VILLAGE OF LOWELLVILLE

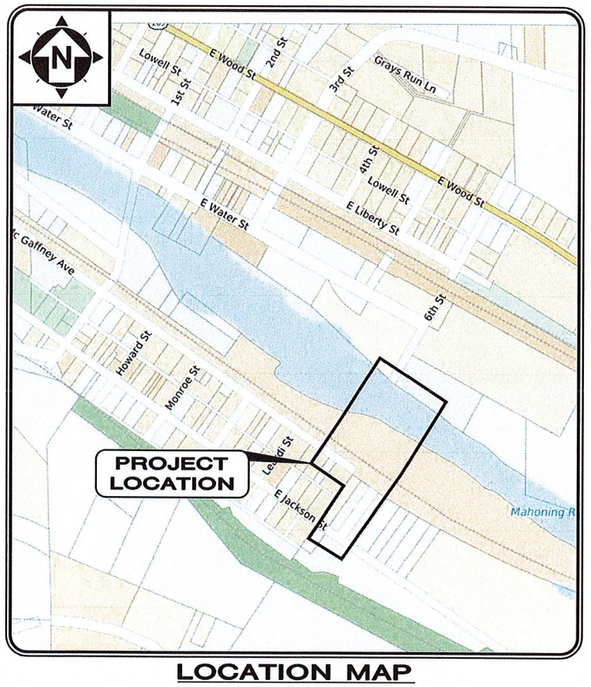
SANITARY SIPHON REPLACEMENT PROJECT

OPWC PROJECT #CF26Y

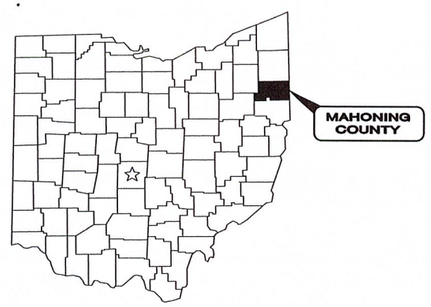
VILLAGE OF LOWELLVILLE, OHIO

OCTOBER 2025

Sheet List Table	
Sheet Number	**Sheet Title**
1	COVER SHEET
2	LEGENDS SYMBOLS & LIST OF ABBREVIATIONS
3	GENERAL NOTES 1
4	GENERAL NOTES 2
5	CONSTRUCTION DETAILS 1
6	CONSTRUCTION DETAILS 2
7	CONSTRUCTION DETAILS 3
8	EROSION &SEDIMENTATION CONTROL NOTES & DETAILS
9	ELECTRICAL NOTES & DETAILS
10	AERIAL SITE PLAN
11	EXISTING SITE AND CONTROL DRAWING
13	PLAN AND PROFILE
12	PLAN AND PROFILE
14	PLAN AND PROFILE
15	PLAN AND PROFILE
16	SITE EXISTING CONDITIONS
17	SITE PIPING PLAN
18	PLAN AND SECTION



LOCATION MAP
NOT TO SCALE



APPROVALS

MAYOR JAMES IUDICIANI, SR. DATE

VILLAGE ADMIN. JOANN ESENWEIN DATE

CLERK TREASURER CAROL FLORA DATE

COUNCIL MEMBERS

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

VILLAGE OF LOWELLVILLE

APPROVED BY:

THE VILLAGE OF LOWELLVILLE WASTEWATER SUPERINTENDENT
THIS_____DAY OF_____, 2025

OUPS CALL:

OHIO811.org Before You Dig

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.

GENERAL NOTE:

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

verdantas

ENGINEER'S PROJECT No. 210340

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

10/14/25

STATE OF OHIO · CHRISTOPHER MICHAEL KOGELNIK · E-70964 · REGISTERED PROFESSIONAL ENGINEER

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

REVISIONS			
REV.	DESCRIPTION	DATE	

ISSUED FOR:	PTI / BID
ISSUE DATE:	10/09/2025
SCALE:	AS SHOWN
DESIGNED BY:	LMM
DRAWN BY:	LMM
CHECKED BY:	CMK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

COVER SHEET

PROJECT NO. 210340
SHEET NAME CV-1
SHEET 1 OF 18

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	1005
MINOR CONTOUR	
WATER EDGE	
COUNTY LINE	
CORPORATION LINE	
ANNEXATION AREA	ANNEX ANNEX
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	ELEC-OH
ELECTRIC, UG	ELEC-UG ELEC-UG
ELECTRIC, SERVICE OH	
ELECTRIC, SERVICE, UG	
GAS	GAS
GAS, SERVICE	GS GS GS
SANITARY FORCE MAIN	FM
SANITARY SEWER	SAN
SANITARY LEACH LINE	
SANITARY SEWER, DOUBLE	
SANITARY SEWER, SERVICE	SS SS
STORM SEWER	STM
STORM SEWER, DOUBLE	
STORM, ROOF DRAIN	
STORM, UNDERDRAIN	UD UD UD
WATER LINE	WAT
WATER LINE, DOUBLE	
WATER LINE, SERVICE	WS WS WS
BUSH LINE	
TREE LINE	
MAJOR CONTOUR	1005
MINOR CONTOUR	1001
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	1+00 2+00
CONSTRUCTION FENCE	CF CF
SILT FENCE	SF SF
FILTER FENCE	FF FF
FILTER SOCK	FS FS

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
STEAM VENT
COMBINED SEWER MANHOLE
GAS LIGHT POST (YARD)
GAS MANHOLE
GAS VALVE
GAS VALVE BOX
GAS
GAS METER
GAS REGULATOR
GAS VENT PIPE
GAS LINE PAINT MARKING
GAS LINE FIXTURE
GAS
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/CABLE TV
POLE, ELECTRIC/TELEPHONE/LIGHT
POLE, ELECTRIC/TELEPHONE/CABLE TV
POLE, ELEC./TELE./LIGHT/CABLE TV
POLE, TELEPHONE/LIGHT
POLE, TELEPHONE/CABLE TV
POLE, TELEPHONE/LIGHT/CABLE TV
POLE, CABLE TV W/LIGHT
POLE, GUY WIRE
SIGN
SIGN, DOUBLE SIDED
SIGN, DUAL POST
SIGN, RAILROAD
POST
BOLLARD
DELINEATOR 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, LIGHT-OVERHEAD
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
DELINEATOR 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

EDGE OF PAVEMENT ELEVATION	EP
ELECTRIC	ELEC.
ENCLOSURE	ENCL.
EXISTING	EX.
FACE TO FACE	F/F
FINISHED FLOOR ELEVATION	FFE
FIRE HYDRANT	FH
FOUNDATION	FNDN.
FULL DEPTH RECLAMATION	FDR
FUTURE	FUT.
GAS	G
GALVANIZED PIPE	GP
GRADE BREAK ELEVATION	GB
GRAVEL	GVL.
GROUND ELEVATION	GND.
GUTTER ELEVATION	GUT.
HANDICAP (E.G. ACCESSIBLE)	HC
HIGH-DENSITY POLYETHYLENE PIPE	HDPE
HIGH POINT ELEVATION	HP
HORIZONTAL	HOR.
INSTALL	INSTL.
IRRIGATION	IRR.
JOINT	JT
JOINT FILLER	JF
JUNCTION	JCT.
KNOCKOUT	KO
LATERAL	LAT.
LOW POINT ELEVATION	LP
MAINTAIN	MAINT.
MATERIAL	MATL.
MOUNTED	MTD.
MISCELLANEOUS	MISC.
NOT TO SCALE	N.T.S.
ORNAMENTAL	ORN.
OUT TO OUT	O/O
OVERHEAD	OH
OXYGEN LINE	O
PARKING	PKG.
PAVEMENT	PVMT.
PEDESTAL	PED.
PERFORATE	PERF.
PIPE INVERT ELEVATION	INV.
POLYVINYL CHLORIDE PIPE	PVC
PREFORMED JOINT FILLER	PJF
PROPOSED	PR.
PULL BOX	PB
RAILROAD	RR
REINFORCED	REINF.
REINFORCED CONCRETE PIPE	RCP
REMOVE	RMV.
RETAINING WALL	RET.WALL
ROOF LEADER	RL
SALVAGE	SALV.
SANITARY SEWER	SAN.
SERVICE	SERV.
SLEEVE	SLV.
STABILIZATION	STABL.
STEAM PIPE	STEA.
STEEL PIPE	STL.
STORM SEWER	STM.
SUMP PUMP	SP
TELEPHONE	TEL.
TEMPORARY	TEMP.
THICKENED	THK.
TOP OF CURB ELEVATION	TC
TOP OF HEADWALL ELEVATION	THW
TOP OF STRUCTURE ELEVATION	RIM
TOP OF WALL ELEVATION	TW
TRENCH DRAIN	TD
TYPICAL	TYP.
UNDERDRAIN	UD
UNDERGROUND	UG
VERTICAL	VERT.
VITRIFIED CLAY PIPE	VCP
WATER MAIN	W.
WINDOW ELEVATION	WIN.
WIRE MESH	WM
WOOD	WD.
YARD HYDRANT	YH

ABBREVIATIONS

ABANDONED	ABAN.
ADJUST	ADJ.
AGGREGATE	AGG.
ASBESTOS PIPE	ASB.
ASPHALT	ASPH.
BACK TO BACK	B/B
BASEMENT FLOOR ELEVATION	BFE
BETWEEN	BTW.
BOTTOM OF CURB ELEVATION	BC
BOTTOM OF FOOTING ELEVATION	FTG.
BOTTOM OF WALL ELEVATION	BWE
BUILDING	BLDG.
BULKHEAD	BHD.
CABLE TELEVISION	CATV
CAST IRON PIPE	CIP
CATCH BASIN	CB
CENTERLINE	C/L
CENTER TO CENTER	C/C
CHAIN LINK FENCE	CLF
CHEMICAL STABILIZATION	CHEM. STABL.
CONCENTRIC	CON.
CONCRETE	CONC.
CONNECTION	CONN.
CONTROL JOINT	CJ
COPPER PIPE	COP.
CORRUGATED METAL PIPE	CMP
DEMOLITION	DEMO.
DEPRESSED	DEP.
DOWNSPOUT	DS
DROP MANHOLE	DMH
DUCTILE IRON PIPE	DIP
DUMPSTER	DUMP.
ECCENTRIC	ECC.

STATE OF OHIO
CHRISTOPHER MICHAEL KOGELNIK
E-70864
REGISTERED PROFESSIONAL ENGINEER

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

REVISIONS

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SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

LEGEND, SYMBOLS & LIST OF ABBREVIATIONS

PROJECT NO.
210340

SHEET NAME
G-1

SHEET 2 OF 18

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.

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.
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 FORCEMAINS SHALL CONFORM TO AWWA C651. MINIMUM TEST DURATION SHALL BE 2-HOURS AT 125% OPERATING PRESSURE.

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.

STATE OF OHIO
CHRISTOPHER KOGELNIK
E-70984
REGISTERED PROFESSIONAL ENGINEER

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

REVISIONS

REV.	DESCRIPTION	DATE

ISSUED FOR:	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
PIT / BID	10/09/2025	AS SHOWN	LMM	LMM	CMK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

GENERAL NOTES

PROJECT NO.
210340

SHEET NAME
GN-1

SHEET 3 OF 18

ELECTRICAL NOTES:

1. 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.
2. 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:

1. 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.

   A. ALL GRASS AREAS ARE TO BE RESTORED UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.

   B. THE COMPOSITION OF SEED MIXTURE SHALL CONFORM TO THE PROJECT DETAILS FOR SEEDING.

2. 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).
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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:

1. 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:

1. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOOD PLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
2. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.
3. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS.
4. 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.
5. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF A STREAM.
6. REMOVAL OF TREES AND BUSHES, OR DAMAGING VEGETATION OUTSIDE THE LIMITS OF THE CONSTRUCTION AREA.
7. DISPOSAL OF TREES, BRUSH AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.
8. 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:

1. 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 CONTRUCTION/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.
2. OPEN BURNING IS NOT ALLOWED.

EROSION & SEDIMENTATION CONTROL NOTES:

EROSION/SEDIMENT/DUST CONTROL PRACTICES:

1. STOCKPILED TOPSOIL AND EXCAVATED MATERIAL IS TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING OR COVERED WITH ANCHORED STRAW MULCH.
2. FINAL GRADING WILL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.
3. 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.
4. DISTURBED LAND SHALL BE TEMPORARILY STABILIZED BY SEEDING AND/OR MULCHING.
5. BACKFILL TRENCHES IMMEDIATELY AFTER EXCAVATION. SEED AND MULCH TRENCHES WITHIN TWO WEEKS AFTER TRENCHES ARE BACKFILLED.
6. 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:

1. 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.
2. BULK STORAGE TANKS HAVING A CAPACITY OF GREATER THAN 55 GALLONS WILL BE PROVIDED WITH SECONDARY CONTAINMENT.
3. PERSONNEL ON-SITE WILL BE MADE AWARE OF CLEANUP PROCEDURES AND THE LOCATION OF SPILL CLEANUP EQUIPMENT.
4. 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:

1. LIMITS OF CLEARING AND GRADING SHALL BE CLEARLY MARKED ON SITE WITH SIGNAGE, FLAGGING AND/OR CONSTRUCTION FENCING.
2. 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:

1. 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.
2. 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.
3. 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.
4. 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.
5. SEEDED AREAS SHALL BE INSPECTED AND WHERE THE SEED HAS NOT PRODUCED 80% COVER SHALL BE RESEEDED AS NECESSARY BY THE CONTRACTOR. AREAS SHALL BE STABILIZED WITH STRAW MULCH WHEN SUB-CONDITIONS PROHIBIT SEEDING.

MANHOLE NOTES:

1. ALL PRECAST CONCRETE SHALL BE REINFORCED IN ACCORDANCE WITH THE LATEST REVISIONS OF A.S.T.M. DESIGNATION C478.
2. ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED AND FURNISHED AS SOLID SECTION WITHOUT LIFT HOLES OF ANY KIND.
3. INTERIOR – THOROSEAL INSIDE OF SANITARY MANHOLES, FULL DEPTH (ANY COLOR BUT GREY). ALL JOINTS AND CONNECTIONS TO BE WATER PLUGGED.
4. 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.
5. 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 STRONG AS THOSE SHOWN HEREON SHALL BE PROVIDED.
6. 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.
7. DROP PIPE, WHEN SPECIFIED ON THE PLANS, SHALL BE CONSTRUCTED AS SHOWN.
8. 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:

1. 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.
2. 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.
3. 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.
4. THE CONTRACTOR SHALL POST 5 M.P.H. SPEED LIMIT SIGNS IN ALL WORK ZONES AND AS DIRECTED BY THE ENGINEER.
5. ACCESS MUST BE MAINTAINED FOR RESIDENCES, EMERGENCY VEHICLES AND PEDESTRIANS INCLUDING PERSONS WITH DISABILITIES, AT ALL TIMES.
6. 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.
7. 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.
8. THE VILLAGE SHALL APPROVE ALL ROAD CLOSURES AND DETOURS PRIOR TO IMPLEMENTATION.

PUMP STATION NOTES:

1. 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.
2. 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.
3. 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.
4. SEAL LIFT HOLES WITH APPROVED NON-SHRINK GROUT AND COAT WITH BITUMASTIC SEALANT.
5. ALL PUMP STATION WET WELL AND VALVE VAULT PIPING TO BE FLANGED DUCTILE IRON PIPE CL. 53.
6. 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.
7. PREP AND PAINT ALL EXPOSED PIPING, VALVES, FERROUS METAL, AND CONCRETE, BOTH SUBMERGED AND NON-SUBMERGED, WITH 1 COAT (4-8 MILS) SHERWIN WILLIAMS DURAPLATE UHS PRIMER AND 1 COAT (14-16 MILS) SHERWIN WILLIAMS DURAPLATE UHS. ALL SURFACES INCLUDING THE CONCRETE TOP AND FLOOR OF THE WET WELL SHALL BE COATED.
8. SEE ELECTRICAL SHEETS FOR WATER LEVEL DETECTOR MOUNTING AND ELECTRICAL WIRING (OR APPROVED EQUAL).
9. DISCHARGE PRESSURE GAUGES SHALL BE INSTALLED UPSTREAM OF CHECK VALVE.
10. LIFT HOIST WILL BE PROVIDED AND INSTALLED BY CONTRACTOR FOR USE OF PICKING UP DEBRIS BASKET.
11. 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.
12. CONCRETE MIX DESIGN IN CONTACT WITH WASTEWATER MUST BE IN ACCORDANCE WITH ACI 350R AND SUCH CONCRETE SHALL UTILIZE TYPE II CEMENT. XYPEX ADMIX C-1000 SHALL BE USED FOR CONCRETE WATERPROOFING.
13. ALL EXPANSION JOINTS AND CONTROL JOINTS SHALL BE SEALED WITH SIKAFLEX-1C SL.
14. CONCRETE PAD TO HAVE A MEDIUM BROOM FINISH.

STATE OF OHIO * CHRISTOPHER MICHAEL KOGELNIK E-70984 REGISTERED PROFESSIONAL ENGINEER

verdantas

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

REVISIONS

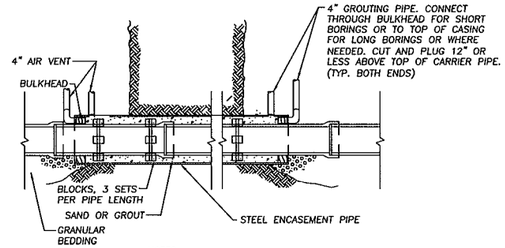
REV.	DESCRIPTION	DATE

ISSUED FOR: PFI / BID
ISSUE DATE: 10/09/2025
SCALE: AS SHOWN
DESIGNED BY: LMM
DRAWN BY: LMM
CHECKED BY: CMK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

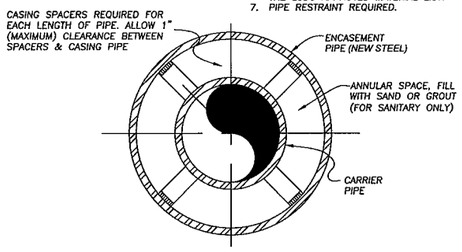
GENERAL NOTES

PROJECT NO. 210340
SHEET NAME GN-2
SHEET 4 OF 18



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

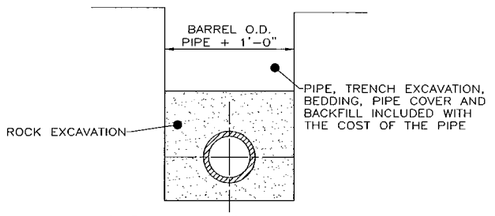
NOTES:
1. WELD ALL ENCASEMENT PIPE JOINTS.
2. MINIMUM THICKNESS FOR NEW CASING PIPE IS 1/2-INCHES.
3. BLOW SAND OR POUR GROUT FROM ONE END ONLY.
4. CASING DIAMETER SHALL BE A MINIMUM OF 6" GREATER THAN THE LARGEST O.D. OF THE CARRIER PIPE.
5. CARRIER PIPE MUST BE CLASS 52 D.I.P. MINIMUM OR AS SPECIFIED.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



SECTION

BORING AND STEEL ENCASEMENT PIPE DETAIL

NOT TO SCALE



ROCK EXCAVATION

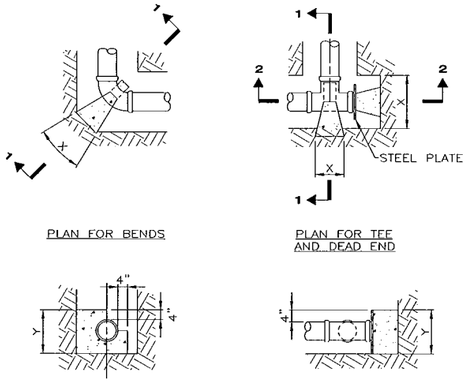
NOT TO SCALE

SIZING SCHEDULE

BEARING FACE (X Y) IN SQ. FT.
CONCRETE VOLUME IN CU. YD.

PIPE SIZE	22-1/2° BEND SOIL BEARING CAPACITY			45° BEND 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 / 0.14	0.46 / 0.09	0.26 / 0.06	2.70 / 0.12	0.90 / 0.06	0.54 / 0.06
6	2.80 / 1.15	0.93 / 0.10	0.56 / 0.07	5.50 / 0.15	1.83 / 0.10	1.10 / 0.07
8	4.80 / 0.20	1.60 / 0.13	0.96 / 0.09	9.60 / 0.23	3.20 / 0.15	1.92 / 0.09
10	7.90 / 0.53	2.63 / 0.34	1.96 / 0.22	15.70 / 0.34	5.23 / 0.20	3.14 / 0.13
12	11.30 / 0.62	3.76 / 0.40	2.26 / 0.26	22.30 / 0.75	7.43 / 0.49	4.46 / 0.32
14	15.30 / 0.74	5.10 / 0.48	3.06 / 0.31	30.20 / 0.98	10.06 / 0.64	6.04 / 0.42
16	19.80 / 1.17	6.60 / 0.76	3.96 / 0.49	39.10 / 1.21	13.03 / 0.79	7.82 / 0.51

PIPE SIZE	90° BEND SOIL BEARING CAPACITY			TEE OR DEAD END 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 / 0.14	1.63 / 0.09	0.96 / 0.06	3.50 / 0.12	1.16 / 0.06	0.70 / 0.06
6	10.20 / 0.22	3.40 / 0.14	2.04 / 0.09	7.20 / 0.17	2.40 / 0.11	1.44 / 0.07
8	17.70 / 0.35	5.54 / 0.23	3.54 / 0.15	12.50 / 0.25	4.16 / 0.16	2.50 / 0.14
10	28.90 / 0.54	9.60 / 0.35	5.76 / 0.23	20.40 / 0.38	6.80 / 0.25	4.06 / 0.16
12	41.10 / 1.31	13.70 / 0.85	8.22 / 0.55	29.10 / 0.97	9.70 / 0.63	5.82 / 0.42
14	55.80 / 1.70	18.60 / 1.11	11.16 / 0.72	39.50 / 1.22	13.16 / 0.79	7.90 / 0.51
16	72.20 / 2.14	24.06 / 1.39	14.44 / 0.90	51.10 / 1.54	17.03 / 1.00	10.22 / 0.65

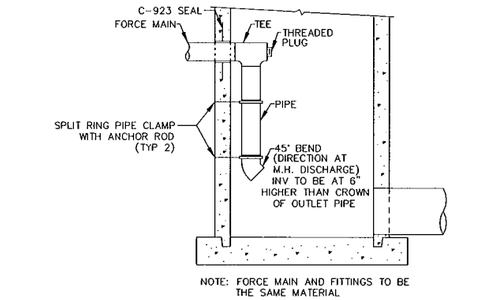


NOTE:

ALL CONCRETE BLOCKING MUST HAVE ITS ENTIRE FACE (X & Y) BEARING SURFACE AGAINST UNDISTURBED SOIL AND ALL VERTICAL NON-BEARING SURFACES SHALL BE FORMED SO AS TO KEEP CONCRETE FROM JOINTS. BLOCKING DESIGN BASED ON COMBINED WORKING PRESSURE PLUS WATER HAMMER OF 240 PSI AND FOR BEARING CAPACITY FOR SAND – 1000 PSF, SAND AND GRAVEL – 3000 PSF, SHALE – 5000 PSF.

THRUST BLOCKING DETAIL

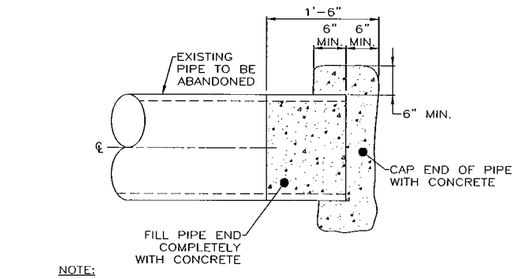
NOT TO SCALE



NOTE: FORCE MAIN AND FITTINGS TO BE THE SAME MATERIAL

F.M. CONNECTION TO MANHOLE

NOT TO SCALE

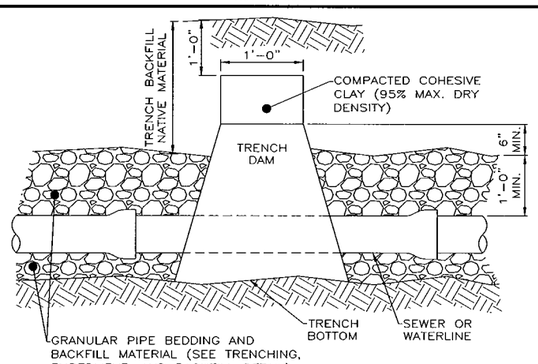


NOTE:

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

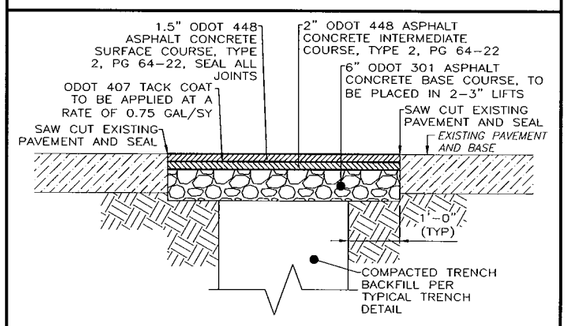
PIPE CAP DETAIL

NOT TO SCALE



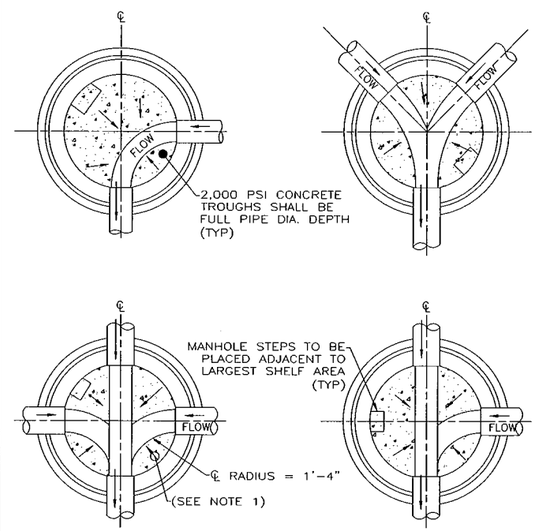
TRENCH DAM DETAIL

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 TROUGHS FOR EXISTING MANHOLES SHALL BE 2'-0" THICK WITH STEEL REINFORCEMENT.

TYPICAL MANHOLE CHANNELS

NOT TO SCALE

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

STATE OF OHIO · CHRISTOPHER MICHAEL KOGELNIK · E-70984 · REGISTERED PROFESSIONAL ENGINEER

REV.	DESCRIPTION	DATE

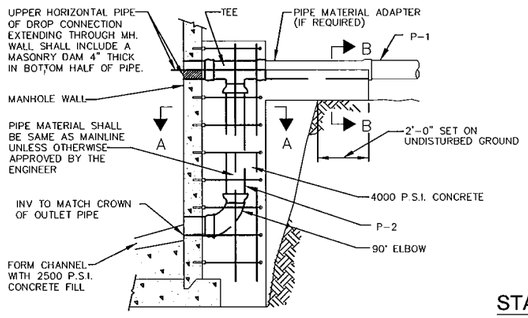
REVISIONS

ISSUED FOR: PTI / BID
ISSUE DATE: 10/09/2025
SCALE: AS SHOWN
DESIGNED BY: LMM
DRAWN BY: LMM
CHECKED BY: CMK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

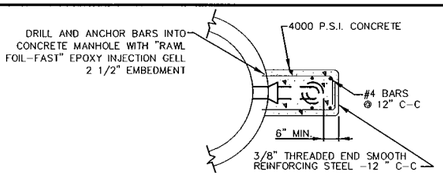
CONSTRUCTION DETAILS

PROJECT NO. 210340
SHEET NAME D-1
SHEET 5 OF 18

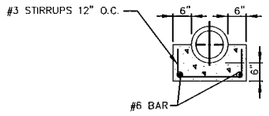


PLAN VIEW

TABLE OF DIMENSIONS	
P-1	P-2
6"	6"
8"	6"
10"	6"
12"	8"
15"	8"
18"	10"
21"	10"
24"	12"



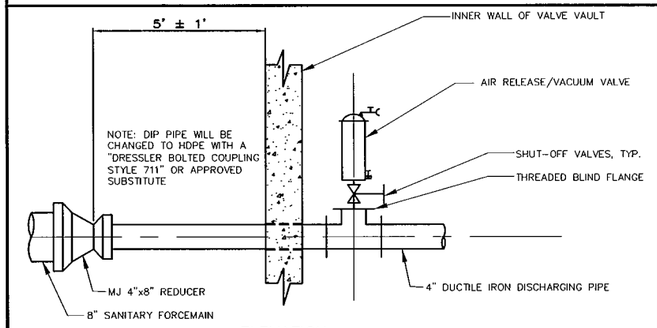
SECTION A-A



SECTION B-B

STANDARD PRECAST SANITARY MANHOLE DROP CONNECTION

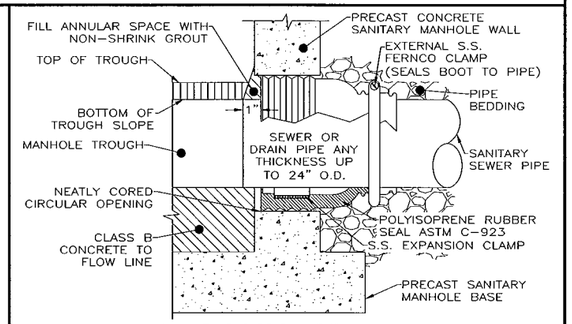
4/08 SD-3-21



ELEVATION

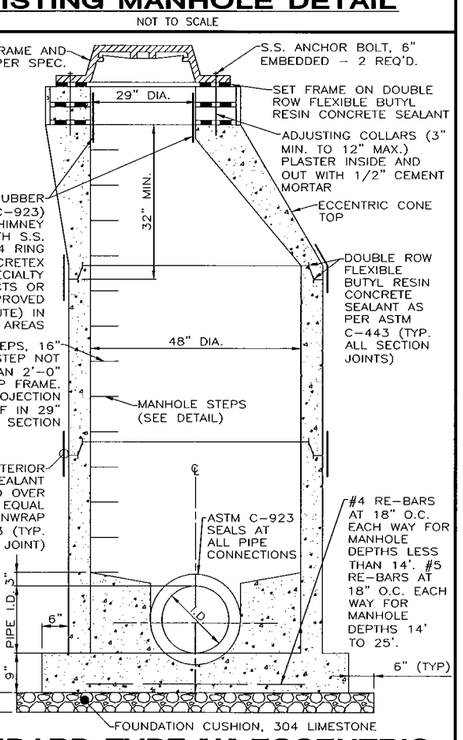
AIR RELEASE/VACUUM VALVE DETAIL

NOT TO SCALE



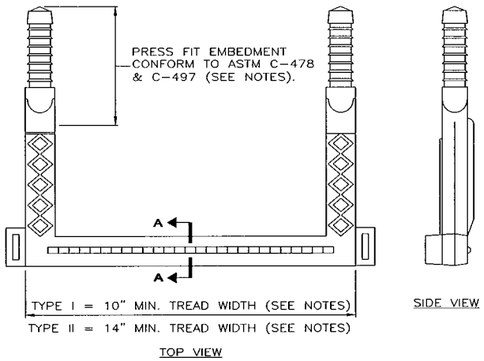
PIPE CONNECTION TO EXISTING MANHOLE DETAIL

NOT TO SCALE



STANDARD TYPE "A" ECCENTRIC MANHOLE (24" I.D. AND LESS)

NOT TO SCALE



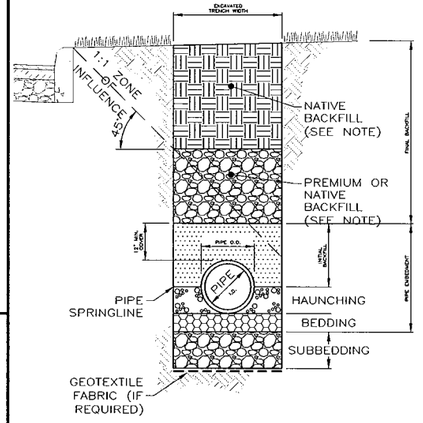
SECTION A-A

NOTES:

1. USE TYPE I STEP FOR MANHOLES OR CIRCULAR STRUCTURES OF 5'-0" DIA. OR LESS - USE 16" C/C SPACING.
2. USE TYPE II STEP FOR FLAT WALL STRUCTURES SUCH AS VAULTS, WELLS, ETC. OR CIRCULAR STRUCTURES OVER 5'-0" DIA. - USE 12" C/C SPACING.
3. MOUNTING REQUIREMENTS SHALL BE IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.

TYPICAL MANHOLE STEP DETAIL

NOT TO SCALE



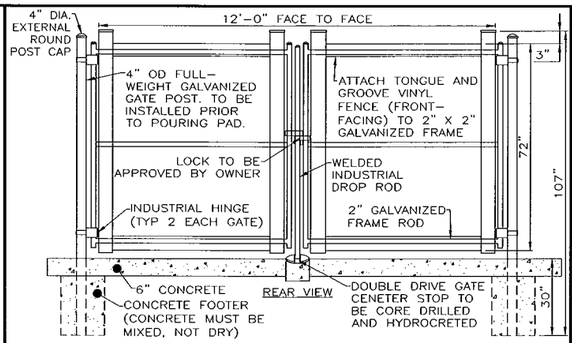
NOTES:

1. 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
2. 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.
3. 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.
4. 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.
5. 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.
6. CLAY TRENCH DAMS: SHALL BE REQUIRED WHEN AND WHERE NECESSARY AS PER PLAN OR DIRECTED BY THE ENGINEER.
7. 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.

TRENCHING AND BACKFILL DETAIL

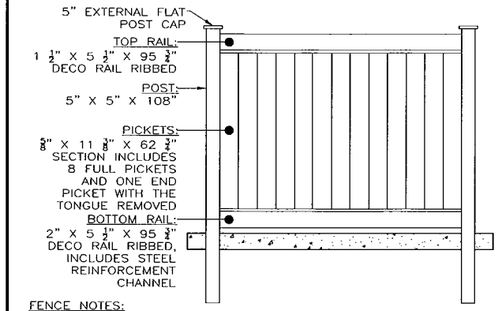
SCALE: NONE



GATE NOTES:
1. 2 GATE KITS WITH UPRIGHTS
2. MODEL: NEW LEXINGTON
3. SHOP DRAWINGS FOR FENCE AND GATE ASSEMBLY TO BE REVIEWED AND APPROVED BY MCSE PRIOR TO CONSTRUCTION.

VINYL FENCE GATE: COLOR: TAN

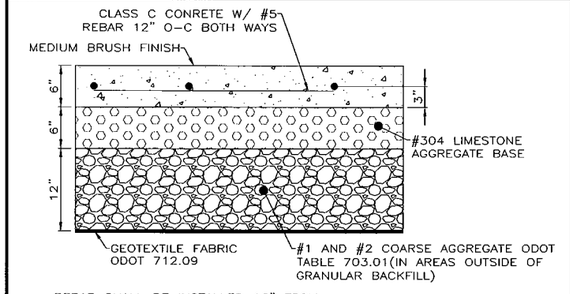
NOT TO SCALE



FENCE NOTES:
1. GALVANIZED FENCE POSTS 2" X 8' TO BE CORED OR HYDROCRETE. 1 E-Z SET BRACKET PER POST. BUFFETT FENCE PRODUCT # 71414 OR APPROVED EQUAL.

VINYL FENCE SECTION: COLOR: TAN

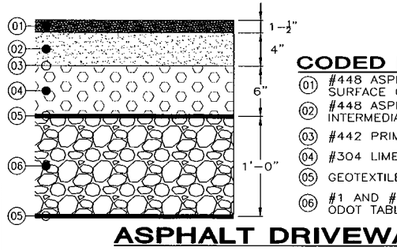
NOT TO SCALE



REBAR SHALL BE INSTALLED 16" FROM OUTER FACES OF CONCRETE PAD.

CONCRETE PAD CROSS SECTION

NOT TO SCALE



CODED NOTES:

(01) #448 ASPHALT CONCRETE SURFACE COARSE TYPE I
(02) #448 ASPHALT CONCRETE INTERMEDIATE COARSE TYPE II
(03) #442 PRIME COAT
(04) #304 LIMESTONE AGGREGATE BASE
(05) GEOTEXTILE FABRIC ODOT 712.09
(06) #1 AND #2 COARSE AGGREGATE ODOT TABLE 703.01

ASPHALT DRIVEWAY CROSS SECTION

NOT TO SCALE

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

STATE OF OHIO * CHRISTOPHER MICHAEL KOGELNIK E-70964 REGISTERED PROFESSIONAL ENGINEER

REVISIONS			
REV.	DESCRIPTION	DATE	

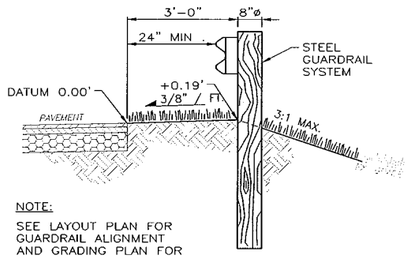
ISSUED FOR:	
PIT/ BID	
ISSUE DATE:	10/09/2025
SCALE:	AS SHOWN
DESIGNED BY:	LMM
DRAWN BY:	LMM
CHECKED BY:	CMK

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

CONSTRUCTION DETAILS

PROJECT NO. 210340
SHEET NAME D-2
SHEET 6 OF 18

W:\VERDANTAS.COM\CITY\PROJECTS\2021\210340\WORKSHEETING_210340_CONSTRUCTION DETAILS.DWG - D-2 - 11/12/2024 10:28:52 AM - LMM MATHEWS

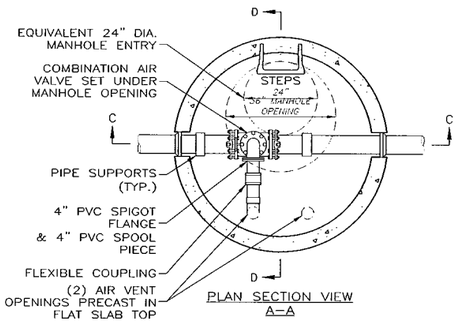


NOTE:

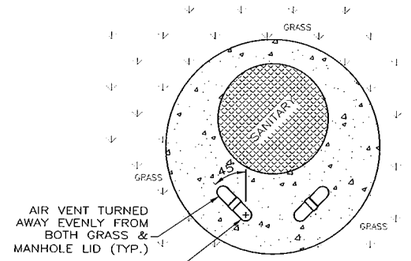
SEE LAYOUT PLAN FOR GUARDRAIL ALIGNMENT AND GRADING PLAN FOR ELEVATIONS.

GUARDRAIL LOCATION DETAIL

SCALE: NONE



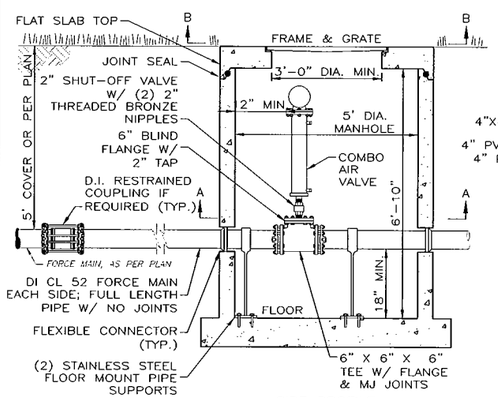
PLAN SECTION VIEW
A-A



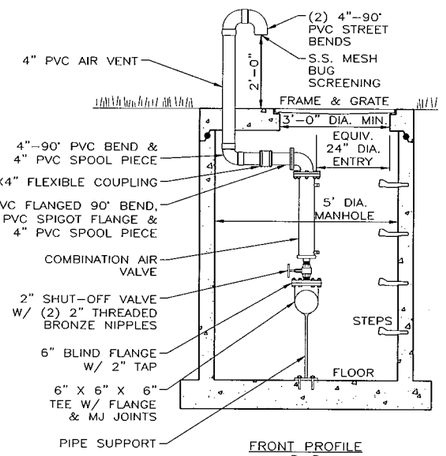
TOP PLAN VIEW
B-B

NOTES:

1. THIS DETAIL SHOWS A 6" FORCE MAIN WITH 5'-0" COVER INSIDE A 5'-0" DIA. MANHOLE FOR REFERENCE ONLY; SEE PLANS FOR ACTUAL SIZES AND DIMENSIONS.
2. SEE SEPARATE PRE-CAST CONCRETE MANHOLE (SANITARY) DETAIL FOR SPECIFICATIONS.
3. MANHOLE SHALL BE A SINGLE PRECAST MONOLITHIC UNIT WITH SEPARATE FLAT SLAB TOP FLUSH TO GROUND GRADE.
4. 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.
5. 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.
6. COMBINATION AIR VALVE SHALL BE VENT-O-MAT 050 RGX 1021 WITH THREADED CONNECTION AND 90° DISCHARGE VENT.
7. COMBINATION AIR VALVE SHALL BE SITUATED UNDER THE MANHOLE OPENING FOR FUTURE INTERNAL FILTER REMOVAL 'STRAIGHT UP' WHILE ALSO ALLOWING SUFFICIENT ENTRY FOR MAINTENANCE PERSONNEL TO ENTER THE MANHOLE.
8. SHUT-OFF VALVE SHALL BE SET FACING OPPOSITE SIDE OF MANHOLE STEPS.
9. FLEXIBLE COUPLING SHALL BE FERNCO P-1056 SERIES LOCATED IN POSITION TO BE SLID TO SIDE FOR FUTURE MAINTENANCE OF COMBINATION AIR VALVE.
10. ALL EXPOSED PIPING, VALVES, FITTINGS AND FERROUS METAL ITEMS SHALL BE PAINTED WITH 1 COAT (3.5 MIL) OF POLYURETHANE PRIMER, TNEMEC OMNITHANE SERIES 1, AND 1 FINISH COAT (4.0 MIL) OF EPOXY PAINT, TNEMEC SERIES N69 HI-BUILD EPOXOLINE II, COLOR 34GR DEEP SPACE.
11. AIR VENT PIPES SHALL BE PRECAST INTO MANHOLE FLAT SLAB TOP.
12. ABOVE GROUND AIR VENT PIPES SHALL HAVE A MINIMUM CLEARANCE OF 24" FROM THE EDGE OF ANY ROADWAY OR WALKING SURFACE.
13. PVC PIPE ABOVE GROUND SURFACE SHALL BE PAINTED BLACK OR COLOR CHOICE BY OWNER WITH PVC PAINT.



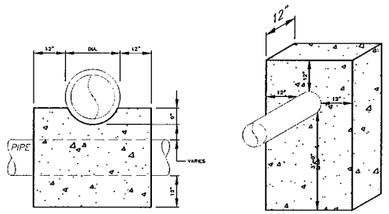
SIDE PROFILE
C-C



FRONT PROFILE
D-D

COMBINATION AIR RELEASE & VACUUM BREAK VALVE FOR 4" THRU 8" DIA. FORCE MAIN IN PRECAST CONCRETE MANHOLE DETAIL

SCALE: NONE



NOTES:

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

CONCRETE PIPE CRADLE DETAIL

SCALE: NONE

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

STATE OF OHIO * CHRISTOPHER MICHAEL KOGELNIK E-70864 REGISTERED PROFESSIONAL ENGINEER

REVISIONS		
REV.	DESCRIPTION	DATE

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SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

CONSTRUCTION DETAILS

PROJECT NO.	
210340	
SHEET NAME	
D-3	
SHEET	OF
7	18

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
	OATS	3	128 (3 BU)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
AUG. 16TH TO NOV.	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
	ANNUAL RYEGRASS	1.25	40
	PERENNIAL RYEGRASS	3.25	40
	CREEPING RED FESCUE	0.4	40
	KENTUCKY BLUEGRASS	0.4	

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

TEMPORARY SEEDING

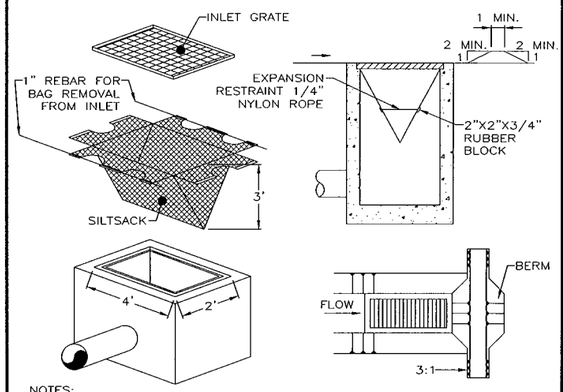
	POUNDS/ ACRE	POUNDS/ 1,000 SF	NOTES
GENERAL USE:			
CREEPING RED FESCUE	20–40	1/2–1	
DOMESTIC RYEGRASS	10–20	1/4–1/2	FOR CLOSE MOWING & WATERWAYS
KENTUCKY BLUEGRASS	20–40	1/2–1	WITH <2.0 FT/SEC VELOCITY
TALL FESCUE	40–50	1–1 1/4	
TURF–TYPE (DWARF) FESCUE	90	2 1/4	
STEEP BANKS OR CUT SLOPES:			
TALL FESCUE	40–50	1–1 1/4	
CROWN VETCH	10–20	1/4–1/2	
TALL FESCUE	20–30	1/2–3/4	DO NOT SEED LATER THAN AUGUST
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		2	
KENTUCKY BLUEGRASS	100–120	2	
CREEPING RED FESCUE		1–1/2	FOR SHADED AREAS

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.

PERMANENT 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

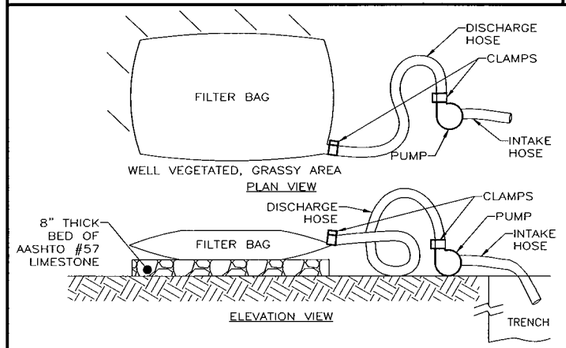


NOTES:

1. MAXIMUM DRAINAGE AREA =1/2 ACRE.
2. INLET PROTECTION IS NOT REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP.
3. BERMS REQUIRED FOR ALL INSTALLATIONS.
4. 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:

1. 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.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. REPLACE FILTER BAGS WHEN THEY BECOME ½ FULL. KEEP SPARE BAGS AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. 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%.
4. INSERT PUMP DISCHARGE HOSE INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHOULD BE NO GREATER THAN 750 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
6. INSPECT FILTER BAGS DAILY. IF ANY PROBLEM IS DETECTED, CEASE PUMPING IMMEDIATELY AND DO NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

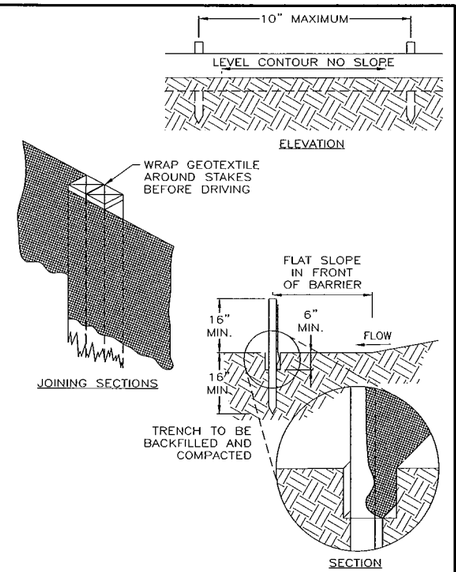
PUMPED WATER FILTER BAG DETAIL

NOT TO SCALE

FABRIC–SILT FENCE NOTES:

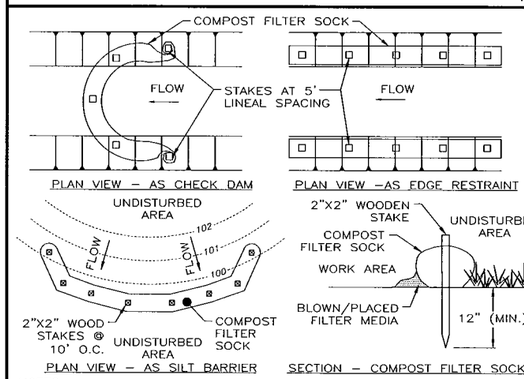
1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. 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.
4. 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.
5. SILT FENCE HEIGHT SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. 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.
7. 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.
8. SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.
9. 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:
   A. THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED,
   B. ACCUMULATED SEDIMENT SHALL BE REMOVED, OR
   C. OTHER PRACTICES SHALL BE INSTALLED.
10. 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.
11. CRITERIA FOR SILT FENCE MATERIALS:
   A. 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.
   B. 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

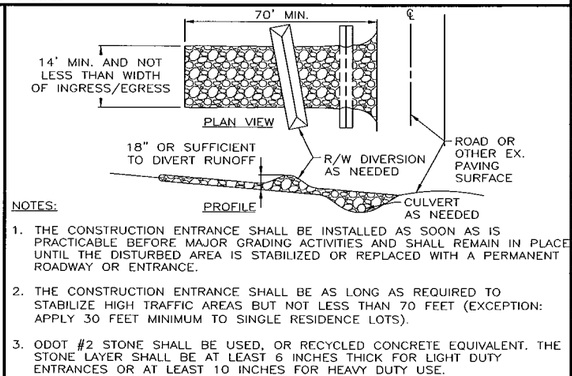


NOTES:

1. 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.
2. 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.
3. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ 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.
4. BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
5. 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:

1. 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.
2. 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).
3. 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.
4. 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

5. 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.
6. 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.
7. 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.
8. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CONSTRUCTION ENTRANCE

NOT TO SCALE

STATE OF OHIO · CHRISTOPHER MICHAEL KOSELNIK · E-70984 · REGISTERED PROFESSIONAL ENGINEER

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

REVISIONS

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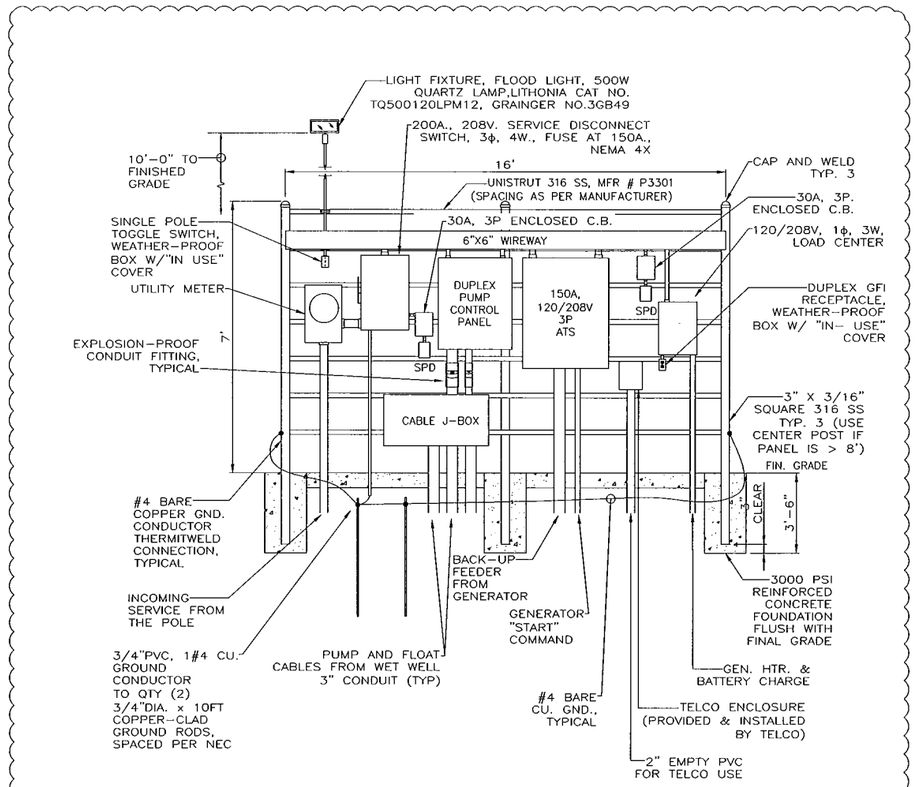
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

EROSION & SEDIMENTATION CONTROL NOTES & DETAILS

PROJECT NO. 210340

SHEET NAME: E-1

SHEET 8 OF 18



ELECTRICAL EQUIPMENT BACKBOARD ELEVATION

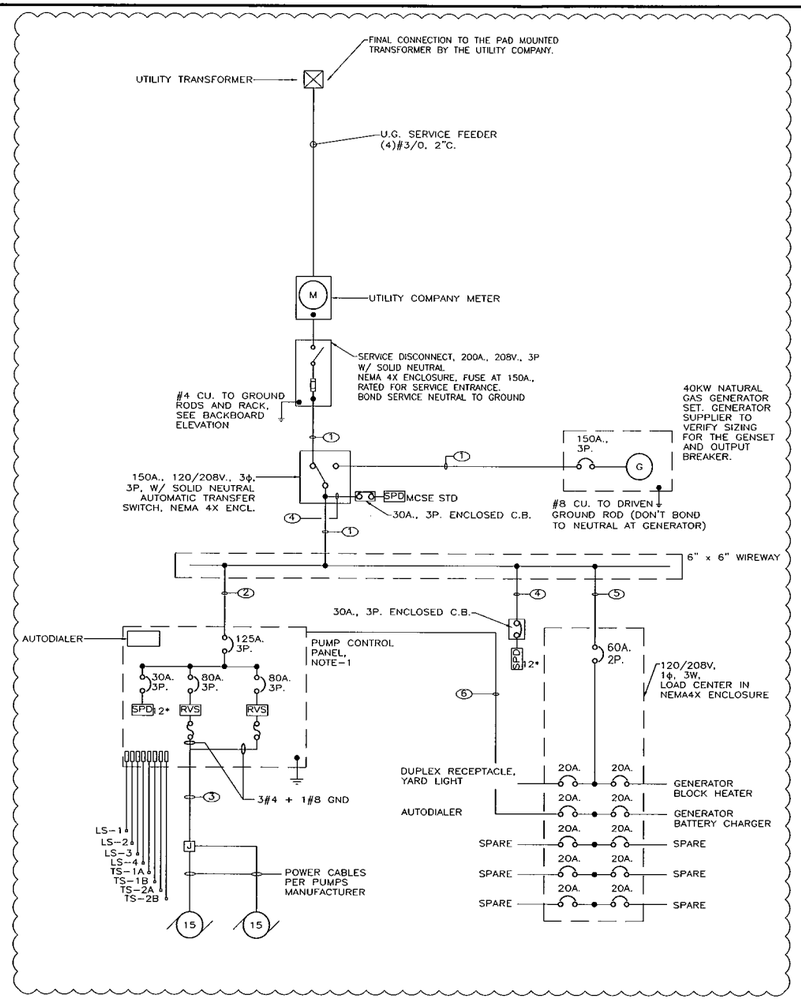
NOT TO SCALE

NOTES:

ADJUST EQUIPMENT PLACEMENT ON THE RACK TO MATCH CONDUIT STUB UPS AS SHOWN ON THE SITE PLAN.

COORDINATE RACK DIMENSIONS AND LAYOUT WITH EQUIPMENT SHOP DRAWINGS. SUBMIT FINAL DIMENSIONED LAYOUT TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

SEAL ALL UNDERGROUND CONDUIT AT ENTRY INTO ENCLOSURES.



SINGLE LINE DIAGRAM

NOT TO SCALE

NOTES:

1. PUMP CONTROL PANEL SHALL BE USEMCO DUPLEX CONTROLLER, NEMA 4X S.S. ENCLOSURE WITH SENTRY TOUCH SCREEN CONTROLLER AND SHALL INCLUDE SENSAPHONE 1400 AUTODIALER TO CALLOUT UPON "HIGH WATER", "POWER OUTAGE", OR "PUMP FAIL".
2. PROVIDE INTRINSICALLY SAFE TERMINALS FOR FLOAT L.S. AND THERMAL SWITCHES.
3. REFER TO FEEDER SCHEDULE ON SHEET 01E-01
4. GENERATOR SUPPLIER SHALL VERIFY ENGINE, ALTERNATOR AND OUTPUT BREAKER SIZING.
5. VERIFY GAS SERVICE REQUIREMENTS. COORDINATE INSTALLATION WITH THE G.C. AND THE GAS COMPANY.
6. WHEN PULLING POWER AND CONTROL CONDUCTORS TO THE WET WELL, IN ADDITION TO THE REQUIRED LENGTH OF CONDUCTORS, LEAVE A 5 FT. COIL OF SLACK IN CONDUCTORS AT TOP OF WET WELL. SUPPORT ALL CABLES USING STRAIN RELIEF GRIPS.

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SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

ELECTRICAL NOTES & DETAILS

PROJECT NO. 210340
SHEET NAME E-1
SHEET 9 OF 18

SHEET 10 OF 18	ASP	PROJECT NO. 210340	SHEET NAME

SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

AERIAL SITE PLAN

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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	VLAGE VLAGE
BOUNDARY LINE	
PROPERTY LINE	
RIGHT-OF-WAY LINE	LT R/W
RIGHT-OF-WAY C/L	
PROPOSED EASEMENT	

1 — SURVEY CONTROL / REFERENCE POINT SET

5 — EXISTING SURVEY MONUMENTATION FOUND

51 — CALCULATED LOCATION OF CENTERLINE OF STREET.

SURVEY NOTES:

1. 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).
2. 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.
3. THE BENCHMARK ELEVATIONS SHOWN IN THE PROJECT CONTROL TABLE ARE AT THE TOP OF THE RED CAP OF THE IRON PIN SET.
4. IRON PINS SET ARE 5/8" IRON PINS SET WITH A RED CAP INSCRIBED WITH "CT REF"

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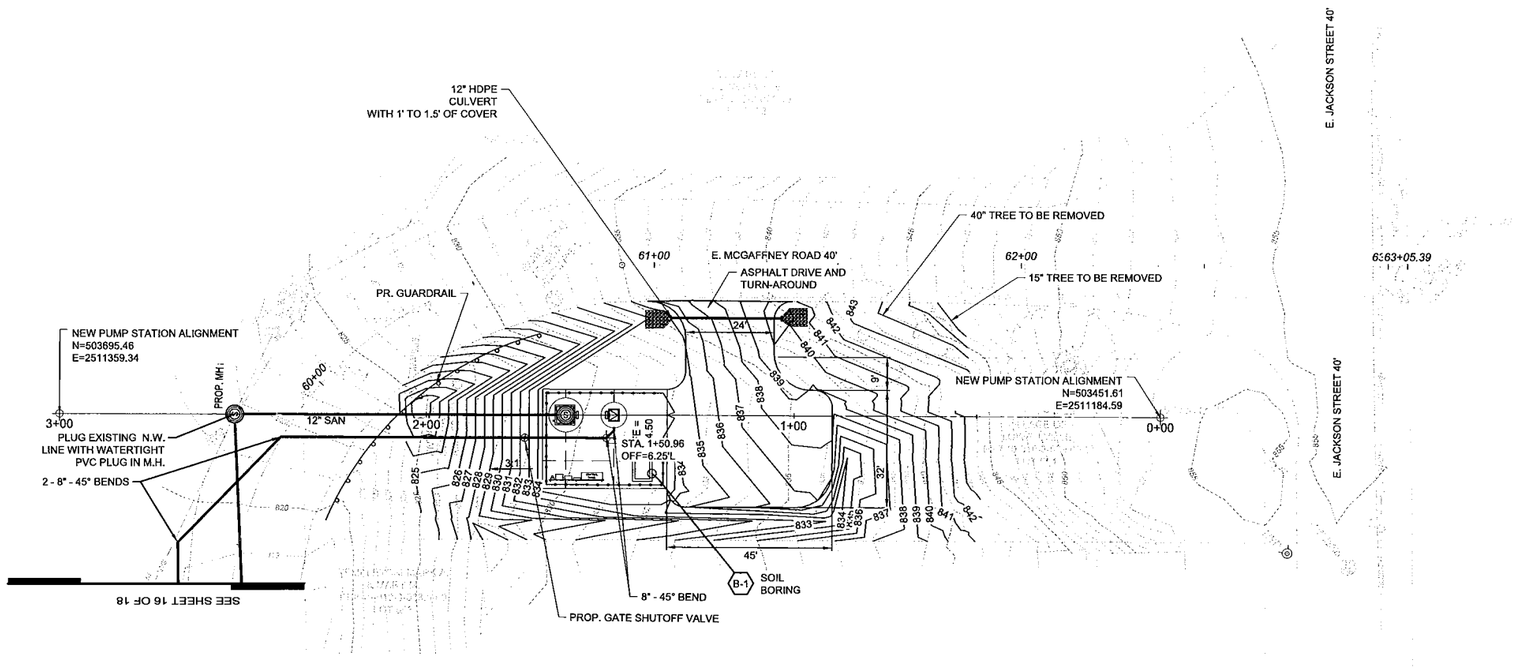
VILLAGE OF LOWELLVILLE, OHIO

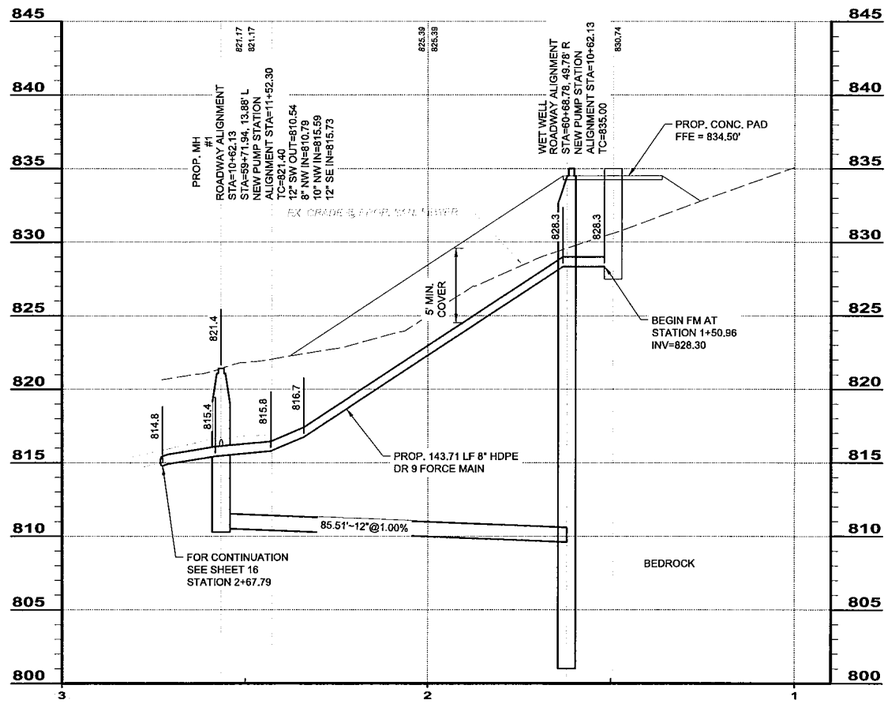
EXISTING SITE PLAN/ CONTROL DRAWING

PROJECT NO.
210340

SHEET NAME
ESP

SHEET	OF
11	18





PUMP STATION PROPOSED SANITARY RUN

0 20 40
HORIZ. SCALE: 1" = 20'

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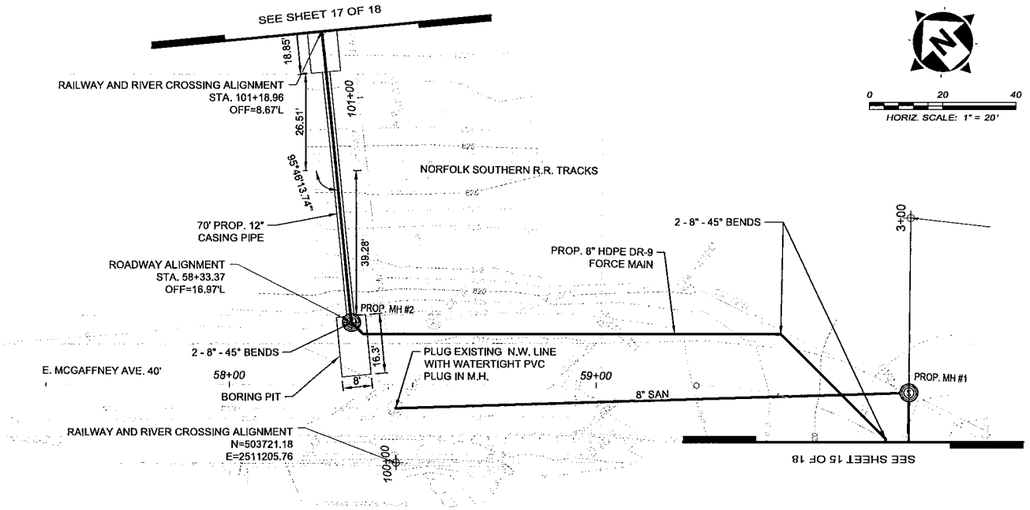
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

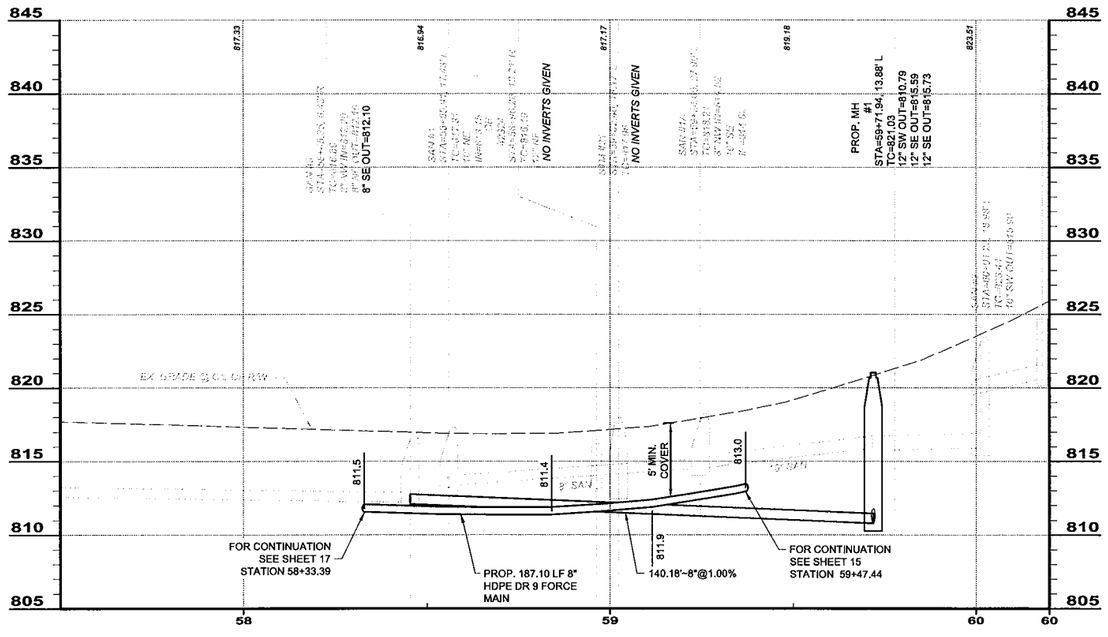
PLAN AND PROFILE - E. MCGAFFNEY AVENUE
STA. 60+00 TO STA. 63+00

PROJECT NO.
210340

SHEET NAME
PNP-1

SHEET 13 OF 18





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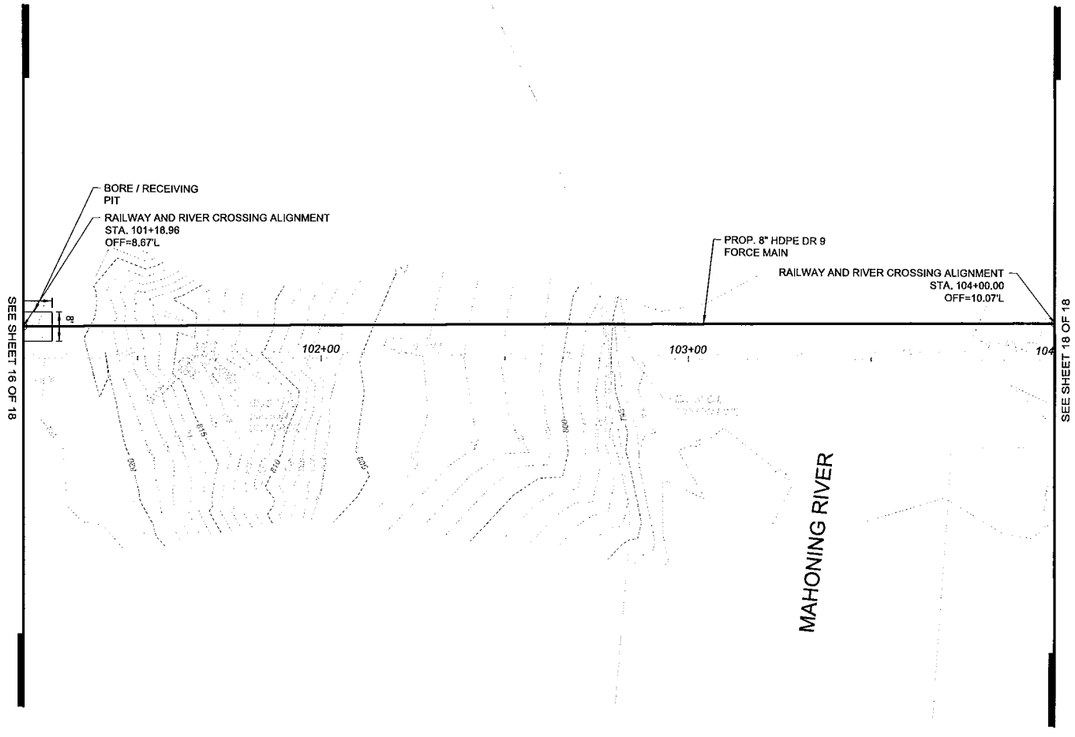
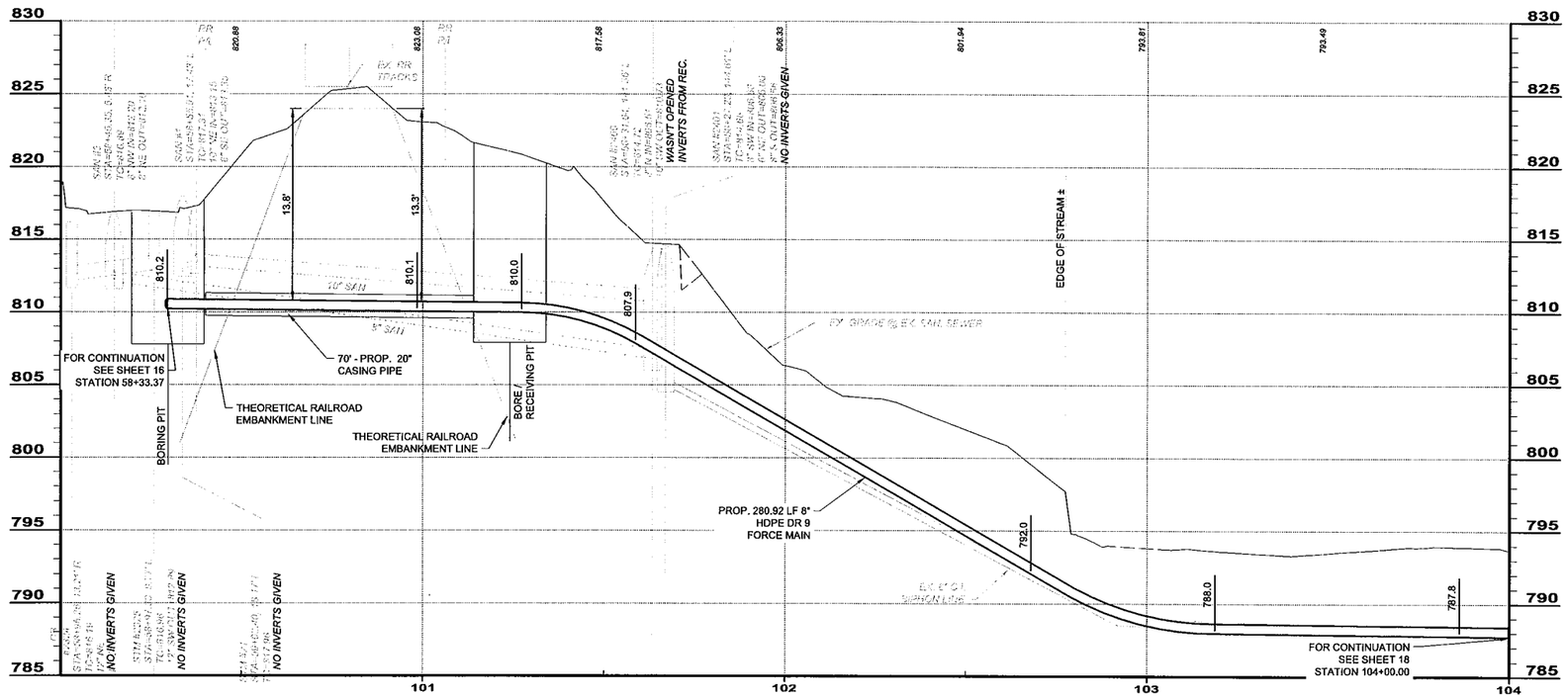
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

PLAN AND PROFILE - E. MCGAFFNEY AVENUE
STA. 56+00 TO STA. 60+00

PROJECT NO.
210340
SHEET NAME
PNP-2
SHEET 12 OF 18

C:\USERS\LMMATHEWS\ONEDRIVE - VERDANTAS\DESKTOP\DAY_T WORK\10 - OCTOBER\18-LOWELLVILLE\DWG\BASE\C_210340 - X-BASE - EXCON.DWG - PNP-2 - 10/17/2025 11:16:07 AM - LMM.MATHEWS





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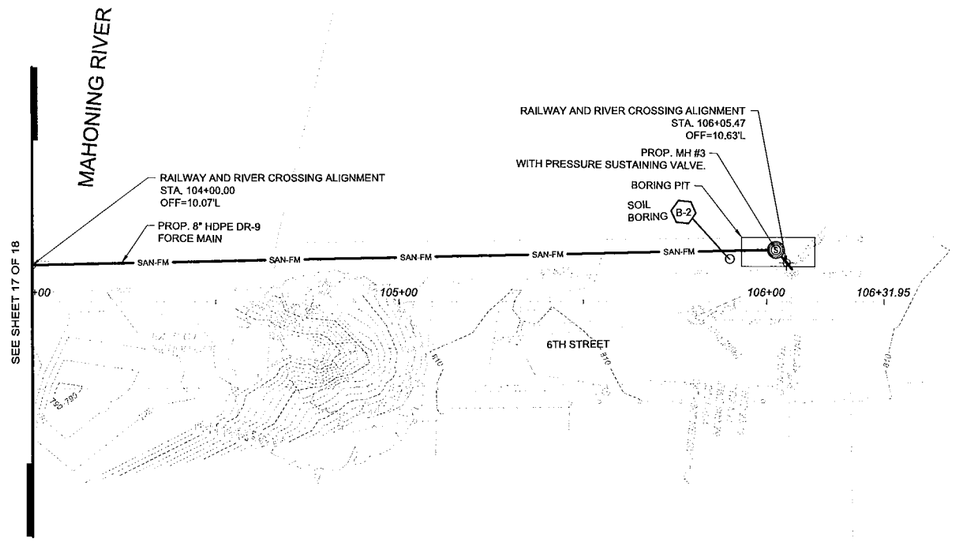
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

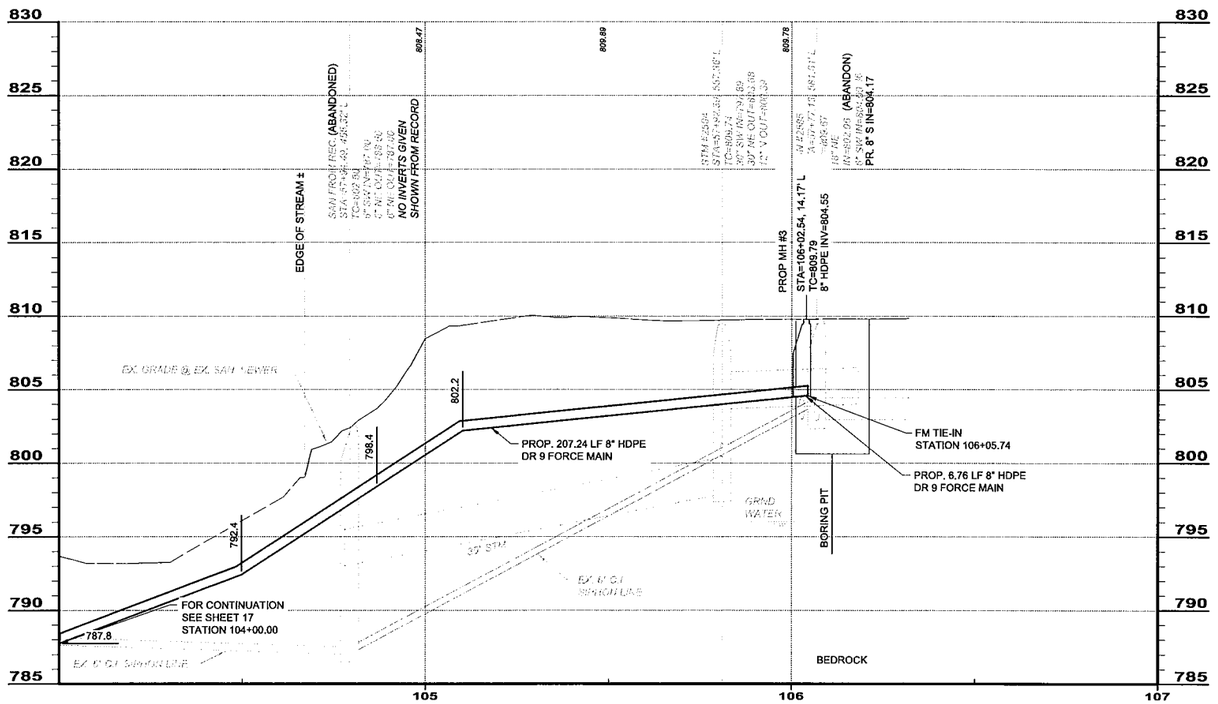
PLAN AND PROFILE - RIVER CROSSING
STA. 100+00 TO STA. 104+00

PROJECT NO.
210340
SHEET NAME
PNP-3

SHEET	OF
14	18

C:\USERS\LMMATHEWS.CHIEFDRIVE - VERDANTAS DESKTOP\DAILY WORK\10 - OCTOBER\15-VILLAGE OF LOWELLVILLE\WORKSPACE\C_210340 - X-BASE - EXCONDLDWG - PNP-3 - 10/17/2025 11:18:07 AM - LMM MATHEWS





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VILLAGE OF LOWELLVILLE, OHIO

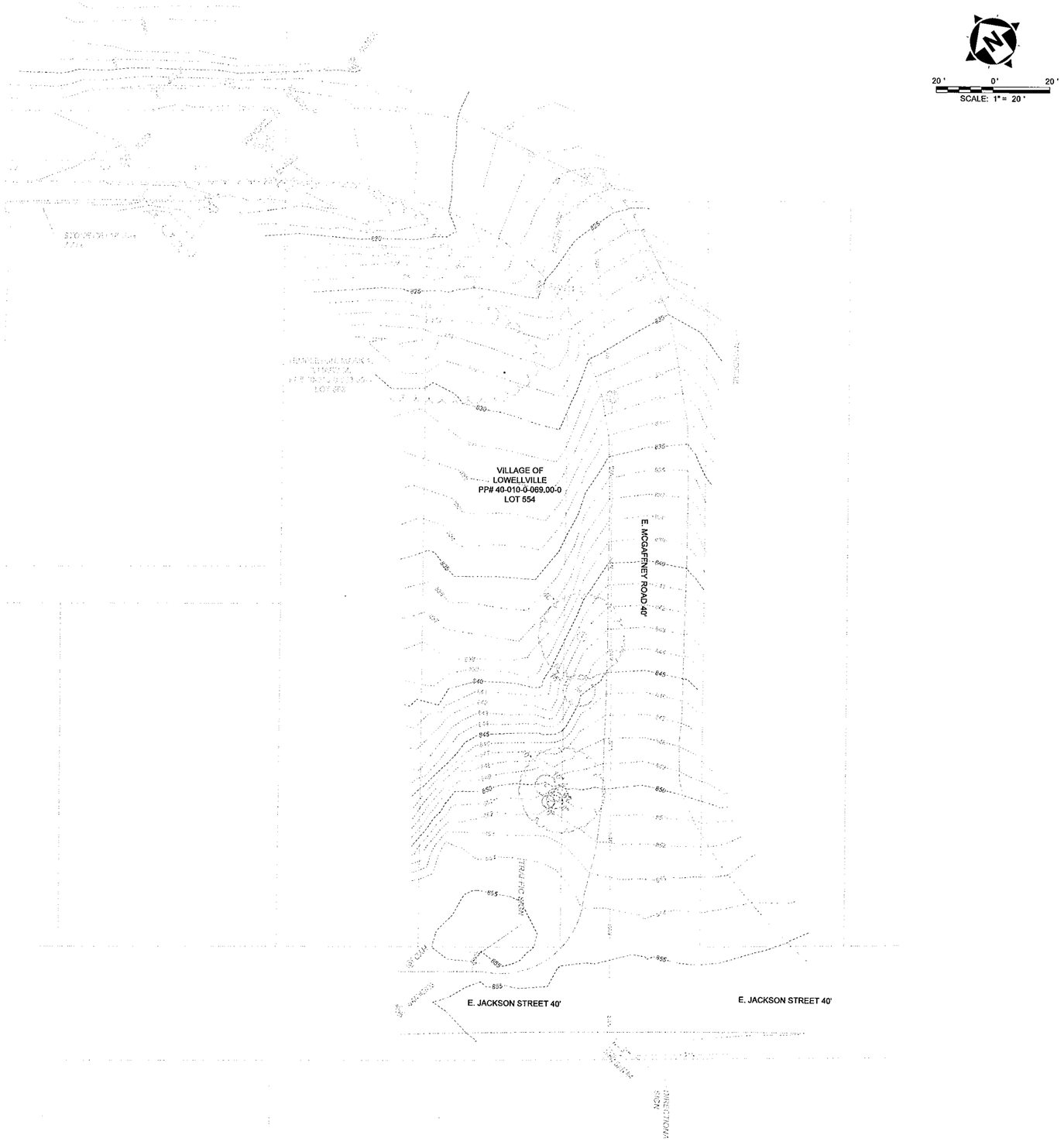
PLAN AND PROFILE - RIVER CROSSING
STA. 100+00 TO STA. 104+00

PROJECT NO.
210340

SHEET NAME
PNP-4

SHEET 15 OF 18

C:\USERS\LMMATHEW\ONEDRIVE - VERDANTAS\DESKTOP\DAILY WORK\18 - OCTOBER\18-1 PLOWELLVILLE\DWG BASE\C_210340 - X-BASE - EXDOND.DWG - PNP-4 - 10/17/2025 12:52:32 PM - LMM MATHEWS



20 ' 0 ' 20 '
SCALE: 1" = 20 '

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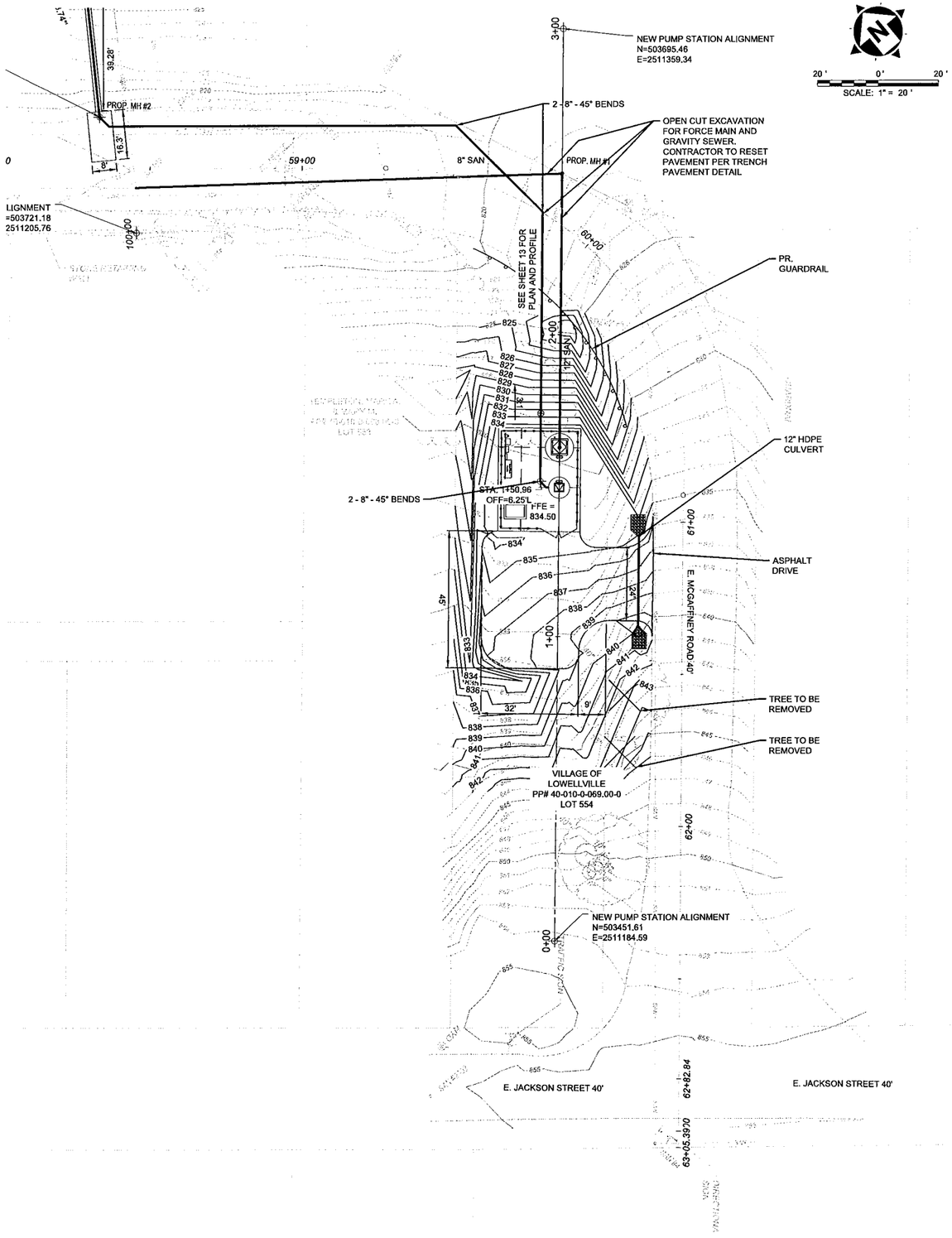
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

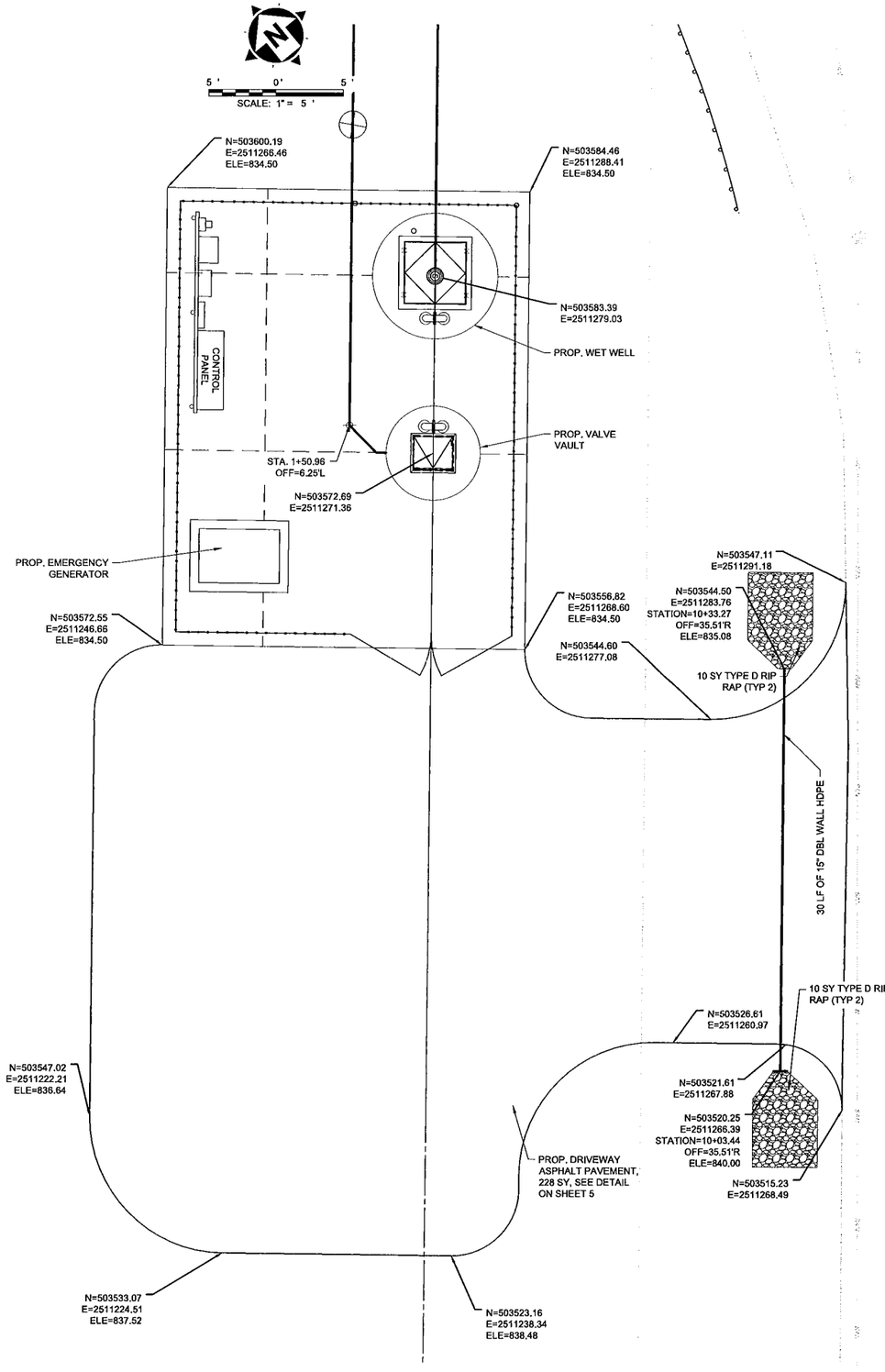
EXISTING CONDITIONS

PROJECT NO.
210340

SHEET NAME
SITE EXISTING CONDITIONS

SHEET	OF
16	18





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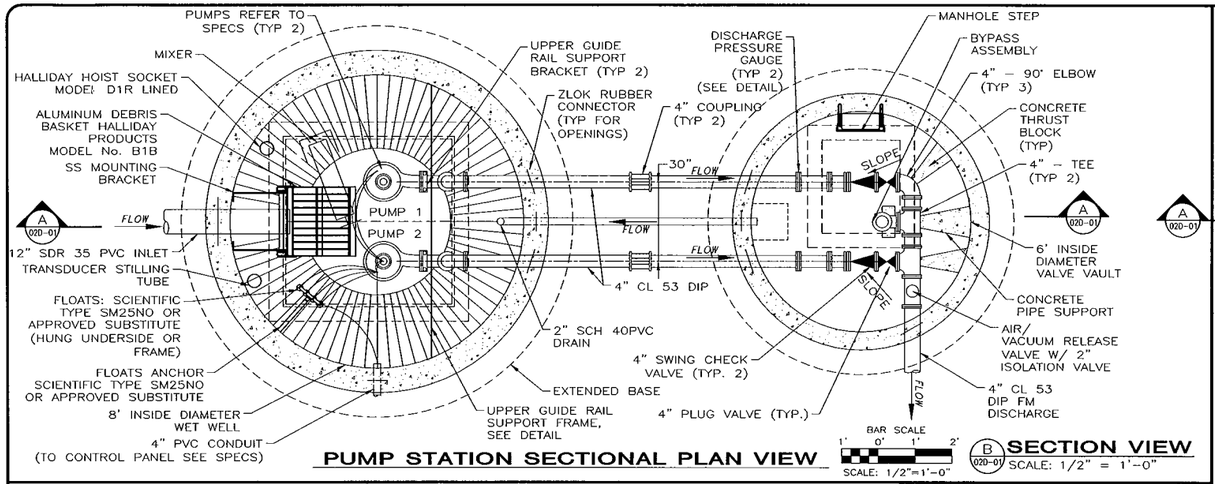
SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

SITE PIPING PLAN & PROFILE

PROJECT NO.
210340

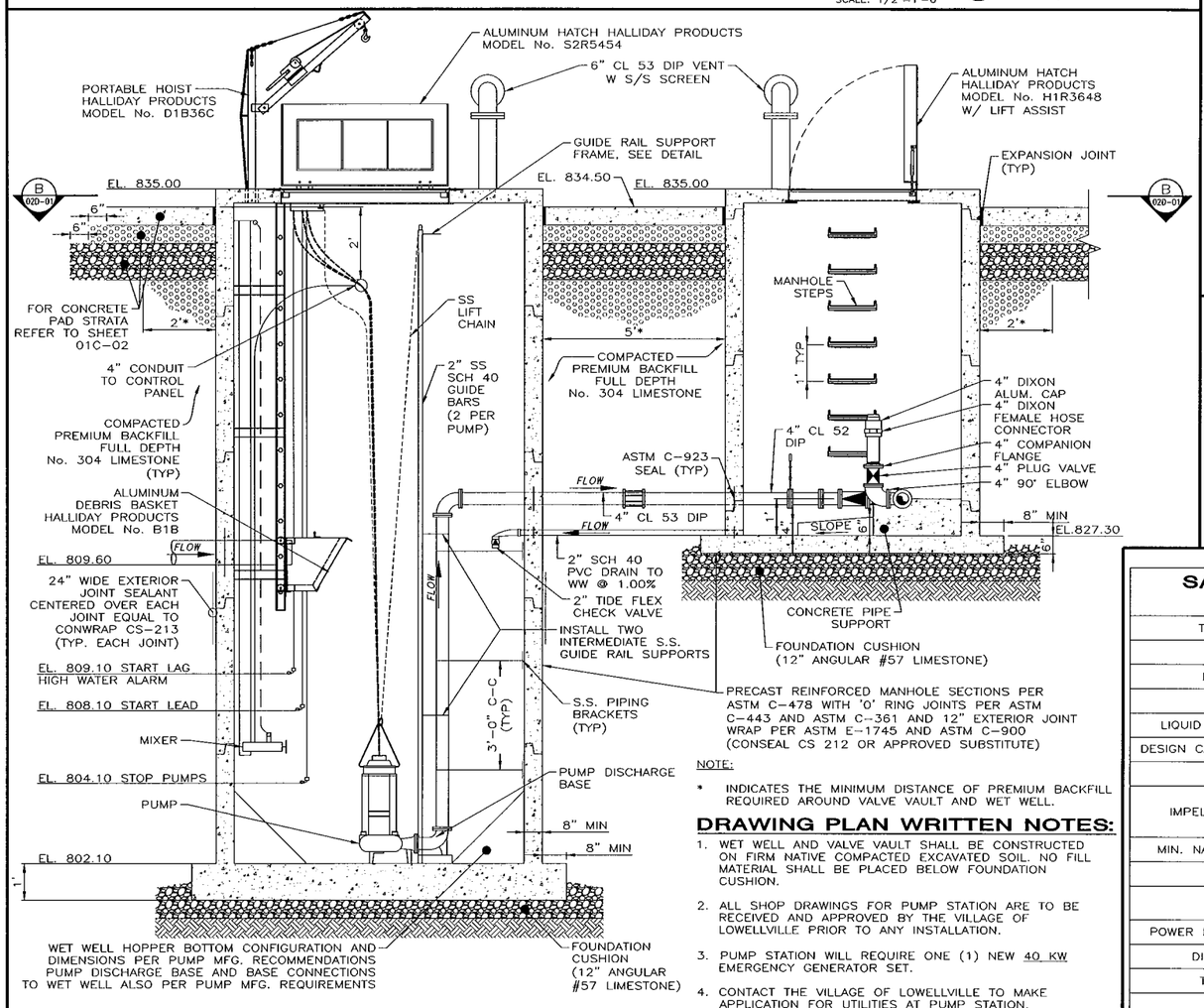
SHEET NAME
Site-Piping

SHEET	OF
17	18



PUMP STATION SECTIONAL PLAN VIEW

B 020-01 SECTION VIEW
SCALE: 1/2" = 1'-0"



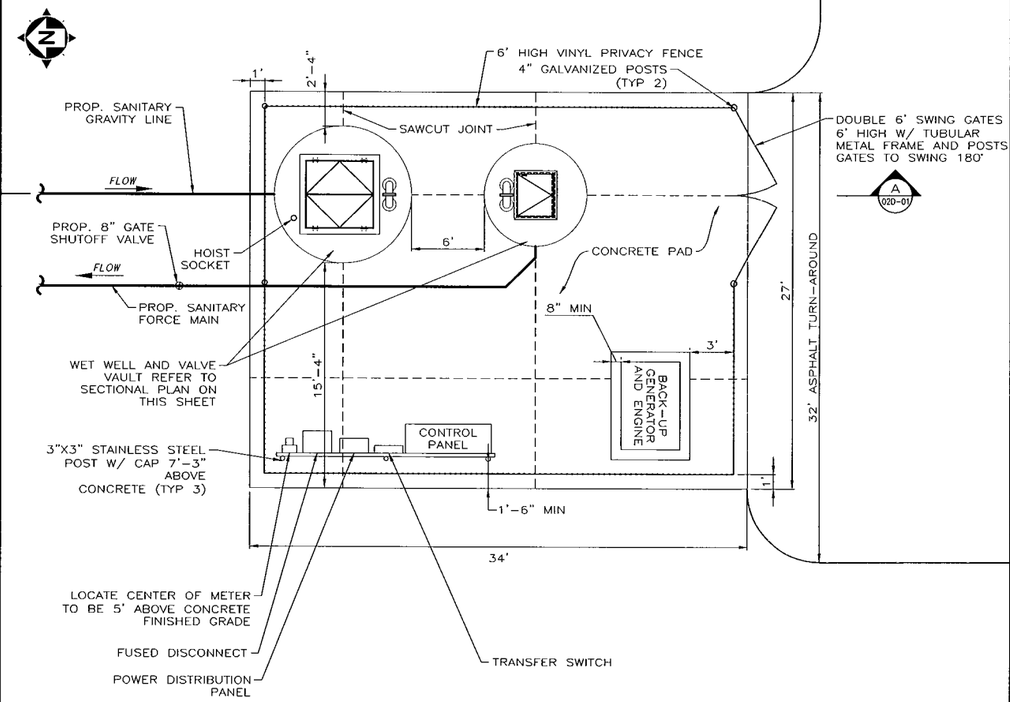
NOTE:

* INDICATES THE MINIMUM DISTANCE OF PREMIUM BACKFILL REQUIRED AROUND VALVE VAULT AND WET WELL.

A 020-01 SECTION VIEW
SCALE: NTS

DRAWING PLAN WRITTEN NOTES:

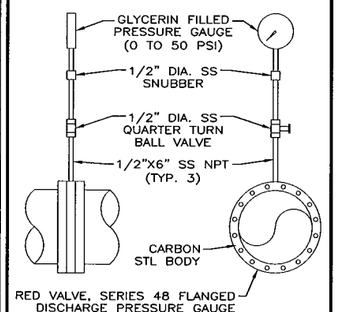
1. WET WELL AND VALVE VAULT SHALL BE CONSTRUCTED ON FIRM NATIVE COMPACTED EXCAVATED SOIL. NO FILL MATERIAL SHALL BE PLACED BELOW FOUNDATION CUSHION.
2. ALL SHOP DRAWINGS FOR PUMP STATION ARE TO BE RECEIVED AND APPROVED BY THE VILLAGE OF LOWELLVILLE PRIOR TO ANY INSTALLATION.
3. PUMP STATION WILL REQUIRE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



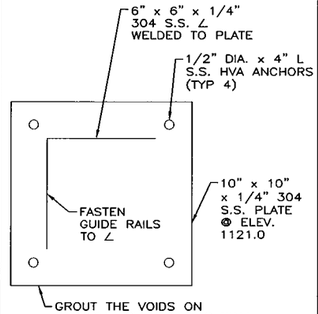
SITE PLAN
NOT TO SCALE

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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SANITARY SIPHON REPLACEMENT PROJECT
VILLAGE OF LOWELLVILLE, OHIO

PLAN AND SECTION

PROJECT NO. 210340
SHEET NAME PS-1
SHEET 18 OF 18