

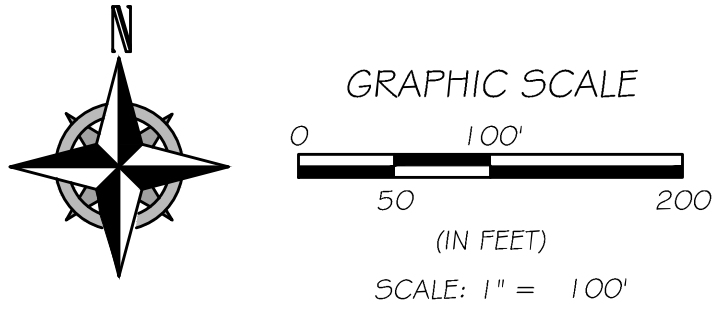
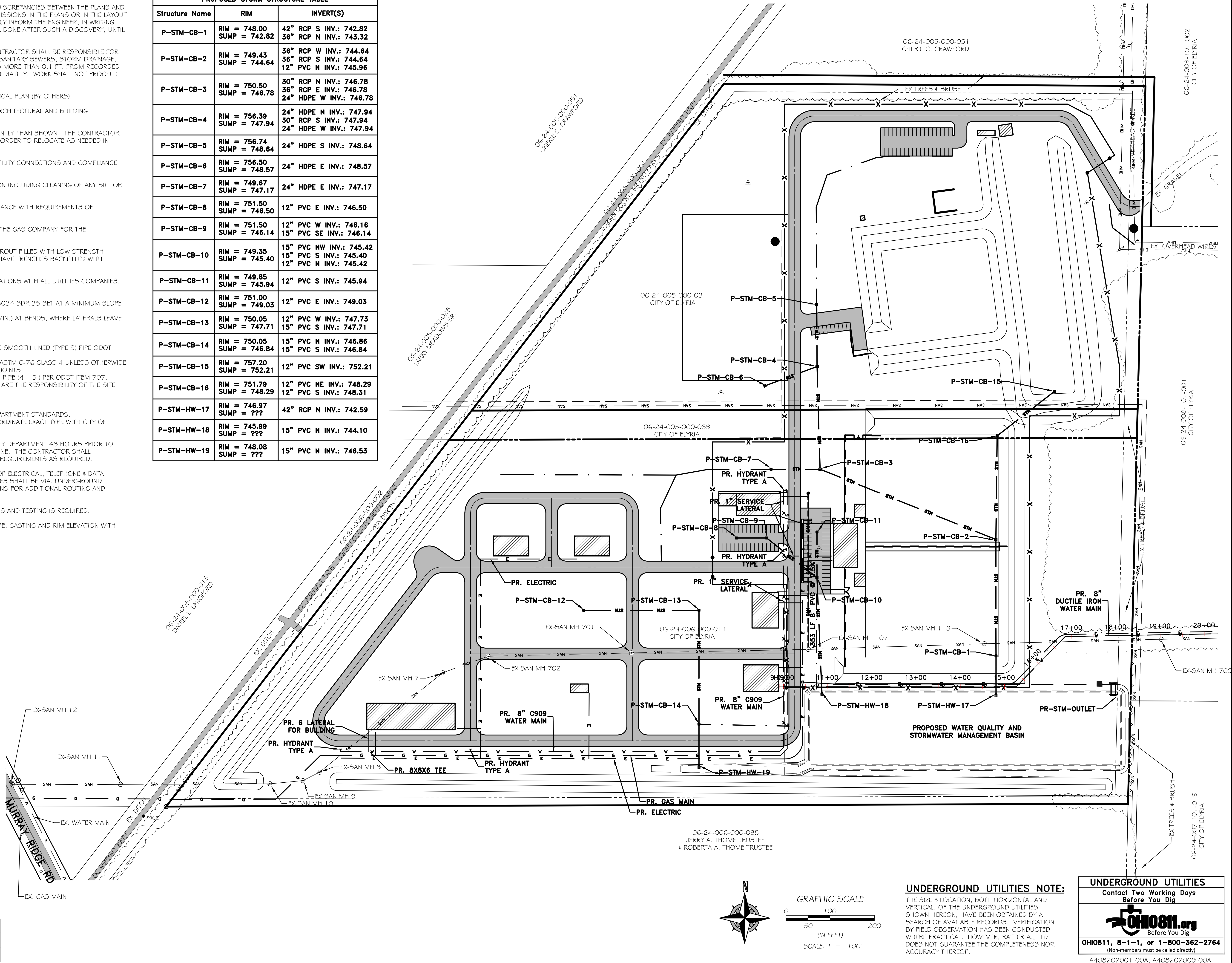
NOTES:

1. IF THE CONTRACTOR, IN THE COURSE OF THE WORK, FINDS ANY DISCREPANCIES BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE SITE, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR IN THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND THE ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
2. PRIOR TO ORDERING STRUCTURES AND CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING LOCATIONS AND INVERT ELEVATIONS OF SANITARY SEWERS, STORM DRAINAGE, AND WATER MAINS AS NEEDED. IF ANY INVERT ELEVATION VARIES MORE THAN 0.1 FT. FROM RECORDED ELEVATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. WORK SHALL NOT PROCEED UNTIL THE CONTRACTOR IS NOTIFIED BY THE ENGINEER.
3. SITE LIGHTING IS SHOWN FOR REFERENCE ONLY. SEE SITE ELECTRICAL PLAN (BY OTHERS).
4. CONTRACTOR TO CONFIRM DOWNSPOUT LOCATIONS WITH THE ARCHITECTURAL AND BUILDING FOUNDATION PLANS AND ADJUST LOCATIONS AS REQUIRED.
5. NOTIFY ENGINEER IMMEDIATELY IF UTILITIES ARE LOCATED DIFFERENTLY THAN SHOWN. THE CONTRACTOR SHALL COORDINATE WITH EACH RESPECTIVE UTILITY COMPANY IN ORDER TO RELOCATE AS NEEDED IN CONFORMANCE WITH THEIR GUIDELINES.
6. COORDINATE WITH BUILDING PLANS TO ASSURE ACCURACY OF UTILITY CONNECTIONS AND COMPLIANCE WITH LOCAL CODES.
7. ALL SEWERS ARE TO BE MAINTAINED THROUGHOUT CONSTRUCTION INCLUDING CLEANING OF ANY SILT OR DEBRIS ACCUMULATED IN STRUCTURES.
8. CONNECT TO EXISTING UTILITIES AND INSTALL UTILITIES IN COMPLIANCE WITH REQUIREMENTS OF APPROPRIATE JURISDICTIONAL AGENCIES.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE GAS COMPANY FOR THE CONNECTION OF THE GAS SERVICE LATERAL.
10. IF EXISTING UTILITIES ARE ABANDONED IN PLACE THEY SHALL BE GROUT FILLED WITH LOW STRENGTH MORTAR. ALL ABANDONED UTILITIES THAT ARE REMOVED SHALL HAVE TRENCHES BACKFILLED WITH PREMIUM FILL AND COMPACTED
11. COORDINATE EXACT TRENCHING, ROUTING AND POINT OF TERMINATIONS WITH ALL UTILITIES COMPANIES.
12. SANITARY UTILITY NOTES:
a. PROPOSED SANITARY LATERAL TO BE 6" OR 8" PVC ASTM D-3034 SDR 35 SET AT A MINIMUM SLOPE OF 1.00%.
b. CONTRACTOR TO PROVIDE CLEANOUTS AT 100' INTERVALS (MIN.) AT BENDS, WHERE LATERALS LEAVE THE BUILDING AND/OR AS SHOWN.
13. STORM UTILITY NOTES:
a. STORM SEWER (HDPE) SHALL BE HIGH DENSITY POLYETHYLENE SMOOTH LINED (TYPE 5) PIPE ODOT 707.33 CONFIRMING TO AASHTO M-294. (12"=48")
b. STORM SEWER (RCP) SHALL BE REINFORCED CONCRETE PIPE ASTM C-76 CLASS 4 UNLESS OTHERWISE SPECIFIED. ALL STORM PIPES TO HAVE PREMIUM GASKETED JOINTS.
c. STORM SEWER (PVC) SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE (4"-15") PER ODOT ITEM 707.
d. ALL STORM SEWER PIPES WHICH PICK UP DOWNSPOUT FLOW ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. ALL SLOPES SHALL BE 1.00% MINIMUM.
14. WATERLINE UTILITY NOTES:
a. WATERLINE TAP SHALL BE PER THE CITY OF ELYRIA UTILITY DEPARTMENT STANDARDS.
b. UTILIZE 1-1/4" PLASTIC WATERLINE FOR WATER LATERAL. COORDINATE EXACT TYPE WITH CITY OF ELYRIA REQUIREMENTS.
15. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ELYRIA UTILITY DEPARTMENT 48 HOURS PRIOR TO PERFORMING CONNECTIONS TO THE SANITARY, STORM & WATERLINE. THE CONTRACTOR SHALL COORDINATE WITH THE CITY TO MEET ALL UTILITY ABANDONMENT REQUIREMENTS AS REQUIRED.
16. CONTRACTOR TO COORDINATE INSTALLATION & FINAL LOCATION OF ELECTRICAL, TELEPHONE & DATA CONNECTIONS WITH PRIVATE UTILITY COMPANIES. ALL UTILITY LINES SHALL BE VIA UNDERGROUND CONNECTIONS TO THE PROPOSED BUILDING. SEE ELECTRICAL PLANS FOR ADDITIONAL ROUTING AND DETAILS.
17. TIMELY AND DOCUMENTED INSPECTIONS OF UTILITY INSTALLATIONS AND TESTING IS REQUIRED.
18. CONTRACTOR TO CONFIRM & COORDINATE EXACT STRUCTURE TYPE, CASTING AND RIM ELEVATION WITH CITY ENGINEER & CITY STREET DEPARTMENT.

EXISTING SANITARY STRUCTURE TABLE		
STRUCTURE ID	RIM	INVERT(S)
EX-SAN-7	RIM = 755.50	21" PVC E INV.: 741.92 21" PVC SW INV.: 741.92
EX-SAN-8	RIM = 758.21	21" PVC NE INV.: 743.46 21" PVC SW INV.: 743.46
EX-SAN-9	RIM = 758.87	21" PVC NE INV.: 743.64 21" PVC W INV.: 743.64
EX-SAN-10	RIM = 758.76	21" PVC E INV.: 743.96 21" PVC W INV.: 743.96
EX-SAN-11	RIM = 775.38	21" PVC E INV.: 746.47
EX-SAN-12	RIM = 750.05	21" PVC E INV.: 745.42 21" PVC W INV.: 745.42
EX-SAN-107	RIM = 749.82	8" PVC N INV.: 740.10 21" PVC E INV.: 738.11 21" PVC W INV.: 738.33
EX-SAN-113	RIM = 747.00	21" PVC W INV.: 735.73 21" PVC E INV.: 735.63
EX-SAN-700	RIM = 746.28	21" PVC W INV.: 734.65 21" PVC E INV.: 734.55
EX-SAN-701	RIM = 750.42 ADJUST RIM: 751.98	21" PVC E INV.: 740.05 21" PVC W INV.: 740.05
EX-SAN-702	RIM = 753.45 ADJUST RIM: 754.78	21" PVC E INV.: 741.45 21" PVC W INV.: 741.45
EX-SAN-2125	RIM = 742.88	21" PVC W INV.: 728.48 21" PVC N INV.: 728.38
EX-SAN-2126	RIM = 742.44	21" PVC S INV.: 727.68
EX-SAN-2134	RIM = 743.05	21" PVC W INV.: 729.31 21" PVC E INV.: 729.21
EX-SAN-2179	RIM = 742.50	21" PVC W INV.: 733.36 21" PVC E INV.: 733.37
EX-SAN-2187	RIM = 743.50	21" PVC W INV.: 731.74 21" PVC E INV.: 731.64

PROPOSED SANITARY STRUCTURE TABLE		
Structure Name	RIM	INVERT(S)
PR-SAN-1	RIM = 751.39	8" PVC S INV.: 741.87

PROPOSED STORM STRUCTURE TABLE		
Structure Name	RIM	INVERT(S)
P-STM-CB-1	RIM = 748.00 SUMP = 742.82	42" RCP S INV.: 742.82 36" RCP N INV.: 743.32
P-STM-CB-2	RIM = 749.43 SUMP = 744.64	36" RCP W INV.: 744.64 36" RCP S INV.: 744.64 12" PVC N INV.: 745.96
P-STM-CB-3	RIM = 750.50 SUMP = 746.78	30" RCP N INV.: 746.78 36" RCP E INV.: 746.78 24" HDPE W INV.: 746.78
P-STM-CB-4	RIM = 756.39 SUMP = 747.94	24" HDPE N INV.: 747.94 30" RCP S INV.: 747.94 24" HDPE W INV.: 747.94
P-STM-CB-5	RIM = 756.74 SUMP = 748.64	24" HDPE S INV.: 748.64
P-STM-CB-6	RIM = 756.50 SUMP = 748.57	24" HDPE E INV.: 748.57
P-STM-CB-7	RIM = 749.67 SUMP = 747.17	24" HDPE E INV.: 747.17
P-STM-CB-8	RIM = 751.50 SUMP = 746.50	12" PVC E INV.: 746.50
P-STM-CB-9	RIM = 751.50 SUMP = 746.14	12" PVC W INV.: 746.16 15" PVC SE INV.: 746.14
P-STM-CB-10	RIM = 749.35 SUMP = 745.40	15" PVC NW INV.: 745.42 15" PVC S INV.: 745.40 12" PVC N INV.: 745.42
P-STM-CB-11	RIM = 749.85 SUMP = 745.94	12" PVC S INV.: 745.94
P-STM-CB-12	RIM = 751.00 SUMP = 749.03	12" PVC E INV.: 749.03
P-STM-CB-13	RIM = 750.05 SUMP = 747.71	12" PVC W INV.: 747.73 15" PVC S INV.: 747.71
P-STM-CB-14	RIM = 750.05 SUMP = 746.84	15" PVC N INV.: 746.86 15" PVC S INV.: 746.84
P-STM-CB-15	RIM = 757.20 SUMP = 752.21	12" PVC SW INV.: 752.21
P-STM-CB-16	RIM = 751.79 SUMP = 748.29	12" PVC NE INV.: 748.29 12" PVC S INV.: 748.31
P-STM-HW-17	RIM = 746.97 SUMP = ???	42" RCP N INV.: 742.59
P-STM-HW-18	RIM = 745.99 SUMP = ???	15" PVC N INV.: 744.10
P-STM-HW-19	RIM = 748.08 SUMP = ???	15" PVC N INV.: 746.53



UNDERGROUND UTILITIES NOTE:
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UNDERGROUND UTILITIES
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CLIENT NAME
CLIENT ADDRESS
CITY, STATE ZIP CODE

PUBLIC SAFETY TRAINING FACILITY
UTILITY PLAN
CITY OF ELYRIA, COUNTY OF LORAIN,
STATE OF OHIO

DESCRIPTION
FIXED SANITARY TABLE PIPE INVERTS

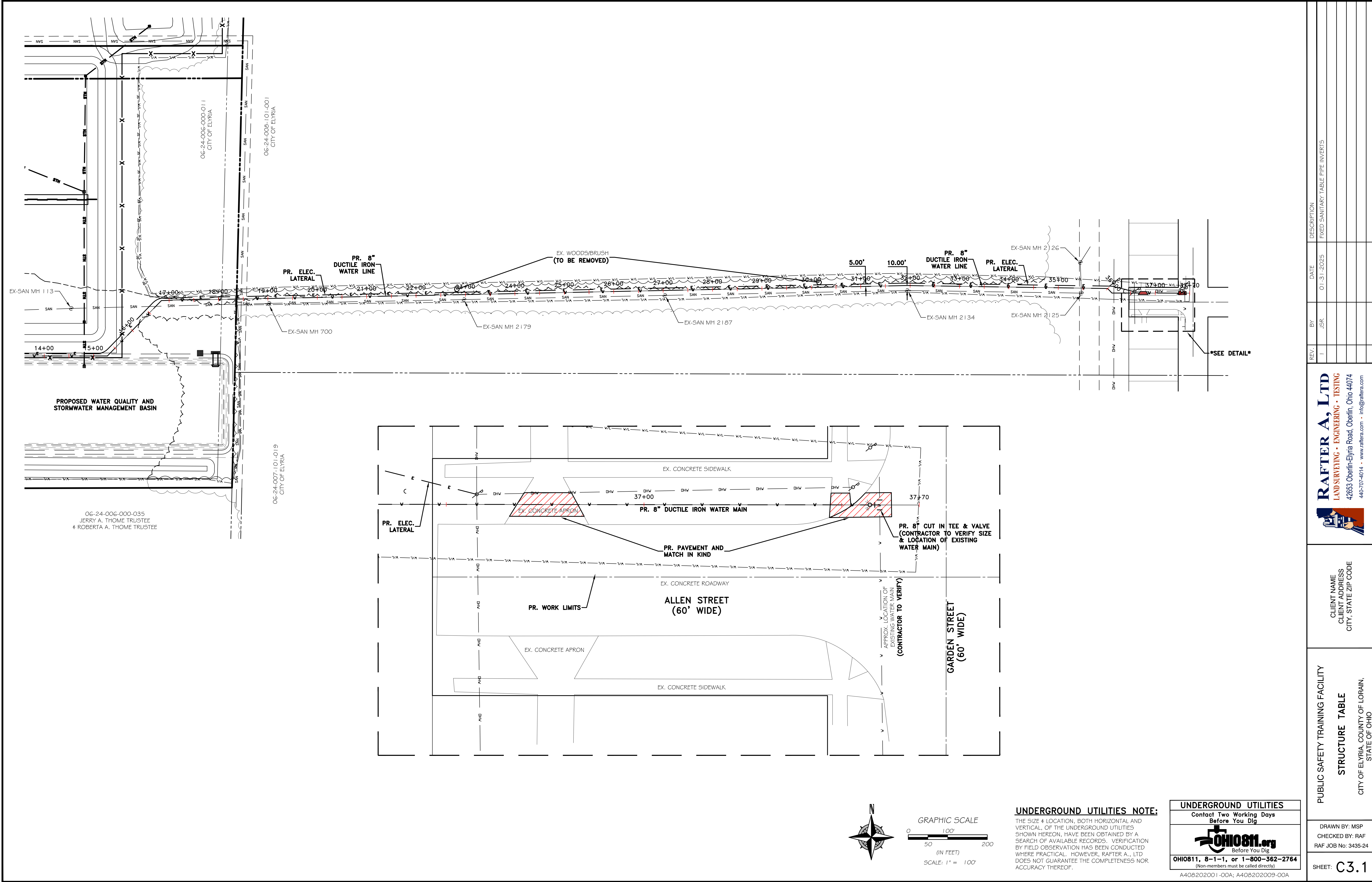
DATE
01-31-2025

BY
JSR

REV.
1

DRAWN BY: MSP
CHECKED BY: RAF
RAF JOB No: 3435-24

SHEET: **C3.0**



REV.	BY	DATE	DESCRIPTION
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STRUCTURE TABLE

CITY OF ELYRIA, COUNTY OF LORAIN,
STATE OF OHIO

DRAWN BY: MSP

CHECKED BY: RAF

RAF JOB No: 3435-24

SHEET: **C3.1**

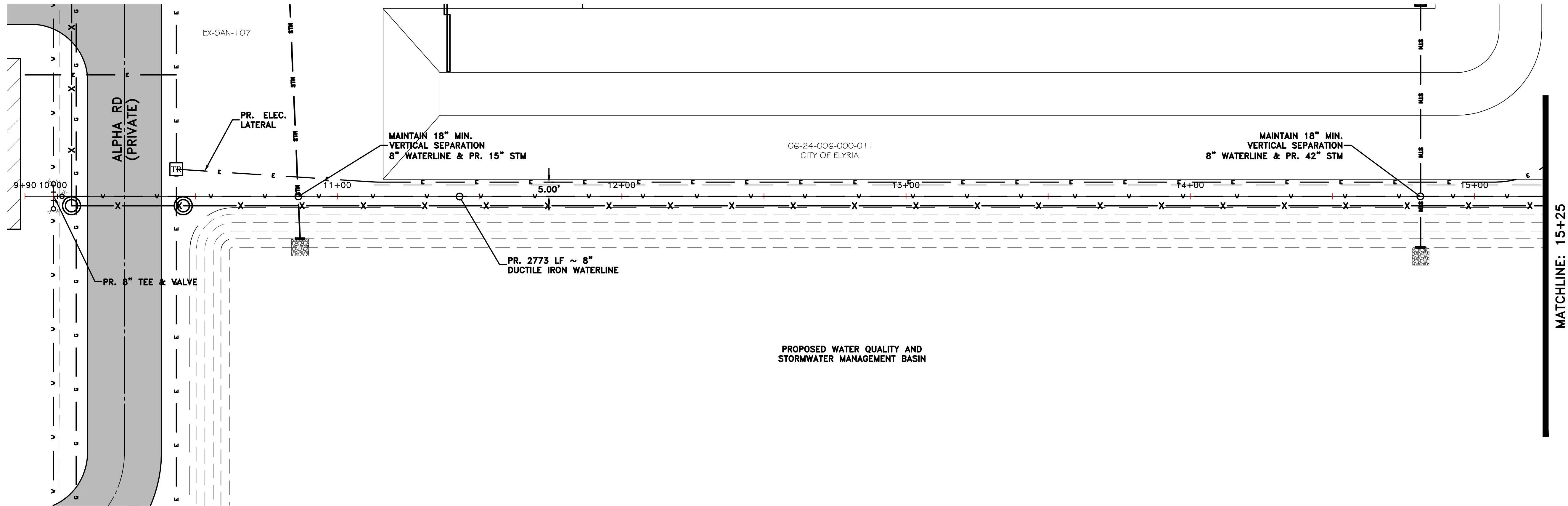
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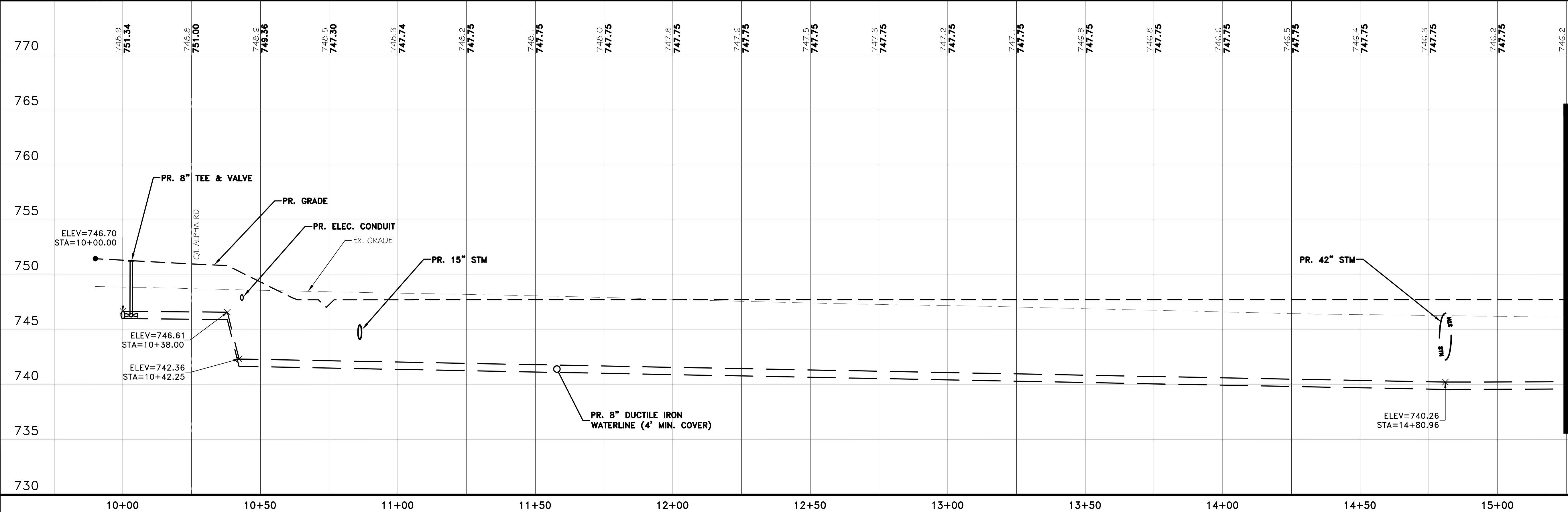
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PLAN SCALE
SCALE: 1" = 20'

PROFILE SCALE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



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BY JSR
DATE 01-31-2025
DESCRIPTION FIXED SANITARY TABLE PIPE INVERT'S

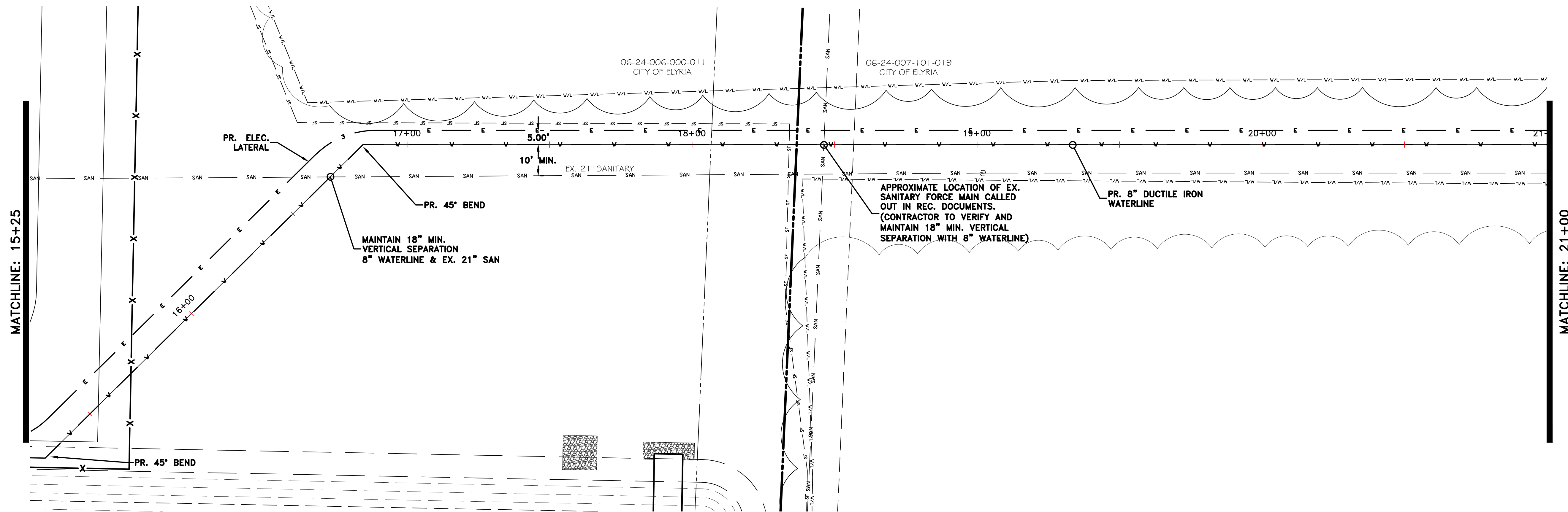

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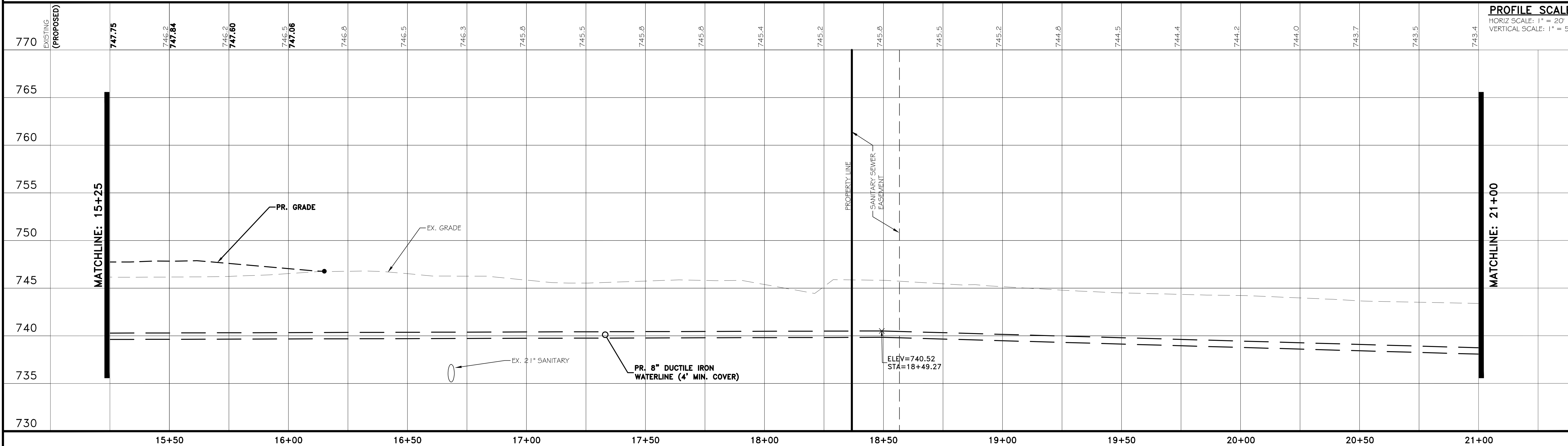
PUBLIC SAFETY TRAINING FACILITY
WATER MAIN
PLAN & PROFILE
CITY OF ELYRIA, COUNTY OF LORAIN,
STATE OF OHIO

DRAWN BY: MSP
CHECKED BY: RAF
RAF JOB No: 3435-24

SHEET: C3.2




PLAN SCALE
SCALE: 1" = 20'



PROFILE SCALE
HORIZ SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

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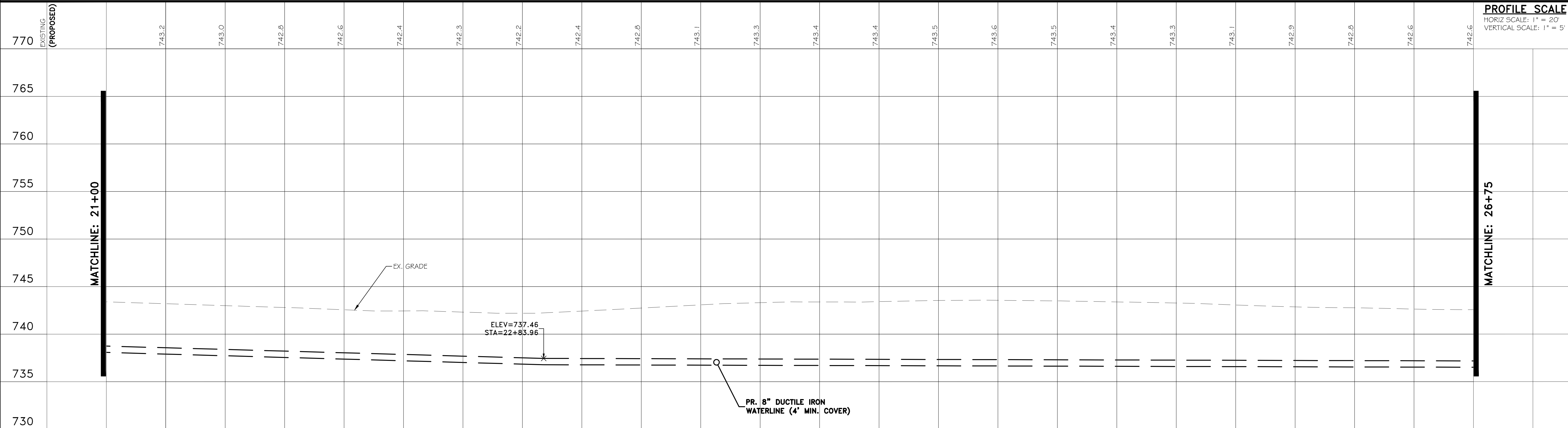
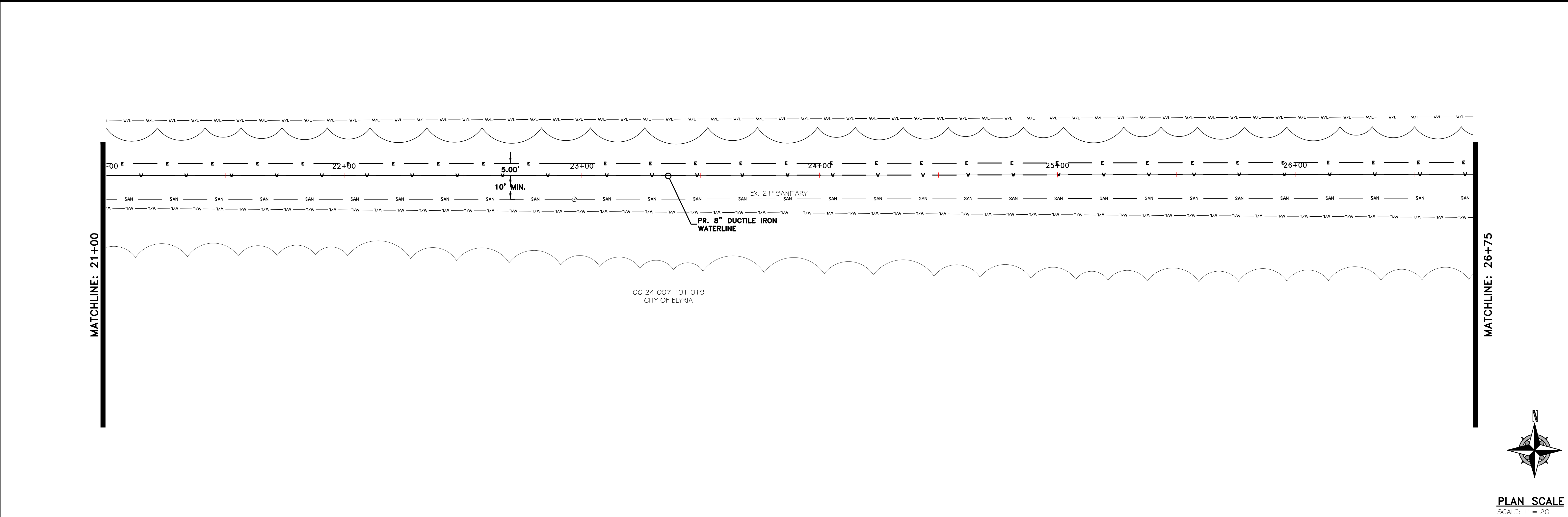
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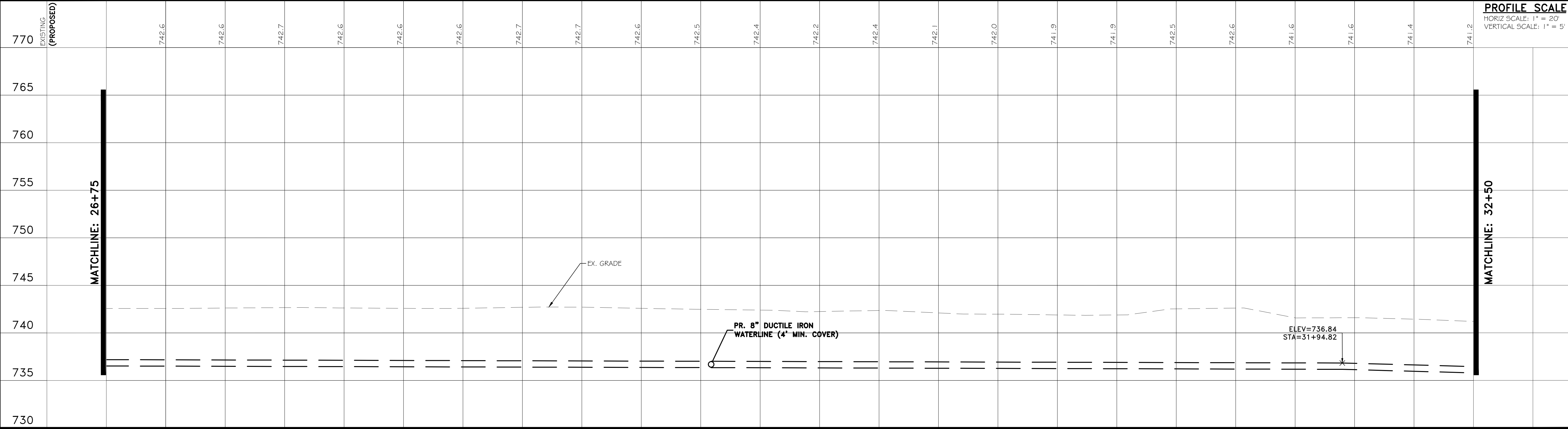
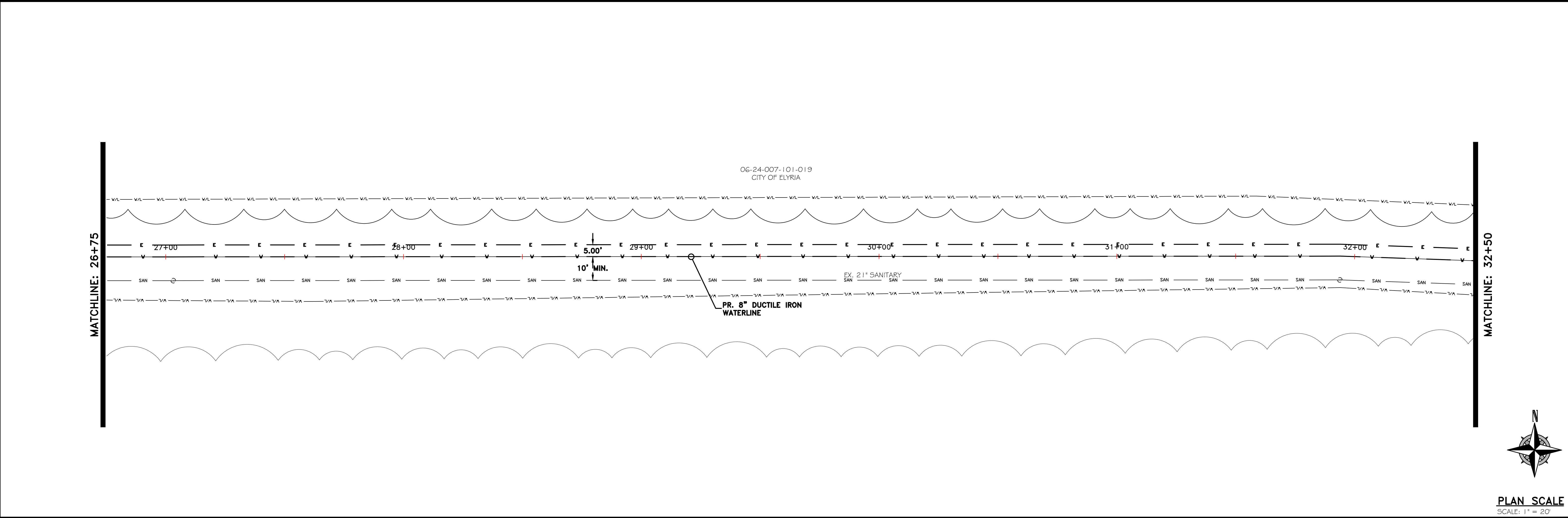
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	1	JSR	01-31-2025	FIXED SANITARY TABLE PIPE INVERTS
PUBLIC SAFETY TRAINING FACILITY WATER MAIN PLAN & PROFILE CITY OF ELYRIA, COUNTY OF LORAIN, STATE OF OHIO	CLIENT NAME CLIENT ADDRESS CITY, STATE ZIP CODE			
	DRAWN BY: MSP CHECKED BY: RAF RAF JOB No: 3435-24			
SHEET: C3.3				



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WATER MAIN

PLAN & PROFILE

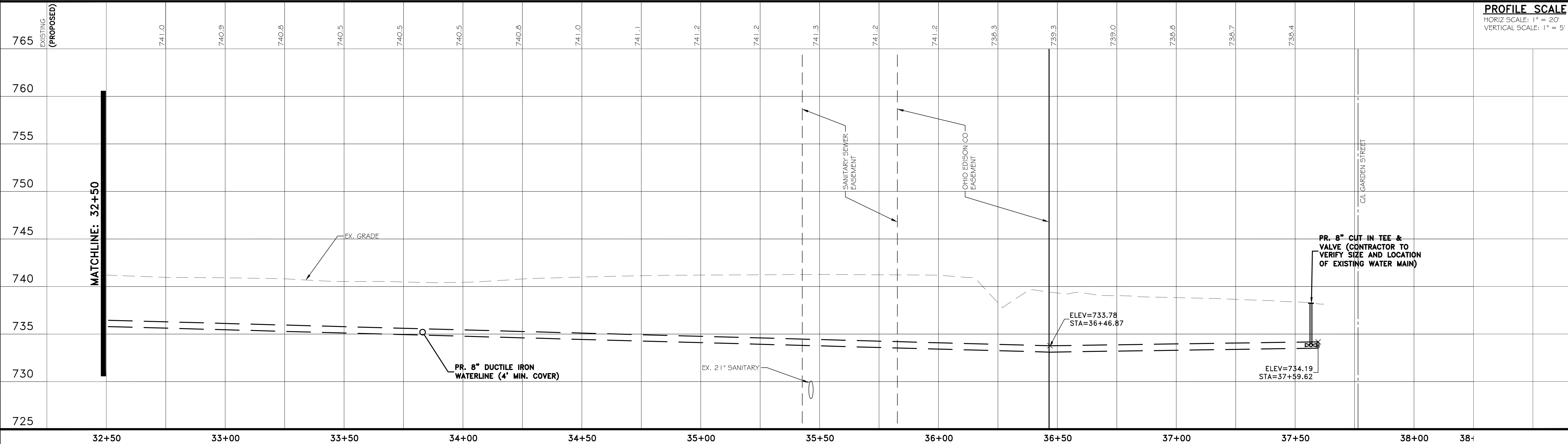
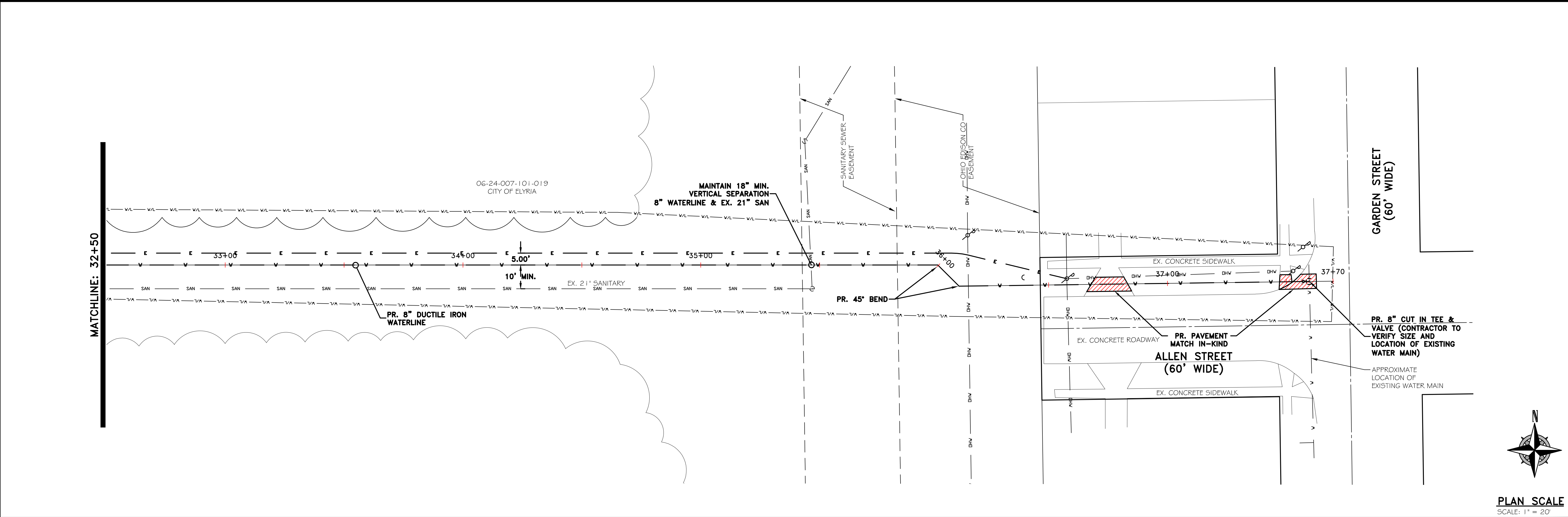
CITY OF ELYRIA, COUNTY OF LORAIN,
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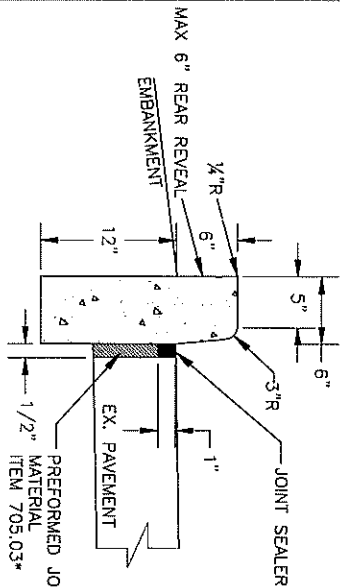
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WATER MAIN
PLAN & PROFILE
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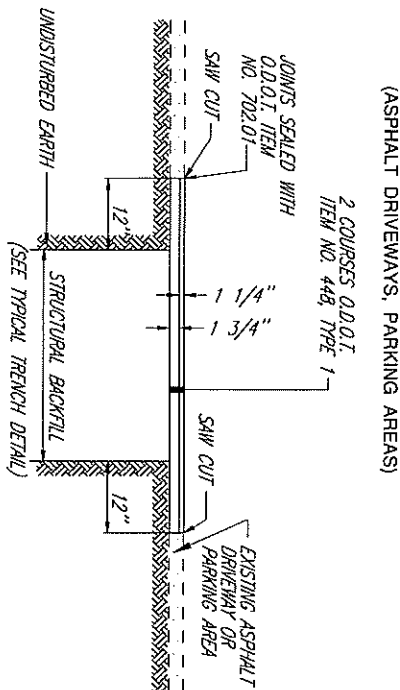
NEW WATER MAIN AND FITTINGS:				
ALL PIPE SHALL BE 000T 748.01, CEMENT LINED, DUCTILE IRON, CLASS 52 (OR ALTERNATE 000T 748.02, CONFORMING TO ANMA C309 PVC, CLASS 235 OR GREATER PER BID ITEMS). ALL FITTINGS SHALL BE 000T 748.01, CEMENT LINED, DUCTILE IRON, CLASS 52. PIPE JOINTS WITHIN TWO PIPE LENGTHS OF A FITTING SHALL BE BOLTLESS RESTRAINED JOINT TYPE (FIELD FOR 350 GASKETS OR APPROVED EQUAL). FITTINGS SHALL BE DUCTILE IRON, MECHANICAL RESTRAINED JOINTS, CONFORMING TO ANSI/ANMA C110/A21.10 OR C153/A21.10 AND SHALL HAVE A MINIMUM PRESSURE RATING OF 350 PSI. ALL BURNED JOINTS ON BENDS, TEES, CROSSES, VALVES, SPECIAL FITTINGS AND PIPE BETWEEN OFFSETS OR BENDS, SHALL BE RESTRAINED MECHANICAL JOINTS. JOINT RESTRAINT SHALL BE TEBRA IRON-MEQA LUG" OR ENGINEER APPROVED EQUAL. NUTS AND BOLTS FOR ALL MECHANICAL JOINTS ASSEMBLES SHALL BE STAINLESS STEEL, TYPE 316.				
THE MINIMUM DEPTH OF WATER MAIN SHALL BE 4.5 FEET MEASURED FROM THE TOP OF THE PIPE TO THE FINISHED GRADE OR PAVEMENT. THE DEPTH MAY BE GREATER WHERE IT IS NECESSARY TO MODIFY THE DEPTH TO CLEAR OTHER STRUCTURES OR TIE INTO EXISTING WATER MAINS. MAXIMUM JOINT DEFLECTION SHALL BE NO MORE THAN 1/2 THE MANUFACTURERS ALLOWABLE DEFLECTION.				
CONTRACTOR SHALL PERFORM HYDROSTATIC LEAKAGE PRESSURE TEST AND DISINECT THE PROPOSED WATER MAINS PER ANMA C600 AND ANMA C651. PRESSURE TEST SECTIONS AGAINST NEW VALVES ONLY. ANY DAMAGES CAUSED TO THE EXISTING WATER SYSTEM RESULTING FROM THE PRESSURE TESTING WORK OF THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIX. PRESSURE TEST THE WATER MAINS ONLY AFTER THE TRENCH IS BACKFILL. THE TEST PRESSURE SHALL BE 200 PSI. PRESSURE SHALL NOT EXCEED THE PRESSURE RATING OF THE PIPE OR FITTING. ALLOWABLE LEAKAGE IS PER THE FORMULA FOUND IN 000T 638.09. THE CONTRACTOR SHALL SUPPLY ALL TEST EQUIPMENT AND LABOR. CITY WILL SUPPLY THE WATER.				
AN 18 INCH MINIMUM VERTICAL SEPARATION (MEASURED OUT-TO-OUT) SHALL BE MAINTAINED BETWEEN THE WATER MAINS AND SANITARY SEWERS AT ALL CROSSESS. A MINIMUM HORIZONTAL SEPARATION OF (10) FEET (MEASURED OUT-TO-OUT) MUST BE MAINTAINED BETWEEN THE WATER MAIN AND SANITARY SEWER IN PARALLEL INSTALLATIONS.				
ALL NEW FITTINGS, VALVES AND SLEEVES SHALL BE POLYETHYLENE WRAPPED, ANMA C105. (MINIMUM THICKNESS: 8 MILS)				
INSTALL TRACE WIRE CONTINUOUS OVER TOP OF NON-METAL PIPE. BURY A MINIMUM OF 6 INCHES BELOW FINISH GRADE, AND ABOVE PIPELINE.				
THE UNIT PRICE PER LINEAL FOOT OF DUCTILE IRON WATER MAIN, CLASS 52, (OR ALTERNATE PVC WATER MAIN), RESPECTIVE OF DEPTH, SHALL INCLUDE THE FURNISHING AND LAYING OF PIPE, FITTINGS, TEES, CROSSES, REDUCERS, BENDS, AND ANY OTHER FITTINGS, BEDDING, COMPACTED BACKFILL, SPECIAL BACKFILL, JOINTING MATERIAL, BLOCKING, RESTRAINTS, COUPLINGS, POLYETHYLENE ENGAGEMENT, SHEETING, SHORING, EARTHWORK, INSPECTION, LINE ACCEPTANCE TESTING (BACTERIA AND PRESSURE TEST), TEST PLUGS AND CAPS AND BLOWOFF PIPING, DISPOSAL OF MATERIAL, AND ANY DISTURBED EXISTING UTILITIES, UNLESS OTHERWISE ITEMIZED.				
VALVES:				
- RESILIENT SEATED GATE VALVES CONFORMING TO ANMA C309 AND C319				
- USE BRONZE GRADES A, D OR E OF ANMA C500 OR C509 FOR WETTED BRONZE PARTS				
- STAINLESS STEEL FASTENERS, TYPE 304				
- 2" SQUARE BRONZE OPERATING NUT AND STAINLESS STEEL OPERATING NUT CAP SCREW, TYPE 304				
- MANGANESE STEEL, NON-RISING STEM VALVES				
- TRIPLE O-RING SEAL STUFFING BOX				
- OPEN TO RIGHT				
- MECHANICALLY RESTRAINED JOINTS				
- PRESSURE RATED AT 250 PSI				
- AS MANUFACTURED BY MUELLER CO. (RESILIENT WEDGE GATE VALVE, A-2362 SERIES) NO APPROVED EQUALS				
CONSTRUCTION MANAGEMENT:				
THE CONTRACTOR IS RESPONSIBLE FOR SELECTION AND CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES AND SAFETY PRECAUTIONS. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE INDUSTRIAL COMMISSION OF OHIO RULES CONCERNING THE SUPPORT OF TRENCHES AND EXCAVATION.				
VALVE BOXES:				
- ADJUSTABLE, TELESCOPING, HEAVY-PATTERN TYPE OF CAST IRON				
- PREVENT DIRECT TRANSMISSION OF TRAFFIC LOADS TO PIPE OR VALVE				
- TO BE MANUFACTURED BY #22 DOMESTIC B&I, ENW, OR EQUIVALENT				
TAPPING SLEEVE AND VALVE:				
TAPPING SLEEVE SHALL BE STAINLESS STEEL (SMITH BLAIR 665) WITH STAINLESS STEEL HARDWARE. JOINTS SHALL BE OF THE MECHANICAL JOINT TYPE. CONTRACTOR SHALL FIELD VERIFY SIZE OF EXISTING WATER MAIN. THE CONTRACTOR SHALL INSTALL AND PRESSURE TEST THE SLEEVE PRIOR TO TAPPING OF THE MAIN. COST FOR TAPPING SLEEVE AND VALVE SHALL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO PROPERLY AND COMPLETELY INSTALL SLEEVE AND TAPPING OF EXISTING WATER MAIN. COST OF VALVE AND VALVE BOX SHALL BE INCLUDED.				
BEDDING AND BACKFILL:				
- BEDDING SHALL CONFORM TO 000T 703.11 TYPE 2 (NO SLAG/NO RECYCLED CONCRETE)				
- PREMIUM BACKFILL SHALL CONFORM TO 000T ITEM 304, LIMESTONE (NO SLAG/NO RECYCLED CONCRETE)				
- UNCLASSIFIED BACKFILL SHALL BE NATURAL SOIL MATERIAL				
ALL BACKFILL SHALL BE COMPACTED AS PER 000T 603.11. PLACES WHERE SETTLEMENT OCCURS AFTER THE SURFACE HAS BEEN RESTORED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE. THE PRICE OF ALL MATERIAL, LABOR, AND EQUIPMENT SHALL BE INCLUDED IN THE PERTINENT ITEMS. NO SEPARATE PAYMENT WILL BE MADE.				
6" FIRE HYDRANT ASSEMBLY COMPLETE, AS PER PLAN:				
PROPOSED FIRE HYDRANT AND VALVE ASSEMBLY SHALL BE PER CITY STANDARD. SEE DETAILS. THE CITY DOES NOT ALLOW APPROVED EQUAL FOR HYDRANTS AND/OR VALVES. THE UNIT PRICE PER EACH FIRE HYDRANT SHALL INCLUDE BUT NOT LIMITED TO FINISHING AND INSTALLING NEW HYDRANT, BLOCKING, VALVE & VALVE BOX, FITTINGS, COUPLINGS, BACKFILL, SHEETING AND SHORING, SURFACE RESTORATION AND ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO COMPLETE.				
WATER SERVICE CONNECTIONS REPLACEMENT:				
WATER SERVICE CONNECTION REPLACEMENT SHALL BE PER CITY STANDARD. SEE DETAILS.				
SHORT SERVICE CONNECTIONS SHALL BE SERVICE WITH VALVE BOXES ON THE SAME SIDE OF THE STREET AS THE WATER MAIN. LONG SERVICE CONNECTIONS SHALL BE SERVICES WITH VALVE BOXES ON THE OPPOSITE SIDE OF THE STREET AS THE WATER MAIN. MINIMUM DISTANCE BETWEEN TAPS AND FITTINGS SHALL BE 18 INCHES.				
CONTRACTOR SHALL REPLACE EXISTING SERVICE WITH 1" BEING THE MINIMUM SERVICE CONNECTION SIZE. SERVICE SHALL BE REPLACED FROM MAIN TO EXISTING SERVICE BOX LOCATION. UNIT PRICE FOR WATER SERVICE CONNECTION REPLACEMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO COMPLETELY RECONNECT WATER SERVICE. MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO CORPORATION STOP, COPPER TUBING (TYPE K), CURB STOP, CURB BOX, SS EXTENSION ROD, STAINLESS STEEL PIN, PAVEMENT RESTORATION, TOPSOIL, SEEDING, AND MULCH, EXCAVATION, SHEETING AND SHORING, BACKFILL MATERIAL, SAW CUTTING, AND ANY SPECIAL FITTINGS REQUIRED TO CONNECT EXISTING SERVICE LINE TO THE NEW CURB BOX. REMOVAL OF THE EXISTING CURB STOP, CURB BOX, ROD AND PIN, ETC. SHALL BE INCLUDED IN THE COST FOR REPLACEMENT (51). NO SEPARATE PAYMENT WILL BE MADE.				
JOINT SEALING:				
AFTER RESURFACING, ALL JOINTS SHALL BE SEALED WITH ASPHALT CEMENT, APPLIED 6" WIDE AT A RATE OF 0.25 GALLONS PER SQUARE YARD. THERE WILL BE NO SEPARATE PAYMENT FOR THIS SEALING AND THE COST SHALL BE INCLUDED IN THE PERTINENT ITEMS AND NO SEPARATE PAYMENT WILL BE MADE.				
DISPOSAL OF REMOVED MATERIALS:				
ALL PAVEMENT, EXCAVATED, PIPING, CURB, SIDEWALK, ETC. REMOVED BY THE CONTRACTOR AS PART OF THE WORK SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. PAYMENT SHALL BE INCLUDED IN THE VARIOUS BID ITEMS OF THE CONTRACT, SEPARATE PAYMENT WILL NOT BE MADE.				
DEWATERING:				
THE CONTRACTOR SHALL, AT ALL TIMES DURING CONSTRUCTION, PROVIDE PROPER AND SATISFACTORY MEANS AND DEVICES FOR THE REMOVAL OF ALL WATER ENTERING THE EXCAVATIONS AND SHALL REMOVE ALL SUCH WATER AS FAST AS IT MAY COLLECT IN SUCH A MANNER AS SHALL NOT INTERFERE WITH THE PROSECUTION OF THE WORK OR THE PROPER PLACING OF MASSOURY OR OTHER WORK.				
CONNECTIONS TO EXISTING MAINS:				
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL CONNECTIONS TO THE EXISTING WATER MAIN. ANY DAMAGE TO THE EXISTING WATER MAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONNECTIONS TO EXISTING 6" MAINS SHALL BE WITH 8" FITTINGS.				
CONTRACTOR TO NOTIFY CITY A MINIMUM OF 72 HOURS IN ADVANCE, AND ALL AFFECTED USERS, IN WRITING, 48 HOURS IN ADVANCE OF SHUTOFFS. THE NOTIFICATION SHALL INCLUDE PLANNED STARTING TIME AND DURATION OF INTERRUPTION, AS WELL AS CONTACT INFORMATION FOR AN ON-SITE SUPERVISOR OF THE CONTRACTOR. THE TIME AND DURATION OF INTERRUPTION OF SERVICE SHALL BE APPROVED BY THE CITY BUT IN NO CASE SHALL EXCEED 8 HOURS. THE CITY SHALL OPERATE ALL VALVES.				
CONTRACTOR SHALL COMPLETE AS MUCH WORK AS POSSIBLE BEFORE MAKING CONNECTIONS. NEW MAINS SHALL BE PRESSURE TESTED AND STERILIZED PRIOR TO MAKING CONNECTION.				
CONTRACTOR SHALL COORDINATE WORK SO THAT ALL LABOR, MATERIAL, TOOLS, AND EQUIPMENT ARE ON SITE AT THE START OF WORK.				
CONTRACTOR SHALL WORK 24 HOURS PER DAY, 7 DAYS PER WEEK UNTIL SERVICE IS RESTORED.				
ABANDONED WATER MAINS, VALVES, & HYDRANTS:				
THE CONTRACTOR SHALL CUT AND PLUG ALL ABANDONED WATER MAIN AS SHOWN ON THE PLANS. ABANDONED VALVES SHALL BE CLOSED AND VALVE BOXES REMOVED. THE CANYI SHALL BE FILLED WITH CONCRETE (CLASS C) AND THE SURFACE SHALL BE RESTORED WITH 3" ASPHALT CONCRETE, INTERMEDIATE COURSE OR TOPSOIL, SEEDING, MULCH WHERE APPLICABLE. COST OF CUTTING, PLUGGING, AND CARPING OF EXISTING WATER MAIN AND REMOVING VALVE BOXES, INCLUDING PAVEMENT RESTORATION SHALL BE INCLUDED IN THE PERTINENT UNIT PRICE BID ITEMS. NO SEPARATE PAYMENT WILL BE MADE. CONTRACTOR SHALL BORE UNDER THE EXISTING HYDRANT ASSEMBLY WITH THE PROPOSED WATER MAIN, SO AS TO NOT DISTURB THE HYDRANT THROUST BLOCKING. THE COST OF THE BORE SHALL BE INCLUDED IN THE BID PRICE FOR THE NEW WATERLINE, NO SEPARATE PAYMENT SHALL BE MADE. THE PROPOSED MAIN MAY BE DEFLECTED SO AS NOT TO POSITION THE MAIN DIRECTLY BEHIND THE EXISTING HYDRANT. EXISTING FIRE HYDRANTS CALLED FOR REMOVAL SHALL BE CAREFULLY REMOVED. ALL REMOVED FIRE HYDRANTS SHALL BE DELIVERED, BY THE CONTRACTOR, TO THE ELYRIA CENTRAL MAINTENANCE GARAGE, LOCATED AT 851 GARDEN STREET. PAYMENT FOR THE REMOVAL AND DELIVERY SHALL BE INCLUDED IN THE CONTRACT BID PRICE OF "FIRE HYDRANT REMOVED, AS PER PLAN". HYDRANT VALVES ARE TO BE ABANDONED AS DETAILED ABOVE, BUT ARE TO BE INCLUDED IN THE BID PRICE FOR "FIRE HYDRANT REMOVED, AS PER PLAN." NO SEPARATE PAYMENT WILL BE MADE FOR ABANDONED FIRE HYDRANT VALVES.				
VALVES ABANDONED IN MANHOLES SHALL BE REMOVED TO A MINIMUM 3 FEET BELOW GRADE. WITH THE REMAINING VOID TO BE BACKFILLED WITH PREMIUM COMPACTED LIMESTONE. THE SURFACE SHALL BE RESTORED USING THE ASPHALT PAVEMENT RESTORATION DETAIL. COST OF CUTTING, PLUGGING, AND CARPING OF EXISTING WATER MAIN AND REMOVING VALVE BOXES, INCLUDING PAVEMENT RESTORATION SHALL BE INCLUDED IN THE PERTINENT UNIT PRICE BID ITEMS. NO SEPARATE PAYMENT WILL BE MADE.				
ADDITIONAL UTILITY NOTES:				
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE THE EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.				
CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTOR 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINES.				
HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATERLINES, STORM SEWERS, AND SANITARY SEWERS SHALL BE MAINTAINED AS FOLLOWS:				
A) MINIMUM 10'-0" HORIZONTAL SEPARATION (MEASURED OUT-TO-OUT CLEAR) BETWEEN PROPOSED WATERLINE AND STORM SEWER OR SANITARY SEWER SHALL BE MAINTAINED.				
B) MINIMUM 18-INCH VERTICAL SEPARATION (MEASURED OUT-TO-OUT CLEAR) BETWEEN PROPOSED WATERLINE AND STORM SEWER OR SANITARY SEWER SHALL BE MAINTAINED.				
IN THE EVENT A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY SEWER, AND STORM SEWERS (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE (DIP) WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF THE CROSSING. THE WATERLINE SHALL BE DIP WITH MECHANICAL JOINTS WITH APPROPRIATE RESTRAINED JOINTS AS REQUIRED TO PROVIDE MINIMUM CLEARANCE AS STATED ABOVE.				
CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4'-6" COVER ON ALL WATERLINES.				
CONCRETE ENGAGEMENT OF UTILITIES SHALL BE USED WHEN MINIMUM SEPARATION REQUIREMENTS CAN NOT BE MET. ALL CONCRETE FOR ENGAGEMENT SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3,000 PSI.				
THE SYSTEM SHALL BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI AT GROUND LEVEL AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW.				
CONTRACTOR RESPONSIBLE FOR NOTIFICATION TO ALL BUSINESSES AND RESIDENTS OF WORK TO BE PERFORMED, SHUT-DOWNS, DATES, AND CONTACT INFORMATION OF ON-SITE FOREMAN.				
SHEETING AND SHORING:				
ALL SHEETING AND SHORING REQUIRED TO SUPPORT ALL TRENCHES AND EXCAVATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION PUBLICATION #1211-1-2 AND SHALL BE PROVIDED BY THE CONTRACTOR AND PAID FOR UNDER THE VARIOUS ITEMS BID FOR WATER MAIN. SEPARATE PAYMENT WILL NOT BE MADE.				
SEEDING AND MULCHING:				
ALL SOIL AREAS DISTURBED ON THE PROJECT SHALL BE RESTORED, SEEDDED AND MULCHED. THE COST OF THE TOPSOIL, SEEDING, MULCHING AND RESEEDING SHALL BE INCLUDED IN THE COST FOR WATERLINE REPLACEMENT. THE CONTRACTOR SHALL SUPPLY THE CITY WITH TWO (2) 40 LBS BAGS OF SCOTTS TURF BUILDER EZ SEED UPON FINAL ACCEPTANCE. NO SEPARATE PAYMENTS WILL BE MADE. 000T CLASS 1 MIX IS REQUIRED FOR ALL SEEDDED AREAS.				
PAVEMENT RESTORATION:				
ALL ASPHALT STREETS, DRIVES (NOT SPECIFICALLY CALLED OUT BY PLANS), PARKING AREAS AND SURFACE PAVEMENTS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED PER THE "ASPHALT PAVEMENT RESTORATION DETAIL." THE COST OF ALL SHALL BE INCLUDED IN THE VARIOUS BID ITEMS OF THE CONTRACT. SEPARATE PAYMENT WILL NOT BE MADE. NO SEPARATE PAYMENT WILL BE MADE FOR PAVEMENT REMOVAL.				
6" CONCRETE APRON (CLASS HS CONCRETE):				
CONTRACTOR SHALL REMOVE AND REPLACE CONCRETE DRIVEWAY APRONS AS PER PLAN. CONCRETE SHALL BE A MINIMUM OF 6" THICK AND CONFORM TO 000T ITEM 452. COST OF REMOVAL, EXPANSION/CONTRACTION JOINTS, LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO COMPLETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 6" CONCRETE APRON. GRAVEL AND ASPHALT APRON REPLACEMENTS SHALL BE CONCRETE. DO NOT REMOVE CURB, EXCEPT AT WATER MAIN CROSSING. 6" DEPTH SHALL EXTEND THROUGH THE SIDEWALK. ANY CASTING ADJUSTMENTS LOCATED WITHIN THE APRON LIMITS ARE TO BE INCIDENTAL TO THE CONCRETE APRON REPLACEMENT.				
WATER				
REVISIONS				
CITY OF ELYRIA DEPARTMENT OF SAFETY SERVICE DIVISION OF ENGINEERING				
WATERLINE F81				
NOTES				
PROJ. NO. 2025				
SHEET NO. 1				

PROPOSED DISCONNECTION DETAIL.JPG



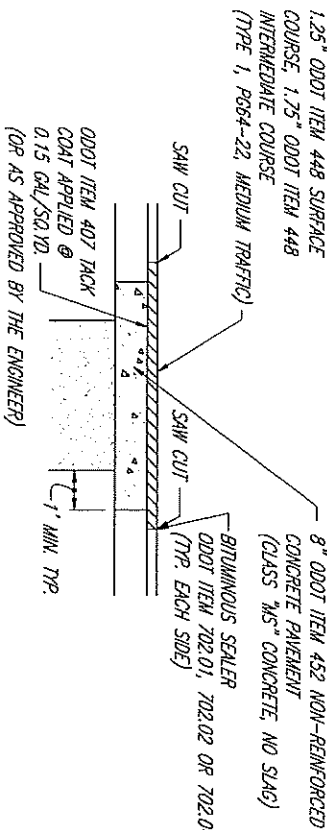
NOTE:
CONTRACTOR SHALL PROVIDE A GUTTER FINISH ON ALL TWO COURSE CURBED STREETS. SPECIAL CARE SHALL BE TAKEN DURING CONSTRUCTION TO OBTAIN MAXIMUM COMPACTION OF BITUMINOUS CONCRETE IN GUTTERS.

TYPE-6 CURB REPLACEMENT DETAILS
NO SCALE

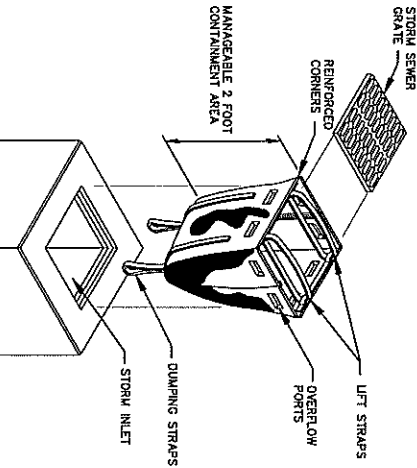


NOTES:
1. THE MAXIMUM PAYMENT LIMIT FOR ASPHALT REPLACEMENT IS PIPE O.D. + 48 INCHES. REPLACE PAVEMENT TO EDGE OF ROADWAY PAVEMENT IF THE CENTER OF THE TRENCH IS 5' OR LESS FROM THE ROADWAY EDGE OF PAVEMENT.

TYPE C ASPHALT PAVEMENT REPLACEMENT DETAIL



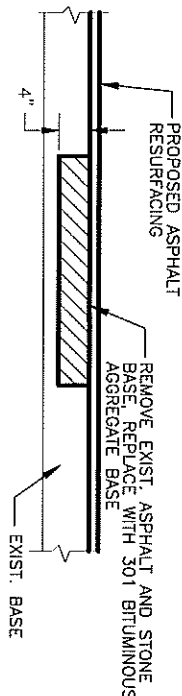
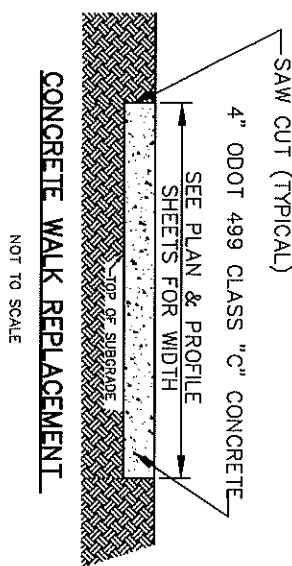
ASPHALT PAVEMENT RESTORATION DETAIL
NOT TO SCALE



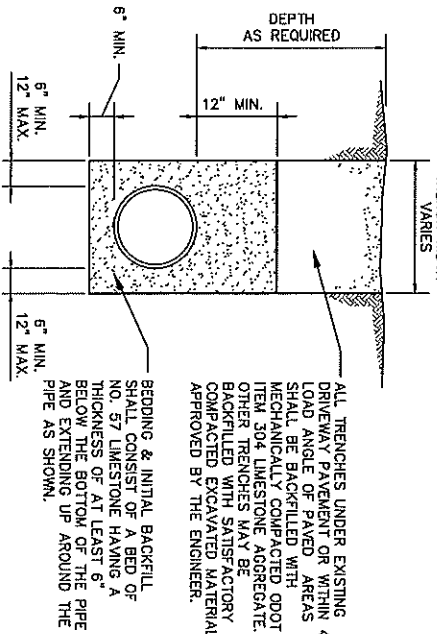
CONSTRUCTION SPECIFICATIONS:
WHERE INLET PROTECTION IS REQUIRED INLET PROTECTION SHALL BE INSTALLED AND MADE FUNCTIONAL EITHER BEFORE THE STORM DRAIN BECOMES OPERATIONAL OR IMMEDIATELY AFTER GRADING AROUND THE INLET.

DANDY SACK INLET PROTECTION
NOT TO SCALE

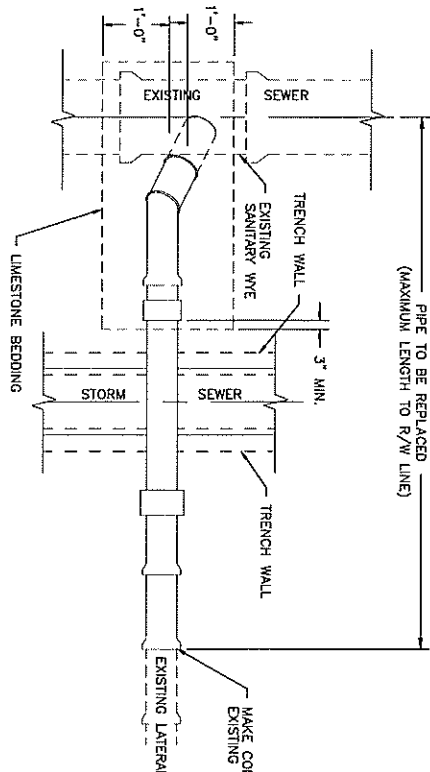
BY DANDY PRODUCTS OR APPROVED EQUAL



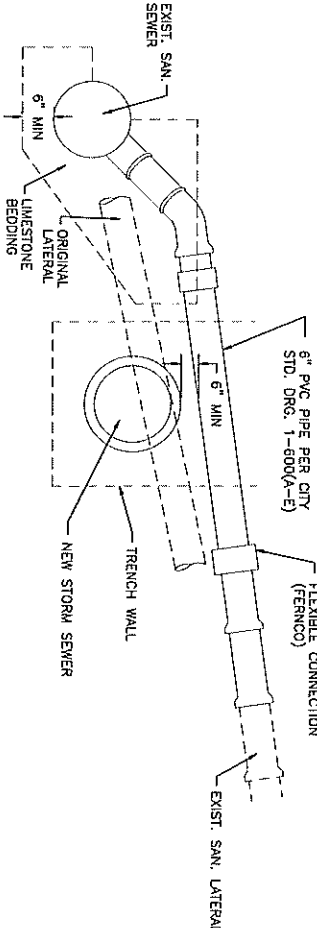
FULL DEPTH ASPHALT PAVEMENT BASE REPAIR
NO SCALE



SEWER TRENCH DETAIL
NOT TO SCALE



PLAN

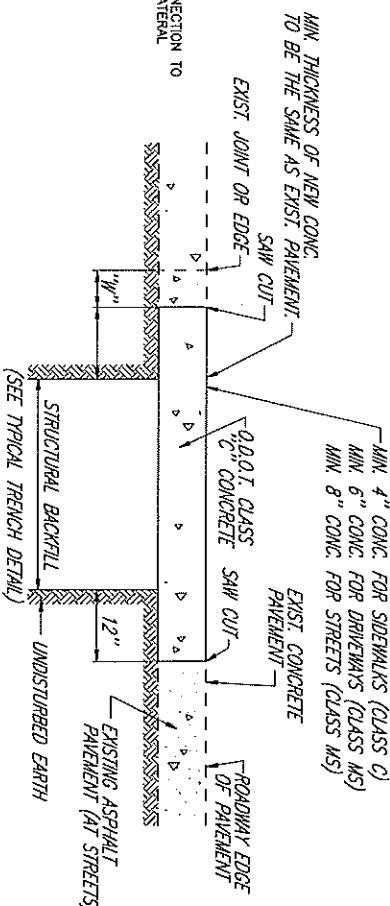


SIDE VIEW

SANITARY LATERAL REPLACEMENT DETAILS
(NO SCALE)

NOTE: EXISTING WYE WILL NOT BE DISTURBED. IF EXISTING WYE CONNECTION NEEDS REPLACEMENT IT SHALL BE DONE BY OTHERS. TRENCH FOR LATERAL SHALL BE BACKFILLED AND RESTORED PER TRENCH RESTORATION DETAILS ON THIS SHEET. DISTURBED CURB SHALL BE RESTORED TO ORIGINAL. COST OF ALL THIS WORK PER DETAILS ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE TRENCH UNIT BID PRICE SHALL INCLUDE LENGTH OF SEWER LATERAL CONNECTION FROM NEW MAIN TO RIGHT-OF-WAY.

(CONCRETE SIDEWALKS, DRIVEWAYS AND STREETS)



NOTES:
1.) SAW CUTS FOR TYPE A2 REPLACEMENTS SHALL BE PARALLEL AND PERPENDICULAR TO THE CENTERLINE OF DRIVE FOR THE FULL WIDTH REPLACED.

2.) REPLACE TO EXISTING JOINT WHEN "W" MEASURES LESS THAN 2 FEET.

3.) REPLACE TO EXISTING ROADWAY EDGE OF PAVEMENT WHEN THE CENTER OF THE TRENCH IS 5' OR LESS FROM THE ROADWAY EDGE OF PAVEMENT.

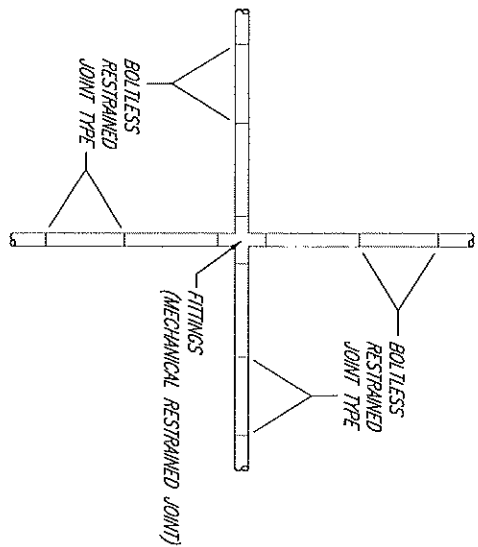
4.) FINISH SURFACE SIMILAR TO SURROUNDING PAVEMENT.

5.) DRIVE APRONS: PAYMENT FOR DRIVE APRONS TO BE INCLUDED UNDER PAY ITEM "CONCRETE PAVEMENT REPLACEMENT, TYPE A2". SEPARATE PAYMENT WILL NOT BE MADE. APRONS SHALL MEET ODOT ITEM 452. DO NOT REMOVE CURB EXCEPT AT WATER MAIN CROSSINGS.

6.) TRUNCATED DOWNS SHALL BE INSTALLED AT ALL SIDEWALK RAMPS WITH FINAL LOCATION COORDINATED WITH ENGINEER DURING CONSTRUCTION. SIDEWALK RAMPS TO BE INSTALLED AT ALL ROADWAY INTERSECTIONS WHERE THE SIDEWALK IS REPLACED INCLUDING ALLEYS. COST OF DOWNS TO BE INCLUDED IN THE UNIT PRICE FOR SIDEWALK. SEPARATE PAYMENT WILL NOT BE MADE. ALL CURB RAMPS SHALL CONFORM TO ODOT SCD BP-7.1.

COST FOR REMOVING EXISTING CONCRETE, EXPANSION JOINTS, AND ALL MATERIAL AND EQUIPMENT REQUIRED TO INSTALL CONCRETE SHALL BE INCLUDED WITH EACH INDIVIDUAL PAY ITEM FOR CONCRETE PAVEMENT. SEPARATE PAYMENT WILL NOT BE MADE.

TYPE A CONCRETE PAVEMENT REPLACEMENT DETAIL



BOLTLESS RESTRAINED JOINT TYPE
NOT TO SCALE
(FIELD LOK 350 GASKETS OR APPROVED EQUAL)

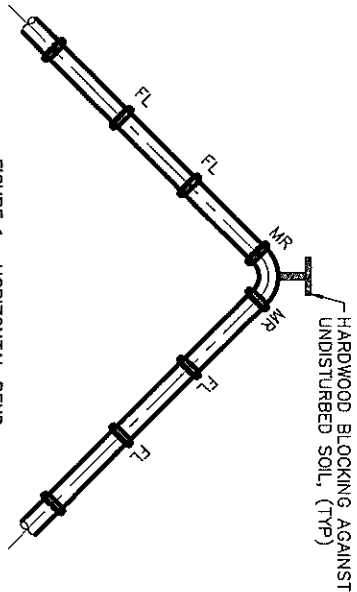


FIGURE 1. HORIZONTAL BEND

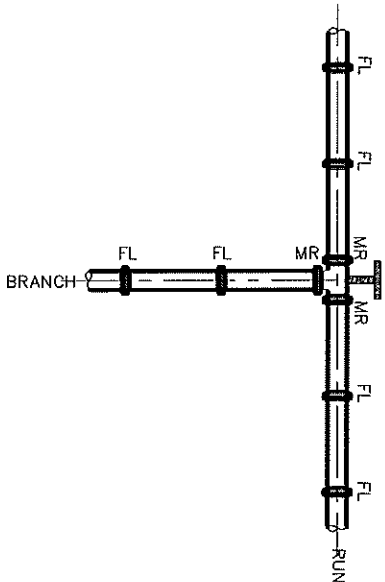


FIGURE 3. TEE



FIGURE 4. REDUCER

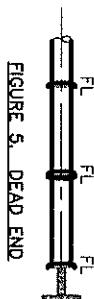
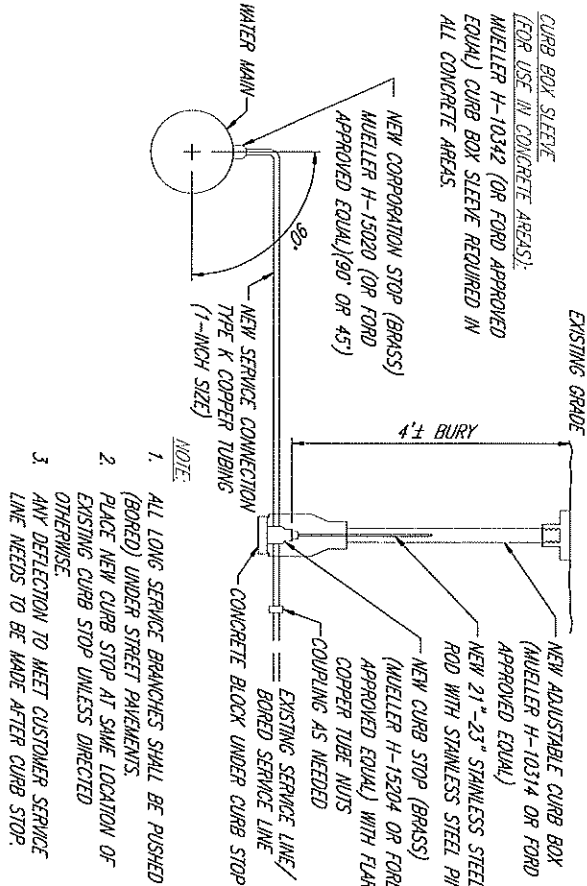


FIGURE 5. DEAD END

MECHANICAL RESTRAINTS REQUIREMENTS
NOT TO SCALE

NOTES:
FL = FIELD LOK GASKETS SHALL BE USED WITHIN TWO PIPE LENGTHS OF FITTINGS IN ALL DIRECTIONS.
MR = MECHANICAL RESTRAINT AND HARDWOOD THRUST BLOCKS TO BE USED AT FITTINGS.



WATER SERVICE CONNECTION REPLACEMENT DETAIL
NOT TO SCALE

- NOTE:
- ALL LONG SERVICE BRANCHES SHALL BE PUSHED (BORED) UNDER STREET PAVEMENTS.
 - PLACE NEW CURB STOP AT SAME LOCATION OF EXISTING CURB STOP UNLESS DIRECTED OTHERWISE.
 - ANY DEFLECTION TO MEET CUSTOMER SERVICE LINE NEEDS TO BE MADE AFTER CURB STOP.

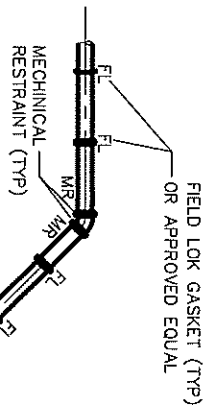
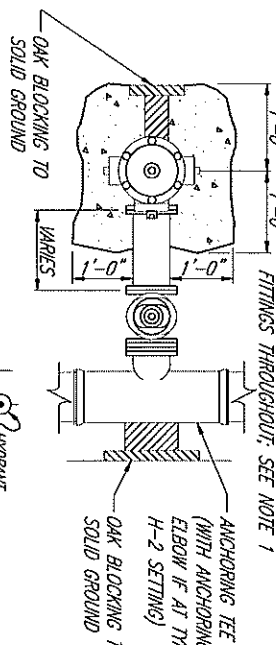
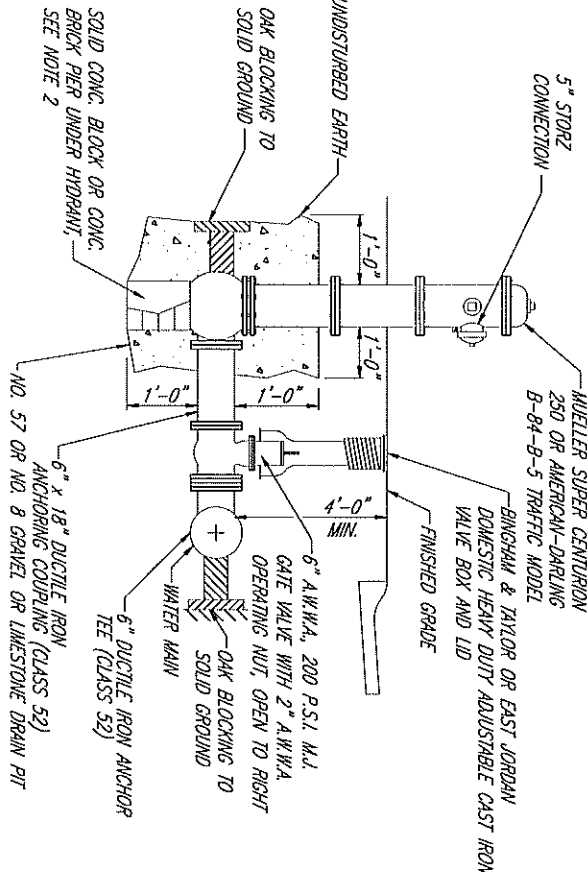
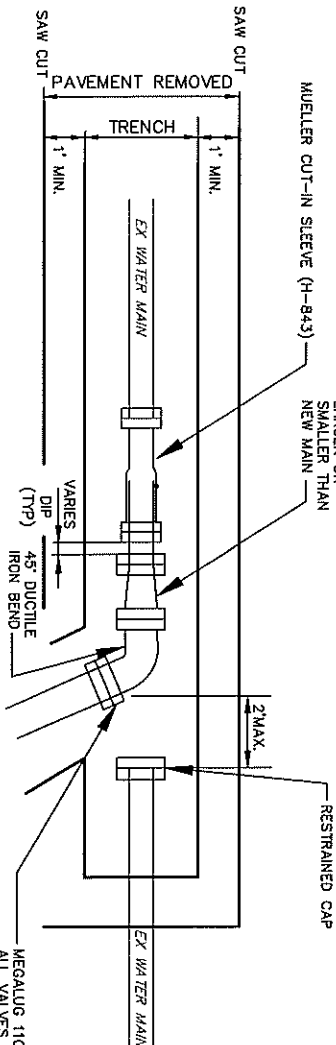


FIGURE 2. VERTICAL DOWN BEND AND OFFSET BEND



FIRE HYDRANT & VALVE ASSEMBLY
NOT TO SCALE

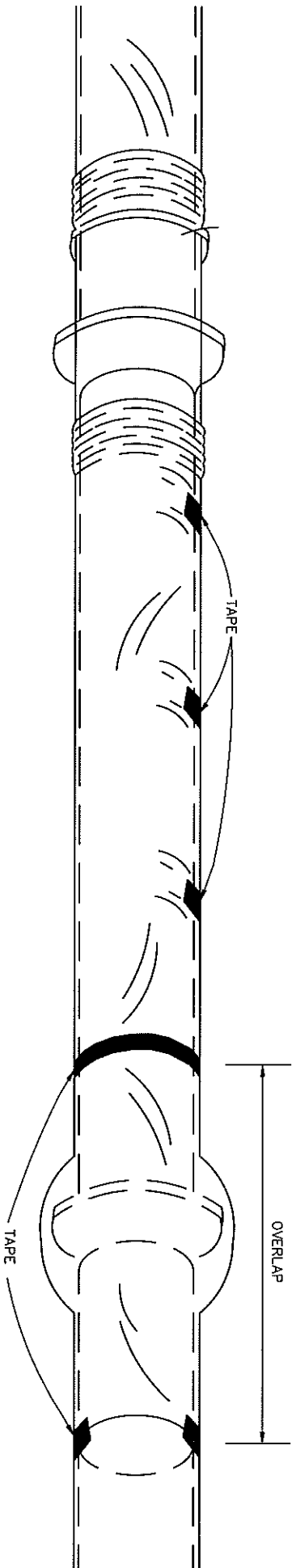
* ALL COMPONENTS SHOWN ABOVE, FROM AND INCLUDING THE MAINLINE TEE TO THE HYDRANT, SHALL BE INCLUDED IN THE UNIT PRICE (EA.) FOR 6" HYDRANT ASSEMBLY, COMPLETE, AS PER PLAN.



CUTTING-IN-SLEEVE, BEND AND RESTRAINED CAP DETAIL
NOT TO SCALE

- NOTES:
- ALL JOINTS SHALL BE MECHANICAL JOINTS WITH STAINLESS STEEL FASTENERS TYPE 304, ANCHOR COUPLINGS AND PIPE SHALL BE CLOW F-1211, F-1215 AND F-1216 OR APPROVED EQUAL.
 - CONCRETE BLOCK SHALL BE A.S.T.M. C-139, CONCRETE BRICK SHALL BE A.S.T.M. C-35, TYPE 2, GRADES M-11 OR S-11.
 - ALL FIRE HYDRANTS SHALL MEET THE FOLLOWING REQUIREMENTS:
 - COMPLY WITH A.W.W.A. STD. C-502
 - MAIN VALVE OPENING 4 1/2"
 - TWO DRAIN VALVES FOR MAIN VALVE
 - MIN. 5'-0" TRENCH DEPTH
 - HAVE TWO 2 1/2" ID HOSE CONNECTIONS WITH NATIONAL STD. THREADS.
 - HAVE ONE 5" STORZ CONNECTION.
 - OPERATING NUT AND CAP NUTS TO BE PENINGOMAL
 - OPERATION - OPEN COUNTER CLOCKWISE
 - DRY BARREL DESIGN

- ALL PIPE, FITTINGS AND HYDRANT BARREL SHALL BE POLYETHYLENE ENCASED PER ST. DWG. 2-701.
- THE VALVE SHALL BE RESILIENT-SEATED GATE VALVES MEETING SPECIFICATION A.W.W.A. C509-94, OPENING RIGHT, EPOXY COATED, BY MUELLER. (A-2362 SERIES)
- FIRE HYDRANT PAINTING
TOP: DEICURAD 4308-1000 (WHITE)
BODY: DEICURAD 4308-9000 (SAFETY RED)
AS MANUFACTURED BY ICI PAINTS
- HYDRANT SHALL BE LOCATED MINIMUM 3 FEET BACK OF CURB.
- PAYMENT FOR 6" HYDRANT ASSEMBLY COMPLETE, AS PER PLAN* SHALL INCLUDE INSTALLATION, ANCHORING TEE, COUPLINGS, ELBOW, PIPE, VALVE, VALVE BOX & COVER, HYDRANT BLOCKING, AGGREGATE AND SURFACE RESTORATION.
- STATION OF HYDRANT ASSEMBLY SHOWN ON PLAN IS TO CENTER OF TEE.
- HYDRANT TO BE INSTALLED 3'± FROM BURY LINE.



MATERIAL REQUIREMENTS

All ductile iron pipe shall have polyethylene encasement. The polyethylene film shall be tube type. The polyethylene film shall be manufactured from materials conforming to ASTM Standard Specification D-1248-68. Raw materials shall be Type I, Class A or C, Grade E-1, with a flow rate of 0.4 maximum and have a dielectric strength . . . volume resistivity, a maximum ohm - cm ' 10²¹. The film shall have a tensile strength of 1,200 psi minimum; elongation of 300%; and dielectric strength...of 800 v/mil thickness minimum. The polyethylene film shall have a minimal nominal thickness of 0.008 in. The tube size shall be as follows:

Nominal Pipe Diameter (in.)	Minimum Polyethylene Width (in.)
8	24
10	27
12	30
14	34
16	37
18	41
20	45
24	54
30	67
36	81
42	95

The tape used to hold the film in place shall be polyethylene type 1-1/2" wide of a type recommended by the film manufacturer.

INSTALLATION REQUIREMENTS

The polyethylene encasement shall prevent contact between the pipe and the surrounding backfill and bedding material.

The general method of installing the film is as follows:

1. Cut the polyethylene film to a length two feet longer than the length of the pipe section. Slip the tube over the pipe. Center the tube to provide a one-foot overlap on each adjacent pipe section. Bunch the tube in accordin fashion lengthwise until it clears the pipe ends, and equipment support point(s).
2. Lower the pipe into the trench. Make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at the joints to facilitate the installation of the polyethylene tube.
3. After assembling the pipe joint, make the overlap of the polyethylene tube, pull the bunched polyethylene from the preceding length of pipe, slip it over the end of the new length of pipe and secure in place with tape. Then slip the end of the polyethylene from the new pipe section over the end of the preceding length of pipe and secure the overlap in place; then pull lengthwise to take up the slack. Along the barrel of the pipe, take up the slack width and make snug, but not tight, securing the fold at quarter points.

4. Any rips, punctures, or other damage to the polyethylene film shall be repaired with adhesive tape or tube section cut open and wrapped around the pipe. The tube section shall be secured in place with adhesive tape.
5. Proceed with the next section of pipe in the same manner.

APPUERTENANCES

Bends, reducers, offsets and other pipe-shaped appurtenances shall be covered with polyethylene film in the same manner as the pipe.

Odd-shaped appurtenances, including valves, ties, crosses and other odd-shaped pieces which cannot be wrapped practically in a tube, shall be wrapped in a flat piece or split length of polyethylene tube. The sheet shall be brought under the appurtenance and brought up around the body. Seams shall be made by bringing the edges together, folding over twice and taping down. Slack widths and overlaps shall be handled as described above for pipe joints. Tape the polyethylene securely in place at valve stem and other penetrations.

The use of the tape shall hold the film in position, but shall not require that all film protection be a completely air and water-tight enclosure.

BACKFILL

Backfill material shall be free from cinders, refuse, boulders, rocks, stones or other material that could damage the polyethylene film. Care shall be taken during placement of backfill to prevent damage to the polyethylene film wrapping. Backfill and/or pipe bedding material shall be as specified for the pipe without the polyethylene wrapping.

JUNCTIONS BETWEEN WRAPPED AND UNWRAPPED PIPE

Where the polyethylene wrapped pipe joins a pipe which is not wrapped, extend the polyethylene tube to cover the unwrapped pipe a distance of at least two feet, secure the end with two circumferential turns of tape. Where beginning with a valve, install the wrapping material over the valve or other appurtenance.

OPENINGS IN ENCASEMENT

Openings for branches, service taps, blow-offs, air valves and similar appurtenances shall be made by making an x-shaped cut in the polyethylene, and temporarily folding the film back. After the appurtenance is installed, tape the slack securely to the appurtenance and repair the cut, as well as any other damaged areas in the polyethylene with tape.

POLYETHYLENE ENCASEMENT FOR DUCTILE IRON PIPE DETAIL.

NO SCALE