

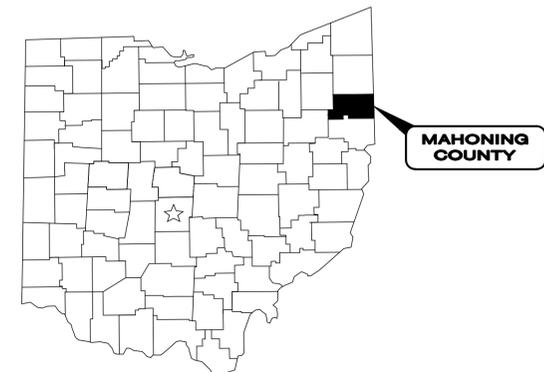
VILLAGE OF LOWELLVILLE

SANITARY SIPHON REPLACEMENT PROJECT

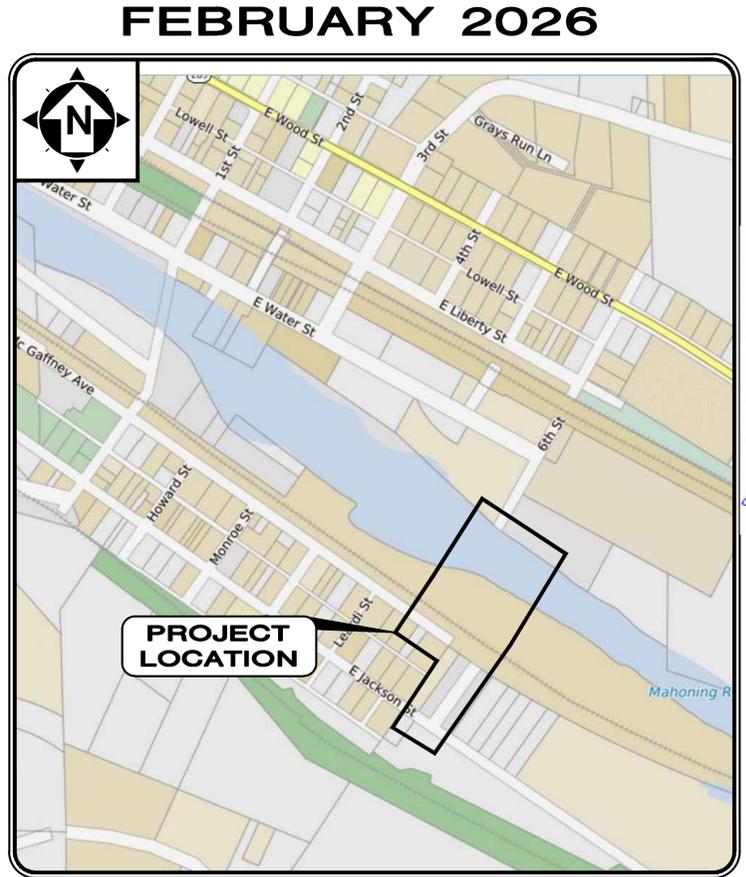
OPWC PROJECT #CF26Y
 VILLAGE OF LOWELLVILLE, OHIO



verdantas
 908 SAHARA TRAIL, SUITE 2
 YOUNGSTOWN, OHIO
 330-272-9330



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PROJECT LOCATION

LOCATION MAP
 NOT TO SCALE

GENERAL NOTE:
 ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.



ENGINEER'S PROJECT No. 210340

APPROVALS

James Iudiciani Sr.
 MAYOR JAMES IUDICIANI, SR. DATE 11/17/2025

Joann Eesenwein
 VILLAGE ADMIN. JOANN ESENWEIN DATE 11/17/2025

Tina Strait
 FISCAL OFFICER TINA STRAIT DATE 11/17/2025

COUNCIL MEMBERS

- ROBERT COPPOLA
- JOEY DONATELLI
- DONALD D'ONOFRIO
- KEITH McCAUGHTRY
- RONALD ROTUNNO
- RYAN MCNICHOLAS
- JAMES LANZO

VILLAGE OF LOWELLVILLE

APPROVED BY: *[Signature]*
 THE VILLAGE OF LOWELLVILLE WASTEWATER SUPERINTENDENT
 THIS 5 DAY OF January, 2026

ENGINEER:

VERDANTAS
 908-2 SAHARA TRAIL,
 YOUNGSTOWN, OHIO 44514
 (330) 746-1200
 (330) 746-1400 FAX
 CHRIS KOGELNIK, P.E.

Christopher M. Kogelnik 10/14/25

OUPS CALL:

OUPS CALL DESIGN SERIAL NUMBERS:
 A202700549-00A & A202700569-00A
 B202400394-00B & B202400429-00B

- OUPS CALL UTILITY LIST:**
1. AQUA OHIO - STRUTHERS
 2. DOMINION ENERGY OHIO
 3. AT&T - OHIO
 4. DOMINION ENERGY OHIO - YOUNGSTOWN
 5. LEVEL 3 COMMUNICATIONS
 6. WINDSTREAM OHIO
 7. CHARTER COMM (SPECTRUM/TIME WARNER)
 8. MCI
 9. VILLAGE OF LOWELLVILLE

1. UNDERGROUND BUILDING SERVICE 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.
 2. THE CONTRACTOR IS RESPONSIBLE TO CALL THE OHIO UTILITY PROTECTION SERVICES @ 1-800-362-2764 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

REV#	DESCRIPTION	DATE
01	PTI REVISIONS - 1	10/20/26
02	GEN NOTE REVISIONS - 1	2/13/2026
03	ELECTRIC PLAN REVISIONS - 1	2/27/2026

SANITARY SIPHON REPLACEMENT PROJECT
 VILLAGE OF LOWELLVILLE, OHIO

PROJECT NO. **210340**
 SHEET NAME **CV-1**

SHEET	OF
1	20

EXISTING LINETYPES	
FENCE, GENERAL	
FENCE, BARBED WIRE	
FENCE, CHAIN LINK	
FENCE, DECORATIVE	
FENCE, ELECTRIC	
FENCE, VINYL	
FENCE, WOOD	
FENCE, WOVEN WIRE	
CABLE RAIL	
GUARDRAIL	
HANDRAIL	
CABLE T.V., ABANDONED	
CABLE T.V.	
CABLE T.V., OH	
CABLE T.V., UG	
CABLE T.V., SERVICE	
CABLE T.V., SERVICE OH	
CABLE T.V., SERVICE UG	
COMMUNICATION, ABANDONED	
COMMUNICATION	
COMMUNICATION, OH	
COMMUNICATION, UG	
COMMUNICATION, SERVICE	
COMMUNICATION, SERVICE OH	
COMMUNICATION, SERVICE, UG	
ELECTRIC, ABANDONED	
ELECTRIC, DUCT BANK	
ELECTRIC	
ELECTRIC, OH	
ELECTRIC, UG	
ELECTRIC, SERVICE	
ELECTRIC, SERVICE OH	
ELECTRIC, SERVICE, UG	
FIBER OPTIC, ABANDONED	
FIBER OPTIC, DUCT BANK	
FIBER OPTIC	
FIBER OPTIC, OH	
FIBER OPTIC, UG	
FIBER OPTIC, SERVICE	
FIBER OPTIC, SERVICE OH	
FIBER OPTIC, SERVICE, UG	
GAS, ABANDONED	
GAS	
GAS, SERVICE	
SANITARY, ABANDONED	
SANITARY FORCE MAIN	
SANITARY SEWER	
SANITARY LEACH LINE	
SANITARY SEWER, DOUBLE	
SANITARY SEWER, SERVICE	
STORM SEWER, ABANDONED	
STORM CULVERT	
STORM SEWER	
STORM SEWER, DOUBLE	
STORM, ROOF DRAIN	
STORM, UNDERDRAIN	
TELEPHONE, ABANDONED	
TELEPHONE	
TELEPHONE, OH	
TELEPHONE, UG	
TELEPHONE, SERVICE	
TELEPHONE, SERVICE OH	
TELEPHONE, SERVICE, UG	
TRAFFIC, ABANDONED	
TRAFFIC LINE	
TRAFFIC LINE, OH	
TRAFFIC LINE, UG	
TRAFFIC, LOOP WIRE	
TRAFFIC, SPAN WIRE	
WATER LINE, ABANDONED	
WATER LINE	
WATER LINE, DOUBLE	
WATER LINE, SERVICE	

EXISTING LINETYPES	
BRUSH LINE	
BUSH LINE	
TREE LINE	
MAJOR CONTOUR	
MINOR CONTOUR	
WATER EDGE	
COUNTY LINE	
CORPORATION LINE	
ANNEXATION AREA	
SECTION LINE	
TOWNSHIP LINE	
FLOOD PLAIN LIMIT	
WETLAND LIMIT	
FARM LINE	
BOUNDARY LINE	
PROPERTY LINE	
LEASE LINE	
RIGHT-OF-WAY LINE	
RIGHT-OF-WAY C/L	
SURVEY STATIONING	

PROPOSED LINETYPES	
FENCE, GENERAL	
FENCE, BARBED WIRE	
FENCE, CHAIN LINK	
FENCE, DECORATIVE	
FENCE, ELECTRIC	
FENCE, VINYL	
FENCE, WOOD	
FENCE, WOVEN WIRE	
CABLE RAIL	
GUARDRAIL	
HANDRAIL	
ELECTRIC, DUCT BANK	
ELECTRIC, OH	
ELECTRIC, UG	
ELECTRIC, SERVICE OH	
ELECTRIC, SERVICE, UG	
GAS	
GAS, SERVICE	
SANITARY FORCE MAIN	
SANITARY SEWER	
SANITARY LEACH LINE	
SANITARY SEWER, DOUBLE	
SANITARY SEWER, SERVICE	
STORM SEWER	
STORM SEWER, DOUBLE	
STORM, ROOF DRAIN	
STORM, UNDERDRAIN	
WATER LINE	
WATER LINE, DOUBLE	
WATER LINE, SERVICE	
BUSH LINE	
TREE LINE	
MAJOR CONTOUR	
MINOR CONTOUR	
WATER EDGE	
BOUNDARY LINE	
PROPERTY LINE	
EASEMENT LINE	
LEASE LINE	
RIGHT-OF-WAY LINE	
RIGHT-OF-WAY C/L	
PHASE LINE	
TEMPORARY RIGHT-OF-WAY	
WORK LIMIT	
SETBACK	
SURVEY STATIONING	
CONSTRUCTION FENCE	
SILT FENCE	
FILTER FENCE	
FILTER SOCK	

EXISTING SYMBOLS	
SANITARY MANHOLE	
SANITARY CLEANOUT	
SANITARY LINE CAP	
SANITARY LINE PAINT MARKING	
SANITARY STRUCTURE NUMBER	
SANITARY VENT PIPE	
STORM MANHOLE (SOLID LID)	
STORM MANHOLE (OPEN GRATE)	
CURB INLET	
CURB INLET (DOUBLE)	
CATCH BASIN	
CATCH BASIN (ROUND LID)	
CATCH BASIN (DOME)	
CATCH BASIN (SIDE INLET)	
DRAIN	
DOWNSPOUT	
STORM CLEANOUT	
STORM LINE CAP	
STORM ENDWALL	
STORM HEADWALL	
STORM LINE PAINT MARKING	
STORM STRUCTURE NUMBER	
ROCK CHANNEL PROTECTION	
SURFACE DRAINAGE FLOW	
STORM FLOOD ROUTING ARROW	
FIRE HYDRANT	
WATER SIAMESE CONNECTION	
WATER VALVE	
WATER VALVE BOX	
WATER METER	
WATER METER PIT	
WATER LINE REDUCER	
WATER LINE CAP	
WATER LINE PLUG	
WATER LINE PAINT MARKING	
POST INDICATOR VALVE	
WATER MANHOLE	
WATER FLUSHING ASSEMBLY	
WATER FIXTURE	
WATER FITTING (TEE)	
WATER FITTING (CROSS)	
WATER FITTING (45° WYE)	
WATER FITTING (11.25°)	
WATER FITTING (22.50°)	
WATER FITTING (45°)	
WATER FITTING (90°)	
IRRIGATION SPRINKLER HEAD	
IRRIGATION CONTROL BOX	
IRRIGATION BOX	
STEAM MANHOLE	
BOLLARD	
COMBINED SEWER MANHOLE	
GAS LIGHT POST (YARD)	
GAS MANHOLE	
GAS VALVE	
GAS VALVE BOX	
GAS METER	
GAS REGULATOR	
GAS VENT PIPE	
GAS LINE PAINT MARKING	
GAS LINE FIXTURE	
ELECTRIC LIGHT POST (YARD)	
ELECTRIC MANHOLE	
ELECTRIC PULL BOX	
ELECTRIC CONTROL BOX	
ELECTRIC JUNCTION BOX	
ELECTRIC VAULT BOX	
ELECTRIC METER	
ELECTRIC PEDESTAL	
ELECTRIC RISER BOX	
ELECTRIC TRANSFORMER	
ELECTRIC HVAC UNIT	
ELECTRIC GROUND LIGHT	
ELECTRIC LINE PAINT MARKING	
CABLE TV MANHOLE	
CABLE TV PEDESTAL	
CABLE TV PAINT MARKING	
TELEPHONE MANHOLE	
TELEPHONE PULL BOX	
TELEPHONE PEDESTAL	
TELEPHONE RISER BOX	
TELEPHONE LINE PAINT MARKING	

EXISTING SYMBOLS	
TELEPHONE PAY PHONE	
FIBER OPTIC CABLE MANHOLE	
FIBER OPTIC CABLE PAINT MARKING	
TRAFFIC CONTROL MANHOLE	
TRAFFIC CONTROL BOX	
TRAFFIC CONTROL PAINT MARKING	
TRAFFIC PULL BOX	
TRAFFIC SIGNAL PEDESTAL	
UNKNOWN, PULL BOX	
UNKNOWN, CLEANOUT	
UNKNOWN, MANHOLE	
UNKNOWN, VALVE	
MONITORING WELL	
TEST WELL	
WATER WELL	
SOIL BORING	
SWAMP	
POLE, ELECTRIC	
POLE, TELEPHONE	
POLE, LIGHT	
POLE, LIGHT, DECORATIVE	
POLE, LIGHT-OVERHEAD	
POLE, CABLE TV	
POLE, UTILITY	
POLE, GENERAL	
POLE, TRAFFIC CONTROL	
POLE, GUY	
POLE, BRACE	
POLE, ELECTRIC/TELEPHONE	
POLE, ELECTRIC/W/LIGHT	
POLE, ELECTRIC/TELEPHONE/LIGHT	
POLE, ELECTRIC/TELEPHONE/CABLE TV	
POLE, ELEC./TELE./LIGHT/CABLE TV	
POLE, TELEPHONE/LIGHT	
SIGN, DOUBLE SIDED	
SIGN, DUAL POST	
SIGN, RAILROAD	
POST	
BOLLARD	
DELINATOR POST	
PARKING BUMPER BLOCK	
HANDICAP PARKING SYMBOL	
HANDICAP PARKING SYMBOL	
HANDICAP DETECTABLE WARNING	
MAILBOX	
PAPERBOX	
PARKING METER	
GRAVE HEADSTONE	
EX. BARBEQUE GRILL	
FUEL PUMP	
FLAG POLE	
RAISED PAVEMENT MARKER	
GUARDRAIL, CENTER POST	
GUARDRAIL, TERMINAL POST	
GUARDRAIL, BOTTOM POST	
GUARDRAIL, TOP POST	
FENCE POST	
PICNIC TABLE	
BENCH	
DECIDUOUS TREE	
EVERGREEN TREE	
STUMP	
BUSH	
IRON PIN FOUND	
SOLID IRON PIN FOUND	
IRON PIPE FOUND	
DRILL HOLE FOUND	
CHISELED "X" FOUND	
MONUMENT BOX FOUND	
MONUMENT CONCRETE FOUND	
MONUMENT RIGHT-OF-WAY FOUND	
PK NAIL FOUND	
MAG NAIL FOUND	

EXISTING SYMBOLS	
SPIKE FOUND	
HUB FOUND	
AXLE FOUND	
WOOD POST FOUND	
CORNER STONE FOUND	
AERIAL TARGET FOUND	
GPS CONTROL FOUND	
BENCHMARK FOUND	

PROPOSED SYMBOLS	
SANITARY MANHOLE	
SANITARY MANHOLE, ADJUST	
SANITARY CLEANOUT	
SANITARY LINE CAP	
SANITARY STRUCTURE NUMBER	
SANITARY VENT PIPE	
STORM MANHOLE (SOLID GRATE)	
STORM MANHOLE (OPEN GRATE)	
STORM MANHOLE, ADJUST	
CURB INLET	
CURB INLET (DOUBLE)	
CURB INLET, ADJUST	
CURB INLET (DOUBLE), ADJUST	
CATCH BASIN	
CATCH BASIN (SOLID)	
CATCH BASIN, ADJUST	
CATCH BASIN (SIDE INLET)	
DRAIN	
DOWNSPOUT	
STORM CLEANOUT	
STORM LINE CAP	
STORM HEADWALL	
STORM STRUCTURE NUMBER	
ROCK CHANNEL PROTECTION	
SURFACE DRAINAGE FLOW	
SURFACE DRAINAGE FLOW	
STORM FLOOD ROUTING ARROW	
FIRE HYDRANT	
FIRE HYDRANT, ADJUST	
WATER SIAMESE CONNECTION	
WATER VALVE	
WATER VALVE BOX	
WATER METER	
WATER LINE REDUCER	
WATER LINE CAP	
WATER LINE PLUG	
POST INDICATOR VALVE	
WATER MANHOLE	
WATER CORPORATION STOP	
WATER FLUSHING ASSEMBLY	
WATER METER	
GAS LIGHT POST (YARD)	
GAS MANHOLE	
GAS MANHOLE	
GAS VALVE	
GAS METER	
GAS REGULATOR	
GAS VENT PIPE	
ELECTRIC LIGHT (GROUND)	
ELECTRIC LIGHT POST (YARD)	
ELECTRIC MANHOLE	
ELECTRIC MANHOLE, ADJUST	
ELECTRIC PULL BOX	
ELECTRIC CONTROL BOX	
ELECTRIC JUNCTION BOX	
ELECTRIC VAULT BOX	
ELECTRIC METER	
ELECTRIC PEDESTAL	
ELECTRIC TRANSFORMER	
ELECTRIC AIR CONDITION UNIT	
POLE, ELECTRIC	
POLE, TELEPHONE	
POLE, LIGHT	
POLE, LIGHT, DECORATIVE	
POLE, CABLE TV	
POLE, UTILITY	
POLE, GENERAL	

PROPOSED SYMBOLS	
POLE, TRAFFIC CONTROL	
POLE, GUY	
POLE, BRACE	
POLE, ELECTRIC/TELEPHONE	
POLE, ELECTRIC W/LIGHT	
POLE, ELECTRIC/CABLE TV	
POLE, ELEC./TELE./LIGHT	
POLE, ELEC./TELE./CABLE TV	
POLE, ELEC./TELE./LIGHT/CABLE	
POLE, TELEPHONE/LIGHT	
POLE, TELEPHONE/CABLE TV	
POLE, TELE./LIGHT/CABLE TV	
POLE, CABLE TV W/LIGHT	
POLE, FLAG	
GUY WIRE	
POST, SIGN (SINGLE SIDED)	
POST, SIGN (DOUBLE SIDED)	
POST, SIGN (DUAL POST)	
POST (GENERAL)	
BOLLARD	
DELINATOR POST	
FENCE POST	
PARKING COUNT	
PARKING BUMPER BLOCK	
HANDICAP PARKING SYMBOL	
HANDICAP DETECTABLE WARNING	
MAILBOX	
PAPERBOX	
PARKING METER	
STREET SIGN	
TRAFFIC CONTROL MANHOLE	
TRAFFIC CONT. MANHOLE (ADJ)	
TRAFFIC CONTROL BOX	
TRAFFIC PULL BOX	
TRAFFIC SIGNAL PEDESTAL	
INLET PROTECTION	
STRAW BALE CHECK DAM	
TREE (DECIDUOUS)	
TREE (EVERGREEN)	
BUSH	

ABBREVIATIONS	
ABANDONED	ABAN.
ADJUST	ADJ.
AGGREGATE	AGG.
ASBESTOS PIPE	ASB.
ASPHALT	ASPH.
BACK TO BACK	B/B
BASEMENT FLOOR ELEVATION	BFE
BETWEEN	BT

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO INSTALL ALL SANITARY SEWERS, MANHOLES, ETC. AS SHOWN OR IMPLIED ON THE DRAWINGS AND PROVIDE A COMPLETE OPERATIVE SYSTEM TO THE SATISFACTION OF THE OWNER. RESTORATION OF ALL SURFACES AND LANDSCAPING IN A PROFESSIONAL MANNER SHALL BE INCLUDED IN THE PAY ITEMS FOR THE PROJECT.
2. CONTRACTOR MUST BE LICENSED.
3. CONTRACTORS MUST OBTAIN PERMITS TO WORK IN OR THROUGH RIGHT-OF WAYS.
4. ALL WORK COMPLETED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR AND OCCUPATIONAL SAFETY AND HEALTH ACT AS WELL AS LOCAL REGULATIONS.
5. CONSTRUCTION MEANS AND METHODS AS WELL AS THE SAFETY AND PROTECTION OF PROPERTY, WORKERS, AND THE PUBLIC IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THROUGH THE USE OF PLATING, CONSTRUCTION FENCE, AND OTHER MEANS, THE CONTRACTOR SHALL SECURE THE CONSTRUCTION SITE.
6. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK. NO EXTRAS WILL BE PERMITTED FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
7. DAILY CLEAN-UP AND FINAL CLEAN-UP SHALL BE PERFORMED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.
8. ALL DISTURBED SIGNS, GUARDRAIL, MAIL AND/OR PAPER BOXES, DRIVES AND DRIVE CULVERTS SHALL BE REPAIRED AND/OR REPLACED AS DIRECTED.
9. ALL DISTURBED AND/OR DAMAGED UTILITIES, STORM SEWER PIPES & APPURTENANCES, PAVEMENT, BERMS AND DITCHES SHALL BE REPAIRED AS DIRECTED.
10. PRESERVATION OF VEGETATION SHALL TAKE PRECEDENCE OVER REMOVAL. REMOVE ONLY THOSE TREES AND SHRUBS NECESSARY TO COMPLETE CONSTRUCTION.
11. ALL ROAD SURFACES, LAWNS, APRONS, SHOULDERS, DRIVES, OR LANDSCAPING DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT ARE TO BE RESTORED COMPLETELY TO PRE-CONSTRUCTION CONDITIONS OR BETTER BEFORE ACCEPTANCE OF WORK BY THE OWNER.
12. NO MORE THAN 50 FEET OF TRENCH SHALL REMAIN OPEN AT ONE TIME. MATERIALS EXCAVATED DURING TRENCHING SHALL BE PILED ON THE UPHILL SIDE OF THE TRENCH.
13. TRENCHES WITHIN AND ADJACENT TO THE ROADWAY OR WITHIN THE DRIVEWAYS SHALL BE BACKFILLED WITH COMPACTED GRANULAR FILL. SEE DETAILS AND PLAN NOTES.
14. CONTRACTOR IS TO COORDINATE WITH UTILITY ON BURIED FIBER OPTIC LINES, BEFORE EXCAVATION AND TO LOCATE THE FIBER OPTIC LINES AND TO AVOID CONFLICT WITH THEM.
15. BURIED FIBER OPTIC LINES ARE MISSING FROM BASE MAP, CONTRACTOR TO COORDINATE WITH UTILITY TO ENSURE EXACT LOCATIONS DURING CONSTRUCTION.
16. CONTRACTOR SHALL FOLLOW ALL STANDARDS FROM "SPECIFICATIONS FOR PIPELINE OCCUPANCY OF NORFOLK SOUTHERN CORPORATION PROPERTY" WHEN WORKING WITHIN NORFOLK SOUTHERN RIGHT-OF-WAY, AND BORING THE SANITARY LINE UNDER THEIR TRACKS.

GENERAL NOTES CONTINUED:

15. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES AND SHALL BACKFILL AND/OR GRADE AREAS TO ELIMINATE THE PONDING OF WATER.
16. THE CONTRACTOR SHALL INSTALL INLET PROTECTION, SILT FENCE AND OTHER STORM WATER PROTECTION MEASURES TO KEEP SILT AND SEDIMENT FROM LEAVING THE SITE. TOPSOIL AND SEED AS SOON AS POSSIBLE.
17. ALL ELEVATIONS AND DISTANCES ARE BELIEVED TO BE ACCURATE. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL INFORMATION SHOWN ON THE DRAWINGS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL STAKE AND ESTABLISH CONTROL FOR SANITARY SEWER LOCATIONS, AND SHALL INCLUDE THESE COSTS IN HIS BID. THE SURVEYOR SHALL RUN AN INDEPENDENT HORIZONTAL AND VERTICAL TRAVERSE THROUGH ALL BENCHMARKS AND OR CONTROL POINTS PROVIDED AND PROVIDE A RECORD COPY OF THE FIELD BOOK TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR POSSIBLE CONFLICTS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AS SOON AS THEY ARE DISCOVERED.
17. ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO BE PROTECTED AND/OR HELD IN PLACE. IF DAMAGED, THE UTILITIES ARE TO BE COMPLETELY RESTORED AT THE EXPENSE OF THE CONTRACTOR.
18. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT THE OWNER IMMEDIATELY IF FIELD LOCATED UTILITIES AFFECT THE ABILITY TO CONSTRUCT THE PROJECT PER THE PLANS.
19. THE CONTRACTOR MUST ALERT THE UTILITIES PROTECTION SERVICE AT 1-800-362-2764 AND OGPUP AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION. NON-MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. AS THE CONTRACTOR ENCOUNTERS UTILITIES HE SHALL IMMEDIATELY NOTIFY THE FIELD REPRESENTATIVE AND TAKE THE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE/RESTORE THE CONTINUANCE OF SERVICE.
20. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

THE FOLLOWING UTILITIES ARE KNOWN TO EXIST WITHIN THE LIMITS OF CONSTRUCTION:

DOMINION ENERGY OHIO 320 SPRINGSIDE DR, SUITE 320 AKRON, OHIO 44333 (330) 664-2678 ATTN: KEVIN BACH	AQUA OHIO, INC. 650 SOUTH AVENUE BOARDMAN, OH 44512 (330) 726-8151	AT&T OHIO 45 ERIEVIEW PLAZA, RM 1600 CLEVELAND, OH 44114 (216) 298-1513
OHIO EDISON COMPANY 730 SOUTH AVENUE YOUNGSTOWN, OH 44502 (330) 747-2071 ATTN: NANCY FRASCO	MCI (330) 622-5967 ALLEN GUEST	WINDSTREAM OHIO (440) 329-4245 GEOFFREY HAMM
		NORFOLK SOUTHERN CORP. 650 W. PEACHTREE STREET NW ATLANTA, GEORGIA 30308 855-667-3655 NS.COORDINATOR@RAILPROS.COM
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING A SITE FOR DISPOSAL OF ALL EXCAVATED MATERIAL THAT IS UNSUITABLE FOR USE AS BACKFILL. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH THE LOCATION OF THE DISPOSAL SITE AND WRITTEN PERMISSION FOR USE OF THE SITE FROM THE PROPERTY OWNER. THE COST FOR SECURING AND MAINTAINING THE DISPOSAL SITE SHALL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS IN THE BID PROPOSAL.
22. THE CONTRACTOR SHALL WORK WITHIN DESIGNATED STREET RIGHT-OF-WAYS, UTILITY EASEMENTS, AND CONSTRUCTION EASEMENTS WHILE CONDUCTING THIS PROJECT UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL MINIMIZE LAND AND PROPERTY DISTURBANCE WITHIN SAID RIGHT-OF-WAYS AND EASEMENTS.
23. THE CONTRACTOR SHALL NOT COMMENCE ANY CONSTRUCTION WITHOUT CONTACTING CT CONSULTANTS, INC. (330) 746-1200 A MINIMUM OF 72 HOURS IN ADVANCE OF CONSTRUCTION ACTIVITY TO ARRANGE FOR OBSERVATION. IF ANY CHANGE IN WORK SCHEDULE BECOMES NECESSARY, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT CT CONSULTANTS, INC. TO AVOID UNNECESSARY OBSERVATION COSTS. IF NO NOTIFICATION IS MADE IN REGARDS TO CANCELLATION OF WORK, THE CONTRACTOR WILL BE CHARGED FOR THE TIME INCURRED.
24. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED FROM 7:00 AM TO 7:00 PM MONDAY THROUGH FRIDAY, UNLESS OTHERWISE APPROVED BY THE OWNER AND THE ENGINEER.
25. THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS, OR ANY OTHER TYPE OF LAND MONUMENT. THE CONTRACTOR SHALL HAVE ALL MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. THE CONTRACTOR SHALL REPLACE DESTROYED OR DISTURBED LAND MONUMENTS AND SHALL FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.
26. PROPERTY LINES AND EXISTING UTILITY EASEMENTS ARE SHOWN FOR GENERAL LOCATION ONLY AND ARE BASED ON TAX MAP LOCATION. INDIVIDUAL PROPERTY SURVEYS TO LOCATE PROPERTY LINES HAVE NOT BEEN COMPLETED FOR THIS PROJECT.
27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING STRUCTURES, SUBGRADE PIPING, OR PROPERTY, AND SHALL REPAIR OR REPLACE ALL DAMAGES AT HIS OWN EXPENSE.
28. A SUBSURFACE GEOTECHNICAL INVESTIGATION AND REPORT HAS BEEN COMPLETED BY THE OWNERS GEOTECHNICAL ENGINEER. THE REPORT WILL BE MADE AVAILABLE TO THE CONTRACTOR FOR REFERENCE. THE CONTRACTOR IS STILL ENCOURAGED TO MAKE HIS OWN SUBSURFACE INVESTIGATION PRIOR TO CONSTRUCTION.
29. NO BACKFILLING OF ANY TRENCHES OR EXCAVATIONS WILL BE PERMITTED WITHOUT TAMPING EQUIPMENT BEING USED. FLOODING, JETTING, OR PUDDLING OF BACKFILL WILL NOT BE PERMITTED.
30. SLAG PRODUCTS WILL NOT BE PERMITTED FOR USE AS PIPE BEDDING OR BACKFILL MATERIAL.
31. ALL EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ROCK OR SHALE EXCAVATION.

SANITARY SEWER NOTES:

1. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO THAT THE FLOW OF ALL EXISTING SEWERS AND LATERALS WILL BE MAINTAINED AT ALL TIMES.
2. THE CONTRACTOR SHALL PROVIDE A SET OF AS-BUILT DRAWINGS WITH THE LOCATIONS AND ELEVATIONS OF ALL SANITARY SEWER, GAS SERVICES, STORM SEWERS/DRAINS, WATER SERVICES AND ALL OTHER UNDERGROUND UTILITIES ENCOUNTERED FOR THE ENTIRE PROJECT.
3. WHERE THE PLANS PROVIDE FOR THE PROPOSED SEWER TO BE CONNECTED TO OR CROSS EITHER OVER OR UNDER AN EXISTING UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITY, BOTH LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT. THERE WILL BE NO EXTRA PAYMENT FOR THE ABOVE WORK. COORDINATE FIELD ADJUSTMENTS WITH THE SANITARY ENGINEER'S OFFICE FIELD REPRESENTATIVE.
4. ALL SANITARY SEWER MATERIALS AND CONSTRUCTION ITEMS (MANHOLES, MAINLINES, JOINTS AND LATERALS) SHALL BE NEW AND IN ACCORDANCE WITH THE STATE OF OHIO EPA REGULATIONS AND STANDARDS.
5. SHOP DRAWINGS OF ALL MATERIALS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, PRIOR TO PURCHASE.
6. NOTIFY THE VILLAGE OF LOWELLVILLE SEVENTY TWO (72) HOURS PRIOR TO STARTING CONSTRUCTION.
7. NO CONSTRUCTION IS PERMITTED UNTIL WRITTEN AUTHORIZATION HAS BEEN RECEIVED FROM THE E.P.A.
8. THE CONTRACTOR SHALL SCHEDULE INSPECTION WITH REGULATORY AGENCIES SUCH THAT WORK PROGRESS IS NOT AFFECTED BY INSPECTION REQUIREMENTS.

SANITARY SEWER NOTES CONTINUED:

9. EXCAVATION OUTSIDE NORMAL WORK LIMITS SHALL NOT BE COMMENCED WITHOUT APPROVAL OF CT CONSULTANTS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING SEWAGE SYSTEM.
11. ROOF DRAINS, FOUNDATION DRAINS, AND ANY OTHER CLEAR-WATER DRAINS SHALL NOT BE CONNECTED TO THE SANITARY SEWER SYSTEM.
12. PVC GRAVITY SANITARY SEWER SHALL BE SDR 35 (LESS THAN 15' BURY) AND SDR 26 (GREATER THAN 15' BURY). PVC PIPE AND FITTINGS SHALL COMPLY WITH ASTM D3034 WITH ASTM D3212 JOINTS. PVC SANITARY SEWER SHALL BE INSTALLED WITH BEDDING CLASS 1 PER ASTM D-2321.
13. ALL FLEXIBLE PIPE GRAVITY SEWERS SHALL BE SUBJECTED TO A PIPE DEFLECTION TEST. THE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF THE VILLAGE AND SHALL NOT OCCUR UNTIL AT LEAST 30 DAYS AFTER THE SOIL/PIPE SYSTEM HAS BEEN INSTALLED. THE TEST SHALL CONSIST OF HAND PULLING A MANDREL DEVICE THROUGH THE SEWER. THE MANDREL SHALL BE EITHER A FULL CIRCLE OR 9-ARM TYPE WHICH HAS OUTSIDE DIMENSIONS WHICH ARE 95% OF THE I.D. OF THE PIPE BEING TESTED. PIPE FAILING THE MANDREL TEST SHALL BE REPLACED AT NO COST TO THE VILLAGE (INCLUDING EXCAVATION, SITE RESTORATION, RE-TESTING ETC). TESTS SHALL BE IN ACCORDANCE WITH GLUMRB 33.85 AND PROJECT SPECIFICATIONS.
14. ALL SANITARY SEWER FORCEMAIN SHALL BE DR 9 HDPE PIPE (UNLESS OTHERWISE NOTED). ALL FORCEMAIN FITTINGS SHALL BE RESTRAINED DIP, HDPE PIPE AND FITTINGS SHALL COMPLY WITH AWWA C906 WITH ASTM F2620 JOINTS. HDPE SANITARY SEWER SHALL BE INSTALLED WITH BEDDING CLASS 1 PER ASTM D-2321.
15. CONTRACTORS MUST HOLD TO THE GRADES AND ELEVATIONS ESTABLISHED BY THE ENGINEER.
16. SANITARY SEWER MUST BE 10 FEET HORIZONTALLY (MEASURED EDGE TO EDGE) FROM WATER LINES, AND MUST MAINTAIN A MINIMUM 18 INCH VERTICAL CLEARANCE AT ANY WATERLINE CROSSING.
17. SANITARY SEWER MUST BE 4 FEET HORIZONTALLY FROM STORM SEWERS AND MUST MAINTAIN A MINIMUM 1' VERTICAL CLEARANCE AT ANY STORM SEWER CROSSINGS.
18. CONTRACTORS MUST CONDUCT INFILTRATION OR EXFILTRATION TESTS IN ACCORDANCE WITH OHIO EPA REGULATIONS AND IN THE PRESENCE OF A DESIGNATED REPRESENTATIVE OF THE VILLAGE. CONTRACTOR IS TO CHOOSE THE METHOD OF CONDUCTING THE LEAKAGE TESTS AND MUST RECEIVE APPROVAL PRIOR TO STARTING CONSTRUCTION. EXFILTRATION OR INFILTRATION SHALL NOT EXCEED THE OHIO EPA LIMIT OF 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE OF SEWER PER DAY. TESTING SHALL ALSO BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
19. IF APPROVED BY THE ENGINEER, AIR TESTING MAY BE PERFORMED ON SANITARY PIPE (INSTEAD OF EXFILTRATION/INFILTRATION TESTING). AIR TESTING SHALL COMPLY WITH ASTM F1417 FOR PLASTIC PIPE AND ASTM C828 FOR CLAY PIPE. CONCRETE PIPE SHALL NOT BE SUBJECTED TO AIR TESTING. TESTING SHALL ALSO BE IN ACCORDANCE WITH SECTION 2000 OF MAHONING CONSTRUCTION AND MATERIAL SPECIFICATIONS.
20. GRANULAR BACKFILL SHALL BE USED OVER MAINS AND LATERALS WITHIN PAVEMENT LIMITS, WITHIN 5 FEET OF PAVEMENT EDGE OR WITHIN THE 1:1 ZONE OF INFLUENCE OF PAVEMENT.
21. BACKFILL MATERIAL EXTENDING MORE THAN SIX (6) INCHES ABOVE THE LEVEL OF THE SIDES OF THE TRENCH, MUST BE REMOVED FROM THE JOB SITE. ANY PAVEMENT CUT, DAMAGED OR UNDERMINED BY EXCAVATION, SHALL BE REMOVED AND REPLACED. TEMPORARY PAVEMENT REPLACEMENTS SHALL BE MAINTAINED IN GOOD CONDITION BY THE CONTRACTOR. PERMANENT REPLACEMENT MUST BE COMPLETED AS SOON AS PRACTICAL.
22. GRANULAR BEDDING SHALL BE USED PER SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
23. TOP ELEVATIONS OF MANHOLES, AS INDICATED ON THE PLAN AND PROFILE ARE APPROXIMATE AND SHOULD BE USED FOR BIDDING PURPOSES ONLY. ACTUAL TOP ELEVATIONS SHALL BE MEASURED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHOULD NOTE THAT NO EXTRAS WILL BE AWARDED NOR SHALL ANY DEDUCTION BE MADE FOR MANHOLES WHOSE AS-BUILT DEPTHS MAY VARY FROM THOSE SHOWN ON PLANS. ADJUSTMENT OF THE CASTING HEIGHT MAY BE MADE WITH CONCRETE GRADE RINGS. MAXIMUM ADJUSTMENT IS 9". NO CHANGE IN PAYMENT WILL OCCUR DUE TO AS-BUILT DEPTHS VARYING FROM PLAN DEPTHS. MANHOLE LIDS SHALL BE 0.5" ABOVE PAVED SURFACES AND TWO (2) INCHES ABOVE UNPAVED GROUND (UNLESS OTHERWISE NOTED IN THE PLANS). NO EXTRAS WILL BE PROVIDED FOR FIELD ADJUSTMENT OF MANHOLES.
24. MANHOLES SHALL BE CONSTRUCTED WITH PERMANENT GRADE ADJUSTMENTS BY USE OF CAST-IN-PLACE OR PRECAST ADJUSTING COLLARS.
25. MANHOLE JOINTS SHALL BE WATERTIGHT AND COMPLY WITH ASTM C-443.
26. ALL SANITARY MANHOLES WITH ELEVATION DROPS OF 24 INCHES OR MORE SHALL BE CONSIDERED DROP MANHOLES AND LABELED AS SUCH ON PLAN WITH CORRESPONDING DETAIL. IN ACCORDANCE WITH GLUMRB 34.2. (TEN STATE STANDARDS)
27. ALL MANHOLE SECTIONS SHALL BE VISUALLY EXAMINED FOR CRACKS OR DAMAGE THAT WOULD COMPROMISE THE WATER TIGHTNESS OF THAT SECTION. ANY DAMAGED SECTION SHOULD BE RETURNED TO THE MANUFACTURER MANHOLE. TESTING SHALL CONFORM TO 10 STATES STANDARDS SECTION 34.7 AND ASTM C-1244.
28. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A FLEXIBLE, WATERTIGHT GASKET, OR ANY WATERTIGHT CONNECTION ARRANGEMENT THAT COMPLIES WITH ASTM C-923 AND ALLOWS FOR DIFFERENTIAL SETTLEMENT TO TAKE PLACE BETWEEN THE PIPE AND THE MANHOLE WALL.
29. LATERALS SHALL BE INSTALLED AT A MINIMUM 2.0% GRADE (1/4 IN/FT). MINIMUM LATERAL PIPE SIZE SHALL BE 6 INCH DIAMETER.
30. LATERAL SEWER PIPE MUST HAVE A BELL OR SPIGOT AT THE END AND MARKED WITH A WITNESS STAKE.
31. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL LATERALS MUST BE EXTENDED TO STREET RIGHT-OF-WAY LINE AND SEALED WITH A WATERTIGHT CAP. EXACT LOCATION OF LATERAL MUST BE FIELD VERIFIED WITH THE HOME OWNER PRIOR TO CONSTRUCTION.
32. LOCATION AND LENGTHS OF ALL LATERALS SHALL BE GIVEN ON ALL CUT SHEETS AND AS-BUILT DRAWINGS.
33. HYDROSTATIC PRESSURE TESTING OF THE SANITARY FORCEMAIN WILL BE REQUIRED. HYDROSTATIC TEST FOR HDPE FORCEMANS SHALL CONFORM TO AWWA C651. MINIMUM TEST DURATION SHALL BE 2-HOURS AT 125% OPERATING PRESSURE.
34. EXISTING SIPHON LINE SHALL BE PROTECTED IN CASE ITS USE IS NEEDED IN THE FUTURE AS A CONTINGENCY CONVEYANCE LINE. ALL GRAVITY LINES GOING TO SIPHON LINE ARE TO BE WATERTIGHT PVC PLUGGED.

RESTORATION NOTES:

1. ALL MATERIALS DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND FASHION. DISPOSING OF DEBRIS ON PRIVATE PROPERTY AND/OR ON AN UNAPPROVED LANDFILL IS NOT ACCEPTABLE.
2. PROVIDE SOIL EROSION BARRIERS AS REQUIRED FOR CONSTRUCTION, AS SPECIFIED AND AS DETAILED IN THESE PLANS.
3. ALL DEWATERING FLOWS ARE TO BE KEPT FREE OF SILT, SEDIMENT, DEBRIS AND OTHER POLLUTANTS THROUGH APPROPRIATE MEANS (SETTLING BASINS, FILTERS, ETC.).
4. ONLY WATER WILL BE USED FOR DUST CONTROL. NO SEPARATE PAYMENT WILL BE MADE.



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ISSUED FOR:		REVISIONS	
PERMIT	DESCRIPTION	REV#	DATE
11/6/2025	PT1 REVISIONS - 1	01	10/20/25
AS SHOWN	GEN NOTE REVISIONS - 1	02	2/13/2026
LMM	ELECTRIC PLAN REVISIONS - 1	03	2/27/2026
LMM			
LMM			
CHK			

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

PROJECT NO.
210340

SHEET NAME
GN-1

SHEET **3** OF **20**

GENERAL NOTES 1

ELECTRICAL NOTES:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING ELECTRICAL CONDITIONS. ONCE THE EXISTING ELECTRICAL CONDITIONS ARE FIELD VERIFIED, THE CONTRACTOR SHALL REVIEW ALL CIVIL, STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. CONTRACT DOCUMENTS FOR CONFLICTS THAT WILL REQUIRE REMOVAL, MODIFICATION OR RELOCATION OF EXISTING EQUIPMENT. THE CONTRACTOR SHALL INCLUDE IN HIS BIDS THE COST ASSOCIATED WITH THIS WORK.
- THE CONTRACTOR SHALL FURNISH AT HIS OWN EXPENSE ALL ELECTRICAL POWER AND TEMPORARY ELECTRIC LINES WHICH MAY BE REQUIRED FOR THE PROJECT.

EROSION & SEDIMENTATION CONTROL NOTES:

- CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS CAUSED FROM CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS OR BETTER. FOR DISTURBED LAWN AREAS, THE CONTRACTOR SHALL INSTALL COMPACTED, SCREENED, IMPORTED TOPSOIL TO PROVIDE A SMOOTH TRANSITION FROM THE ROAD SURFACE TO THE NON-PAVED SURFACE. SEE STANDARD DETAILS AND THE FOLLOWING NOTES FOR REQUIRED SEED MIX.
 - ALL GRASS AREAS ARE TO BE RESTORED UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
 - THE COMPOSITION OF SEED MIXTURE SHALL CONFORM TO THE PROJECT DETAILS FOR SEEDING.
- EROSION CONTROL SHALL CONSIST OF TEMPORARY CONTROL MEASURES AS DETAILED ON THE PLANS OR ORDERED BY THE GOVERNING AGENCY DURING THE LIFE OF THE CONTRACT TO CONTROL SOIL EROSION AND SEDIMENTATION THROUGH USE OF EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP'S).
- TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS, THE LOCATION AND SIZE OF WHICH ARE DETAILED ON THE PLANS, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORK OPERATIONS. CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE NOT FORESEEN DURING DESIGN STAGE THAT REQUIRE ADDITIONAL OR MODIFIED TEMPORARY OR PERMANENT BMP'S SHALL BE APPROVED BY THE ENGINEER.
- SEDIMENT PONDS, SEDIMENT TRAPS, AND PERIMETER SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING. THEY SHALL CONTINUE TO FUNCTION UNTIL DISTURBED AREAS ARE RE-ESTABLISHED. NO SEDIMENT CONTROLS SHALL BE PLACED IN A STREAM.
- TRENCH DEWATERING OR DEWATERING GROUND WATER WHICH CONTAINS SEDIMENT SHALL PASS THROUGH AN EFFECTIVE SEDIMENT CONTROL DEVICE. THIS MAY INCLUDE DEWATERING INTO SUMP PIT, FILTER BAG, OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATER SHALL NOT BE DISCHARGED TO STREAMS OR THE STORM SEWER SYSTEM.
- CEMENT WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. ALL WASH WATER SHALL BE COLLECTED IN AN APPROVED, DESIGNATED CONTAINER PROVIDED BY THE CONTRACTOR, AND PLACED IN THE DESIGNATED LOCATIONS.
- CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS TO BE USED ON-SITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.
- THESE NOTES AND DRAWINGS ARE INTENDED TO SERVE AS BASIC GUIDELINES. ALL EROSION CONTROL PRACTICES SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL.
- ADDITIONAL EROSION CONTROL BMP'S MAY BE MANDATED BY THE GOVERNING AGENCY AT ANY TIME DURING THIS PROJECT AS UNFORESEEN SITUATIONS MAY ARISE THAT WARRANT FURTHER EROSION AND SEDIMENT CONTROL PRACTICES.

OFF-SITE TRACKING:

- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL INGRESS AND EGRESS LOCATIONS TO ELIMINATE OFF-SITE VEHICLE TRACKING OF SEDIMENTS. SEDIMENT SHALL BE REMOVED FROM ROADWAYS AT LEAST DAILY, OR MORE OFTEN IF REQUESTED BY THE OWNER.

PROHIBITED CONSTRUCTION ACTIVITIES:

THE CONTRACTOR SHALL NOT USE CONSTRUCTION METHODS, ACTIVITIES, OR OPERATIONS THAT MAY NEGATIVELY IMPACT THE NATURAL ENVIRONMENT OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION METHODS, ACTIVITIES, OR OPERATIONS INCLUDE BUT ARE NOT LIMITED TO:

- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOOD PLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
- INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.
- PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS.
- DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE RIVERS, STREAMS, IMPOUNDMENTS OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF A STREAM.
- REMOVAL OF TREES AND BUSHES, OR DAMAGING VEGETATION OUTSIDE THE LIMITS OF THE CONSTRUCTION AREA.
- DISPOSAL OF TREES, BRUSH AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.
- STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED BY THE ENGINEER FOR SAID PURPOSES.

CONTAMINATED SOILS:

- IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LAND FILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY. (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). NOTE THAT STORM WATER RUN OFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT AUTHORIZED UNDER OHIO EPA'S GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- OPEN BURNING IS NOT ALLOWED.

EROSION & SEDIMENTATION CONTROL NOTES:

EROSION/SEDIMENT/DUST CONTROL PRACTICES:

- STOCKPILED TOPSOIL AND EXCAVATED MATERIAL IS TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING OR COVERED WITH ANCHORED STRAW MULCH.
- FINAL GRADING WILL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.
- REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED TO PERMIT ACTUAL CONSTRUCTION: PROTECT THE REMAINING TO PRESERVE THEIR AESTHETIC AND EROSION CONTROL VALUE.
- DISTURBED LAND SHALL BE TEMPORARILY STABILIZED BY SEEDING AND/OR MULCHING.
- BACKFILL TRENCHES IMMEDIATELY AFTER EXCAVATION. SEED AND MULCH TRENCHES WITHIN TWO WEEKS AFTER TRENCHES ARE BACKFILLED.
- SILT FROM CONSTRUCTION OPERATIONS SHALL NOT BE PERMITTED TO ENTER THE STORM DRAIN SYSTEM. FOR CONSTRUCTION OCCURRING NEAR STORM DRAIN INLETS, EROSION CONTROL MEASURES, SUCH AS SILT FENCES, ROCK CHECKS, SEDIMENT BASINS, ETC., SHALL BE USED TO PREVENT SILT FROM ENTERING THE STORM DRAIN.

SPILL CONTROL AND CLEANUP:

- ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS THAT ARE CLEARLY LABELED. PREFERABLY, THE CONTAINERS WILL BE STORED IN A COVERED TRUCK OR TRAILER THAT PROVIDES SECONDARY CONTAINMENT FOR THE PRODUCTS.
- BULK STORAGE TANKS HAVING A CAPACITY OF GREATER THAN 55 GALLONS WILL BE PROVIDED WITH SECONDARY CONTAINMENT.
- PERSONNEL ON-SITE WILL BE MADE AWARE OF CLEANUP PROCEDURES AND THE LOCATION OF SPILL CLEANUP EQUIPMENT.
- ALL SPILLS WILL BE CLEANED UP USING APPROPRIATE ABSORBENT MATERIALS AND EXCAVATION AS NECESSARY. CLEANUP WASTE WILL BE CHARACTERIZED AND DISPOSED OF ACCORDINGLY.

CLEARING AND GRADING:

- LIMITS OF CLEARING AND GRADING SHALL BE CLEARLY MARKED ON SITE WITH SIGNAGE, FLAGGING AND/OR CONSTRUCTION FENCING.
- THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY EXCAVATION, BORROW, AND FILL OPERATIONS AND PROVIDE IMMEDIATE PERMANENT OR TEMPORARY CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS OR OTHER WATER COURSES, LAKES, PONDS, WETLANDS OR OTHER AREAS OF WATER IMPOUNDMENT.

TEMPORARY SEEDING:

- SEDIMENT CONTROL SHALL BE ACCOMPLISHED BY SEEDING AND STRAW MULCHING ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF EXCAVATION OR FILL AND FINISH GRADING IN ACCORDANCE WITH SPECIFICATIONS OF THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL.
- ALL DETENTION PONDS, RETENTION PONDS, WATER QUALITY STRUCTURES, SEDIMENT PONDS, SEDIMENT TRAPS, EARTHEN DIVERSIONS OR EMBANKMENTS SHALL BE SEEDED AND STRAW MULCHED WITHIN SEVEN (7) DAYS OF COMPLETED CONSTRUCTION.
- DISTURBED AREAS THAT WILL REMAIN INACTIVE FOR A PERIOD OF TWENTY-ONE (21) DAYS OR LONGER SHALL BE STABILIZED WITH SEEDING AND STRAW MULCHING, OR OTHER APPROPRIATE MEANS, WITHIN SEVEN (7) DAYS AFTER EARTH MOVING CEASES. PERMANENT SOILS STABILIZATION SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.
- STABILIZE AREAS WITHIN FIFTY (50) FEET OF ANY STREAM OR WETLAND WITHIN TWO (2) DAYS ON ALL INACTIVE DISTURBED AREAS THAT WILL REMAIN INACTIVE FOR FOURTEEN (14) DAYS OR LONGER.
- SEEDED AREAS SHALL BE INSPECTED AND WHERE THE SEED HAS NOT PRODUCED 80% COVER SHALL BE RESEED AS NECESSARY BY THE CONTRACTOR. AREAS SHALL BE STABILIZED WITH STRAW MULCH WHEN SUB-CONDITIONS PROHIBIT SEEDING.

MANHOLE NOTES:

- ALL PRECAST CONCRETE SHALL BE REINFORCED IN ACCORDANCE WITH THE LATEST REVISIONS OF A.S.T.M. DESIGNATION C478.
- ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED AND FURNISHED AS SOLID SECTION WITHOUT LIFT HOLES OF ANY KIND.
- INTERIOR - THOROSEAL INSIDE OF SANITARY MANHOLES, FULL DEPTH (ANY COLOR BUT GREY). ALL JOINTS AND CONNECTIONS TO BE WATER PLUGGED.
- ALL PRECAST CONCRETE SANITARY SEWER STRUCTURES, OTHER THAN STORM SEWER CATCH BASIN STRUCTURES, SHALL BE PRECAST USING A CONCRETE ADMIXTURE SUCH AS XYPEX CRYSTALLINE ADMIXTURE OR AN APPROVED EQUAL WHICH WILL ACT AS A WATERPROOF AGENT AND HYDROGEN SULFIDE INHIBITOR.
- FRAME AND COVER SHALL BE OF HEAVY DESIGN (475 LBS MIN. TOTAL WEIGHT). BEARING AREAS SHALL BE FINISHED SMOOTH AND FITTED SO AS TO PROVIDE A FIRM AND EVEN SEAT FOR ALL PORTIONS OF THE COVER IN THE FRAME. EACH COVER SHALL SEAT IN THE FRAME WITHOUT ROCKING AND SHALL BE MARKED AS A MATCHED FRAME AND COVER BEFORE DELIVERY TO THE PROJECT. THE BASE OF THE FRAME SHALL BE SET IN A FULL BED OF PORTLAND CEMENT MORTAR AND SO ADJUSTED TO CONFORM TO THE FINISHED PAVEMENT OR SHOULDER ELEVATION AND SLOPE. CASTINGS MEET THE REQUIREMENTS AND DESIGNED ESSENTIALLY THE SAME AND EQUALLY AS THOSE SHOWN HEREON SHALL BE PROVIDED.
- STEPS SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS. ALL STEPS SHALL HAVE A DEPRESSED THREAD OF A 1/2" MIN. CLEAT HEIGHT AT THE ENDS. STEPS INSTALLED IN FRESH CONCRETE SHALL BE EMBEDDED TO MINIMUM DEPTH OF 4". STEPS INSTALLED IN MORTAR JOINTS SHALL BE EMBEDDED TO A MINIMUM DEPTH OF 7". FRICTION-FIT STEPS WITH A 1/2" DIAMETER REBAR MAY BE USED IN PRECAST MANHOLES. THE RECEIVING HOLES FOR FRICTION-FIT STEPS SHALL NOT PENETRATE THE MANHOLE WALL. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO TEST LOAD MAXIMUM OF ONE STEP PER MANHOLE TO A PROOF LOAD OF 400 LBS. IN DIRECT PULL. THE EQUIPMENT AND METHOD USED SHALL MEET THE APPROVAL OF THE ENGINEER. IF THE SELECTED STEP FAILS THE PULLOUT TEST, THE REMAINING STEPS IN THAT MANHOLE SHALL ALSO BE TESTED. ALL STEPS NOT PASSING THE PULLOUT TEST SHALL BE REMOVED AND A NEW STEP INSTALLED AND TESTED TO THE SATISFACTION OF THE ENGINEER. COST OF TESTING SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE MANHOLE.
- DROP PIPE, WHEN SPECIFIED ON THE PLANS, SHALL BE CONSTRUCTED AS SHOWN.
- SANITARY SEWER COVERS SHALL BE WITHOUT THE PICK AND VENT HOLES SHOWN HEREON AND SHALL INCLUDE A SEALING GASKET AFFIXED TO THE BEARING SURFACE. BOLT-DOWN COVERS SHALL NOT BE USED UNLESS SPECIFIED IN THE PLANS.

MAINTENANCE OF TRAFFIC NOTES:

- MAINTAINING TRAFFIC/TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH ODOT ITEM 614 "THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". AS A MINIMUM THE CONTRACTOR SHALL SUBMIT A CONTROL PLAN FOR REVIEW AND ACCEPTANCE BY THE ENGINEER PRIOR TO BEGINNING WORK.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE LOCAL ACCESS, VEHICULAR AND PEDESTRIAN, TO ALL PROPERTIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL FURNISH, MAINTAIN AND SUBSEQUENTLY REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, BARRIERS, TEMPORARY PAVEMENT, LIGHTING, FLAGGERS, SIGNING AND OTHER TRAFFIC CONTROLS TO INSURE THE SAFETY OF PERSONS AND VEHICLES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS.
- THE CONTRACTOR WILL FURNISH AND INSTALL TRAFFIC COMPACTED SURFACE WITH ODOT 304 INCLUDING NECESSARY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL. THE COST FOR MAINTAINING TRAFFIC, TRAFFIC COMPACTED SURFACE AND DUST CONTROL SHALL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS IN THE BID PROPOSAL.
- THE CONTRACTOR SHALL POST 5 M.P.H. SPEED LIMIT SIGNS IN ALL WORK ZONES AND AS DIRECTED BY THE ENGINEER.
- ACCESS MUST BE MAINTAINED FOR RESIDENCES, EMERGENCY VEHICLES AND PEDESTRIANS INCLUDING PERSONS WITH DISABILITIES, AT ALL TIMES.
- AT ALL EXCAVATION LOCATIONS THE CONTRACTOR SHALL PROVIDE SUITABLE FLASHERS, BARRICADES, AND TRAFFIC CONTROL DEVICES AS DEEMED NECESSARY BY THE ENGINEER AND IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). SUCH TIME AS THE AREA IS COMPLETELY BACKFILLED.
- TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE LOCAL ACCESS, VEHICULAR AND PEDESTRIAN, TO ALL PROPERTIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL FURNISH, MAINTAIN AND SUBSEQUENTLY REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, BARRIERS, TEMPORARY PAVEMENT, LIGHTING, FLAGGERS, SIGNING AND OTHER TRAFFIC CONTROLS TO INSURE THE SAFETY OF PERSONS AND VEHICLES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS.
- THE VILLAGE SHALL APPROVE ALL ROAD CLOSURES AND DETOURS PRIOR TO IMPLEMENTATION.

PUMP STATION NOTES:

- OPENINGS IN RISER SECTIONS OF PRECAST CONCRETE MANHOLE AND VAULTS SHALL HAVE A.S.T.M. SPEC. C-923 OR MODULAR MECHANICAL TYPE SEAL OF INTERLOCKING SYNTHETIC RUBBER LINKS (LINKSEAL OR APPROVED EQUIVALENT). WATERTIGHT PIPE SEALS.
- JOINT SEAL BETWEEN PRECAST MANHOLE SECTIONS SHALL COMPLY WITH A.S.T.M. C-443 OR LATEST EDITION. FOLLOW SAME TONGUE AND GROOVE DETAIL AS ON MANHOLE DETAIL. ALSO FOLLOW SAME EXTERNAL JOINT DETAIL AS ON MANHOLE DETAIL.
- PRECAST STEEL REINFORCED CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. C-478. FOR BOTH THE PUMP STATION WET WELL AND THE VALVE VAULT.
- SEAL LIFT HOLES WITH APPROVED NON-SHRINK GROUT AND COAT WITH BITUMASTIC SEALANT.
- ALL PUMP STATION WET WELL AND VALVE VAULT PIPING TO BE FLANGED DUCTILE IRON PIPE CL. 53.
- PREP AND PAINT ALL EXPOSED PIPING, VALVES AND FERROUS METAL ITEMS IN VALVE PIT WITH 1 COAT (3.5 MIL) OMNITHANE PRIMER AND 1 FINISH COAT OF (4 MIL) SERIES N69 HI-BUILD EPOXOLINE II. THE INTERIOR WALLS AND CEILING OF THE PRECAST CONCRETE VALVE VAULT SHALL BE PAINTED COLOR WHITE WITH THE PRODUCT THOROSEAL OR APPROVED EQUAL.
- PREP AND PAINT ALL CONCRETE IN THE WET WELL, WITH 1 COAT (100 MILS) SHERWIN WILLIAMS DURAPLATE 6000. ALL SURFACES INCLUDING THE CONCRETE TOP AND FLOOR OF THE WET WELL SHALL BE COATED. PREP AND PAINT ALL PROCESS PIPING IN THE WET WELL WITH 1 COAT (20 MILS) SHERWIN WILLIAMS DURAPLATE 6000.
- SEE ELECTRICAL SHEETS FOR WATER LEVEL DETECTOR MOUNTING AND ELECTRICAL WIRING (OR APPROVED EQUAL).
- DISCHARGE PRESSURE GAUGES SHALL BE INSTALLED UPSTREAM OF CHECK VALVE.
- LIFT HOIST WILL BE PROVIDED AND INSTALLED BY CONTRACTOR FOR USE OF PICKING UP DEBRIS BASKET.
- EACH PUMP SHALL BE EQUIPPED WITH A STAINLESS STEEL LIFTING CHAIN AND BAIL EXTENDING FROM THE PUMP TO THE TOP OF THE WET WELL WITH AN EXTRA 5--L.F. OF CHAIN. CHAIN SHALL BE ABLE TO CONNECT TO A S.S. CLASP AT THE TOP OF THE WET WELL SO THAT OPERATIONS STAFF CAN UNCLASP CHAIN AND HOOK TO A JIB CRANE. DESIGN OF CHAIN SHALL BE COMMENSURATE WITH PUMP LOAD AND FACTOR OF SAFETY OF 3.
- CONCRETE MIX DESIGN IN CONTACT WITH WASTEWATER MUST BE IN ACCORDANCE WITH ACI 350R AND SUCH CONCRETE SHALL UTILIZE TYPE II CEMENT.
- ALL EXPANSION JOINTS AND CONTROL JOINTS SHALL BE SEALED WITH SIKAFLEX-1C SL.
- CONCRETE PAD TO HAVE A MEDIUM BROOM FINISH.



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01	PT REVISIONS - 1	10/20/28	
02	GEN NOTE REVISIONS - 1	2/13/2028	
03	ELECTRIC PLAN REVISIONS - 1	2/27/2028	
SCALE:	AS SHOWN		
DESIGNED BY:	LMH		
DRAWN BY:	LMH		
CHECKED BY:	CMK		

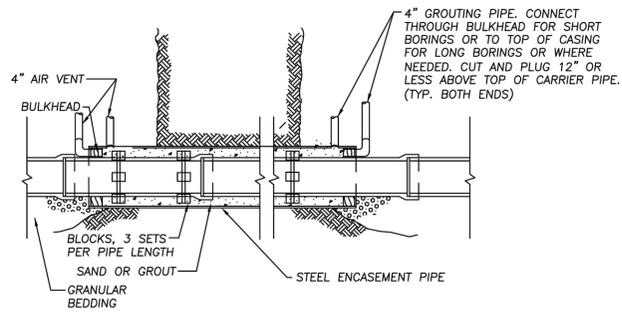
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

PROJECT NO.
210340

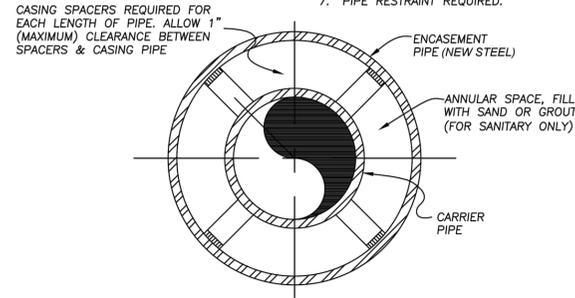
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GN-2

SHEET **4** OF **20**

GENERAL NOTES 2



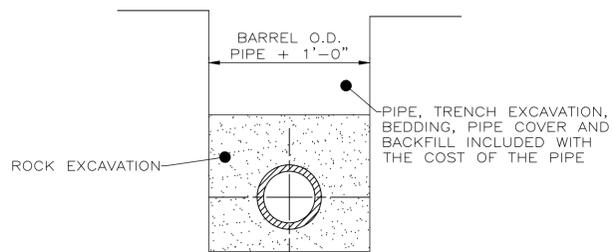
- NOTES:
1. WELD ALL ENCASEMENT PIPE JOINTS.
 2. MINIMUM THICKNESS FOR NEW CASING PIPE IS 1/2-INCHES.
 3. BLOW SAND OR POUR GROUT FROM ONE END ONLY.
 4. CASING DIAMETER SHALL BE A MINIMUM OF 6" GREATER THAN THE LARGEST O.D. OF THE CARRIER PIPE.
 5. CARRIER PIPE MUST BE CLASS 52 D.I.P. MINIMUM OR AS SPECIFIED.
 6. ALL MATERIALS SHALL BE AS LISTED ON THE LODJ APPROVED MATERIAL LIST.
 7. PIPE RESTRAINT REQUIRED.



BORING AND STEEL ENCASEMENT PIPE DETAIL

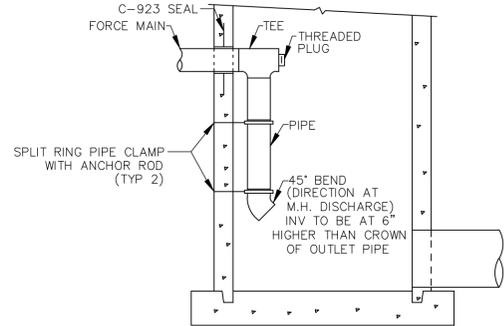
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CARRIER PIPE DIA.	STEEL CASING PIPE				TYPE OF FILL
	DIA.	THICK.	GRADE		
8"	20"	3/8"(NEW)	B		SAND



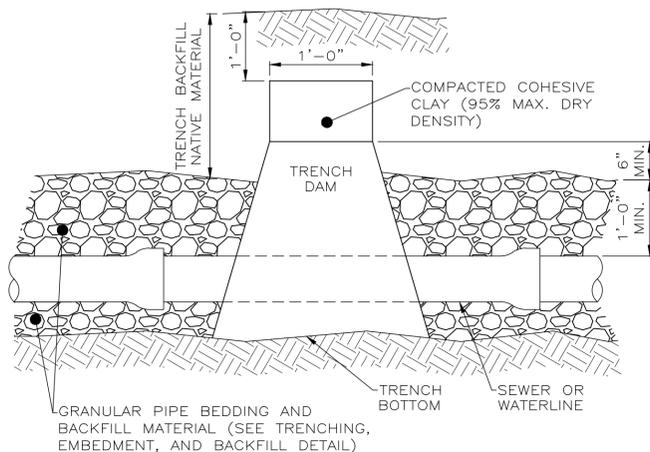
ROCK EXCAVATION

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F.M. CONNECTION TO MANHOLE

NOT TO SCALE



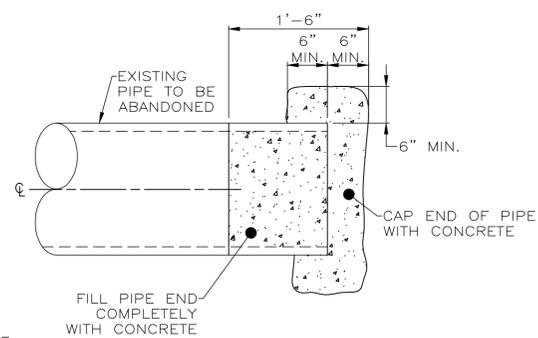
TRENCH DAM DETAIL

NOT TO SCALE

PIPE SIZE	SIZING SCHEDULE					
	22-1/2 BEND			45 BEND		
	SOIL BEARING CAPACITY			SOIL BEARING CAPACITY		
	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.
4	1.40	0.46	0.26	2.70	0.90	0.54
	0.14	0.09	0.06	0.12	0.06	0.06
6	2.80	0.93	0.56	5.50	1.83	1.10
	1.15	0.10	0.07	0.15	0.10	0.07
8	4.80	1.60	0.96	9.60	3.20	1.92
	0.20	0.13	0.09	0.23	0.15	0.09
10	7.90	2.63	1.96	15.70	5.23	3.14
	0.53	0.34	0.22	0.34	0.20	0.13
12	11.30	3.76	2.26	22.30	7.43	4.46
	0.62	0.40	0.26	0.75	0.49	0.32
14	15.30	5.10	3.06	30.20	10.06	6.04
	0.74	0.48	0.31	0.98	0.64	0.42
16	19.80	6.60	3.96	39.10	13.03	7.82
	1.17	0.76	0.49	1.21	0.79	0.51
	90 BEND			TEE OR DEAD END		
	SOIL BEARING CAPACITY			SOIL BEARING CAPACITY		
	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.
4	4.90	1.63	0.96	3.50	1.16	0.70
	0.14	0.09	0.06	0.12	0.06	0.06
6	10.20	3.40	2.04	7.20	2.40	1.44
	0.22	0.14	0.09	0.17	0.11	0.07
8	17.70	5.54	3.54	12.50	4.16	2.50
	0.35	0.23	0.15	0.25	0.16	0.14
10	28.90	9.60	5.76	20.40	6.80	4.06
	0.54	0.35	0.23	0.38	0.25	0.16
12	41.10	13.70	8.22	29.10	9.70	5.82
	1.31	0.85	0.55	0.97	0.63	0.42
14	55.80	18.60	11.16	39.50	13.16	7.90
	1.70	1.11	0.72	1.22	0.79	0.51
16	72.20	24.06	14.44	51.10	17.03	10.22
	2.14	1.39	0.90	1.54	1.00	0.65

THRUST BLOCKING DETAIL

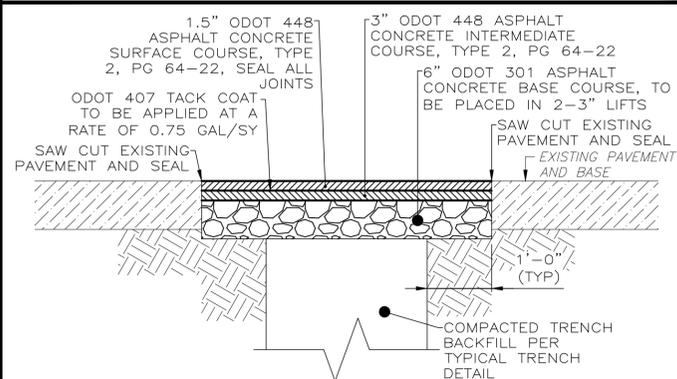
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NOTE: ALL ABANDONED IN PLACE PIPING SHALL HAVE ENDS CAPPED AND FILLED WITH SAND OR GROUT.

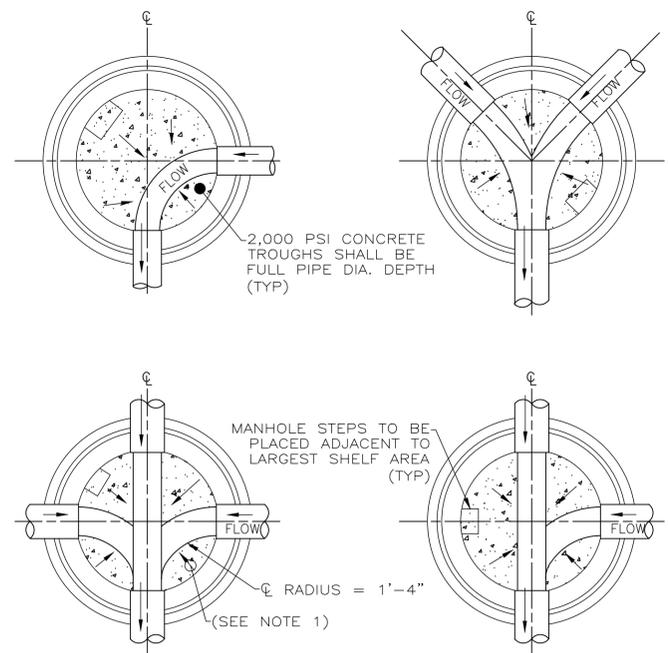
PIPE CAP DETAIL

NOT TO SCALE



ASPHALT PAVEMENT REPLACEMENT DETAIL

NOT TO SCALE



- NOTES:
1. ALL BENCHES SHALL SLOPE A MINIMUM OF 2" PER FOOT TOWARD THE FLOW CHANNEL.
 2. CONTRACTOR HAS THE OPTION OF PROVIDING PRECAST CHANNELS.
 3. NEW TROUGH FOR EXISTING MANHOLES SHALL BE 2'-0" THICK WITH STEEL REINFORCEMENT.

TYPICAL MANHOLE CHANNELS

NOT TO SCALE

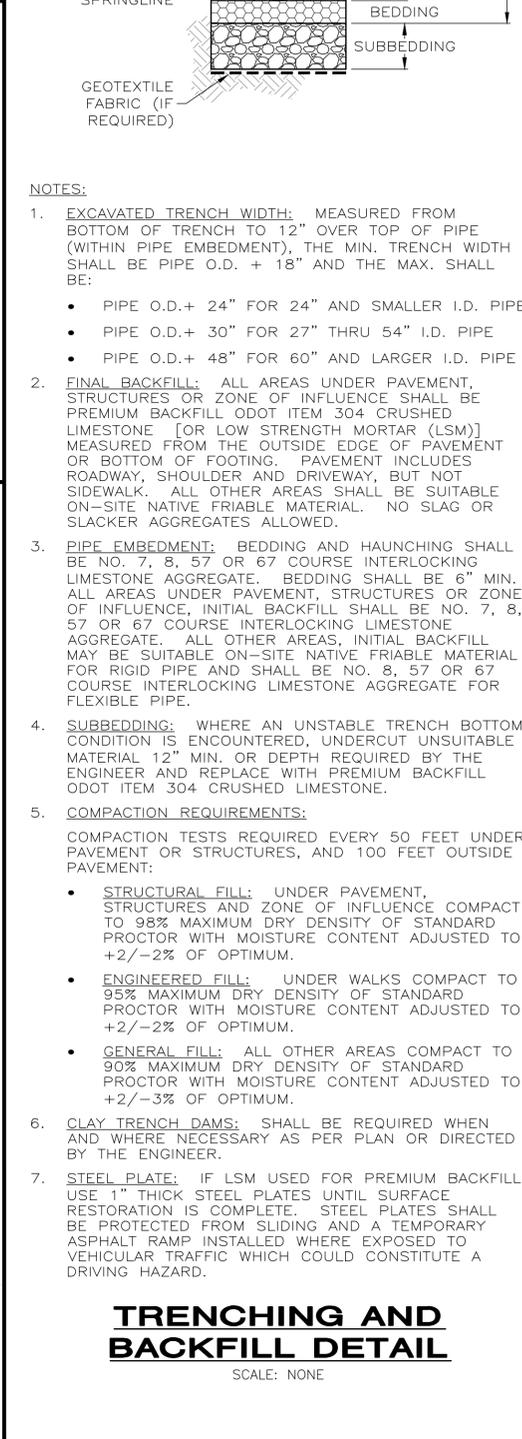
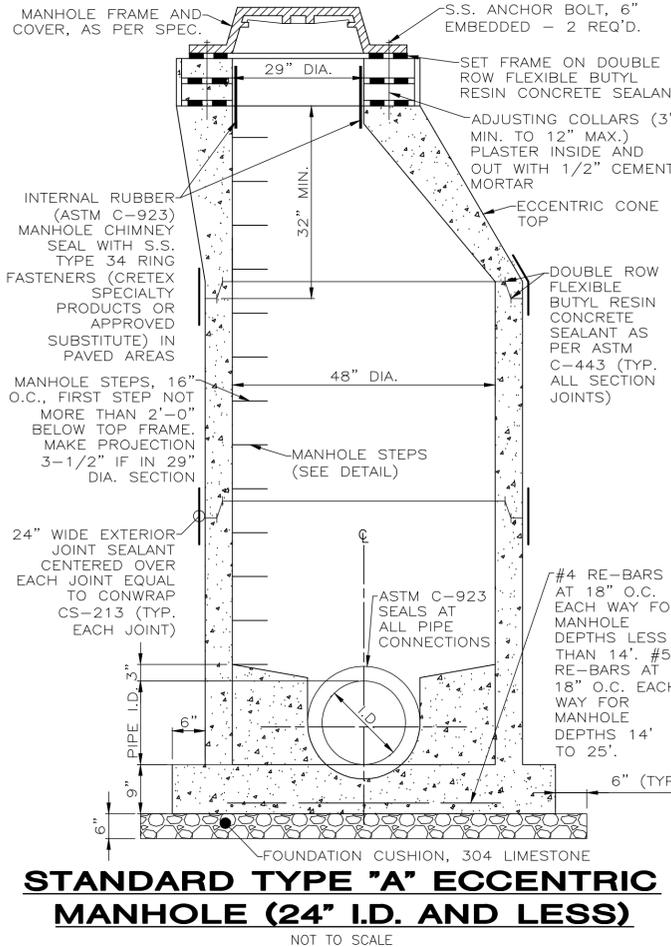
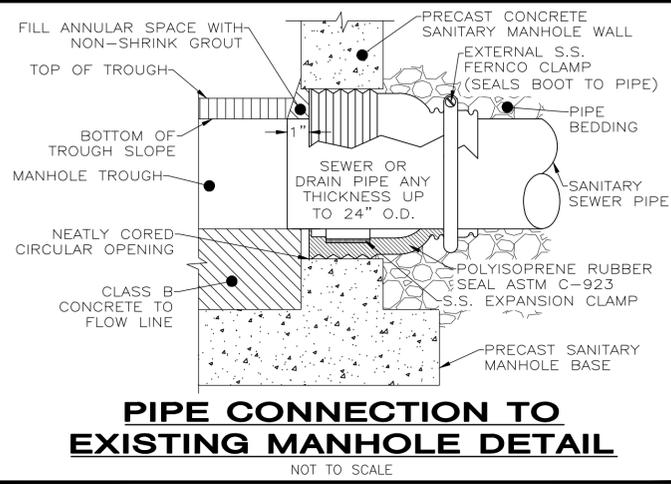
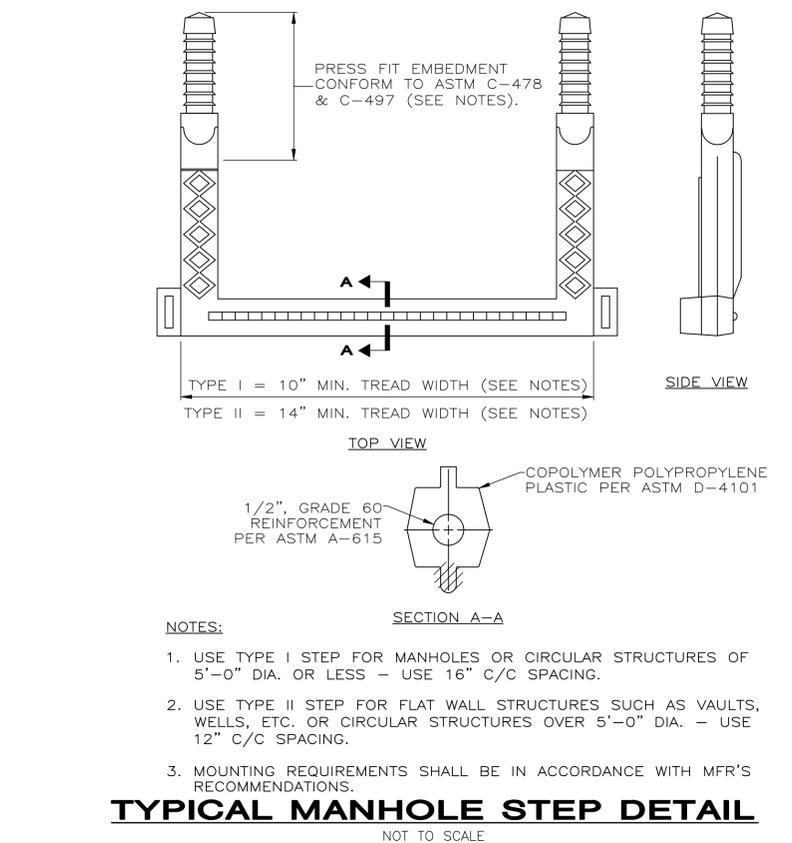
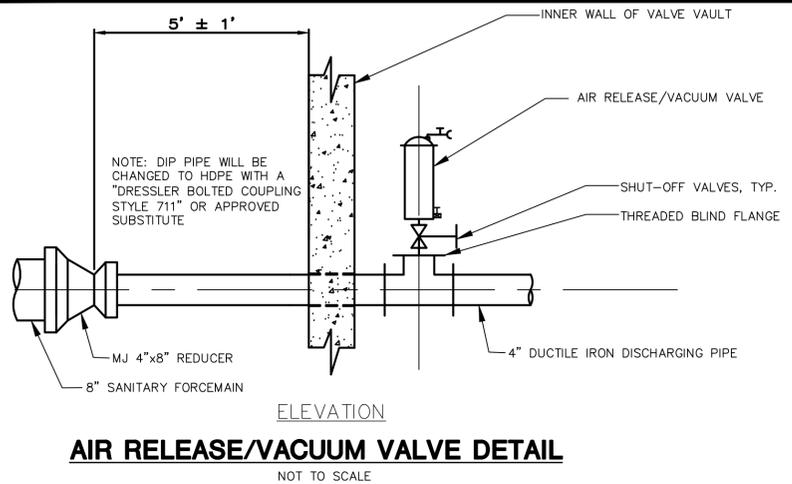


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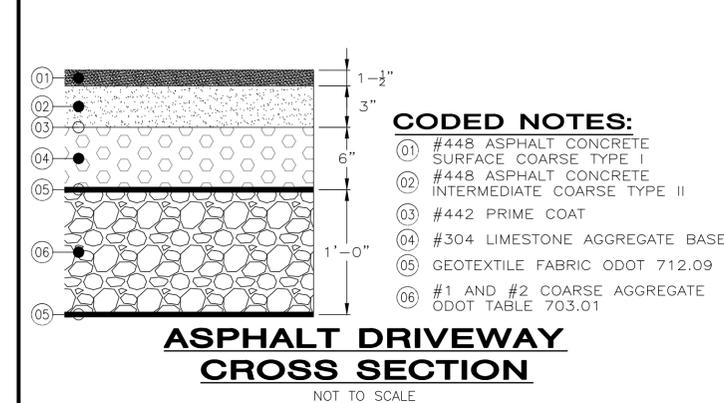
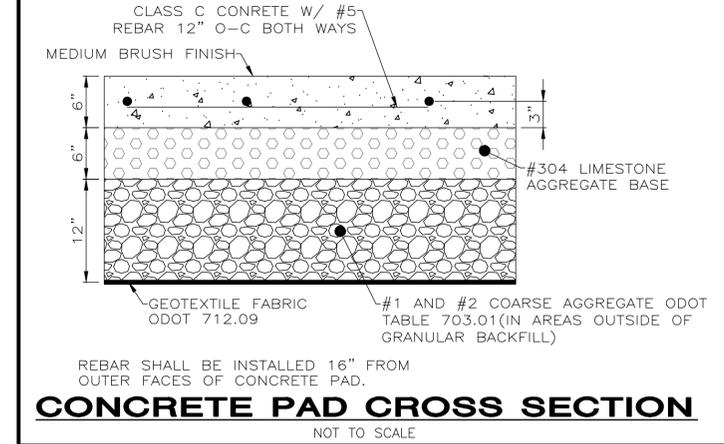
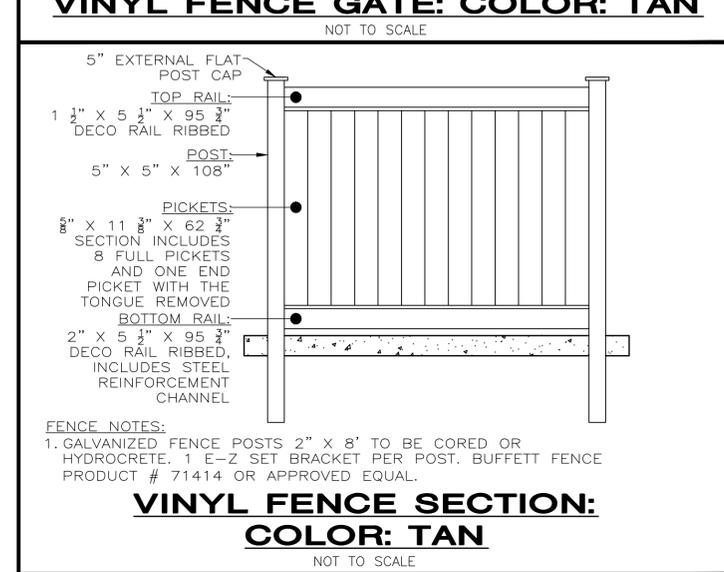
REV.	DESCRIPTION	DATE
01	PT REVISIONS - 1	16/02/08
02	GEN NOTE REVISIONS - 1	2/13/2028
03	ELECTRIC PLAN REVISIONS - 1	2/27/2028

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

PROJECT NO.	210340
SHEET NAME	CO-01
SHEET	5
OF	20



- NOTES:**
- EXCAVATED TRENCH WIDTH:** MEASURED FROM BOTTOM OF TRENCH TO 12" OVER TOP OF PIPE (WITHIN PIPE EMBEDMENT), THE MIN. TRENCH WIDTH SHALL BE PIPE O.D. + 18" AND THE MAX. SHALL BE:
 - PIPE O.D. + 24" FOR 24" AND SMALLER I.D. PIPE
 - PIPE O.D. + 30" FOR 27" THRU 54" I.D. PIPE
 - PIPE O.D. + 48" FOR 60" AND LARGER I.D. PIPE
 - FINAL BACKFILL:** ALL AREAS UNDER PAVEMENT, STRUCTURES OR ZONE OF INFLUENCE SHALL BE PREMIUM BACKFILL ODOT ITEM 304 CRUSHED LIMESTONE [OR LOW STRENGTH MORTAR (LSM)] MEASURED FROM THE OUTSIDE EDGE OF PAVEMENT OR BOTTOM OF FOOTING. PAVEMENT INCLUDES ROADWAY, SHOULDER AND DRIVEWAY, BUT NOT SIDEWALK. ALL OTHER AREAS SHALL BE SUITABLE ON-SITE NATIVE FRIABLE MATERIAL. NO SLAG OR SLACKER AGGREGATES ALLOWED.
 - PIPE EMBEDMENT:** BEDDING AND HAUNCHING SHALL BE NO. 7, 8, 57 OR 67 COURSE INTERLOCKING LIMESTONE AGGREGATE. BEDDING SHALL BE 6" MIN. ALL AREAS UNDER PAVEMENT, STRUCTURES OR ZONE OF INFLUENCE, INITIAL BACKFILL SHALL BE NO. 7, 8, 57 OR 67 COURSE INTERLOCKING LIMESTONE AGGREGATE. ALL OTHER AREAS, INITIAL BACKFILL MAY BE SUITABLE ON-SITE NATIVE FRIABLE MATERIAL FOR RIGID PIPE AND SHALL BE NO. 8, 57 OR 67 COURSE INTERLOCKING LIMESTONE AGGREGATE FOR FLEXIBLE PIPE.
 - SUBBEDDING:** WHERE AN UNSTABLE TRENCH BOTTOM CONDITION IS ENCOUNTERED, UNDERCUT UNSUITABLE MATERIAL 12" MIN. OR DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH PREMIUM BACKFILL ODOT ITEM 304 CRUSHED LIMESTONE.
 - COMPACTION REQUIREMENTS:** COMPACTION TESTS REQUIRED EVERY 50 FEET UNDER PAVEMENT OR STRUCTURES, AND 100 FEET OUTSIDE PAVEMENT:
 - STRUCTURAL FILL:** UNDER PAVEMENT, STRUCTURES AND ZONE OF INFLUENCE COMPACT TO 98% MAXIMUM DRY DENSITY OF STANDARD PROCTOR WITH MOISTURE CONTENT ADJUSTED TO +2/-2% OF OPTIMUM.
 - ENGINEERED FILL:** UNDER WALKS COMPACT TO 95% MAXIMUM DRY DENSITY OF STANDARD PROCTOR WITH MOISTURE CONTENT ADJUSTED TO +2/-2% OF OPTIMUM.
 - GENERAL FILL:** ALL OTHER AREAS COMPACT TO 90% MAXIMUM DRY DENSITY OF STANDARD PROCTOR WITH MOISTURE CONTENT ADJUSTED TO +2/-3% OF OPTIMUM.
 - CLAY TRENCH DAMS:** SHALL BE REQUIRED WHEN AND WHERE NECESSARY AS PER PLAN OR DIRECTED BY THE ENGINEER.
 - STEEL PLATE:** IF LSM USED FOR PREMIUM BACKFILL, USE 1" THICK STEEL PLATES UNTIL SURFACE RESTORATION IS COMPLETE. STEEL PLATES SHALL BE PROTECTED FROM SLIDING AND A TEMPORARY ASPHALT RAMP INSTALLED WHERE EXPOSED TO VEHICULAR TRAFFIC WHICH COULD CONSTITUTE A DRIVING HAZARD.



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REV#	DESCRIPTION	DATE
01	PTI REVISIONS - 1	10/20/26
02	GEN NOTE REVISIONS - 1	2/13/2026
03	ELECTRIC PLAN REVISIONS - 1	2/27/2026

ISSUED FOR:	PERMIT:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
		AS SHOWN	LMM	LMM	CHK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

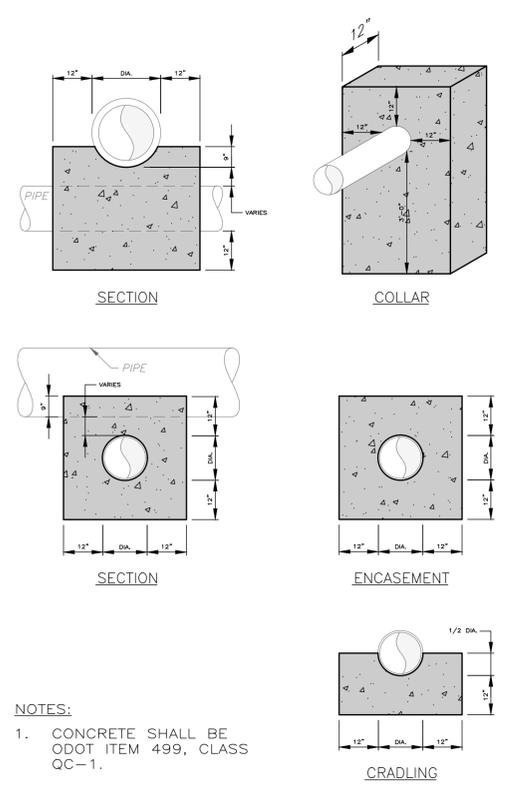
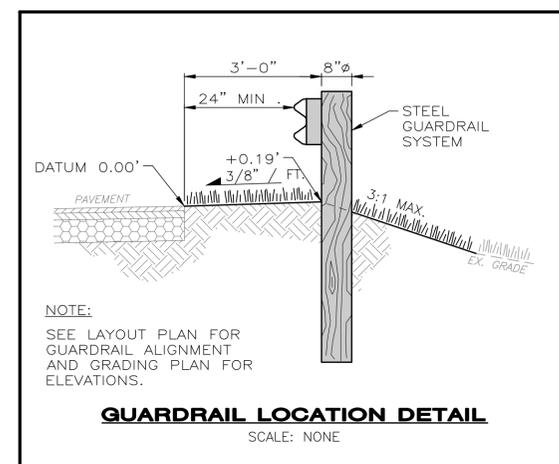
PROJECT NO.	210340
SHEET NAME	CO-02
SHEET	6
OF	20

CONSTRUCTION DETAILS 2

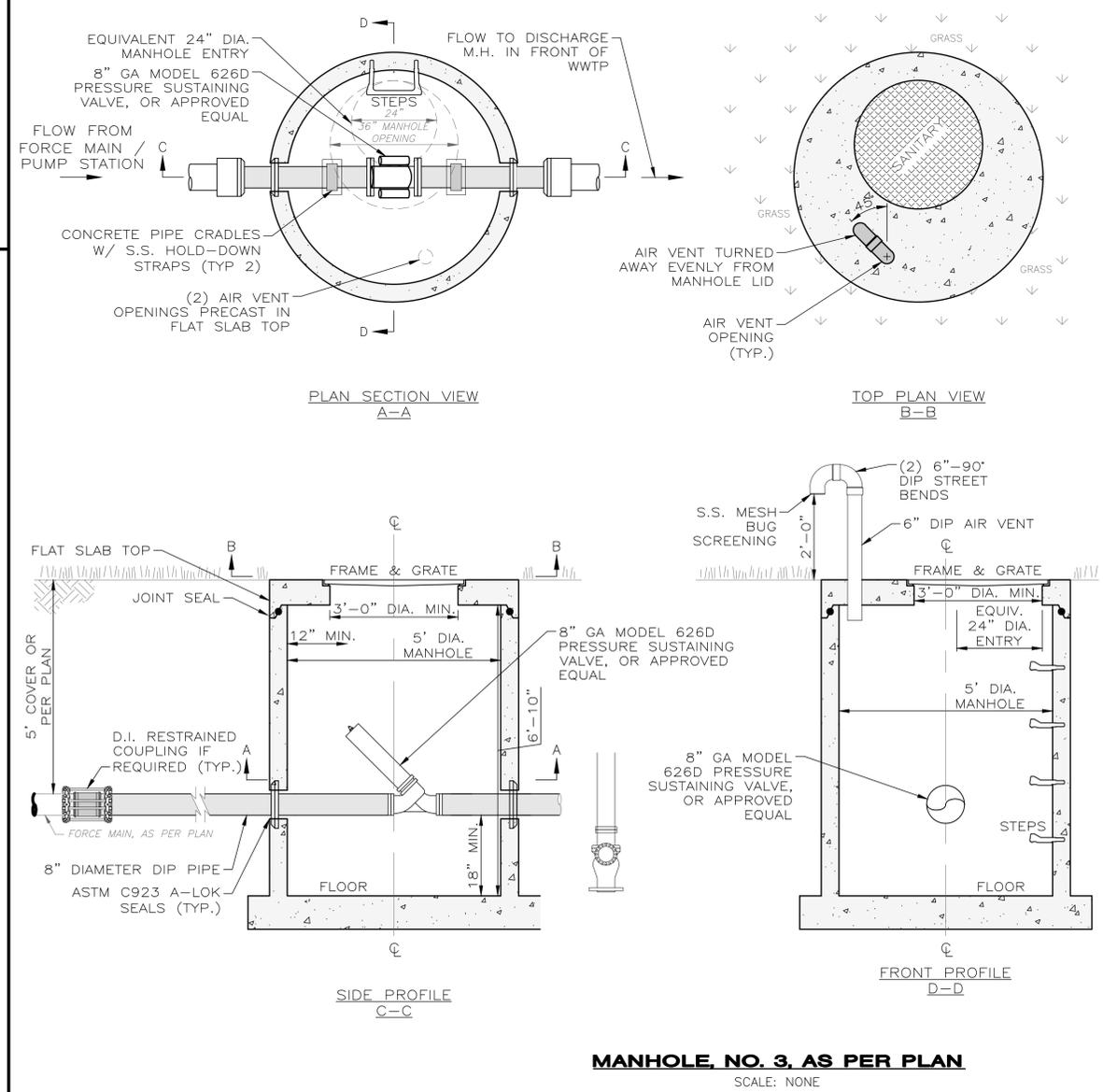


REV#	DESCRIPTION	DATE
01	PT REVISIONS - 1	16/05/2026
02	GEN NOTE REVISIONS - 1	2/13/2026
03	ELECTRIC PLAN REVISIONS - 1	2/27/2026

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		AS SHOWN	LMM	LMM	CHK



- NOTES:**
- CONCRETE SHALL BE ODOT ITEM 499, CLASS QC-1.



- NOTES:**
- THIS DETAIL SHOWS A 8" FORCE MAIN WITH 5'-0" COVER INSIDE A 5'-0" DIA. MANHOLE FOR REFERENCE ONLY; SEE PLANS FOR ACTUAL SIZES AND DIMENSIONS.
 - SEE SEPARATE PRE-CAST CONCRETE MANHOLE (SANITARY) DETAIL FOR SPECIFICATIONS.
 - MANHOLE SHALL BE A SINGLE PRECAST MONOLITHIC UNIT WITH SEPARATE H2O RATED FLAT SLAB TOP FLUSH TO GROUND GRADE.
 - MANHOLE FRAME & GRATE SHALL BE EJ V-1600-5 REVERSIBLE FRAME, SOLID GRATE LABELED "SANITARY" AND WATERTITE ASSEMBLY. FRAME SHALL BE REVERSED AND PRECAST INTO FLAT SLAB TOP.
 - IF FORCE MAIN IS NOT DUCTILE IRON PIPE, USE RESTRAINED COUPLING SYSTEM TO CONNECT 2 PLAIN ENDS OF DISSIMILAR PIPE MATERIALS, EBAA IRON SERIES 3800.
 - PRESSURE SUSTAINING VALVE SHALL BE SITUATED UNDER THE MANHOLE OPENING FOR MAINTENANCE WHILE ALSO ALLOWING SUFFICIENT ENTRY FOR MAINTENANCE PERSONNEL TO ENTER THE MANHOLE.
 - ALL EXPOSED PIPING, VALVES, FITTINGS AND FERROUS METAL ITEMS SHALL BE PAINTED PER THE PAINT SPEC.
 - AIR VENT PIPES SHALL BE CAST INTO MANHOLE FLAT SLAB TOP.
 - ABOVE GROUND AIR VENT PIPES SHALL HAVE A MINIMUM CLEARANCE OF 24" FROM THE EDGE OF ANY ROADWAY OR WALKING SURFACE.

SEEDING DATES	SPECIES	POUNDS/1,000 SF	POUNDS/ACRE
MAR. 1 TO AUG. 15	OATS	3	128 (4 BU)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	55
	PERENNIAL RYEGRASS	3.25	142
	CREeping RED FESCUE	0.4	17
	KENTUCKY BLUEGRASS	0.4	17
AUG. 16TH TO NOV.	OATS	3	128 (3 BU)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
NOVEMBER 1 TO FEB. 29	RYE	3	112 (2 BU)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	WHEAT	3	120 (2 BU)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYE	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1.25	40
CREeping RED FESCUE	3.25	40	
KENTUCKY BLUEGRASS	0.4	40	

	POUNDS/ACRE	POUNDS/1,000 SF	NOTES
GENERAL USE:			
CREeping RED FESCUE	20-40	1/2-1	FOR CLOSE MOWING & WATERWAYS WITH <2.0 FT/SEC VELOCITY
DOMESTIC RYEGRASS	10-20	1/4-1/2	
KENTUCKY BLUEGRASS	20-40	1/2-1	
TALL FESCUE	40-50	1-1 1/4	
TURF-TYPE (DWARF) FESCUE	90	2 1/4	
STEEP BANKS OR CUT SLOPES:			
TALL FESCUE	40-50	1-1 1/4	DO NOT SEED LATER THAN AUGUST
CROWN VETCH	10-20	1/4-1/2	
TALL FESCUE	20-30	1/2-3/4	
FLAT PEA	20-25	1/2-3/4	
TALL FESCUE	20-30	1/2-3/4	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES:			
TALL FESCUE	40-50	1-1 1/4	
TURF-TYPE:			
(DWARF) FESCUE	90	2 1/4	
KENTUCKY BLUEGRASS	5	0.1	
LAWNS:			
KENTUCKY BLUEGRASS	100-120	2	
PERENNIAL RYEGRASS	100-120	2	
KENTUCKY BLUEGRASS	100-120	2	
CREeping RED FESCUE	5	1-1/2	FOR SHADED AREAS
NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.			
PERMANENT SEEDING			

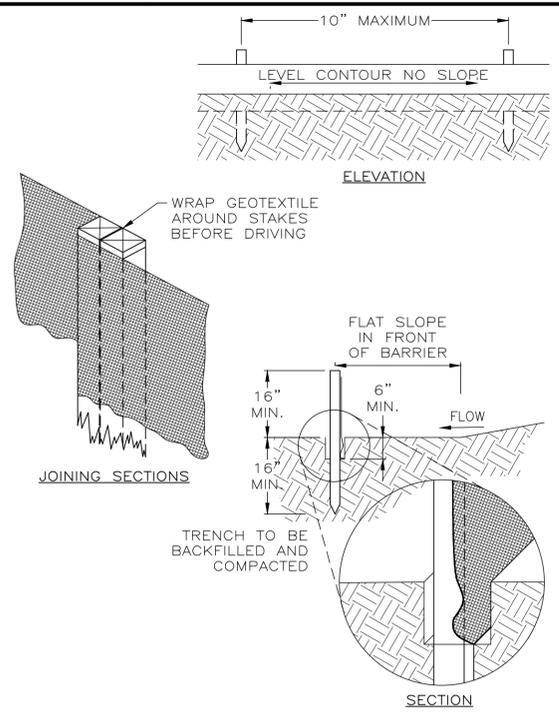
NOVEMBER 1 TO FEB. 29 USE MULCH ONLY OR DORMANT SEEDING
NOTE: OTHER APPROVED SPECIES MAY BE SUBSTITUTED.
TEMPORARY SEEDING

NOTE: STRAW MULCHING SHALL BE APPLIED AT A RATE OF 90 POUNDS PER 1,000 SF OF DISTURBED AREA OR TWO (2) TONS/ACRE. ALL HYDROSEEDING MUST BE WOOD CELLULOSE FIBER AND APPLIED AT 2,000 LBS/AC OR 46 POUNDS PER 1,000 SF.

SEEDING CHARTS

FABRIC-SILT FENCE NOTES:

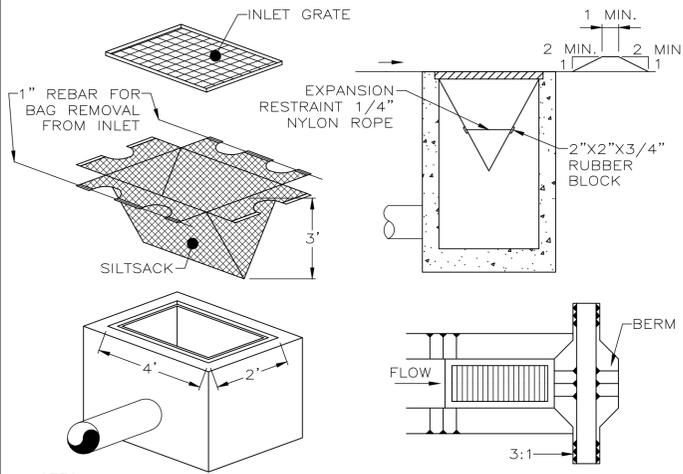
- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
- ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
- TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.
- WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
- SILT FENCE HEIGHT SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
- THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 INCHES OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH-DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.
- SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.
- SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE:
 - THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED,
 - ACCUMULATED SEDIMENT SHALL BE REMOVED, OR
 - OTHER PRACTICES SHALL BE INSTALLED.
- SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE. SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.
- CRITERIA FOR SILT FENCE MATERIALS:
 - FENCE POSTS - THE LENGTH SHALL BE A MINIMUM OF 32 INCHES LONG. WOOD POSTS WILL BE 2 X 2 INCH HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS THAT WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FEET. POSTS SHALL BE DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
 - SILT FENCE FABRIC - SEE CHART TO THE RIGHT:



MINIMUM CRITERIA FOR SILT FENCE FABRIC (ODOT, 2003)		
FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS	ASTM D 4632
MAXIMUM ELONGATION AT 60 LBS	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS	ASTM D 4833
MINIMUM TEAR STRENGTH	40 PSI	ASTM D 4533
APPARENT OPENING SIZE	≤ 0.84 mm	ASTM D 4751
MINIMUM PERMITTIVITY	1x10 ⁻² sec ⁻¹	ASTM D 4491
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4355

FABRIC SILT FENCE DETAIL

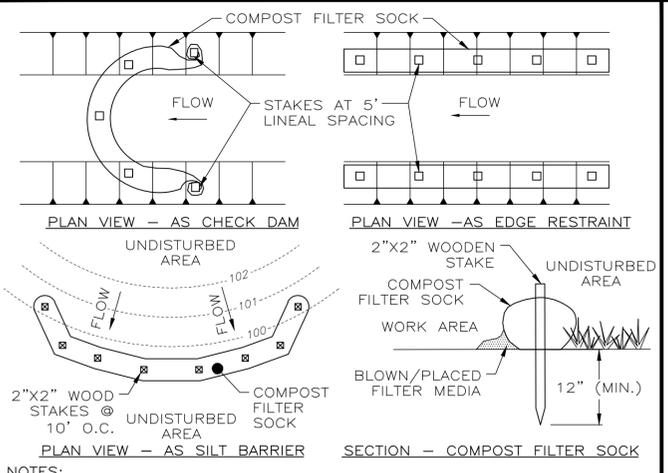
NOT TO SCALE



- NOTES:
- MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 - INLET PROTECTION IS NOT REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP.
 - BERMS REQUIRED FOR ALL INSTALLATIONS.
 - EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

SILTSACK DETAIL

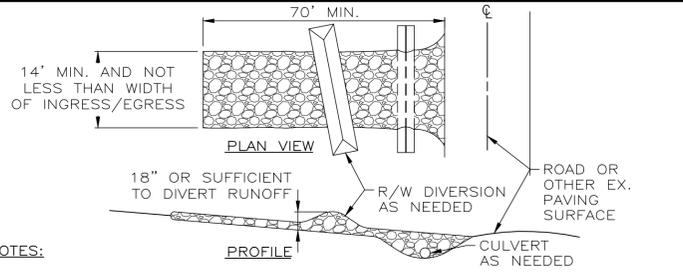
NOT TO SCALE



- NOTES:
- THIS PROJECT REQUIRES THE USE OF 8" DIA. COMPOST FILTER SOCK. SOCK FABRIC, COMPOST, USAGE, AND MAINTENANCE SHALL MEET AND FOLLOW THE STANDARDS OF THE LATEST VERSION OF THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCK.
 - COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45° TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN IN THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.
 - SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED IN THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 - BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS SHALL BE REPLACED AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 - UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK

NOT TO SCALE



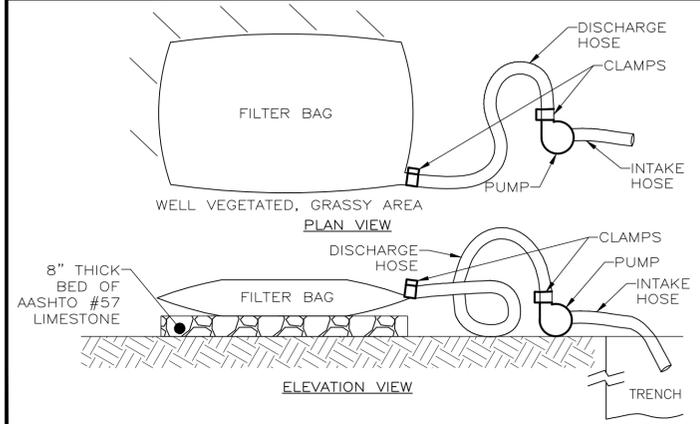
- NOTES:
- THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.
 - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FEET (EXCEPTION: APPLY 30 FEET MINIMUM TO SINGLE RESIDENCE LOTS).
 - ODOT #2 STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT. THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
 - A GEOTEXTILE SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL MEET THE FOLLOWING SPECIFICATIONS:

GEOTEXTILE SPECIFICATION FOR CONSTRUCTION ENTRANCE	
MINIMUM TENSILE STRENGTH	200 LBS
MINIMUM PUNCTURE STRENGTH	80 PSI
MINIMUM TEAR STRENGTH	50 LBS
MINIMUM BURST STRENGTH	320 PSI
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	EOS < 0.6 MM
PERMITTIVITY	1x10 ⁻³ CM/SEC

- A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCES AND OUT ONTO PAVED SURFACES.
- TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY E&SC'S, SHALL BE REMOVED IMMEDIATELY BY SCRAPING OR SWEEPING.
- VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CONSTRUCTION ENTRANCE

NOT TO SCALE



- NOTES:
- USE FILTER BAGS MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS, CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
 - A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. REPLACE FILTER BAGS WHEN THEY BECOME 1/2 FULL. KEEP SPARE BAGS AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
 - PLACE BAGS IN WELL-VEGETATED (GRASSY) AREAS, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, PROVIDE A GEOTEXTILE FLOW PATH. DO NOT PLACE BAGS ON SLOPES GREATER THAN 5%.
 - INSERT PUMP DISCHARGE HOSE INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
 - THE PUMPING RATE SHOULD BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
 - INSPECT FILTER BAGS DAILY. IF ANY PROBLEM IS DETECTED, CEASE PUMPING IMMEDIATELY AND DO NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAG DETAIL

NOT TO SCALE



verdantas
908 SAHARA TRAIL, SUITE 2
YOUNGSTOWN, OHIO 44444
330-272-9330

REV#	DESCRIPTION	DATE
01	PT REVISIONS - 1	10/20/26
02	GEN NOTE REVISIONS - 1	2/13/2026
03	ELECTRIC PLAN REVISIONS - 1	2/27/2026

ISSUED FOR:	PERMIT:	ISSUE DATE:	SCALE:	DESIGNED BY:	LMM	LMM	CHK
SANITARY SIPHON REPLACEMENT PROJECT		11/06/2025	AS SHOWN	LMM	LMM	LMM	CHK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

PROJECT NO. **210340**
SHEET NAME **CO-04**

EROSION & SEDIMENT CONTROL NOTES & DETAILS

SHEET	OF
8	20

ELECTRICAL SYMBOLS - PLAN:

	HOME RUN TO PANEL
	MOTOR
	MOTOR CONTROLLER
	FUSIBLE SAFETY SWITCH
	NON-FUSIBLE DISCONNECT SWITCH
	SIMPLEX RECEPTACLE, EXPLOSION PROOF
	DUPLEX RECEPTACLE
	QUADPLEX RECEPTACLE
	DATA PORT, RJ45
	SPECIAL RECEPTACLE, NEMA TYPE NOTED
	SINGLE-POLE SWITCH, "3" INDICATES 3-WAY, "OS" INDICATES OCCUPANCY SENSING
	DRY-TYPE TRANSFORMER
	PUSHBUTTON STATION
	LOUVER OPERATOR
	JUNCTION BOX
	SOLENOID VALVE
	LIMIT SWITCH
	FLOW: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
	LEVEL: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
	PRESSURE: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
	TEMPERATURE: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
	OTHER SENSOR / INDICATING TRANSMITTER AS NOTED
	HAZARDOUS AREA LIGHT FIXTURE
	OUTDOOR CANOPY LIGHT FIXTURE
	EXTERIOR WALL-PACK LIGHT FIXTURE
	HIGH BAY LIGHT FIXTURE
	LINEAR LED LIGHT FIXTURE
	EXIT SIGN
	EMERGENCY REMOTE HEAD
	EMERGENCY WALL-PACK
	FIRE ALARM PULL STATION, STROBE, HORN-STROBE
	FIRE ALARM AREA SMOKE DETECTOR

ELECTRIC SYMBOLS - UTILITIES:

	PR:	
		AIR CONDITIONING UNIT
		ELECTRIC CONTROL BOX
		ELECTRIC JUNCTION BOX
		ELECTRIC PULL BOX
		ELECTRIC RISER BOX
		ELECTRIC VAULT BOX
		ELECTRIC LIGHT - GROUND
		ELECTRIC LIGHT - POST
		ELECTRIC MARKER POST
		ELECTRIC METER
		ELECTRIC MANHOLE - 48"
		ELECTRIC MANHOLE - 48" - ADJUST
		ELECTRIC MANHOLE - LID
		ELECTRIC PAINT MARK
		ELECTRIC PEDESTAL
		ELECTRIC TRANSFORMER

SINGLE LINE, ELEMENTARY, & INTERCONNECTION DIAGRAMS (ONLY) SYMBOLOGY:

	DISCONNECT SWITCH - AMP RATING		N.O. LIMIT SWITCH		CONTACT - NORMALLY OPEN
	FUSE - AMP RATING		N.O. FLOW SWITCH		CONTACT - NORMALLY CLOSED
	CIRCUIT BREAKER - AMP RATING		N.O. LEVEL SWITCH		SOLENOID COIL
	MOTOR W / HORSEPOWER INDICATED		N.O. PRESSURE SWITCH		PILOT LIGHT - PUSH TO TEST (COLOR)
	AMMETER		N.O. TEMPERATURE SWITCH		GROUND
	VOLT METER		N.O. TIME DELAY AFTER ENERGIZATION		CAPACITOR
	POWER FACTOR METER		N.C. TIME DELAY AFTER ENERGIZATION		2 POSITION SELECTOR SWITCH
	GROUND FAULT RELAY		N.C. TIME DELAY AFTER DE-ENERGIZATION		3 POSITION SELECTOR SWITCH
	TRANSFORMER		N.O. TIME DELAY AFTER DE-ENERGIZATION		EQUIPMENT FIELD TERMINAL
	RELAY COIL		N.O. SWITCH (GENERAL)		LOCAL PANEL / BLDG WIRING
	TIMING RELAY COIL		START PUSHBUTTON NORMALLY OPEN		EXTERNAL / FIELD WIRING
	MOTOR STARTER COIL		STOP PUSHBUTTON NORMALLY CLOSED		
	ELAPSED TIME TOTALIZER				
	GROUNDING BUS				
	TRANSIENT VOLTAGE SURGE SUPPRESSOR				

ABBREVIATIONS:

x-CSC	x-CONDUCTOR SHIELDED CABLE	IAW	IN ACCORDANCE WITH	R	RELAY
A	AMPS	ICP	INSTRUMENTATION & CONTROL PANEL	RCP	REINFORCED CONCRETE PIPE
AF	AMPERE FRAME	IPP	INSTRUMENT POWER PANEL	RL	RUN LIGHT
AI	ANALOG INPUT (PLC)	JB	JUNCTION BOX	SCP	SURGE CONTROL PANEL
AL	ALUMINUM	JBC	JUNCTION BOX-CONTROL	SCR	SILICON-CONTROLLED RECTIFIER
AM	AMMETER	JBM	JUNCTION BOX-METERING	SEC	SECONDARY
AO	ANALOG OUTPUT (PLC)	JBP	JUNCTION BOX-POWER	SF	SUPPLY FAN
AP	ALARM PANEL	KCM	KILO (1000) CIRCULAR MILL	SHLD	SHIELDED
AT	AMPERE TRIP	kVA	KILOVOLT AMPERES	SP	SHEAR PIN SWITCH
AWG	AMERICAN WIRE GAUGE	kVAR	KILOVOLT AMPERES-REACTIVE	SPK	SPEAKER
C	CONDUIT	kW	KILOWATT	SS	SELECTOR SWITCH OR STAINLESS STEEL
CAP	CAPACITOR	LA	LIGHTING ARRESTOR	SSR	SOLID STATE OVERLOAD RELAY
CB	CIRCUIT BREAKER	LGT	LIGHT	SSPB	START/STOP PUSHBUTTON
CJB	CONTROL JUNCTION BOX	LOR	LOCAL/OFF/REMOTE SELECTOR SWITCH	SSS	SOLID STATE STARTER
CP	CONTROL PANEL	LP	LIGHTING PANEL	STD	STANDARD
CPT	CONTROL POWER TRANSFORMER	LS	LEVEL SWITCH	STP	SHIELDED TWISTED PAIR
CR	CORROSION RESISTANT	MCC	MOTOR CONTROL CENTER	STR	STARTER
CS	CONTROL STATION	MCP	MOTOR CIRCUIT PROTECTOR	SV	SOLENOID VALVE
CT	CURRENT TRANSFORMER	MDP	MAIN DISTRIBUTION PANEL	SW	SWITCH
CU	COPPER	MJB	METERING JUNCTION BOX	T	TELEPHONE
DB	DUCT BANK	NEC	NATIONAL ELECTRICAL CODE	TB	TERMINAL BOARD
DI	DIGITAL INPUT (PLC)	NEMA	NATIONAL ELECTRICAL MFR ASSOC.	TC	TIME CLOCK
DO	DIGITAL OUTPUT (PLC)	NEU	NEUTRAL	TD	TRENCH DUCT
EAG	ELECTRICALLY ACTIVATED GATE	NFDS	NON-FUSED DISCONNECT SWITCH	TEB	TELEPHONE EQUIPMENT BACKBOARD
EAV	ELECTRICALLY ACTIVATED VALVE	OCSS	OPEN/CLOSE SELECTOR SWITCH	TEMP	TEMPERATURE
EF	EXHAUST FAN	OL	OVERLOAD	TOR	THERMAL OVERLOAD RELAY
ESPB	EMERGENCY STOP PUSHBUTTON (MAINTAINED)	OOSS	ON/OFF SELECTOR SWITCH	TR	TIMING RELAY
ETT	ELAPSED TIME TOTALIZER	OS	OCCUPANCY SENSING	TSP	TWISTED SHIELDED PAIR
EWD	ELEMENTARY WIRING DIAGRAM	OT	OVER TORQUE SWITCH	TSTAT	THERMOSTAT
FDS	FUSED DISCONNECT SWITCH	P	POLE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FLA	FULL LOAD AMPERES	PB	PUSHBUTTON	UH	UNIT HEATER
FS	FLOW SWITCH	PBC	PULLBOX-CONTROL	UNO	UNLESS NOTED OTHERWISE
FVC	FULL VOLTAGE CONTACTOR	PBM	PULLBOX-METERING	UPS	UNINTERRUPTIBLE POWER SUPPLY
FVNR-1	FULL VOLTAGE NON-REVERSING STARTER SIZE 1	PBP	PULLBOX-POWER	UTP	UNSHIELDED TWISTED PAIR
GFI	GROUND FAULT INTERRUPTER	PC	PHOTO CONTROL	V	VOLTS
GND	GROUND	PF	POWER FACTOR	VC	VOLUME CONTROL
GFR	GROUND FAULT RELAY	PH	PHASE	VFD	VARIABLE FREQUENCY DRIVE
HOA	HAND/OFF/AUTO SELECTOR SWITCH	PLC	PROGRAMMABLE LOGIC CONTROLLER	VM	VOLT METER
HP	HORSEPOWER	PJB	POWER JUNCTION BOX	XP	EXPLOSION PROOF
HT	HIGH TORQUE SWITCH	PP	POWER PANEL	XFMR	TRANSFORMER
HTR	HEATER	PRI	PRIMARY	WP	WATERPROOF
HZ	HERTZ	PS	PRESSURE SWITCH	ZS	LIMIT SWITCH
		PT	POTENTIAL TRANSFORMER		

ELECTRICAL CODED NOTES:

	NEW WORK - NOTE 1		DEMOLITION - NOTE 1		REVISION - NOTE 1
	NEW WORK - NOTE 1		DEMOLITION - NOTE 2		REVISION - NOTE 2
	NEW WORK - NOTE 1		DEMOLITION - NOTE 3		REVISION - NOTE 3

ELECTRICAL GENERAL NOTES:

- ALL ELECTRICAL EQUIPMENT AND MATERIALS WILL BE SELECTED AND INSTALLED IN COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL FIRE CODES, INCLUDING BUT NOT LIMITED TO ALL PERTINENT NFPA REGULATIONS. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH THESE CODES.
 - DO NOT INSTALL DEVICES SCALED FROM THESE DRAWINGS. ALL DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN IN THE APPROVED CONDUIT/DEVICE LAYOUT DRAWINGS AND WITH DIMENSIONS TAKEN IN THE FIELD.
 - ELECTRICIAN TO VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID.
 - NO DUCTWORK OR PIPING TO BE RUN ABOVE ELECTRICAL PANELS OR THROUGH ELECTRICAL EQUIPMENT ROOMS. ELECTRICIAN SHALL COORDINATE WITH ALL TRADES FOR EQUIPMENT LAYOUTS PRIOR TO ROUGH-IN OF ALL SYSTEMS.
 - MANUFACTURERS AND CATALOG NUMBERS SHOWN IN THE LIGHT FIXTURE SCHEDULE ARE PROVIDED TO INDICATE DESIRED LIGHT FIXTURE CHARACTERISTICS. IT IS THE INTENT OF THE DOCUMENTS TO ALLOW ALTERNATE MANUFACTURERS TO PROVIDE LIGHTING PRODUCTS FOR THE PROJECT, AS LONG AS PROPOSED ALTERNATES PROVIDE THE SAME GENERAL DESIGN AND LIGHTING CHARACTERISTICS AS NOTED IN THE LIGHT FIXTURE DESCRIPTION.
 - ELECTRICIAN TO CONFIRM LOCATIONS OF ALL ELECTRICAL EQUIPMENT AND ELECTRICAL CHARACTERISTICS OF PROCESS EQUIPMENT PROVIDED BY OTHER TRADES PRIOR TO INSTALLING ROUGH-INS AS SHOWN ON THE ELECTRICAL PLANS. ALL SHOP DRAWING REQUIREMENTS WILL BE CONSIDERED AS THE MEANS AND METHODS OF INSTALLATION.
 - THIS PROJECT INVOLVES WORK AT AN MUNICIPAL SEWAGE PUMPING FACILITY AND THE CONTRACTOR IS EXPECTED TO PROVIDE CRAFTSMANSHIP REFLECTING THE NATURE OF THE FACILITY. CONDUITS IN PROCESS AREAS ARE TO BE SURFACE MOUNTED RIGID GALVANIZED STEEL (RGS), IN CLASSIFIED AREAS SEAL ALL CONDUITS TO RESTRICT THE PASSAGE OF GASSES AND VAPORS, AND ARRANGE SEALING FITTING DRAINS IN CONDUIT SYSTEMS TO PREVENT ACCUMULATION OF CONDENSATE ABOVE SEALS. ALL CONDUITS ENTERING OR LEAVING A MOTOR CONTROL CENTER, CONTROL PANEL, VALVE ACTUATOR, INSTRUMENT, A BUILDING, OR A PANELBOARD SHALL BE MADE WATERTIGHT USING AN INFLATABLE SEALED BLADDER DUCT SEALING SYSTEM, RAYCHEM RAYFLATE DUCT SEALING SYSTEM RDSS OR APPROVED EQUAL. ALL HARDWARE IS TO BE STAINLESS STEEL UNLESS OTHERWISE DIRECTED.
- ALL ENCLOSURES ARE TO BE RATED AS FOLLOWS (UON):**
- OUTDOORS: NEMA 4X (STAINLESS STEEL)
 - CLASSIFIED AREAS: NEMA 7
 - INDOORS (CORROSIVE AREAS): NEMA 4X (STAINLESS STEEL)
 - INDOORS (CONTROLLED ENVIRONMENT) NEMA 12
- ELECTRICIAN SHALL REVIEW ALL OTHER TRADES' CONSTRUCTION DOCUMENTS AND/OR COORDINATE WITH OTHER TRADES AND VERIFY IF THERE ARE ANY ADDITIONAL ELECTRICAL REQUIREMENTS NOT SHOWN ON ELECTRICAL DRAWINGS. COST FOR WORK SHOWN ON OTHER TRADES' DRAWINGS SHALL BE INCLUDED IN BASE BID. ALL FIELD WIRING AND TERMINATIONS OF PROCESS EQUIPMENT AND INSTRUMENTATION AND CONTROLS SHALL BE THE RESPONSIBILITY OF THE ELECTRICIAN. ALL CABLES AND WIRES PROVIDED BY VENDORS SHALL BE INSTALLED AND TERMINATED BY THE ELECTRICIAN. WIRE ALL MISCELLANEOUS POWER AND CONTROLS AS REQUIRED TO PROVIDE A COMPLETE FUNCTIONING SYSTEM.
 - A 4-20mA SIGNAL IS AN ANALOG SIGNAL USED TO TRANSMIT DATA (LEVEL, FLOW, ETC.) FOR PROCESS CONTROLS. THE ELECTRICIAN SHALL PROVIDE, INSTALL, AND TERMINATE SHIELDED TWISTED PAIRS (STP) WIRING IN RIGID GALVANIZED STEEL CONDUIT (RGS). RGS IS USED IN AN ATTEMPT TO REDUCE THE DISTORTION AFFECT FROM EMI AND RFI. BELOW GRADE CONDUITS SHALL BE PVC SCHED-40. PARALLEL RUNS OF POWER AND CONTROL / SIGNAL CONDUITS SHALL BE SEPARATED BY THE GREATER OF THE MINIMUM SEPARATIONS REQUIRED BY NEC AND THE FOLLOWING MINIMUMS, UNLESS NOTED OTHERWISE:
480/277V POWER TO CONTROL/SIGNAL CONDUITS: 2 FEET MINIMUM
120/240V POWER TO CONTROL/SIGNAL CONDUITS: 1 FOOT MINIMUM
WHERE SPECIFICATIONS REQUIRE LESSER SEPARATION DISTANCES, THE MORE STRINGENT (GREATER) REQUIREMENT SHALL GOVERN. THE STP SHIELD SHALL BE GROUNDED AT THE CONTROL PANEL ONLY (DO NOT GROUND AT BOTH ENDS).
 - THE ELECTRICIAN SHALL BE RESPONSIBLE FOR LAYOUT AND COORDINATION OF OPENINGS AND CHASES AND SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED TO INSTALL THEIR WORK. ALL CONCRETE HOUSE KEEPING PADS SHALL BE FRAMED AND POURED BY THE ELECTRICIAN. PADS SHALL HAVE A 45 DEGREE, 1" CHAMFER AROUND UPPER EDGE.
 - THE ELECTRICIAN SHALL INSTALL & DISTRIBUTE TEMPORARY POWER SERVICE FOR THE DURATION OF THIS PROJECT AS DEFINED IN DIVISION 1 SPECIFICATIONS. ALL COSTS ASSOCIATED WITH THE INSTALLATION, DISTRIBUTION AND MAINTENANCE OF THE TEMPORARY POWER IS THE RESPONSIBILITY OF THE ELECTRICIAN. THERE SHALL BE 480/277V, 3PH, 4W; 208/120V, 3PH, 4W; AND 120/240V, 1PH, 3W POWER AVAILABLE AT ALL LOCATIONS OF CONSTRUCTION AS DIRECTED IN FIELD AND AS SPECIFIED. ALL TEMPORARY EQUIPMENT, CONDUITS & CONDUCTORS SHALL BE COMPLETELY REMOVED AT COMPLETION OF PROJECT.
 - ALL ELECTRICAL EQUIPMENT, DEVICES, LIGHTING FIXTURES, CONDUIT, AND WIRING SHOWN ON THE ELECTRICAL DRAWINGS IS NEW UNLESS CLEARLY CALLED OUT AS EXISTING. ALL EXISTING ELECTRICAL EQUIPMENT THAT IS CALLED OUT TO BE REUSED SHALL BE INSPECTED IN THE FIELD BY THE ELECTRICIAN AND THE CONSTRUCTION MANAGER TO DETERMINE ITS CONDITION PRIOR TO STARTING ANY WORK. PROVIDE DOCUMENTATION TO OWNER INDICATING CONDITION OF THE EXISTING EQUIPMENT, AND REUSE EXISTING EQUIPMENT ONLY IF ALL PARTIES AGREE THE CONDITION IS ACCEPTABLE. ALL EXISTING EQUIPMENT DETERMINED TO BE UNUSABLE SHALL BE REPLACED WITH LIKE KIND AS DIRECTED BY THE OWNER. ANY OF THE OWNERS EQUIPMENT DETERMINED TO BE REUSED THAT IS DAMAGED BY ANY CONTRACTOR DURING SWITCHOVER SHALL BE REPLACED BY THAT CONTRACTOR. ALL EXISTING EQUIPMENT IS THE PROPERTY OF THE OWNER (NOT THE CONTRACTOR) AND SHALL BE TREATED ACCORDINGLY.
 - THE ELECTRICIAN SHALL BE HELD RESPONSIBLE TO ENSURE ALL CONTROLLERS TO BE INSTALLED ARE CAPABLE OF LOCKOUT / TAGOUT PRIOR TO INSTALLATION.
 - CONFORM TO THE NEC, OSHA, FIRE MARSHAL, BUILDING DEPARTMENT AND OTHER APPLICABLE CODES AND REGULATIONS. OBTAIN PERMITS, PAY ALL FEES, AND ARRANGE FOR REQUIRED INSPECTIONS.
 - ALL LIGHTING AND RECEPTACLE WIRING TO BE #12 XHHW WITH EQUIPMENT GROUND IN 3/4" C UNLESS OTHERWISE NOTED.
 - DO NOT MOUNT ANY LIGHT FIXTURE DIRECTLY OVER PIPING OR EQUIPMENT THAT WILL INTERFERE WITH NORMAL LIGHTING DISTRIBUTION.
 - SIZE JUNCTION BOXES AS REQUIRED PER NEC. PROVIDE BARRIER TYPE TERMINAL STRIPS, AND ALL WIRING TO BE IN CONDUIT.
 - SIZE PULL BOXES (PB) AS REQUIRED PER NEC.
 - PROVIDE SEPARATE PB'S FOR CONTROL AND POWER.
 - MOTOR OVERLOAD SETTING SHALL BE FIELD SELECTED PER MOTOR NAME PLATE CURRENT AND INSTALLED ACCORDINGLY.
 - MOUNT LOCAL CONTROLS AND SERVICE DISCONNECTS ON WALL NEAREST EQUIPMENT WHERE POSSIBLE. (MAXIMUM 60" ABOVE FINISHED FLOOR OR FINAL GRADE, MAXIMUM LATERAL DISTANCE FROM WALL TO EQUIPMENT - 10 FEET).
 - ALL FEEDERS RUN BELOW GRADE SHALL BE RUN IN PVC CONDUIT AT MINIMUM 3'-0" BELOW FINISHED GRADE. TRANSITION TO ABOVE GRADE SHALL BE MADE USING FACTORY PVC COATED RIGID STEEL CONDUIT SWEEPS.
 - HAZARDOUS (CLASSIFIED) LOCATIONS INDICATED ON THE DRAWINGS ARE BASED ON NFPA 820 REQUIREMENTS. ELECTRICAL EQUIPMENT, WIRING METHODS, AND INSTALLATION PRACTICES WITHIN CLASSIFIED AREAS SHALL COMPLY WITH NFPA 820, NFPA 70 (NEC), AND ALL APPLICABLE LOCAL CODES.
 - SURGE PROTECTIVE DEVICES (SPDS) SHALL BE PROVIDED AT THE AUTOMATIC TRANSFER SWITCH (ATS), MAIN DISTRIBUTION PANEL (MDP), AND ALL DOWNSTREAM PANELBOARDS WHERE REQUIRED BY THE ELECTRICAL SPECIFICATIONS, WHETHER OR NOT INDIVIDUALLY SHOWN ON THE DRAWINGS. COORDINATE SPD RATINGS, LOCATIONS, AND INSTALLATION WITH DIVISION 26 SPECIFICATIONS
 - GROUNDING CONDUCTOR SIZES SHOWN ON THE DRAWINGS INDICATE MINIMUM SIZES UNLESS NOTED OTHERWISE. GROUNDING ELECTRODE CONDUCTORS, SUPPLEMENTAL GROUNDING CONDUCTORS, AND EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE 250 AND DIVISION 26 SPECIFICATIONS. WHERE MULTIPLE GROUNDING CONDUCTOR SIZES ARE SHOWN, SIZES ARE APPLICATION SPECIFIC AND SHALL NOT BE REDUCED.



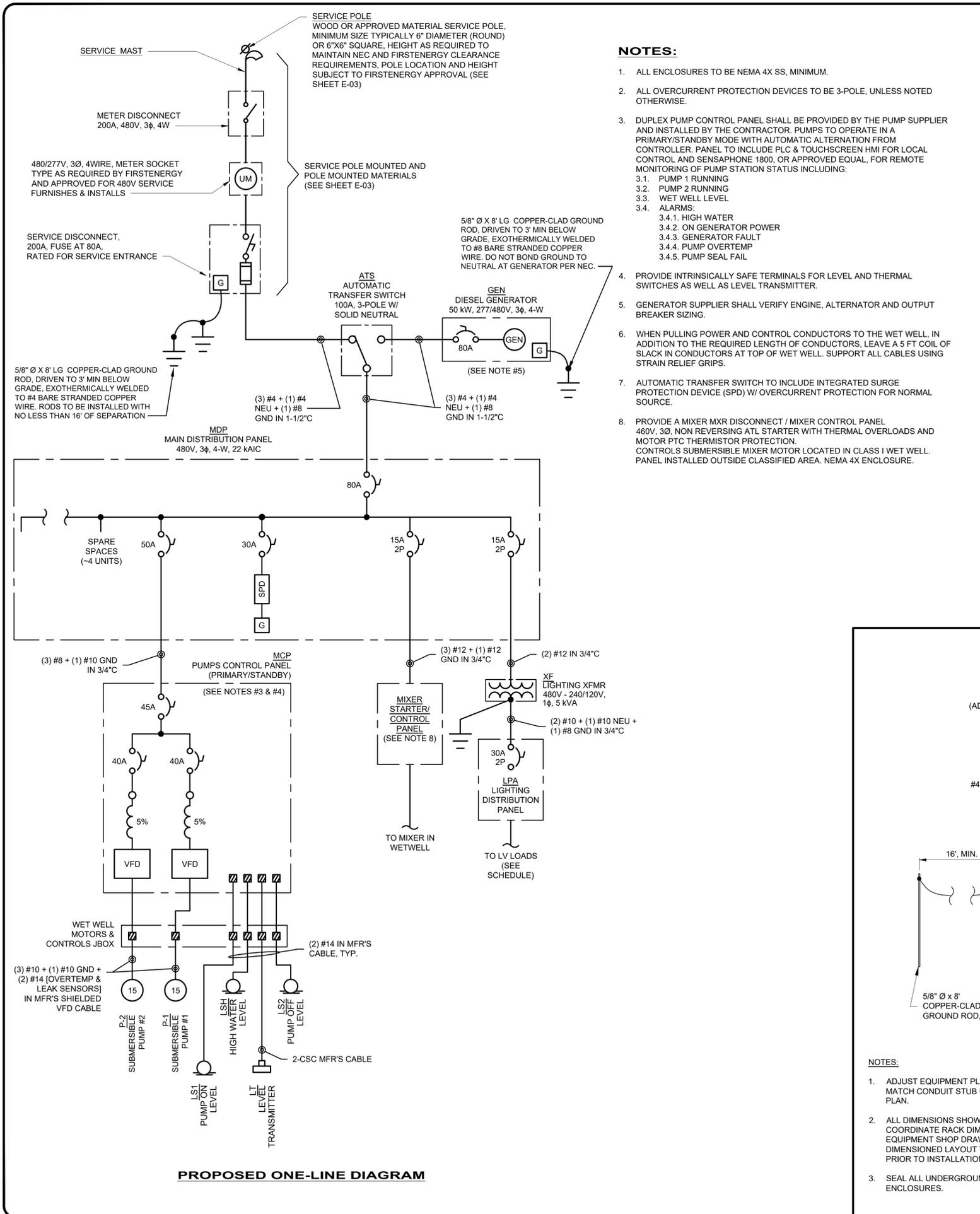
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YOUNGSTOWN, OHIO
330-272-9330

ISSUED FOR:		REVISIONS	
REV#	DESCRIPTION	DATE	BY
01	PTI REVISIONS - 1	10/20/26	
02	GEN NOTE REVISIONS - 1	2/13/2026	
03	ELECTRIC PLAN REVISIONS - 1	2/27/2026	
SCALE:	AS SHOWN	ELE	
DESIGNED BY:		ELE	
DRAWN BY:		ELE	
CHECKED BY:		CMK	

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

ELECTRICAL NOTES & LEGEND

PROJECT NO.	
210340	
SHEET NAME	
E-01	
SHEET	OF
9	20



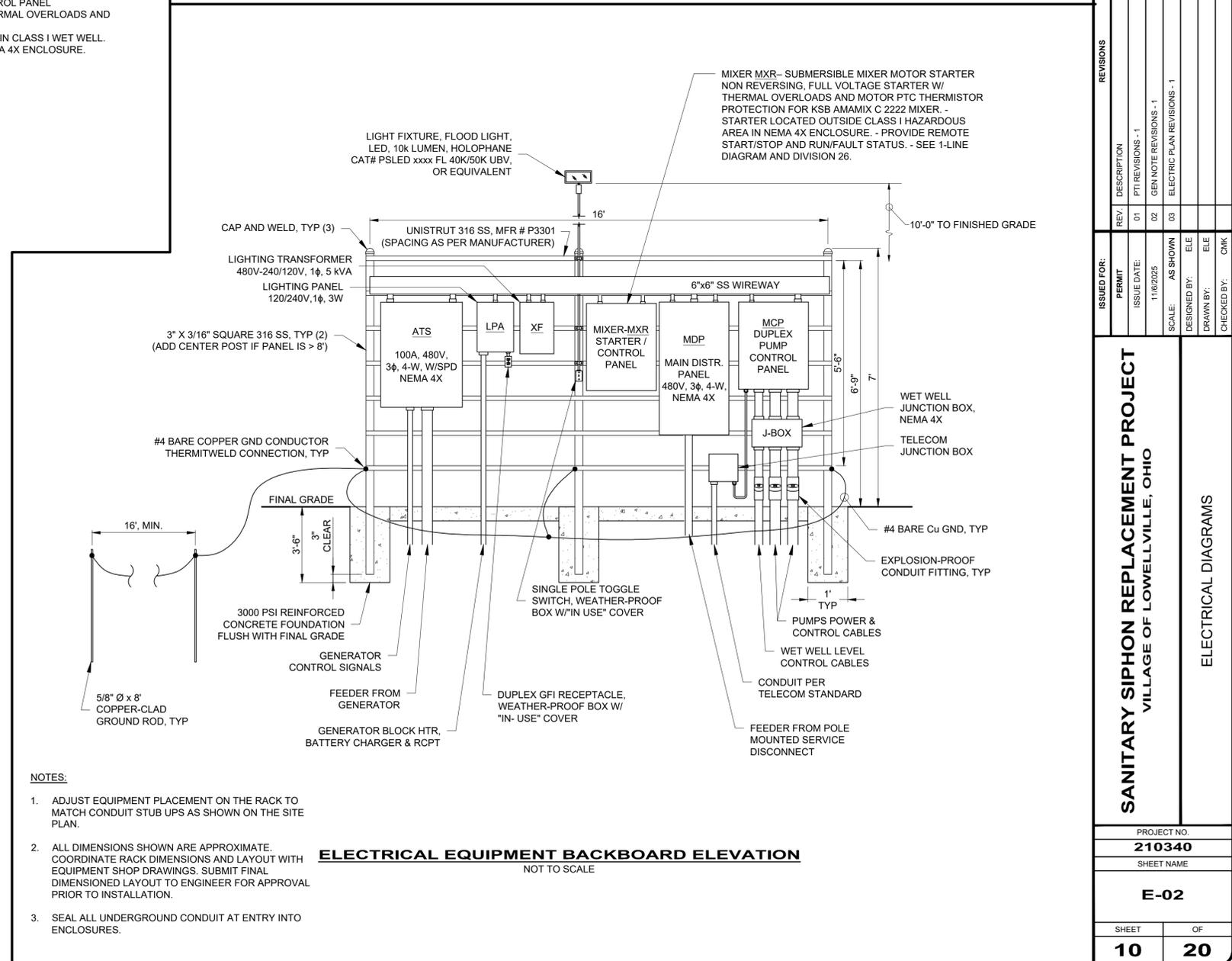
PANELBOARD		LPA	
PANEL TYPE	NQOD OR EQUAL	PHASE	1
NEMA TYPE	NEMA 4X	WIRE	3
VOLTAGE	240V/120V	BUSS	100A
OCPD	30A		
MOUNTING	SURFACE		

LOAD DESCRIPTION	LOAD	BKR.	CKT. NO.	PHASE	CKT. NO.	BKR.	LOAD	LOAD DESCRIPTION
GENERATOR BLOCK HEATER	1000	20/1	1	A	2	20/1		SPARE
GENERATOR BATTERY CHARGER	450	15/1	3	B	4	20/1		SPARE
RECEPTACLES (GFCI)	360	20/1G	5	A	6			
ALARM DIALER	100	15/1	7	B	8			
SPOT LIGHT	83	15/1	9	A	10			
SPARE		15/1	11	B	12			

1993 VA CONNECTED
2288.75 VA DEMAND
9.54 A @ 240/120V, 1P, 3W

PROPOSED PANEL "LPA" SCHEDULE

- NOTES:**
- ALL RECEPTACLE CIRCUIT BREAKERS TO BE GROUND FAULT INTERRUPTER TYPE (GFCI)



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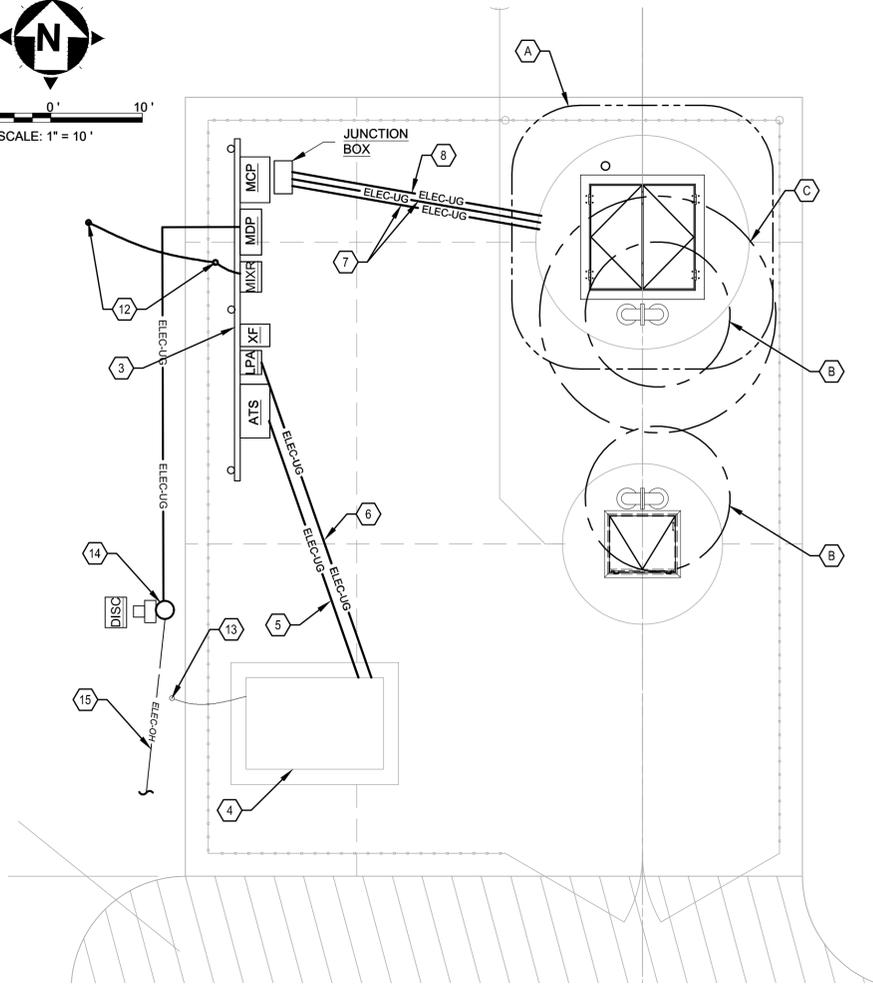
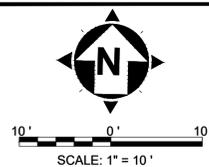
REV.	DESCRIPTION	DATE
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DESIGNED BY: ELE	DRAWN BY: ELE
CHECKED BY: CMK	

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

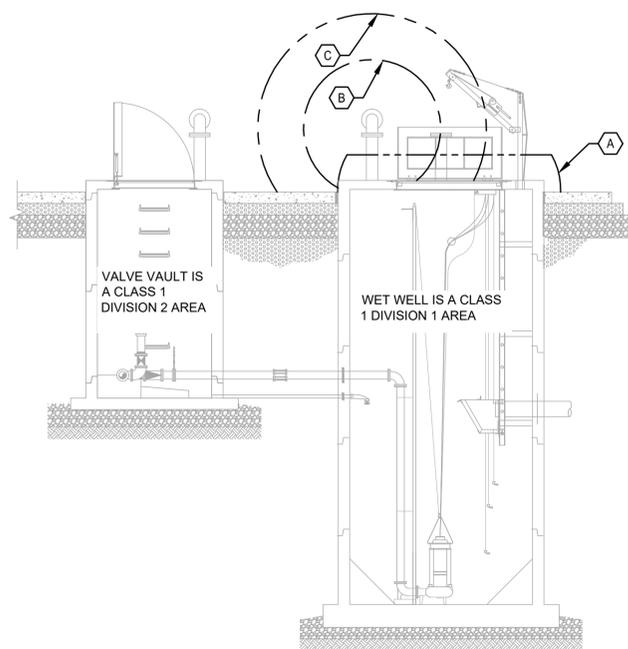
ELECTRICAL DIAGRAMS

PROJECT NO.	210340
SHEET NAME	E-02
SHEET	OF
10	20

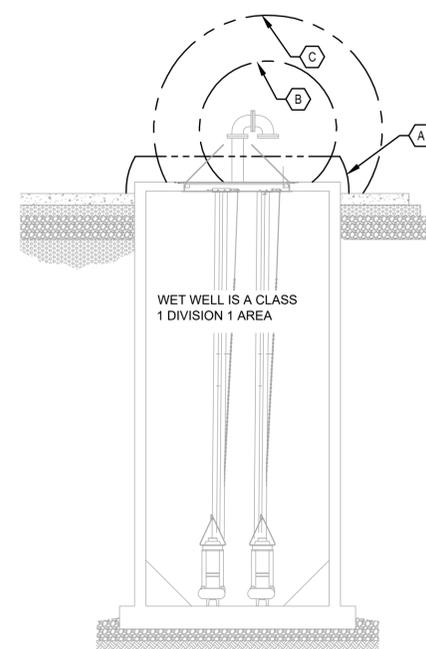


ABOVE GRADE CLASSIFIED AREA LIMITS
(IN ACCORDANCE WITH NFPA 820):

- A HATCH CLEARANCE - C1D2 AREA EXTENDS 3' IN ALL DIRECTIONS ALONG GRADE FROM HATCH OPENING, 18" ABOVE GRADE.
- B VENT CLEARANCE 1 - C1D1 AREA EXTENDS IN A 3' RADIUS SPHERE CENTERED ON THE VENT OPENING.
- C VENT CLEARANCE 2 - C1D2 AREA EXTENDS IN A 5' RADIUS SPHERE CENTERED ON THE VENT OPENING.



NEC HAZARDOUS AREA CLASSIFICATION DETAILS
SECTION 1
N.T.S.



SECTION 2
N.T.S.

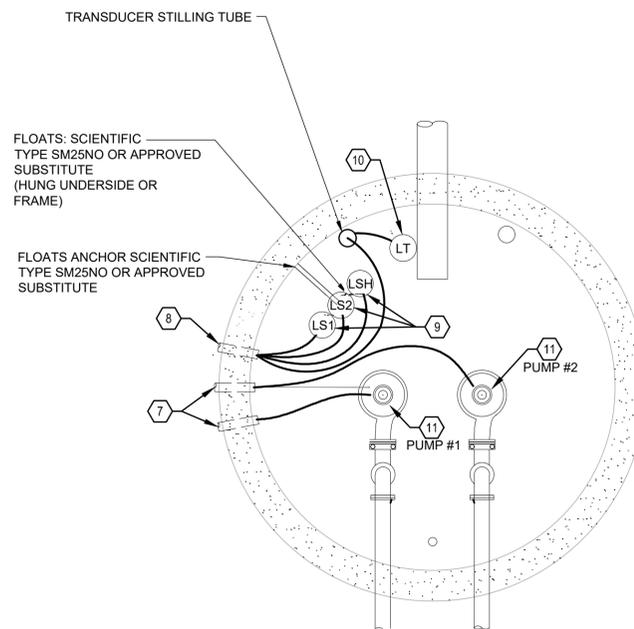
X CODED NOTES

1. NEW 480Y/277V, 3 PHASE, 4WIRE UTILITY ELECTRICAL SERVICE FROM FIRSTENERGY.
2. UNDERGROUND CUSTOMER OWNED FEEDERS AND CONDUITS AS SHOWN. SEE SHEET E-02 FOR CONDUIT AND CONDUCTOR CALLOUTS.
3. ELECTRICAL EQUIPMENT BACKBOARD PER DETAIL ON SHEET E-02. CONTAINS THE FOLLOWING RACK-MOUNTED DEVICES:
 - 3.1. AUTOMATIC TRANSFER SWITCH, 100A, 3-POLE W/SOLID NEUTRAL, PROGRAMMED TRANSITION, KOHLER #KCP-AMTF-0104-S WITH HEATER & SPD OPTIONS OR APPROVED EQUAL.
 - 3.2. MAIN DISTRIBUTION PANEL, 480V, 3Φ, 4-W, 22 kAIC, 80A MCB, (18) SINGLE POLE SPACES, MIN. & SPD. SQUARE D #NF418L1 & MH38WP OR APPROVED EQUALS.
 - 3.3. RESIN ENCAPSULATED LIGHTING TRANSFORMER, 5 kVA, 1Φ, 480V-240/120V. SQUARE D #4X551FSS OR APPROVED EQUAL.
 - 3.4. LIGHTING PANELBOARD, 100A BUS W/30A MCB, 240/120V, 1Φ, 3-W, (12) SPACES. SQUARE D #NQ418L1 & MH38WP OR APPROVED EQUALS. 3.7. VENDOR-SUPPLIED 20 HP DUPLEX PUMPS CONTROL PANEL WITH THE FOLLOWING:
 - 3.4.1. OVERCURRENT PROTECTION DEVICES
 - 3.4.2. (2) VFD MOTOR CONTROLS W/ 5% LINE REACTORS
 - 3.4.3. INDUSTRIAL CONTROLLER FOR WET WELL LEVEL MONITORING, AUTOMATIC PUMP CYCLING, AND ALARM ANNUNCIATION
 - 3.4.4. ALARM AUTO-DIALER
 - 3.5. WET WELL DEVICES JUNCTION BOX
 - 3.6. CONVENIENCE RECEPTACLE WITH WEATHERPROOF IN-USE COVER
 - 3.7. SMALL LED FLOOD LIGHT & TOGGLE SWITCH, 10,000 LUMEN OUTPUT W/ WIDE PATTERN, HOLOPHANE #PSLED-P3-40K/50K-MVOLT-66-KM OR APPROVED EQUALS.
 - 3.8. TELECOM JUNCTION BOX
 - 3.9. MIXER STARTER/CONTROLLER
4. BACKUP GENERATOR, 50 kW, 480V, 3Φ, 4-W, DIESEL-FUELED WITH 24-HOUR STATE APPROVED FUEL TANK. SEE SHEET E-02 & SPEC SECTION 263213 FOR DETAILS.
5. 80A UNDERGROUND FEEDER FROM GENERATOR TO ATS. SEE SHEET E-02 FOR CONDUIT & CONDUCTORS. INCLUDES SEPARATE 1" C FOR CONTROL WIRING PER SPECIFICATION.
6. GENERATOR BLOCK HEATER FEEDER FROM LIGHTING PANEL, (2) #12 + (1) #12 GND IN 1" C
7. WET WELL PUMP POWER & SENSOR CABLE FEEDER FROM CONTROL PANEL/JUNCTION BOX IN 2" C. SEE SHEET E-02 FOR CALLOUTS.
8. WET WELL LEVEL SENSORS FEEDER FROM CONTROL PANEL/JUNCTION BOX. SEE SHEET E-02 FOR CALLOUTS.
9. VENDOR-SUPPLIED FLOAT SWITCHES, LS1, LS2 & LSH; SUSPEND FROM RACK

10. VENDOR-SUPPLIED LIQUID LEVEL TRANSMITTER IN STILLING WELL. INSTALL PER PROCESS DRAWINGS WITH 5' SERVICE LOOP OF EXTRA CABLE AT TOP OF WELL.
11. SUBMERSIBLE SEWAGE PUMPS, 460V / 3Φ / 60 Hz / 20 HP. SEE SHEET E-02 FOR FEEDER CALLOUT AND TERMINATE MFR CABLE IN WET WELL EQUIPMENT JUNCTION BOX ON ELECTRICAL BACKBOARD.
12. GROUNDING RODS INSTALLED PER NEC, 5/8"Ø X 8' LONG COPPER-CLAD STEEL DRIVEN TO AT LEAST 24" BELOW FINISHED GRADE, BONDED VIA BARE COPPER STRANDED CABLE EXOTHERMICALLY WELDED TO EACH ROD. INSTALL AT A MINIMUM DISTANCE OF 16' FROM EACH OTHER. SEE SHEET E-02 FOR MORE DETAILS.
13. SUPPLEMENTAL GROUNDING ROD FOR GENERATOR. SEE SHEET E-02 FOR DETAILS.
14. PROPOSED CONTRACTOR INSTALLED SERVICE POLE FOR 480Y/277V, 3 PHASE OVERHEAD ELECTRICAL SERVICE. (SEE 1-LINE DIAGRAM) POLE HEIGHT, LOCATION, AND POINT OF ATTACHMENT SUBJECT TO FIRSTENERGY REVIEW AND APPROVAL. ELECTRICAL CONTRACTOR TO COORDINATE WITH FIRSTENERGY AND PROVIDE ALL CUSTOMER OWNED SERVICE EQUIPMENT, INCLUDING METERING, DISCONNECTS, AND GROUNDING, IN ACCORDANCE WITH UTILITY REQUIREMENTS AND NEC. SEE 1-LINE DIAGRAM ON SHEET E-02. POLE-MOUNTED EQUIPMENT INCLUDES:
 - 14.1 480V SERVICE METER SOCKET, 200A, PER FIRSTENERGY REQUIREMENTS
 - 14.2. SERVICE MAST, WEATHERHEAD, RISER CONDUIT, AND SERVICE ENTRANCE CONDUCTORS
 - 14.1. CUSTOMER MAIN SERVICE DISCONNECT SWITCH, 3 POLE, 200A, FUSED AT 80A, WITH NEUTRAL AND GROUND LUGS. SQUARE D #VH364NDSGL WITH HRK1020 FUSES OR APPROVED EQUAL.
15. OVERHEAD ELECTRICAL SERVICE TO BE PROVIDED FROM EXISTING FIRSTENERGY UTILITY POLE WITH 480V SERVICE TRANSFORMERS, PREVIOUSLY IDENTIFIED ON NON ELECTRICAL SHEETS. REFER TO SHEET E-03 FOR ELECTRICAL SERVICE CONFIGURATION. ELECTRICAL CONTRACTOR TO VERIFY POLE LOCATION, TRANSFORMER CAPACITY, AND SERVICE AVAILABILITY WITH FIRSTENERGY PRIOR TO INSTALLATION.

GENERAL NOTES

1. ALL REFERENCES TO "UTILITY" (TBD)
2. ALL ENCLOSURES TO BE NEMA 4X SS, UNO.
3. ALL PROPOSED UNDERGROUND DUCT BANKS TO UTILIZE 36" SWEEPS, MINIMUM.
4. ALL PROPOSED UNDERGROUND CONDUIT ROUTED TO WET WELL TO BE 1-1/2", MIN.
5. SEE ONE-LINE DIAGRAM ON SHEET E-02 FOR ALL DISTRIBUTION EQUIPMENT WITH CONDUIT/CONDUCTOR CALLOUTS.
6. ELECTRICAL SERVICE TO BE 480V / 3Φ / 4-W / 60 Hz / 200A CAPACITY.



WET WELL ELECTRICAL DETAILS
NOT TO SCALE



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EMR	ELECTRIC PLAN REVISIONS - 1	03	2/27/2026
EMR			
CMR			

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO
ELECTRICAL PLANS & DETAILS

PROJECT NO.	210340
SHEET NAME	E-03
SHEET	11
OF	20



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11/06/2025	GEN NOTE REVISIONS - 1	02	2/13/2026
	ELECTRIC PLAN REVISIONS - 1	03	2/27/2026
DESIGNED BY: LMM			
DRAWN BY: LMM			
CHECKED BY: CHK			

SANITARY SIPHON REPLACEMENT PROJECT
 VILLAGE OF LOWELLVILLE, OHIO

AERIAL SITE PLAN

PROJECT NO. 210340	
SHEET NAME C0-05	
SHEET 12	OF 20

BENCHMARKS

BM#1 (PNT #18)
 NAIL EAST SIDE OF POLE
 ELEV.= 1074.04

BM#2 (PNT #21)
 NAIL WEST SIDE OF POLE
 ELEV.= 1084.03

EXISTING LINETYPES	
SUBDIVISION LINE	_____
VILLAGE LINE	_____ CORP _____ CORP
BOUNDARY LINE	_____
PROPERTY LINE	_____
RIGHT-OF-WAY LINE	_____ EX. RW
RIGHT-OF-WAY CL	_____
PROPOSED EASEMENT	_____

	SURVEY CONTROL / REFERENCE POINT SET
	EXISTING SURVEY MONUMENTATION FOUND
	CALCULATED LOCATION OF CENTERLINE OF STREET.

SURVEY NOTES:

- THE PROJECT CONTROL COORDINATE SYSTEM IS BASED UPON THE FOLLOWING:
 - HORIZONTAL DATUM - PROJECT CONTROL COORDINATES FOR THIS PROJECT HAVE BEEN ESTABLISHED BY GPS/RTK OBSERVATIONS UTILIZING THE OHIO CO-ORDINATE SYSTEM OF 1983 (ZONE 3401-OHIO NORTH). OHIO STATE PLANE GRID COORDINATE VALUES ARE EXPRESSED IN UNITS OF U.S. SURVEY FEET "ON THE GRID" AND HAVE NOT BEEN ADJUSTED FOR USE "ON THE GROUND."
 - VERTICAL DATUM - NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- THE SURVEY AND STREET ALIGNMENTS SHOWN HEREON WERE OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR OTHER PURPOSES.
- THE BENCHMARK ELEVATIONS SHOWN IN THE PROJECT CONTROL TABLE ARE AT THE TOP OF THE RED CAP OF THE IRON PIN SET.
- IRON PINS SET ARE 5/8" IRON PINS SET WITH A RED CAP INSCRIBED WITH "CT REF"



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02	2/13/2026	02	GEN NOTE REVISIONS - 1
03	2/27/2026	03	ELECTRIC PLAN REVISIONS - 1
DESIGNED BY:	LMM	DRAWN BY:	LMM
CHECKED BY:	CHK		

SANITARY SIPHON REPLACEMENT PROJECT
 VILLAGE OF LOWELLVILLE, OHIO

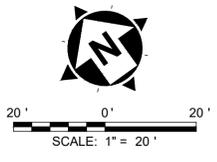
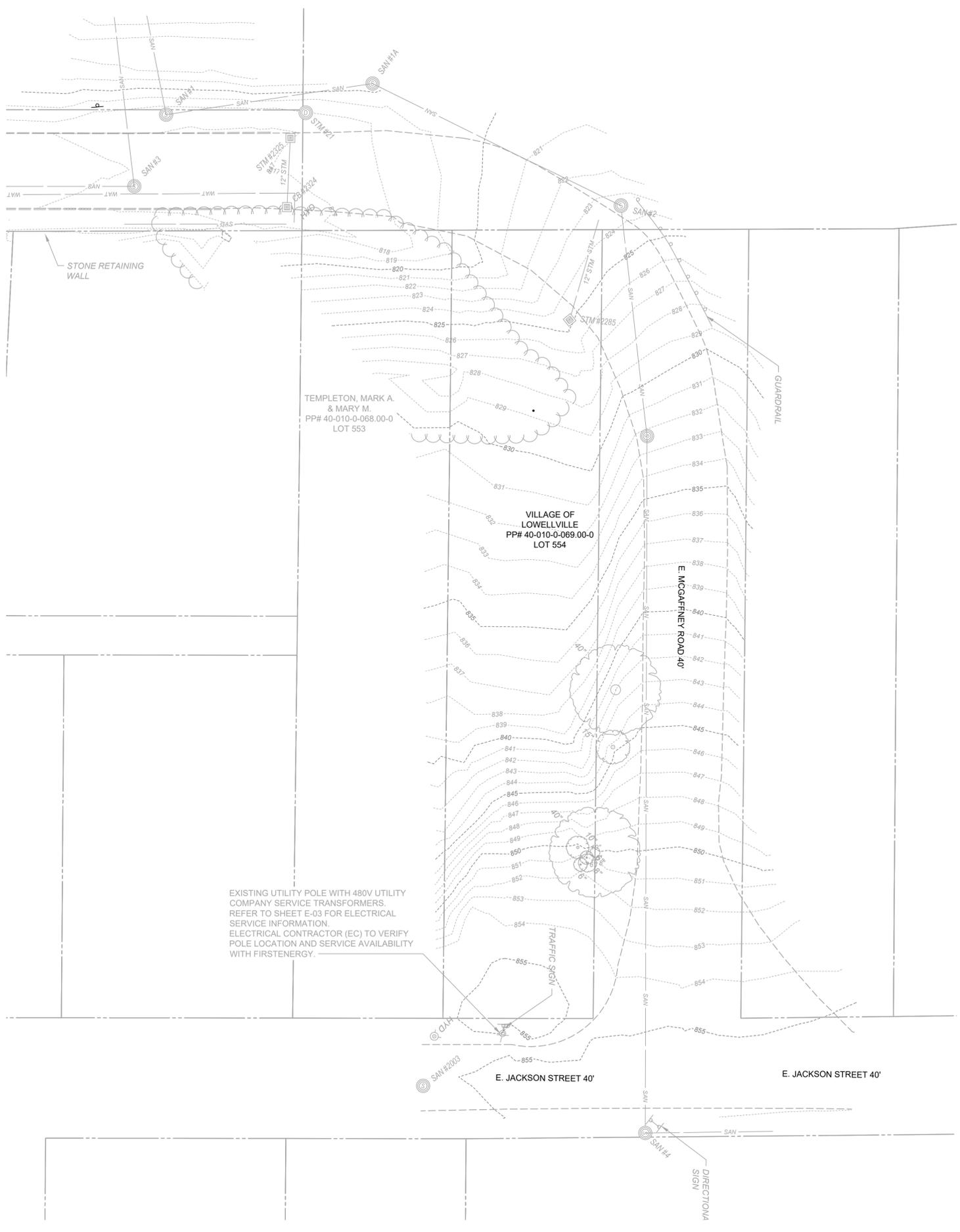
EXISTING SITE PLAN/ CONTROL DRAWING

PROJECT NO.
210340

SHEET NAME

C0-06

SHEET **13** OF **20**



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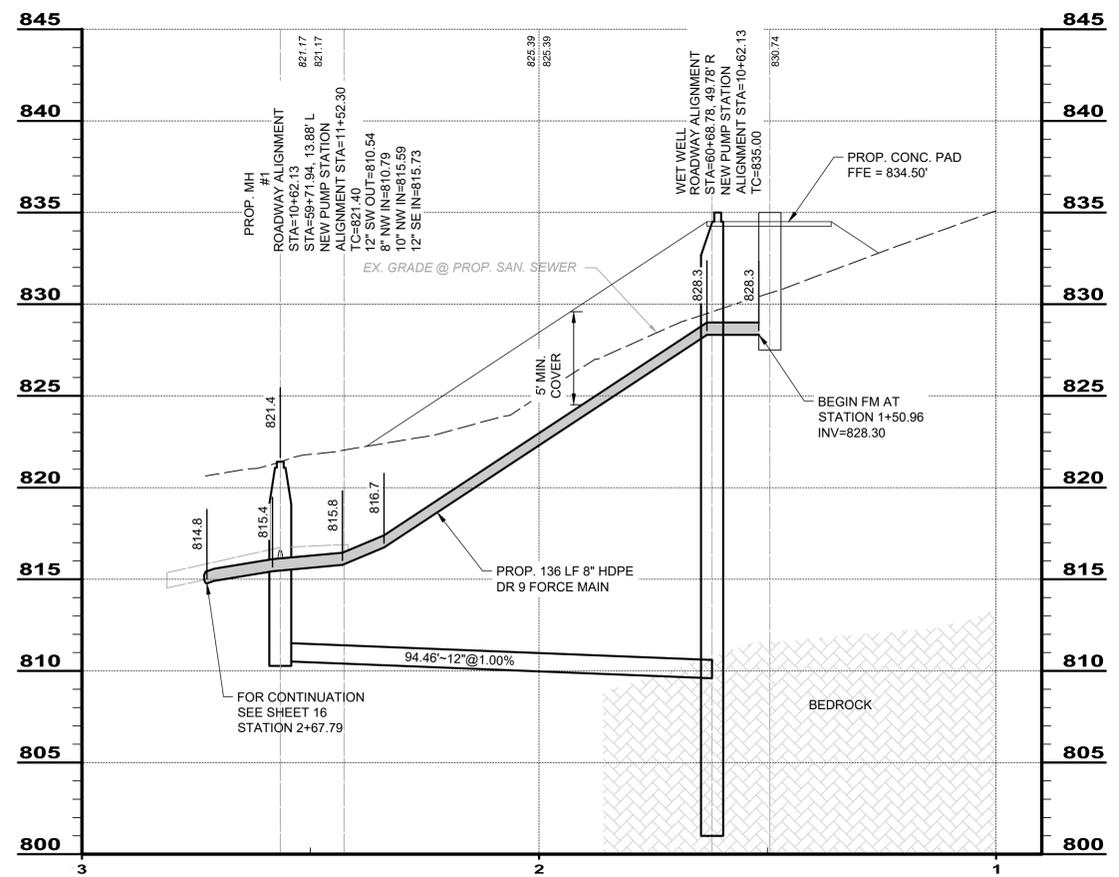
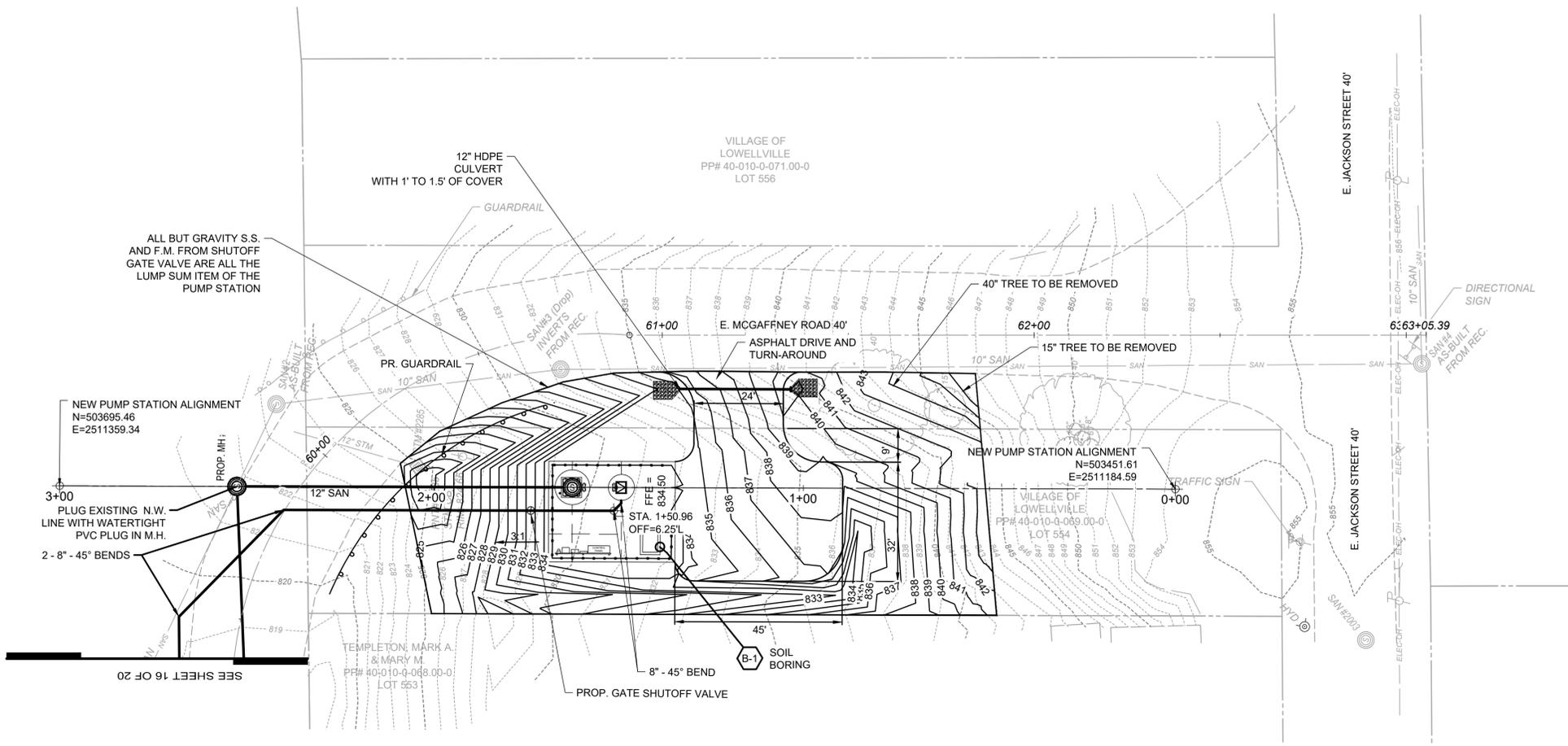
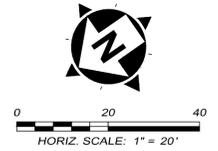
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

EXISTING CONDITIONS

PROJECT NO. 210340	
SHEET NAME C0-07	
SHEET 14	OF 20



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PUMP STATION PROPOSED SANITARY RUN

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	DESIGNED BY:	LMM	
	DRAWN BY:	LMM	
	CHECKED BY:	CMK	

SANITARY SIPHON REPLACEMENT PROJECT
 VILLAGE OF LOWELLVILLE, OHIO

PLAN AND PROFILE - E. MCGAFFNEY AVENUE
 STA. 60+00 TO STA. 63+00

PROJECT NO.	
210340	
SHEET NAME	
C0-08	
SHEET	OF
15	20



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11/6/2025	GEN NOTE REVISIONS - 1	02	2/13/2026
11/6/2025	ELECTRIC PLAN REVISIONS - 1	03	2/27/2026
DESIGNED BY:	LMM		
DRAWN BY:	LMM		
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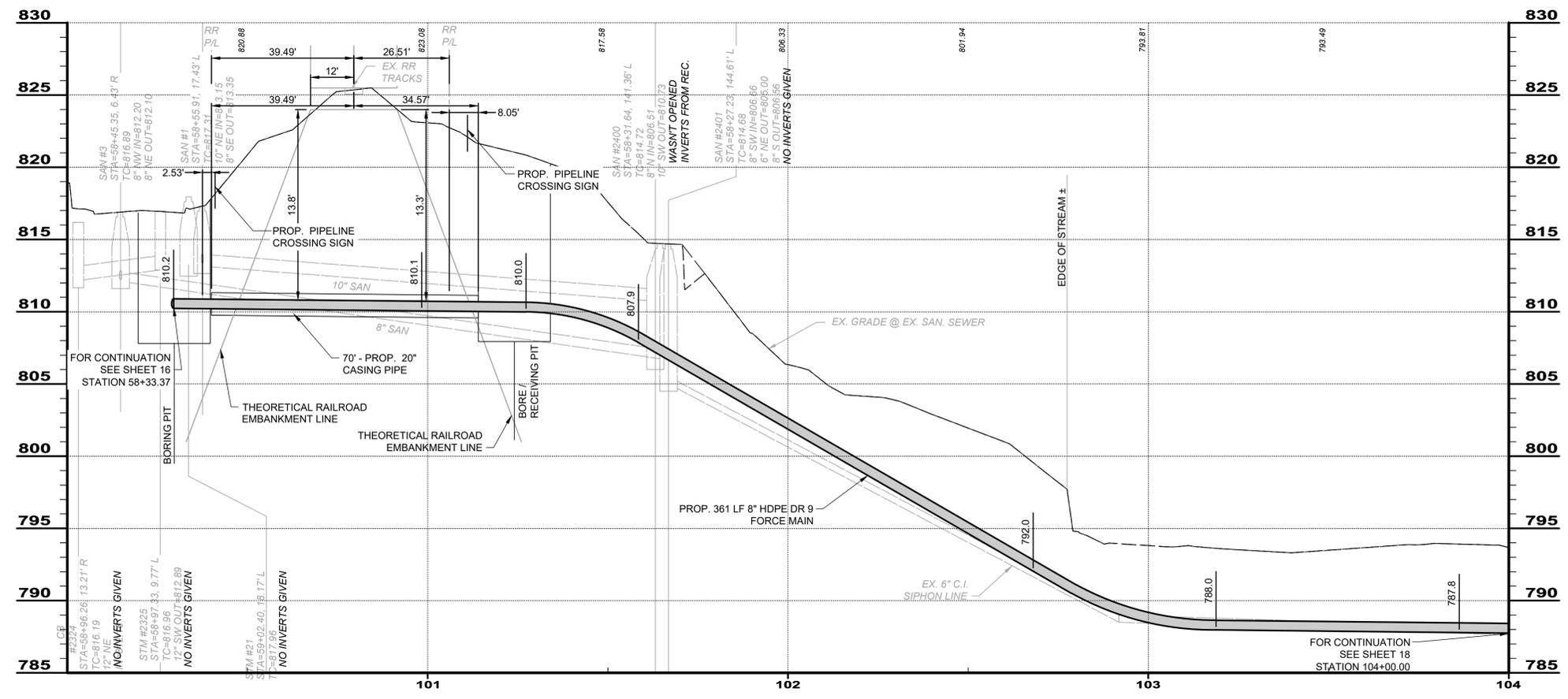
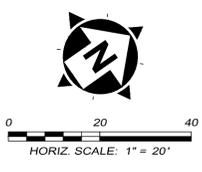
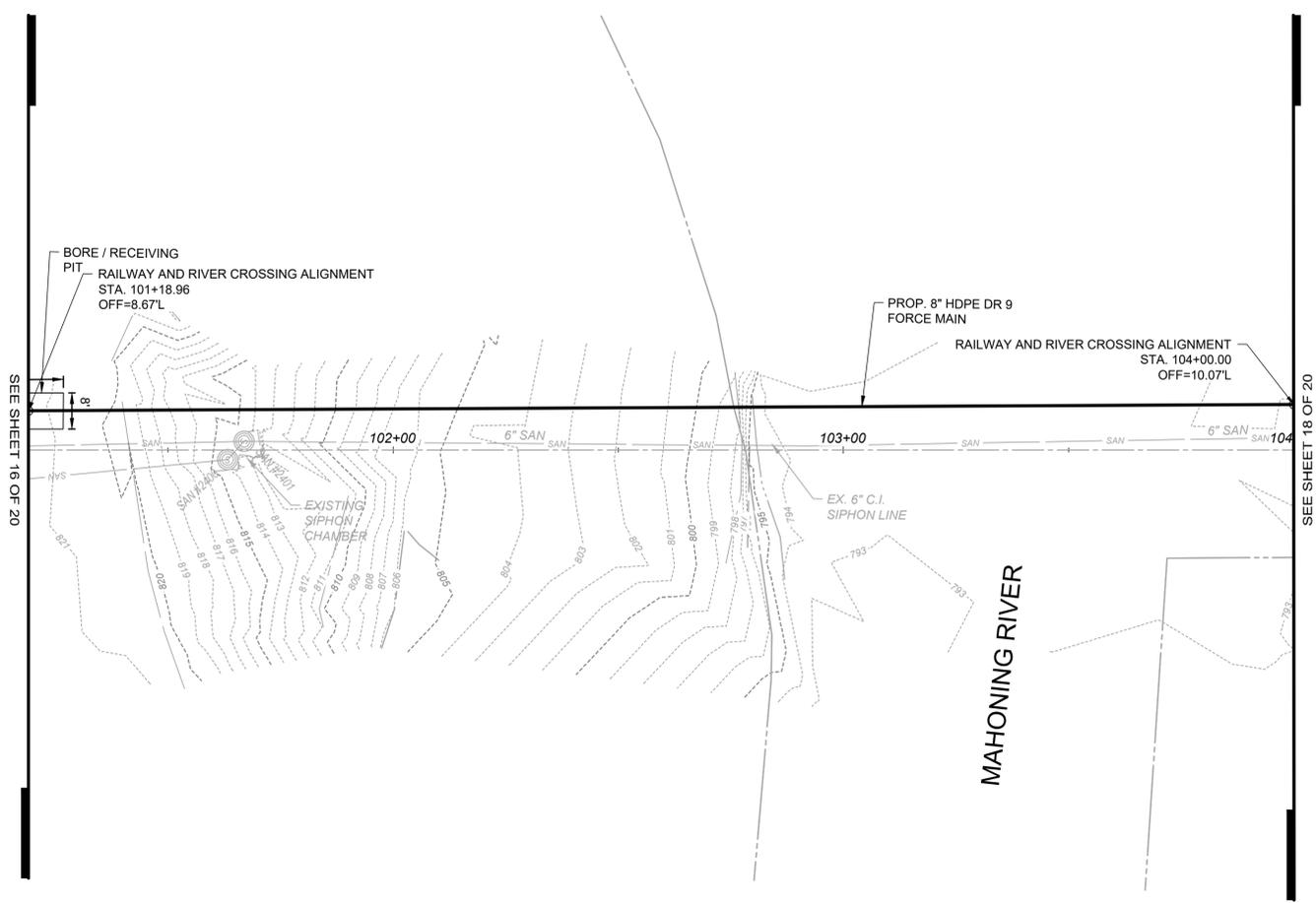
SANITARY SIPHON REPLACEMENT PROJECT
 VILLAGE OF LOWELLVILLE, OHIO

PROJECT NO.
210340

SHEET NAME
C0-10

PLAN AND PROFILE - RIVER CROSSING
 STA. 100+00 TO STA. 104+00

SHEET	OF
17	20





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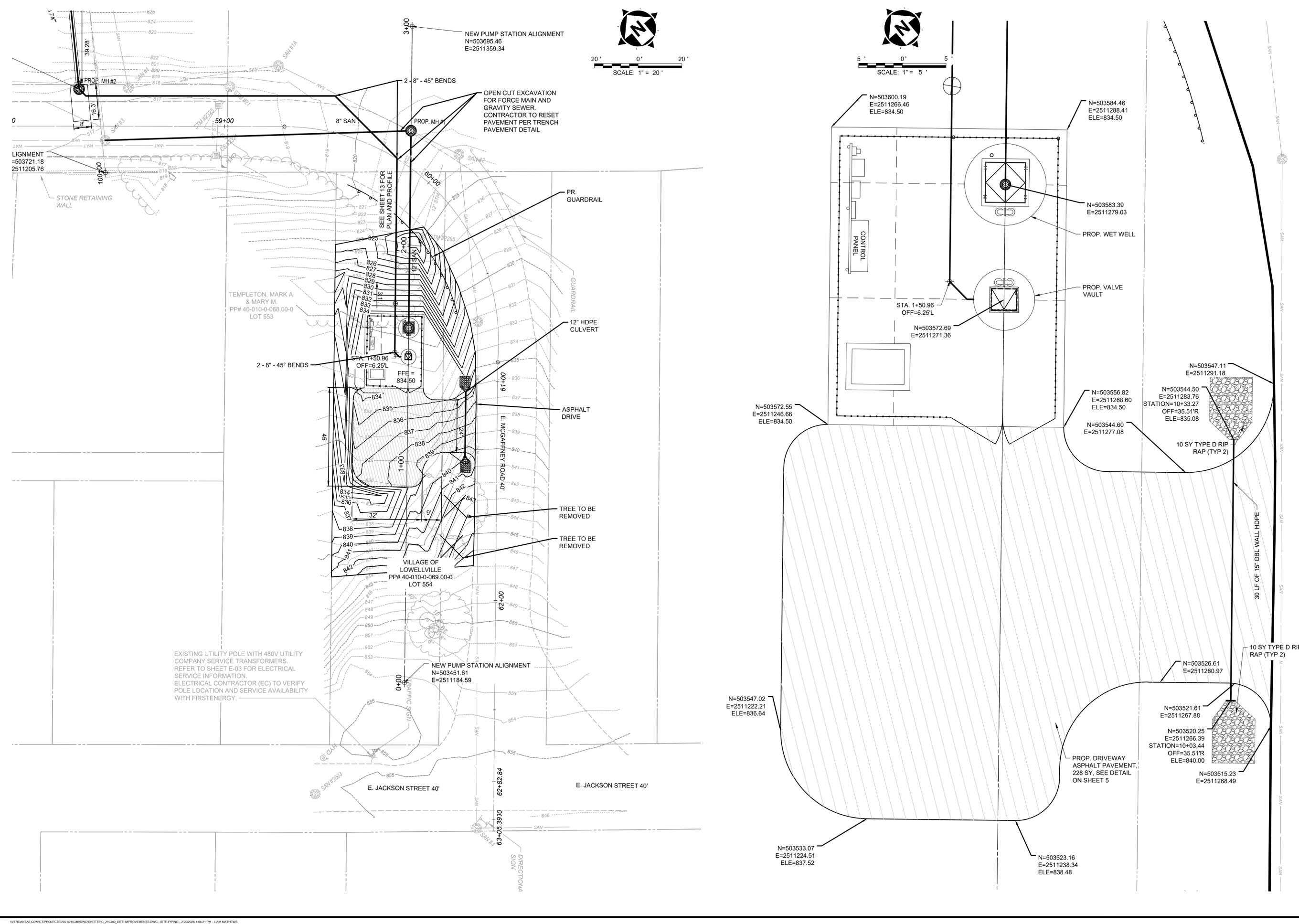
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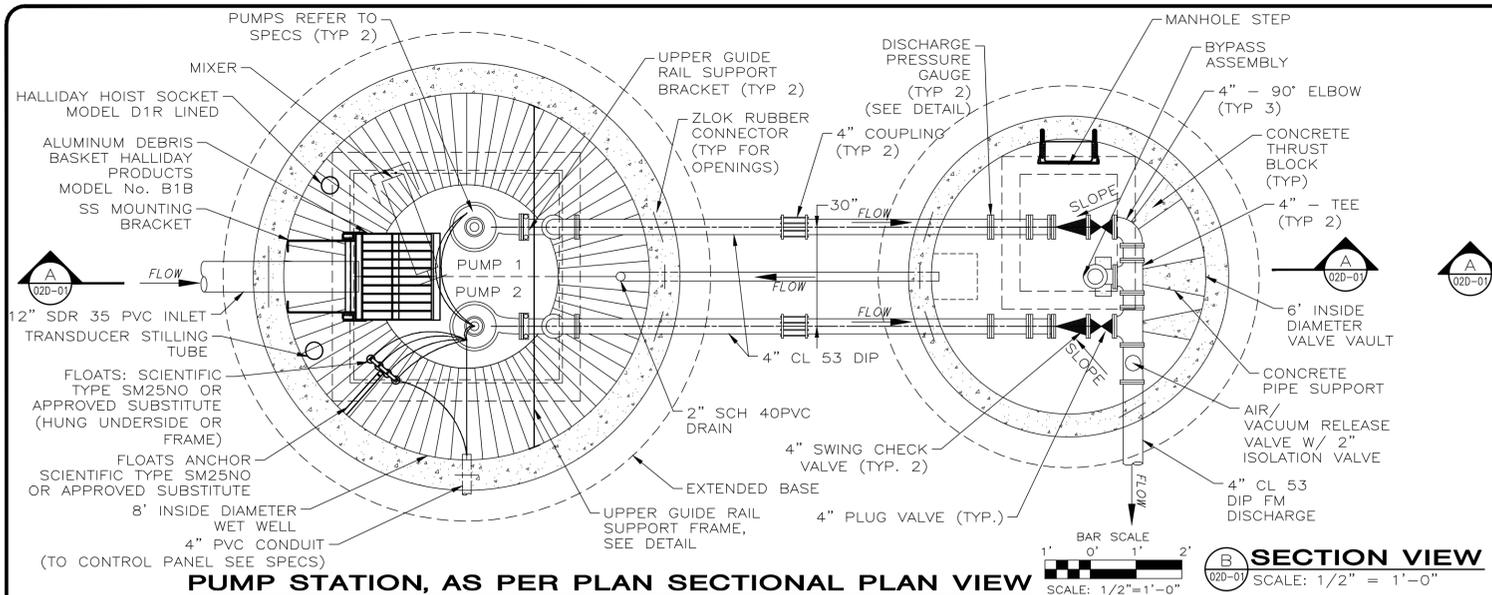
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VILLAGE OF LOWELLVILLE, OHIO

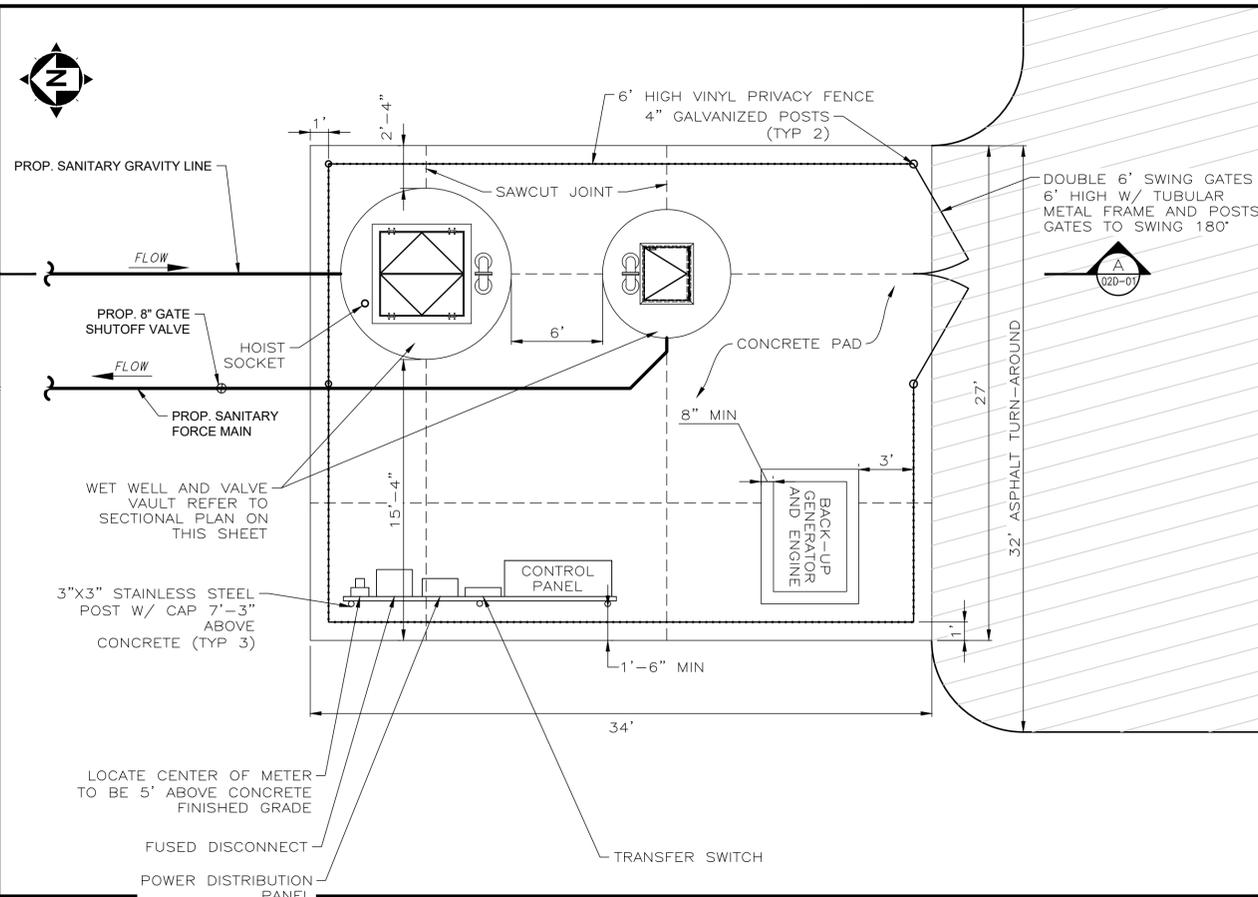
SITE PIPING PLAN & PROFILE

PROJECT NO.	
210340	
SHEET NAME	
C0-12	
SHEET	OF
19	20

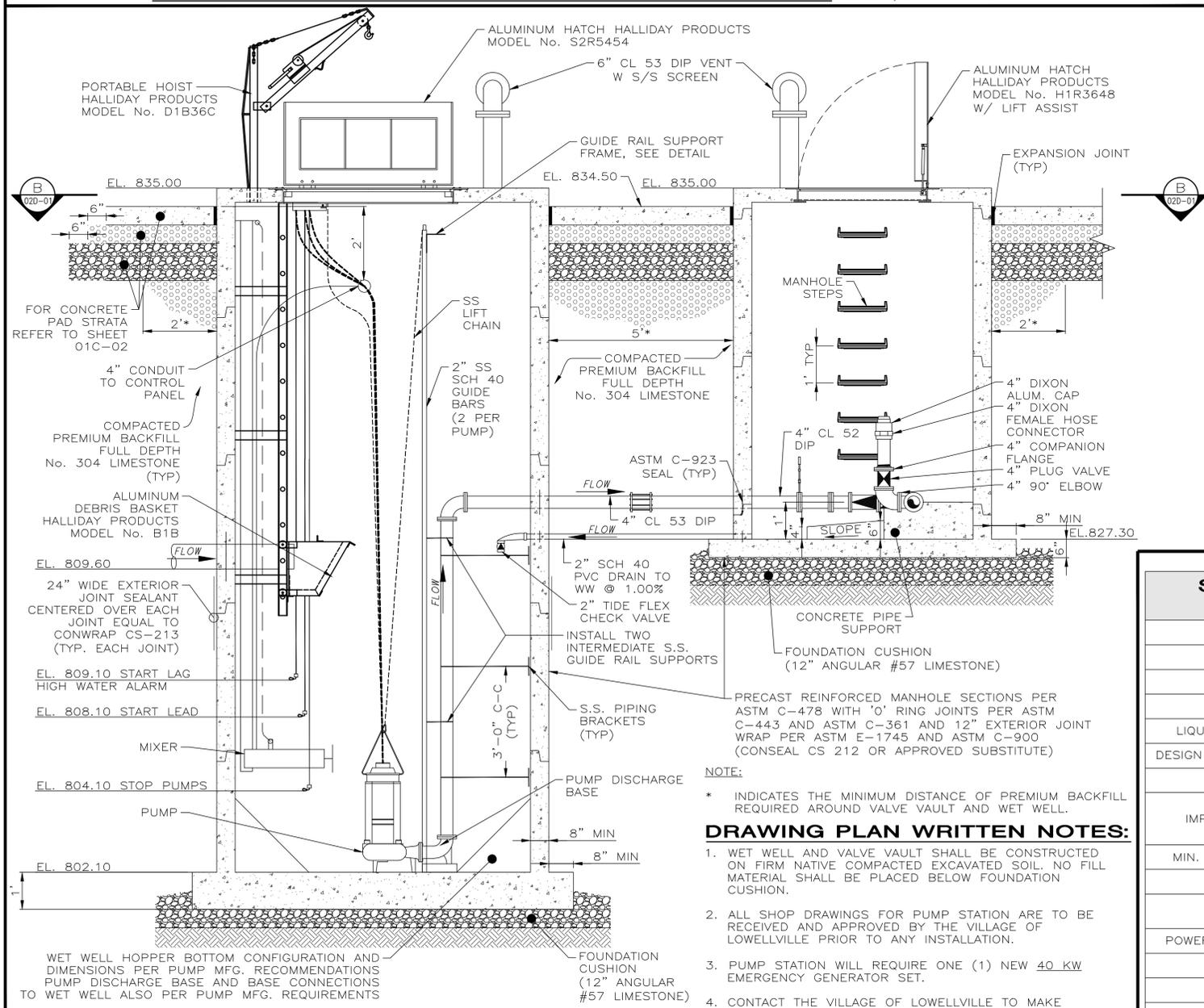




PUMP STATION, AS PER PLAN SECTIONAL PLAN VIEW SCALE: 1/2" = 1'-0"



PUMP STATION, AS PER PLAN. SITE PLAN NOT TO SCALE

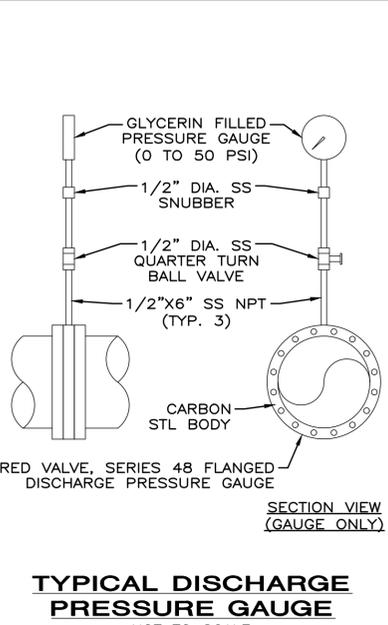


SECTION VIEW SCALE: NTS

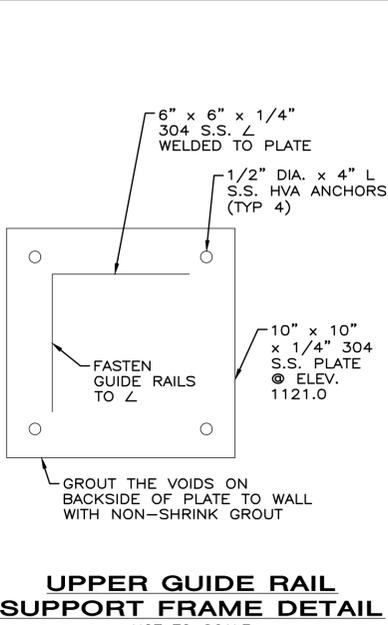
DRAWING PLAN WRITTEN NOTES:

1. WET WELL AND VALVE VAULT SHALL BE CONSTRUCTED ON FIRM NATIVE COMPACTED EXCAVATED SOIL. NO FILL MATERIAL SHALL BE PLACED BELOW FOUNDATION CUSHION.
2. ALL SHOP DRAWINGS FOR PUMP STATION ARE TO BE RECEIVED AND APPROVED BY THE VILLAGE OF LOWELLVILLE PRIOR TO ANY INSTALLATION.
3. PUMP STATION WILL REQUIRE ONE (1) NEW 40 KW EMERGENCY GENERATOR SET.
4. CONTACT THE VILLAGE OF LOWELLVILLE TO MAKE APPLICATION FOR UTILITIES AT PUMP STATION.

SANITARY PUMP STATION PUMP DATA	
TYPE OF PUMP:	SUBMERSIBLE EXPLOSION-PROOF
ARRANGEMENT:	DUPLEX
PUMPED FLUID:	RAW SEWAGE
ENCLOSURE:	NEMA TEFC
LIQUID TEMPERATURE:	UP TO 140° F
DESIGN CAPACITY, EACH:	400 GPM
T.D.H.:	63 FT
IMPELLER DIAMETER:	0'-6"
MIN. NAMEPLATE H.P.:	15 HP
MOTOR SPEED:	3500 RPM
MODEL:	HPS4SCXP015243
POWER REQUIREMENTS:	460 VOLT, 3 PHASE, 60 HZ
DISCHARGE SIZE:	4 INCH
TYPE OF MIXER:	CENTRIFUGAL
MIXER HP:	1.7 HP
MODEL OF MIXER:	KSB AMAMIX C 2222 14UDC



TYPICAL DISCHARGE PRESSURE GAUGE NOT TO SCALE



UPPER GUIDE RAIL SUPPORT FRAME DETAIL NOT TO SCALE

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SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
	LMM	LMM	CMK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

PUMP STATION PLAN AND SECTION

PROJECT NO.	210340
SHEET NAME	
CO-13	
SHEET	OF
20	20