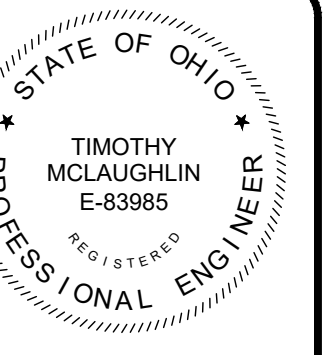


CITY OF MARION, OHIO

ROCK SWALE COMBINED SEWER IMPROVEMENTS PHASE I

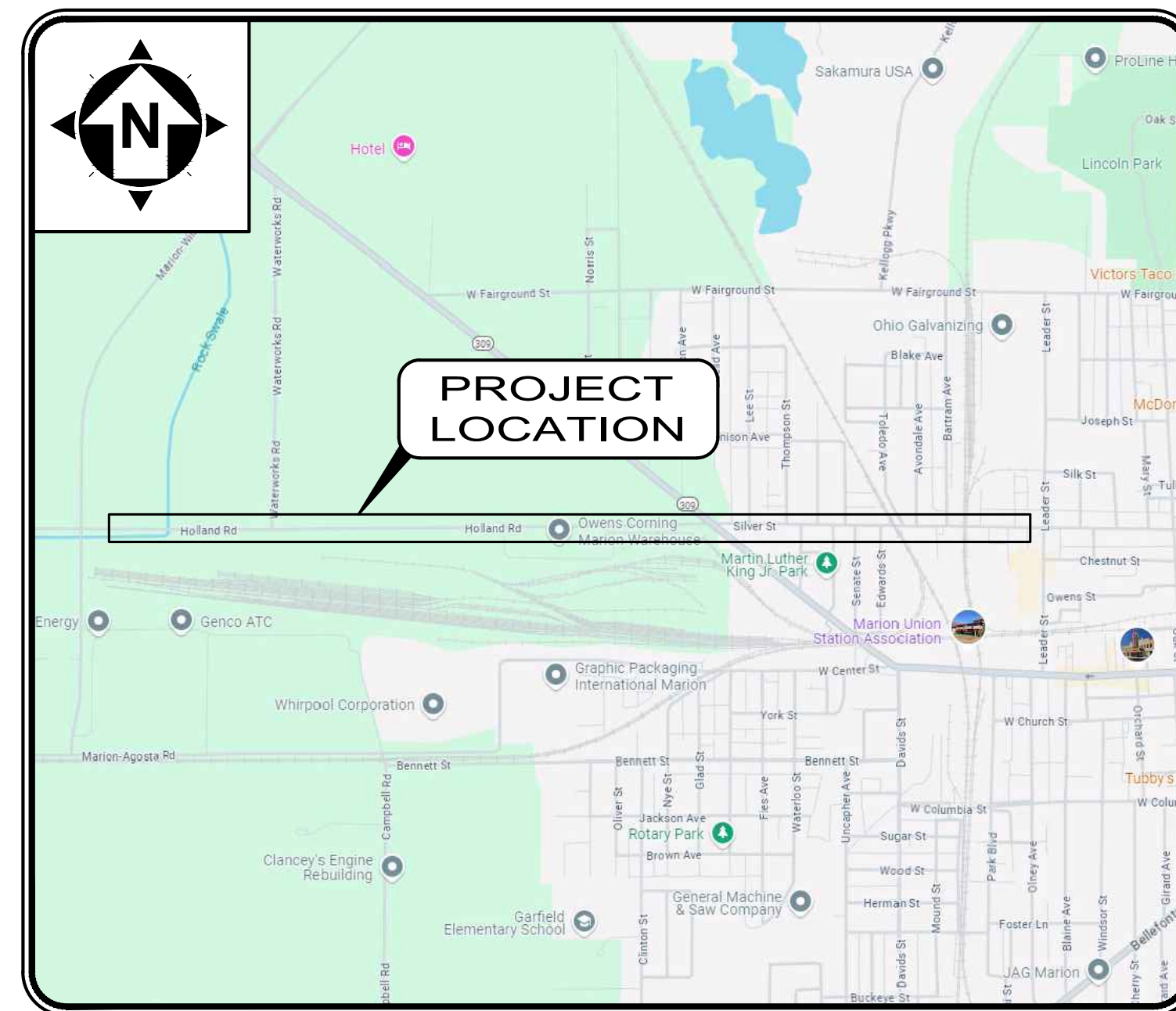
MARION COUNTY, OHIO



SHEET LIST TABLE		
SHEET NUMBER	SHEET TITLE	SHEET NAME
GENERAL - 00 SERIES		
1	COVER SHEET	00G-01
2	LINETYPES & SYMBOLOLOGY	00G-02
3	SYMBOL LEGEND	00G-03
4	GENERAL NOTES	00G-04
5	GENERAL NOTES	00G-05
6	OVERALL PLAN	00G-06
7	MAINTENANCE OF TRAFFIC	00G-07
8	CONSTRUCTION DETAILS - 01	00G-08
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11	CONSTRUCTION DETAILS - 04	00G-11
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12	STA 0+00 - 5+00	10C-01
13	STA 5+00 - 10+00	10C-02
14	STA 10+00 - 15+00	10C-03
15	STA 15+00 - 20+00	10C-04
16	STA 20+00 - 25+00	10C-05
17	STA 25+00 - 30+00	10C-06
18	STA 30+00 - 35+00	10C-07
19	STA 35+00 - 40+00	10C-08
20	STA 40+00 - 45+00	10C-09
21	STA 45+00 - 50+00	10C-10
22	STA 50+00 - 55+00	10C-11
23	STA 55+00 - 60+00	10C-12
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25	STA 65+00 - 70+00	10C-14
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EROSION CONTROL - 20 SERIES		
28	EROSION CONTROL DETAILS	20EC-01



OCTOBER 2024



LOCATION MAP
NOT TO SCALE

MARION OFFICERS

BILL COLLINS	MAYOR
TOM ROBBINS	DIRECTOR OF PUBLIC SAFETY
MIKE BODINE II	DIRECTOR OF PUBLIC SERVICE
TOMMY REESE	TREASURER
JAY MCDONALD	POLICE CHIEF
CHUCK DEEM	FIRE CHIEF
MARK RUSSELL	LAW DIRECTOR
JEFF SHETLER, PE	CITY ENGINEER
SCOTT BISHOP	ASSISTANT CITY ENGINEER

MARION CITY COUNCIL

MARY STONEBURNER	PRESIDENT OF COUNCIL
SHAWN BARR	COUNCILPERSON WARD 1
AYERS RATLIFF	COUNCILPERSON WARD 2
JASON SCHABER	COUNCILPERSON WARD 3
TWILA LAING	COUNCILPERSON WARD 4
THADDAEUS SMITH	COUNCILPERSON WARD 5
RONALD PRATER	COUNCILPERSON WARD 6
MIKE NEFF	COUNCIL-AT-LARGE
AARON ROLLINS	COUNCIL-AT-LARGE
RALPH SMITH	COUNCIL-AT-LARGE
MATTHEW K. POLLOCK	CLERK OF COUNCIL

APPROVALS

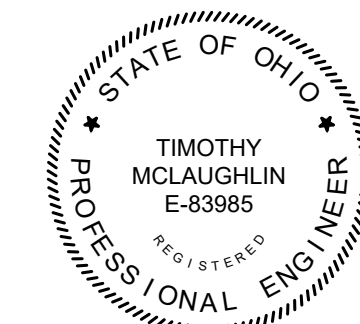
CITY OF MARION

Jeff Shetler
JEFF SHETLER, PE - CITY ENGINEER

10/24/24
DATE

ENGINEER:

CT CONSULTANTS, INC.
8150 STERLING COURT
MENTOR, OH 44060
(440) 951-9000 PHONE
(440) 951-7487 FAX



Timothy McLaughlin
TIMOTHY MCLAUGHLIN
P.E. No. E-83985

10/23/2024
DATE

NO	DATE	REVISION

SCALE:	AS NOTED
DATE:	10/1/2024
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	TJM

CITY OF MARION
ROCK SWALE COMBINED
SEWER IMPROVEMENTS PHASE I
MARION COUNTY
OHIO
GENERAL - 00 SERIES
COVER SHEET

PROJECT NO:	
242139	
DRAWING NAME	
00G-01	
SHEET	OF
1	28



TICKET ID NUMBERS

B427001316-01B, B427001342-00B, B427001349-00B, B427001354-00B, B427001357-00B, B427001363-00B, B427001494-00B, B427001495-00B

- 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.
- THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.



ENGINEER'S PROJECT No. 242139

GENERAL PROJECT CONDITIONS

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF MARION (OWNER) CODIFIED ORDINANCES & CONSTRUCTION STANDARDS AND THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS NOTED OTHERWISE HERIN. WHEN IN CONFLICT THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- UNLESS OTHERWISE SPECIFIED, ALL MATERIALS SHALL BE NEW AND BOTH WORKMANSHIP AND MATERIALS SHALL BE OF PREMIUM QUALITY. PROPER AND SUFFICIENT FOR THE PURPOSE CONTEMPLATED. THE CONTRACTOR SHALL FURNISH, IF SO REQUIRED, SATISFACTORY EVIDENCE AS TO TYPE AND QUALITY OF MATERIALS AND WORKMANSHIP.
- ALL ITEMS OF EQUIPMENT AND/OR MATERIAL PROPOSED BY THE CONTRACTOR FOR SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER IN WRITING AND SHALL BE EQUAL OR SUPERIOR TO THE ITEMS SPECIFIED IN THE CONTRACT DOCUMENTS. IF SAID SUBSTITUTION PROPOSED BY THE CONTRACTOR FOR A SPECIFIED ITEM REQUIRES ENGINEERING REVISIONS, THE TOTAL EXPENSE OF SAID REVISIONS SHALL BE PAID BY THE CONTRACTOR.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL CHARGES AND FEES AS MAY BE NECESSARY AND REQUIRED BY THE CITY OR STATE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THEIR WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING FEATURE, (I.E. EXISTING INLETS, CONDUITS, ETC.) WHICH IS NOT MARKED FOR REPLACEMENT OR REMOVAL. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE OPERATIONS OF THE CONTRACTOR, THEY SHALL REPLACE THE DAMAGED PORTION AT THEIR EXPENSE.
- THE CONTRACTOR SHALL EXERCISE DUE CARE DURING CONSTRUCTION SO AS NOT TO DESTROY ANY TREES, PLANTS, SHRUBS OR STRUCTURES OUTSIDE OF THE INDICATED WORK LIMITS AND THOSE NOT SPECIFICALLY MARKED FOR REMOVAL OR RELOCATION WITHIN THE WORK LIMITS.
- IN SOME INSTANCES, THE CONTRACTOR MAY BE REQUIRED TO EXCAVATE UNDER AND AROUND THE EXISTING UTILITIES.
- THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE OWNER DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS AND THE CONTRACTOR IS ULTIMATELY RESPONSIBLE TO CONFIRM THE PRESENCE AND LOCATION OF ANY AND ALL EXISTING UTILITIES.

COLUMBIA GAS

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AQUA OHIO

VINNY LUPICA
CONSTRUCTION COORDINATOR III
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WATER POLLUTION CONTROL

MATT ICE
1810 MARION AGOSTA ROAD
MARION, OHIO 43302
740-383-6051

SANITATION, STREETS, RECYCLING & CENTRAL GARAGE

SCOTT KURZ
981 W. CENTER ST.
MARION, OHIO 43302
740-382-1479

- 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. THE COST FOR ANY REQUIRED PROTECTION OR RELOCATION OF EXISTING POWER OR TELEPHONE POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT BE THE RESPONSIBILITY OF THE OF THE OWNER.
- 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 WITH THE UTILITY COMPANY'S SCHEDULE.
- CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL THE EXISTING GAS, WATER, ELECTRIC, CABLE, TELEPHONE, 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 PROJECT ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- 48 HOURS PRIOR TO ANY EXCAVATION NOTIFY OHIO ONE CALL @ 811.
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA): IT SHALL BE THE FULL AND COMPLETE RESPONSIBILITY OF THE CONTRACTOR TO MEET AND COMPLY WITH SAFETY REQUIREMENTS AND REGULATIONS AS ESTABLISHED BY OSHA OR ANY OTHER REGULATORY BODY.
- ALL MATERIALS TO BE REMOVED FROM THE SITE SHALL BE DISPOSED AT A LICENSED FACILITY PER ALL APPLICABLE STATE, FEDERAL AND LOCAL REGULATIONS.

OHIO EDISON

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SPECTRUM

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FRONTIER

CHRIS AVERY
NETWORK ENGINEER
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MARION OH 43302
740-383-0551
ira.avery@fr.com

- THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY, SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST-FREE STREET SWEEPING DEVICE, AS DIRECTED BY THE ENGINEER, TO MAINTAIN ALL ROADWAYS BEING USED ALONG THE CONSTRUCTION SITE. PAYMENT FOR ALL SOIL EROSION, SEDIMENT AND DUST CONTROL MEASURES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER VARIOUS ITEMS.
- PROPERTY PINS AND MONUMENTS NEAR 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 AS DIRECTED BY THE ENGINEERS.
- 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 TO THE SATISFACTION OF THE ENGINEER. ANY DITCHES DISTURBED DURING CONSTRUCTION SHALL BE REGRADED BY THE END OF THE SAME WORK DAY. THE COST FOR THIS WORK SHALL BE COVERED UNDER THE COST OF OTHER BID ITEMS. ALL EXISTING STORM AND SANITARY SEWER FACILITIES, INCLUDING TILE, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR RECONNECTED TO THE EXISTING OR PROPOSED SYSTEM AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL BENCH MARKS, PROPERTY LINE REFERENCES (E.G., PINS, PIPES, MONUMENTS), REFERENCE POINTS, STAKES AND ANY OTHER SURVEY REFERENCE. IN CASE OF DISTURBANCE, THE CONTRACTOR SHALL ENGAGE A REGISTERED SURVEYOR TO REPLACE THEM AT THE CONTRACTOR'S EXPENSE AND SHALL BE RESPONSIBLE FOR ANY ERRORS THAT MAY BE CAUSED BY THEIR LOSS OR DISTURBANCE. ALL NOTES AND CALCULATIONS USED IN RESETTling OR REPLACEMENT OF PROPERTY PINS, MONUMENTS, REFERENCE POINTS, AND ANY OTHER SURVEY REFERENCE SHALL BE STAMPED, SIGNED AND DATED BY THE REGISTERED SURVEYOR AND COPIES PROVIDED TO THE OWNER.
- SURVEY AND STREET ALIGNMENTS SHOWN ON THESE PLANS WERE OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR OTHER PURPOSES.

PROHIBITED CONSTRUCTION ACTIVITIES

- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER;
- LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS;
- INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS;
- PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS 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;
- 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;
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM;
- DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA;
- DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS;
- OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT;
- 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;
- 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;
- 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;
- 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; AND
- 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.

EROSION/SEDIMENT CONTROL:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH ODOT ITEM 207 AND AS REQUIRED BY THE MARION COUNTY SOIL AND WATER CONSERVATION DISTRICT.
- SITE CLEARING AND GRUBBING SHALL NOT COMMENCE UNTIL SUCH TIME THAT THE CONTRACTOR IS PREPARED TO START CONSTRUCTION. REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION OF ACTUAL FACILITIES; PROTECT THE REST TO PRESERVE THEIR AESTHETIC, HABITAT, AND EROSION CONTROL VALUES.
- IMMEDIATELY FOLLOWING SITE AND ACCESS CLEARING, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED. THEY WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION UNTIL FINAL SEEDING AND SITE RESTORATION OCCURS.

- EXISTING TOPSOIL WILL BE STOCKPILED AND REPLACED UPON FINAL GRADING OF THE CONSTRUCTION SITE.
- EXTENSIVE AREAS OF STOCKPILED TOPSOIL AT THE CONSTRUCTION SITE ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING OR COVERING SUCH AS WITH ANCHORED STRAW MULCH. SILT BARRIERS WILL BE INSTALLED DOWN GRADIENT OF THESE AREAS ON CONTOUR AND WITH THEIR ENDS UP SLOPE OF THE CONTOUR TO PREVENT SILT LADEN RUNOFF FROM ENTERING WATERWAYS OR STORM SEWERS. WITHIN 15 DAYS OF COMPLETION OF CONSTRUCTION, ANY REMAINING SOIL MUST EITHER BE REMOVED OR PERMANENTLY STABILIZED.
- SILT FENCES SHOULD BE TRENCHED SIX TO TWELVE INCHES DEEP, THE FABRIC LAID IN THE TRENCH, AND THE SOIL PROPERLY BACKFILLED INTO THE TRENCH TO PREVENT UNDERCUTTING.
- WHERE TRENCH EXCAVATION OCCURS PARALLEL TO ANY WATERWAY, A VEGETATED BARRIER SHOULD BE MAINTAINED BETWEEN THE STREAM AND THE CONSTRUCTION SITE. ALL TRENCH SPOILS WILL BE STOCKPILED ON THE SIDE OF THE TRENCH AWAY FROM THE WATERWAY, AND A LINE OF SILT BARRIERS WILL BE ESTABLISHED ALONG THE EDGE OF CONSTRUCTION ON THE CONTOUR BETWEEN THE TRENCH AND THE WATERWAY.
- NO MORE THAN 200 FEET OF TRENCH SHALL BE OPEN AT ANY GIVEN TIME. TRENCH OPENING AND LAYING OF PIPE SHOULD OCCUR SO AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA. ALL TRENCHES ARE TO BE BACKFILLED AND COMPACTED IMMEDIATELY AFTER PIPE INSTALLATION. IMMEDIATELY FOLLOWING THE BACKFILLING OF THE TRENCH, THE GROUND SURFACE WILL BE ROUGH GRADED TO THE EXISTING CONTOURS TO ALLOW FOR PROPER DRAINAGE, AND WILL BE SEEDDED AND/OR MULCHED IN STAGES TO PREVENT EROSION.
- ANY DISTURBED AREA THAT WILL NOT BE ACTIVELY UNDER CONSTRUCTION FOR A PERIOD OF 15 DAYS OR MORE WILL BE TEMPORARILY STABILIZED IMMEDIATELY BY SEEDING AND MULCHING OR BY ANCHORED STRAW MULCH.
- AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH DISTURBED AREA IN STAGES WITH PERENNIAL VEGETATION INSTALLED ACCORDING TO OHIO EPA (OR EQUIVALENT) STANDARDS AND SPECIFICATIONS. AFTER FINAL SOIL SETTLING OVER THE SANITARY SEWER, OUTFALL SEWER, AND FORCE MAIN ALIGNMENTS, THE CONTRACTOR SHALL BRING THE TRENCH BACK TO GRADE IF NECESSARY, PLACE TOPSOIL, AND FINE GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION OF THAT SECTION OF PIPE. FINAL GRADING WILL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY FOR DRAINAGE AND AESTHETIC REASONS.
- EXCAVATION PITS (FOR SEWER LINER INSTALLATION) SHALL BE SURROUNDED WITH SILT BARRIERS TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL. STORM SEWER INLETS WILL BE SURROUNDED WITH SILT BARRIERS TO PREVENT SILTATION.
- SLOPES EXCEEDING 15 PERCENT OR THAT TEND TO BE UNSTABLE REQUIRE SPECIAL TREATMENT SUCH AS WATER DIVERSION BERMS, SODDING, OR THE USE OF JUTE OR EXCELSIOR BLANKETS.
- WHEN BORROW MATERIAL IS OBTAINED FROM OTHER THAN COMMERCIAL OPERATED SOURCES, EROSION OF THE BORROW SITE WILL BE SO CONTROLLED BOTH DURING AND AFTER COMPLETION OF THE WORK THAT EROSION WILL BE MINIMIZED AND SEDIMENT WILL NOT ENTER STREAMS OR OTHER BODIES OF WATER. WASTE OR DISPOSAL AREAS AND CONSTRUCTION ROADS SHALL BE LOCATED AND CONSTRUCTED IN A MANNER THAT WILL KEEP SEDIMENT FROM ENTERING STREAMS. TEMPORARY EROSION CONTROL BARRIERS AND LIMITED SITE CLEARING WILL BE USED AS NEEDED.
- IF WORK IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROLS IN GOOD OPERATING CONDITION DURING THE SUSPENSION OF THE WORK. ALSO, WHEN SEASONAL CONDITIONS PERMIT AND THE SUSPENSION OF WORK IS EXPECTED TO EXCEED A PERIOD OF ONE MONTH, THE CONTRACTOR SHALL SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS LEFT EXPOSED WHEN THE WORK IS STOPPED.
- INSTALL THE ABOVE EROSION AND SEDIMENT CONTROL MEASURES, AS APPROPRIATE, REFERRING TO OHIO EPA, STORM WATER TECHNICAL ASSISTANCE, RAINWATER AND LAND DEVELOPMENT MANUAL STANDARDS AND SPECIFICATIONS (FORMERLY ODNr) OR EQUIVALENT FOR PARTICULAR TECHNIQUES. THESE MEASURES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
LINK:
<http://epa.ohio.gov/portals/35/storm/technicalassistance/r11-6-14all.pdf>

TRAFFIC CONTROL:

- CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN IN COMPLIANCE WITH THE LATEST OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.ACCESS MUST BE MAINTAINED FOR EMERGENCY VEHICLES AT ALL TIMES.
- NO TRENCH WILL BE LEFT OPEN AT THE END OF A WORK DAY, WHERE PRACTICAL; ANY OPEN TRENCH WILL BE PROPERLY IDENTIFIED AND BARRICADED FOR SAFETY PURPOSES. THE SAME APPLIES FOR ACCESS PIT LOCATIONS.
- ANY CONSTRUCTION EQUIPMENT OR EXCAVATIONS NEAR ROADS MUST BE MARKED WITH LIGHTS, REFLECTORS, OIL LANTERNS, OR SMUDGE POTS.
- THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN ALL NECESSARY BARRICADES, WARNING SIGNS, DANGER SIGNALS, FLAG PERSON(S), WATCHERS, AND ALL OTHER APPROPRIATE PRECAUTIONS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR SAFETY.
- PRIOR TO CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE, OR BOULEVARD, THE CONTRACTOR MUST HAVE CONSENT FROM LOCAL OFFICIALS AND THE ENGINEER.

AIR POLLUTION / NOISE CONTROL:

- CONSTRUCTION ACTIVITIES WILL BE LIMITED TO 7AM TO 7PM UNLESS AUTHORIZED TO PERFORM OUTSIDE THOSE TIME LIMITS BY THE OWNER.
- CONSTRUCTION EQUIPMENT WILL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS, AS REQUIRED BY SAFETY STANDARDS.
- ALL CONSTRUCTION VEHICLES SHOULD BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.
- PERIODICALLY CHECK EQUIPMENT AND MACHINERY FOR PROPER TUNING TO MINIMIZE EXHAUST EMISSIONS AND NOISE.
- UNPAVED AREAS WILL BE WET DOWN (AS NECESSARY) DURING CONSTRUCTION TO MINIMIZE DUST GENERATION.

TREE / VEGETATION PROTECTION:

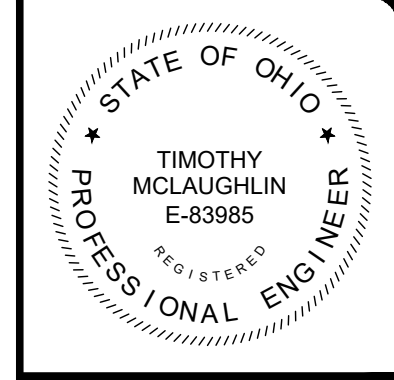
- TREE REMOVAL WILL BE LIMITED TO THE TIME PERIOD BETWEEN OCTOBER 1 AND MARCH 31.
- TREE REMOVAL WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHEREVER POSSIBLE.
- NO TREE REMOVAL WILL BE PERMITTED OUTSIDE THE TEMPORARY EASEMENT WITHOUT PERMISSION OF THE ENGINEER.
- TREES WHICH ARE NOT REMOVED WILL BE PROTECTED BY ENSURING THAT TREES TO BE REMOVED ARE FELLED SO AS NOT TO INJURE THE REMAINING TREES.
- PRIOR TO CLEARING, THE CONTRACTOR AND ENGINEER, SHALL WALK THE ACQUIRED EASEMENTS IN AN EFFORT TO DESIGNATE THE TREES THAT ARE TO BE SAVED. TREES TO BE SAVED WILL BE CLEARLY MARKED BY PAINT WITH THE LETTER "S". TREES TO BE PROTECTED BY AN APPROPRIATE BARRIER SHALL BE MARKED WITH AN "S" ENCLOSED IN A CIRCLE. TREES MARKED FOR REMOVAL IN THE PLANS WILL BE INSPECTED BY THE CITY & THE ENGINEER BEFORE REMOVAL & WILL BE SAVED WHERE POSSIBLE.
- SOIL AND OTHER MATERIAL WILL NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES.
- PRESERVATION OF LANDSCAPING SHOULD TAKE PRECEDENCE OVER REMOVAL. IF REMOVAL OR DAMAGE IS UNAVOIDABLE, EXISTING VEGETATION SHOULD BE REPAIRED OR REPLACED "IN-KIND" UNLESS THE HOMEOWNER SPECIFIES OTHERWISE.
- IF TREES/SHRUBS CANNOT BE REPLACED IN THE SAME LOCATION DUE TO INSTALLATION OF THE SEWER SYSTEM, RELOCATION SHOULD BE CONSIDERED.
- THE CONTRACTOR'S ARBORIST SHALL REPAIR ALL INJURIES TO BARK, TRUNKS, LIMBS, AND ROOTS OF REMAINING VEGETATION BY PROPERLY DRESSING, CUTTING, BRACING AND PAINTING, USING ONLY APPROVED TREE SURGERY METHODS, TOOLS, AND MATERIALS.
- SELECTIVE PRUNING OF TREE LIMBS PRIOR TO INITIATION OF CONSTRUCTION SHOULD ONLY BE USED WITHIN ESTABLISHED EASEMENTS WHERE REMOVAL IS NECESSARY FOR OPERATION OF EQUIPMENT.
- LIMIT THE USE OF RIP-RAP TO AREAS WHERE STREAM FLOW CONDITIONS PREEMPT VEGETATIVE STABILIZATION.

ENVIRONMENTAL PROTECTION:

- ALL MATERIALS TO BE DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AT A SITE APPROVED BY THE ENGINEER. NO EXCESS MATERIALS ARE TO BE DISPOSED OF IN ANY WETLAND, FLOODPLAIN, SURFACE WATER, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS. EROSION CONTROL MEASURES AT THE DISPOSAL SITE MUST BE INSTALLED AND MAINTAINED UNTIL DISPOSAL IS COMPLETE AND THE DISPOSAL SITE IS PERMANENTLY STABILIZED. GIVING EXCAVATED SOIL AWAY DOES NOT RELIEVE THE CONTRACTOR OR ENGINEER OF THIS RESPONSIBILITY.
- TREE REMOVAL WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHENEVER POSSIBLE. IF THE PROJECT IS LOCATED WITHIN THE RANGE OF THE FEDERALLY-ENDANGERED INDIANA BAT (MYOTIS SODALIS) AND TREES MUST BE CUT, THIS MUST OCCUR BETWEEN SEPTEMBER 30 AND APRIL 1. INDIANA BATS ARE HIGHLY-DEPENDENT UPON TREES INCLUDING DEAD AND DYING TREES OF SPECIES WITH EXFOLIATING BARK, CREVICES, OR CAVITIES IN UPLAND AREAS OR RIPARIAN CORRIDORS AND LIVING TREES OF THE SPECIES LISTED ABOVE WITH EXFOLIATING BARK, CAVITIES, OR HOLLOW AREAS FORMED FROM BROKEN BRANCHES OR TOPS. IF SUITABLE TREES MUST BE CUT DURING THE PROHIBITED TIME PERIOD, A NET SURVEY MUST BE CONDUCTED TO DETERMINE THE PRESENCE OR ABSENCE OF INDIANA BATS PRIOR TO CUTTING.

DEWATERING:

- ALL DEWATERING FLOWS ARE TO BE SETTLED INSTILLATION BASINS OR DIRECTED THROUGH FILTERING DEVICES BEFORE DISCHARGE TO STABILIZED SITES, SUCH AS STREAMS OR STORM SEWERS; NOT ONTO EXPOSED SOILS, STREAM BANKS, OR ANY OTHER SITE WHERE THE FLOW COULD CAUSE EROSION.
- SILT FROM CONSTRUCTION OPERATIONS SHALL NOT BE PERMITTED TO ENTER THE STORM SEWER SYSTEM. WHEN CONSTRUCTION OCCURS NEAR STORM SEWER INLETS, EROSION CONTROL MEASURES SUCH AS INLET FILTERS OR OTHER APPROVED BMP SHALL BE USED TO PREVENT SILT FROM ENTERING THE STORM SEWERS.
- CONVEY WATER FROM THE CONSTRUCTION SITE IN A CLOSED CONDUIT. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

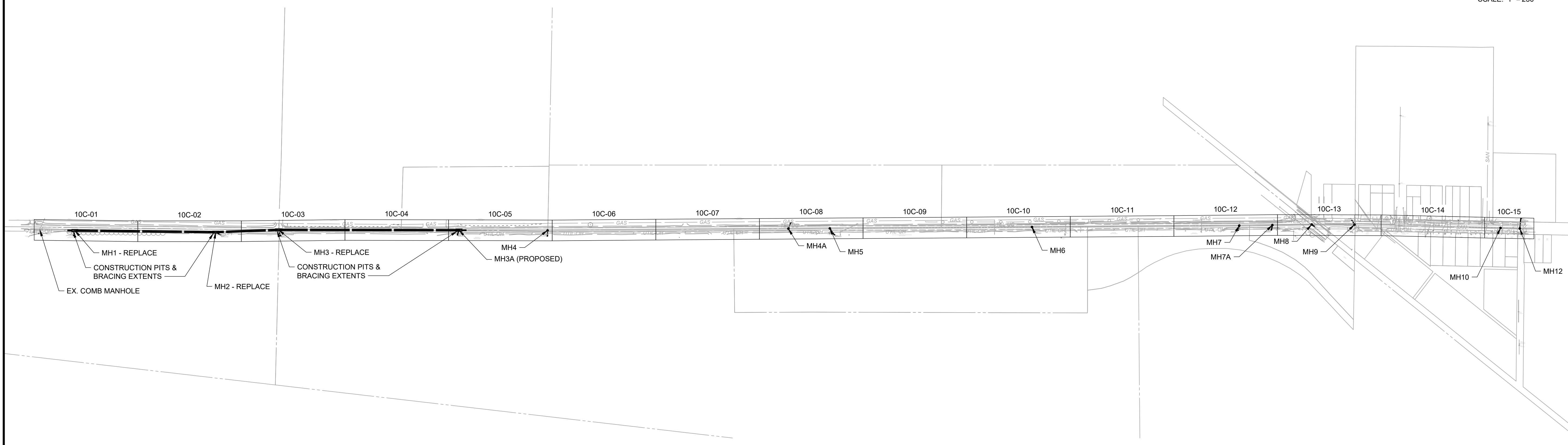
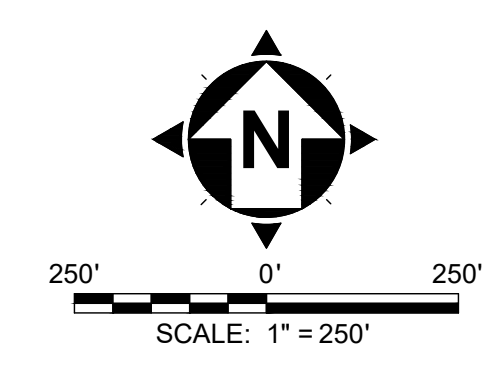
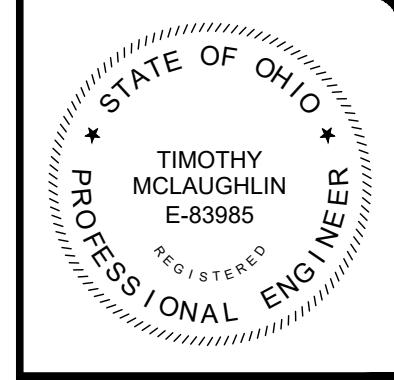


DATE	REVISION	NO	AS NOTED	SCALE:
			10/23/2024	
			DESIGNED BY:	
			DRAWN BY:	
			CHECKED BY:	TJM

CITY OF MARION	OHIO
ROCK SWALE COMBINED	
SEWER IMPROVEMENTS PHASE I	
MARION COUNTY	

GENERAL - 00 SERIES
GENERAL NOTES

PROJECT NO:	
242139	
DRAWING NAME	
00G-04	
SHEET	OF
4	28

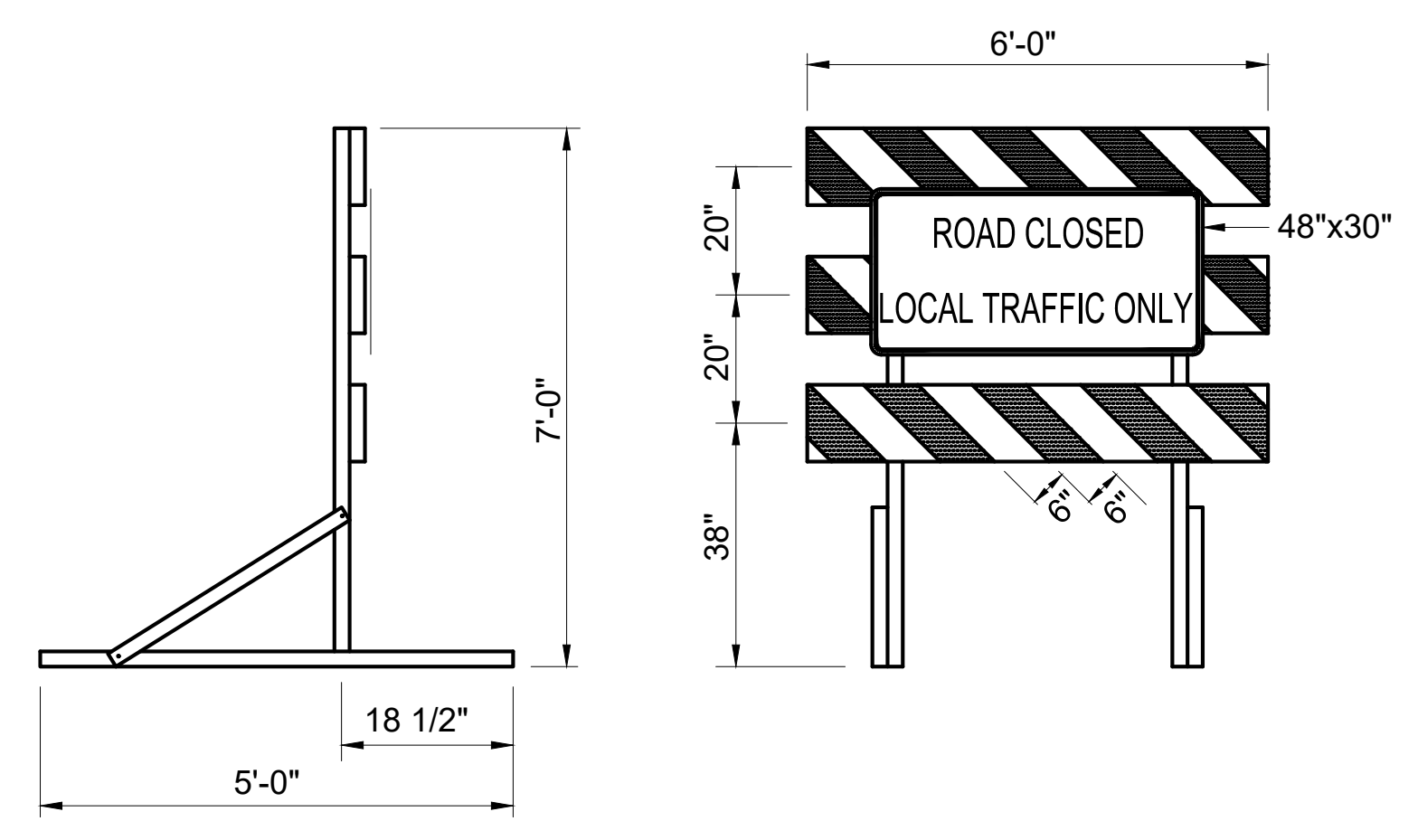
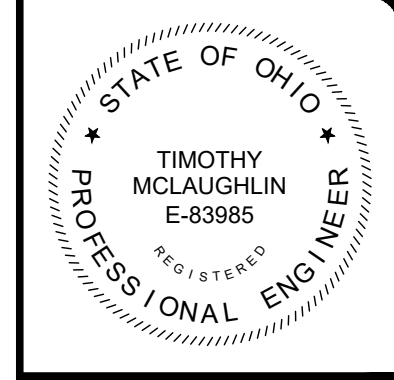


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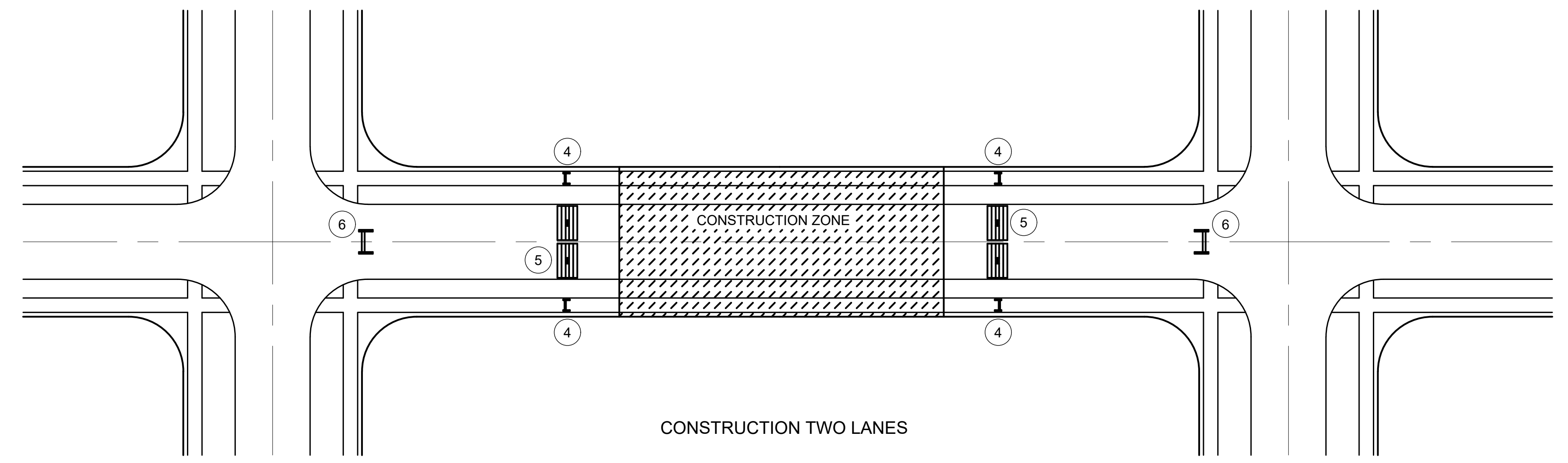
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DATE:	10/23/2024
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DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
GENERAL - 00 SERIES
OVERALL PLAN

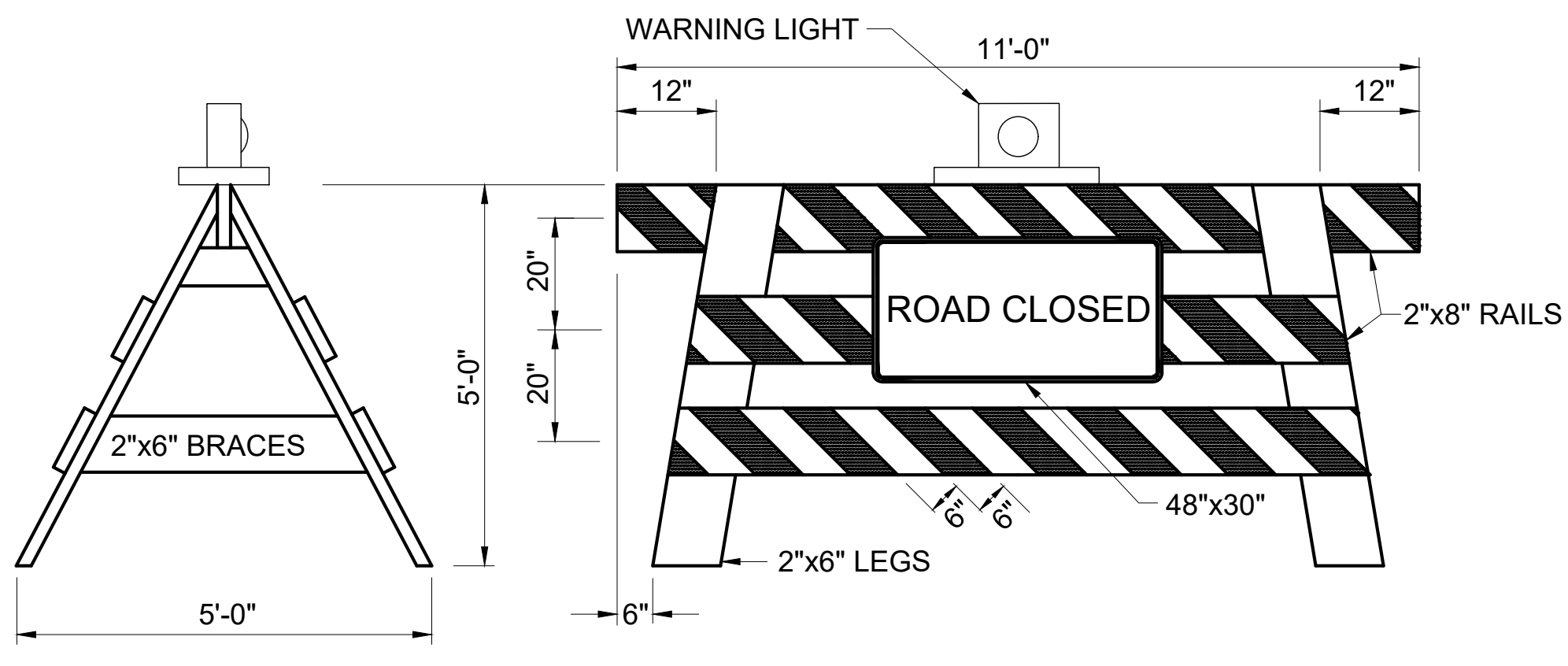
PROJECT NO:	
242139	
DRAWING NAME	
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SHEET	OF
6	28



TYPE III PORTABLE CONSTRUCTION BARRICADE



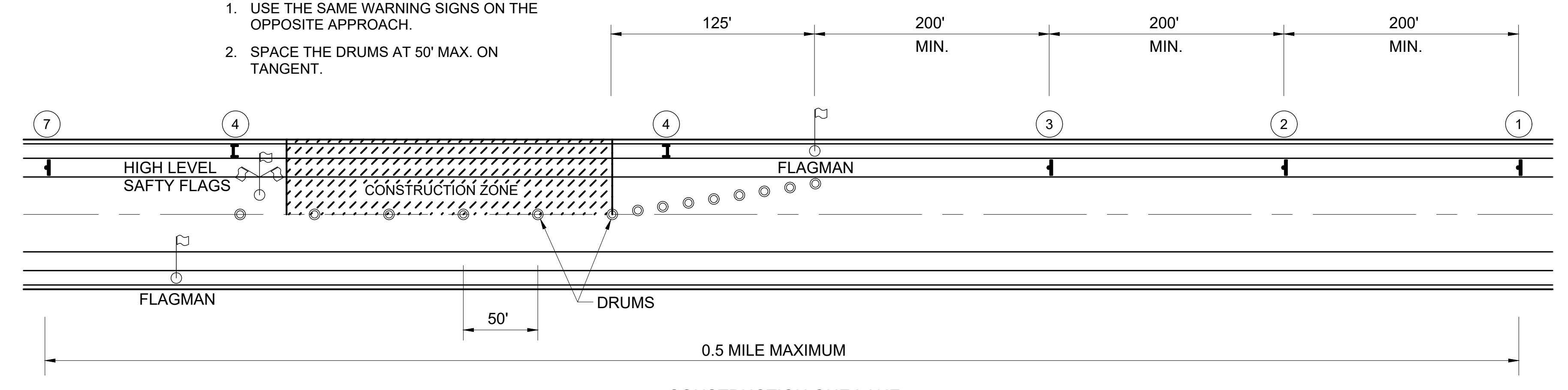
CONSTRUCTION TWO LANES



TYPE III DEMOUNTABLE CONSTRUCTION BARRICADE

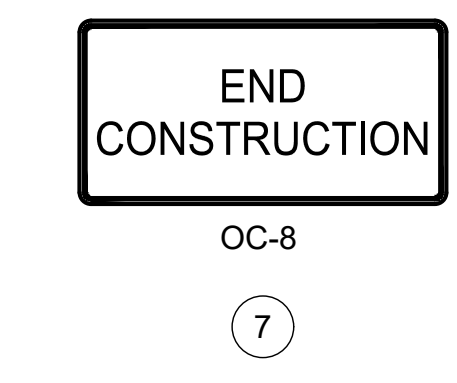
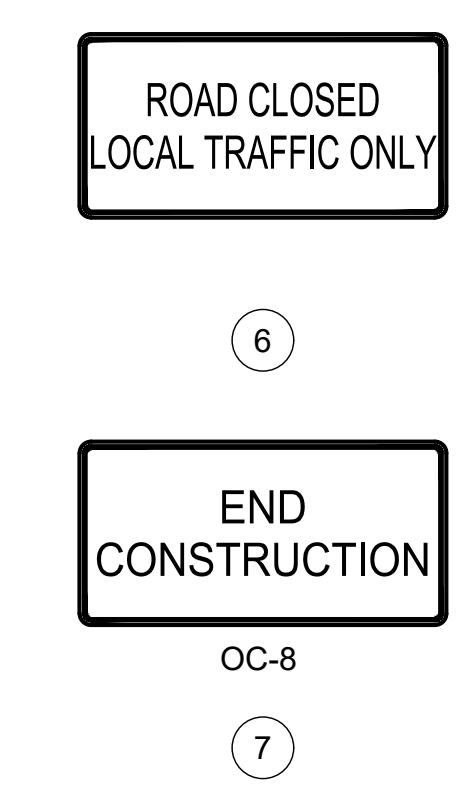
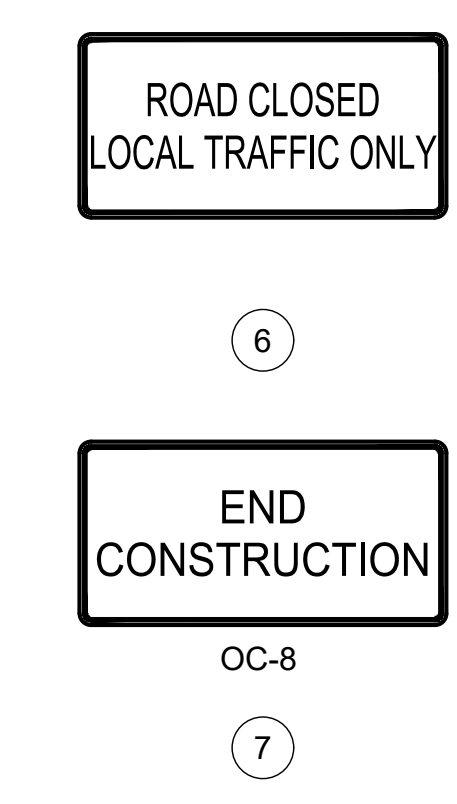
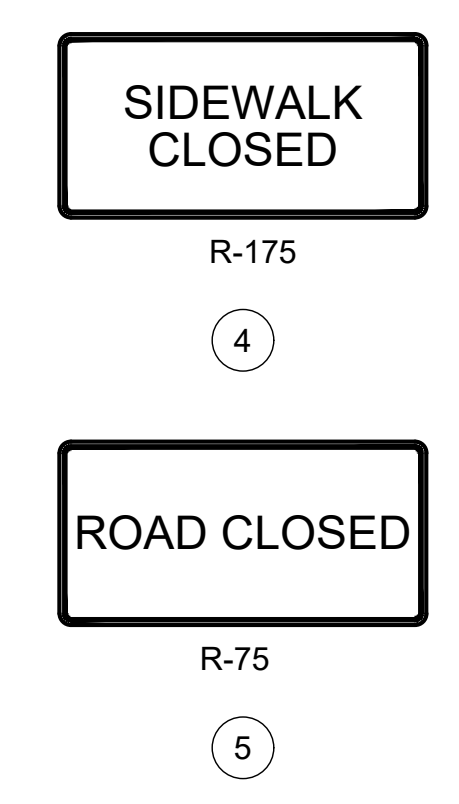
NOTES:

1. USE THE SAME WARNING SIGNS ON THE OPPOSITE APPROACH.
2. SPACE THE DRUMS AT 50' MAX. ON TANGENT.



CONSTRUCTION ONE LANE

- A. BARRICADES: BARRICADES SHALL BE CONSTRUCTED ACCORDING TO DETAILS SHOWN. WHEN THE ROAD IS CLOSED TO TRAFFIC, BARRICADES SHALL BE USED TO EFFECTIVELY CLOSE THE ENTIRE ROADWAY. THE ENDS OF THE BARRICADE SHALL BE LOCATED BY THE ENGINEER TO EFFECT THE DESIRED CLOSING OF THE ROADWAY.
- B. PAINTING AND REFLECTORIZATION: ALL RAILS OF THE BARRICADES AND GATES SHALL BE REFLECTORIZED WITH ORANGE AND WHITE REFLECTORIZED TYPE "G" SHEETING IN 6" WIDE ALTERNATE STRIPES WHICH SLOPE DOWNWARD TOWARD THE CENTERLINE OF THE ROAD AT AN ANGLE OF 45°. ALL THREE RAILS OF THE ROAD CLOSED BARRICADE SHALL BE STRIPED ON THE SIDE FACING TRAFFIC. ALL GATE RAILS SHALL BE STRIPED ON BOTH SIDES. ALL POSTS, BRACES, GATE-LEGS, AND UNSTRIPED RAILS SHALL BE PAINTED WHITE.
- C. TYPE "C" STEADY BURNING BARRICADE WARNING LIGHTS: EACH GATE SHALL BE EQUIPPED WITH A TYPE "C" STEADY BURNING BARRICADE WARNING LIGHT, CONSPICUOUSLY VISIBLE AT ALL DISTANCES UP TO 1000' UNDER NORMAL CONDITIONS BETWEEN SUNSET AND SUNRISE DURING THE PERIOD THE ROAD IS CLOSED.
- D. SIGNS: WHERE THE ROAD IS CLOSED TO TRAFFIC BY THE ERECTION OF BARRICADES, "ROAD CLOSED" SIGNS (R-75) SHALL BE MOUNTED ON THE BARRICADES AS SHOWN. WHEN TRAFFIC IS MAINTAINED, A "ROAD CONSTRUCTION AHEAD" SIGN (OW-128) SHALL BE USED ON THE RIGHT SHOULDER ON THE APPROACHES AT THE INTERSECTING STREET IN ADVANCE OF THE PROJECT. WHERE THE SIDEWALK IS CLOSED TO PEDESTRIAN TRAFFIC "SIDEWALK CLOSED" SIGNS SHALL BE ERECTED ACROSS THE WALK AT THE LOCATION SHOWN.

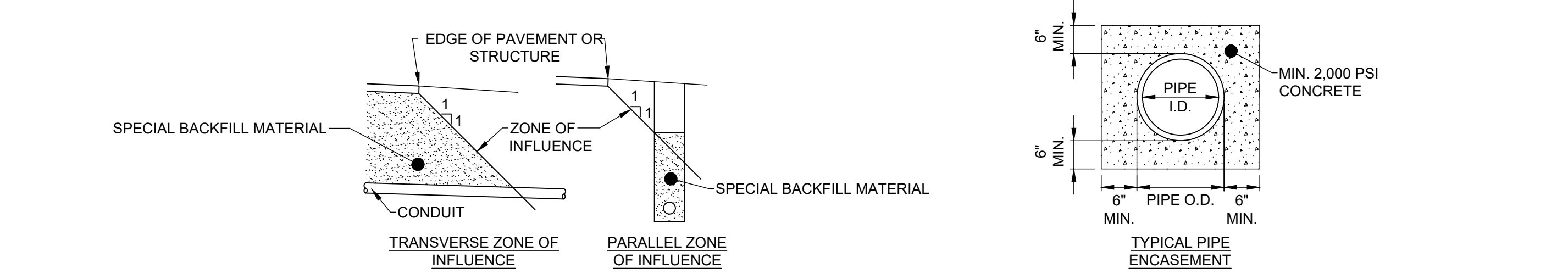
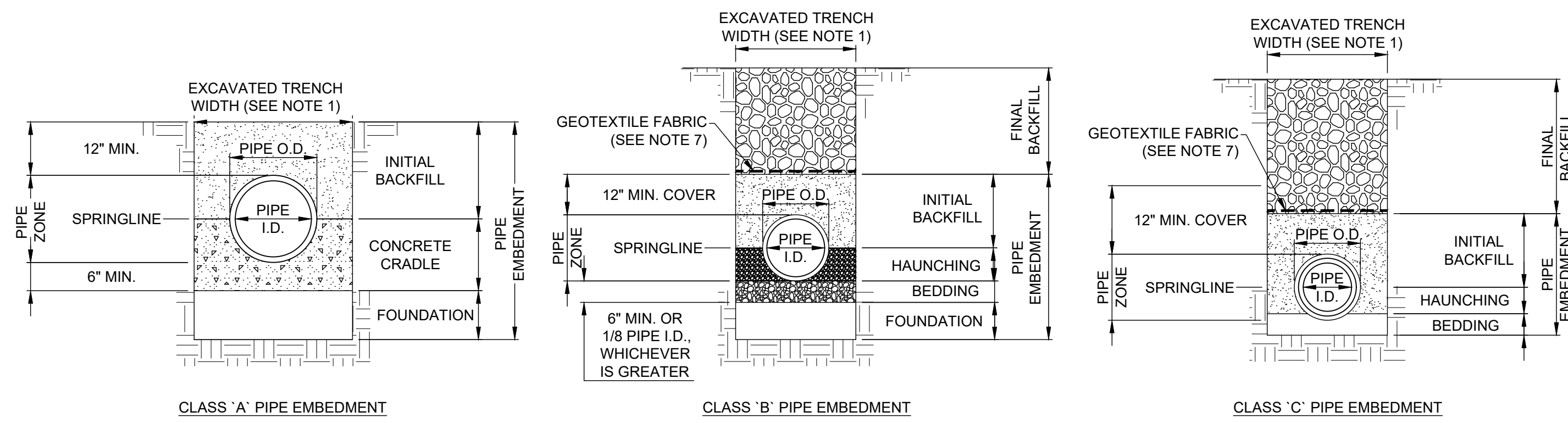


NO.	REVISION	DATE

SCALE:	AS NOTED
DATE:	9/25/2024
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 OHIO
 MARION COUNTY
GENERAL - 00 SERIES
MAINTENANCE OF TRAFFIC

PROJECT NO:	242139
DRAWING NAME:	00G-07
SHEET:	7
OF:	28



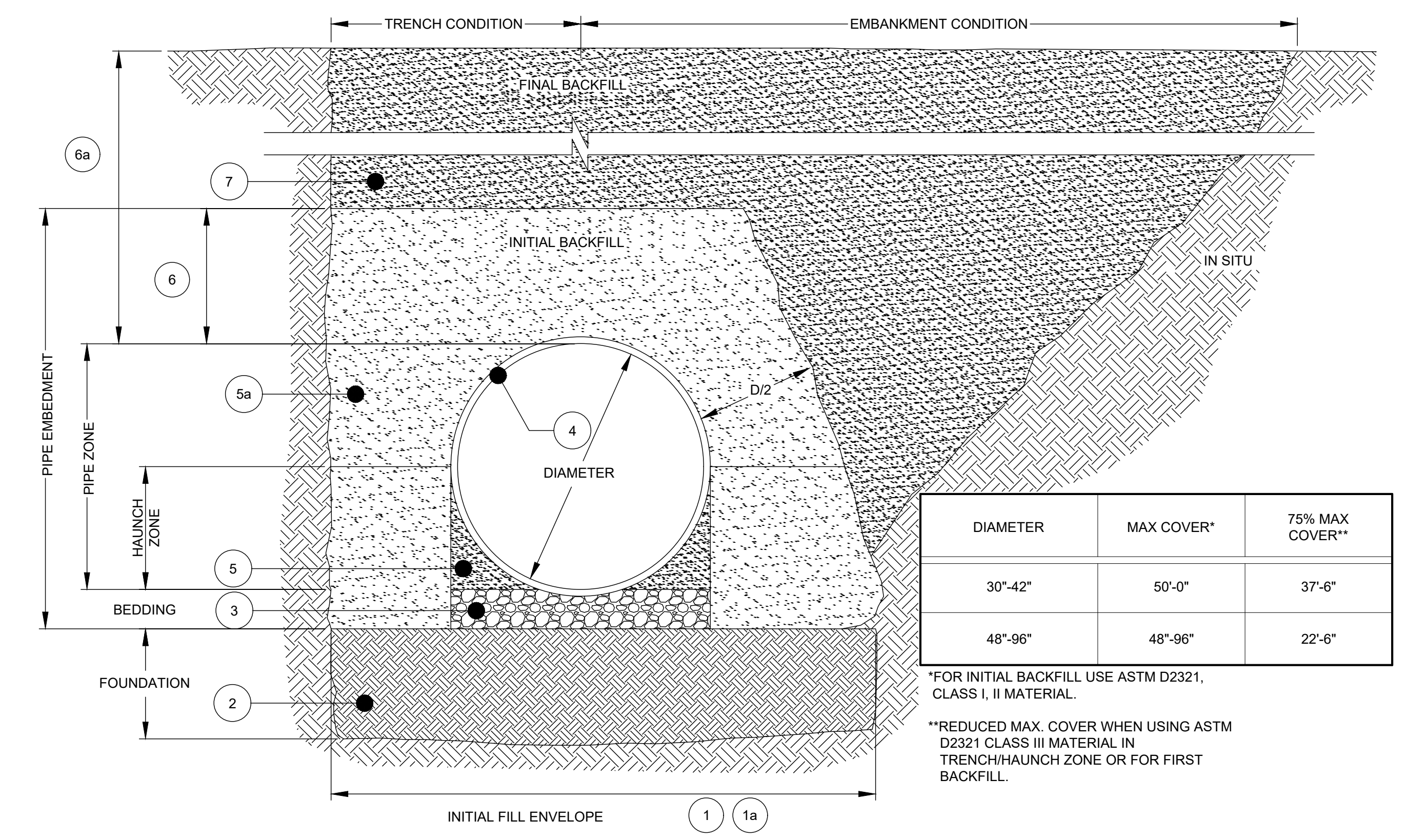
- NOTES:**
- MAXIMUM EXCAVATED TRENCH WIDTH: THE MAXIMUM EXCAVATED TRENCH WIDTH FROM THE BOTTOM OF THE TRENCH TO 12" OVER THE TOP OF THE PIPE (WITHIN PIPE EMBEDMENT) SHALL BE O.D. + 24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D. + 30" FOR PIPE FROM 24" I.D. TO 54" I.D. AND O.D. + 48" FOR PIPES SIZES 60" I.D. AND OVER.
 - FOUNDATION: REQUIRED FOR THIS PROJECT. AS PER THE GEOTECHNICAL REPORT, THE CONTRACTOR SHALL EXCAVATE AND REMOVE AN ADDITIONAL 12" OF MATERIAL AND REPLACE WITH A LAYER OF 6" OF AASHTO NO. 1 AND NO. 2 CRUSHED LIMESTONE, FOLLOWED BY A LAYER OF 6" OF AASHTO NO. 57 GRANULAR LIMESTONE.
 - 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 LIMESTONE 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 HAUNCHING SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT. IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 LIMESTONE 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 LIMESTONE 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 LIMESTONE 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 LIMESTONE GRANULAR PIPE BEDDING OR SAND BEDDING SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
 - 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. LSM SHALL BE USED IN PLACE OF SPECIAL BACKFILL MATERIAL WHEN TOP OF PIPE IS WITHIN 5' OF PAVEMENT OR WITHIN CITY RIGHT-OF-WAY OR UNLESS INDICATED ON DRAWINGS
 - SPECIFICATIONS: ALL TRENCHING, PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATION 310000 - EARTHWORK.
 - CLAY TRENCH DAMS: CLAY TRENCH DAMS SHALL BE REQUIRED FOR EACH LATERAL, UPSTREAM OF EVERY MANHOLE, AS SHOWN ON THE DRAWINGS, AND AS DIRECTED BY THE ENGINEER.
 - GEOTEXTILE FABRIC: INSTALL A GEOTEXTILE FABRIC IN ACCORDANCE WITH ODOT 712.09, TYPE A, AFTER ALL INITIAL BACKFILL CONSISTING OF AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT.
 - TYPICAL PIPE ENCASEMENT, AS PER PLAN OR AS DIRECTED BY THE ENGINEER.

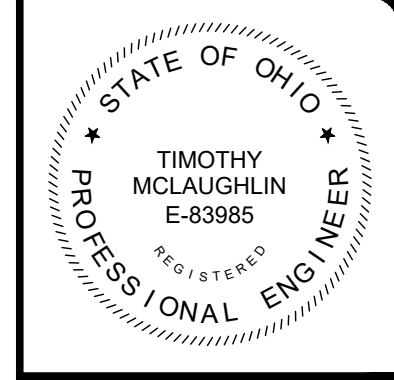
TRENCHING, BEDDING, AND BACKFILL DETAIL
NOT TO SCALE



- MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER PIPE. MIN. WIDTH = (1.25 x DIAMETER) + 12" (FOLLOW ASTM D2321)
- 1a. MINIMUM EMBANKMENT WIDTH IS 3 PIPE DIAMETERS BUT NO LESS THAN 2' OUTSIDE OF SPRINGLINE.
- FOUNDATION: ONLY REQUIRED AS PER THE GEOTECHNICAL REPORT - IF REQUIRED THE CONTRACTOR SHALL EXCAVATE AND REMOVE AN ADDITIONAL 12" OF MATERIAL AND REPLACE WITH A LAYER OF 6" OF AASHTO NO. 1 AND NO. 2 CRUSHED LIMESTONE, FOLLOWED BY A LAYER OF 6" OF AASHTO NO. 57 GRANULAR LIMESTONE.
- ENGINEER TO DETERMINE IF BEDDING IS REQUIRED. BEDDING MATERIAL SHALL BE A RELATIVELY LOOSE MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, 6" MINIMUM DEPTH.
- DUROMAXX STEEL REINFORCED (SRPE) PIPE, OR APPROVED EQUIVILANT
- HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION.
- 5a. INITIAL BACKFILL FOR PIPE EMBEDMENT MATERIAL TO MEET ASTM D2321 CLASS I, II, III OR APPROVED EQUAL, COMPACTED TO 90% STANDARD PROCTOR (NATIVE MATERIAL CAN BE UTILIZED THAT MEETS ASTM D2321 OR APPROVED EQUAL).
 - ALL LIFTS PLACED IN CONTROLLED MANNER. TO PREVENT UNEVEN LOADING, IT IS RECOMMENDED THAT LIFTS NOT EXCEED 8" UNCOMPACTED LIFT HEIGHTS.
- INITIAL BACKFILL ABOVE PIPE MAY INCLUDE ROAD BASE MATERIAL AND RIGID PAVEMENT (IF APPLICABLE), MINIMUM COVER STILL APPLIES, OTHERWISE:
 - 6" MINIMUM FOR PIPE DIAMETERS 30" - 60"
 - 12" MINIMUM FOR PIPE DIAMETERS 66" - 96"
- 6a. HEIGHT OF COMPACTED COVER PER DIAMETER FOR CONVENTIONAL HIGHWAY LOADS (DISTANCE MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT):
 - 12" MINIMUM FOR PIPE DIAMETERS 30" - 60"
 - 18" MINIMUM FOR PIPE DIAMETER 66" - 78"
 - 24" MINIMUM FOR PIPE DIAMETERS 84" - 96"
- 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. SPECIAL BACKFILL MATERIAL SHALL BE USED WHEN TOP OF PIPE IS WITHIN 5' OF PAVEMENT OR WITHIN CITY RIGHT-OF-WAY OR UNLESS INDICATED ON DRAWINGS.

- NOTES:**
- ENGINEER TO DETERMINE IF GEOTEXTILE SHOULD BE USED TO PREVENT SOIL MIGRATION.
 - FOR MULTIPLE BARREL INSTALLATION THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE = PIPE DIA./2 OR 3' FOR PIPE DIAMETERS 72" AND LARGER. CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING.
 - BACKFILL REQUIREMENTS SHALL FOLLOW ASTM D2321. IN THE EVENT OF DISCREPANCIES, ASTM D2321 SHALL SUPERCEDE THIS DETAIL.
 - SPECIFICATIONS: ALL TRENCHING, PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATION 310000 - EARTHWORK.

SRPE TRENCHING AND BEDDING DETAIL
NOT TO SCALE



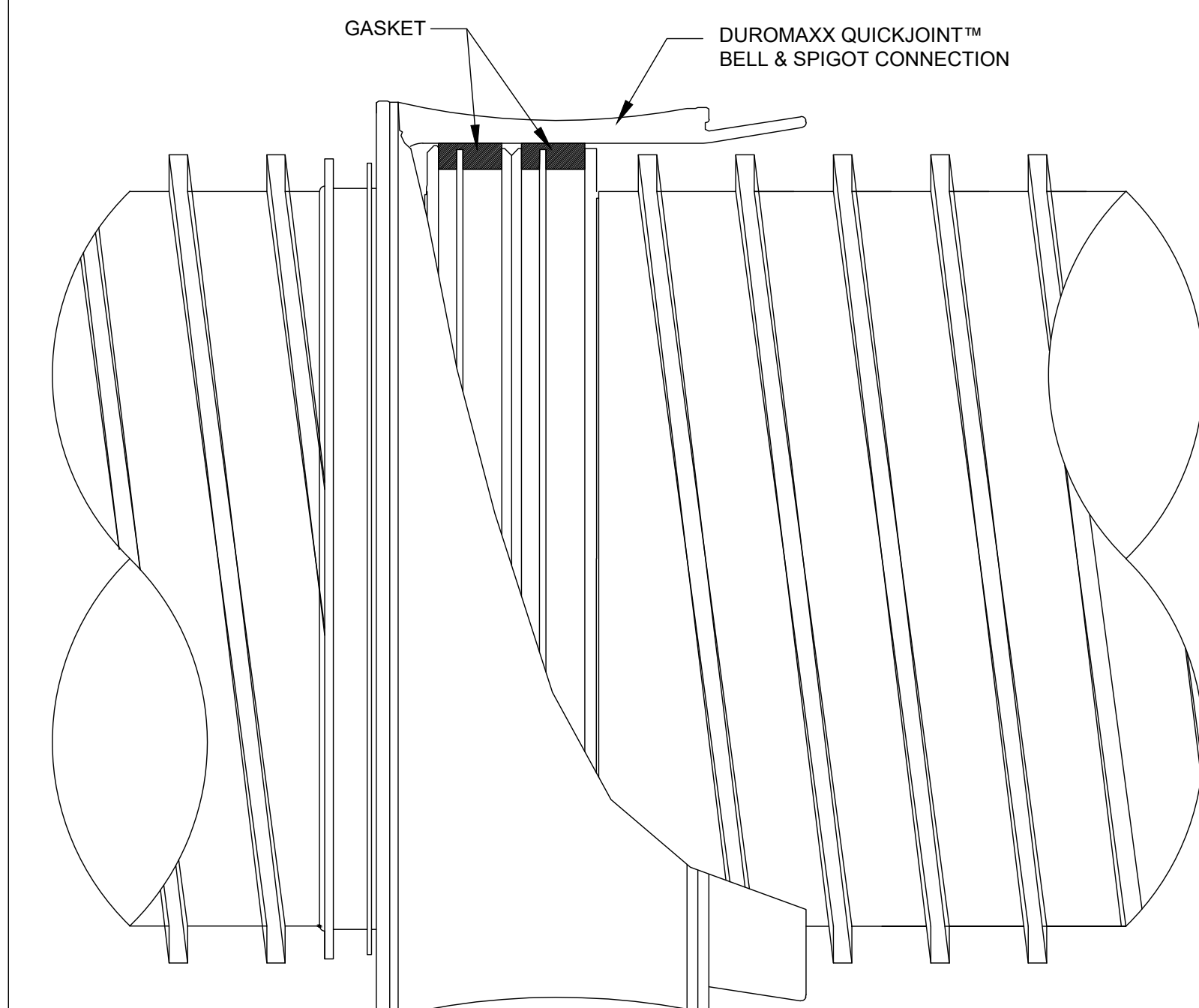
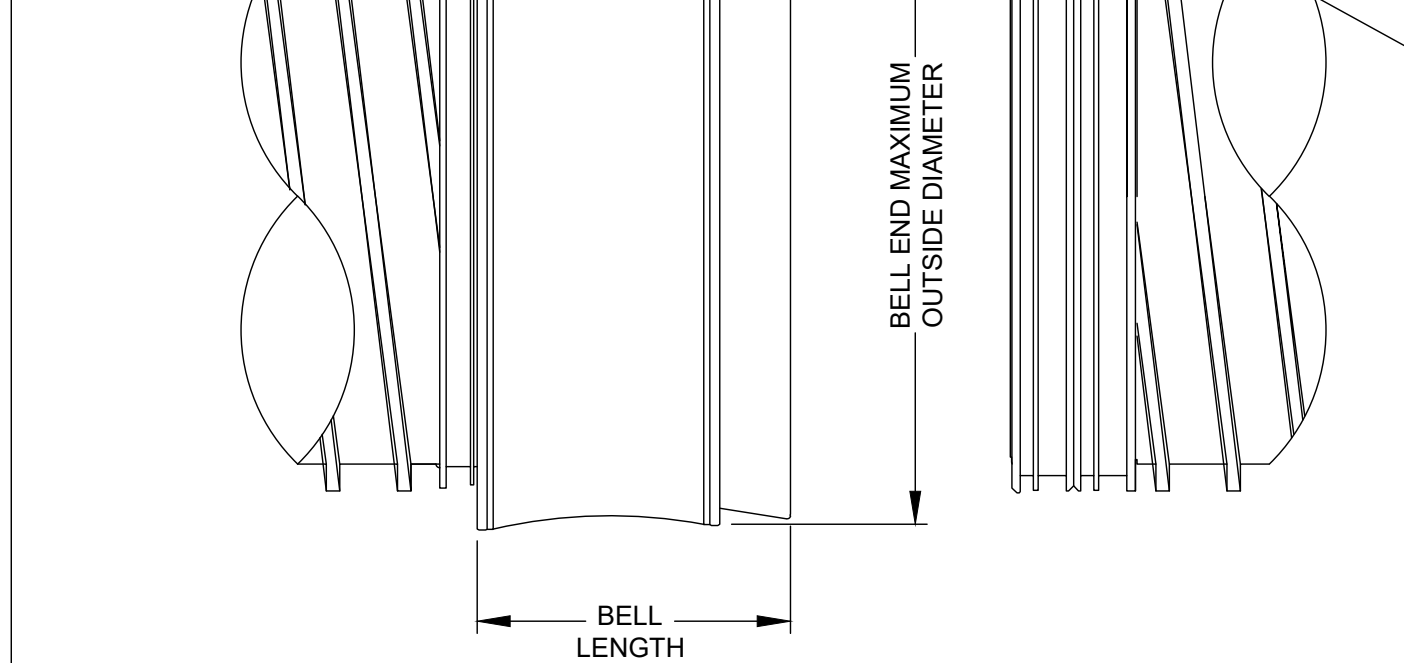
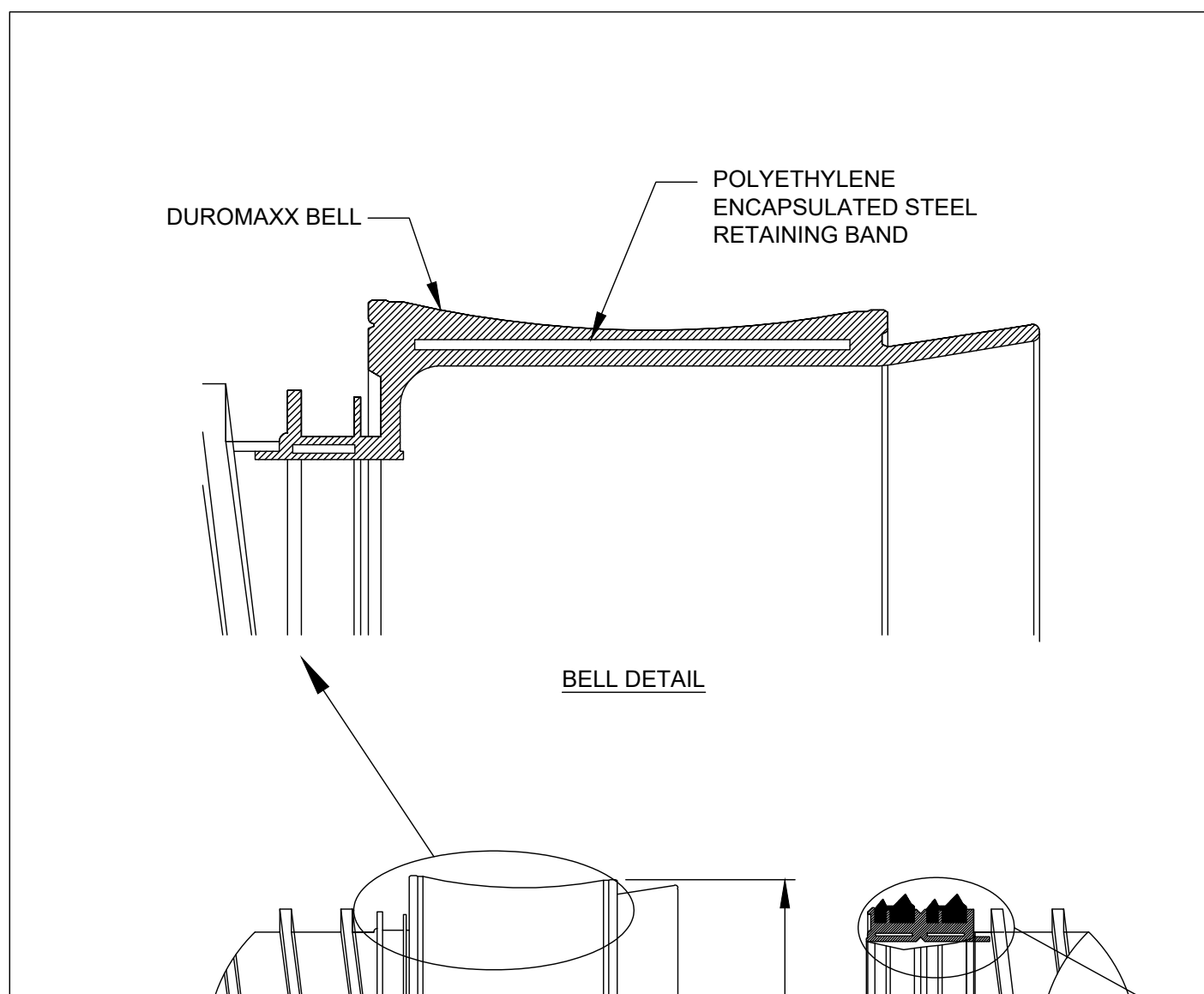
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SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	JAP
DRAWN BY:	JAP
CHECKED BY:	TJM

CITY OF MARION
ROCK SWALE COMBINED
SEWER IMPROVEMENTS PHASE I
MARION COUNTY

OHIO
GENERAL - 00 SERIES
CONSTRUCTION DETAILS - 01

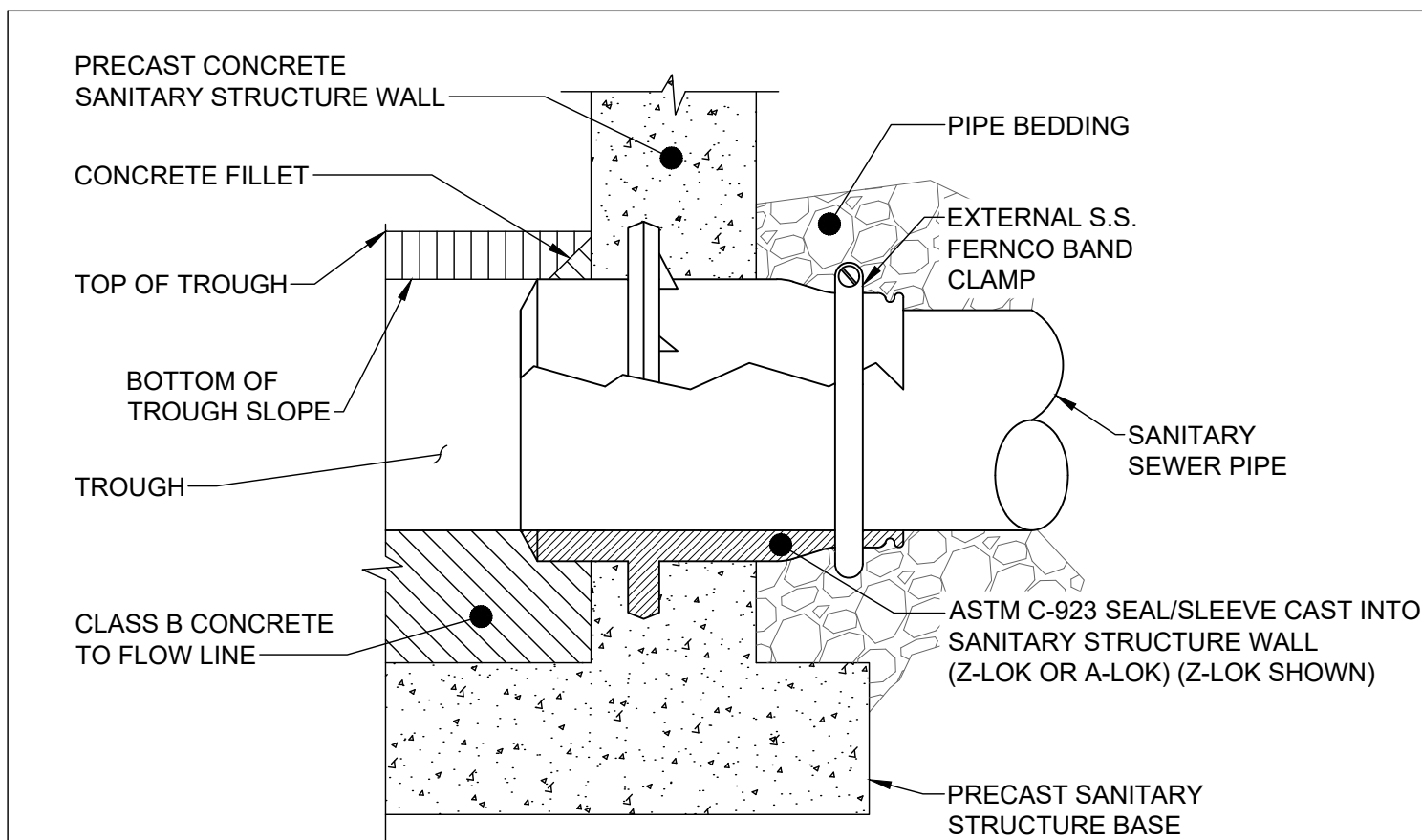
PROJECT NO:	242139
DRAWING NAME:	00G-08
SHEET:	8
OF:	28



QUIKJOINT BELL & SPIGOT CONNECTION (SPRE) DETAIL
NOT TO SCALE

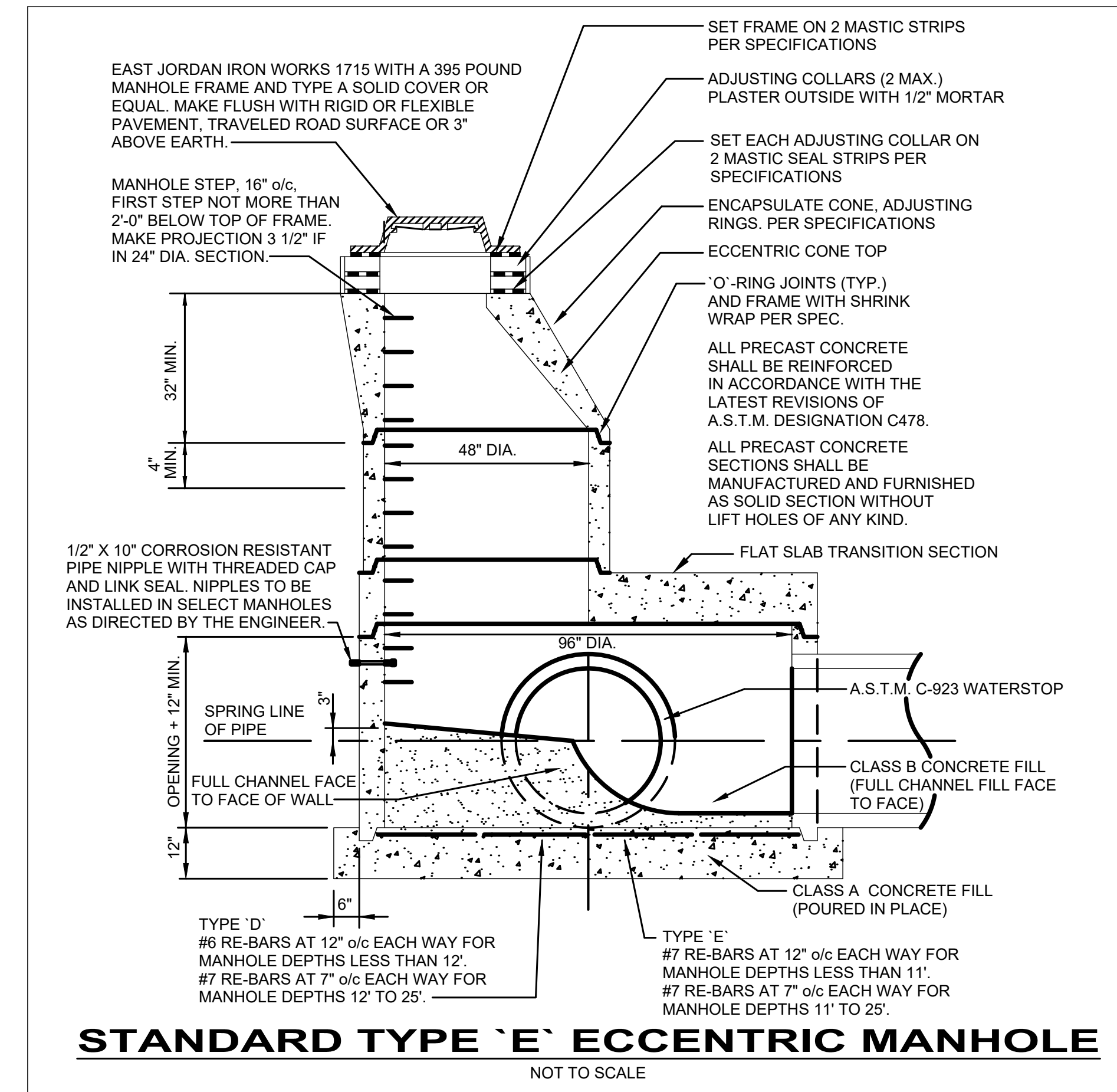
NOMINAL PIPE DIA. (in)	BELL O.D. (in)	BELL LENGTH (in)-MAX
30	33.9	10.74
36	39.8	10.74
42	45.7	10.74
48	52.3	10.74
54	58.2	10.74
60	64.1	10.74
66	70.9	10.74
72	76.8	10.74
78	82.7	10.74
84	88.6	10.74
96	100.4	10.74
108	114.0	10.74
120	124.1	10.74

ALL JOINTS ARE 10.8 psi

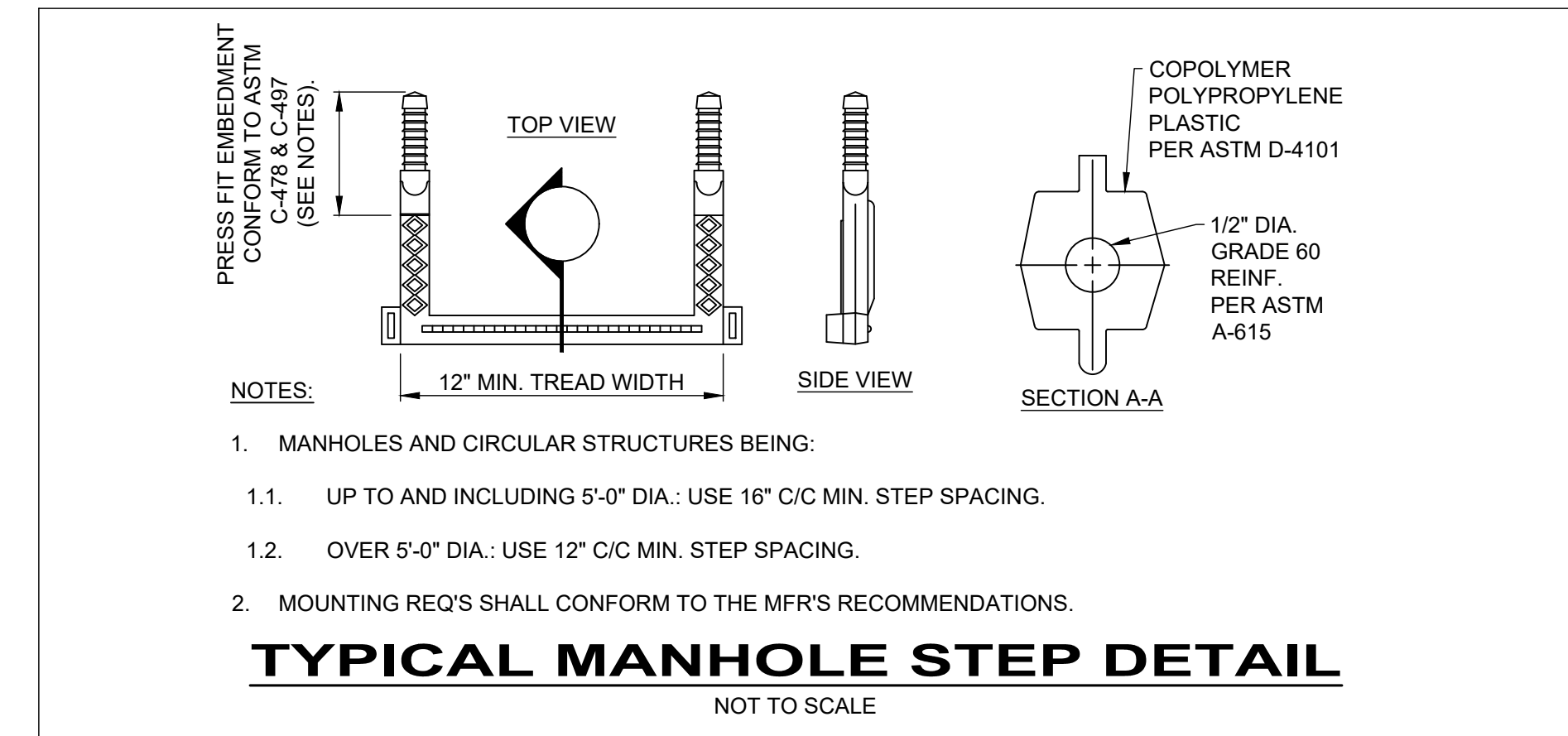


PIPE CONNECTION TO NEW STRUCTURE DETAIL
NOT TO SCALE

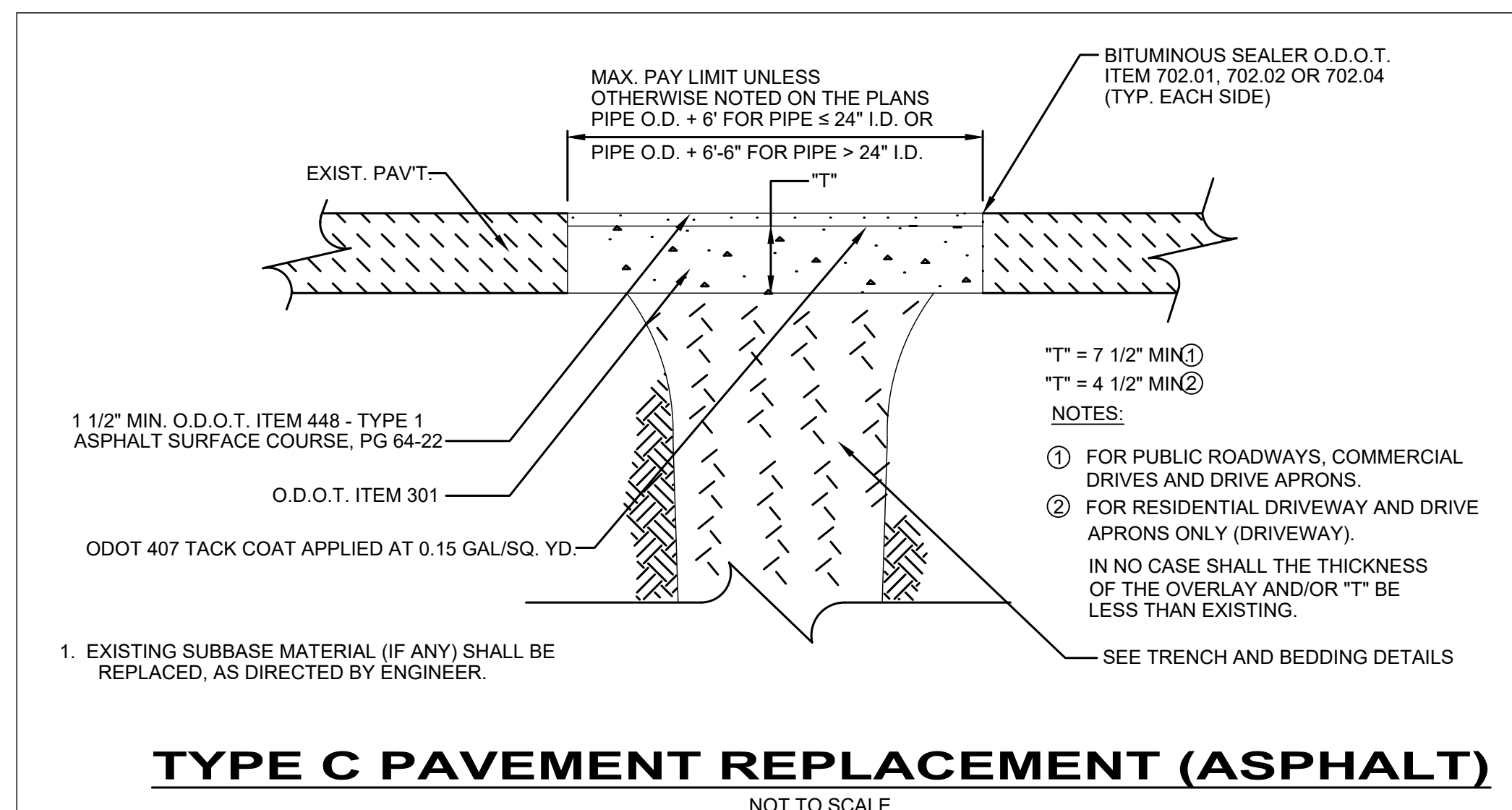
CONTRACTOR SHALL REFER TO MANUFACTURER DETAILS AND SPECIFICATIONS FOR SPECIFIC REQUIREMENTS NOT EXPLICITLY NOTED ON THESE DETAILS FOR INSTALLING NEW PIPE INTO AN EXISTING OR NEW PRE-CAST CONCRETE STRUCTURE.



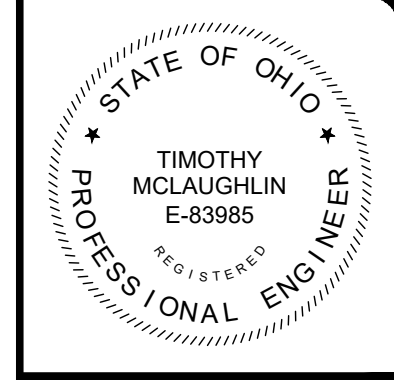
STANDARD TYPE 'E' ECCENTRIC MANHOLE
NOT TO SCALE



TYPICAL MANHOLE STEP DETAIL
NOT TO SCALE



TYPE C PAVEMENT REPLACEMENT (ASPHALT)
NOT TO SCALE



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CITY OF MARION
ROCK SWALE COMBINED
SEWER IMPROVEMENTS PHASE I
MARION COUNTY, OHIO
GENERAL - 00 SERIES
CONSTRUCTION DETAILS - 02

PROJECT NO.:	242139
DRAWING NAME:	00G-09
SHEET OF:	9 OF 28

MIN. HS-25 TRAFFIC RATED FRAME & GRATE OR METAL PLATE & FRAME SHALL BE SEPARATE FROM RISER TO PREVENT ANY LIVE LOADS BEING DIRECTED ONTO RISER

REINFORCED CONCRETE COLLAR (REFER TO COLLAR DETAILS AND REINFORCEMENT SCHEDULE)

TYPICAL BACKFILL AS SHOWN ON TRENCH AND BEDDING DETAIL

HDPE RISER PIPE

FINISHED GRADE

NOTES:

- 30" DIAMETER MIN. RISER.
- STABILIZED BACKFILL MATERIAL SUCH AS LSM OR CEMENT STABILIZED SAND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 750 PSI (SUPPLIED AND INSTALLED BY OTHERS).

GASKET MATERIAL SUFFICIENT TO PREVENT SLAB FROM BEARING ON RISER TO BE PROVIDED BY CONTRACTOR

REFER TO COLLAR DETAILS AND REINFORCEMENT SCHEDULE

FINISHED GRADE

3'-0" MIN

1'-0"

30" MIN I.D.
36" MAX I.D.

1'-0"

RISER BACKFILL ENVELOPE SHALL BE CLASS 1 MATERIAL PER ASTM D2321

SEE NOTE #2

UNDISTURBED EARTH

TYPICAL MAINLINE PIPE BACKFILL PER 310000 SPECIFICATIONS UP TO PIPE EMBEDMENT ZONE.

TYPICAL PIPE BEDDING PER TRENCH AND BEDDING DETAIL

10'-0" MIN. ABOVE THE CROWN OF THE PIPE

24'-0" MAX HEIGHT OF COVER

1'-0"

1'-0"

72" I.D. PIPE

DUROMAXX PIPE

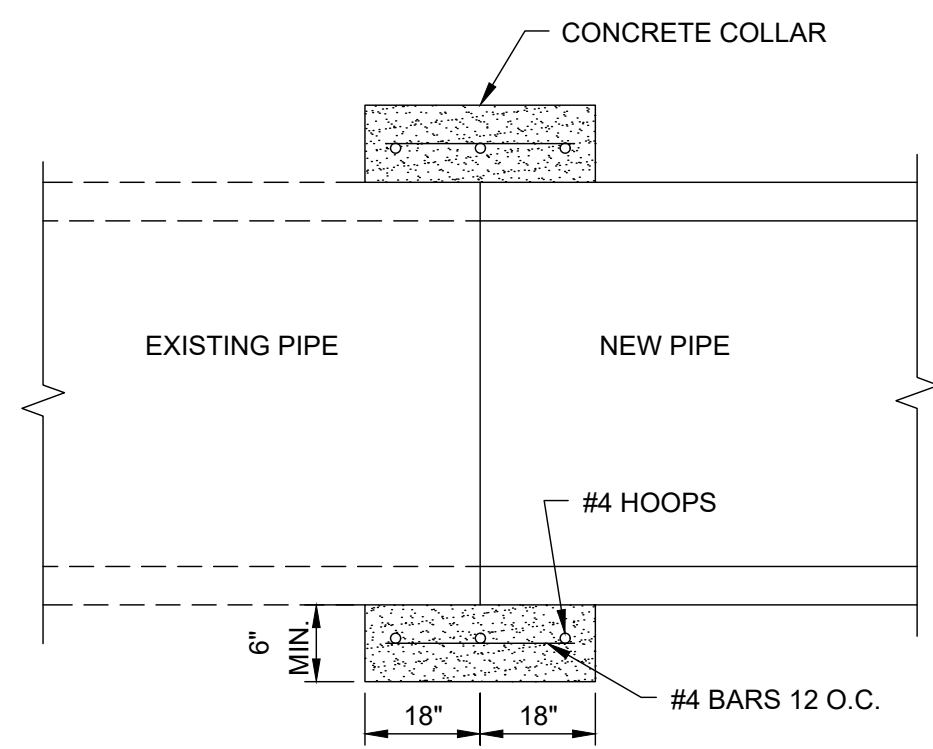
MANHOLE TEE WITH ACCESS RISER & REINFORCEMENT INSTALLATION DETAIL

NOT TO SCALE

NO.	REVISION	DATE
SCALE:	AS NOTED	
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CITY OF MARION
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 MARION COUNTY, OHIO
GENERAL - 00 SERIES
CONSTRUCTION DETAILS - 03

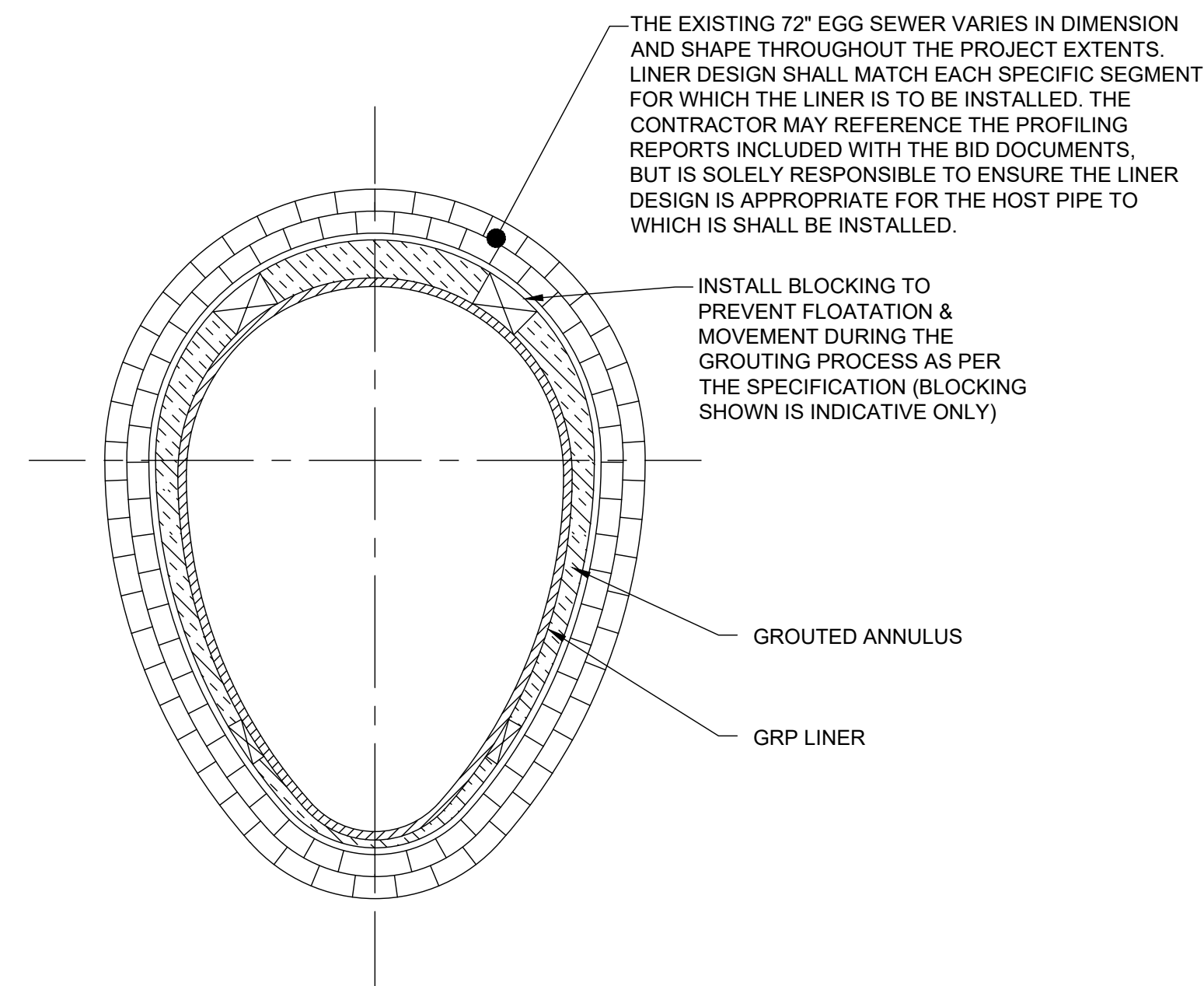
PROJECT NO.	242139
DRAWING NAME	00G-10
SHEET	10
OF	28



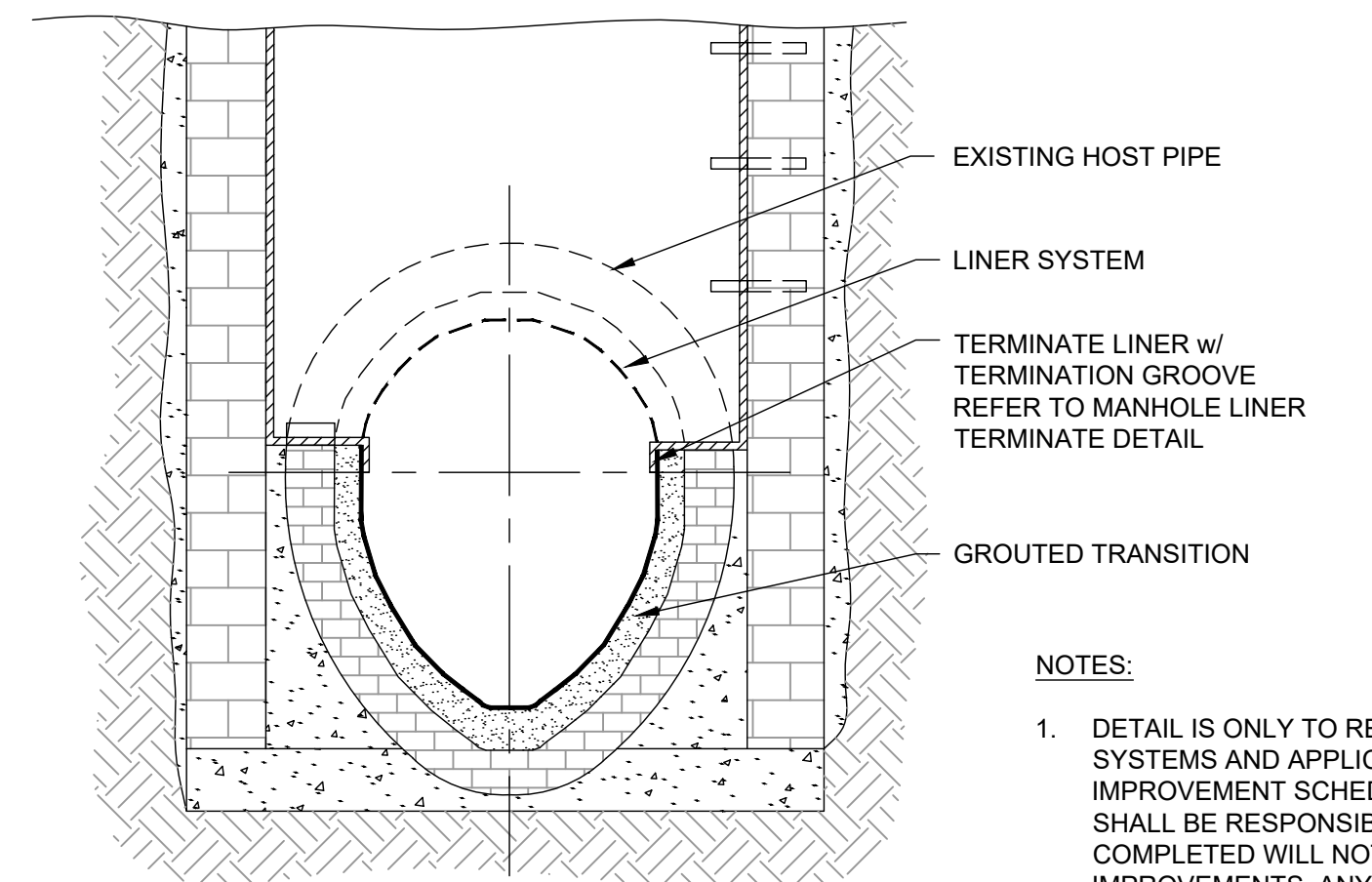
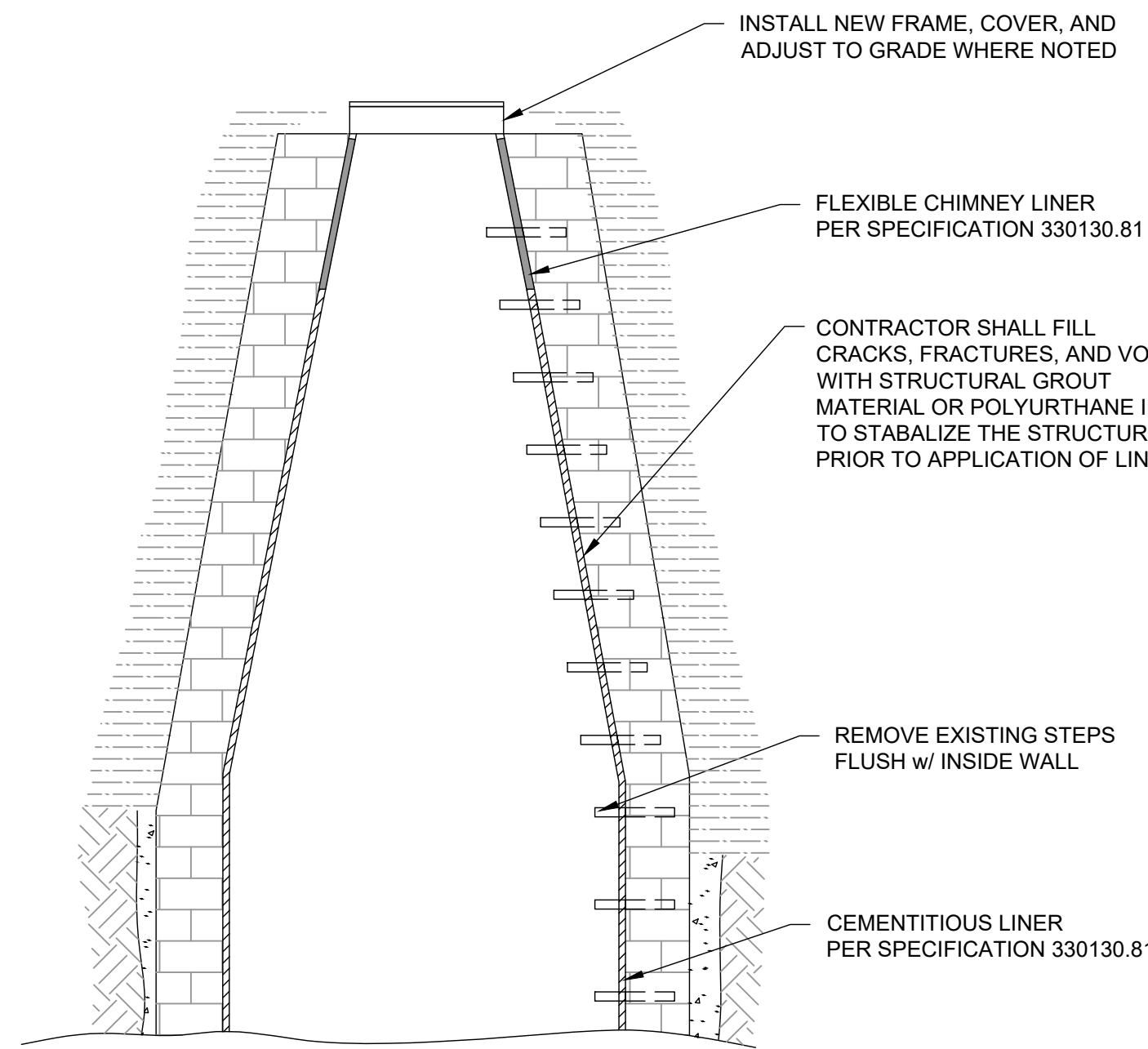
TYPICAL CONCRETE COLLAR DETAIL
NOT TO SCALE

NOTES:

1. CONCRETE COLLAR SHALL ENCOMPASS COMPLETELY AROUND THE JOINT WHERE THE NEW PIPE AND EX. PIPE JOIN.
2. CONTRACTOR SHALL INSTALL A HYDRATITE JOINT SEAL AT THE COMPLETION IF A LINING SYSTEM IS NOT APPLIED OVER THE SECTION WHERE THE NEW PIPE AND EX. PIPE JOIN.



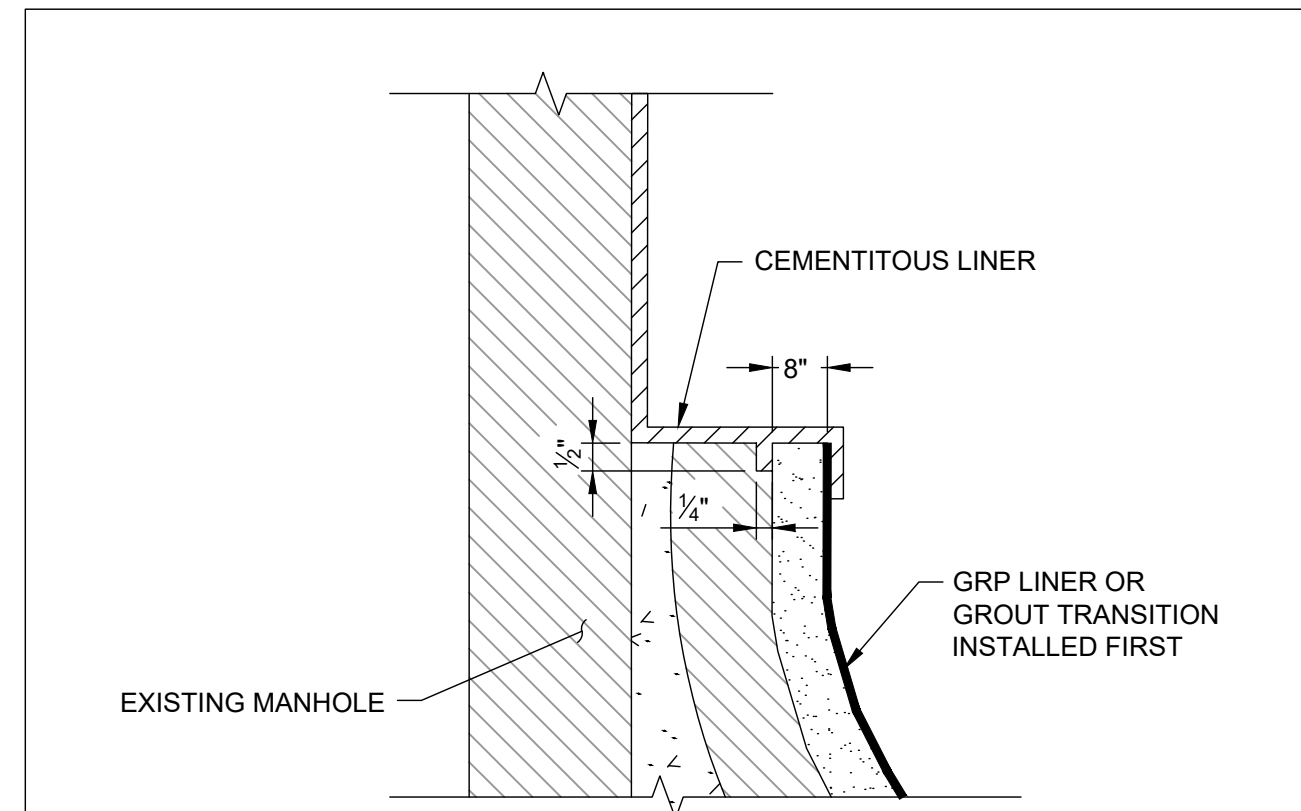
GRouted LINER TYPICAL CROSS-SECTION
NOT TO SCALE



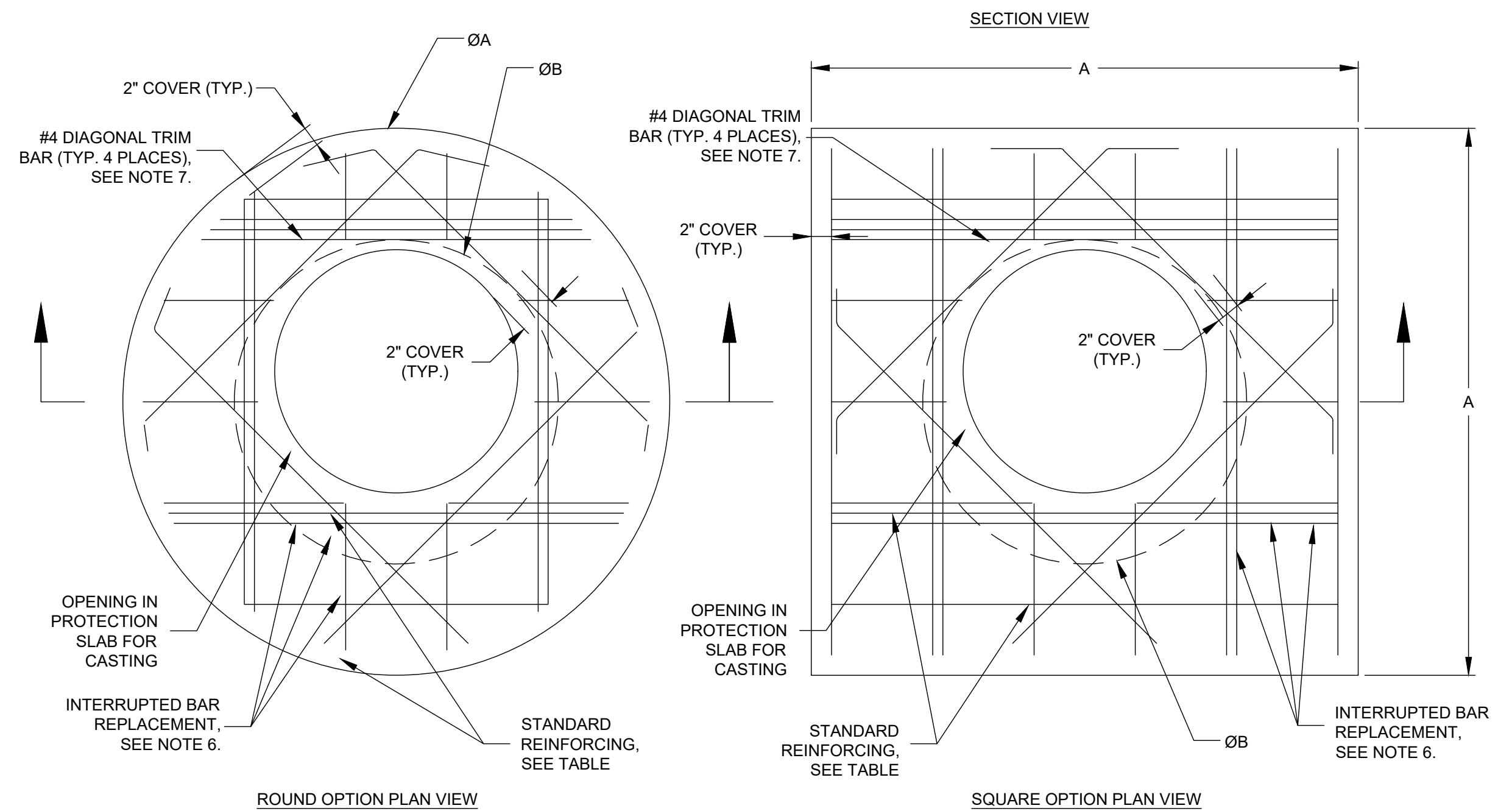
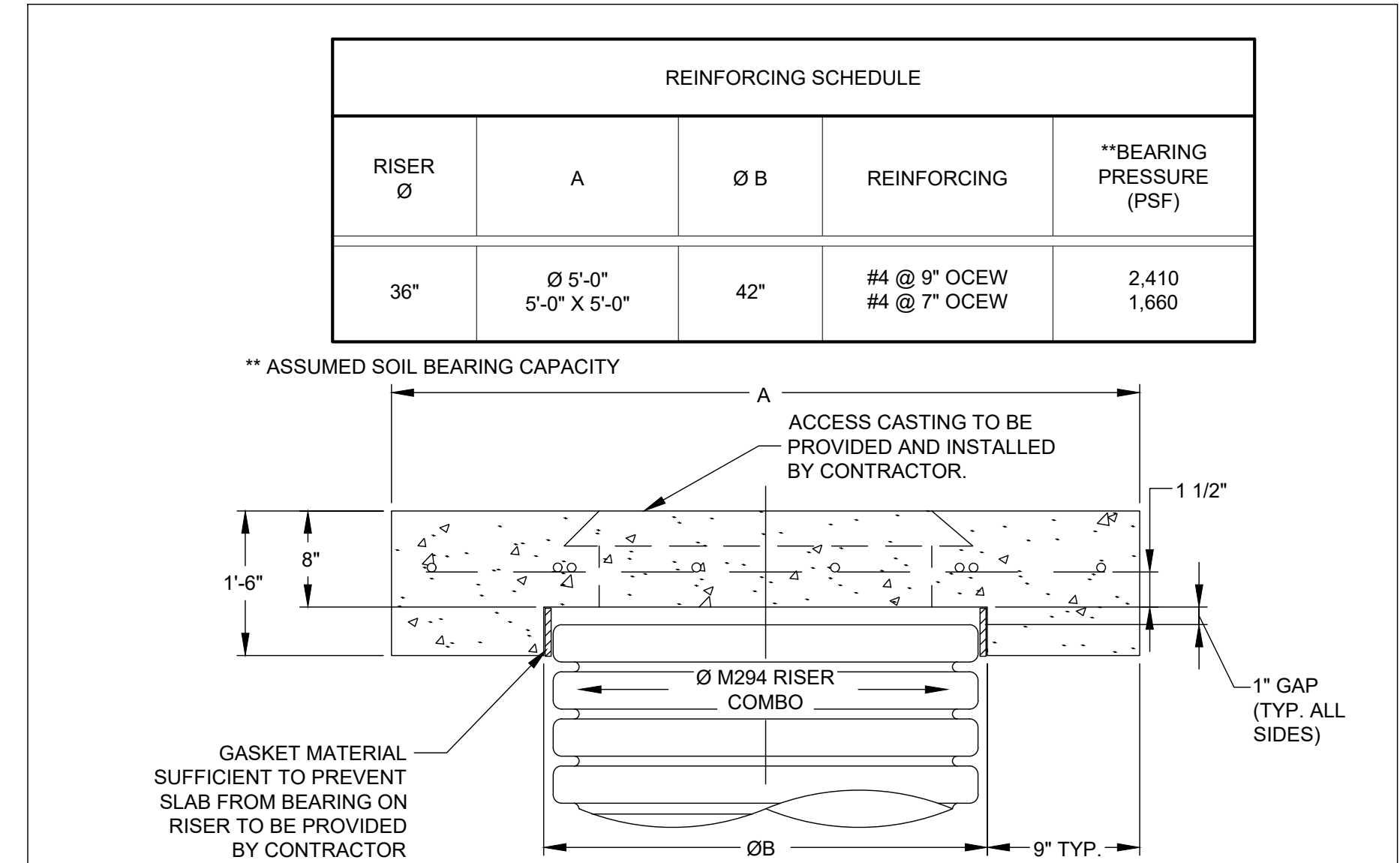
MANHOLE REHABILITATION DETAIL
NOT TO SCALE

NOTES:

1. DETAIL IS ONLY TO REFLECT THE GENERAL TRANSITION FROM LINING (CIPP, GRP) SYSTEMS AND APPLICATION OF IMPROVEMENTS AS DETAILED IN THE MANHOLE IMPROVEMENT SCHEDULE AND SPECIFICATION SECTION 330130.81. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE MANHOLE IMPROVEMENTS NOTED TO BE COMPLETED WILL NOT INTERFERE WITH ANY OF THE PROPOSED SEWER RELATED IMPROVEMENTS. ANY MODIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
2. DETAIL IS FOR ALL CONTRACTS UNLESS OTHERWISE NOTED ON PLANS.



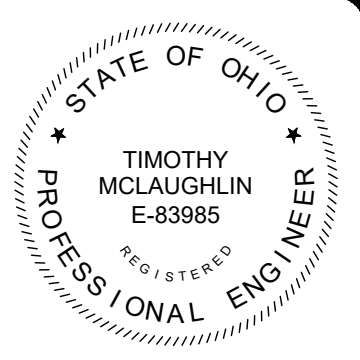
MANHOLE LINER TERMINATION GROOVE
NOT TO SCALE



NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS. EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.

COLLAR DETAILS AND REINFORCING SCHEDULE
NOT TO SCALE

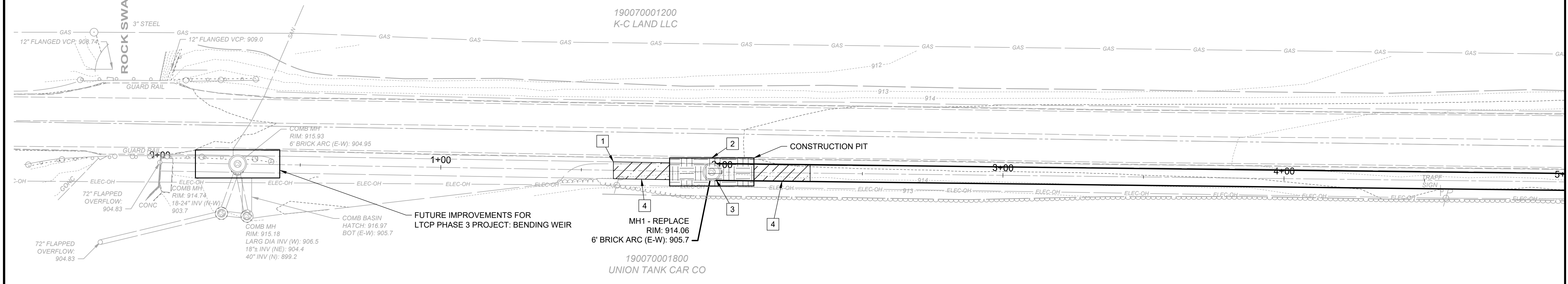
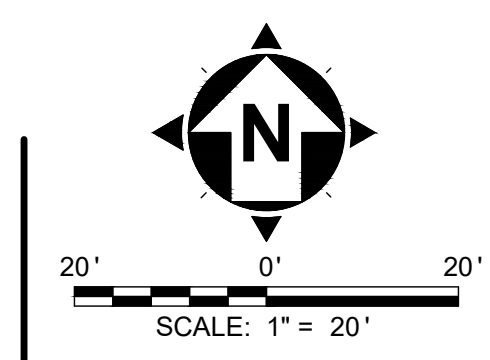


NO.	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	TJM

CITY OF MARION
ROCK SWALE COMBINED
SEWER IMPROVEMENTS PHASE I
MARION COUNTY OHIO
GENERAL - 00 SERIES
CONSTRUCTION DETAILS - 04

PROJECT NO:	
242139	
DRAWING NAME	
00G-11	
SHEET	OF
11	28



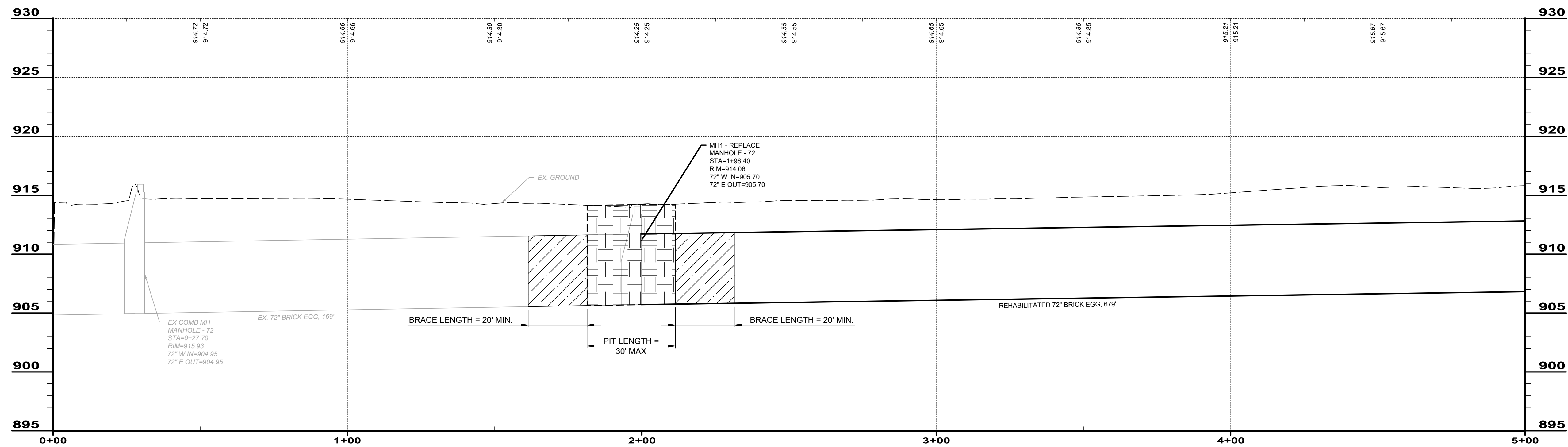
GENERAL NOTES

- NEW SEWER PIPE CONNECTING INTO A NEW MANHOLE SHALL BE CONNECTED PER THE NEW CONNECTION MANHOLE DETAIL.
- SEWER PIPE FOR REPLACEMENT SECTIONS OF THE EXISTING BRICK WALL SEWER SHALL BE 70" DUROMAXX SRPE PIPE OR APPROVED EQUIVALENT.
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- CONTRACTOR SHALL REPLACE PAVEMENT TO MATCH EXISTING PAVEMENT TYPE, THICKNESS, AND BASE INCLUDING ALL BASE AND SUBBASE LAYERS.

- BRACING EXTENTS
- CONSTRUCTION PITS

CODED NOTES

- THE DOWNSTREAM PROJECT LIMIT SHALL BE CONSIDERED AT MANHOLE MH1. THE CONTRACTOR SHALL ONLY EXTEND DOWNSTREAM OF MANHOLE MH1 TO BRACE PIPE AS A PART OF THE INSTALLATION OF CONSTRUCTION PITS AND REPLACE PIPE THAT IS REMOVED AS A PART OF THE CONSTRUCTION PIT INSTALLATION.
- CONSTRUCTION PIT DIMENSIONS ARE DEFINED AS THE ANTICIPATED LIMITS THE CONTRACTOR IS REQUIRED TO EXCAVATE AT EXISTING AND/OR DESIGNATED SECTIONS BETWEEN MANHOLES FOR PURPOSES OF BEING ABLE TO SETUP OPERATIONS FOR INSTALLING LINER SYSTEMS ASSOCIATED WITH ALTERNATIVES A, B AND C. ANY DEVIATIONS THAT EXPAND BEYOND THE REPRESENTED LIMITS NOTED IN THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- A NEW MANHOLE SHALL BE INSTALLED WHEREVER CONSTRUCTION PITS ARE IMPLEMENTED. SEE MANHOLE IMPROVEMENT SCHEDULE FOR IMPROVEMENTS FOR ALL EXISTING MANHOLES.
- BRACING LENGTHS SHALL BE MEASURED FROM THE END OF THE EXCAVATIONS FOR CONSTRUCTION PITS OR NEW MANHOLES. ANY DAMAGE TO PIPE WITHIN THE MINIMUM BRACING LIMITS THAT CAN NOT BE REHABILITATED IN PLACE SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPLACE WITH A SUITABLE SECTION OF NEW PIPE THAT IS IN ACCORDANCE WITH SPECIFICATION SECTION 333100.



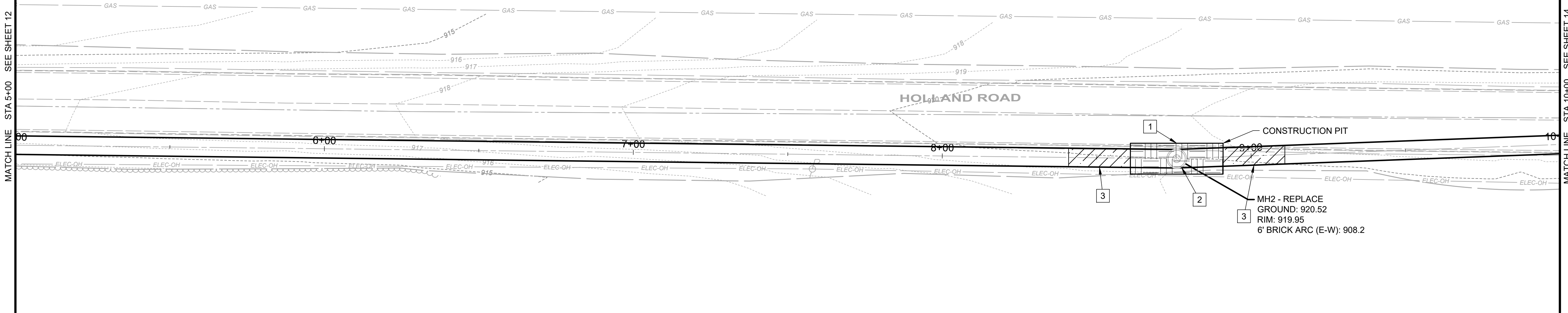
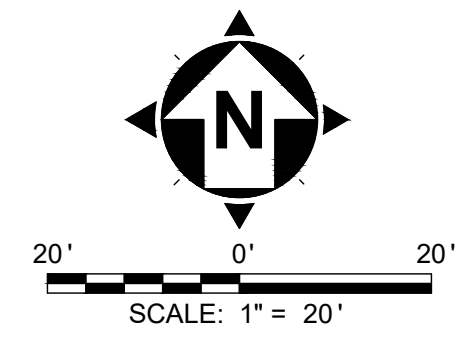
EX. 72" COMBINED BRICK SEWER: 0+00 - 5+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 MARION COUNTY
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 OHIO
CIVIL - 10 SERIES
STA 0+00 - 5+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-01	
SHEET	OF
12	28



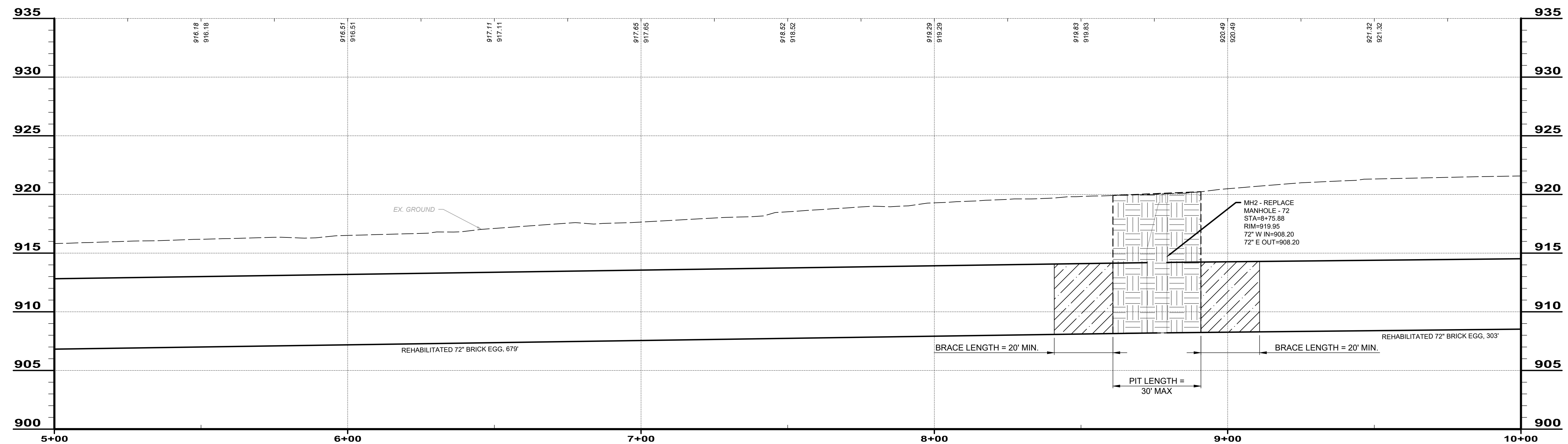
GENERAL NOTES

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- BRACING EXTENTS
- CONSTRUCTION PITS

CODED NOTES

- CONSTRUCTION PIT DIMENSIONS ARE DEFINED AS THE ANTICIPATED LIMITS THE CONTRACTOR IS REQUIRED TO EXCAVATE AT EXISTING AND/OR DESIGNATED SECTIONS BETWEEN MANHOLES FOR PURPOSES OF BEING ABLE TO SETUP OPERATIONS FOR INSTALLING LINER SYSTEMS ASSOCIATED WITH ALTERNATIVES A, B AND C. ANY DEVIATIONS THAT EXPAND BEYOND THE REPRESENTED LIMITS NOTED IN THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
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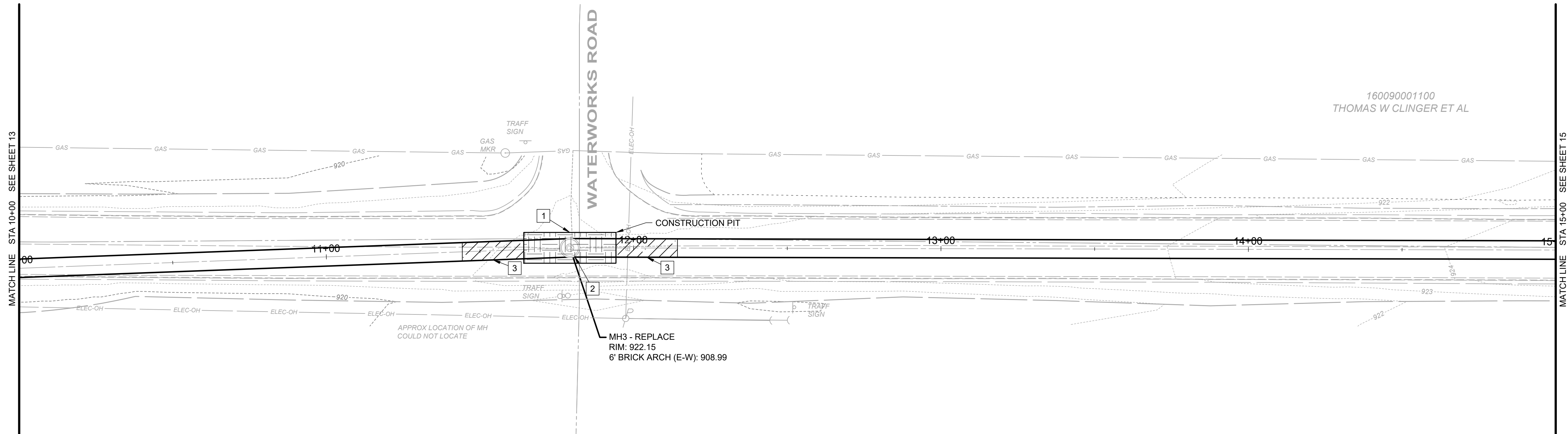
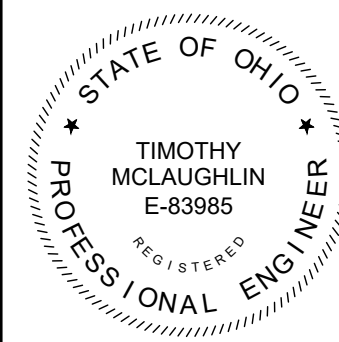
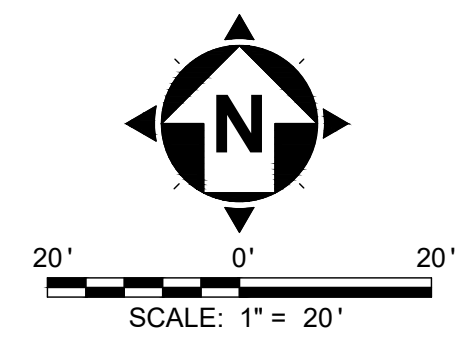
EX. 72" COMBINED BRICK SEWER: 5+00 - 10+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 5+00 - 10+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-02	
SHEET	OF
13	28



160090001100
THOMAS W CLINGER ET AL

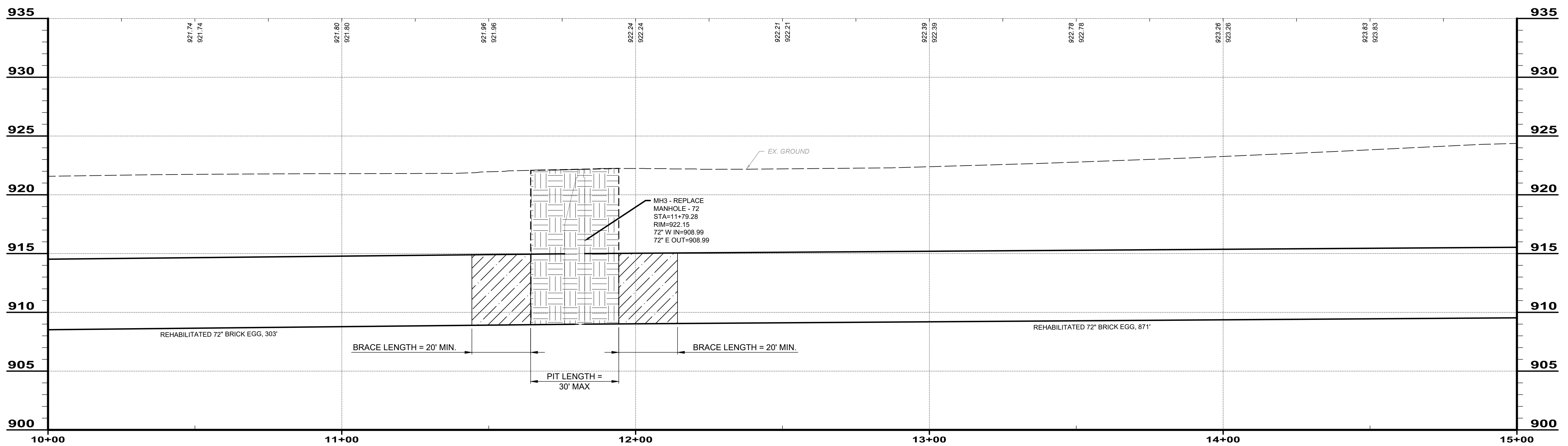
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4. CONTRACTOR SHALL REPLACE PAVEMENT TO MATCH EXISTING PAVEMENT TYPE, THICKNESS, AND BASE INCLUDING ALL BASE AND SUBBASE LAYERS.

- BRACING EXTENTS
- CONSTRUCTION PITS

CODED NOTES

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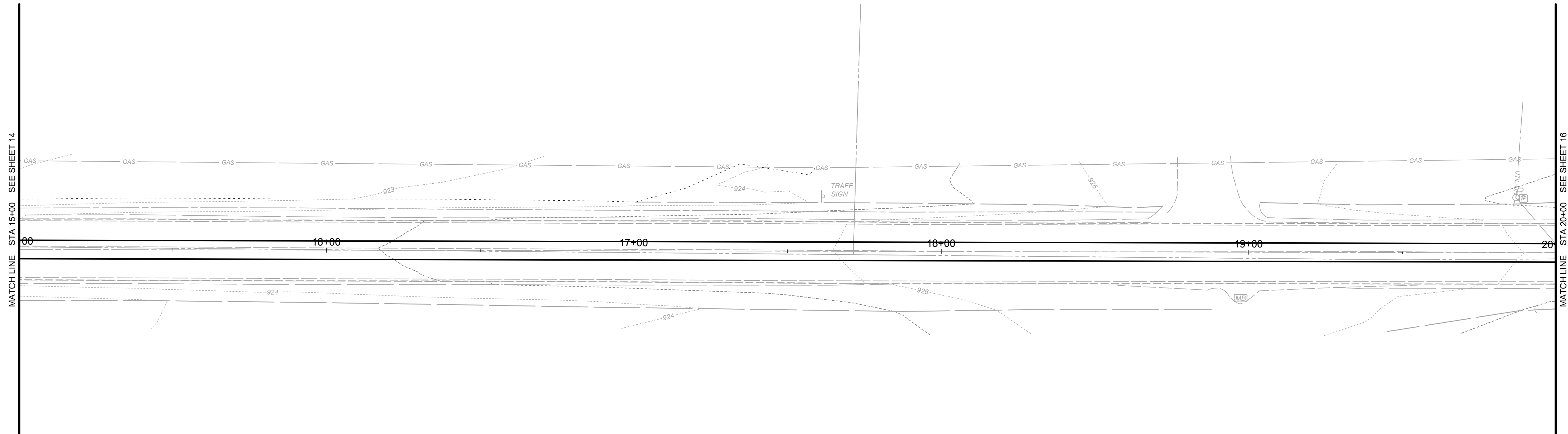
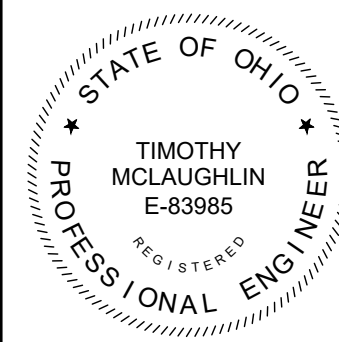
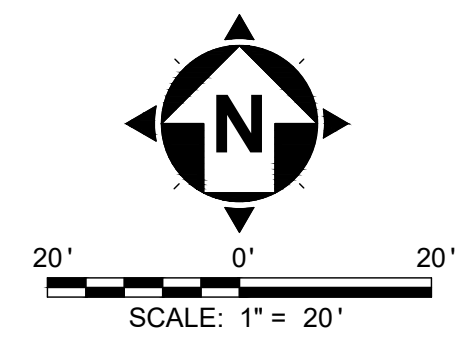
EX. 72" COMBINED BRICK SEWER: 10+00 - 15+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

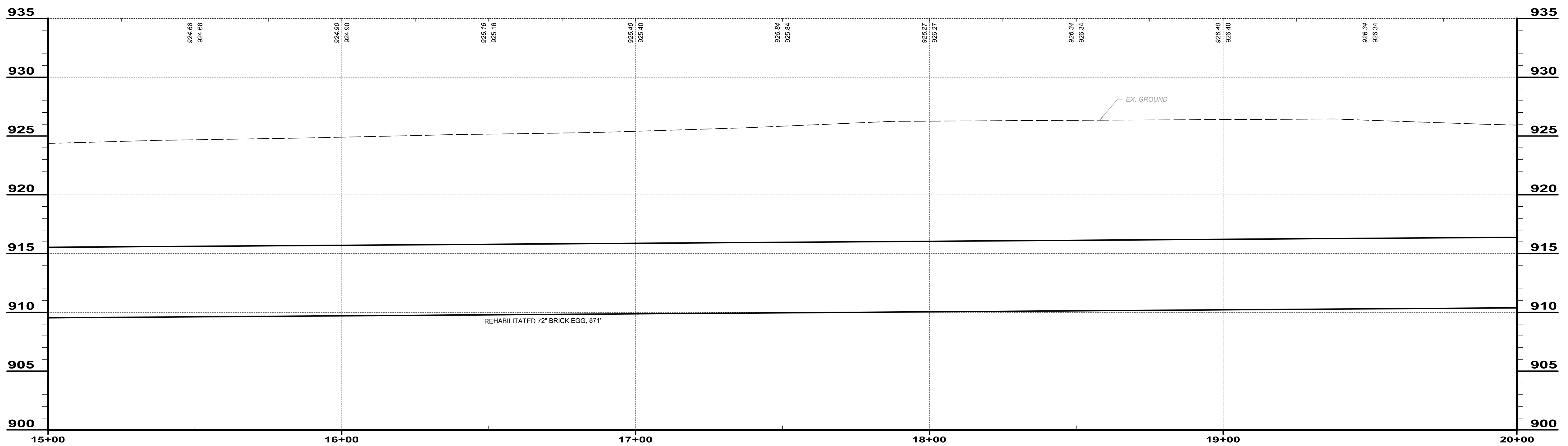
CITY OF MARION
MARION COUNTY OHIO
ROCK SWALE COMBINED SEWER IMPROVEMENTS PHASE I
CIVIL - 10 SERIES
STA 10+00 - 15+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-03	
SHEET	OF
14	28



GENERAL NOTES

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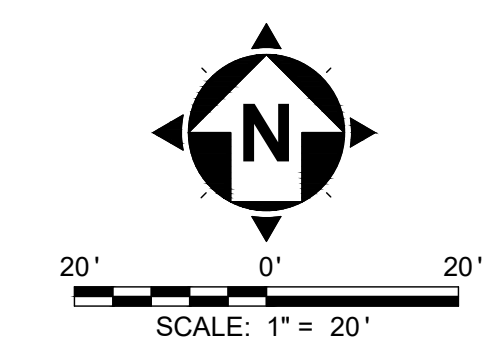
EX. 72" COMBINED BRICK SEWER: 15+00 - 20+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 MARION COUNTY
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 OHIO
CIVIL - 10 SERIES
STA 15+00 - 20+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-04	
SHEET	OF
15	28

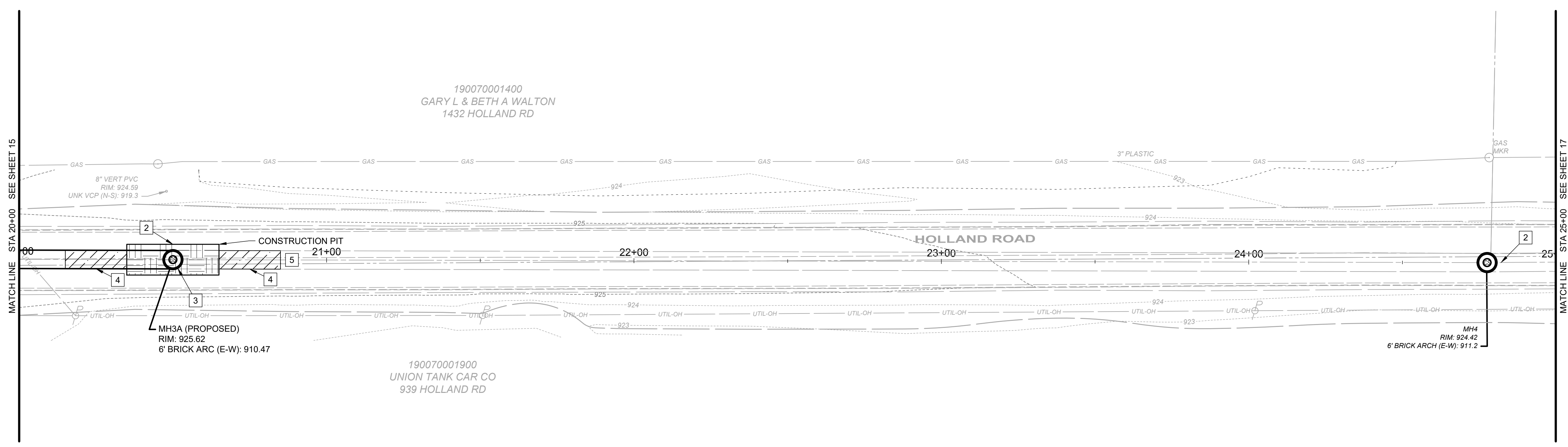


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CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 20+00 - 25+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-05	
SHEET	OF
16	28



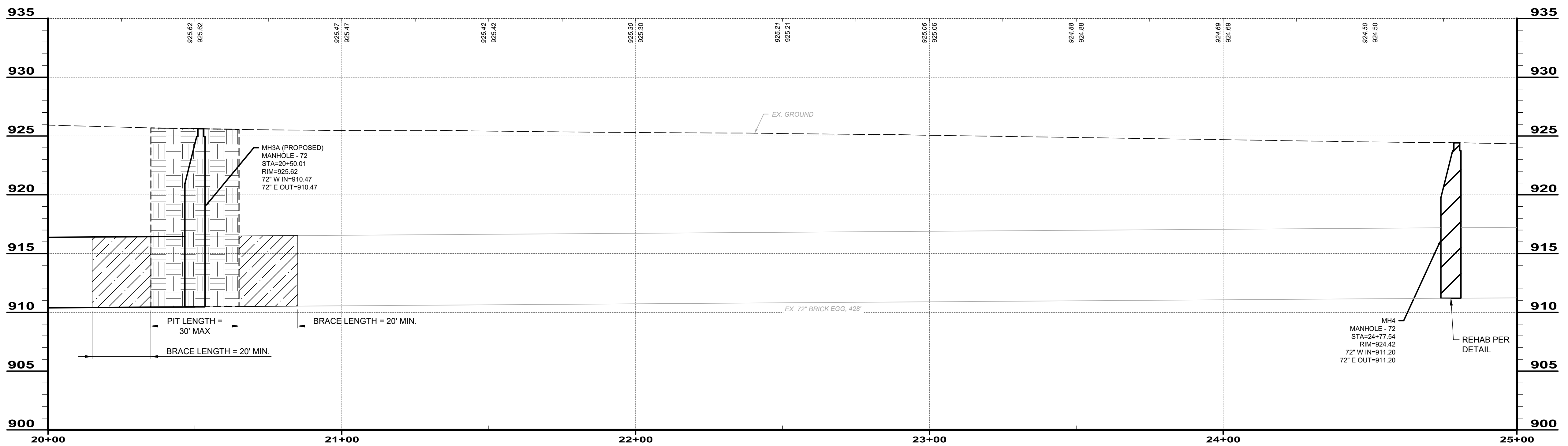
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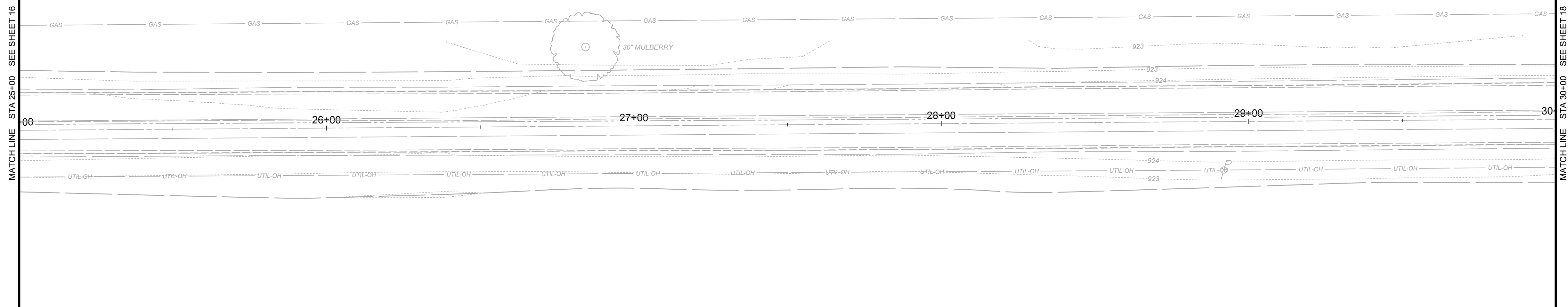
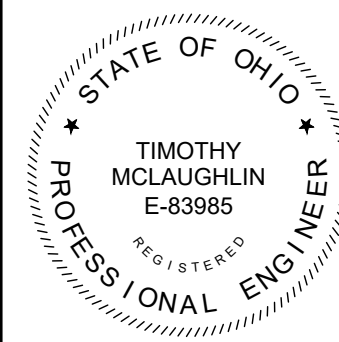
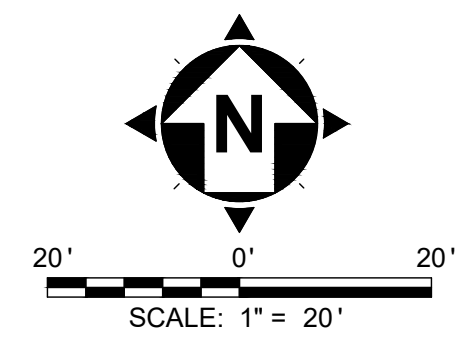
- BRACING EXTENTS
- CONSTRUCTION PITS
- MANHOLE REHAB

CODED NOTES

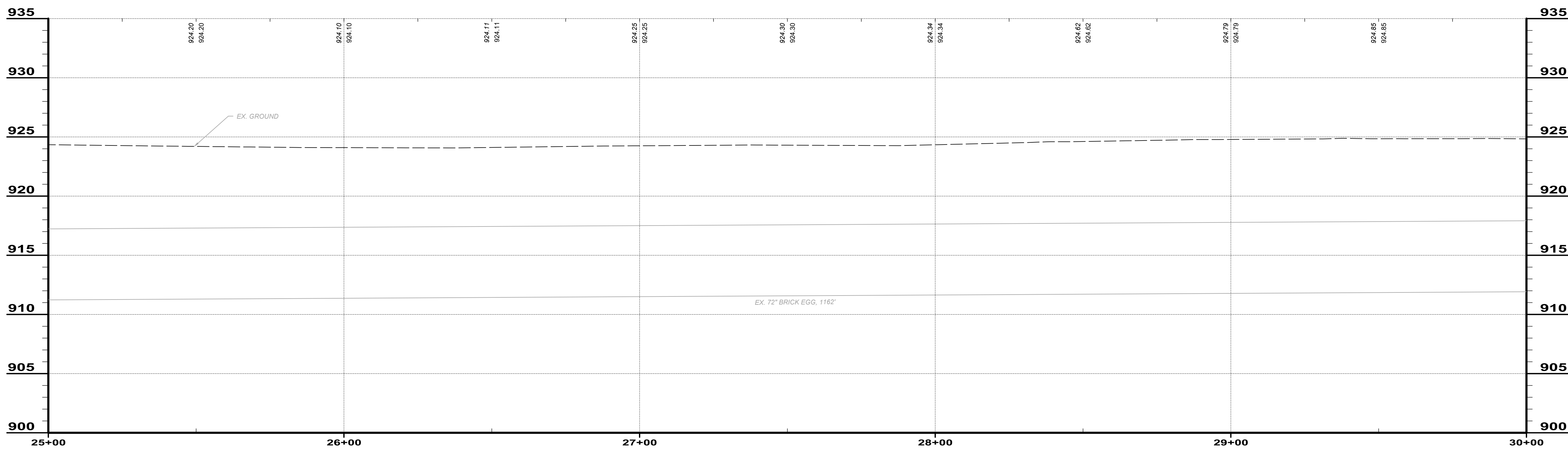
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- PROPOSED CONSTRUCTION PIT AND MANHOLE AT STATION 20+50 IS THE ANTICIPATED END POINT FOR SEWER RELATED IMPROVEMENTS AND IS SUBJECT TO CHANGE BASED ON SUBMITTED UNIT PRICING FOR ALTERNATIVES 1, 2, OR 3. THE CONTRACTOR SHALL AS A PART OF THEIR BID SUBMIT AN ANTICIPATED END POINT OF THE SEWER RELATED IMPROVEMENTS FOR EACH ALTERNATIVE THEY CHOOSE TO SUBMIT ON WITH NOTED CHANGES OF PROPOSED CONSTRUCTION PIT LOCATIONS OR WHERE ADDITIONAL LOCATIONS WILL BE REQUIRED.



EX. 72" COMBINED BRICK SEWER: 20+00 - 25+00



- GENERAL NOTES**
1. NEW SEWER PIPE CONNECTING INTO A NEW MANHOLE SHALL BE CONNECTED PER THE NEW CONNECTION MANHOLE DETAIL.
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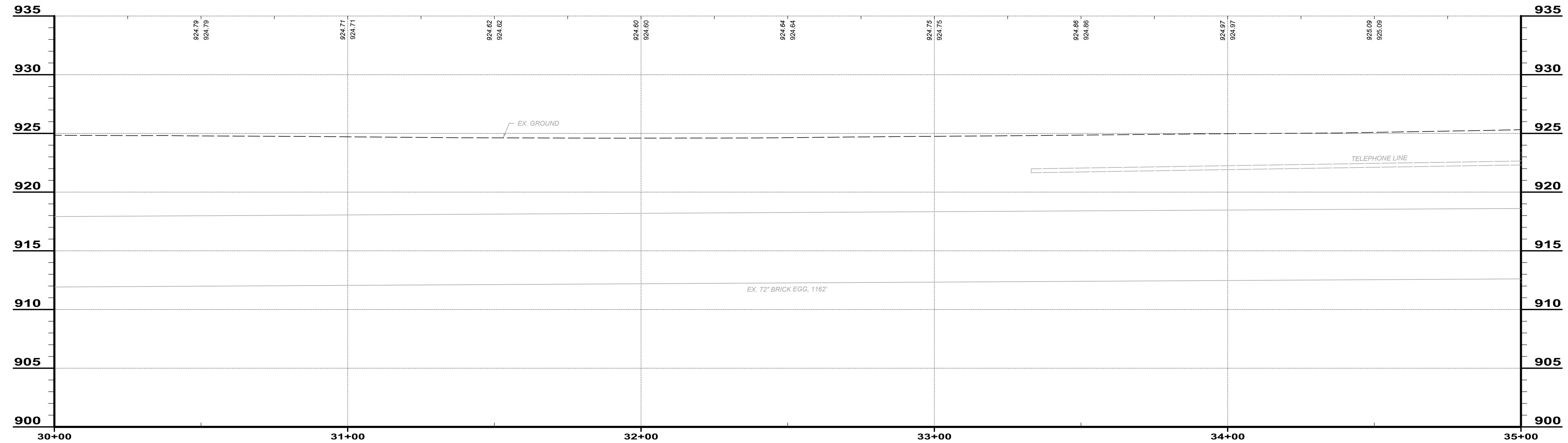
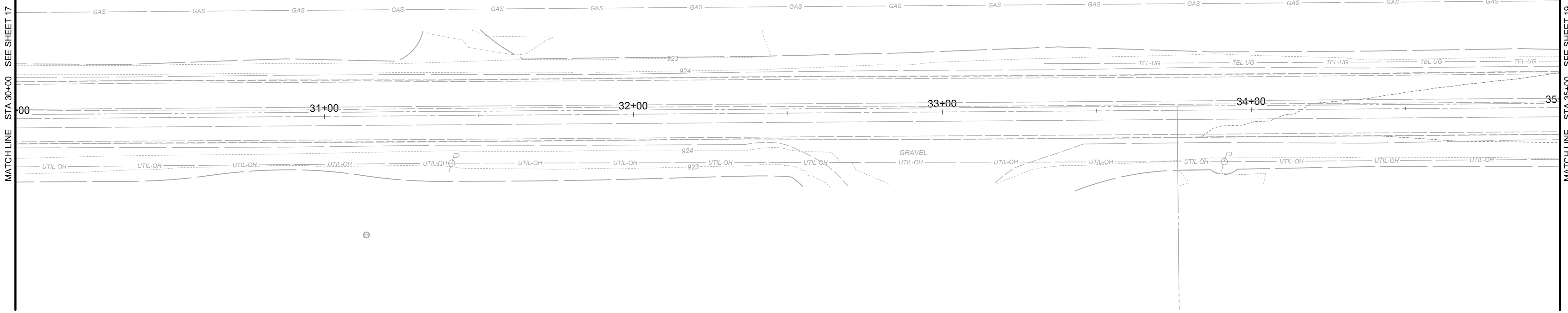
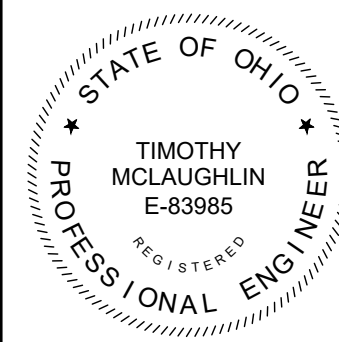
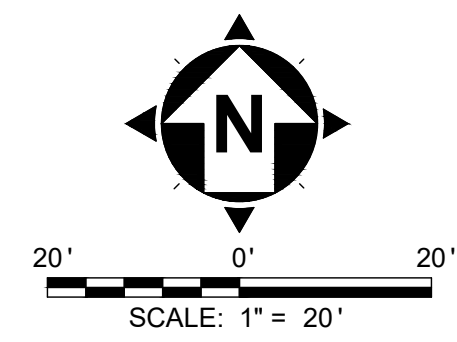
EX. 72" COMBINED BRICK SEWER: 25+00 - 30+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 25+00 - 30+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-06	
SHEET	OF
17	28



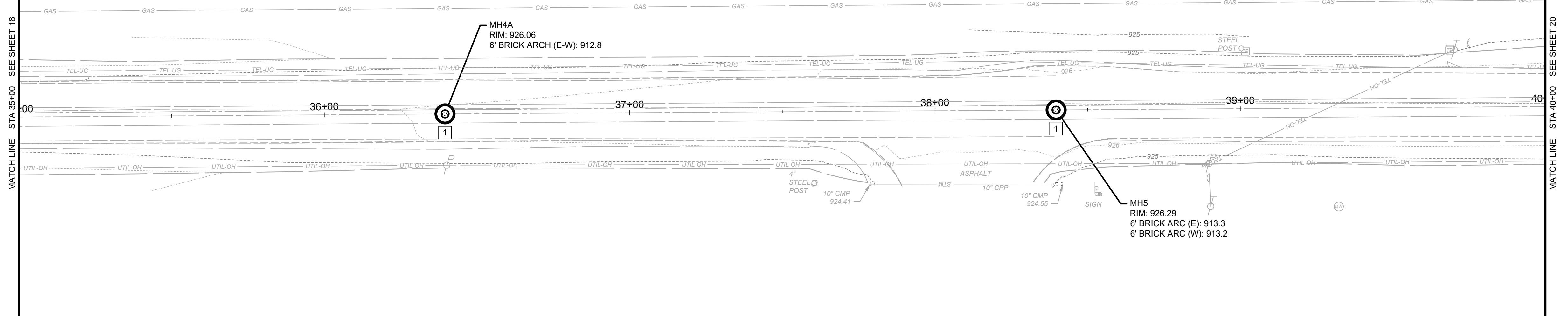
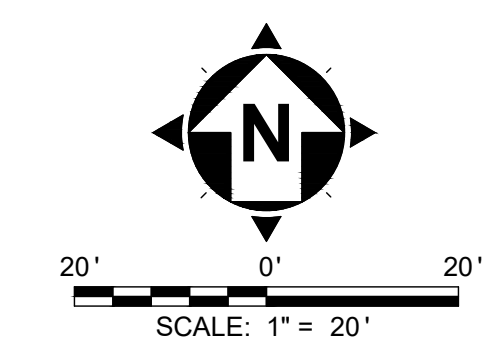
EX. 72" COMBINED BRICK SEWER: 30+00 - 35+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 30+00 - 35+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-07	
SHEET	OF
18	28



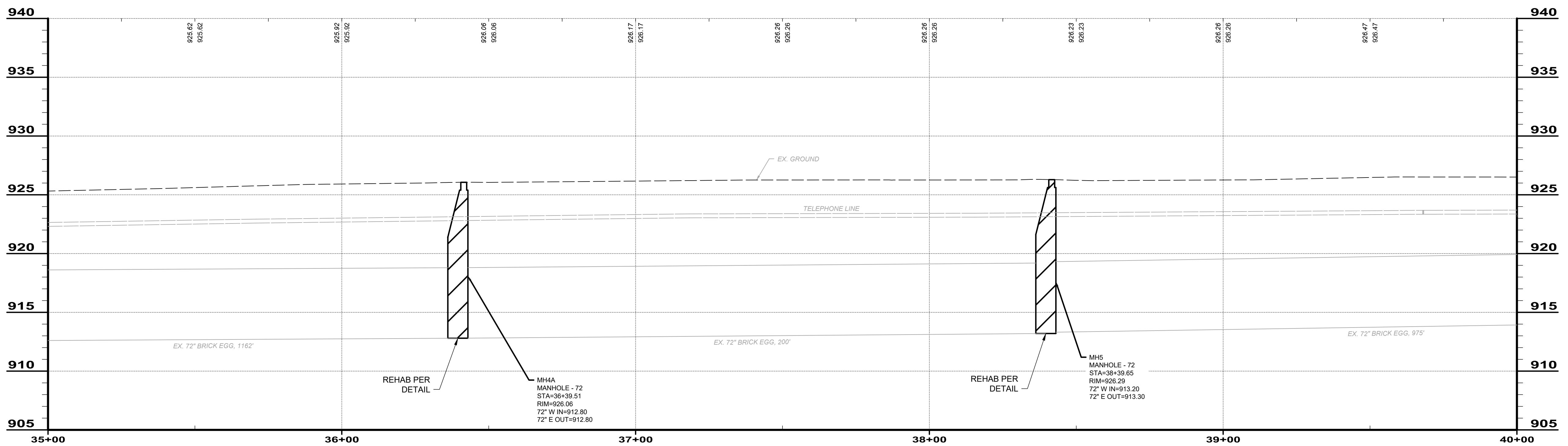
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MANHOLE REHAB

CODED NOTES

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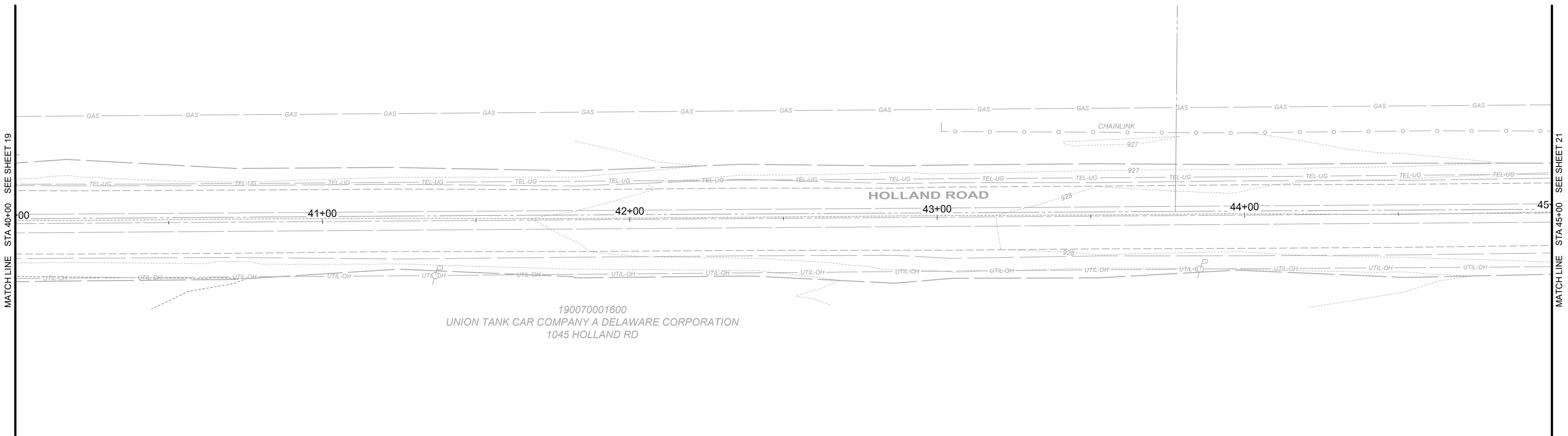
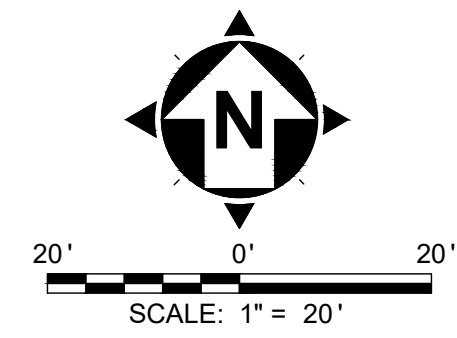
EX. 72" COMBINED BRICK SEWER: 35+00 - 40+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

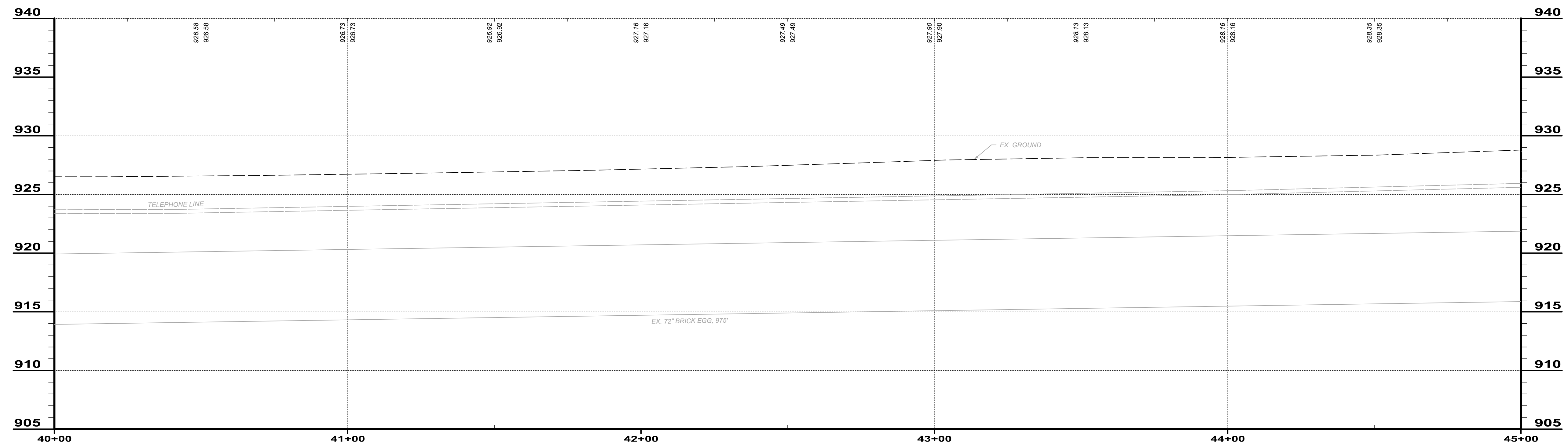
CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 35+00 - 40+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-08	
SHEET	OF
19	28



GENERAL NOTES

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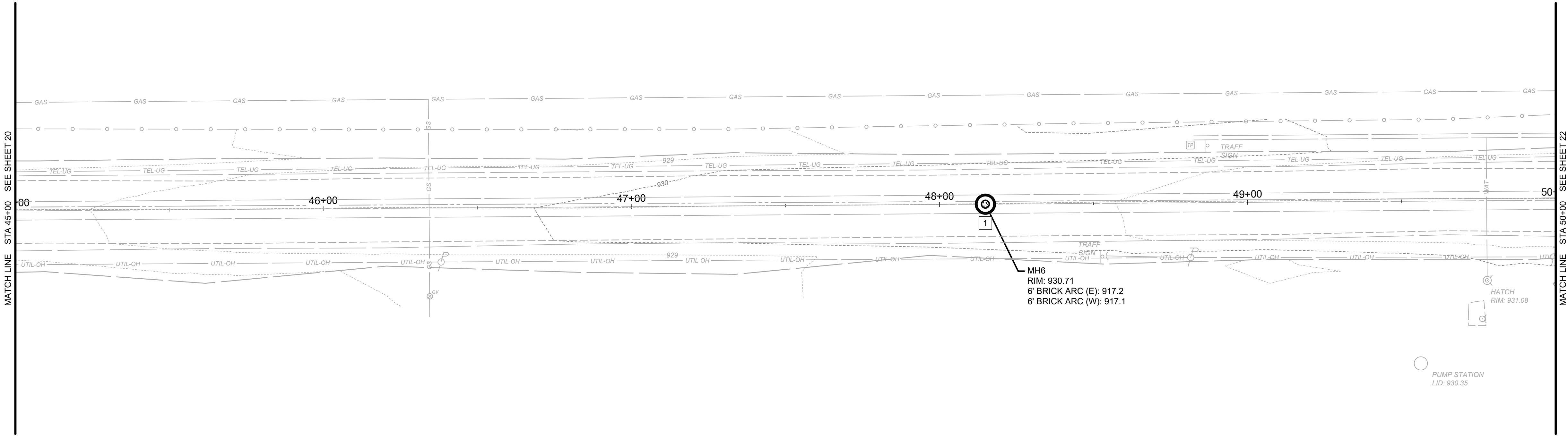
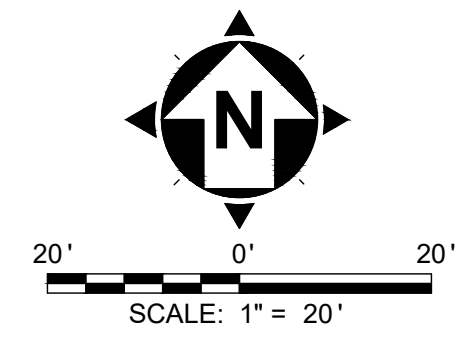
EX. 72" COMBINED BRICK SEWER: 40+00 - 45+00

NO	REVISION	DATE

SCALE:	AS NOTED
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CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 40+00 - 45+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-09	
SHEET	OF
20	28



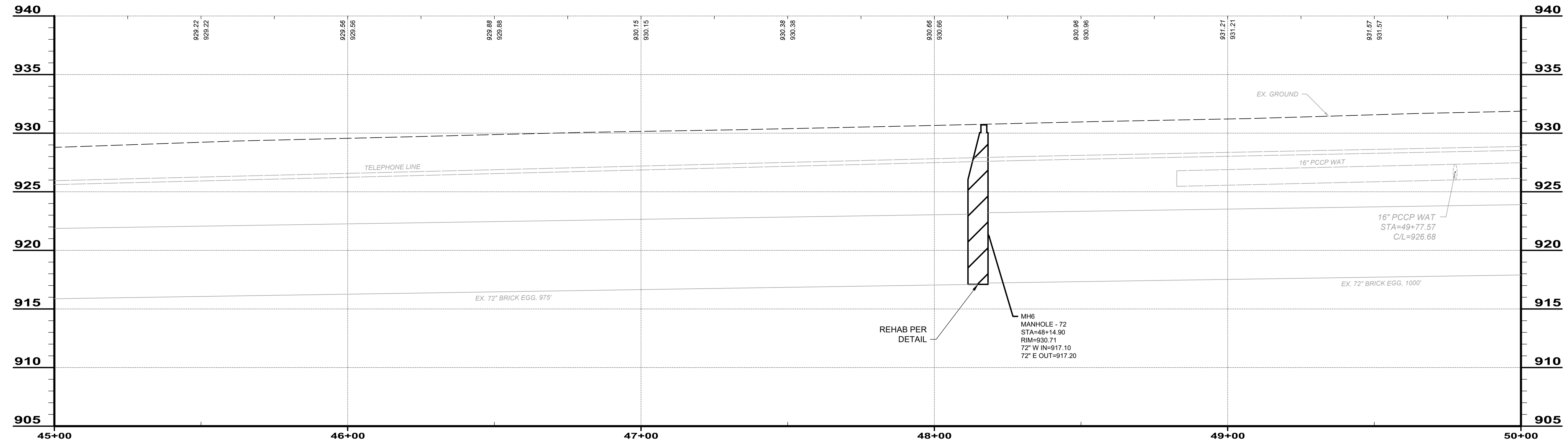
GENERAL NOTES

1. NEW SEWER PIPE CONNECTING INTO A NEW MANHOLE SHALL BE CONNECTED PER THE NEW CONNECTION MANHOLE DETAIL.
2. SEWER PIPE FOR REPLACEMENT SECTIONS OF THE EXISTING BRICK WALL SEWER SHALL BE 70" DUROMAXX SRPE PIPE OR APPROVED EQUIVALENT.
3. WHERE EXISTING BRICK SEWER IS TO BE JOINED TO NEW SRPE OR EQUIVALENT PIPE, THE CONTRACTOR SHALL ADHERE TO THE TYPICAL CONCRETE COLLAR DETAIL IN THE PLANS.
4. CONTRACTOR SHALL REPLACE PAVEMENT TO MATCH EXISTING PAVEMENT TYPE, THICKNESS, AND BASE INCLUDING ALL BASE AND SUBBASE LAYERS.

MANHOLE REHAB

CODED NOTES

1. A NEW MANHOLE SHALL BE INSTALLED WHEREVER CONSTRUCTION PITS ARE IMPLEMENTED. SEE MANHOLE IMPROVEMENT SCHEDULE FOR IMPROVEMENTS FOR ALL EXISTING MANHOLES.



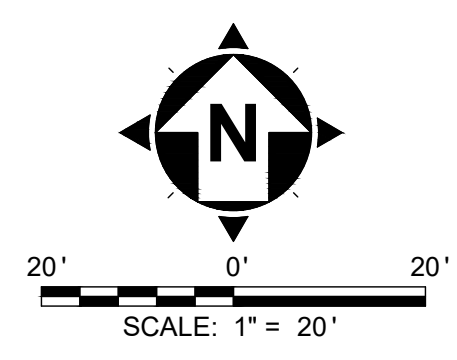
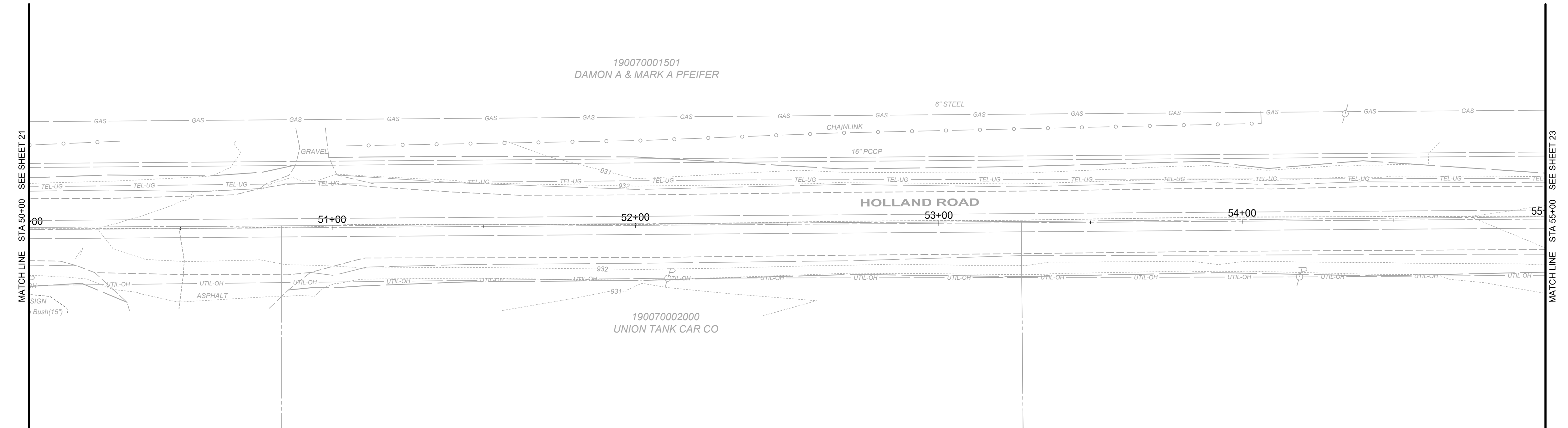
EX. 72" COMBINED BRICK SEWER: 45+00 - 50+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION	OHIO
ROCK SWALE COMBINED	
SEWER IMPROVEMENTS PHASE I	
MARION COUNTY	
CIVIL - 10 SERIES	
STA 45+00 - 50+00	

PROJECT NO:	242139
DRAWING NAME:	10C-10
SHEET:	21
OF:	28



NO	REVISION	DATE

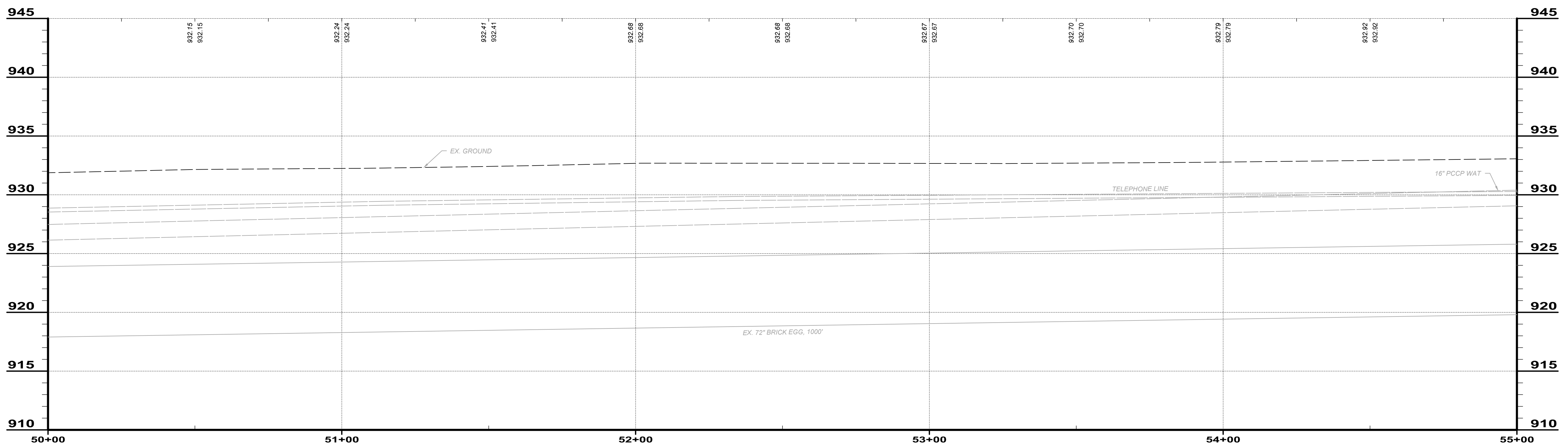
SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 MARION COUNTY OHIO
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
CIVIL - 10 SERIES
STA 50+00 - 55+00

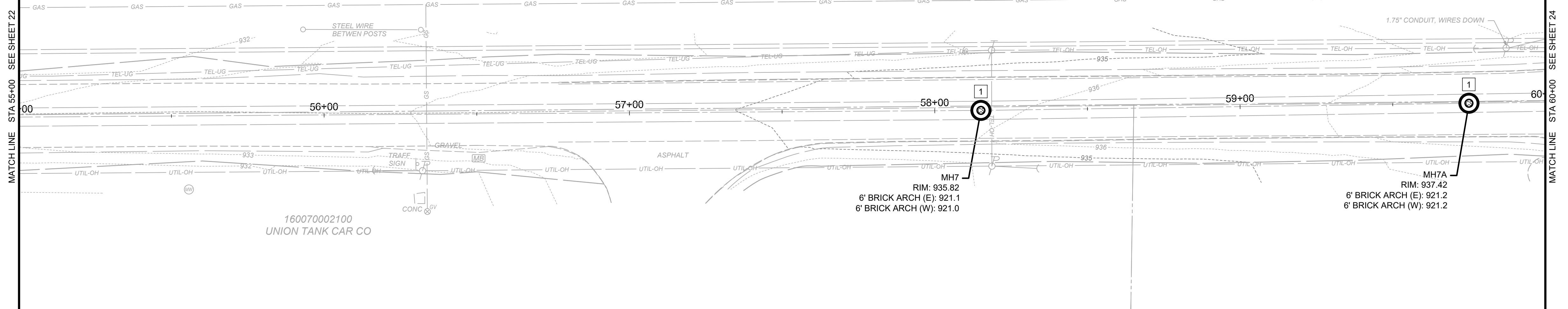
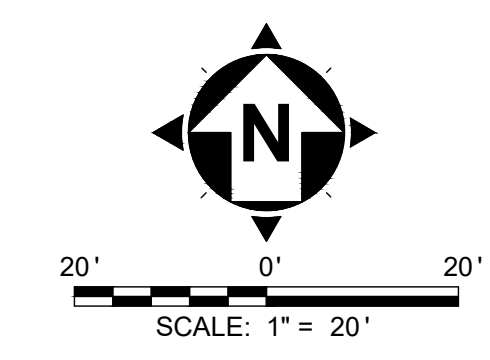
PROJECT NO:	
242139	
DRAWING NAME	
10C-11	
SHEET	OF
22	28

GENERAL NOTES

- NEW SEWER PIPE CONNECTING INTO A NEW MANHOLE SHALL BE CONNECTED PER THE NEW CONNECTION MANHOLE DETAIL.
- SEWER PIPE FOR REPLACEMENT SECTIONS OF THE EXISTING BRICK WALL SEWER SHALL BE 70" DUROMAXX SRPE PIPE OR APPROVED EQUIVALENT.
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- CONTRACTOR SHALL REPLACE PAVEMENT TO MATCH EXISTING PAVEMENT TYPE, THICKNESS, AND BASE INCLUDING ALL BASE AND SUBBASE LAYERS.



EX. 72" COMBINED BRICK SEWER: 50+00 - 55+00



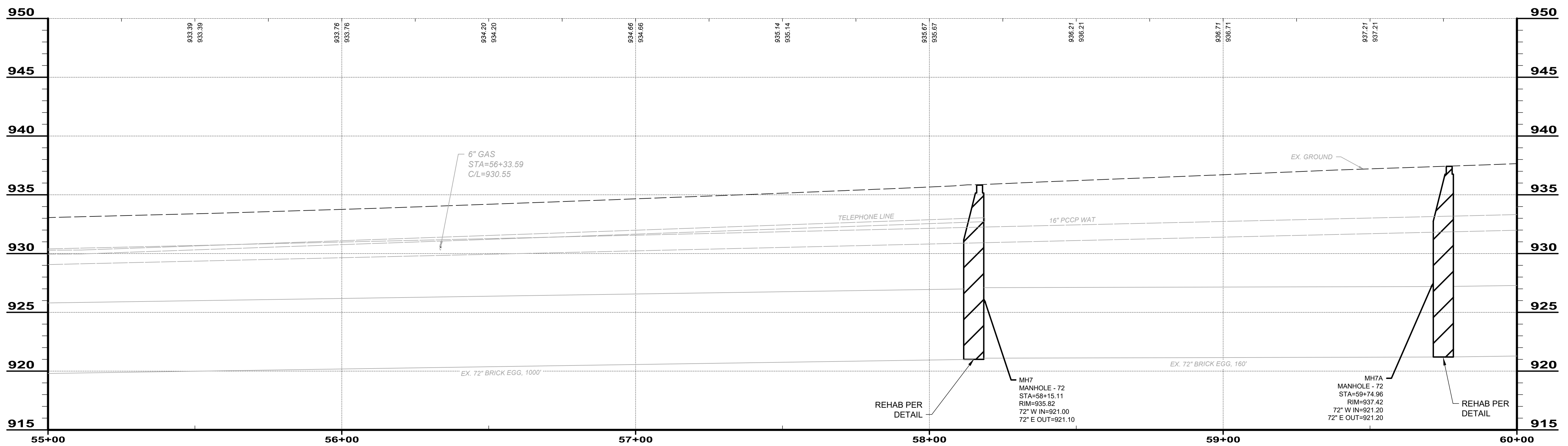
GENERAL NOTES

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MANHOLE REHAB

CODED NOTES

- A NEW MANHOLE SHALL BE INSTALLED WHEREVER CONSTRUCTION PITS ARE IMPLEMENTED. SEE MANHOLE IMPROVEMENT SCHEDULE FOR IMPROVEMENTS FOR ALL EXISTING MANHOLES.



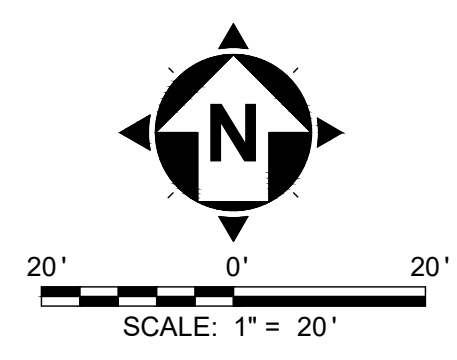
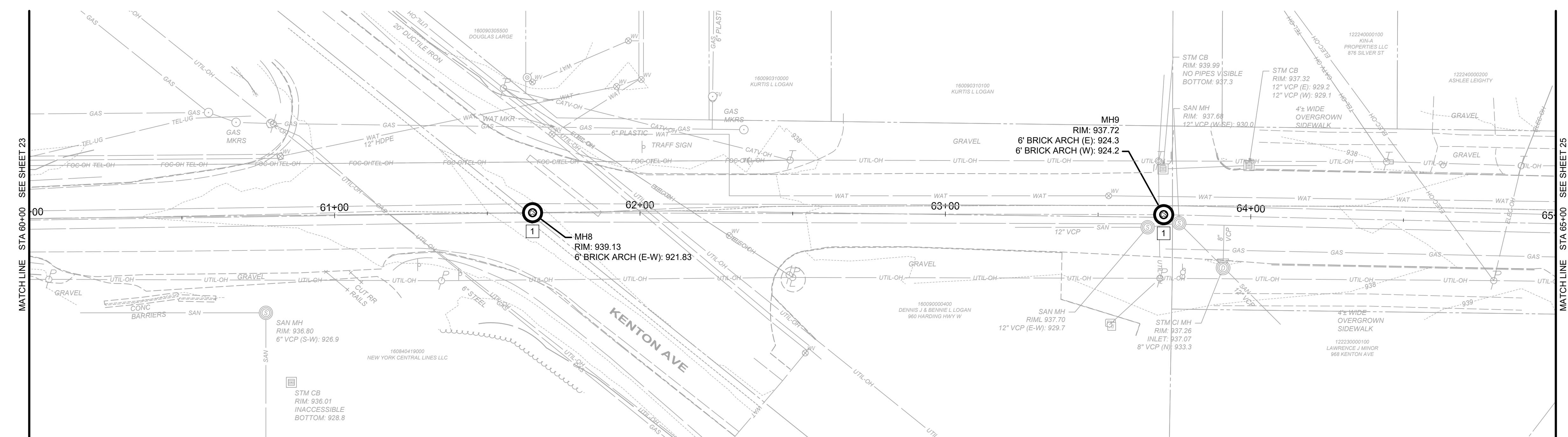
EX. 72" COMBINED BRICK SEWER: 55+00 - 60+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 55+00 - 60+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-12	
SHEET	OF
23	28



consultants
engineers • architects • planners

A Verdantas Company

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
MARION COUNTY, OHIO
**ROCK SWALE COMBINED
SEWER IMPROVEMENTS PHASE I**
CIVIL - 10 SERIES
STA 60+00 - 65+00

PROJECT NO:	242139
DRAWING NAME:	10C-13
SHEET OF:	24 28

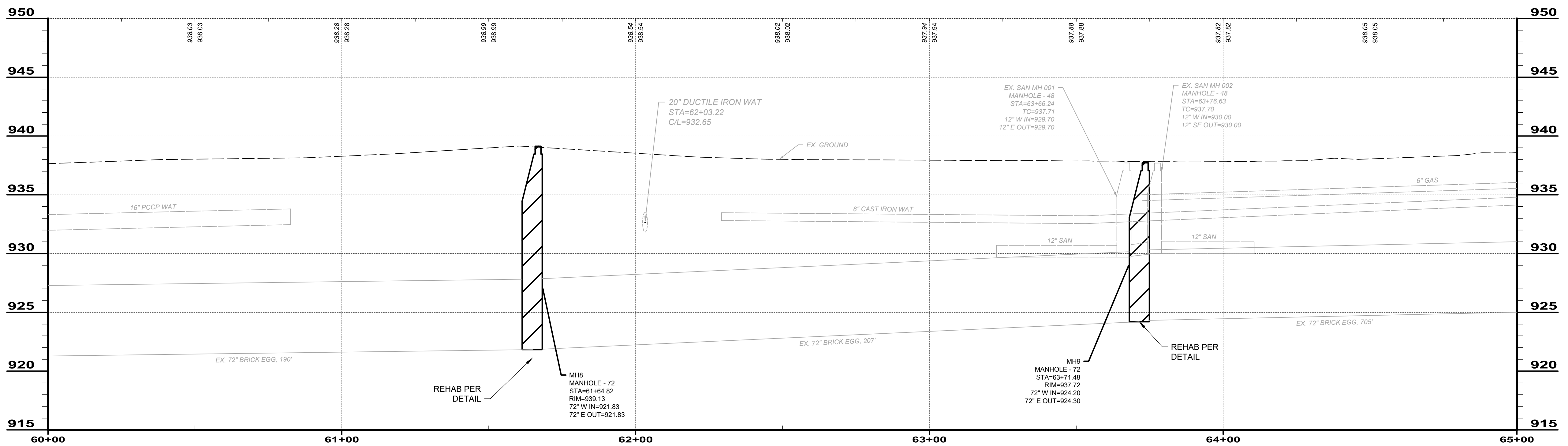
GENERAL NOTES

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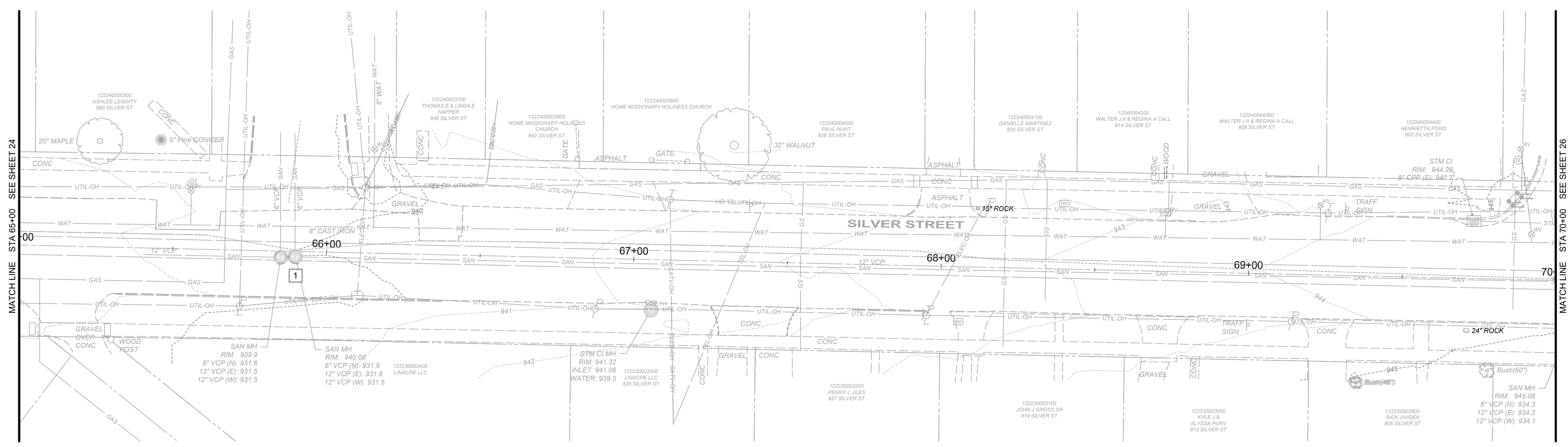
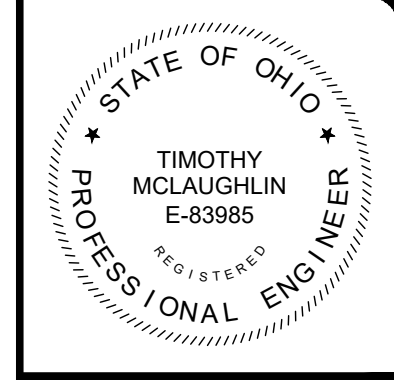
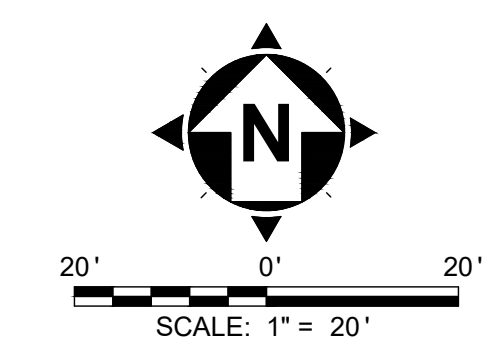
MANHOLE REHAB

CODED NOTES

- A NEW MANHOLE SHALL BE INSTALLED WHEREVER CONSTRUCTION PITS ARE IMPLEMENTED. SEE MANHOLE IMPROVEMENT SCHEDULE FOR IMPROVEMENTS FOR ALL EXISTING MANHOLES.



EX. 72" COMBINED BRICK SEWER: 60+00 - 65+00

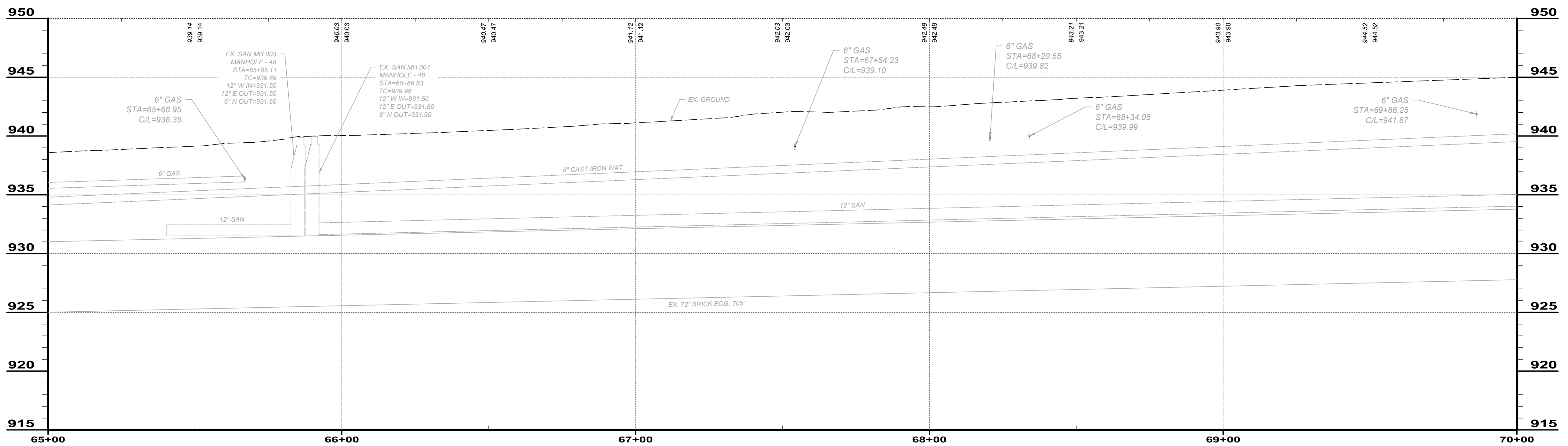


GENERAL NOTES

1. NEW SEWER PIPE CONNECTING INTO A NEW MANHOLE SHALL BE CONNECTED PER THE NEW CONNECTION MANHOLE DETAIL.
2. SEWER PIPE FOR REPLACEMENT SECTIONS OF THE EXISTING BRICK WALL SEWER SHALL BE 70" DIURAMAXX SRPE PIPE OR APPROVED EQUIVALENT.
3. WHERE EXISTING BRICK SEWER IS TO BE JOINED TO NEW SRPE OR EQUIVALENT PIPE, THE CONTRACTOR SHALL ADHERE TO THE TYPICAL CONCRETE COLLAR DETAIL IN THE PLANS.
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CODED NOTES

1. A NEW MANHOLE SHALL BE INSTALLED WHEREVER CONSTRUCTION PITS ARE IMPLEMENTED. SEE MANHOLE IMPROVEMENT SCHEDULE FOR IMPROVEMENTS FOR ALL EXISTING MANHOLES.



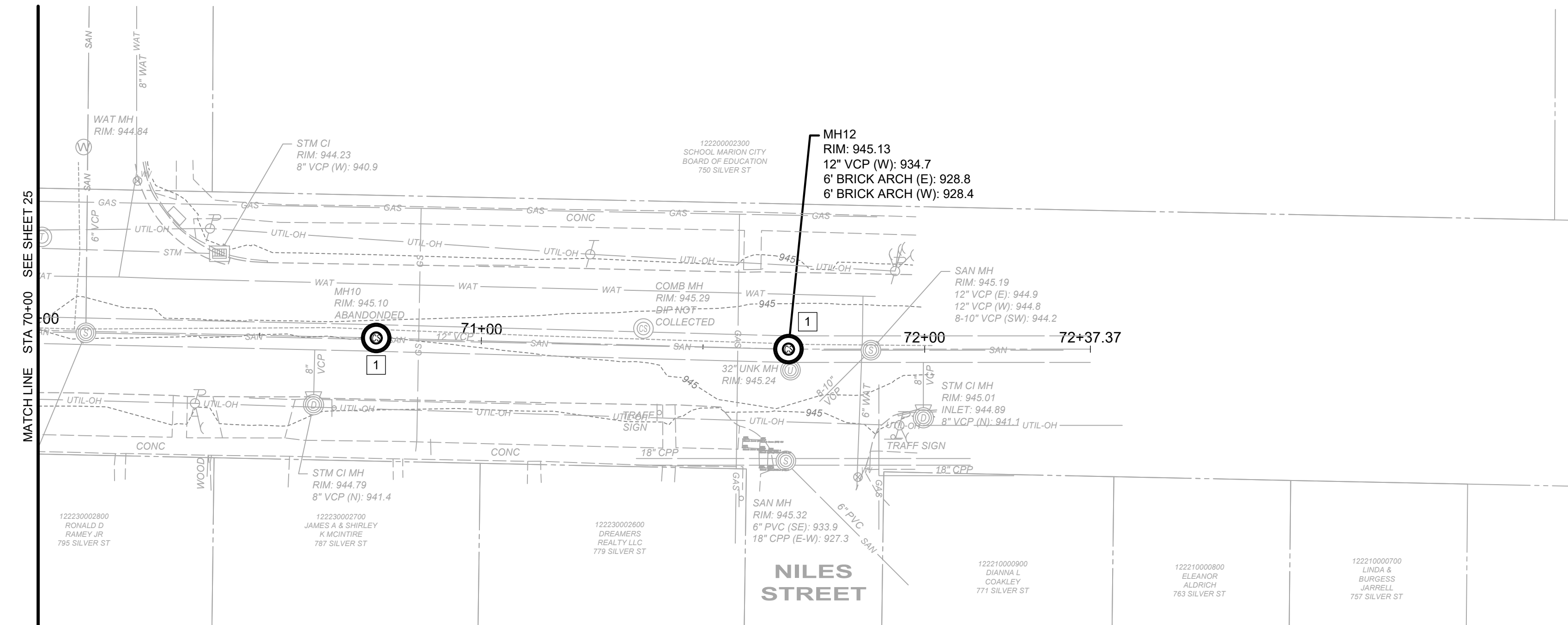
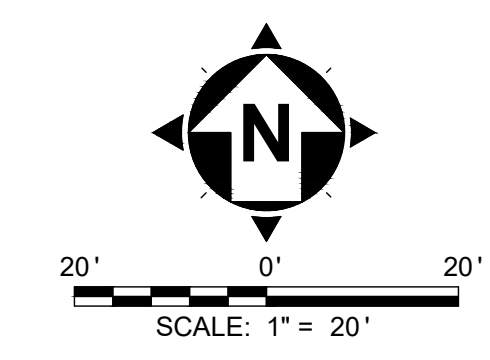
EX. 72" COMBINED BRICK SEWER: 65+00 - 70+00

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY OHIO
CIVIL - 10 SERIES
STA 65+00 - 70+00

PROJECT NO:	
242139	
DRAWING NAME	
10C-14	
SHEET	OF
25	28



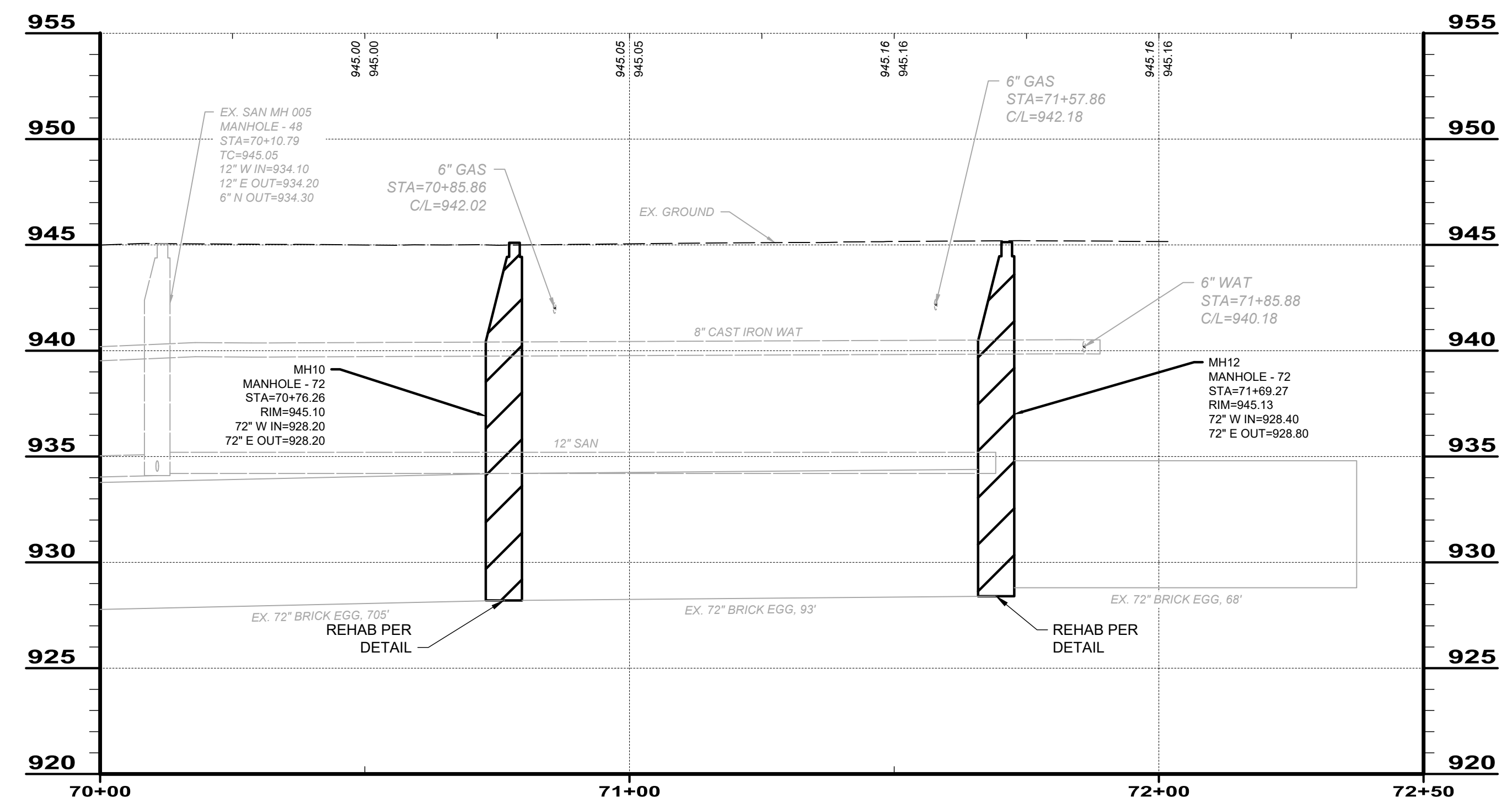
GENERAL NOTES

1. NEW SEWER PIPE CONNECTING INTO A NEW MANHOLE SHALL BE CONNECTED PER THE NEW CONNECTION MANHOLE DETAIL.
2. SEWER PIPE FOR REPLACEMENT SECTIONS OF THE EXISTING BRICK WALL SEWER SHALL BE 70\"/>

MANHOLE REHAB

CODED NOTES

1. A NEW MANHOLE SHALL BE INSTALLED WHEREVER CONSTRUCTION PITS ARE IMPLEMENTED. SEE MANHOLE IMPROVEMENT SCHEDULE FOR IMPROVEMENTS FOR ALL EXISTING MANHOLES.



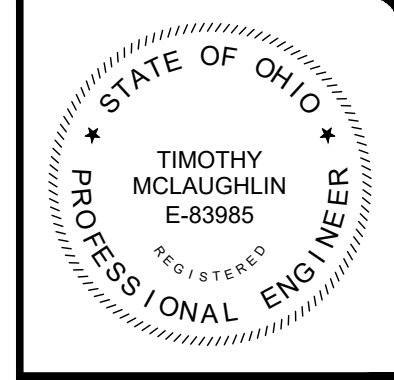
EX. 72\"/>

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	10/23/2024
DESIGNED BY:	BKU
DRAWN BY:	CAS
CHECKED BY:	TJM

OHIO
CITY OF MARION
ROCK SWALE COMBINED
SEWER IMPROVEMENTS PHASE I
MARION COUNTY
CIVIL - 10 SERIES
STA 70+00 - 72+50

PROJECT NO:	
242139	
DRAWING NAME	
10C-15	
SHEET	OF
26	28



MANHOLE ID	STATION	RIM EL. (FT)	INVERT EL. (FT)	DEPTH (FT)	RISER/CONE MATERIAL	RISER/CONE DIAMETER (IN)	WALL MATERIAL	WALL MAX DIAMETER (IN)	IMPROVEMENT TYPE	REPAIR IMPROVEMENTS					
										CASTING FRAME	CONNECTIONS	STEPS	CHIMNEY	WALL	INVERT OR BENCH
MH1	1+96.40	914.06	905.70	8.36	Concrete	30	Brick	70	Replace	N/A	N/A	N/A	N/A	N/A	N/A
MH2	8+75.88	919.95	908.20	11.75	Concrete	30	Brick	70	Replace	N/A	N/A	N/A	N/A	N/A	N/A
MH3	11+79.28	922.15	908.99	13.16	Brick	30	Brick	70	Replace	N/A	N/A	N/A	N/A	N/A	N/A
MH3A (PROPOSED)	20+50	925.62	910.47	15.15	See Manhole Detail(s)	See Manhole Detail(s)	See Manhole Detail(s)	See Manhole Detail(s)	Proposed	N/A	N/A	N/A	N/A	N/A	N/A
MH4	24+77.54	924.42	911.20	13.22	Concrete	30	Brick	70	Repair	N/A	N/A	Remove	Chimney Seal per 330130.81	Polyurethane Wall Injection, Structural Lining per	Structural Lining per 330130.81
MH4A	36+39.51	926.06	912.80	13.26	Concrete	30	Brick	70	Repair	N/A	N/A	Remove	Chimney Seal per 330130.81	Polyurethane Wall Injection, Structural Lining per	Structural Lining per 330130.81
MH5	38+38.65	926.29	913.20	13.09	Concrete	30	Brick	70	Repair	N/A	N/A	Remove	Chimney Seal per 330130.81	Structural Lining per 330130.81	Structural Lining per 330130.81
MH6	48+14.90	930.71	917.10	13.61	Brick	30	Brick	70	Replace	N/A	N/A	N/A	N/A	N/A	N/A
MH7	58+15.11	935.82	921.00	14.82	Brick	30	Brick	75	Repair	N/A	Grout around existing pipe (1) inlets prior to lining	Remove	Chimney Seal per 330130.81	Structural Lining per 330130.81	Structural Lining per 330130.81
MH7A	59+74.96	935.82	921.10	14.72	Concrete	30	Brick	75	Repair	Expose/Adjust to Grade	N/A	Remove	Chimney Seal per 330130.81	Structural Lining per 330130.81	Structural Lining per 330130.81
MH8	61+64.82	939.13	921.83	17.3	Brick	30	Brick	80	Repair	N/A	N/A	Remove	Chimney Seal per 330130.81	Structural Lining per 330130.81	Structural Lining per 330130.81
MH9	63+71.48	937.72	924.20	13.52	Brick	30	Brick	75	Repair	N/A	Grout around existing pipe (2) inlets prior to lining	Remove	Chimney Seal per 330130.81	Structural Lining per 330130.81	Structural Lining per 330130.81
MH10	70+79.26	945.10	928.20	16.90	Brick	30	Brick	75	Repair	N/A	Grout around existing pipe (1) inlets prior to lining	Remove	Chimney Seal per 330130.81	Structural Lining per 330130.81	Structural Lining per 330130.81
MH12	71+69.27	945.13	928.80	16.33	Concrete	30	Brick	75	Repair	N/A	N/A	Remove	Chimney Seal per 330130.81	Structural Lining per 330130.81	Structural Lining per 330130.81

GENERAL NOTES:

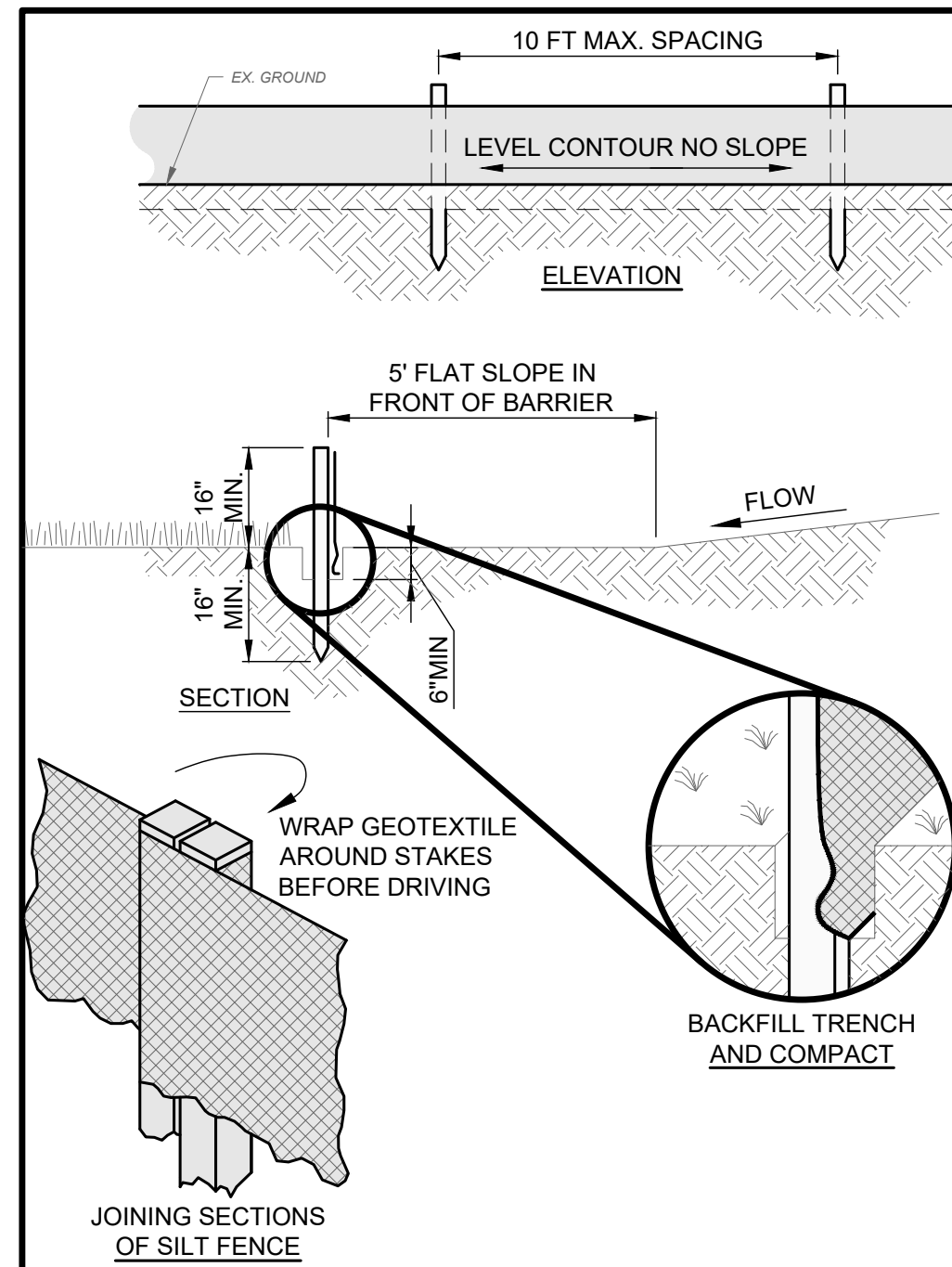
1. THE CONTRACTOR SHALL CONFIRM ALL DEPTHS, MANHOLE DIAMETERS, PIPE INLETS, EXISTING MANHOLE MATERIALS, AND GENERAL CONDITION OF EACH MANHOLE PRIOR TO INSTALLATION OF ANY REPAIRS OR REPLACEMENT OF ANY STRUCTURES. ANY DEVIATIONS OR CONDITIONS ENCOUNTERED DURING THE CONTRACTORS INSPECTION OF THE STRUCTURES THAT LIMITS THE ABILITY TO ADEQUATELY INSTALL THE NECESSARY IMPROVEMENTS SHALL REQUIRED NOTIFICATION TO THE ENGINEER IMMEDIATELY UPON DISCOVERY.
2. REPLACEMENT MANHOLES SHALL EITHER BE PRECAST CONCRETE STRUCTURES (SEE STANDARD TYPE "E" ECCENTRIC MANHOLE DETAIL) OR INTEGRATED MANHOLE TEE WITH HDPE PIPE RISER AND CONCRETE COLLAR THAT INCLUDED AN INTEGRATED GRATE AND FRAME (SEE MANHOLE TEE WITH ACCESS RISER & REINFORCEMENT INSTALLATION DETAIL).
3. ANY MATERIALS OR APPLICATION METHODS NOT CALLED OUT IN PLAN AND PROFILE OR IN CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH APPLICABLE DIVISION 31 AND 33 SECTIONS AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
4. CONNECTIONS: ALL CONNECTIONS THAT ARE NOT INTEGRATED WITHIN THE 72" EGG SEWER SHALL BE CLEANED TO REMOVE LOSE BRICKS, MORTAR, DEBRIS, OR OTHER MATERIALS THAT MAY COMPROMISE SEALING THE CONNECTION. ONCE PROPERLY CLEANED, THE CONTRACTOR SHALL SEAL THE CONNECTIONS BY INSTALLING NEW BRICKS WITH MORTAR (IN AREAS WHERE MISSING) AND APPLYING PATCHING MIX FOR STRUCTURAL REHABILITATION AND SEALING IN ACCORDANCE WITH 330130.81.
5. STRUCTURAL INJECTION: WHERE NOTED UNDER REPAIR IMPROVEMENTS - WALL, THE CONTRACTOR SHALL CORE DRILL HOLES AROUND THE PERIMETER OF THE STRUCTURE TO INJECT A STRUCTURAL POLYURETHANE FOAM THAT WHEN CURED WITH STABILIZE THE AREA AROUND THE EXISTING STRUCTURE AND AREAS WHERE THERE ARE MISSING MORTAR BETWEEN BRICK WALLS. ALTERNATIVE MATERIALS MAY BE USED BUT SHALL BE MEET EQUAL OR GREATER STRUCTURAL AND MATERIAL PROPERTIES AS DETAILED IN SECTION 330130.63.

DATE					
REVISION					
NO					

SCALE:	AS NOTED
DATE:	10/15/2024
DESIGNED BY:	---
DRAWN BY:	---
CHECKED BY:	TJM

CITY OF MARION
 ROCK SWALE COMBINED
 SEWER IMPROVEMENTS PHASE I
 MARION COUNTY, OHIO
CIVIL - 10 SERIES
IMPROVEMENT SCHEDULE

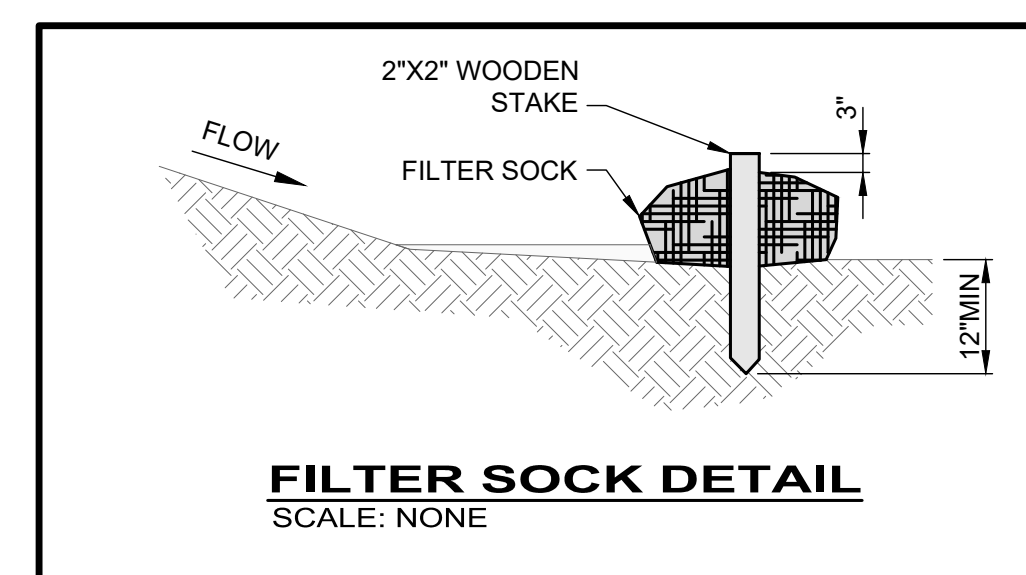
PROJECT NO:	242139
DRAWING NAME	10C-16
SHEET	27
OF	28



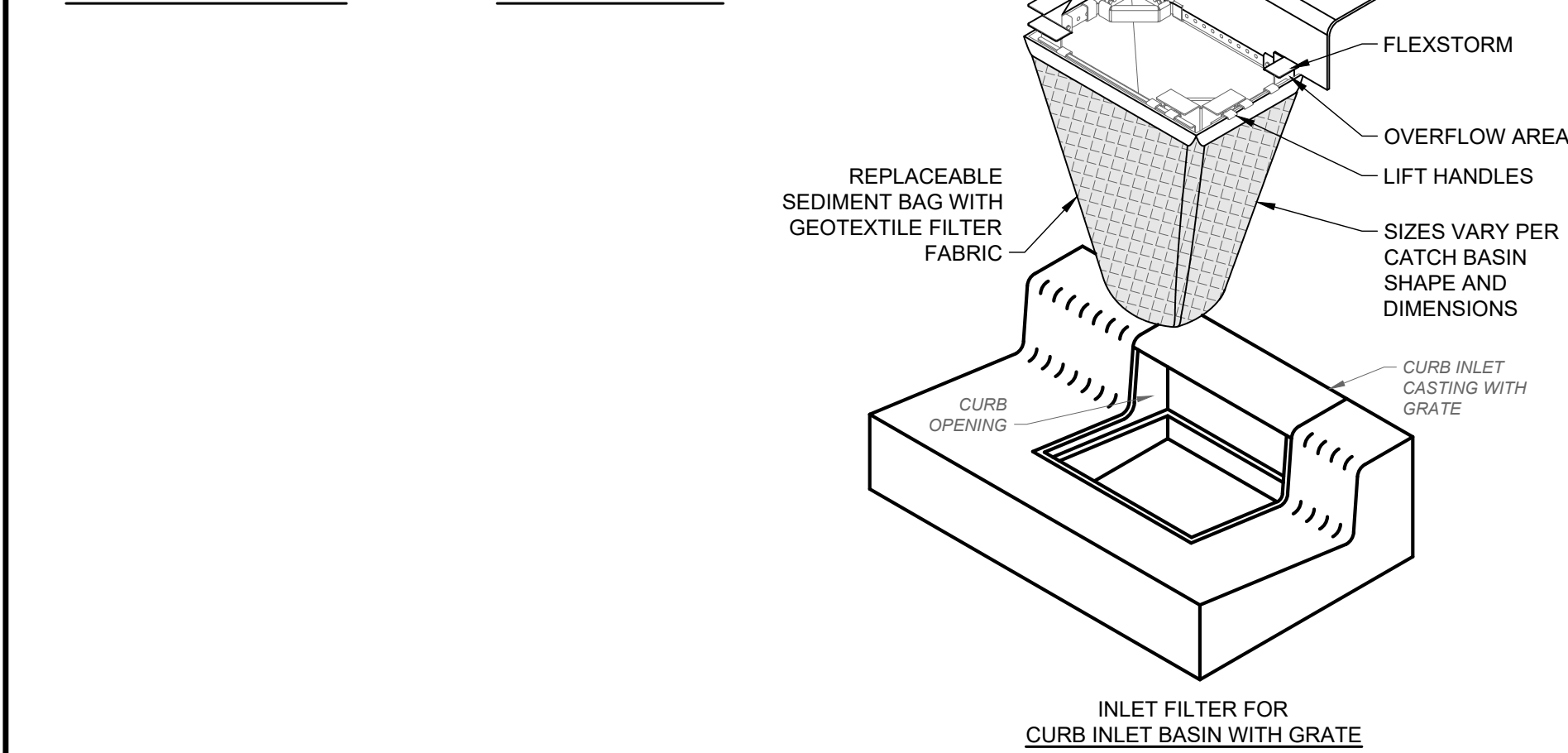
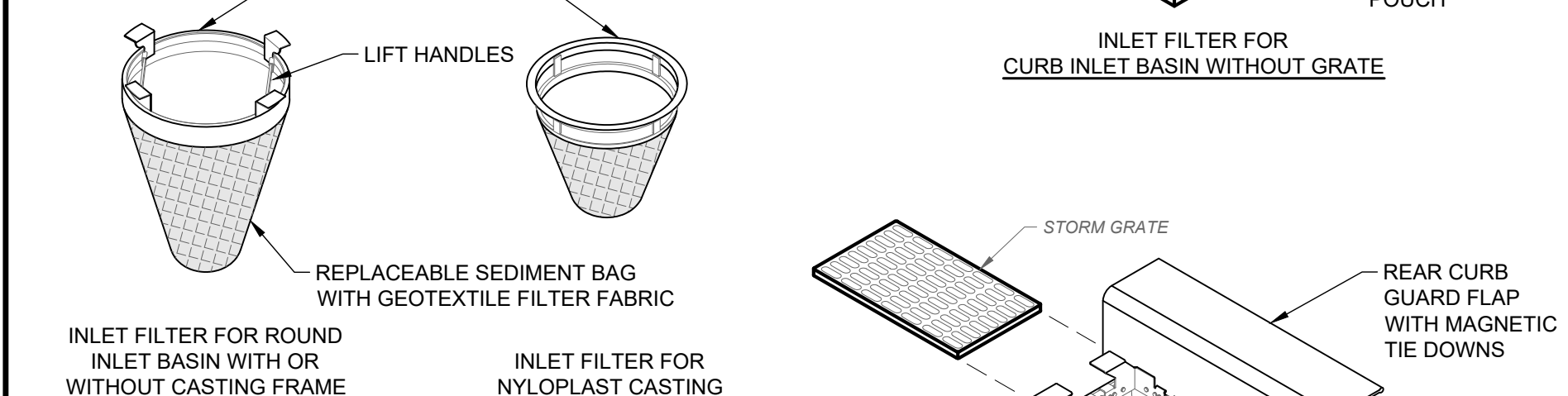
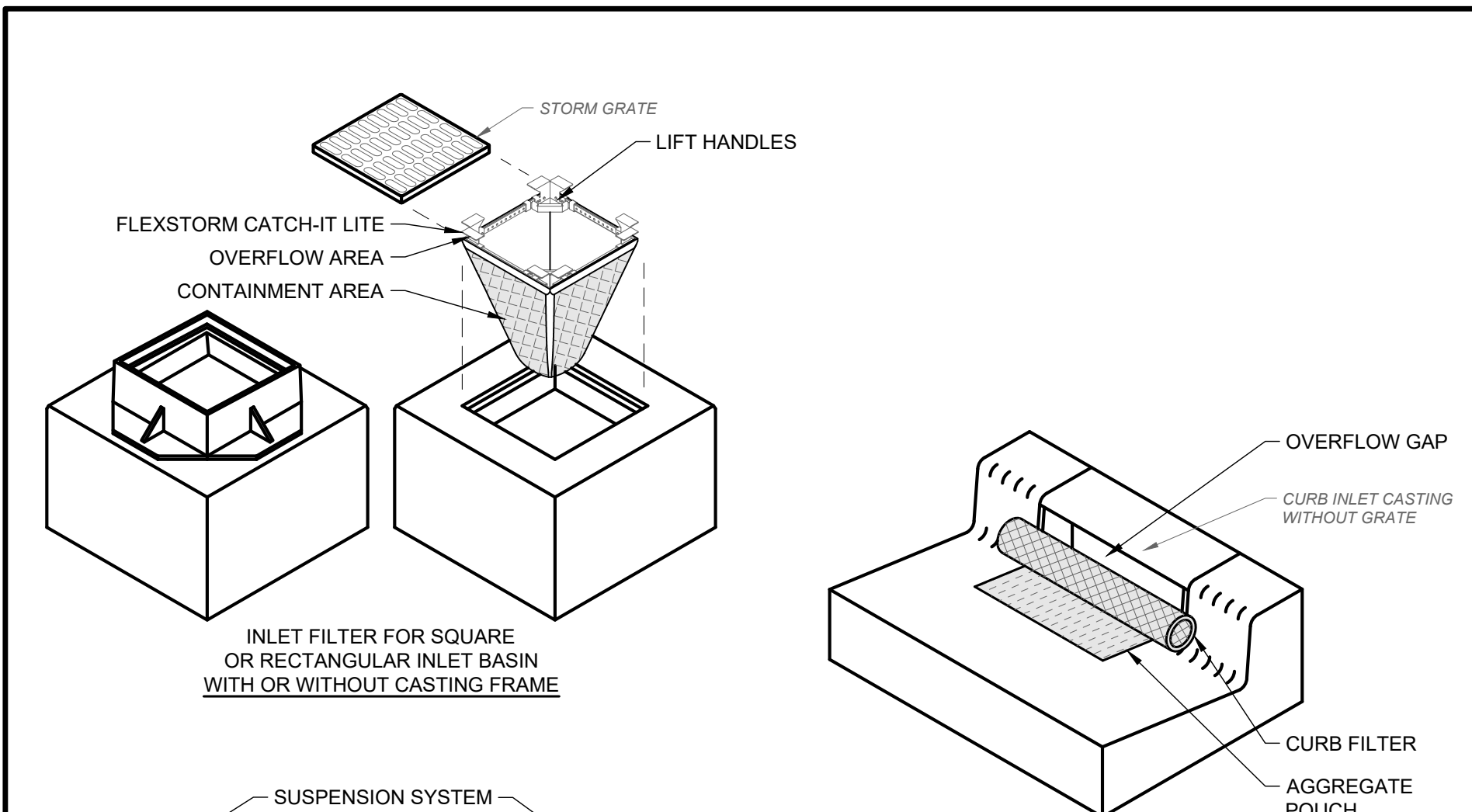
- NOTES:
- PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
 - SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
 - CHANGE THE LAYOUT OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT.
 - INSTALL OTHER PRACTICES.

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

SILT FENCE
SCALE: NONE

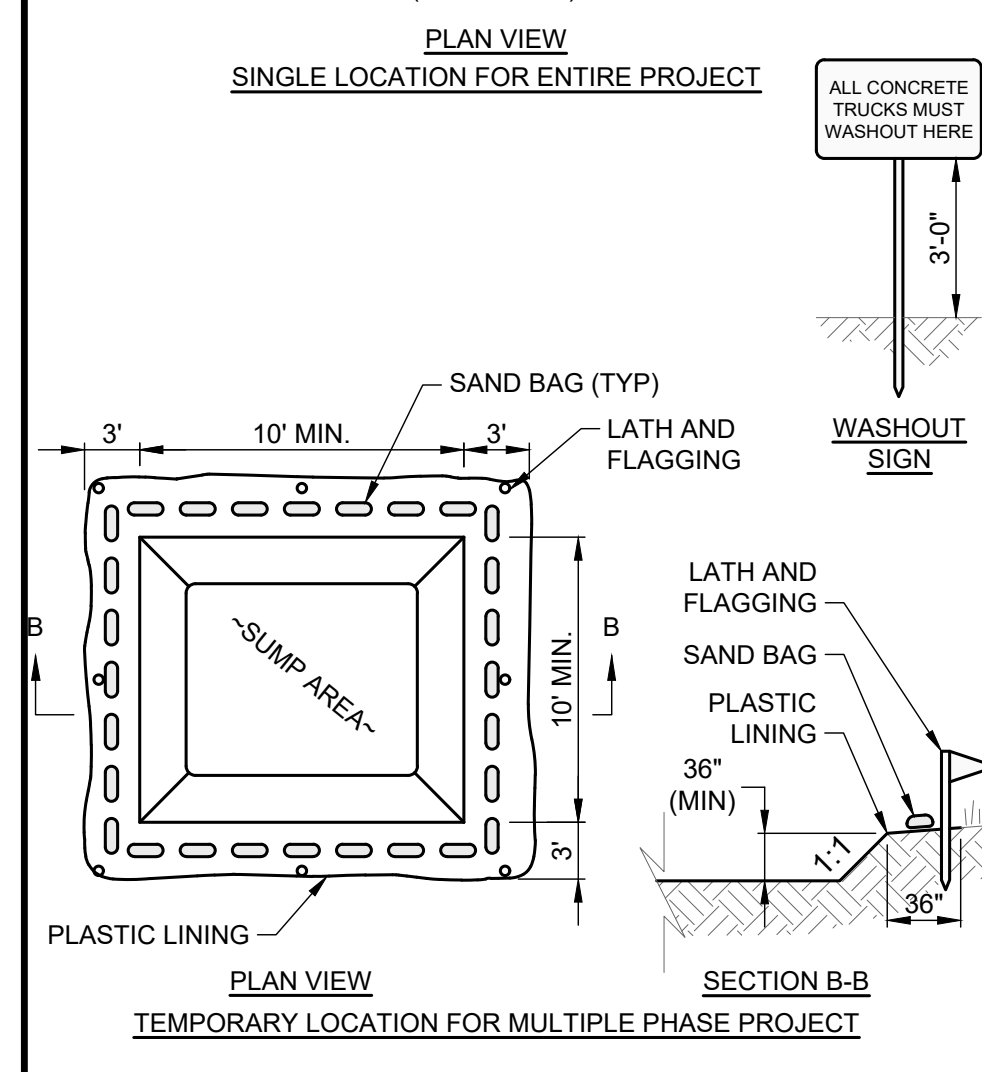
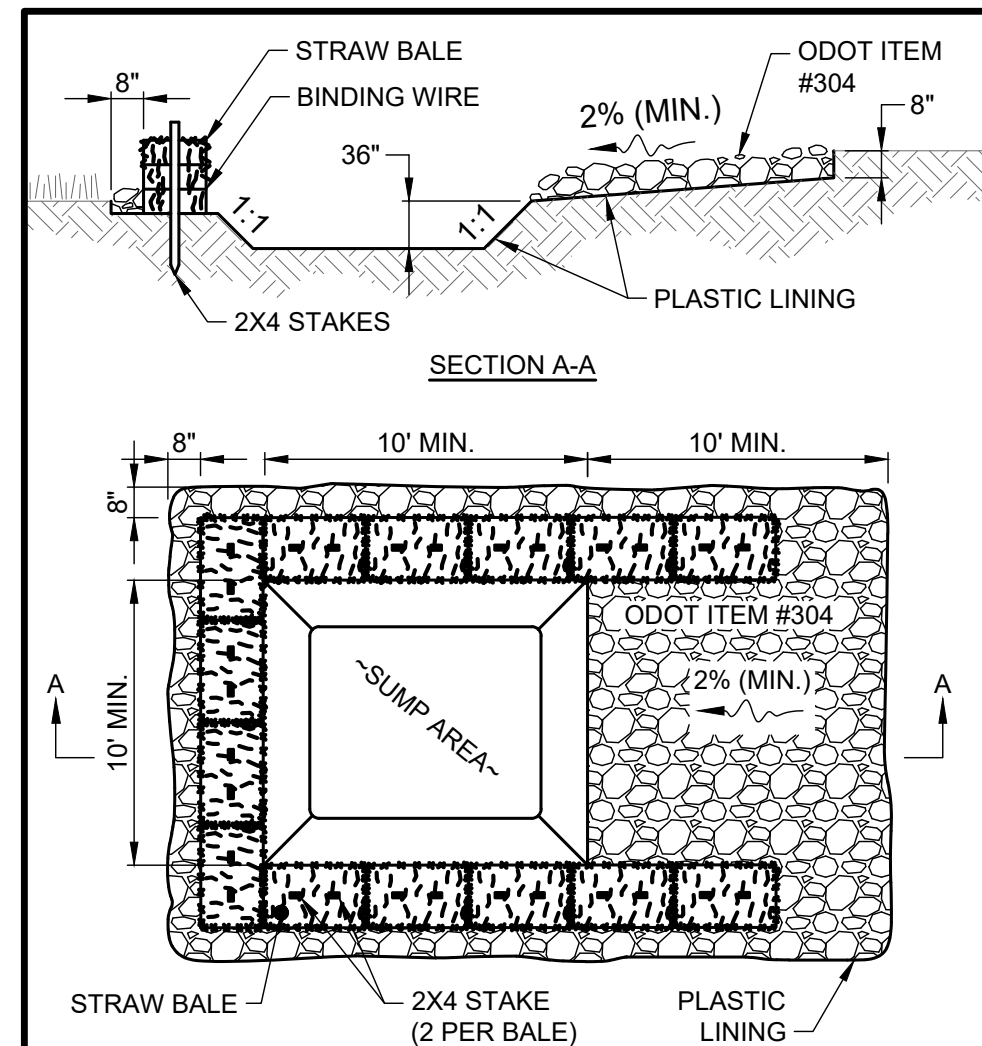


FILTER SOCK DETAIL
SCALE: NONE



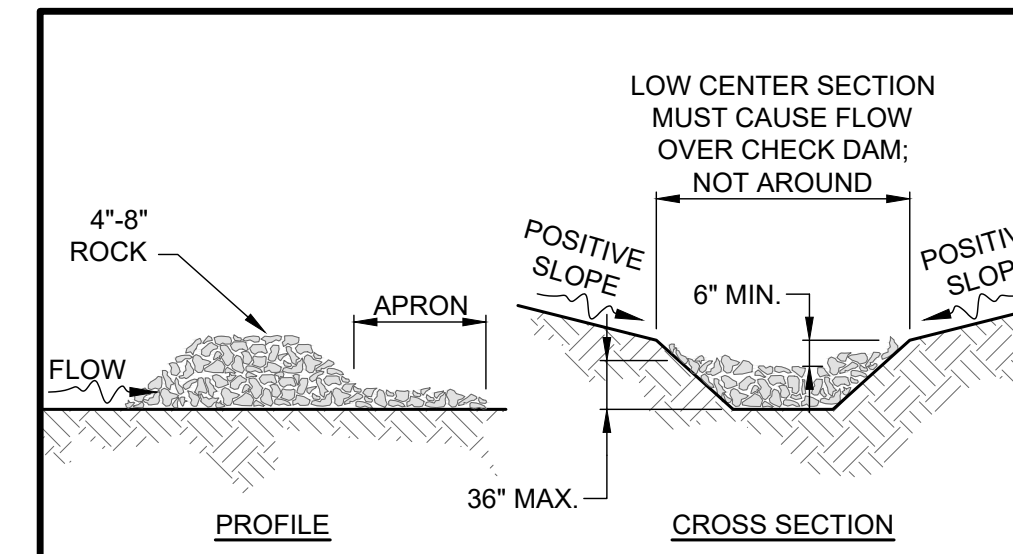
- NOTES:
- ALL FRAMING SHALL BE CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
 - CONTRACTOR SHALL PROVIDE EXISTING OR PROPOSED STRUCTURE DETAILED DIMENSIONS, CASTING CATALOG, MAKE AND MODEL TO CONFIGURE AND ASSEMBLE CUSTOMIZED FLEXSTORM INLET FILTERS.

STORM DRAIN INLET PROTECTION DETAIL
SCALE: NONE



- NOTES:
- WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
 - ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
 - CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
 - IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
 - PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-ML POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
 - CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
 - CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
 - PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
 - CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
 - SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

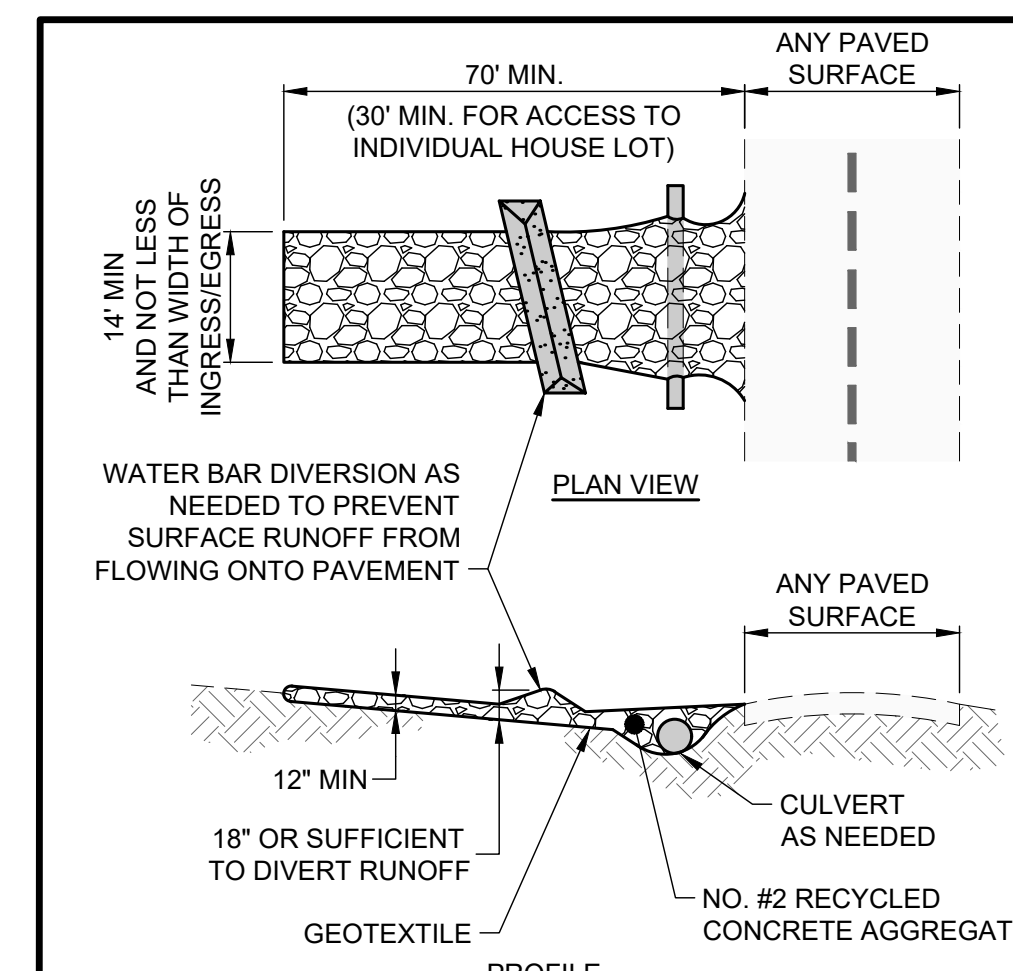
CONCRETE WASHOUT DETAIL
SCALE: NONE



- NOTES:
- THE CHECK DAM SHALL BE CONSTRUCTED OF 4" TO 8" DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL.
 - THE TOP OF THE CHECK DAM SHALL BE CONSTRUCTED SO THE CENTER IS APPROXIMATELY 6" LOWER THAN THE OUTER EDGES; SO WATER WILL FLOW ACROSS THE CENTER AND NOT AROUND THE ENDS.
 - THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER OF THE WEIR SHALL NOT EXCEED 36".
 - SPACING BETWEEN DAMS SHALL BE AS SHOWN IN THE CONSTRUCTION PLANS OR BY THE FOLLOWING TABLE:

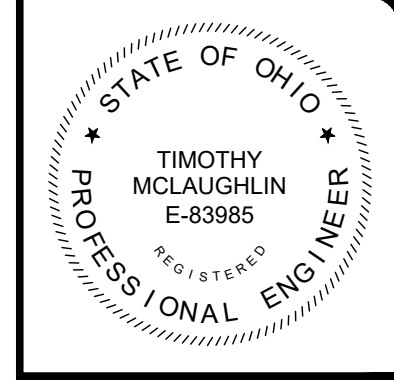
DAM HEIGHT	CHECK DAM SPACING			
	CHANNEL SLOPE			
	< 5%	5% - 10%	10% - 15%	15% - 20%
1 FT.	65 FT.	30 FT.	20 FT.	15 FT.
2 FT.	130 FT.	65 FT.	40 FT.	30 FT.
3 FT.	200 FT.	100 FT.	65 FT.	50 FT.

CHECK DAM DETAIL
SCALE: NONE



- NOTES:
- PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:
 - A. TENSILE STRENGTH = 200 LBS.
 - B. PUNCTURE STRENGTH = 80 PSI
 - C. TEAR STRENGTH = 50 LBS.
 - D. BURST STRENGTH = 320 PSI
 - E. ELONGATION = 20%
 - F. EQUIVALENT OPENING SIZE ≤ 0.6 MM
 - G. PERMITTIVITY = 0.001 CM/SEC
 - APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
 - IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
 - CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CONSTRUCTION ENTRANCE
SCALE: NONE



consultants
engineers • architects • planners
A Verdantas Company

NO.	DATE	REVISION

SCALE: AS NOTED	DATE: 9/26/2024	DESIGNED BY: J	DRAWN BY: J	CHECKED BY: TJM
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CITY OF MARION
OHIO
MARION COUNTY
ROCK SWALE COMBINED
SEWER IMPROVEMENTS PHASE I
EROSION CONTROL - 20 SERIES
EROSION CONTROL DETAILS

PROJECT NO:	242139
DRAWING NAME:	20EC-01
SHEET OF:	28 OF 28