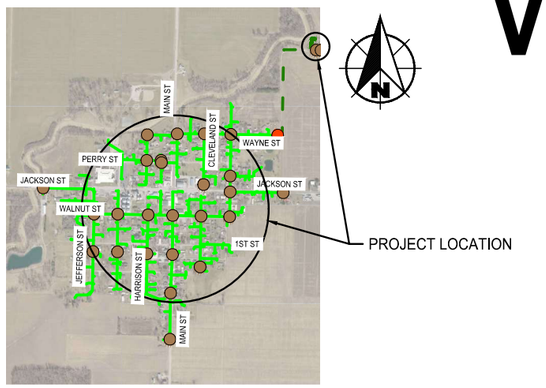
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

FOR THE

VILLAGE OF GROVER HILL, OHIO



GROVER HILL, OHIO

VICINITY MAP

SCALE: NONE

STATE LOCATION MAP

SCALE: NONE

WESSLER ENGINEERING

More than a Project™

BLUFFTON
80 State Route 103, Suite C
Bluffton, Ohio 45817
Phone: (419) 358-0521
www.wesslerengineering.com

PROJECT NO. 706524-04-001

DRAWINGS PREPARED FOR:

VILLAGE OF GROVER HILL COUNCIL

DEWAYNE HINCHCLIFF, MAYOR
GABRIELLE HOOK, FISCAL OFFICER
DONNIE EGNOR, VILLAGE COUNCIL MEMBER/PRESIDENT
NICK MYERS, VILLAGE COUNCIL MEMBER
CANDY MINCK, VILLAGE COUNCIL MEMBER
TRUDY WILKINS, VILLAGE COUNCIL MEMBER
RHONDA MILLER, VILLAGE COUNCIL MEMBER
LEEANN LESTER, VILLAGE COUNCIL MEMBER

PAULDING COUNTY COMMISSIONERS
MARK HOLTSBERRY
MIKE WEIBLE, CHAIRMAN
LISA MCCLURE, VICE-CHAIRMAN

JANUARY 2026

STATE OF OHIO
RYAN KENT BRAUEN
E-79180
REGISTERED PROFESSIONAL ENGINEER

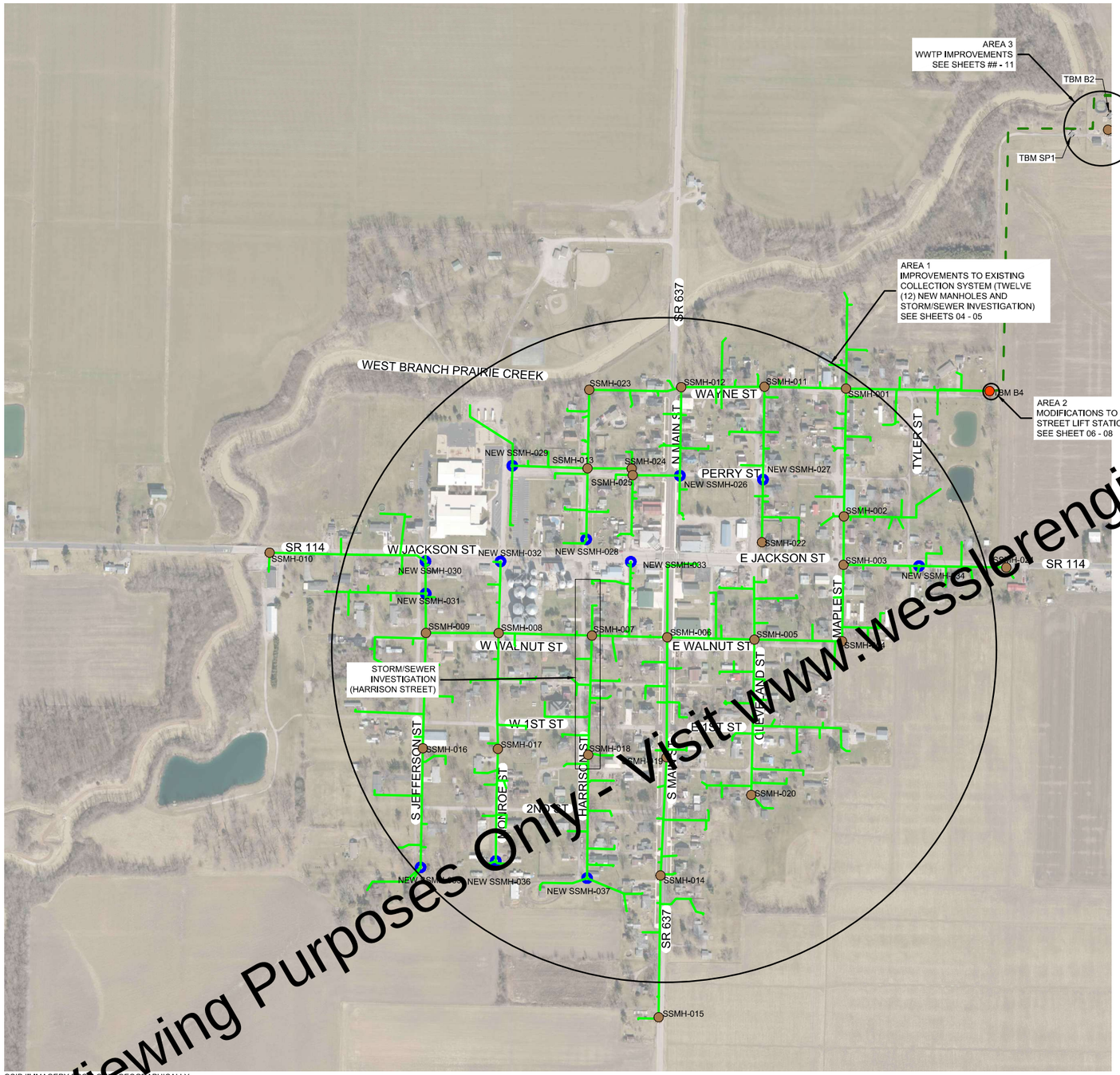
01/24/2026

RYAN K. BRAUEN
REGISTERED ENGINEER STATE OF OHIO NO. E-79180

STATE OF OHIO
WAYNE C. MOORE
E-70068
REGISTERED PROFESSIONAL ENGINEER

WAYNE C. MOORE
REGISTERED ENGINEER STATE OF OHIO NO. E-70068

Drawing: X:\Grover Hill_OH\706524-04-001 Grover Hill WW Improv PH\IDWG\Sheets\706524-GS.dwg | Layout: 1G1 | Plotted: 01/23/26 @ 04:44:22 | LastSavedBy: travisl



OSIP III IMAGERY FROM 2023 GEOGRAPHICALLY REFERENCED INFORMATION SYSTEM.

LOCATION AND SCOPE OF WORK PLAN

0 125 250 500 FT
1"=250'

HORIZONTAL AND VERTICAL CONTROL INFORMATION

NOTES:
1. A FIELD SURVEY WAS PERFORMED IN DECEMBER 2019.
2. COORDINATES (OHIO STATE PLANE, NORTH ZONE, NAD 83) AND ELEVATIONS (NAVD 88) UTILIZING ODOT VRS.
3. UNITS ARE U.S. SURVEY FEET.
4. CONTROL POINTS WERE SET USING GPS.
5. ALL ELEVATIONS WERE VERIFIED UTILIZING A ROBOTIC TOTAL STATION.

CONTROL DESCRIPTION:
1. TBM NO. SP1 - MAG NAIL CONTROL POINT SET IN ASPHALT DRIVE WEST OF WWTP GATE. EL 722.60
2. TBM NO. B1 - OLD SQUARE CUT IN EAST-WEST LEDGE OF AERATION BASIN EL 728.52
3. TBM NO. B2 - X CUT IN CONCRETE NORTHEAST LEDGE OF CLARIFIER EL 730.15
4. TBM NO. B3 - X CUT IN CONCRETE NNE OF DEWATERING BUILDING WEST GARAGE DOOR EL 724.54
5. TBM NO. B4 - SW CORNER OUTSIDE OF LID FRAME OF WEST LIFT STATION MANHOLE EL 724.54

LEGEND
- NEW MANHOLE
- EX MANHOLE
- SANITARY SEWER GRAVITY MAIN
- SANITARY SEWER FORCEMAIN
- WAYNE STREET LIFT STATION

Table A-1: Schedule of New Manhole Installation

Manhole ID:	Approximate Location Description:	Surface Material:	Approximate Depth:	Comments:
SSMH-026	East side of the intersection of North Main St. & Perry St. just North of the Dollar General Marketplace.	Pavement	4.0' to 6.0'	Manhole to be located at the insection of the 2 gravity mains.
SSMH-027	Southeast corner of the intersection of Cleveland St. & Perry St.	Pavement	8.1' to 10.0'	Manhole to be located out of the road, place manhole within either the grass patch &/or sidewalk.
SSMH-028	North side of the intersection of Harrison St. and Jackson St.	Pavement	4.0' to 6.0'	Manhole to be located at the dead end of gravity main.
SSMH-029	Northeast corner of the intersection of Monroe St. and Perry St. near the elementary school.	Pavement	4.0' to 6.0'	Manhole to be located at the insection of the 3 gravity mains.
SSMH-030	Southeast corner of the intersection of Jefferson St. and West Jackson St.	Non-Pavement	4.0' to 6.0'	Manhole to be located at the insection of the 3 gravity mains in the existing gravel drive.
SSMH-031	North end of Jefferson St.	Non-Pavement	6.1' to 8.0'	Manhole to be located at the insection of the 3 gravity mains.
SSMH-032	South side of the intersection of Monroe St. and West Jackson St.	Pavement	4.0' to 6.0'	Manhole to be located at the dead end of gravity main.
SSMH-033	Southeast side of the intersection between the alley east of the Marathon Gas Station and Jackson St.	Pavement	6.1' to 8.0'	Manhole to be located at the dead end of gravity main.
SSMH-034	East end of Jackson St.	Non-Pavement	8.1' to 10'	Manhole to be located approximately halfway between existing manholes SSMH-003 and SSMH-021.
SSMH-035	Dead end of South Jefferson St. on the East side of the road.	Non-Pavement	4.0' to 6.0'	Manhole to be located at the dead end of gravity main.
SSMH-036	Dead end of South Monroe St. on the East side of the road.	Pavement	4.0' to 6.0'	Manhole to be located at the dead end of gravity main.
SSMH-037	Dead end of South Harrison St. on the East side of the road.	Non-Pavement	4.0' to 6.0'	Manhole to be located at the dead end of gravity main.

Notes:
1. It is the responsibility of the Contractor to visit the approximate location of each new manhole and confirm details - see drawing set for maps.
2. Information provided in the above table cannot be guaranteed. Information shown has been assembled by Engineer through information provided by the Village, old collection system mapping, and depths of existing manholes. Actual locations of existing sanitary sewer pipes, connections, and dead ends are unknown - only existing sanitary sewer manholes have been GPS'd.
3. All new manholes are standard 48-inch diameter structures.
4. All new manholes are to have full depth composite manhole lining per specification 02738.

DRAWING INDEX	
SHEET NO.	DESCRIPTION
GENERAL	
01	TITLE SHEET
02	DRAWING INDEX, LOCATION, AND SCOPE OF WORK PLAN
03	GENERAL NOTES, UTILITIES, ABBREVIATIONS AND LEGEND
COLLECTION SYSTEM	
04 - 05	NEW SANITARY SEWER MANHOLES - APPROXIMATE LOCATIONS
WAYNE STREET LIFT STATION	
06	WAYNE STREET LS - EXISTING SITE PLAN AND SECTION
07	WAYNE STREET LS - NEW SITE PLAN & MODIFICATIONS PLAN & SECTION
08	WAYNE STREET LS - NEW ELECTRICAL SITE PLAN
WASTEWATER TREATMENT PLANT	
09	WWTP - DEMO AND MODIFIED SITE PLAN
10	WWTP - UV DISINFECTION SYSTEM PLAN AND SECTIONS AND DETAILS
11	WWTP - ELECTRICAL SITE PLAN
MISCELLANEOUS DETAILS	
12 - 13	MISCELLANEOUS DETAILS
ELECTRICAL	
14	ELECTRICAL LEGEND
15	ONE LINE DIAGRAMS AND DETAILS
16	ELECTRICAL DETAILS
17	PROCESS AND INSTRUMENTATION LEGEND
18	PROCESS AND INSTRUMENTATION DIAGRAM

NOTICE!
PRINT SHEET IN COLOR
THIS SHEET WAS CREATED WITH COLOR LINEWORK, SHADING AND/OR PHOTOS, AND MUST BE PRINTED IN COLOR FOR IMPROVEMENTS TO BE CLEARLY VISIBLE.

SCALE VERIFICATION
BAR IS ONE INCH LONG ON ORIGINAL DRAWING

DRAWN BY	MTF
CHECKED BY	AAB
APPROVED BY	RKB
ISSUE DATE	JANUARY 2026
PROJECT NUMBER	706524-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO
RYAN KENT BRAUEN
E-79180
REGISTERED PROFESSIONAL ENGINEER
01/24/2026

WESSLER ENGINEERING
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2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2
VILLAGE OF GROVER HILL, OHIO
DRAWING INDEX, LOCATION, AND SCOPE OF WORK PLAN

SHEET NO. 02
TOTAL SHEETS 18

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BM	BENCH MARK	CB	CISTERN		EASEMENT - CONSTRUCTION/PERMANENT
TBM	TEMPORARY BENCH MARK	EM	ELECTRIC METER		LOT BOUNDARY
SB-01	SOIL BORING LOCATION	AC	AIR CONDITIONING UNIT		PROPERTY BOUNDARY
	SECTION CORNER	XXX	UTILITY RISER (DEFINED BY UTILITY)		RIGHT-OF-WAY - TEMPORARY/PERMANENT
	DRILL HOLE IN CONCRETE/HARRISON MONUMENT	XXX	UTILITY PEDESTAL (DEFINED BY UTILITY)		SECTION BOUNDARY
CP	CONTROL POINT (SET/FOUND)		UTILITY MARKER (DEFINED BY UTILITY)		WETLANDS
MS	MAGNETIC NAIL (SET/FOUND)		JOINT POWER/TELEPHONE POLE	849	CONTOUR - INTERMEDIATE ELEVATION
BS	BOAT SPIKE (SET/FOUND)		LIGHT POLE	850	CONTOUR - INDEX ELEVATION
PK	PK NAIL (SET/FOUND)		LIGHT ON POWER POLE	OHE OHE	OVERHEAD ELECTRIC
RS	RAILROAD SPIKE (SET/FOUND)		LIGHT ON JOINT POLE	OHC OHC	OVERHEAD CABLE TV
R/M	R/W MARKER - CONCRETE/GRANITE/STONE		POWER POLE	OHT OHT	OVERHEAD TELEPHONE
	IRON PIPE/IRON PIN/REBAR (WITH DIAMETER)		TELEPHONE POLE	UGC UGC	UNDERGROUND CABLE TV
BP	BRASS PLUG		LAMP POST	UGE UGE	UNDERGROUND ELECTRIC
C	CABLE TV MANHOLE		GUY ANCHOR	UGF UGF	UNDERGROUND FIBER OPTIC
E	ELECTRIC MANHOLE		GUY POLE OR STUB	G G G	GAS MAIN
G	GAS MANHOLE		CONTROLLER CABINET	DG DG	DIGESTER GAS
O	OTHER MANHOLE	FP	FLAG POLE	P P P	PETROLEUM MAIN
T	TELEPHONE MANHOLE		POST	UGT UGT	UNDERGROUND TELEPHONE
TEL	TELEPHONE VAULT		GROUND LIGHT	W W W	WATER MAIN
I	TRAFFIC MANHOLE	M	MAILBOX	W W W	WATER SERVICE
H	TRAFFIC HANDHOLE	MM	DOUBLE/MULTIPLE MAILBOX	FM FM	FORCEMAIN
W	WATER MANHOLE		MAST ARM POLE		GRAVITY SEWER PIPE
A	AIR RELEASE VALVE		TRAFFIC SIGNAL STRAIN POLE		PLANT CHLORINE PIPE
S	SANITARY SEWER MANHOLE		SIGNAL LOOP DETECTOR BOX		TOP OF BANK/TOE OF SLOPE
D	DRAINAGE/STORM SEWER MANHOLE		SIGNAL LOOP DETECTOR LOOP		CENTERLINE OF DITCH/SWALE/STREAM
	SANITARY SEWER CLEANOUT		SIGN - SINGLE POST		FENCE - FIELD
ST	SEPTIC TANK		SIGN - DOUBLE POST		FENCE - METAL
V	VALVE VAULT		SIGN - RAILROAD SIGNAL		FENCE - WOOD
	BEEHIVE INLET		SIGN - RAILROAD CROSSING		GUARDRAIL
	CURB INLET		BUSH		STREAM
	DROP INLET		STUMP		TREE/BRUSH LINE
	CATCH BASIN		TREE - CONIFEROUS		
	DOWNSPOUT		TREE - DECIDUOUS		
	GAS METER		ROCK OUTCROP		
GV	GAS VALVE		SATELLITE		
	GAS SERVICE VALVE	SPV	SPRINKLER CONTROL VALVE		
PV	PETROLEUM VALVE		WATER METER		
	PETROLEUM SHUTOFF VALVE	WV	WATER VALVE		
MW	GAS STATION MONITORING WELL		WATER SERVICE VALVE		
FC	GAS STATION FILL CAP	WW	WATER WELL		
GW	NATURAL GAS WELL/STORAGE WELL	WW	WET WELL		
	SPRINKLER HEAD		FIRE HYDRANT		
	YARD HYDRANT		PROCESS VALVE		

*NOTE: THIS TABLE IS A LISTING OF TYPICAL EXISTING SYMBOLS AND MAY NOT INCLUDE ALL EXISTING SYMBOLS FOUND WITHIN THIS PLAN SET. ALL PROPOSED ITEMS WILL BE CALLED OUT ON THEIR PLAN SHEETS. IF A QUESTION ARISES ON THE MEANING OF ANY SYMBOL NOT LISTED IN THIS TABLE, PLEASE CONTACT THE ENGINEER FOR CLARIFICATION. THE SYMBOLS ARE NOT TO SCALE.

Ohio Utilities Protection Service
Call 811
before you dig

UTILITY CONTACTS

ELECTRIC
AMERICAN ELECTRIC POWER OHIO
1-800-672-2231

SEWER
VILLAGE OF GROVER HILL
104 SOUTH MAIN STREET
GROVER HILL, OHIO 45849
419-203-5323
ATTN: DEWAYNE HINCHCLIFF, MAYOR

CABLE
OTEC COMMUNICATION COMPANY
245 3RD STREET
OTTOVILLE, OHIO 45876
567-204-6880
ATTN: DALE HONIGFORD, PLAT SUPERVISOR
OR
419-796-0000
ATTN: BILL HONIGFORD, GENERAL MANAGER

TELEPHONE
TDS TELECOM
88 EAST RICE STREET
CONTINENTAL, OHIO 45831
419-889-7055
ATTN: DAN WATSON, SENIOR FIELD SERVICE TECHNICIAN
OR
419-796-0131
ATTN: CHAD SPEAR, TECHNICIAN

TABLE OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	LB	POUND(S)
ALUM	ALUMINUM	LF	LINEAR FEET
APP	APPARENT	LN	LANE
APPROX	APPROXIMATE(LY)	LS	LIFT STATION
ASPH	ASPHALT	MA EX	MATCH EXISTING
ASSOC	ASSOCIATES	MJ	MECHANICAL JOINT
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	MATL	MATERIAL
AVE	AVENUE	MAX	MAXIMUM
AVG	AVERAGE	MH	MANHOLE
BLDG	BUILDING	MIN	MINIMUM
BLVD	BOULEVARD	MISC	MISCELLANEOUS
BM	BENCHMARK	MNFR	MANUFACTURER
CO	CLEANOUT	N	NORTHING, NORTH
CI	CAST IRON	NGS	NATIONAL GEODETIC SURVEY
CL	CENTER LINE	NO.	NUMBER
CMA	COLD MIX ASPHALT	OC	ON CENTER
CMP	CORRUGATED METAL PIPE	OD	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	ODOT	OHIO DEPARTMENT OF TRANSPORTATION
CONC	CONCRETE	OSPC	OHIO STATE PLANE COORDINATE
CONT	CONTINUOUS	PC	POINT OF CURVE (BEGIN CURVE)
CNR	CORNER	POLY	POLYETHYLENE
CP	CONTROL POINT	PI	POINT OF INTERSECTION
CPP	CORRUGATED PLASTIC PIPE	POT	POINT ON TANGENT
CR STN	CRUSHED STONE	PT	POINT OF TANGENT (END CURVE)
CYD	CUBIC YARD	PSI	POUNDS PER SQUARE INCH
D	DEPTH	PT	POINT
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
DI MJ	DUCTILE IRON MECHANICAL JOINT	R	RADIUS
DBL	DOUBLE	ROW	RIGHT-OF-WAY
DIA	DIAMETER	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	RD	ROAD
DIPS	DUCTILE IRON PIPE SIZE	S	SOUTH
DR	DRIVE	SR	STATE ROUTE
E	EASTING, EAST	SST	STAINLESS STEEL
EF	EACH FACE	SVA	SERVICE VALVE ASSEMBLY
EW	EACH WAY	SB	SOIL BORING
EA	EACH	SCHED	SCHEDULE
EJ	EAST JORDAN IRON WORKS	SDR	STANDARD DIMENSION RATIO
EL	ELEVATION	SECT	SECTION
EX	EXISTING	SF	SQUARE FEET
EXP	EXPANSION	SHT	SHEET
FFE	FINISH FLOOR ELEVATION	SPECS	SPECIFICATION(S)
FM	FORCE MAIN	SQ	SQUARE
FND	FOUND	SRF	STATE REVOLVING FUND
FT	FEET	ST	STREET
FTG	FOOTING	STA	STATION
GALV	GALVANIZED	SYD	SQUARE YARD
GPS	GLOBAL POSITIONING SYSTEM	TBM	TEMPORARY BENCHMARK
HMA	HOT MIX ASPHALT	TC	TOP OF CASTING
HDPE	HIGH DENSITY POLYETHYLENE	TYP	TYPICAL
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
ID	INSIDE DIAMETER	USGS	US GEOLOGICAL SURVEY
IE	INVERT ELEVATION	VERT	VERTICAL
INC	INCORPORATED	VLV	VALVE
INSTR	INSTRUMENT	W	WIDTH, WEST
INV	INVERT	WSE	WATER SURFACE ELEVATION
IPS	IRON PIPE SIZE	YR	YEAR

*NOTE: THIS TABLE IS A LISTING OF TYPICAL ABBREVIATIONS AND MAY NOT INCLUDE ALL ABBREVIATIONS FOUND WITHIN THIS PLAN SET. IF A QUESTION ARISES ON THE MEANING OF AN ABBREVIATION NOT LISTED IN THIS TABLE, PLEASE CONTACT THE ENGINEER FOR CLARIFICATION.

GENERAL NOTES:
1. NOTIFY THE ENGINEER IF ANY CONFLICTING INFORMATION BECOMES APPARENT IN THE CONTRACT DOCUMENTS AS SOON AS POSSIBLE AND PRIOR TO THE COMMENCEMENT OF ANY WORK IN THE VICINITY OF OR RELATIVE TO THE APPARENT CONFLICT SO THAT CLARIFICATION MAY OCCUR PRIOR TO CONSTRUCTION.
2. ANY ALTERATIONS TO THESE DRAWINGS NOT AUTHORIZED BY WESSLER ENGINEERING AND NOT IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS AND RECORDS ON FILE AT WESSLER ENGINEERING SHALL RELIEVE WESSLER ENGINEERING OF ANY RESPONSIBILITY FOR THE ACCURACY OF THE DRAWINGS.
3. USE CAUTION DURING THE EXECUTION OF WORK TO PREVENT DAMAGE TO STATE, COUNTY, MUNICIPAL, AND PRIVATE PROPERTY. REPAIR ALL DAMAGES AS A RESULT OF OPERATIONS, INCLUDING DAMAGE TO DRAINAGE STRUCTURES, FIELD TILES, PUBLIC/PRIVATE ROADS, AND LANDSCAPING (INCLUDING FENCING). REPAIR AND REPLACE DAMAGED ITEMS AT NO ADDITIONAL COST TO THE OWNER. PERFORM ALL REPAIR AND REPLACEMENT WORK TO THE SATISFACTION OF THE PERMITTING AGENCY, THE OWNER AND THE ENGINEER.
4. TAKE CARE TO AVOID DAMAGE TO PAVED AREAS WHICH ARE NOT SPECIFICALLY CALLED OUT FOR REPAIR OR REPLACEMENT. REPAIR, OR REPLACE ALL SUCH PAVEMENTS WHICH ARE DAMAGED BY CONSTRUCTION ACTIVITIES AND CONSTRUCTION TRAFFIC AT NO ADDITIONAL COST TO THE OWNER.
5. OBTAIN ALL TEMPORARY EASEMENTS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
6. COMPLY WITH ALL APPLICABLE PERMITS AND REGULATIONS. APPLICABLE PERMITS ISSUED TO THE OWNER WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT ALL APPLICABLE PERMITTING AGENCIES WITHIN THE TIME PERIOD SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.
7. PRIVATE WELLS EXIST THROUGHOUT THE PROJECT LIMITS IF LOCATIONS WERE NOT LOCATED BY WESSLER ENGINEERING. IDENTIFY AND PROTECT PRIVATE WELLS WITHIN THE PROJECT AREA.
8. ALL EXISTING AND NEW UTILITY INFORMATION, INCLUDING BUT NOT LIMITED TO LOCATION, SIZE AND INVERT ELEVATION, IS SHOWN BASED UPON AVAILABLE INFORMATION. THE ENGINEER DOES NOT GUARANTEE OR ASSUME SUCH INFORMATION TO BE TRUE, ACCURATE, ALL INCLUSIVE OR EVEN APPROXIMATE. CONTACT THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY. CONTACT NON-MEMBER UTILITIES DIRECTLY.
9. DETERMINE WHICH UTILITIES MAY CONFLICT WITH WORK AND VERIFY THEIR LOCATION, SIZE AND ELEVATION PRIOR TO CONSTRUCTION AND DETERMINE IF THERE ARE ANY DISCREPANCIES OR CONFLICTS. IF ANY DISCREPANCIES OR CONFLICTS ARE DISCOVERED, NOTIFY THE ENGINEER AS SOON AS POSSIBLE.
10. EXISTING UTILITY SERVICE LINES TO INDIVIDUAL CUSTOMERS MAY NOT BE SHOWN ON THE DRAWINGS. ASSUME THAT UNDERGROUND SERVICE LINES FOR ALL UTILITIES EXIST TO EACH PROPERTY ALONG THE ROUTE OF THE PLANNED IMPROVEMENTS.
11. COORDINATE ALL WORK WITH THE RESPECTIVE UTILITIES. SCHEDULE WORK ACCORDINGLY, AND NOTIFY ALL UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.
12. COORDINATE PLANNED UTILITY SERVICE INTERRUPTIONS WITH THE RESPECTIVE UTILITIES AND THE UTILITIES' AFFECTED CUSTOMERS. SERVICE INTERRUPTIONS SHOULD NOT LAST MORE THAN EIGHT (8) HOURS. GIVE WRITTEN NOTICE TO ALL AFFECTED UTILITY CUSTOMERS AND PROPERTY OWNERS AT LEAST TWENTY-FOUR (24) HOURS BUT NOT MORE THAN SEVENTY-TWO (72) HOURS PRIOR TO ANY PLANNED INTERRUPTION OF UTILITY SERVICE.
13. USE CAUTION DURING THE EXECUTION OF WORK TO PREVENT DAMAGE TO EXISTING UTILITIES. REPAIR OR REPLACE ALL PUBLIC AND PRIVATE FACILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS.
14. BRACE AND PROTECT ALL UTILITY POLES AND EXISTING STRUCTURES ADJACENT TO NEW EXCAVATIONS. UTILITY POLE BRACING SHALL BE AS DIRECTED BY THE GOVERNING UTILITY.
15. MAINTAIN EXISTING STORMWATER DRAINAGE FOR THE ENTIRE DURATION OF THE PROJECT.
16. DO NOT DISTURB EXISTING MANHOLES OR INLETS, UNLESS NOTED OTHERWISE.
17. ALL EQUIPMENT, APPURTENANCES AND PIPING REMOVED AS PART OF THE DEMOLITION SHALL FIRST BE OFFERED TO THE OWNER FOR SALVAGE. DELIVER SALVAGED ITEMS SELECTED BY OWNER TO A LOCATION DESIGNATED BY THE OWNER OR ENGINEER. IN THE EVENT THE OWNER DOES NOT ELECT TO KEEP THE REMOVED ITEMS, REMOVE SUCH ITEMS FROM THE SITE AND DISPOSE OF AT A LOCATION APPROVED FOR SUCH DISPOSAL AT THE CONTRACTOR'S EXPENSE.
18. COORDINATE STAGING AREA LOCATIONS WITH THE OWNER.
19. ALL CONSTRUCTION TRAFFIC SHALL USE MAJOR ROADS. NO CONSTRUCTION TRAFFIC SHALL USE LOCAL STREETS FOR INDIRECT ACCESS.
20. TO CONTROL DUST, REMOVE SOIL FROM STREETS USED BY CONSTRUCTION TRAFFIC DAILY, VACUUM AND WATER AS NECESSARY AND/OR AS DIRECTED BY THE OWNER.
21. PLACE NEW ASPHALT PAVEMENT FLUSH WITH ADA RAMPS.
22. ALL EXISTING PIPING MAY NOT BE SHOWN. REFERENCE EXISTING RECORD DRAWINGS ON FILE WITH THE OWNER AND WESSLER ENGINEERING FOR ADDITIONAL INFORMATION OF EXISTING PIPING AND CONDUIT THROUGHOUT THE PLANT SITE.
23. THE WORK SHOWN ON THESE DRAWINGS IS OCCURRING ON A PLANT SITE AND ON PRIVATE PROPERTY VIA EASEMENTS IN WHICH BURIED ELECTRICAL CONDUIT AND SMALL PIPING MAY EXIST THROUGHOUT AND IN THE VICINITY OF THE PROJECT AND MAY NOT BE SHOWN ON THESE DRAWINGS. EXPECT TO ENCOUNTER BURIED ELECTRICAL AND COMMUNICATIONS WIRING, WITH OR WITHOUT CONDUIT, SMALL PIPING, AND FIELD TILE WHILE DIGGING ON THIS SITE.
24. NEW PIPING CARRYING LIQUIDS SHALL HAVE MINIMUM COVER AS DEFINED IN THE MISCELLANEOUS SITE DETAILS OR SPECIFICATIONS, UNLESS SPECIFIC ELEVATIONS ON THE DRAWINGS INDICATE OTHERWISE.
25. INSPECT THE SITE PRIOR TO BIDDING TO UNDERSTAND THE EXTENT OF THE WORK INVOLVED AND ADJUST BID ACCORDINGLY.
26. COMPLETELY REMOVE UNDERGROUND PIPING THAT HAS PREVIOUSLY BEEN OR WILL BE TAKEN OUT OF SERVICE, IN CONFLICT WITH THE NEW WORK, UNLESS OTHERWISE NOTED, ABANDON IN PLACE ALL UNDERGROUND PIPING NOT IN CONFLICT WITH THE NEW WORK. DO NOT LEAVE ABANDONED PIPING LIVE. SEE SPECIFICATION SECTION 02050 FOR DEMOLITION PROCEDURES. SEE SPECIFICATION SECTION 01550 FOR PLANT OPERATIONS DURING CONSTRUCTION FOR COORDINATION OF DEMOLITION WORK AND NEW CONSTRUCTION.
27. ALL EQUIPMENT TO BE REMOVED THAT HAS ELECTRICAL COMPONENTS, CONDUIT AND WIRING, OR SMALL PIPING CONNECTED SHALL HAVE THE ELECTRICAL COMPONENTS AND SMALL PIPING REMOVED BACK TO THE SOURCE.
28. LENGTHS OF SEWERS AS SHOWN ON THE DRAWINGS AND INDICATED AS LINEAR FEET (LF) ARE FROM CENTER TO CENTER OF STRUCTURES.
29. NORTHING AND EASTING INFORMATION IS GIVEN AT CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
30. PLACE NO. 8 CRUSHED AGGREGATE BETWEEN PIPES AT ALL PIPE CROSSINGS TO PREVENT PIPE SETTLEMENT UNLESS SHOWN OTHERWISE.
31. VERIFY EXISTING SEWER INVERTS AND LOCATIONS PRIOR TO CONSTRUCTION AND DETERMINE IF THERE ARE ANY DISCREPANCIES OR CONFLICTS.
32. ADJUST SEWER LATERALS AS NECESSARY TO AVOID CONFLICTS. LATERALS THAT REQUIRE FIELD ADJUSTMENT SHALL BE LAID AT THE MINIMUM SLOPE AS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS.
33. ALL SANITARY SEWER PIPE, INCLUDING GRAVITY SEWERS, LATERAL WYES AND SERVICE LATERAL PIPE LOCATED WITHIN 50 FEET OF PRIVATE WELLS SHALL BE SDR 21 PVC WATER GRADE PRESSURE PIPE UNLESS SPECIFICALLY INDICATED OTHERWISE. ALL SANITARY SEWER PIPE, INCLUDING GRAVITY SEWERS, LATERAL WYES AND SERVICE LATERAL PIPE NOT LOCATED WITHIN 50 FEET OF PRIVATE WELLS SHALL BE SDR 35 PVC SEWER GRADE PIPE, UNLESS SPECIFICALLY INDICATED OTHERWISE.
34. RESET ALL MAILBOXES AND SIGNS DISTURBED BY CONSTRUCTION ACTIVITIES.
35. IF REQUIRED, PLACE TEMPORARY OVERNIGHT AGGREGATE WEDGES AT DRIVEWAYS TO ALLOW PROPERTY OWNER ACCESS.

EROSION CONTROL NOTES:
1. REFER TO SITE STORM WATER POLLUTION PREVENTION PLAN (SWP3), DEVELOPED IN ACCORDANCE WITH OHIO GENERAL PERMIT OHC000005, FOR SITE CONDITIONS, POTENTIAL SOURCES OF POLLUTION, AND SEDIMENT AND EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS). THE SWP3 SHALL BE RETAINED ON-SITE AND AVAILABLE UPON REQUEST OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) OR A LOCAL REGULATORY AGENCY. ALL ENTITIES INVOLVED IN PLAN IMPLEMENTATION, INCLUDING CONTRACTORS AND SUBCONTRACTORS MUST SIGN THIS PLAN AS DOCUMENTATION THAT THEY REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THIS PLAN.
2. A COPY OF THE ODOT PERMIT AND APPROVED PLANS SHALL BE ON SITE AT ALL TIME WHILE WORK IS BEING PERFORMED WITHIN THE STATE'S RIGHT-OF-WAY. COUNTY MANAGER OR APPROPRIATE ASSOCIATE SHALL BE CONTACTED 24 HOURS IN ADVANCE OF STARTING ANY WORK.
3. INSTALL AND MAINTAIN CONCRETE WASHOUT AREAS AT ALL CONCRETE WORK LOCATIONS. REFER TO SITE STORM WATER POLLUTION PREVENTION PLAN (SWP3) FOR SPECIFICATIONS.
4. INSTALL AND MAINTAIN INLET PROTECTION ON ALL STORM SEWER INLETS RECEIVING RUNOFF FROM DISTURBED AREAS, INCLUDING SEPTIC TANK, MANHOLE, LIFT STATION, AND WWTP LOCATIONS, REFER TO SITE STORM WATER POLLUTION PREVENTION PLAN (SWP3) FOR SPECIFICATIONS.

SCALE VERIFICATION	DRAWN BY	MTF
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	AAB
	APPROVED BY	RKB
	ISSUE DATE	JANUARY 2026
	PROJECT NUMBER	706524-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO
RYAN KENT BRAUEN
E-79180
REGISTERED
PROFESSIONAL ENGINEER
01/24/2026

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2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

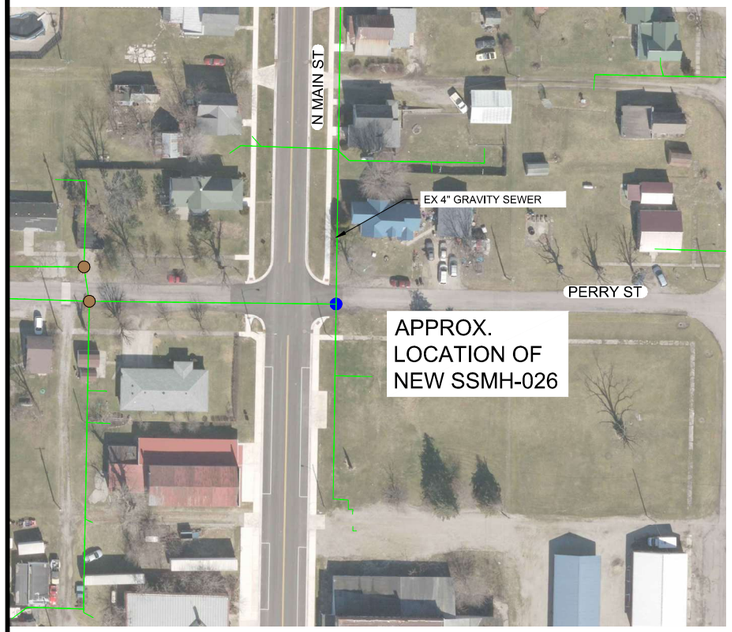
VILLAGE OF GROVER HILL, OHIO

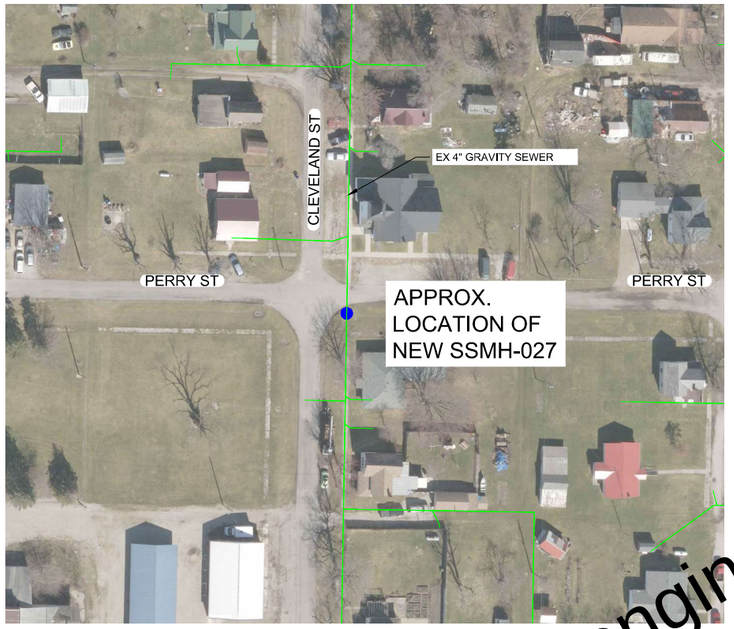
GENERAL NOTES, UTILITIES, ABBREVIATIONS AND LEGEND

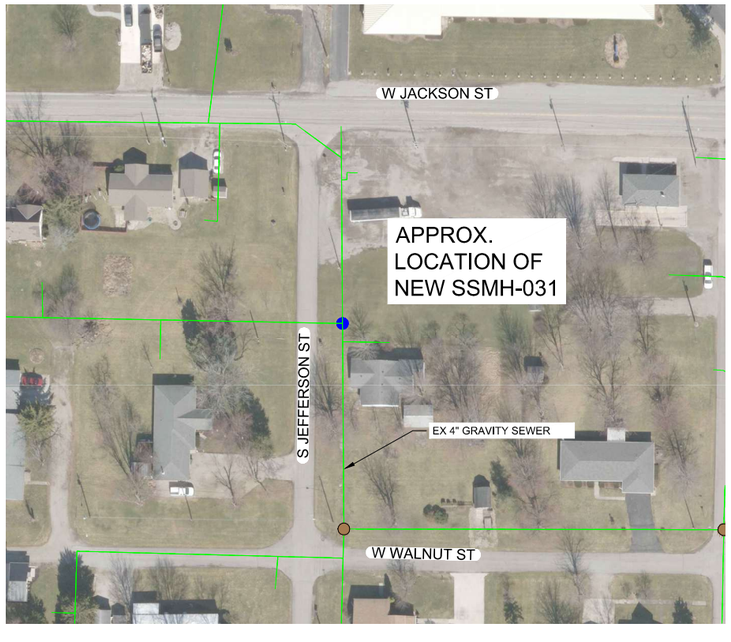
SHEET NO. **03**

TOTAL SHEETS 18

Drawing: X:\Grover Hill_OH\706524-04-WW Improv Phil\DWG\Sheets\706524-04-GS.dwg | Layout: 1G3 | Plotted: 01/22/26 @ 12:46:07 | LastSavedBy: MasonF







LEGEND

- NEW MANHOLE
- EX MANHOLE
- SANITARY SEWER GRAVITY MAIN
- SANITARY SEWER FORCEMAIN

NOTE:
1. CONTRACTOR TO CONFIRM NEW MANHOLE LOCATIONS WITH ENGINEER PRIOR TO INSTALLATION

NOTICE!
PRINT SHEET IN COLOR
THIS SHEET WAS CREATED WITH COLOR LINEWORK, SHADING AND/OR PHOTOS, AND MUST BE PRINTED IN COLOR FOR IMPROVEMENTS TO BE CLEARLY VISIBLE.

SCALE VERIFICATION
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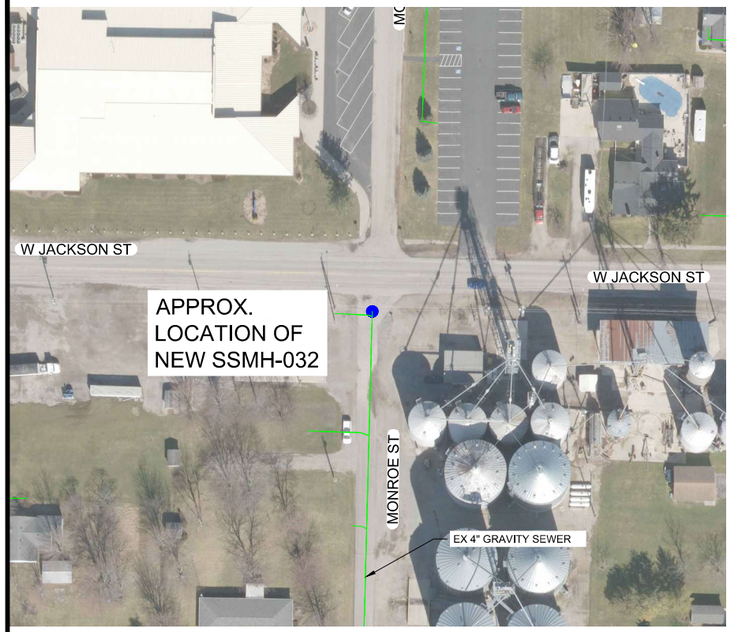
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

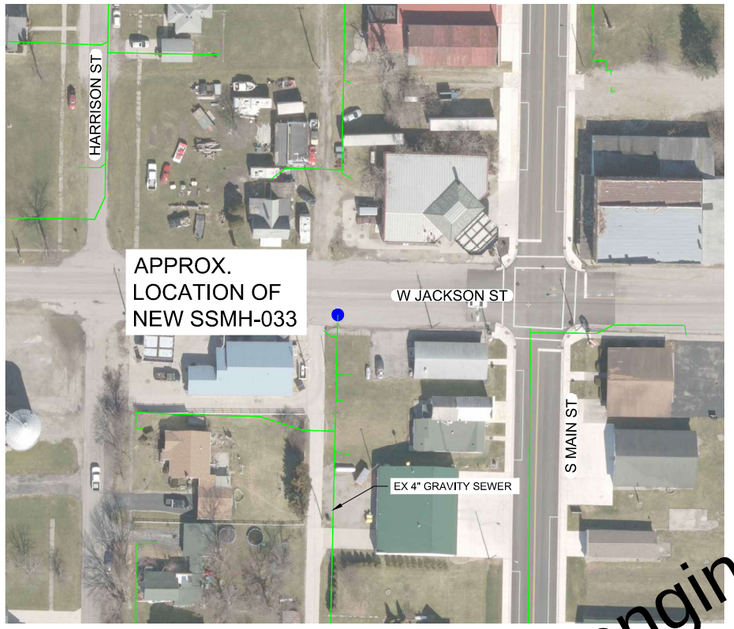
VILLAGE OF GROVER HILL, OHIO

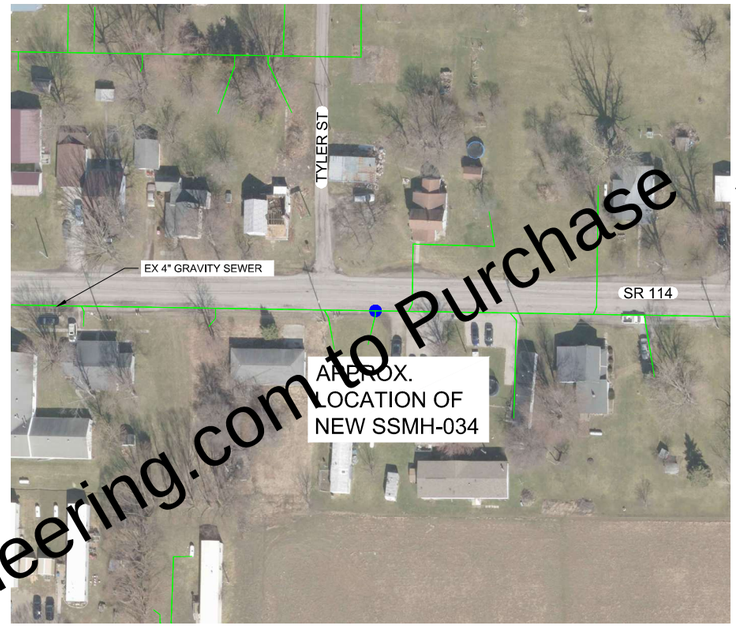
NEW SANITARY SEWER MANHOLES - APPROXIMATE LOCATIONS

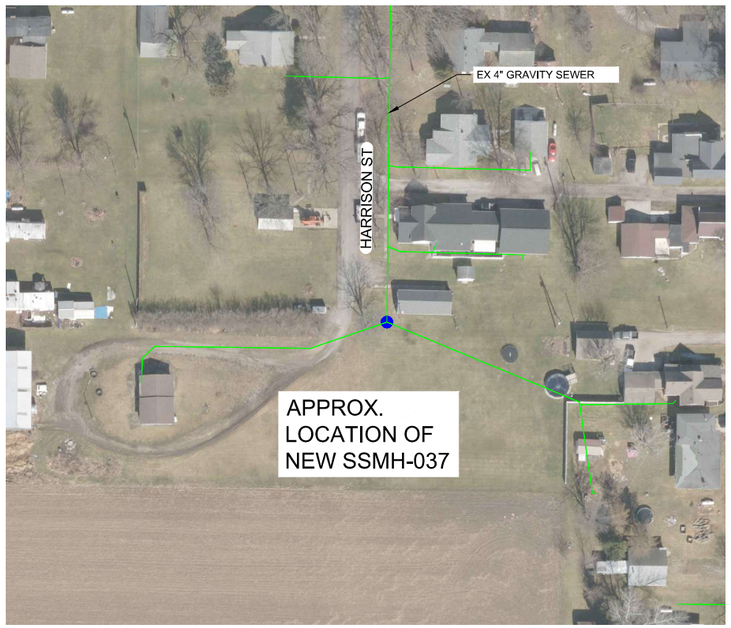
SHEET NO. 04

TOTAL SHEETS 18









0 30 60 120 FT
1" = 60'

LEGEND

- NEW MANHOLE
- EX MANHOLE
- SANITARY SEWER GRAVITY MAIN
- SANITARY SEWER FORCEMAIN

NOTE:
1. CONTRACTOR TO CONFIRM NEW MANHOLE LOCATIONS WITH ENGINEER PRIOR TO INSTALLATION

NOTICE!
PRINT SHEET IN COLOR
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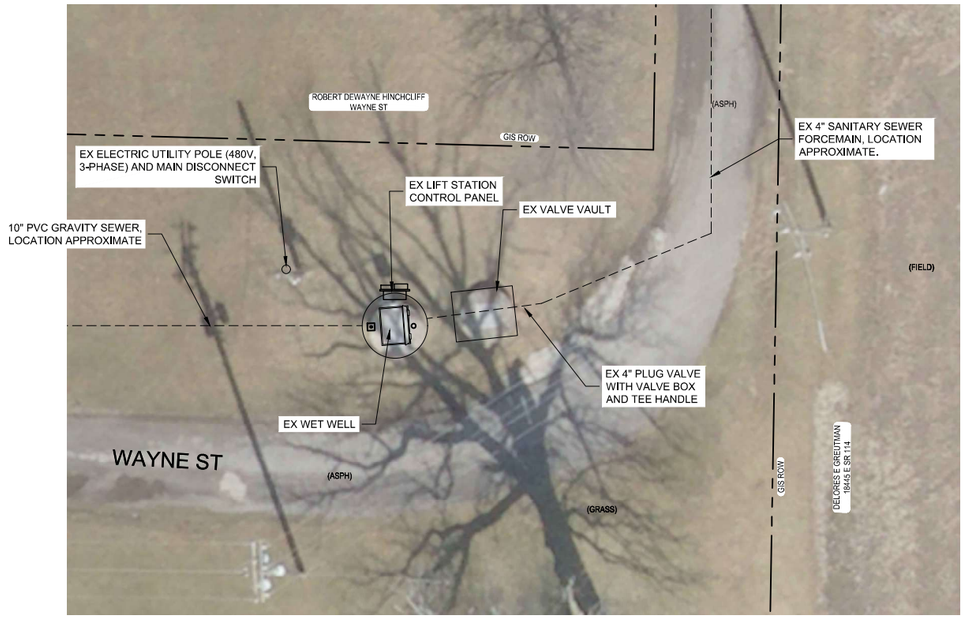
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

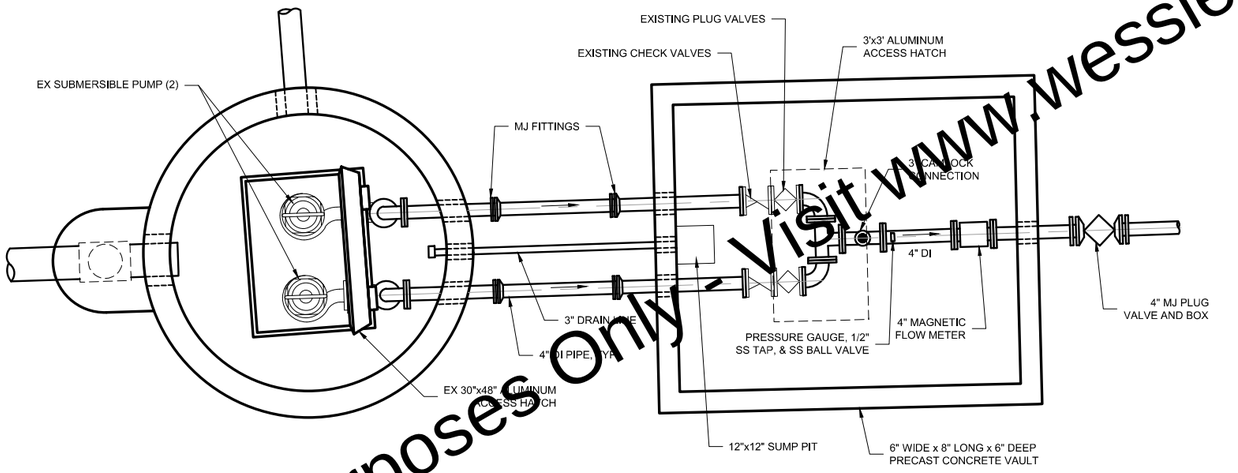
NEW SANITARY SEWER MANHOLES - APPROXIMATE LOCATIONS

SHEET NO. 05
TOTAL SHEETS 18



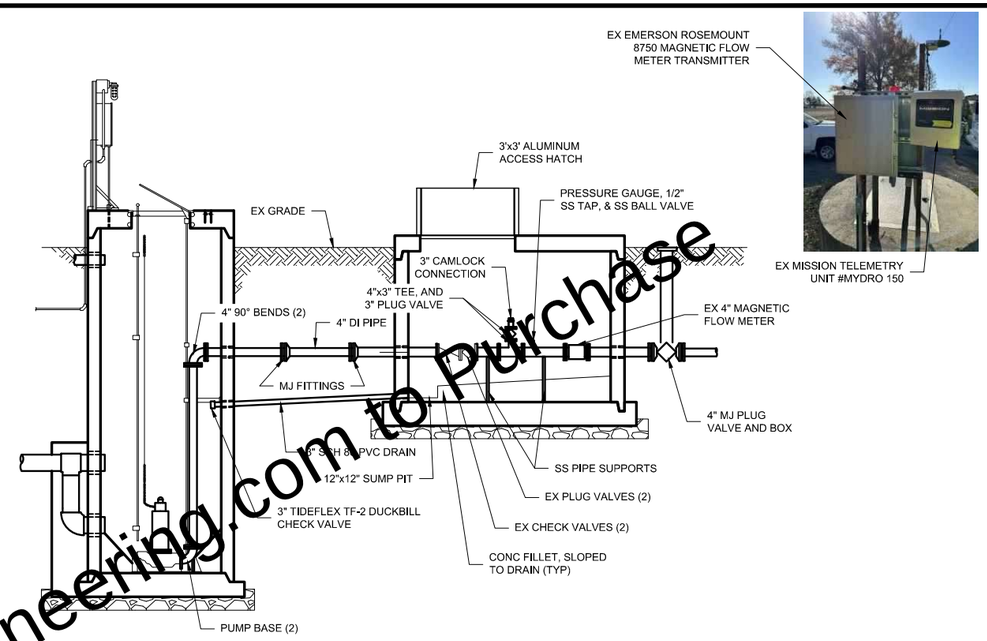
EXISTING LIFT STATION SITE PLAN

SCALE: 1" = 10'



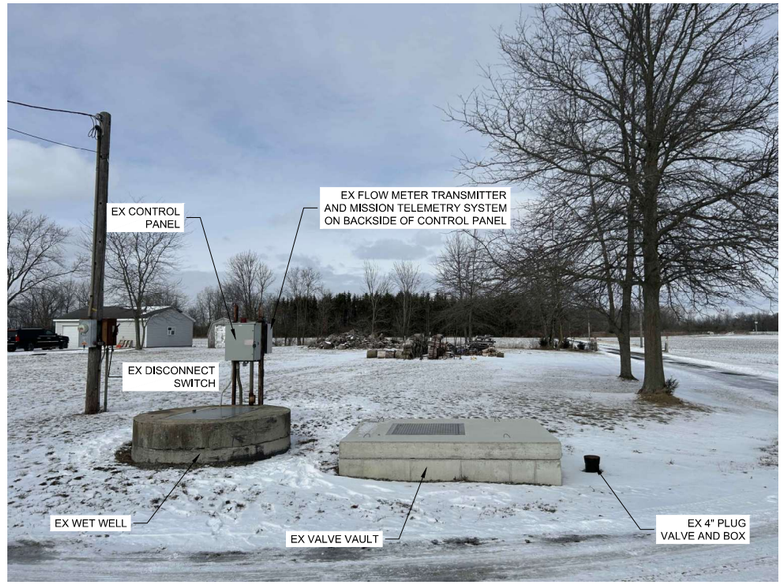
PLAN - EXISTING LIFT STATION

SCALE: NONE



SECTION - LIFT STATION

SCALE: NONE



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	APPROVED BY	RKB				
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2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

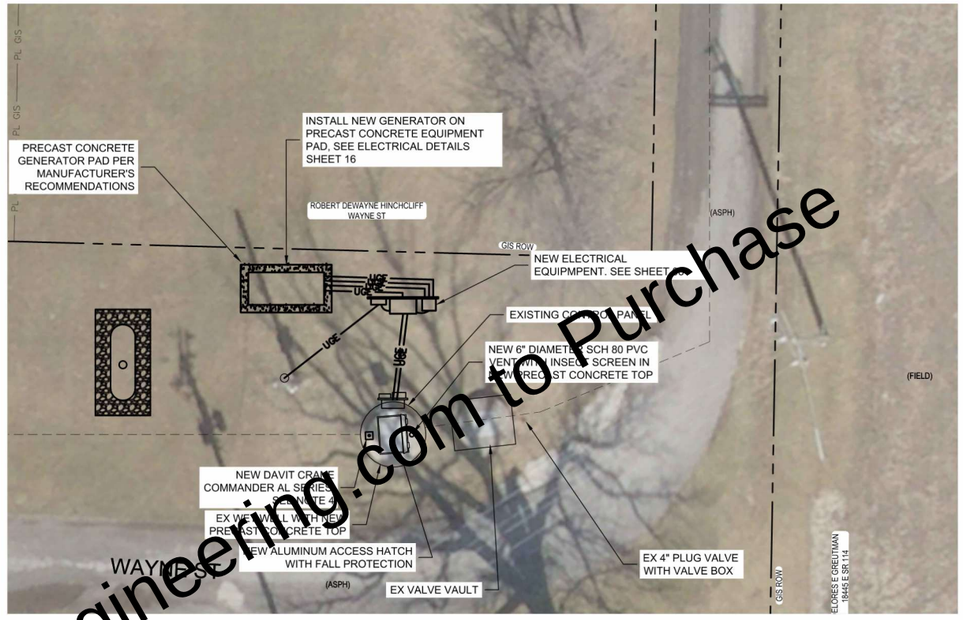
VILLAGE OF GROVER HILL, OHIO

WAYNE STREET LS - EXISTING SITE PLAN AND SECTION

SHEET NO. **06**

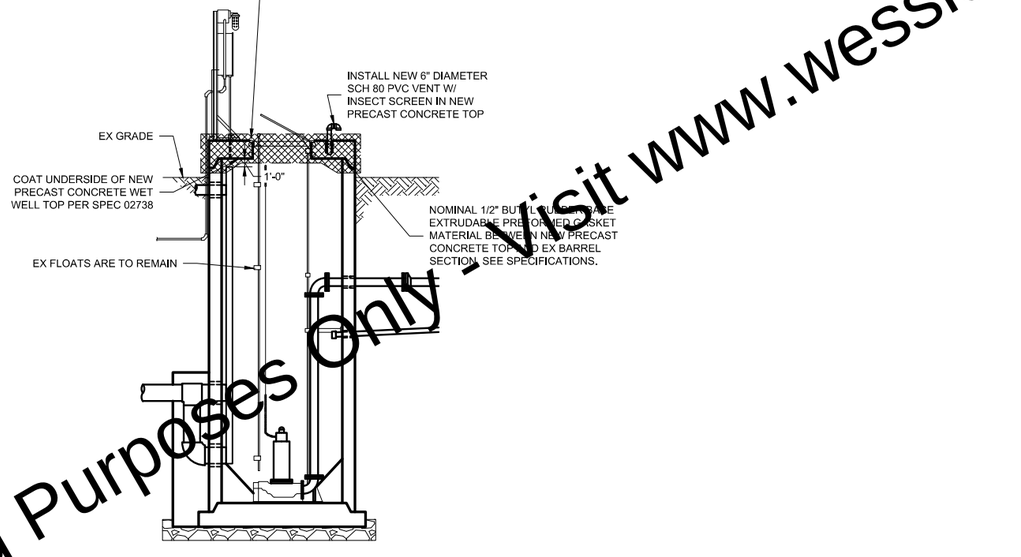
TOTAL SHEETS 18

DEMO PRECAST CONCRETE TOP. PROVIDE NEW CASTING AND HATCH AS NOTED IN THE PLAN - LIFT STATION MODIFICATIONS DETAIL.



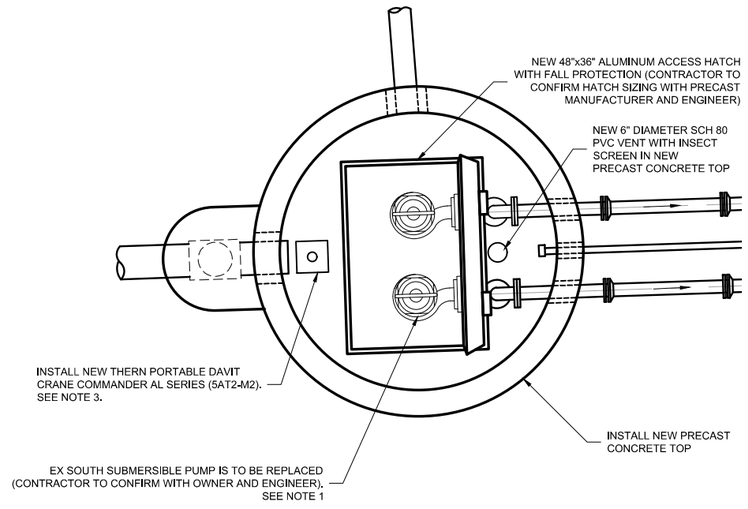
NEW LIFT STATION SITE PLAN

SCALE: 1" = 10'



SECTION - LIFT STATION MODIFICATIONS

SCALE: NONE



PLAN - LIFT STATION MODIFICATIONS

SCALE: NONE

NOTES:

1. NEW PUMP IS TO BE: FLYGT, MODEL 3127.060, N487 IMPELLER, HARD IRON IMPELLER & INSERT RING, 50' CABLE ASSEMBLY, 10 HP, 4" DISCHARGE (CONFIRM PUMP MODEL W/ ENGINEER AND CONFIRM PUMP BOLT PATTERN MATCHES EXISTING PUMP BASE BOLT PATTERN). CONTRACTOR TO CONFIRM WITH OWNER, ENGINEER, AND WWTP OPERATOR PRIOR TO PUMP REPLACEMENT. THE REPLACED PUMP SHALL BE TAKEN AND STORED AT WWTP (COORDINATE WITH WWTP OPERATOR).
2. ALL FASTENERS AND SUPPORTS SHALL BE STAINLESS STEEL.
3. NEW DAVIT CRANE IS TO BE: THERN PORTABLE DAVIT CRANE COMMANDER AL SERIES (5AT2-M2), 316 SS PEDESTAL (5BP20S316), 304 SS WIRE ROPE (WS25-36NS), ROLLER BALL BEARING WITH LOCK (5PT20BRG-SS) OR ENGINEER APPROVED EQUAL.

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	APPROVED BY	RKB				
	ISSUE DATE	JANUARY 2026				
	PROJECT NUMBER	706524-04-001				

STATE OF OHIO — RYAN KENT BRAUEN — E-79180 — REGISTERED PROFESSIONAL ENGINEER — 01/24/2026

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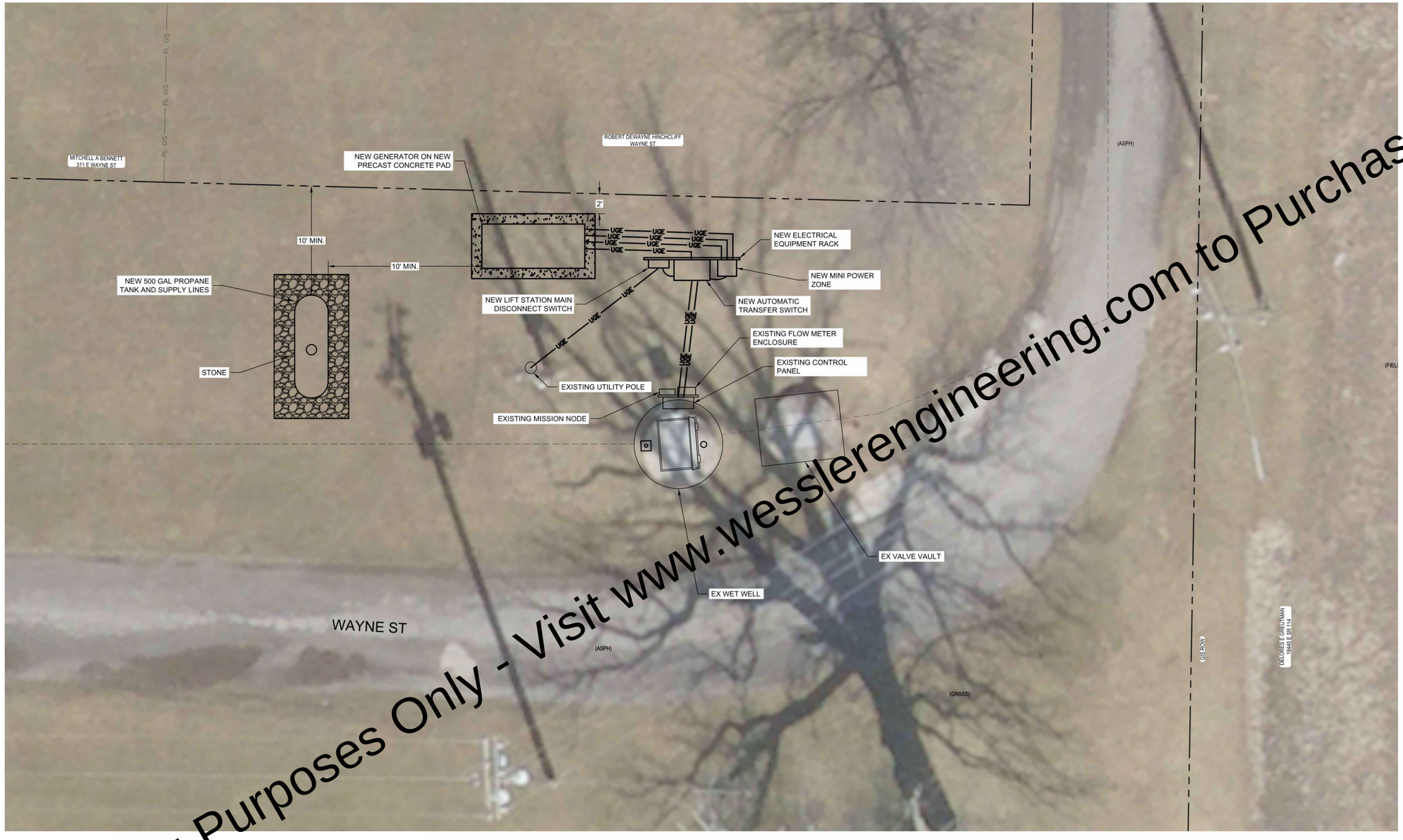
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

WAYNE STREET LS - NEW SITE PLAN & MODIFICATIONS PLAN & SECTION

SHEET NO. **07**

TOTAL SHEETS 18



NEW LIFT STATION ELECTRICAL SITE PLAN

SCALE: 1" = 5'

SCALE VERIFICATION	DRAWN BY	MTF	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JLK					
	APPROVED BY	WCM					
	ISSUE DATE	JANUARY 2026					
	PROJECT NUMBER	706524-04-001					

STATE OF OHIO — WAYNE C. MOORE E-70068 — REGISTERED PROFESSIONAL ENGINEER

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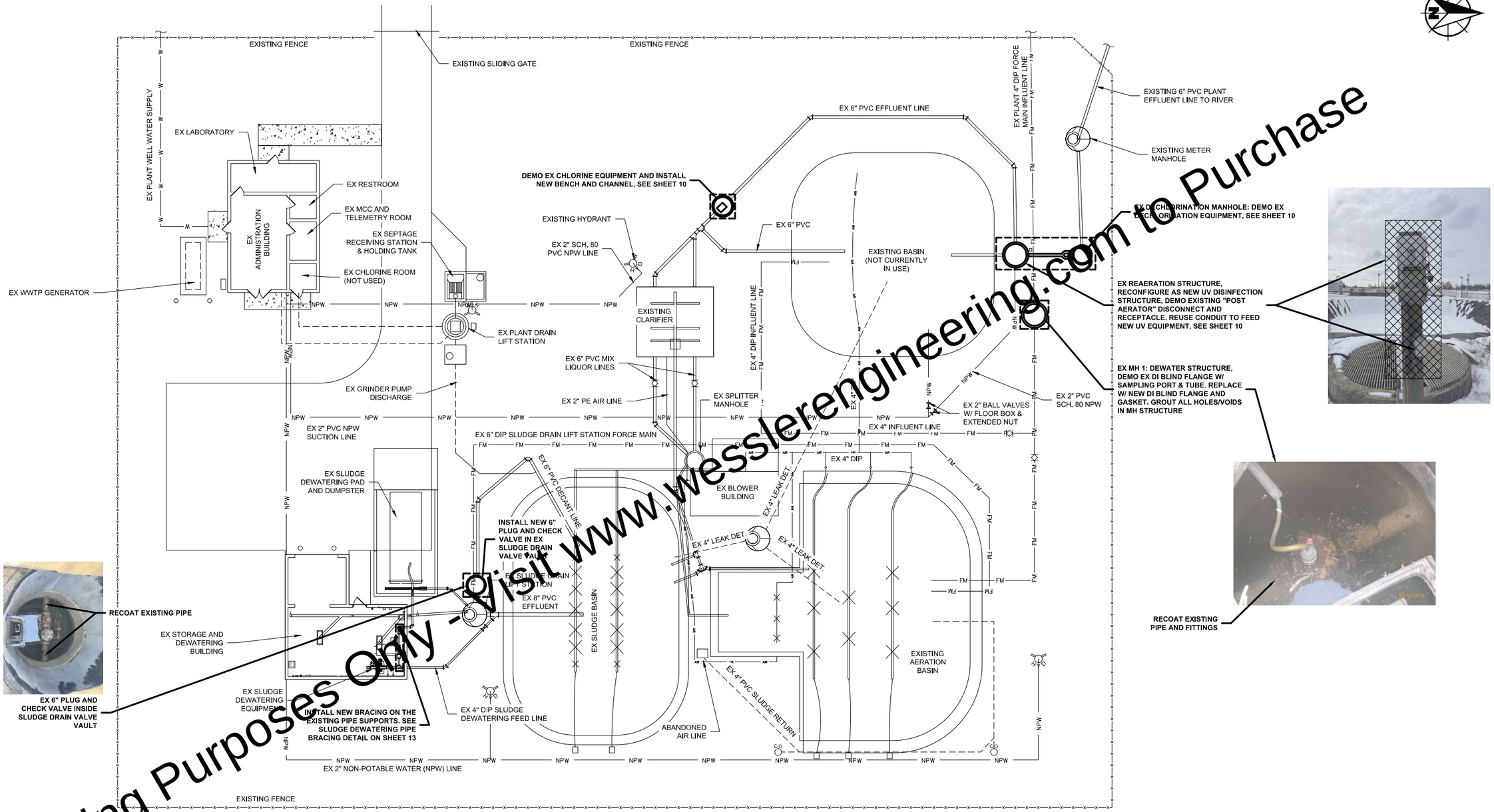
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

WAYNE STREET LS - NEW ELECTRICAL SITE PLAN

SHEET NO. **08**

TOTAL SHEETS 18



WWTP - DEMO AND MODIFIED SITE PLAN

SCALE: NONE

SCALE VERIFICATION	DRAWN BY	MTF	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	AAB					
	APPROVED BY	RKB					
	ISSUE DATE	JANUARY 2026					
	PROJECT NUMBER	706524-04-001					

STATE OF OHIO — RYAN KENT BRAUEN — E-79180 — REGISTERED PROFESSIONAL ENGINEER — 01/24/2026

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2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

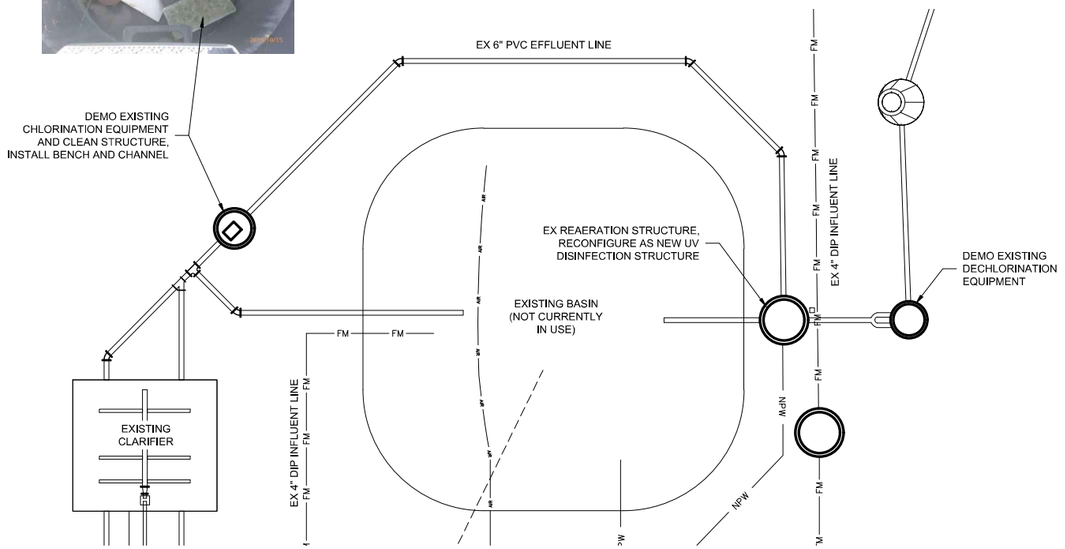
VILLAGE OF GROVER HILL, OHIO

WWTP - DEMO AND MODIFIED SITE PLAN

SHEET NO. **09**

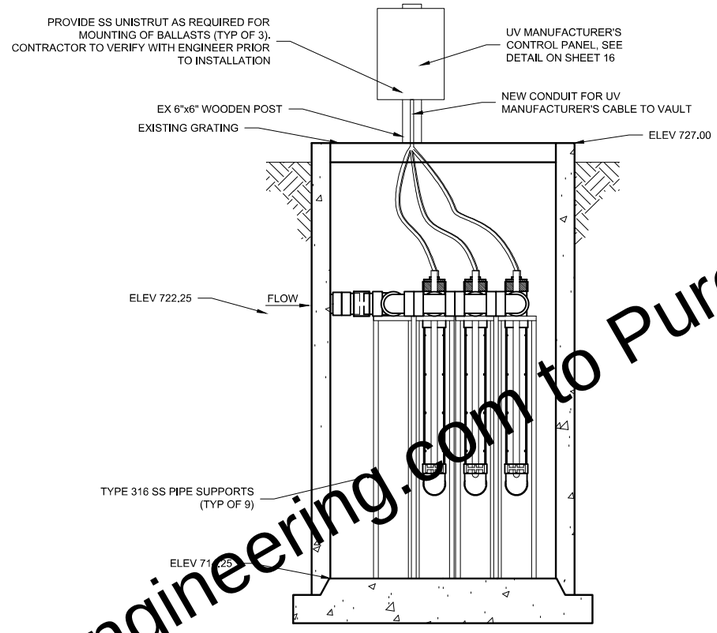
TOTAL SHEETS 18

Drawing: X:\Grover Hill_OH\706524 - GH WW Improv Phil\DWG\Sheets\706524-EX-SI.dwg | Layout: 9 | Plotted: 01/23/26 @ 01:27:41 | LastSavedBy: joshk



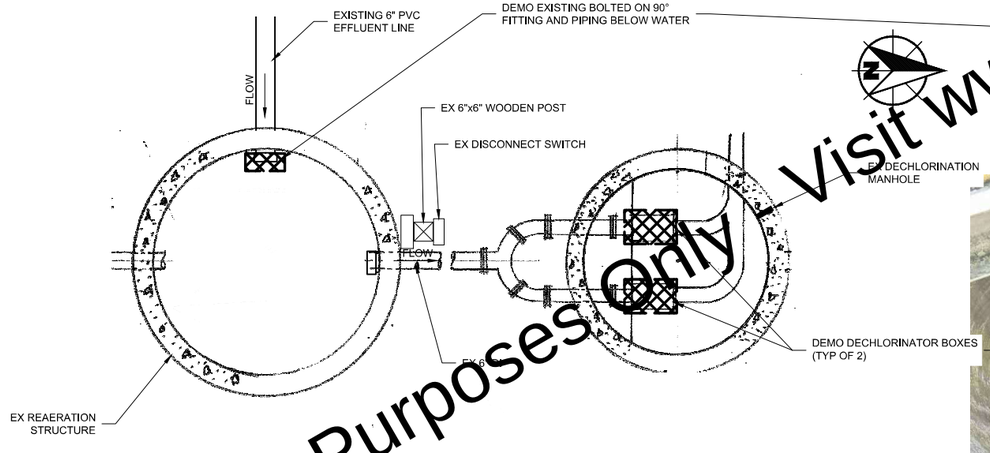
EXISTING CHLORINATION EQUIPMENT

SCALE: 1/8" = 1'



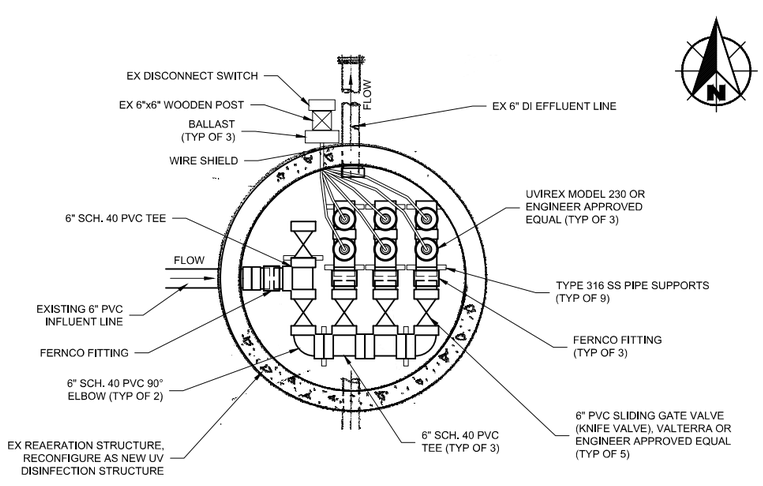
SECTION - NEW UV DISINFECTION EQUIPMENT & PIPING

SCALE: 1/2" = 1'



EXISTING EFFLUENT STRUCTURES

SCALE: 1/2" = 1'



PLAN - NEWLY RECONFIGURED UV DISINFECTION STRUCTURE

SCALE: 1/2" = 1'

NOTES:

1. CONTRACTOR TO PROVIDE AND INSTALL THREE (3) WINELCO, INC - UVIREX MODEL 230 ULTRAVIOLET DISINFECTION UNITS IN PARALLEL (OR ENGINEER APPROVED EQUAL). CONTRACTOR TO ALSO PROVIDE MANUFACTURER'S OPERATION & MAINTENANCE MANUALS AND MATERIALS, SIX (6) 'EASY PULL' HANDLES, SIX (6) REPLACEMENT UV LAMPS IN QUARTZ OUTER TUBES, AND TWO (2) REPLACEMENT BALLASTS. CONTRACTOR SHALL BEAR ALL EXPENSES ASSOCIATED WITH THE START-UP, TESTING, AND TRAINING PROCEDURES INCLUDING LABOR, TRANSPORTATION, AND MATERIAL COSTS.
2. CONTRACTOR TO CONFIRM NEW ULTRAVIOLET DISINFECTION SYSTEM PIPE SIZING AND PIPE CONFIGURATION WITHIN THE RECONFIGURED UV DISINFECTION STRUCTURE WITH ENGINEER PRIOR TO INSTALLATION.
3. ELEVATIONS SHOWN IN SECTION - NEW UV DISINFECTION EQUIPMENT & PIPING ARE BASED ON THE 1989 GROVER HILL PLANS.
4. ALL FASTENERS AND SUPPORTS SHALL BE STAINLESS STEEL.
5. LEVEL UV SYSTEM TO ENSURE BALANCED FLOW.

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2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

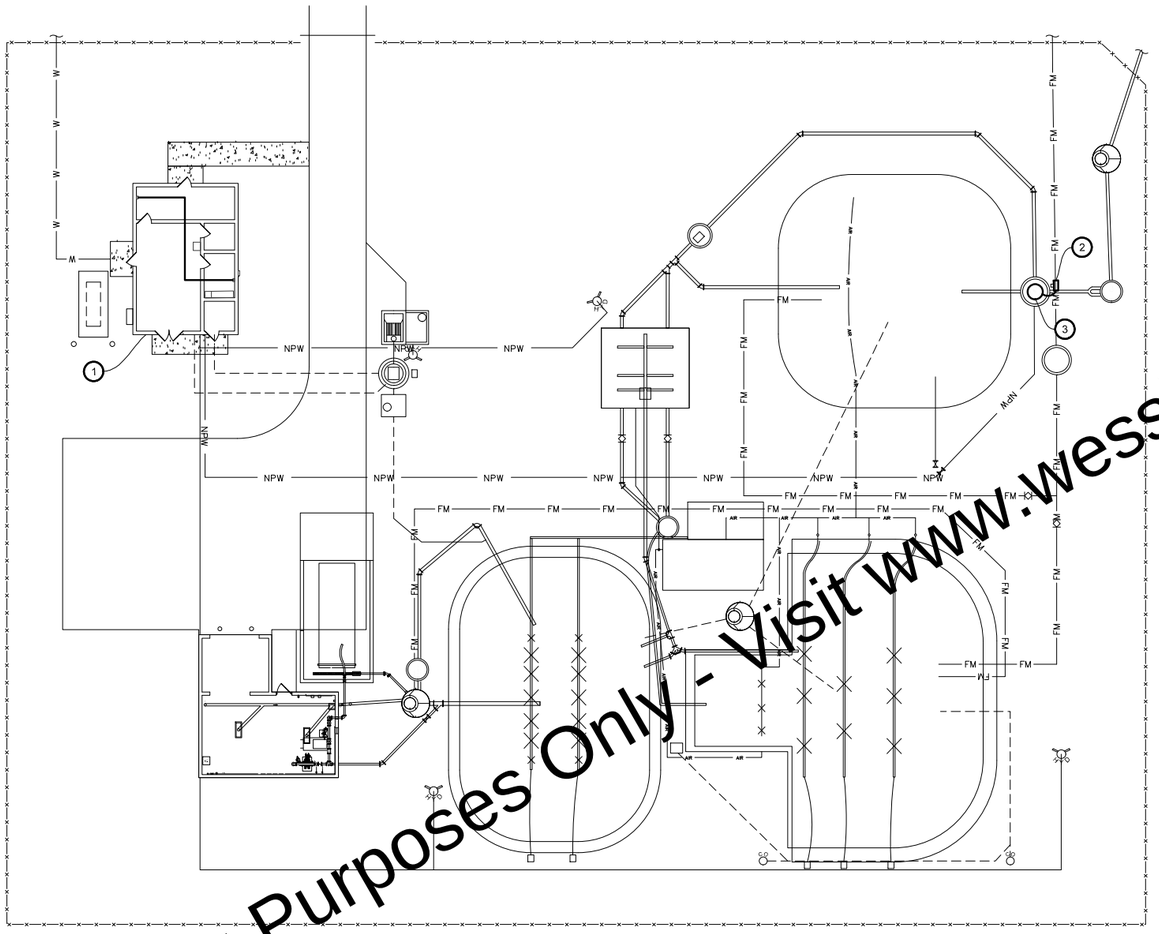
WWTP - UV DISINFECTION SYSTEM PLAN AND SECTIONS AND DETAILS

SHEET NO. **10**

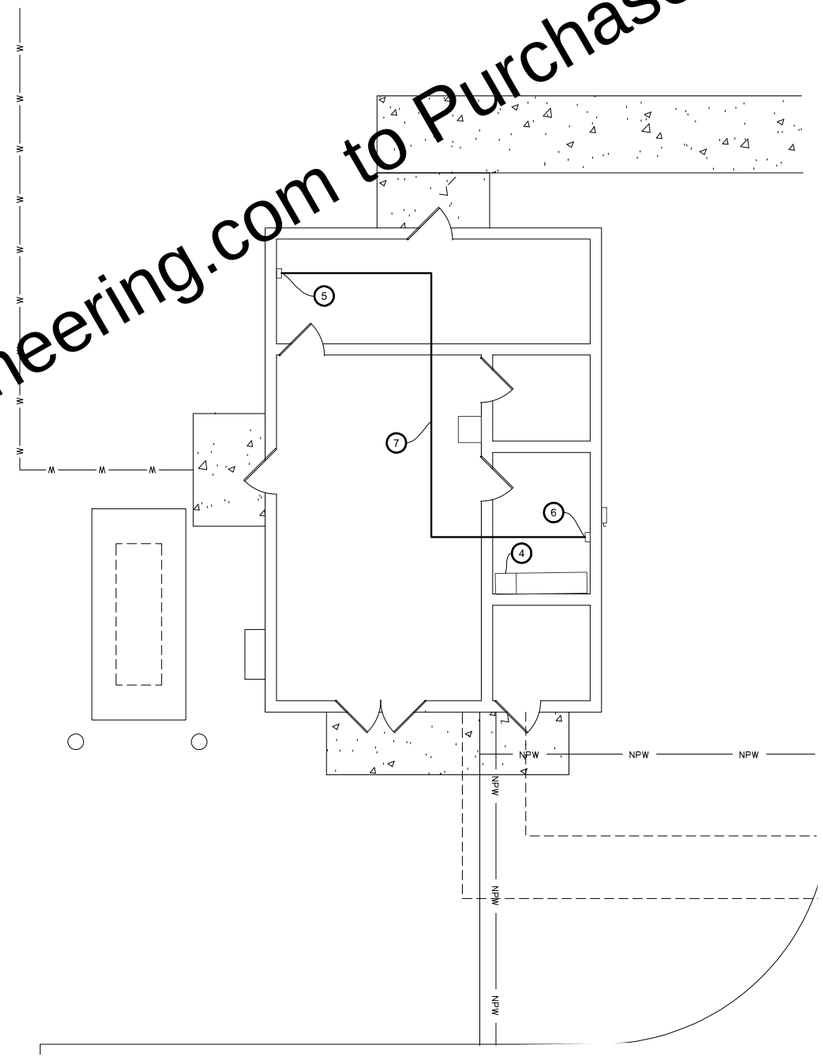
TOTAL SHEETS 18

KEYED NOTES

1. EXISTING ADMINISTRATION BUILDING.
2. NEW UV MANUFACTURER'S PANEL ON EXISTING POST. SEE SHEET 10 AND DETAIL ON SHEET 16. EXISTING 120V RECEPTACLE AND DISCONNECT TO BE REMOVED AS SHOWN ON SHEET 09.
3. NEW UV EQUIPMENT IN MANHOLE.
4. IDENTIFY 120V CIRCUIT THAT FEEDS NEW UV EQUIPMENT AND RELABEL CIRCUIT IN PANEL. 120V PANEL IS LOCATED WITHIN EXISTING MCC.
5. EXISTING PAPER CHART RECORDER.
6. EXISTING MISSION NODE
7. EXISTING 4-20MA SIGNAL COMES FROM EFFLUENT FLOW METER/TRANSMITTER TO PAPER CHART RECORDER. SIGNAL TO BE EXTENDED TO MISSION NODE BY RUNNING IT IN SERIES THROUGH THE TWO DEVICES. WIRING DIAGRAM PROVIDED ON SHEET 20.



ELECTRICAL IMPROVEMENTS PLAN
SCALE: 1/16"=1'



ADMINISTRATIVE BUILDING ELECTRICAL PLAN
SCALE: 3/16"=1'

SCALE VERIFICATION BAR IS ONE INCH LONG ON ORIGINAL DRAWING	DRAWN BY	MTF	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2 VILLAGE OF GROVER HILL, OHIO WWTP - ELECTRICAL SITE PLAN
	CHECKED BY	JLK					
	APPROVED BY	WCM					
	ISSUE DATE	JANUARY 2026					
	PROJECT NUMBER	706524-04-001					

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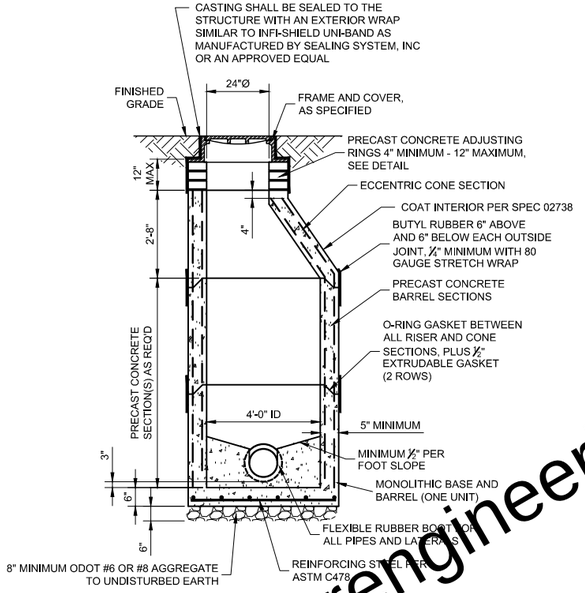
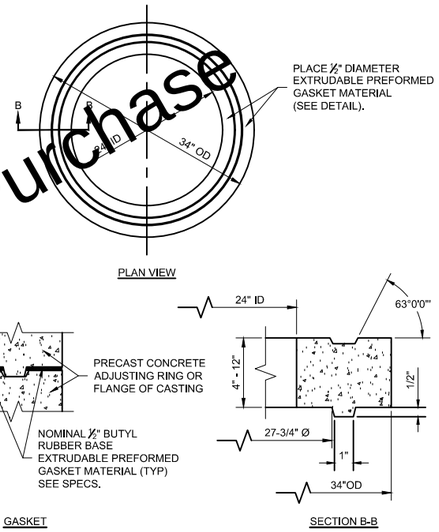
SHEET NO. 11
TOTAL SHEETS 18



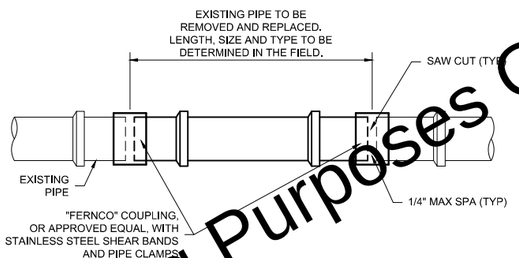
STANDARD SANITARY SEWER MANHOLE

SCALE: NONE



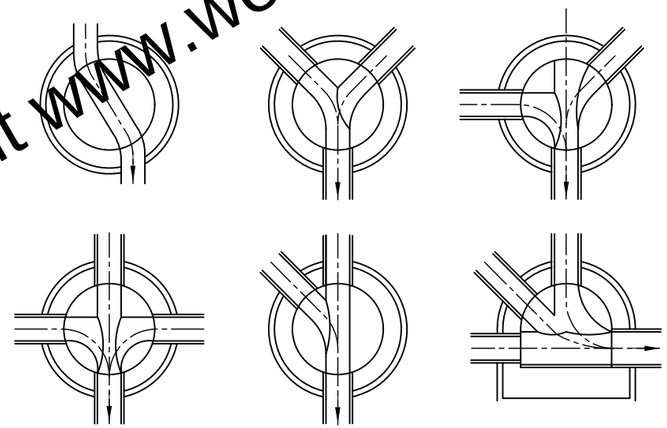
ADJUSTING RING

SCALE: NONE



SANITARY SEWER REPAIR

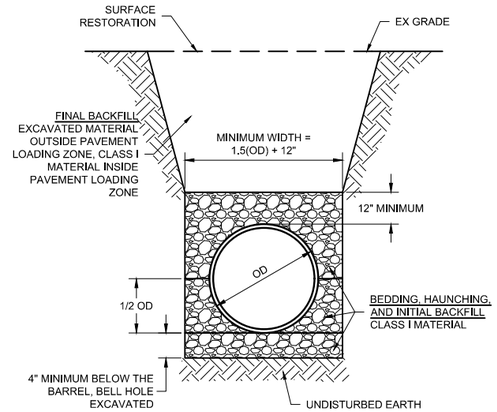
SCALE: NONE



NOTES:
1. SANITARY SEWER BENCH SLOPE = ½" PER FOOT

STANDARD MANHOLE BENCHES

SCALE: NONE



FLEXIBLE (HDPE, PP, PVC) PIPE TRENCH

SCALE: NONE

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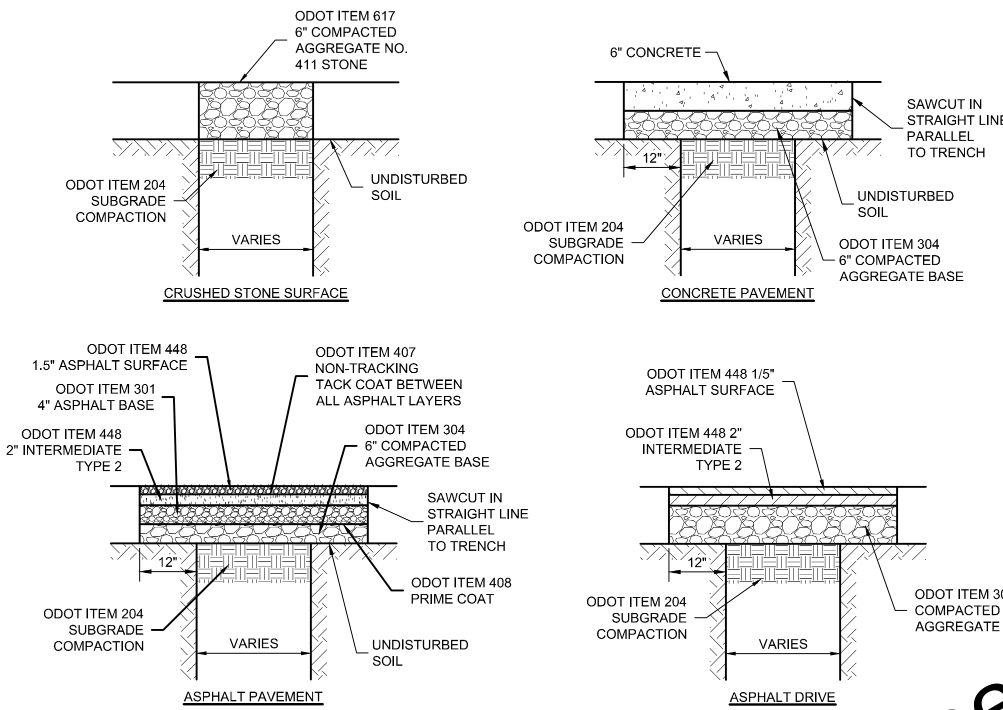
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

MISCELLANEOUS DETAILS

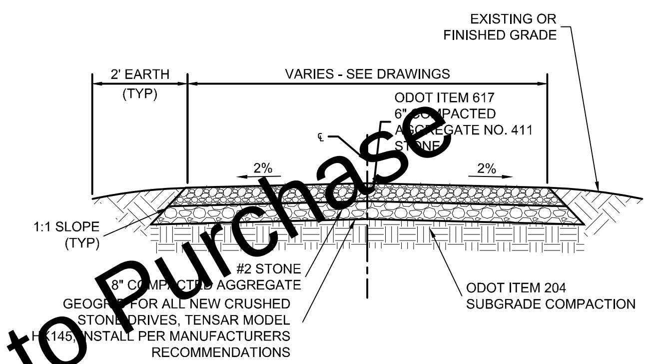
SHEET NO. **12**

TOTAL SHEETS 18

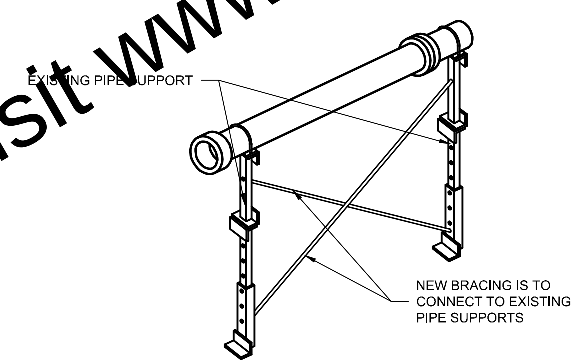


NOTE:
1. TO SPECIFIER: HMA, TYPE B RELATES TO AN EQUIVALENT SINGLE AXLE LOAD (ESAL) OF <3,000,000, AVERAGE ANNUAL DAILY TRAFFIC (AADT) OF <15,000, AND AVERAGE ANNUAL DAILY TRUCK TRAFFIC (AADTT) OF <1,700. IF THE PROJECT EXPERIENCES CONDITIONS OUTSIDE THESE PARAMETERS, A TYPE C OR TYPE D HMA MAY BE REQUIRED.

PAVEMENT REPAIR
SCALE: NONE



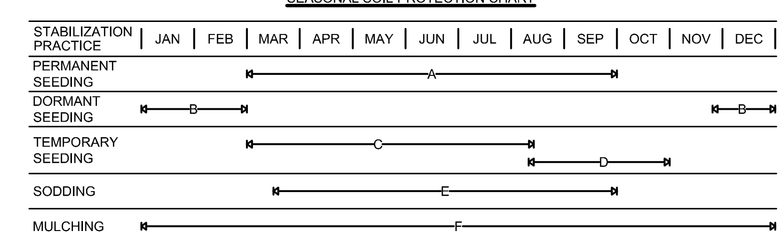
CRUSHED STONE DRIVE
SCALE: NONE



NOTES:
1. NEW BRACING IS TO MATCH EXISTING BRACE AND PIPE SUPPORT MATERIAL
2. ALL FASTENERS SHALL BE STAINLESS STEEL
3. ADDITIONAL BRACING FROM WHAT IS SHOWN MAY BE REQUIRED TO PREVENT PIPE MOVEMENT

SLUDGE DEWATERING PIPE BRACING DETAIL
SCALE: NONE

SEASONAL SOIL PROTECTION CHART



A. = KENTUCKY BLUEGRASS AND PERENNIAL RYEGRASS 100 LB/ACRE
B. = KENTUCKY BLUEGRASS AND PERENNIAL RYEGRASS 150 LB/ACRE. PREPARE SEEDBED PRIOR TO NOV 20
C. = MIX 1 (128 LB/ACRE OATS, 40 LB/ACRE TALL FESCUE, 40 LB/ACRE ANNUAL RYEGRASS), MIX 2 (40 LB/ACRE PERENNIAL RYEGRASS, 40 LB/ACRE TALL FESCUE, 40 LB/ACRE ANNUAL RYEGRASS), MIX 3 (55 LB/ACRE ANNUAL RYEGRASS, 142 LB/ACRE PERENNIAL RYEGRASS, 17 LB/ACRE CREEPING RED FESCUE, 17 LB/ACRE KENTUCKY BLUEGRASS), OR MIX 4 (128 LB/ACRE OATS, 40 LB/ACRE TALL FESCUE, 40 LB/ACRE ANNUAL RYEGRASS)
D. =MIX 5 (112 LB/ACRE RYE, 40 LB/ACRE TALL FESCUE, 40 LB/ACRE ANNUAL RYEGRASS), MIX 6 (120 LB/ACRE WHEAT, 40 LB/ACRE TALL FESCUE, 40 LB/ACRE ANNUAL RYEGRASS), MIX 7 (40 LB/ACRE PERENNIAL RYE, 40 LB/ACRE TALL FESCUE, 40 LB/ACRE ANNUAL RYEGRASS), OR MIX 8 (40 LB/ACRE ANNUAL RYEGRASS, 40 LB/ACRE PERENNIAL RYEGRASS, 40 LB/ACRE CREEPING RED FESCUE, 40 LB/ACRE KENTUCKY BLUEGRASS)
E. = SOD
F. = ANCHORED STRAW/HAY (2 TONS/ACRE) OR WOOD CELLULOSE FIBER (750 LB/ACRE) OR WOOD MULCH/CHIPS (10 TONS/ACRE)

NOTES:
1. IRRIGATION NEEDED DURING MAY THROUGH SEPTEMBER.
2. IRRIGATION NEEDED FOR 2 TO 4 WEEKS AFTER APPLYING SOD.
3. ANCHORED MULCH IS REQUIRED FOR PERMANENT, DORMANT AND TEMPORARY SEEDING.
4. OPTIMUM SEEDING DATES PROVIDED. DATES MAY BE EXTENDED OR SHORTENED BASED ON PROJECT LOCATION.
5. SEED MIXTURES PROVIDED FOR LAWNS AND HIGH MAINTENANCE AREAS.
6. ADDITIONAL REQUIREMENTS AND INFORMATION ARE LOCATED IN THE OHIO DEPT. OF NATURAL RESOURCES RAINWATER AND LAND DEVELOPMENT MANUAL.

MAINTENANCE:
1. INSPECT WITHIN 24 HOURS OF EACH 0.5-INCH RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.
2. CHECK FOR EROSION AND MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (70% DENSITY).
4. RESEED, FERTILIZE OR APPLY MULCH WHERE NECESSARY.

SCALE VERIFICATION	DRAWN BY	MTF	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	AAB				
	APPROVED BY	RKB				
	ISSUE DATE	JANUARY 2026				
	PROJECT NUMBER	706524-04-001				

STATE OF OHIO RYAN KENT BRAUEN E-79180 REGISTERED PROFESSIONAL ENGINEER
01/24/2026

WESSLER ENGINEERING
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2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

MISCELLANEOUS DETAILS

SHEET NO. 13

TOTAL SHEETS 18

LIGHTING

- SURFACE/PENDANT MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTED CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT
- SURFACE/PENDANT MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTES CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT
- RECESS MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTED CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT
- RECESS MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTES CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT
- H.I.D. OR INCANDESCENT FIXTURE CEILING MOUNTED LETTER DENOTES TYPE, # DENOTES CIRCUIT
- WALL MOUNTED FIXTURE LETTER DENOTES TYPE, # DENOTES CIRCUIT
- WALL MOUNTED PHOTOCELL
- CEILING MOUNTED EXIT SIGN
- WALL MOUNTED EXIT SIGN
- EMERGENCY LIGHT FIXTURE # DENOTES CIRCUIT
- POLE MOUNTED FIXTURE

RECEPTACLE

- DUPLEX RECEPTACLE SUBSCRIPT DENOTES TYPE: UPS DENOTES UNINTERRUPTIBLE POWER SUPPLY # DENOTES CIRCUIT
- SINGLE OUTLET RECEPTACLE
- SPECIAL PURPOSE OUTLET
- MULTI-OUTLET RECEPTACLE SINGLE
- MULTI-OUTLET RECEPTACLE DUPLEX
- 240 VOLT RECEPTACLE

PANELS AND BOXES

- JB — JUNCTION BOX
- PB — PULL BOX
- PANEL

HVAC AND FIRE ALARM

- FIRE ALARM PULL STATION
- FIRE ALARM CONTROL PANEL
- ANNUNCIATOR
- HORN/LIGHT DEVICE
- DD — DUCT DETECTOR
- SMOKE DETECTOR SUBSCRIPT DENOTES TYPE:
  - Z DENOTES IONIZATION
  - P DENOTES PHOTOELECTRIC
  - T DENOTES THERMAL
- T — THERMOSTAT
- R — AMBIENT TEMPERATURE TRANSMITTER
- UNIT HEATER
- WALL MOUNTED GAS DETECTION FIXTURE

SWITCHES

- WALL SWITCH SUBSCRIPT DENOTES TYPE: NO SUBSCRIPT DENOTES SINGLE POLE
  - 3 DENOTES 3 WAY
  - 4 DENOTES 4 WAY
  - M DENOTES MANUAL MOTOR STARTER
- MOTOR STARTER
- COMBINATION MOTOR STARTER
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- LS — DOOR LIMIT SWITCH
- LOCAL CONTROL STATION
- SS — SPEED SWITCH

WIRING

- CONDUIT HOME RUN
- CONDUIT EXPOSED
- CONDUIT CONCEALED
- X — FLEXIBLE CONDUIT

SCHEMATICS

- H O A / XOO / OOX — 3-POSITION SELECTOR SWITCH HAND - OFF - AUTO
- START — PUSHBUTTON SWITCH N.O. TEXT DENOTES LEGEND PLATE
- STOP — PUSHBUTTON SWITCH N.C. TEXT DENOTES LEGEND PLATE
- E-STOP — MUSHROOM HEAD EMERGENCY STOP PUSHBUTTON SWITCH N.C. MAINTAINED TEXT DENOTES LEGEND PLATE
- STOP L.O. — PUSHBUTTON SWITCH N.C. WITH LOCK-OUT TEXT DENOTES LEGEND PLATE
- DISCONNECT SWITCH N.O.
- DISCONNECT SWITCH N.C.
- TS — TEMPERATURE SWITCH OR THERMOSTAT N.O. TEXT DENOTES TAG NUMBER
- TS — TEMPERATURE SWITCH OR THERMOSTAT N.C. TEXT DENOTES TAG NUMBER
- PS — PRESSURE SWITCH N.O. TEXT DENOTES TAG NUMBER
- PS — PRESSURE SWITCH N.C. TEXT DENOTES TAG NUMBER
- LS — LEVEL SWITCH N.O. TEXT DENOTES TAG NUMBER
- LS — LEVEL SWITCH N.C. TEXT DENOTES TAG NUMBER
- TR — ON DELAY TIMED SWITCH N.O.T.C. TEXT DENOTES TAG NUMBER
- TR — ON DELAY TIMED SWITCH N.C.T.O. TEXT DENOTES TAG NUMBER
- TR — OFF DELAY TIMED SWITCH N.O.T.O. TEXT DENOTES TAG NUMBER
- TR — OFF DELAY TIMED SWITCH N.C.T.C. TEXT DENOTES TAG NUMBER
- TS — TORQUE SWITCH TEXT DENOTES TAG NUMBER
- LS — LIMIT SWITCH TEXT DENOTES TAG NUMBER
- # — CONTACT (NORMALLY OPEN) # DENOTES COIL NUMBER
- # — CONTACT (NORMALLY CLOSED) # DENOTES COIL NUMBER
- PL — INDICATOR LIGHT - LETTER DENOTES COLOR
- PTT G — PUSH-TO-TEST INDICATOR LIGHT LETTER DENOTES COLOR
- ETM — ELAPSED TIME METER
- SV — SOLENOID VALVE
- MECHANICAL INTERLOCK CONNECTION
- M XXX — COIL
  - M DENOTES MOTOR STARTER
  - CR DENOTES CONTROL RELAY
  - TR DENOTES TIME DELAY RELAY
  - LC DENOTES LIGHTING CONTACTOR
  - PR DENOTES INTERPOSING PILOT RELAY
  - XXX DENOTES REFERENCE LINE NUMBER

SINGLE LINE

- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- NEW
- FUTURE
- TX-STRUCTURE DESIGNATION, XXX kVA, 480-120/208V — TRANSFORMER
- 3P/4W — TYPE OF TRANSFORMER
- 50 — PROTECTIVE RELAY, NUMBER DENOTES IEEE DEVICE FUNCTION
- 1200A 52 — MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER
- 100 A — FUSE
- XXA — DRAWOUT POWER CIRCUIT BREAKER
- XXA — MOLDED CASE CIRCUIT BREAKER
- THERMAL OVERLOAD RELAY
- GROUND
- 600:5A (3) — CURRENT TRANSFORMER NUMBER DENOTES QUANTITY
- 480-120V (3) — POTENTIAL TRANSFORMER NUMBER DENOTES QUANTITY
- DRAW-OUT ELEMENT
- 800 A 3Ø 3W ATS N E L — AUTOMATIC OR MANUAL TRANSFER SWITCH
- M XXX — MOTOR NUMBER DENOTES HORSEPOWER
- XXkW 480V,3Ø,4W — GENERATOR XX NUMBER DENOTES REQUIRED kW RATING AND VOLTAGE

EQUIPMENT/DEVICE LOCATION SYMBOLS

- * — LOCATED AT MCC, COMBINATION STARTER, OR BYPASS STARTER
- △ — LOCATED IN FIELD
- ⬡1 — LOCATED AT DCU 1A REMOTE I/O RACK
- □ — LOCATED AT VFD

MISC PLAN VIEW SYMBOLS

- E OR ● — EQUIPMENT CONNECTION
- GROUND ROD
- INSTRUMENT TRANSMITTER

COMMUNICATIONS

- TELEPHONE OR NETWORK DROP
- N — ETHERNET JACK

SINGLE LINE, CONT'D.

- X% — LINE REACTOR X% NUMBER DENOTES PERCENT IMPEDANCE
- CAPACITOR
- V VS — VOLTMETER AND SWITCH
- ST — SHUNT TRIP
- TVSS — SURGE PROTECTION DEVICE
- LIGHTNING ARRESTOR
- K — KIRK-KEY INTERLOCK
- MPU-# — MINI POWER UNIT
- VFD — VARIABLE FREQUENCY DRIVE

SITE DUCTBANKS

- UGC — UNDERGROUND CONTROL
- UGE — UNDERGROUND ELECTRICAL
- UGF — UNDERGROUND FIBER

GENERAL NOTES:

1. PROVIDE SPARES AND SPARE EQUIPMENT AS OUTLINED IN SPECIFICATIONS.
2. CONDUIT AND WIRE BETWEEN DEVICES (SUCH AS VERTICAL TURBINE PUMP MOTOR THERMOSTATS OR DISCONNECT AUX. CONTACTS) AND POWER EQUIPMENT (SUCH AS VFDS AND MOTOR STARTERS) WHERE NOT EXPLICITLY SHOWN SHALL BE #14, CONDUIT SIZE TO FOLLOW THE REQUIREMENTS SET FORTH IN THE NEC, 3/4"C MINIMUM EXPOSED, 1"C MINIMUM BURIED.
3. CONTRACTOR RESPONSIBLE FOR INFORMING THE ENGINEER DURING CONSTRUCTION OF ANY CONDITIONS ON SITE WHICH MAY PREVENT ANY ASPECT OF THE INSTALLATION FROM MEETING THE REQUIREMENTS SET FORTH IN THE NEC. SPECIAL CARE SHALL BE TAKEN WITH REGARDS TO CONDUIT FILL, CLEARANCE, JUNCTION/PULL BOX, AND CIRCUIT DISCONNECTING MEANS REQUIREMENTS.
5. ALL CONTROL PANELS AND LOCAL STATIONS NOT EXPLICITLY INDICATED TO HAVE A DISCONNECT SWITCH MOUNTED ADJACENT TO THE PANEL SHALL HAVE A MAIN CIRCUIT BREAKER WITH THRU PANEL OPERATOR WHICH SHALL BE LOCKABLE AND INTERLOCKED WITH THE PANEL DOOR AS NEEDED TO MEET THE REQUIREMENTS OF THE NEC.
6. CONTRACTOR RESPONSIBLE FOR ALL CONDUIT AND WIRE BETWEEN MECHANICAL EQUIPMENT (INCLUDING BUT NOT LIMITED TO UNIT HEATERS, EXHAUST FANS AND AIR CONDITIONING UNITS) AND CONTROLLERS (INCLUDING BUT NOT LIMITED TO MOTOR STARTERS, THERMOSTATS AND MOTOR OPERATED LOUVERS). FOR BID PURPOSES THIS IS TO BE 1"C, 4#14, #14G BETWEEN EACH PIECE OF EQUIPMENT AND CONTROLLER.
7. MANUFACTURER EQUIPMENT SHOWN FOR BIDDING PURPOSES ONLY. FINAL WIRING LIST TO BE PROVIDED BY EQUIPMENT SUPPLIER IN SHOP DRAWING SUBMITTAL. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL WIRING AND CONDUIT BETWEEN THE MANUFACTURER'S CONTROL PANELS AND THE EQUIPMENT PROVIDED BY THE MANUFACTURER.

ABBREVIATIONS

A	AMPERE(S)	MAN	MANUFACTURER SUPPLIED (EX. MAN-CP)
ACU	AIR CONDITIONING UNIT	MAU	MAKEUP AIR UNIT
AE	ANALYTICAL SENSOR	MCC	MOTOR CONTROL CENTER
AF	AMP FRAME	MH	MANHOLE
AFF	ABOVE FINISHED FLOOR	MOL	MOTOR OPERATED LOUVER
AHU	AIR HANDLING UNIT	MPU	MINI POWER UNIT
AIT	ANALYTICAL INDICATOR TRANSMITTER	MV	MEDIUM VOLTAGE
AM	AMMETER	N	NEUTRAL
AMP	AMPERE(S)	N/A	NOT APPLICABLE
AT	AMP TRIP	N.C.	NORMALLY CLOSED
ATL	ACROSS THE LINE (STARTER)	NEC	NATIONAL ELECTRICAL CODE
ATS	AUTOMATIC TRANSFER SWITCH	NET	NETWORK (PANEL)
AUX	AUXILIARY	NF	NON-FUSED
AWG	AMERICAN WIRE GAUGE	NFSS	NON-FUSED SAFETY SWITCH
BKR	BREAKER	N.O.	NORMALLY OPEN
BLDG	BUILDING	NTS	NOT TO SCALE
C	CONDUIT	OL	OVERLOAD
CB	CIRCUIT BREAKER	PB	PUSHBUTTON
CKT	CIRCUIT	PLC	PROGRAMMABLE LOGIC CONTROLLER
CMS	COMBINATION MOTOR STARTER	PM	POWER METER/MONITOR
CP	CONTROL PANEL	PNL	PANEL
CR	CORROSION RESISTANT	PP	POWER PANEL
CU	COPPER	RCPT	RECEPTACLE
DF	DUCT FAN	RGS	RIGID GALVANIZED STEEL
DH	DUCT HEATER	RIO	REMOTE INPUT/OUTPUT
DISC	DISCONNECT	R/S	RING SWITCH
EF	EXHAUST FAN	RVSS	REDUCED VOLTAGE SOFT STARTER
ELEV	ELEVATION	RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
EMH	ELECTRICAL MANHOLE	SF	SUPPLY FAN
EMT	ELECTRICAL METALLIC TUBING	SHLD	SHIELDED
EQUIP	EQUIPMENT	SOL	SOLENOID
EXP	EXPLOSION PROOF	SP	SINGLE POLE
F	FUSED OR FUSE	SPD	SURGE PROTECTIVE DEVICE
FE	FLOW SENSOR	SST	STAINLESS STEEL
FIT	FLOW INDICATING TRANSMITTER	STR	STARTER
FLA	FULL LOAD AMPS	SW	SWITCH
FOPP	FIBER OPTIC PATCH PANEL	SWBD	SWITCHBOARD
FV(N)R	FULL VOLTAGE (NON) REVERSING	SWGR	SWITCHGEAR
G	GROUND	TB	TERMINAL BOX
GEN	GENERATOR	TPS	TWISTED PAIR SHIELDED
GF	GROUND FAULT	TYP	TYPICAL
GF(C)I	GROUND FAULT (CIRCUIT) INTERRUPTER	UGE	UNDERGROUND ELECTRICAL
HH-(P/C)	HANDHOLE (POWER/CONTROLS)	UGT	UNDERGROUND TELEPHONE
HOA	HAND-OFF-AUTOMATIC	UGCC	UNDERGROUND CONTROLS CABLE
HOR	HAND-OFF-REMOTE	UGF	UNDERGROUND FIBER
HP	HORSEPOWER	UH	UNIT HEATER
JB	JUNCTION BOX	UL	UNDERWRITERS LABORATORIES
KV	KILOVOLTS	UNO	UNLESS NOTED OTHERWISE
KVA	KILOVOLTS AMPS	V	VOLTS
KVAR	KILOVAR	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATTS	VM	VOLTMETER
LCP	LOCAL CONTROL PANEL	VS	VOLTMETER SWITCH
LCS	LOCAL CONTROL STATION	W	WIRE/WATT
LE	LEVEL SENSOR	WH	WATER HEATER
LIT	LEVEL INDICATING TRANSMITTER	WP	WEATHERPROOF
LOR	LOCAL-OFF-REMOTE	XFMR	TRANSFORMER
LP	LIGHTING PANEL		
LTG	LIGHTING		
LV	LOW VOLTAGE		

SCALE VERIFICATION	DRAWN BY	MTF
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JLK
	APPROVED BY	WCM
	ISSUE DATE	JANUARY 2026
	PROJECT NUMBER	706524-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO — WAYNE C. MOORE E-70068 — REGISTERED PROFESSIONAL ENGINEER

WESSLER ENGINEERING — More than a Project™

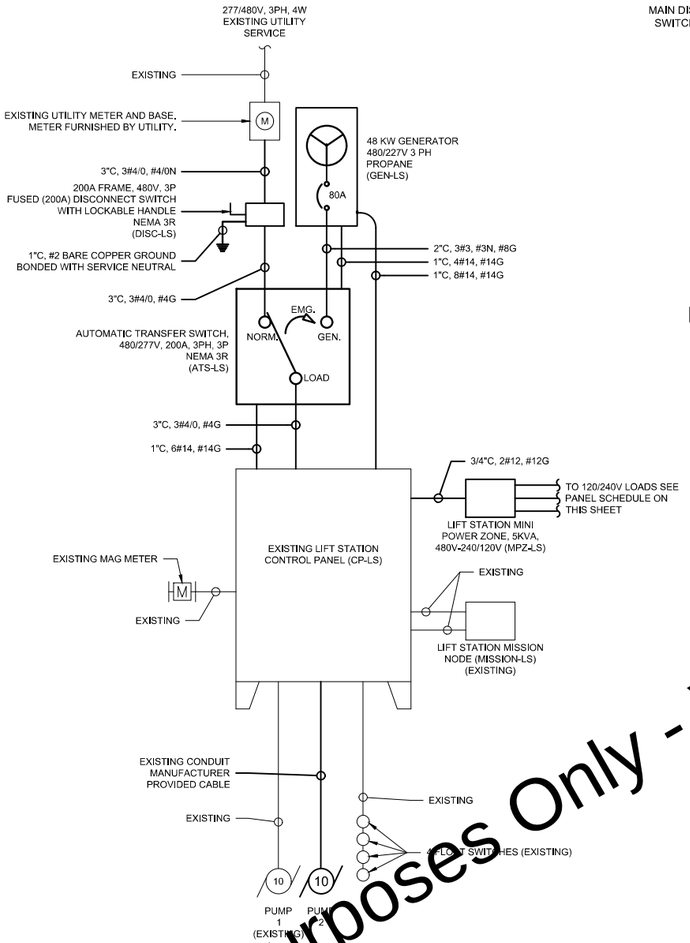
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

ELECTRICAL LEGEND

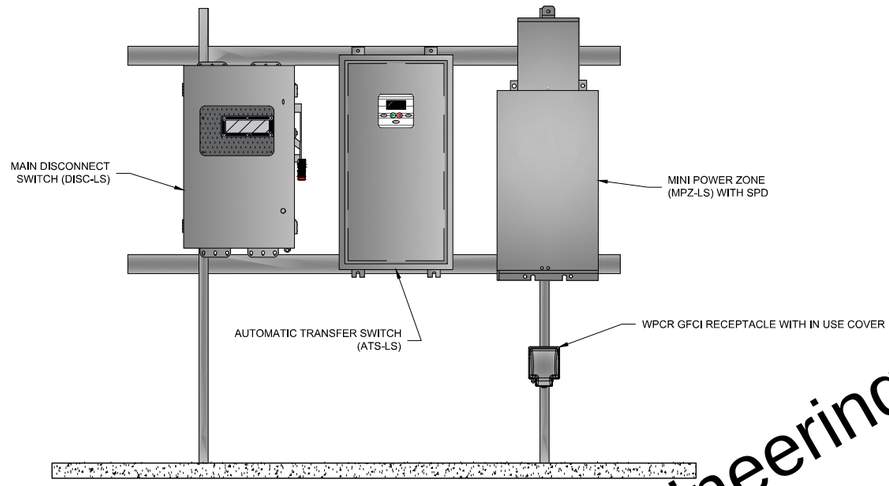
SHEET NO. 14

TOTAL SHEETS 18



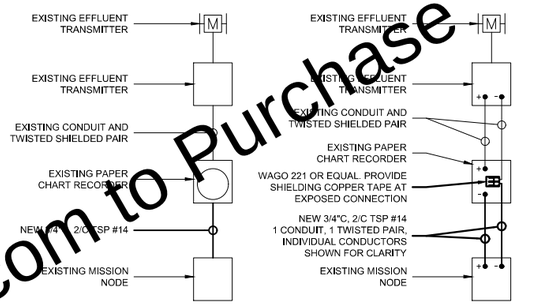
LIFT STATION ONE-LINE DIAGRAM

SCALE: NONE



ELECTRICAL EQUIPMENT RACK ELEVATION

SCALE: NONE



NOTES:
1. DESIGN INTENT IS TO GET 4-20MA SIGNAL TO BOTH THE PAPER CHART RECORDER AS WELL AS THE MISSION NODE.
2. CONNECTIONS SHOWN ARE ANALOG INPUTS/OUTPUTS

WWTP EFFLUENT METER TO MISSION WIRING DIAGRAM

SCALE: NONE

PANEL SCHEDULE

DESIGNATION:	MPZ-LS	MAINS:	20 AMP MAIN CIRCUIT BREAKER
LOCATION:	LIFT STATION	BUS SIZE	30 AMP
VOLTAGE:	120/240 V AC	ENCLOSURE RATING	3R - 5KVA
PHASE:	1 PHASE, 3 WIRE	ALL BREAKERS:	18000 A.I.C. (MINIMUM)

CKT. NO.	LOAD DESCRIPTION	#	KVA	CKT. BKR. AMPS	CKT. BKR. POLE	KVA A	KVA B	CKT. BKR. AMPS	CKT. BKR. POLE	KVA	#	LOAD DESCRIPTION	CKT. NO.
1	GENERATOR MISC LOAD 1	2	1.00	20	2	1.50		20	1	0.50	1	GENERATOR MISC LOAD 2	2
3			1.00				1.50	20	1	0.50	1	GENERATOR MISC LOAD 3	4
5	CONVENIENCE RECEPTACLE	1	0.50	20	1	0.50		20	1			SPARE	6
7	SPARE			20	1		0.00	20	1			SPARE	8
9	SPARE			20	1	0.00		20	1			SPARE	10
11	SPARE			20	1		0.00	20	1			SPARE	12
13	SPARE			20	1	0.00		30	2		3	SPD	14
15	SPARE			20	1		0.00						16
	TOTAL CONNECTED LOAD:					2.00	1.50	TOTAL =		3.50	KVA		

\# ONE (1) OR TWO (2) DIGIT NUMBERS REFER TO CONDUIT & WIRE SCHEDULE ON THIS SHEET.

12 1-pole 20A breakers, 1 2-pole 20A breaker, 1 2-pole 30A breaker

MPZ-LS PANEL SCHEDULE

SCALE: NONE

GENERAL NOTES:

1. ALL NEW ELECTRICAL ENCLOSURES TO BE NEMA 3R.

CONDUIT AND WIRE:

1. 3/4"C, #12, #12N, #12G
2. 3/4"C, 2#12, #12N, #12G
3. 3/4"C, 2#10, #10G

SCALE VERIFICATION	DRAWN BY	MTF
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JLK
	APPROVED BY	WCM
	ISSUE DATE	JANUARY 2026
	PROJECT NUMBER	706524-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO
WAYNE C. MOORE
E-70068
REGISTERED
PROFESSIONAL ENGINEER

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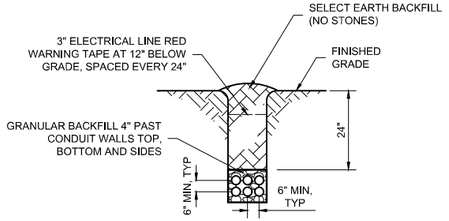
2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

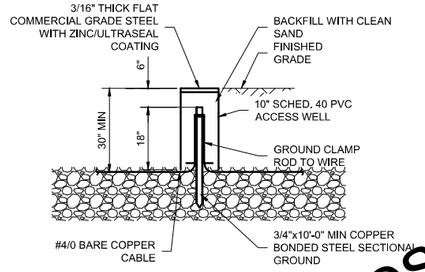
ONE LINE DIAGRAMS AND DETAILS

SHEET NO. **15**

TOTAL SHEETS 18

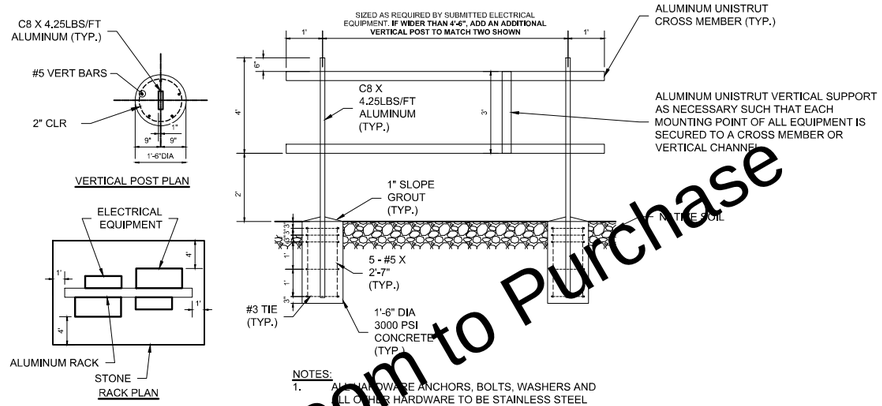


CONDUIT TRENCH
SCALE: NONE



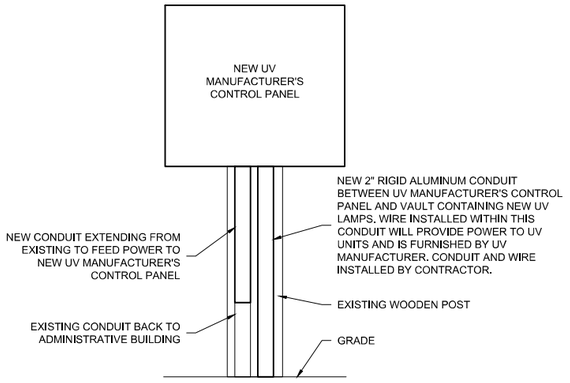
NOTES:
1. REFER TO JOB SPECIFICATION FOR MINIMUM SYSTEM RESISTANCE TO GROUND. IF THE RESISTANCE CANNOT BE MET WITH SINGLE END RODS, ADD ADDITIONAL SECTIONS TO RODS OR ADD NEW RODS AS REQUIRED, SPACED 6'-0" TO 10'-0" FROM EXISTING RODS.

ELECTRICAL INSTALLATION
AND GROUND ROD ASSEMBLY
SCALE: NONE



NOTES:
1. ALL HARDWARE ANCHORS, BOLTS, WASHERS AND ALL OTHER HARDWARE TO BE STAINLESS STEEL
2. WHERE ALUMINUM COMES IN CONTACT WITH CONCRETE, COAT WITH BITUMINOUS.

ELECTRICAL EQUIPMENT RACK
SCALE: NONE



NOTES:
1. EXISTING CONDUIT BACK TO 120V PANEL IN ADMINISTRATIVE BUILDING TO BE REUSED. 120V, 20A, BREAKER TO BE IDENTIFIED, RELABELED, AND REUSED TO FEED NEW UV EQUIPMENT
2. PROVIDE NEW WIRE 2#12, #12G FROM BREAKER IN ADMINISTRATIVE BUILDING AND NEW UV MANUFACTURER'S CONTROL PANEL.
3. UV MANUFACTURER'S PANEL TO PROVIDE POWER TO ALL UV UNITS. PANEL SHALL BE PROVIDED WITH MAIN BREAKER TO ACT AS DISCONNECTING MEANS.

UV MANUFACTURER CONTROL PANEL
SCALE: NONE

SCALE VERIFICATION	DRAWN BY	MTF	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JLK				
	APPROVED BY	WCM				
	ISSUE DATE	JANUARY 2026				
	PROJECT NUMBER	706524-04-001				

STATE OF OHIO · WAYNE C. MOORE · E-70068 · REGISTERED PROFESSIONAL ENGINEER

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2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

ELECTRICAL DETAILS

SHEET NO. **16**

TOTAL SHEETS 18

VALVE SYMBOLS

SEAT PORT

ECCENTRIC PLUG
THREE - WAY
BUTTERFLY
BALL
GLOBE
PRESSURE RELIEF
AIR RELEASE AND VACUUM RELIEF
GATE
KNIFE GATE
CONSTANT VOLUME FLOW REGULATOR
MUD
BALL CHECK
SWING CHECK
SPLIT DISC CHECK
REGULATED SIDE PRESSURE CONTROL
PINCH
DIAPHRAGM
NEEDLE
CALIBRATED BALANCE
SOLENOID

GATE SYMBOLS

SLUICE GATE
SLIDE GATE
FLAP GATE
WEIR GATE
STOP GATE
WEIR AND STOP GATE

VALVE AND GATE POWER ACTUATOR SYMBOLS

ELECTRIC MOTOR
ELECTRIC MOTOR WITH POSITIONER
HYDRAULIC WITH POSITIONER
HYDRAULIC WITH SOLENOID
PNEUMATIC WITH POSITIONER
PNEUMATIC WITH SOLENOID

XX: FC = FAIL CLOSED
FIP = FAIL INTERMEDIATE POSITION
FIP = FAIL TO LAST POSITION
FO = FAIL OPEN

NOTE: XX = FAIL POSITION ON LOSS OF PRIMARY POWER (PNEUMATIC OR ELECTRICAL)

FLOW ELEMENTS SYMBOLS

WEIR PLATE
PARSHALL FLUME
ROTAMETER
PROPELLER OR TURBINE METER
ORIFICE METER
EXISTING STRUCTURE
CLAMP ON ULTRASONIC FLOWMETER
MAGNETIC FLOWMETER
VENTURI OR FLOW TUBE

STRUCTURES AND EQUIPMENT

NEW OR RELOCATED ITEM
EXISTING ITEM
EXISTING OR RELOCATED STRUCTURE

MISCELLANEOUS SYMBOLS

HARDWIRED INTERLOCK SEE SPECIFICATION
OR
MICROPROCESSOR BASED INTERLOCK SEE SPECIFICATION
OR
BLIND FLANGE OR CLEAN OUT
AIR GAP
STRAINER
FLUSHING WATER CONNECTION
SEAL WATER CONNECTION
INJECTOR
AUTOMATIC SAMPLER
DIFFUSER
BUBBLER LEVEL ELEMENT
VENT
RUPTURE DISK
STATIC MIXER
ORTHO PHOSPHATE ELEMENT
PROBE
ELECTRIC MOTOR
MANUAL SAMPLE PORT
AUTOMATIC DRAIN
MANUAL DRIP TRAP
DIAPHRAGM SEAL
ANNULAR SEAL
FLOW STRAIGHTENING VANE
CALIBRATION CHAMBER
DENSITY METER
X: N - NUCLEAR
O - OPTICAL
U - ULTRASONIC
SELF CONTAINED AIR SUPPLY
PURGE SET
X: W = WATER
A = AIR

INTERFACE SYMBOLS

PROCESS

INTER - UNIT PROCESS
W = SOURCE UNIT PROCESS NO.
A = INTERFACE NO.

NNN = SOURCE SHEET NO.
MMM = DESTINATION SHEET NO.

INTRA - UNIT PROCESS
Q = INTERFACE LETTER

TO INTERFACE NOT IN CONTACT

SIGNAL LINE CONTINUATION
N = 1, 2, 3 ETC.

GENERAL NOTE:

1. THIS IS A STANDARD LEGEND. NOT ALL THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.
2. ALL I/O MAY NOT BE REFERENCED WITHIN THE N-SERIES DRAWINGS. REFER TO E-SERIES DRAWINGS, INCLUDING CONTROL ONE-LINES, ELECTRICAL WIRING SCHEMATICS, AND THE I/O LISTING IN SECTION 13482 FOR ADDITIONAL I/O REQUIREMENTS.

PUMP AND COMPRESSOR SYMBOLS

SUBMERSIBLE PUMP
CENTRIFUGAL BLOWER
CENTRIFUGAL PUMP (DRY PIT)
VERTICAL TURBINE PUMP
PROGRESSING CAVITY PUMP
LOBE PUMP, BLOWER OR COMPRESSOR (POSITIVE DISPLACEMENT)
COMPRESSOR (PISTON)
CHEMICAL FEED PUMP
PLUNGER PUMP
DIAPHRAGM PUMP

LEVEL ELEMENTS SYMBOLS

SUBMERSIBLE LEVEL TRANSMITTER
ULTRASONIC
FLOAT

INPUTS AND OUTPUTS TO PLC OR DISTRIBUTED CONTROL

ANALOG INPUT
ANALOG OUTPUT
PULSE INPUT
PULSE OUTPUT
DIGITAL INPUT
DIGITAL OUTPUT

NOTE:
X = TOTAL NUMBER OF SIGNALS WHERE MORE THAN ONE SIGNAL IS REQUIRED. IF QUANTITY IS NOT SHOWN THEN ONE SIGNAL IS REQUIRED.

SCALE VERIFICATION	DRAWN BY	MTF
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JLK
	APPROVED BY	WCM
	ISSUE DATE	JANUARY 2026
	PROJECT NUMBER	706524-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO — WAYNE C. MOORE E-70068 — REGISTERED PROFESSIONAL ENGINEER

WESSLER ENGINEERING — More than a Project™

2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

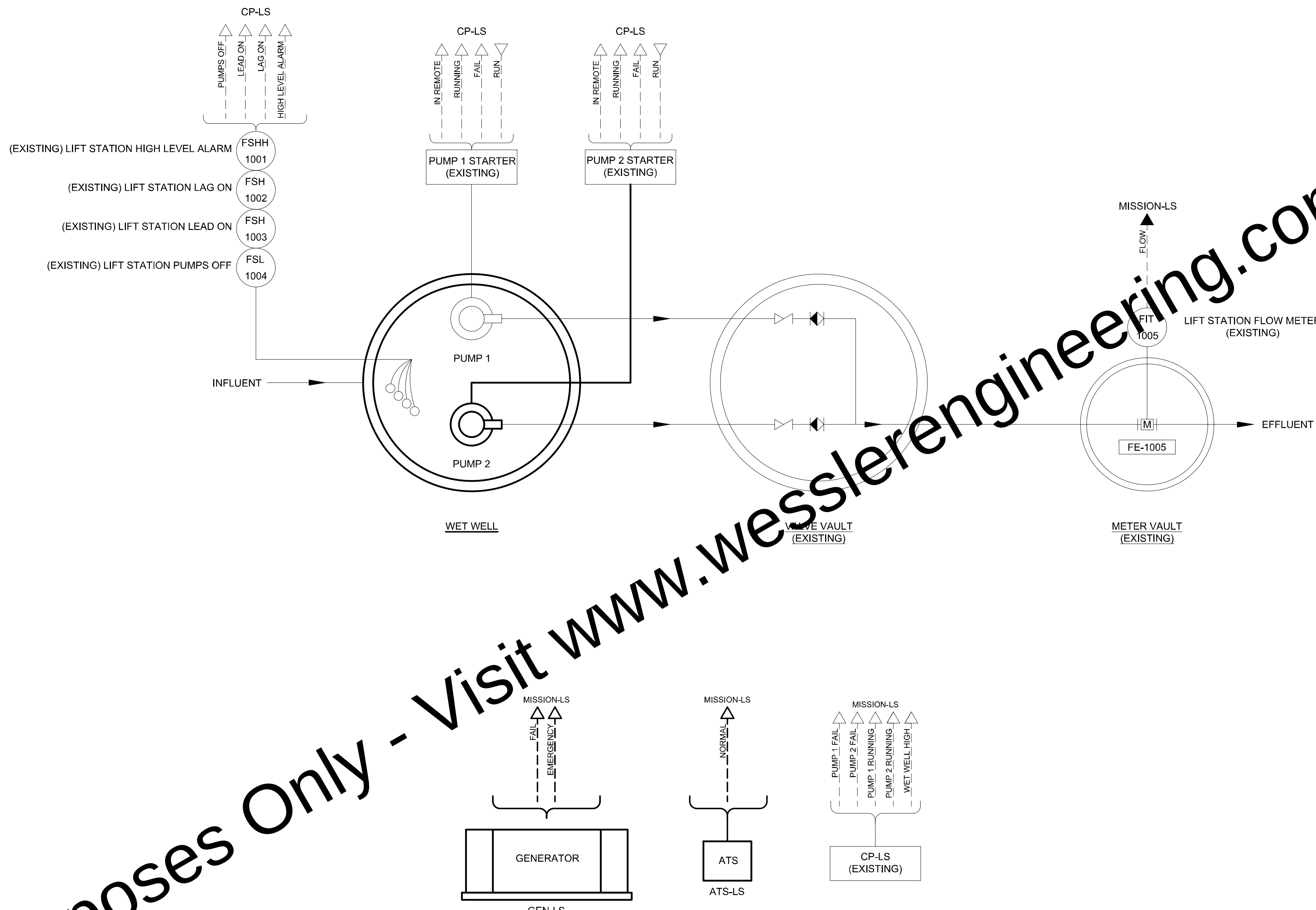
VILLAGE OF GROVER HILL, OHIO

PROCESS AND INSTRUMENTATION LEGEND

SHEET NO. **17**

TOTAL SHEETS 18

Drawing: X:\Grover Hill_OH\706524-04 WW Improv PhII\DWG\Sheets\706524-LS1-EL-C0D.dwg | Layout: P1D LEGEND | Plotted: 01/23/26 @ 04:47:46 | LastSavedBy: jostk



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More than a Project™

2024 WASTEWATER SYSTEM IMPROVEMENTS: PHASE 2

VILLAGE OF GROVER HILL, OHIO

PROCESS AND INSTRUMENTATION DIAGRAM

SHEET NO. **18**

TOTAL SHEETS 18