

LAKETRA

FUEL TANK UPGRADE

555 LAKESHORE BOULEVARD PAINESVILLE TOWNSHIP, LAKE COUNTY, OHIO

MAY, 2024

ADMINISTRATION:

BEN CAPELLE CHIEF EXECUTIVE OFFICER
 ANDREA AABY DIRECTOR OF COMPLIANCE AND DEV.
 KEITH BARE DIR. OF MAINTENANCE
 SHEILA BARE HUMAN RESOURCE GENERALIST
 NICK BORELLI ASST. DIR. VEHICLE MAINT.
 LISA COLLING DIRECTOR OF FINANCE
 JORDAN GARDNER COMMUNICATIONS SPC.
 EMILY GILLIAM DIRECTOR OF HUMAN RESOURCES
 MATT MAIER DIRECTOR OF OPERATIONS
 MARC McLAIN ASST. DIR. FACILITY MAINT.
 TONY MELARAGNO DIR. OF INFORMATION TECH.
 JULIA SCHICK DIR. OF COMMUNICATIONS
 TAMMY SKAGGS ASST. DIR. OPERATIONS
 KATIE TOTH CUSTOMER RELATIONS SUPERVISOR
 TRUDY VILCHECK ADMINISTRATIVE COORDINATOR
 DALE WIECHELMAN CUSTOMER OUTREACH SPECIALIST

LAKETRA BOARD OF TRUSTEES:

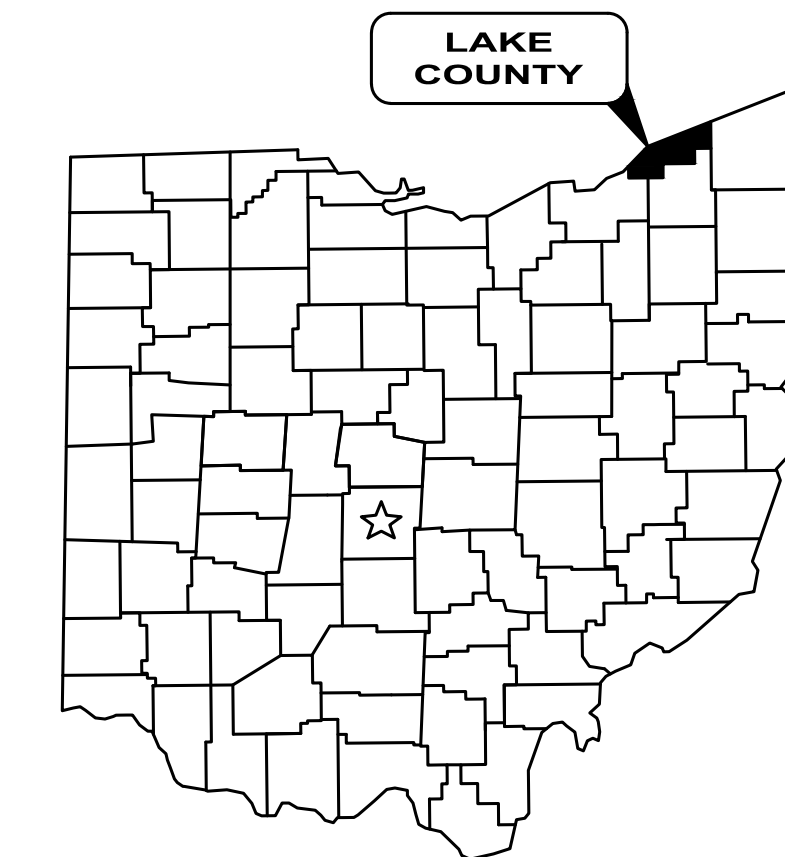
BRIAN J. FALKOWSKI PRESIDENT	WILLIAM F. EPPICH
CHUCK ZIBBEL, PE VICE-PRESIDENT	DANIELLA NUNNALLY
DONNA P McNAMEE OPERATIONS CHAIR	MICHAEL PIZMOHT
GARY SWANSON SPECIAL PROJECTS CHAIR	LANE H. SHEETS
	KIM STENGER



SITE LOCATION MAP
1" = 500'

INDEX OF SHEETS

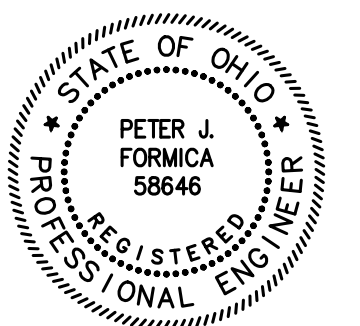
- 1 COVER SHEET
- 2 GENERAL NOTES
- 3 EXISTING CONDITIONS PLAN
- 4 SITE PLAN
- 5 ELECTRIC CONDUIT LAYOUT PLAN
- 6 ELECTRIC DETAILS & SPECIFICATIONS
- 7-8 TANK DETAILS
- 9 STANDARD DETAILS

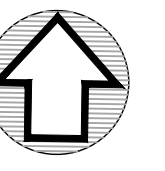


1-800-362-2764

CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

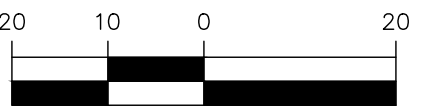
1. THE SURVEY SHOWN ON THESE PLANS WAS OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR ANY OTHER PURPOSE.
 2. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.
 3. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.



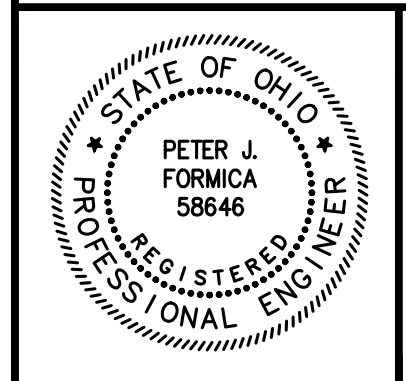
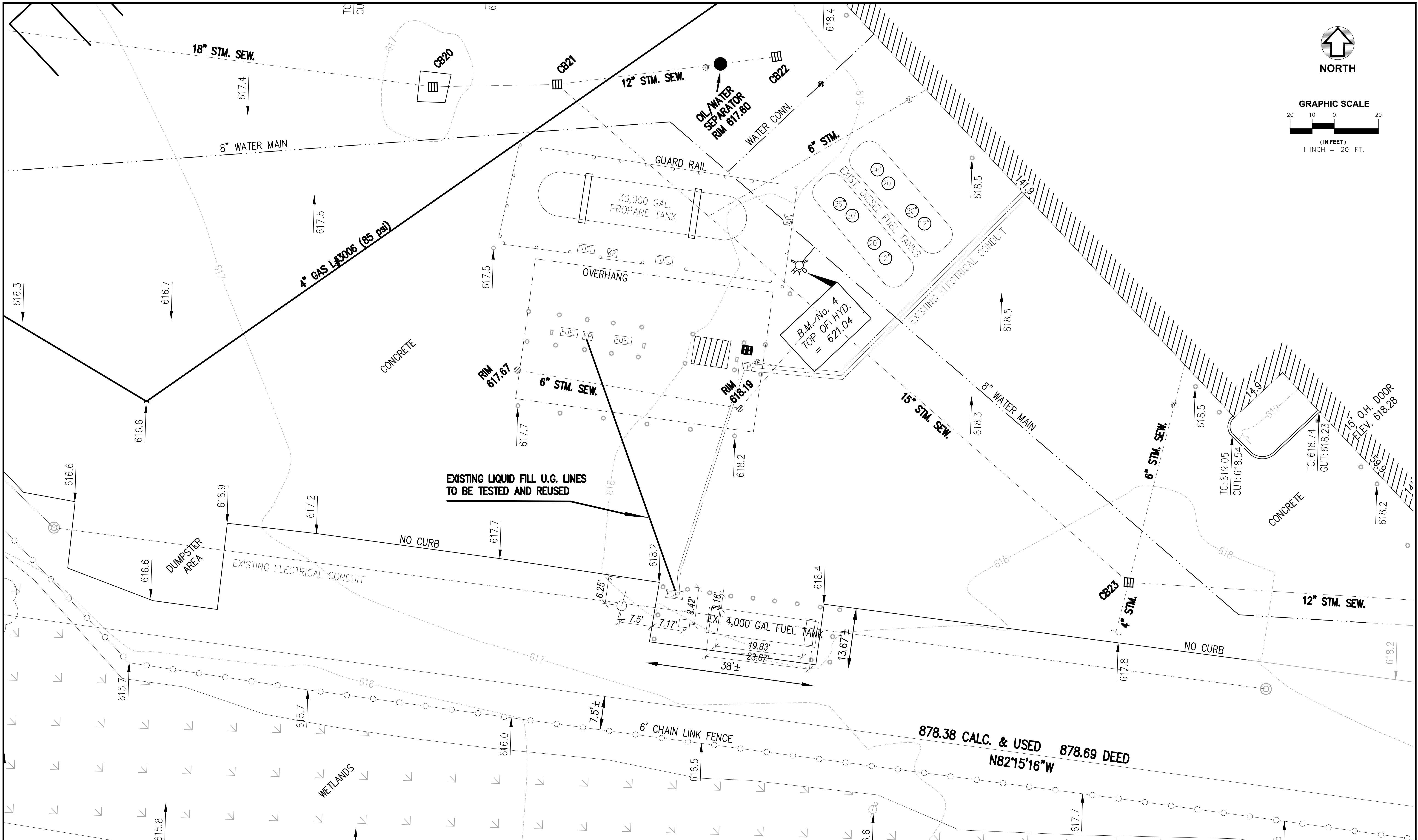


NORTH

GRAPHIC SCALE



(IN FEET)
1 INCH = 20 FT.



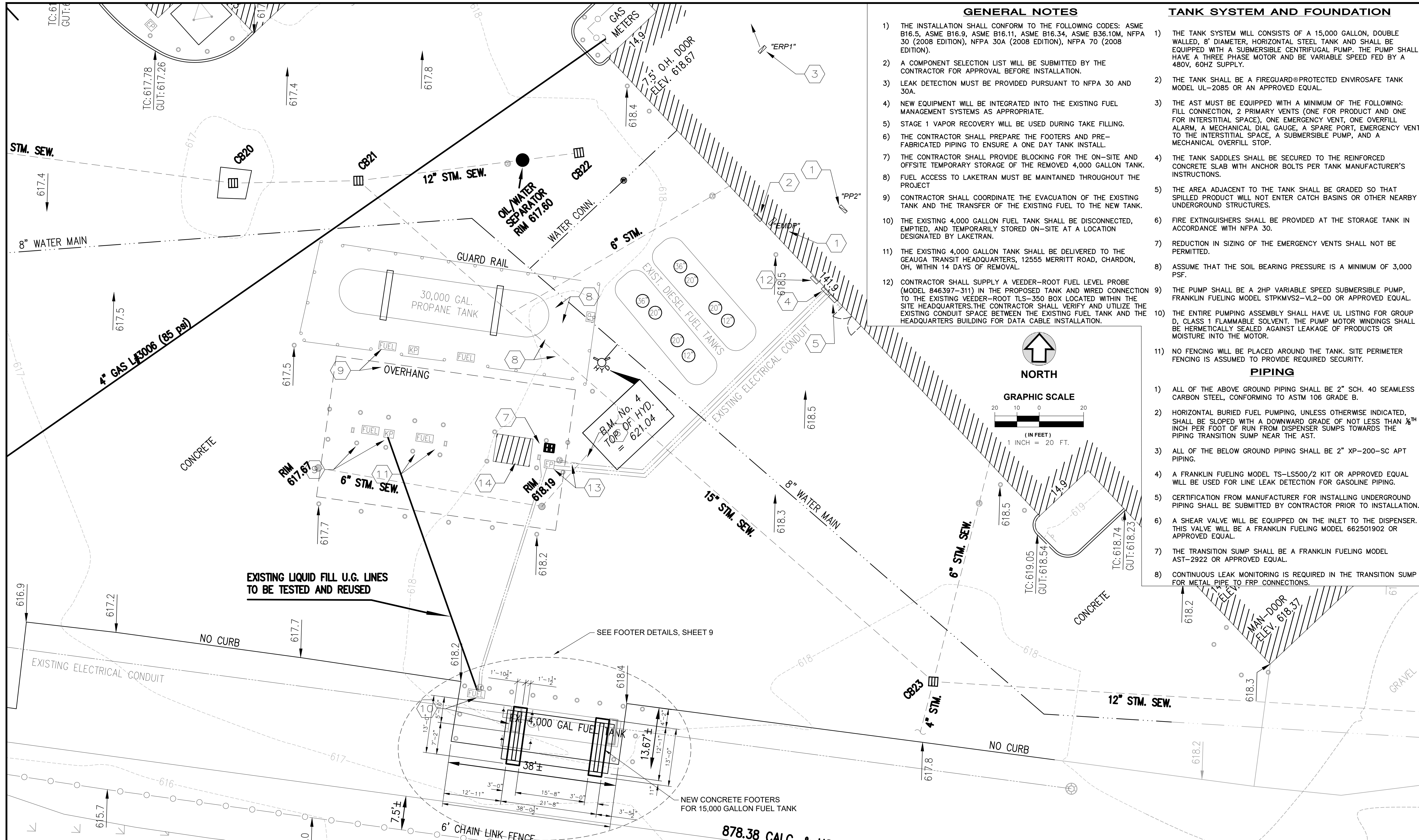
NO	REVISION	DATE

LAKETRAN
FUEL TANK UPGRADE
 LAKE COUNTY, OHIO

ISSUED FOR: BID SET
 ISSUE DATE: 05-11-24
 SCALE: AS SHOWN
 DESIGNED BY: PJF
 DRAWN BY: PJF
 CHECKED BY: PJF

EXISTING CONDITIONS

PROJECT NO. 232359	
DISCIPLINE CIVIL	
SHEET NAME EX COND.	
SHEET 3	OF 9



GENERAL NOTES

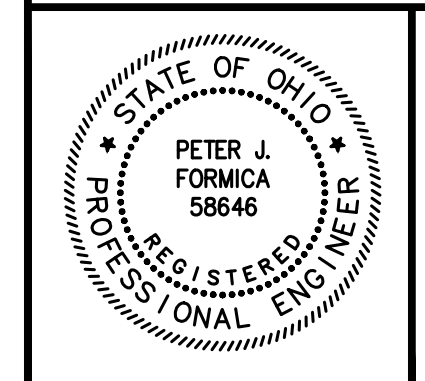
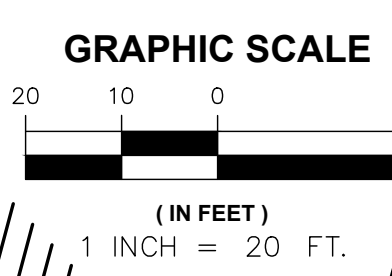
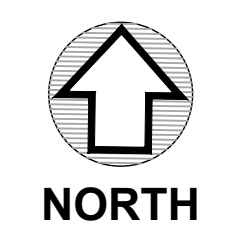
- 1) THE INSTALLATION SHALL CONFORM TO THE FOLLOWING CODES: ASME B16.5, ASME B16.9, ASME B16.11, ASME B16.34, ASME B36.10M, NFPA 30 (2008 EDITION), NFPA 30A (2008 EDITION), NFPA 70 (2008 EDITION).
- 2) A COMPONENT SELECTION LIST WILL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BEFORE INSTALLATION.
- 3) LEAK DETECTION MUST BE PROVIDED PURSUANT TO NFPA 30 AND 30A.
- 4) NEW EQUIPMENT WILL BE INTEGRATED INTO THE EXISTING FUEL MANAGEMENT SYSTEMS AS APPROPRIATE.
- 5) STAGE 1 VAPOR RECOVERY WILL BE USED DURING TAKE FILLING.
- 6) THE CONTRACTOR SHALL PREPARE THE FOOTERS AND PRE-FABRICATED PIPING TO ENSURE A ONE DAY TANK INSTALL.
- 7) THE CONTRACTOR SHALL PROVIDE BLOCKING FOR THE ON-SITE AND OFFSITE TEMPORARY STORAGE OF THE REMOVED 4,000 GALLON TANK.
- 8) FUEL ACCESS TO LAKETRAN MUST BE MAINTAINED THROUGHOUT THE PROJECT
- 9) CONTRACTOR SHALL COORDINATE THE EVACUATION OF THE EXISTING TANK AND THE TRANSFER OF THE EXISTING FUEL TO THE NEW TANK.
- 10) THE EXISTING 4,000 GALLON FUEL TANK SHALL BE DISCONNECTED, EMPTIED, AND TEMPORARILY STORED ON-SITE AT A LOCATION DESIGNATED BY LAKETRAN.
- 11) THE EXISTING 4,000 GALLON TANK SHALL BE DELIVERED TO THE GEAGA TRANSIT HEADQUARTERS, 12555 MERRITT ROAD, CHARDON, OH, WITHIN 14 DAYS OF REMOVAL.
- 12) CONTRACTOR SHALL SUPPLY A VEEDER-ROOT FUEL LEVEL PROBE (MODEL 846397-311) IN THE PROPOSED TANK AND WIRED CONNECTION TO THE EXISTING VEEDER-ROOT TIS-350 BOX LOCATED WITHIN THE SITE HEADQUARTERS. THE CONTRACTOR SHALL VERIFY AND UTILIZE THE EXISTING CONDUIT SPACE BETWEEN THE EXISTING FUEL TANK AND THE HEADQUARTERS BUILDING FOR DATA CABLE INSTALLATION.

TANK SYSTEM AND FOUNDATION

- 1) THE TANK SYSTEM WILL CONSISTS OF A 15,000 GALLON, DOUBLE WALLED, 8' DIAMETER, HORIZONTAL STEEL TANK AND SHALL BE EQUIPPED WITH A SUBMERSIBLE CENTRIFUGAL PUMP. THE PUMP SHALL HAVE A THREE PHASE MOTOR AND BE VARIABLE SPEED FED BY A 480V, 60HZ SUPPLY.
- 2) THE TANK SHALL BE A FIREGUARD®PROTECTED ENVIROSAFE TANK MODEL UL-2085 OR AN APPROVED EQUAL.
- 3) THE AST MUST BE EQUIPPED WITH A MINIMUM OF THE FOLLOWING: FILL CONNECTION, 2 PRIMARY VENTS (ONE FOR PRODUCT AND ONE FOR INTERSTITIAL SPACE), ONE EMERGENCY VENT, ONE OVERFILL ALARM, A MECHANICAL DIAL GAUGE, A SPARE PORT, EMERGENCY VENT TO THE INTERSTITIAL SPACE, A SUBMERSIBLE PUMP, AND A MECHANICAL OVERFILL STOP.
- 4) THE TANK SADDLES SHALL BE SECURED TO THE REINFORCED CONCRETE SLAB WITH ANCHOR BOLTS PER TANK MANUFACTURER'S INSTRUCTIONS.
- 5) THE AREA ADJACENT TO THE TANK SHALL BE GRADED SO THAT SPILLED PRODUCT WILL NOT ENTER CATCH BASINS OR OTHER NEARBY UNDERGROUND STRUCTURES.
- 6) FIRE EXTINGUISHERS SHALL BE PROVIDED AT THE STORAGE TANK IN ACCORDANCE WITH NFPA 30.
- 7) REDUCTION IN SIZING OF THE EMERGENCY VENTS SHALL NOT BE PERMITTED.
- 8) ASSUME THAT THE SOIL BEARING PRESSURE IS A MINIMUM OF 3,000 PSF.
- 9) THE PUMP SHALL BE A 2HP VARIABLE SPEED SUBMERSIBLE PUMP, FRANKLIN FUELING MODEL STPKMVS2-VL2-00 OR APPROVED EQUAL.
- 10) THE ENTIRE PUMPING ASSEMBLY SHALL HAVE UL LISTING FOR GROUP D, CLASS 1 FLAMMABLE SOLVENT. THE PUMP MOTOR WINDINGS SHALL BE HERMETICALLY SEALED AGAINST LEAKAGE OF PRODUCTS OR MOISTURE INTO THE MOTOR.
- 11) NO FENCING WILL BE PLACED AROUND THE TANK. SITE PERIMETER FENCING IS ASSUMED TO PROVIDE REQUIRED SECURITY.

PIPING

- 1) ALL OF THE ABOVE GROUND PIPING SHALL BE 2" SCH. 40 SEAMLESS CARBON STEEL, CONFORMING TO ASTM 106 GRADE B.
- 2) HORIZONTAL BURIED FUEL PUMPING, UNLESS OTHERWISE INDICATED, SHALL BE SLOPED WITH A DOWNWARD GRADE OF NOT LESS THAN 1/8" INCH PER FOOT OF RUN FROM DISPENSER SUMPS TOWARDS THE PIPING TRANSITION SUMP NEAR THE AST.
- 3) ALL OF THE BELOW GROUND PIPING SHALL BE 2" XP-200-SC APT PIPING.
- 4) A FRANKLIN FUELING MODEL TS-LS500/2 KIT OR APPROVED EQUAL WILL BE USED FOR LINE LEAK DETECTION FOR GASOLINE PIPING.
- 5) CERTIFICATION FROM MANUFACTURER FOR INSTALLING UNDERGROUND PIPING SHALL BE SUBMITTED BY CONTRACTOR PRIOR TO INSTALLATION.
- 6) A SHEAR VALVE WILL BE EQUIPPED ON THE INLET TO THE DISPENSER. THIS VALVE WILL BE A FRANKLIN FUELING MODEL 662501902 OR APPROVED EQUAL.
- 7) THE TRANSITION SUMP SHALL BE A FRANKLIN FUELING MODEL AST-2922 OR APPROVED EQUAL.
- 8) CONTINUOUS LEAK MONITORING IS REQUIRED IN THE TRANSITION SUMP FOR METAL PIPE TO FRP CONNECTIONS.



NO	REVISION	DATE

LAKETRAN
FUEL TANK UPGRADE
 LAKE COUNTY, OHIO

ISSUED FOR:	BID SET
ISSUE DATE:	05-11-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

SITE PLAN

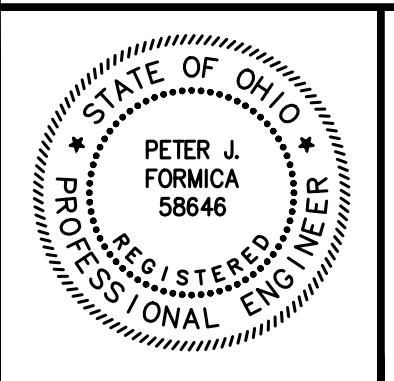
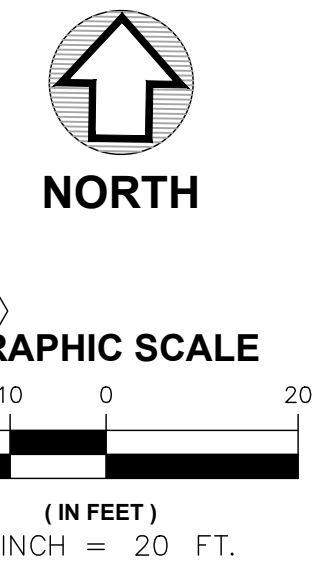
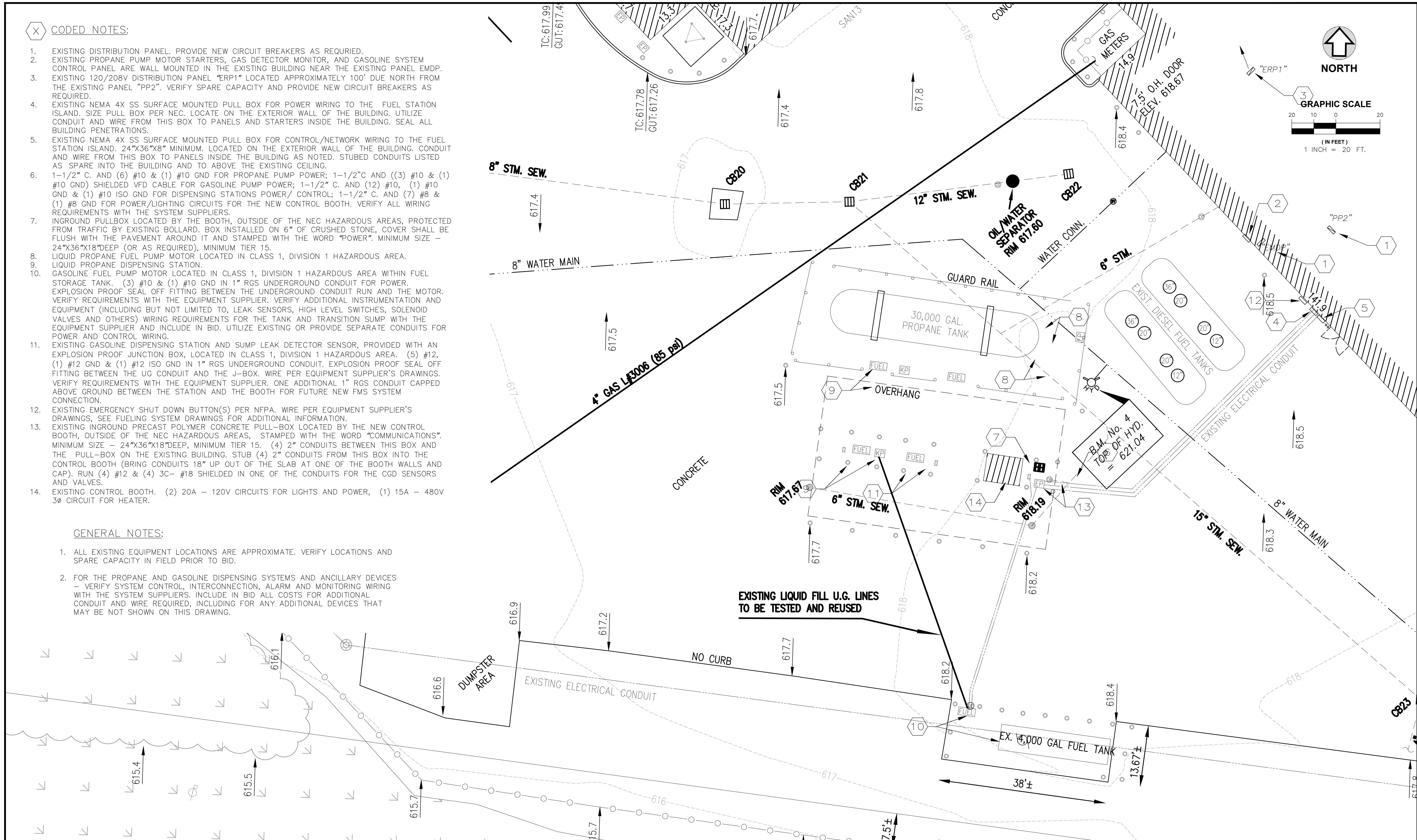
PROJECT NO.		232359	
DISCIPLINE		CIVIL	
SHEET NAME		SITE	
SHEET	OF	4	9

CODED NOTES:

- EXISTING DISTRIBUTION PANEL. PROVIDE NEW CIRCUIT BREAKERS AS REQUIRED.
- EXISTING PROPANE PUMP MOTOR STARTERS, GAS DETECTOR MONITOR, AND GASOLINE SYSTEM CONTROL PANEL ARE WALL MOUNTED IN THE EXISTING BUILDING NEAR THE EXISTING PANEL EMDP.
- EXISTING 120/208V DISTRIBUTION PANEL "ERP1" LOCATED APPROXIMATELY 100' DUE NORTH FROM THE EXISTING PANEL "PP2". VERIFY SPARE CAPACITY AND PROVIDE NEW CIRCUIT BREAKERS AS REQUIRED.
- EXISTING NEMA 4X SS SURFACE MOUNTED PULL BOX FOR POWER WIRING TO THE FUEL STATION ISLAND. SIZE PULL BOX PER NEC. LOCATE ON THE EXTERIOR WALL OF THE BUILDING. UTILIZE CONDUIT AND WIRE FROM THIS BOX TO PANELS AND STARTERS INSIDE THE BUILDING. SEAL ALL BUILDING PENETRATIONS.
- EXISTING NEMA 4X SS SURFACE MOUNTED PULL BOX FOR CONTROL/NETWORK WIRING TO THE FUEL STATION ISLAND. 24"x36"x8" MINIMUM. LOCATED ON THE EXTERIOR WALL OF THE BUILDING. CONDUIT AND WIRE FROM THIS BOX TO PANELS INSIDE THE BUILDING AS NOTED. STUBED CONDUITS LISTED AS SPARE INTO THE BUILDING AND TO ABOVE THE EXISTING CEILING.
- 1-1/2" C. AND (6) #10 & (1) #10 GND FOR PROPANE PUMP POWER; 1-1/2" C. AND ((3) #10 & (1) #10 GND) SHIELDED VFD CABLE FOR GASOLINE PUMP POWER; 1-1/2" C. AND (12) #10, (1) #10 GND & (1) #10 ISO GND FOR DISPENSING STATIONS POWER/ CONTROL; 1-1/2" C. AND (7) #8 & (1) #8 GND FOR POWER/LIGHTING CIRCUITS FOR THE NEW CONTROL BOOTH. VERIFY ALL WIRING REQUIREMENTS WITH THE SYSTEM SUPPLIERS.
- INGROUND PULLBOX LOCATED BY THE BOOTH, OUTSIDE OF THE NEC HAZARDOUS AREAS, PROTECTED FROM TRAFFIC BY EXISTING BOLLARD. BOX INSTALLED ON 6" OF CRUSHED STONE, COVER SHALL BE FLUSH WITH THE PAVEMENT AROUND IT AND STAMPED WITH THE WORD "POWER". MINIMUM SIZE - 24"x36"x18" DEEP (OR AS REQUIRED), MINIMUM TIER 15.
- LIQUID PROPANE FUEL PUMP MOTOR LOCATED IN CLASS 1, DIVISION 1 HAZARDOUS AREA.
- LIQUID PROPANE DISPENSING STATION.
- GASOLINE FUEL PUMP MOTOR LOCATED IN CLASS 1, DIVISION 1 HAZARDOUS AREA WITHIN FUEL STORAGE TANK. (3) #10 & (1) #10 GND IN 1" RGS UNDERGROUND CONDUIT FOR POWER. EXPLOSION PROOF SEAL OFF FITTING BETWEEN THE UNDERGROUND CONDUIT RUN AND THE MOTOR. VERIFY REQUIREMENTS WITH THE EQUIPMENT SUPPLIER. VERIFY ADDITIONAL INSTRUMENTATION AND EQUIPMENT (INCLUDING BUT NOT LIMITED TO, LEAK SENSORS, HIGH LEVEL SWITCHES, SOLENOID VALVES AND OTHERS) WIRING REQUIREMENTS FOR THE TANK AND TRANSITION SUMP WITH THE EQUIPMENT SUPPLIER AND INCLUDE IN BID. UTILIZE EXISTING OR PROVIDE SEPARATE CONDUITS FOR POWER AND CONTROL WIRING.
- EXISTING GASOLINE DISPENSING STATION AND SUMP LEAK DETECTOR SENSOR, PROVIDED WITH AN EXPLOSION PROOF JUNCTION BOX, LOCATED IN CLASS 1, DIVISION 1 HAZARDOUS AREA. (5) #12, (1) #12 GND & (1) #12 ISO GND IN 1" RGS UNDERGROUND CONDUIT. EXPLOSION PROOF SEAL OFF FITTING BETWEEN THE UG CONDUIT AND THE J-BOX. WIRE PER EQUIPMENT SUPPLIER'S DRAWINGS. VERIFY REQUIREMENTS WITH THE EQUIPMENT SUPPLIER. ONE ADDITIONAL 1" RGS CONDUIT CAPPED ABOVE GROUND BETWEEN THE STATION AND THE BOOTH FOR FUTURE NEW FMS SYSTEM CONNECTION.
- EXISTING EMERGENCY SHUT DOWN BUTTON(S) PER NFPA. WIRE PER EQUIPMENT SUPPLIER'S DRAWINGS. SEE FUELING SYSTEM DRAWINGS FOR ADDITIONAL INFORMATION.
- EXISTING INGROUND PRECAST POLYMER CONCRETE PULL-BOX LOCATED BY THE NEW CONTROL BOOTH, OUTSIDE OF THE NEC HAZARDOUS AREAS, STAMPED WITH THE WORD "COMMUNICATIONS". MINIMUM SIZE - 24"x36"x18" DEEP, MINIMUM TIER 15. (4) 2" CONDUITS BETWEEN THIS BOX AND THE PULL-BOX ON THE EXISTING BUILDING. STUB (4) 2" CONDUITS FROM THIS BOX INTO THE CONTROL BOOTH (BRING CONDUITS 18" UP OUT OF THE SLAB AT ONE OF THE BOOTH WALLS AND CAP). RUN (4) #12 & (4) 3C- #18 SHIELDED IN ONE OF THE CONDUITS FOR THE CGD SENSORS AND VALVES.
- EXISTING CONTROL BOOTH. (2) 20A - 120V CIRCUITS FOR LIGHTS AND POWER, (1) 15A - 480V 3Ø CIRCUIT FOR HEATER.

GENERAL NOTES:

- ALL EXISTING EQUIPMENT LOCATIONS ARE APPROXIMATE. VERIFY LOCATIONS AND SPARE CAPACITY IN FIELD PRIOR TO BID.
- FOR THE PROPANE AND GASOLINE DISPENSING SYSTEMS AND ANCILLARY DEVICES - VERIFY SYSTEM CONTROL, INTERCONNECTION, ALARM AND MONITORING WIRING WITH THE SYSTEM SUPPLIERS. INCLUDE IN BID ALL COSTS FOR ADDITIONAL CONDUIT AND WIRE REQUIRED, INCLUDING FOR ANY ADDITIONAL DEVICES THAT MAY BE NOT SHOWN ON THIS DRAWING.



NO	REVISION	DATE

LAKETRAN
FUEL TANK UPGRADE
LAKE COUNTY, OHIO

ISSUED FOR:	BID SET
ISSUE DATE:	05-11-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

ELECTRICAL CONDUIT PLAN

PROJECT NO.	232359
DISCIPLINE	CIVIL
SHEET NAME	ELEC-1
SHEET	5
OF	9

ELECTRICAL SPECIFICATIONS

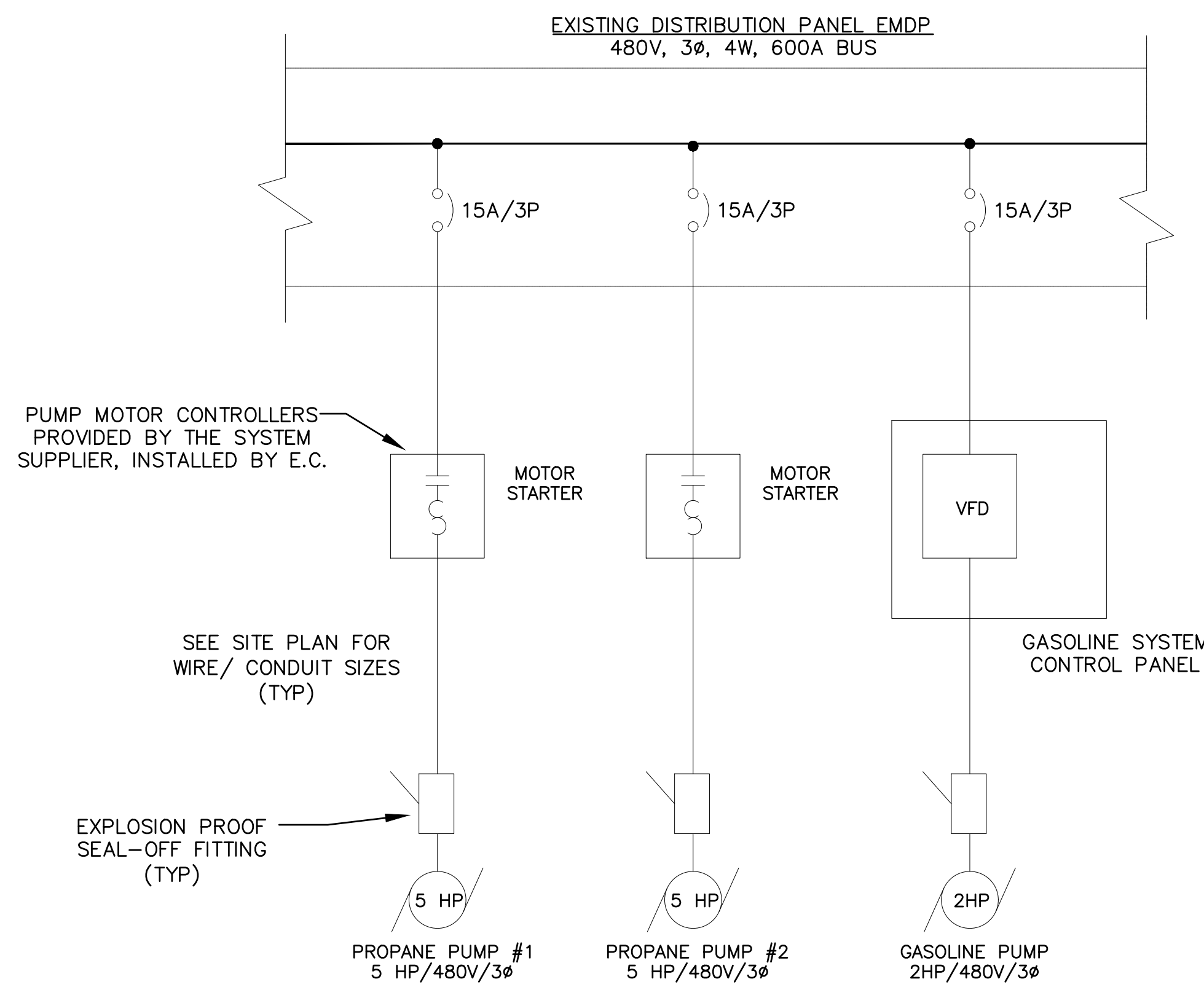
- THE ELECTRICAL CONTRACTOR SHALL APPLY FOR AND SECURE ALL COSTS AND CHARGES FOR PERMITS, CONSTRUCTION, AND MISCELLANEOUS WORK ASSOCIATED WITH AND REQUIRED FOR THE COMPLETION OF THE PROJECT ELECTRICAL WORK.
- THE ELECTRICAL CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS OF ELECTRICAL WORK BY ALL INSPECTION AUTHORITIES HAVING JURISDICTION. COPIES OF INSPECTION REPORTS SHALL BE MADE AVAILABLE TO THE OWNER UPON REQUEST, AND THREE (3) COPIES OF THE APPROVED FINAL INSPECTION REPORT SHALL ACCOMPANY THE REQUEST FOR FINAL PAYMENT.
- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, OHIO BUILDING CODE, LOCAL CODES AND ORDINANCES WHERE APPLICABLE, AND REQUIREMENTS OF O.S.H.A.
- ALL MATERIALS AND EQUIPMENT FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE NEW, U.L. LISTED OR LABELED, AND CONFORM TO NEMA AND ANSI STANDARD WHERE APPLICABLE.
- THE CONTRACTOR SHALL VISIT THE SITE AND FULLY FAMILIARIZE HIMSELF WITH ALL CONDITIONS WHICH AFFECT HIS WORK PRIOR TO BID. COORDINATE AND SCHEDULE WORK WITH OTHER TRADES TO ENSURE SATISFACTORY PERFORMANCE, AVOID DELAYS AND DUPLICATIONS AND MEET THE OWNER'S COMPLETION SCHEDULE FOR THE USE OF THE BUILDING.
- ALL WORK SHALL BE INSTALLED BY WORKMEN FULLY SKILLED IN THE WORK TO BE PERFORMED. REPAIR OR REPLACE EXISTING EQUIPMENT OR PROPERTY OF THE OWNER DAMAGED BY ELECTRICAL TRADES WORKMEN.
- THE ELECTRICAL CONTRACTOR SHALL GUARANTEE MATERIALS AND WORKMANSHIP PROVIDED BY HIM FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF OWNER'S FINAL ACCEPTANCE. REPAIR OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER WITHIN THE GUARANTEE PERIOD.
- ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE EMT, INTERMEDIATE, OR RIGID GALVANIZED IN ACCORDANCE WITH AND AS PERMITTED BY THE NATIONAL ELECTRICAL CODE OR LOCAL/STATE CODES AS APPLICABLE. UNLESS NOTED OTHERWISE, UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, 1" MINIMUM, USE RGS SWEEPS AND LISTED PVC TO RGS COUPLINGS TO TRANSITION TO ABOVE GRADE.
- FURNISH AND INSTALL PULL BOXES, JUNCTION, AND DEVICE BOXES OF SUITABLE CODE GAUGE AND SIZE. ALL TERMINATIONS IN IN-GROUND PULL BOXES SHALL BE LIQUID-TIGHT.
- ELECTRICAL WIRES SHALL BE MINIMUM #12 AWG, COPPER, 600 V RATED. #14 AWG COPPER SHALL BE PERMISSIBLE FOR CONTROL CIRCUITRY. AMPACITY RATINGS SHALL BE BASED UPON 75°C RATINGS.
 - #14, #12, AND #10 AWG CONDUCTORS SHALL BE "THHN/THWN".
 - #8 AND LARGER SHALL BE STRANDED "THHN/THWN".
- FLEXIBLE METAL CONDUIT INCLUDING LIQUIDTIGHT SHALL BE PERMITTED WHERE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND LOCAL CODE PROVISIONS. FLEXIBLE METAL CONDUIT SHALL CONTAIN A SEPARATE GROUNDING CONDUCTOR AND BE TERMINATED WITH APPROPRIATE FITTINGS.
- THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO DESCRIBE THE WORK REQUIRED. THE ELECTRICAL CONTRACTOR SHALL ACCURATELY FIELD MEASURE AND LAY OUT HIS WORK TO EFFECTIVELY ACHIEVE A COORDINATED INSTALLATION WITH THE SITE LAYOUT AND OTHER TRADES.
- DISCONNECTION, RECONNECTION, AND RELOCATION OF EQUIPMENT SHALL BE COORDINATED SO AS TO CAUSE MINIMAL DISRUPTION OF SERVICE.
- ELECTRICAL DISTRIBUTION PANELS ARE EXISTING TO REMAIN, VERIFY LOCATIONS AND SPARE CAPACITY. PROVIDE ALL NEW CIRCUIT BREAKERS FOR THE NEW EQUIPMENT.
- PROVIDE UPDATED TYPEWRITTEN PANELBOARD CIRCUIT DIRECTORIES IN EACH PANELBOARD DOOR IDENTIFYING ALL ACTIVE CIRCUITS AND SPARES. ACTIVE CIRCUITS SHALL DESIGNATE EQUIPMENT SERVED.
- IDENTIFY PANELBOARDS AND USAGE OF PANELBOARD CIRCUIT BREAKERS WITH PLASTIC LAMINOID NAMEPLATES. NAMEPLATES SHALL INDICATE PANEL DESIGNATION, VOLTAGE, AND USE.
- BALANCE ALL LOADS IN PANELBOARDS.
- THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL NECESSARY DEMOLITION WORK AS INDICATED ON THE DRAWINGS.

ELECTRICAL SYMBOL LEGEND

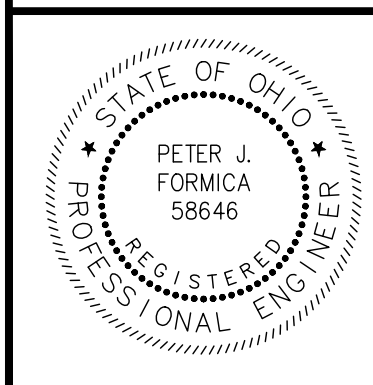
- MOTOR
- IN-GROUND PULL-BOX
- SURFACE MOUNTED JUNCTION BOX
- EXISTING DISTRIBUTION PANEL
- SOLENOID VALVE
- GAS DETECTOR
- LEAK SENSOR
- CIRCUIT BREAKER
- CONTACTOR
- OVERLOAD RELAY
- EXPLOSION PROOF CONDUIT SEAL

Panelboard	ERP1	Voltage	208Y/120V	Phase	3			
Panel Type	EXISTING	OCPD	100A M.C.B.	Wire	4			
NEMA Type	EXISTING	Mounting	SURFACE	Buss	100A			
Ckt. No.	DES	Load Description	Brkr. Size *	Phase	Brkr. Size *	Load Description	DES	Ckt. No.
1	E	DAYTANK	50/1	A	20/1	OH DOORS	E	2
3	E	TRAPEZE	20/1	B	20/1	FUEL MANAGEMENT	E	4
5	E	OH DOORS	20/1	C	20/1	TRAPEZE	E	6
7	E	RECEPTACLES	20/1	A	20/1	RECEPTACLES	E	8
9	E	RECEPTACLES	20/1	B	20/1	FUEL MONITOR	E	10
11	E	RECEPTACLES	20/1	C	20/1	FUEL MANAGEMENT	E	12
13	E	RECEPTACLES	20/1	A	20/1	FIRE ALARM PANEL	E	14
15	E	TOXALERT PANEL	20/1	B	20/1	TIME CLOCK	E	16
17	E	SUBMERSIBLE PUMP	20/2	C	20/2	SUBMERSIBLE PUMP	E	18
19	A		E	20				
21	E	PROPANE DISPENSER 1	15/1	B	20/1	HALON SYSTEM	E	22
23	E	PROPANE DISPENSER 2	15/1	C	20/1	BOOTH CIRC 2	E	24
25	E	GASOLINE DISPENSER 1	15/1	A	20/1		E	26
27	E	GASOLINE DISPENSER 2	15/1	B	20/1		E	28
29	E	BOOTH CIRC 1	20/1	C	20/1		E	30

Panelboard	FP-2	Voltage	480Y/277V	Phase	3			
Panel Type	EXISTING	OCPD	M.L.O.	Wire	4			
NEMA Type	EXISTING	Mounting	SURFACE	Buss	400A			
Ckt. No.	DES	Load Description	Brkr. Size *	Phase	Brkr. Size *	Load Description	DES	Ckt. No.
1				A				2
3	E	UNKNOWN CIRCUIT	100/3	B	70/3	HV-2-1	E	4
5				C				6
7				A				8
9	E	UNKNOWN CIRCUIT	100/3	B	70/3	HV-2-2	E	10
11				C				12
13				A				14
15	E	VEHICLE WASHER	25/3	B	30/3	LIFT	E	16
17				C				18
19				A				20
21	E	PRESSURE WASHER	30/3	B	35/3	WATER RECLAMATION	E	22
23				C				24
25				A				26
27	E	AIR COMPRESSOR	50/3	B	20/3	AIR DRYER	E	28
29				C				30
31								32
33	E	BOOTH UNIT HEATER	15/3		50/3	VACUUM PUMP	E	34
35								36
37								38
39						SPACE		40
41								42



PARTIAL ONE-LINE DIAGRAM
NTS



NO	REVISION	DATE

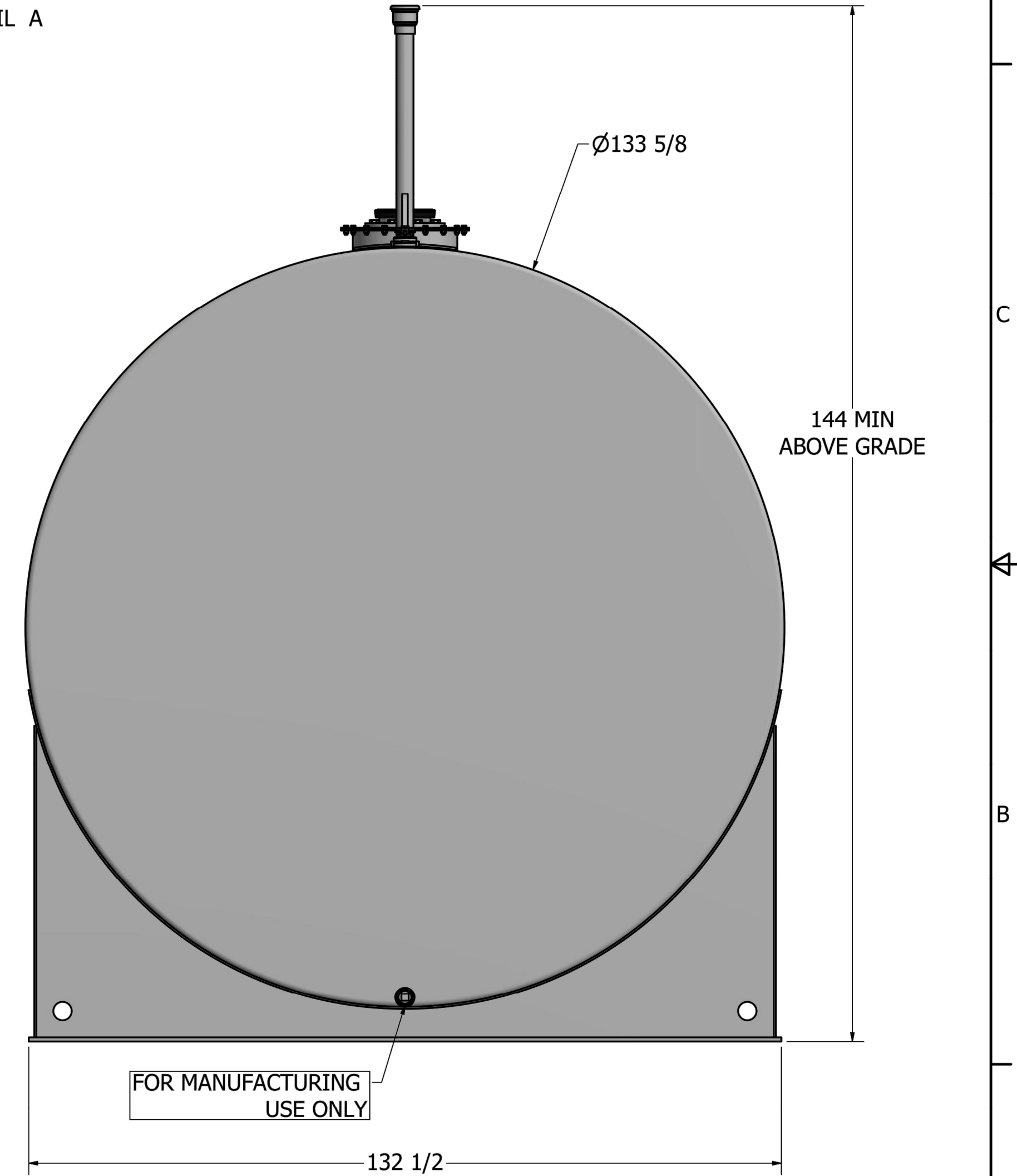
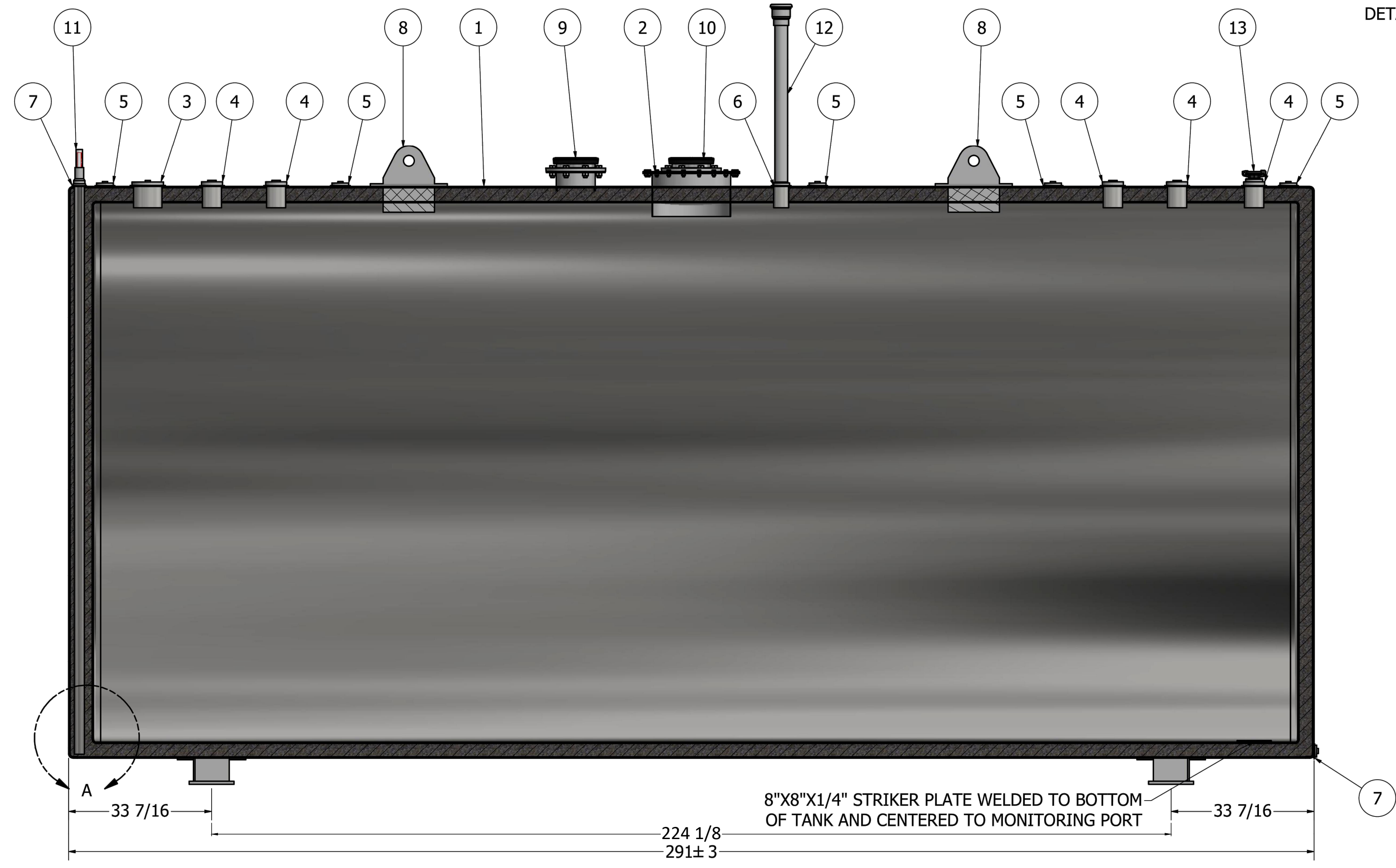
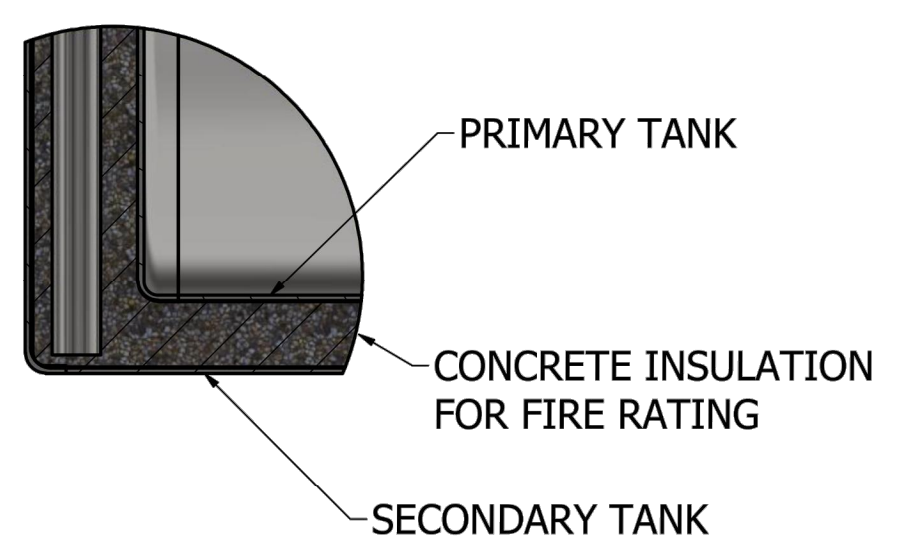
LAKETRAN
FUEL TANK UPGRADE
LAKE COUNTY, OHIO

ISSUED FOR: BID SET
ISSUE DATE: 05-11-24
SCALE: AS SHOWN
DESIGNED BY: PJF
DRAWN BY: PJF
CHECKED BY: PJF

ELECTRICAL DETAILS AND SPECIFICATIONS

PROJECT NO.	232359
DISCIPLINE	CIVIL
SHEET NAME	ELEC-2
SHEET	OF
6	9

PARTS LIST			PARTS LIST		
ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	15,000 GALLON FIREGUARD TANK MOUNTED ON SADDLES	9	1	8" 8 OZ./SQ.IN. FLANGED EMERGENCY VENT KIT
2	1	18" MANWAY FOR EASY INNER TANK ACCESSIBILITY	10	1	8" 8 OZ./SQ.IN. FLANGED EMERGENCY VENT WITH SET OF NUTS AND BOLTS AND GASKET
3	1	6" NPT THREADED FLANGE	11	1	INTERSTITIAL LEAK GAUGE
4	5	4" NPT THREADED FLANGE	12	1	3" UPDRAFT STACK W/3" 354 SLIP ON
5	5	3" NPT THREADED FLANGE (CONCRETE PORT)	13	1	MONITORING CAP 2"
6	1	3" NPT THREADED FLANGE	14	1	TANK DECAL KIT (NOT SHOWN)
7	2	2" NPT THREADED FLANGE	15	1	TOUCH UP PAINT (NOT SHOWN AND SHIPPED SEPARATELY)
8	2	LIFTING LUG WITH REPAD PLATE			



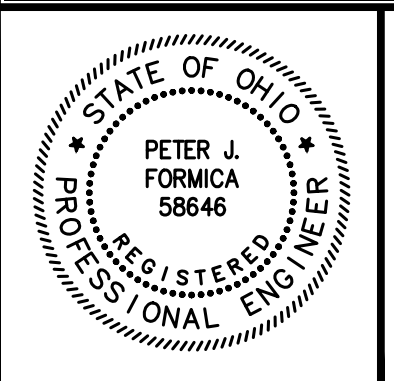
SHELL THICKNESS: 5/16"
 PRI. HEAD THICKNESS: 5/16"
 SEC. HEAD THICKNESS: 3/8"

This document and all information and design thereon are the property of EnviroSAFE Fuel Systems. This document is confidential and must not be made public or copies without written authorization from EnviroSAFE and is subject to return upon demand. No use of this document or any design thereon is permitted except as is specifically authorized in writing by EnviroSAFE. Acceptance of possession of this document constitutes full agreement with the above conditions. All Right Reserved. Memco, Inc.

#			IT IS THE CLIENT'S RESPONSIBILITY TO ENSURE SYSTEM COMPLIANCE WITH APPLICABLE REGULATIONS.		
			APPROVED BY:		
STI	SwRI	UL			

MEMCO, INC	
ER. VERSION #:	SALES ORDER #:

AUTHOR	AP
MEMCO REP	
DATE	9/2/2022
SIZE D	REV
	SHEET 2 OF 3



NO	REVISION	DATE

LAKETRAN

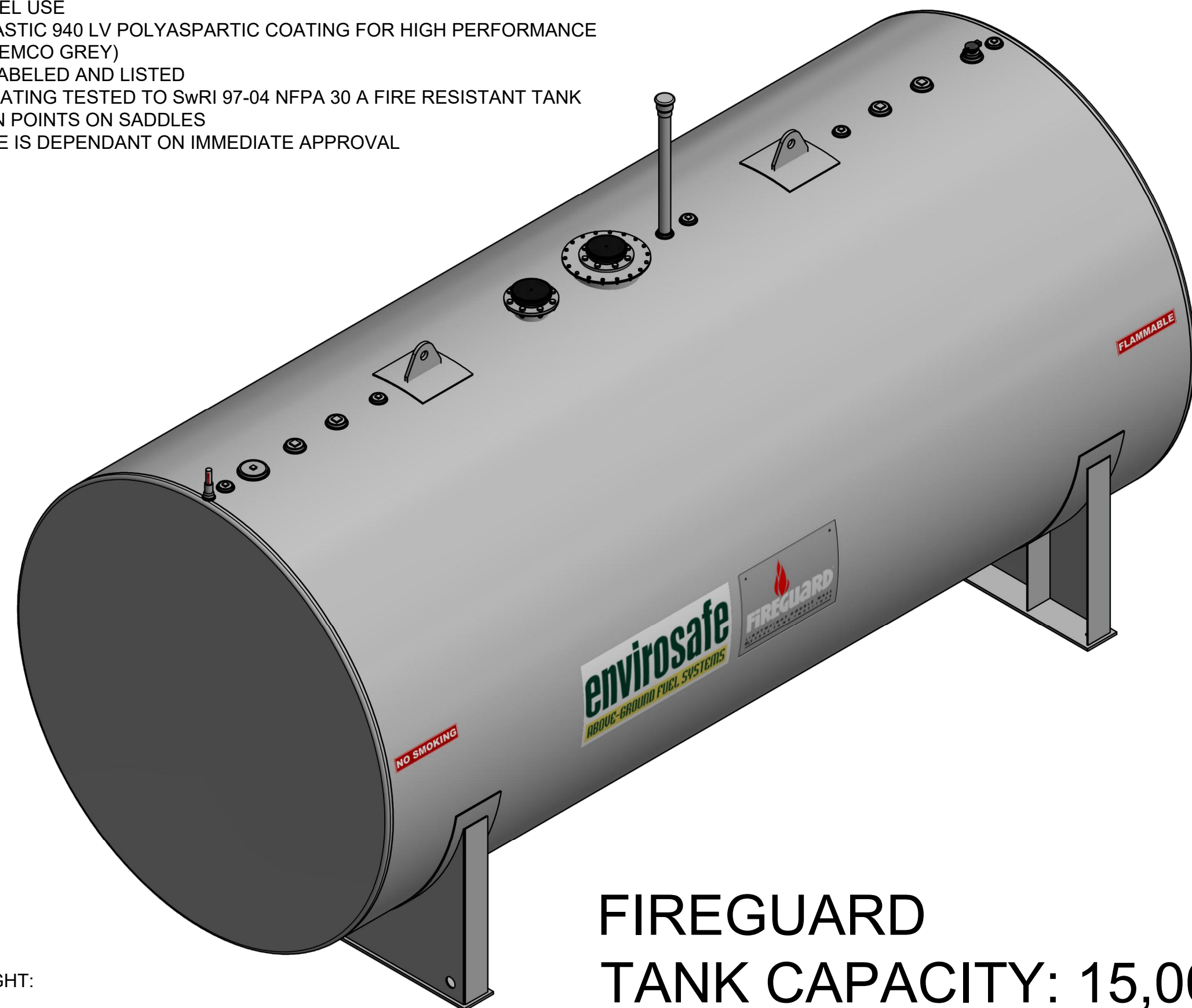
FUEL TANK UPGRADE

LAKE COUNTY, OHIO

ISSUED FOR:	BID SET
ISSUE DATE:	05-11-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

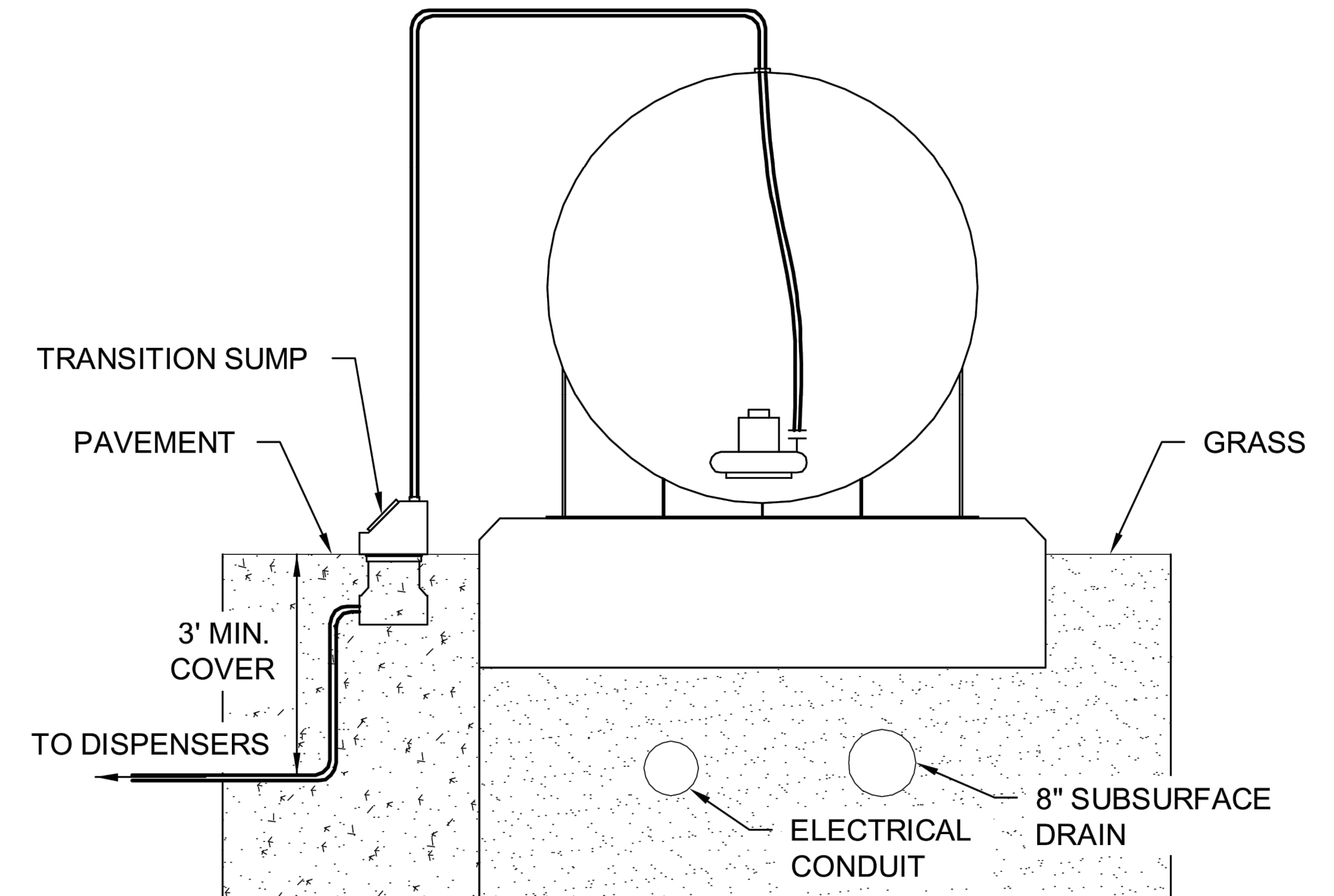
TANK DETAILS		PROJECT NO.	232359
		DISCIPLINE	CIVIL
TANK-1		SHEET NAME	TANK-1
		SHEET	7
TANK DETAILS		OF	9

- NOTES:
1. GAS/DIESEL USE
 2. ENVIROLASTIC 940 LV POLYASPARTIC COATING FOR HIGH PERFORMANCE FINISH (MEMCO GREY)
 3. UL 2085 LABELED AND LISTED
 4. 2 HOUR RATING TESTED TO SWRI 97-04 NFPA 30 A FIRE RESISTANT TANK
 5. TIE-DOWN POINTS ON SADDLES
 6. LEAD TIME IS DEPENDANT ON IMMEDIATE APPROVAL

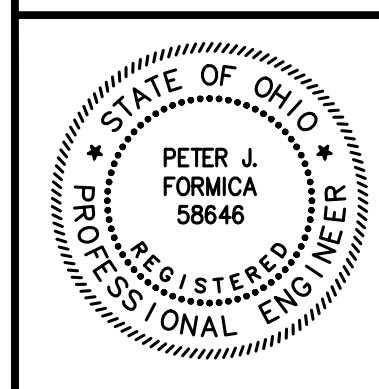
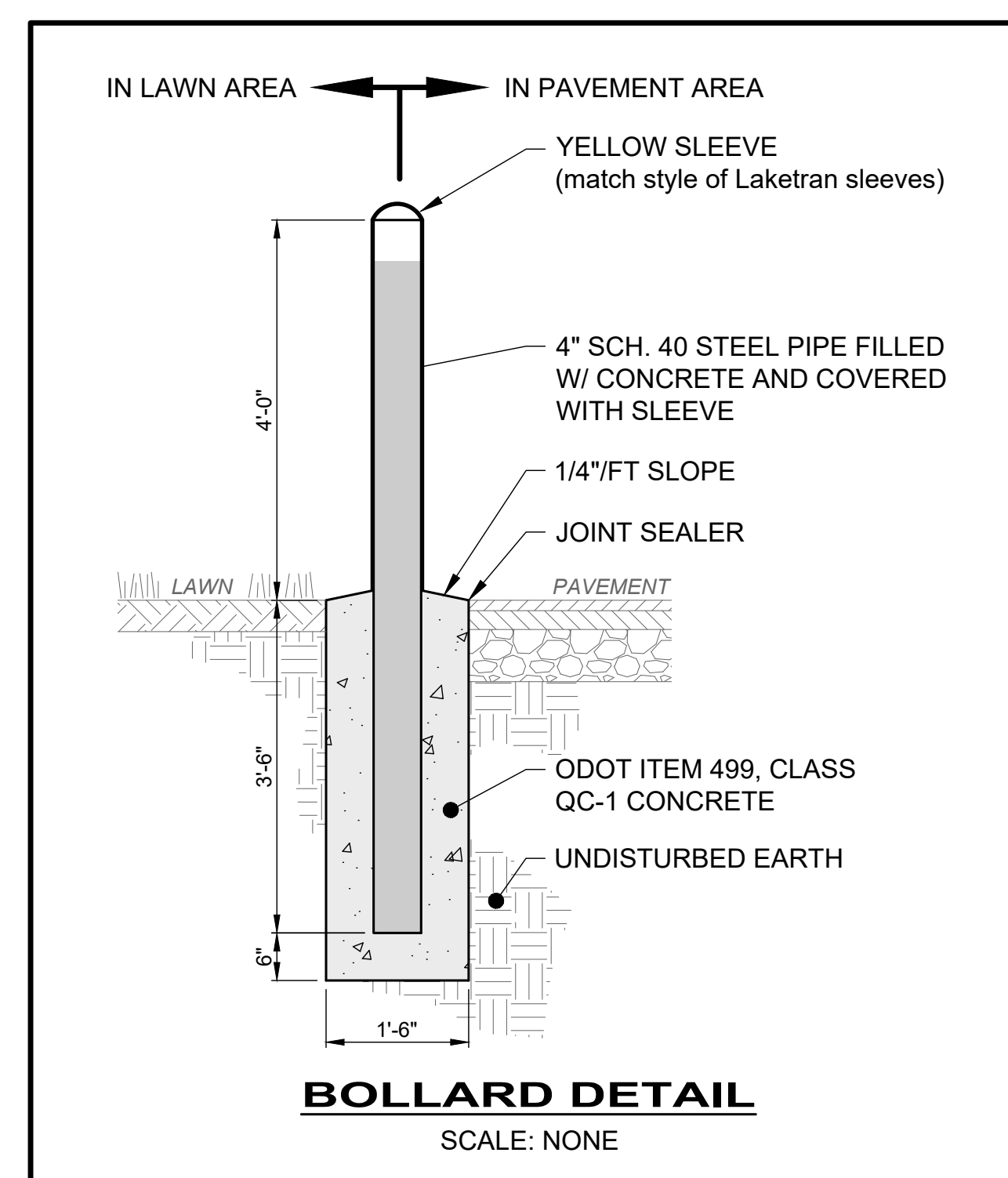
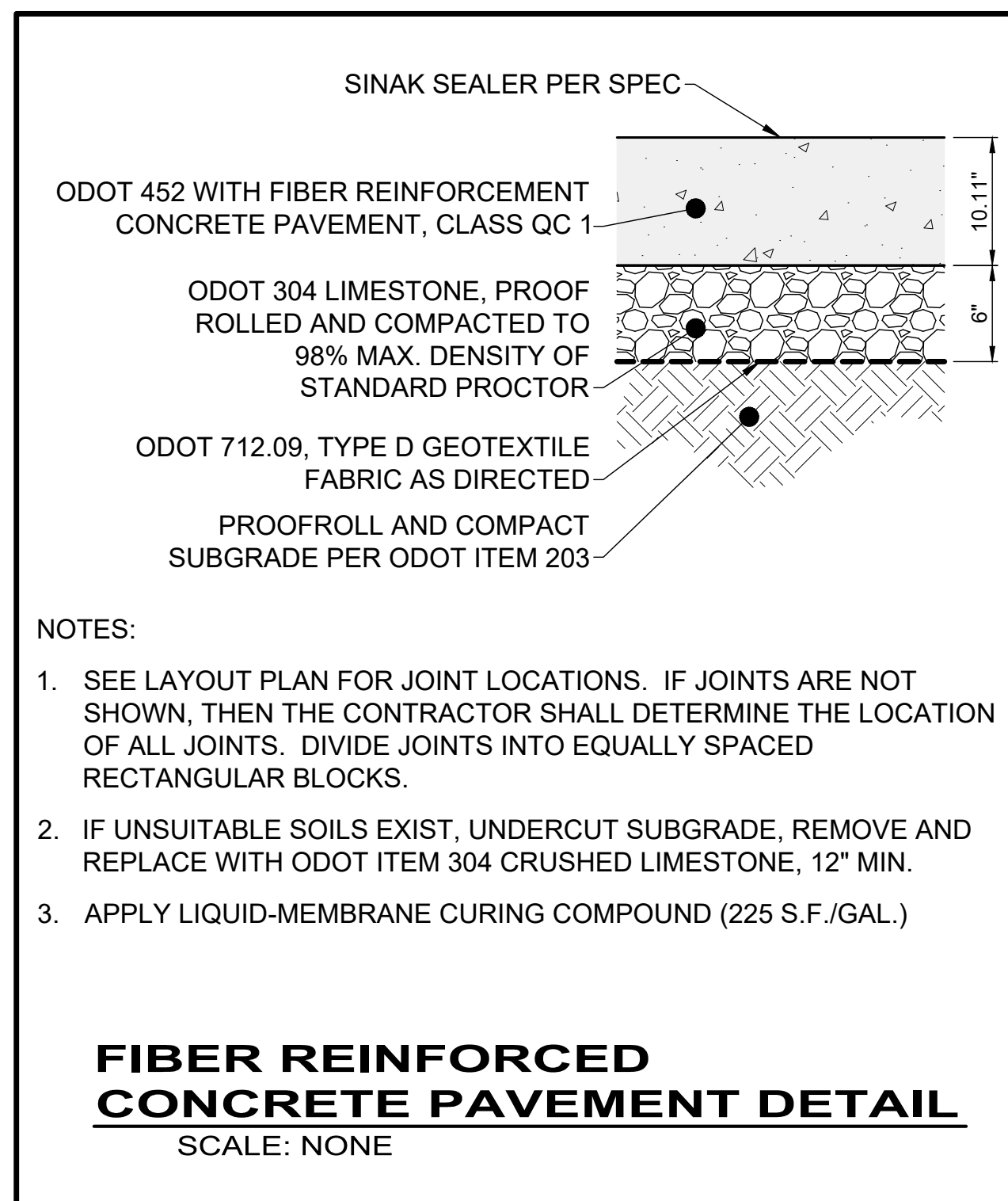


CALCULATED WEIGHT:
39,500 LB±

**FIREGUARD
TANK CAPACITY: 15,000 GALLONS**



- NOTES:
- SEE PIPING NOTES ON SHEET G-1 FOR UNDERGROUND TRANSITION SUMP AND PIPING SLOPE REQUIREMENTS.
 - SEE TANK SYSTEM AND FOUNDATION NOTES ON SHEET G-1 FOR PUMP AND TANK REQUIREMENTS.



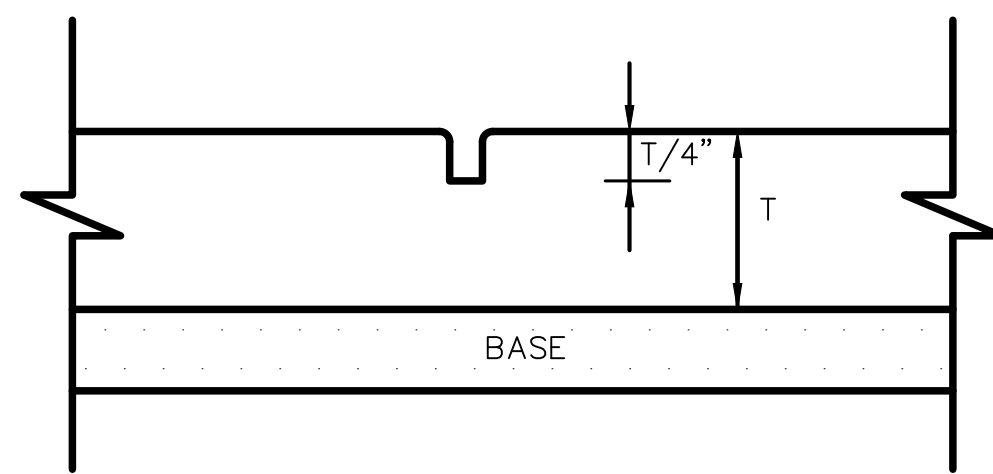
NO	REVISION	DATE

LAKETRAN
FUEL TANK UPGRADE
LAKE COUNTY, OHIO

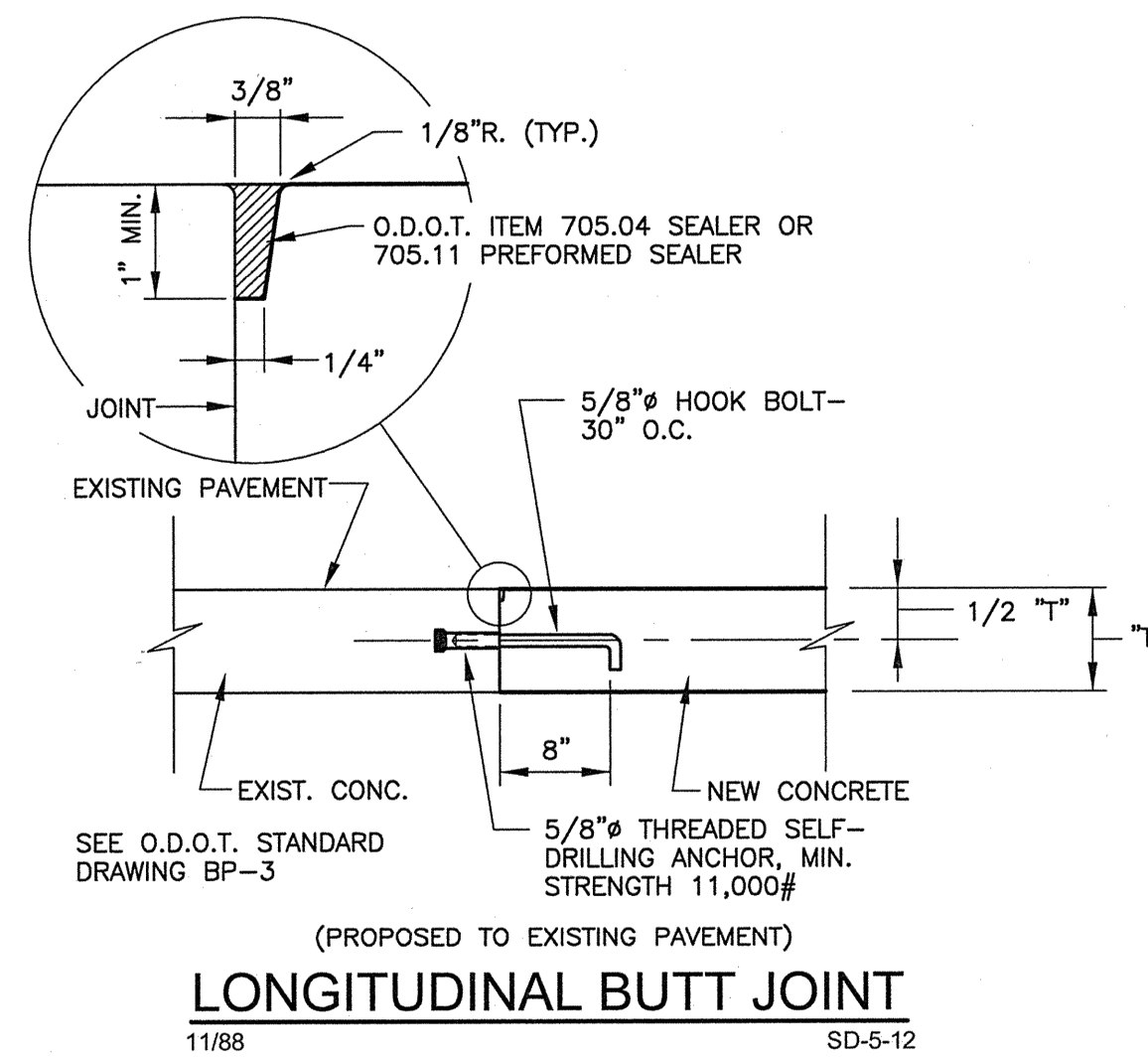
ISSUED FOR: BID SET
ISSUE DATE: 05-11-24
SCALE: AS SHOWN
DESIGNED BY: PJF
DRAWN BY: PJF
CHECKED BY: PJF

TANK DETAILS

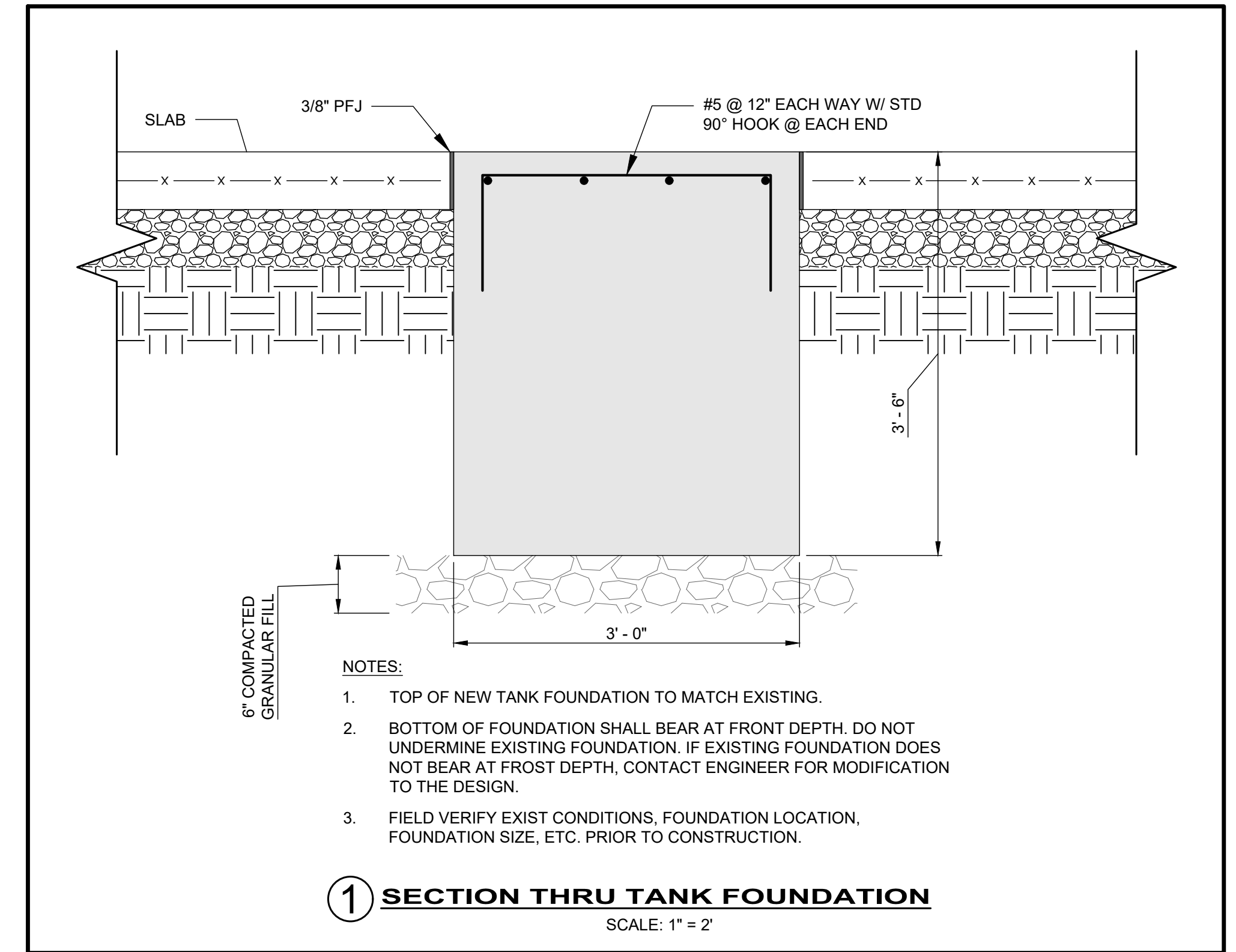
PROJECT NO. 232359	
DISCIPLINE CIVIL	
SHEET NAME TANK-2	
SHEET 8	OF 9



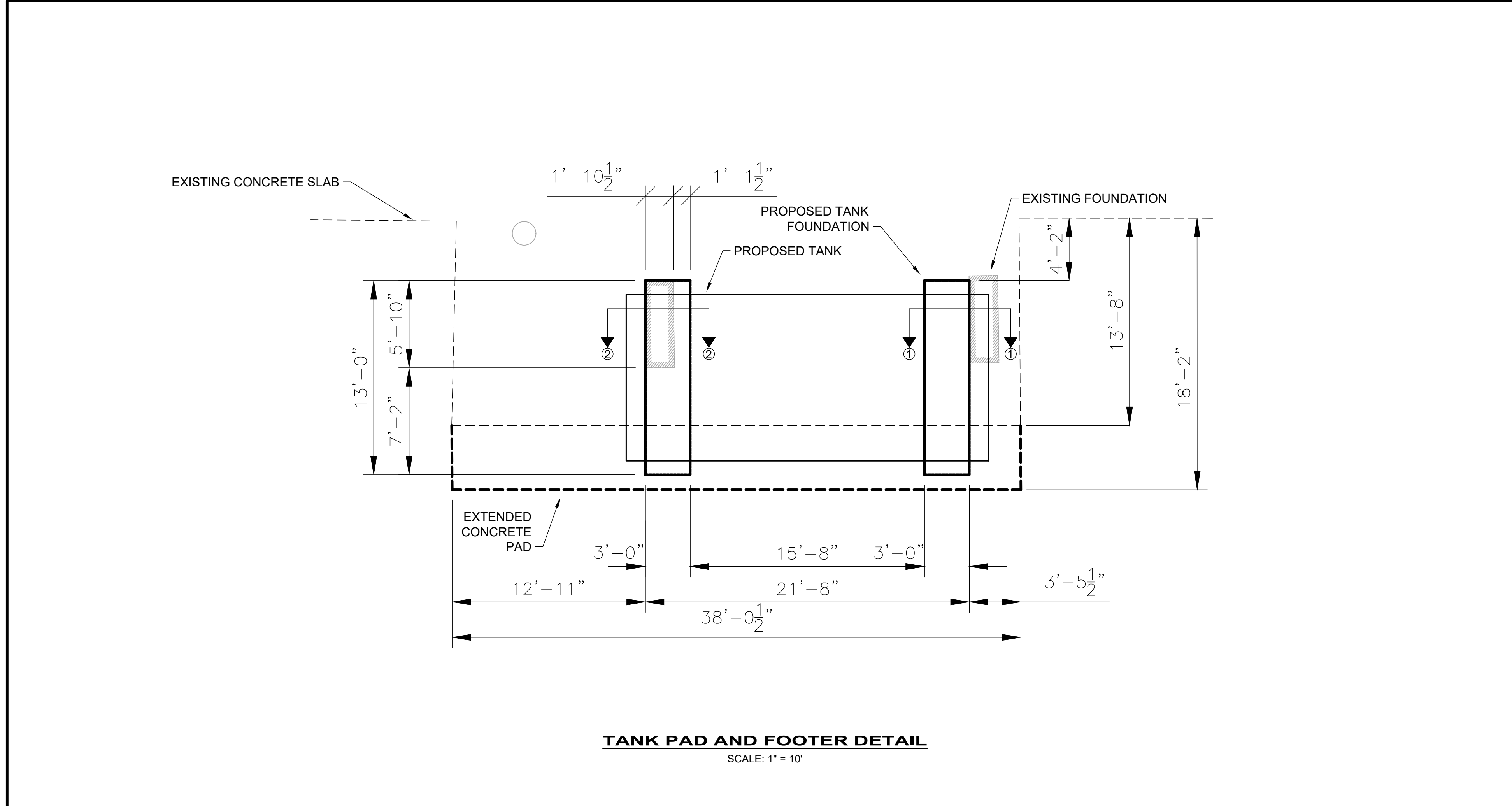
IMPRESSION JOINT FORMED



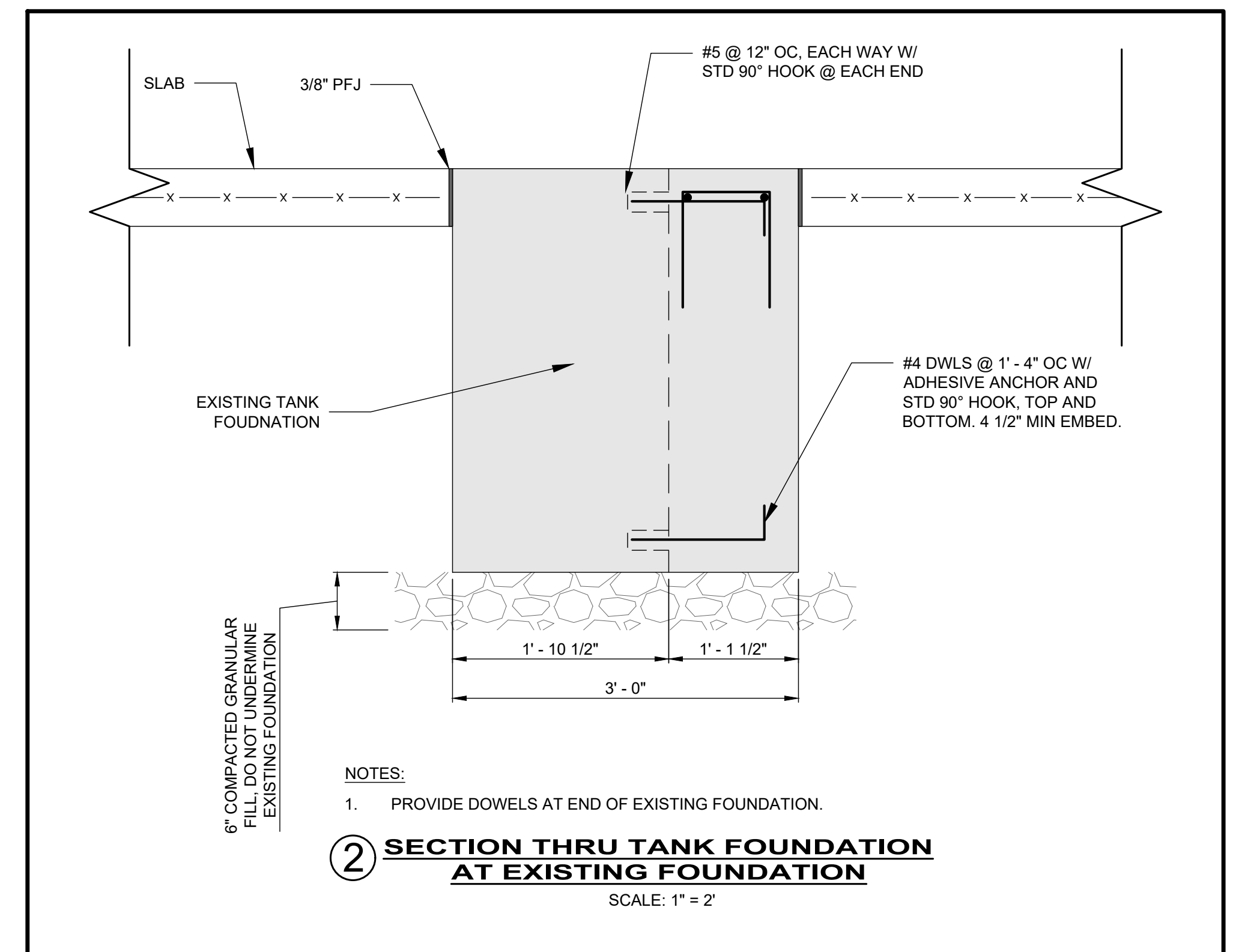
LONGITUDINAL BUTT JOINT



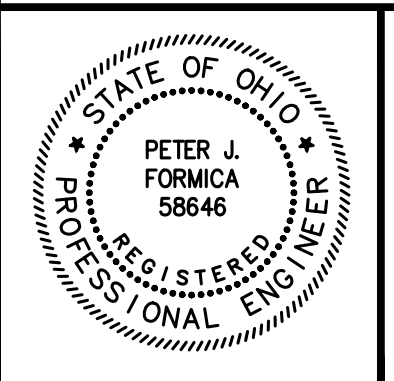
SECTION THRU TANK FOUNDATION
SCALE: 1" = 2'



TANK PAD AND FOOTER DETAIL
SCALE: 1" = 10'



SECTION THRU TANK FOUNDATION AT EXISTING FOUNDATION
SCALE: 1" = 2'



NO	REVISION	DATE

LAKETRAN
FUEL TANK UPGRADE
LAKE COUNTY, OHIO

ISSUED FOR:	BID SET
ISSUE DATE:	05-11-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

STANDARD DETAILS

PROJECT NO.	232359
DISCIPLINE	CIVIL
SHEET NAME	DET-1
SHEET	OF
9	9