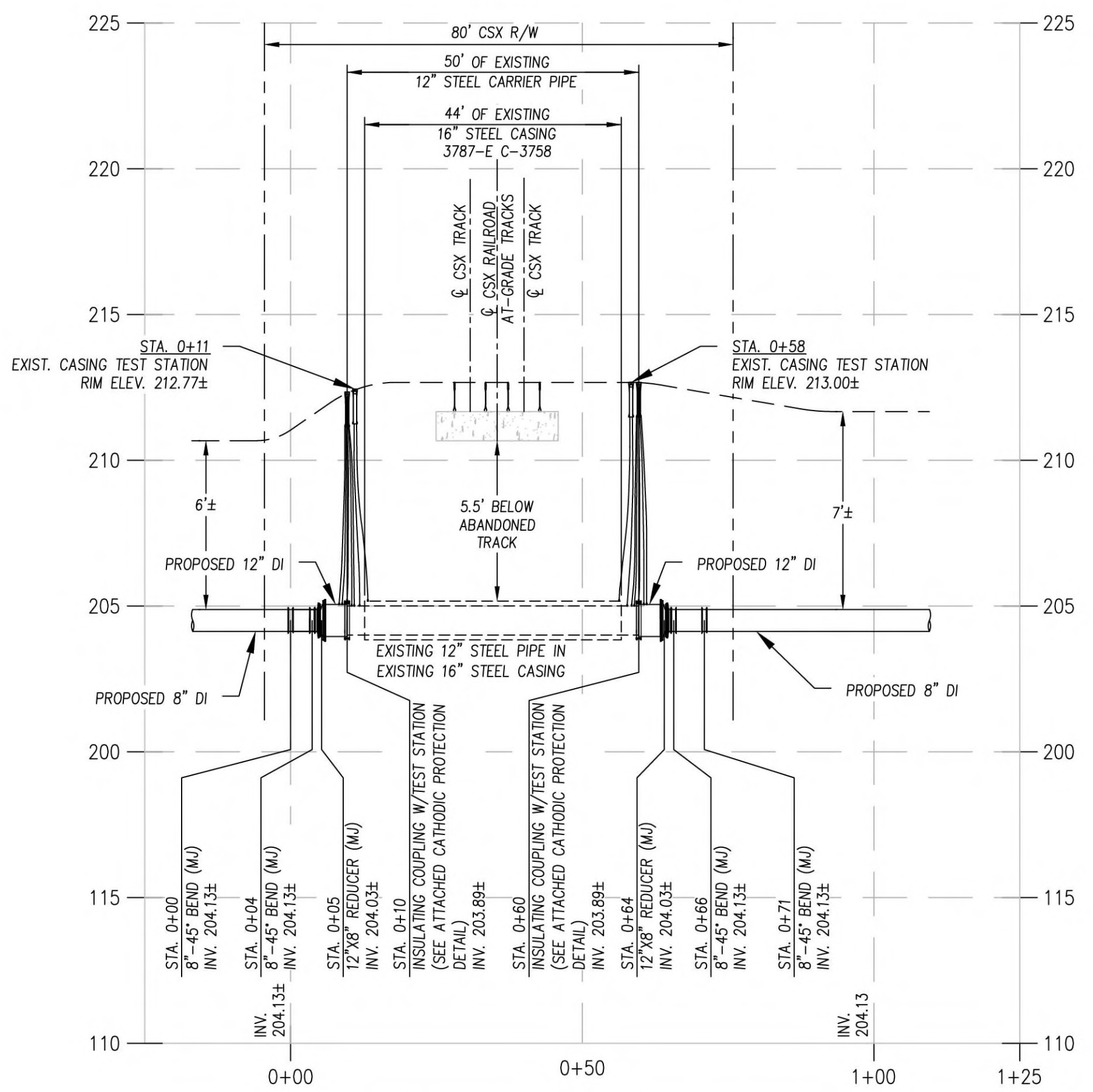


PLAN FOR WATER MAIN TIE-IN
ULMER AVE AT CSX RAILROAD
SCALE - 1"=30'



PROFILE/TIE-IN - ULMER AVE AT CSX RAILROAD
US DOT 589 859 F - MILEPOST 0008.65
SCALE - HORIZ: 1"=20' VERT: 1"=4'
ALL ELEVATIONS ARE APPROXIMATE TEST HOLES REQUIRED TO
CONFIRM DEPTHS OF EXISTING FACILITIES

CSX CONSTRUCTION REQUIREMENTS

METHOD OF INSTALLATION - NONE (EXISTING 12" CARRIER PIPE & EXISTING 16" CASING PIPE TO REMAIN)

1. GENERAL REQUIREMENTS-

- 1.1. BORED, JACKED, OR TUNNELED INSTALLATIONS SHALL HAVE A BORE HOLE ESSENTIALLY THE SAME AS THE OUTSIDE DIAMETER OF THE PIPE PLUS THE THICKNESS OF THE PROTECTIVE COATING.
- 1.2. THE USE OF WATER OR OTHER LIQUIDS TO FACILITATE CASING EMPLACEMENT AND SPOIL REMOVAL IS PROHIBITED.
- 1.3. IF, DURING INSTALLATION, AN OBSTRUCTION IS ENCOUNTERED WHICH PREVENTS INSTALLATION OF THE PIPE IN ACCORDANCE WITH THIS SPECIFICATION, NOTIFY CSXT IMMEDIATELY, ABANDON THE PIPE IN PLACE, AND IMMEDIATELY FILL WITH GROUT. A NEW INSTALLATION PROCEDURE AND REVISED PLANS MUST BE SUBMITTED TO, AND APPROVED BY, CSXT BEFORE WORK CAN RESUME.

2. OPEN CUT-

- 2.1. THE OWNER MUST REQUEST OPEN CUT APPROVAL WHEN MAKING APPLICATION FOR OCCUPANCY. ALL PROCEDURES WILL BE IN COMPLIANCE WITH AREMA CHAPTER 1 SECTION 5.1.5.1(B).
- 2.2. INSTALLATIONS BENEATH THE TRACK BY OPEN TRENCH METHODS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE CHIEF ENGINEER, DESIGN AND CONSTRUCTION.
- 2.3. INSTALLATIONS BY OPEN CUT WILL NOT BE PERMITTED UNDER MAINLINE TRACKS, TRACKS CARRYING HEAVY TONNAGE OR TRACKS CARRYING PASSENGER TRAINS. ALSO, OPEN CUT SHALL NOT BE USED WITHIN THE LIMITS OF HIGHWAY/RAILROAD GRADE CROSSING OR ITS APPROACHES, 25 FEET EITHER SIDE OF TRAVELED WAY, WHERE POSSIBLE.
- 2.4. RIGID PIPE (RCP, VCP, AND PCCP) MUST BE PLACED IN A CLASS B BEDDING OR BETTER.
- 2.5. AT LOCATIONS WHERE OPEN CUT IS PERMITTED, THE TRENCH IS TO BE BACKFILLED WITH CRUSHED STONE WITH A TOP SIZE OF THE AGGREGATE TO BE A MAXIMUM OF 2 INCHES AND TO HAVE NO MORE THAN 5% PASSING THE NUMBER 200 SIEVE. THE GRADATION OF THE MATERIAL IS TO BE SUCH THAT A DENSE STABLE MASS IS PRODUCED.
- 2.6. THE BACKFILL MATERIAL SHALL BE PLACED IN LOOSE 6 INCH LIFTS AND COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DENSITY WITH A MOISTURE CONTENT THAT IS NO MORE THAN 1% GREATER THAN OR 2% LESS THAN THE OPTIMUM MOISTURE AS DETERMINED IN ACCORDANCE WITH CURRENT ASTM DESIGNATION D - 1557 (MODIFIED PROCTOR). WHEN THE BACKFILL MATERIAL IS WITHIN 3 FEET OF THE SUBGRADE ELEVATION (THE INTERFACE OF THE BALLAST AND THE SUBSOIL) A COMPACTION OF AT LEAST 98% WILL BE REQUIRED. COMPACTION TEST RESULTS CONFIRMING COMPLIANCE MUST BE PROVIDED TO CSXT'S REGIONAL ENGINEERING OFFICE BY THE OWNER.
- 2.7. ALL BACKFILLED PIPES LAID EITHER PERPENDICULAR OR PARALLEL TO THE TRACKS MUST BE DESIGNED SO THAT THE BACKFILL MATERIAL WILL BE POSITIVELY DRAINED. THIS MAY REQUIRE THE PLACEMENT OF LATERAL DRAINS ON PIPES LAID LONGITUDINALLY TO THE TRACK AND THE INSTALLATION OF STUB PERFORATED PIPES AT THE EDGE OF THE SLOPES.
- 2.8. UNLESS OTHERWISE AGREED UPON, ALL WORK INVOLVING RAIL, TIES, AND OTHER TRACK MATERIAL WILL BE PERFORMED BY RAILROAD EMPLOYEES AT THE SOLE EXPENSE OF THE OWNER, SUBJECT TO ADVANCE PAYMENTS BY THE OWNER.

3. SOIL STABILIZATION-

- 3.1. PRESSURE GROUTING OF THE SOILS OR FREEZING OF THE SOILS BEFORE JACKING, BORING, OR TUNNELING MAY BE REQUIRED AT THE DIRECTION OF CSXT CHIEF ENGINEER, DESIGN AND CONSTRUCTION TO STABILIZE THE SOILS, CONTROL WATER, PREVENT LOSS OF MATERIAL, AND PREVENT SETTLEMENT OR DISPLACEMENT OF EMBANKMENT. GROUT SHALL BE CEMENT, CHEMICAL, OR OTHER SPECIAL INJECTION MATERIAL SELECTED TO ACCOMPLISH THE NECESSARY STABILIZATION.
- 3.2. THE MATERIALS TO BE USED AND THE METHOD OF INJECTION SHALL BE PREPARED BY A LICENSED PROFESSIONAL SOILS ENGINEER, OR BY AN EXPERIENCED AND QUALIFIED COMPANY SPECIALIZING IN THIS WORK AND SUBMITTED FOR APPROVAL TO CSXT BEFORE THE START OF WORK. PROOF OF EXPERIENCE AND COMPETENCY SHALL ACCOMPANY THE SUBMISSION.

4. DEWATERING-

- 4.1. WHEN WATER IS KNOWN OR EXPECTED TO BE ENCOUNTERED ALL PLANS AND SPECIFICATION MUST BE SUBMITTED TO THE CHIEF ENGINEER, DESIGN AND CONSTRUCTION FOR APPROVAL BEFORE THE PROCESS BEGINS. PUMPS OF SUFFICIENT CAPACITY TO HANDLE THE FLOW SHALL BE MAINTAINED AT THE SITE, PROVIDED THE CONTRACTOR HAS RECEIVED APPROVAL FROM CSXT TO OPERATE THEM. PUMPS IN OPERATION SHALL BE CONSTANTLY ATTENDED ON A 24-HOUR BASIS UNTIL, IN THE SOLE JUDGMENT OF CSXT, THE OPERATION CAN BE SAFELY HALTED. WHEN DEWATERING, A PROCESS FOR MONITORING FOR ANY SETTLEMENT OF TRACK OR STRUCTURES MUST BE IN PLACE.

5. SAFETY REQUIREMENTS

- 5.1. ALL OPERATIONS SHALL BE CONDUCTED SO AS NOT TO INTERFERE WITH, INTERRUPT, OR ENDANGER THE OPERATION OF TRAINS NOR DAMAGE, DESTROY, OR ENDANGER THE INTEGRITY OF RAILROAD FACILITIES. ALL WORK ON OR NEAR CSXT PROPERTY SHALL BE CONDUCTED IN ACCORDANCE WITH CSXT SAFETY RULES AND REGULATIONS. SPECIFICALLY ALL LICENSEE'S EMPLOYEES AND AGENTS, WHILE ON CSXT PROPERTY, SHALL BE REQUIRED TO WEAR AN ORANGE HARD HAT, SAFETY GLASSES WITH SIDE SHIELDS, 6" LACE UP BOOTS WITH A DISTINCT HEEL, SHIRTS WITH SLEEVES, AND LONG PANTS. ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT MAY BE REQUIRED FOR CERTAIN OPERATIONS INCLUDING ABRASIVE CUTTING, USE OF TORCHES, USE OF CHAINSAWS, ETC. THE CONTRACTOR AND ITS EMPLOYEES SHALL COMPLY WITH THE CSXT SAFETY RULES AT ALL TIMES WHILE OCCUPYING CSXT'S PROPERTY. OPERATIONS WILL BE SUBJECT TO CSXT INSPECTION AT ANY AND ALL TIMES.
- 5.2. ALL CRANES, LIFTS, OR OTHER EQUIPMENT THAT WILL BE OPERATED IN THE VICINITY OF THE RAILROAD'S ELECTRIFICATION AND POWER TRANSMISSION FACILITIES SHALL BE ELECTRICALLY GROUNDED AS DIRECTED BY CSXT. USE OF A CRANE OR OTHER LIFTING EQUIPMENT IS SUBJECT TO REQUIREMENTS AS STATED IN THE CSXT PUBLIC PROJECTS MANUAL.
- 5.3. WHENEVER EQUIPMENT OR PERSONNEL ARE WORKING CLOSER THAN 25 FEET FROM THE CENTERLINE OF AN ADJACENT TRACK, THAT TRACK SHALL BE CONSIDERED AS BEING OBSTRUCTED. INsofar AS POSSIBLE, ALL OPERATIONS SHALL BE CONDUCTED NO LESS THAN THIS DISTANCE. ALL OPERATIONS SHALL BE CONDUCTED ONLY WITH THE PERMISSION OF, AND AS DIRECTED BY, A DULY QUALIFIED RAILROAD EMPLOYEE PRESENT AT THE SITE OF THE WORK. ALL COSTS RELATED TO RAILROAD PROTECTION WILL BE PASSED ON TO THE APPLICANT.
- 5.4. CROSSING OF TRACKS AT GRADE BY EQUIPMENT AND PERSONNEL IS PROHIBITED EXCEPT BY PRIOR ARRANGEMENT WITH AND AS DIRECTED BY, CSXT.
- 5.5. PROTECTION OF DRAINAGE FACILITIES
- 5.6. IF, IN THE COURSE OF CONSTRUCTION, IT MAY BE NECESSARY TO BLOCK A DITCH, PIPE, OR OTHER DRAINAGE FACILITY, TEMPORARY PIPES, DITCHES, OR OTHER DRAINAGE FACILITIES SHALL BE INSTALLED TO MAINTAIN ADEQUATE DRAINAGE, AS APPROVED BY CSXT. UPON COMPLETION OF THE WORK, THE TEMPORARY FACILITIES SHALL BE REMOVED AND THE PERMANENT FACILITIES RESTORED.
- 5.7. SOIL EROSION METHODS SHALL BE USED TO PROTECT RAILROAD DITCHES AND OTHER DRAINAGE FACILITIES DURING CONSTRUCTION ON AND ADJACENT TO CSXT'S RIGHT-OF-WAY.

PIPE CROSSING DATA	EXISTING CARRIER PIPE	EXISTING CASING PIPE
CONTENTS TO BE HANDLED	POTABLE WATER	N/A
OPERATING PRESSURE (PSI)	160	N/A
NOMINAL PIPE SIZE (")	12	16
O.S. DIAMETER (")	12.75	16.00
I.S. DIAMETER (")	11.75	15.38
WALL THICKNESS (")	0.50	0.31
WEIGHT PER FOOT (LBS)	65.50	52.30
MATERIAL	CARBON STEEL	CARBON STEEL
PROCESS OF MANUFACTURE	AWWA C200, AWWA C206	ASTM A252
SPECIFICATION	ASTM A53	ASTM A53
GRADE OR CLASS	GRADE B	GRADE B
WORKING PRESSURE (PSI)	1,980 PSI	1,013 PSI
TYPE OF JOINT	WELDED - AWWA C206	WELDED - AWWA C206
TYPE OF COATING	COLD TAR ENAMEL AWWA C203-62	UNKNOWN
DETAILS OF CATHODIC PROTECTION	AWWA SPEC C203-62-ANODES, ISOLATION JOINTS, AND TEST STA	16"x12" MALONEY CASING SEAL
DETAILS OF SEAL OR PROTECTION AT ENDS OF COATING	N/A	FLEXIBLE OIL/WATER RESISTANT RUBBER END SEALS
METHOD OF INSTALLATION	12" STEEL PREVIOUSLY INSERTED	16" STEEL PREVIOUSLY BORED
SPECIFIC MIN. YIELD STRENGTH	35,000 PSI	36,000 PSI

NO	DATE	REVISION	INTL
0	03/16/2026	ISSUED FOR CONSTRUCTION	JMM
0	03/16/2026	DESIGN COMPLETION	JMM

AQUA PENNSYLVANIA, INCORPORATED
762 LANCASTER AVENUE, BRYN MAWR, PA., 19010

PROJECT PLAN FOR:
ROESCH AVE-PHASE B PROJECT
RIGHT OF WAY ENCROACHMENT PLAN
SPRINGFIELD TOWNSHIP, MONTGOMERY COUNTY

DRAWN BY: ZA	CHK'D BY: JMM	EXT No: 21160-E
DATE: 02/22/2026	SCALE: N.T.S.	PLATE: 013, P13
PROJECT No: 625.21	CPA ID No: 10300396	A - 69148
APPROVED: <i>Jeffrey M. Moore</i>		SHEET 2 OF 7

CERTIFIED CORRECT PLANS
Professional Engineer
Approved by: Bureau of Technical Utility Services
PA PUBLIC UTILITY COMMISSION
ATTEST: *Secretary* 05/05/2026
Docket: A-2026-3061328

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JEFFREY M. MOORE
ENGINEER PE076094