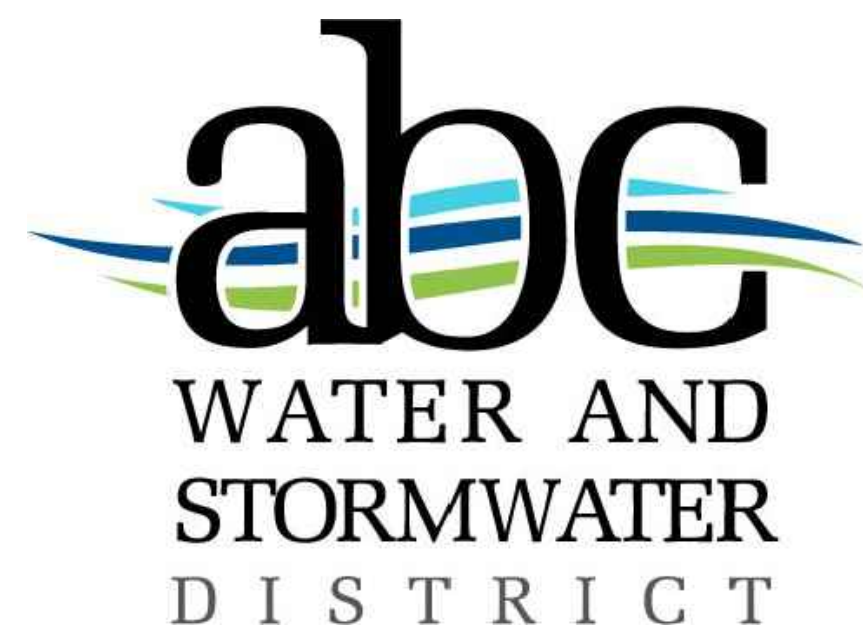


ABC WATER & STORMWATER DISTRICT BAYMAR DR STORM SEWER IMPROVEMENTS REBID

BOARDMAN TOWNSHIP
MAHONING COUNTY, OHIO
MAY 2024



OHIO 811 DESIGN SERIAL NUMBER & UTILITY LIST:

STORM SEWER AND ROADWAY
MARILYN SFERRA KENNER, PE
BOARDMAN TOWNSHIP ROAD DEPARTMENT
8299 MARKET STREET
BOARDMAN, OHIO 44512
330-726-4190

DOMINION EAST OHIO (GAS)
RYAN A. BOND
320 SPRINGSIDE DR. SUITE 320
AKRON, OHIO 44333
(330) 664-2642
RYAN.A.BOND@DOMINIONENERGY.COM

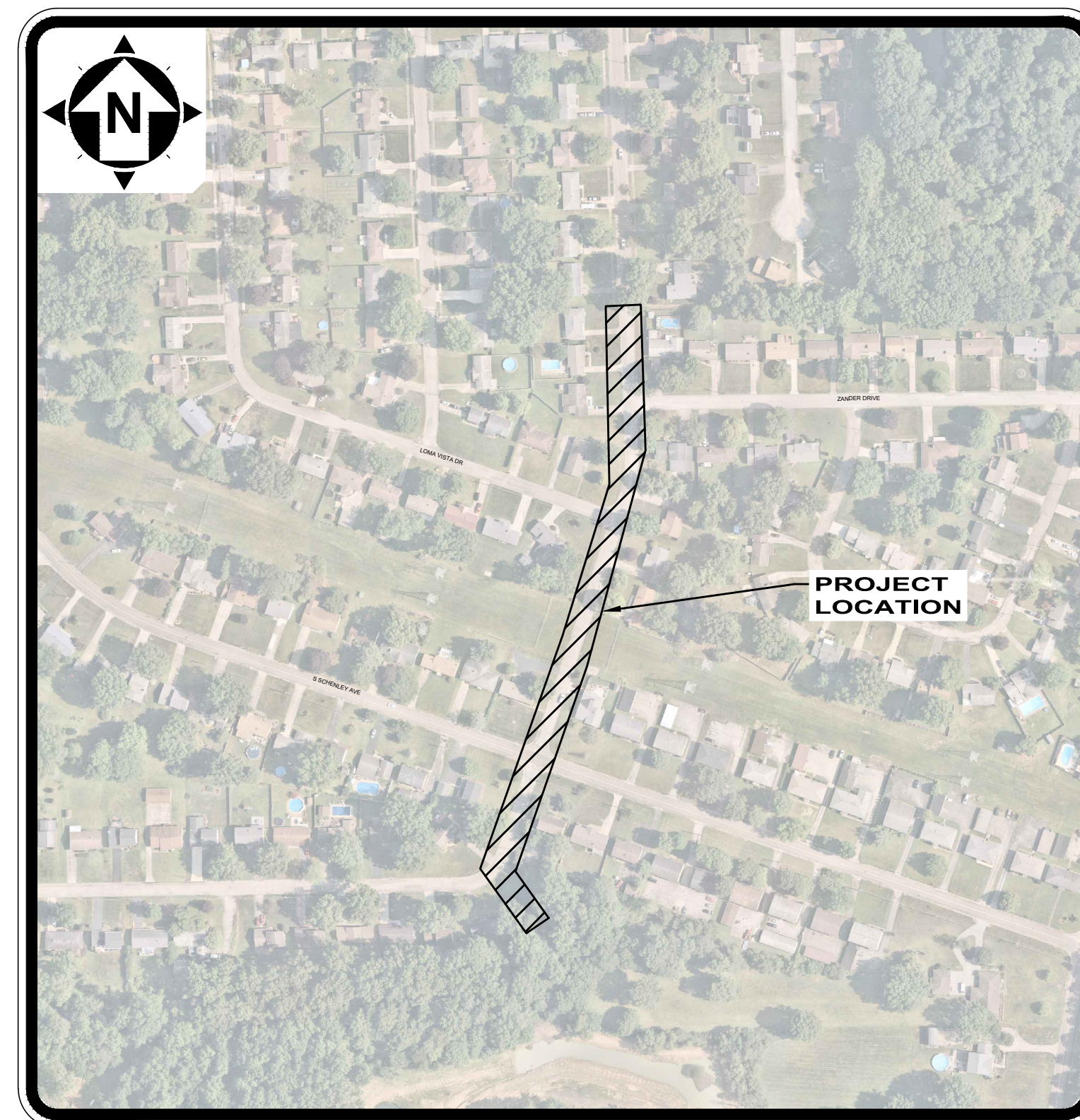
THE CITY OF YOUNGSTOWN
WATER DEPARTMENT
LOU ZORELLA
160 NORTH WEST AVENUE
YOUNGSTOWN, OHIO 44502
330-742-8751

MAHONING COUNTY
SANITARY ENGINEERS
PATRICK GINNETTI, PE, PS
761 INDUSTRIAL ROAD
YOUNGSTOWN, OHIO 44509
330-793-5514

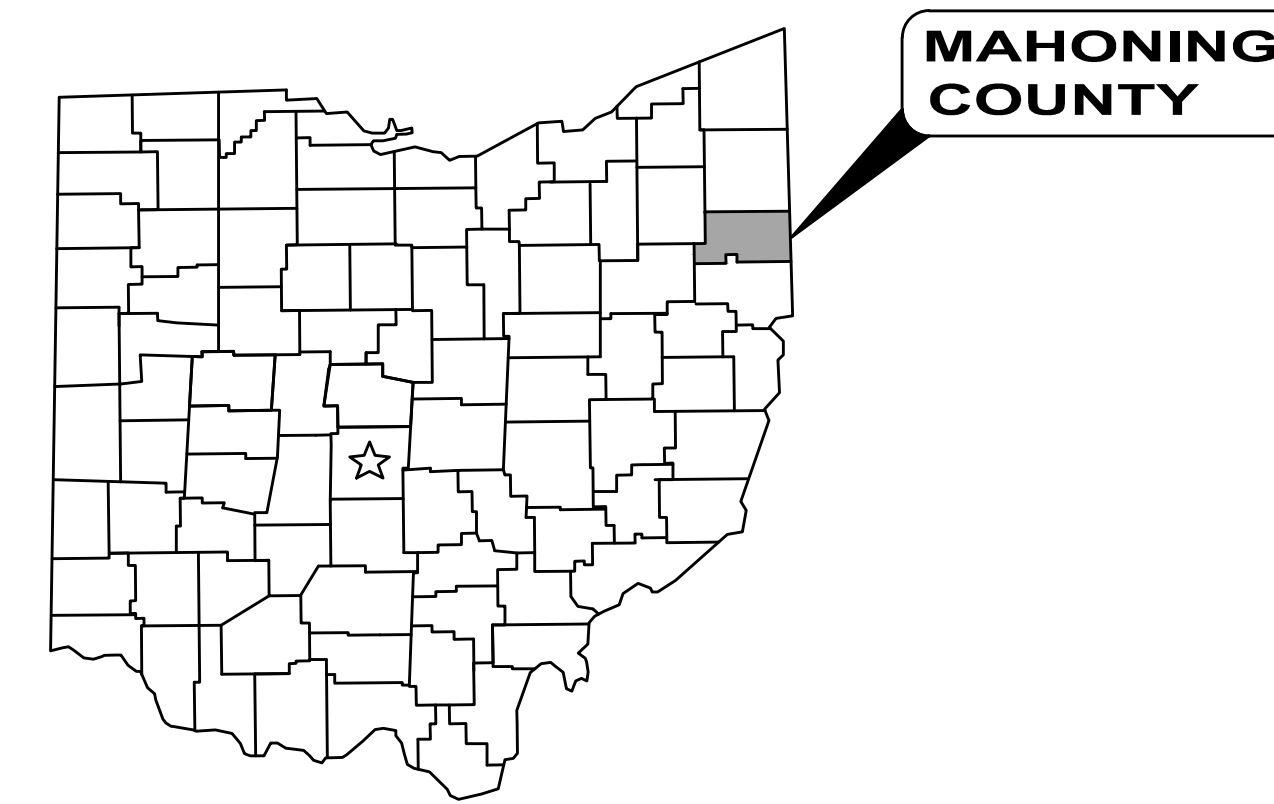
FIRST ENERGY (ELECTRIC)
MICHAEL BECK
730 SOUTH AVENUE
YOUNGSTOWN, OHIO 44502
330-740-7704
BECKM@FIRSTENERGYCORP.COM

AT&T (COMMUNICATIONS)
TORRES ROBINSON
50 WEST BOWERY STREET
AKRON, OHIO 44308
330-734-5117
TR3463@ATT.COM

1. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.
2. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.



LOCATION MAP
NOT TO SCALE



ABC WATER & STORMWATER DISTRICT BOARD:

JASON LOREE	BOARD MEMBER
KEITH ROGERS	BOARD MEMBER
ROBERT SANTOS	BOARD MEMBER
STEPHANIE LANDERS	ADMINISTRATIVE ASSISTANT

OWNER:

JASON LOREE (BOARDMAN TOWNSHIP)	BOARD MEMBER
---------------------------------	--------------

OFFICE:

ABC WATER AND STORMWATER DISTRICT
P.O. BOX 3554
YOUNGSTOWN, OHIO 44512

(330) 729-2080 PHONE
(330) 729-2054 FAX

DEPARTMENTS:

BOARDMAN TOWNSHIP ROAD DEPARTMENT
(330) 726-4177 PHONE
(330) 726-4175 FAX

ROAD SUPERINTENDENT
MARILYN SFERRA KENNER, P.E.

ENGINEER:

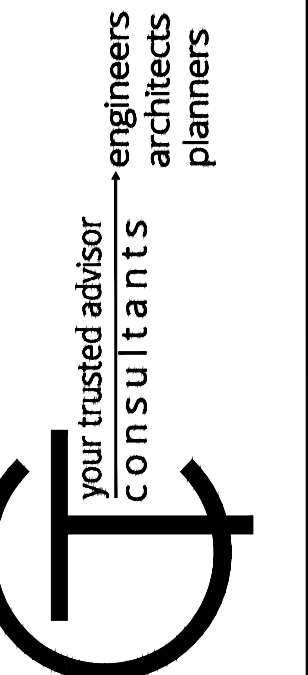
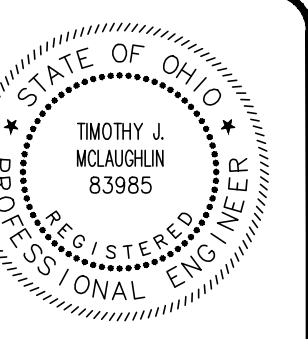
CT CONSULTANTS, INC.
908-2 SAHARA TRAIL
YOUNGSTOWN, OH 44514
(330) 746 1200 PHONE

PROJECT SITE:

LOCATED ON BAYMAR DRIVE FROM CREEK INLET SOUTH OF S SCHENLEY AVENUE TO THE YOUNGSTOWN CORPORATION LIMIT. THIS PROJECT INCLUDES THE REHABILITATION OF A 36 INCH STORM SEWER BY INJECTING CHEMICAL SEALANT INTO EACH JOINT, AND SEVERAL POINT REPAIRS. THIS PROJECT ALSO INCLUDES INSTALLATION OF A NEW MANHOLE AND THE ADDITION OF SEVERAL MANHOLE ACCESS POINTS.

ENGINEER'S PROJECT No. 232472

TIMOTHY MCLAUGHLIN, P.E. PE NO. 83985 DATE



ISSUED FOR:	REBID NO.	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:

ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
MAHONING COUNTY BOARDMAN TOWNSHIP, OH
COVER SHEET

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	G-01
SHEET	OF
1	10

1.0 GENERAL NOTES

- 1.01 THE WORK CONTEMPLATED UNDER THIS CONTRACT INCLUDES STORM SEWER JOINT REPAIRS, POINT REPAIRS OF STORM SEWER, INSTALLATION OF NEW PRE-CAST CONCRETE MANHOLES AND MANHOLE MODIFICATIONS AS DETAILED IN THE PLANS AND THE PERFORMANCE OF OTHER INCIDENTAL WORK.
- THE CONTRACTOR WILL DO ALL OF THE LABOR AND MATERIALS NECESSARY FOR THE FINAL COMPLETION OF THIS CONTRACT IN THE MANNER AND UNDER THE CONDITIONS HEREIN SPECIFIED AND PROVIDED AND IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
- 1.02 A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED BY THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK. IN ADDITION, THE CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO BOARDMAN TOWNSHIP PRIOR TO THE COMMENCEMENT OF WORK.
- 1.03 ACCESS TO ALL DRIVEWAYS WILL BE MAINTAINED AT ALL TIMES EXCEPT THE TIME WHEN SEWER WORK AND PAVEMENT REPLACEMENT WILL NOT PERMIT.
- 1.04 IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE LOCAL ACCESS, VEHICULAR AND PEDESTRIAN, TO ALL PROPERTIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL FURNISH, MAINTAIN AND SUBSEQUENTLY REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, BARRIERS, TEMPORARY PAVEMENT, LIGHTING, FLAGGERS, SIGNING AND OTHER TRAFFIC CONTROLS TO INSURE THE SAFETY OF PERSONS AND VEHICLES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS.
- MAINTAINING TRAFFIC SHALL BE IN ACCORDANCE WITH ODOT ITEM 614 AND THE OHIO MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS - REVISION 20.
- 1.05 THE CONTRACTOR WILL BE RESPONSIBLE FOR SECURING A SITE FOR DISPOSAL OF ALL EXCAVATED MATERIAL THAT IS UNSUITABLE FOR USE AS BACKFILL AND ALL OTHER EXCESS EXCAVATED MATERIALS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH THE LOCATION OF THE DISPOSAL SITE AND WRITTEN PERMISSION FOR USE OF THE SITE FROM THE PROPERTY OWNER. THE COST FOR SECURING AND MAINTAINING THE DISPOSAL SITE WILL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS IN THE BID PROPOSAL.
- 1.06 ALL OVER-THE-ROAD VEHICLES USED ON THE PROJECT BY ALL CONTRACTORS AND SUBCONTRACTORS WILL BE CLEARLY MARKED SHOWING ITS COMPANY AFFILIATION.
- 1.07 ALL SHOP DRAWINGS WILL BE SUBMITTED TO THE ENGINEER FOR PRELIMINARY CHECKING. THE ENGINEER SHALL FORWARD THE CHECKED SHOP DRAWINGS TO THE OWNER FOR FINAL CHECKING AND APPROVAL. SHOP DRAWINGS MUST BE APPROVED PRIOR TO ORDERING ANY MATERIALS.
- 1.08 BEFORE THE OWNER WILL APPROVE AND ACCEPT THE WORK AND RELEASE THE GUARANTEE RETAINER, THE CONTRACTOR WILL FURNISH THE OWNER A WRITTEN REPORT INDICATING THE RESOLUTION OF ANY AND ALL PROPERTY DAMAGE CLAIMS FILED WITH THE CONTRACTOR BY ANY PARTY DURING THE CONSTRUCTION PERIOD. THE INFORMATION TO BE SUPPLIED SHALL INCLUDE, BUT NOT BE LIMITED TO, NAME OF CLAIMANT, DATE FILED WITH CONTRACTOR, NAME OF INSURANCE COMPANY AND/OR ADJUSTER HANDLING CLAIM, HOW CLAIM WAS RESOLVED AND IF CLAIM WAS NOT RESOLVED FOR THE FULL AMOUNT, A STATEMENT INDICATING THE REASON FOR SUCH ACTION.
- 1.09 THE CONTRACTOR IS TO TAKE CARE DURING EXCAVATION, PIPE INSTALLATION AND BACKFILLING, IN AREAS IMMEDIATELY ADJACENT TO TREES, TO MINIMIZE THE DISTURBANCE OF ROOT SYSTEM AND TREE LIMBS. THE COST OF ANY EXTRA EFFORT SUCH AS HAND EXCAVATION IS TO BE INCLUDED IN THE UNIT PRICE BID FOR PIPE INSTALLATION.
- 1.10 CONTRACTOR SHALL TAKE SPECIAL PROTECTIONS AS NECESSARY TO PREVENT ANY HARMFUL OR TOXIC BYPRODUCTS, INCLUDING FUMES, FROM ENTERING INTO BUILDINGS CONNECTED TO THE SEWER. THIS SHALL INCLUDE ENSURING FUMES WILL NOT SEEP INTO BUILDINGS THROUGH HOMES BY EITHER TEMPORARILY PLUGGING LATERALS THROUGH CLEANOUTS. 48 HOUR NOTIFICATION TO EACH PROPERTY CONNECTED TO THE SEWER SHALL BE PROVIDED PRIOR TO WORK COMMENCING.
- 2.0 EXCAVATION, BACKFILL AND COMPACTION
- 2.01 ALL EXCAVATION WILL BE CONSIDERED UNCLASSIFIED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR ROCK OR SHALE EXCAVATION.
- 2.02 ALL BACKFILL WILL BE AS DESCRIBED IN THESE PLANS AND SPECIFICATIONS.
- 2.03 SLAG PRODUCTS OR CRUSHED CONCRETE WILL NOT BE PERMITTED FOR BEDDING, BACKFILL, OR TRAFFIC COMPACTED SURFACE.
- 2.04 ALL UTILITY LINES CROSSING THE NEW SEWER TRENCH, (I.E. STORM SEWERS, STORM LATERALS, WATERLINES, WATERLINE CONNECTIONS, SANITARY SEWERS, SANITARY LATERALS, GAS MAINS, GAS SERVICE CONNECTIONS, UNDERGROUND OCT CONDUITS, CABLE TV LINES) SHALL BE PROTECTED AND SUPPORTED WITH HARDWOOD PLANKS OR REMOVED AND REPLACED, RECONNECTED AND SUPPORTED ACROSS THE ENTIRE WIDTH OF THE TRENCH. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THE ABOVE WORK UNLESS ANY OF THE ABOVE UTILITIES ARE ENCOUNTERED AND NOT SHOWN ON THE DRAWINGS.
- 2.05 ANY COMPACTION TESTING REQUIRED AT THE SOLE DISCRETION OF THE ENGINEER SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
- 2.06 THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND MANAGEMENT OF ALL GROUNDWATER AND SURFACE WATER AS NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. ALL CONDUIT SHALL BE INSTALLED IN A DRY AND STABLE TRENCH.
- 3.0 STORM SEWER MATERIALS
- 3.01 ALL PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 334100 OR AS NOTED IN PLANS.
- 3.02 CONTRACTOR SHALL FILL ALL VOIDS AT PIPE CONNECTIONS TO EXISTING AND NEW CATCH BASINS INSIDE AND OUTSIDE WITH CHEMICAL SEALANT USED FOR JOINT REPAIRS. SEALANT SHALL BE WATER-TIGHT AND FLUSH TO ALL INTERIOR WALLS.
- 3.03 CONTRACTOR SHALL RE-CONNECT ALL ENCOUNTERED DOWN SPOUT DRAINS AND OTHER STORM SEWER DRAIN LINES UNLESS DIRECTED OTHERWISE WITHIN.
- 3.04 ALL EXISTING UTILITY LINE ELEVATION SHOWN ARE ESTIMATED AND MUST BE FIELD DETERMINED BY THE CONTRACTOR. CONFLICTS MUST BE RESOLVED BY THE CONTRACTOR AND THE UTILITY OWNER.
- 3.05 FINAL MANHOLE AND CATCH BASIN RIMS SHALL BE FLUSH WITH FINAL GRADE IN PAVED AREAS AND 3" BELOW FINAL LAWN GRADE WITH BEEHIVE GRATE IN UNPAVED AREAS.
- 3.06 CONNECTION OF EXISTING STORM SEWER OR STORM DRAIN LINES TO A NEW STORM SEWER PIPE, SHALL UTILIZE A SILT TIGHT COUPLING OR CONCRETE ENCASED JOINT AS APPROVED BY THE OWNER.
- 3.07 INSTALL SILT SACK IN ALL CATCH BASINS, REMOVE WHEN DISTURBED AREAS ARE STABILIZED.
- 3.08 ALL GRATES SHALL BE BICYCLE SAFE, UNLESS OTHERWISE NOTED.
- 3.09 ALL PIPE MATERIAL SHALL BE HDPE OR PE (OR APPROVED EQUIVALENT) PER SPECIFICATION 334100.

4.0 EXISTING UTILITIES

- 4.01 NO PROFESSIONAL FIELD SURVEY WAS COMPLETED. THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY SEARCHES OF AVAILABLE RECORDS. UTILITIES WERE DEVELOPED PRIMARILY THROUGH GIS SHAPEFILES, NEARMAP, AND AS BUILT DRAWINGS. LOCATIONS ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AND LOCATE ALL UTILITIES, WHETHER INCLUDED IN THE PLANS OR NOT, PRIOR TO ANY WORK COMMENCING.
- 4.02 WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE THEIR WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS GOING ON ADJACENT TO THE POLE.
- 4.03 DELAYS TO THE CONTRACTOR AS A RESULT OF TIMING OF POLE RELOCATION OR PROTECTION SHALL NOT BE CONSIDERED COMPENSABLE DELAYS, AS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS WORK IN CONFORMANCE TO THE UTILITY COMPANY'S SCHEDULE.
- 4.04 NO SEPARATE PAYMENT WILL BE MADE FOR UTILITY SUPPORT, POLE SUPPORT OR POLE RELOCATION. THE CONTRACTOR SHALL INCLUDE THE COST OF UTILITY SUPPORT, POLE SUPPORT AND POLE RELOCATION IN THE UNIT PRICE(S) BID FOR OTHER RELATED ITEMS OF WORK.
- 4.05 CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL THE EXISTING GAS, WATER, ELECTRIC, CABLE, TELEPHONE, SANITARY OR OTHER UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF ANY PROPOSED IMPROVEMENT INDICATED ON THE PLANS. SHOULD A CONFLICT EXIST AT A UTILITY CROSSING, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- 4.06 BEFORE ANY WORK IS STARTED, THE CONTRACTOR SHALL CALL THE "OHIO UTILITIES PROTECTION SERVICE", AT 1-800-362-2764, A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF THE WORK. NON-MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, AT NO ADDITIONAL EXPENSE TO THE OWNER, TO AVOID DAMAGE TO EXISTING UNDERGROUND AND OVERHEAD UTILITY LINES DURING THE ENTIRE PROJECT. IN THE EVENT OF DAMAGE TO EXISTING PUBLIC AND/OR PRIVATE UTILITIES, THE AGENCY CONCERNED SHALL BE NOTIFIED IMMEDIATELY AND ALL REPAIR WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE AGENCY AT NO ADDITIONAL EXPENSE TO THE OWNER, INCLUDING ANY INSPECTION FEES OR MAINTENANCE CREWS.
- 4.07 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION OF THE EXISTING UTILITY OWNERS AND THE UTILITY PROTECTION SERVICE IN THE LIST INCLUDED ON THE COVER SHEET IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE.
- 4.08 ALL ROAD CLOSURE MUST BE APPROVED BY THE OWNER. IN THE EVENT OF A ROAD CLOSURE THE CONTRACTOR SHALL NOTIFY BOARDMAN TOWNSHIP A MINIMUM OF 48 HOURS IN ADVANCE.
- 4.09 SERVICE CONNECTIONS AND LATERALS ARE SHOWN ON THE PLANS USING RECORD DRAWINGS AND G.I.S DATA. THE CONTRACTOR SHALL FIELD VERIFY AND PROTECT CONNECTIONS AND LATERALS DURING CONSTRUCTION AND REPAIR ANY DAMAGE DUE TO CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR LOCATION, PROTECTION, AND/OR REPAIR.
- 5.0 GRASS RESTORATION
- 5.01 GRASS AREAS TO BE RESTORED SHALL BE SEEDED UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
- 5.02 SEEDING AND/OR SODDING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 329200.19 OF THE DETAILED SPECIFICATIONS.
- 5.03 ALL GRASSSED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY SEEDING AND MULCHING RATHER THAN SODDING UNLESS OTHERWISE SHOWN ON PLANS, DETAILS, OR SPECIFICATIONS.
- 5.04 SEEDING AND MULCHING OF ALL DISTURBED AREAS SHALL IMMEDIATELY FOLLOW EXCAVATION AND SEWER INSTALLATION OPERATIONS.
- 6.0 DRAINAGE, SOIL EROSION, SEDIMENT AND DUST CONTROL
- 6.01 ALL SWALES, OR DITCHES DISTURBED OR DESTROYED BY THE CONSTRUCTION ACTIVITIES SHALL BE REPLACED TO MATCH PRE CONSTRUCTION CONDITIONS OR BETTER AT THE CONTRACTORS EXPENSE.
- 6.02 POSITIVE DRAINAGE OF ALL CONSTRUCTION AREAS SHALL BE MAINTAINED AT ALL TIMES.
- 6.03 THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH ODOT ITEM 207 AND AS REQUIRED BY THE MAHONING COUNTY SOIL AND WATER CONSERVATION DISTRICT.
- 6.04 TEMPORARY OR PERMANENT EROSION CONTROL MATTING SHALL BE UTILIZED FOR STABILIZATION OF ALL DISTURBED SLOPE AREAS GREATER THAN 2:1 (HORIZ:VERT). PERMANENT EROSION CONTROL SHALL BE UTILIZED ON SEVER SLOPES GREATER THAN 1-1/2:1, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 6.05 THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY, SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST-FREE STREET SWEEPING DEVICE PERFORMED DAILY OR AS DIRECTED BY THE TOWNSHIP, TO MAINTAIN ALL PAVED AREAS AFFECTED BY THE CONSTRUCTION.
- PAYMENT FOR ALL SOIL EROSION, SEDIMENT AND DUST CONTROL MEASURES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER VARIOUS ITEMS.

7.0 TREE PROTECTION

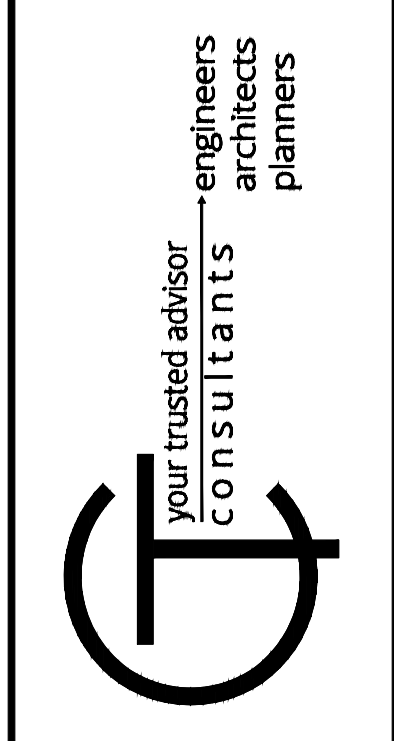
- 7.01 SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO TREES AND THEIR ROOT SYSTEM. THE OPERATION OF ALL EQUIPMENT, PARTICULARLY WHEN EMPLOYING BOOMS, THE STORAGE OF MATERIALS AND THE DISPOSITION OF EXCAVATED MATERIALS SHALL BE CONDUCTED IN A MANNER WHICH WILL NOT INJURE TREES, TRUNKS, BRANCHES OR THEIR ROOTS UNLESS SUCH TREES ARE DESIGNATED BY THE ENGINEER FOR REMOVAL.
- 8.0 MONUMENT PROTECTION
- 8.01 PROPERTY PINS AND MONUMENTS ALONG THE ROUTE OF THE IMPROVEMENT, WHICH MAY BE DISTURBED BY THE CONTRACTOR, SHALL BE REFERENCED BY A PROFESSIONAL SURVEYOR, SO THEY CAN BE REPLACED IN THE EVENT THAT THEY ARE DISTURBED DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL PINS, MONUMENTS AND REFERENCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF LOCATING AND REFERENCING AND REPLACING THE PROPERTY PINS AND MONUMENTS.
- 9.0 MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS
- 9.01 WHEN MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS INTERFERE WITH CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND ERECT THEM IN A TEMPORARY LOCATION DURING CONSTRUCTION (EXCEPT FENCES). AFTER COMPLETION OF THE CONSTRUCTION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL ERECT THE MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS IN A PERMANENT LOCATION IN ACCORDANCE WITH THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE WORK SHALL BE INCLUDED IN THE UNIT PRICES BID FOR OTHER ITEMS.
- 10.0 RESTORATION
- 10.01 THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM THEIR OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES AND PROPERTY TO ITS ORIGINAL CONDITION. ANY DITCHES DISTURBED DURING CONSTRUCTION SHALL BE REGRADED BY THE END OF THE SAME WORK DAY.
- 10.02 ALL EXISTING STORM SEWER FACILITIES, INCLUDING TILE, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR RECONNECTED TO THE EXISTING OR PROPOSED SYSTEM. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK. THE CONTRACTOR SHALL INCLUDE THE COST OF SUCH WORK IN THE UNIT PRICE FOR OTHER RELATED ITEMS OF WORK.
- 10.03 RESTORATION SHALL INCLUDE SEEDING AND MULCHING OF DISTURBED AREAS, RESTORATION OF EXISTING DRIVES AND FINAL CLEAN UP.
- 11.0 MATERIAL STORAGE
- 11.1 ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE STORED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL LEAVE DRIVEWAYS, HYDRANTS UNDER PRESSURE, VALVE PIT COVERS, VALVE BOXES, CURB STOP BOXES OR OTHER UTILITY CONTROLS UNOBTSTRUCTED AND ACCESSIBLE WHILE THE WORK IS BEING COMPLETED. GUTTERS SHALL BE KEPT CLEAR AND MAINTAINED AT ALL TIMES OR OTHER SATISFACTORY PROVISIONS SHALL BE MADE FOR STREET DRAINAGE. NATURAL DRAINAGE COURSES SHALL NOT BE OBTSTRUCTED. DURING THE PROGRESS OF WORK, ALL MATERIALS SHALL BE KEPT TRIMMED UP AND MAINTAINED IN A NEAT MANNER.
- 11.02 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL TREES, STUMPS, BROKEN PAVEMENT AND ALL CONSTRUCTION DEBRIS OF WHATEVER NATURE OUTSIDE THE WORK LIMITS OF THE PROJECT. NO EXTRA PAYMENT WILL BE MADE BY THE OWNER FOR THE REMOVAL AND DISPOSAL OF DEBRIS.
- 12.0 MATERIAL TESTING
- 12.01 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIAL AND EQUIPMENT TESTING. THE OWNER MAY REQUIRE SUBGRADE COMPACTION TESTING, ASPHALT AND CONCRETE QUALITY CONTROL TESTING WHICH WILL BE PAID FOR BY THE CONTRACTOR.
- 13.0 INSPECTION
- 13.01 THE CONTRACTOR SHALL NOT COMMENCE WITH ANY FORM OF CONSTRUCTION WITHOUT CONTACTING THE OWNER AS APPROPRIATE, A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION ACTIVITY TO ARRANGE FOR OBSERVATION. IF ANY CHANGE IN THE WORK SCHEDULE BECOMES NECESSARY, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE OWNER AND UNDERSTAND THE IMPLICATIONS AND COSTS. IF NO NOTIFICATION IS MADE IN REGARDS TO CANCELLATION OF WORK, THE CONTRACTOR WILL BE CHARGED FOR THE TIME INCURRED.
- 14.0 PROHIBITED CONSTRUCTION ACTIVITIES
- 14.01 DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER;
- 14.02 LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS;
- 14.03 INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS;
- 14.04 PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE;
- 14.05 DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO;
- 14.06 PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM;
- 14.07 DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA;
- 14.08 DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS;
- 14.09 OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT;
- 14.10 DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION;
- 14.11 STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES;
- 14.12 RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER;
- 14.13 OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OR 8:00 AM AND 5:00 P.M. OR OUTSIDE THE HOURS ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS
- 14.14 CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER, AND CLOSING CLEAR ACCESS:
- BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;
 - BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR
 - BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.

LEGEND & SYMBOLOGY:

- EXISTING LINEWORK AND SYMBOLS
- EX. DRIVEWAY
 - EX. EDGE OF PAVEMENT
 - WS --- WS --- WS --- EX. WATER SERVICE
 - WAT --- EX. WATER LINE / WATER MAIN
 - SAN --- EX. SANITARY SEWER
 - STM --- EX. STORM SEWER
 - STM --- EX. STORM SEWER (ABOND)
 - GAS --- EX. GAS LINE
 - EX. RW --- EX. PROPERTY LINE
 - EX. RIGHT-OF-WAY
 - ⊗ EX. WATER VALVE
 - ⊗ EX. FIRE HYDRANT
 - ⊗ EX. SANITARY MANHOLE
 - ⊗ EX. STORM MANHOLE
 - ⊗ EX. STORM CURB & GUTTER INLET
 - ⊗ EX. GAS VALVE

- PROPOSED LINEWORK AND SYMBOLS
- ⊗ PR. STORM SEWER
 - ⊗ PR. STORM MANHOLE
 - ⊗ PR. STORM STRUCTURE
 - PR. PAVEMENT REPLACEMENT
 - ▨ PR. STORM STRUCTURE MODIFICATION
 - ⊗ PR. POINT REPAIR

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2	GENERAL NOTES AND SYMBOLOGY	G-02
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4	MAINTENANCE OF TRAFFIC PLAN - 2	MOT-02
5	PLAN AND PROFILE - STA. 0+00 TO 3+50	PP-01
6	PLAN AND PROFILE - STA. 3+50 TO 7+50	PP-02
7	PLAN AND PROFILE - STA. 7+50 TO 10+77	PP-03
8	BAYMAR TYPICAL CROSS SECTIONS	TYP-1
9	EROSION AND SEDIMENT CONTROL DETAILS	ESC-01
10	CONSTRUCTION DRAWING - 1	CD-01



DATE	REVISION	NO	REBID	ISSUED FOR:	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
			04/29/2024	AS SHOWN					

ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
BOARDMAN TOWNSHIP, OH
MAHONING COUNTY
GENERAL NOTES AND SYMBOLOGY

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	G-02
SHEET	OF
2	10

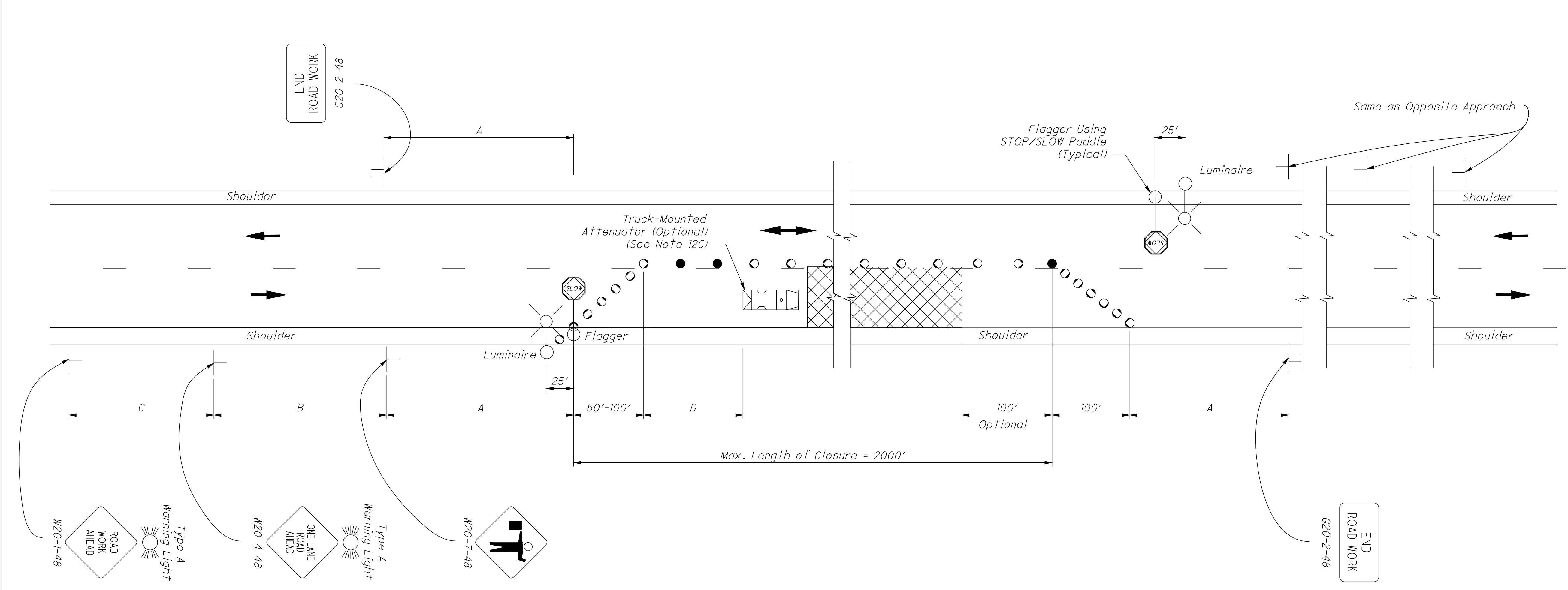
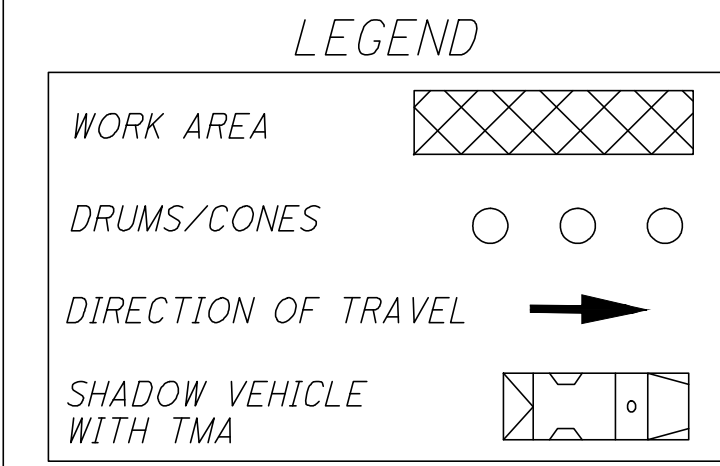


TABLE I (SIGN SPACING)

ROAD TYPE	DISTANCE BETWEEN SIGNS (FT)		
	A	B	C
Two-Lane (< 40 MPH)	100	100	100
Two-Lane (45-50 MPH)	350	350	350
Two-Lane (55-60 MPH)	500	500	500

TABLE II

SPEED LIMIT (MPH)	BUFFER (D) (FT) MIN.
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570



THIS DRAWING REPLACES MT-97.10 DATED 07-18-2014.
 STANDARD ROADWAY CONSTRUCTION DRAWING
 SCD NUMBER **MT-97.10**
FLAGGER CLOSING 1 LANE OF A 2-LANE HIGHWAY - STATIONARY OPERATION
 OFFICE OF ROADWAY ENGINEERING
 STDS. ENGINEER Soisson
 STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein
 REVISION DATE 04-19-2019

ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
 MAHONING COUNTY BOARDMAN TOWNSHIP, OH
MAINTENANCE OF TRAFFIC PLAN - 1

PROJECT NO. **232472**
 DISCIPLINE **CIVIL**
 SHEET NAME **MOT-01**
 SHEET **3** OF **10**

ISSUED FOR:	REBID NO.	REVISION	DATE
ISSUE DATE: 04/29/2024			
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DRAWN BY: AMM			
CHECKED BY: TJM			

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STATE OF OHIO
 REGISTERED PROFESSIONAL ENGINEER
 TIMOTHY J. McLAUGHLIN
 83985

NOTES:

FLAGGERS

1. *Flaggers, one for each direction, shall be used to control traffic continuously for as long as a one lane operation is in effect. The flaggers shall be able to communicate with each other at all times.*

LENGTH OF CLOSURE

2. *Several small work areas close together should be combined into one work zone. However, the closure shall not be more than 2000' long unless approved by the Engineer. The minimum length between closures shall be 2000'. Only one side of the road shall be closed in any one work zone.*

SIGN LOCATION AND SPACING

- 3A. *The minimum spacing between work zone signs is shown in Table 1. Maximum spacing should not be greater than 1.5 times the distances shown in Table 1.*
- 3B. *Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200' for speeds of 45 mph or less and a minimum of 400' for speeds of 50 mph or greater.*
- 3C. *The location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.*

ADJUSTMENTS FOR SIGHT DISTANCE

4. *The location of the flagger station and the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.*

BASIC SIGNING

- 5A. *ROAD WORK AHEAD (W20-1) signs shall be provided on entrance ramps or roadways entering the work limits.*
- 5B. *END ROAD WORK (G20-2) signs are only required for lane closures of more than 1 day. If is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits.*
- 5C. *Overlapping of signing for adjacent projects should be avoided where the messages could be confusing. Any ROAD WORK AHEAD (W20-1) or END ROAD WORK (G20-2) sign which falls within the limits of another traffic control zone shall be omitted or covered during the period when both projects are active.*

SIGNING DETAILS

- 6A. *The Advisory Speed (W13-1P) plaque shall be used when specified in the plan.*
- 6B. *36" warning signs may be used when the approach speed limit is 40 mph or less.*

FLASHING WARNING LIGHTS

7. *Type A flashing warning lights shown on the ROAD WORK AHEAD (W20-1) signs and on the LANE CLOSED AHEAD (W20-5) signs are required whenever a night lane closure is necessary.*

DRUMS / CONES

- 8A. *Drum spacing shall be as follows:*
 - a) *Spacing along the closure shall be 40' center-to-center.*
 - b) *Spacing along the approach taper shall be 10' center-to-center.*
- 8B. *Cones may be substituted for drums as follows:*
 - a) *Cones used for daytime traffic control shall have a minimum height of 28".*
 - b) *Cones used for nighttime traffic control shall have a minimum height of 42".*
 - c) *Use of cones at night shall be prohibited along tapers.*
- 8C. *Provisions shall be made to stabilize the cones and drums to prevent them from blowing over.*
- 8D. *A minimum of two drums shall be used to close the paved shoulder.*

(RESERVED FOR FUTURE USE)

- 9A. *(intentionally blank)*

AREA ILLUMINATION

- 10A. *Adequate area illumination of each flagger station shall be provided at night. Use of portable flood lighting is acceptable. Luminaires shall be located adjacent to each flagger station.*
- 10B. *To ensure the adequacy of floodlight placement and the elimination of glare, the Contractor and the Engineer shall drive through the worksite each night when the lighting is in place. Light placement and shielding shall be adjusted to the satisfaction of the Engineer.*

INTERSECTION / DRIVEWAY ACCESS

11. *Within the length of closure, provision shall be made to control traffic entering from intersecting streets and major drives as necessary to prevent wrong-way movements and to keep vehicles off of new pavement not ready for traffic. The Contractor shall:*
 - a) *Place across the closed lane, either three drums (cones) or barricades, and/or*
 - b) *Provide an additional flagger at every public street intersection and major driveway.*

Drums (cones) placed across the closed lane shall be located 25' beyond the projected pavement edges of the driveway or cross highway, as shown in Standard Construction Drawings (SCDs) MT-97.11 or MT-97.12. For barricades, see SCD MT-101.60.

Existing STOP signs shall be relocated as necessary to assure proper location for the traffic conditions.

The method of control shall be subject to the approval of the Engineer.

SHADOW VEHICLE

- 12A. *The shadow vehicle shall be in place and unoccupied whenever workers are in the work area. This vehicle shall be removed from the pavement whenever workers are not in the work area.*
- 12B. *The shadow vehicle shall be equipped with a high-intensity yellow rotating, flashing, oscillating, or strobe light(s).*
- 12C. *The shadow vehicle shall be equipped with a truck-mounted or trailer attenuator (TMA) in accordance with CMS 614.03 when called for in the plans.*

CHIP SEAL OPERATIONS

13. *For chip seal operations, additional signing shall be incorporated in the advanced warning area.*
 - a) *The LOOSE GRAVEL (W8-7) and FRESH TAR (W21-2) signs shall both be used in advance of the chip seal operation.*
 - b) *Repeat the LOOSE GRAVEL sign with a 35 mph Advisory Speed (W13-1) plaque every half mile per CMS 422.09.*
 - c) *The FRESH TAR and the LOOSE GRAVEL signs shall both be used for signing of side roads intersecting the work area.*

THIS DRAWING REPLACES MT-97.10 DATED 07-18-2014.

SCD NUMBER

MT - 97.10

STANDARD ROADWAY CONSTRUCTION DRAWING

FLAGGER CLOSING 1 LANE OF A 2-LANE HIGHWAY - STATIONARY OPERATION

OFFICE OF ROADWAY ENGINEERING

STDS. ENGINEER

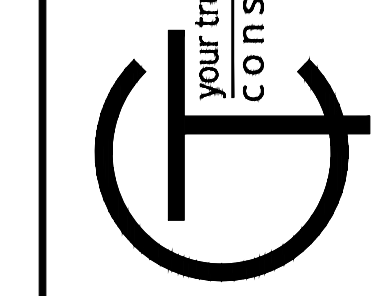
Soisson

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR

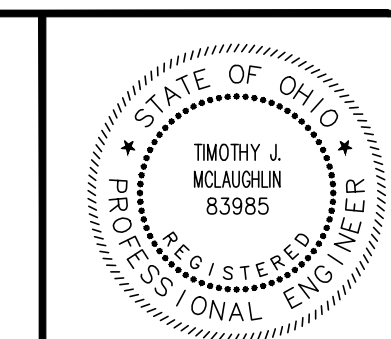
David L. Holstein

REVISION DATE

04-19-2019



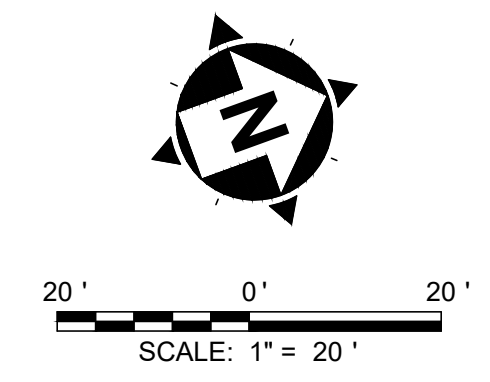
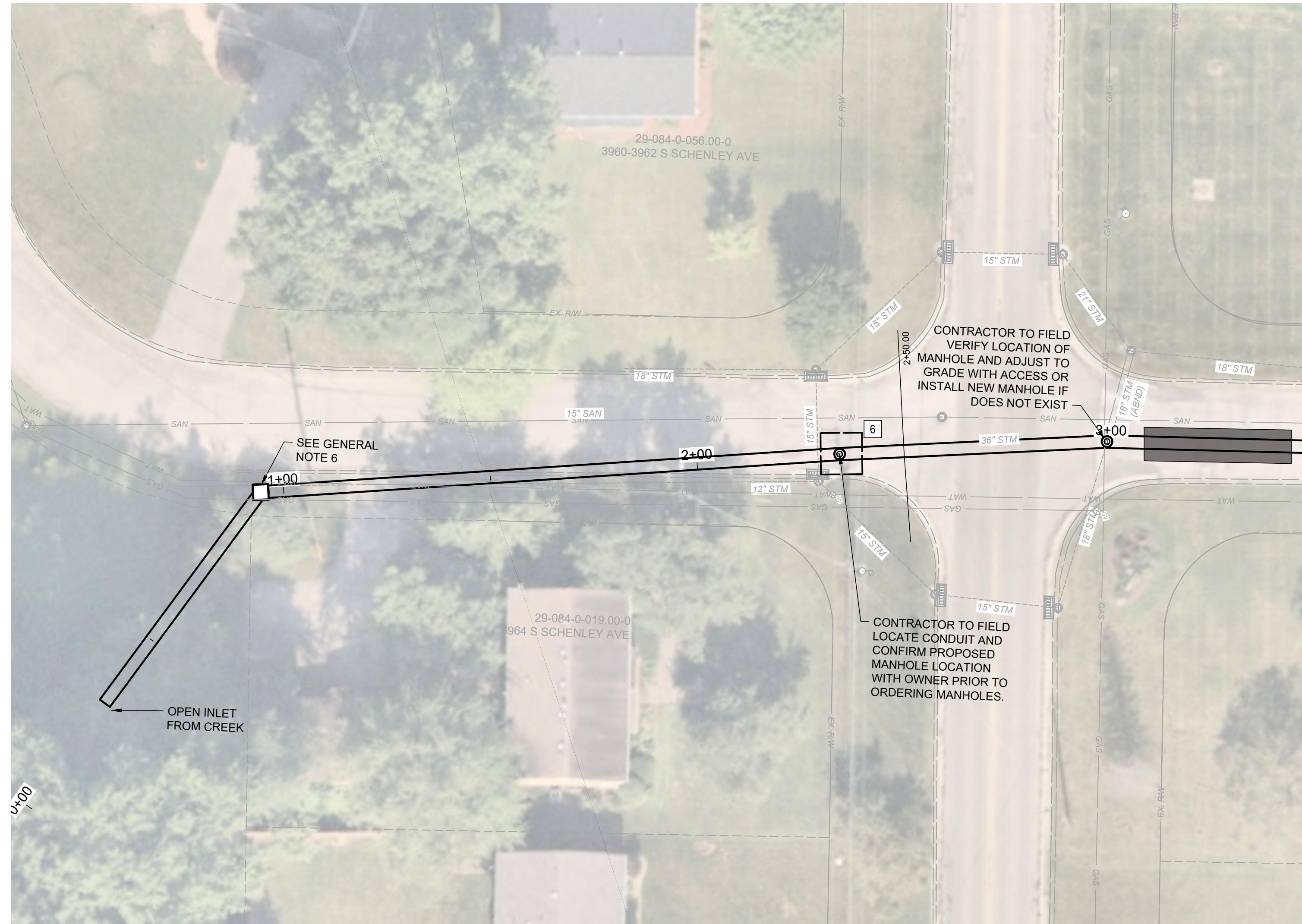
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CHECKED BY:	TJM			

ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
MAHONING COUNTY BOARDMAN TOWNSHIP, OH
MAINTENANCE OF TRAFFIC PLAN - 2

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	MOT-02
SHEET	4
OF	10

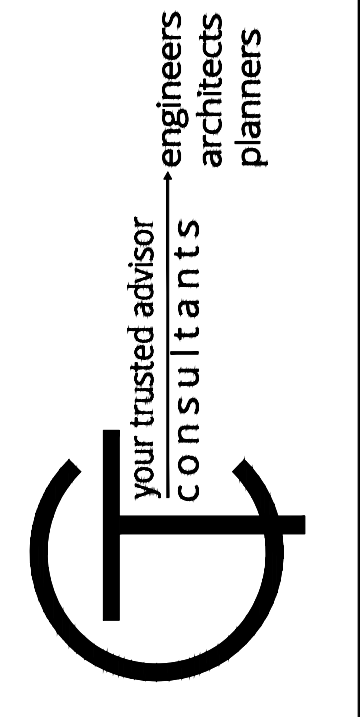
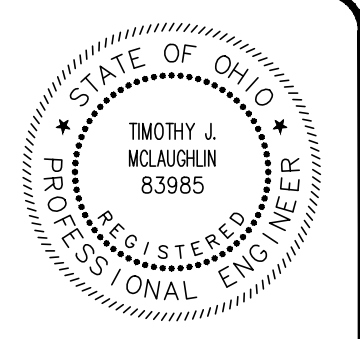
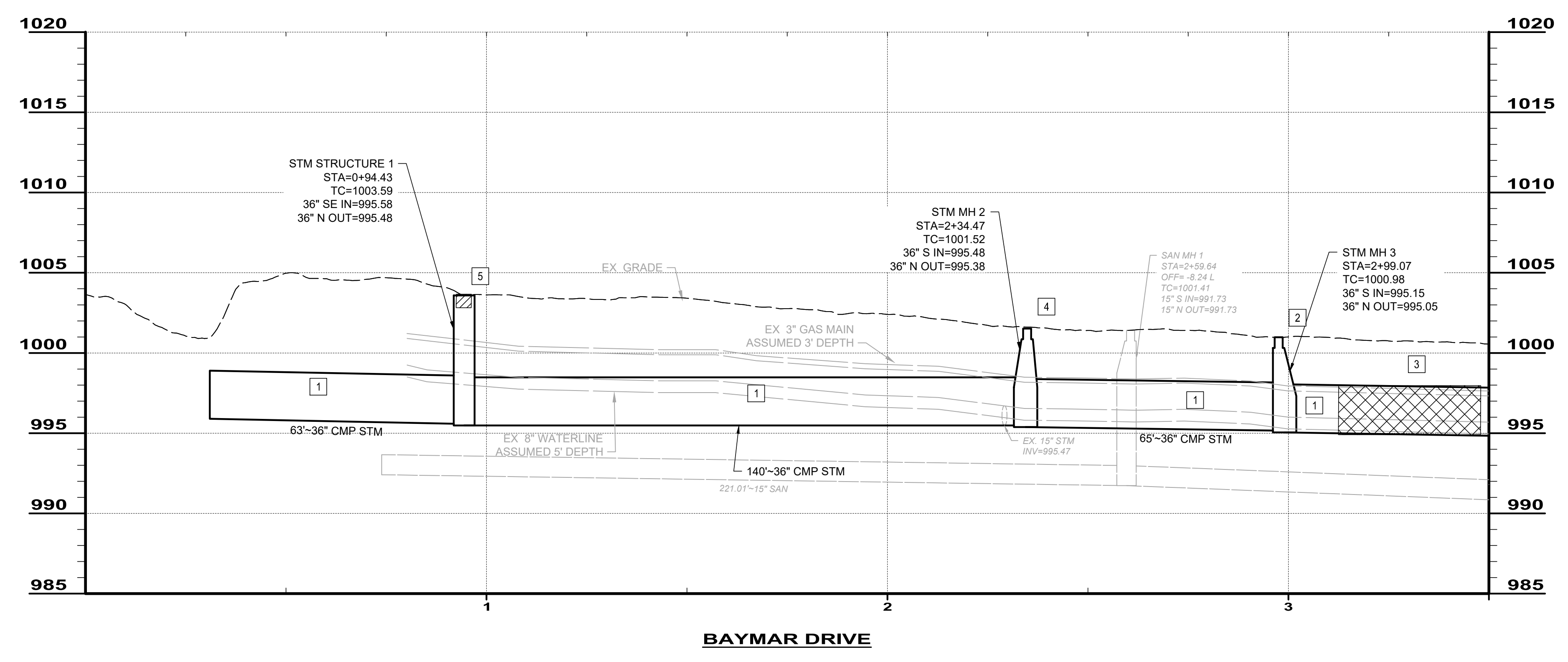


CODED NOTES:

- 1 STORM SEWER JOINT REPAIR AT EACH JOINT (TOTAL 14)
- 2 PROPOSED ADJUSTMENT MANHOLE (TOTAL 1)
- 3 PROPOSED POINT REPAIR (APPROXIMATELY 35 LF)
- 4 PROPOSED STORM MANHOLE (TOTAL 1)
- 5 PROPOSED STORM STRUCTURE MODIFICATION (TOTAL 1)
- 6 10 FEET BY 10 FEET EXPLORATORY DIG FOR CONFIRMATION OF ALIGNMENT (TOTAL 100 SF)

GENERAL NOTES:

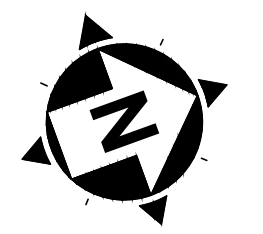
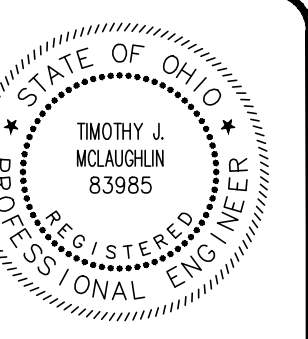
1. CONTRACTOR SHALL HEAVY CLEAN AND TELEVISION SEWER AS DIRECTED BY THE ENGINEER PRIOR TO WORK. CCTV SHALL BE REVIEWED BY THE ENGINEER BEFORE AUTHORIZATION TO COMPLETE IMPROVEMENTS. DIRECTION OF ANY ADDITIONAL REPAIRS NOT CURRENTLY SHOWN ON PLANS WILL BE MADE PRIOR TO COMMENCEMENT OF ANY IMPROVEMENTS.
2. CONTRACTOR IS RESPONSIBLE TO CONFIRM AND VERIFY ANY ADDITIONAL INLETS (ACTIVE OR INACTIVE) ENTERING INTO THE SEWER. ALL INLETS SHALL REMAIN ACTIVE OR RESTORED AT THE COMPLETION OF CONSTRUCTION.
3. POINT REPAIRS SHALL BE MADE TO DISTURB THE LEAST AMOUNT OF PAVEMENT, CURB AREA, AND/OR GRASS AREA AS MUCH AS POSSIBLE. THE CONTRACTOR SHALL REPLACE ALL PAVEMENT TO MATCH EXISTING CONDITIONS AND PER CONSTRUCTION DETAILS.
4. CONTRACTOR SHALL RESTORE ANY DISTURBANCE TO THE CREEK OR VEGETATION ON PRIVATE PROPERTY TO THE SAME OR BETTER CONDITION AT THEIR COST.
5. ALL PROPOSED ACCESS MANHOLES MUST BE CUT INTO EXISTING MAIN AND SEALED USING AN X-CEL GASKET OR APPROVED EQUIVALENT. CMP PIPE MAY HAVE A DISSIMILAR SIZE AND CONCRETE COLLARS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
6. CONTRACTOR SHALL BUILD 48" BY 48" CONCRETE SLAB AND INSTALL NEW EAST JORDAN V5760 OR APPROVED EQUIVALENT. SLAB SHALL BE 8" MINIMUM THICKNESS AND BE REINFORCED TO MEET H5-20 LOADINGS. THE SLAB SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH FLAT SLAB TOPS SPECIFIED IN ASTM C478/478M.



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DESIGNED BY: AMM	AMM			
DRAWN BY: AMM	AMM			
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ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
 MAHONING COUNTY BOARDMAN TOWNSHIP, OH
PLAN AND PROFILE - STA. 0+00 TO 3+50

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	PP-01
SHEET	5
OF	10



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

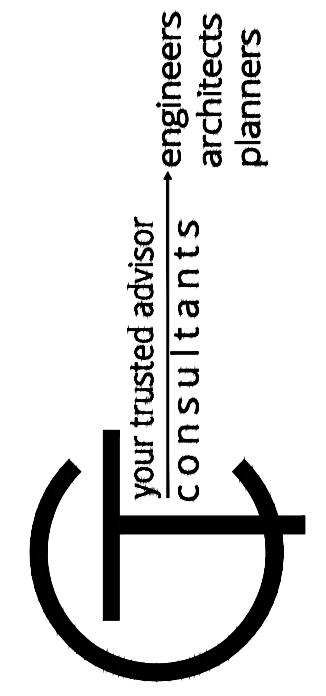


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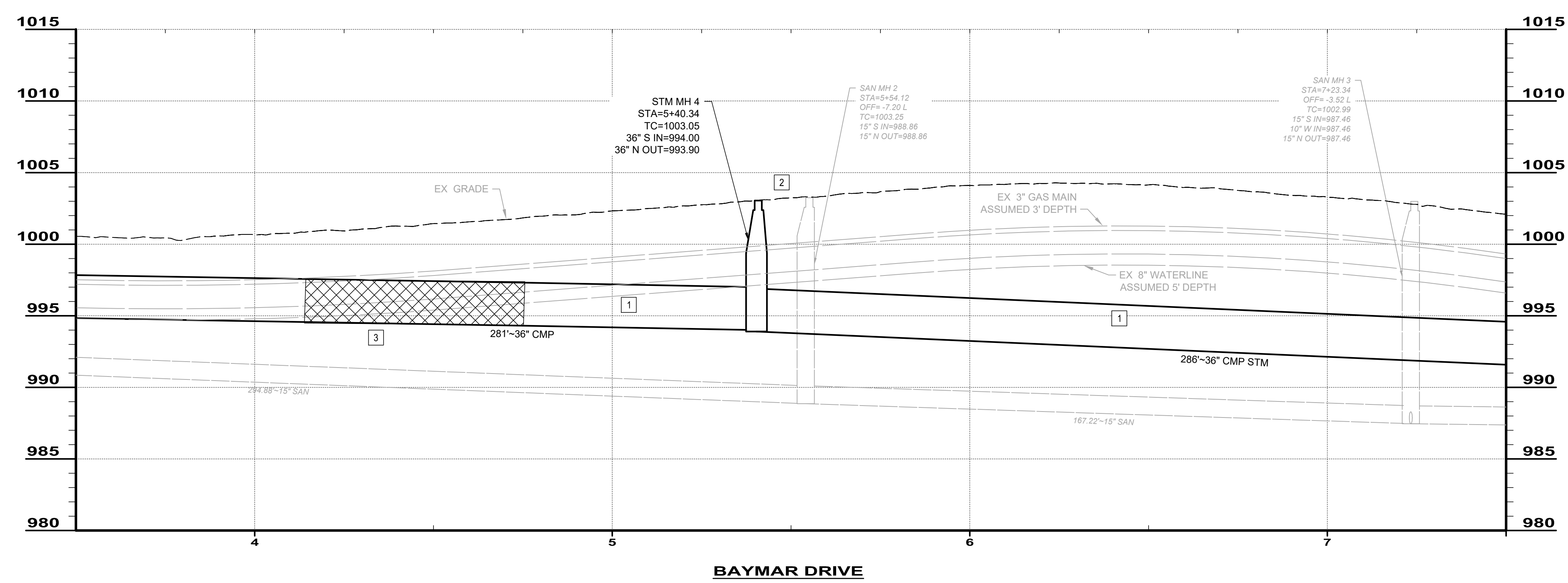
- 1 STORM SEWER JOINT REPAIR AT EACH JOINT (TOTAL 27)
- 2 PROPOSED ADJUSTMENT MANHOLE (TOTAL 1)
- 3 PROPOSED POINT REPAIR (APPROXIMATELY 65 LF)
- 4 PROPOSED STORM STRUCTURE MODIFICATION (TOTAL 1)

GENERAL NOTES:

- 1. CONTRACTOR SHALL HEAVY CLEAN AND TELEVIEW SEWER AS DIRECTED BY THE ENGINEER PRIOR TO WORK. CCTV SHALL BE REVIEWED BY THE THE ENGINEER BEFORE AUTHORIZATION TO COMPLETE IMPROVEMENTS. DIRECTION OF ANY ADDITIONAL REPAIRS NOT CURRENTLY SHOWN ON PLANS WILL BE MADE PRIOR TO COMMENCEMENT OF ANY IMPROVEMENTS.
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- 4. CONTRACTOR SHALL RESTORE ANY DISTURBANCE TO THE CREEK OR VEGETATION ON PRIVATE PROPERTY TO THE SAME OR BETTER CONDITION AT THEIR COST.
- 5. ALL PROPOSED ACCESS MANHOLES MUST BE CUT INTO EXISTING MAIN AND SEALED USING AN X-CEL GASKET OR APPROVED EQUIVALENT. CMP PIPE MAY HAVE A DISSIMILAR SIZE AND CONCRETE COLLARS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
- 6. CONTRACTOR SHALL BUILD 28" BY 40" CONCRETE SLAB AND INSTALL NEW EAST JORDAN V5760 OR APPROVED EQUIVALENT. SLAB SHALL BE 8" MINIMUM THICKNESS AND BE REINFORCED TO MEET HS-20 LOADINGS. THE SLAB SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH FLAT SLAB TOPS SPECIFIED IN ASTM C478/478M.

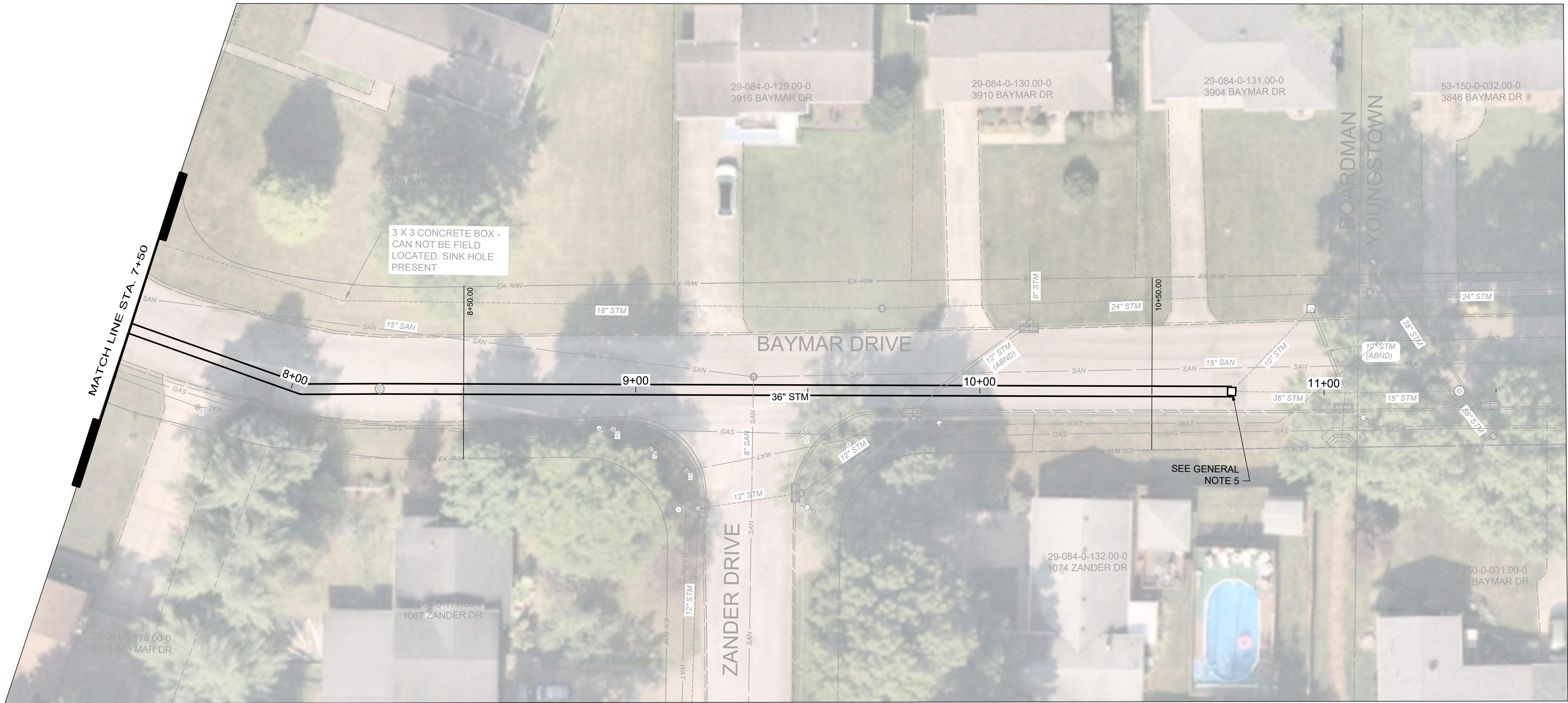


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DRAWN BY: AMM	AMM			
CHECKED BY: TJM	TJM			



ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
 MAHONING COUNTY BOARDMAN TOWNSHIP, OH
PLAN AND PROFILE - STA. 3+50 TO 7+50

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	PP-02
SHEET	6
OF	10

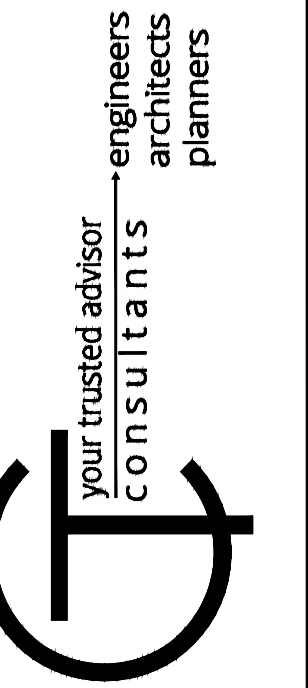
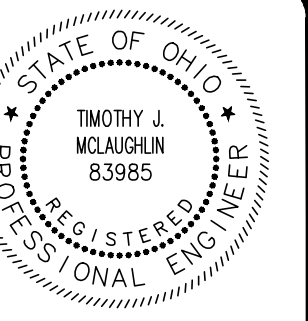
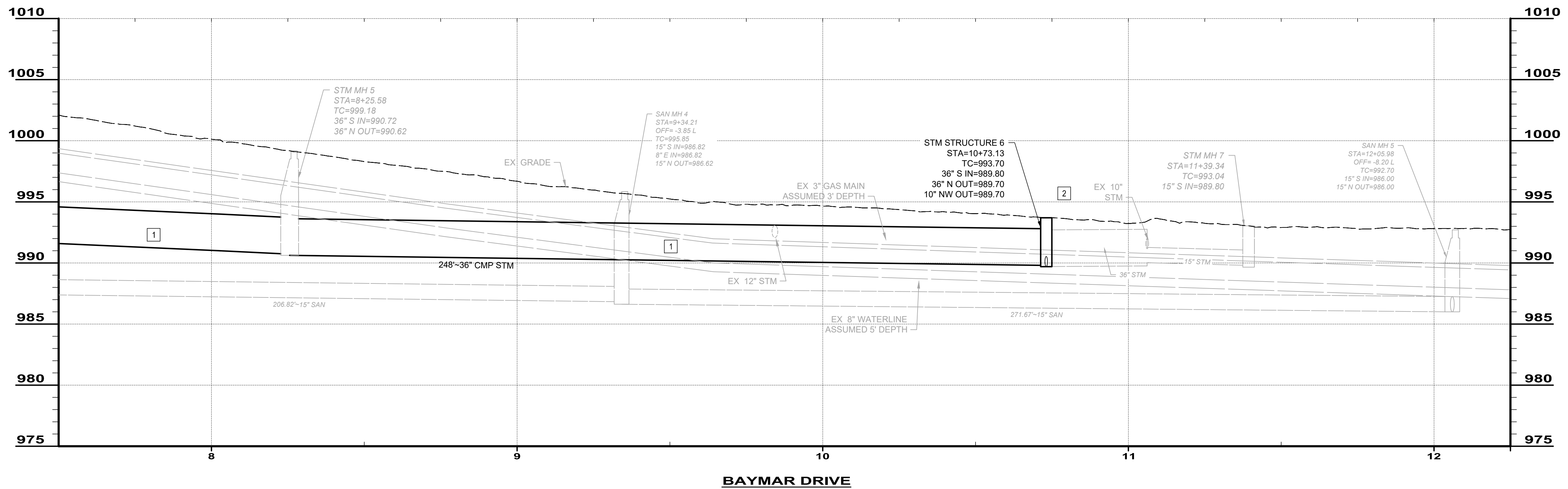


CODED NOTES:

- 1 STORM SEWER JOINT REPAIR AT EACH JOINT (TOTAL 13)
- 2 PROPOSED STORM STRUCTURE MODIFICATION (TOTAL 1)

GENERAL NOTES:

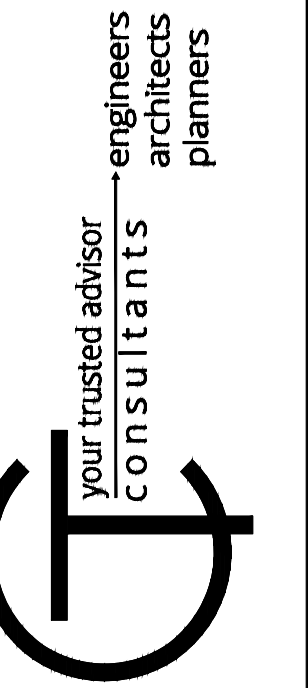
1. CONTRACTOR SHALL HEAVY CLEAN AND TELEVISION SEWER AS DIRECTED BY THE ENGINEER PRIOR TO WORK. CCTV SHALL BE REVIEWED BY THE ENGINEER BEFORE AUTHORIZATION TO COMPLETE IMPROVEMENTS. DIRECTION OF ANY ADDITIONAL REPAIRS NOT CURRENTLY SHOWN ON PLANS WILL BE MADE PRIOR TO COMMENCEMENT OF ANY IMPROVEMENTS.
2. CONTRACTOR IS RESPONSIBLE TO CONFIRM AND VERIFY ANY ADDITIONAL INLETS (ACTIVE OR INACTIVE) ENTERING INTO THE SEWER. ALL INLETS SHALL REMAIN ACTIVE OR RESTORED AT THE COMPLETION OF CONSTRUCTION.
3. POINT REPAIRS SHALL BE MADE TO DISTURB THE LEAST AMOUNT OF PAVEMENT, CURB AREA, AND/OR GRASS AREA AS MUCH AS POSSIBLE. THE CONTRACTOR SHALL REPLACE ALL PAVEMENT TO MATCH EXISTING CONDITIONS AND PER CONSTRUCTION DETAILS.
4. ALL PROPOSED ACCESS MANHOLES MUST BE CUT INTO EXISTING MAIN AND SEALED USING AN X-CEL GASKET OR APPROVED EQUIVALENT. CMP PIPE MAY HAVE A SLIGHT DISSIMILAR SIZE AND CONCRETE COLLARS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
5. CONTRACTOR SHALL INSTALL 24" EJ V5624 GRATE AND FRAME OR APPROVED EQUIVALENT.
6. CONTRACTOR SHALL INSTALL DOGHOUSE STYLE BASE MANHOLE WITH A REINFORCED FLAT SLAB TOP THAT IS ABLE TO REST ON TOP OF THE DOGHOUSE WALLS. FRAME AND GRATE USED SHALL BE BICYCLE SAFE. FINISHED CONCRETE SHALL BE NO GREATER THAN 8" ABOVE THE EXISTING TOP. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND SUBMIT FINAL DESIGN FOR CHAMBER, FLAT SLAB, AND FRAME AND GRATE FOR REVIEW BY OWNER. SLAB SHALL BE 8" MINIMUM THICKNESS AND BE REINFORCED TO MEET HS-20 LOADINGS. THE SLAB SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH FLAT SLAB TOPS SPECIFIED IN ASTM C478/478M.



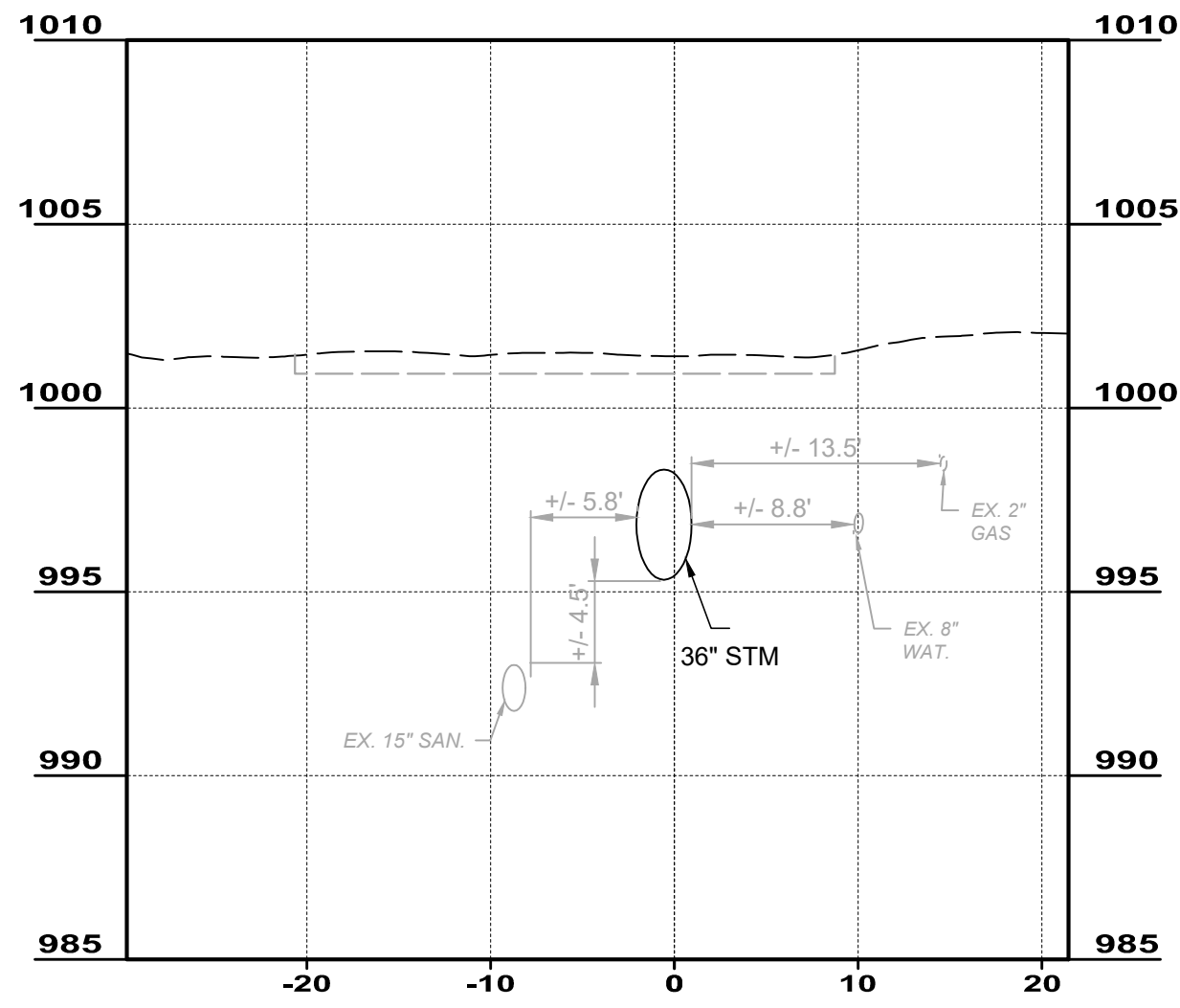
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ISSUE DATE: 04/29/2024	NO.		
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ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
 MAHONING COUNTY BOARDMAN TOWNSHIP, OH
PLAN AND PROFILE - STA. 7+50 TO 10+73

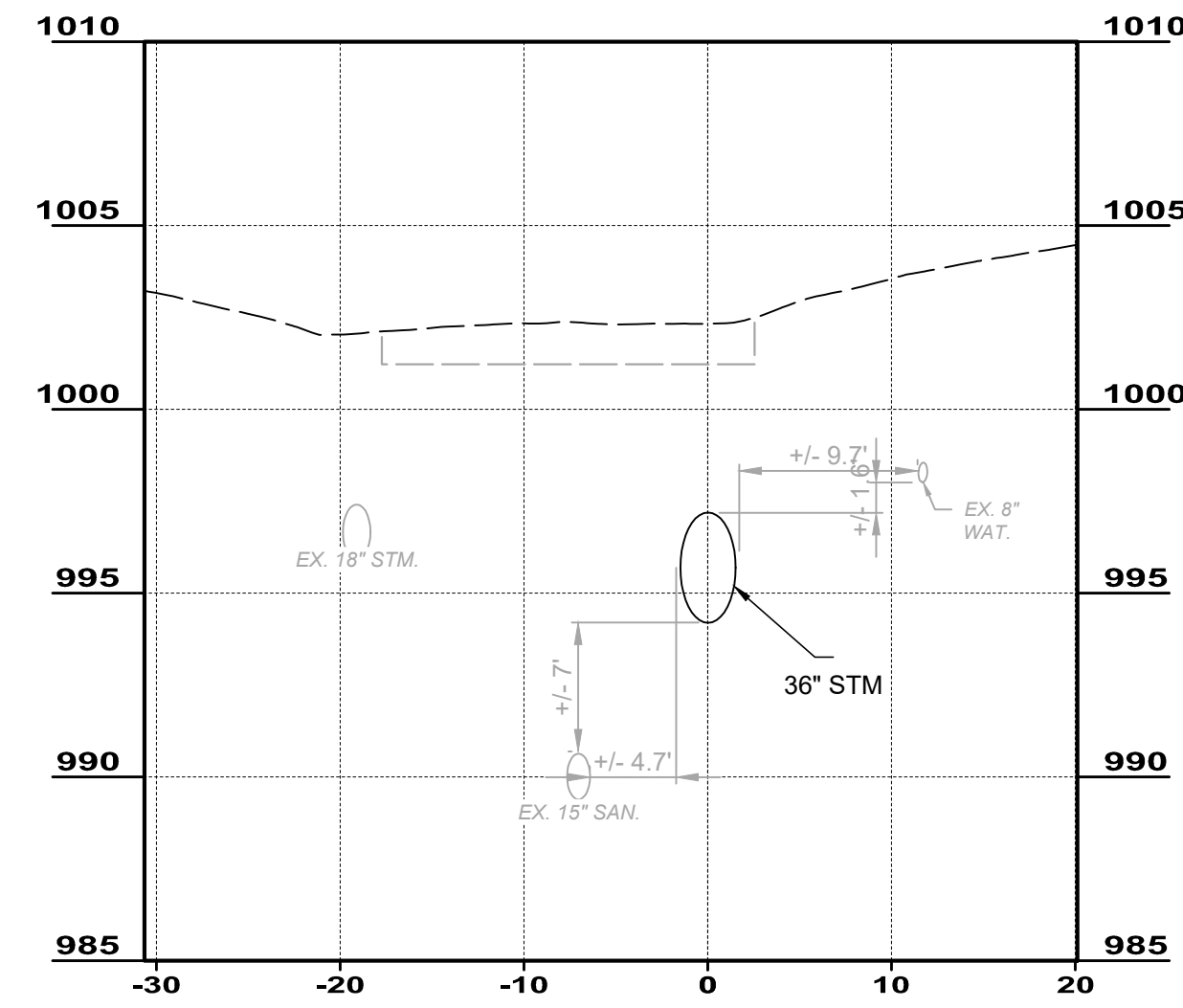
PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	PP-03
SHEET	7
OF	10



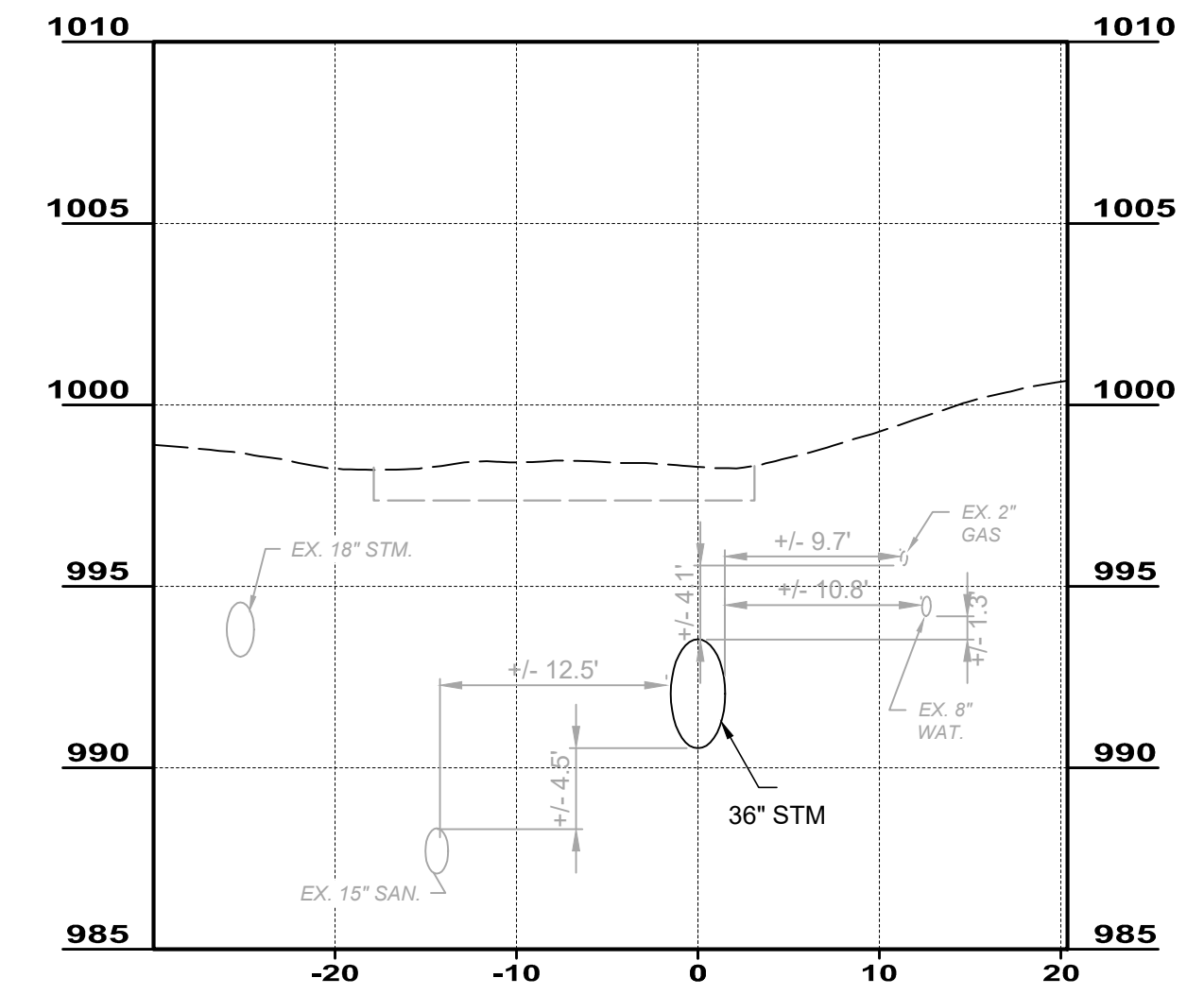
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ISSUE DATE:	04/29/2024			
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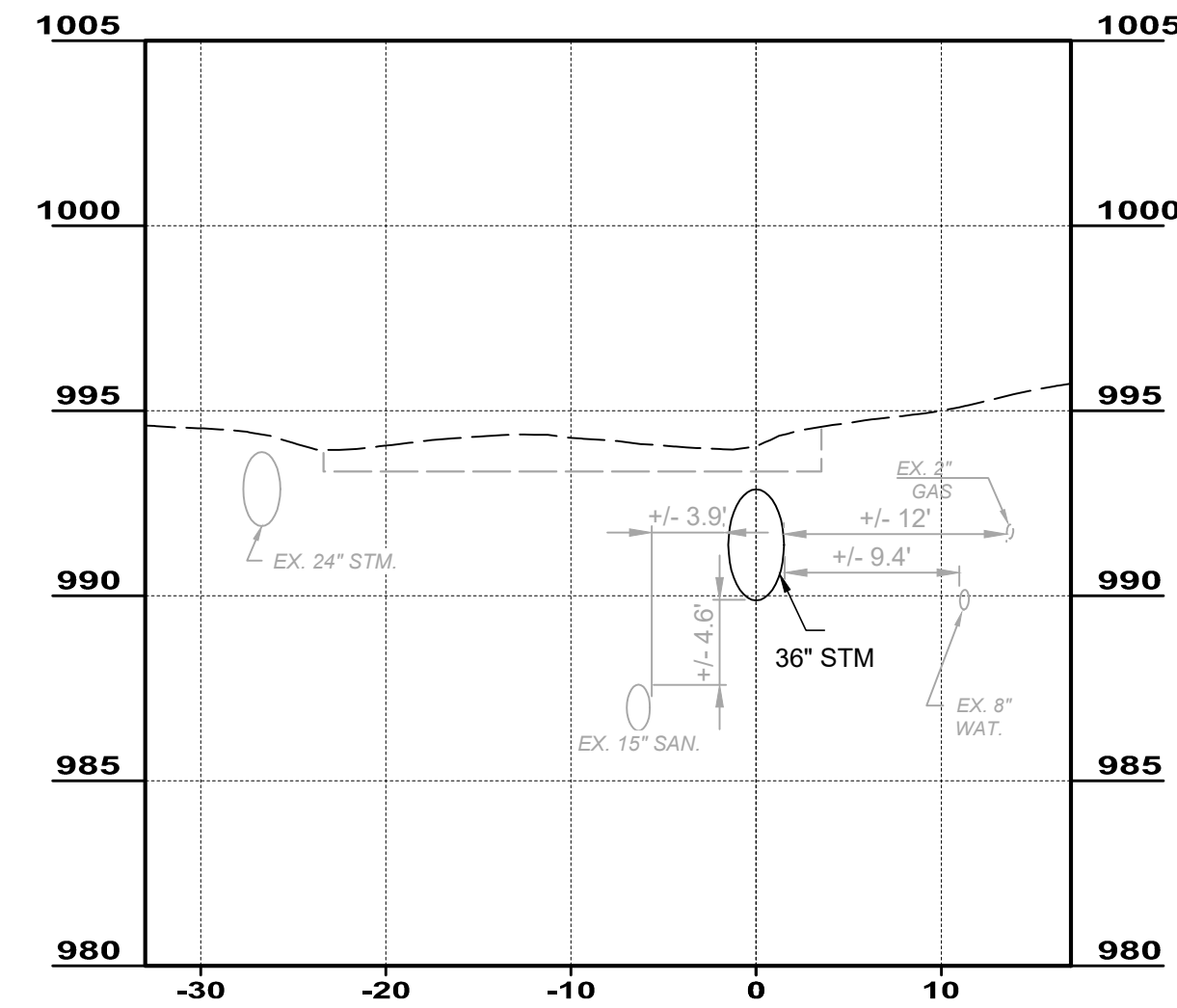
BAYMAR TYPICAL SECTION STA. 2+50
SCALE: 1" = 10'



BAYMAR TYPICAL SECTION STA. 5+00
SCALE: 1" = 10'



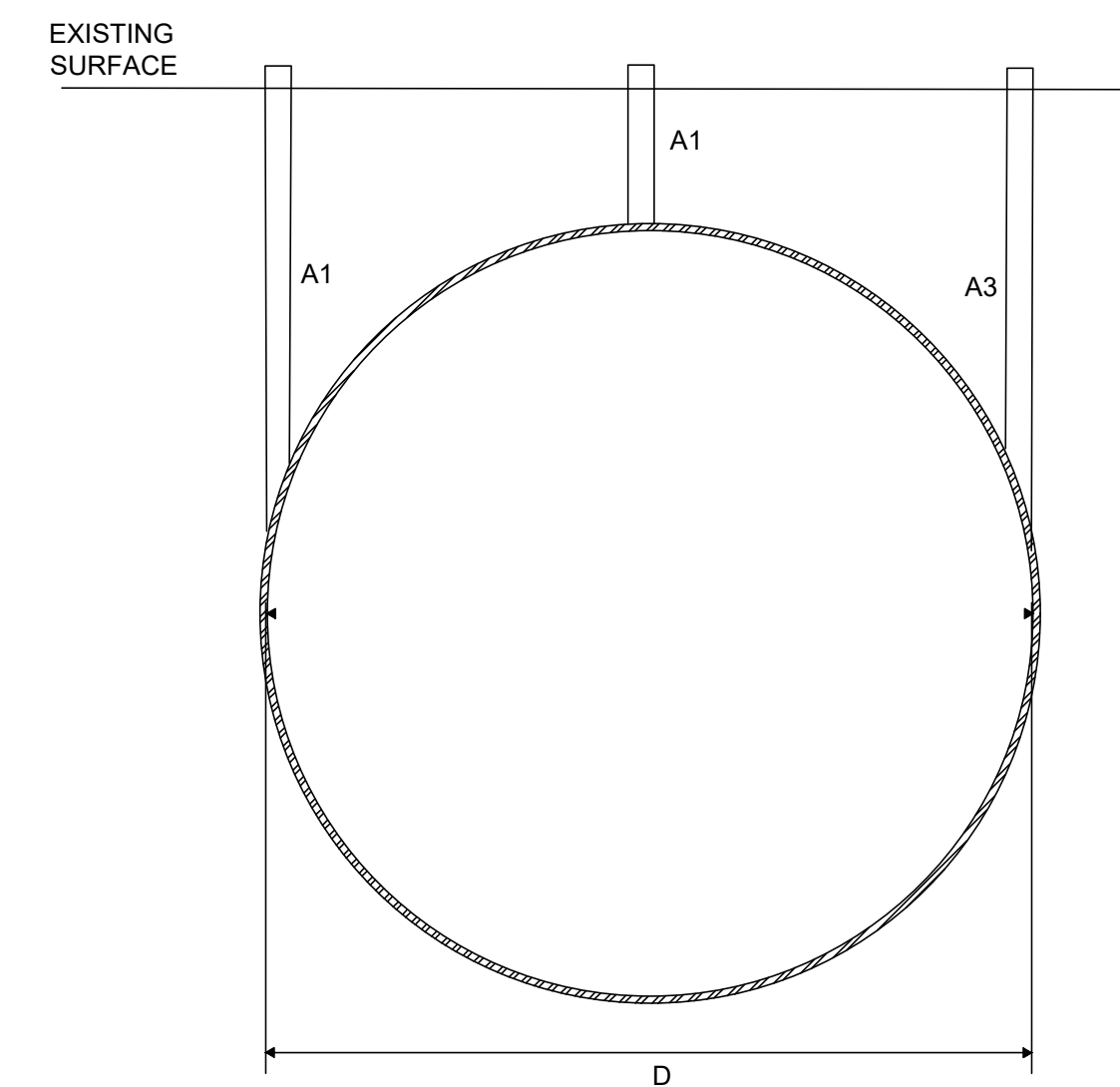
BAYMAR TYPICAL SECTION STA. 8+50
SCALE: 1" = 10'



BAYMAR TYPICAL SECTION STA. 10+50
SCALE: 1" = 10'

GENERAL NOTES:

- CENTER OF TYPICAL SECTION IS THE APPROXIMATED CENTER OF 36 INCH STORM SEWER FOR REHABILITATION. THE CONTRACTOR SHALL VERIFY ALIGNMENT OF EXISTING 36 INCH SEWER AND ENSURE SURROUNDING UTILITIES ARE PROTECTED DURING JOINT REPAIR AND REHABILITATION ACTIVITIES.



REFERENCE
 "A1" - INJECTION INSERTION POINT AT EDGE OF JOINT
 "A2" - INJECTION INSERTION POINT AT CENTER OF JOINT
 "A3" - INJECTION INSERTION POINT AT EDGE OF JOINT
 "D" - INNER DIAMETER = 36"

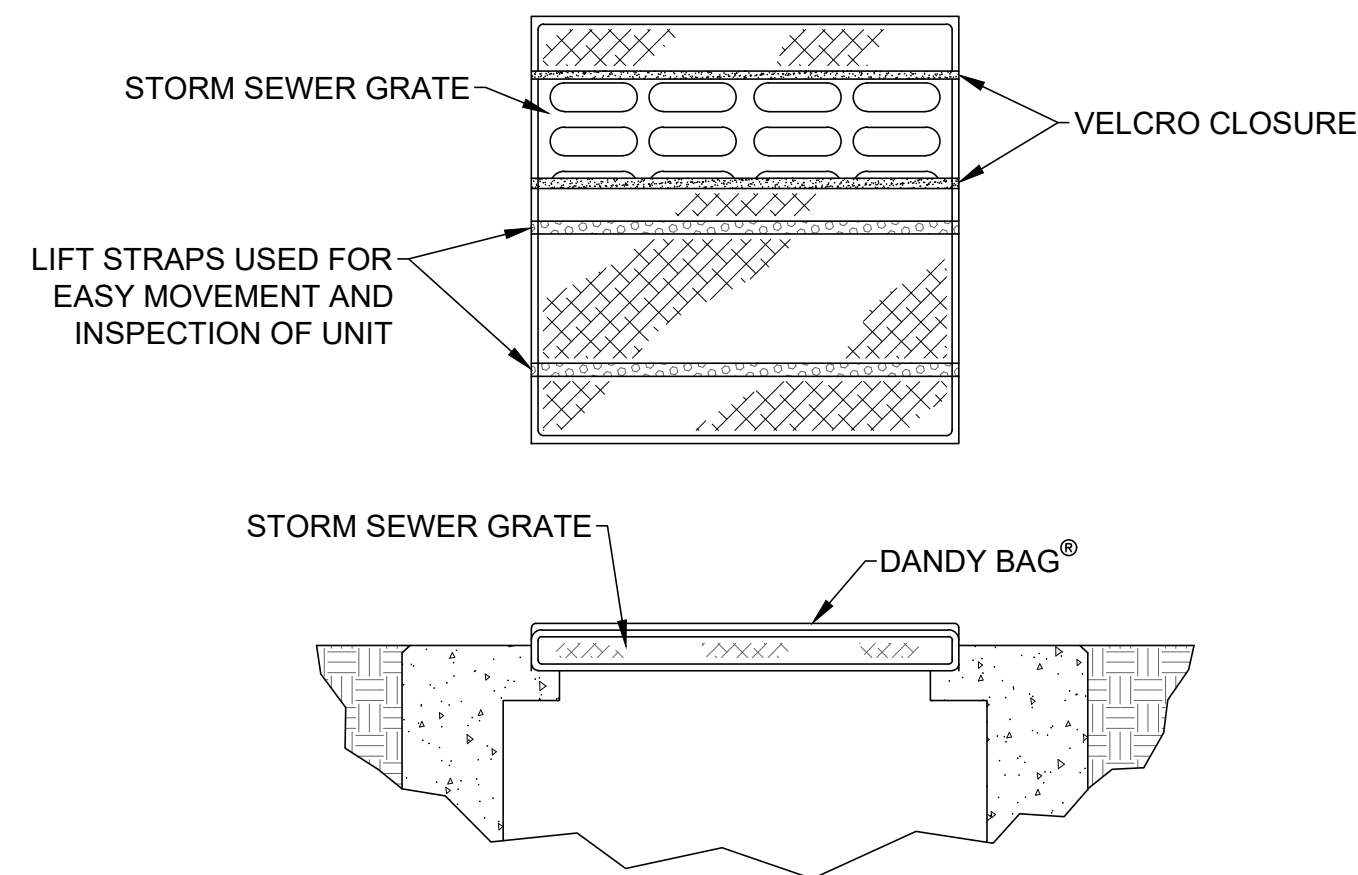
NOTES:

- INJECTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH SECTIONS 330130.61 AND 330130.63.
- INJECTION POINTS WILL BE DRILLED THROUGH PAVEMENT OR GRASS AREAS. PAVEMENT MUST BE RESTORED AND BACKFILLED BY COMPLETION OF CONSTRUCTION.
- INSERTION POINTS SHALL BE MADE SUCH THAT THEY ARE ABLE TO SUFFICIENTLY SEAL THE PIPE JOINTS. THE CONTRACTOR SHALL MARK LOCATIONS AFTER TELEVISIONING THE SEWER. IN LOCATIONS WHERE DEPTH FROM TOP OF PIPE TO SURFACE IS GREATER THAN 6'-0", CONTRACTOR SHALL DRILL TO 6'-0" OR A DEPTH TO ENSURE MATERIAL ENCOMPASSES AREA AROUND JOINT.
- INJECTION POINT SIZE SHALL BE NO LARGER THAN 1" IN DIAMETER. EACH INJECTION POINT SHALL BE CAPPED, CUT, AND FLUSH WITH EXISTING GROUND SURFACE AFTER INJECTION MATERIAL HAS COMPLETELY CURED. CONTRACTOR IS RESPONSIBLE TO ENSURE NO DAMAGE IS MADE TO EXISTING UTILITIES WITHIN 10'-0" OF INJECTION POINT. CONTRACTOR SHALL REFERENCE TYPICAL CROSS SECTIONS FOR UTILITY CLEARANCE.
- CONTRACTOR SHALL COMPLETE POST CONSTRUCTION VERIFICATION AND REMOVE ANY EXCESS MATERIAL BEFORE COMPLETION OF CONSTRUCTION. CONTRACTOR SHALL USE 30 LB OR WHAT IS REQUIRED TO FILL VOIDS AND SEAL JOINTS. MATERIAL USED OVER 30 LB SHALL BE PAID AS EXTRA PER THE POUND.

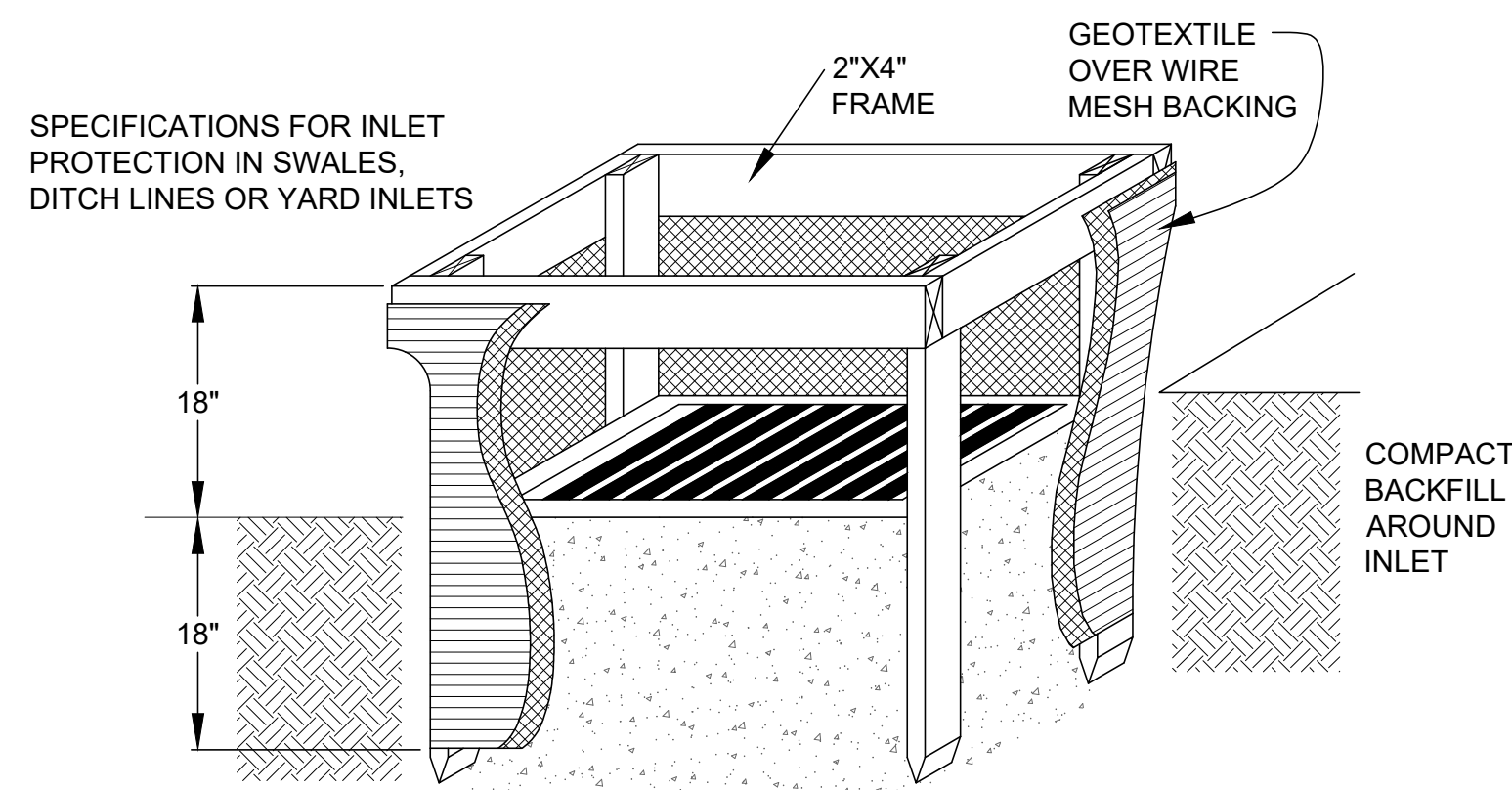
JOINT REPAIR DETAIL
NOT TO SCALE

ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
 MAHONING COUNTY BOARDMAN TOWNSHIP, OH
BAYMAR TYPICAL CROSS SECTIONS

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	TYP-1
SHEET	8
OF	10



**INLET PROTECTION ALTERNATIVE
DANDY BAG DETAIL**
NOT TO SCALE



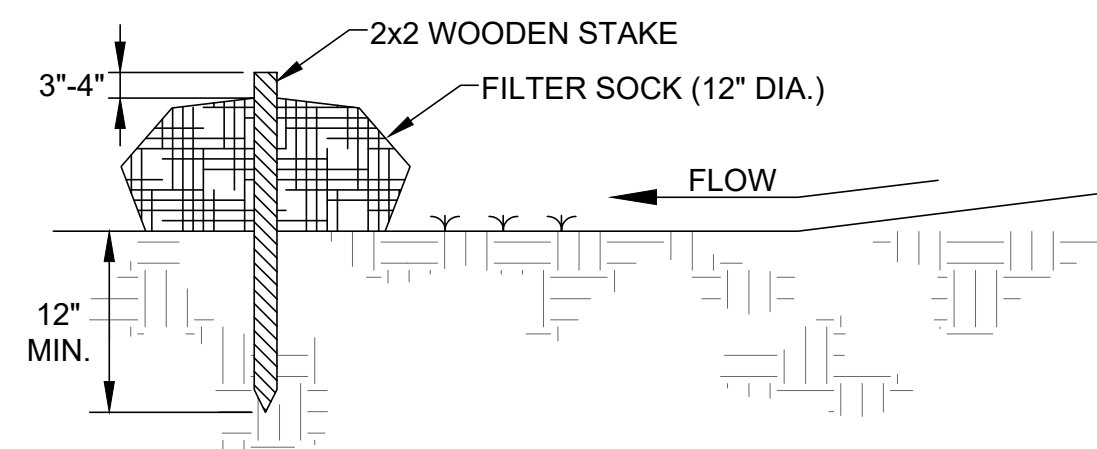
SPECIFICATIONS FOR INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS:

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.
2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 INCHES.
3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2-BY-4-INCH CONSTRUCTION-GRADE LUMBER. THE 2-BY-4-INCH POSTS SHALL BE DRIVEN 1 FOOT INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2-BY-4-INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
5. GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
6. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6 INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
7. A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

INLET PROTECTION
NOT TO SCALE

RESTORATION/SEDIMENTATION AND EROSION CONTROL:

1. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND OTHER AREAS AS SHOWN ON PLANS SHALL BE PROPERLY RESTORED WITH 4" OF TOPSOIL, SEEDING AND MULCHING PER THE SPECIFICATIONS.
2. IN ALL DISTURBED AREAS THE CONTOURS WILL BE RESTORED IN A MANNER THAT MAINTAINS EXISTING DRAINAGE PATTERNS. FOLLOWED BY SEEDING AND MULCHING. IF, DUE TO WEATHER, FINAL GRADING CANNOT BE ACCOMPLISHED IMMEDIATELY, TEMPORARY SEEDING & MULCHING, WITHIN SEVEN DAYS, WILL BE USED UNTIL FINAL RESTORATION CAN OCCUR.
3. SILT FENCING SHALL BE EXTRA STRENGTH SYNTHETIC FILTER FABRIC HAVING A MINIMUM FLOW RATE OF 0.3 GA/SQ.FT/MINUTE AND SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0°F. TO 120°F. SEE STANDARD DETAIL.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING INSPECTIONS OF ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER ALL STORMS THAT PRODUCE MORE THAN ONE-HALF (1/2") INCH TOTAL RAINFALL. ANY NEEDED REPAIRS SHALL BE PERFORMED IMMEDIATELY. THE CONTRACTOR SHALL DOCUMENT ALL INSPECTIONS AND ANY REPAIRS THAT ARE DONE TO MAINTAIN EFFICIENCY.
5. CONTRACTOR SHALL REMOVE DAILY ALL MUD, SOIL AND DEBRIS THAT MAY BE TRACKED ONTO EXISTING STREETS, DRIVES OR WALKS BY HIS EQUIPMENT OR THAT OF SUBCONTRACTORS OR SUPPLIERS.
6. THE TOTAL DISTURBED AREA IS LESS THAN ONE ACRE.



MATERIALS - COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".

INSTALLATION:

1. FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES; GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1; ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
2. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
3. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.

MAINTENANCE:

1. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
2. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
3. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
4. REMOVAL - FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

**SILT FENCE ALTERNATIVE
FILTER SOCK DETAIL**

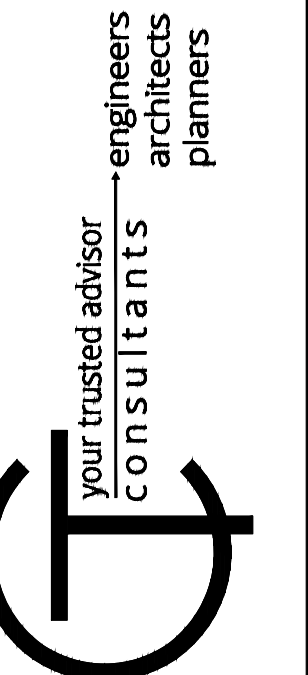
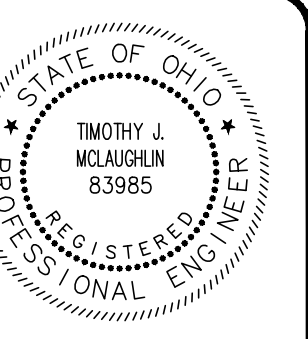
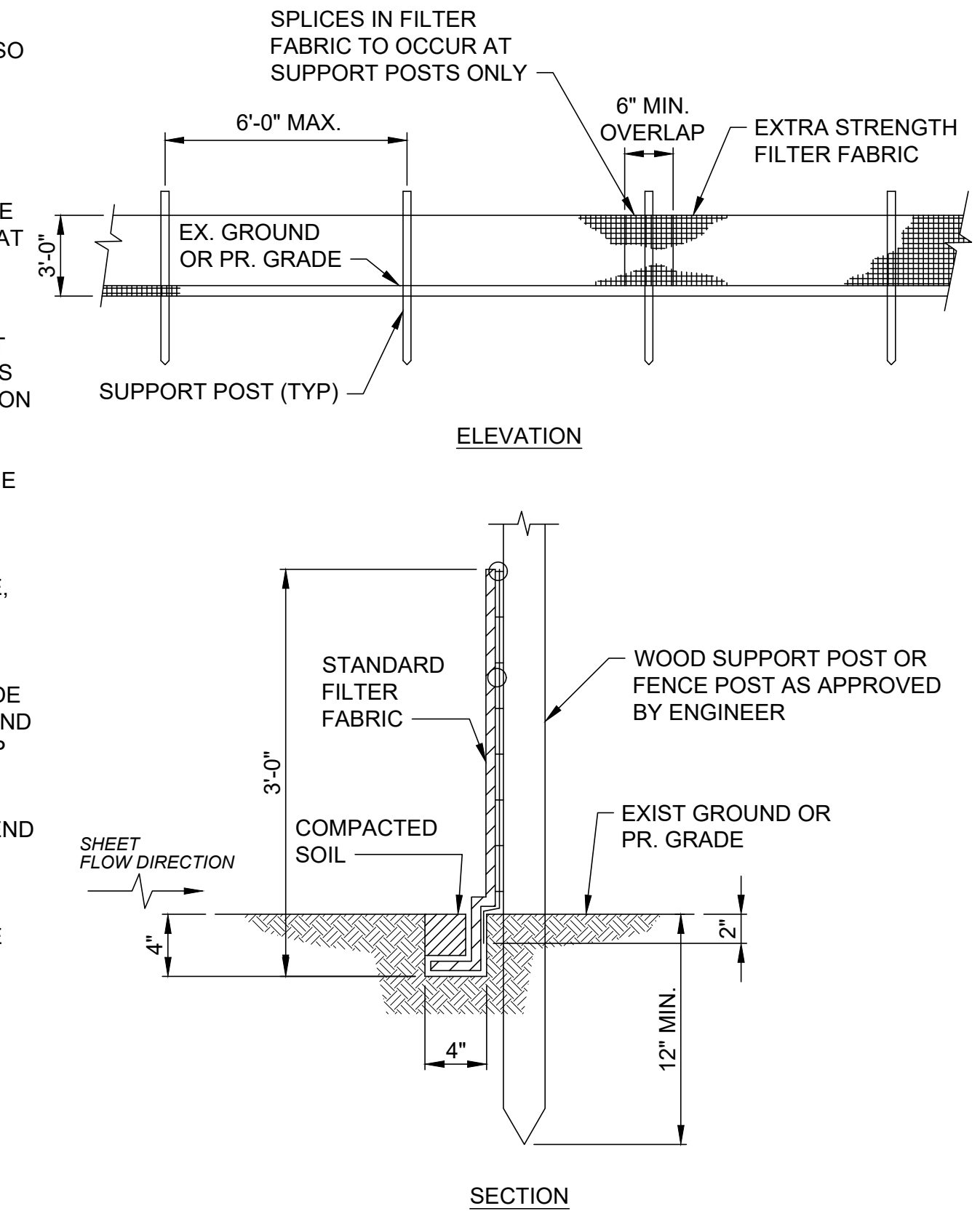
NOT TO SCALE

SILT FENCE NOTES:

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.
4. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
5. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
7. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 INCHES OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH-DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.
8. SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.
9. MAINTENANCE - SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE:
 - 9.1. THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED,
 - 9.2. ACCUMULATED SEDIMENT SHALL BE REMOVED, OR
 - 9.3. OTHER PRACTICES SHALL BE INSTALLED.
10. SILT FENCE MATERIALS
 - 10.1. FENCE POSTS - THE LENGTH SHALL BE A MINIMUM OF 32 INCHES LONG. WOOD POSTS WILL BE 2 X 2 INCH HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FEET.
 - 10.2. SILT FENCE FABRIC (SEE CHART BELOW):

FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MINIMUM	ASTM D 1682
MULLEN BURST STRENGTH	190 PSI MINIMUM	ASTM D 3786
SLURRY FLOW RATE	0.3 GAL./MIN./F2 MAXIMUM	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MINIMUM	ASTM-G-26

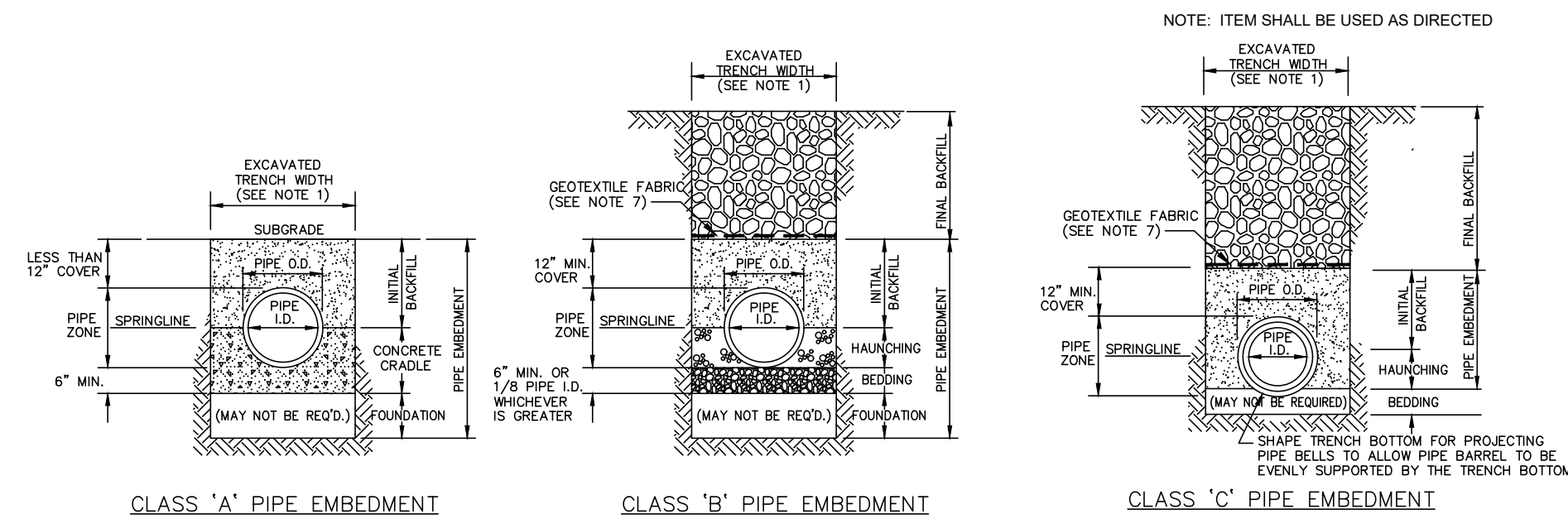
SILT FENCE
NOT TO SCALE



ISSUED FOR:	REVISION	NO	DATE
ABC WATER & STORMWATER DISTRICT			
BAYMAR DR STORM SEWER IMPROVEMENTS REBID			
MAHONING COUNTY BOARDMAN TOWNSHIP, OH			
EROSION AND SEDIMENT CONTROL DETAILS			

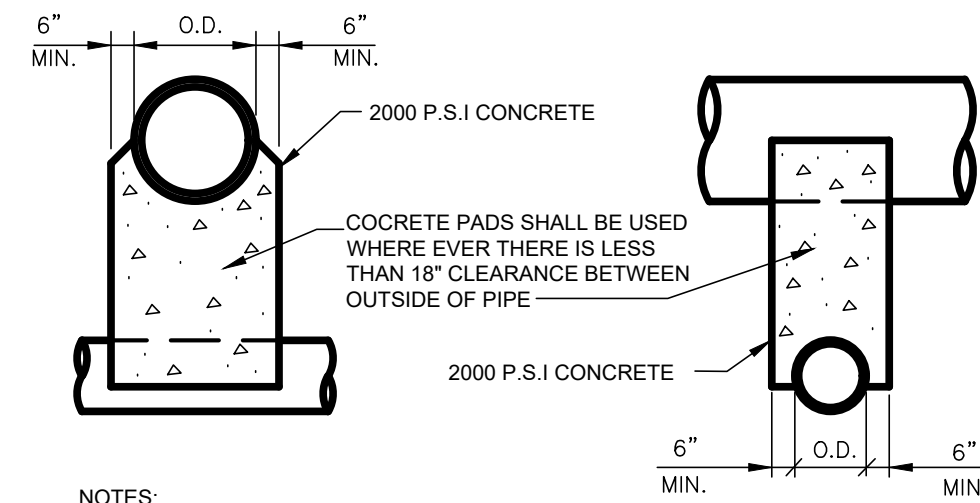
ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
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EROSION AND SEDIMENT CONTROL DETAILS

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	ESC-01
SHEET	9
OF	10



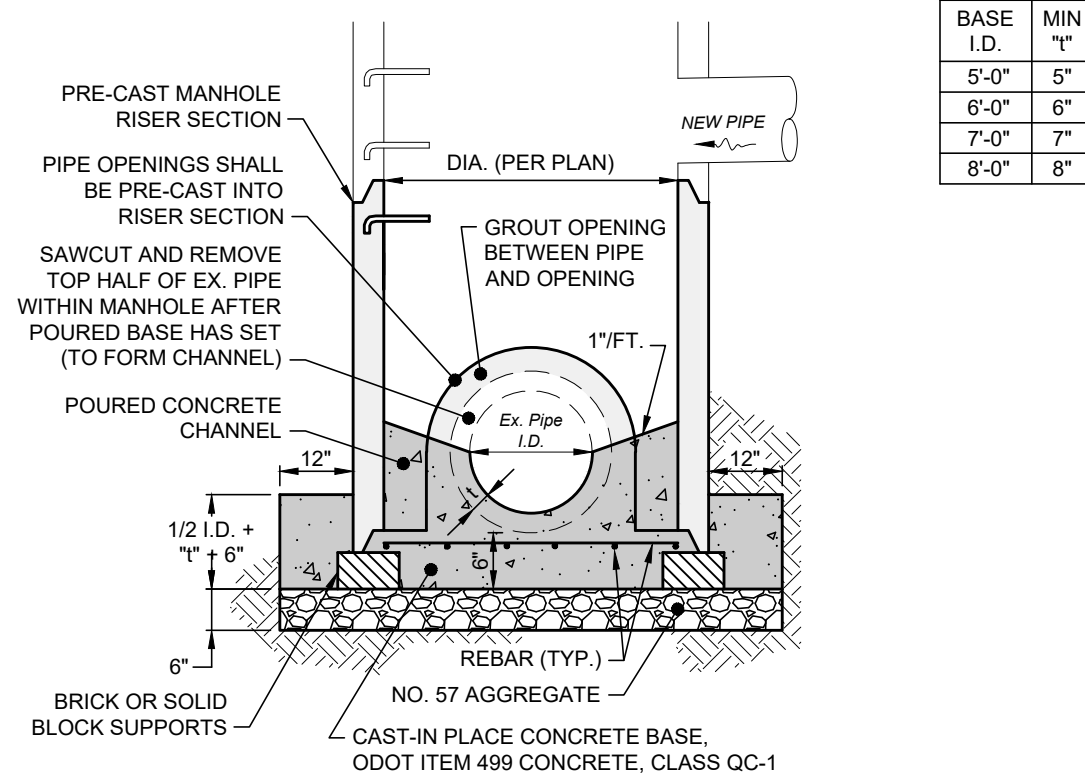
- NOTES:
1. MAXIMUM EXCAVATED TRENCH WIDTH: THE MAXIMUM EXCAVATED TRENCH WIDTH FROM THE BOTTOM OF THE TRENCH TO 12" OVER THE TOP OF THE PIPE (WITHIN PIPE EMBEDMENT) SHALL BE O.D. + 24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D. + 30" FOR PIPE FROM 24" I.D. TO 54" I.D. AND O.D. + 48" FOR PIPES SIZES 60" I.D. AND OVER.
 2. FOUNDATION: WHERE AN UNSTABLE TRENCH BOTTOM CONDITION IS ENCOUNTERED, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH MATERIAL AS DIRECTED BY THE ENGINEER.
 3. PIPE EMBEDMENT: CLASS A: CLASS A PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNDER PAVEMENT OR STRUCTURES WITH LESS THAN 12 INCHES OF PIPE COVER TO THE SUBGRADE. THE CONCRETE CRADLE SHALL BE IN ACCORDANCE WITH ODOT ITEM 499, CLASS "C". THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT. CLASS B: CLASS B PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER. THE BEDDING AND HAUNCHING SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT. IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER FOR ONLY REINFORCED CONCRETE PIPE AND DUCTILE IRON PIPE. THE INITIAL BACKFILL FOR ALL OTHER PIPES SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT. CLASS C: CLASS C PIPE EMBEDMENT SHALL ONLY BE USED FOR DUCTILE IRON WATER MAIN, DUCTILE IRON FORCE MAINS OR AS AUTHORIZED BY THE ENGINEER. THE PIPE EMBEDMENT SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE. THE PIPE EMBEDMENT SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE. WHERE ROCK OR SHALE IS ENCOUNTERED, A MINIMUM 6-INCHES OF AASHTO NO. 57 OR NO. 67 GRANULAR PIPE BEDDING OR SAND BEDDING SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
 4. FINAL BACKFILL: IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE THE FINAL BACKFILL SHALL BE SPECIAL BACKFILL MATERIAL. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE FINAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER.
 5. SPECIFICATIONS: ALL TRENCHING, PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATION 310000.
 6. CLAY TRENCH DAMS: CLAY TRENCH DAMS SHALL BE REQUIRED AS SHOWN ON PLANS OR WHEN AND WHERE NECESSARY AS DIRECTED BY THE ENGINEER.
 7. GEOTEXTILE FABRIC: INSTALL A GEOTEXTILE FABRIC IN ACCORDANCE WITH ODOT 712.09, TYPE A, AFTER ALL INITIAL BACKFILL CONSISTING OF AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT.
 8. DETECTOR TAPE: IF REQUIRED IN THE SPECIFICATIONS, INSTALL DETECTABLE WARNING TAPE ABOVE UTILITIES, 12" BELOW FINISHED GRADE, EXCEPT 6 INCHES BELOW SUBGRADE UNDER PAVEMENT AND SLABS.

TRENCHING, EMBEDMENT AND BACKFILL DETAIL
6/04 NOT TO SCALE SD-1-1
(FOR SEWER INSTALLATION)



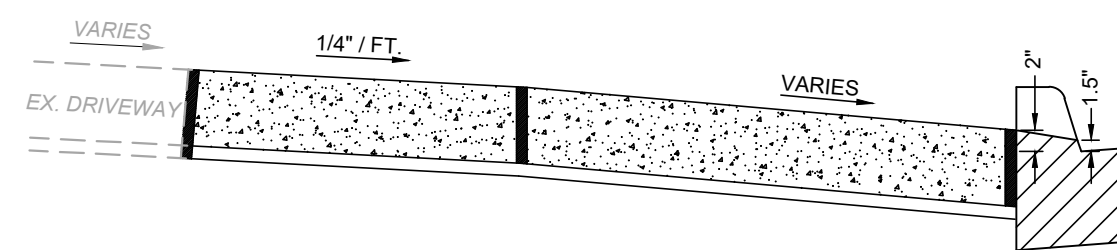
- NOTES:
1. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WHERE TWO PIPES (SEWER & WATER) CROSS EACH OTHER, A CONCRETE PAD AND CRADLE SEPARATOR SHALL BE PLACED BETWEEN THEM AS INDICATED ABOVE. WHERE PERMISSION IS GRANTED TO OMIT THE CONCRETE PADS, GRANULAR BACKFILL SHALL BE TAMPED IN 6" LAYERS AROUND BOTH PIPES. SUCH TAMPED BACKFILL SHALL BE CONTINUOUS FROM THE CRADLE OF THE LOWER PIPE TO THE TOP OF THE UPPER PIPE AND AT THE BOTTOM SHALL EXTEND IN BOTH DIRECTIONS, FOR THE FULL WIDTH OF THE TRENCH.

PIPE CROSSING DETAIL
NOT TO SCALE

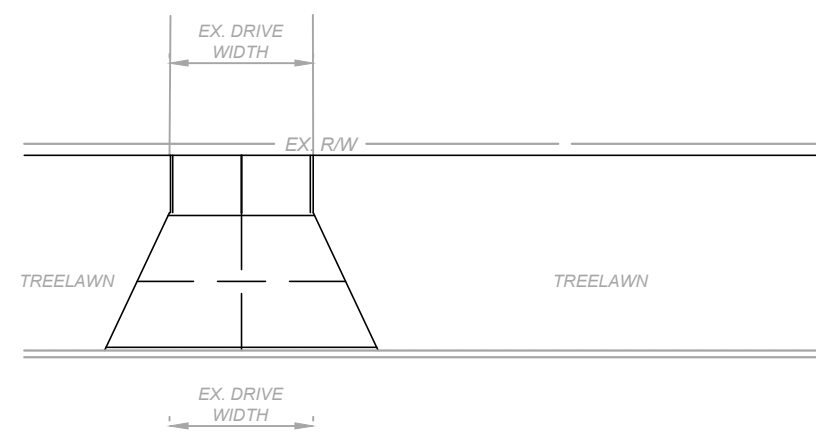


- NOTES:
1. USE #4 REBAR AT 18" O.C. EACH WAY FOR MANHOLE DEPTH LESS THAN 14'; AND USE #5 REBAR FOR MANHOLE DEPTHS GREATER THAN 14'.
 2. IF NOT PREFORMED, THE PIPE OPENING IN THE PRECAST RISER SECTION MUST BE FULL DEPTH SAW CUT. THE CONTRACTOR SHALL NOT USE A JACKHAMMER OR SLEDGEHAMMER TO CREATE THE OPENING.

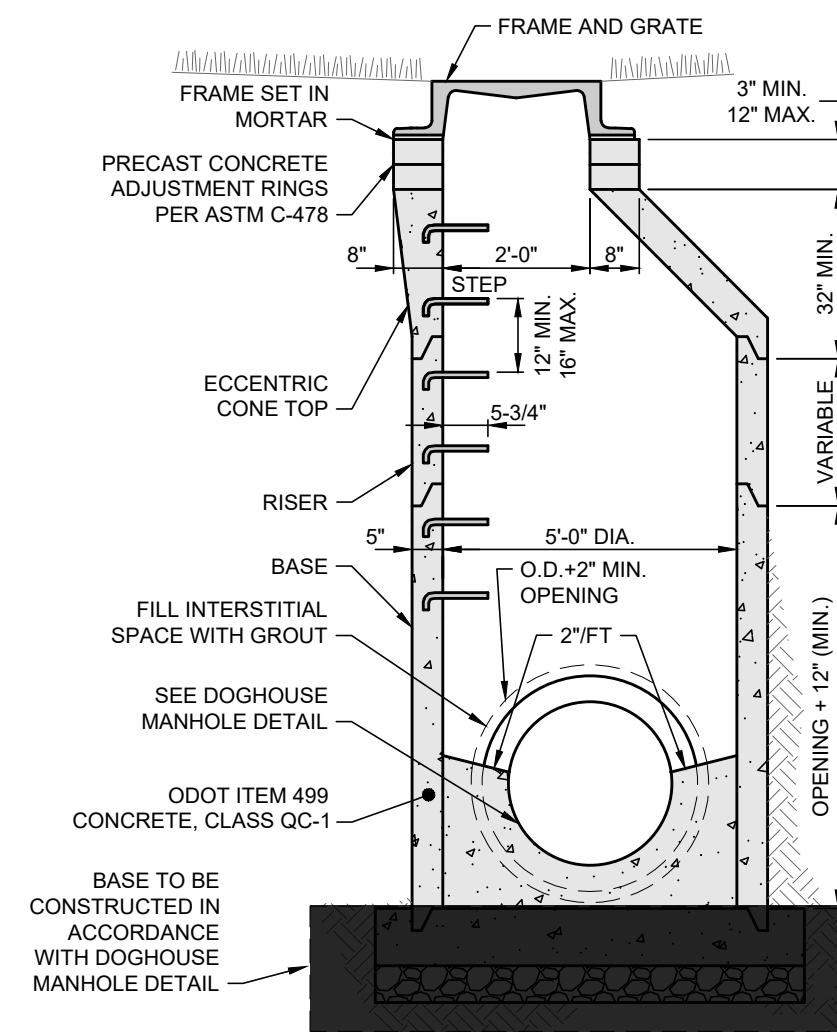
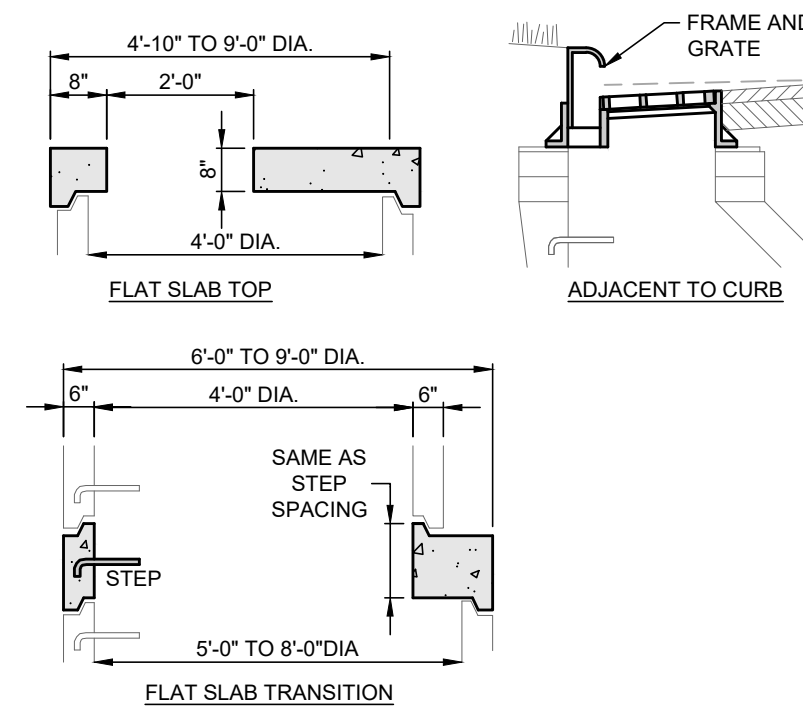
DOGHOUSE MANHOLE DETAIL
NOT TO SCALE



- NOTE: WIRE MESH REINFORCING SHALL BE FURNISHED & INSTALLED IN-KIND IF FOUND IN THE EXISTING APRON.
- DROP CURB AT DRIVEWAY DETAIL**
NOT TO SCALE

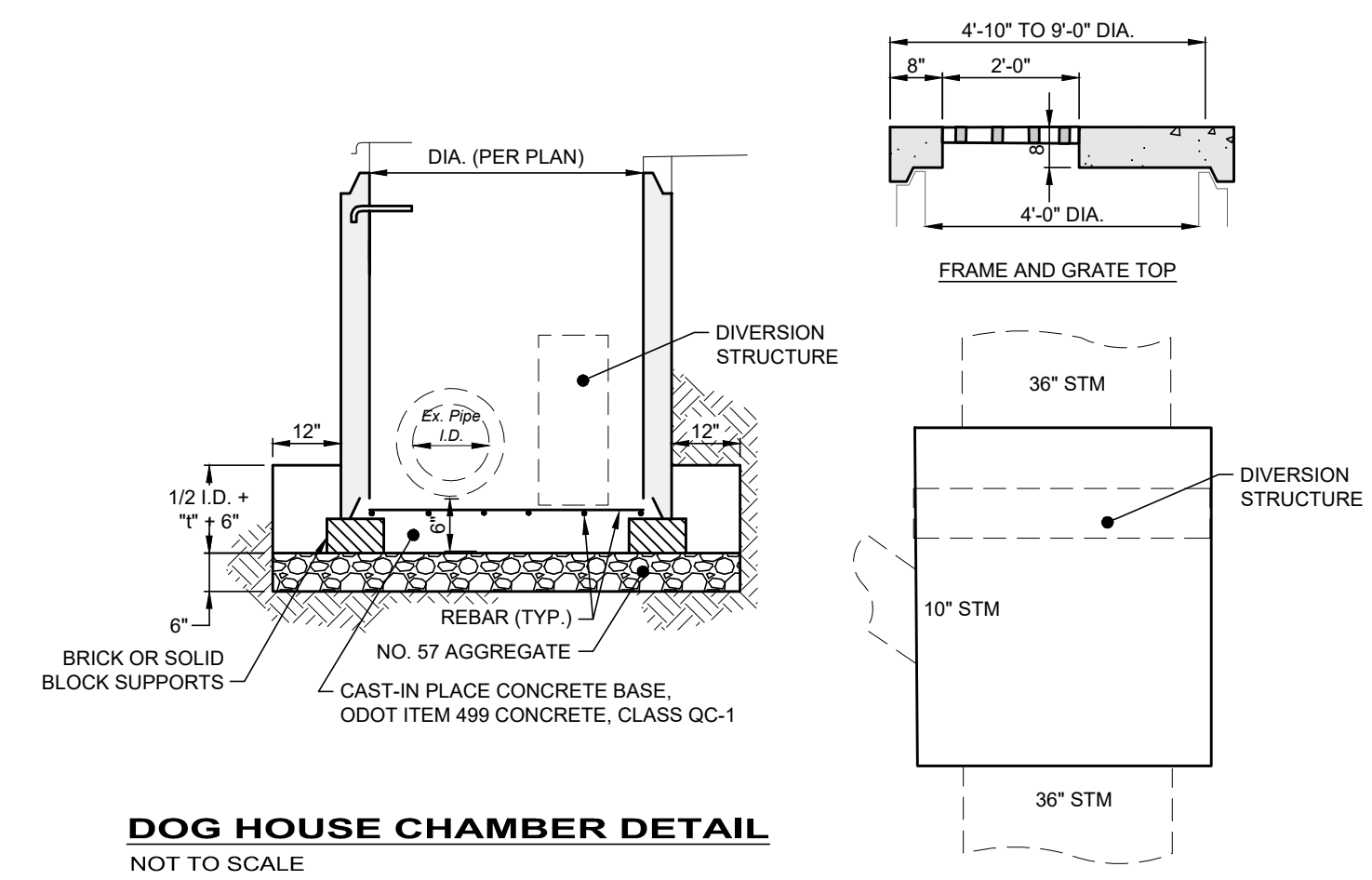


- NOTE: IN NO CASE SHALL THE DRIVE APRON BE SMALLER IN DIMENSION THAN THE EXISTING APRON.
- * THE TRANSITION FROM STANDARD VERTICAL CURB SECTION TO DROP CURB SECTION IS TO BE WITHIN 12' OF DRIVEWAY.
- DRIVEWAY APPROACH DETAIL**
NOT TO SCALE

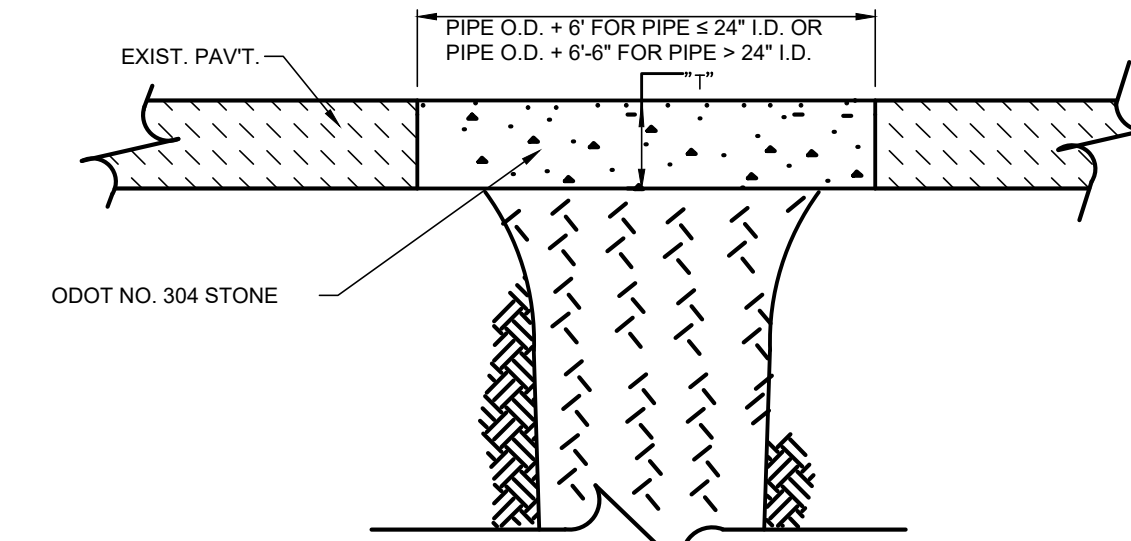


- NOTES:
1. THIS DETAIL IS FOR REFERENCE ONLY; NOT ALL ITEMS SHOWN MAY APPLY OR DIFFERENT ITEMS MAY BE REQUIRED.
 2. STRUCTURE SHALL MEET H-20 LOADING.
 3. PRE-CAST CONCRETE SECTIONS SHALL BE MANUFACTURED AND FURNISHED WITH LIFT HOLES.
 4. TOP, TRANSITION AND REDUCER SECTIONS MAY BE ECCENTRIC CONE, CONCENTRIC CONE OR FLAT SLAB.
 5. BASE TO BE INSTALLED PER DOGHOUSE MANHOLE DETAIL.
 6. OPENINGS IN RISER SECTIONS FOR 18" AND SMALLER PIPES TO BE PREFABRICATED. PROVIDE FLEXIBLE CONNECTIONS ("Z" LOCK, INSERT A-TEE, OR APPROVED EQUAL) FOR ALL PIPES.
 7. JOINT SEAL BETWEEN PRE-CAST MANHOLE SECTIONS SHALL BE RESILIENT AND FLEXIBLE GASKET JOINT PER ODOT ITEM 706.11.
 8. PRE-CAST CONCRETE SHALL BE REINFORCED PER ASTM C-478.
 9. USE REINFORCED PLASTIC MANHOLE STEPS.
 10. FIRST STEP SHALL NOT BE MORE THAN 2'-0" BELOW TOP OF FRAME. MAKE PROJECTION 3'-1/2" IF IN 24" DIA. SECTION.
 11. CASTING TYPE VARIES BASED ON MANHOLE LOCATION AND SHALL BE AS FOLLOWS OR PER PLAN:
 - A. IN PAVEMENT: EJ FRAME 1040 W/TYP "B" VENTED COVER LABELED "STORM".
 - B. IN PAVEMENT ADJACENT TO CURB: EJ FRAME 7010 W/TYP "M4" VANE GRATE AND "T1" BACK.
 - C. IN GRASS: EJ 1040 FRAME W/TYP "N" OVAL GRATE

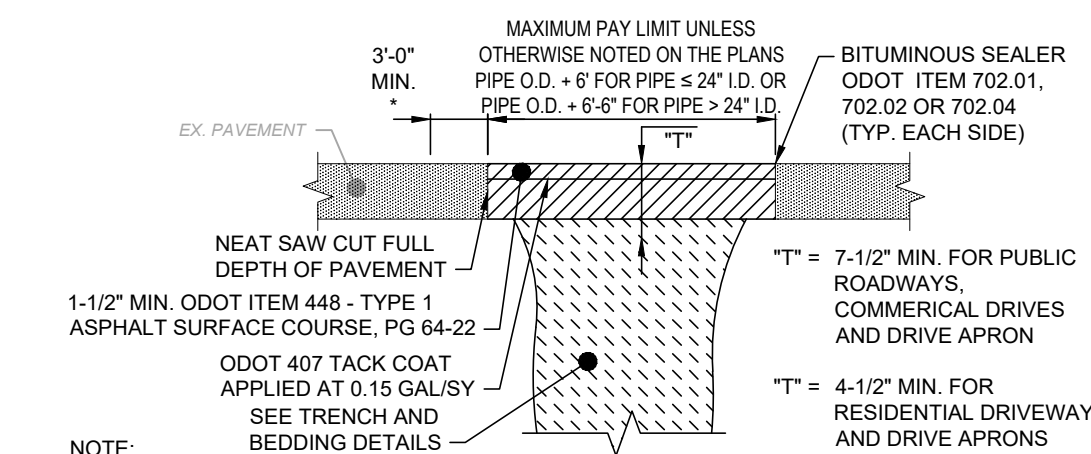
TYP "B" PRE-CAST CONCRETE ECCENTRIC MANHOLE (STORM) DETAIL
NOT TO SCALE



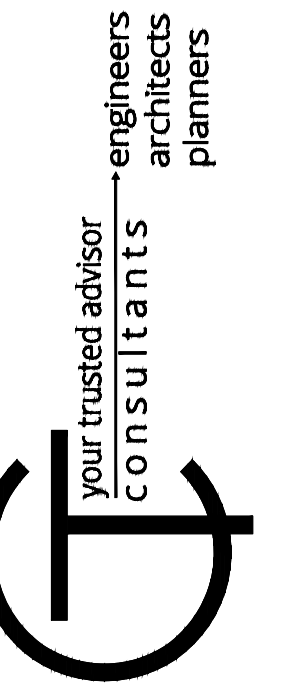
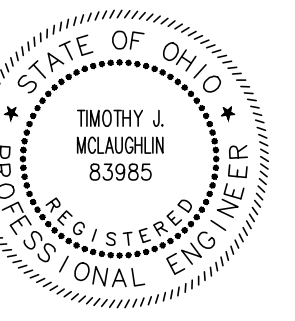
DOG HOUSE CHAMBER DETAIL
NOT TO SCALE



PAVEMENT RESTORATION
NOT TO SCALE



- NOTE: EXISTING SUBBASE MATERIAL (IF ANY) SHALL BE REPLACED, AS DIRECTED BY ENGINEER.
- IN NO CASE SHALL "T" BE LESS THAN THE EXISTING PAVEMENT THICKNESS.
- TYPE 'C' PAVEMENT REPLACEMENT**
NOT TO SCALE



DATE	REVISION	NO	ISSUED FOR:	REBID	NO	CHECKED BY:
			04/29/2024	AS SHOWN	AMM	TJM

ABC WATER & STORMWATER DISTRICT
BAYMAR DR STORM SEWER IMPROVEMENTS REBID
MAHONING COUNTY BOARDMAN TOWNSHIP, OH
CONSTRUCTION DRAWING - 1

PROJECT NO.	232472
DISCIPLINE	CIVIL
SHEET NAME	CD-01
SHEET NO.	10
OF	10