

DOC

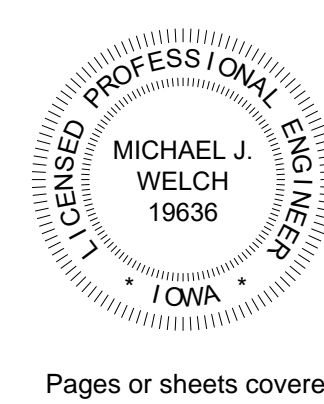
MPCF DIESEL TANKS REPLACEMENT & SPILL CONTAINMENT

MT. PLEASANT CORRECTIONAL FACILITY

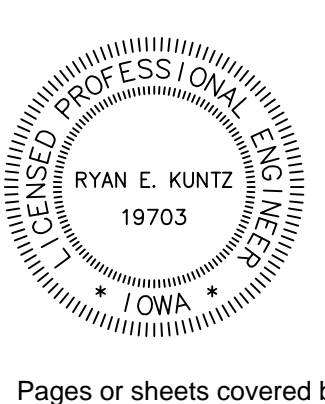
1200 E Washington St, Mt. Pleasant, IA 52641

DAS PROJECT #9500.00

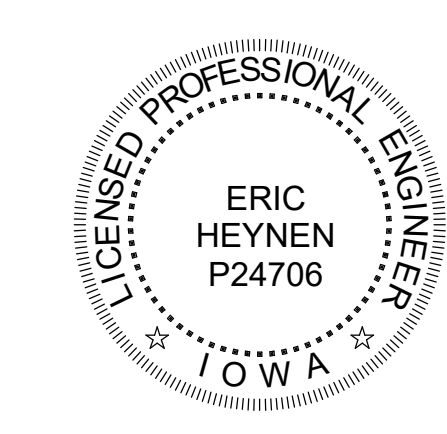
Sheet Index	
Sheet Number	Sheet Name
C100	CIVIL GRADING AND SWPPP PLAN
S000	GENERAL NOTES
S100	DEMO PLAN, FOUNDATION PLAN, AND DETAILS
S101	TANK ACCESS PLAN AND DETAILS
M000	MECHANICAL GENERAL NOTES & SYMBOLS
M100	MECHANICAL PLAN
M300	MECHANICAL SCHEMATIC
M500	MECHANICAL SCHEDULES TANK BID DOCUMENTS
E000	ELECTRICAL PLAN


 I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.
 Michael J. Welch Reg. No. 19636 Date 04/29/2026
 My license renewal date is December 31, 2026.

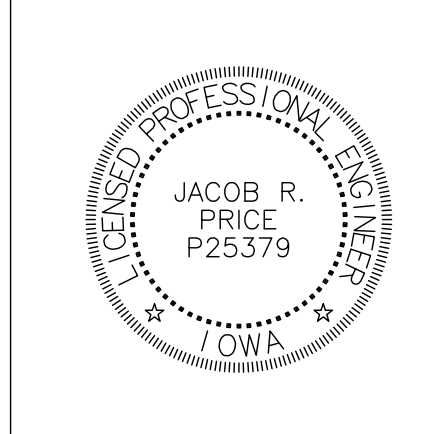
Pages or sheets covered by the seal: C Sheets

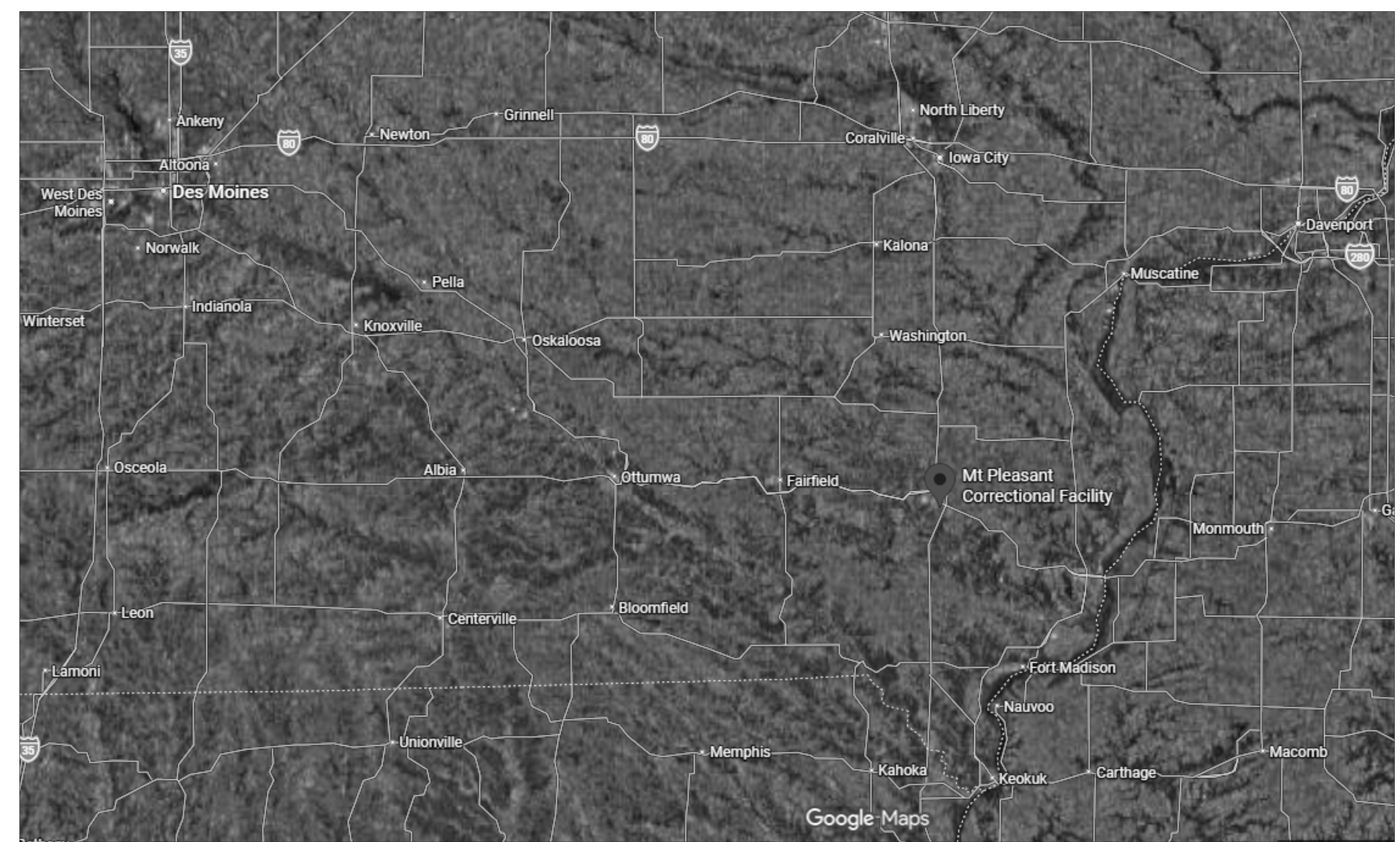

 I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.
 Ryan E. Kuntz Reg. No. 19703 Date 04/29/2026
 My license renewal date is December 31, 2027.

Pages or sheets covered by the seal: S Sheets

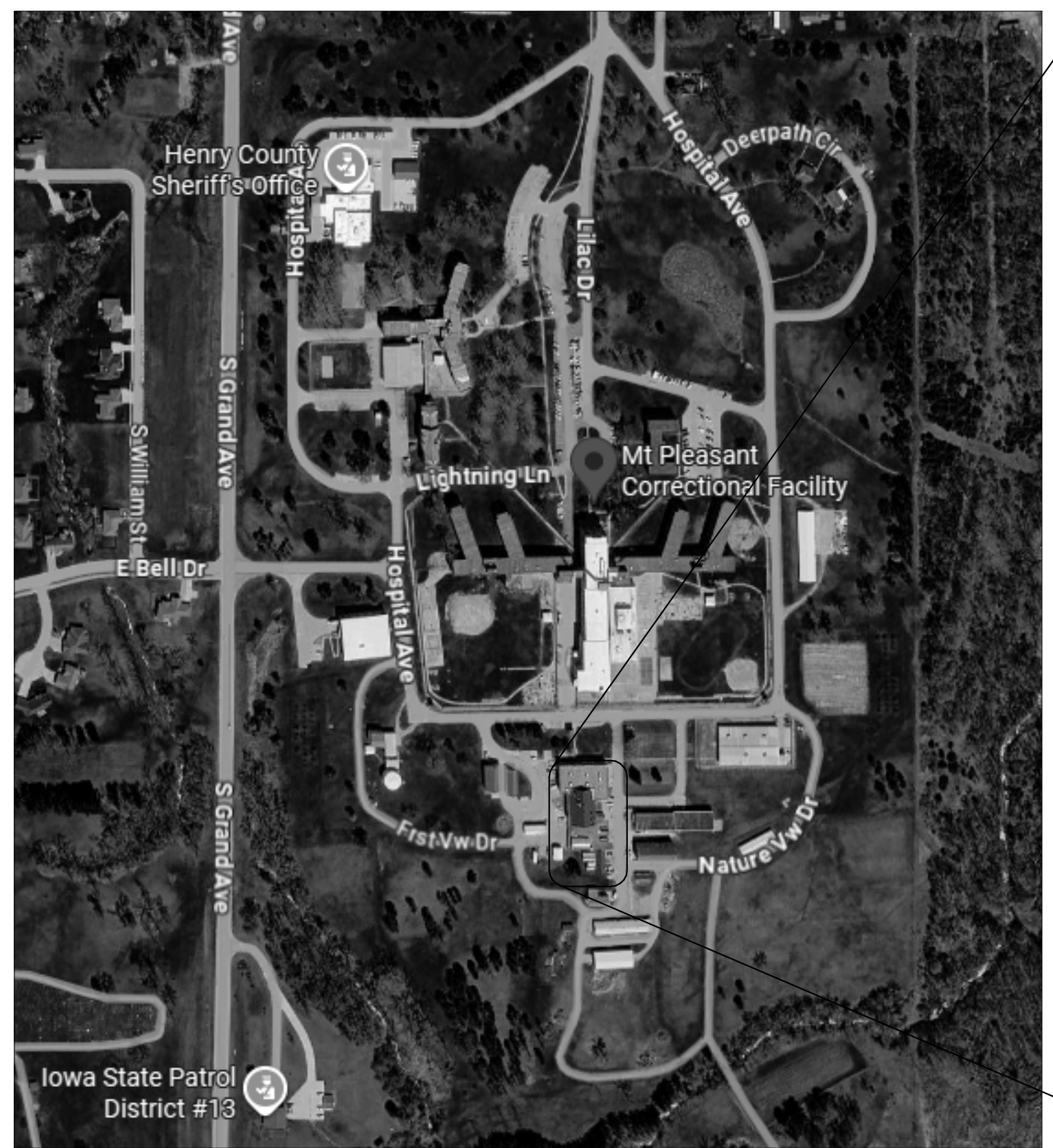

 I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.
 Eric Heynen Reg. No. 19703 Date 04/29/2026
 My license renewal date is December 31, 2027.

Pages or sheets covered by this seal: E. Sheets


 I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.
 Jacob R. Price Reg. No. P25379 Date 04/29/2026
 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026
 PAGES OR SHEETS COVERED BY THIS SEAL: M. SHEETS



STATE LOCATION MAP



SITE PLAN



PLANT BASEMENT ROOF AND DIESEL TANKS

KCL

ENGINEERING

300 4th St
West Des Moines, IA
50265
515-724-7938
info@kclengineering.com

 Shoemaker
Haaland
www.shoemaker-haaland.com
SHPE PROJECT NO. 25457

DOC

MPCF DIESEL TANKS REPLACEMENT & SPILL CONTAINMENT

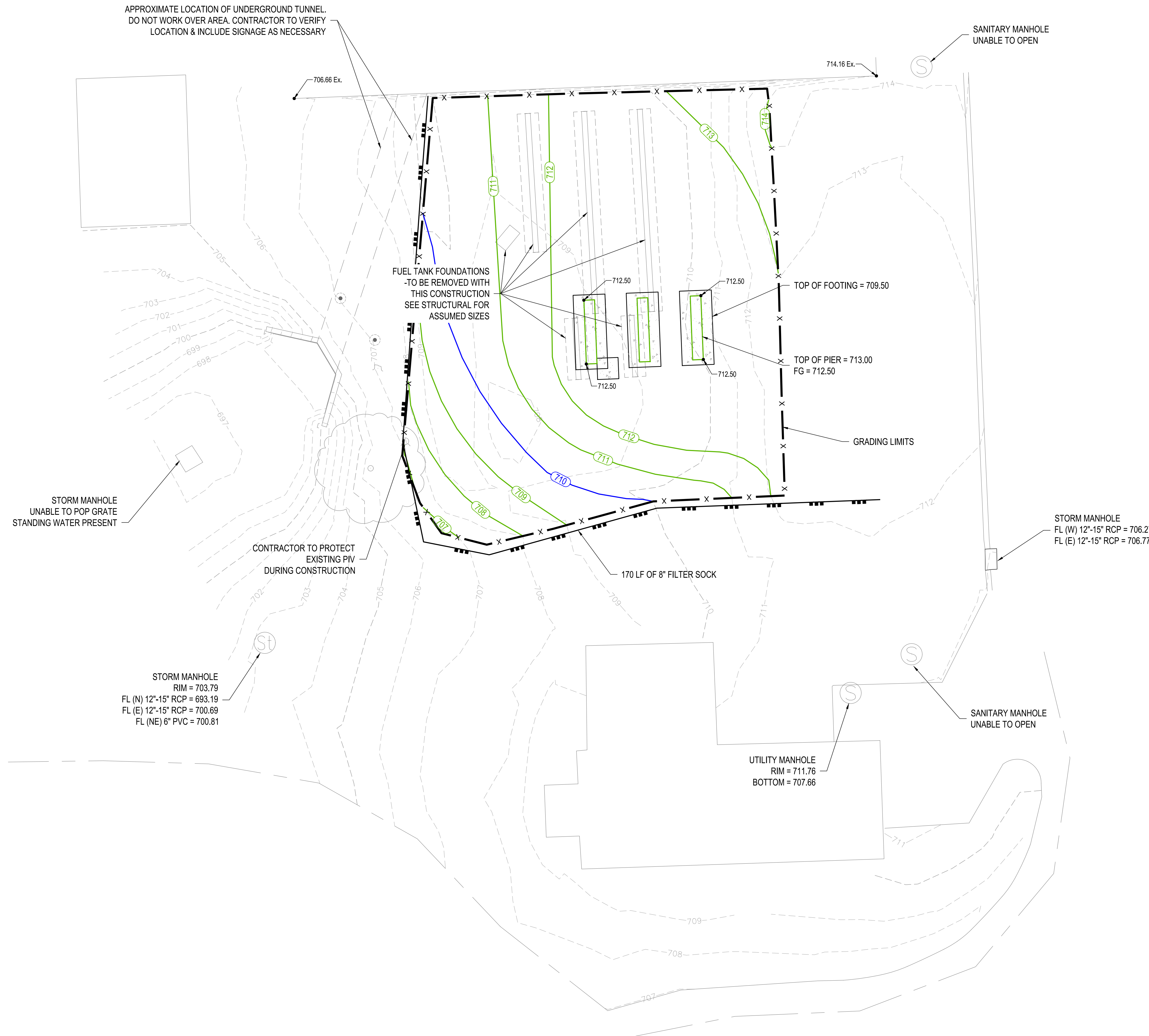
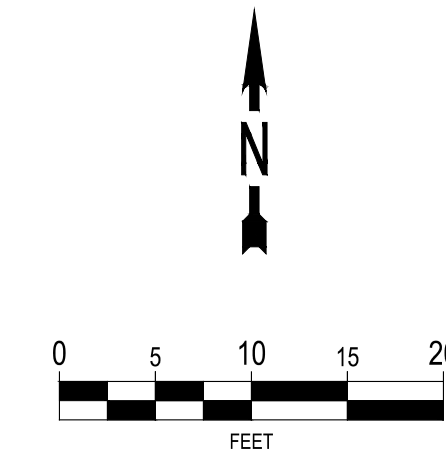
MT. PLEASANT CORRECTIONAL FACILITY

Project No: 26027
Date: 04/29/26

#	Revision	Date
0	100%CD	04/29/26

Drawing Name:
COVER SHEET

Drawing #:
MC



GENERAL NOTES:

CODES, STANDARDS, AND SPECIFICATIONS

- DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF THE 2024 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) AND ANY APPLICABLE AMENDMENTS, AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION
- DESIGN REQUIREMENTS FOR THE MATERIALS OF CONSTRUCTION BASED ON THE REFERENCED STANDARDS IN CHAPTER 35 OF THE IBC
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) 29 CFR 1910 - STANDARDS FOR GENERAL INDUSTRY AND CFR 1926 - SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION HAVE BEEN REFERENCED FOR REQUIREMENTS RELATED TO WORKPLACE SAFETY

STRUCTURAL DESIGN INFORMATION

- SNOW LOAD**
GROUND SNOW LOAD, $P_g = 20$ PSF
FLAT ROOF SNOW LOAD, $P_f = 20$ PSF
SNOW EXPOSURE FACTOR, $C_e = +1.0$
SNOW IMPORTANCE FACTOR, $I_s = 1.0$
THERMAL FACTOR, $C_t = 1.2$
- WIND DESIGN DATA**
ULTIMATE DESIGN WIND SPEED, $V_{ult} = 103$ MPH
NOMINAL DESIGN WIND SPEED, $V_{ref} = 90$ MPH
RISK CATEGORY II
WIND EXPOSURE CATEGORY C
TOPOGRAPHIC FACTOR, $K_{zt} = 1.0$
 $G_{cp} = \pm 0.18$
- DESIGN LIVE LOADS**
EXTERIOR WALKWAYS - 50 PSF
EQUIPMENT LOADS AS PROVIDED ON FINAL SHOP DRAWINGS
- SEISMIC DESIGN DATA**
SITE CLASS D
RISK CATEGORY II
SEISMIC DESIGN CATEGORY B
SEISMIC IMPORTANCE FACTOR, $I_p = 1.0$
MAPPED SPECTRAL RESPONSE ACCEL. (SHORT PERIOD), $S_s = 0.089$
MAPPED SPECTRAL RESPONSE ACCEL. (1 SEC PERIOD), $S_1 = 0.067$
DESIGN SPECTRAL RESPONSE ACCEL. (SHORT PERIOD), $S_{ps} = 0.085$
DESIGN SPECTRAL RESPONSE ACCEL. (1 SEC PERIOD), $S_{ps1} = 0.108$

GENERAL STRUCTURAL NOTES

- ALL WORK SHALL CONFORM TO ALL APPLICABLE BUILDING CODES, ORDINANCES, AND REGULATIONS AS ADOPTED BY LOCAL AUTHORITIES HAVING JURISDICTIONS
- ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, AND ELEVATIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONSTRUCTION OF ANY AFFECTED ELEMENTS SHALL NOT COMMENCE WITHOUT APPROVAL OF DESIGN ENGINEER
- THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE TAKEN FROM EXISTING RECORDS. ADDITIONAL UTILITIES MAY BE ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES WHICH COME IN CONFLICT WITH THE PROPOSED CONSTRUCTION
- THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE DESIGN ENGINEER FOR APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS OR SUBSTITUTIONS DIFFERING FROM CONTRACT DOCUMENTS
- THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS PLUMB AND SECURED
- THE CONTRACTOR SHALL VERIFY THE POSITION, ELEVATION, AND ORIENTATION OF PROCESS EQUIPMENT PRIOR TO FABRICATION. THIS INCLUDES ANCHOR BOLT SIZES AND LOCATIONS, FLOOR PENETRATIONS, AND REQUIRED CLEARANCES TO ADJACENT WALLS, FRAMING, AND OTHER OBSTRUCTIONS
- WHERE NEW CONSTRUCTION INTERFACES WITH EXISTING, FIELD VERIFY EXISTING DIMENSIONS, MEMBER SIZES, AND ELEVATIONS SHOWN ON THE DRAWINGS PRIOR TO STARTING CONSTRUCTION. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER
- DO NOT SCALE DIMENSIONS FROM DRAWINGS. INTERPRETATION OF PLANS, DETAILS, DIMENSIONS, OR OTHER ITEMS PROVIDED IN THE CONTRACT DOCUMENTS ARE TO BE COMPLETED BY THE DESIGN ENGINEER
- DETAILED SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BY THE OWNER AND DESIGN ENGINEER PRIOR TO FABRICATION FOR ALL STRUCTURAL ITEMS INCLUDING CONCRETE AND MASONRY REINFORCEMENT, EMBEDDED STEEL ITEMS, STRUCTURAL STEEL, STEEL STACKS, STEEL JOISTS, STEEL DECKING, METAL GRATING, GUARDRAILS AND STAIRS
- ALL OPEN EXCAVATIONS SHALL CONFORM TO OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY
- WHERE APPLICATION IS MADE TO THE BUILDING OFFICIAL FOR CONSTRUCTION, THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PROVIDE INSPECTIONS AND TESTS PER THE REQUIREMENTS OF CHAPTER 17 OF THE IBC UNLESS WAIVED BY THE BUILDING OFFICIAL
- PERIODIC SITE OBSERVATION BY THE ENGINEER IS SOLELY FOR THE PURPOSE OF DETERMINING IF WORK IS PROCEEDING IN ACCORDANCE WITH STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OF WORK, BUT RATHER AS PERIODIC IN AN EFFORT TO REVIEW THE PROGRESS OF THE CONTRACTOR

FOUNDATIONS

- FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION PREPARED BY TERRACON, PROJECT NO. 06265019-01 DATED APRIL 9, 2026
- NET ALLOWABLE DESIGN SOIL BEARING PRESSURE = 1000 PSF
- MINIMUM FROST PROTECTION DEPTH FOR THE BASE OF FOUNDATIONS SHALL BE 3' - 0" BELOW GRADE ELEVATION
- FOUNDATIONS SHALL BE CARRIED TO LOWER ELEVATIONS THAN THOSE SHOWN ON THE DRAWINGS IF FIELD CONDITIONS OBSERVED BY THE GEOTECHNICAL ENGINEER OR TESTING LAB REVEAL SOILS NOT CAPABLE OF PROVIDING THE DESIGN ALLOWABLE SOIL BEARING PRESSURE. IF THIS CONDITION OCCURS, CONSULT WITH ENGINEER FOR CHANGES TO DESIGNER FOUNDATIONS
- ALL SUBGRADE SHALL BE PREPARED AND COMPACTED ACCORDING TO THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. IF ADDITIONAL PROBING OR TESTING IS REQUIRED, THE TESTING SHALL BE CONDUCTED BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO VERIFY THAT SOIL CONDITIONS CONFORM WITH THE ASSUMPTIONS USED WHEN ESTABLISHING THE ALLOWABLE BEARING PRESSURES

CAST-IN-PLACE CONCRETE

- MATERIALS:**
CONCRETE - MINIMUM 28 DAY COMPRESSIVE STRENGTH
4,000 PSI (6% - 7% AIR) - CONCRETE EXPOSED TO FREEZE THAW CYCLES
4,000 PSI - ALL OTHER CONCRETE
CEMENT - ASTM C150 OR ASTM C595 TYPE II
AGGREGATE - ASTM C33
STEEL REINFORCING BARS - ASTM A615 GR. 60
STEEL REINFORCING WELDABLE - ASTM A706 GR. 60
WELDED WIRE FABRIC - ASTM A185
GROUT - ASTM 1287
ANCHOR BOLTS - ASTM F1554 GR. 55
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 AND ACI 301 AND ALL LOCAL BUILDING CODES. REFER TO THE FOLLOWING CODE SECTIONS FOR SPECIFIC REQUIREMENTS:
MIX PROPORTIONS - ACI 211.1
HOT WEATHER CONCRETE - ACI 305R
COLD WEATHER CONCRETE - ACI 306.1
CONCRETE CURING - ACI 308
CONCRETE CONSOLIDATION - ACI 309
REBAR DETAILING AND PLACEMENT - ACI 315
ENVIRONMENTAL STRUCTURES - ACI 350
- CLEAR COVER FROM FACE OF CONCRETE TO OUTERMOST REINFORCING, UNLESS NOTED OTHERWISE:
WALLS, PIERS - 2"
COLUMNS (EDGE TIES) - 1-1/2"
FOOTINGS - 3"
SLABS EXPOSED TO EARTH AND WEATHER - 1-1/2"
SLABS NOT EXPOSED TO EARTH AND WEATHER - 3/4"
GRADE BEAMS - (EDGE OF STIRRUPS) - 1-1/2" TOP, 3" BOT., 3" SIDES
- WATER REDUCING ADMIXTURES MAY BE INCORPORATED IN THE MIX DESIGN WITH THE APPROVAL OF THE ENGINEER. ADMIXTURE SHALL CONFORM TO ASTM C494 AND USED PER MANUFACTURER'S RECOMMENDATIONS. CHLORIDE CONTAINING ADMIXTURES SHALL NOT BE USED
- AIR-ENTRAINING AGENTS SHALL CONFORM TO ASTM C260 WITH AMOUNTS IN ACCORDANCE WITH ACI 318. ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE FROM THE TRUCK
- ALL EXPOSED CONCRETE EDGES TO HAVE 3/4" CHAMFER, U.N.O.
- BAR LAP SPLICES SHALL BE BASED UPON THE REQUIREMENTS OF ACI 318 OR CRSI UNLESS NOTED OTHERWISE. LAP WELD WIRE FABRIC SHEETS 3 INCHES MINIMUM. LAP SPLICES SHALL BE STAGGERED
- REINFORCING STEEL SHALL BE PLACED AS NOTED ON THE DRAWINGS AND DETAILED IN ACCORDANCE WITH ACI 315. BARS SHALL BE HELD IN PLACE WITH BOLSTERS, CHAIRS, AND SPACERS AS REQUIRED TO ENSURE POSITIONS AND CONCRETE COVER AS INDICATED ON THE DRAWINGS
- PLACE TWO #4 X 5' - 0" LONG BARS, CENTERED IN SLAB & WALL AT EACH CORNER OF ALL OPENINGS
- PROVIDE CORNER BARS AT INTERSECTIONS OF ALL WALLS AND CURBS FOR CONTINUITY OF HORIZONTAL REINFORCING. CORNER BAR SIZE SHALL MATCH THE HORIZONTAL BARS AND LAP THE MAIN BARS BY AT LEAST 30 BAR DIAMETERS
- ROUGHEN ALL CONSTRUCTION JOINTS TO AN AMPLITUDE OF AT LEAST 1/4" AND APPLY A BONDING AGENT SUBMITTED TO AND APPROVED BY DESIGN ENGINEER
- CONTRACTOR SHALL PROVIDE NECESSARY CONSTRUCTION JOINTS IN MONOLITHIC CONCRETE POURS SO THAT THE QUALITY OF PLACEMENT AND FINISH MEETS THE REQUIREMENTS OF PLANS AND SPECIFICATIONS. CONTROL JOINTS IN CONCRETE FOUNDATION WALLS SHALL BE SPACED AT 20' - 0" ON CENTER MAX. CONSTRUCTION JOINTS SHALL BE PLACED AT 100' - 0" ON CENTER MAX.
- THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS
- ALL VERTICAL CONSTRUCTION JOINTS IN SLABS AND BEAMS SHALL BE MADE WITH BULKHEADS. ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS SHALL BE AS SPECIFIED BY THE STRUCTURAL ENGINEER. REFER TO TYPICAL CONSTRUCTION JOINT DETAILS IN CONTRACT DOCUMENTS
- SLAB ON GRADE SHALL BE SUPPORTED ON CONTROLLED BACKFILL MATERIAL. WHERE FILL IS REQUIRED IT SHALL BE PLACED IN 9" LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MATERIALS MAXIMUM STANDARD PROCTOR DRY DENSITY (ASTM D998). THE TOP 6" OF MATERIAL BELOW SLABS SHALL BE COMPACTED OR UNLAP BACKFILL.
- SAW CUT CONTROL JOINTS IN ALL SLABS ON-GRADE. JOINTS SHALL BE LOCATED ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED AT A MAXIMUM OF 30 TIMES THE SLAB THICKNESS, LIMITED TO 15 FEET MAXIMUM, U.N.O. JOINTS SHALL BE CONTINUOUS, NOT STAGGERED OR OFFSET. SLAB PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5 TO 1. PROVIDE ADDITIONAL JOINTS AT ALL RE-ENTRANT CORNERS FORMED IN THE SLAB
- SAW CUT JOINTS WITHOUT TEARING THE AGGREGATE FROM THE SLAB SURFACE. SAW CUT WITHIN 4 TO 12 HOURS BUT NO LATER THAN 12 HOURS AFTER CONCRETE PLACEMENT. SAW CUT DEPTH TO BE 1/4 THE THICKNESS OF THE SLAB BUT NOT LESS THAN 1 INCH, U.N.O.
- CONTINUOUS TOP AND BOTTOM HORIZONTAL BARS IN WALLS AND GRADE BEAMS SHALL BE SPLICED AS FOLLOWS:
TOP BARS - AT MIDSPAN
BOTTOM BARS - OVER SUPPORTS
GRADE BEAM SIDE BARS - OVER SUPPORTS
WALL AND BEAM SIDE BARS - AT MIDSPAN
- FOUNDATION FOR FLAT BOTTOM STORAGE TANKS SHALL MEET THE FOLLOWING TOLERANCES PER AMERICAN PETROLEUM INSTITUTE STANDARD 650:
A. WHERE A CONCRETE RINGWALL IS PROVIDED UNDER THE TANK SHELL, THE TOP OF THE RINGWALL SHALL BE LEVEL WITHIN 1/8" IN ANY 30 FT OF THE CIRCUMFERENCE AND WITHIN 1/4" IN THE TOTAL CIRCUMFERENCE MEASURED FROM THE AVERAGE ELEVATION
B. WHERE A CONCRETE SLAB FOUNDATION IS PROVIDED, THE FIRST 1 FT OF THE FOUNDATION, MEASURED FROM THE OUTSIDE OF THE TANK RADIALLY TOWARDS THE CENTER, SHALL COMPLY WITH THE CONCRETE RINGWALL REQUIREMENT. THE REMAINDER OF THE FOUNDATION SHALL BE WITHIN 1/2" OF THE DESIGN SHAPE
- WATERSTOP SHALL BE 4" THERMOPLASTIC ELASTOMERIC, WESTEC ENVIROSTOP PROFILE #818, OR APPROVED EQUAL. PROVIDE FACTORY FABRICATED CORNER PIECES.
- ALL AREAS SUBJECT TO HYDROSTATIC PRESSURE EITHER FROM CONTAINED WATER AND/OR FROM GROUND WATER SHALL BE CONSTRUCTED WITH A CONCRETE MIX CONTAINING XYPEX CRYSTALLINE TECHNOLOGY ADMIX PER MANUFACTURERS RECOMMENDATIONS.

DOC MPCF DIESEL TANKS REPLACEMENT & SPILL CONTAINMENT MT PLEASANT CORRECTIONAL FACILITY

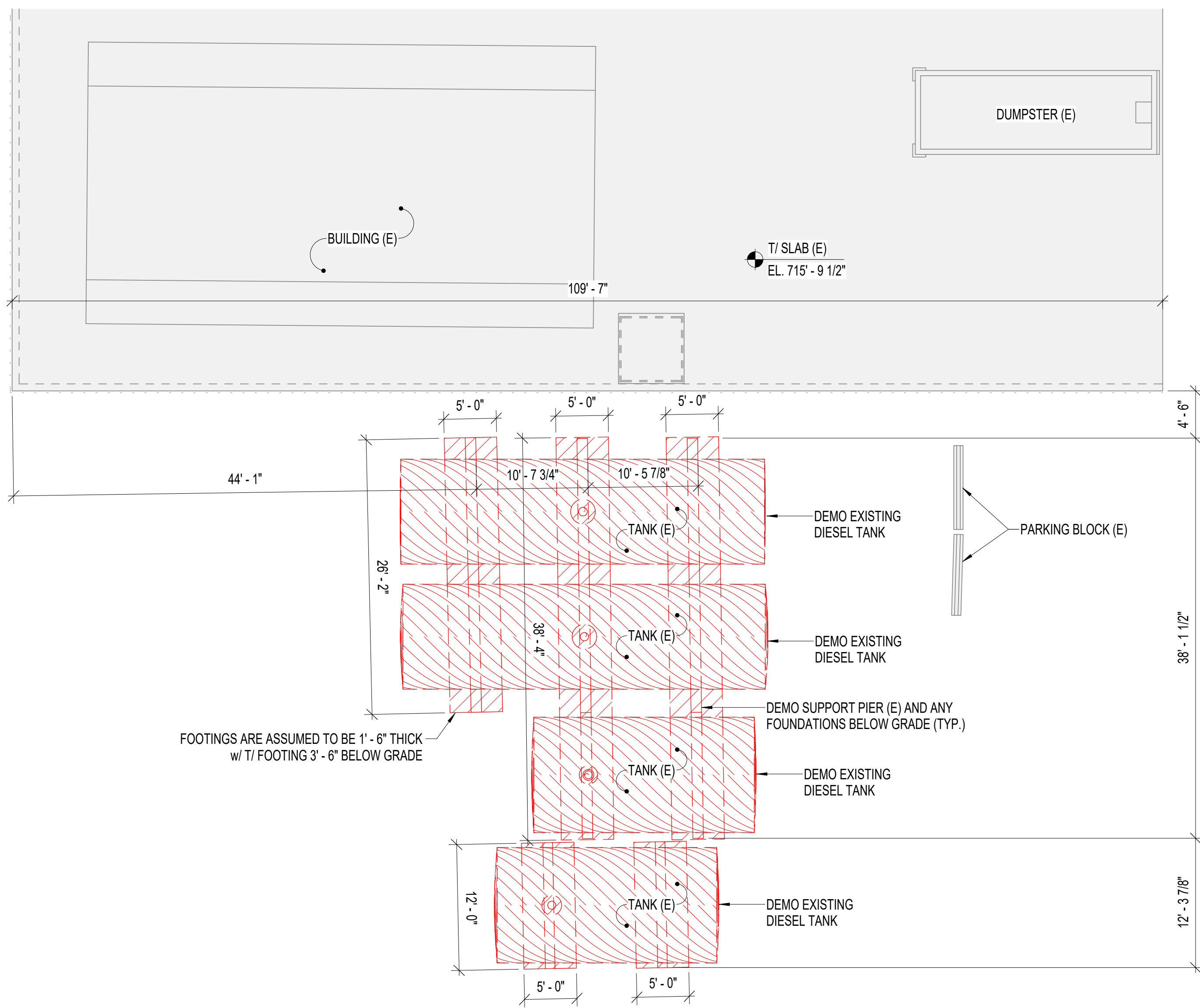
Project No: 26027
Date: 04/29/26

#	Revision	Date
0	100%CD	04/29/26

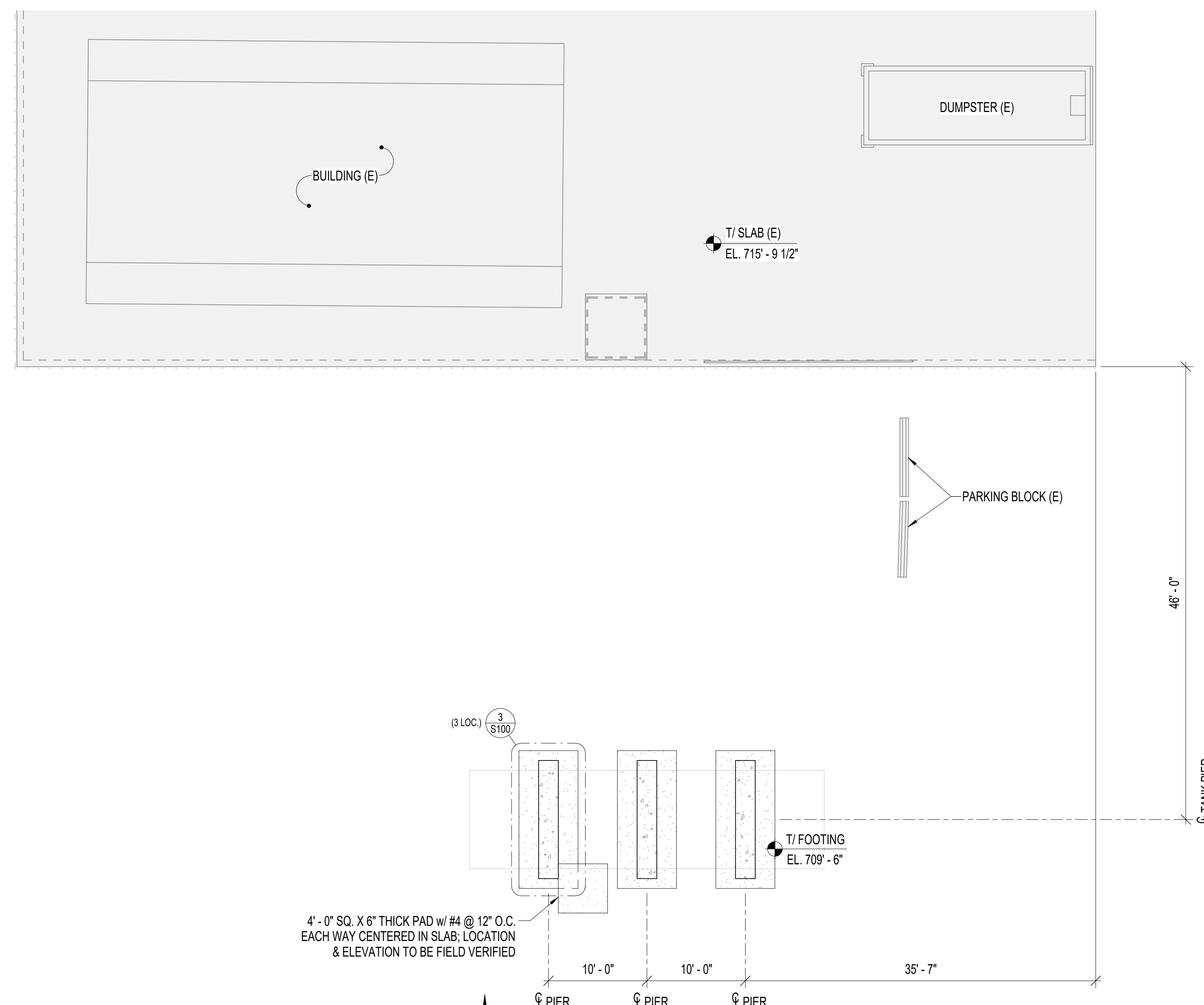
Drawing Name:
GENERAL NOTES

Drawing #:

S000

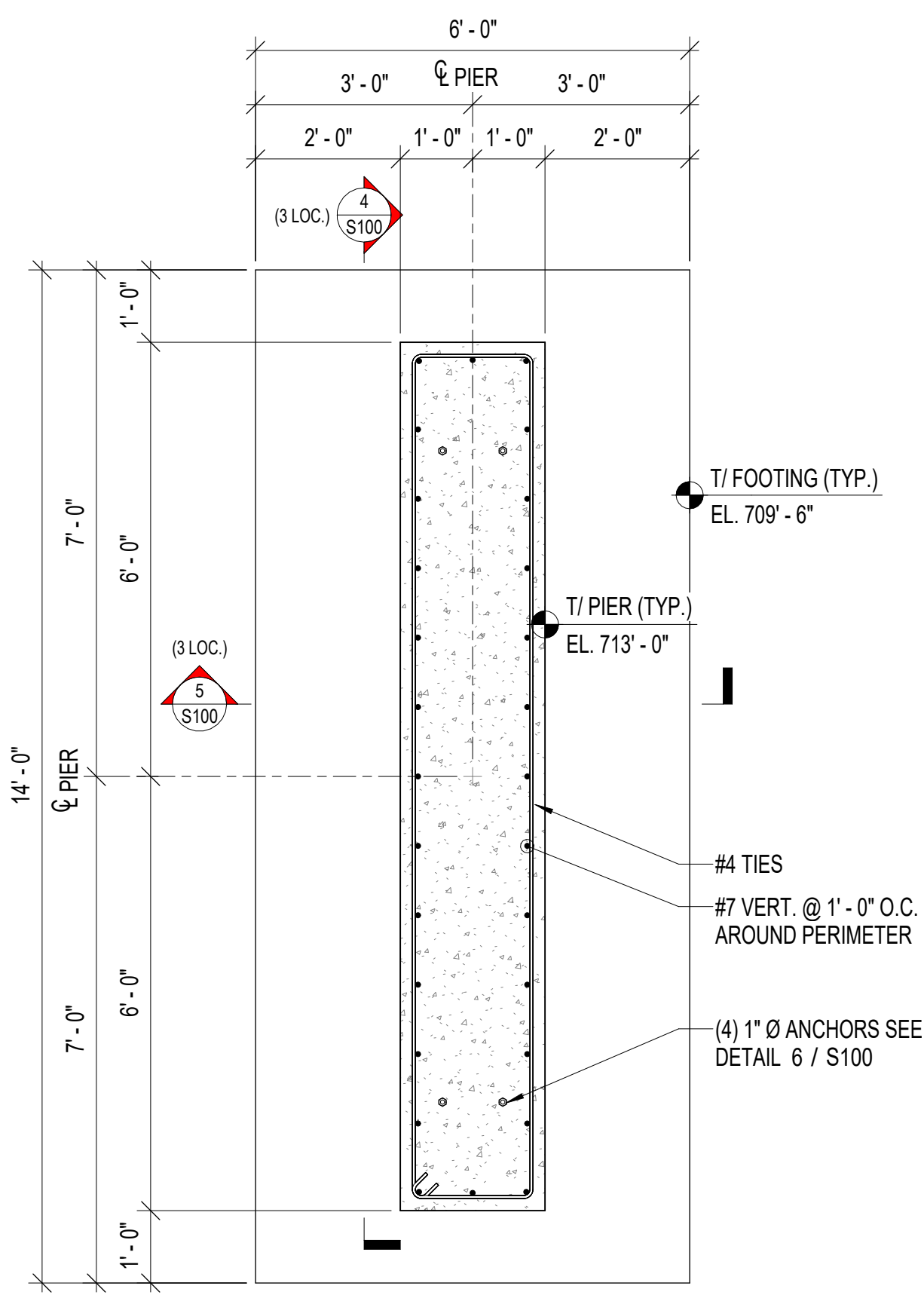


1 EXISTING TANK DEMO PLAN
1/8" = 1'-0"
NOTE: ACTUAL FOOTING SIZE, THICKNESS, AND ELEVATION IS UNKNOWN.
DIMENSIONS SHOWN ARE BASED ON ASSUMED WEIGHT & SOIL BEARING PRESSURE

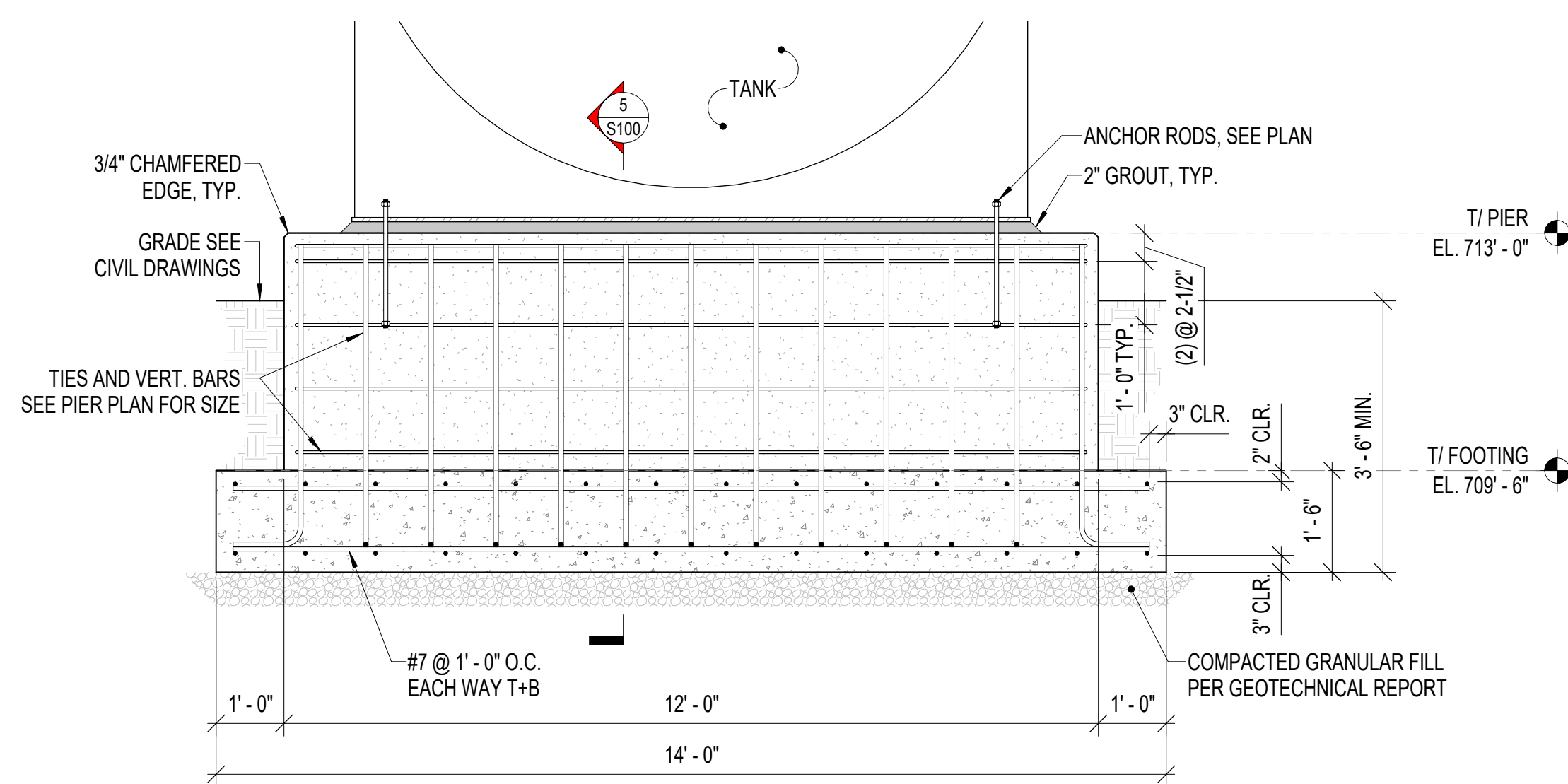


2 FOUNDATION PLAN
1/8" = 1'-0"

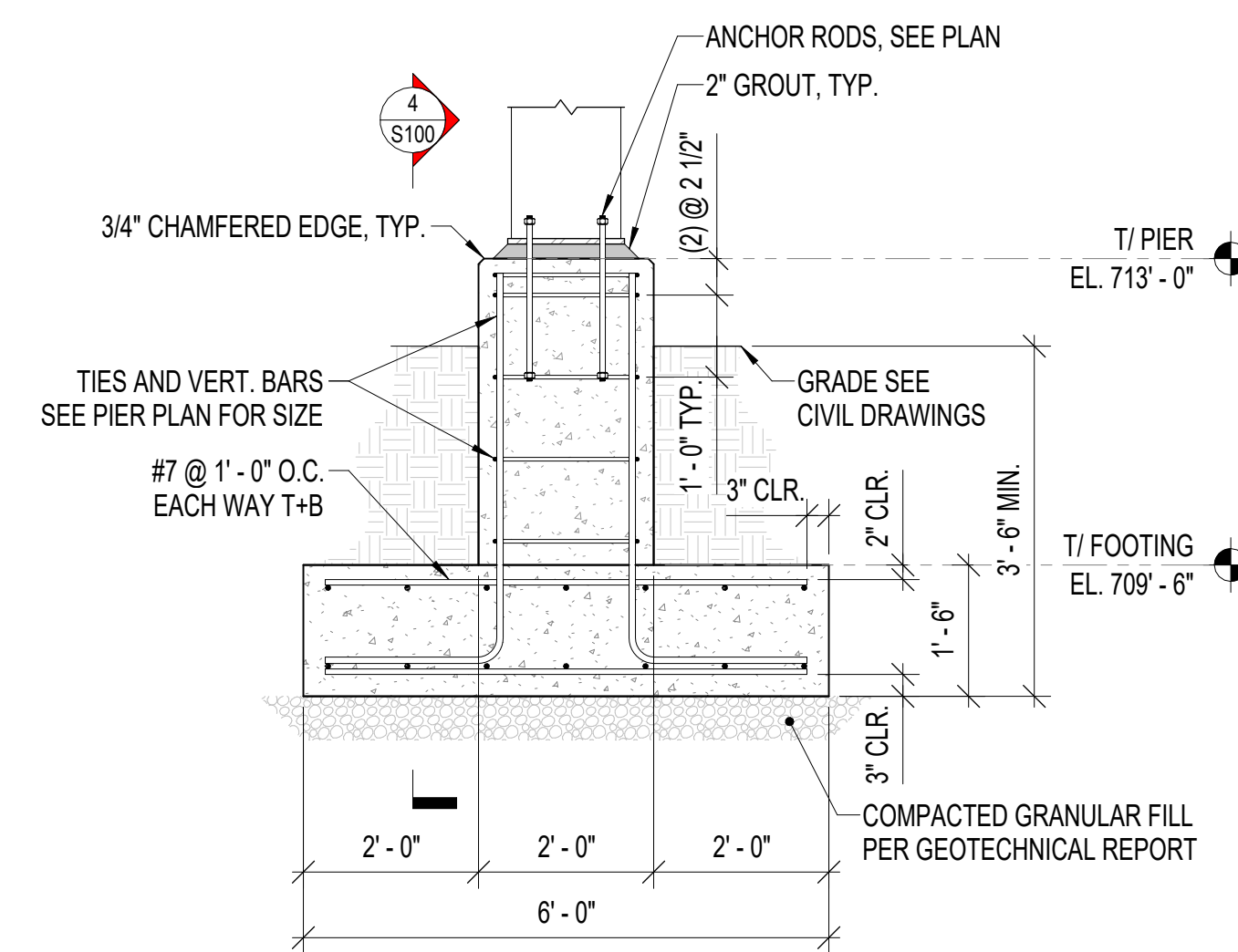
NOTE: TANK FOUNDATION SPACING & ANCHOR ROD REQUIREMENTS TO BE VERIFIED BY EOR w/ FINAL TANK DRAWING PRIOR TO CONSTRUCTION



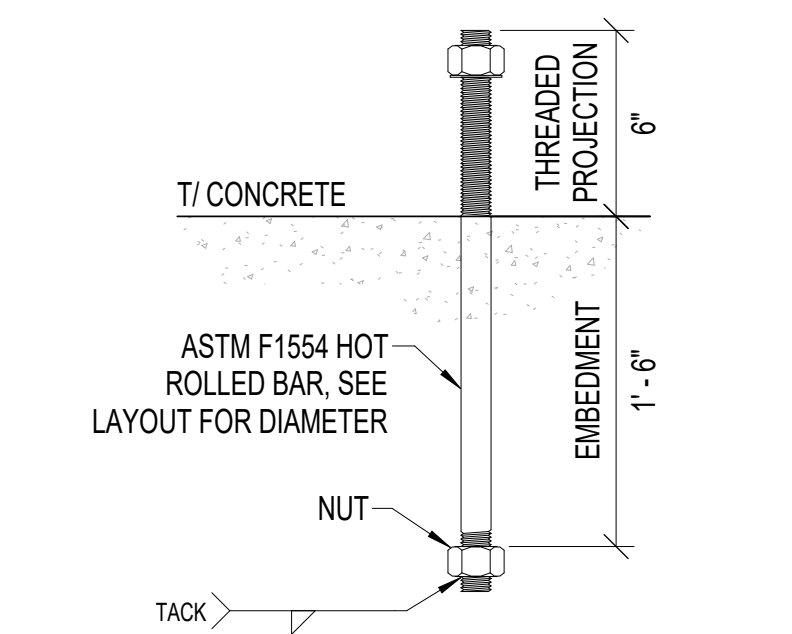
3 ENLARGED TANK PIER PLAN
1/2" = 1'-0"



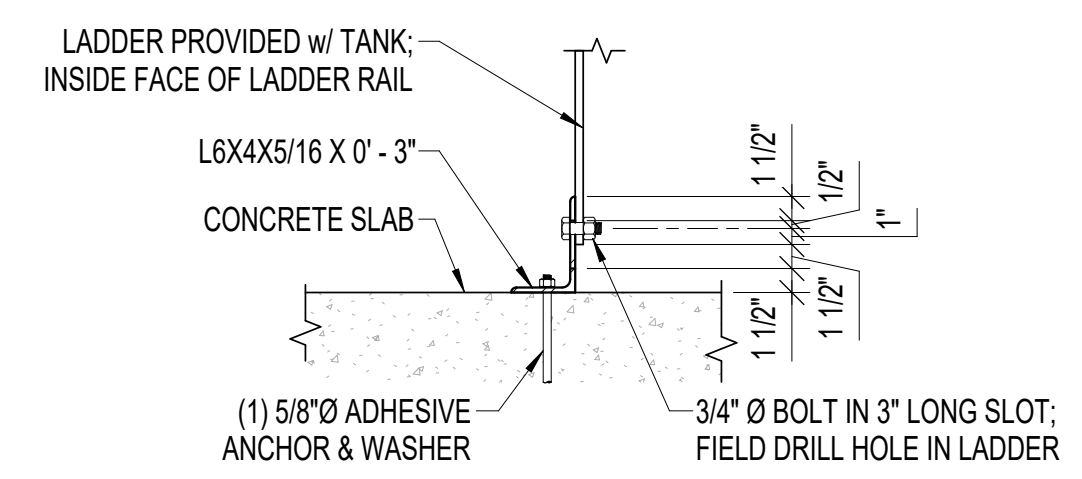
4 TANK PIER ELEVATION
1/2" = 1'-0"



5 TANK PIER SECTION
1/2" = 1'-0"



6 TYPICAL ANCHOR ROD DETAIL
1 1/2" = 1'-0"



BASE CONNECTION AT CONCRETE
7 LADDER BASE CONNECTION
1" = 1'-0"



GENERAL NOTE:

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN SHOWN BASED UPON INFORMATION OBTAINED FROM FIELD LOCATIONS BY UTILITY COMPANIES, AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS ALSO POSSIBLE THAT THERE MAY BE OTHER UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES EXISTENCE THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PARTY REFERENCING THIS PLAN TO DETERMINE THE EXACT LOCATION AND TYPE OF UNDERGROUND FACILITIES ON THE SITE. HAND EXCAVATE AT CRITICAL POINTS AS NECESSARY TO VERIFY LOCATIONS, SIZES, ELEVATIONS, FLOW LINES, ETC. IF A PROBLEM OR INTERFERENCE EXISTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING.

MECHANICAL ABBREVIATIONS

Table of mechanical abbreviations including ABSOR, ACU, AFF, AFG, AHU, AV, BOT, BTU, BTUH, BV, CA, CB, CEAT, CFM, CI, CL, COND, CO, COAC, CONCR, CP, CUP, CU, CUH, CWP, DDC, DN, DR, DS, EA, EAT, EC, EDBT, EEW, EF, EQUIP, ESE, ESW, EWB, EWC, EWT, EX, EXH, EXP, FAI, FCU, FD, FDC, FLEX, FLR, FPM, FFS, FS, FSEC, FT, FINTUBE, FOOTING, GA, GAGE, GAL, GALLON, GALV, GALVANIZED, GC, GENERAL CONTRACTOR, GW, GREASE WASTE, GPH, GALLONS PER HOUR, GPM, GALLONS PER MINUTE, HR, HOUR, HTG, HEATING, HB, HOSE BIBB, ISP, INTERNAL STATIC PRESSURE, JR, JANITOR RECEPTOR, LAV, LAVATORY, LDBT, LEAVING DRY BULB TEMPERATURE, LWT, LEAVING WATER TEMPERATURE, LWBT, LEAVING WET BULB TEMPERATURE, MB, MOP BASIN, MBH, 1000 BTUH, MC, MECHANICAL CONTRACTOR, MECH, MECHANICAL, MH, MANHOLE, NTS, NOT TO SCALE, OA, OUTSIDE AIR, OD, OVERFLOW ROOF DRAIN, PC, PLUMBING CONTRACTOR, PSI, POUNDS PER SQUARE INCH, PRV, POWER ROOF VENTILATOR, PRV, PRESSURE REDUCING VALVE, PV, PRESSURE VENT, PVC, POLYVINYL CHLORIDE, RA, RETURN AIR, RD, ROOF DRAIN, RTU, UNIT HUMIDITY, RTU, ROOF TOP UNIT, RV, RELIEF VALVE, RVT, ROOF VENT TERMINATION, SA, SINK, SA, SUPPLY AIR, SH, SHOWER, SO, STORM OVERFLOW, ST, STORE, STC, TEMPERATURE CONTROL CONTRACTOR, TYP, TYPICAL, UH, UNIT HEATER, UR, URINAL, UV, UNIT VENTILATOR, VA, VENTILATION AIR, VTR, VENT THROUGH ROOF, WB, WALL BOX - CONDENSATE, WC, WATER CLOSET, WHA, WATER HAMMER ARRESTOR, WH, WATER HEATER

PIPING LEGEND - PLUMBING

Table of plumbing piping symbols including AV, AW, CA, CW, HW, DSW, GW, G, GV, NPCW, NPHW, NPSW, OSW, PA, LP, PD, RHW, SAN, ST, SO, P, V, and their corresponding line styles and descriptions like ACID WASTE, COMPRESSED AIR, DOMESTIC COLD WATER, etc.

PIPE FITTINGS

Table of pipe fittings symbols for SINGLE LINE and DOUBLE LINE, including ELBOW, TEE, CROSS, LATERAL, REDUCER, and FLANGED CONNECTION with various configurations.

PLUMBING ACCESSORY LEGEND

Table of plumbing accessory symbols including HOSE BIBB, ROOF HYDRANT, CLEAN OUT, FLOOR CLEAN OUT, LEVEL TRANSMITTER, LEVEL SWITCH HIGH, LEVEL SWITCH HIGH-HIGH, LEVEL DETECTION ALARM, BACKFLOW PREVENTER, and VALVE - BALL / SHUT-OFF.

NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT

GENERAL SYMBOLS

Table of general symbols including EXISTING = HALFTONE LINEWORK, NEW = DARK LINEWORK, DEMO = DASHED DARK LINEWORK, BELOW GRADE = LONG DASHED DARK LINEWORK, NEW CONNECTION POINT, POINT OF DISCONNECT, KEYNOTE, EQUIPMENT IDENTIFICATION TAG, SIMILAR SHEET REFERENCE, SECTION CUT REFERENCE TAG, and INTERIOR ELEVATION DRAWING REFERENCE TAG.

PIPING LEGEND - MECHANICAL

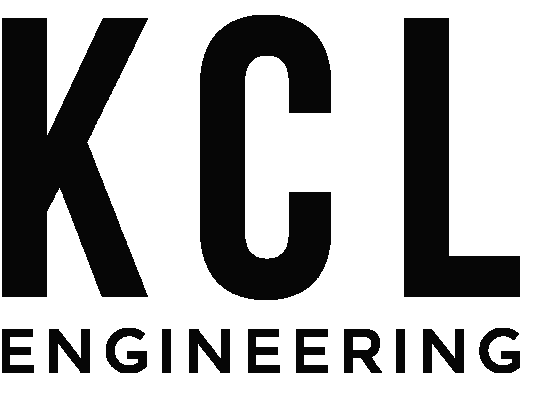
Table of mechanical piping symbols including BOILER BLOWDOWN, BOILER FEED, CHILLED WATER RETURN, CHILLED WATER SUPPLY, CONDENSATE DRAIN, PUMPED CONDENSATE, CONDENSER WATER RETURN, CONDENSER WATER SUPPLY, EXHAUST PIPE - PVC, FUEL OIL RETURN, FUEL OIL SUPPLY, FUEL OIL VENT, HEAT PUMP WATER RETURN, HEAT PUMP WATER SUPPLY, HIGH PRESSURE STEAM, HIGH PRESSURE STEAM CONDENSATE, HOT/CHILLED WATER RETURN, HOT/CHILLED WATER SUPPLY, HYDRONIC RETURN, HYDRONIC SUPPLY, LOOP WATER RETURN, LOOP WATER SUPPLY, LOW PRESSURE STEAM, LOW PRESSURE STEAM CONDENSATE, MEDIUM PRESSURE STEAM, MEDIUM PRESSURE STEAM CONDENSATE, REFRIGERANT GAS, REFRIGERANT HOT GAS, and REFRIGERANT LIQUID.

MECHANICAL - GENERAL NOTES

- 1. COORDINATE MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. BEGIN INSTALLATION AND ROUGH-IN AFTER COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION IS COMPLETE. COORDINATE BUILDING STRUCTURE, ARCHITECTURAL ASSEMBLIES, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REWORK ASSOCIATED WITH FAILURE TO COORDINATE.
2. INCORPORATE MECHANICAL SPECIFICATIONS, DRAWINGS, STATE AND LOCAL CODES, AND OWNER STANDARDS INTO WORK.
3. WARNING - CALL 48 HOURS BEFORE YOU DIG; LAW REQUIRES ANYONE DOING ANY EXCAVATION, FENCING, PLANTING OR DRILLING TO CALL 48 HOURS IN ADVANCE. HAND DIG WITHIN 18 INCHES OF ANY LOCATE MARK OR FLAG. ONE CALL 811.
4. REFER TO ARCHITECTURAL SPECIFICATIONS FOR THROUGH-PENETRATION FIRESTOPPING AND TO ARCHITECTURAL CODE PLAN FOR FIRE RATED WALLS, FLOORS, AND CEILINGS. EACH TRADE IS RESPONSIBLE TO FIRESTOP PENETRATIONS THROUGH RATED ASSEMBLIES.
5. EACH TRADE IS RESPONSIBLE FOR MAKING PENETRATIONS WHERE REQUIRED IN EXISTING WALLS, FLOORS, CEILINGS, AND ROOFS. MAKE PENETRATIONS NEAT. PATCH, CONCEAL, OR CAULK OVERCUT.
6. COVER EXPOSED WALL PENETRATIONS WITH ESCUTCHEONS OR SHEET METAL AS APPROPRIATE.
7. CAULK ALL CONCEALED AND EXPOSED PIPING AND DUCT WALL PENETRATIONS TO PREVENT NOISE TRANSFER BETWEEN SPACES.
8. CREATE OPENINGS IN THE BUILDING THAT ARE REQUIRED TO REMOVE EXISTING ITEMS AND TO BRING IN NEW EQUIPMENT. PATCH ALL OPENINGS CREATED AND FINISHED WITH MATERIALS TO MATCH EXISTING CONDITIONS. INCLUDE THIS WORK IN BID.
9. ON COMPLETION OF THE INSTALLATION, COOPERATE WITH THE OWNER TO PROVIDE TESTING, ADJUSTING, AND BALANCING TO OBTAIN PROPER OPERATION OF ALL EQUIPMENT AND SYSTEMS. PROVIDE ALL FACILITIES AND EQUIPMENT AND COMPLETE ALL TESTS REQUIRED FOR ADJUSTMENTS AND BALANCING TO ESTABLISH THE PROPER PERFORMANCE OF EQUIPMENT. CONTRACTOR IS REQUIRED TO PROVIDE TESTING REQUIREMENTS AND INCLUDE 2,000 GALLONS OF DIESEL FOR PLANT USE AT END OF TESTING.
10. PROVIDE WARRANTIES FOR ALL EQUIPMENT AND INSTALLATION PER THE CONTRACT DOCUMENTS. CONDITIONING REFRIGERATION SYSTEMS SHALL BE WARRANTED FOR A MINIMUM OF 5 YEARS, PARTS ONLY, NON-PRORATED, FROM THE DATE OF OCCUPANCY OR SUBSTANTIAL COMPLETION, OR WHICHEVER OCCURS FIRST. THE WARRANTY SHALL COVER COMPRESSORS, EVAPORATORS, CONDENSER COILS, HIGH AND LOW SIDE PIPING, AND PIPING SPECIALTIES INCLUDING EXPANSION AND SOLENOID VALVES, RELIEF VALVES, FILTER-DRYER, AND SIGHT GLASSES. PRESSURE GAUGES AND PRESSURE SWITCHES ARE NOT UNDER THE EXTENDED WARRANTY EXCEPT FOR LOSS OF REFRIGERANT AND CONSEQUENTIAL DAMAGE TO THE SYSTEM WHICH WILL BE AN EXTENDED WARRANTY OBLIGATION. ALL DEFECTS THAT BECOME APPARENT WITHIN THE WARRANTY PERIOD SHALL BE REPAIRED BY THE MECHANICAL CONTRACTOR AS DIRECTED BY THE ENGINEER THROUGH THE OWNER'S REPRESENTATIVE. WARRANTY DOES NOT OBLIGATE THE MECHANICAL CONTRACTOR TO REPAIR DAMAGE RESULTING FROM THE OWNER'S ACCIDENT, IMPROPER OPERATION, OR FAILURE TO PROVIDE MAINTENANCE. WARRANTY COVERS DEFECTIVE MATERIAL AND INSTALLATION. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND OTHER WARRANTY INFORMATION.

MECHANICAL - DEMOLITION NOTES

- 1. MECHANICAL DEMOLITION DRAWINGS SHOWING EXISTING CONDITIONS HAVE BEEN PREPARED BASED ON NON-DESTRUCTIVE FIELD OBSERVATION AND AS-BUILT DRAWINGS PROVIDED BY THE OWNER. FIELD VERIFY EXISTING SYSTEMS BEFORE BEGINNING WORK. NOTIFY ARCHITECT/ENGINEER IF EXISTING CONDITIONS ARE MATERIALLY DIFFERENT THAN THOSE SHOWN ON THE PLANS.
2. BE FAMILIAR WITH EXISTING MECHANICAL SYSTEMS THAT WILL BE AFFECTED BY THE DEMOLITION WORK. OBTAIN PERMISSION FROM THE OWNER'S REPRESENTATIVE TO SHUT OFF SERVICES OR SYSTEMS THAT AFFECT AREAS BEYOND THE LIMITS OF THE IMMEDIATE DEMOLITION AREA. INFORM THE OWNER'S REPRESENTATIVE OF THE REASON FOR AND DURATION OF THE SHUTDOWN. MINIMIZE IMPACT TO OTHER AREAS. PROCEED WITH THE SHUT-DOWN AFTER PERMISSION FROM THE OWNER IS GRANTED.
3. REMOVE PIPING, HANGERS, DUCTWORK, GRILLES, REGISTERS, DIFFUSERS, ETC. THAT ARE INDICATED TO BE REMOVED IN A TIMELY MANNER IN ACCORDANCE WITH THE GENERAL DEMOLITION SPECIFICATIONS. COORDINATE WITH THE OWNER AND OTHER CONTRACTORS.
4. UNLESS EQUIPMENT TO BE REMOVED IS NOTED AS OWNER'S SALVAGE, DISPOSE OF EQUIPMENT AND/OR MATERIALS INDICATED TO BE REMOVED PROMPTLY.
5. REMOVE ALL ABANDONED PIPING AND DUCTWORK THAT IS EXPOSED OR ACCESSIBLE WITHOUT WALL OR CEILING DEMOLITION. REFER TO ARCH PLANS FOR CEILINGS TO BE REMOVED.
6. REPAIR OR REPLACE TELECOMMUNICATIONS FACILITIES OR EQUIPMENT FOUND TO BE DAMAGED OR NON-FUNCTIONAL AFTER SUBSTANTIAL COMPLETION.



300 4th St
West Des Moines, IA
50265
515-724-7938
info@kclengineering.com



DOC
MPCF DIESEL TANKS REPLACEMENT & SPILL
CONTAINMENT
MT. PLEASANT CORRECTIONAL FACILITY

Project No: 26027
Date: 04/29/26

Table with columns #, Revision, and Date. Row 0: 100%CD, 04/29/26

Drawing Name:
MECHANICAL
GENERAL NOTES &
SYMBOLS

Drawing #:
M000

DOC
MPCF DIESEL TANKS REPLACEMENT & SPILL
CONTAINMENT
MT. PLEASANT CORRECTIONAL FACILITY

Project No: 26027
Date: 04/29/26

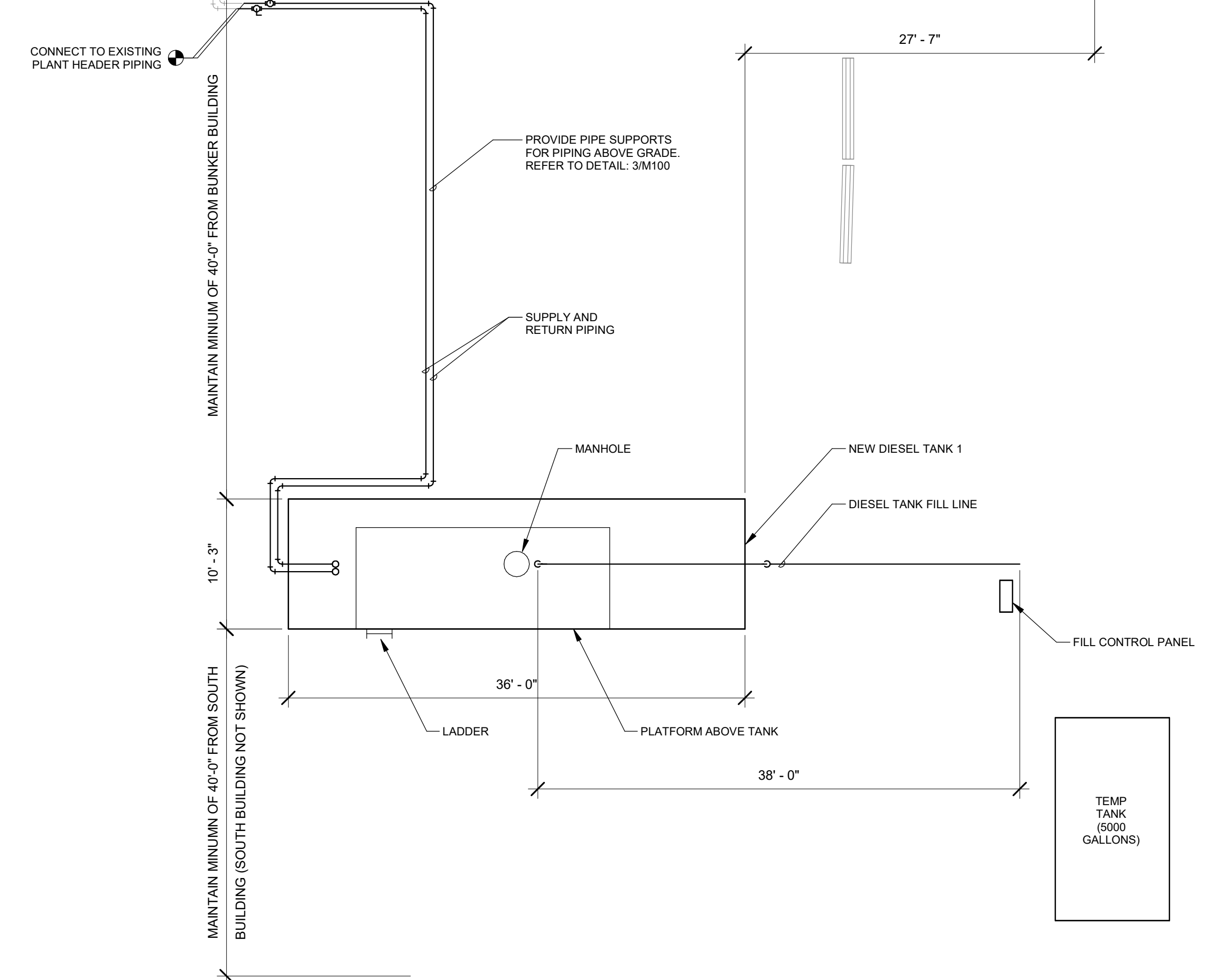
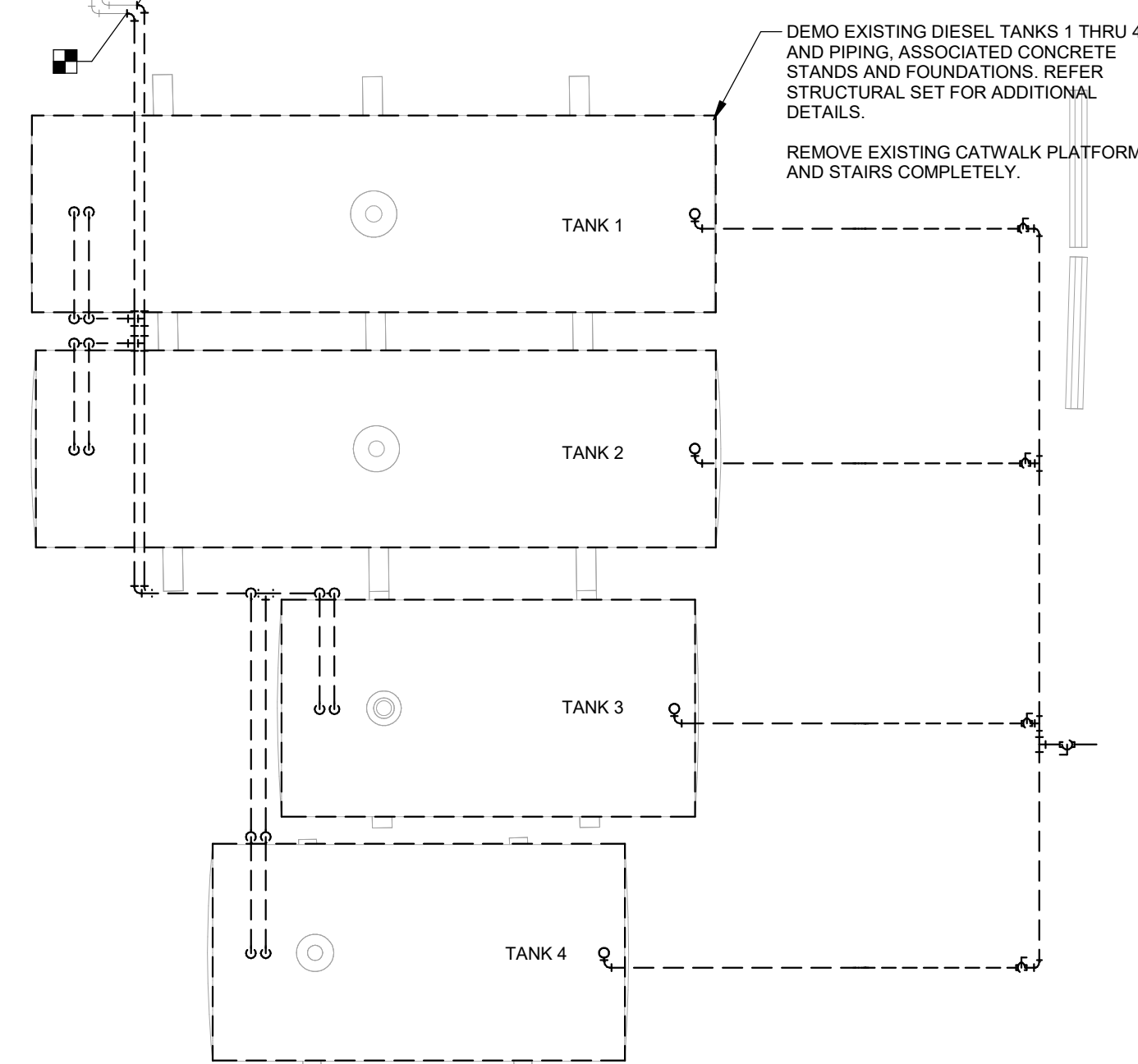
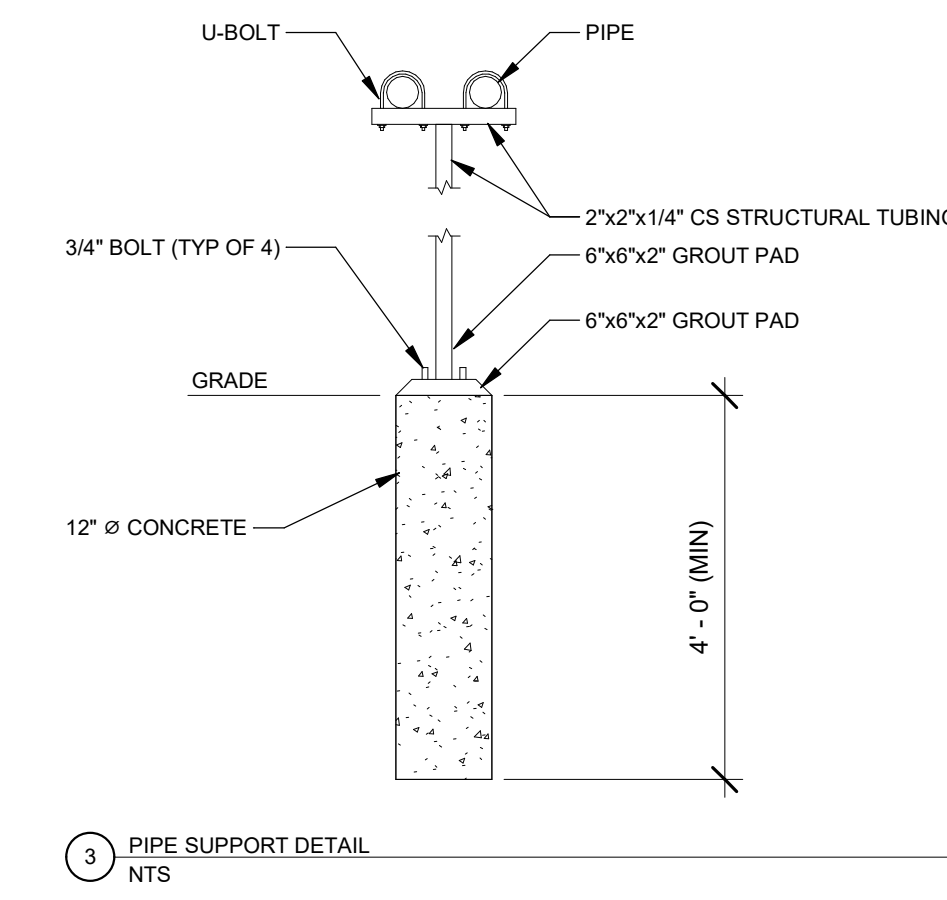
#	Revision	Date
0	100%CD	04/29/26

Drawing Name:
MECHANICAL PLAN

Drawing #:
M100

GENERAL NOTES:

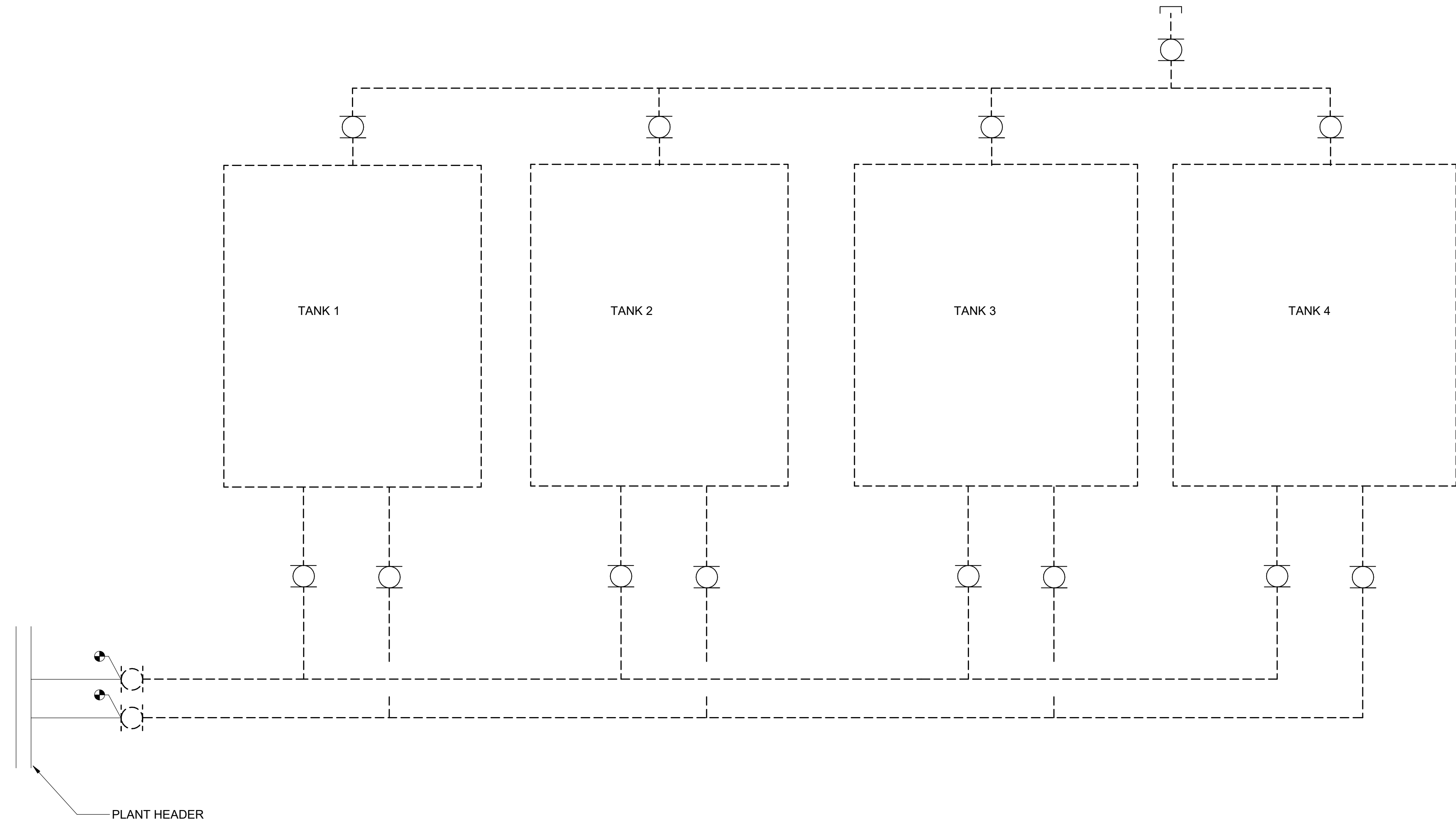
- A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.
- B. REFER TO M500 FOR PIPING SCHEDULES.
- C. BRANCH PIPING SHALL BE TAKEN OFF THE TOP OF MAIN PIPING.



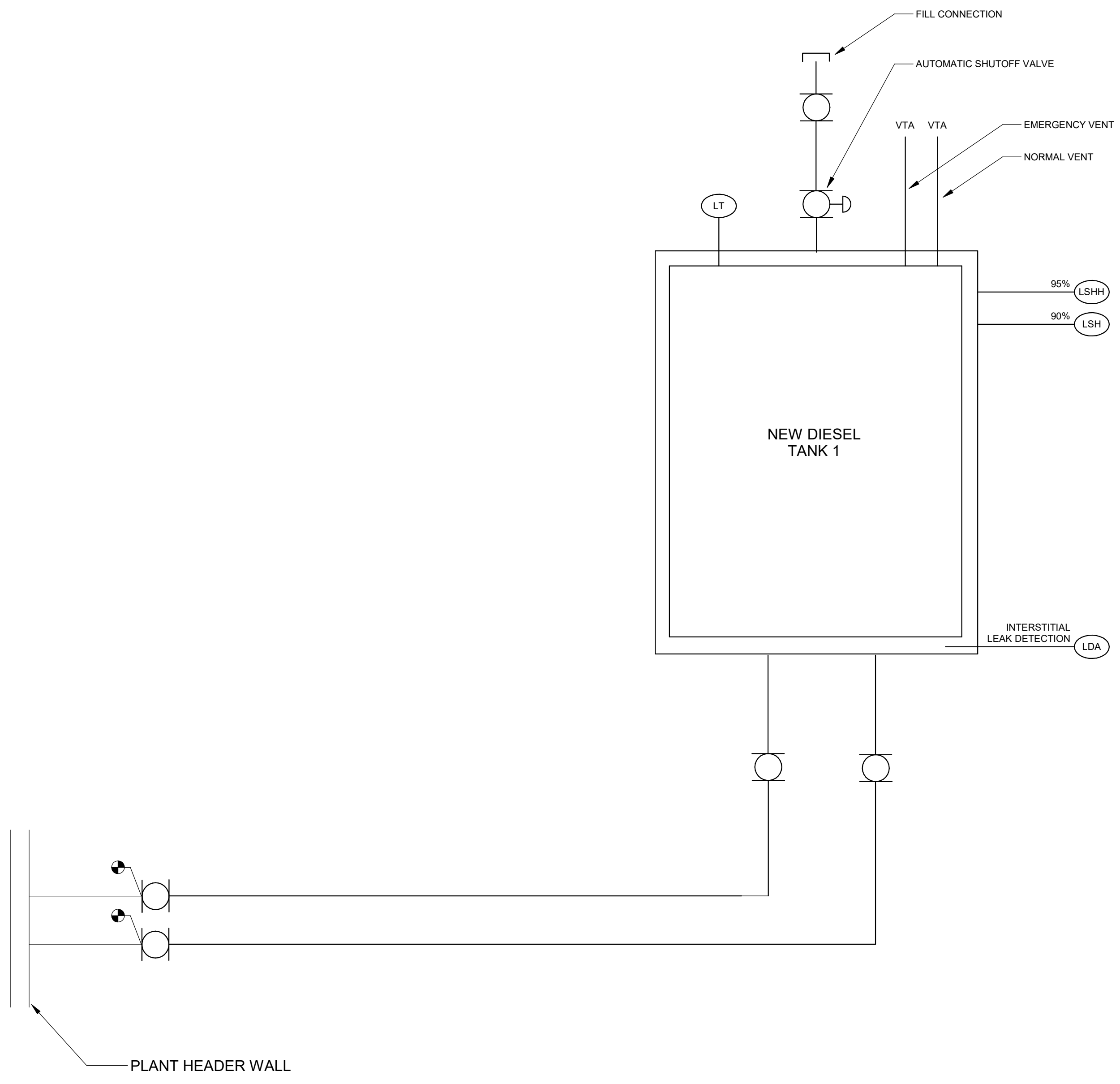
1 MECHANICAL PIPING DEMO
1/8" = 1'-0"

2 MECHANICAL PIPING PLAN
1/8" = 1'-0"

DOC
MPCF DIESEL TANKS REPLACEMENT & SPILL
CONTAINMENT
MT. PLEASANT CORRECTIONAL FACILITY



1 DEMO SCHEMATIC
N.T.S.



2 NEW PIPING SCHEMATIC
N.T.S.

Project No: 26027
Date: 04/29/26

#	Revision	Date
0	100%CD	04/29/26

Drawing Name:
MECHANICAL SCHEMATIC

Drawing #:
M300

PIPING SPECIFICATION		PROCESS:		DESIGN CONDITIONS:	
NG1	PIPE SIZE (NPS)	NATURAL GAS (150PSIG OR LESS)		150 PSIG AT 150°F	
	WEIGHT/SCHEDULE	2" AND SMALLER		2 1/2" AND LARGER	
PIPE: ASME B36.10M	MATERIAL	XS		SCH 40	
PIPE	CONSTRUCTION	ASTM A53 GRADE B, SEAMLESS		2 1/2" AND LARGER	
FITTINGS:	PIPE SIZE (NPS)	2" AND SMALLER		2 1/2" AND LARGER	
	WALL THICKNESS	CLASS 3000 - SOCKETWELD - B16.11		BUTTWELD - ASME B16.9 (3)	
	MATERIAL	SAME AS ADJOINING PIPE		SAME AS ADJOINING PIPE	
PIPING JOINTS:	TYPE	SOCKET WELDED FITTING - ASTM A105 - SEAMLESS		BUTTWELD FITTING - ASTM A234 GRADE B - ...	
	OTHER	WHERE FLANGE REQUIRED		WHERE FLANGE REQUIRED	
UNIONS:	CONSTRUCTION	CLASS 3000 - B16.11 - FLAT FACE WITH SPIRAL WOUND GASKET DESIGN		NOT PERMITTED	
	WALL THICKNESS	SAME AS ADJOINING PIPE		--	
	MATERIAL	FORGED CARBON STEEL - ASTM A105		--	
FLANGES:	CONSTRUCTION	CLASS 150 - WELD NECK - ASME B16.5		--	
	WALL THICKNESS	SAME AS ADJOINING PIPE		--	
	MATERIAL	FORGED CARBON STEEL - ASTM A105		--	
FLANGE BOLTS:	CONSTRUCTION	ALLOY STEEL, AISI 4140/4142 QUENCHED AND TEMPERED, A193 GRADE B7, STUD - FULL LENGTH		--	
FLANGE NUTS:	CONSTRUCTION	HEAVY HEX - A194 GRADE 2H		--	
WASHER:	CONSTRUCTION	F436		--	
GASKETS:	CONSTRUCTION	SPIRAL WOUND - SUITABLE FOR RAISED-FACE OR FLAT-FACE FLANGES		--	
THERMOWELLS:	MATERIAL	FLEXITALLIC STYLE CGI - TYPE 304 STAINLESS - FLEXICARB FILLER		--	
PIPE MATERIAL:	MATERIAL	INSERTION THERMOWELLS - ASTM A105 - 3000 PSIG PRESSURE CLASS - SEAL WELDED WELLS		--	
PIPE MATERIAL:	DESIGN/CONSTRUCTION CODE:	REVISION:	DATE REVISED:		
CARBON STEEL	ASME B16.34	ASME B31.1	1	9/23/2025	
VALVE SPECIFICATION:	SPECIFICATION MATERIAL:	PRESSURE CLASS:	DESIGN CODE:		
NG1	CARBON STEEL	SEE RATING BELOW	ASME B31.1	ASME B16.34	
	PIPE SIZE (NPS)	2" AND SMALLER		2 1/2" AND LARGER	
BALL VALVE	CONNECTION AND RATING	CLASS 800 SOCKETWELDED ENDS		CLASS 150 FLANGED ENDS	
	CONSTRUCTION	BODY: A106B API TRIM 8			
VALVE SELECTION	BONNEY FORGE OR EQUIVALENT	APOLLO OR EQUIVALENT	JAMESBURY OR EQUAL		
NOTES:	1. ALL THREADED PIPE SHALL BE SEAMLESS (TYPE S) 2. BRONZE BODY VALVES MAY BE USED FOR PIPE SIZES 1/4" - 2" IN LIEU OF SOCKET WELDED VALVES. 3. NO BACKING RING				

DIESEL TANK SPECIFICATIONS

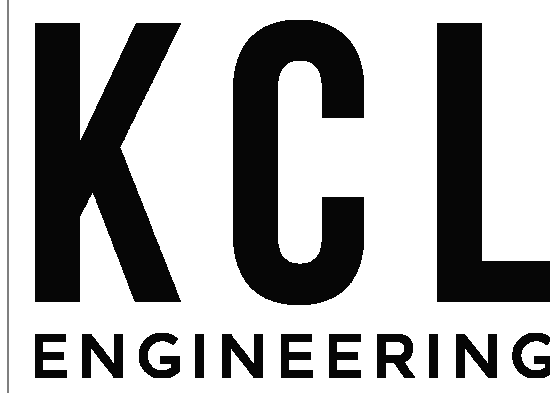
General Information	
Item	Specification / Requirement
Service	No. 2 Diesel Fuel (Class II Combustible)
Qty	1
Application	Backup fuel for central steam plant
Tank Type	Aboveground, Horizontal, Cylindrical
Capacity (Nominal)	20,000 gallons (Inside diameter of tank @ 10' dia x 34' long)
Construction	Double-wall steel
Listing	UL 142 listed and labeled
Installation Code	NFPA 30 and adopted IFC
Location	Outdoor installation

Design Criteria	
Item	Specification / Requirement
Design Pressure	Atmospheric
Design Temperature	-20°F to 120°F
Specific Gravity	0.85 (diesel typical)
Corrosion Allowance	Minimum 1/16 inch
Inner Tank Material	ASTM A36 or ASTM A516 carbon steel
Outer Tank Material	Carbon steel secondary containment shell
Wind/Seismic Design	ASCE 7 (Mt. Pleasant, Iowa)
Foundation Loads	Vendor to provide empty and full weights
Anchorage	Provide anchor bolt reactions and recommendations

Nozzles & Appurtenances	
Item	Specification / Requirement
Fill Connection	Lockable cap; size by vendor; spill containment provided
Normal Vent	Sized per NFPA 30 and UL 142 listing
Emergency Vent	Sized per NFPA 30 and UL 142 listing
Supply Outlet	Sized per fuel demand (120 gpm); anti-siphon protection required
Return Inlet	Sized per fuel demand (120 gpm); anti-siphon protection required
Drain	Valved and capped; controlled discharge only
Manway	Minimum 24-inch diameter, top center of tank, provide a ladder into the tank
Level Gauge	Direct-reading, visible to delivery operator
Level Transmitter	4-20 mA or Modbus output to DCS/BMS
High Level Alarm	90% capacity (local + remote alarm)
High-High Shutdown	95% automatic fill shutdown device
Interstitial Leak Detection	Continuous monitoring with alarm
Painting and Coating	Painting and Coating shall be to manufacturer's standard
Ladder and Platform	See specification for requirements for integral ladder and platform
Grounding Lugs	2 required

Codes & Regulatory Compliance	
Item	Specification / Requirement
UL Listing	UL 142 certification required
NFPA 30 Compliance	Overfill protection, venting, and installation per NFPA 30
NEC Compliance	Electrical classification per NFPA 70
SPCC Applicability	Evaluate per EPA 40 CFR 112
Secondary Containment	Integral double wall; interstitial monitoring required
API 650 Alignment	Vendor to state alignment with applicable API 650 provisions where not in conflict with UL 142
Labeling	Diesel Fuel - Combustible; No Smoking signage

Required Vendor Submittals	
Item	Specification / Requirement
UL 142 Documentation	Provide certificate and nameplate photo
General Arrangement Drawing	Dimensions, nozzle schedule, elevations
Vent Sizing Documentation	Normal and emergency vent basis
Leak Detection Cut Sheet	Manufacturer data and alarm details
Overfill Protection Cut Sheet	Alarm and shutoff documentation
Foundation Load Data	Empty and full tank weights
Coating System Data	Exterior coating and painting specifications
Ladder and Platform	Connection and Layout Details
Inspection/Test Procedures	Factory test documentation



300 4th St
West Des Moines, IA
50265
515-724-7938
info@kclengineering.com



DOC
MPCF DIESEL TANKS REPLACEMENT & SPILL
CONTAINMENT
MT. PLEASANT CORRECTIONAL FACILITY

Project No: 26027
Date: 04/29/26

#	Revision	Date
0	100%CD	04/29/26

Drawing Name:
MECHANICAL
SCHEDULES TANK BID
DOCUMENTS

Drawing #:
M500

A	DEVICE MOUNTED +8" ABOVE COUNTER TOP (VERIFY LOCATION)	NM	NONMETALLIC NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	OC	ON CENTER
ATS	AUTOMATIC TRANSFER SWITCH	OFCl	OWNER FURNISHED CONTRACTOR INSTALLED
C	CEILING	OFCl	OWNER FURNISHED, OWNER INSTALLED
CB	CIRCUIT BREAKER	R	EXISTING ITEM TO BE REMOVED
CT	CURRENT TRANSFORMER	RR	EXISTING ITEM TO BE REMOVED AND RELOCATED
E	EXISTING ITEM TO REMAIN	RN	EXISTING ITEM TO BE REMOVED AND REPLACED WITH NEW
EC	ELECTRICAL CONTRACTOR	SCCR	SHORT CIRCUIT CURRENT RATING
EM	EMERGENCY LIGHT FIXTURE	T	TAMPER PROOF DEVICE
ER	NEW LOCATION OF EXISTING ITEM	TCC	TEMPERATURE CONTROL CONTRACTOR
F	ROUGH IN FOR FUTURE DEVICE	TV	TELEVISION
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TYP	TYPICAL
FACP	FIRE ALARM CONTROL PANEL	UPS	UNINTERRUPTIBLE POWER SUPPLY
FSD	FIRE SMOKE DAMPER	V	VOLTS
G	GROUND FAULT CIRCUIT INTERRUPTER	VA	VOLT-AMPERES
GND	GROUND	WG	WIREGUARD COVER
KVA	KILO-VOLT-AMPERES	WP	WEATHERPROOF DEVICE
KW	KILOWATTS	WR	WEATHER RESISTANT DEVICE
MC	MECHANICAL CONTRACTOR	XFR	TRANSFORMER
MCB	MAIN CIRCUIT BREAKER	+24"	INDICATES MOUNTING HEIGHT CENTER LINE OF DEVICE TO FINISHED FLOOR
MDP	MAIN DISTRIBUTION PANEL		
MLO	MAIN LUGS ONLY		
N	NEW DEVICE IN EXISTING LOCATION		
NIC	NOT IN CONTRACT		

	JUNCTION BOX, CEILING OR FLOOR MOUNTED.
	JUNCTION BOX, WALL MOUNTED, ELEVATION AS NOTED.
	KEYNOTE
	EQUIPMENT IDENTIFICATION TAG. REFER TO EQUIPMENT CONNECTION SCHEDULE
	DETAIL DRAWING REFERENCE TAG, SIM-SIMILAR, TYP-TYPICAL, OPP-OPPOSITE SHEET REFERENCE
	SECTION CUT REFERENCE TAG, SIM-SIMILAR, TYP-TYPICAL, OPP-OPPOSITE SHEET REFERENCE
	INTERIOR ELEVATION DRAWING REFERENCE TAG
	DRAWINGS REVISION. REFER TO TITLEBLOCK FOR REVISION NAME AND DATE

	DUPLEX GFCI RECEPTACLE, TAMPER-RESISTANT, WALL MOUNT. *G* INDICATES PROTECTION INCLUDED IN DEVICE. SHADING INDICATES DEVICE PROTECTED BY EITHER UPSTREAM GFCI DEVICE OR CIRCUIT BREAKER
	DUPLEX GFCI WEATHER RESISTANT RECEPTACLE WITH WEATHER-PROOF IN-USE COVER, TAMPER-RESISTANT, WALL MOUNT
	EQUIPMENT CONNECTION. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR CONNECTION TYPE. REFER TO PANEL SCHEDULES FOR GFCI PROTECTION WHERE REQUIRED
	MOTOR CONNECTION. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR CONNECTION TYPE. REFER TO PANEL SCHEDULES FOR GFCI PROTECTION WHERE REQUIRED
	EQUIPMENT CONNECTION, WALL MOUNT. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR CONNECTION TYPE. REFER TO PANEL SCHEDULES FOR GFCI PROTECTION WHERE REQUIRED
	SAFETY DISCONNECT SWITCH
	EMERGENCY PUSH BUTTON
	PANELBOARD - SURFACE MOUNTED
	PANELBOARD - RECESSED IN WALL
	GENERATOR

- GENERAL NOTES - ELECTRICAL**
- COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. BEGIN INSTALLATION AND ROUGH-IN ONLY AFTER PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION IS COMPLETE. COORDINATE WITH BUILDING STRUCTURE, ARCHITECTURE, MECHANICAL SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, EQUIPMENT ACCESS/CLEARANCE, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REWORK OF INSTALLED EQUIPMENT RESULTING FROM INSUFFICIENT COORDINATION.
 - ELECTRICAL DRAWINGS ARE ONLY A PORTION OF THE COMPLETE SET OF PLANS AND CONTRACT DOCUMENTS. THE ELECTRICAL SCOPE OF WORK IS DEFINED BY THE COMPLETE SET OF CONTRACT DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO REFERENCING: ARCHITECTURAL PLANS FOR DIMENSIONS AND DETAILS, EQUIPMENT PLANS FOR ROUGH-IN REQUIREMENTS, MECHANICAL PLANS FOR EQUIPMENT SIZES AND LOCATIONS.

- INSTALLATION NOTES - ELECTRICAL**
- INCREASE CONDUCTOR SIZES ON 20A 120V-1 PHASE CIRCUITS EXCEEDING 100 FEET TO CENTER OF LOAD TO ACCOUNT FOR VOLTAGE DROP.
 - RACEWAYS AND BOXES ARE SHOWN DIAGRAMMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED. NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS.
 - PROVIDE A DEDICATED GREEN INSULATED GROUND CONDUCTOR TO ALL DEVICES. DO NOT USE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUNDING METHOD.
 - PROVIDE TYPED PANEL DIRECTORY AT PROJECT COMPLETION FOR NEW PANELS AND EXISTING PANELS WITH CIRCUITS MODIFIED DURING PROJECT. USE OWNER'S CURRENT ROOM NUMBERS AND EQUIPMENT NAMES. PROVIDE UNIQUE CIRCUIT IDENTIFICATION PER NEC 408.4(A)
 - CONTRACTOR IS RESPONSIBLE FOR OPENINGS IN WALLS, FLOORS, CEILINGS, AND ROOFS THAT ARE REQUIRED TO COMPLETE THEIR SCOPE OF WORK. SEAL PENETRATIONS IN ACCORDANCE WITH THE RATING OF THE AFFECTED ASSEMBLY. REFER TO ARCHITECTURAL CODE PLAN FOR RATED WALLS, FLOORS, AND CEILINGS.
 - INSTALL NEW CONDUIT A MINIMUM OF 18" BELOW GRADE.
 - INSTALL CONDUIT AND PATHWAYS FROM CONTROL PANEL TO SENSORS AT TANKS. COORDINATE INSTALLATION AND CONTROL LOCATIONS WITH MANUFACTURER AND CONTRACTOR.
 - CONDUIT INSTALLATION TO TANK AREA TO BE INSTALLED TO MEET NEC CLASS 1 DIVISION 2 REQUIREMENTS. PROVIDE SEAL-OFFS AND INSTALL CONDUIT BELOW GRADE TO MEET NEC REQUIREMENTS.

- CODE NOTES - ELECTRICAL**
- PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ALL STATE CODES.
 - THE CURRENT ADOPTED EDITION OF THE ELECTRICAL CODE IS THE STANDARD FOR THE ELECTRICAL INSTALLATION. VERIFY WITH LOCAL OFFICIALS WHEN PERMITS ARE OBTAINED. NOTIFY DESIGN TEAM OF ANY DISCREPANCIES BETWEEN THE PROJECT MANUAL OR DRAWINGS AND THE GOVERNING CODE.
 - PER NEC EVERY CIRCUIT AND CIRCUIT MODIFICATION SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT AND SPECIFIC PURPOSE OR USE. CONTRACTOR TO PROVIDE FINAL CIRCUIT IDENTIFICATION FOR ALL NEW AND MODIFIED CIRCUITS AT PROJECT COMPLETION.

- DEVICE INSTALLATION AND MATERIALS - ELECTRICAL**
- PROVIDE NORMAL WIRING DEVICES AS **GRAY** UNLESS OTHERWISE NOTED.
 - PROVIDE DEVICES COVER PLATES AS **STAINLESS STEEL**. MATCH WIRING DEVICES COLOR.

