

McKINNEY WATER DISTRICT

WATER TANK CONSTRUCTION-PHASE 1B

CONTRACT 3

MCKINNEY BLUFF

LINCOLN COUNTY, KENTUCKY

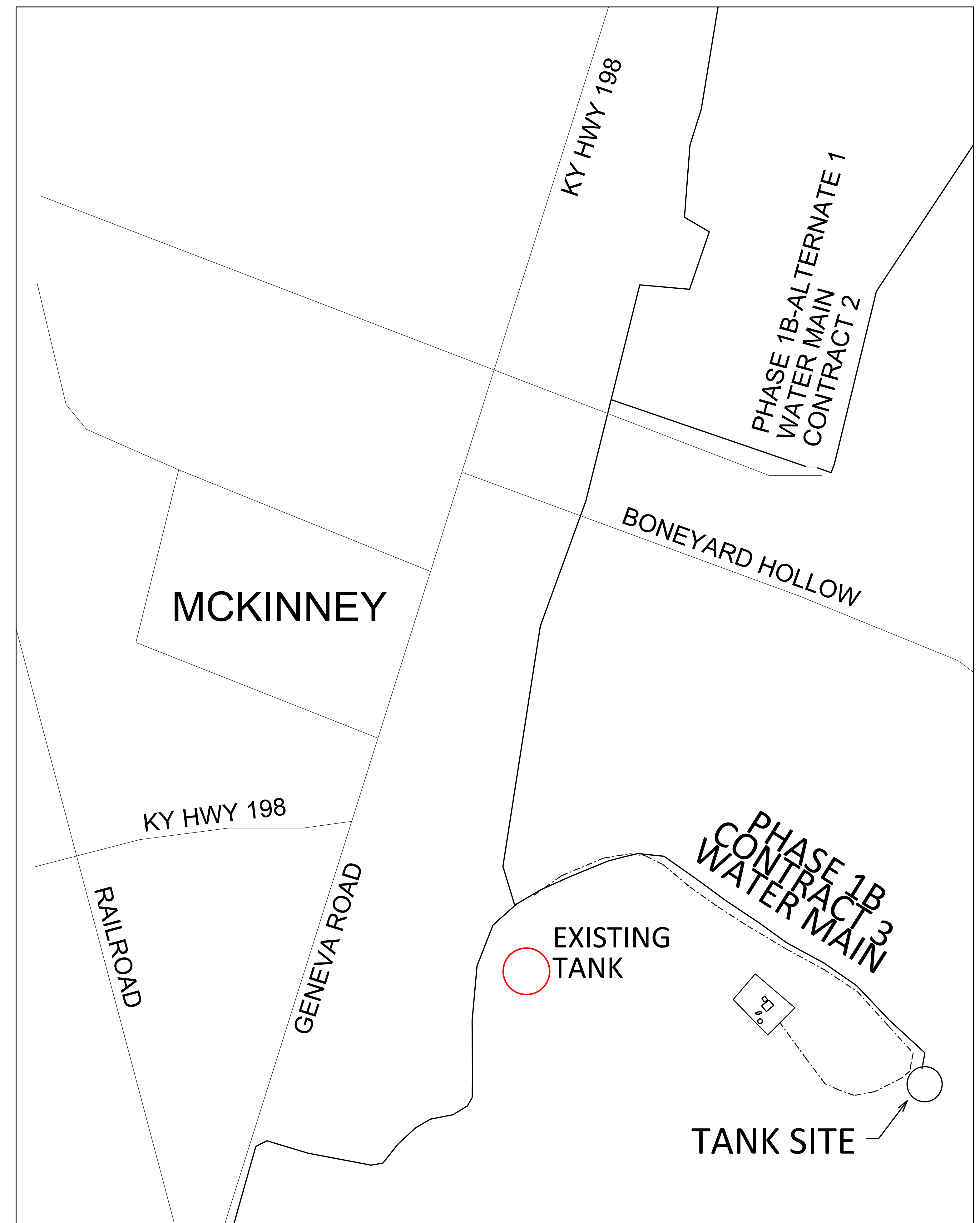
SHEET LEGEND

COVER SHEET	
PLAN AND PROFILE SHEET	1
TANK SITE PLAN	2
VALVE VAULT	3
TANK DETAILS	4
DETAILS	5-6

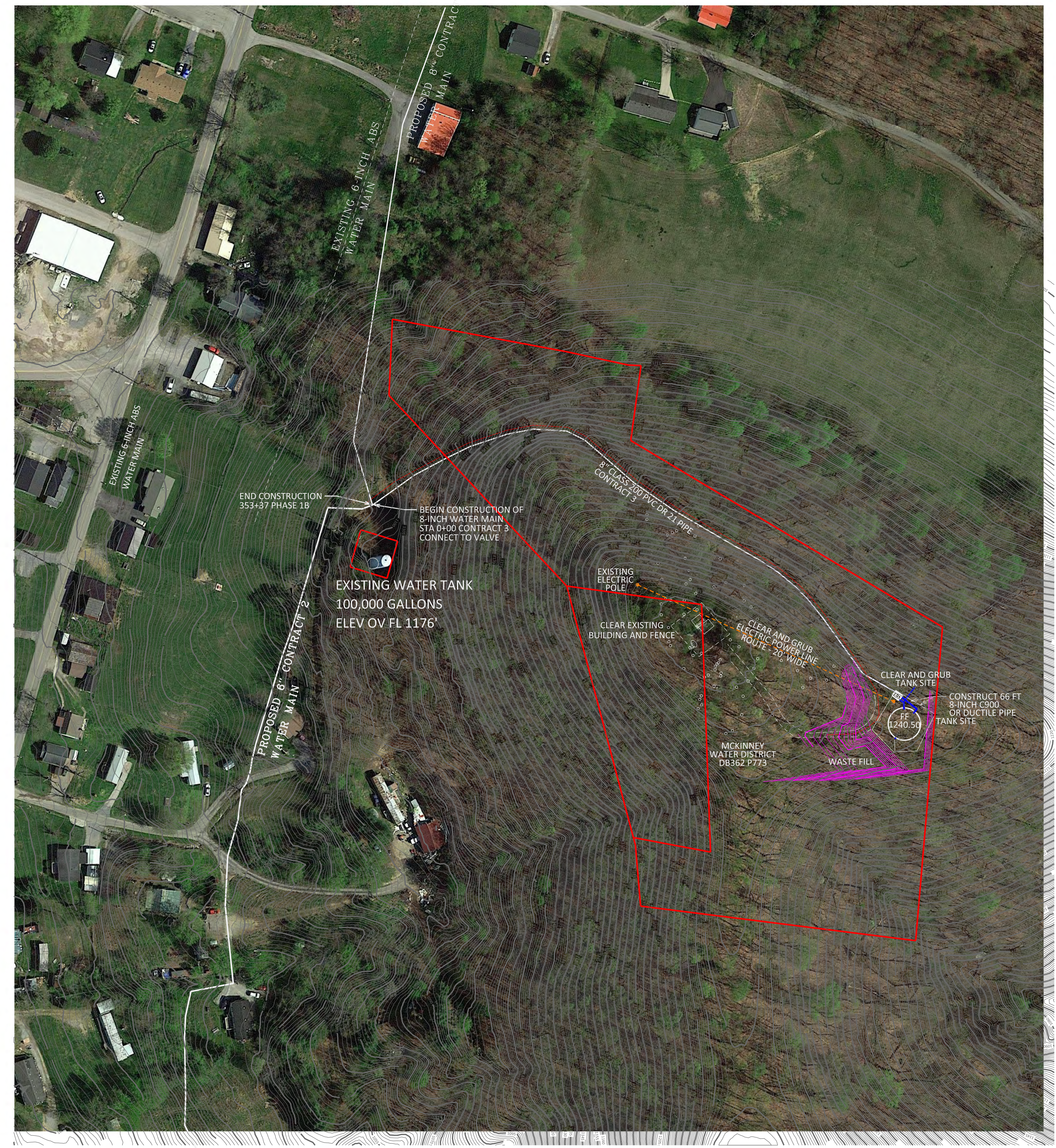
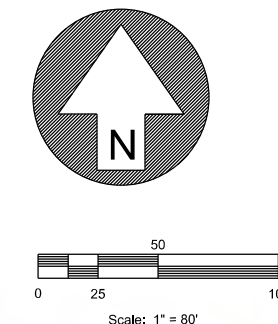
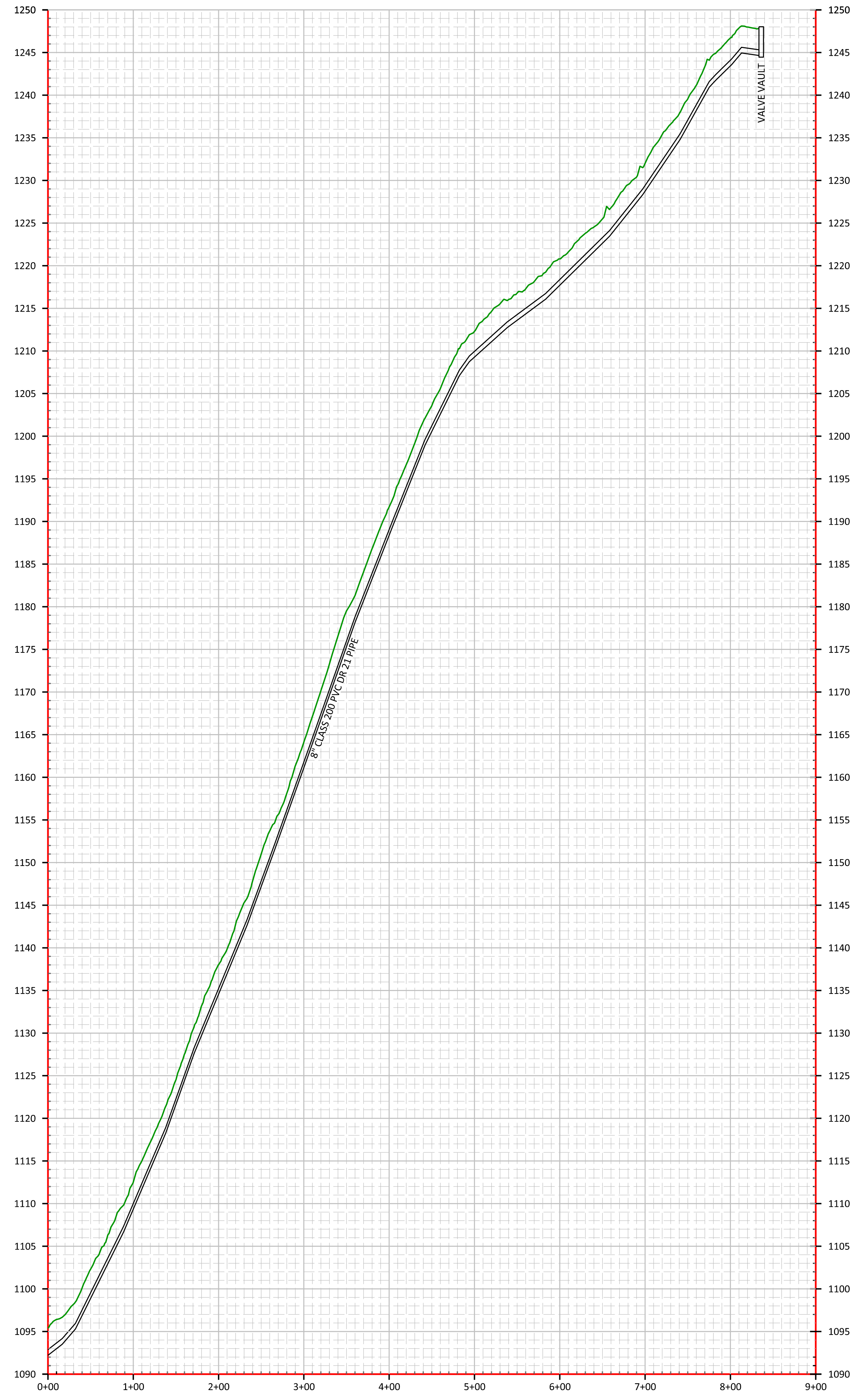
ENGINEER



P.O. BOX 204
165 FOSTER LANE
STANFORD, KY 40484
PHONE (606) 365-8362
FAX (606) 365-1097



VICINITY MAP



DATE: 4-26-22
 SCALE: 1" = 80'
 DRAWN BY: M.S.
 APPROVED BY: LMG
 FILENAME: 18295WATANK

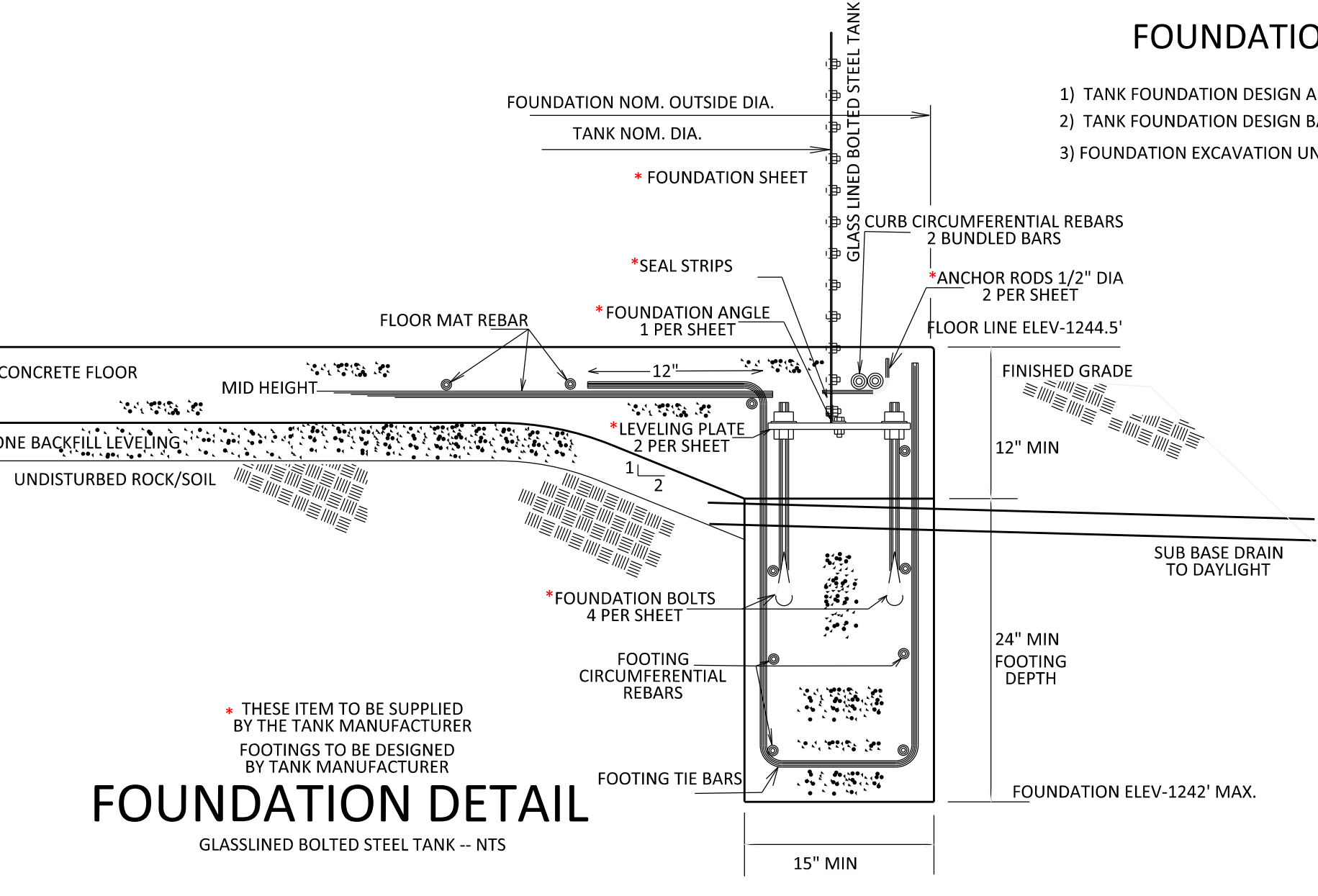
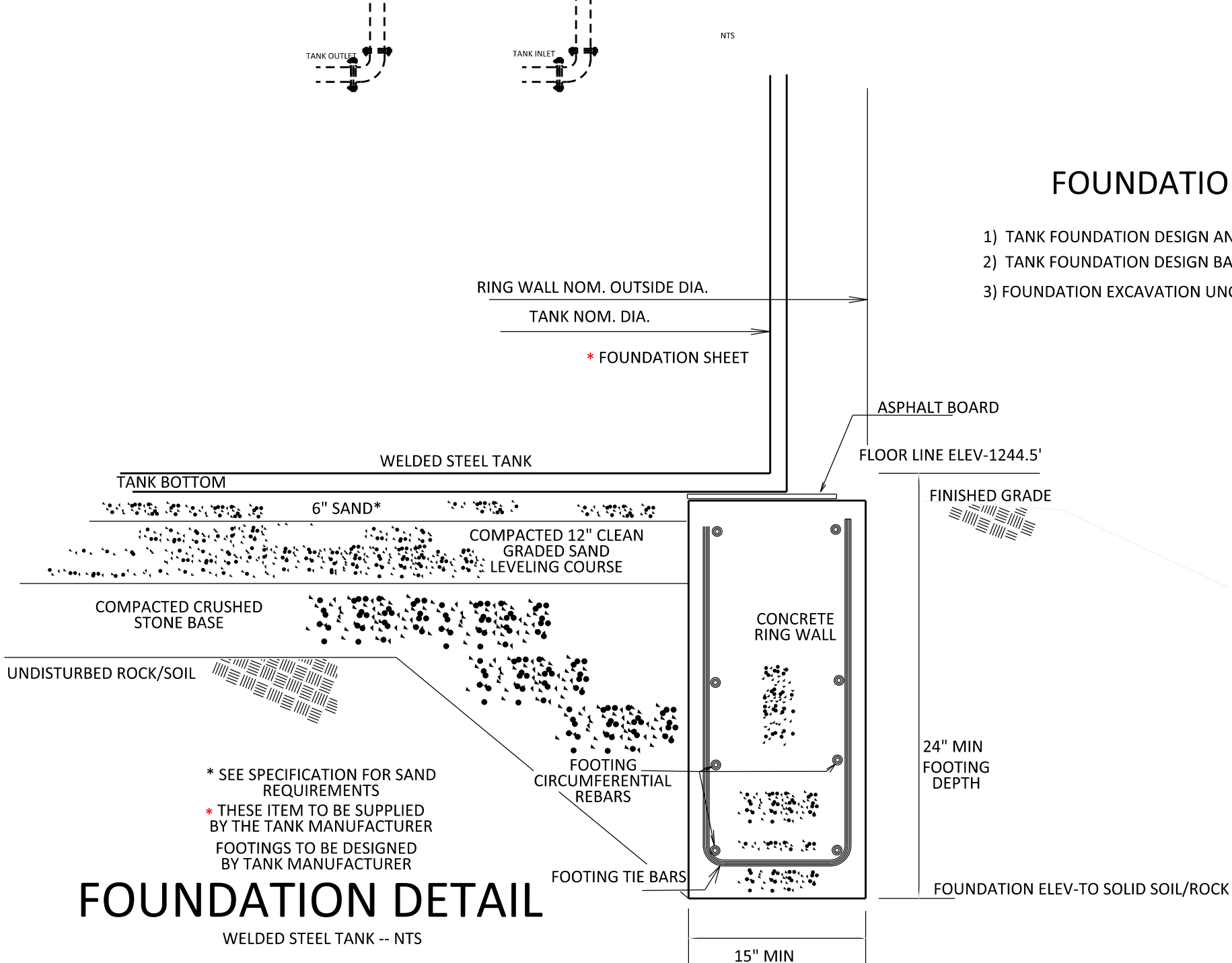
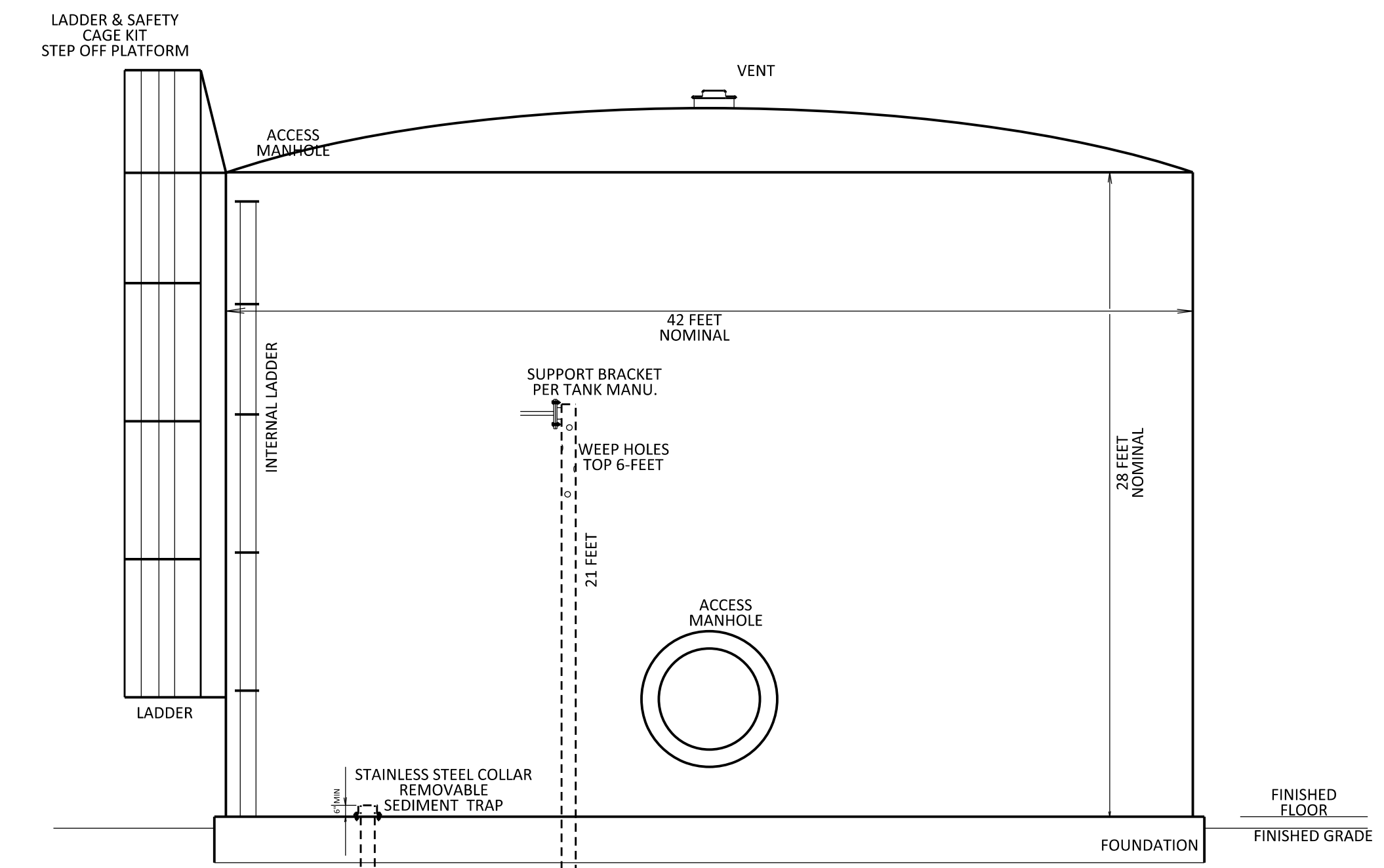
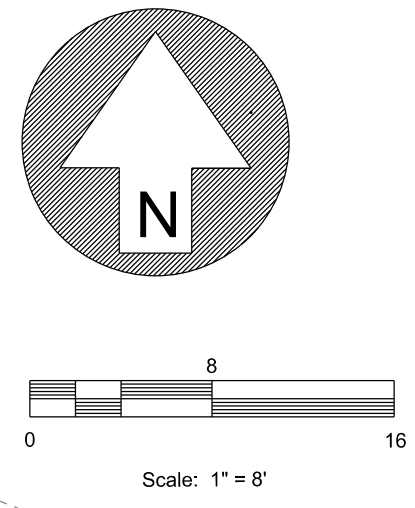
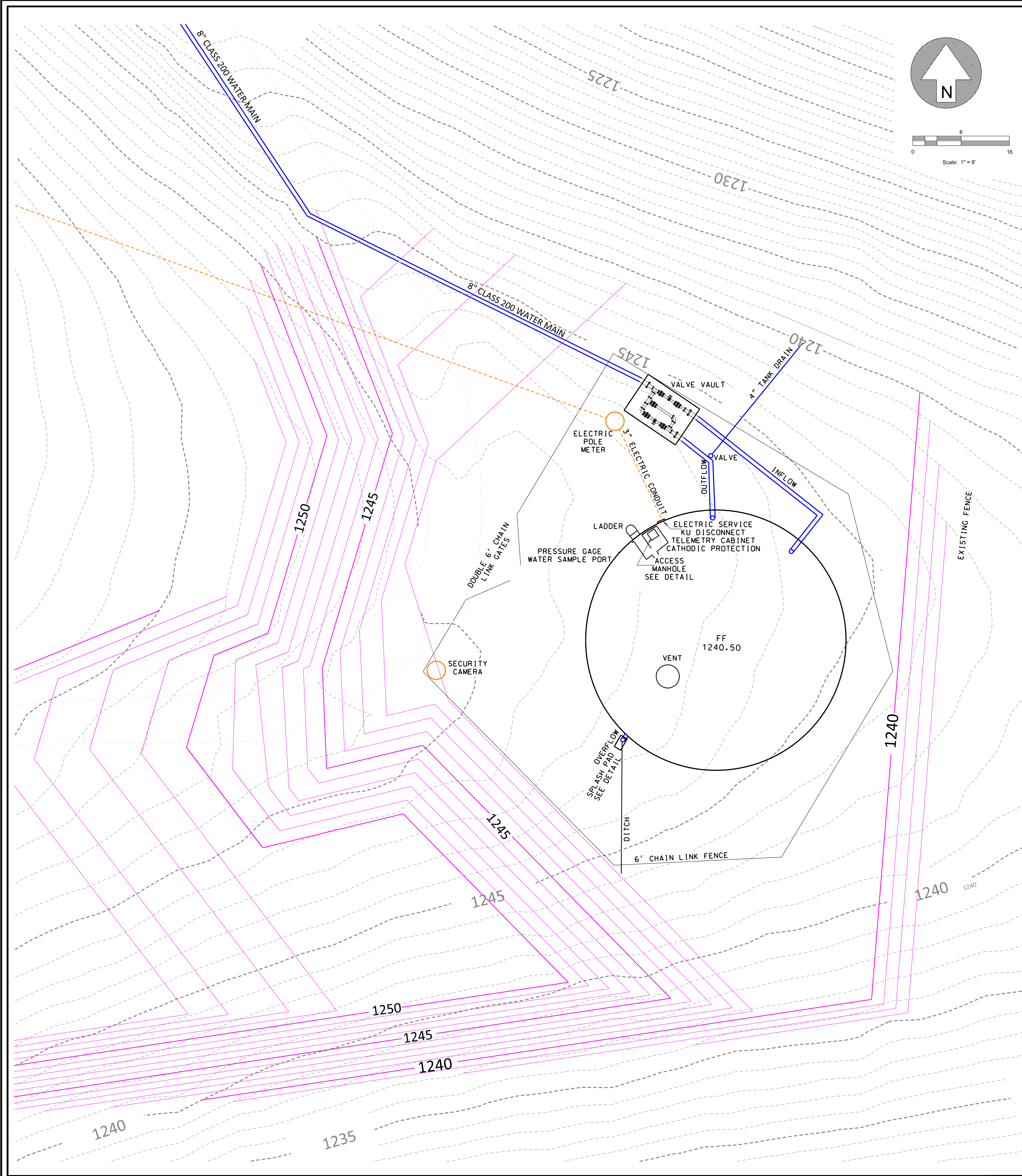
PHASE 1B - CONTRACT 3 WATER PROJECT
PLAN AND PROFILE
WATER STORAGE TANKS
MCKINNEY, LINCOLN COUNTY, KENTUCKY

CLIENT:
 MCKINNEY WATER DISTRICT
 2900 MIDDLEBURG RD
 MCKINNEY, KY 40448

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 165 FOSTER LANE
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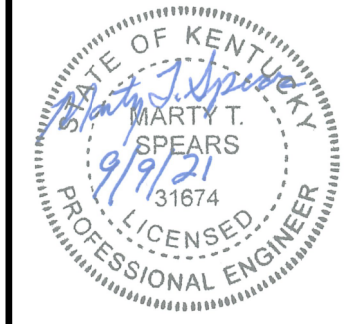


REVISION(S)



- FOUNDATION NOTES:**
- 1) TANK FOUNDATION DESIGN AND CONSTRUCTION BY TANK SUPPLIER.
 - 2) TANK FOUNDATION DESIGN BASED ON GEOTECHNICAL REPORT.
 - 3) FOUNDATION EXCAVATION UNCLASSIFIED.

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DATE: 10-7-19
 SCALE: 1" = NTS
 DRAWN BY: M.S.
 APPROVED BY: GOOCH
 FILENAME: 18295WATANK

PHASE 1B - CONTRACT 3 WATER PROJECT
GENERAL TANK PLAN
WATER STORAGE TANKS
MCKINNEY, LINCOLN COUNTY, KENTUCKY

CLIENT:
 MCKINNEY WATER DISTRICT
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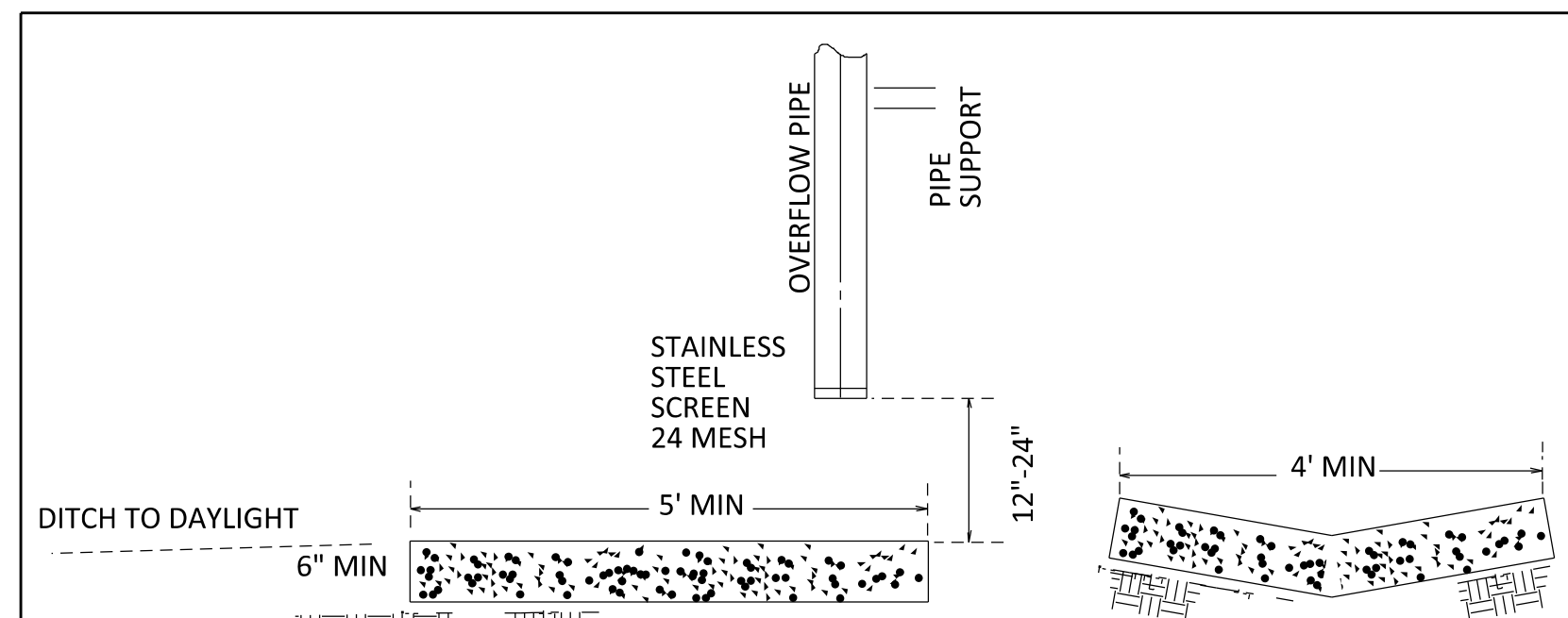
REVISION(S)

GENERAL NOTES:

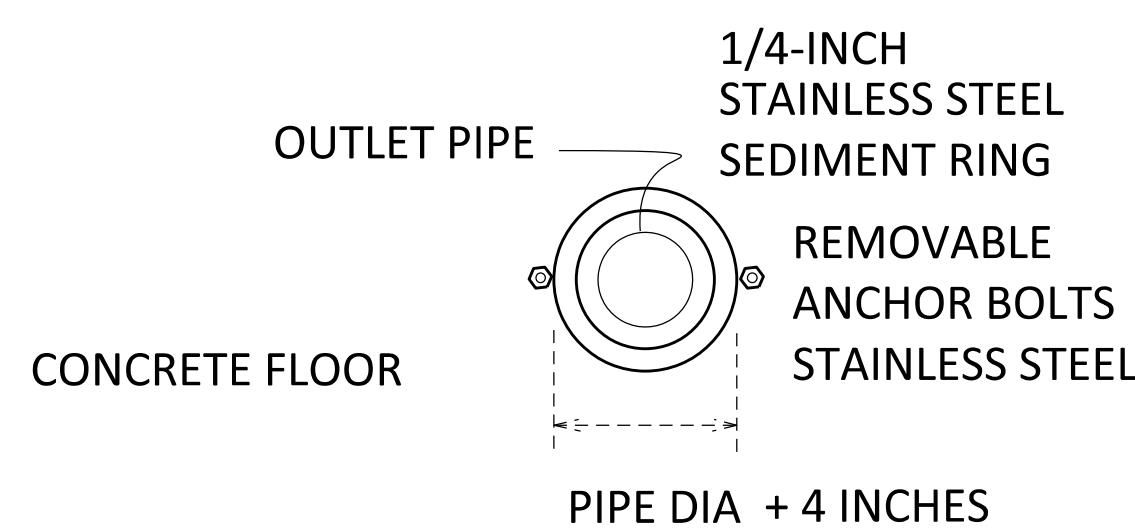
- 1) TANK FOUNDATION BY TANK SUPPLIER
- 2) VALVE VAULT CONCRETE - 11 FEET BY 8 FEET
- 3) SUPPLY 8" MAIN CLASS 200 DR 21 PVC CONNECT TO VALVE VAULT.
- 4) VALVE VAULT ACCESS HATCH TO BE ALUMINUM 48 INCHES BY 72 INCHES MANUFACTURER SHALL BE BILCO OR APPROVED EQUAL.
- 5) VALVE VAULT SHALL HAVE A 4 INCH DRAIN TO DAYLIGHT.
- 6) WATER TANK SHALL BE GLASS LINED STEEL OR WELDED STEEL TANK WITH THE NOMINAL DIMENSIONS OF 43 FEET BY 28 FEET WITH A MINIMUM CAPACITY OF 250,000 GALLONS
- 7) THE WATER TANK SHALL HAVE A WATERTIGHT ROOF TO EXCLUDE ALL BIRDS, ANIMALS, INSECTS AND DUST.
- 8) THE FENCING, LOCKS AND ACCESS MANHOLES SHALL BE LOCKABLE TO PREVENT TRESPASSING, VANDALISM AND SABOTAGE.
- 9) THE TANK SHALL HAVE SEPARATE INLET AND OUTLET STRUCTURES AND ADEQUATE MIXING TO FACILITATE WATER TURNOVER.
- 10) THE OVERFLOW SHALL BE BROUGHT DOWN TO 18 INCHES ABOVE THE GROUND FINISHED SURFACE AND INSTALL A CONCRETE SPLASH PAD 36 INCHES SQUARE. THE OVERFLOW PIPE SHALL BE TURNED DOWN. THE PIPE SHALL HAVE INSTALLED A STAINLESS STEEL WIRE TWENTY -FOUR MESH SCREEN.
- 11) THE TANK SHALL HAVE TWO ACCESS MANHOLES. MANHOLES SHALL BE FITTED WITH A SOLID WATER -TIGHT COVER WHICH OVERLAPS A RAISED MANHOLE OPENING AND BE BOLTED AND GASKETED. THE MANHOLE SHALL BE HINGED AND HASPED FOR LOCK.
- 12) THE WATER TANK SHALL BE VENTED THAT SHALL PREVENT THE ENTRY OF OUTSIDE WATER. IT SHALL EXCLUDE BIRDS AND ANIMALS. THE VENT SHALL BE FITTED WITH A FOUR MESH STAINLESS STEEL SCREEN.
- 13) THE TANK ROOF SHALL BE AN ALUMINUM GEODESIC DOME ROOF STRUCTURE.
- 14) THE TANK SHALL HAVE A LADDER WITH CAGE MEETING OSHA REQUIREMENTS ON THE SIDEWALL OF THE TANK. THE LADDER SHALL BEGIN SIX FEET OFF THE FINISHED GRADE WITH A LOCKING LADDER HATCH.
- 15) THE TANK MANUFACTURE SHALL PROVIDE THE DESIGN AND INSTALLATION OF A SACRIFICIAL CATHODIC PROTECTION SYSTEM.
- 16) THE TANK MANUFACTURE SHALL PROVIDE THE DESIGN AND INSTALLATION OF A FOUNDATION SYSTEM ADEQUATE FOR THE TANK BEING INSTALLED.
- 17) THE TANK SHALL BE DESIGN TO ACCOMMODATE ELECTRONIC EQUIPMENT FOR TELEMETRY FOR PUMP OPERATIONS.
- 18) EXISTING ACCESS ROAD TO BE UPGRADED AS FOLLOWS:
 - a) THE CONTRACTOR WILL REMOVE ANY LIMBS, TREES, STUMPS, LEAVES AND OTHER DEBRIS FROM THE ACCESS EASEMENT TO ALLOW FOR HEAVY EQUIPMENT ACCESS.
 - b) THE CONTRACTOR WILL GRADE THE EXISTING ACCESS TO ROCK OR SOLID MATERIAL PRIOR TO OTHER CONSTRUCTION.
 - c) THE CONTRACTOR WILL CONSTRUCT AN 8-INCH PVC WATER MAIN ALONG THE DITCH SIDE OF THE EASEMENT FROM THE EXISTING TANK TO THE NEW TANK SITE.
 - d) THE CONTRACTOR WILL BED THE WATER MAIN PVC PIPE WITH #8 CRUSHED STONE AND REMOVE ANY ROCK FROM TRENCH BACK FILL.
 - e) THE CONTRACTOR WILL CONSTRUCT ROADWAY CULVERTS AS SHOWN ON THE PLANS.
 - f) THE CONTRACTOR WILL CONSTRUCT A ROADWAY DITCH OVER THE NEW WATER MAIN WITH A 6-INCH LAYER OF #2 CRUSHED STONE RIP-RAP.
 - g) THE CONTRACTOR WILL CONSTRUCT A ROAD SURFACE OF 4-INCHES OF #2 CRUSHED STONE OVERLAID BY 2 -INCHES OF DGA TO THE NEW TANK SITE.

GENERAL NOTES ORDER OF WORK:

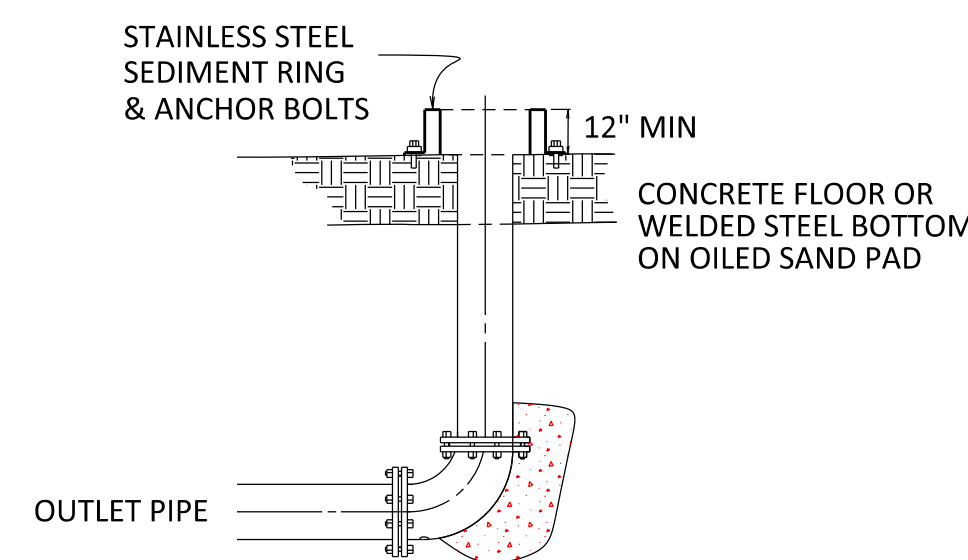
- 1) CLEAR AND GRUB THE ACCESS ROAD. REMOVE OVERHANGING TREES TO PERMIT ACCESS OF EQUIPMENT AND SUPPLIES.
- 2) INSTALL WATER MAIN PIPING ALONG THE ROADWAY INTO THE TANK SITE. THIS MUST BE COMPLETE BEFORE REPAIRING ROAD.
- 3) REPAIR ROAD, INSTALL NEW CULVERTS, REGRADE ROAD, EXCAVATE DITCH AND INSTALL RIP-RAP, AND INSTALL STONE ROAD SURFACE.
- 4) REMOVE EXISTING CHAIN LINK FENCE, BARBED WIRE, BRACKETS, HARDWARE, POST GATES, TOP RAIL, ETC. AND SALVAGE FOR REUSE ANYTHING UNDAMAGED.
- 5) CLEAR AND GRUB THE TANK SITE. REMOVE TREES STUMPS COMPLETELY UNDER TANK, BACKFILL WITH STONE, REMOVE OVERHANGING TREES TO PERMIT ACCESS OF EQUIPMENT, AND SUPPLIES. INSTALL SILT FENCE.
- 6) CLEAR TANK SITE. REMOVE BUILDINGS FOUNDATIONS ANTENNAS, TOWERS, ANCHORS AND OTHER STRUCTURES.
- 7) EXCAVATE TANK SITE TO PREPARE FOR TANK FOUNDATION 1 FOOT BELOW FINISHED FLOOR ELEVATION.
- 8) EVALUATE THE UNDISTURBED SOIL/ROCK TO DETERMINE IF UNDERCUT IS REQUIRED.
- 9) BEGIN CONSTRUCTION OF TANK FOUNDATION AND VALVE VAULT.
- 10) BEGIN CONSTRUCTION OF WATER TANK.
- 11) COMPLETE CONSTRUCTION OF WATER TANK. COMPLETE VALVE VAULT, WATER PIPING, GRADING AND SITE WORK.
- 12) DISINFECT WATER LINES AND TANK AND FILL WITH WATER. COORDINATE WITH THE CITY OF DANVILLE FOR TELEMETRY ON WATER TANK.
- 13) PRESSURE TEST WATER LINES AND TEST ALL COMPONENTS OF THE TANK TELEMETRY, VALVES, GAUGES AND OTHER EQUIPMENT.



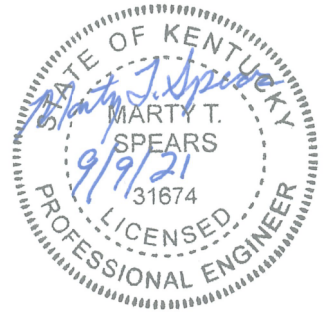
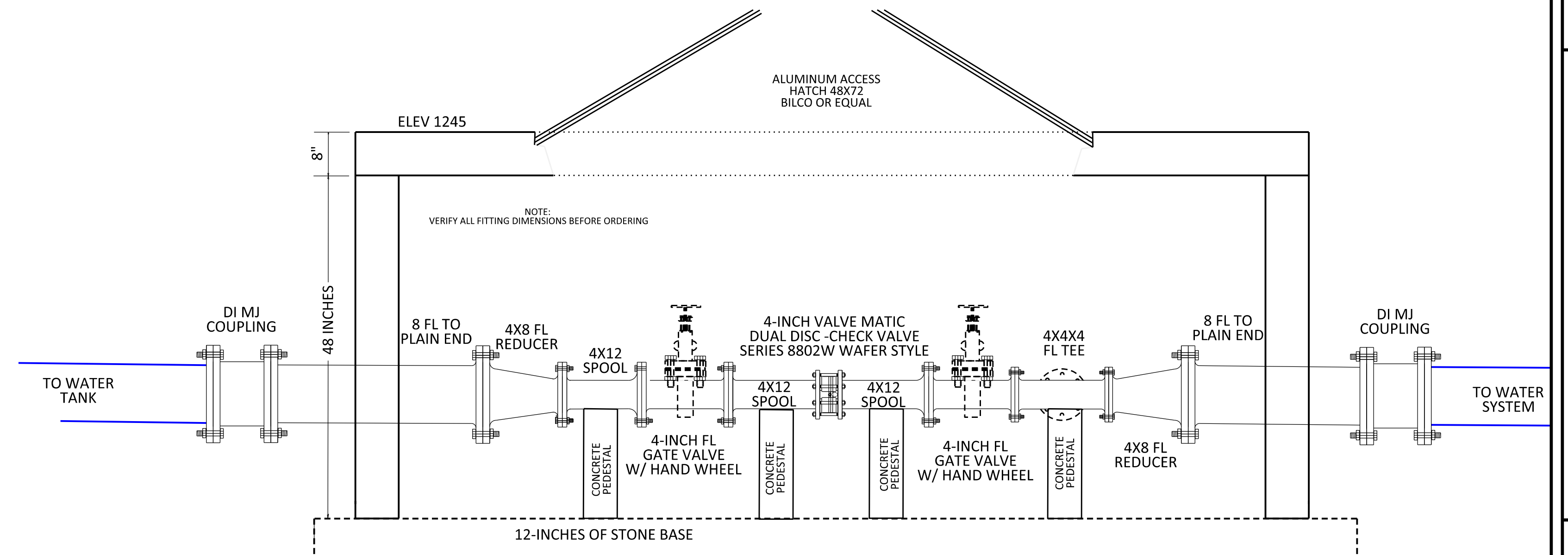
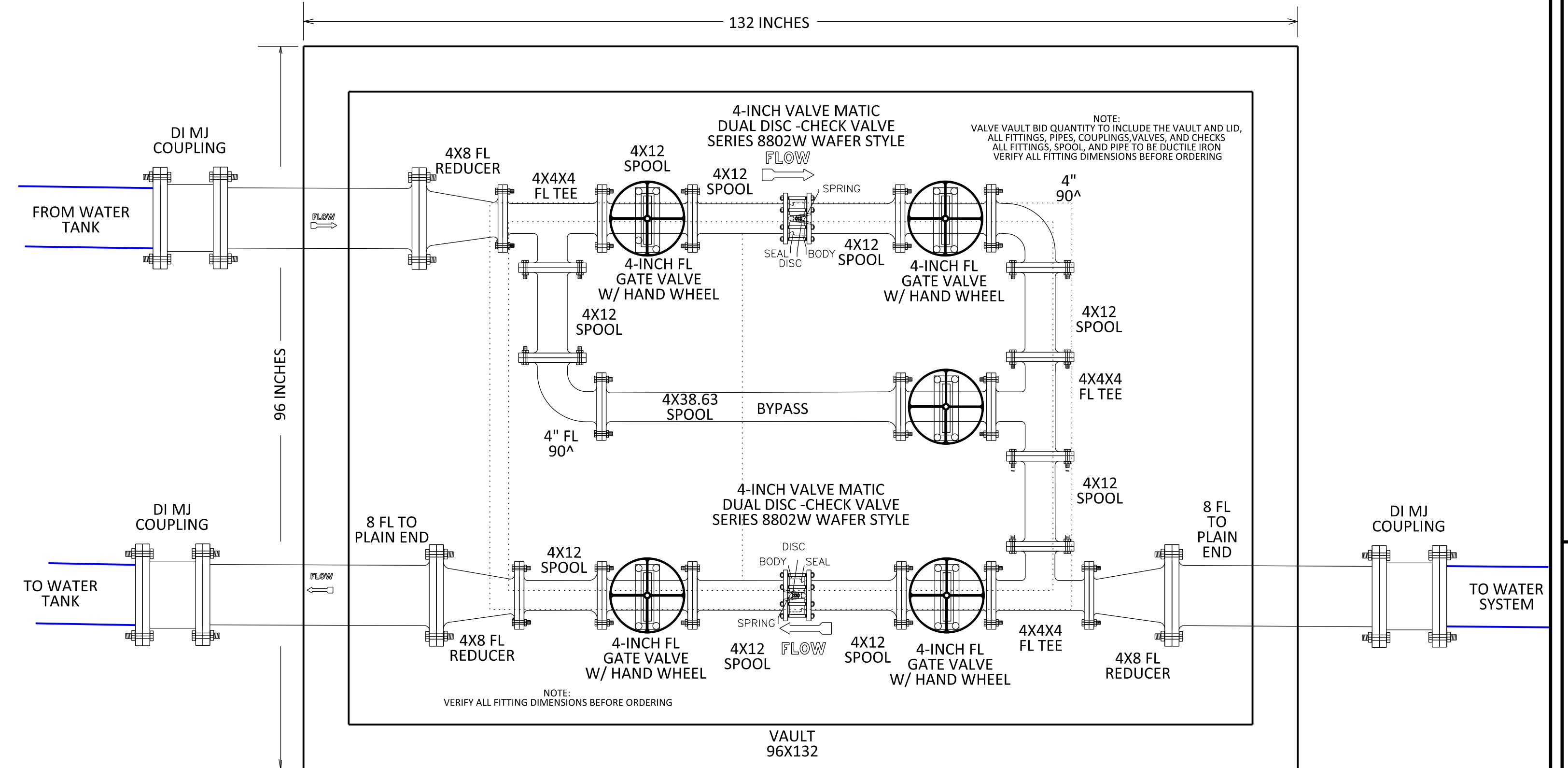
DETAIL OVERFLOW SPLASH PAD -- NTS



OVERFLOW OUTLET PIPE - NTS



SEDIMENT TRAP DETAIL



DATE: 10-7-19
 SCALE: 1" = 10'
 DRAWN BY: M.S.
 APPROVED BY: GOOCH
 FILENAME: 18298WATANK

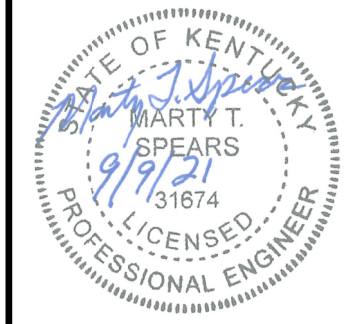
PHASE 1B - CONTRACT 3 WATER PROJECT
TANK SITE NOTES
AND VALVE VAULT
MCKINNEY, LINCOLN COUNTY, KENTUCKY

CLIENT: MCKINNEY WATER DISTRICT
 2900 MIDDLEBURG RD
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REVISION(S)



DATE: 10-7-19
 SCALE: 1" = 1'-0"
 DRAWN BY: M.S.
 APPROVED BY: GOOCH
 FILENAME: 18295WATANK

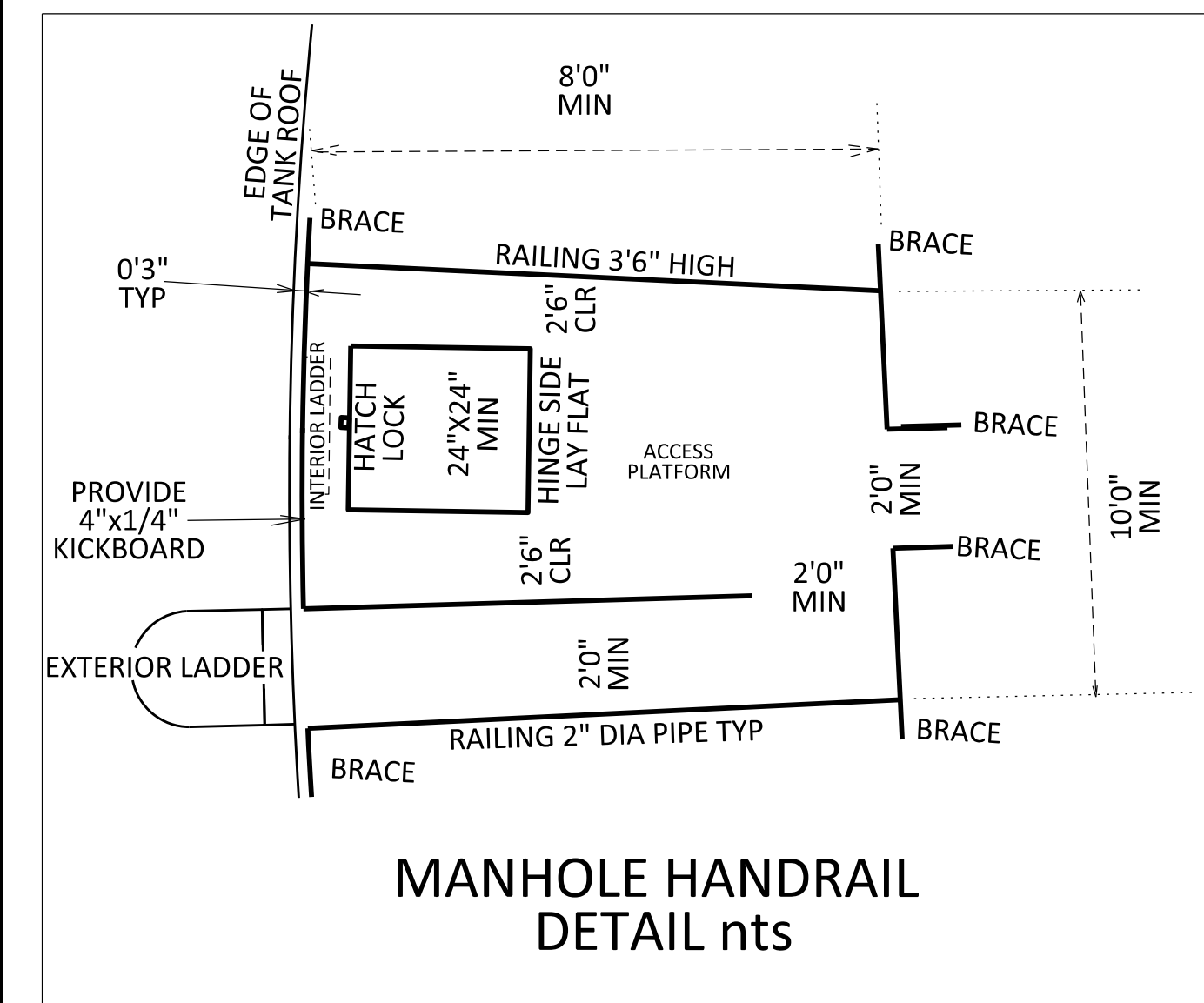
PHASE 1B - CONTRACT 3 WATER PROJECT
 GENERAL TANK DETAILS
 WATER STORAGE TANK
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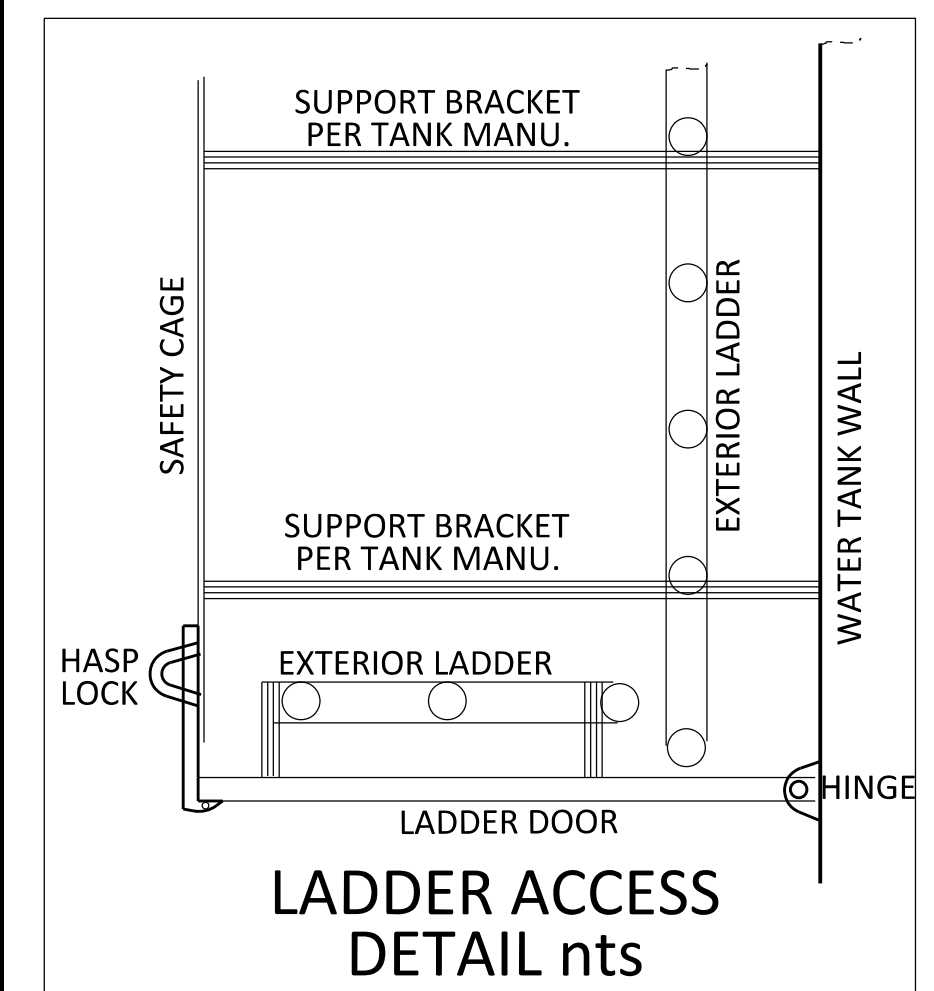
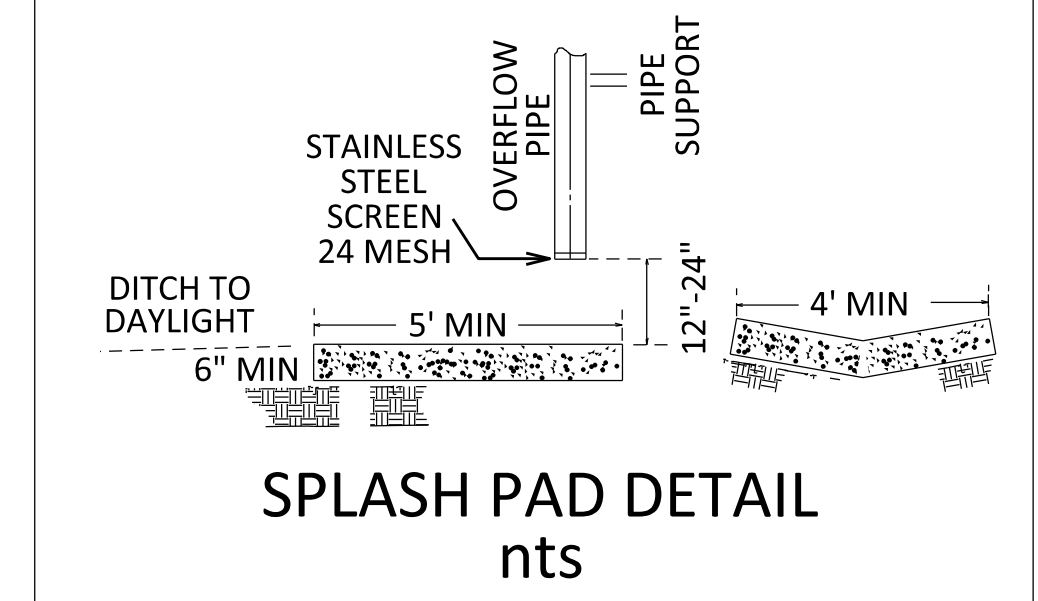
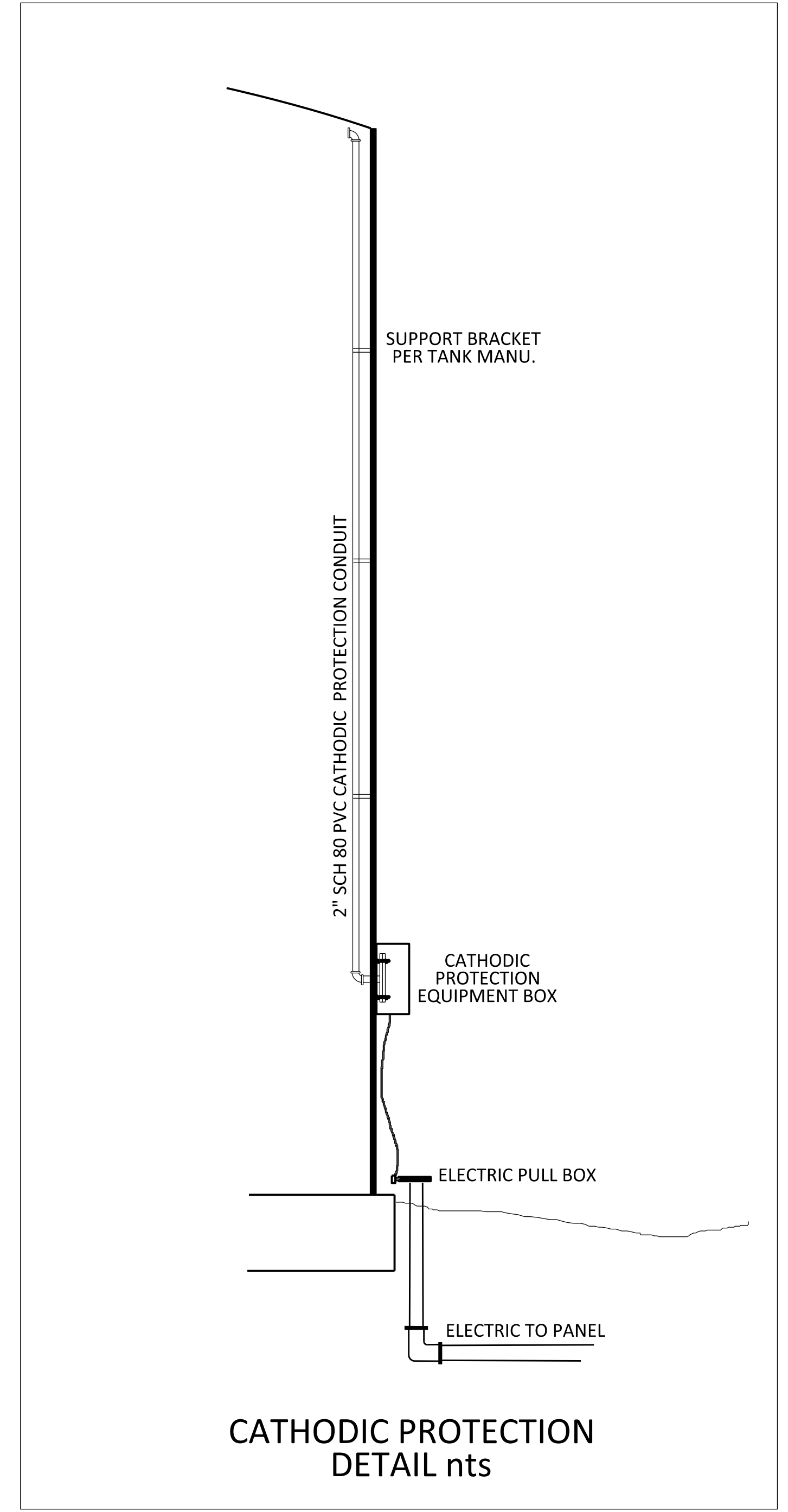
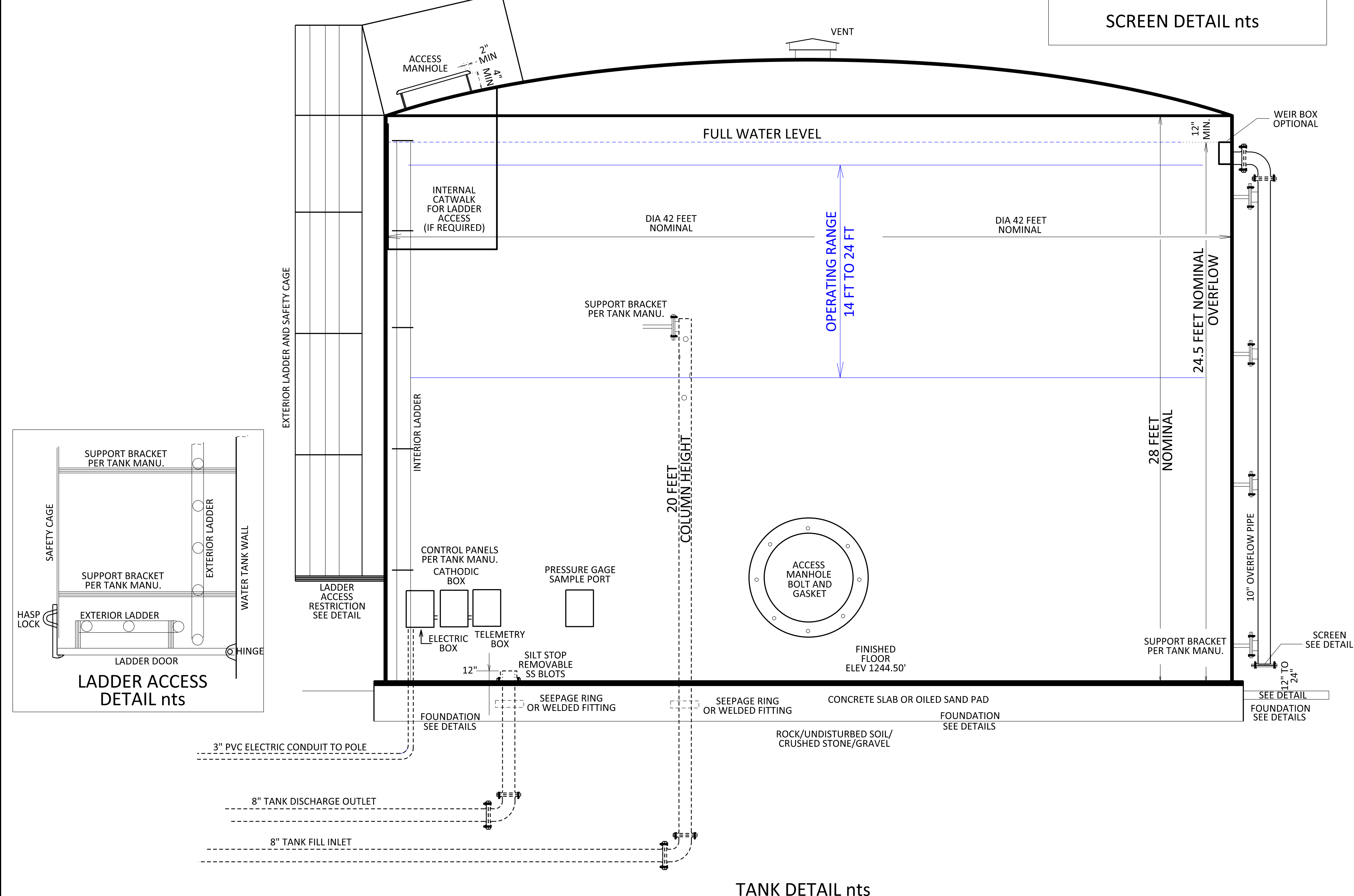
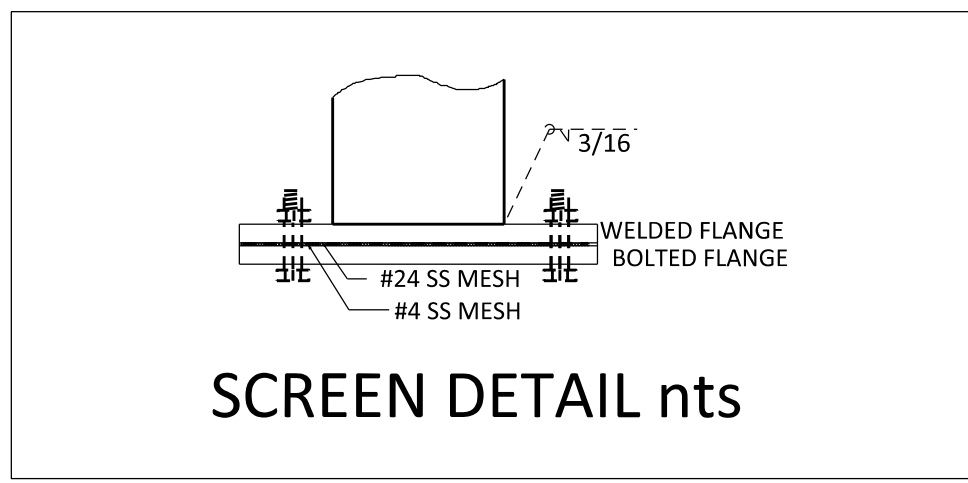
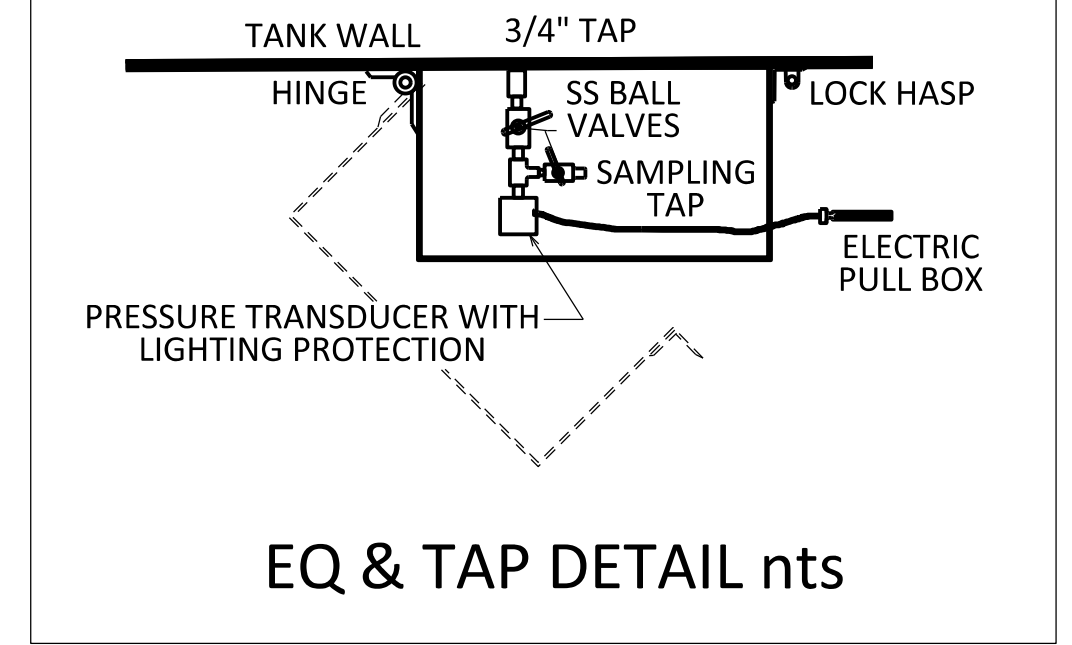
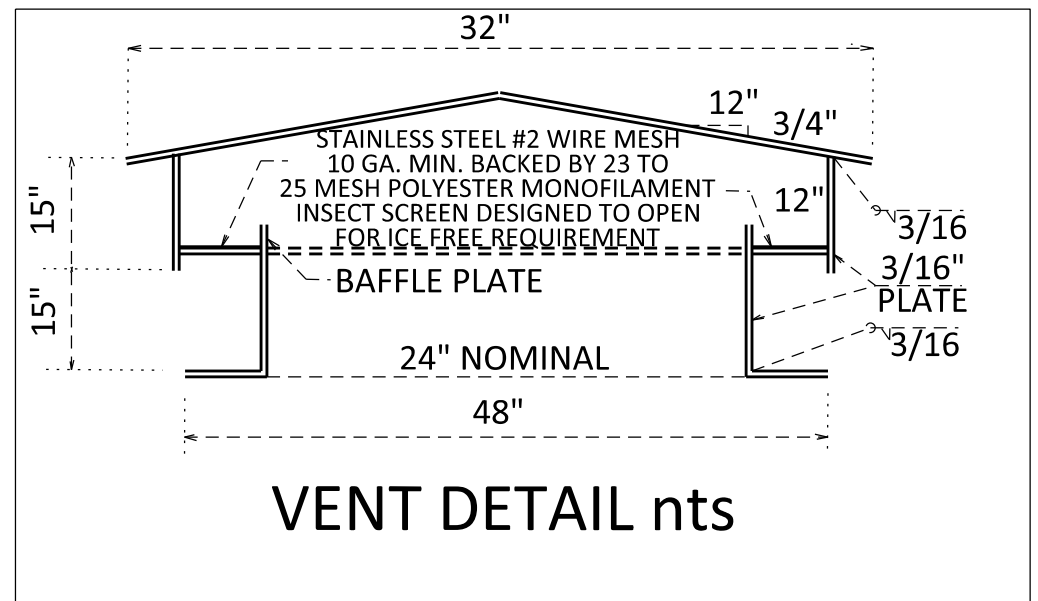
NOTE: THE TANK MANUFACTURER IS RESPONSIBLE FOR DESIGN OF THE TANK AND ALL FIXTURES, PIPING, ACCESS, EQUIPMENT, AND ELECTRONICS.

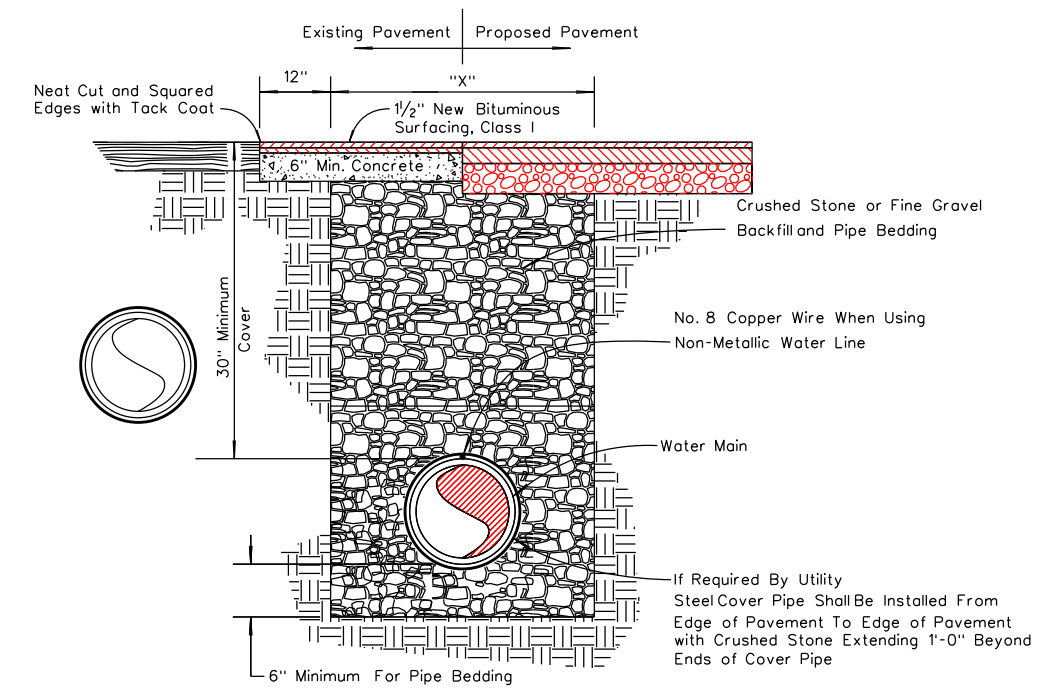
NOTE: LADDER, CAGE, PLATFORM OR SAFETY DEVICES COMPLYING WITH OCCUPATION SAFETY AND HEALTH ACT REQUIRED

NOTE: ALL TANK FACILITIES TO COMPLY WITH GREAT LAKES -UPPER MISSISSIPPI RIVER BOARD OF STATE AND PROVINCIAL PUBLIC HEALTH AND ENVIRONMENTAL MANAGERS RECOMMENDED STANDARDS FOR WATER WORKS 2012 AS REVISED

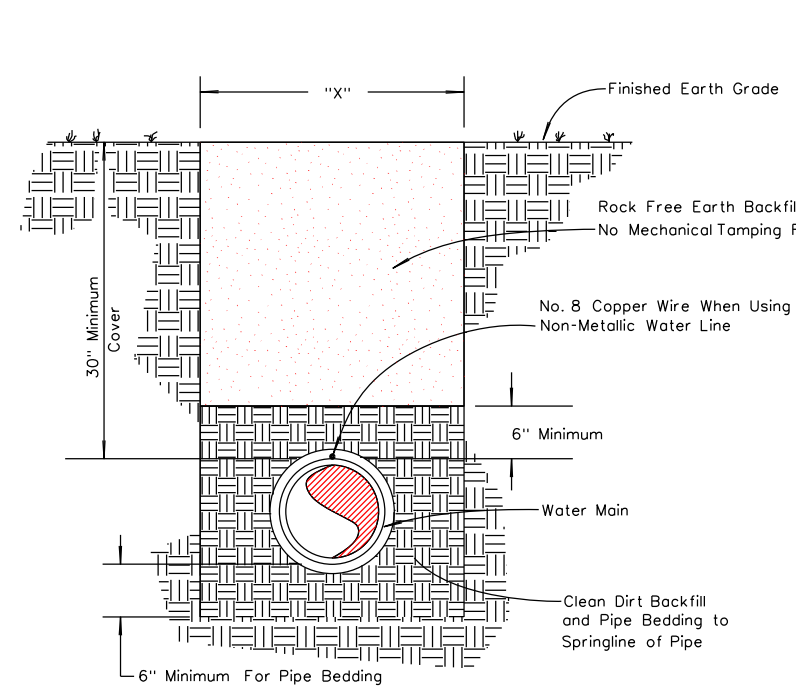
NOTE: ALL TANK FACILITIES SHALL COMPLY WITH COMMONWEALTH OF KENTUCKY DIVISION OF WATER REQUIREMENTS

NOTE: ALL TANK FACILITIES SHALL COMPLY WITH STATE & FEDERAL REQUIREMENTS OF THE "AMERICAN IRON AND STEEL "





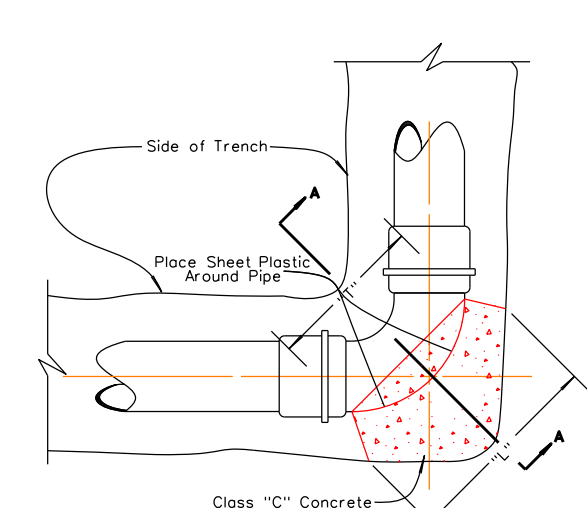
PAVED OR CONCRETE AREAS



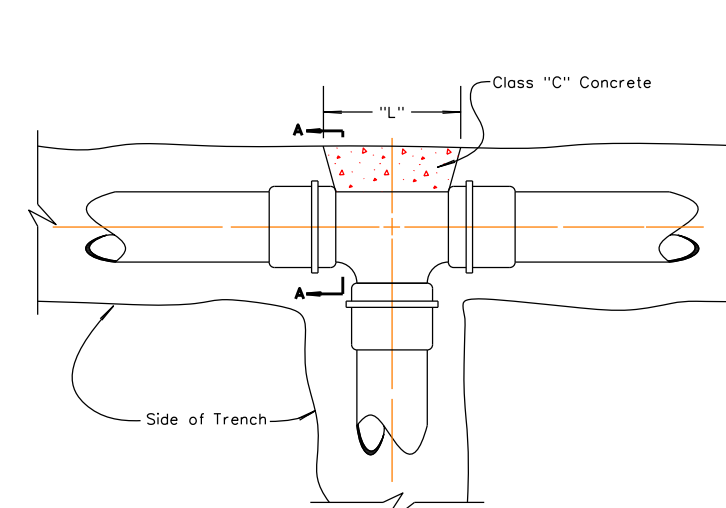
EARTH AREAS

TRENCH WIDTH	
PIPE SIZE	W x D
4" Thru 12"	30"
14" Thru 18"	36"
20" Thru 24"	42"
26" Thru 36"	54"

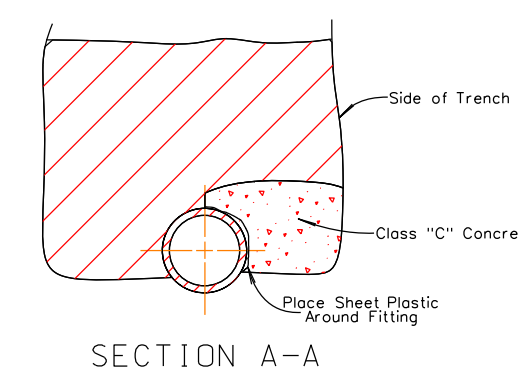
TYPICAL BACKFILL & BEDDING METHODS



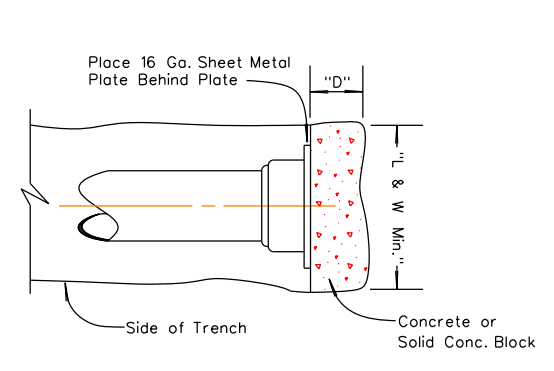
45° AND 90° BENDS



TEES



SECTION A-A



PLUGS

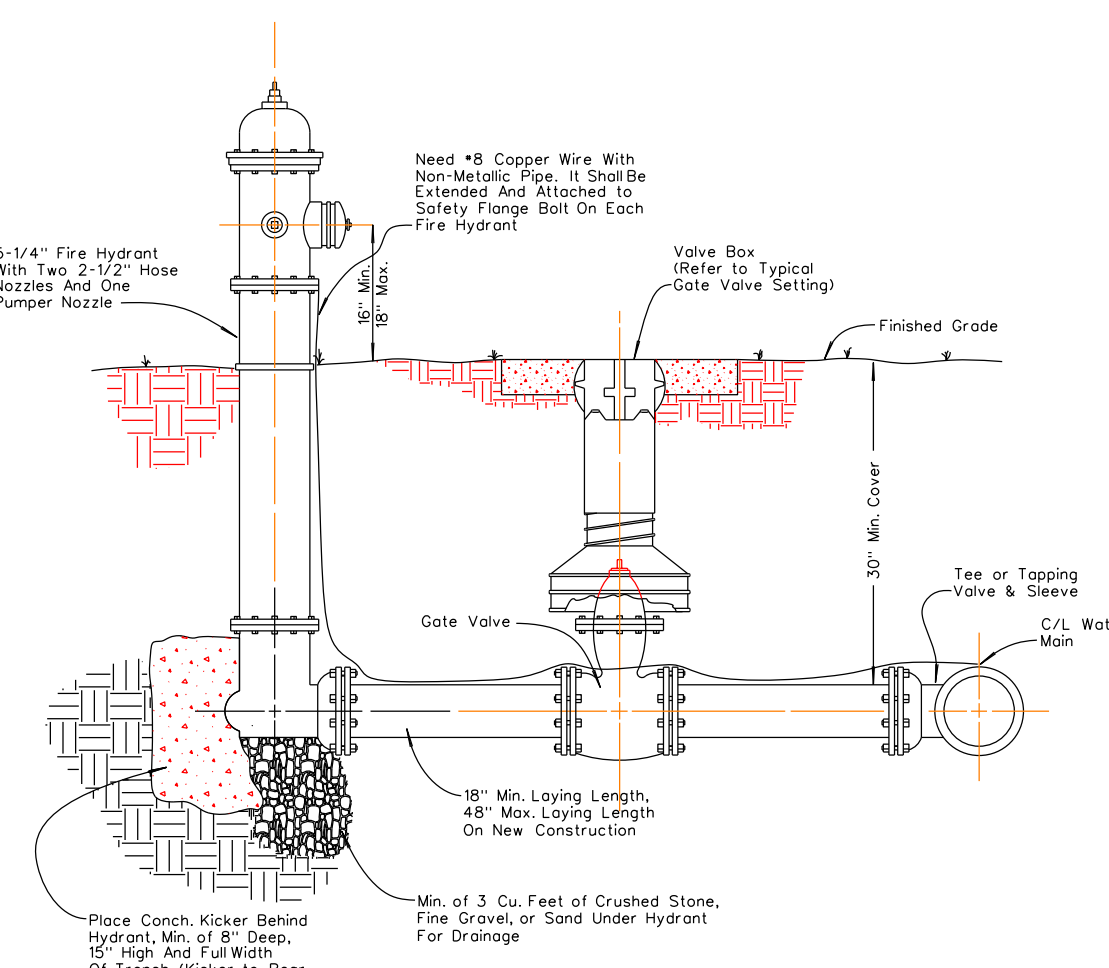
CONCRETE THRUST BLOCK

FOR PRESSURE ABOVE 100 PSI INCREASE BY 100%

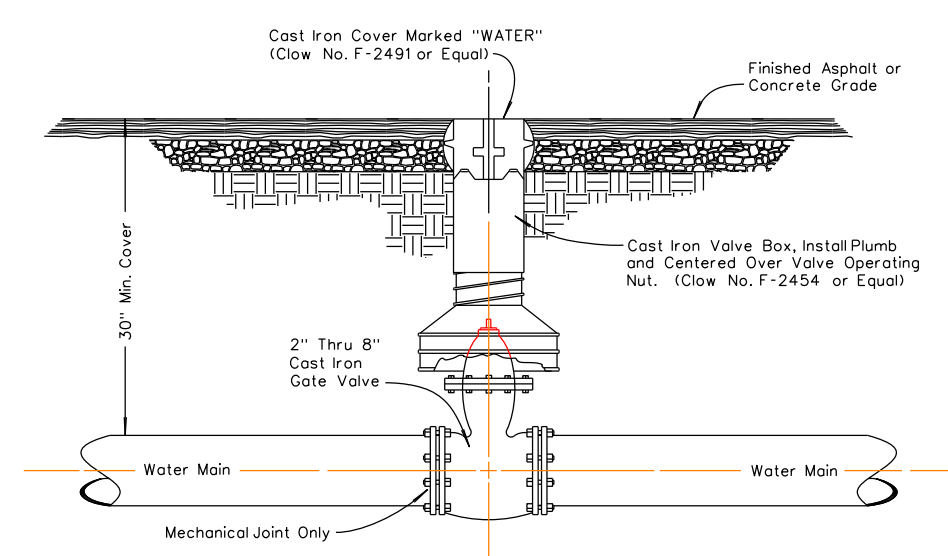
PLUGS AND TEES						
SIZE	2"	3"	4"	6"	8"	10"
D	6"	6"	6"	6"	6"	6"
L&W	14"	16"	18"	20"	22"	24"

(45°) EIGHTH BENDS						
SIZE	2"	3"	4"	6"	8"	10"
D	6"	6"	6"	6"	6"	6"
L	14"	16"	18"	20"	22"	24"
T	10"	12"	14"	16"	18"	18"

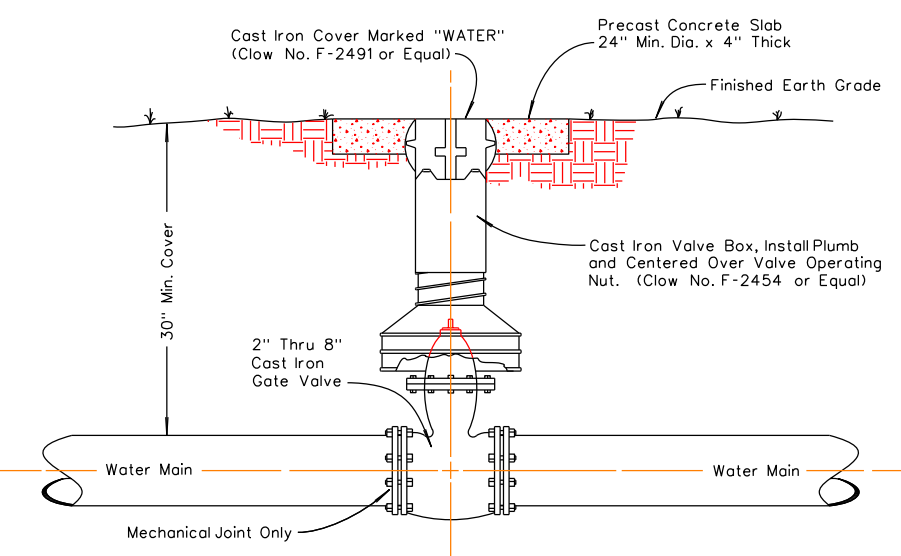
(90°) QUARTER BENDS						
SIZE	2"	3"	4"	6"	8"	10"
D	6"	6"	6"	6"	6"	6"
L	15"	18"	21"	24"	27"	30"
T	10"	12"	14"	16"	18"	20"



TYPICAL FLUSH HYDRANT SETTING

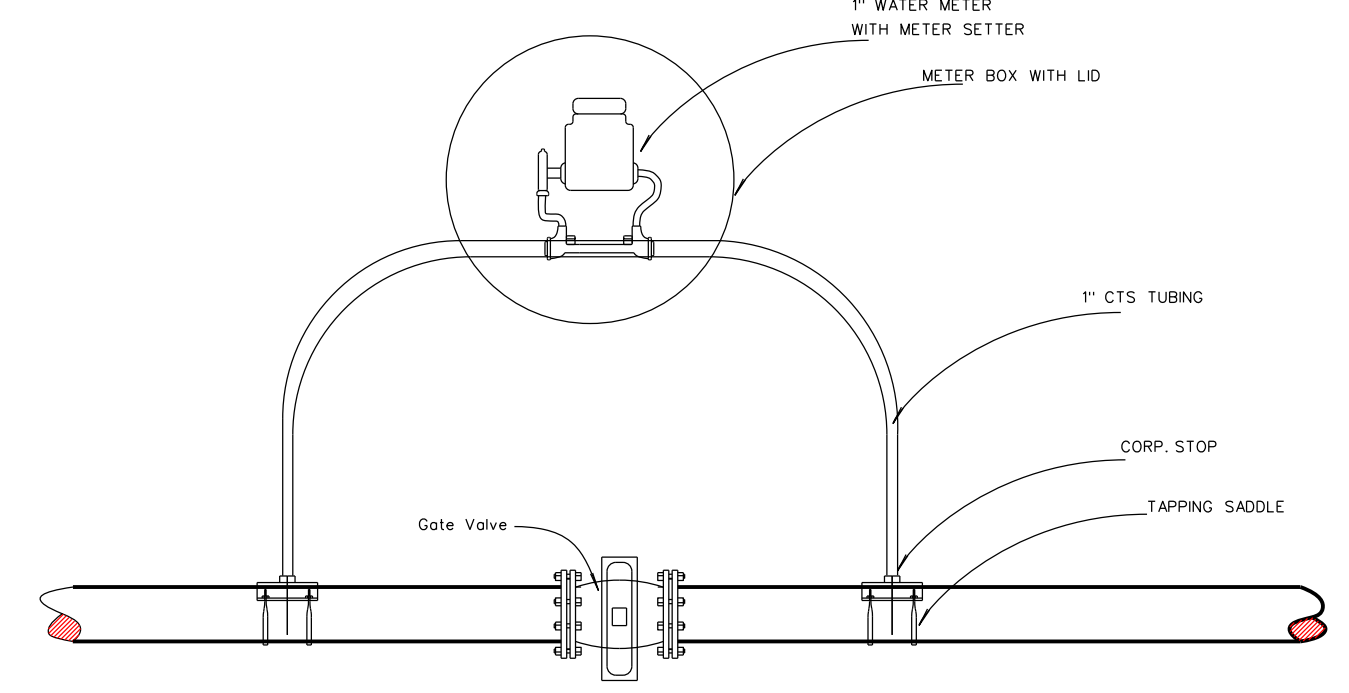


PAVED OR CONCRETE AREAS

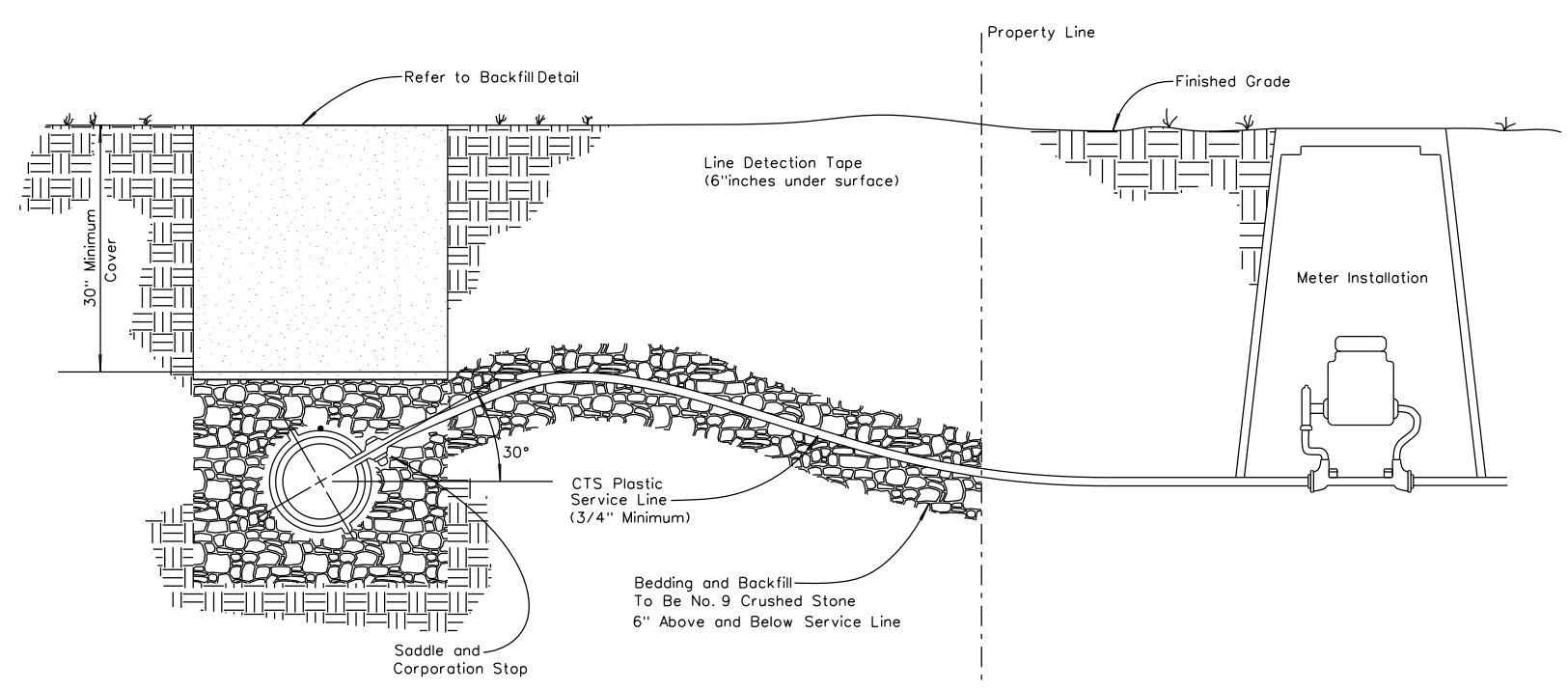


EARTH AREAS

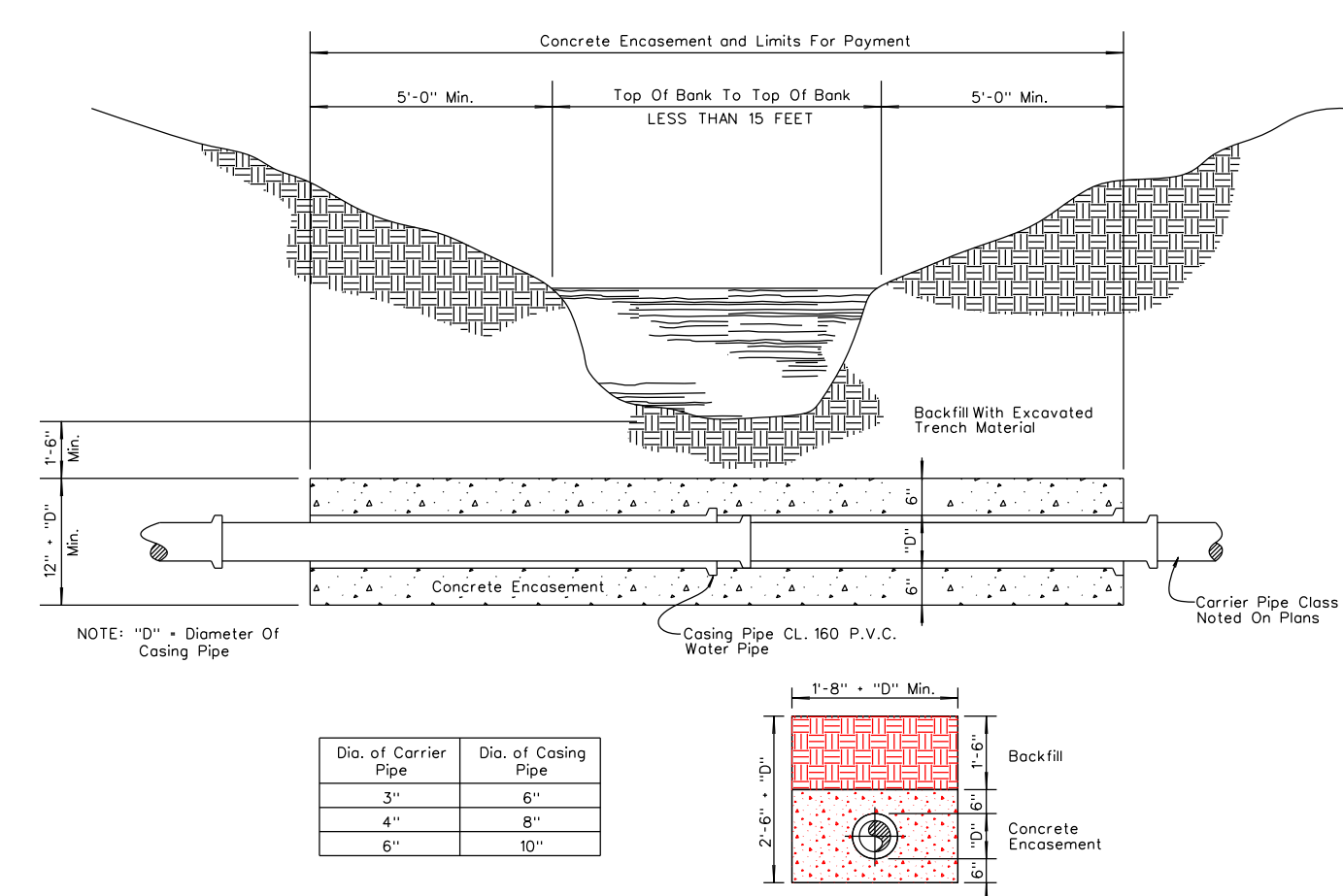
TYPICAL GATE VALVE SETTING



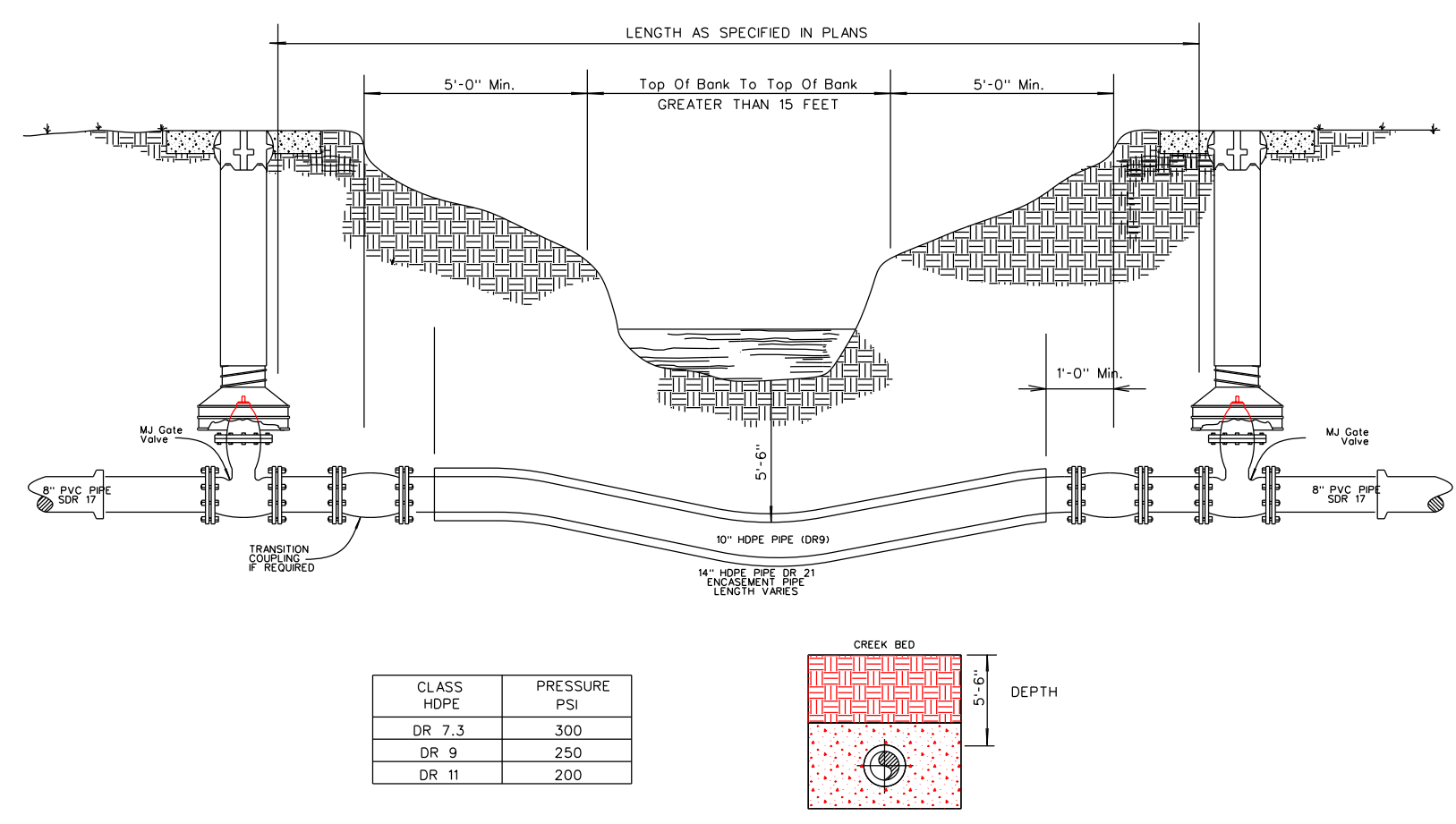
TEST METER AT VALVE OR TYPE II STREAM CROSSING



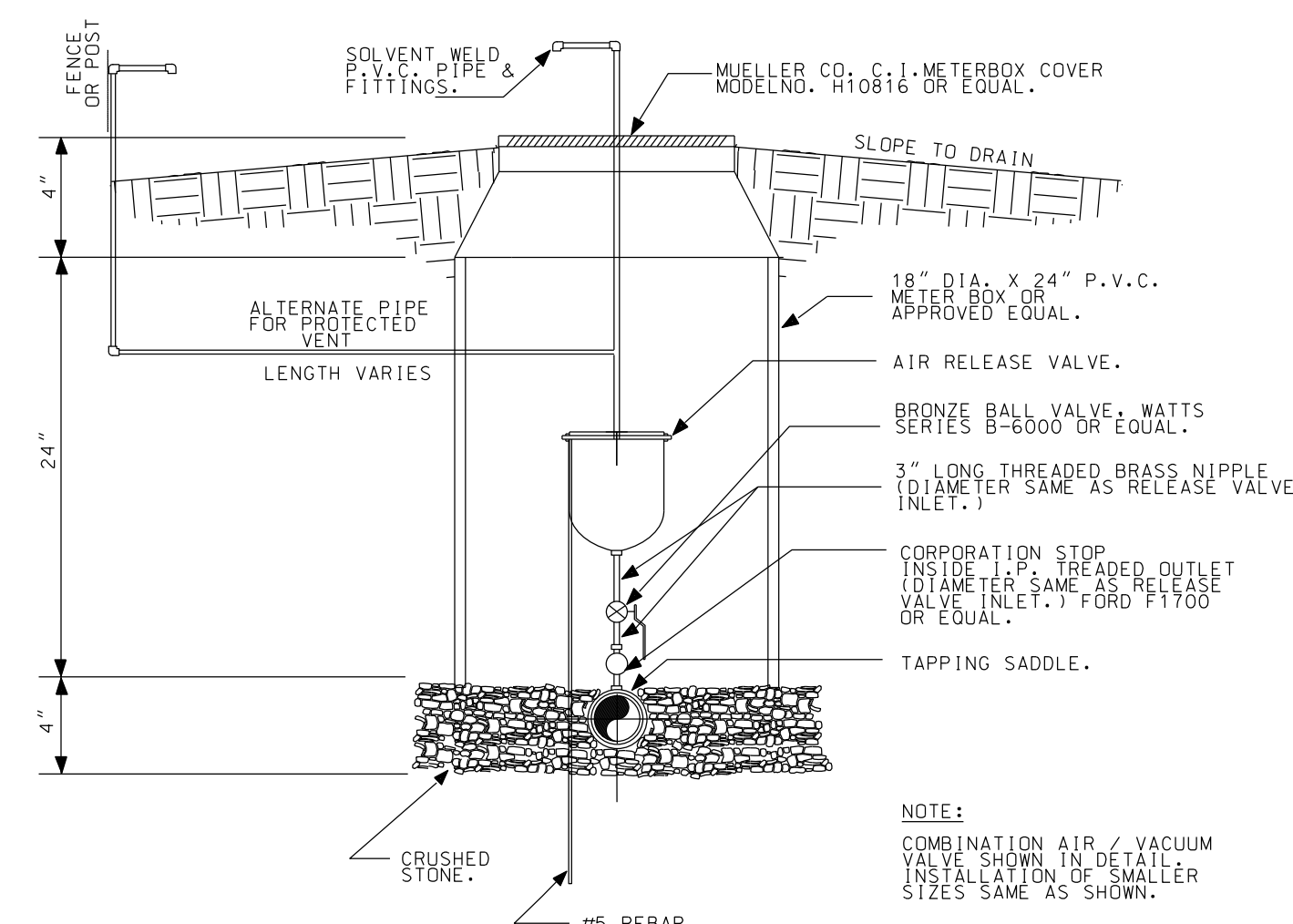
TYPICAL 3/4" 1" AND 2" SERVICE CONNECTION



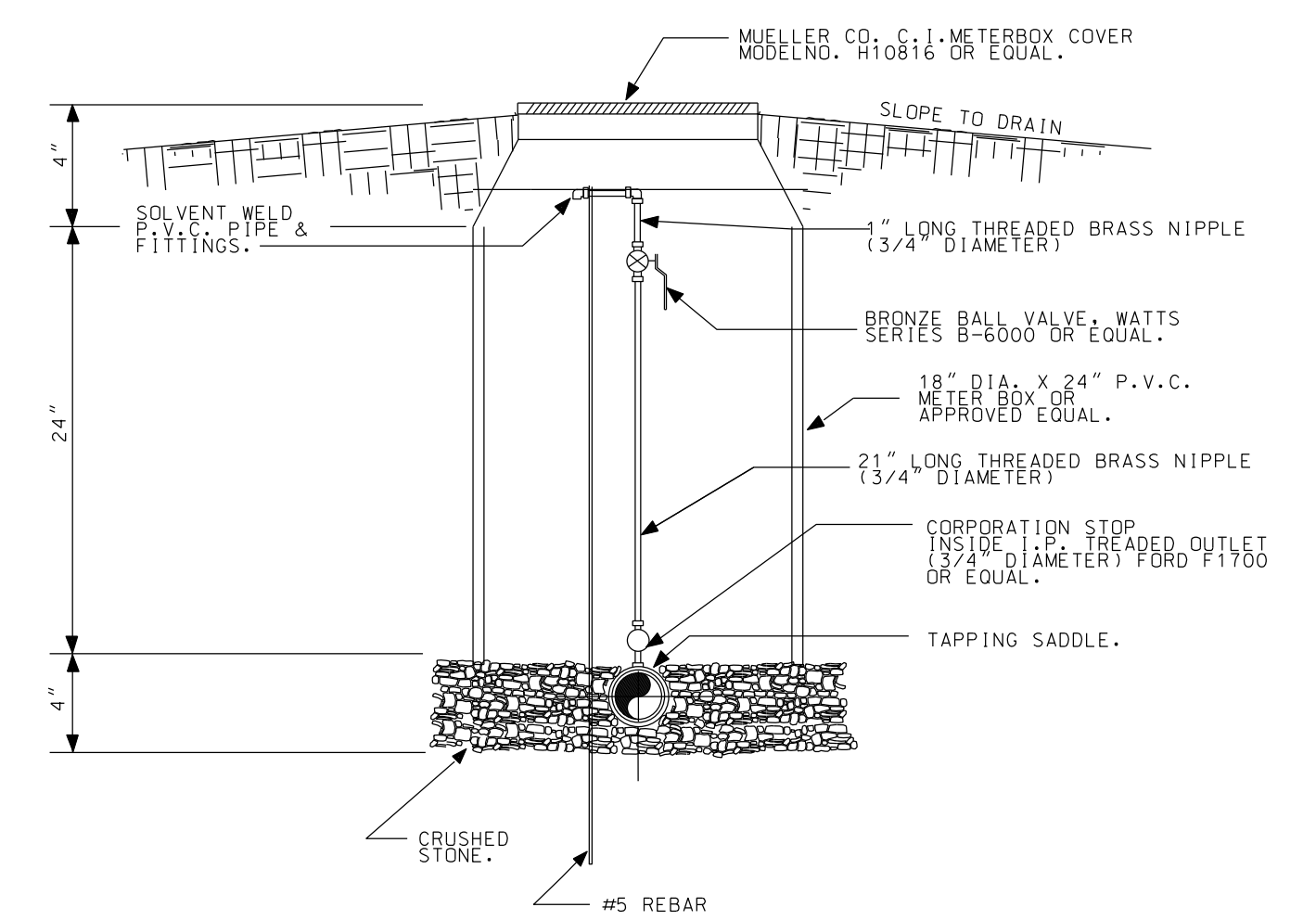
TYPE I STREAM CROSSING
STREAM CROSSING ON P.V.C. WATERLINE



TYPE II STREAM CROSSING
STREAM CROSSING BORE WITH HDPE WATERLINE



AUTOMATIC LINE AIR RELEASE DETAIL



MANUAL AIR RELEASE DETAIL

DATE: 08/04/20
SCALE: NTS
DRAWN BY: M.S.
APPROVED BY: GOOCH
FILENAME: 18295WATANK

WATER PROJECT
PHASE 1B - CONTRACT 3
DETAILS
STANFORD, LINCOLN COUNTY, KENTUCKY

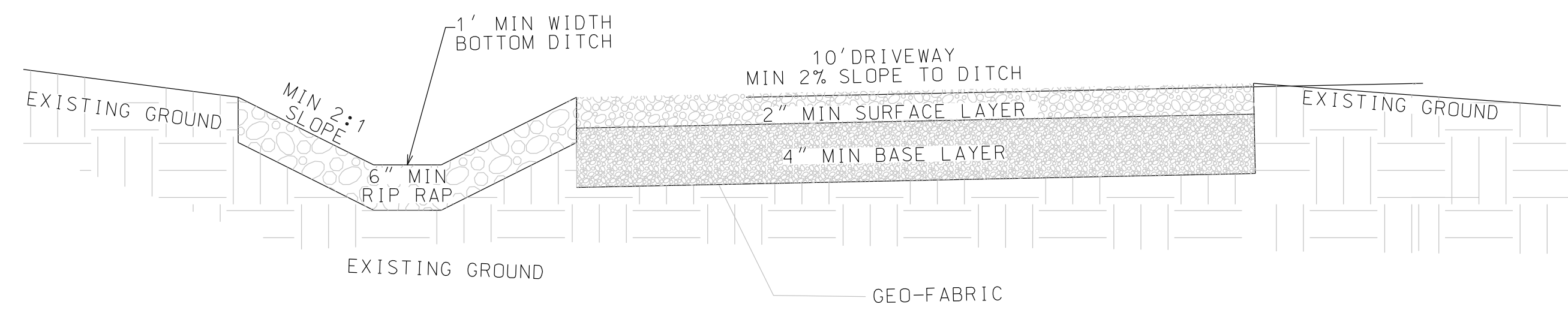
CLIENT:
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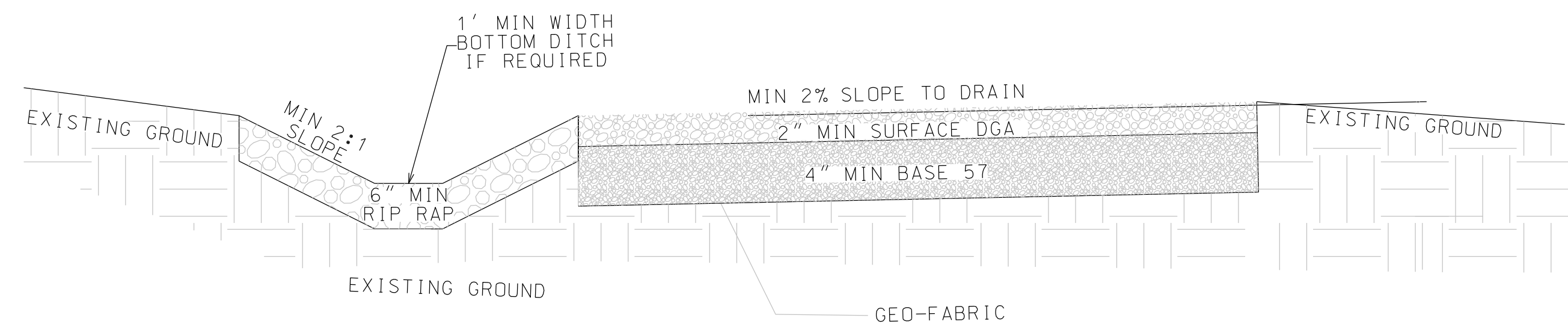
REVISION(S)

SHEET: 5 OF 6



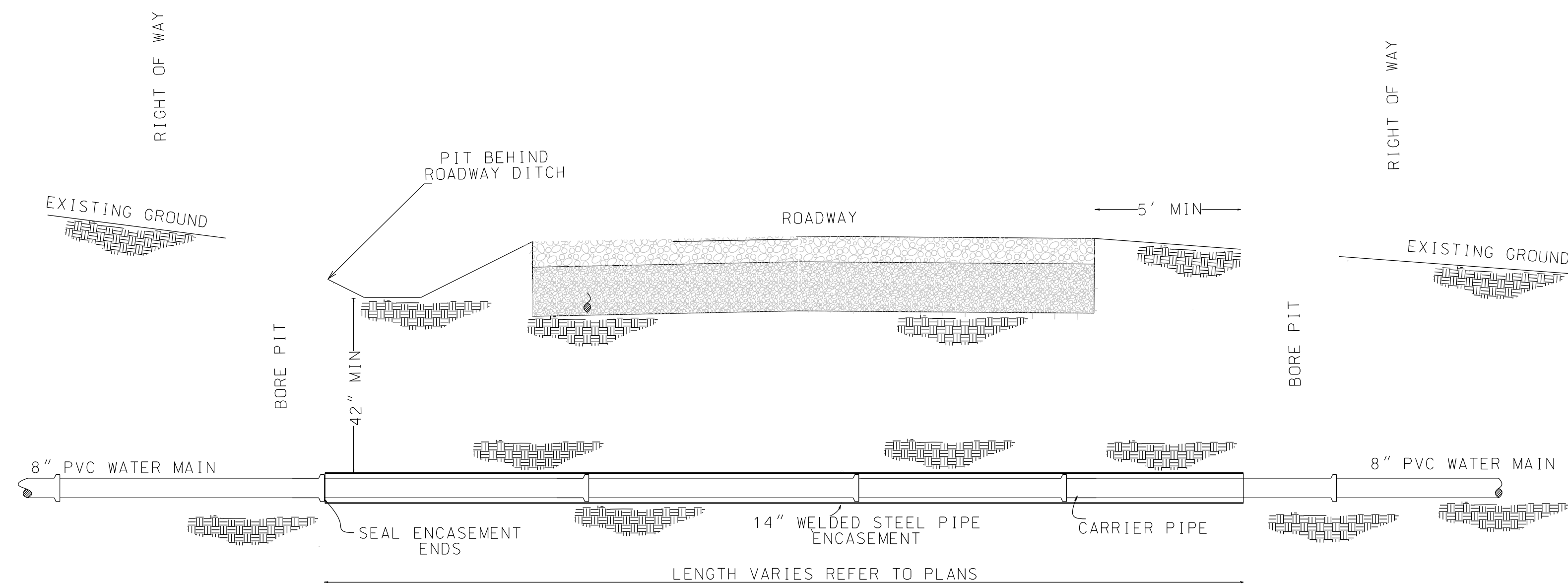
CONTACT ENGINEER FOR FIELD VERIFICATION OF SOIL CONDITIONS FOR ROCK CLASSIFICATION OF BASE LAYER AND SURFACE LAYER

TYPICAL SECTION FOR DRIVEWAY CONSTRUCTION WITH DITCH

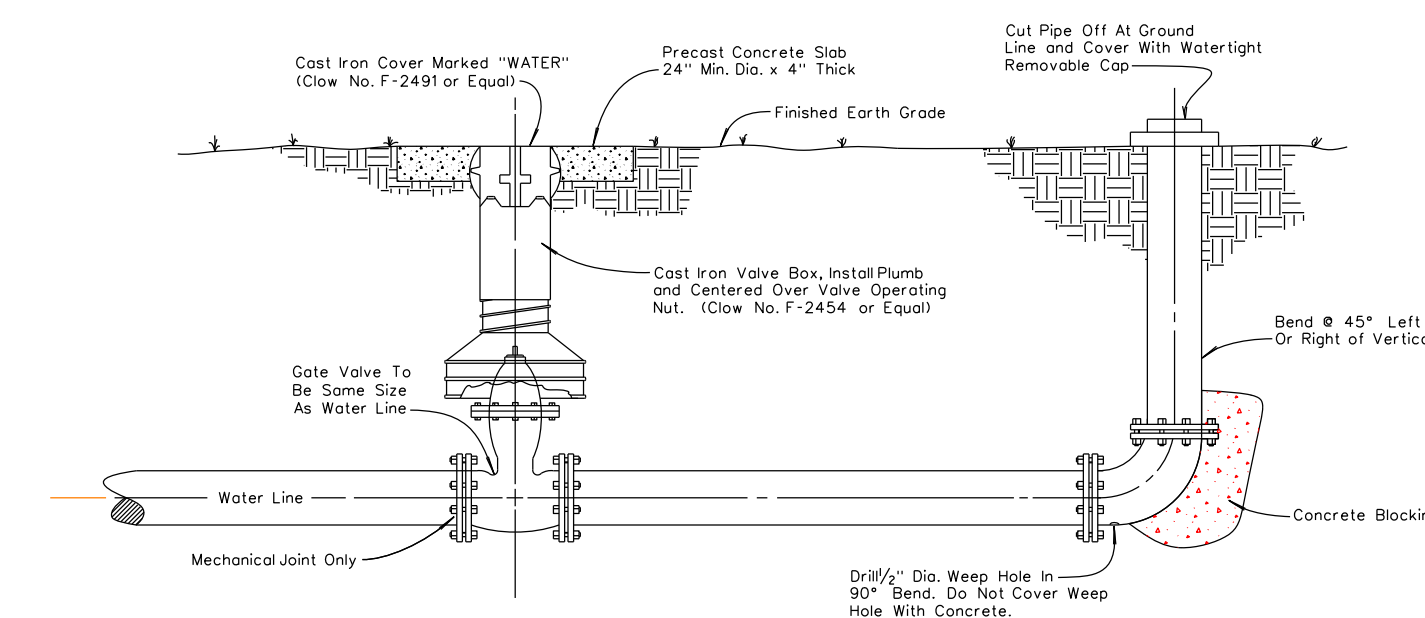


CONTACT ENGINEER FOR FIELD VERIFICATION OF SOIL CONDITIONS

TYPICAL SECTION FOR PARKING CONSTRUCTION



TYPICAL SECTION FOR HIGHWAY BORE



TYPICAL BLOW-OFF VALVE DETAIL (4\"/>

DATE: 08/04/20
SCALE: NTS
DRAWN BY: M.S.
APPROVED BY: GOOCH
FILENAME: 18295WATANK

WATER PROJECT
PHASE 1B - CONTRACTS 2 & 3
DETAIL
STANFORD, LINCOLN COUNTY, KENTUCKY

CLIENT:
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MCKINNEY, KY 40448

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REVISION(S)

SHEET: 6 OF 6