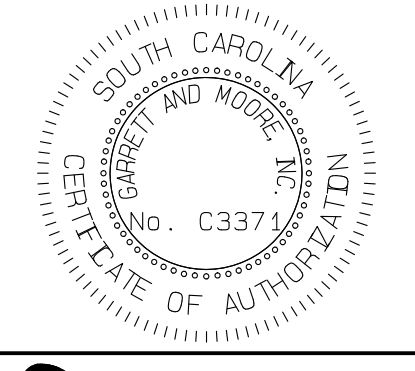
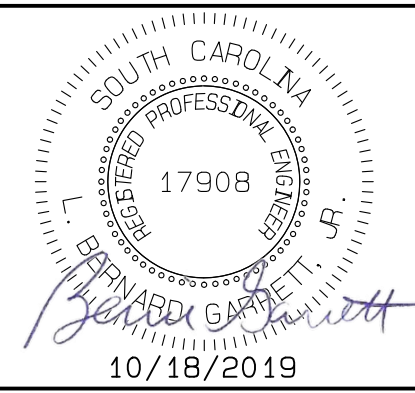
GARRETT & MOORE
 Engineering for the Power and Waste Industries
 206 High House Road, Suite 259
 Cary, North Carolina 27513
 TEL: 919 - 792 - 1900 FAX: 966 - 311 - 7206
 NC FIRM C-2910

GEORGETOWN COUNTY SOLID WASTE FACILITY
LEACHATE MANAGEMENT UPGRADES

REVISION	DATE
1)	
2)	
3)	
4)	



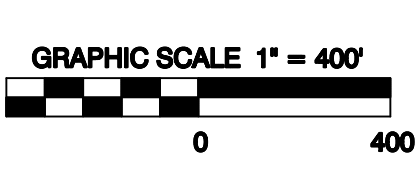
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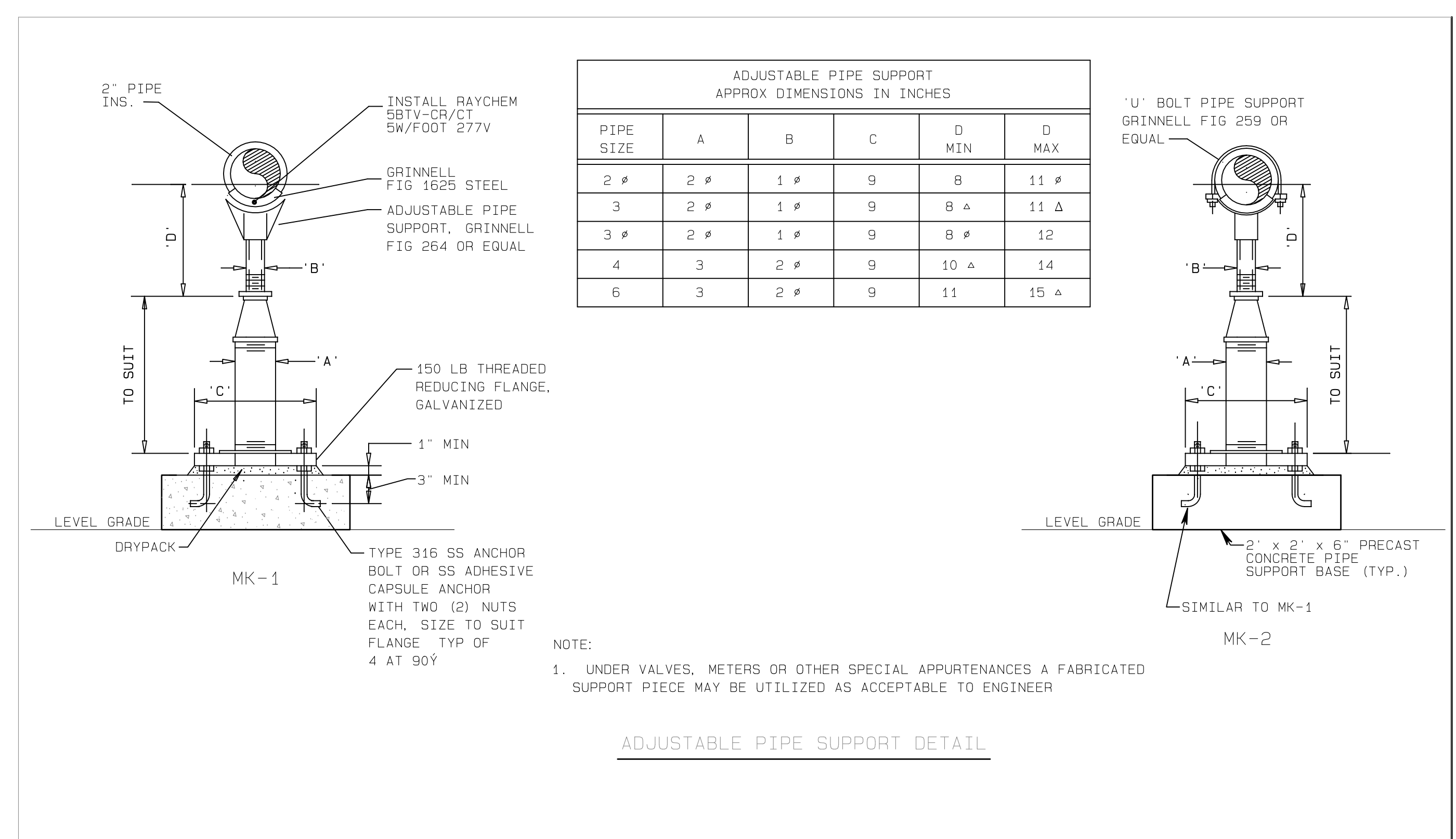
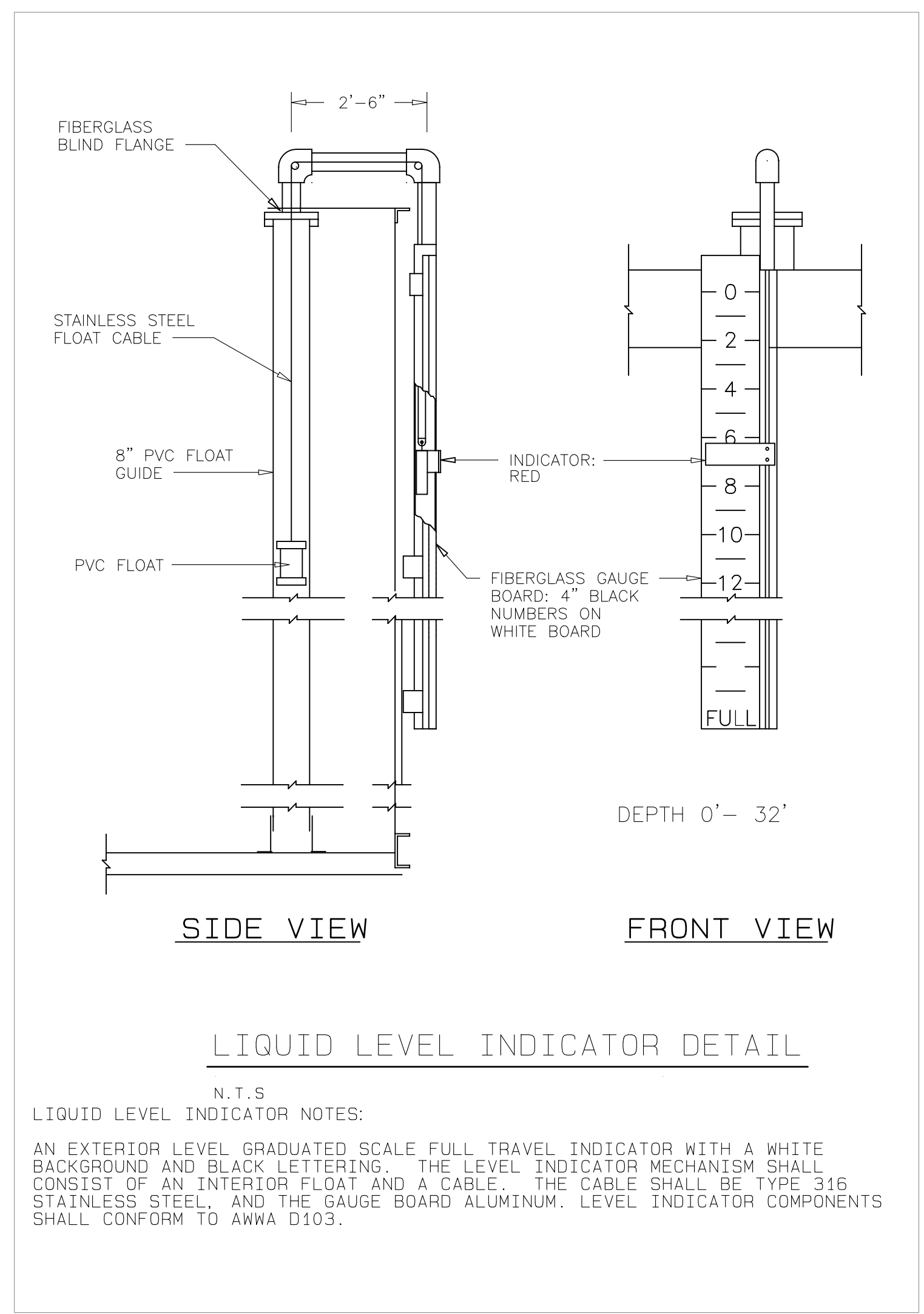
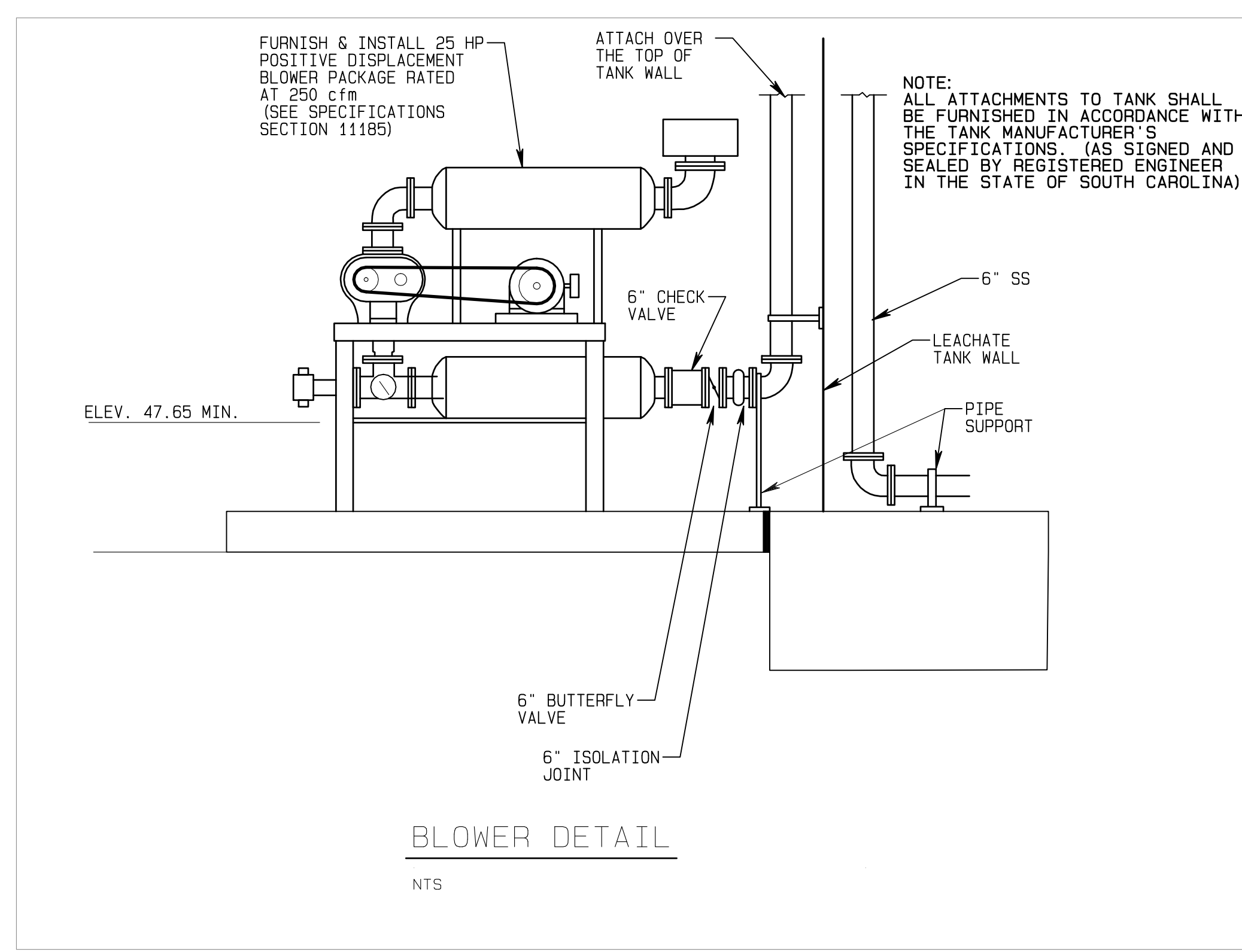
GARRETT & MOORE
 Engineering for the Power and Waste Industries
 206 High House Road, Suite 259
 Cary, North Carolina 27513
 TEL: 919 - 792 - 1900 FAX: 966 - 311 - 7206
 NC FIRM C-2910

**GEORGETOWN COUNTY
 SOLID WASTE FACILITY
 LEACHATE MANAGEMENT
 UPGRADES**

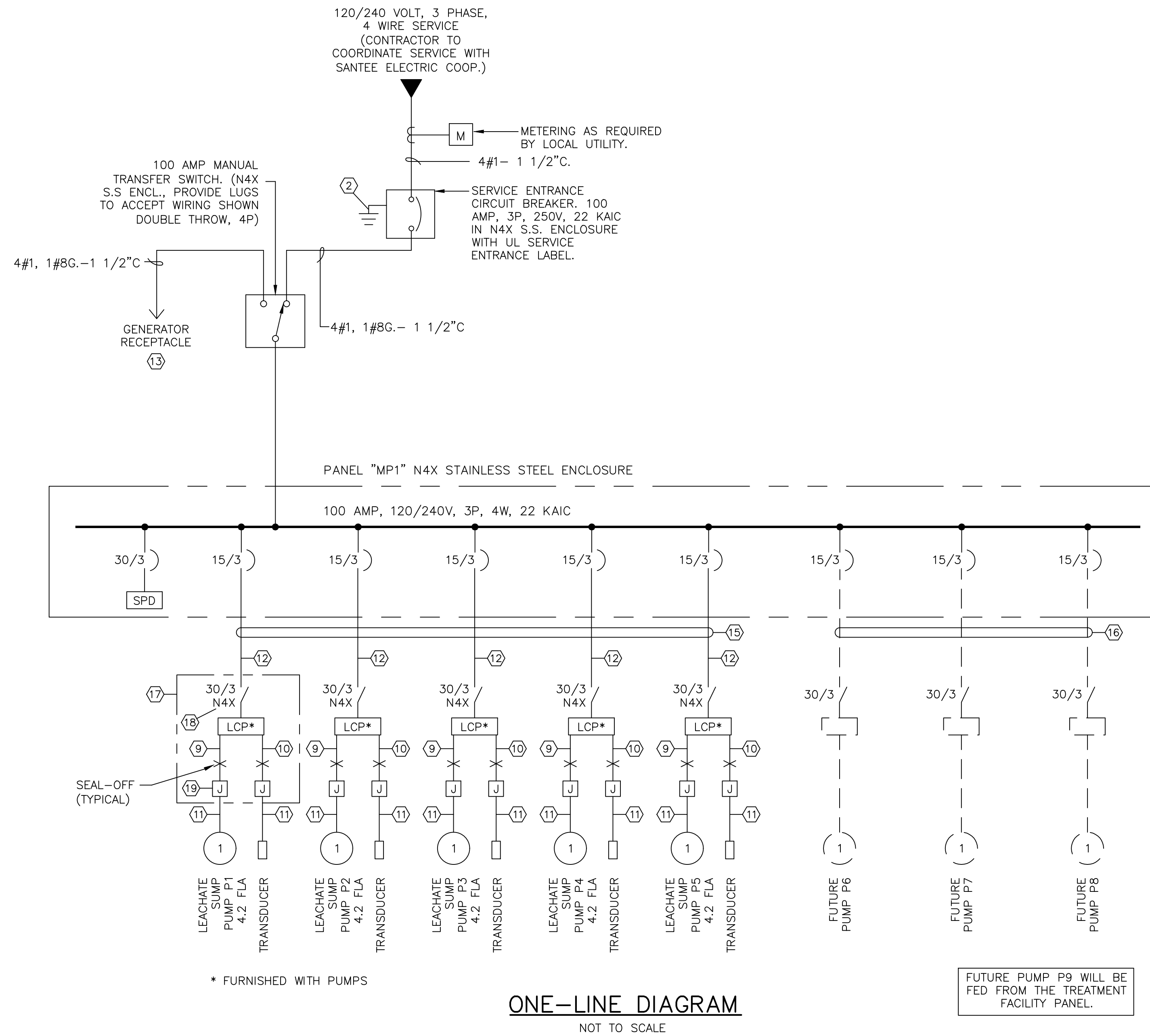
DATE	REVISION
	1)
	2)
	3)
	4)



**SHEET
 2**



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* FURNISHED WITH PUMPS

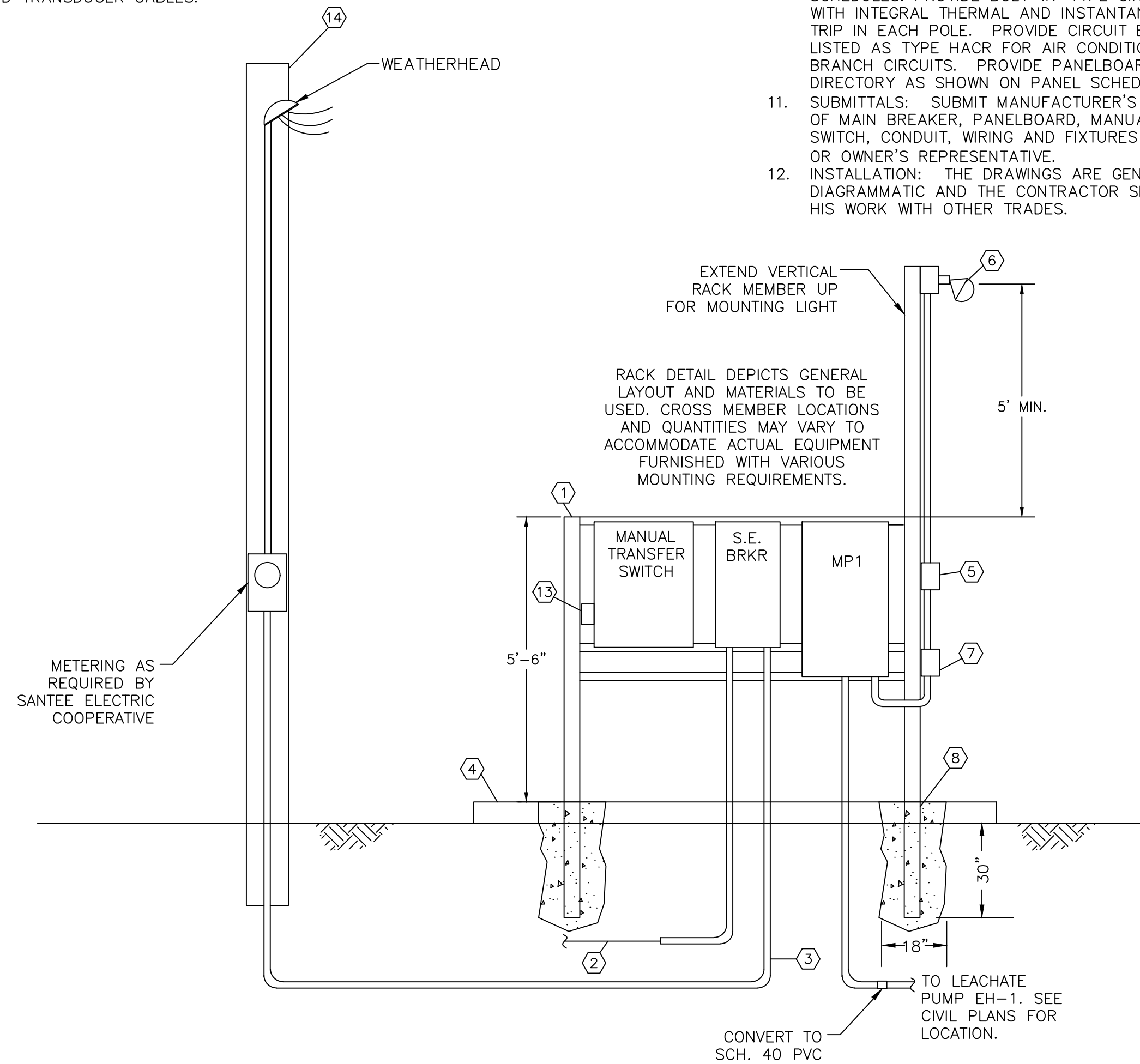
ONE-LINE DIAGRAM
NOT TO SCALE

FUTURE PUMP P9 WILL BE FED FROM THE TREATMENT FACILITY PANEL.

PHASE			PANELBOARD: MP1			BUS: COPPER			MAINS: LUGS ONLY			PHASE		
"A"	"B"	"C"	SERVICE: 120/240V, 3PH, 4W, S/N			RATING: 100A			LOCATION: EQUIPMENT RACK			"A"	"B"	"C"
V.A.	V.A.	V.A.	MOUNTING: SURFACE			N4XS.S.						V.A.	V.A.	V.A.
			P	BKR	CKT #	BKR	P	LOAD						
581	581				1 2	15 3		PUMP P1						
					3 4			PUMP P2						
					5 6									
581	581				7 8	15 3		PUMP P3						581
					9 10									
					11 12									
581	581				13 14	15 3		PUMP P5						581
					15 16									
					17 18									
581	581				19 20	15 3		PUMP P7 (FUTURE)						581
					21 22									
					23 24									
					25 26									
					27 28									
					29 30									
					31 32									
					33 34									
					35 36									
					37 38									
					39 40									
					41 42									
2324								TOTAL "A"						2324
	2324							TOTAL "B"						2324
		2324						TOTAL "C"						2324
			TOTAL =											

EQUIPMENT RACK/ONE-LINE DIAGRAM NOTES

- 4" SQUARE ALUMINUM TUBING. PROVIDE 316 STAINLESS STEEL HARDWARE. PROVIDE 2"x4" ALUMINUM C-CHANNEL CROSS MEMBERS WELDED TO UPRIGHTS.
- 1" SCH. 80 PVC WITH #4 BARE COPPER GROUNDING ELECTRODE. BOND TO 3-3/4"x10" COPPERCLAD GROUND RODS SPACED IN A 10' TRIANGLE.
- SECONDARY SERVICE. SEE ONE LINE DIAGRAM. (BASE PRICE ON RACK LOCATION 50' FROM POLE)
- 8" THICK REINFORCED CONCRETE PAD. (APPROX. 8' X 4')
- 15A, 1P WEATHERPROOF LIGHT SWITCH.
- 78 W LED FIXTURE. RAB FXLED 78 WITH PHOTOCELL.
- 20 AMP GFCI WEATHERPROOF RECEPTACLE.
- COAT WITH BITUMASTIC PAINT WHERE IN CONTACT WITH EARTH OR CONCRETE TO 4" ABOVE PAD. (TYPICAL FOR CONDUIT)
- 3#12, 1#12G.-3/4"C. (VERIFY TO MATCH CONDUCTORS IN CABLE.)
- 2/C SH-3/4"C. (VERIFY TO MATCH CONDUCTORS IN CABLE.)
- 1 1/2"C. WITH CABLE BY EQUIPMENT SUPPLIER TO WELL HEAD.
- 3#8, 1#8G-1"C.
- GENERATOR RECEPTACLE TO MATE WITH PLUG ON OWNER'S GENERATOR. (APPLETON 200AMP, 3P, 4W)
- NEW 30' TREATED POLE FOR NEW SERVICE. VERIFY LOCATION AND REQUIREMENTS WITH UTILITY. EXTEND CONDUIT UP POLE, INSTALL METER BASE AND WEATHERHEAD AT HEIGHT AS DIRECTED.
- 15#8, 5#8G.-2 1/2"C. (ROUTE TO NEAREST CENTER HANDHOLE, EXTEND CONDUCTORS THRU 4" CONDUIT TO SUMP PUMP LOCATIONS.)
- 2 1/2" EMPTY CONDUIT WITH PULL STRING. ROUTE TO NEAREST CENTER HANDHOLE.
- INSTALL CONTROL PANEL, DISCONNECT AND JB'S ADJACENT TO SUMP ON RACK PER NOTE 1. (TYPICAL)
- FURNISHED 30 AMP, 3P, HD N4X S.S. NON-FUSED DISCONNECT.
- NEMA 4X S.S. HINGED COVER JUNCTION BOX WITH FINGER-SAFE TERMINALS FOR PUMP AND TRANSDUCER CABLES.



EQUIPMENT RACK DETAIL
NOT TO SCALE

ELECTRICAL SPECIFICATIONS

- GENERAL: PROVIDE A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED HEREIN, AND AS NEEDED FOR A COMPLETE AND PROPER INSTALLATION INCLUDING
- WARRANTY: PROVIDE STANDARD ONE (1) YEAR WARRANTY ON ALL LABOR AND MATERIALS.
- RULES AND PERMITS: THE ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC, IBC, OSHA, AND ALL LOCAL CODES.
- ELECTRICAL SERVICE: FROM THE UTILITY COMPANY, ESTABLISH REQUIREMENTS FOR TRANSFORMER PAD(S), METERING, CONNECTIONS, ETC., AND MAKE PROVISIONS FOR THEM: PROVIDING AND INSTALLING ALL LUGS, CONNECTORS, GROUNDING, ETC., REQUIRED FOR A COMPLETE INSTALLATION.
- RACEWAYS: CONDUIT SHALL BE RIGID ALUMINUM WITH RIGID ALUMINUM FITTINGS. CONDUIT IN DIRECT CONDUIT WITH THE EARTH SHALL HAVE A COAT OF BITUMASTIC PAINT. CONDUIT TO LEACHATE PUMPS SHALL BE SCHEDULE 40 PVC INSTALLED IN PIPE TRENCH. PROVIDE ALUMINUM BACKED LOCATOR TAPE FOR ALL UNDERGROUND CONDUITS. INSTALL HANDHOLE EVERY 500 FT. (QUAZITE WITH ELECTRIC LOGO, NON-TRAFFIC RATED) CONDUCTORS: PROVIDE COPPER, 600V, 90°C, TYPE XHHW-2.
- WIRING DEVICES: RECEPTACLES SHALL BE SPECIFICATION GRADE, IVORY, 20 AMPERE, 125 VOLT. LIGHT SWITCHES SHALL BE TOGGLE TYPE, SPECIFICATION GRADE, IVORY, 20 AMPERE, 120-277 VOLT OF THE NUMBER OF POLES SHOWN ON THE DRAWINGS.
- LIGHTING: THE FIXTURES INDICATED IN THE SCHEDULE ARE FOR DESIGN REFERENCE. EQUIVALENT FIXTURES SHALL BE PERMITTED AS ACCEPTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE. PROVIDE ALL HANGERS, SUPPORTS AND ACCESSORIES REQUIRED FOR MOUNTING.
- DISCONNECT/SAFETY SWITCHES: NON-FUSIBLE (SAFETY) SWITCH ASSEMBLIES: NEMA KS 1; TYPE HD, QUICK-MAKE, QUICK-BREAK, LOAD INTERRUPTER ENCLOSED KNIFE SWITCH WITH EXTERNALLY OPERABLE HANDLE INTERLOCKED TO PREVENT OPENING FRONT COVER WITH SWITCH IN ON POSITION. ALL SWITCHES TO BE NEMA 4X STAINLESS STEEL.
- PANELBOARDS: NEMA PB 1; CIRCUIT BREAKER TYPE, NEMA 4X STAINLESS STEEL, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. PROVIDE PANELBOARDS WITH TIN PLATED, COPPER BUS, RATINGS AS SCHEDULED. PROVIDE COPPER GROUND BUS IN ALL PANELBOARDS. MINIMUM INTEGRATED SHORT CIRCUIT RATING AS SHOWN IN PANEL SCHEDULES. PROVIDE BOLT-IN-TYPE CIRCUIT BREAKERS WITH INTEGRAL THERMAL AND INSTANTANEOUS MAGNETIC TRIP IN EACH POLE. PROVIDE CIRCUIT BREAKERS UL LISTED AS TYPE HACR FOR AIR CONDITIONING EQUIPMENT BRANCH CIRCUITS. PROVIDE PANELBOARDS WITH TYPED DIRECTORY AS SHOWN ON PANEL SCHEDULES.
- SUBMITTALS: SUBMIT MANUFACTURER'S SHOP DRAWINGS OF MAIN BREAKER, PANELBOARD, MANUAL TRANSFER SWITCH, CONDUIT, WIRING AND FIXTURES TO THE OWNER OR OWNER'S REPRESENTATIVE.
- INSTALLATION: THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG: ATH
DESIGNED BY: ATH
DRAWN BY: HWH
CHECKED BY: ATH
APPROVED: ATH

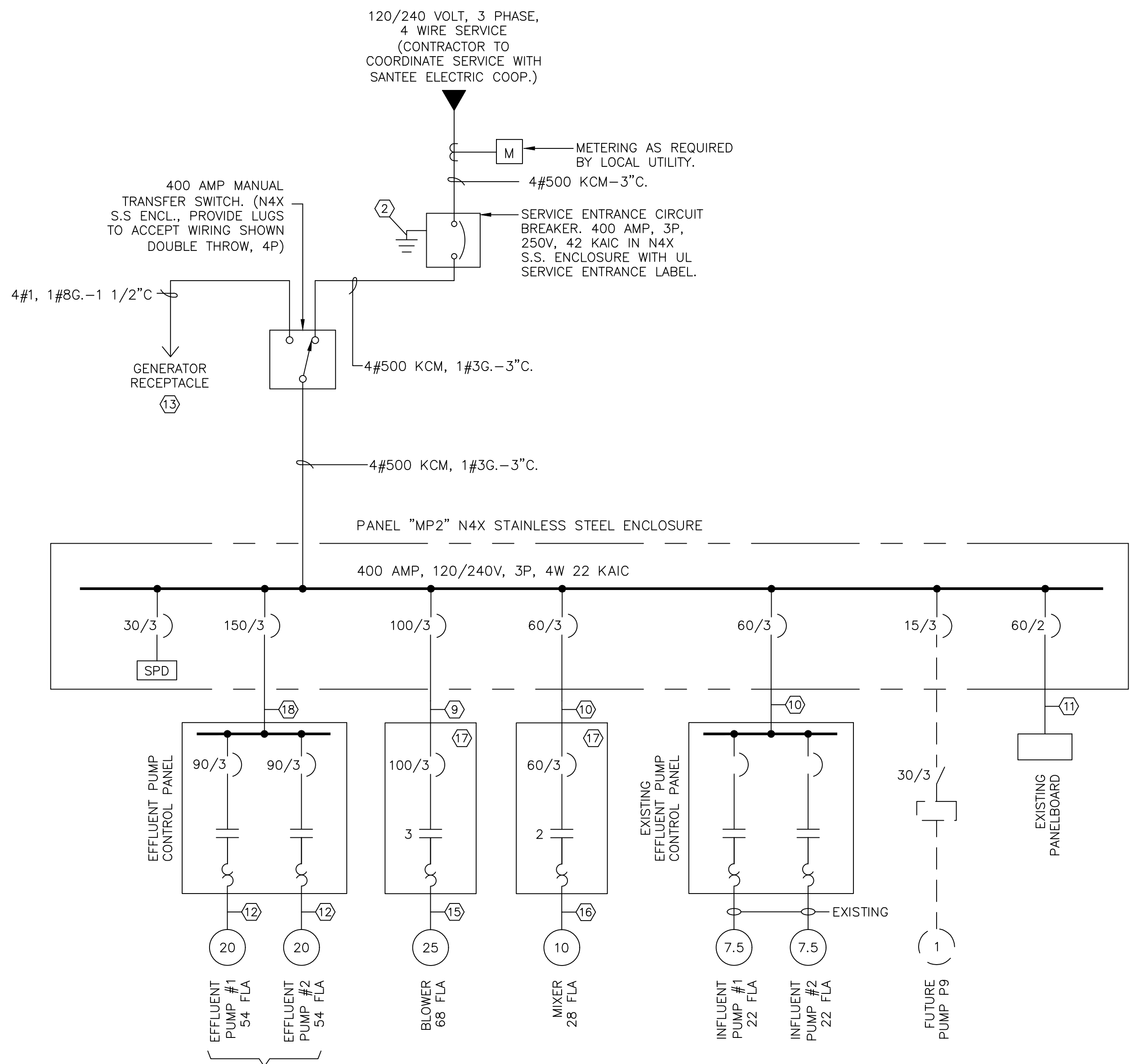
HOWARD ENGINEERING
No. 1636
REGISTERED PROFESSIONAL ENGINEER
SOUTH CAROLINA
10-15-19

HOWARD ENGINEERING
ELECTRICAL-CONTROLS-AUTOMATION
MARIETTA, SOUTH CAROLINA
(864) 836-0440

SHEET TITLE:
**ELECTRICAL PLAN
LEACHATE SUMP
PUMPS P-1 - P-5**

PROJECT:
**GEORGETOWN COUNTY
LANDFILL PUMP
ADDITIONS**

DATE: OCTOBER 2019
HEI PROJECT NO. A1930
SCALE: NO SCALE
SHEET NO. E1 OF 4

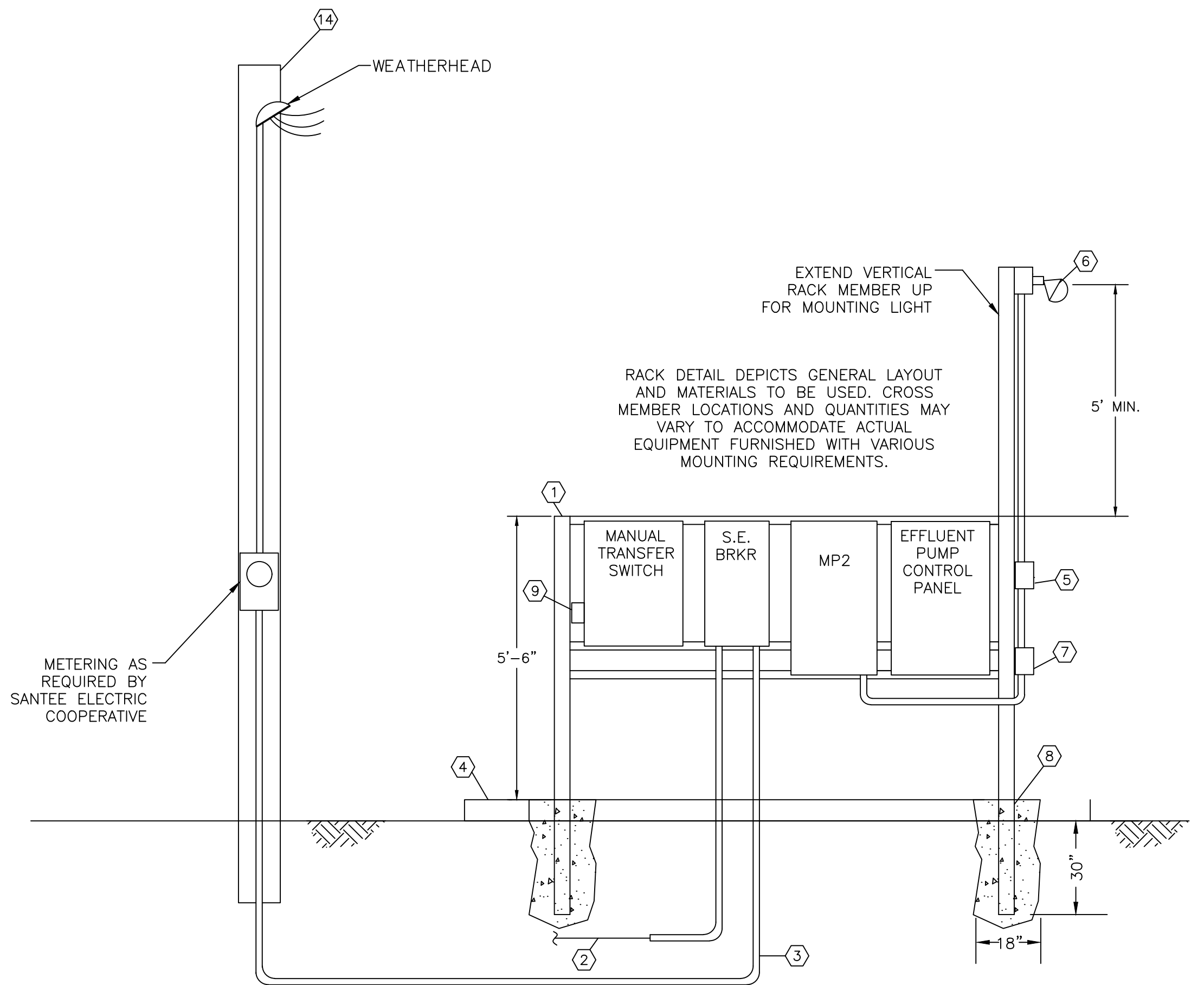


ONE-LINE DIAGRAM
NOT TO SCALE

PHASE		PANELBOARD: MP2		BUS: COPPER		MAINS: LUGS ONLY		PHASE		
"A"	"B"	"C"	SERVICE: 120/240V, 3PH, 4W, S/N	RATING: 400A	LOCATION: EQUIPMENT RACK	"A"	"B"	"C"		
V.A.	V.A.	V.A.	MOUNTING: SURFACE	N4X S.S.		V.A.	V.A.	V.A.		
7470			EFFLUENT PUMP CONTROL PANEL	3	150	1	2	100	3	BLOWER
	7470					3	4			9407
		7470				5	6			9407
3874			MIXER	3	60	7	8	60	3	INFLUENT PUMP CONTROL PANEL
	3874					9	10			6087
		3874				11	12			6087
100			LEVEL TRANSMITTER	1	20	13	14	15	3	PUMP P9 (FUTURE)
			HIGH LEG DO NOT USE			15	16			581
			60A PANEL	2	60	17	18			581
			HIGH LEG DO NOT USE			19	20	20	3	SPARE
			SPARE	1	20	21	22			
			SPARE	3	20	23	24			
						25	26			
						27	28			
						29	30			
			SPARE	3	20	31	32	20	1	RECEPTACLE
						33	34			HIGH LEG DO NOT USE
						35	36	20	1	LIGHT
			SPD	3	30	37	38	20	1	SPARE
						39	40			HIGH LEG DO NOT USE
						41	42	20	1	SPARE
11444			TOTAL "A"			27519				TOTAL "A"
	11344		TOTAL "B"			27419				TOTAL "B"
		11344	TOTAL "C"			27419				TOTAL "C"
			TOTAL =			82357				16075

EQUIPMENT RACK/ONE-LINE DIAGRAM NOTES

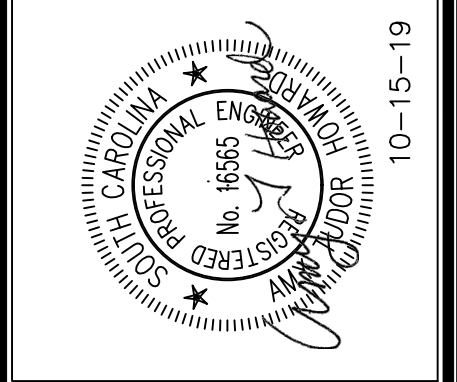
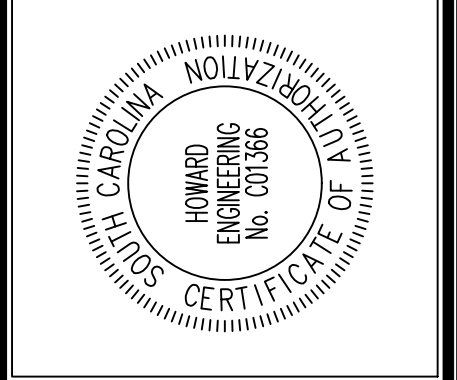
- 4" SQUARE ALUMINUM TUBING. PROVIDE 316 STAINLESS STEEL HARDWARE. PROVIDE 2"X4" ALUMINUM C-CHANNEL CROSS MEMBERS WELDED TO UPRIGHTS.
- 3/4" SCH. 80 PVC WITH #2 BARE COPPER GROUNDING ELECTRODE. BOND TO GROUND RING.
- SECONDARY SERVICE. SEE ONE LINE DIAGRAM.
- 8" THICK REINFORCED CONCRETE PAD. (APPROX. 8' X 4')
- 15A, 1P WEATHERPROOF LIGHT SWITCH.
- 78 W LED FIXTURE. RAB FXLED 78 WITH PHOTOCCELL. ORIENT AS DIRECTED BY OWNER.
- 20 AMP GFCI WEATHERPROOF RECEPTACLE.
- COAT WITH BITUMASTIC PAINT WHERE IN CONTACT WITH EARTH OR CONCRETE TO 4" ABOVE PAD. (TYPICAL FOR CONDUITS)
- 4#1, 1#8G.-2"C.
- 4#4, 1#10G.-1 1/2"C.
- 3#4, 1#10G.-1"C.
- 3#2, 1#8G., 4#14-2"C.
- GENERATOR RECEPTACLE TO MATE WITH PLUG ON OWNER'S GENERATOR. (RE-USE EXISTING APPLETON 200AMP, 3P, 4W PLUG)
- NEW 30' TREATED POLE FOR NEW SERVICE. VERIFY LOCATION AND REQUIREMENTS WITH UTILITY. EXTEND CONDUIT UP POLE, INSTALL METER BASE AND WEATHERHEAD AT HEIGHT AS DIRECTED.
- 3#1, 1#8G., 4#14-2"C.
- 3#4, 1#8G., 4#14-1 1/2"C.
- COMBINATION STARTER WITH MCP IN NEMA 4X S.S. ENCLOSURE OF NEMA SIZE SHOWN. SEE CONTROL DIAGRAM.
- 4#1/0, 1#6G.-2"C.



EQUIPMENT RACK DETAIL
NOT TO SCALE

REVISIONS		DATE	BY
NO.	DESCRIPTION		

APPROVALS		DATE	BY
PROJECT ENG:	DESIGNED BY:		
DRAWN BY:	CHECKED BY:		
APPROVED:			
ATH	ATH		
HWH	HWH		
ATH	ATH		

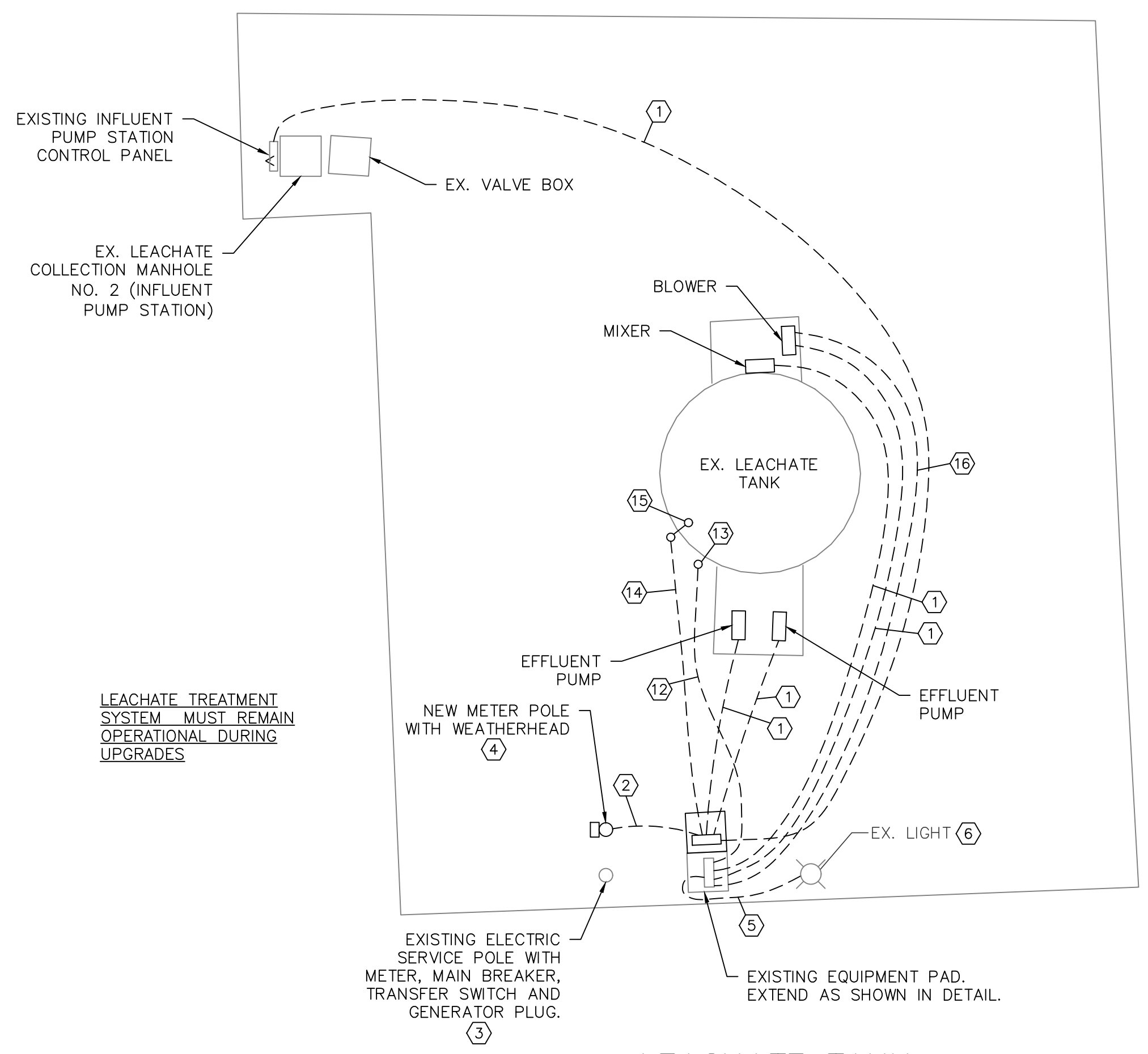


ELECTRICAL PLAN
LEACHATE TANK

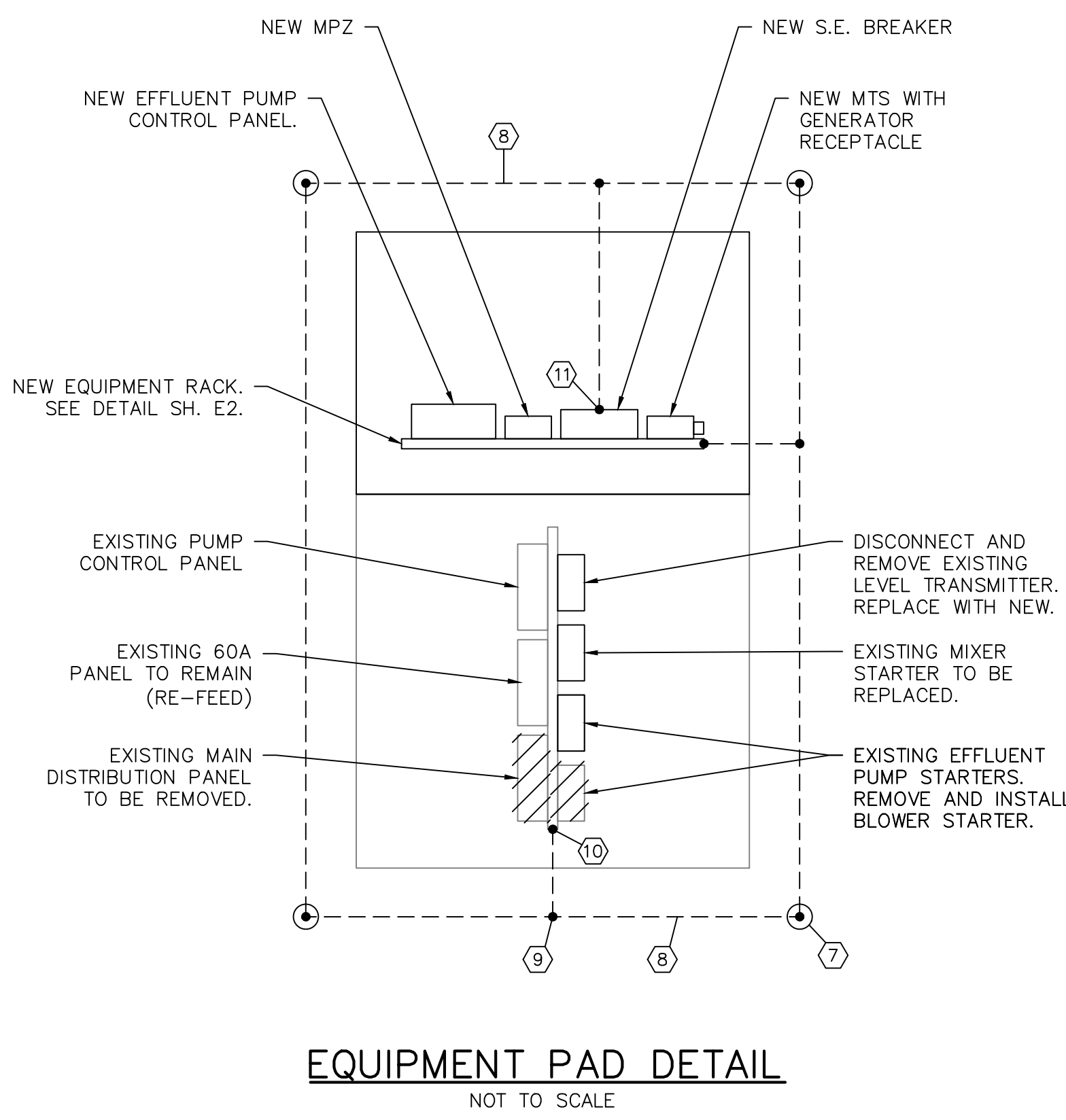
GEORGETOWN COUNTY
LANDFILL PUMP
ADDITIONS

DATE: OCTOBER 2019
HEI PROJECT NO. A1930
SCALE: NO SCALE

SHEET NO. E2 OF 4



LEACHATE TANK ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"



(X) SITE PLAN AND EQUIPMENT PAD DETAIL NOTES

- 240V FEEDER. SEE ONE-LINE DIAGRAM.
- SECONDARY SERVICE. SEE ONE-LINE DIAGRAM.
- TO REMAIN IN SERVICE DURING CONSTRUCTION. DEMOLISH AT COMPLETION OF WORK. GENERATOR PLUG TO BE MOVED TO NEW RACK.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING SERVICE MODIFICATION WITH SANTEE ELECTRIC COOP.
- 2#12, 1#12G.-3/4"C.
- REPLACE EXISTING COBRA HEAD FIXTURE ON EXISTING WOODEN POLE WITH NEW MEDIUM LED LIGHT. (GREE #RSWM-A-HT-2ME-9L-GY-N OR EQUAL WITH PHOTOCELL AND 24" ALUMINUM MOUNTING ARM)
- 3/4"Ø X 10' DRIVEN COPPERCLAD GROUND ROD WITH EXOTHERMIC WELDS. (TYP.)
- #2 BARE COPPER GROUND RING, BURIED 30" BELOW GRADE.
- EXOTHERMIC WELD (TYPICAL)
- BOND TO EQUIPMENT RACK (TYPICAL)
- BOND TO S.E. BREAKER.
- 1" CONDUIT - INSTALL TRANSDUCER CABLE FURNISHED WITH EQUIPMENT.
- EXTEND CONDUIT UP SIDE OF TANK, SECURING TO LADDER. EXTEND OVER TO TRANSDUCER AND CONNECT AS RECOMMENDED BY SUPPLIER.
- 10#14, 1#14G.-1"C. TO EFFLUENT PUMP CONTROL PANEL (INCLUDES SPARES).
- HIGH LEVEL FLOAT. PROVIDE N4X JB WITH CORD CONNECTOR AT TOP OF TANK AT LOCATION AS DIRECTED.
- 4#14, 1#14G.-3/4"C. (PRESSURE/TEMPERATURE SWITCHES)

ELECTRICAL DEMOLITION NOTES:

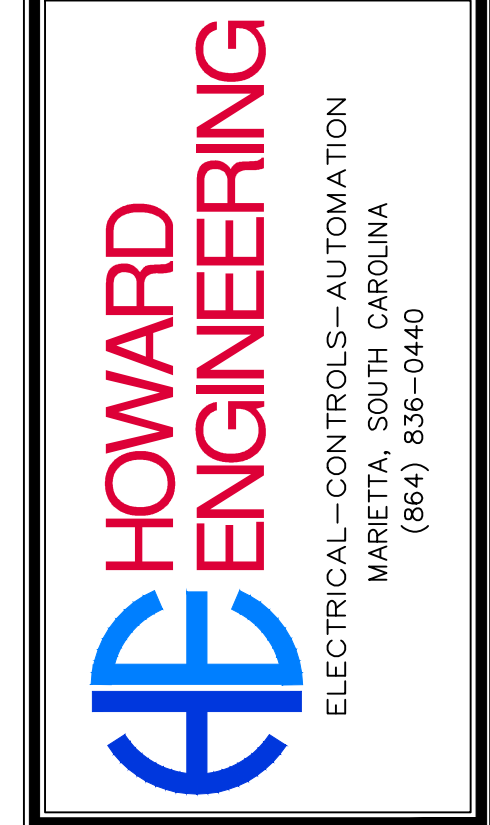
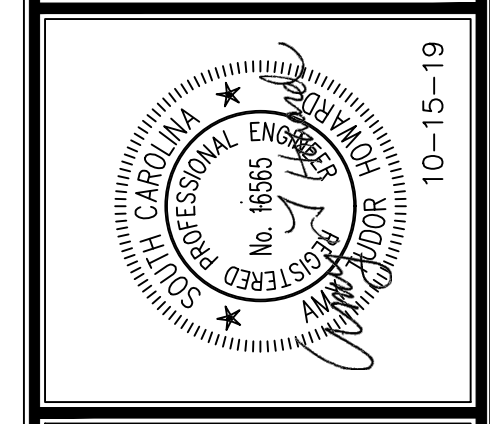
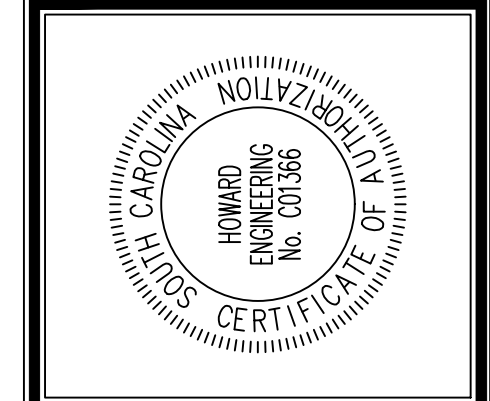
- CONDUIT AND WIRING ASSOCIATED WITH EQUIPMENT BEING REMOVED SHALL BE REMOVED AND DISPOSED OF.
- WHERE CONDUIT ASSOCIATED WITH AN ITEM IS IN AN INACCESSIBLE AREA (SUCH AS ENCASED IN CONCRETE), ABANDON INACCESSIBLE CONDUIT IN PLACE AND CAP OR SEAL.
- WHERE SUCH INACCESSIBLE CONDUIT ENDS OR MUST BE TERMINATED IN FINISHED SURFACE OF WALL, CEILING OR FLOOR, CUT OFF FLUSH AND FILL VOID WITH NON-SHRINKING GROUT AND FINISH TO MATCH SURROUNDING SURFACES.
- MATERIALS THAT MAY BE SALVAGED NOT LISTED ABOVE ARE TO BE TURNED OVER TO THE OWNER. UNWANTED MATERIALS SHALL BE DISPOSED OF BY THIS CONTRACTOR.

GENERAL ELECTRICAL NOTES:

- CONTRACTOR WILL BE HELD RESPONSIBLE FOR HAVING VISITED THE SITE AND BEING FAMILIARIZED WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
- CONSULT APPROVED MANUFACTURER'S WIRING AND CONNECTION DIAGRAMS AND SHOP DRAWINGS IN DETAIL FOR EXACT CONNECTION REQUIREMENTS TO EQUIPMENT PROVIDED BY OTHER TRADES.
- CONTRACTOR'S RECORD DRAWINGS SHALL SHOW EXACT LOCATIONS OF UNDERGROUND CONDUITS AND DUCT BANKS.

NO.	DESCRIPTION	DATE	BY

APPROVALS	PROJECT ENG:	ATH	DESIGNED BY:	ATH	DRAWN BY:	HWH	CHECKED BY:	ATH	APPROVED:	ATH
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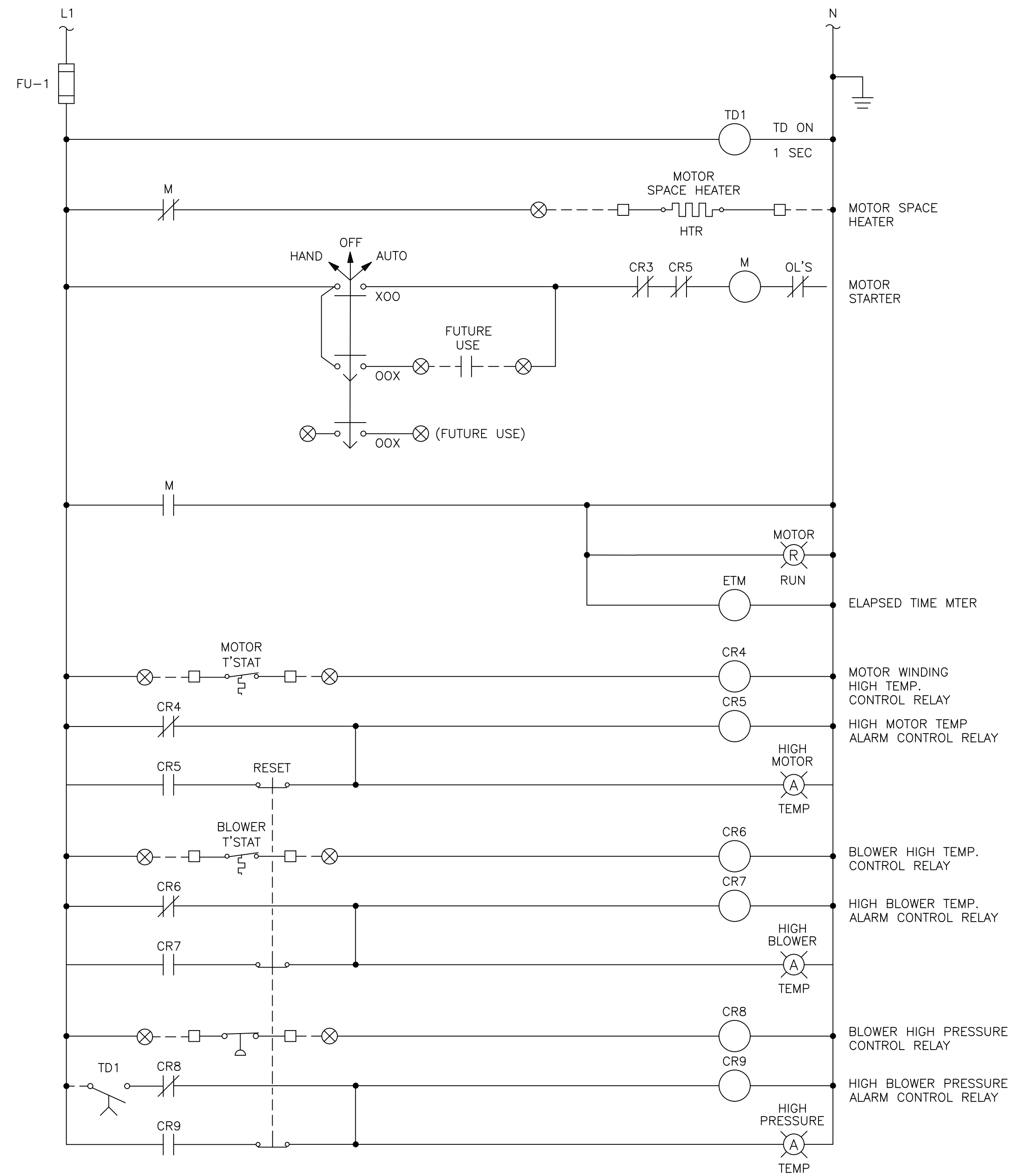


SHEET TITLE:
LEACHATE TANK ELECTRICAL SITE PLAN

PROJECT:
GEORGETOWN COUNTY LANDFILL PUMP ADDITIONS

DATE: OCTOBER 2019
HEI PROJECT NO. A1930
SCALE: NO SCALE

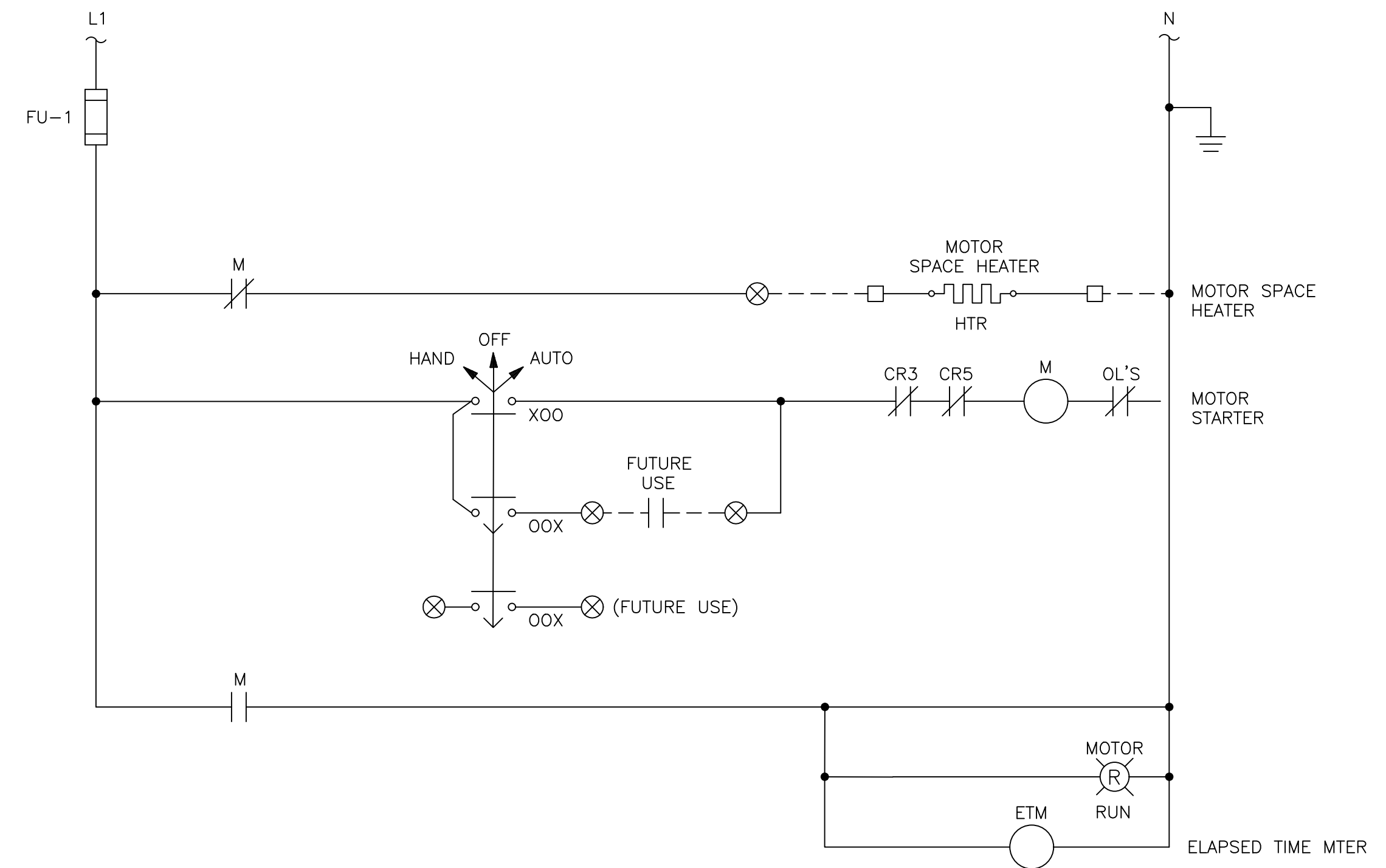
SHEET NO.
E3 OF 4



BLOWER STARTER
CONTROL DIAGRAM

KEY

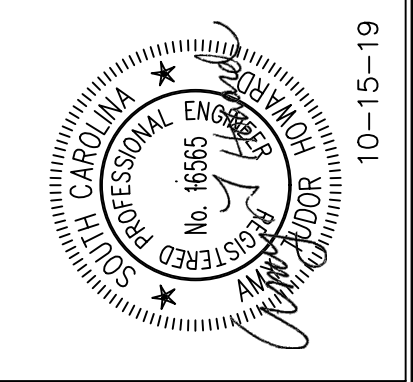
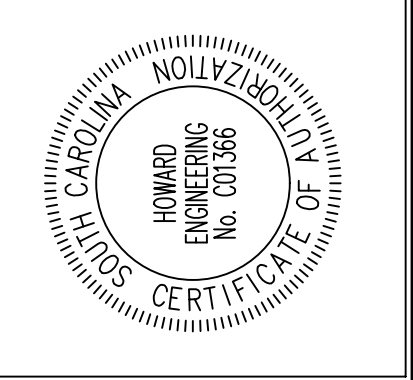
- ⊗ TERMINAL LOCATED IN STARTER
- ◇ TERMINAL LOCATED ON DRIVE
- TERMINAL LOCATED IN FIELD



MIXER STARTER
CONTROL DIAGRAM

NO.	REVISIONS	DESCRIPTION	DATE	BY

APPROVALS	PROJECT ENG:	ATH
	DESIGNED BY:	ATH
	DRAWN BY:	HWH
	CHECKED BY:	ATH
	APPROVED:	ATH



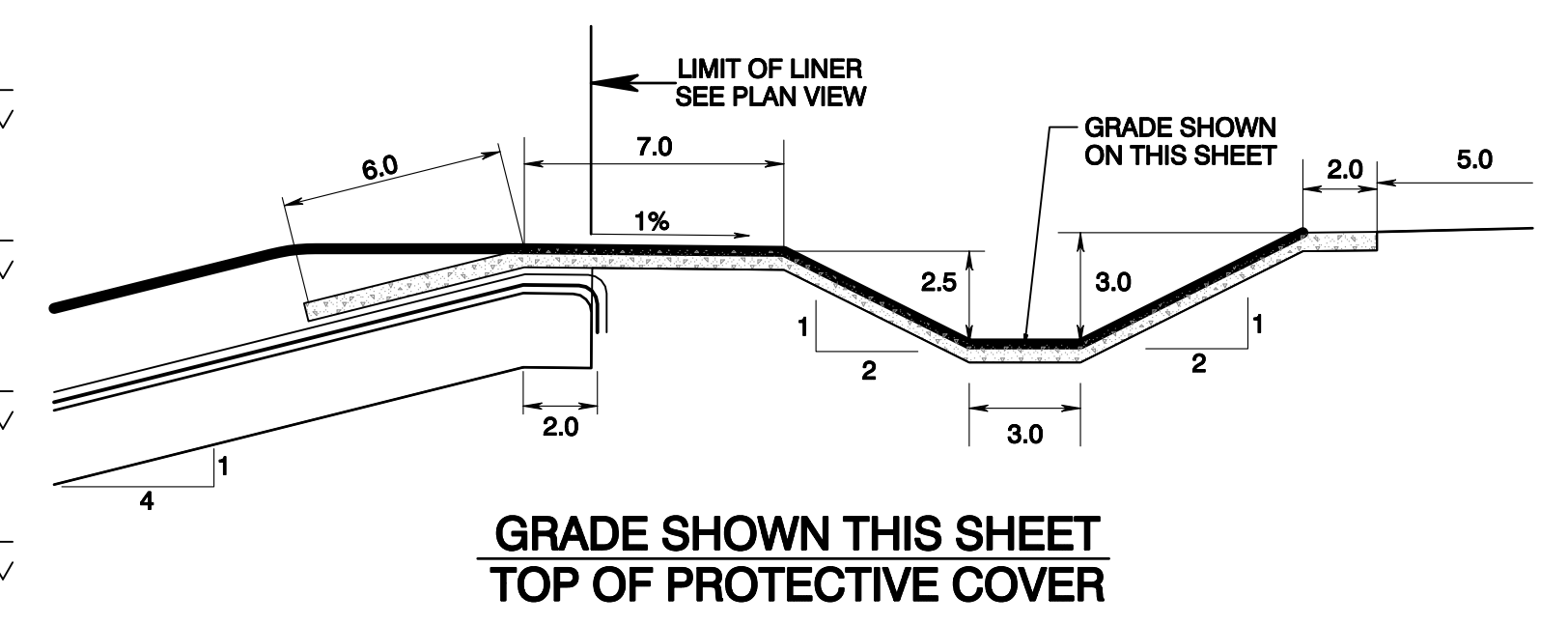
HOWARD ENGINEERING
ELECTRICAL-CONTROLS-AUTOMATION
MARIETTA, SOUTH CAROLINA
(864) 836-0440

SHEET TITLE:
CONTROL DIAGRAMS

PROJECT:
**GEORGETOWN COUNTY
LANDFILL PUMP
ADDITIONS**

DATE:
OCTOBER 2019
HEI PROJECT NO.
A1930
SCALE:
NO SCALE

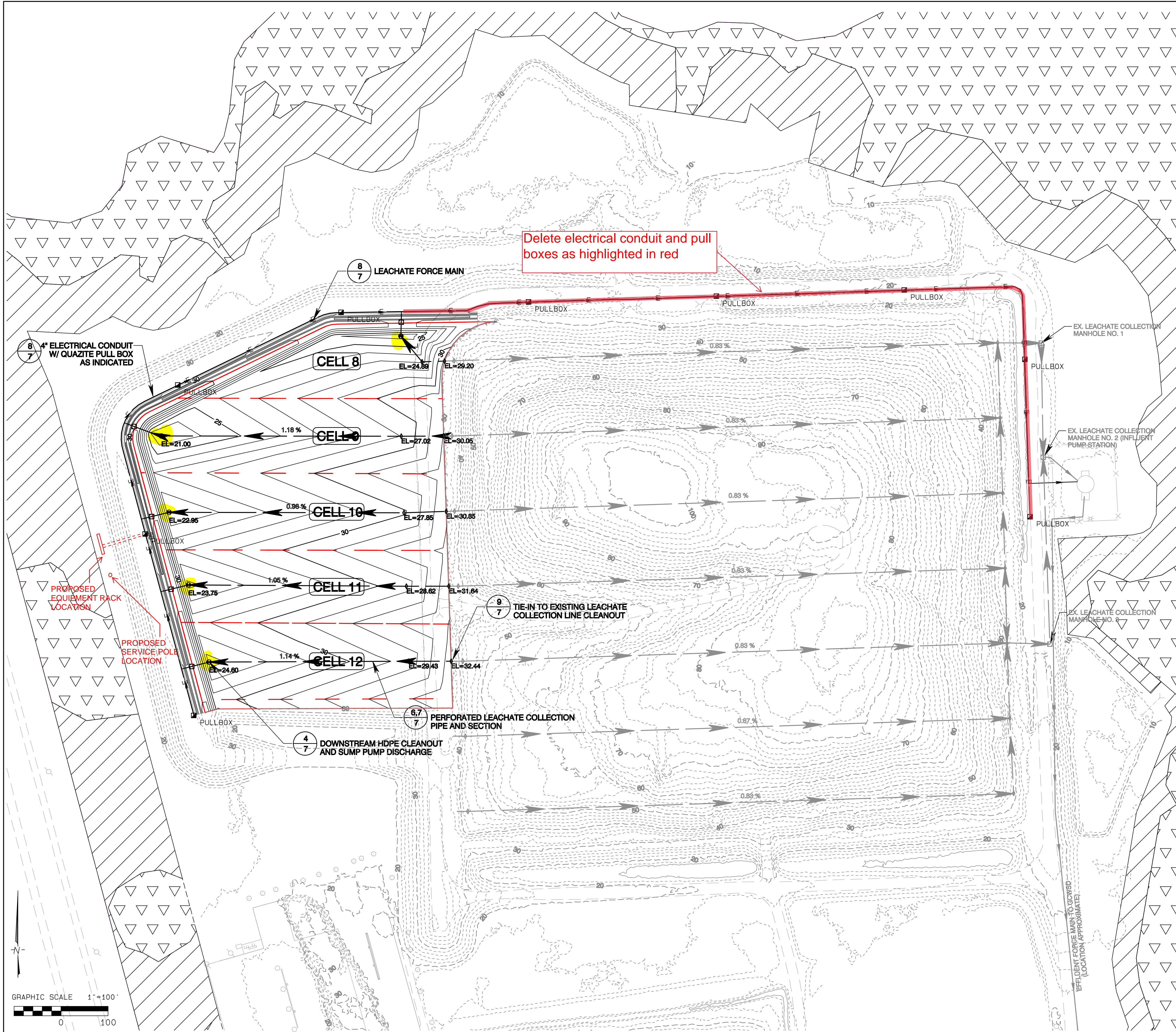
SHEET NO.
E4 OF 4



- LEACHATE COLLECTION SYSTEM LEGEND**
- SP LEACHATE COLLECTION SUMP PUMP/RISER PIPE - SEE DETAIL 6/19
 - VV LEACHATE COLLECTION VALVE VAULT - SEE DETAIL 6/19
 - LEACHATE COLLECTION - 8" HDPE DR 17 IPS PERFORATED
 - LEACHATE COLLECTION - FORCEMAIN - 4" HDPE DR 17 IPS
 - ARV LEACHATE COLLECTION - AIR RELEASE VALVE - SEE SPECIFICATION
 - ◇ EL=28.26 INVERT ELEVATION OF LEACHATE LINE

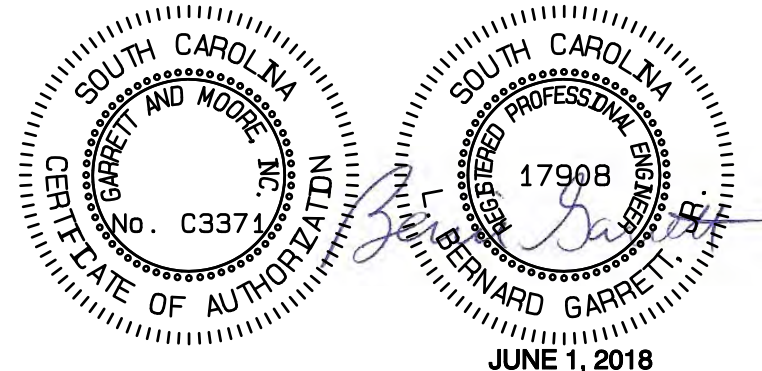
- LEACHATE COLLECTION SYSTEM NOTES**
1. THE 8-FOOT HORIZONTAL SECTION OF THE 24-INCH SIDE SLOPE RISER PIPE SHALL BE PERFORATED PER DETAIL 7/7.
 2. TERMINATE TO LEACHATE FORCE MAIN AT THE LEACHATE TANKS USING A 90-DEGREE BEND AND A BLIND FLANGE INSTALLED 2 FEET ABOVE EXISTING GRADE.
 3. TERMINATE THE LEACHATE FORCE MAIN UPSTREAM OF CELL 12 USING A BLIND FLANGE.

Delete electrical conduit and pull boxes as highlighted in red

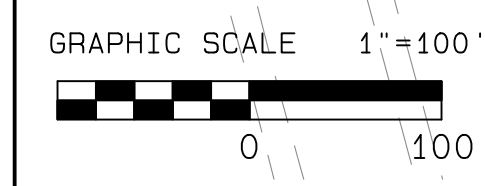


FOR REFERENCE ONLY, NOT INCLUDED IN CONTRACT.

ADDENDUM 1 NOTES:
1. LEACHATE COLLECTION SYSTEM NOTES ADDED



Path: V:\Georgetown\2018 Contract\Task Order 36 - Landfill\11 Expansion Bidding\cadd\Cells 8-12 Construction May 2018 - ADDENDUM 1.dwg Plot Date/Time: Fri Jun 1, 2018 / 10:07:04



REVISION	DATE
1) ADDENDUM 1 - SEE ADDENDUM 1 NOTES	JUNE 1, 2018
2)	
3)	
4)	

GARRETT & MOORE
Engineering for the Power and Waste Industries

1100 CRESCENT GREEN DRIVE
SUITE 208
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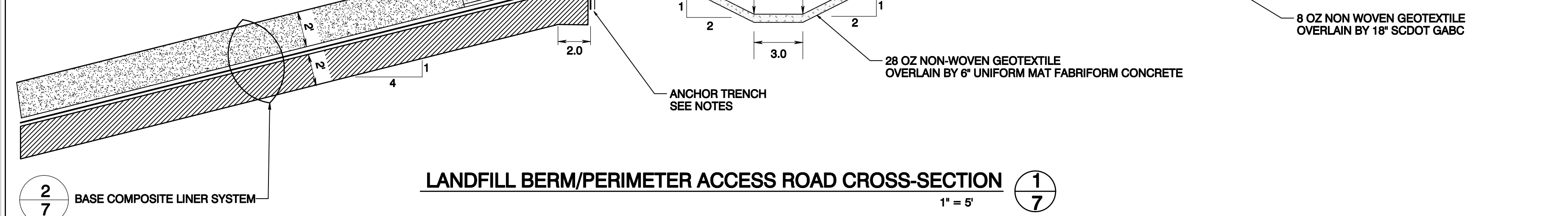
**GEORGETOWN COUNTY
CLASS THREE LANDFILL CELLS 8-12 &
CLASS TWO LANDFILL CLOSURE PROJECT**

**CLASS THREE LANDFILL
TOP OF PROTECTIVE COVER GRADES
AND LEACHATE COLLECTION PIPING SYSTEM PLAN**

JOB NUMBER
SHEET 5

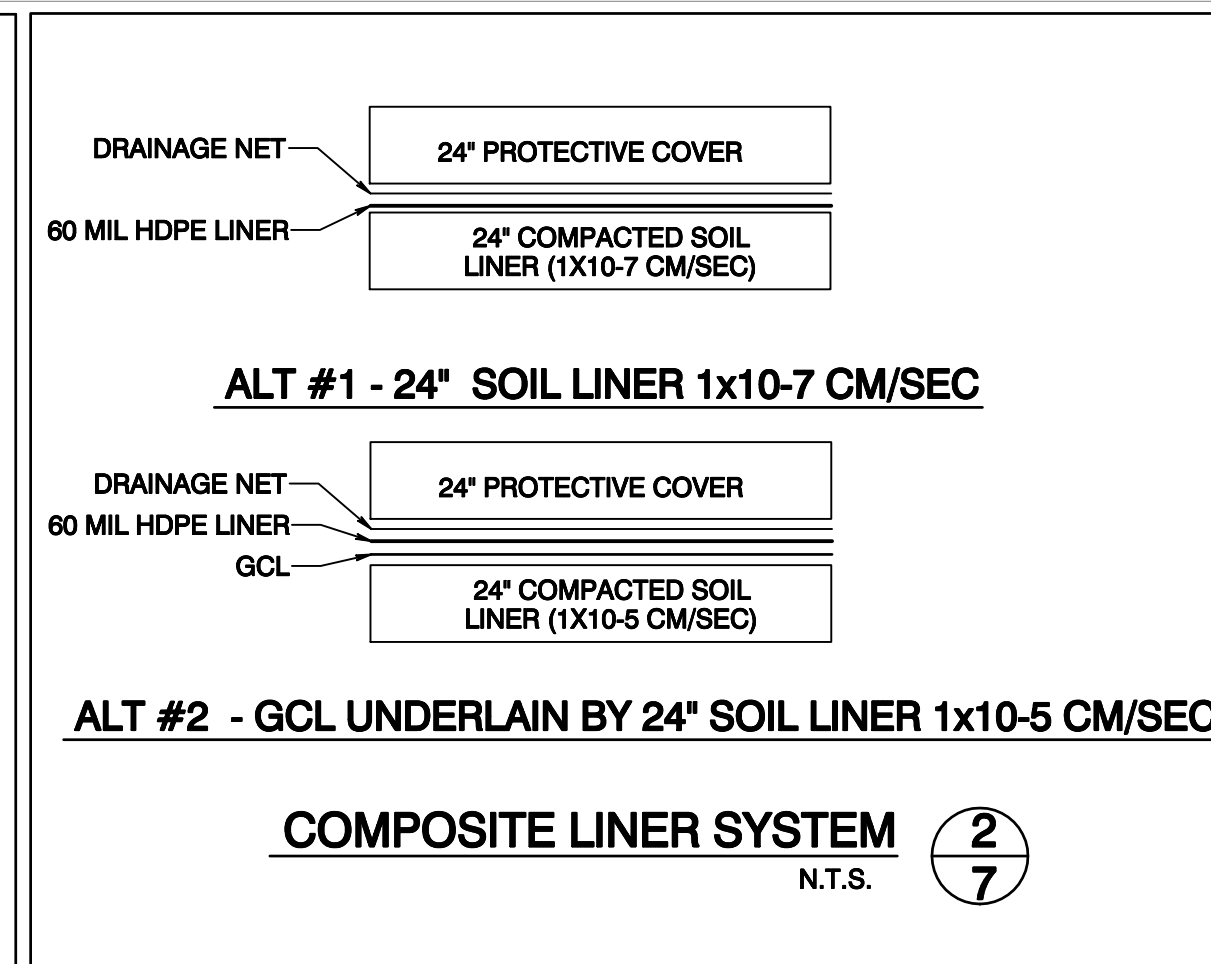
ANCHOR TRENCH NOTES:

1. COMPACTED SOIL LINER SHALL BE INSTALLED TO 12-INCHES OUTSIDE OF LIMITS OF PAY ITEM.
2. FML AND COMPOSITE DRAINAGE NET SHALL BE INSTALLED TO 12-INCHES OUTSIDE OF LIMITS OF PAY ITEM WITH A 12-INCH TURN-DOWN.
3. INSTALLATION OF ADDITIONAL FML MATERIAL MAY BE NECESSARY TO ALLOW FOR SHRINK AND SWELL OF THE MATERIAL PRIOR TO BACKFILLING ANCHOR TRENCH.
4. IMMEDIATELY PRIOR TO BACKFILLING ANCHOR TRENCH, CUT THE FML TO FINAL 12-INCH TURN-DOWN LENGTH.

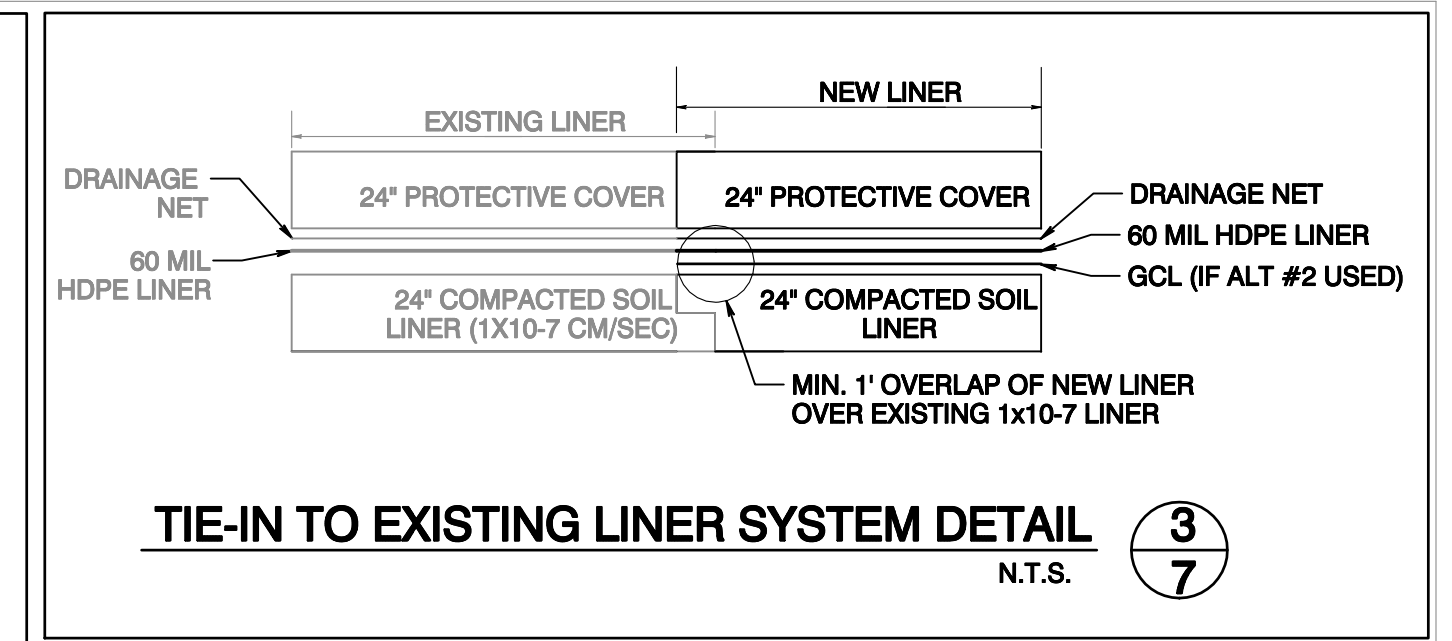


2/7 BASE COMPOSITE LINER SYSTEM

LANDFILL BERM/PERIMETER ACCESS ROAD CROSS-SECTION 1/7
1" = 5'



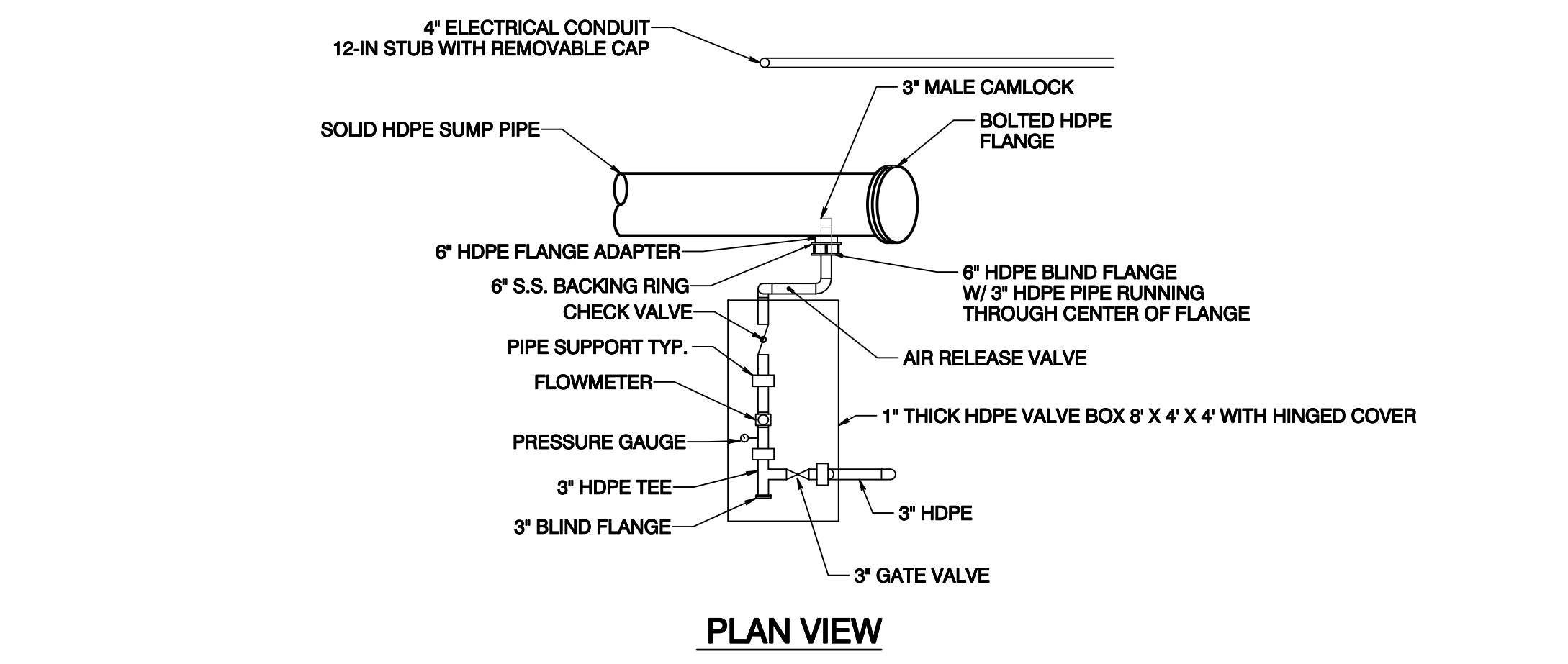
ALT #1 - 24" SOIL LINER 1x10-7 CM/SEC
ALT #2 - GCL UNDERLAIN BY 24" SOIL LINER 1x10-5 CM/SEC
COMPOSITE LINER SYSTEM 2/7
N.T.S.



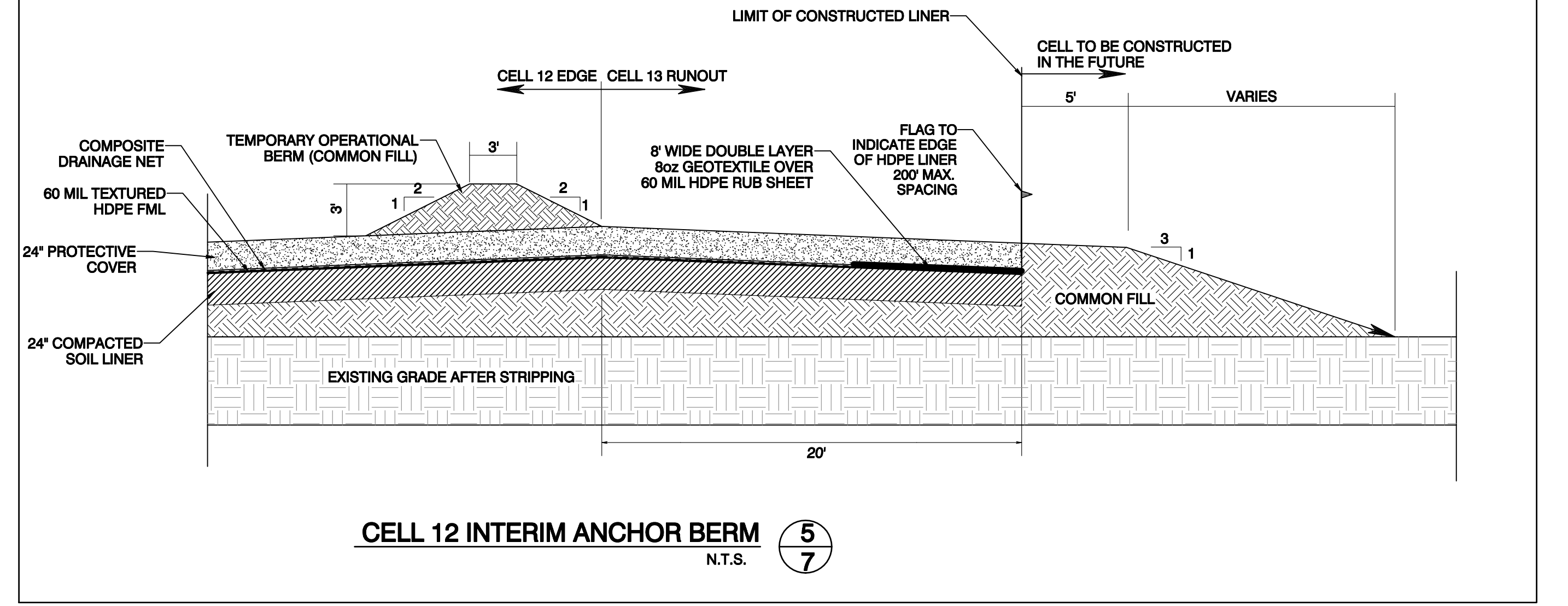
TIE-IN TO EXISTING LINER SYSTEM DETAIL 3/7
N.T.S.

VALVE BOX NOTES

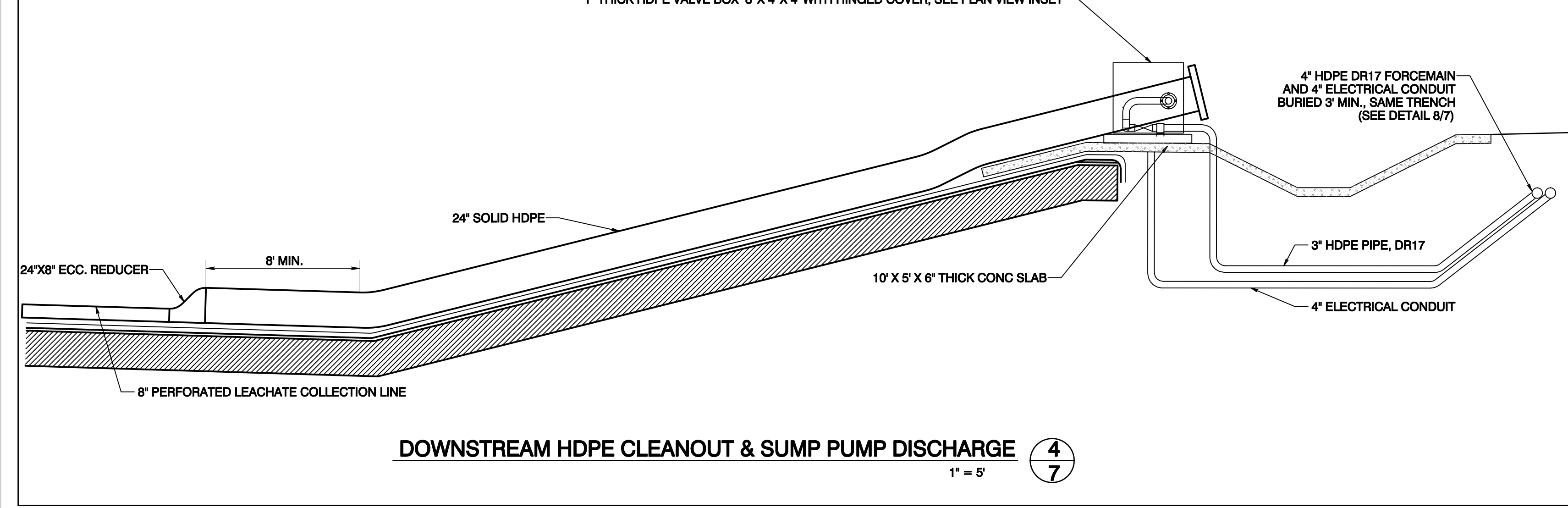
1. Air release valve shall be a Crispin Model UX20. Support air release valve and 3" HDPE pipe using an 8-foot long stainless steel Uni strut anchored in 12" diameter and 36" depth concrete below grade.
2. Install a paddlewheel type flow meter sensor within a special adaptor, mounted within a pipe tee section. The sensor is made to fit the tee section on a 3-inch discharge pipe, in the location shown on the drawings, and shall be equal to model 52EP300 as manufactured by EPG Companies Inc or GUNNCO IP81. The sensor utilizes a dual magnet drum design, is constructed of Delvin, Kynar, or equal, and measures flow range from 1 to 500 gpm with a linearity and repeatability factor of +/- 0.5%.
3. Check valves shall be thermoplastic, butterfly design constructed from CPVC Type IV, ASTM D1784 Cell Classification 23447. Valves shall be flanged style. All valve seals shall be reinforced EPDM or Viton with replaceable internal components. All valves shall be pressure rated at 150 psi for water at 73-deg F as manufactured by Spears Manufacturing.
4. Gate valves shall be thermoplastic constructed from CPVC Type IV, ASTM D1784 Cell Classification 23447. Valves shall be flanged style, nonrising stem with stem extensions and 2" square operating nut. There shall be no metal to media contact anywhere on the valve. Valves shall have an indicator to show the position of the gate. All valves shall be pressure rated at 150 psi for water at 73-deg F as manufactured by Spears Manufacturing.
5. Pressure gauges for the above services shall have a black case and shall be 4-1/2-in nominal diameter with phosphor bronze Bourdon tubes (beryllium copper bellows), 1/4-in NPT male connection, stainless steel rack and pinion movement, microadjustment for calibration, white dials and black figures, threaded ring case. All gages shall be furnished with protective diaphragm attachment as specified above. Gages shall be installed with brass nipples no shorter than 2-in and a manufacturer's standard pulsation dampener and shutoff valve. Gages shall be manufactured by U.S. Gage, Sellersville, Pa.; Crosby-Ashton, Wrentham, Mass.



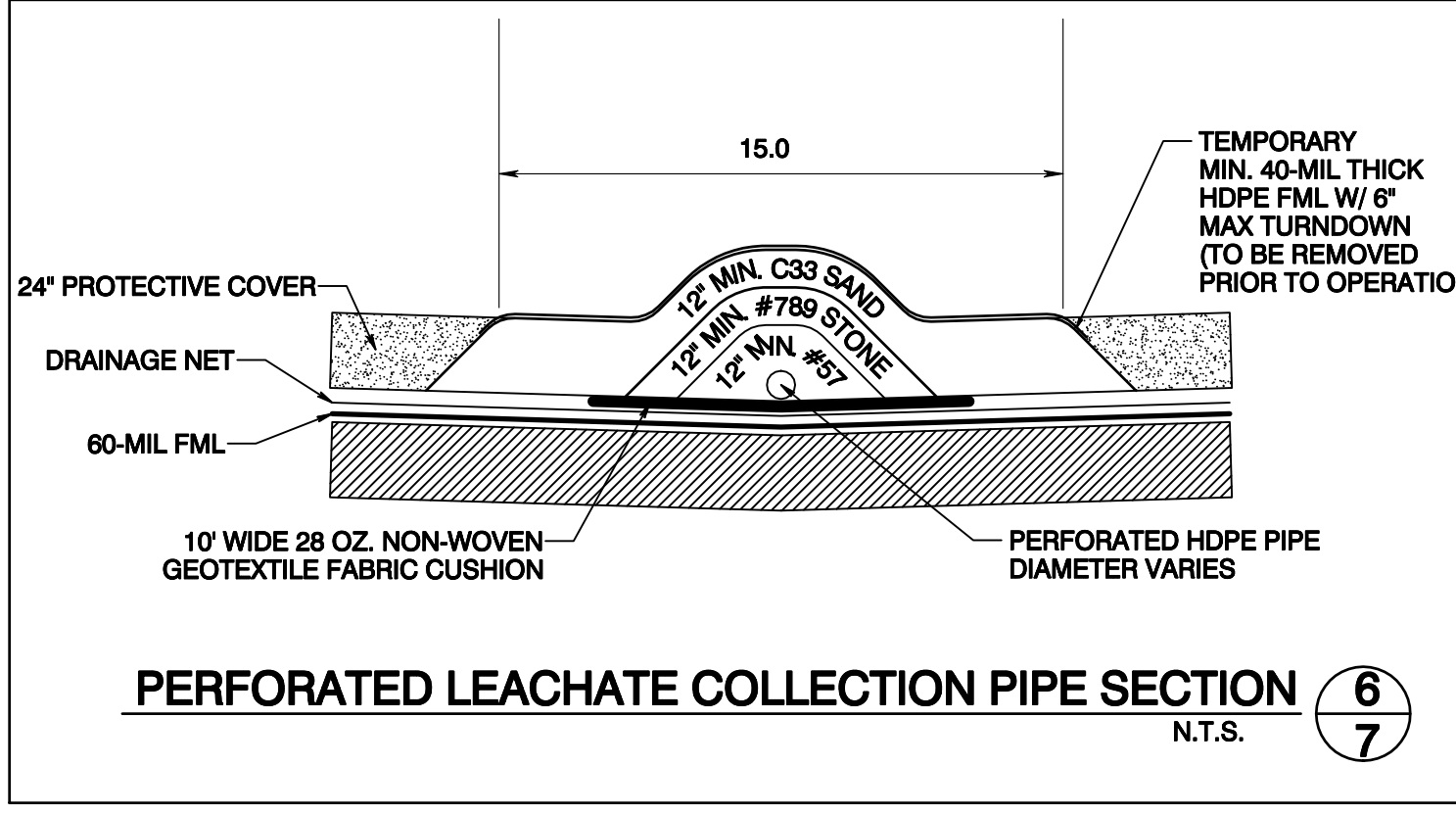
1" THICK HDPE VALVE BOX 8' X 4' X 4' WITH HINGED COVER, SEE PLAN VIEW INSET



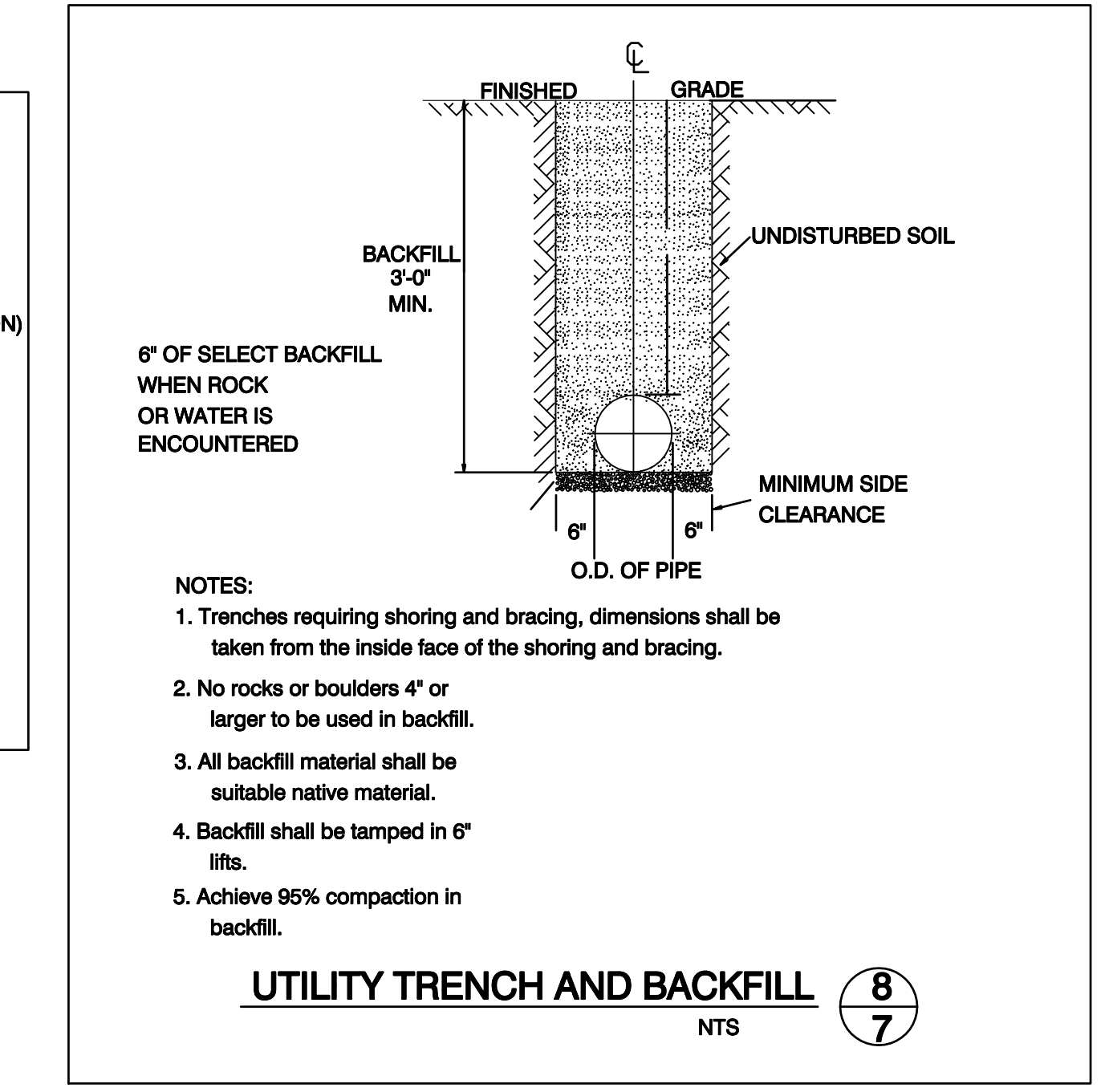
CELL 12 INTERIM ANCHOR BERM 5/7
N.T.S.



DOWNSTREAM HDPE CLEANOUT & SUMP PUMP DISCHARGE 4/7
1" = 5'

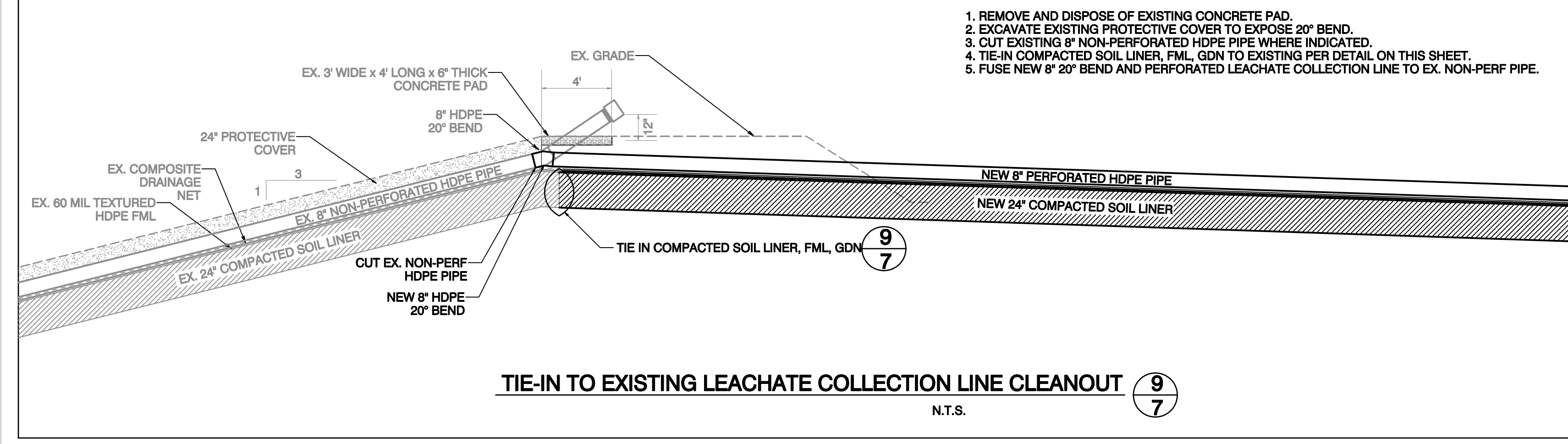


PERFORATED LEACHATE COLLECTION PIPE SECTION 6/7
N.T.S.

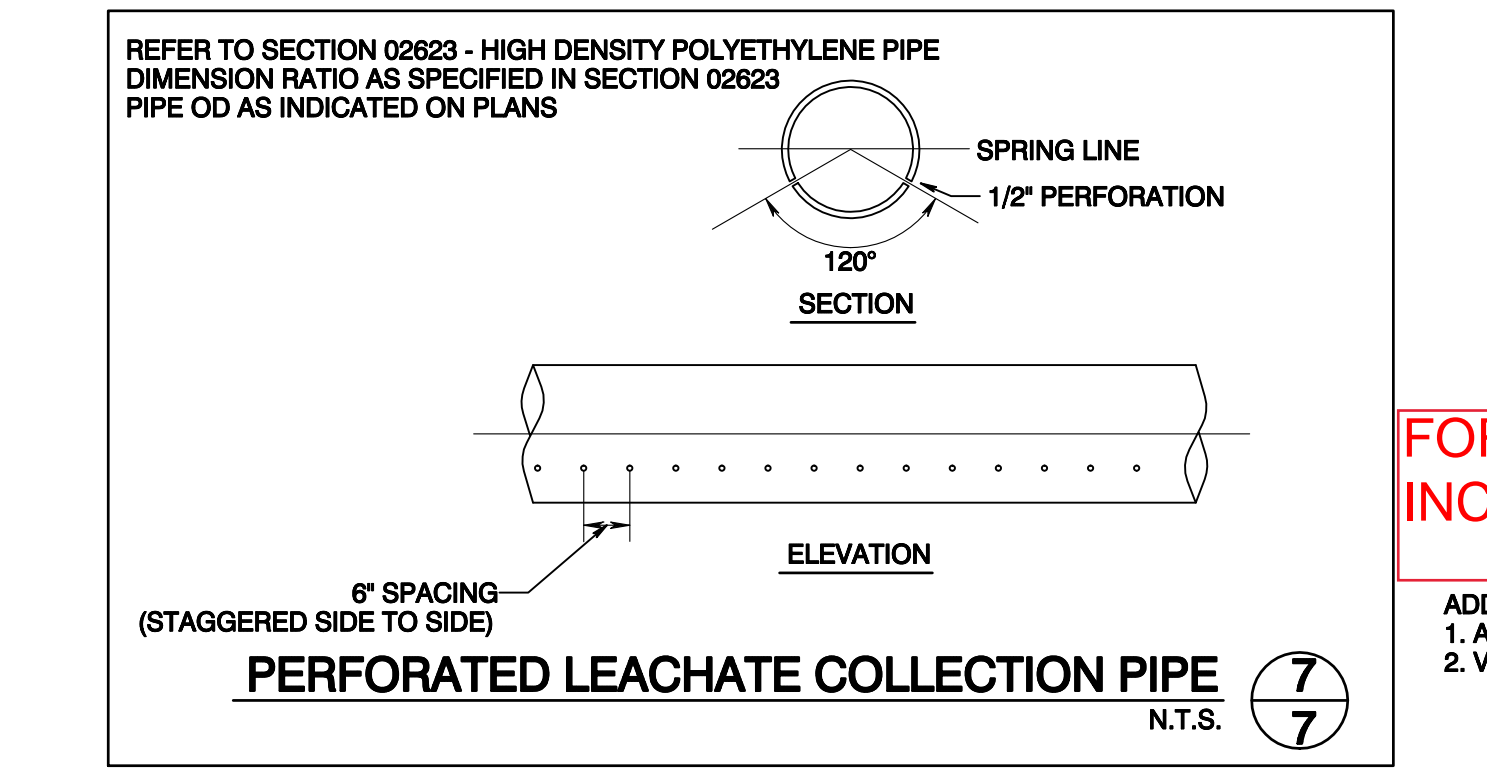


- NOTES:**
1. Trenches requiring shoring and bracing, dimensions shall be taken from the inside face of the shoring and bracing.
 2. No rocks or boulders 4" or larger to be used in backfill.
 3. All backfill material shall be suitable native material.
 4. Backfill shall be tamped in 6" lifts.
 5. Achieve 95% compaction in backfill.

UTILITY TRENCH AND BACKFILL 8/7
N.T.S.



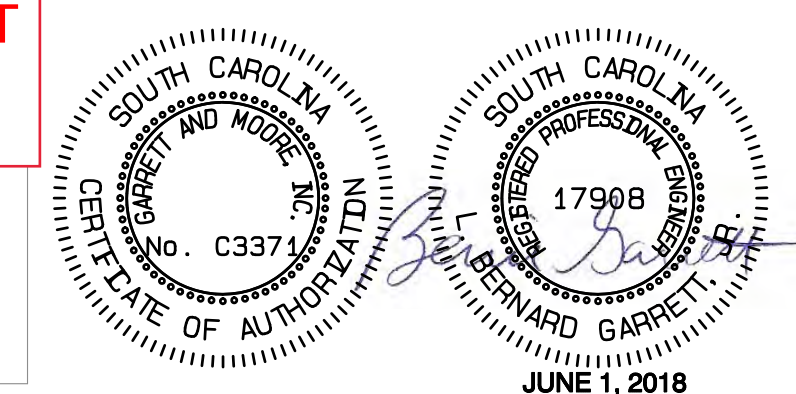
TIE-IN TO EXISTING LEACHATE COLLECTION LINE CLEANOUT 9/7
N.T.S.



PERFORATED LEACHATE COLLECTION PIPE 7/7
N.T.S.

FOR REFERENCE ONLY, NOT INCLUDED IN CONTRACT.

ADDENDUM 1 NOTES:
1. ARV DETAIL DELETED
2. VALVE BOX NOTES ADDED



Path: V:\Georgetown\2018 Contract\Task Order 36 - Landfill Expansion\Bidding\Cadd\Cadd\Cells 8-12 Construction May 2018 - ADDENDUM 1.dwg Plot Date/Time: F1 Jun 1, 2018 / 10:16:40

REVISION	DATE
1) ADDENDUM 1 - SEE ADDENDUM 1 NOTES	JUNE 1, 2018
2)	
3)	
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CLASS THREE LANDFILL CELLS 8-12 &
CLASS TWO LANDFILL CLOSURE PROJECT**