

August 12, 2024

Mr. Mike Petegrew, Environmental Services Administrator Ohio Department of Natural Resources Office of Real Estate & Land Management 2045 Morse Road, Bldg. E-2 Columbus, OH 43229

RE: Village of Crooksville, Perry County, Ohio Crooksville WW Pump Station Improvements

Dear Mr. Petegrew:

The Village of Crooksville is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the ARC, Appalachian Community Grant Program for replacement of two Lift Stations (B1 and B6) within the Village of Crooksville. Lift Station B1 is located at 39.770161033038555, -82.09570938149754, and Lift Station B6 is located at 39.77500082950693, -82.0886013365391.

Enclosed is a completed Data Request Form with attached topographical, floodplain and wetland maps that depict the proposal's construction location, site photos and a description of the work involved.

We request that your office review the proposal for any State and Federally listed threatened and endangered species, including Migratory Bird, and any other important State natural resources that may occur in the project area. Please provide any recommendations you may have to mitigate or avoid these impacts.

We would appreciate a response within 30 days. If you need any further information or wish to discuss this project, please contact me at 614-706-0002 or tlwoodland@glcap.org.

Sincerely,

Trína Woodland

Trina Woodland Sr. Rural Development Specialist Rural Community Assistance Program (RCAP)

Enclosures

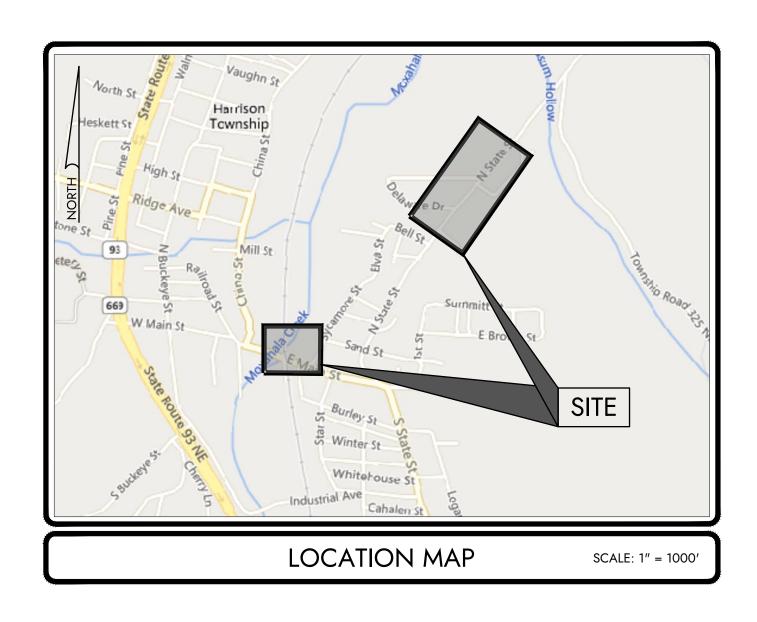
Project Description

The Village of Crooksville is seeking to replace two wastewater Lift Stations (B1 & B6). The proposed project is located in Perry County, Harrison Township within the Village of Crooksville. The Lift Stations are nearing the end of their useful life and are critical to the operation of the village's wastewater collection system. Lift Station B1 is located on the north side of East Main Street west of Sycamore Street, and Lift Station B6 is at the northeast corner of State Street and Mohican Drive. The replacement lift stations are within the limits of the Village of Crooksville and will be constructed adjacent to the existing systems. A new 10-inch force main will connect the replacement B1 lift station to the existing 10-inch force main running to Roseville, and a new 4-inch force main will connect the replacement B6 lift station to the same existing force main. The two replacement lift stations will use submersible pumps installed in HDPE wet wells. The majority of construction activities will be subsurface and will not affect the viewshed. The new segment of force main that will enable Lift Station B1 to pump to Roseville will be installed by horizontal directional drilling within the State Street right of way from South Delaware Drive to the existing force main near new Lift Station B6. All construction activities will occur within the developed urban area of the Village of Crooksville. The new 10" Force Main that will be extended from South Delaware Drive to the existing 10" Force Main north of Mohican Drive will be constructed solely within the road right-of-way. Horizontal drilling will be used to cross under N. State Street. All construction activities will be subsurface. No known habitats will be disturbed by construction activities. There will be no in-water work, and the project will not require any tree cutting.

All construction activities will place on previously disturbed ground and within the road right-of-ways.

CONSTRUCTION DOCUMENTS FOR:

VILLAGE OF CROOKSVILLE LIFT STATIONS B1 & B6 REPLACEMENT PERRY COUNTY, OHIO



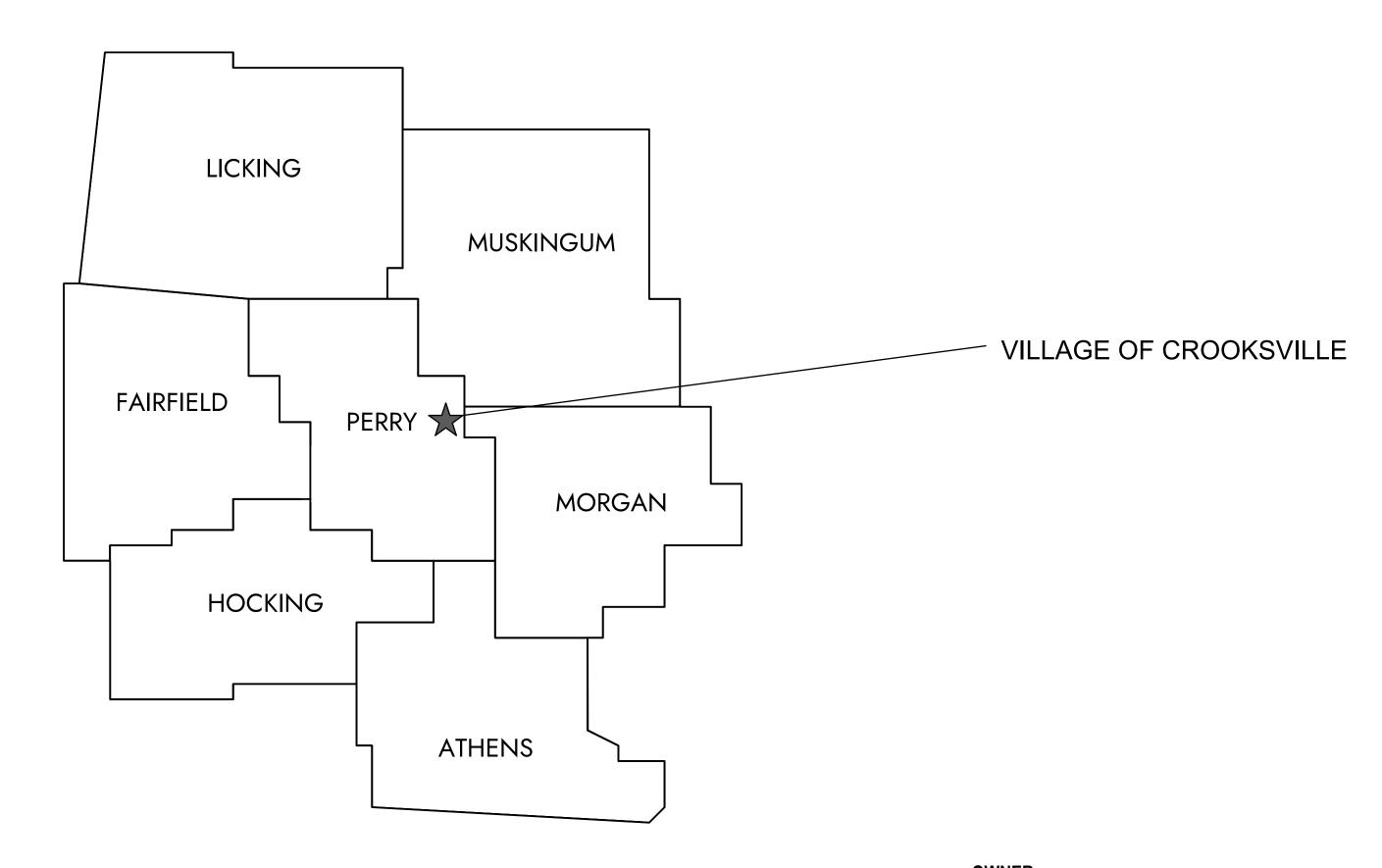


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PLANS PREPARED BY:





<u>OWNER</u>

VILLAGE OF CROOKSVILLE
98 S. BUCKEYE STREET
CROOKSVILLE, OH 43731
P: (740) 982-2712
CONTACT: MAYOR CHRIS MOHLER

APPROVAL

SIGNATURE BELOW ONLY SIGNIFIES THE AGREEMENT WITH THE GENERAL PURPOSES AND INTENT OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

MAYOR CHRIS MOHLER

DATE

GRANT FOREST SCHOOLEY, PE DATE OHIO REG, NO. 80135

B HECKED BY: FS

PRELIMINARY
NOT FOR
CONSTRUCTION
GFS

CROOKSVILLE

& B6 REPLACEMENT

IS B1 & B6 F

VILLA T STATIC

ATE: 11/21/2023

SCALE:

SHEET:

G01 - UTILITY OWNERS

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THE PROJECT

TELECOMMUNICATIONS FRONTIER 241 S. NELSON AVENUE WILMINGTON, OHIO 45177 (937) 385-2222

68 E MAIN STREET CHILLICOTHE, OHIO 45601 (740) 772-8200

TELECOMMUNICATIONS ELECTRIC CHARTER CABLE (SPECTRUM) SOUTH CENTRAL POWER 32 ENTERPRISE DRIVE 720 MILL PARK DRIVE CHILLICOTHE, OHIO 43055 LANCASTER OHIO, 43130

DETERMINE THEIR EXACT LOCATION AND ELEVATION WHEN WORKING IN THEIR VICINITY.

(888) 406-7063 (800) 282-5064 SEWER **ROSS COUNTY WATER** VILLAGE OF ADELPHI 663 FAIRGROUND RD 11759 MARKET STREET CHILLICOTHE, OHIO 45601 ADELPHI, OHIO 43101 (740) 774-4117 (740) 655-3443

TELECOMMUNICATIONS TELECOMMUNICATIONS HORIZON CHILLICOTHE TELEPHONE AT&T (866) 287-6349

> COLUMBIA GAS OF OHIO 290 W NATIONWIDE BLVD COLUMBUS, OHIO 43215 (800) 344-4077

G02 - UTILITY LOCATIONS THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF UTILITIES AS REQUIRED BY SECTION 153.64 ORC. LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO

WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR SHALL UNCOVER SUCH UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT THE EXACT ELEVATION MAY BE DETERMINED AND THE NECESSARY ADJUSTMENTS MADE. COST OF THE ABOVE, IF ANY, WILL BE INCLUDED IN THE PRICE BID FOR THE PERTINENT ITEM.

LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL UTILITY LINES, SERVICES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED WITH THE PRICE BID FOR THE PERTINENT ITEM, UNLESS OTHERWISE NOTED ON THE PLANS. ESTIMATED QUANTITIES SHOWN ON THE PLANS FOR WATER AND SANITARY SEWER RELOCATIONS ARE FOR THOSE ITEMS ACTUALLY CALLED FOR AND SHOWN ON THE PLANS.

THE CONTRACTOR SHALL DISPOSE OF ALL SURPLUS EXCAVATION, AT THE CONTRACTORS OWN EXPENSE.

THE INFORMATION SHOWN CONCERNING EXISTING UTILITIES IS NOT REPRESENTED, WARRANTED OR GUARANTEED TO BE COMPLETE OR ACCURATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PHYSICALLY LOCATE AND VERIFY, IN THE FIELD, ALL UTILITY LOCATIONS AND ELEVATIONS, PRIOR TO THE BEGINNING OF HIS CONSTRUCTION OPERATIONS

THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS, IN ACCORDANCE WITH SECTION 153.64, OHIO REVISED CODE, AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE BEGINNING OF ANY WORK, COORDINATE HIS WORK WITH THEM, AND KEEP THE UTILITY OWNERS APPRAISED OF HIS SCHEDULE AND REQUIREMENTS UNTIL ALL WORK IS COMPLETED. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH EVIDENCE OF HAVING NOTIFIED THE UTILITIES AND PROVIDING THEM WITH HIS WORK SCHEDULE PRIOR TO BEGINNING ANY WORK. NOTICE SHALL BE GIVEN TO THE OHIO UTILITIES PROTECTION SERVICE (TELEPHONE 800-362-2764), FOR THE MEMBER UTILITIES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL DETAIL SURVEYS NEEDED FOR CONSTRUCTION. ALL CONSTRUCTION STAKING, IF NEEDED, SHALL BE DONE BY OR UNDER THE DIRECTION OF A PROFESSIONAL REGISTERED. SURVEYOR.

G04 - MODIFICATIONS

ANY MODIFICATIONS OR CHANGES TO THE WORK, AS SHOWN ON THE DRAWINGS, MUST HAVE PRIOR WRITTEN APPROVAL BY THE ENGINEER.

G05 - SAFETY

THE CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS. TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS INCLUDING EMPLOYEES AND PROPERTY. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SECURING THE PROJECT SITE FROM THE GENERAL PUBLIC BOTH DURING AND AFTER WORKING HOURS. THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN ALL LIGHTS, SIGNS, FENCES, OR ANY OTHER SAFETY DEVICE TO PREVENT UNAUTHORIZED PERSONNEL FROM HAZARDOUS OR DANGEROUS CONDITIONS ON THE PROJECT SITE. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE VARIOUS ITEMS BID FOR FURNISHING AND INSTALLING MATERIALS ON THIS PROJECT.

G06 - REVIEW OF PROJECT SITE

PRIOR TO BIDDING THE CONTRACTOR SHALL, BY PERSONAL EXAMINATION, SATISFY HIMSELF AS TO THE LOCATION OF THE PROPOSED WORK AND TO ACQUAINT HIMSELF THOROUGHLY WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT ARE LIKELY TO BE ENCOUNTERED IN THE PERFORMANCE OF THE PROPOSED WORK.

THROUGH OBSERVATION OF THE PROPOSED PROJECT ROUTING PRIOR TO BID, THE CONTRACTOR SHALL NOTE ALL STREAM CROSSINGS WHERE EVIDENCE OF ROCK IS PRESENT. SUCH EXISTING CONDITIONS SHALL BE CONSIDERED IN PREPARING THE BID. ADDITIONAL COMPENSATION SHALL NOT BE GRANTED SHOULD ROCK BE ENCOUNTERED IN THESE LOCATIONS. IN ADDITION, CHANNEL AND BANK RESTORATION WORK, INSTALLATION METHODS, CONCRETE ENCASEMENT, BACKFILL, SEEDING AND MULCHING, AND EROSION CONTROL METHODS SHALL CONSIDER EXISTING STREAM CONDITIONS AND SHALL BE EFFECTED TO PROHIBIT EROSION AND/OR DEGRADATION OF THE EXISTING STREAM CHANNEL.

G07 - IRON PINS AND MONUMENTS

THE CONTRACTOR SHALL REFERENCE ALL IRON PINS AND MONUMENTS BEFORE EXCAVATING AT OR NEAR THEM. IF ANY IRON PINS OR MONUMENTS ARE DESTROYED OR DAMAGED BY THE CONTRACTOR, THEY SHALL BE ACCURATELY REPLACED BY A REGISTERED SURVEYOR EMPLOYED BY THE CONTRACTOR AT THE COMPLETION OF THE PROJECT AND AT NO EXPENSE TO THE PROJECT OWNER OR PROPERTY OWNERS.

G08 - PRIOR TO COMMENCEMENT OF WORK

A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE OWNER, PROJECT ENGINEER, AND CONTRACTOR BEFORE ANY CONSTRUCTION BEGINS. AT THE PRE-CONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE REFLECTING ALL WORK THAT IS TO BE CONDUCTED AND SECURE ANY NECESSARY LICENSES.

THE OWNER SHALL SECURE OHIO EPA PERMIT TO INSTALL, ALL ROAD PERMITS AND PRIVATE EASEMENTS. CONTRACTOR SHALL SECURE ALL OTHER NECESSARY PERMITS, PAY ANY INSPECTION, TAP OR CONNECTION FEES UNLESS OTHERWISE

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, A MINIMUM OF FIVE (5) DAYS BEFORE BEGINNING WORK, HOLIDAYS AND WEEKENDS EXCLUDED. WHEN THE CONTRACTOR SUSPENDS OPERATIONS FOR TWO (2) OR MORE WORKING DAYS, HE SHALL NOTIFY THE PROJECT ENGINEER, A MINIMUM OF TWENTY-FOUR (24) HOURS BEFORE

AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UTILITY FACILITY SHOWN IN THE PLANS

WHERE IT IS ANTICIPATED THAT WORK WILL CLOSE A STREET, THE CONTRACTOR SHALL INFORM THE RESIDENTS TO BE AFFECTED, THE OWNER, POLICE DEPARTMENT, THE FIRE DEPARTMENT, AND THE COUNTY ENGINEER AS TO THE EXTENT, NATURE, AND THE TIME OF THE ANTICIPATED WORK. NO STREET SHALL BE CLOSED UNTIL THE SCHEDULE IS APPROVED BY THE OWNER, VIA THE PROJECT ENGINEER.

G9 - SANITARY FACILITIES

THE CONTRACTOR SHALL FURNISH AND MAINTAIN SANITARY CONVENIENCE FACILITIES FOR WORKERS AND INSPECTORS FOR THE DURATION OF THE WORK.

G10 - USE OF FIRE HYDRANTS

THE CONTRACTOR IS HEREBY NOTIFIED THAT THE USE OF FIRE HYDRANTS WILL NOT BE PERMITTED AND THAT THE USE OF FIRE HYDRANTS WILL RESULT IN THE CONTRACTOR'S PROSECUTION FOR THEFT OF A PUBLIC UTILITY. THE CONTRACTOR SHALL COORDINATE WITH THE DIVISION OF WATER TO ACCESS THE WATER SUPPLY.

G11 - LEGAL DIMENSION AND WEIGHT LIMITS

PURSUANT TO SECTIONS 5577.04 AND 5577.05 OHIO REVISED CODE (ORC), LEGAL LIMITS FOR DIMENSIONS AND WEIGHTS FOR HIGHWAY VEHICLES WERE AMENDED EFFECTIVE OCTOBER 1, 1992. THE AMENDED ORC MAY AFFECT THE CONTRACTOR'S COST FOR PERFORMING THE VARIOUS ITEMS OF WORK ON THIS PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FACTOR ANY ADDITIONAL COSTS RESULTING FROM THE AMENDED ORC OR LOCAL LIMITS INTO THE UNIT BID PRICE FOR THE VARIOUS ITEMS OF WORK TO BE PERFORMED ON THIS PROJECT. NO ADDITIONAL REIMBURSEMENT FOR THE COSTS WILL BE PAID BY THE OWNER.

G12 - EMERGENCY PHONE NUMBER

THE CONTRACTOR SHALL PROVIDE THE OWNER AND PROJECT ENGINEER WITH A 24 HOUR TELEPHONE NUMBER TO READILY CONTACT A RESPONSIBLE PARTY IN THE CASE OF AN EMERGENCY. COSTS AND/OR DAMAGES INCURRED RELATED TO WORK PERFORMED BY THE CONTRACTOR IN SUCH EMERGENCIES ARE THE CONTRACTOR'S RESPONSIBILITY AND NOT THAT OF THE PROJECT ENGINEER OR OWNER.

G13 - INCLUSIVE BID

THE CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE PROJECT. COMPENSATION FOR ANY WORK WHICH DOES NOT HAVE A SPECIFIC PAY ITEM WILL BE INCLUDED IN THE PRICE BID FOR THE INDIVIDUAL ITEMS.

G14 - WORKING HOURS

WORKING HOURS ARE LIMITED TO 7:00AM TO 7:00PM MONDAY THROUGH FRIDAY. NO WORK SHALL BE PERFORMED ON THE WEEKEND OR HOLIDAYS. CONTRACTOR SHALL RESTRICT HIS WORK DURING HUNTING SEASON ON A PROPERTY IF REQUESTED BY A PROPERTY OWNER.

G15 - RECORD DRAWINGS

THE CONTRACTOR SHALL PREPARE AND MAINTAIN A SET OF RECORD CONSTRUCTION DRAWINGS AS HIS WORK ON THE PROJECT PROGRESSES. THE RECORD DRAWINGS SHALL DOCUMENT ALL DEVIATIONS FROM THE ORIGINAL DRAWINGS AS WELL AS DOCUMENT THE LOCATION AND EXTENT OF ANY UNFORESEEN CONDITIONS OR OBSTRUCTIONS. THE RECORD CONDITIONS SHALL BE SHOWN IN RED AND ANY PLAN CHANGES SHALL BE OUTLINED. THE CONTRACTOR SHALL BRING THE RECORD DRAWINGS TO ALL CONSTRUCTION PROGRESS MEETINGS FOR THE OWNER'S GENERAL MANAGER'S

THE CONTRACTOR IS RESPONSIBLE FOR HAVING 1 CLEAN SET OF THE RECORD CONSTRUCTION DRAWINGS SENT TO THE PROJECT ENGINEER AFTER THE PROJECT IS COMPLETED. THE PLANS MUST INCLUDE THE FOLLOWING:

- LOCATIONS OF ALL WATER LINES, VALVES, HYDRANTS AND SERVICES.
- IDENTIFY ALL FIELD MODIFICATIONS TO THE APPROVED PLAN SET. LOCATIONS OF ANY LOCATED UTILITIES WITHIN THE PROJECT CORRIDOR.

G16 - NON-RUBBER TIRE VEHICLES

NO NON-RUBBER TIRE VEHICLES SHALL BE MOVED ON ANY STREETS. EXCEPTIONS MAY BE GRANTED BY THE OWNER WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. GRANTING OF EXCEPTIONS MUST BE IN WRITING AND ANY RESULTING DAMAGE MUST BE REPAIRED TO THE SATISFACTION OF THE PROJECT ENGINEER. THE CONTRACTOR SHALL USE EXTREME CARE WHEN OPERATING NON-RUBBER TIRE VEHICLES ON STREETS OR DRIVEWAYS TO AVOID MARKING OR DAMAGING THE PAVEMENT. PROTECTION OF THE PAVEMENT FROM DAMAGE RESULTING FROM THE TRACKS OF NON-RUBBER TIRE VEHICLES UTILIZED IN TRENCH EXCAVATION SHALL BE REQUIRED. A WOOD PLANK SYSTEM, USED TIRES, RUBBER MATS OR OTHER MEANS AS APPROVED BY THE PROJECT ENGINEER SHALL BE USED TO PROTECT THE PAVEMENT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

G17 - PROTECTION AND RESTORATION OF PROPERTY

THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ALL PRIVATE AND PUBLIC PROPERTY IMPACTED BY THE CONTRACTOR'S OPERATIONS IN ACCORDANCE WITH SECTION 107.10 OF THE CURRENT ODOT CMS.

GRAVEL DRIVES SHALL BE REPAIRED THE SAME DAY THEY ARE CROSSED. NO ADDITIONAL PAYMENT WILL BE MADE FOR DRIVE REPAIR.

G18 - WORK LIMITS

THE CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO THE PROJECT SITE UNDER DEVELOPMENT OR THE EXISTING RIGHT-OF-WAYS, CONSTRUCTION AND/OR PERMANENT EASEMENTS AND SHALL NOT TRESPASS UPON OTHER PRIVATE PROPERTY WITHOUT THE WRITTEN CONSENT OF THE PROPERTY OWNER.

ALL ADJOINING PROPERTIES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE RESTORED TO THE SAME OR BETTER CONDITION. THIS INCLUDES GRADING, SEEDING, AND REMOVAL OF EXCESS MATERIAL.

G19 - MISCELLANEOUS WORK

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SAME SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS RELATED ITEMS.

ALL EXCAVATION ON THIS PROJECT IS UNCLASSIFIED. THE CONTRACTOR SHALL MAKE ALL EXCAVATION OF WHATEVER NATURE NECESSARY FOR CONSTRUCTION OF THE PROPOSED UTILITY AND THEIR APPURTENANT STRUCTURES INCLUDED IN THIS PROJECT. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR ROCK ENCOUNTERED DURING EXCAVATION.

G20 - FINAL CLEAN-UP

THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM HIS OPERATIONS AND RESTORE ALL SURFACES, STRUCTURES, DITCHES, AND PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER AND PROJECT ENGINEER.

THE CONTRACTOR WILL INDEMNIFY AND HOLD HARMLESS THE OWNER, THE ENGINEER AND THEIR AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEYS' FEES ARISING OUT OF OR RESULTING FROM PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIMS, DAMAGE, LOSS OR EXPENSE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING THE LOSS OF USE RESULTING THEREFROM; AND IS CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT OR WILLFUL ACT OR OMISSION OF THE CONTRACTOR, AND SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE.

IN ANY AND ALL CLAIMS AGAINST THE OWNER OR THE ENGINEER, OR ANY OF THEIR AGENTS OR EMPLOYEES, BY ANY EMPLOYEE OF THE CONTRACTOR, ANY SUBCONTRACTOR, ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR OR ANY SUBCONTRACTOR UNDER WORKERS COMPENSATION ACTS, DISABILITY BENEFIT ACTS, OR OTHER EMPLOYEE BENEFIT ACTS.

THE OBLIGATION OF THE CONTRACTOR UNDER THIS PARAGRAPH SHALL NOT EXTEND TO THE LIABILITY OF THE ENGINEER, HIS AGENTS OR EMPLOYEES ARISING OUT OF THE PREPARATION OR APPROVAL OF MAPS, PLANS, OPINIONS, REPORTS, SURVEYS, CHANGE ORDERS, DESIGNS OR SPECIFICATIONS

G22 - PAVEMENT CLEANING

THE CONTRACTOR IS HEREBY NOTIFIED THAT HE/SHE SHALL BE RESPONSIBLE FOR CLEANING OF STREETS OR ANY MUD DIRT, SAND, GRAVEL, STONES, OR ANY KIND OF MATERIAL THAT HAVE DEPOSITED AS A RESULT OF HIS/HER OR SUBCONTRACTOR'S OPERATIONS. PAVEMENTS SHALL BE CLEANED AT THE END OF EACH WORK DAY OR MORE OFTEN AS DETERMINED BY THE OWNER OR PROJECT ENGINEER.

G23 - WEATHER CONDITIONS

ALL CONSTRUCTION AND MATERIAL USAGE SHALL BE IN ACCORDANCE WITH CLIMATIC CONDITIONS ADDRESSED IN CURRENT ISSUE OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS.

G24 - INSTALLATION OF EQUIPMENT

CONTRACTOR SHALL PROVIDE ANY NECESSARY TEMPORARY STRUCTURES (PLATFORMS, SCAFFOLDING, LADDERS, ETC.). INCLUDING SAFETY EQUIPMENT, NEEDED FOR CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR SETUP AND REMOVAL FOR THESE NECESSARY STRUCTURE.

CONTRACTOR SHALL PROVIDE STORM WATER PREVENTION MEASURES AS REQUIRED BY THE EPA.

AREAS DISTURBED BY GRADING OPERATIONS SHALL BE STABILIZED BY USE OF SEEDING AND MULCHING IN CONFORMANCE WITH ITEM 659 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION "CONSTRUCTION AND MATERIALS SPECIFICATIONS," LATEST EDITION.

SEEDING AND MULCHING AND STRAW BALE OR FILTER FABRIC FENCE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF GRADING AND COMPACTION OPERATIONS WHERE DEEMED NECESSARY BY THE ENGINEER.

THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENTATION DEVICES AS DEEMED NECESSARY BY THE ENGINEER. THESE DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL PERMANENT STABILIZATION OF SLOPES AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED. PERMANENT SOIL EROSION CONTROL MEASURES SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER THE FINAL GRADING OR EARTH MOVING ACTIVITY. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA OR WHEN GRADING ACTIVITY HAS TEMPORARILY CEASED, TEMPORARY SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED. THE TEMPORARY CONTROL WILL BE INSPECTED AND MAINTAINED UNTIL PERMANENT CONTROL MEASURES ARE IMPLEMENTED.

THE CONTRACTOR'S SUPERINTENDENT SHALL MAKE DAILY INSPECTIONS OF THE SITE TO INSURE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES AND WILL IMMEDIATELY MAKE NECESSARY REPAIRS.

WHEN AREAS OF SEEDING FAIL TO GERMINATE, SUCH AREAS SHALL BE RESEEDED AND MULCHED UNTIL GERMINATION OCCURS.

WHEN MULCHING HAS BEEN WASHED AWAY OR BLOWN AWAY EXPOSING SEED AREA AND BARE SOIL, THE MULCHING SHALL BE REPLACED IMMEDIATELY LEAVING NO SEEDED OR BARE SOILS AREAS EXPOSED.

SEDIMENT REMOVED IN CLEANING OPERATIONS SHALL BE DISPOSED OF IN SUCH LOCATIONS THAT THE SEDIMENT WILL NOT AGAIN ERODE INTO CONSTRUCTION AREAS OR NATURAL WATERWAYS. ANY EROSION AND SEDIMENTATION CONTROL DAMAGED DURING CLEANING SHALL BE REPLACED IMMEDIATELY.

G26 - DEWATERING

THE COST OF ANY DEWATERING OPERATIONS REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE BID. NO GROUNDWATER OR SURFACE WATER SHALL ENTER THE PROPOSED SEWER LINE AT ANY TIME.

G27 - ROCK EXCAVATION

THE COST OF ANY ROCK EXCAVATION SHALL BE INCLUDED IN THE UNIT BID PRICE. THE BIDDER SHALL DETERMINE IF ANY ROCK EXCAVATION WILL BE REQUIRED AND ADJUST HIS BIDS ACCORDINGLY. ALL LABOR, MATERIAL, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO REMOVE THE ROCK SHALL BE FURNISHED AND INSTALLED IN PLACE INCLUDING BEDDING.

S00 - SANITARY SEWER WORK

ALL SANITARY SEWER PIPE, MANHOLES, FITTINGS, METHODS OF CONSTRUCTION, AND WORKMANSHIP FOR SANITARY SEWER AND APPURTENANCES SHOWN ON THESE PLANS SHALL CONFORM TO THE RULES AND REGULATIONS OF THE OWNER AND ODOT ITEMS 611, CURRENT ON THE DATE OF CONTRACT UNLESS THE REQUIREMENTS OF SUCH RULES AND REGULATIONS ARE UPGRADED BY THE FOLLOWING NOTES OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

S01 - WATERLINE SEPARATION

SEWER MAINS, MANHOLES, SEPTIC TANKS, AND/OR SUBSOIL TREATMENT SYSTEMS SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAINS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.

WHENEVER A WATER LINE AND SEWER MUST CROSS, THE SEWER MAIN (STORM OR SANITARY) SHALL BE LAID SUCH THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER LINE MEASURED BETWEEN THE OUTSIDE PIPE WALLS. IN CASES WHERE THE REQUIRED SEPARATION CANNOT BE MAINTAINED, CLOSER INSTALLATION MAY BE PERMITTED ON A CASE-BY-CASE BASIS ONLY AFTER RECEIPT OF WRITTEN CONCURRENCE FROM THE OHIO EPA DIVISION OF DRINKING WATER. CURRENT RECOMMENDED STANDARDS FOR WATER WORKS, SECTIONS 8.8.2 AND 8.8.3 SHALL GOVERN AS TO THE SEPARATION OF WATER LINE FROM CONTAMINATION SOURCES. PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 611 ITEMS.

S02 - BEDDING & BACKFILL

ALL OPEN TRENCHED SANITARY SEWER PIPE SHALL BE BEDDED WITH #57 STONE PER AASHTO M43 AND SHALL COMPLY WITH ASTM D-2321. TRENCH BACKFILL SHALL BE COMPACTED BACKFILL AS PER ODOT ITEM 611.06. REFER TO TRENCH DETAILS HEREIN AND TECHNICAL SPECIFICATION SECTIONS 312000 AND 333000 FOR ADDITIONALBEDDING AND BACKFILL REQUIREMENTS.

TOPSOIL SHALL BE WHERE REQUIRED TO MATCH ORIGINAL, FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, FREE FROM ADMIXTURE OF SUBSOIL, HEAVY CLAY, COARSE SAND, STONES, PLANTS, ROOTS, STICKS AND OTHER FOREIGN MATERIALS.

S03 - MATERIALS

ALL SANITARY SEWERS, FORCE MAINS, GRINDER PUMP STATIONS, AND FACTORY ASSEMBLED AIR RELEASE STATIONS SHALL BE INSTALLED WITH STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. GRAVITY SANITARY SEWER PIPE SHALL BE INSTALLED PER ODOT ITEM 611, TYPE B OR C CONDUIT.

ALL GRAVITY SANITARY SEWER SHALL BE PVC PIPE. FOR SIZES UP TO 15 INCHES IN DIAMETER, PIPE SHALL CONFORM TO

ASTM D-3034. SDR 35 WITH A CELL CLASSIFICATION OF ASTM B OR C 12454. FOR SIZES 18 INCHES AND LARGER. THE PVC PIPE SHALL CONFORM TO ASTM F-679 OR ASTM F-794 WITH A CELL CLASSIFICATION OF ASTM B OR C 12454. BELL AND SPIGOT JOINTS SHALL CONFORM TO ASTM D-3212.

FOR SIZES UP TO 15 INCH DIAMETER, PVC PIPE FITTINGS SHALL CONFORM, TO SDR 35 GASKETED HEAVY WALL SEWER FITTINGS MEETING ASTM D-3034 AND ASTM F-1336 WITH A CELL CLASSIFICATION OF ASTM B OR C 12454. FOR SIZES 18 INCHES AND LARGER, PVC PIPE FITTINGS SHALL CONFORM TO SDR 35 GASKETED SEWER FITTINGS MEETING ASTM F-679 AND ASTM F-1336.

SERVICE LATERAL CONNECTIONS SHALL CONSIST OF PVC PIPE (ASTM D-3034, SDR 35, 707.45) OF A SIZE NOT LESS THAN SIX (6) INCHES NOMINAL DIAMETER AND SHALL BE BUILT TO AVOID INTERFERENCE WITH PROPOSED UTILITIES WHEN CONNECTING TO THE SANITARY SERVICE. FITTINGS SHALL MATCH SERVICE LATERAL MATERIAL.

GREEN NON-DETECTABLE TAPE SHALL BE PLACED WITH 18" COVER OVER ALL SEWER LINES. ALL MANHOLE LIDS SHALL BE MARKED "SANITARY SEWER".

S04 - SERVICE CONNECTIONS

SERVICES OR HOUSE CONNECTIONS SHALL NOT BE CONNECTED TO THE LATERAL OR MAIN LINE SEWERS SHOWN HEREON UNTIL ENGINEER APPROVAL OF SAID LATERAL OR MAIN LINE SEWER HAS BEEN RECEIVED.

CONTRACTOR SHALL BE RESPONSIBLE FOR SANITARY SEWER LATERAL CONNECTION TO SEWER MAIN, CLEANOUT INSTALLATION, AND SEWER LATERAL TO THE PROPERTY LINE AS SHOWN IN THE SERVICE CONNECTION AND CLEANOUT DETAIL (SEE NOTE S11, THIS SHEET). OTHERS SHALL BE RESPONSIBLE FOR SERVICE LATERAL / GRINDER PUMP STATION CONNECTION TO BUILDING.

SANITARY SERVICE LATERALS SHALL BE INSTALLED AT A MINIMUM OF 2.08% SLOPE; 42" MINIMUM COVER.

S05 - CONNECTION TO EXISTING MANHOLE

WHERE NEW SEWERS ARE CONNECTED TO EXISTING MANHOLES, THE CONTRACTOR SHALL CORE DRILL ANY NEW OPENINGS INTO THE EXISTING MANHOLE. THE PIPE TO MANHOLE SHALL HAVE A WATER TIGHT JOINT OF A FLEXIBLE RUBBER GASKET EXPANSION BOOT. THE CONTRACTOR SHALL THEN CLEAN THE MANHOLE OF ALL DEBRIS BEFORE MAKING THE CONNECTION. THE CONTRACTOR SHALL CONSTRUCT A SEMI-CIRCULAR, CONCRETE CHANNEL TO THE NEW PIPE TO PROVIDE SMOOTH, UNINTERRUPTED FLOW THROUGH THE MANHOLE. PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE ITEMS BID FOR FURNISHING AND INSTALLING PIPE.

S06 - PROHIBITED CONNECTIONS TO SANITARY SEWER SYSTEM

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

S07 - PROFILE & MANHOLE LOCATIONS

PROFILE IS SHOWN ALONG SEWER CENTERLINE. PROFILES ARE NOT SHOWN ON ALL INLET CONNECTOR SEWERS. THE STATION AND OFFSET OF THE MANHOLES SHOWN ON THE PLANS ARE TO THE CENTER OF THE MANHOLE BASE.

ALL SANITARY MANHOLES SHALL BE STAKED UNDER THE DIRECTION OF A REGISTERED SURVEYOR.

S08 - EXISTING SEWERS AND STRUCTURES

THE CONTRACTOR SHALL REPLACE TO THE SATISFACTION OF THE ENGINEER ALL EXISTING MANHOLES, CATCH BASINS DRAINS, SEWERS AND APPURTENANCES REMOVED OR DAMAGED DURING CONSTRUCTION. THE ABOVE IS NOT APPLICABLE TO STRUCTURES TO BE ABANDONED. THE CONTRACTOR SHALL REMOVE DEBRIS, SILT, ETC. FROM EXISTING MANHOLES AND CATCH BASINS AND VARIOUS SEWER PIPE WHICH ARE CONNECTED IN THE NEW SYSTEM.

S09 - SANITARY SEWER-MANHOLE CONNECTIONS

THE SANITARY SEWER PIPE TO MANHOLE CONNECTIONS SHALL BE OF FLEXIBLE WATERTIGHT JOINT OF APPROVED MANUFACTURE. THE JOINT MAY BE OF THE FOLLOWING DESIGN (A) RUBBER SLEEVE WITH STAINLESS STEEL BANDING, (B) RUBBER GASKET COMPRESSION OR (C) RUBBER GASKET EXPANSION. PAYMENT FOR THIS WORK AND MATERIALS SHALL BE INCLUDED WITH THE ITEM BID FOR FURNISHING AND INSTALLING MANHOLES.

UPON CONSTRUCTION COMPLETION, GRAVITY SANITARY SEWER SHALL BE AIR TESTED IN ACCORDANCE WITH ASTM

CONTRACTOR SHALL MANDREL TEST ALL ABS OR PVC PIPE FOR DEFLECTION A MINIMUM OF 30 DAYS AFTER INSTALLATION. TESTING SHALL BE IN ACCORDANCE WITH ASTM D-3034. THE MANDREL MUST BE AT LEAST 95% OF THE BASE INSIDE DIAMETER OF THE PIPE.

ALL NEW MANHOLES SHALL BE NEGATIVE AIR (VACUUM) TESTED AS DESCRIBED IN ASTM C-1244. ALL TESTING SHALL BE PERFORMED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER OR A REPRESENTATIVE OF THE OWNER.

INFILTRATION / EXFILTRATION AND WATER TESTING IS PERMITTED IN LIEU OF AIR TESTING OF GRAVITY SEWER AND VACUUM TESTING OF MANHOLES.

ALL NEW FORCE MAINS SHALL BE HYDROSTATICALLY TESTED PER AWWA C-605 (PVC) AND AWWA C-901 (PE), AS APPLICABLE. IF THERE ARE INDICATIONS OF LEAKS, CONTRACTOR SHALL LOCATE AND REPAIR THEM AT HIS EXPENSE UNTIL THE LEAKAGE IS WITHIN THE SPECIFIED ALLOWANCE.

IF UNSATISFACTORY TESTING RESULTS ARE ACHIEVED, CAMERA INSPECT PROBLEMATIC SECTION OF SEWER, MAKE NECESSARY REPAIRS. AND RETEST UNTIL RESULTS MEET CRITERIA. PIPE REPAIR CLAMPS ARE NOT PERMITTED.

S11 - SANITARY LATERAL LOCATION & ELEVATION FIELD VERIFICATION

PROPOSED SERVICE LATERAL LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY REQUIRE FIELD LOCATING AFTER CONSULTATION WITH THE LANDOWNER. CONTRACTOR SHALL COORDINATE WITH THE LANDOWNER AND ENGINEER TO DETERMINE SERVICE LATERAL LOCATIONS.

CONTRACTOR SHALL FIELD VERIFY EXISTING SANITARY LATERAL LOCATIONS AND ELEVATIONS WITHIN STRUCTURES REQUIRING SEWER SERVICE TO ENSURE PROPOSED SEWER MAIN / GRINDER PUMP STATION LOCATION AND DEPTH IS SUFFICIENT FOR SERVICE, PRIOR TO INSTALLATION OF SEWER MAIN / GRINDER PUMP STATION. RELAY RELEVANT INFORMATION OF ANY STRUCTURES WITH INSUFFICIENT DEPTHS FOR SEWER SERVICE TO ENGINEER FOR CONSIDERATION OF DESIGN CHANGES.

CONTRACTOR SHALL STAKE PROPOSED SANITARY LATERAL AND GRINDER PUMP STATION LOCATIONS FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.

S12 - TRENCH DAMS

CONTRACTOR SHALL PLACE A MINIMUM OF ONE (1) TRENCH DAM ON PIPE RUNS BETWEEN MANHOLES OR STRUCTURES COMPRISED OF NATIVE CLAY, IMPERVIOUS SOILS OR AQUABLOK®. POLYETHYLENE ANTI-SEEP COLLARS ARE ALSO ACCEPTABLE. TRENCH DAMS SHALL BE 6 FEET LONG, AS MEASURED ALONG THE SEWER CENTERLINE, CONSTRUCTED AGAINST THE UNDISTURBED TRENCH SIDES AND BOTTOM, AND CAREFULLY COMPACTED TO A HEIGHT OF 36 INCHES ABOVE THE CROWN OF PIPE, OR AS SPECIFIED BY THE MANUFACTURER (WHERE APPLICABLE).

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11/21/2023

SCALE:

STANDARD CONSTRUCTION DRAWINGS — CITY OF COLUMBUS

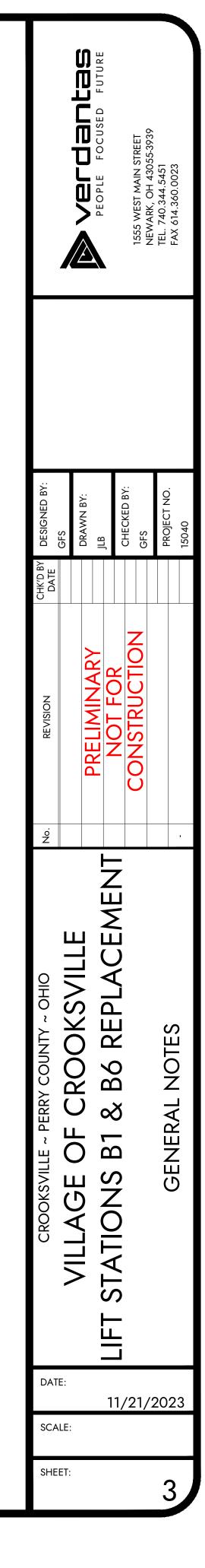
(ADDITIONAL STANDARD DRAWINGS FOR LIFT STATION SITE CONSTRUCTION)

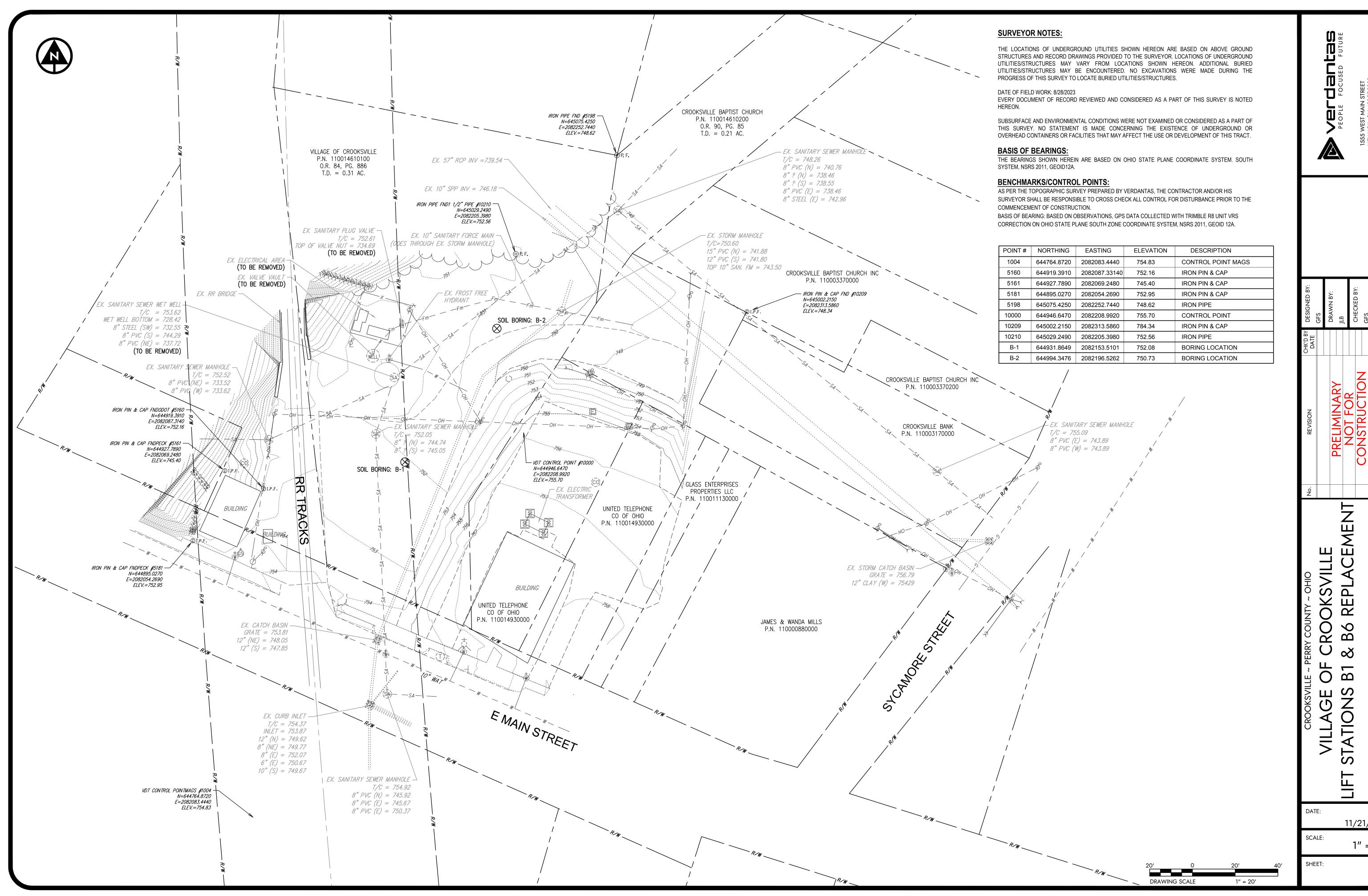
1441 - PAVEMENT & UTILITY CUT REPAIR STANDARDS 2230 - TEMPORARY CONSTRUCTION DRIVE

NOTES:

1. CONTRACTOR SHALL PREPARE AND SUBMIT A MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL BY THE OWNER AND ENGINEER PRIOR TO ANY WORK BEING COMPLETED.

- 2. CONTRACTOR SHALL PERFORM START-UP FOR THE LIFT STATION. CONTRACTOR SHALL SUPPLY CLEAN WATER IN ORDER TO PERFORM START-UP. START-UP SHALL CONSIST OF THE GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR AND A REPRESENTATIVE FROM THE SUPPLIER AT A MINIMUM. CONTRACTOR SHALL COORDINATE THE START-UP AND INCLUDE THE OWNER AND ENGINEER. THIS SHALL BE SCHEDULED A WEEK IN ADVANCE TO THE START-UP DATE.
- 3. ALL FILL UNDER OR WITHIN 3' OF DRIVE AREA SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AND WITHIN 1.5% OF THE OPTIMUM MOISTURE CONTENT.
- 4. CONTRACTOR SHALL FINAL GRADE SITE. SURFACE SHALL BE FREE OF ROCKS, ETC. CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREA.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING A TEMPORARY CONSTRUCTION DRIVE. CONSTRUCTION DRIVE SHALL FOLLOW THE CITY OF COLUMBUS, STANDARD DRAWING 2230.
- 6. CONTRACTOR SHALL PROVIDE, IF NECESSARY, DEWATERING FOR THE CONSTRUCTION OF THE LIFT STATION. ALL COST FOR DEWATERING THE LIFT STATION SITE SHALL BE INCLUDED WITHIN THE CONTRACTORS BID. ALL DEWATERING FLOWS SHALL BE KEPT FREE OF SILT, SEDIMENTS, DEBRIS, AND OTHER POLLUTANTS THROUGH APPROPRIATE MEANS (SETTLING BASINS, FILTER, ETC.), AND FOLLOWING THIS, THE FLOWS SHALL ONLY BE RELEASED DIRECTLY INTO STORM SEWERS, STREAM CHANNELS, OR OTHER STABILIZED DRAINAGE COURSES AND NOT ONTO EXPOSED SOILS, STEEP SLOPES, OR ANY OTHER SITE WHERE FLOWS COULD CAUSE FURTHER EROSION. ANY WELL, WELL POINT, PIT, OR OTHER DEVICE INSTALLED FOR THE PURPOSE OF LOWERING THE GROUND WATER LEVEL TO FACILITATE CONSTRUCTION OF THIS PROJECT SHALL BE PROPERLY ABANDONED IN ACCORDANCE WITH THE PROVISIONS OF THIS PLAN OR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. ANY PERSON INSTALLING ANY WELL, WELL POINT, PIT OR OTHER DEVICE USED FOR THE PURPOSE OF REMOVING GROUND WATER FROM AN AQUIFER SHALL COMPLETE AND FILE A WELL LOG AND DRILLING REPORT FORM WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WATER, WITHIN 30 DAYS OF THE WELL COMPLETION IN ACCORDANCE WITH OHIO REVISED CODE SECTION 1521.01 AND 1521.05.
- 7. ALL EXCAVATION ON THIS SITE IS UNCLASSIFIED. THE CONTRACTOR SHALL MAKE ALL EXCAVATION OF WHATEVER NATURE NECESSARY FOR CONSTRUCTION OF THE PROPOSED UTILITY AND THEIR APPURTENANT STRUCTURES INCLUDED IN THIS SITE. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR ROCK ENCOUNTERED DURING EXCAVATION.
- 8. FORCE MAIN PIPE SHALL BE DUCTILE IRON AND CONFORM WITH AWWA C151. JOINT SHALL CONFIRM TO AWWA C111.
- 9. FORCE MAIN SHALL BE HYDROSTATICALLY TESTED PER ASTM F1417.

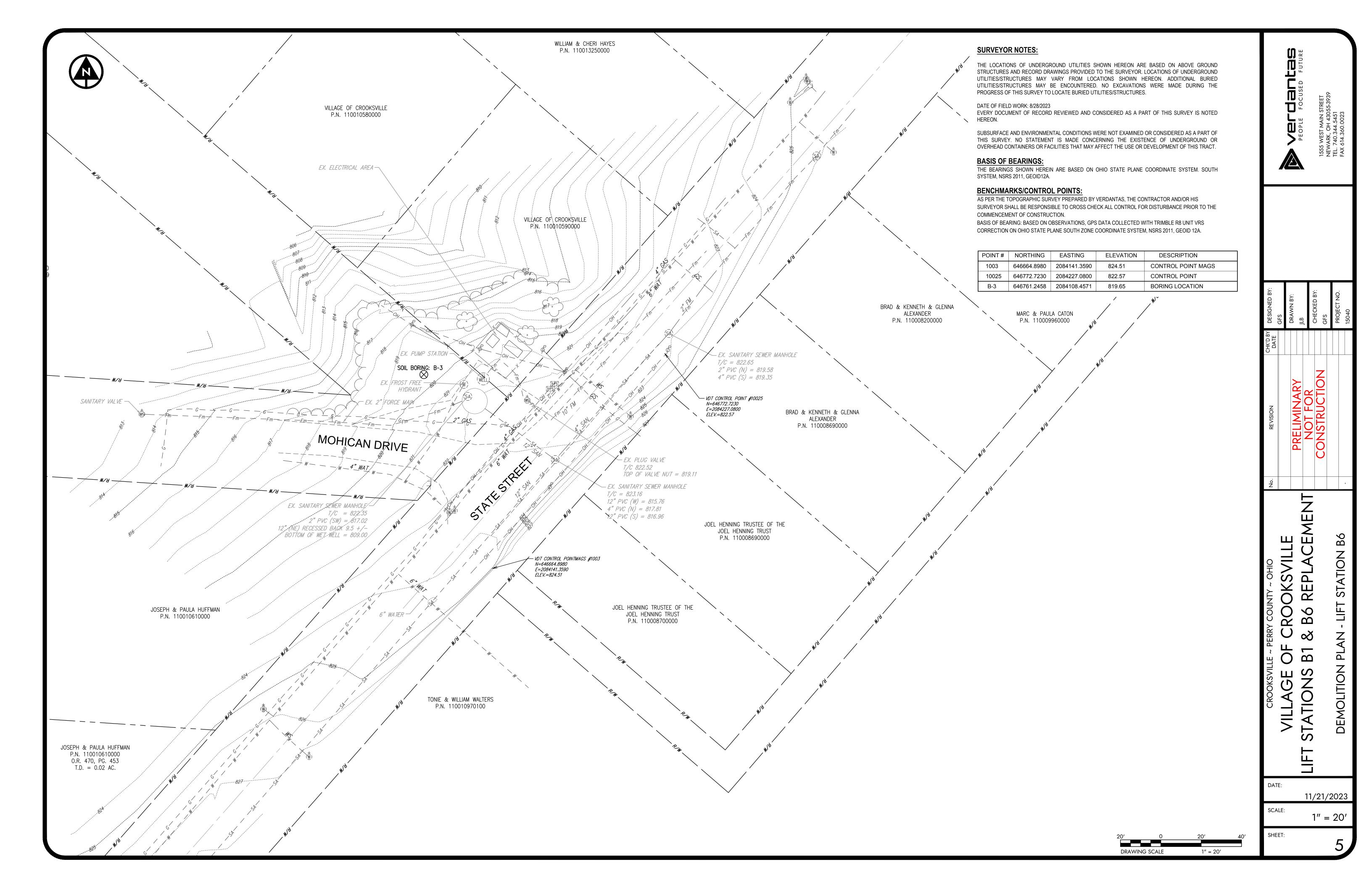


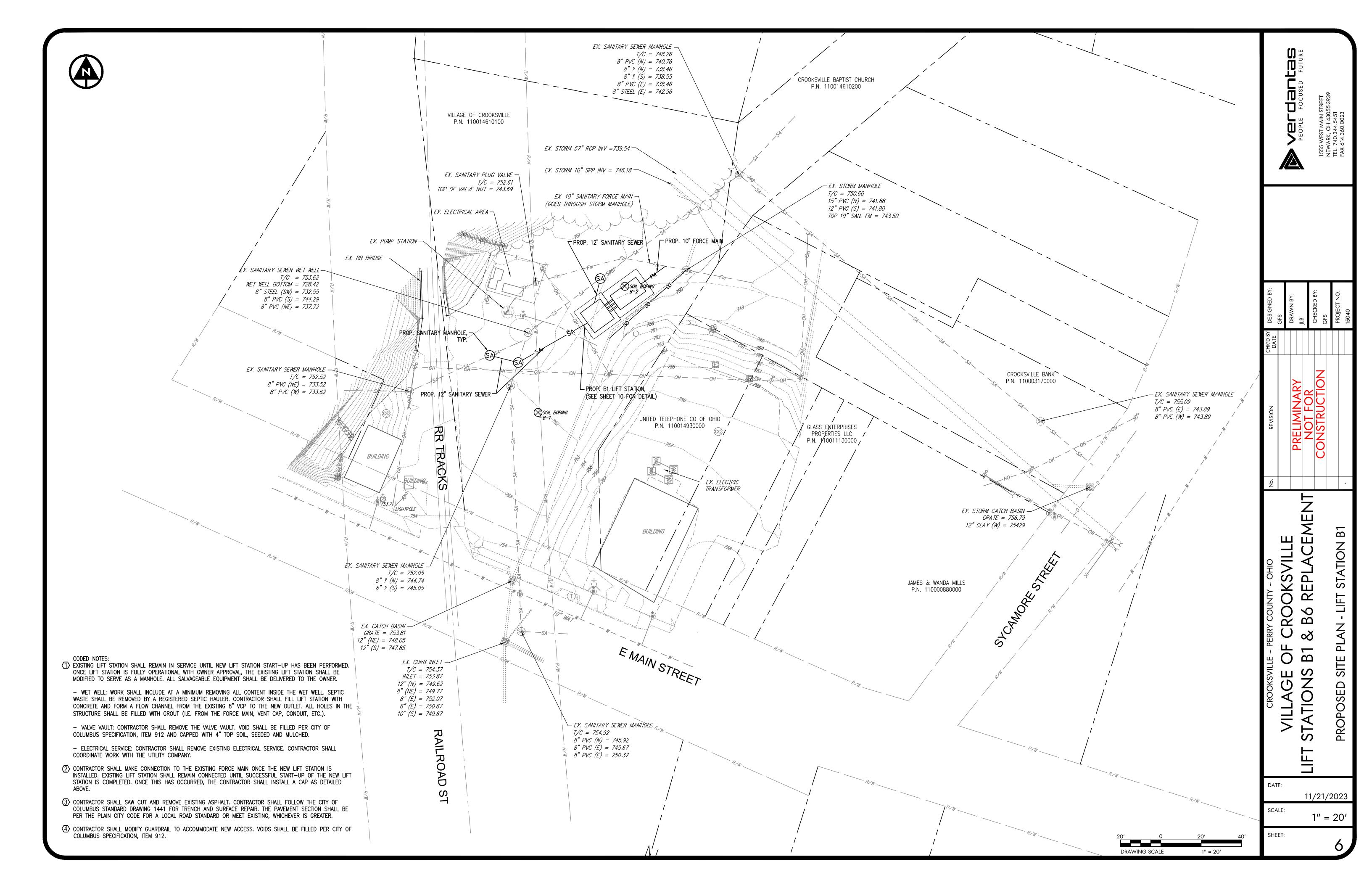


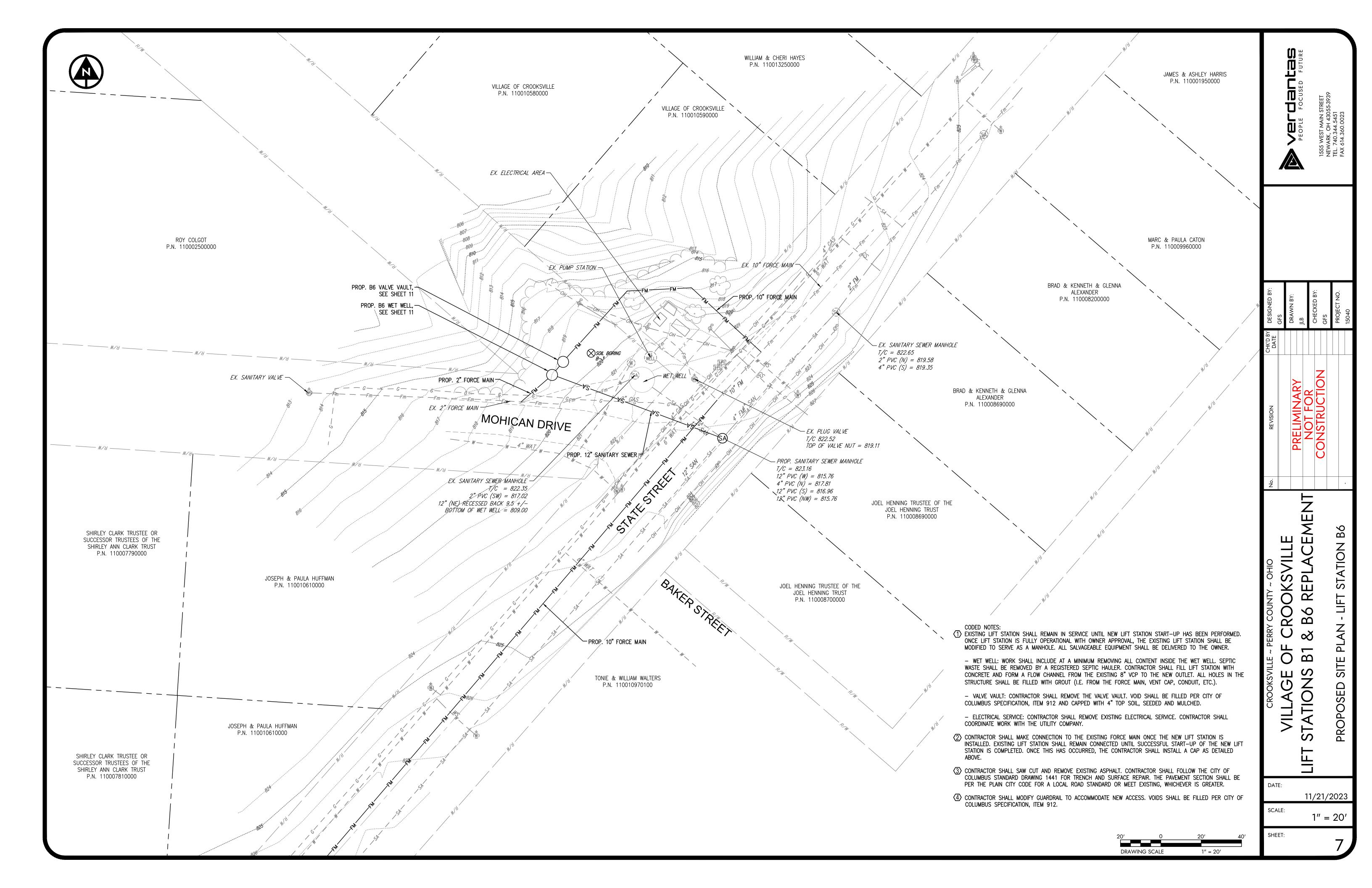
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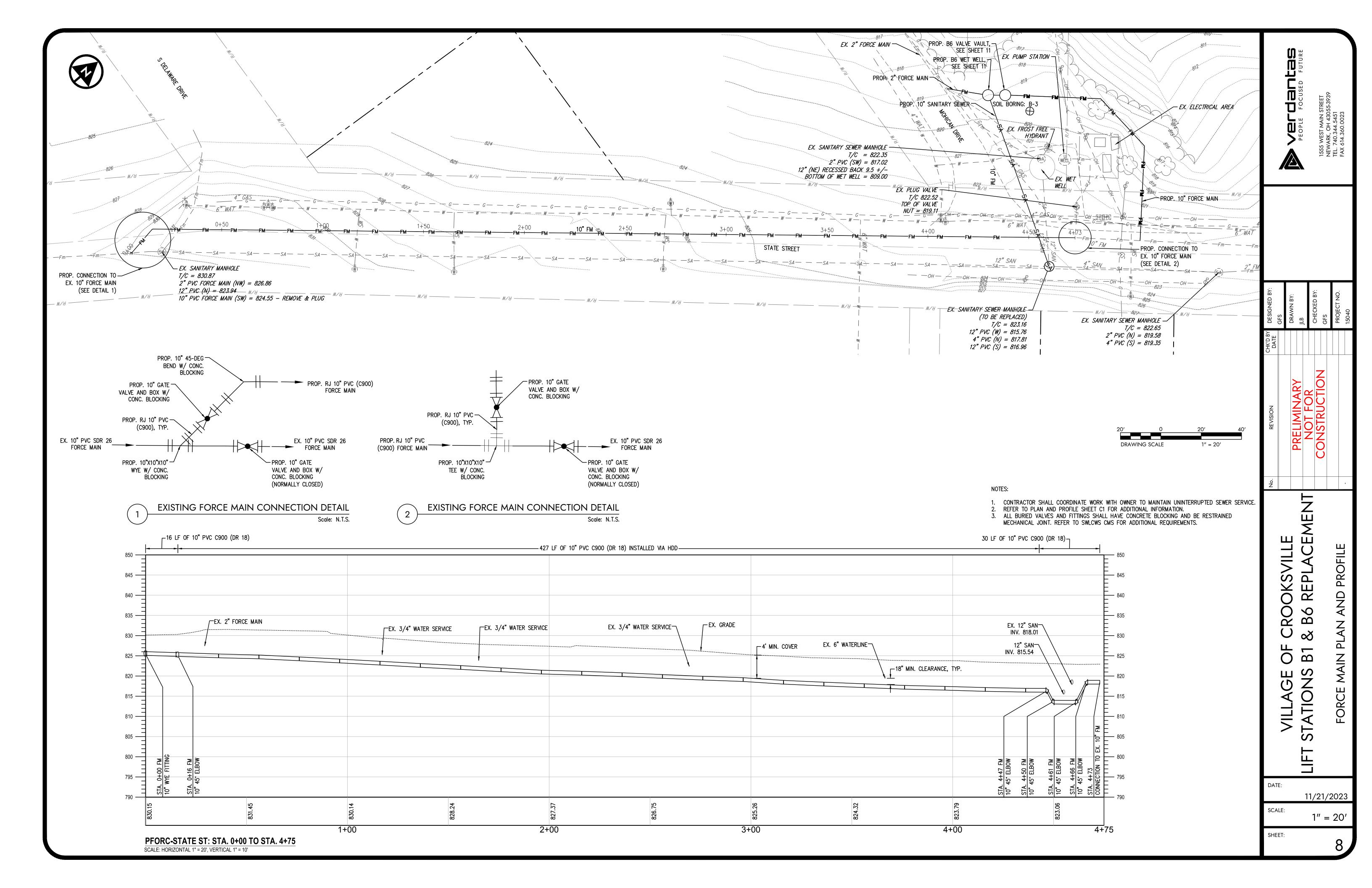
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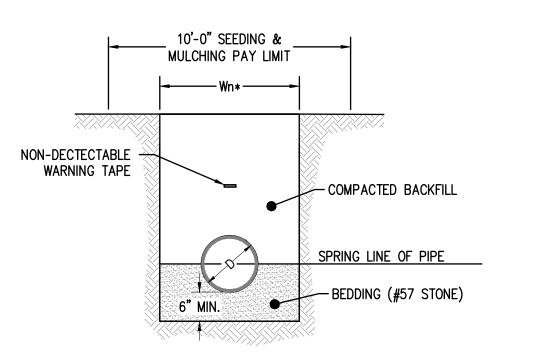
1'' = 20'

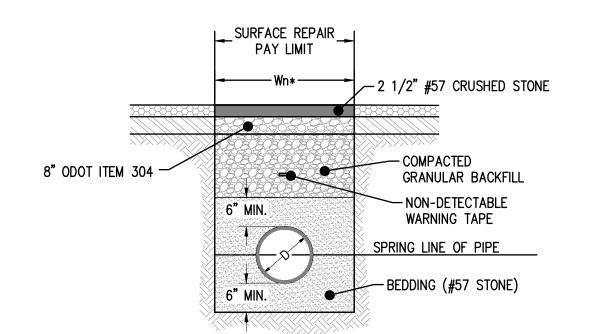


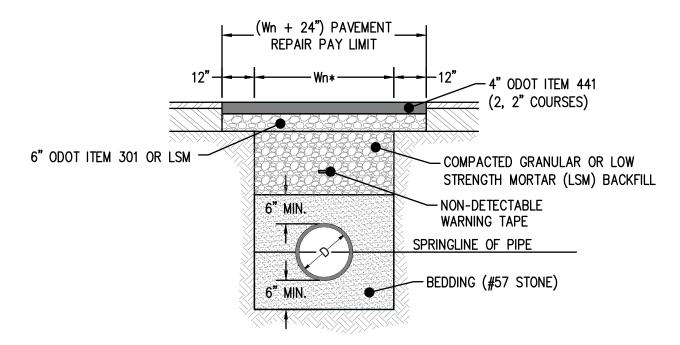












SEWER TRENCH DETAIL IN GRASSY AREA Scale: N.T.S.

- 1. IF SOFT OR OTHERWISE UNSUITABLE SOILS ARE ENCOUNTERED AT SUBGRADE DEPTH, OVEREXCAVATE TO FIRM SUBGRADE DEPTH OR AT LEAST 12" BELOW DESIGN SUBGRADE.
- 2. SEE SPECIFICATIONS FOR ADDITIONAL BEDDING AND BACKFILL REQUIREMENTS.
- 3. TRENCH DAMS SHALL BE INSTALLED A MINIMUM OF EVERY 200 FEET ALONG THE SEWER MAIN, REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

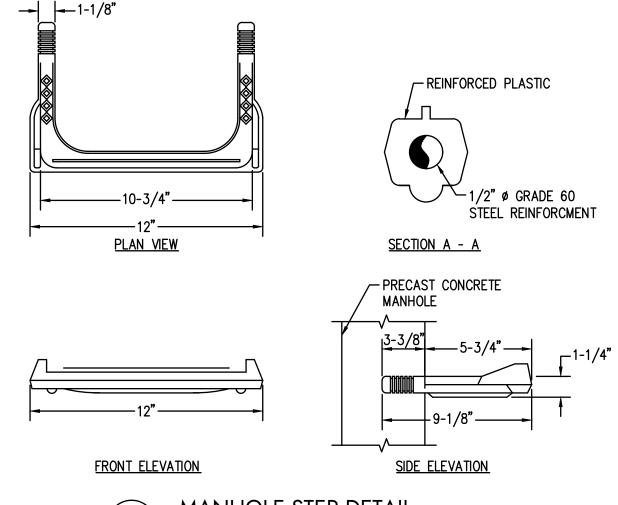
	SEWER TRENCH DETAIL IN STONE DRIV
(Scale: N.T.S.

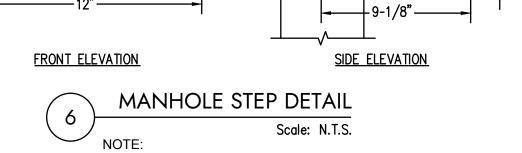
- 1. IF SOFT OR OTHERWISE UNSUITABLE SOILS ARE ENCOUNTERED AT SUBGRADE DEPTH, OVEREXCAVATE TO FIRM SUBGRADE DEPTH OR AT LEAST 12" BELOW DESIGN SUBGRADE.
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	MIN. TRENCH WIDTH (Wn*)	* Wn SHOWN FOR TRENCH IS THE MINIMUM WIDTH PERMITTED. ACTUAL WIDTH MAY VARY DEPENDENT ON CONTRACTOR'S CHOICE OF OPERATION. HOWEVER, IN NO EVENT SHALL
6"	30"	CONTRACTOR BE PAID FOR QUANTITIES IN EXCESS OF THOSE
8"	30"	QUANTITIES CALCUALTED BASED ON Wn.

SEWER TRENCH DETAIL UNDER OR WITHIN 3' OF PAVEMENT Scale: N.T.S.

- 1. IF SOFT OR OTHERWISE UNSUITABLE SOILS ARE ENCOUNTERED AT SUBGRADE DEPTH. OVEREXCAVATE TO FIRM SUBGRADE DEPTH OR AT LEAST 12" BELOW DESIGN SUBGRADE.
- 2. SEE SPECIFICATIONS FOR ADDITIONAL BEDDING AND BACKFILL REQUIREMENTS.
- 3. TRENCH DAMS SHALL BE INSTALLED A MINIMUM OF EVERY 200 FEET ALONG THE SEWER MAIN, REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

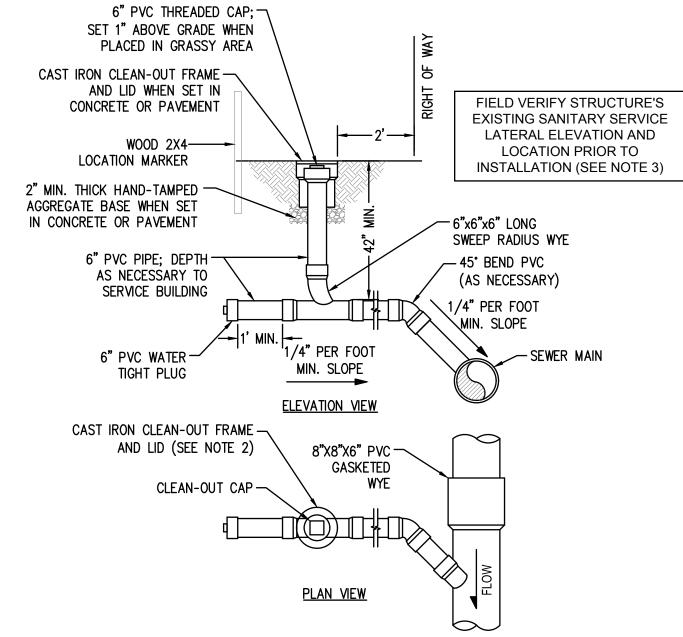




1. STEPS SHALL MEET THE REQUIREMENTS OF ASTM C-478. —24-3/4" ø— 00000 000000 0000000 -22 5/8" 🗌 SANITARY SEWER 🕻 🤇 00000000 $\langle 0 0 0 0 0 \rangle$ <u>FRAME</u> MANHOLE FRAME AND COVER

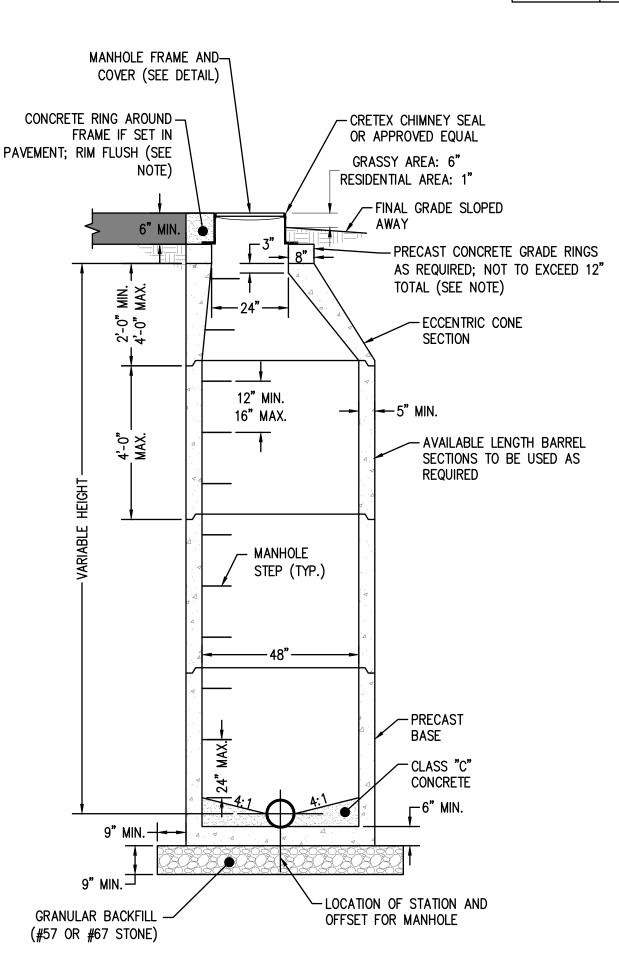
FRAME AND COVER SHALL BE CAST IRON.

Scale: N.T.S.



SERVICE LATERAL & CLEANOUT DETAIL Scale: N.T.S.

- 1. SERVICE LATERAL AND CLEANOUT PVC PIPE AND FITTINGS SHALL BE SDR-35. 2. CAST IRON CLEAN-OUT SHALL BE USED WHEN CLEANOUT IS SET IN CONCRETE OR PAVEMENT. LID SHALL BE EMBOSSED, "SANITARY."
- 3. CONTRACTOR SHALL VERIFY PROPOSED SANITARY SERVICE LATERAL IS SET AT SUFFICIENT DEPTH TO SERVE THE EXISTING SANITARY LATERAL ELEVATION WITHIN STRUCTURE PRIOR TO INSTALLATION. ADJUST SERVICE LATERAL LOCATION AS NECESSARY FOR CONVIENIENT CONNECTION BY OTHERS.



ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM C478 UNLESS OTHERWISE SHOWN.

SECTIONS OF THE PRECAST MANHOLE SHALL BE CAST AND ASSEMBLED WITH EITHER ALL TONGUE OR GROOVE ENDS UP. LIFT HOLES MAY BE PROVIDED IN EACH SECTION FOR HANDLING. ALL LIFT HOLES AND OTHER OPENINGS SHALL BE THOROUGHLY AND NEATLY GROUTED WITH CEMENT MORTAR.

PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 5-INCHES AND REINFORCED SUFFICIENTLY TO PERMIT SHIPPING AND HANDLING WITHOUT DAMAGE.

SANITARY MANHOLES SHALL BE WATERTIGHT STRUCTURES. ALL JOINTS TO BE SUPPLIED WITH O-RING RUBBER GASKETS AS PER ASTM C-443.

MANHOLES SHALL BE CARRIED TO PROPER HEIGHT SO THAT THE TOP OF CASTING WILL BE SET AT THE FINISH GRADE. TOP OF CASTING SHALL BE SET FLUSH WITH GRADE WHEN SET WITHIN TRAFFICKED ASPHALT, CONCRETE, OR GRAVEL ROADWAY OR DRIVE, 1 INCH ABOVE FINAL GRADE WHEN SET WITHIN RESIDENTIAL GRASSED AREAS, AND 6 INCHES ABOVE FINAL GRADE WHEN SET WITHIN OPEN GRASSY AREA. WHEN SET IN A GRASSY AREA, SURROUNDING FINAL GRADE SHALL BE SLOPED AWAY FROM MANHOLE TO ALLOW DRAINAGE AWAY FROM MANHOLE.

PROVIDE A UTILITY MARKER FOR EACH MANHOLE LOCATED IN A GRASSY FIELD.

PRECAST GRADE RINGS:

PRECAST CONCRETE GRADE RINGS, GROUTED IN PLACE, SHALL BE USED IF NEEDED BETWEEN THE SLAB OR CONE TOP AND THE ACCESS FRAME CASTING CASTING AND COVER. A 6 INCH THICK GRADE RICK SHALL BE INSTALLED FOR ALL MANHOLES BEING PLACED IN PAVEMENT FOR FLUSH INSTALLATION. CONTRACTOR SHALL INSTALL TAPERED GRADE RINGS AS NECESSARY.

THIS SECTION SHALL BE AN ECCENTRIC CONE UNLESS A FLAT SLAB IS SPECIFIED.

SANITARY SEWER - MANHOLE CONNECTIONS: SEWER PIPE SHALL BE SECURED THROUGH THE MANHOLE WALL BY A

REINFORCING STEEL USED WITHIN THE TOP SLAB SHALL BE EPOXY COATED.

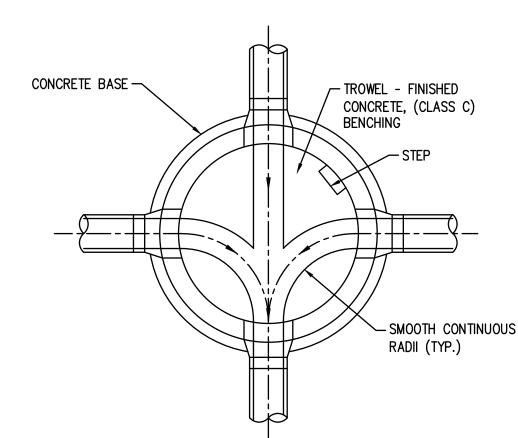
KOR-N-SEAL BOOT OR APPROVED EQUIVALENT MEETING ASTM C923.

A CRETEX CHIMNEY SEAL OR APPROVED EQUAL SHALL BE INSTALLED ON ALL MANHOLES.

MANHOLE FRAME AND COVER:

ALL MANHOLES (PUBLIC OR PRIVATE) SHALL USE A NEENAH R-1767 FRAME AND COVER OR APPROVED EQUAL. COVER SHALL BE SOLID AND EMBOSSED "SANITARY SEWER."

WHERE REQUIRED, CONCRETE RING SHALL BE 4,000 PSI MINIMUM AND CONTAIN 6% ENTRAINED AIR AND A 3" MAXIMUM SLUMP, ODOT ITEM 452. BORDER SHALL BE 12" WIDE AROUND FRAME AND MINIMUM 6" THICK.



PRECAST MANHOLE BASE CHANNELIZATION DETAIL Scale: N.T.S.

STANDARD PRECAST SANITARY MANHOLE Scale: N.T.S.

SHEET:

DATE:

SCALE:

11/21/2023

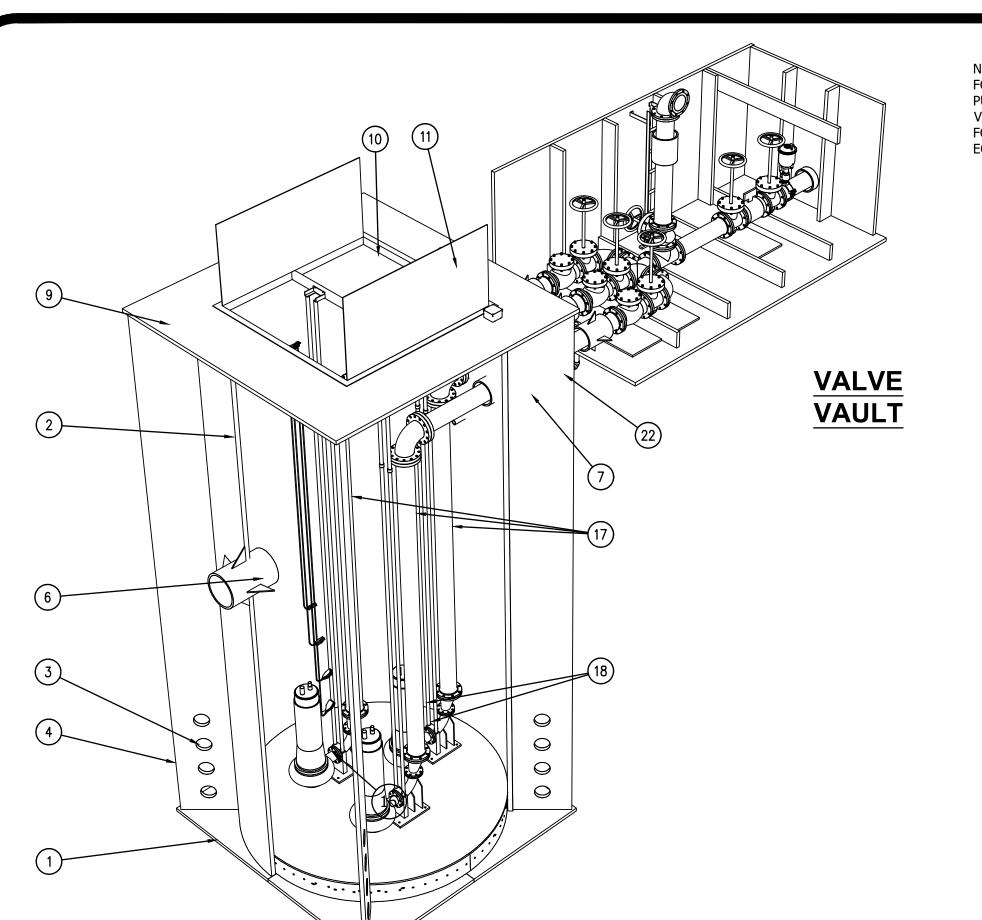
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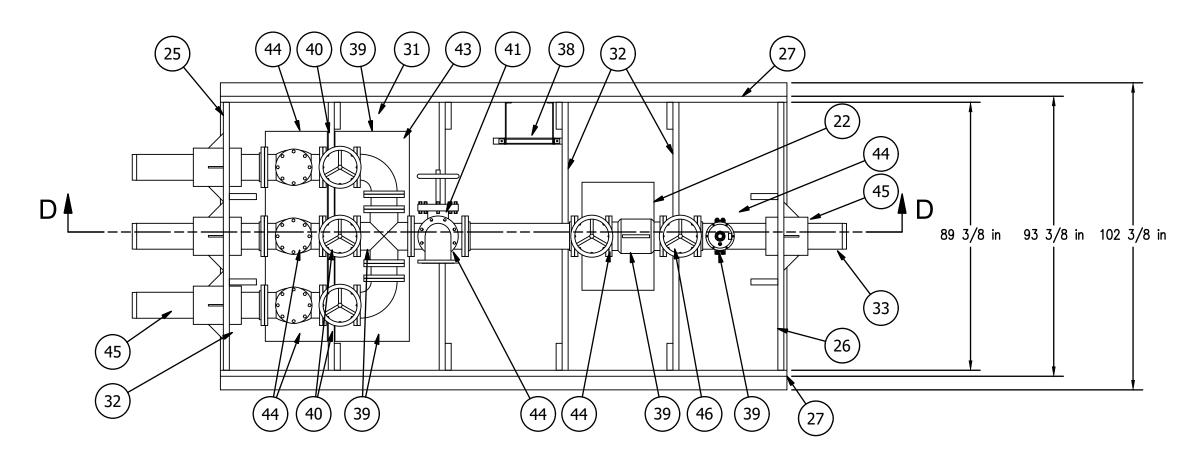
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NOTE: EXTERNAL VALVE VAULT SHOWN FOR GENERAL REPRESENTATION PURPOSES ONLY. REFER TO VALVE VAULT DETAIL SHEETS AS REQUIRED FOR GENERAL CONFIGURATION, EQUIPMENT, DIMENSIONS, AND DETAILS

DI II II	2011501115						
PUMP SCHEDULE							
DESIGNATION	TBD						
PUMP TYPE	SUBMERSIBLE						
MANUFACTURER	WILO						
MODEL NUMBER	EMU FA10.68W WITH T30-4/55KEx						
VOLTAGE/PHASE/FREQUENCY	460V / 3-PH / 60 Hz						
PUMP RATE	VARIES by VFD CONTROL (500-1400 GPM)						
TOTAL DYNAMIC HEAD	260.3' TDH						
MOTOR HP	114 hp						
PUMP SPEED	1765 RPM						
DISCHARGE DIAMETER	4"						
IMPELLER DIAMETER	15.39"						

PUMP CONTROL SCHEDULE							
LEVEL FLOAT	ELEVATION						
EMERGENCY HIGH WATER ALARM	N/A						
HIGH WATER ALARM	742.50'						
LAG PUMP ON	742.00'						
LEAD PUMPS ON	741.50'						
PUMPS OFF	731.94'						
LOW WATER ALARM	731.44'						



VALVE VAULT PLAN VIEW

PUMP STATION WETWELL PUMP STATION

ISOMETRIC VIEW

	PARTS LIST						
ITEM	QTY	DESCRIPTION					
1	1	BASE PLATE ASSEMBLY					
2	1	134" ID WET WELL RISER					
3	4	EXTERNAL STIFFENER					
4	1	18", SCH 80, PP PIPE STUB (INLET STUB)					
5	1	12", SCH 80, PP PIPE STUB (CENTER OUTLET STUB)					
6	2	12", SCH 80, PP PIPE STUB (OUTER OUTLET STUB)					
7	1	2", SCH 80, PP PIPE STUB (FLOWBACK)					
8	1	TOP PLATE ASSEMBLY					
9	2	6" x 6" ALUMINUM JUNCTION BOX					
10	1	TANK VENT					
11	1	84" x 84" ALUMINUM ACCESS W/ FALL PROTECTION GRATING					
12	1	PUMP STATION LEVEL FLOATS					
13	1	BASE ELBOW					
14	1	EMU FA10.68W SUBMERSIBLE PUMP					
15	1	8" x 4" FLANGED ECCENTRIC REDUCER					
16	1	UPPER GUIDERAIL BRACKET					

8" x 12" LINK SEAL

VALVE VAULT

8" DRESSER COUPLING

1-1/4" SCH10, 316SS, PUMP GUIDERAILS

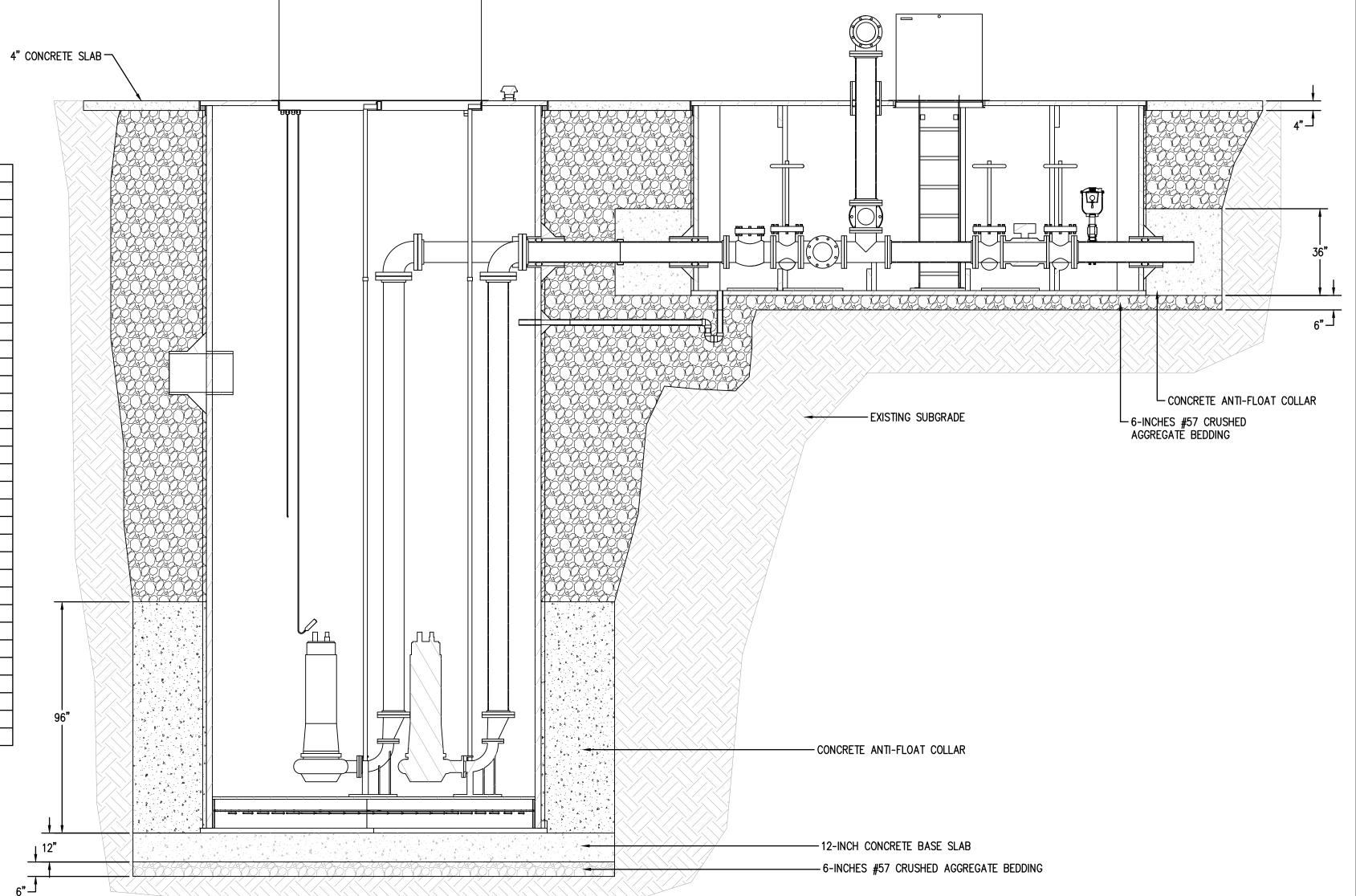
B", SCH 10, 304 SS, DISCHARGE PIPING AND FLANGED FITTINGS

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21

PARTS LIST						
ITEM	QTY	DESCRIPTION				
22	1	VV BASE PLATE				
23	1	1" THICK PP MOUNTING PLATE (1 OF 3)				
24	1	1" THICK PP MOUNTING PLATE (2 OF 3)				
25	1	1" THICK PP MOUNTING PLATE (3 OF 3)				
26	1	VV INLET WALL				
27	1	VV OUTLET WALL				
28	2	VV SIDE WALL				
29	12	INTERNAL WALL STIFFENER				
30	3	12" SCH 80, PP PIPE STUB (INLET)				
31	1	12" SCH 80, PP PIPE STUB (OUTLET)				
32	1	2" SCH 80, PP PIPE STUB (FLOWBACK)				
33	6	INTERNAL LID AND FLOOR STIFFENER				
34	1	VV TOP PLATE				
35	1	12", SCH 80, PP PIPE STUB (TOP PLATE STUB)				
36	1	36" X 36" ALUMINUM HATCH				
37	1	ALUMINUM ACCESS LADDER				
38	6	8" FLANGED GATE VALVE				
39	3	8" FLANGED SWING CHECK VALVE				
40	1	8" FLANGED CROSS				
41	2	8" SPOOL PIECE				
42	3	8" FLANGED ELBOW				
43	8	8", SCH 10, 304SS FLANGE				
44	1	8", SCH 10, 304SS PIPING				
45	1	8" ELECTROMAGNETIC FLOW METER				
46	5	8" x 12" LINK SEAL				
47	1	8" FLANGED TEE				
48	1	8" x 12" LINK SEAL				
49	1	2" NPT, CLOSE NIPPLE				
50	1	2" NPT, BRONZE BODY BALL VALVE				
51	1	2" NPT, LONG NIPPLE				
52	1	AIR RELEASE VALVE				



PUMP STATION INSTALLATION DETAIL SECTION VIEW

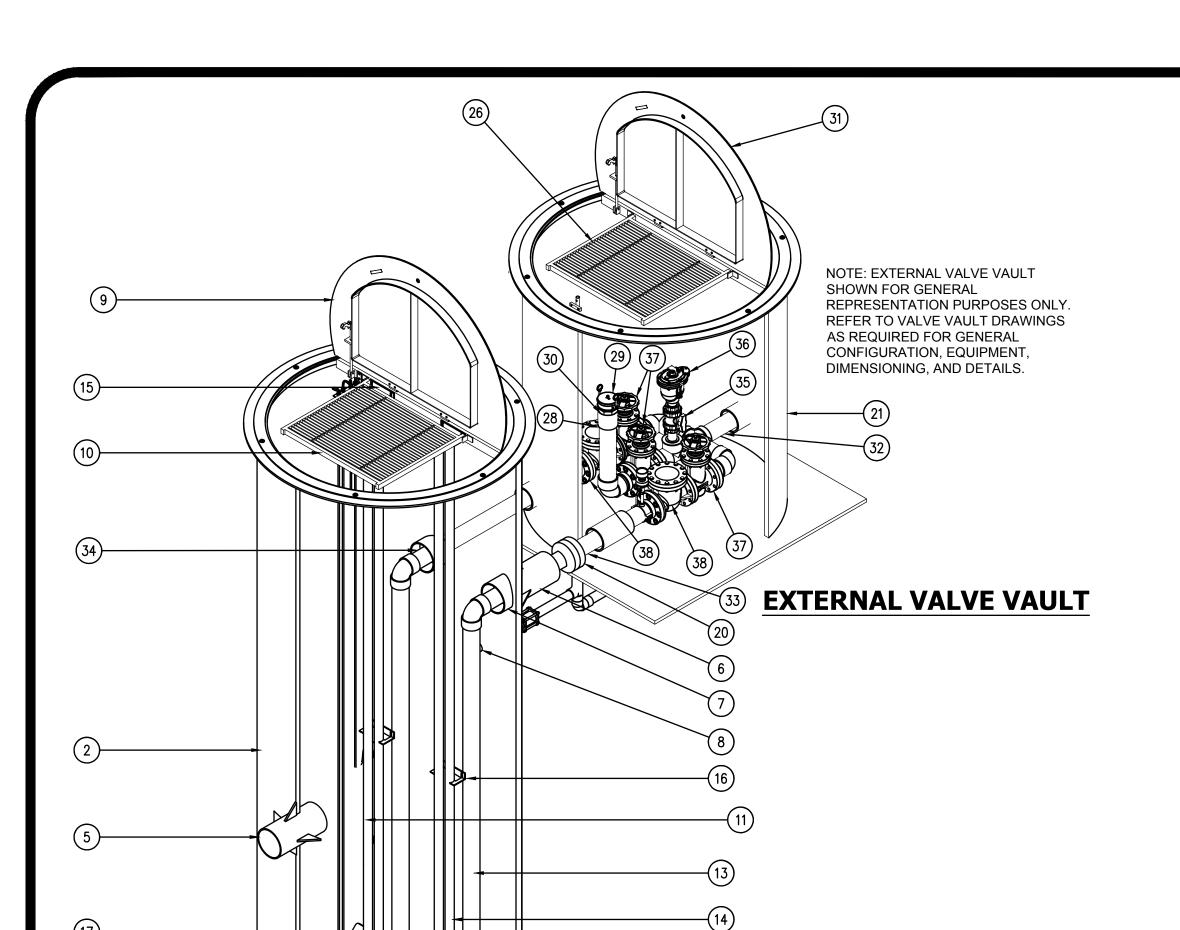
CROOKSVILLE ~ PERRY COUNTY ~ OHIO
VILLAGE OF CROOKSVILLE
IFT STATIONS B1 & B6 REPLACEMENT
LIFT STATION B1 DETAILS

DATE:

SCALE:

11/21/2023

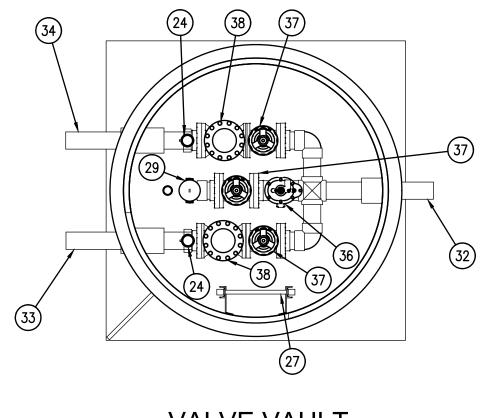
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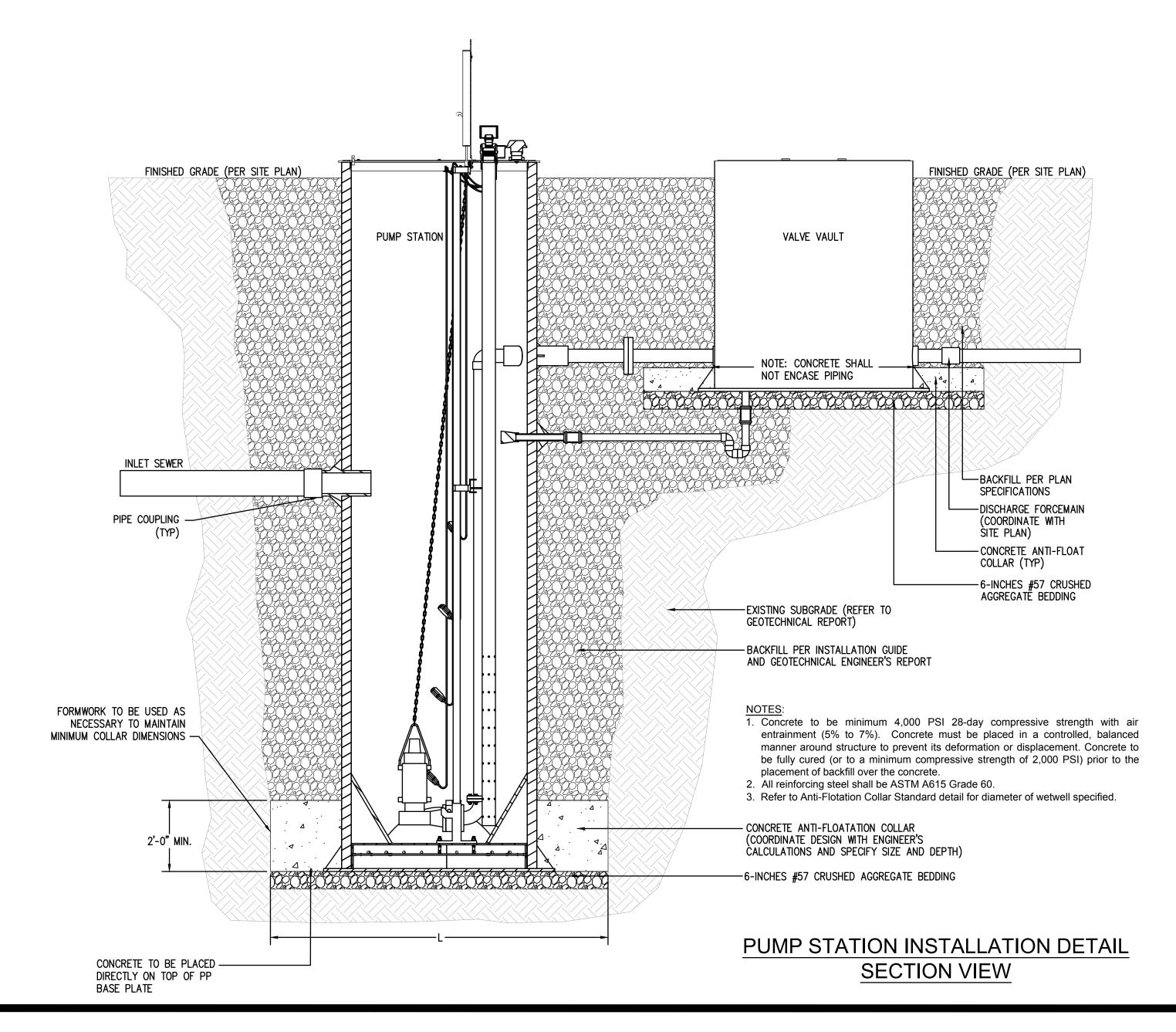
SUBMERSIBLE PUMP SCHEDULE						
DESIGNATION TBD						
PUMP TYPE	TBD					
MANUFACTURER	TBD					
MODEL NUMBER	TBD					
VOLTAGE/PHASE/HZ	TBD					
PUMP RATE	TBD					
TOTAL DYNAMIC HEAD	TBD					
MOTOR HORSEPOWER	TBD					
PUMP SPEED	TBD					
DISCHARGE DIAMETER	4"					
IMPELLER DIAMETER	TBD					
PUMP SPACING	TBD					

PUMP CONTROL SCHEDULE						
EMERGENCY HIGH WATER ALARM	Not Used					
HIGH WATER ALARM	TBD					
LAG PUMP ON	TBD					
LEAD PUMP ON	TBD					
PUMPS OFF	TBD					
LOW WATER ALARM	Not Used					

ITEM	QTY	DESCRIPTION					
22	3	PENETRATION SLEEVE					
23	3	PENETRATION SEAL					
24	2	PRESSURE GAUGE					
25	1	VV DRAIN STUB					
26	1	SAFETY GRATING					
27	1	ACCESS LADDER					
28	1	4" SCH.80 PVC FEMALE ADAPTER					
29	1	FEMALE QUICK CONNECT CAP					
30	1	MALE QUICK CONNET X MALE THREAD					
31	1	66" FROG-MOUTH HATCH					
32	1	COMBINED 4" SCH. 40 PVC EFFLUENT PIPE					
33	1	PUMP B DISCHARGE					
34	1	PUMP A DISCHARGE					
35	1	2" SCH.80 PVC BALL VALVE					
36	1	AIR RELEASE/VACUUM BREAKER VALVE					
37	3	4" SCH. 80 PVC GATE VALVE					
38	2	4" SCH. 80 PVC SWING CHECK VALVE					
39	1	66" VALVE VAULT					



VALVE	VAULT
PLAN	VIEW





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CHK'D BY DATE									
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DATE: 11/21/2023

SCALE: NTS SHEET:

66" ID STRUCTURAL BASE ASSEMBLY 1 66" ID PP RISER 4 RISER BASE GUSSET 4 SLOPE SUMP PLATES (OPTIONAL) 1 GRAVITY INLET PIPE STUB - SEE NOTE 17 2 DISCHARGE PENETRATION SLEEVE 2 LINK SEAL 1 FLOWBACK PIPE STUB 1 ALUMINUM ACCESS HATCH 1 FALL PROTECTION GRATING 2 PUMP 2 PUMP BASE ELBOW (DUCTILE IRON) 2 OUTLET PIPING (SCH. 80 PVC) 2 PUMP GUIDE RAIL (STAINLESS STEEL) 2 UPPER GUIDE RAIL SUPPORT (STAINLESS STEEL) 2 INTERMEDIATE GUIDE RAIL SUPPORT (STAINLESS STEEL) 17 VARIES FLOAT SWITCHES 2 ELECTRICAL JUNCTION BOX

2 VAN STONE FLANGE (150 LB. FLAT FLANGE)

1 EXTERNAL VALVE VAULT ASSEMBLY

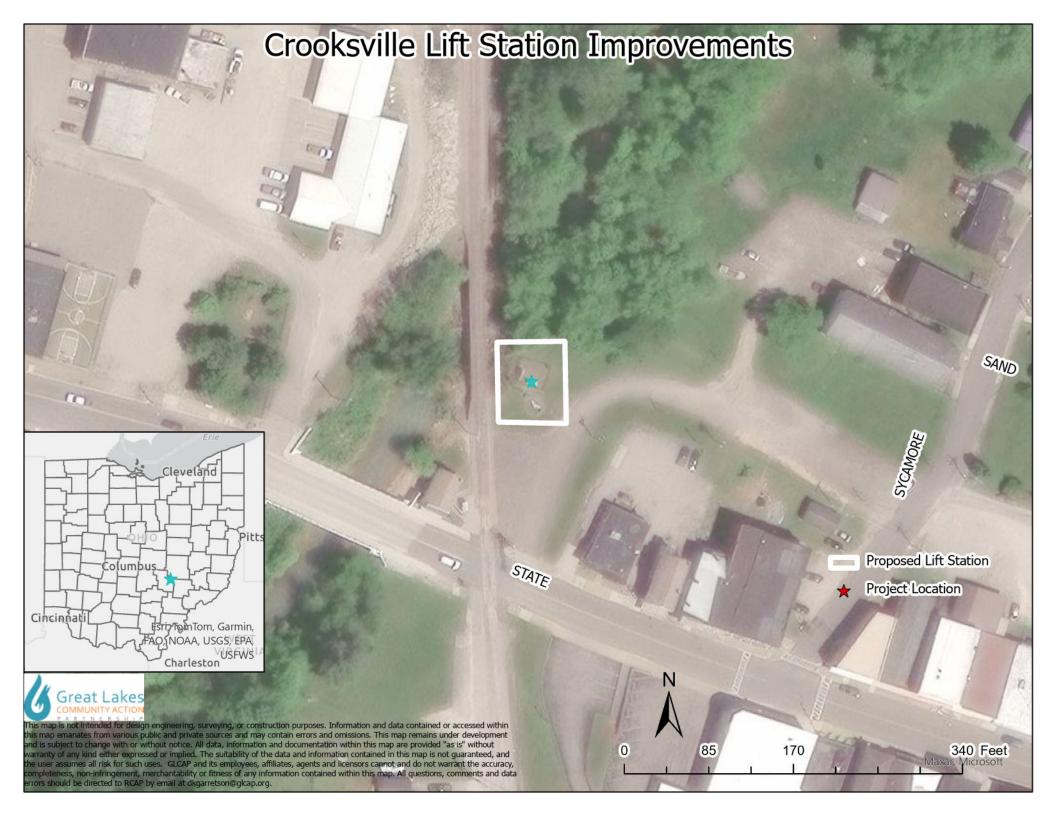
TANK VENT ASSEMBLY

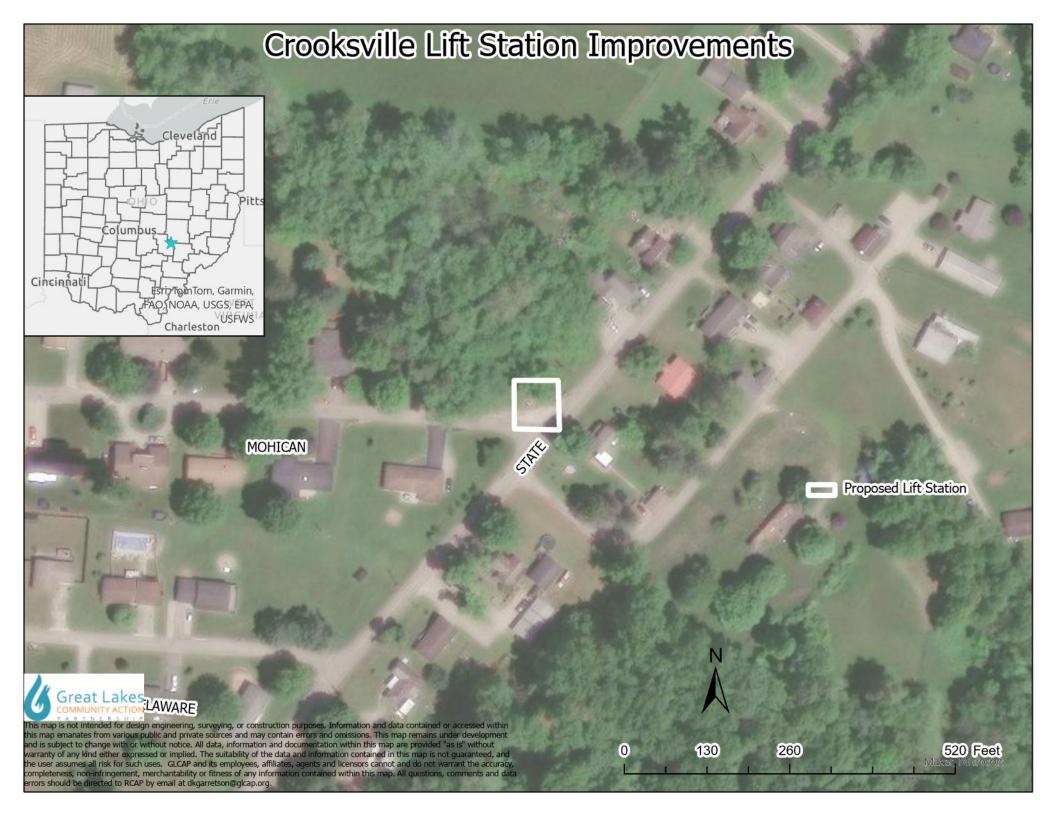
PUMP STATION WETWELL

PUMP STATION ISOMETRIC VIEW

DESCRIPTION

PARTS LIST







Lift Station B1 Crooksville, OH



Lift Station B6 Crooksville, OH









Photographs of Crooksville Pump Stations B1 and B2



1. Pump B1 – Facing East



2. Pump B1 - Facing East – Close Up



3. Pump B1 – Facing North



4. Pump B1 – Facing South



5. Pump B1 – Facing West



6. Pump B1 – Facing West – Close Up



7. Pump B1 – Inside Fence



8. Pump B6 – Facing East



9. Pump B6 – Facing East – Close up



10. Pump Station B6 – Facing South



11. Pump Station B6 – Facing South Close Up



12. Pump Station B6 – Facing West



13. Pump Station B6 – Facing North – Close Up



14. Pump Station 6 – Facing North from Mohican Road.



15. Pump Station B6 – Facing West – Close Up



16. Pump Station B6 – Inside Fence



17. Pump Station B6 – Inside the fence.