

RESOLUTION APPROVING PLANS FOR HARPERSFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT, HARPERSFIELD TOWNSHIP

WHEREAS, Doug Starkey, Director of the Ashtabula County Department of Environmental Services, has presented plans to this Board for the Harpersfield Water Tank & Water Line Improvements Project as further outlined in the Plans; and

WHEREAS, the project is located off of State Route 534 (South Broadway Drive) on the east side of the road. The property is 100 LF North of Alex Court on the East side and has an existing billboard sign along the frontage. The site is between address ES 1878 and 1920 OH0534, Harpersfield Township, Ohio 44041; and

WHEREAS, Shawn Aiken, Ashtabula County Sanitary Engineer, has reviewed the plans and recommends that the Board of Commissioners approve such plans; now

THEREFORE, BE IT RESOLVED, By the Board of Commissioners of Ashtabula County, Ohio, that the plans for the Harpersfield Water Tank & Water Line Improvements Project as presented by CT Consultants, Engineers, Planners and Architects, are hereby approved.

**ASHTABULA COUNTY COMMISSIONERS
CERTIFICATION PAGE**

Resolution No. 2022-521

December 06, 2022

**RESOLUTION APPROVING PLANS FOR THE HARPERSFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT, HARPERSFIELD TOWNSHIP**

Upon the motion of Kathryn L. Whittington, seconded by Casey R. Kozlowski.

VOTE:

J.P. Ducro IV

Aye

Casey R. Kozlowski

Aye

Kathryn L. Whittington

Aye

CERTIFICATE OF CLERK

IT IS HEREBY CERTIFIED that the foregoing is a true and correct transcript of a resolution acted upon and duly passed by the Board of County Commissioners of Ashtabula County, Ohio, on the date noted above.



Lisa Hawkins, Clerk of the Board
Board of County Commissioners
Ashtabula County, Ohio

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES HARPERSFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT HARPERSFIELD TOWNSHIP, OHIO



ASHTABULA COUNTY APPROVALS:

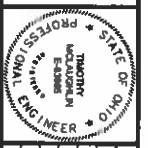
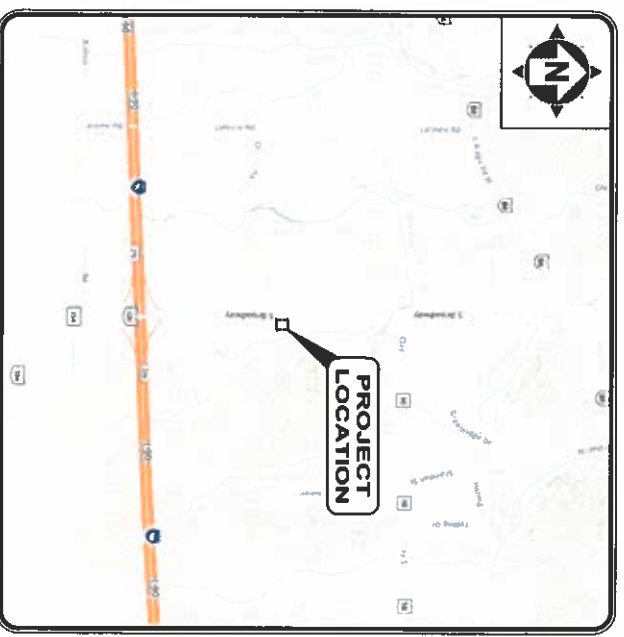
[Signature] DATE 12-6-22
 KATHLEEN L. WHITTINGTON, COUNTY COMMISSIONER
 DATE 12-6-22
[Signature] DATE 12-6-22
 CASEY A. KOZLOWSKI, COUNTY COMMISSIONER
 DATE 12-6-22
[Signature] DATE 12-6-22
 J.P. DICRO IV, COUNTY COMMISSIONER

OHIO 811 DESIGN SERIAL NUMBER & UTILITY LIST:

XX - STATE ROUTE 534

OHIO UTILITY PROTECTION SERVICE: 108 WEST RYEN, ROOM 427 YOUNGSTOWN, OHIO 44051 (800) 362-2764	ALL-TEL: 360 HIGHLAND ROAD MACEDONIA, OHIO 44067 (800) 782-6206	ENVIRONMENTAL SERVICES: 36 W. WALNUT STREET JEFFERSON, OHIO 44047 (440) 576-3722 PHONE (440) 576-3781 FAX
CLEVELAND ELECTRIC ILLUMINATING CO. 2210 SOUTH RIDGE ROAD ASHTABULA, OHIO 44004	SPRINT: PO BOX 3555 MANSFIELD, OHIO 44807 (800) 786-6272	TCI: 2904 STATE ROAD ASHTABULA, OHIO 44004 (440) 996-2148
THE EAST OHIO GAS COMPANY 1070 WEST 30TH STREET ASHTABULA, OHIO 44004 (440) 992-5100		

- 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.
- THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.



NO	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
HARPERSFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY/HARPERSFIELD TOWNSHIP, OHIO

SCALE: AS SHOWN
 DATE: 11/2/2022
 DESIGNED BY: TML
 DRAWN BY: PAB
 CHECKED BY: TML

GENERAL - 00 SERIES
COVER SHEET
 PROJECT NO: 200426
 DRAWING NAME: 00G-01
 SHEET OF: 1 21

OWNER:
 DOUGLAS G. SARKKEY, DIRECTOR
 DATE: 12-6-2022

OFFICE: ENVIRONMENTAL SERVICES
 36 W. WALNUT STREET
 JEFFERSON, OHIO 44047

DEPARTMENTS: WATER & SEWER DEPARTMENT
 (440) 576-3722 PHONE
 (440) 576-3781 FAX

ENGINEER: ED SPOOR
 DIRECTOR OF FIELD OPERATIONS
 (440) 951-9000 PHONE
 (440) 951-7487 FAX

PROJECT SITE:
 THE PROJECT IS LOCATED OFF OF STATE ROUTE 534 (SOUTH BROADWAY DRIVE) ON THE EAST SIDE OF THE ROAD. THE PROPERTY IS 100 LF NORTH OF ALEX COURT ON THE EAST SIDE AND HAS AN EXISTING BILLBOARD SIGN ALONG THE FRONTAGE. THE SITE IS BETWEEN ADDRESS ES 1878 AND 1920 OH-534, HARPERSFIELD TOWNSHIP, OHIO 44041.

ENGINEER'S PROJECT No. 200426
 TIMOTHY MCLAUGHLIN
 P.E. No. 83885
 DATE: 12/5/2022

1. PROHIBITED CONSTRUCTION ACTIVITIES

- A. DISCHARGE OF EXCESS OR UNDESIRABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
- B. LOCATING STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS.
- C. DISCHARGING, ASBESTOS, OR CARCINOGENS OPERATING OR EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATER, OR OUTSIDE THE EASEMENT LIMITS.
- D. RAINING OR SEMI-CLEARING WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATER, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS. ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE.
- E. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, PAINTS, LUBRICANTS, BRUSHES, WASHING MACHINES, DRAINAGE COVERS, DIVERSION CHANNELS, WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, JURISDICTIONS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THEREOF.
- F. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM.
- G. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.
- H. DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATER, OR AT UNSPECIFIED LOCATIONS.
- I. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.
- J. DISCHARGING MAJOR DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAVING OR BUFFING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF RIAMAN OCCUPATION.
- K. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES.
- L. RAINING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSIST OF THE ENGINEER.
- M. OPERATING EXISTING THE USE OF VESICATORY HAMMERS OR COMPACTIONS ON THE PROPERTY WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ALL TRENCHES ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS, AND CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER, AND CLOSING CLEAR ACCESS.
- N. BY THE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES.
- BY THE PROTECTION EQUIPMENT, OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE, OR - BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.

2. MITIGATIVE MEASURES

- 1. SITE CLEANING AND DRAINAGE SHALL NOT COMMENCE UNTIL SUCH TIME THAT THE CONTRACTOR IS PREPARED TO START CONSTRUCTION REMOVE DIRT THOSE TRENCHES, SHRUBS AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION OF ACTUAL TRENCHES. PROTECT THE SEEDS TO PRESERVE THEIR RESTORATION, MAINTAIN AND EROSION CONTROL VALUES.
- 2. IMMEDIATELY FOLLOWING SITE AND ACCESS CLEARING, TEMPORARY EROSION AND SEDIMENTATION CONTROL SHALL BE INSTALLED. THEY WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION UNTIL FINAL SEEDING AND SITE RESTORATION OCCURS.
- 3. AT THE CONSTRUCTION SITE, INSTALL SEGMENT BASINS AND INVERSION DICES BEFORE DISTURBING THE LAND THAT DRAINS INTO THEM.
- 4. DIVERSION CHANNELS WILL BE CONSTRUCTED AROUND THE CONSTRUCTION SITE TO COLLECT RUNOFF AND PREVENT SILT AND OTHER ERODIBLE MATERIALS FROM ENTERING LOCAL DRAINAGE COURSES. DIVERSION CHANNELS WILL FLOW TO TEMPORARY SEDIMENT BASINS AND ARE TO BE STABILIZED THROUGH SEEDING, RIP-RAPPING OR LINING THEM WITH PLASTIC.
- 5. EXISTING TOPSOIL WILL BE STOCKPILED AND REPLACED UPON FINAL GRADING OF THE CONSTRUCTION SITE.
- 6. DISTURBED AREAS OF STOCKPILED TOPSOIL AT THE CONSTRUCTION SITE ARE TO BE RESTORED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING OR COVERING SUCH AS WITH ANCHORED STRAW MATS. SILT BARBERS WILL BE INSTALLED DOWN GRADIENT OF THESE AREAS ON CONTOUR AND WITH THEIR ENDS UP SLOPE OF THE CONTOUR TO PREVENT SILT LOSS. RUNOFF FROM ENTERING WATERWAYS OR STORM SEWERS WITHIN 15 DAYS OF COMPLETION OF CONSTRUCTION, ANY REMAINING SOIL MUST EITHER BE REMOVED OR PERMANENTLY STABILIZED.
- 7. SILT FENCES SHOULD BE TRENCHED SIX TO TWELVE INCHES DEEP. THE FABRIC LAIN IN THE TRENCH, AND THE SOIL PROPERLY BACKFILLED INTO THE TRENCH TO PREVENT UNDERFLOWING.
- 8. WHERE TRENCH EXCAVATION OCCURS PARALLEL TO ANY WATERWAY, A VEGEATED BARRIER SHOULD BE MAINTAINED BETWEEN THE STREAM AND THE CONSTRUCTION SITE. ALL TRENCH SHOULDS WILL BE STOCKPILED ON THE SIDE OF THE TRENCH AWAY FROM THE WATERWAY, AND A LINE OF SILT BARBERS WILL BE ESTABLISHED ALONG THE EDGE OF CONSTRUCTION ON THE CONTOUR BETWEEN THE TRENCH AND THE WATERWAY.
- 9. NO MORE THAN 200 FEET OF TRENCH SHALL BE OPEN AT ANY GIVEN TIME. TRENCH OPENING AND LAYING OF PIPE SHOULD OCCUR SO AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA. ALL TRENCHES ARE TO BE BACKFILLED AND COMPACTED IMMEDIATELY AFTER PIPE INSTALLATION. IMMEDIATELY FOLLOWING THE BACKFILLING OF THE TRENCH, THE GROUND SURFACE WILL BE ROUGH GRADED TO THE EXISTING CONTOUR TO ALLOW FOR PROPER DRAINAGE, AND WILL BE SEEDS AND/OR MULCHED IN STAGES TO PREVENT EROSION.
- 10. ANY DISTURBED AREA THAT WILL NOT BE ACTIVELY LAINED CONSTRUCTION FOR A PERIOD OF 15 DAYS OR MORE WILL BE TEMPORARILY STABILIZED IMMEDIATELY BY SEEDING AND MULCHING OR BY ANCHORED STRAW MATS.
- 11. AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH DISTURBED AREA IN STAGES WITH PERENNIAL VEGETATION INSTALLED ACCORDING TO CHD EPA (OR EQUIVALENT) STANDARDS AND SPECIFICATIONS AFTER FINAL SOIL SETTLING OVER THE WATER LINE. SANITARY SEWER, CUTTING SEWER, STORM SEWER SYSTEM AND FORDS SHALL ALLOWMINT. THE CONTRACTOR SHALL BRING THE TRENCH BACK TO GRADE IF NECESSARY. PLACE TOPSOIL, AND FINE GRADE SEED, FERTILIZE AND MACH ALL AREAS DISTURBED BY ACTIVITIES ASSOCIATED WITH CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL AREAS DISTURBED BY CONSTRUCTION CONSISTENT WITH PRE CONSTRUCTION TOPOGRAPHY FOR DRAINAGE AND AESTHETIC REASONS.
- 12. BORING PITS FOR JACK AND BORE LOCATIONS SHALL BE SURROUNDED WITH SILT BARBERS TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL. STORM SEWER LINTS WILL BE SURROUNDED WITH SILT BARBERS TO PREVENT SILTATION.
- 13. SLOPES EXCEEDING 15 PERCENT OR THAT TEND TO BE UNSTABLE REQUIRE SPECIAL TREATMENT SUCH AS WATER DIVERSION BERMS, STODING, OR THE USE OF JOLE OR EXCLUSIVE BARRIERS.
- 14. WHEN BORROW MATERIAL IS OBTAINED FROM OTHER THAN COMMERCIALLY OPERATED SOURCES, EROSION OF THE BORROW SITE WILL BE SO CONTROLLED BOTH DURING AND AFTER COMPLETION OF THE WORK THAT EROSION WILL BE MANAGED AND SEDIMENT WILL NOT ENTER STREAMS OR OTHER BODIES OF WATER. WATER OR OTHER AREAS AND CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE DISTURBED AREAS. TEMPORARY EROSION BARRIERS AND LIMITED SITE CLEARING WILL BE USED AS NEEDED.
- 15. IF WORK IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN ALL EXISTING EROSION CONTROL MEASURES. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE WORK. ALL DISTURBED AREAS LEFT EXPOSED TO EXCEED A PERIOD OF ONE MONTH, THE CONTRACTOR SHALL SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS LEFT EXPOSED WHEN THE WORK IS STOPPED.
- 16. RETAIL THE ABOVE EROSION AND SEDIMENT CONTROL MEASURES AS APPROPRIATE REFERRED TO CHD EPA, STORM WATER TECHNICAL ASSISTANCE HANDBOOK AND LAND DEVELOPMENT MANUAL STANDARDS AND SPECIFICATIONS (FORMERLY CHD) OR EQUIVALENT FOR PARTICULAR TECHNIQUES. THESE MEASURES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

2. MITIGATIVE MEASURES - CONTINUED

- 17. AT LEAST ONE LINE OF TRAFFIC MUST BE MAINTAINED ALONG THE TRAVEL ROUTE TO THE CONSTRUCTION SITE.
- 18. ACCESS MUST BE MAINTAINED FOR EMERGENCY VEHICLES AT ALL TIMES.
- 19. NO TRENCH WILL BE LEFT OPEN AT THE END OF A WORK DAY, WHERE PRACTICAL, PROTECT TRENCH WITH PROTECTIVE BARRIERS AND SURROUNDED FOR SAFETY PURPOSES.
- 20. ANY CONSTRUCTION EQUIPMENT OR EXCAVATIONS NEAR ROADS MUST BE MAINTAINED WITH LIGHTS, PROTECTIVE OR LIGHTING OR SHADDER PADS.
- 21. THE CONTRACTOR SHALL PROVIDE ERECT AND MAINTAIN ALL NECESSARY BARRIERS, WARNING SIGNS, DANGER SIGNAL, FLAG PERSONS, WATCHERS, AND ALL OTHER APPROPRIATE PRECAUTIONS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR SAFETY.
- 22. PRIOR TO CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD THE CONTRACTOR MUST HAVE CONSENT FROM LOCAL OFFICIALS AND THE ENGINEER.

AIR POLLUTION/NOISE CONTROL

- 23. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO DAYTIME HOURS UNLESS APPROVED 48 HOURS IN ADVANCE BY HARRISFIELD TOWNSHIP AND ADOCS.
- 24. CONSTRUCTION EQUIPMENT WILL BE PROTECTED WITH STRIKE BELINDERS AND MATINGS AS REQUIRED BY SAFETY STANDARDS.
- 25. ALL CONSTRUCTION VEHICLES SHOULD BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.
- 26. PERIODICAL CHECK EQUIPMENT AND MAINTENANCE FOR PROPER TUNING TO MINIMIZE EXHAUST EMISSIONS AND NOISE.
- 27. URGED AREAS WILL BE WET DOWN (AS NECESSARY) DURING CONSTRUCTION TO MINIMIZE DUST OPERATION.

THEE/VEGETATION PROTECTION

- 28. THESE RESERVES WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHEREVER POSSIBLE.
- 29. NO TREE REMOVAL WILL BE PERMITTED OUTSIDE OF THE TEMPORARY EASEMENT WITHOUT PERMISSION OF THE ENGINEER.
- 30. TREES WHICH ARE NOT REMOVED WILL BE PROTECTED BY ENSURING THAT TREES TO BE REMOVED ARE FIELED SO AS NOT TO HARM THE REMAINING TREES.
- 31. PRIOR TO CLEARING, THE CONTRACTOR AND ENGINEER SHALL WALK THE ACQUIRED EASEMENTS IN AN EFFORT TO DESIGNATE THE TREES THAT ARE TO BE SAVED. TREES TO BE SAVED WILL BE CLEARLY MARKED BY PAINT WITH THE LETTER "S". TREES TO BE PROTECTED BY AN APPROPRIATE BARRIER SHALL BE MARKED WITH AN "X" ENCLOSED IN A CIRCLE.
- 32. SOIL AND OTHER MATERIAL WILL NOT BE STORED NEXT TO OR WITHIN THE DRAIN LINE OF TREES.
- 33. PRESERVATION OF LANDSCAPING SHOULD TAKE PRECEDENCE OVER REMOVAL. IF REMOVAL OR DAMAGE IS UNAVOIDABLE, EXISTING VEGETATION SHOULD BE REPAIRED OR REPLACED "HARDER" UNLESS THE HOMEOWNER AGREES OTHERWISE.
- 34. IF TREES/CANES CANNOT BE REPAIRED IN THE SAME LOCATION ONE (1) INSTALLATION OF THE BERRY SYSTEM RELOCATION SHOULD BE CONSIDERED.
- 35. THE CONTRACTOR'S LABORER SHALL REPAIR ALL MAJORS TO BARK, TRUNKS, LIMBS, AND ROOTS OF REMAINING VEGETATION BY PROPERLY DRESSING, CUTTING, BRACING AND PRUNING, USING ONLY APPROVED TREE SURGERY METHODS, TOOLS, AND MATERIALS.
- 36. SELECTIVE PRUNING OF TREE LIMBS PRIOR TO INITIATION OF CONSTRUCTION IS NECESSARY FOR OPERATION OF EQUIPMENT.
- 37. LIMIT THE USE OF RIP-RAP TO AREAS WHERE STREAM FLOW CONDITIONS DEVELOPERS

2. MITIGATIVE MEASURES - CONTINUED

- 41. WHEN CLEARING VEGETATION PRIOR TO INITIATING STREAM CROSSING WORK, STREAM BANK TREES, SHRUBS AND OTHER VEGETATION SHOULD BE LEFT IN PLACE TO HELP CONTROL EROSION, WHERE EQUIPMENT OPERATION REQUIRES THE REMOVAL OF TREES, THE CONTRACTOR SHALL TAKE STEPS TO PROTECT THE STREAM BANK FROM THE PROBLEMS OF ANY TRENCH. PROTECTIVE BARRIERS SHALL BE PLACED ALONG THE BANKS WHERE VEGETATION REMOVAL HAS OCCURRED OR IS ANTICIPATED. EXPOSED SOIL EXITS, ANCHOR SPOLS OR OTHER FILL MATERIALS ARE TO BE STOCKPILED WITHIN 50 FEET OF THE STREAM.
- 42. PRIOR TO THE ONSET OF ANY STREAM CROSSING, SILT BARBERS SHALL BE PLACED ALONG THE BANKS WHERE VEGETATION REMOVAL HAS OCCURRED OR IS ANTICIPATED. EXPOSED SOIL EXITS, ANCHOR SPOLS OR OTHER FILL MATERIALS ARE TO BE STOCKPILED WITHIN 50 FEET OF THE STREAM.
- 43. CONSTRUCTION WITHIN A STREAM WILL BE CONTINUED UNTIL COMPLETED A PERIOD OF 15 DAYS OR MORE. THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL STREAM CROSSING WORK. ALL WORK MUST NOT BE INITIATED UNLESS THE WEATHER CONDITIONS HAVE BEEN PROVIDED FOR STREAM CROSSING WORK SHALL BE RESTRICTED TO PERIODS OF DRY WEATHER AND LOW FLOW OR NO FLOW CONDITIONS.
- 44. RESTORATION SHOULD INCLUDE THE RE-ESTABLISHING OF CHANNEL CONTROLS AND BANK STABILIZATION AND SHOULD BE INITIATED IMMEDIATELY AFTER THE CROSSING IS COMPLETED.
- 45. WHEN USING OPEN CUT METHODS FOR LAYING SEWER PIPE ACROSS WATERWAYS OR VERY SMALL STREAMS, THE STREAM CROSSING AND STREAM CROSSING AND ASSOCIATED RESTORATION MUST BE COMPLETED WITHIN A ONE WEEK (SEVEN DAY) PERIOD. IF THE CROSSING INVOLVES TEMPORARY DIVERSION OF A SMALL TO MODERATE SIZE STREAM AND ENCLOSURE OF THE SEWER IN CONCRETE.
- 46. THE WIDTH OF THE EASEMENT FOR THE STREAM CROSSING SHOULD BE RESTRICTED TO ONLY THAT NECESSARY TO PERFORM THE WORK.
- 47. BORING PITS FOR JACK AND BORE CROSSINGS SHOULD BE SURROUNDED WITH SILT FENCES OR HAY BALES TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL.
- 48. CONSTRUCTION EQUIPMENT SHALL BE KEPT OUT OF THE STREAM CHANNEL WHENEVER POSSIBLE.

ARCHAEOLOGICAL/HISTORICAL RESOURCES

- 49. CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVERED CODE SECTION 4433 TO NOTIFY THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORICAL SOCIETY AND TO COOPERATE WITH THOSE ENTITIES IN ANCHROLOGICAL AND HISTORIC SURVEYS AND SALVAGE EFFORTS IF SUCH DISCOVERIES ARE UNCOVERED WITHIN THE PROJECT AREA.

CONTACT STATE HISTORIC PRESERVATION OFFICE
PHONE: 1-614-286-2500

NO.	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
HARRISFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARRISFIELD TOWNSHIP, OHIO

SCALE	AS SHOWN
DATE	1/27/2023
DESIGNED BY	TL
DRAWING BY	SLJ
CHECKED BY	TL

GENERAL - 00 SERIES
OHIO EPA GENERAL NOTES

PROJECT NO.	200426
DRAWING SCALE	00G-03
SHEET	3
OF	21

WATER MAIN SPECIFICATIONS & NOTES:

1. WATER MAIN 12" THROUGH 48" SHALL BE DUCTILE IRON PIPE CORRECT LEAD, AND MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C150/A21.5 (1) WITH THICKNESS CLASS OF 53. ALL PIPES UNLESS OTHERWISE SPECIFIED, SHALL BE FINISHED WITH PUSH-ON TYPE JOINTS, SUCH AS TYPON OR FASTITE WITH RESTRAINED TYPE JOINTS PROVIDED WITHIN THE LENGTHS NOTED ON THE DRAWING, AND BE IN ACCORDANCE WITH ANSI/AWWA C111/A21.11.
2. RESTRAINED PUSH-ON JOINTS SHALL BE COMPLETELY RIGID, USE: HORMIX SUPER-LOCK, AMERICAN FLEX-RING, U.S. PIPE TRIFLEX, OR AS APPROVED. RESTRAINED MECHANICAL JOINTS SHALL BE MANUFACTURED BY BOLA RION, INC. OR AS APPROVED. OF DUCTILE IRON AND WITH A WORKING PRESSURE OF AT LEAST 250 PSIG AND A MINIMUM SAFETY FACTOR OF 2:1. MINIMUM LENGTH OF CUT WORK OF WATER MAIN SHALL BE 10 FEET OR 15 FEET.
3. FITTINGS SHALL BE DUCTILE IRON AND MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C110/A21.10 OR ANSI/AWWA C150/A21.5 (FOR COMPACT FITTINGS). ALL FITTINGS AND ACCESSORIES SHALL BE FINISHED WITH MECHANICAL TYPE JOINTS IN ACCORDANCE WITH ANSI/AWWA C110/A21.11.
4. ALL FITTINGS, BENDS, TEES, FLUOS, ETC. SHALL BE TIED TO THE WATER MAIN WITH EITHER M.J. TYPE CONNECTIONS, THE ROOFS OR MEGALUOS. THE ROOFS SHALL BE 3/4" DIAMETER STAINLESS STEEL, FOR 24" DIAMETER PIPE USE FOUR ROOFS.
5. POLYETHYLENE ENCASEMENT SHALL BE AN 8 MIL. VLD0 POLYETHYLENE, MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C150/A21.5. POLYETHYLENE ADHESIVE TAPE, 2" WIDE, SHALL BE USED TO SEAL ALL JOINTS WITH ANSI/AWWA C150/A21.5.
6. FIRE HYDRANTS SHALL BE ROST TYPE WITH A BRASS 6" FLANGE DESIGN. THE MAIN VALVE SHALL BE 6"X STANDARD THERCOS UNLESS OTHERWISE SPECIFIED. THE OPENING INT SHALL BE PERMANENT. IN SHAPE HYDRANTS SHALL HAVE A 6" MECHANICAL JOINT TYPE SHOE WITH A 5'-0" BURST DEPTH.
7. GATE VALVES SHALL BE RESTRICT GATE, NON-RISING STEEL WITH MECHANICAL JOINT TYPE ENDS WHICH MEET THE REQUIREMENTS OF AWWA C500. MECHANICAL JOINT ENDS SHALL COMPLY WITH AWWA C111. EXCEPT FOR TAPPING VALVES, THE OPERATING INT SHALL BE 2" SQUARE WHICH OPENS TO THE LEFT. VALVES SHALL COME EQUIPPED WITH A DOUBLE O-RING SEAL STUFFING BOX AND HAVE AN EPOXY COATING ON ALL EXTERIOR SURFACES WHICH COMPLETES WITH AWWA C500.
8. BUTTERFLY VALVES SHALL BE OF THE SIZE SHOWN ON THE PLANS AND MEET OR EXCEED ALL APPLICABLE REQUIREMENTS OF ANSI/AWWA C504 WITH A MAXIMUM WORKING PRESSURE OF 250 PSIG. THE VALVE SHALL HAVE A DUCTILE IRON BODY CONFORMING TO ASTM A534 WITH MECHANICAL JOINT ENDS. ALL EXTERIOR SURFACES SHALL BE FINISHED WITH AN EPOXY COATING. THE OPERATING INT SHALL BE 2" SQUARE WHICH OPENS TO THE LEFT. VALVES SHALL BE MANUALLY OPERATED WITH A 2" SQUARE INT, WHICH OPENS COUNTER CLOCKWISE (LEFT).
9. VALVE BOXES SHALL BE CAST IRON, TWO PIECE SCREW TYPE, 50% DIA. CONFORMING TO ASTM A-128. EACH FOR CASTING SHALL BE FINISHED WITH AN EPOXY COATING. THE OPERATING INT SHALL BE 2" SQUARE WHICH OPENS TO THE LEFT. VALVES SHALL BE MANUALLY OPERATED WITH A 2" SQUARE INT, WHICH OPENS COUNTER CLOCKWISE (LEFT). INCLUDE A CAST IRON LID WITH THE WORD "VALVE" CAST INTO THE TOP. ALL VALVE BOXES SHALL INCLUDE ONE 1 1/2" VALVE BOX RISER.
10. WATER MAINS SHALL TYPE ALL VALVE 4" OF COVER, MEASURED FROM THE TOP OF PIPE VERTICALLY TO THE FINAL FINISH GROUND GRADE OR AS SHOWN SPECIFICALLY ON THE PLANS OR AS DIRECTED BY THE OWNER.
11. TAPPING SLEEVES SHALL HAVE A STAINLESS STEEL BODY WITH A DUCTILE IRON RANGED GUNLET WHICH SHALL BE FINISHED WITH AN EPOXY COATING. THE OPERATING INT SHALL BE 2" SQUARE WHICH OPENS TO THE LEFT. THE SLEEVE SHALL COME EQUIPPED WITH A 1/2" NPT BRASS TEST PLUG. MAXIMUM WORKING PRESSURE FOR 4" - 12" SIZES (250 psig) AND FOR 14" - 24" SIZES (300 psig). TAPPING VALVES SHALL MEET OR EXCEED ALL APPLICABLE REQUIREMENTS OF ANSI/AWWA C504. THE SLEEVE SHALL COMPLY WITH AWWA C111. THE VALVE SHALL HAVE A NON-RISING STEEL OPERATING INT WHICH OPENS TO THE LEFT. VALVES SHALL COME EQUIPPED WITH A DOUBLE O-RING SEAL STUFFING BOX AND HAVE AN EPOXY COATING ON ALL EXTERIOR SURFACES WHICH COMPLETES WITH AWWA C504.
12. BLOW-OFF HORIZONTAL ASSEMBLIES SHALL BE EPIPE MODEL NO. 85, AS MANUFACTURED BY THE REPUBLIC FLOUROY COMPANY (1-800-231-5899) OR APPROVED EQUAL. ASSEMBLIES SHALL BE SELF-DRAINING. NON-FREEZING COMPRESSION TYPE WITH 3/4" MAIN VALVE OPERING THE INLET CONNECTION SHALL BE MANUFACTURED BY THE REPUBLIC FLOUROY COMPANY. THE INTERIOR OPERATING PARTS SHALL BE DUCTILE IRON RISER PIPE. THE INTERIOR OPERATING PARTS SHALL BE BRASS AND BE REMOVABLE FROM THE HYDRANT FOR SERVICING WITHOUT EXCAVATING THE HYDRANT. THE ASSEMBLY SHALL BE SET IN A MINIMUM FOUR (4) DRAIN FEET OF 80% WASHED STONE. THE DEPTH OF BURY SHALL BE 5'-0". THE TOP OF THE ASSEMBLY SHALL BE FLUSH WITH THE FINAL GRADE OF THE ADJACENT GROUND.
13. WATER SERVICE PIPE 2" OR LESS SHALL BE AS NOTED ON PLANS AND SPECIFICATIONS. SIZE SHALL BE AS NOTED ON THE PLANS (1" MINIMUM). ALL PIPES SHALL HAVE COMPRESSION ENDS. MINIMUM COVER OVER THE PIPE SHALL BE FOUR (4) FEET - SIX (6) INCHES UNLESS OTHERWISE NOTED ON THE DRAWINGS.
14. CORPORATION STOPS SHALL BE A GROUND KEY DESIGN, CAST FROM BRASS ALLOY, CONFORMING TO ANSI/AWWA C900. INLET END SHALL HAVE AWWA TAPER THREDS. OUTLET END SHALL HAVE A COPPER COMPRESSION QUARTER BEND CONNECTION. ALL WATER SERVICE TAPS, 2" OR LESS SHALL BE TAPPED ON TOP OF THE WATER MAIN. THE CORPORATION STOPS AND QUARTER BEND SHALL BE BLOCKED.
15. CURB VALVES (STOPS) SHALL BE A ONE PIECE DESIGN, CAST FROM A BRASS ALLOY, CONFORMING TO ANSI/AWWA C900. THE MAIN WORKING DESIGN OF 1 1/2" DIA. AND HAVE A CURVED TOP TO CHECK BOTH ENDS SHALL HAVE COPPER COMPRESSION ENDS. CURB VALVES SHALL BE BURNED TO A MINIMUM DEPTH OF 4 FEET AND A MAXIMUM DEPTH OF 5 FEET.
16. CURB BOXES SHALL BE CAST IRON, TWO PIECE SCREW TYPE, ADJUSTABLE TO A TOTAL HEIGHT BETWEEN 48" AND 60" WITH A MINIMUM WORKING PRESSURE OF 250 PSIG. THE OPERATING INT SHALL BE 2" SQUARE WHICH OPENS TO THE LEFT. THE BOXES SHALL BE LOCATED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER.
17. SERVICE FITTERS TO CONNECT TO EXISTING WATER SERVICES WHICH ARE NOT 1" DIAMETER COPPER SHALL BE A WELDER 1/4-1/2 IN. SWIMMING 521, OR EQUAL.
18. WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA C900. ALL TEST RESULTS MUST BE APPROVED BY THE OWNER BEFORE INSTALLATION OF WATER SERVICES. COST SHALL BE SUBSIDARY TO THE INSTALLATION OF WATER MAIN. TEST PRESSURE SHALL BE 150 PSI.
19. WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C901. COST SHALL BE SUBSIDARY TO THE INSTALLATION OF WATER MAIN.
20. CURB STOP DURING NORMAL OPERATING CONDITIONS.
21. BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS. THE VALVE MAY GRANT SPECIAL PERMISSION FOR BOLLINGS STOP AND HOOPER.
22. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 10 FOOT HORIZONTAL SEPARATION AND 18 INCH VERTICAL SEPARATION BETWEEN THE PROPOSED WATER MAIN AND EXISTING STORM SEWERS AS MEASURED FROM OUTSIDE EDGE TO OUTSIDE EDGE UNLESS NOTED ON THE PLAN AND PROFILE SHEETS.
23. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 10 FOOT HORIZONTAL SEPARATION AND 18 INCH VERTICAL SEPARATION BETWEEN THE PROPOSED WATER MAIN AND EXISTING SANITARY SEWERS FROM OUTSIDE EDGE TO OUTSIDE EDGE.
24. THE CONTRACTOR SHALL NOT OPERATE OR TURN ANY EXISTING WATER VALVE. IF VALVES NEED TO BE OPENED OR CLOSED HE SHALL NOTIFY THE OWNER.
25. ALL ROAD GRADING TO WITHIN SIX (6) INCHES OF FINISH GRADE SHALL BE COMPLETED OVER THE PROPOSED WATER MAIN PRIOR TO ITS INSTALLATION.
26. THE LOCATION OF EXISTING WATER UTILITIES AS SHOWN ON THESE PLANS WERE DETERMINED FROM AVAILABLE DATA AT THE TIME OF FIELD SURVEYING IN ACCORDANCE WITH SECTION 153.63 OF THE OHIO REVENUE CODE.
27. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS PAYING ALL FEES, AND FOLLOWING ALL REQUIREMENTS ASSOCIATED WITH THE PERMITS. THE OWNER ASSUMES NO LIABILITY FOR NOT FOLLOWING THE ABOVE.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OHIO UTILITY PROTECTION SERVICE (OUPS) AS REQUIRED BY LAW.
29. NO WATERLINE TIE-INS SHALL BE DONE ON HOLIDAYS OR THE DAY BEFORE A HOLIDAY.
30. DEFECT WATER MAIN AS REQUIRED TO MAINTAIN ALIGNMENT AS SHOWN ON PLANS. MAXIMUM DEFLECTION IS 19 DEGREES PER JOINT.
31. TEMPORARY BLOW-OFF AND FLUSHING ASSEMBLY:
 - A. PIPE SHALL BE TYPE K COPPER WITH COMPRESSION FITTINGS
 - B. CORPORATION STOPS SHALL BE GROUND KEY DESIGN, CAST FROM A BRASS ALLOY AND CONFORM TO ANSI/AWWA C900. THE MAIN WORKING DESIGN OF 1 1/2" DIA. AND HAVE A CURVED TOP TO CHECK BOTH ENDS SHALL HAVE COPPER COMPRESSION ENDS. CORPORATION STOPS AND QUARTER BENDS SHALL BE BLOCKED.
 - C. CURB VALVES (STOPS) SHALL BE ONE PIECE DESIGN, CAST FROM A BRASS ALLOY, CONFORM TO AWWA C900. THE MAIN WORKING DESIGN OF 1 1/2" DIA. AND HAVE A CURVED TOP TO CHECK BOTH ENDS SHALL HAVE COPPER COMPRESSION FITTINGS.
 - D. LOCATIONS SHALL BE AS SHOWN ON THE DRAWINGS, AT A MINIMUM CONTRACTOR SHALL INSTALL PRESSURE TESTING BACTERIA SAND LING AND FLUSHING.
 - E. AT COMPLETION OF TESTING, CLOSE CORPORATION STOP, REMOVE COPPER PENING AND INSERT PLUG ON CORPORATION STOP.
 - F. NO SEPARATE PAVEMENT SHALL BE MADE FOR TEMPORARY BLOW-OFFS AND FLUSHING ASSEMBLIES.



NO.	REVISION	DATE

**ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES**
HARBERSFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARBERSFIELD TOWNSHIP, OHIO

SCALE	AS SHOWN
DATE	11/27/2022
DESIGNED BY	TAL
DRAWING NO.	543
ORIGINATED BY	TAL

GENERAL - 00 SERIES
CT GENERAL NOTES 2

PROJECT NO.	200426
DRAWING NUMBER	00G-05
SHEET	5
OF	21



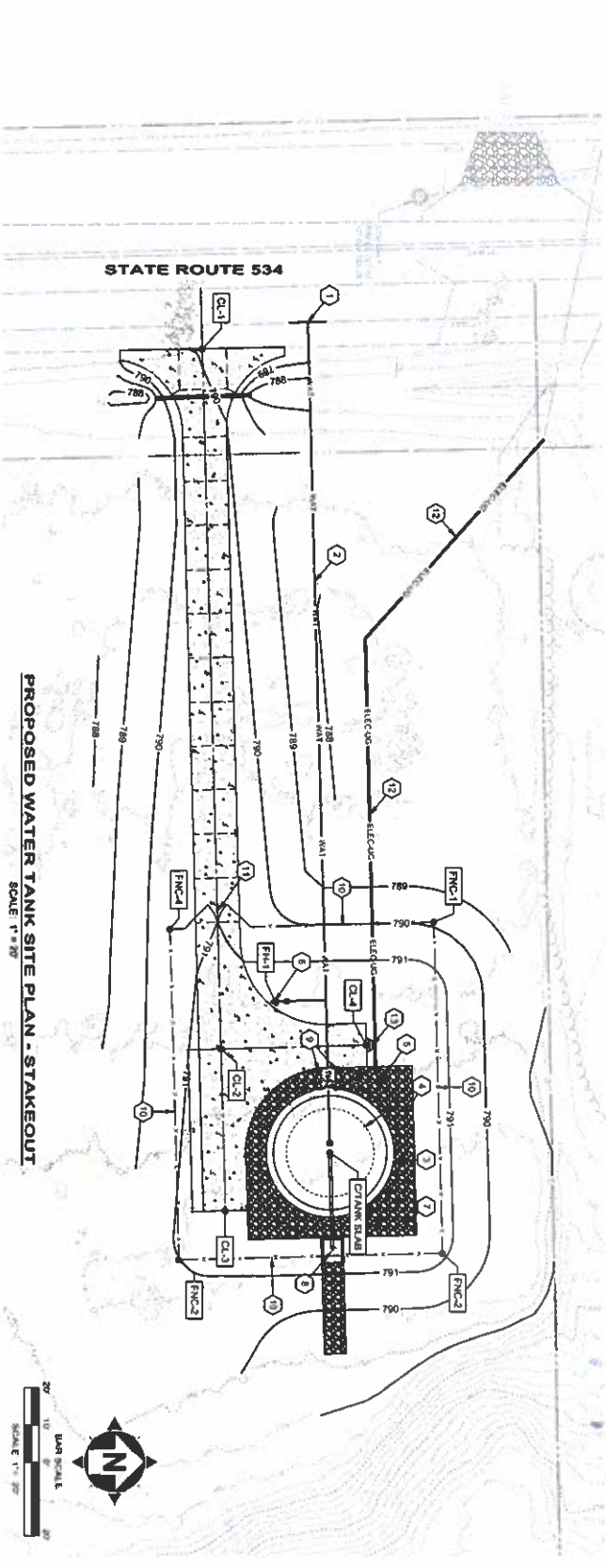
NO.	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
HARPERSFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARPERSFIELD TOWNSHIP, OHIO

DATE	BY	SCALE
1/15/2023	AS SHOWN	AS SHOWN

**PROPOSED WATER TANK
SITE PLAN**

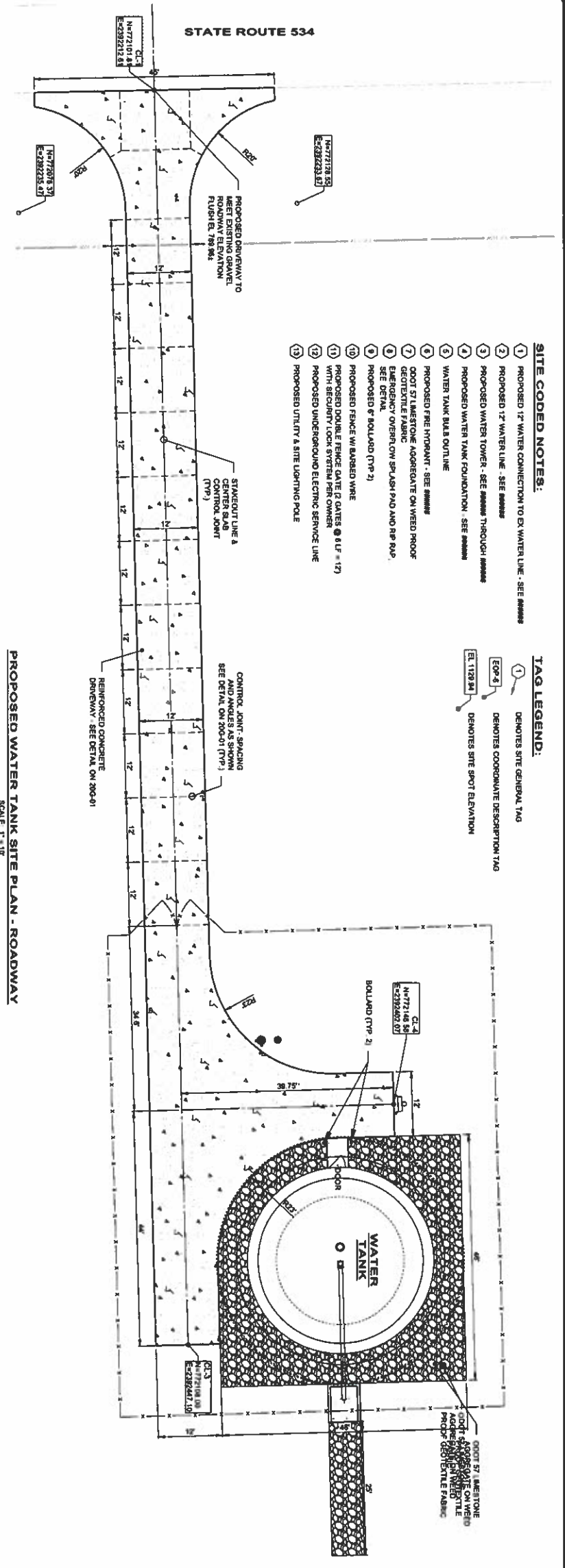
PROJECT NO.
200426
DRAWING NUMBER
01C-02
SHEET
7
OF
21



SITE STAKEOUT POINT TABLE

POINT TAG	POINT #	NORTHING	EASTING	ELEVATION
CL-1	101	772 011.81	2382212.81	0.00
CL-2	102	772 108.84	2382403.12	0.00
CL-3	103	772 108.00	2382447.10	0.00
CL-4	104	772 148.58	2382402.07	0.00
GTANK SLAB	120	772 158.89	2382431.34	0.00
FNC-1	301	772 164.55	2382228.57	0.00
FNC-2	302	772 187.33	2382458.54	0.00
FNC-3	303	772085.35	2382460.44	0.00
FNC-4	304	772082.88	2382370.47	0.00
PA-1	401	772121.77	2382380.15	0.00
RA-1	501	772145.81	2382223.75	0.00
RA-2	502	772093.94	2382248.80	0.00
RA-3	503	772135.07	2382273.28	0.00

POINT TAG ABBREVIATIONS:
 BC BUILDING CORNER
 CL CLANK
 CL CENTER OF CORNER OR UTILITY LINE
 CL CENTER OF ROADWAY ALIGNMENT
 R CENTER OF RADIUS
 CB CATCH BASIN
 CB EDGE OF CONCRETE
 FNC FENCE CORNER
 HW HEADWALL
 STW STORM SEWER
 N/A NOT APPLICABLE
 * DENOTES ELEVATION TO MATCH EX. GROUND FINISH

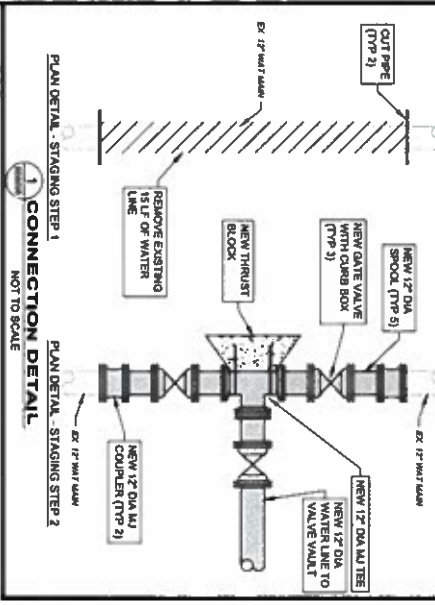
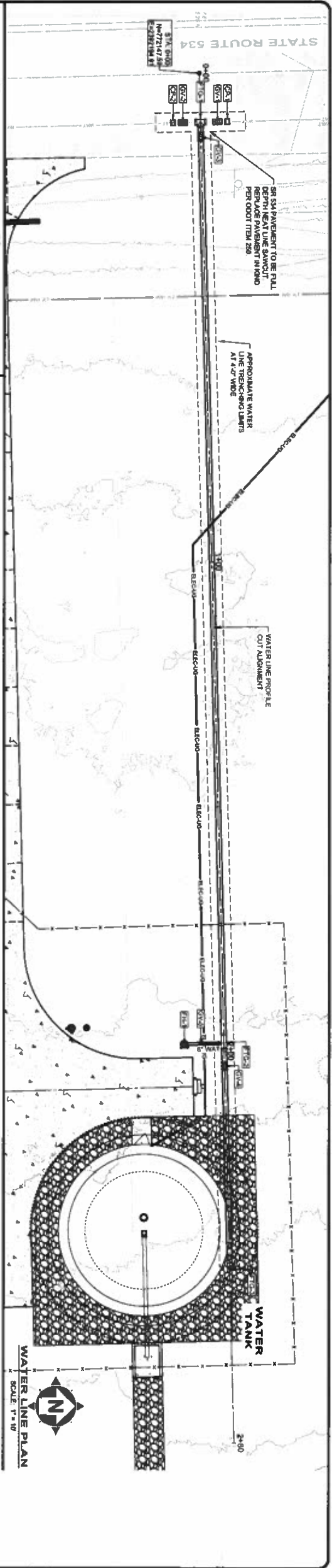


- SITE CODED NOTES:**
- PROPOSED 12" WATER CONNECTION TO EX. WATER LINE - SEE #88888
 - PROPOSED 12" WATER LINE - SEE #88888
 - PROPOSED WATER TOWER - SEE #88888 THROUGH #88888
 - PROPOSED WATER TANK FOUNDATION - SEE #88888
 - WATER TANK BULK OUTLINE
 - PROPOSED FIRE HYDRANT - SEE #88888
 - ODOT ST LIME STONE AGGREGATE ON WEED PROOF GEOTEXTILE FABRIC
 - EMERGENCY OVERFLOW SPLASH PAD AND RFP RUP - SEE DETAIL
 - PROPOSED 8" BOLLARD (TYP 2)
 - PROPOSED FENCE W/ BARBED WIRE
 - PROPOSED DOUBLE FORCE GATE @ 4LZ @ 4LZ @ 4LZ WITH SECURITY LOCK SYSTEM PER OWNER
 - PROPOSED UNDERGROUND ELECTRIC SERVICE LINE
 - PROPOSED UTILITY & SITE LIGHTING POLE

- TAG LEGEND:**
- 1 DENOTES SITE GENERAL TAG
 - EP-8 DENOTES COORDINATE DESCRIPTION TAG
 - EL 1129.84 DENOTES SITE SPOT ELEVATION

PROPOSED WATER TANK SITE PLAN - ROADWAY
SCALE: 1" = 10'



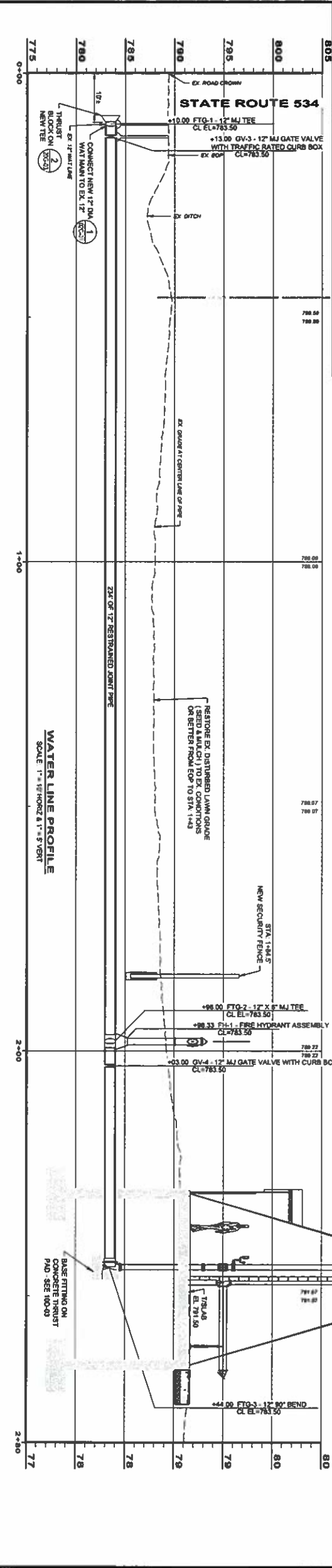


WATERLINE VALVE TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
FH-1	FIRE HYDRANT ASSEMBLY	1+98.33	783.50	772144.75	2882283.38		
GV-1	12" MJ GATE VALVE WITH CURB BOX	0+10.00	783.50	772151.35	2882283.81		
GV-2	12" MJ GATE VALVE WITH CURB BOX	0+10.00	783.50	772144.38	2882285.50		
GV-3	12" MJ GATE VALVE	0+13.00	783.50	772147.83	2882287.80		
GV-4	12" MJ GATE VALVE WITH CURB BOX	2+03.00	783.50	772152.85	2882287.84		
GV-5	8" MJ GATE VALVE WITH CURB BOX	1+98.33	783.50	772148.11	2882283.30		

WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CP-1	12" MJ COUPLER/END	0+10.00	783.50	772153.35	2882284.758		
CP-2	12" MJ COUPLER/END	0+10.00	783.50	772142.38	2882285.048		
FTG-1	12" X 8" MJ TEE	0+10.00	783.50	772147.83	2882284.804		
FTG-2	12" X 8" MJ TEE	1+98.00	783.50	772152.82	2882282.831		
FTG-3	12" 90° BEND	2+44.00	783.50	772154.03	2882283.808		



CONSULTANTS
Planners

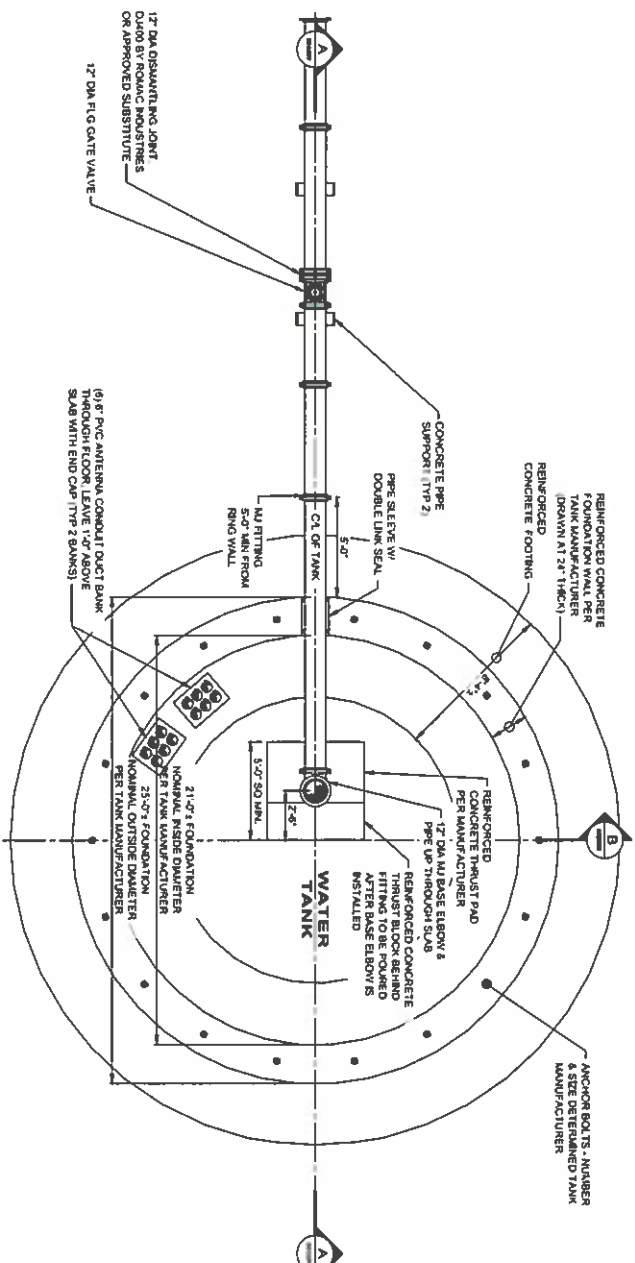
STATE OF OHIO
TEMPORARY
PROFESSIONAL
ENGINEER

NO. REVISION DATE

ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
HARPERFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARPERFIELD TOWNSHIP, OHIO

SCALE: AS SHOWN
DATE: 11/20/23
DESIGNED BY: PAB
DRAWN BY: PAB
CHECKED BY: TJA

PROJECT NO.
200428
DRAWING NAME
02C-01
SHEET
OF
8
21



INTER-UNIT PIPING & FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

WATER TOWER DESIGN NOTES:

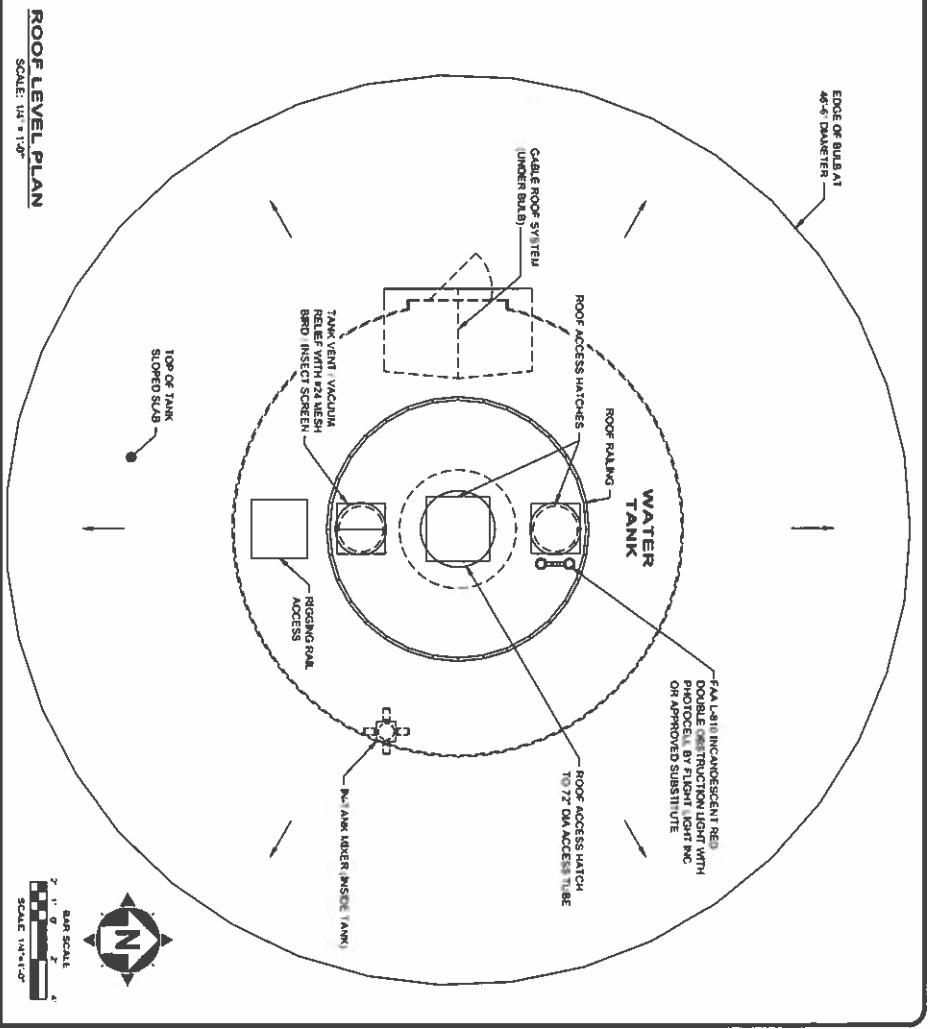
1. THE WATER TANK DRAWINGS ARE DESIGNED BASED ON PERSPHERE ELEVATED STORAGE TANK WITH A CONE BASE 300,000 GALLON CAPACITY, 48'-0" BOLD OVERFLOW WEIR, 10'-0" WINDS OF 31.9' WITH A MINIMUM 9'-0" FEEDHEAD FROM THE OVERFLOW WEIR.
2. THE WATER TANK & TANK FOUNDATION DESIGN IS THE RESPONSIBILITY OF THE DRAWINGS SEALED BY A REGISTERED ENGINEER IN OHIO.
3. ALL WATER TANK APPURTENANCES (LADDER, COLE, RAILINGS, PIPE SUPPORTS, VENTILATION, ACCESS HATCHES, PIPE PENETRATIONS, PIPE SUPPORTS, ETC.) MUST BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF OHIO UNDER CONTRACT WITH THE SUPPLIER. TANK MANUFACTURER AND SHALL BE FABRICATED BY THE SUPPLIER. TANK MANUFACTURER, CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELEVATED WATER TANK DESIGN. CONTRACTOR SHALL APPURTENANCES WITH THE ELEVATED WATER TANK MUST BE DESIGNED FOR A LIVE LOAD OF 48 PSF. ALL STRUCTURAL DESIGNS MUST BE IN ACCORDANCE WITH PERMIT BUILDING AND STRUCTURAL DESIGN CODES.
4. WATER TANK CONCRETE FLOOR SHALL HAVE TYPE 3 CRACK, SEEPAGE CONDITIONS, ADAPTIVE OR APPROVED SUBSTITUTE PER MANUFACTURER RECOMMENDATIONS.
5. ALL WINDLOADS, PLATFORM LUNARDS, WALKWAYS, LADDERS, AND SAFETY CLIMB DEVICES SHALL CONFORM WITH CORRECT OSHA STANDARDS.
6. SEE PROJECT SPECIFICATIONS FOR SHOP AND FIELD PAINT REQUIREMENTS.
7. STEEL TANK IN ACCORDANCE WITH AWWA C200-18 AND PROJECT SPECIFICATIONS.

FOUNDATION NOTES:

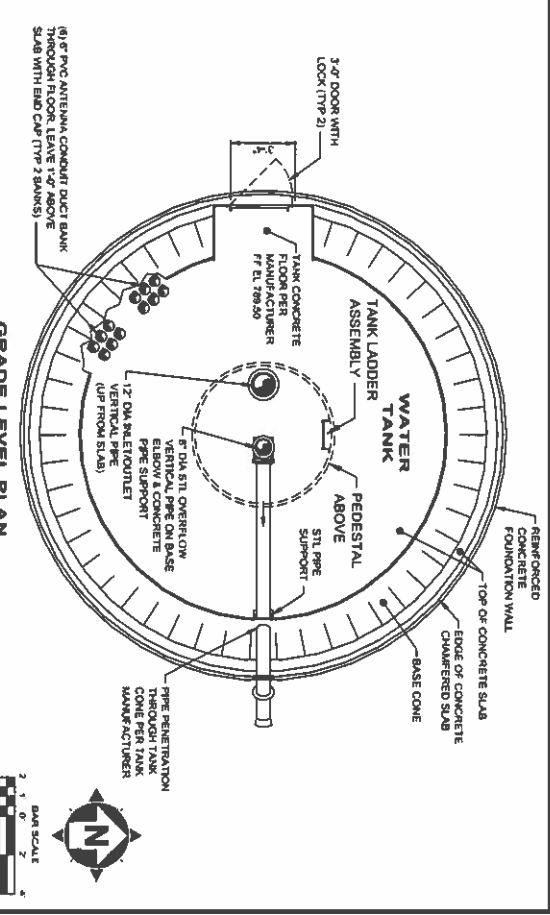
1. FOUNDATION CONSTRUCTION SHALL COMPLY WITH A.C.I. 318.14, A.C.I. 301-18, AWWA D100.11 AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS AND THE PROJECT SOils REPORT.
2. FOUNDATION DESIGN WILL BE THE RESPONSIBILITY OF THE TANK MANUFACTURER.
3. PROPOSED AND FOOTING DIMENSIONS AND CONCRETE REINFORCEMENT SHALL BE DETERMINED BY THE TANK MANUFACTURER.
4. MINIMUM FOUNDATION CONCRETE COMPRESSIVE STRENGTH SHALL BE 4,000 P.S.I. AT 28 DAYS. REINFORCEMENT SHALL CONFORM TO ASTM A615 GRA. 60.
5. CONSTRUCTION JOINTS SHALL BE PROHIBITED ACROSS ENTIRE FACE WITH 14" MINIMUM DEPTH INDENTATIONS.
6. THE TOP OF THE RINGWALL SHALL BE 18" MIN. (18'-0" TO 30'-0" FEET WITHIN A MAXIMUM DIFFERENCE OF 1/4" BETWEEN ANY TWO POINTS ON THE CIRCUMFERENCE.
7. PROVIDE 12" THICK EXPANSION JOINT MATERIAL BETWEEN FLOOR AND WALL AND AT ALL OTHER PENETRATIONS.
8. REFER TO SUBSURFACE EXPLORATION REPORT PROVIDED BY WENZEL GEOTECHNICAL ENGINEERING INC. (GPE PROJECT NO. 20231049) FOR THE FOUNDATION DESIGN RECOMMENDATIONS.

VALVE VAULT DESIGN NOTES:

1. THE VALVE VAULT SHALL BE PRE-CAST CONCRETE. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS & DRAWINGS SEALED BY A REGISTERED ENGINEER.



ROOF LEVEL PLAN
SCALE: 1/4" = 1'-0"



GRADE LEVEL PLAN
SCALE: 1/4" = 1'-0"



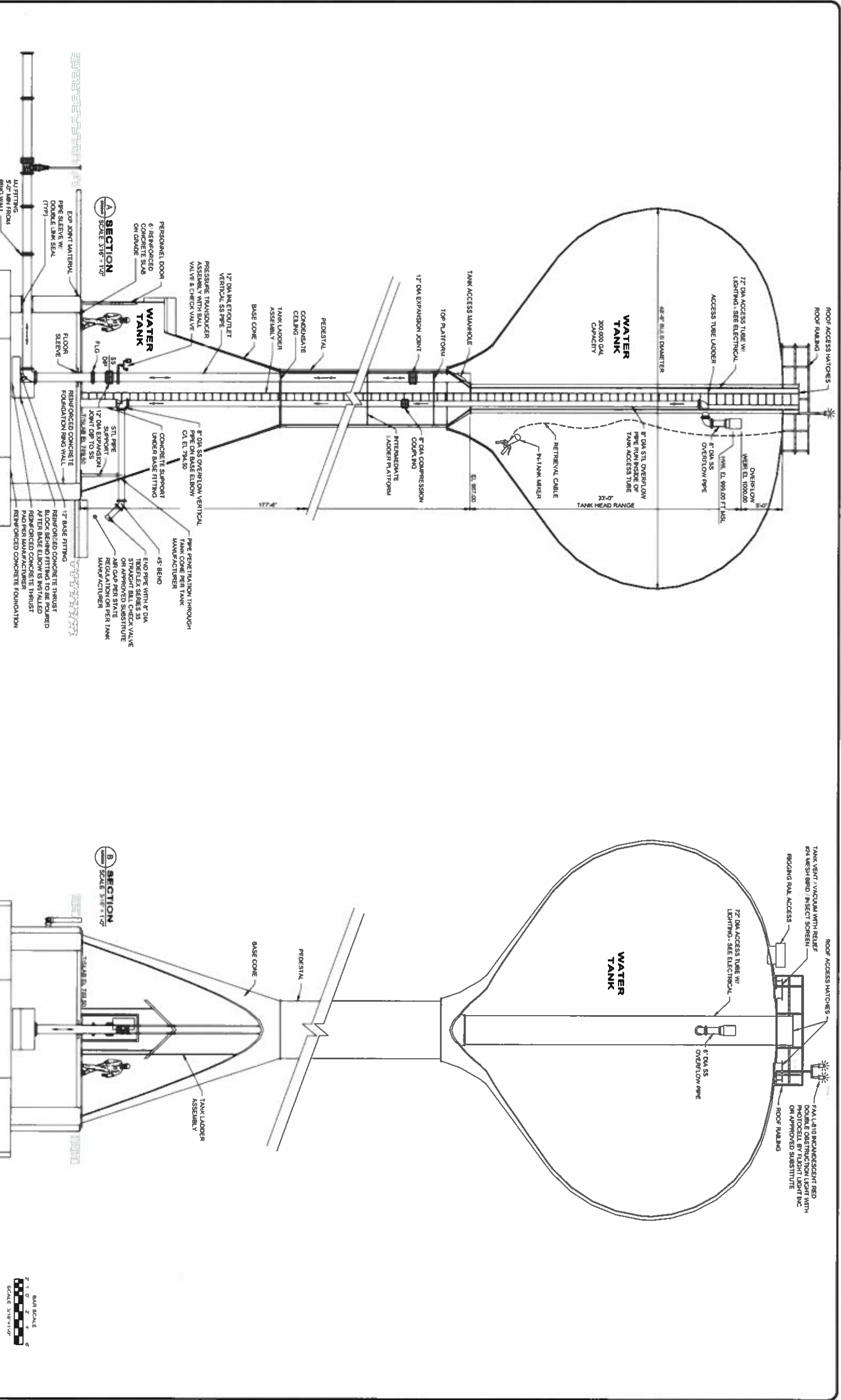
NO.	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
HARRERSFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARRERSFIELD TOWNSHIP, OHIO

DATE	BY	CHKD BY
11/27/2023	ASB/BDH	

WATER TANK FACILITY - 10 SERIES
WATER TANK & CONTROL BUILDING PLAN VIEWS

PROJECT NO.	200426
DRAWING NAME	10D-02
SHEET	9
OF	21



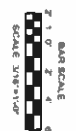
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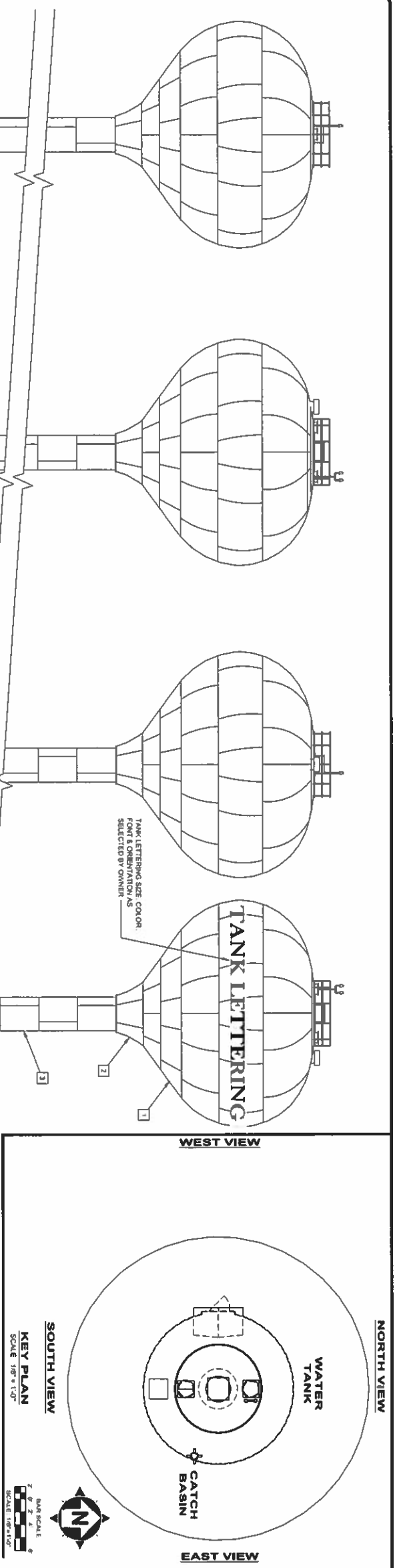
ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
HARPERFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARPERFIELD TOWNSHIP, OHIO

SCALE	AS SHOWN
DATE	11/29/22
DESIGNED BY	TAL
DRAWN BY	PAJ
CHECKED BY	TAL

WATER TANK FACILITY - 10 SERIES
WATER TANK & CONTROL
BUILDING SECTION VIEWS

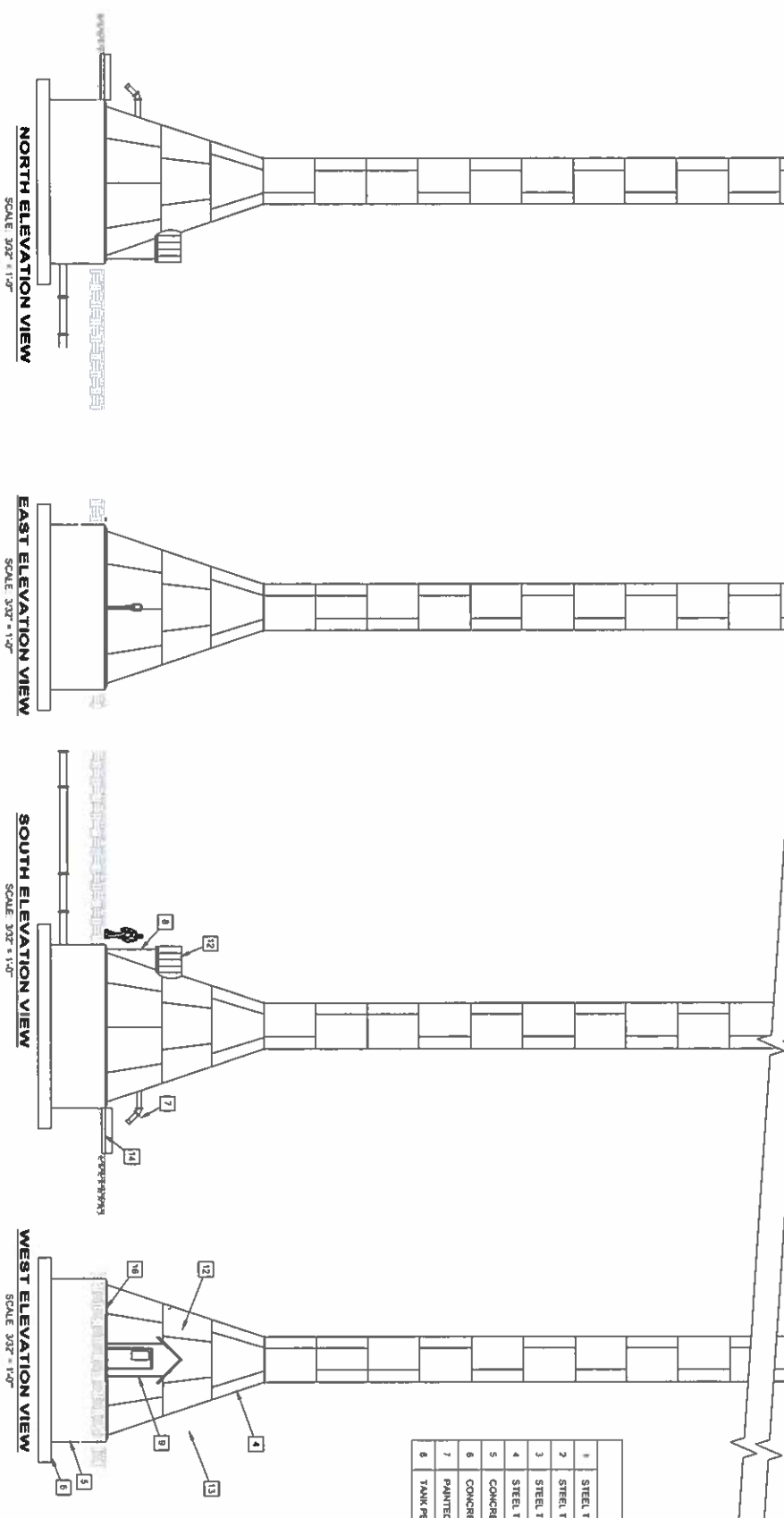
PROJECT NO.	200426
DRAWING NAME	10D-03
SHEET	21
OF	10





ELEVATION SCHEDULE

1	STEEL TANK BOWL
2	STEEL TANK SMOOTH TRANSITION SECTION
3	STEEL TANK FEDESTAL
4	STEEL TANK BASE CONE
5	CONCRETE FOUNDATION RING WALL
6	CONCRETE FOUNDATION SLAB
7	PAINTED SS OVERFLOW PIPE
8	TANK PERSONAL DOOR
9	
10	
11	PRE-FINISHED LOWER
12	STANDING SEAM METAL ROOFING SYSTEM
13	PAINTED PVC VENT PIPE
14	PRE-CAST CONCRETE CATCH BASIN
15	
16	CLEAN OUT





T CONSULTANTS
ARCHITECTS
ENGINEERS

STATE OF OHIO
LICENSED PROFESSIONAL ENGINEER
No. 10484

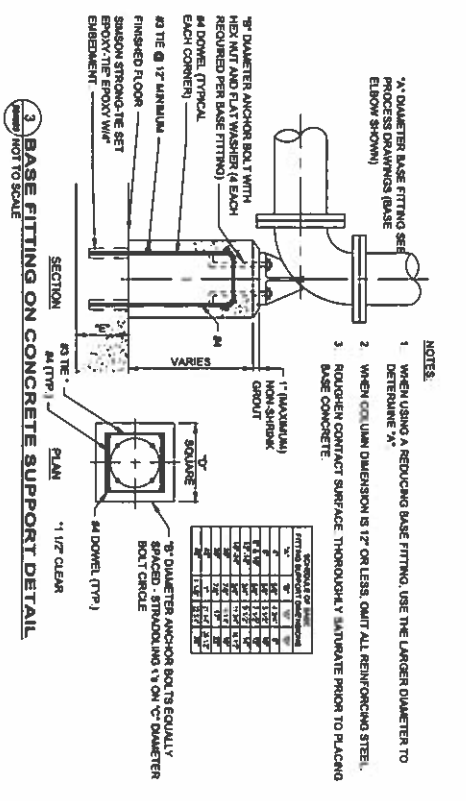
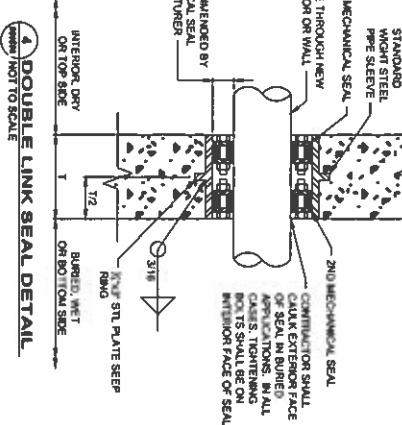
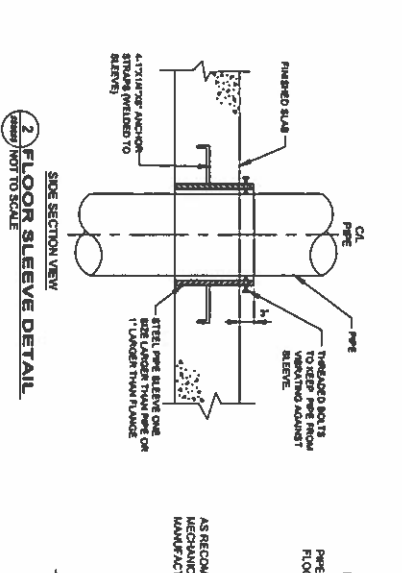
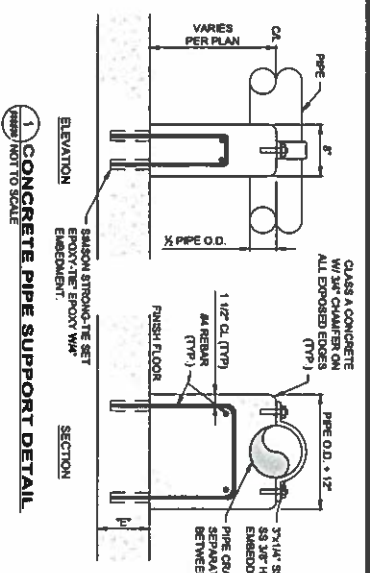
NO.	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
HARPERFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT
 ASHTABULA COUNTY HARPERFIELD TOWNSHIP, OHIO

SCALE	AS SHOWN
DATE	11/20/22
DRAWN BY	TJM
CHECKED BY	PHS
DATE	12/1/22

WATER TANK FACILITY - 10 SERIES
WATER TANK & CONTROL BUILDING ELEVATION VIEWS

PROJECT NO.	SHEET NO.	TOTAL SHEETS
200426	11	21

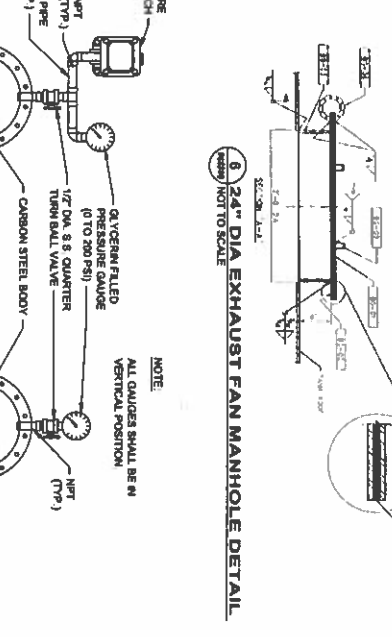
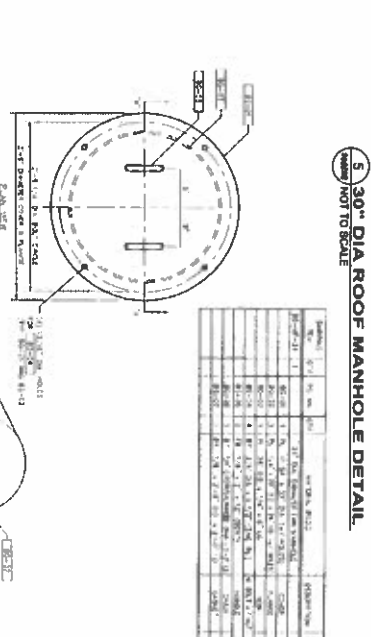
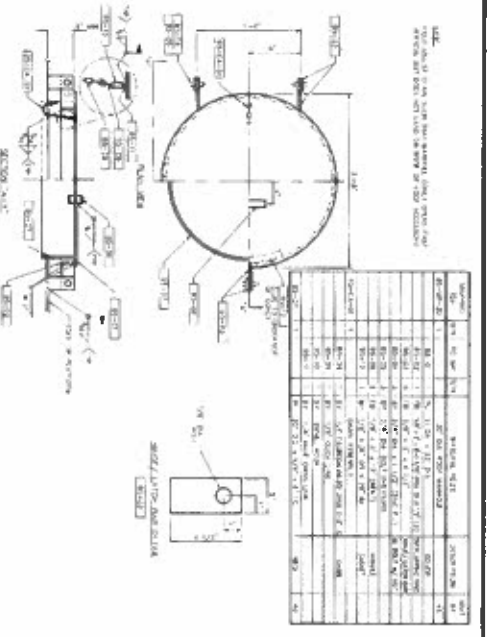


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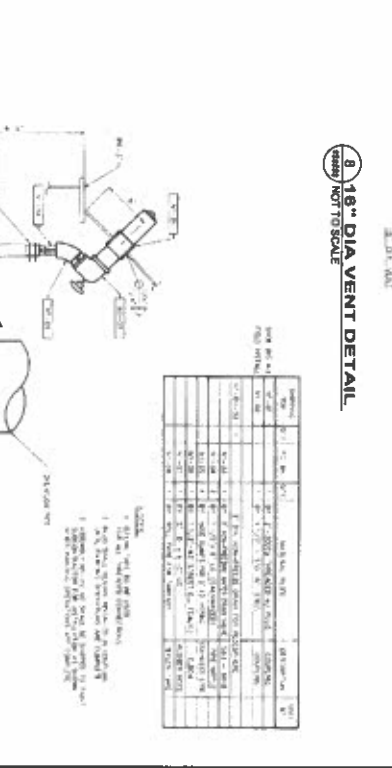
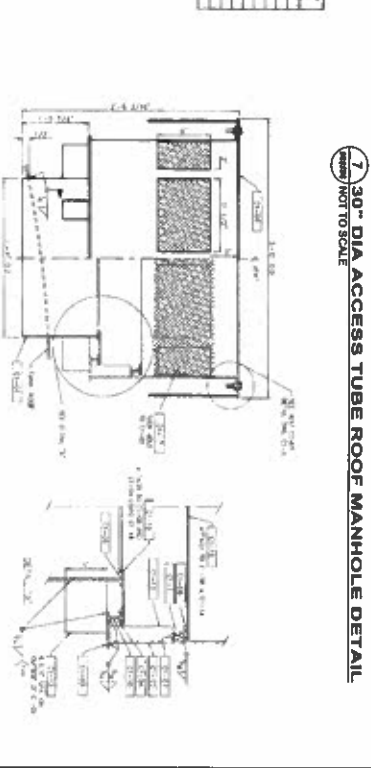
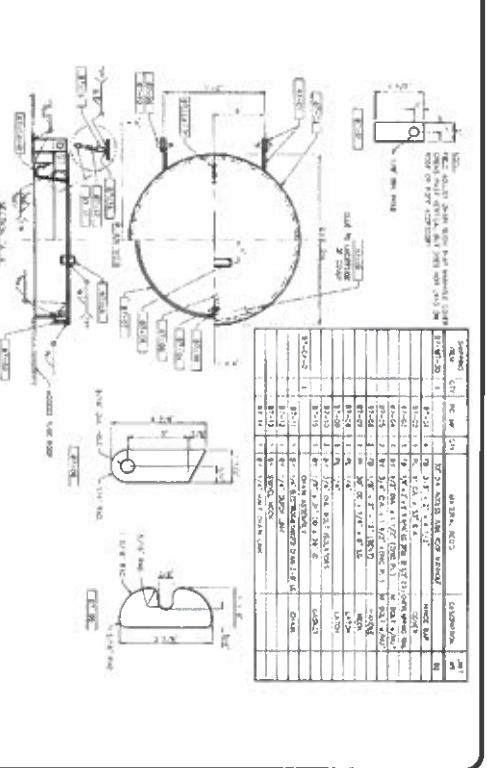
1. WHEN USING A REDUCING BASE FITTING, USE THE LARGER DIAMETER TO DETERMINE "X".
2. WHEN CONCRETE DIMENSION IS 12" OR LESS, OMIT ALL REINFORCING STEEL.
3. ROUGHEN CONTACT SURFACE THOROUGHLY & MATERIAL PRIOR TO PLACING BASE CONCRETE.

WATER TANK CONSTRUCTION DETAILS NOTE:

1. THE WATER TANK DETAILS SHOWN ON THIS SHEET ARE GENERAL DETAILS & WILL VARY PER TANK SUPPLIER. THE CONTRACTOR SHALL COORDINATE WITH THE TANK MANUFACTURER & ENGINEER AND PROVIDE THE TANK SUPPLIER'S CONSTRUCTION DETAILS TO THE ENGINEER FOR REVIEW DURING THE SHOP DRAWING PROCESS.



ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
HARPERFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARPERFIELD TOWNSHIP, OHIO



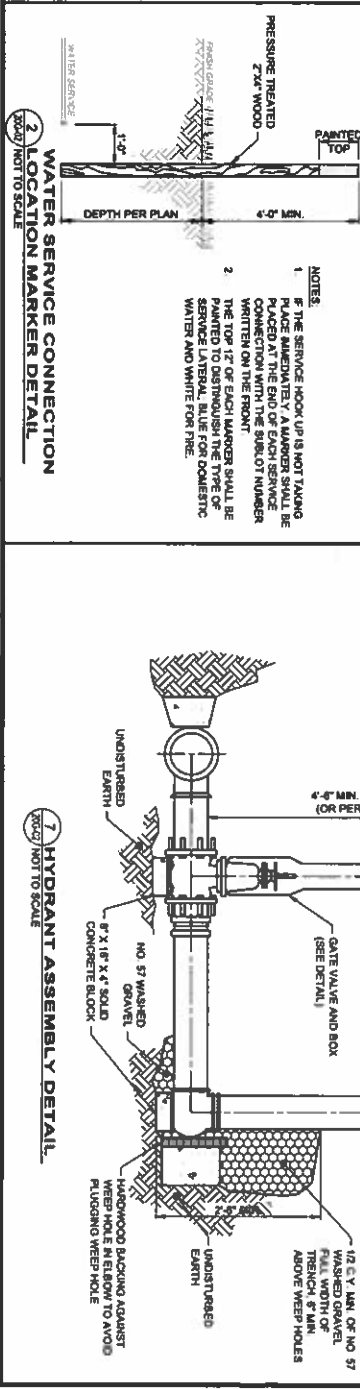
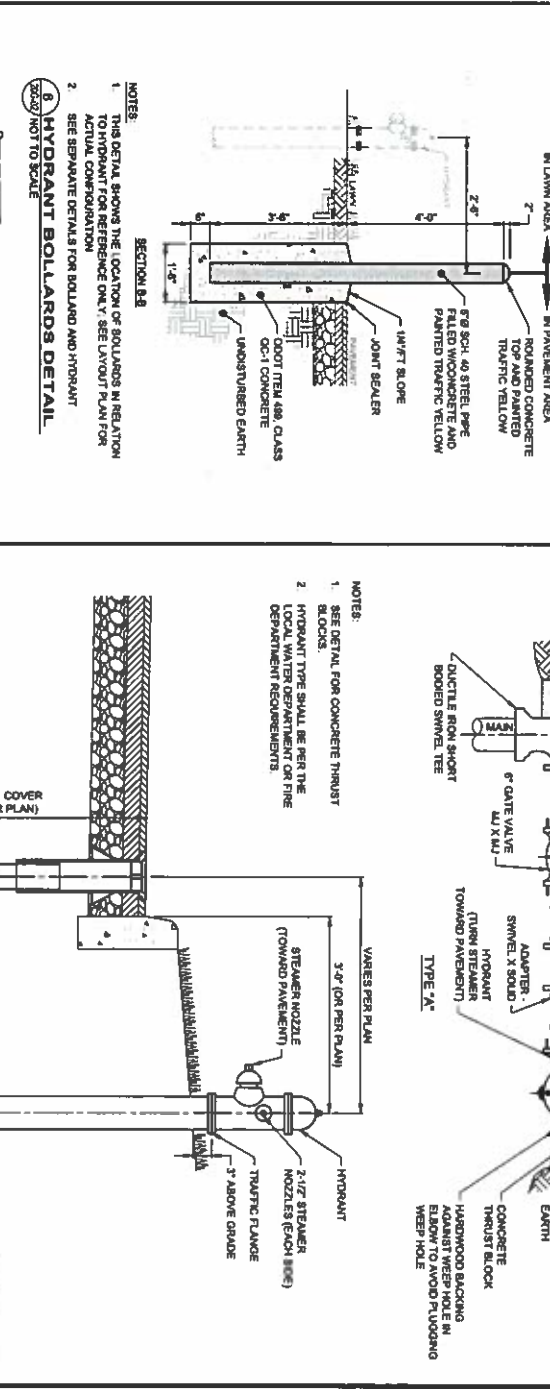
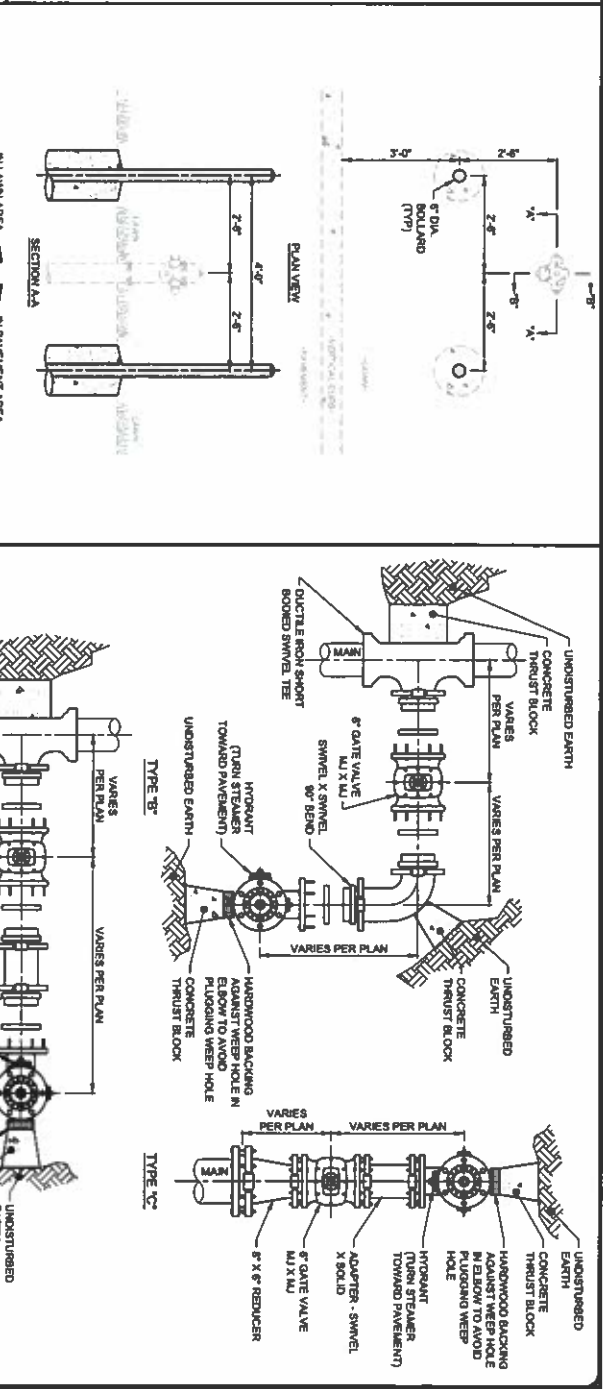
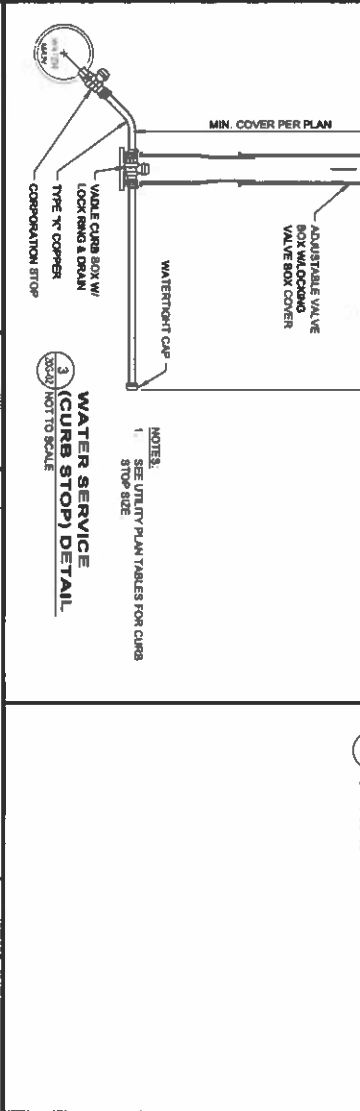
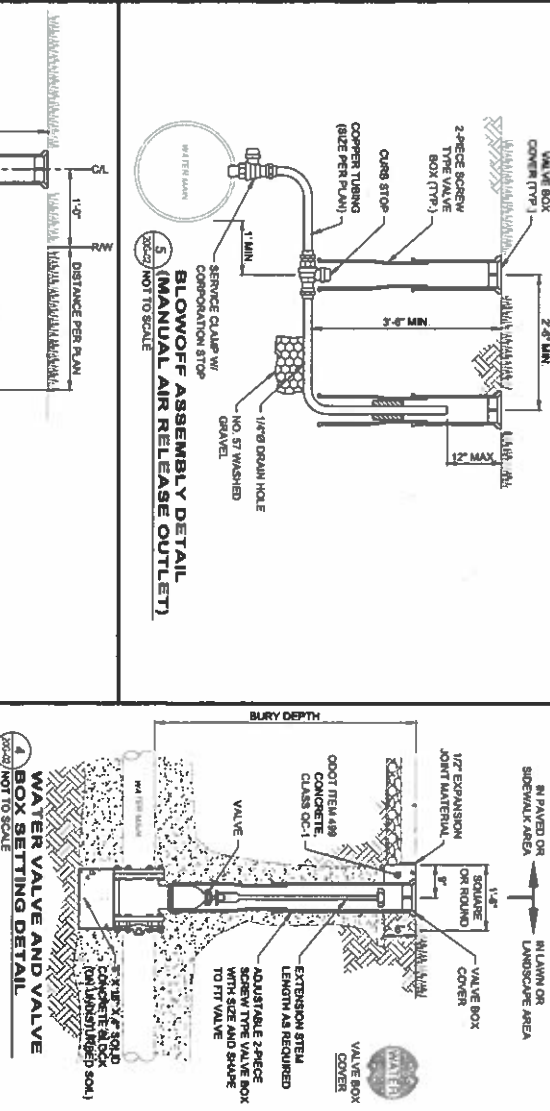
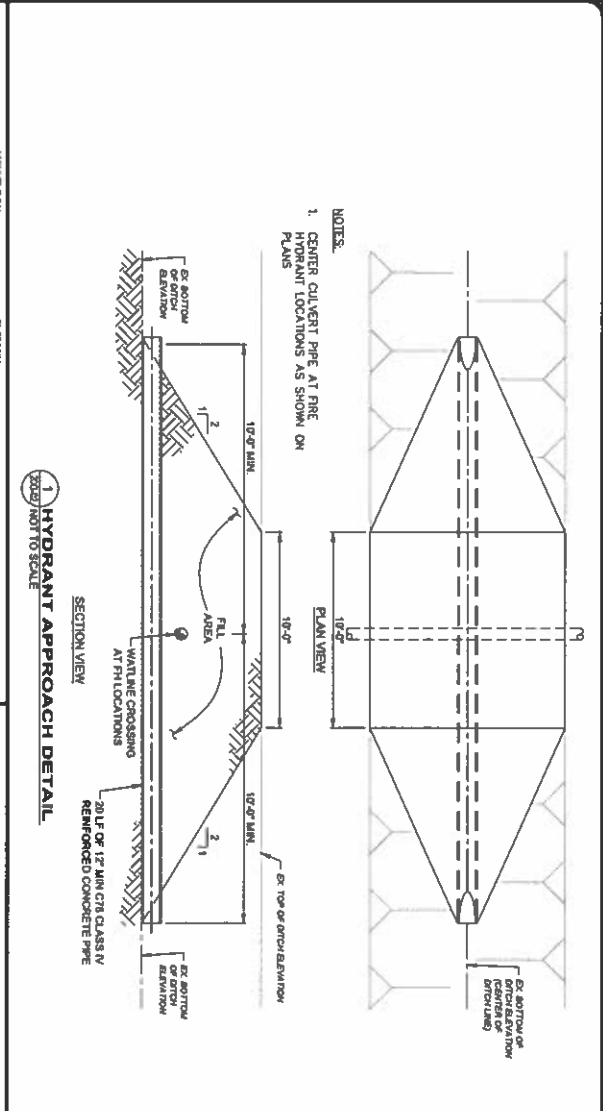
WATER TANK FACILITY - 10 SERIES
WATER TANK & CONTROL BUILDING DETAILS



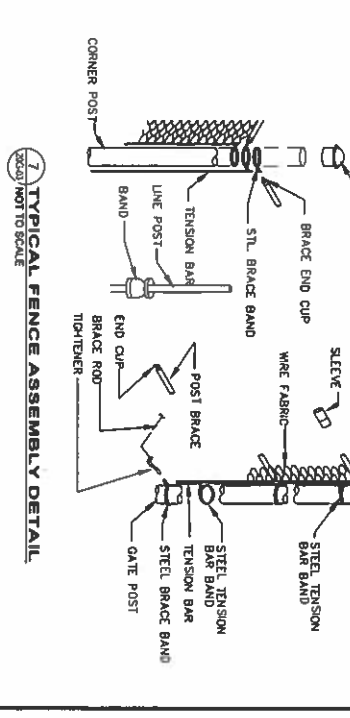
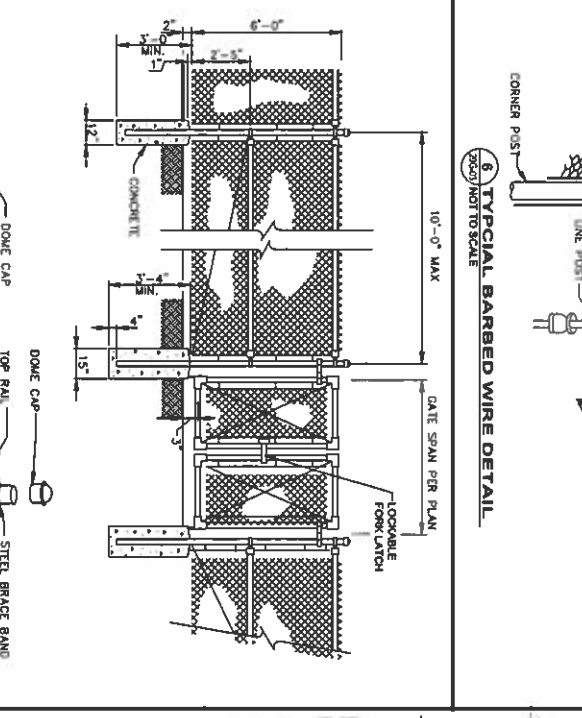
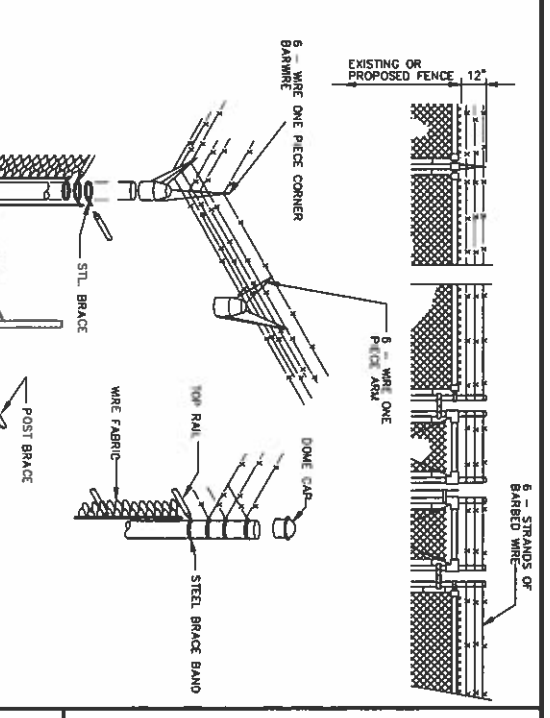
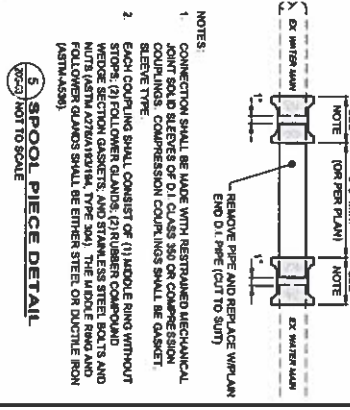
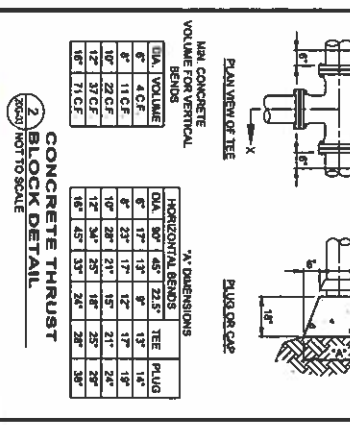
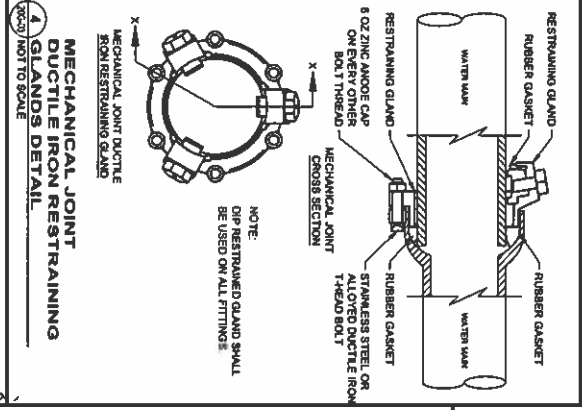
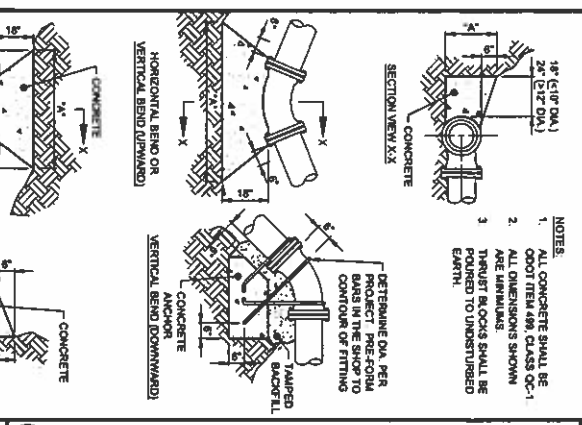
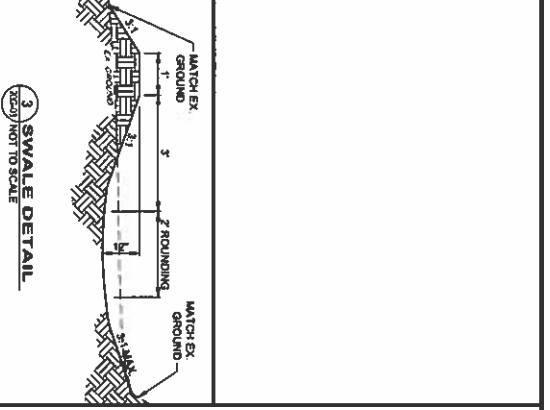
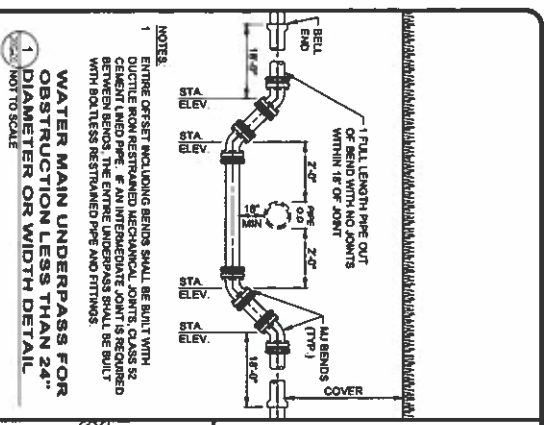
NO.	REVISION	DATE

SCALE	AS SHOWN
DATE	11/27/22
DESIGNED BY	J.M.
DRAWN BY	P.S.
CHECKED BY	J.M.

PROJECT NO.	200426
DRAWING NAME	10D-05
SHEET	OF
12	21



	STATE OF OHIO THOMAS M. ALLEN LICENSED PROFESSIONAL ENGINEER No. 10488	NO.	DATE	ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES HARPERFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT ASHTABULA COUNTY HARPERFIELD TOWNSHIP, OHIO
		REVISION	DATE	
CONSTRUCTION DETAILS - 20 SERIES CONSTRUCTION DETAILS 2				
PROJECT NO.	200426	DATE	14	21
DRAWING NUMBER	20G-02	SCALE	AS SHOWN	
SHEET	14	OF	21	



CONSTRUCTION DETAILS - 20 SERIES

CONSTRUCTION DETAILS

3

PROJECT NO.	200426
DRAWING NAME	20G-03
SHEET	03
DATE	15
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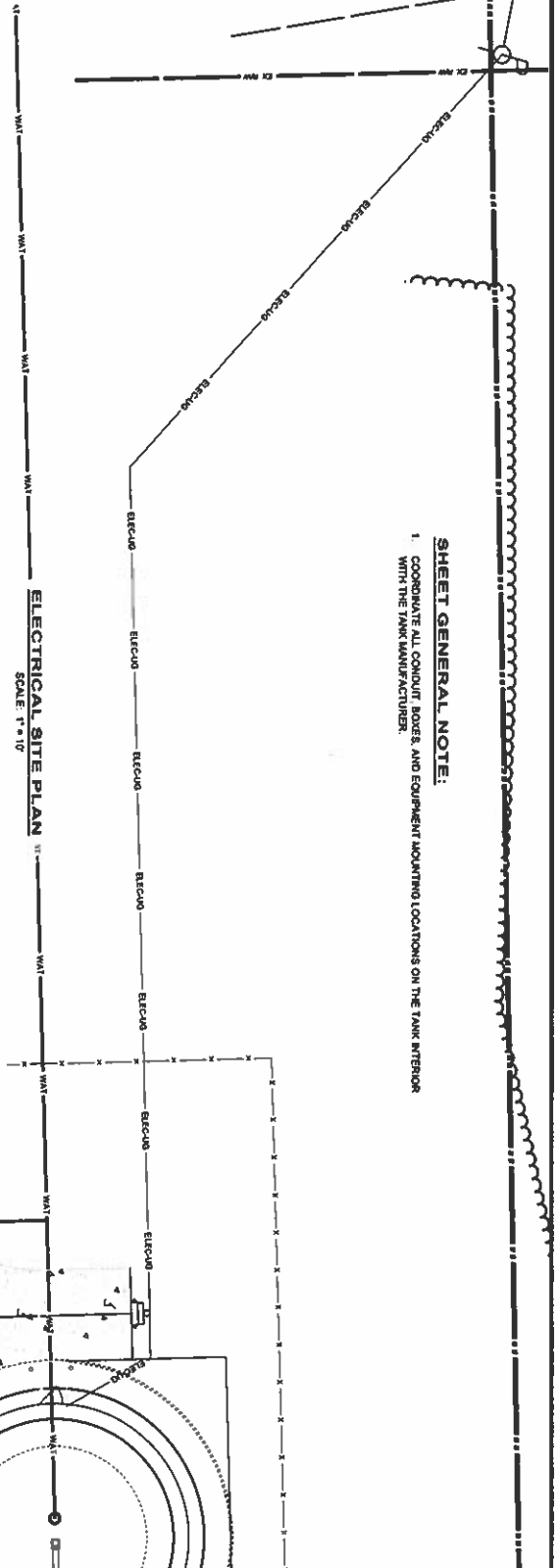
T CONSULTANTS
CONSULTANTS
PARTNERS

STATE OF OHIO
DIVISION OF ENGINEERING
PROFESSIONAL ENGINEER

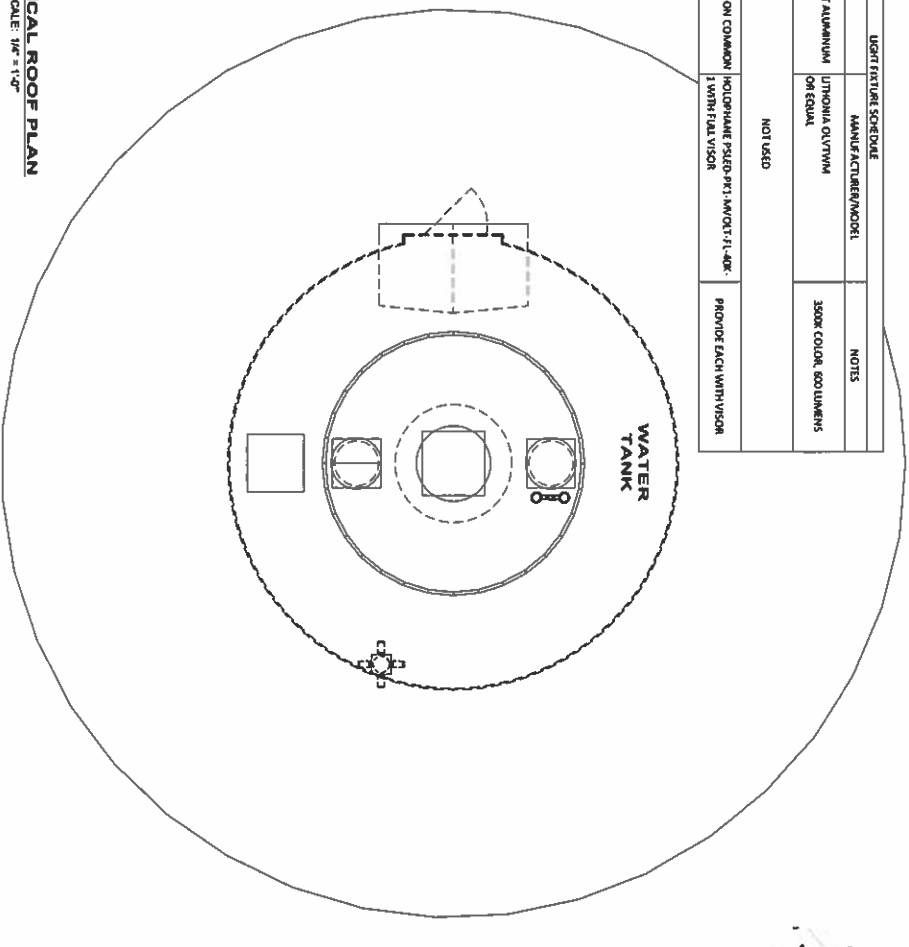
NO.	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
HARRPERSFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARRPERSFIELD TOWNSHIP, OHIO

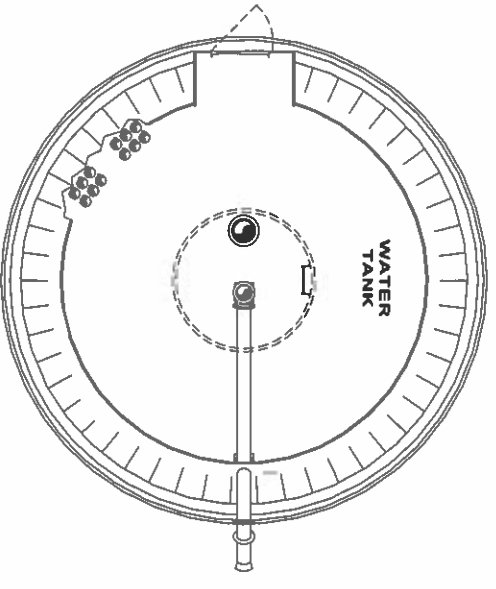
SHEET GENERAL NOTE:
 1. COORDINATE ALL CONDUIT ROSES AND EQUIPMENT MOUNTING LOCATIONS ON THE TANK INTERIOR WITH THE TANK MANUFACTURER.



DESIGNATION	DESCRIPTION	LIGHT FIXTURE SCHEDULE	MANUFACTURER/MODEL	NOTES
A	WALL MOUNTED LED LIGHT CAST ALUMINUM HOUSING	LITHONIA OLIVINA	ON EQUAL	300K COLOR EQUIVMENTS
B	LED FLOOD LIGHT	7X10 HEADS ON COMMON RAIL	NOT USED	
C	LED FLOOD LIGHT	7X10 HEADS ON COMMON RAIL WITH FULL VISION	PROVIDE EACH WITH VISION	



ELECTRICAL ROOF PLAN
 SCALE: 1/4" = 1'-0"



ELECTRICAL FLOOR PLAN
 SCALE: 1/4" = 1'-0"

CODED NOTES:

1. NEW 1/2" RIGID, 1/2" W/ SERVICE FROM POLE MOUNTED TRANSFORMER TO NEW SERVICE RACK PER DETAIL. COORDINATE TRANSFORMER INSTALLATION AND POLE LOCATION WITH THE UTILITY. EXTEND THE SERVICE IN CONDUIT 20' UP THE POLE AND PROVIDE WEATHERHEAD. FINAL CONNECTIONS BY UTILITY. SEE CIVIL SITE PLAN FOR THE RECOMMENDED TRANSFORMER POLE LOCATION.
2. NEW METERS AND METERS SOCKET PER UTILITY COMPANY REQUIREMENTS BOND TO THE GROUND ELECTRODE SYSTEM.
3. 100A 2P FUSIBLE SERVICE ENTRANCE RATED DISCONNECT SWITCH WITH SOLID NEUTRAL AND NEUA SR ENCLOSURE.
4. NEW 600V TANK FROM THE ELECTRICAL SERVICE BACK TO THE BUILDING INTERIOR (4) 1-1/2" CONDUITS (1 SPARE).
5. NEW DISTRIBUTION PANEL, 1P.
6. TELEMETRY PANEL PROVIDED BY THE SYSTEM INTEGRATOR, INSTALLED BY THE CONTRACTOR.
7. TANK WATER CONTROL PANEL, FURNISHED WITH THE WATER INTERFERENCE TO TELEMETRY RTU FOR MONITORING AND CONTROL.
8. CATHODIC PROTECTION PANEL, INSTALL AND CONNECT TO THE TANK AND PERFORM PER MANUFACTURERS INSTRUCTIONS.
9. INSTALL (8) TYPE ALBERTS VERTICALLY SPACED AT 16" O.C. FOR LUMINATION OF THE ROOF ACCESS LADDER. CONNECT THROUGH A COMMON TROUBLE SHOOTER AND WIRE LABEL FOR THE SWITCH.
10. NEW NEUA SR JUNCTION BOX FOR TANK WATER CABLE ROUTE 3/4" RIGID CONDUIT WITH (2) #12 & (1) #12 GND ALONG THE TANK WALL AND ROOF TO THE JUNCTION BOX. PENETRATE SIDE OF TANK MATCH INSTALLED CONDUIT BELOW CONDUIT BELL OFF FITTING AND CORD STRAIN RELIEF. PER MANUFACTURER'S INSTRUCTIONS.
11. N/A.
12. PROVIDE A 1/2" STATION MOUNTED AREA LIGHT WITH ADJUSTABLE GULL HEADS AND MOTION DETECTOR FOR CONDUIT AND TANK WATER CONTROL PANEL. LOCATE MOTION DETECTOR ABOVE FENCE LINE AND ADJUST FOR OPTIMAL OPERATION.
13. PRESSURE TRANSDUCER FOR TANK LEVEL MEASUREMENT.
14. #2 BARE COPPER GROUND RING 1" BELOW GRADE.
15. (2) EQUALLY SPACED 3/4" 1/2" COPPER GULLO GROUND RODS DRIVEN TO AT LEAST 1' BELOW GRADE EXOTHERMICALLY WELDED TO THE GROUND RING.
16. EXTEND #2 CONDUCTOR FROM THE RING TO TANK STEEL AND CADWELD BOND GROUND THROUGH THE GROUND SUPPLIER.
17. REFER TO THE INSTRUMENT LIST IN SPECIFICATION SECTION 28001 FOR THE INSTRUMENTATION TO BE PROVIDED BY THE SYSTEM INTEGRATOR AND INSTALLED BY THIS CONTRACTOR. INCLUDE IN BID THE PRICE TO INSTALL AND WIRE THE GAUGE PRESSURE TRANSMITTER.
 - GAUGE PRESSURE TRANSMITTER
 - SECURITY WENTAD
 - AMBIENT TEMPERATURE TRANSMITTER

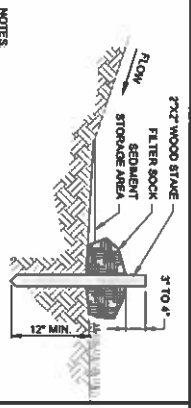


NO.	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
 HARPERFIELD WATER TANK & WATER LINE IMPROVEMENTS PROJECT
 ASHTABULA COUNTY HARPERFIELD TOWNSHIP, OHIO

DATE	BY	CHKD BY
11/27/2023		

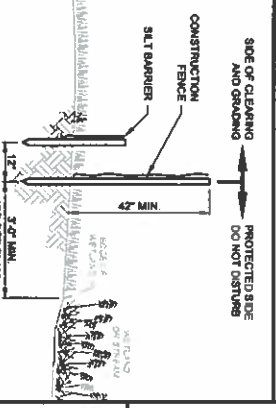
PROJECT NO.	200426
DRAWING NAME	E-02
SHEET	OF
17	21



- NOTES:
1. FILTER SOCKS SHALL BE 3' ON 5' MIN. CONTINUOUS, TUBULAR, HOPE 3/4\"/>

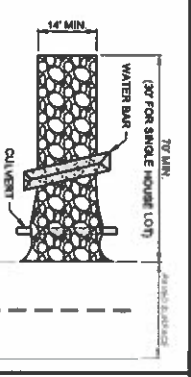
MAX SLOPE LENGTH ABOVE FILTER SOCK	
SLOPE	RATIO (H:V)
0% - 2%	0 - 50'
2% - 10%	50 - 10'
10% - 20%	15 - 5'
20% - 50%	5 - 1.2'
> 50%	> 2.1'

FILTER SOCK DETAIL
SCALE NONE



- NOTES:
1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY BARRIERS AROUND NONIMPACTED WETLANDS AND STREAMS THROUGHOUT CONSTRUCTION ACTIVITIES UNTIL THE PROJECT IS COMPLETED.
 2. CONSTRUCTION FENCE SHALL BE HIGH VISIBILITY, ORANGE COLOR, HIGH DENSITY POLYETHYLENE GRID SECURED TO STEEL POSTS LOCATED ON MAXIMUM 10' CENTERS.
 3. THE FOLLOWING ACTIVITIES ARE PROHIBITED WITHIN OR THROUGH NON-IMPACTED WETLANDS AND STREAMS:
 - A. EROSION CONTROL OTHER THAN:
 - i. STORMWATER DETENTION
 - ii. STORAGE OF CONSTRUCTION MATERIALS, DEBRIS OR EQUIPMENT
 - iii. OPERATING OR PARKING VEHICLES OR EQUIPMENT
 - E. FOOT TRAFFIC
 - F. ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES
 - G. ANYTHING THAT WOULD DESTROY THE GROUND

WETLAND BARRIER DETAIL
SCALE NONE



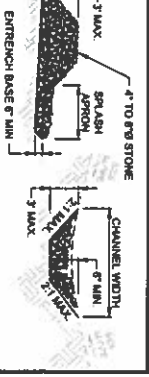
- NOTES:
1. GEOTEXTILE SHALL BE COMPOSED OF STRONG ROT-PROOF POLYESTER FIBERS MEETING THE FOLLOWING:

TENSILE STRENGTH	200 LB
PUNCTURE STRENGTH	80 PSI
TEAR STRENGTH	50 LB
BURST STRENGTH	320 PSI
ELONGATION	20%
EQUIVALENT OPENING SIZE	< 0.075 MM

EQUIVALENT OPENING SIZE	
PERMEABILITY	< 0.001 CM/SEC.

- NOTES:
2. INSTALL WATER BAR AS NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING OFF-COAST OF ROADWAY.
 3. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND, REFINISH STONE WHEN THE DEPTH IS LESS THAN 6\"/>

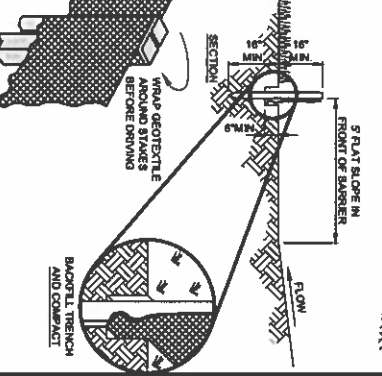
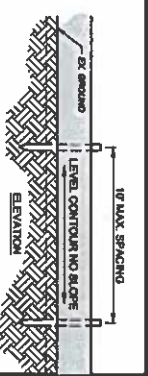
CONSTRUCTION ENTRANCE
SCALE NONE



- NOTES:
1. STONE MUST COVER THE FULL CHANNEL WIDTH.
 2. ODD-TYPE STONE IS ACCEPTABLE, BUT MUST BE INTERLUMEN WITH NO. 3 OR 4 STONE OR FILTER FABRIC.
 3. WHEN THE CHECK DAM IS TO BE A CHANNEL, THE CENTER AND AWAY FROM CHANNEL SIDES.
 4. SPACE CHECK DAMS SO TOP OF UPSTREAM DAM IS AT SAME ELEVATION AS TOP OF DOWNSTREAM DAM OR AS FOLLOWS:

CHANNEL SLOPE	
CHECK DAM HEIGHT	< 5% 5% - 10% 10% - 15% 15% - 25%
1 FT	65 FT 30 FT 20 FT 15 FT
2 FT	130 FT 65 FT 40 FT 30 FT
3 FT	200 FT 100 FT 65 FT 50 FT
 5. CHECK DAMS TO REMAIN IN USE FOR EXTENDED PERIOD OF TIME SHALL BE INSTALLED WITH A MINIMUM THICKNESS OF 2 TIMES CHECK DAM HEIGHT.

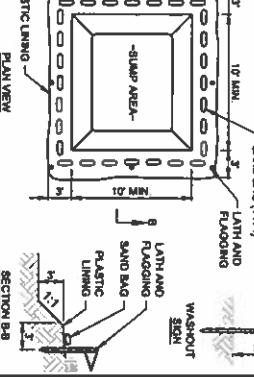
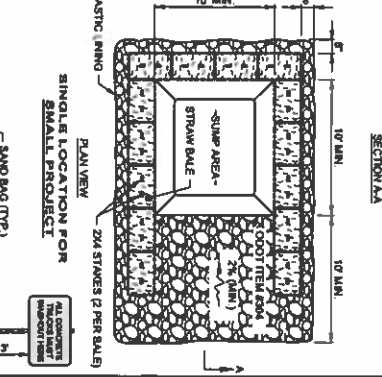
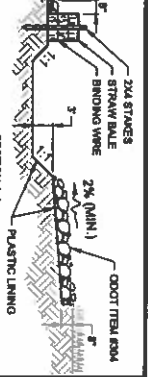
CHECK DAM DETAIL
SCALE NONE



VALUES		TEST METHOD
FABRIC PROPERTIES	80 LB MIN	ASTM D-1682
GRAVEL TENSILE STRENGTH	190 PSF MIN	ASTM D-3786
MINIMUM BURST STRENGTH	0.3 GAL./MIN./S.F. MAX	US STD. SEVE C1002215
SLURRY FLOW RATE	4-90	ASTM D-21
EQUIVALENT OPENING SIZE	80% MIN	
ULTRAVIOLET RADIATION STABILITY		

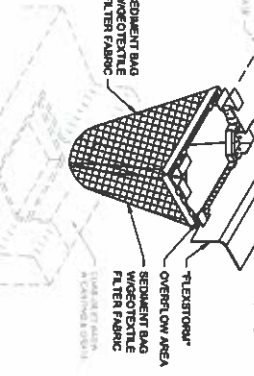
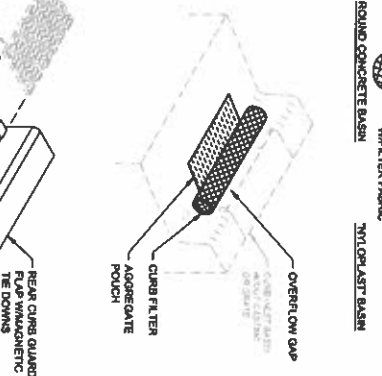
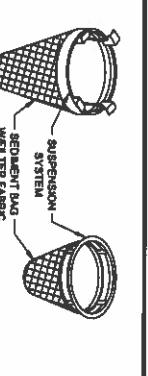
- NOTES:
1. PRESERVE VEGETATION FOR 2 FEET OR AS MUCH AS POSSIBLE UPSTREAM FROM THE SILT FENCE. VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
 2. THE MAXIMUM OPENING AREA PER 100 FEET OF SILT FENCE IS 50%.
 3. SILT FENCE MAY ONLY PASS RUNOFF AS DEFLECTED FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE MAT FENCE, FLOW UNDER OR AROUND THE ENDS OR IN ANY OTHER MANNER SHALL BE PROHIBITED. THE LAYOUT OF THE SILT FENCE SHOULD BE ACCUMULATED SEDIMENT ON INSTALL OTHER PRACTICES.
 4. SILT FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TENSILE STRENGTH, AND PROPER TENSIONING. TENTS ARE TO BE REMOVED AND RE-INSTALLED AS NECESSARY. SILT FENCE WHEN IT HAS REACHED 1/2 THE FENCE HEIGHT.

SILT FENCE
SCALE NONE



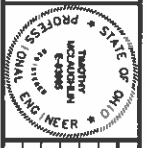
- NOTES:
1. CONCRETE WASHOUT AREA SHALL BE LOCATED A MINIMUM OF 100' FROM STORM SEWER INLETS, STREAMS, WETLANDS OR ANY OTHER SENSITIVE AREAS.
 2. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE FROM THE CONCRETE WASHOUT AREA TO THE CONSTRUCTION ENTRANCE.
 3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO ACCOMMODATE ALL CONCRETE WASHOUT FROM THE PROJECT. CONCRETE WASHOUT AREA SHALL BE PROTECTED FROM POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS INSTALLED ON A SMOOTH, LEVEL SURFACE FREE OF DUNE ROCKS AND DEBRIS.
 4. CONCRETE WASHOUT AREA SHALL BE CLEAN, VISIBLE AND LOCATED WITHIN 50 FEET OF EACH WASHOUT AREA.
 5. CONCRETE WASHOUT AREA SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOW.
 6. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE.
 7. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND DETERMINE IF IT NEEDS CLEANED OR REPAIRED. CONCRETE WASHOUT AREA SHALL BE REPAIRED IMMEDIATELY UPON DAMAGE TO THE ENTIRE CONCRETE WASHOUT AREA WHEN IT IS 75% FULL.

CONCRETE WASHOUT AREA DETAIL
SCALE NONE



- NOTES:
1. ALL NEW AND EXISTING STORM INLET BASINS WITHIN THE WORK LIMITS SHALL HAVE INLET PROTECTION INSTALLED.
 2. INLET PROTECTION SHALL BE INSTALLED AS EACH STORM INLET IS CONSTRUCTED.
 3. NOT ALL ITEMS SHOWN MAY APPLY FOR CERTAIN TYPES OR SIZES OF STORM INLETS. CONTRACTOR SHALL MEASURE EACH INLET TO CONFIGURE AND ASSEMBLE CUSTOMIZED INLET FILTERS.

INLET PROTECTION DETAIL
SCALE NONE



NO.	REVISION	DATE

ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
HARRERSFIELD WATER TANK &
WATER LINE IMPROVEMENT PROJECT
ASHTABULA COUNTY HARRERSFIELD TOWNSHIP, OHIO

NO.	DATE	BY	CHKD.

PROJECT NO.
200426
DRAWING NAME
SWPPP DETAILS 1
SHEET NO.
20 OF
21



NO.	REVISION	DATE

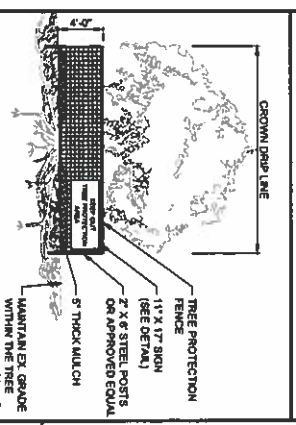
**ASHTABULA COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
HARRERSFIELD WATER TANK &
WATER LINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY HARRERSFIELD TOWNSHIP, OHIO**

SWPPP SERIES		PROJECT NO.
DATE	11/27/22	200426
DESIGNED BY	TH	DRAWING NAME
DRAWN BY	SAS	SWP3-3
CHECKED BY	TU	PROJECT
		21
		21

SWPPP DETAILS 2

- NOTES:**
- MULCH SHALL CONSIST OF ONE OF THE FOLLOWING: UNROTATED SMALL GRASS STRAW SPREAD UNIFORMLY AT 2 TONS/AC (2 TO 3 BALS).
 - WOOD-CELLULOSE FIBER (E. HORSESEEDING) APPLIED AT 1 TON/AC.
 - ROLLED EROSION CONTROL PRODUCT OR MULCH MATTING APPLIED PER MANUFACTURER RECOMMENDATION.
 - WOOD MULCH OR CHIPS APPLIED AT 5 TONS/AC.
 - MULCH SHALL BE ANCHORED IMMEDIATELY BY ONE OF THE FOLLOWING METHODS:
 - PINCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL USING A DISK, CHALKER OR SIMILAR TOOL. DO NOT FINELY CHOP STRAW TO BE MECHANICALLY ANCHORED, BUT LEAVE LONGER THAN 8"
 - NESTING PER MANUFACTURER RECOMMENDATION IN AREAS OF CONCENTRATED RUNOFF OR ON CRITICAL SLOPES.
 - SYNTHETIC BRUSHES AT MANUFACTURER RATE.
 - WOOD-CELLULOSE FIBER BARRIER AT A NET DRY WEIGHT OF 750 LB/AC, MIXED WITH WATER AND CONTAIN 50 LB/100 GAL MAX OF WOOD CELLULOSE FIBER.

MULCHING DETAIL



- NOTES:**
- THE PROTECTION FENCE MUST BE INSTALLED PRIOR TO BEGINNING CLEARING OPERATIONS AND REMAIN UNTIL FINAL GRADING HAS BEEN COMPLETED.
 - FENCE MUST BE PLACED BEYOND THE DRIP LINE OR CANOPY OF THE TREE (SEE GENERAL TECHNICAL REQUIREMENTS) FOR PROTECTION FROM OPERATIONAL EQUIPMENT.
 - POLYETHYLENE FENCING WITH 1.5" X 1.5" OPENINGS.
 - STEEL POSTS SHALL BE INSTALLED AT 8' O.C. MIN.
 - SIGN SHALL BE MAINTAINED IN PLASTIC AND SPACED DEEPLY 8' ALONG THE FENCE.
 - NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING, INCLUDING FENCE INSTALLATION AND REMOVAL.
- TREE PROTECTION DETAIL**
SCALE: NONE

SODDING DETAIL

- NOTES:**
- SOIL SHALL BE UNDISTURBED AND INSTALLED WITHIN 48 HOURS OF REMOVAL OF EXISTING VEGETATION. SOIL SHALL BE INSPECTED AND APPROVED PRIOR TO INSTALLATION.
 - SOIL SHALL BE KEPT MOIST AND COVERED DURING HAULING AND PREPARATION FOR PLACEMENT.
 - SOIL SHALL BE MATCHED TO A UNIFORM SOIL THICKNESS OF 3"± 1/4". EXCLUDING TOPGROWTH AND THATCH.
 - AREAS SHALL BE GRADED AND TOPSOIL SPREAD AS NEEDED.
 - THE SEEDBED SHALL BE PREPARED BY APPLYING RECOMMENDED BY SOIL TEST. ONE INCH OF A SOIL TEST APPLY LIME AT 100 LB/1000 SF OR FERTILIZER AT 12 LB/1000 SF OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3" BEFORE LAYING SOIL. THE SURFACE SHALL BE FINE GRADED TO 1/4"± 1/8".
 - 7 DOWNLETTER, KNOCK DOWN HIGH SPOTS AND TILL IN LOW SPOTS SO SOIL IS LEVEL AND 1" BELOW THE GRADE OF ANY PAVED SURFACE, SUCH AS CURBS, WALLS AND PAVEMENT. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURES, THE SOIL SHALL BE LIGHTLY BRIGATED PRIOR TO LAYING SOIL.
 - DO NOT PLACE SOIL ON PROZEN SOIL.
 - THE FIRST ROW OF SOIL SHALL BE Laid IN A STRAIGHT LINE AND THE SOIL SHALL BE COMPACTED TO A MINIMUM OF 90% DENSITY WEDGE AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED IN A BRICK-LIKE PATTERN. ENSURE SOIL IS NOT STRETCHED OR OVERLAPPED, AND JOINTS ARE BUTTED TIGHT ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM. SOIL CONTAINS WITHIN THESEED STRIPS AND BE SECURED WITH PEGS OR STAPLES.
 - AS SOODING IS COMPLETED IN ANY ONE SECTION, ROLL OR TAMP THE SOIL TO ENSURE SOLID CONTACT OF ROOTS WITH THE SOIL. WATER IMMEDIATELY AFTER ROLLING OR TAMPING TO MOISTEN THE SOIL. WATER SHALL BE APPLIED IMMEDIATELY AFTER THE OPERATIONS OF LAYING, TAMPING AND BRIGATING FOR ANY PIECE OF SOIL SHALL BE COMPLETED WITHIN 8 HOURS.
 - IN THE ABSENCE OF ADEQUATE RAINFALL DURING THE FIRST WEEK, WATER DAILY OR AS NECESSARY TO MAINTAIN MOIST SOIL. WATER THE FIRST WEEK, WATER SOIL AS NECESSARY TO MAINTAIN MOIST SOIL THROUGHOUT THE ESTABLISHMENT PERIOD.
 - DO NOT MOW UNTIL SOIL IS FULLY ROOTED.

PERMANENT SEEDING DETAIL

- NOTES:**
- DISBURRING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. DISBURRING IS NOT PERMITTED ON SLOPE AREAS.
 - DISTURBED AREAS SHALL BE GRADED AND TOPSOIL SPREAD.
 - THE SEED BED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND NESTONE OR FERTILIZER AS RECOMMENDED BY SOIL TEST. ONE INCH OF A SOIL TEST APPLY LIME AT 2 TONS/AC OR FERTILIZER AT 500 LB/AC OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
 - APPLY SEED UNIFORMLY ON FIRM MOIST SEED BED BETWEEN MARCH 1 AND MAY 31 OR AUGUST 1 AND SEPTEMBER 30. SOIL SHALL BE MOIST ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. SEEDING SHOULD NOT BE APPLIED BETWEEN OCTOBER 1 AND NOVEMBER 30. THE SEEDING RATE SHALL BE INCREASED AS THE SEEDING RATE BY 50% AND ANCHOR APPLY ADDITIONAL MULCH AND BRIGATION AS REQUIRED TO ENSURE GERMINATION.
 - MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING.
 - SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SOIL CONDITIONS. IRRIGATION SHALL BE APPLIED TO PREVENT EROSION AND DAMAGE FROM RUNOFF.
 - SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF SEEDING. DURING THIS PERIOD INSPECT FOR SOIL EROSION OR VEGETATION LOSS AND REPAIR AS NEEDED. REPAIRS SHALL BE DONE AT THE SAME RATE BY 50% AND ANCHOR APPLY ADDITIONAL MULCH AND BRIGATION AS REQUIRED TO ENSURE GERMINATION.
 - ADEQUATE PERMANENT VEGETATION SHALL BE OBTAINED COVER DENSE ENOUGH TO COVER 90% OF THE SOIL SURFACE BASED ON VISUAL INSPECTION.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART

HURDURE	FORMULA	LD	TIME	MOW
CREeping RED FESCUE	10-10-10	500	FALL, YEARLY	3 rd
DOMESTIC RYEGRASS	10-10-10	500	OR AS NEEDED	
KENTUCKY BLUEGRASS	10-10-10	500		
TALL FESCUE	10-10-10	500		2 nd
TURF TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING AND FALL	NO
FLAT PEA FESCUE	0-20-20	400	ESTABLISHED	NO

PERMANENT SEEDING SPECIES SELECTION

SEED MIX	SEED RATE	NOTES:

TEMPORARY SEEDING SPECIES SELECTION

DATES	SPECIES	LD/1000 SF	LB/AC
MARCH 1 - AUGUST 15	OATS	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	2	40
	TALL FESCUE	1	40
AUGUST 15 - OCTOBER 31	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	2	40
	TALL FESCUE	1	40
NOVEMBER 1 - FEBRUARY 28	ONLY MULCH OR DOMINANT SEEDING		

TEMPORARY SEEDING SPECIES SELECTION

DATES	SPECIES	LD/1000 SF	LB/AC
MARCH 1 - AUGUST 15	OATS	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	2	40
	TALL FESCUE	1	40
AUGUST 15 - OCTOBER 31	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	2	40
	TALL FESCUE	1	40
NOVEMBER 1 - FEBRUARY 28	ONLY MULCH OR DOMINANT SEEDING		

PERMANENT SEEDING DETAIL

SEED MIX	SEED RATE	NOTES:

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