

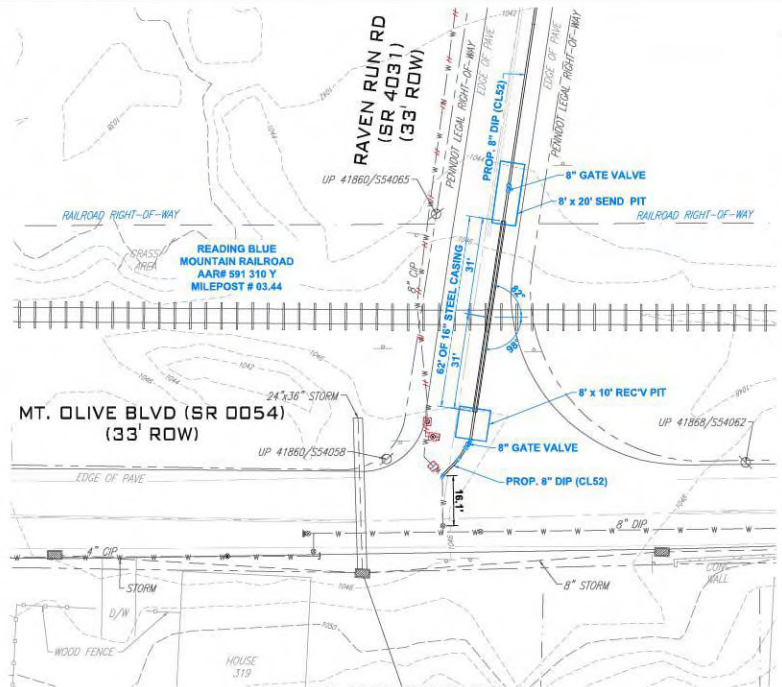
CERTIFIED CORRECT PLANS

Will N. D. P.E.
Professional Engineer

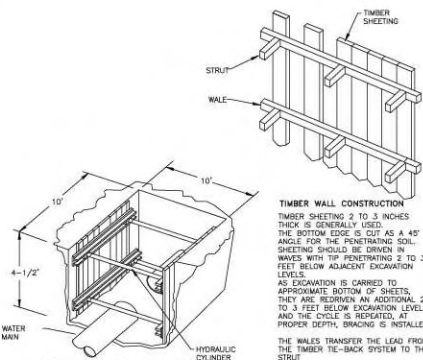
Approved by **Bureau of Technical Utility Services**

PA PUBLIC UTILITY COMMISSION

ATTEST *Matthew L. Hunsaker*
Secretary



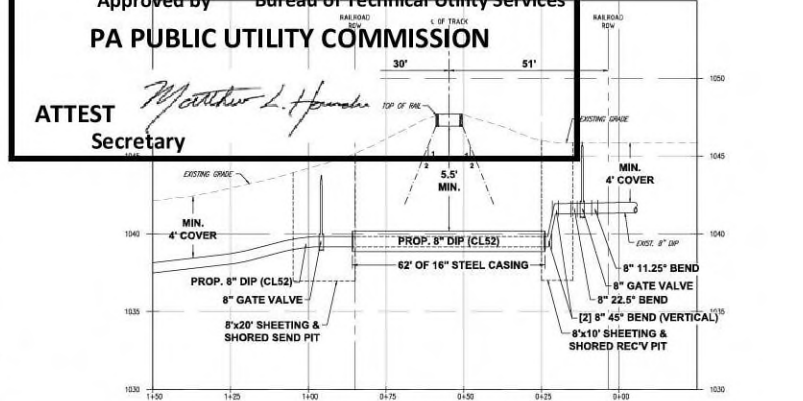
RAIL CROSSING PLAN VIEW
SCALE: 1" = 20' HORIZONTAL



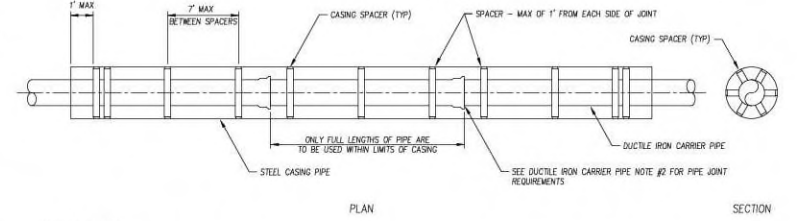
TYPICAL SHEETING AND SHORING

GENERAL CONSTRUCTION REQUIREMENTS:

1. PROVIDE NOTIFICATION PRIOR TO THE START OF CONSTRUCTION, INCLUDING UPDATED PROJECT SCHEDULE.
2. RIGHT OF ENTRY PERMIT MUST BE SECURED PRIOR TO START OF CONSTRUCTION.
3. OSHA RULES AND REGULATIONS MUST BE ADHERED TO FOR SAFETY IN EXCAVATIONS, DESIGN, AND SHORING AND SHEETING. ADDITIONALLY, JACK AND BORE PITS SHALL BE FENCED WITH ADEQUATE LIGHTING FOR PUBLIC SAFETY.
4. THE TRACK AND RIGHT-OF-WAY MUST BE PROTECTED FROM ANY EROSION CAUSED BY THE PROJECT FIELD WORK.
5. THE APPLICANT MUST MAINTAIN ALL SIGNS ON READING BLUE MOUNTAIN RAILROAD RIGHT-OF-WAY AS LONG AS THE OCCUPATIONAL AGREEMENT IS IN EFFECT.
6. CONSTRUCTION SHALL BE ACCOMPLISHED SO THAT ADEQUATE AND UNINTERRUPTED DRAINAGE IN READING BLUE MOUNTAIN RAILROAD RIGHT-OF-WAY IS MAINTAINED.
7. ALL PIPELINES (EXCEPT THOSE IN STREETS OR ACCESS ROADS WHERE IT WOULD NOT BE PRACTICAL TO DO SO) SHALL BE PROMINENTLY MARKED AT THE RIGHT-OF-WAY LINES (ON BOTH SIDES OF TRACK FOR CROSSINGS) BY DURABLE, WEATHERPROOF SIGNS LOCATED OVER THE CENTERLINE OF THE PIPE. SIGNS SHALL SHOW THE FOLLOWING:
 - 1) NAME AND ADDRESS OF APPLICANT
 - 2) CONTENTS OF PIPE
 - 3) PRESSURE IN PIPE
 - 4) EMERGENCY TELEPHONE NUMBER
7. 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.
8. THE USE OF WATER OR OTHER LIQUIDS TO FACILITATE CASING EMPLOYMENT AND SPOIL REMOVAL IS PROHIBITED EXCEPT WHEN USED IN CONJUNCTION WITH DIRECTIONAL BORING METHOD.
9. IF DURING INSTALLATION AN OBSTRUCTION IS ENCOUNTERED WHICH PREVENTS INSTALLATION OF THE PIPE IN ACCORDANCE WITH THIS SPECIFICATION, THE PIPE SHALL BE ABANDONED IN PLACE AND IMMEDIATELY FILL WITH GROUT. A NEW INSTALLATION PROCEDURE AND REVISED PLANS MUST BE SUBMITTED TO, AND APPROVED BY, READING BLUE MOUNTAIN RAILROAD BEFORE WORK CAN RESUME.
10. BORE AND JACK OPERATION SHALL BE PROCEEDED ON A 24-HOUR BASIS WITHOUT STORAGE IN ZONE 1, 2, AND 3 AS INDICATED IN PLATE VII (EXCEPT FOR ADDING LENGTHS OF PIPE) UNTIL THE LEADING EDGE OF THE PIPE HAS REACHED THE RECEIVING PIT.
11. CASINGS FOR CARRIER PIPES OF NON-FLAMMABLE SUBSTANCES SHALL HAVE BOTH OF THE CASING BLOCKED UP IN SUCH A WAY AS TO PREVENT THE ENTRANCE OF FOREIGN MATERIAL, BUT ALLOWING LEAKAGE TO PASS IN THE EVENT OF A CARRIER BREAK.
12. ACCESSIBLE EMERGENCY SHUT OFF VALVES SHALL BE INSTALLED WITH EFFECTIVE DISTANCES EACH SIDE OF THE RAILROAD AT LOCATIONS SELECTED BY NS WHERE HAZARD TO LIFE AND PROPERTY MUST BE GUARDED AGAINST. NO ADDITIONAL VALVES WILL BE REQUIRED WHERE PIPELINES ARE PROVIDED WITH AUTOMATIC CONTROL STATIONS AND WITHIN DISTANCES APPROVED BY NS.
13. BLASTING NOT PERMITTED.
14. 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 READING BLUE MOUNTAIN RAILROAD PROPERTY SHALL BE CONDUCTED IN ACCORDANCE WITH READING BLUE MOUNTAIN RAILROAD SAFETY RULES AND REGULATIONS. THE CONTRACTOR SHALL SECURE AND COMPLY WITH THE READING BLUE MOUNTAIN RAILROAD SAFETY RULES AND SHALL GIVE WRITTEN ACKNOWLEDGEMENT TO READING BLUE MOUNTAIN RAILROAD THAT THEY HAVE BEEN RECEIVED, READ AND UNDERSTOOD BY THE CONTRACTOR AND ITS EMPLOYEES. OPERATIONS WILL BE SUBJECT TO READING BLUE MOUNTAIN RAILROAD MONITORING AT ANY AND ALL TIMES.



READING BLUE MOUNTAIN RAILROAD RAIL CROSSING PROFILE VIEW
SCALE: 1" = 20' HORIZONTAL
1" = 5' VERTICAL



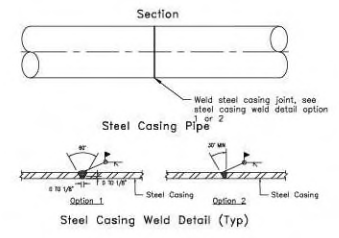
STEEL CASING PIPE NOTES:

1. ALL CASING PIPE SHALL BE ASTM A53 GRADE B, 0.50" WALL THICKNESS, STANDARD HEIGHT, MANUFACTURED IN ACCORDANCE WITH AWWA C200.
2. CASING PIPE SHALL BE REQUIRED FOR WATER MAINS CROSSING OVER AND UNDER HIGHWAYS, RAILROADS, OR ANY OTHER LOCATION WHERE A LEAKING PIPE CAN CREATE A HAZARDOUS CONDITION. IN GENERAL, CASING PIPE IS NOT REQUIRED FOR MAINS CROSSING BODIES OF WATER.
3. ALL EXPOSED CASING PIPE SHALL BE SHOP BLASTED AND COATED EXTERNALLY IN ACCORDANCE WITH THE STATE DOT PAINT SPECIFICATION FOR STRUCTURAL STEEL.
4. ALL STEEL PIPE BELOW GRADE SHALL BE WRAPPED WITH PROTECTO-WRAP 310, GOLD APPLIED PIPE TAPE. (WRAPPING TO EXTEND TO A MINIMUM OF 15' BEYOND FINISHED GRADE.) IF APPLICABLE, REFER TO THE CATHODIC PROTECTION PLAN FOR ADDITIONAL CORROSION PROTECTION MEASURES.
5. ALL STEEL PIPE SHALL BE ORDERED WITHOUT COATING 6" FROM EACH END TO ALLOW FOR BENDING AND WELDING IN THE FIELD.
6. ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE API 1104 CODE OR AN APPROVED EQUAL. CONTRACTOR SHALL PROVIDE OWNER WITH EVIDENCE OF CURRENT WELDER QUALIFICATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
7. ALL PRODUCTION WELDS SHALL BE PERFORMED, TESTED AND INSPECTED IN CONFORMANCE WITH THE CURRENT EDITION OF AWWA C200.
8. ANY WELDER WHO MAKES A PRODUCTION WELD THAT FAILS TO COMPLY WITH THE REQUIREMENTS OF AWWA C200 MAY BE IMMEDIATELY DISQUALIFIED FROM CURRENT AND/OR FUTURE WORK AT THE DISCRETION OF THE OWNER.

NOMINAL PIPE DIAMETER	MINIMUM NOMINAL CASING I.D.
8"	16"
10"	18"
12"	20"
16"	24"
20"	36"

DUCTILE IRON CARRIER PIPE NOTES:

1. ALL DUCTILE IRON PIPE SHALL BE CLASS 52 (MIN.) CEMENT LINED, INTERNALLY AND EXTERNALLY COATED AS PER AWWA C150 (LATEST SPECS).
2. WHEN USING TYTON (OR PUSH-ON) JOINT PIPE, THE USE OF FIELD-LOK (RESTRAINT TYPE) GASKETS ARE REQUIRED AT EACH JOINT WITHIN THE CASING PIPE AND (2) PIPE JOINTS PAST THE CASING END ON EACH END. PIPE IS TO BE PUSHED THROUGH CASING, NOT PULLED. CONSULT PROJECT CONSTRUCTION PLANS IF OTHER TYPE OF RESTRAINT PIPE IS BEING INSTALLED AND FOLLOW THOSE SPECIFICATIONS ACCORDINGLY.



TYPICAL DUCTILE IRON WATER MAIN WITH STEEL CASING AND SPACERS DETAIL

PIPE CROSSING DATA	CARRIER PIPE	CASING PIPE
	CONTENTS TO BE HANDLED	WATER
OPERATING PRESSURE (PSI)	150	N/A
NOMINAL PIPE SIZE (")	8"	16"
O.S. DIAMETER (")	9.05"	16.00"
I.S. DIAMETER (")	8.39"	15.00"
WALL THICKNESS (")	0.33"	0.50"
WEIGHT PER FOOT (LBS)	29	83
MATERIAL	DUCTILE	STEEL
PROCESS OF MANUFACTURE	CENTRIFUGALLY CAST	WELDED ROUND PIPE
SPECIFICATION	AWWA C150/C151	ASTM A53 & AWWA C200
GRADE OR CLASS	THICKNESS CLASS 52	A53 GRADE B
WORKING PRESSURE (PSI)	200	N/A
TYPE OF JOINT	MECHANICAL/SLIP-ON	WELDED
TYPE OF COATING	BITUMASTIC	BITUMASTIC
DETAILS OF SEAL OR PROTECTION AT ENDS OF COATING	N/A	N/A
METHOD OF INSTALLATION	PUSHING	BORING
SPECIFIC MIN. YIELD STRENGTH	42,000 PSI	35,000 PSI



NO.	REVISIONS	DATE



NOTICE:
AQUA ADVISES THAT IT HAS COMPLIED WITH THE PROVISIONS OF THE UNDERGROUND UTILITY LINE PROTECTION LAW, ACT 387 OF 1974 AS AMENDED. IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE COMMONWEALTH OF PENNSYLVANIA, AQUA DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE INFORMATION RECEIVED PERTAINING TO SAID ACT AND REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE OR THAT ALL SUBSURFACE UTILITIES AND STRUCTURES ARE SHOWN, BUT IS REFLECTING SAID INFORMATION ON THESE DRAWINGS IN ACCORDANCE WITH THE REQUIREMENT OF SUCH ACT. CONTRACTORS ARE REMINDED OF THEIR OBLIGATION TO NOTIFY 1-800-242-1778 OR 8-1-1 NOT LESS THAN 3 OR MORE THAN 10 WORKING DAYS PRIOR TO BEGINNING EXCAVATION.
POCS SERIAL: 2025049817
DATE: 2/12/2025



MT. OLIVE PHASE 4 WATER MAIN REPLACEMENT RAILROAD CROSSING NOTES & DETAILS

DESIGN BY: JL	EXT: 21251-R	CNR:	TEC JOB: 250022	SCALE: N.T.S.
DRAWN BY: EB	PLATE: W-8	WG:	AQUA JOB: 220.25	SHEET 5 OF 21
DATE: 2/23/2025				