

UTILITY CONTACTS

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AT THE TOME OF PREPARING THESES PANS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE REASONABILITY TO BE SATISFIED AS TO ITS ACCURACY AND LOCATION OF EXISTING UTILITIES.

CHARTER COMMUNICATIONS
ATT: MARK KELLY
1480 S. VALLEY CENTER DRIVE
BAY CITY, MI 48706

CABLE TV
PHONE: 989-233-9404
mark.kelly@chartercom.com

CITY OF OWOSSO
ATT: CLAYTON WEHNER, P.E.
301 W. MAIN STREET
OWOSSO, MI 48867

ROAD
989-725-0551
clayton.wehner@ci.owosso.mi.us

CITY OF OWOSSO
ATT: RYAN SUCHANEK
301 W. MAIN STREET
OWOSSO, MI 48867

SANITARY SEWER & WATER MAIN
989-725-0550
ryan.suchanek@ci.owosso.mi.us

CONSUMERS ENERGY
ATT: TRACY MAHAR
1801 W. MAIN ST
OWOSSO, MI 48867

ELECTRIC
OFFICE: 989-729-3250
CELL: 517-204-9018
trmahar@cmsenergy.com

CONSUMERS ENERGY
ATT: ADAM BERTRAM
530 W. WILLOW STREET
P.O. BOX 30162
LANSING, MI 48909

GAS
OFFICE: 517-374-2375
CELL: 517-614-8570
adam.bertram@cmsenergy.com

DAYSTARR COMMUNICATIONS
ATT: JARED JACKSON
307 N. BALL STREET
OWOSSO, MI 48867

FIBER
PHONE: 989-720-6004
FAX: 989-720-6060
jared.jackson@daystarrfiber.net

FRONTIER COMMUNICATIONS
ATT: HAROLD ROTH
1943 W. M-21
OWOSSO, MI 48847

FIBER
PHONE: 989-627-9759
harold.roth@ftr.com

SHIAWASSEE COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
ATT: STEVE ALWORDEN
201 N. SHIAWASSEE STREET
CORUNNA, MI 48817

SOIL EROSION AND SEDIMENTATION CONTROL
PHONE: 989-743-2289
FAX: 989-743-2413
salworden@shiawasseechd.net

CALL MISS DIG AT 1-800-482-7171 OR 811 THREE DAYS, EXCLUDING SATURDAY, SUNDAY, AND HOLIDAY, BEFORE STARTING YOUR PROJECT.

MDOT ROAD STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MDOT STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

- DRAINAGE STRUCTURES

COVER B

MONUMENT BOXES

COVER K

COVER Q

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS

CONCRETE CURB AND CONCRETE CURB AND GUTTER*

BUMPER & PARKING RAIL AND MISC. WOOD POSTS

GRANULAR BLANKET, UNDERDRAINS, AND OUTLET ENDINGS FOR SEWER UNDERDRAINS, AND SEWER BULKHEADS

BEDDING AND FILLING AROUND PIPE CULVERTS

UTILITY TRENCHES

SOIL EROSION & SEDIMENT CONTROL MEASURES

SEEDING AND TREE PLANTING

*SPECIAL DETAILS INCLUDED IN PROPOSAL OR MODIFIED IN GENERAL PLANS
- R-1-G*

R-7-F

R-11-E

R-15-F

R-18-F

R-28-J*

R-29-I

R-30-G

R-74-D

R-80-E

R-82-D

R-83-C

R-96-E

R-100-H

PROJECT LOCATION - YOUNG STREET

PROJECT LOCATION - NAFUS STREET

PROJECT LOCATION - GRACE STREET



1. ALL WATER MAIN MAIN LINE PROPOSED FOR THIS PROJECT HAS BEEN DESIGNED FOR AND SHALL BECOME A PUBLIC SYSTEM.
2. A WATER MAIN CONSTRUCTION PERMIT FROM THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY MUST BE ISSUED PRIOR TO BEGINNING THE CONSTRUCTION OF ANY WATER MAIN IN THIS PROJECT.
3. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF OWOSSO SPECIAL PROVISION FOR WATER MAIN INSTALLATION AND THE STANDARD DETAILS.
4. ALL PUBLIC WATER MAIN SHALL BE OWNED AND MAINTAINED BY THE CITY OF OWOSSO UPON COMPLETION OF THE PROJECT.
5. ALL PUBLIC WATER MAIN SHALL BE PVC AWWA C900/C909. TRACER WIRE AND BOXES SHALL CONFORM TO THE CITY OF OWOSSO SPECIAL PROVISION FOR WATER MAIN INSTALLATION.
6. ALL PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES THAT ARE USED FOR POTABLE WATER MUST COMPLY WITH THE LEAD FREE REQUIREMENT AND MUST BEAR THE MARK NSF/ANSI STANDARD 61, ANNEX G OR NSF 61-G.
7. GATE VALVES SHALL BE EAST JORDAN RESILIENT SEATED GATE VALVES CONFORMING TO AWWA C509. VALVES SHALL BE VERTICAL, NON-RIISING STEM AND OPEN CLOCKWISE. SEE CITY OF OWOSSO SPECIAL PROVISION FOR WATER MAIN INSTALLATION AND STANDARD DETAILS.
8. FIRE HYDRANTS SHALL CONFORM TO THE SPECIFICATION SHOWN ON THIS SHEET.

10. PRESSURE TAPS TO EXISTING WATER MAINS AND CONNECTIONS TO EXISTING VALVES SHALL BE MADE ONLY UNDER CITY OF OWOSSO OBSERVATION. ALL VALVE OPENING AND CLOSING SHALL BE BY THE CITY OF OWOSSO PERSONNEL. A FULL DIAMETER STAINLESS STEEL TAPPING SLEEVE IS REQUIRED FOR ALL PRESSURE TAPS.

12. ALL WATER SERVICE LEADS SHALL HAVE A MINIMUM COVER OVER THE TOP OF THE PIPE OF 5 FEET FROM FINISHED GRADE.

13. ALL TRENCH EXCAVATION UNDER OR WITHIN 5' OF EXISTING OR PROPOSED PAVING SHALL BE BACKFILLED WITH CLASS II COMPACTED GRANULAR MATERIALS.

14. MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAIN AND SEWERS SHALL BE 10 FEET.

16. WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA STANDARD C605, AND DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651. WATER MAIN CHLORINATION SHALL BE OBSERVED AND MONITORED BY CITY OF OWOSSO REPRESENTATIVE.

18. THE CONTRACTOR SHALL INSTALL TWO INCH CORPORATIONS ON THE WATERLINE FOR PRESSURE TESTING, CHLORINE ADDITION AND FOR BLOW-OFF PURPOSES. THE CORPORATIONS SHALL HAVE COPPER PIPE EXTENDING TO THE GROUND SURFACE. THE CONTRACTOR SHALL REMOVE THE CORPORATION AND COPPER LINE UPON A SATISFACTORY TEST AND INSTALL A PLUG.

20. WHERE WATER MAIN CROSSES BENEATH OR ABOVE SANITARY OR STORM SEWER, A SOLID LENGTH OF PIPE SHALL BE POSITIONED BENEATH OR ABOVE THE CROSSING TO AVOID PIPE JOINTS IN THE VICINITY OF THE CROSSING.

CONTRACTOR SHALL FREEBORE PROPOSED WATER MAIN WHERE NECESSARY TO SAVE/PROTECT TREES OR AVOID EXISTING UTILITIES AND POLES. COST OF FREEBORE SHALL BE INCLUDED IN THE WATER MAIN PAY ITEM. REQUIRED FREEBORE LOCATIONS SHALL BE DETERMINED IN THE FIELD AND ARE NOT SHOWN ON THE PLANS.

A SERVICE CHARGE OF \$1,000 WILL BE REQUIRED AT TIME OF PERMIT APPLICATION. THIS FEE INCLUDES THE MINIMUM CHARGE OF \$60 FOR 5,000 BULK GALLONS OF WATER, PLUS ADDITIONAL CHARGES OF \$12 PER 1,000 GALLONS CONSUMED IN EXCESS OF THE MINIMUM QUANTITY. OWSO WATER SYSTEM PERSONNEL WILL ATTACH A WATER METER AND RPZ BACKFLOW PREVENTER TO THE HYDRANT FOR CONTRACTOR USE. IF THE WATER METER AND RPZ IS RETURNED IN GOOD OPERATING CONDITION, THE CONTRACTOR WILL RECEIVE A \$450 REFUND, LESS ADDITIONAL WATER CONSUMED IN EXCESS OF MINIMUM QUANTITY.

ALL UTILITY POLES SHALL BE PROTECTED BY THE CONTRACTOR DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS CONSTRUCTION OPERATIONS WITH AFFECTED UTILITIES AND ADEQUATELY SUPPORT THE POLES.



WATER SERVICES ON THE SAME SIDE OF THE ROAD AS THE NEW WATER MAIN SHALL BE OPEN CUT.

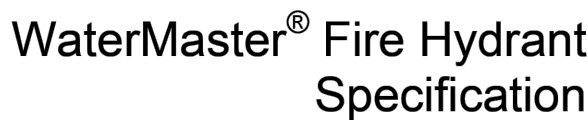
METER PITS, WHERE VISIBLE AT TIME OF TOPOGRAPHIC SURVEY, ARE SHOWN.

SIDEWALK REMOVAL AND REPLACEMENT FOR WATER
SERVICE LINE REPLACEMENT IS NOT SHOWN ON PLAN
SHEETS AND SHALL BE AS DIRECTED BY ENGINEER

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY
THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR
INCLUDED ON THE PLAN AND PROFILE SHEETS

Quantity	Unit	Pay Item
1	LSUM	Mobilization, Max \$137,000, Water Main
1	LSUM	Mobilization, Max \$1,200, Sanitary Sewer
400	Syd	Pavt, Rem
450	Syd	Sidewalk, Rem
300	Syd	Aggregate Base, 8 inch, Modified
10	Ea	Dr Structure Cover, Adj, Case 1
100	Ton	HMA, 13A
100	Syd	Driveway, Nonreinf Conc, 6 inch
2430	Sft	Sidewalk, Conc, 4 inch
1620	Sft	Sidewalk Conc, 6 inch
10	Ea	Sanitary Serv Conflict
10	Ea	Abandoned Gas Main Conflict
10	Ea	Sign, Type III, Rem
10	Ea	Sign, Type III, Erect, Salv
160	Ft	Post, Steel, 3 pound
200	Syd	Turf Establishment, Performance
300	Ton	Maintenance Gravel
1	LSUM	Testing and Chlorination of Water Main

Quantity	Unit	Pay Item
12	Ea	Barricade, Type III, High Intensity, Double Sided, Furn & Oper
30	Ea	Pedestrian, Type II Barricade, Temp
5	Ea	Lighted Arrow, Type C, Furn & Oper
1	LSUM	Minor Traffic Devices, Max \$20,000
250	Ea	Plastic Drum, High Intensity, Furn & Oper
200	Sft	Sign, Type B, Temp, Prismatic, Furn & Oper
1	LSUM	Traf Regulator Control



1. Manufacturers shall provide sufficient documentation to assure that their hydrant will successfully meet the latest revisions of AWWA Standard C502. Fire hydrants shall be rated for 250 psi working pressure and be listed by Underwriters Laboratories Inc. (UL246) and meet the test requirements of Factory Mutual (1510) at this pressure.

2. Hydrants shall be of a true compression type, opening against the pressure and closing with the pressure. Composition of the main valve shall be a molded rubber having a durometer hardness of 91 +/- 5. The rubber seat valve shall fit a 5 1/4" opening and not be less than 1" thick.

3. Fire hydrant shall be **three-way** in design, having **Harrington 5" Storz C & X Dome** pumper nozzle, and **2 1/2" Nat Std 2 7/8" Base, C Dome** hose nozzle. Nozzles shall "thread" counterclockwise into hydrant barrel utilizing "o" ring pressure seals. A suitable nozzle lock shall be in place to prevent inadvertent nozzle removal. Wedging devices and/or ductile iron retainer rings to secure nozzles shall not be allowed.

4. The lubrication system shall be sealed from the waterway and any external contaminants by use of "o" ring pressure seals. Anti-friction washers shall be in place above and below the thrust collar of the operating nut to further minimize operating torque. The grease reservoir shall be factory filled with an FDA approved food grade lubricant. Oil shall not be used.

5. The operating nut shall be a one piece design, manufactured of ASTM B-584 bronze. It shall be **1 1/8" Pentagon-point to flat** in size/shape. The operating nut shall be affixed to the bonnet by means of an ASTM B-584 bronze hold down nut. The hold down nut shall be threaded into the bonnet in such a manner as to prevent accidental disengagement during the opening cycle of the hydrant. A resilient weather seal shall be incorporated with the hold down nut, for the purpose of protecting the operating mechanism from the elements.

6. The direction of opening shall be **right**. An arrow shall be cast on the top of the hydrant to indicate the opening direction

7. The hydrant bonnet shall be attached to the upper barrel by no more than six bolts and nuts. All nuts and bolts below grade shall be 304 stainless steel.

8. The hydrant will have **6'** Depth of bury, unless otherwise noted.

9. Hydrants shall be of the "Traffic Model" design, provided with a safety coupling and flange design that will permit a full 360 degree facing of the nozzles. O-rings shall be the Quad-Ring® type and be installed in a groove on the bottom of the joint so that taping or gluing to the upper standpipe or

extension is not required. The safety coupling shall be a one piece design. Multiple parts and cast iron not allowed.

10. The operating stem shall be a two piece design, not less than 1 1/4" diameter (excluding threaded or machined areas). Threads shall be Acme type with no 60 deg. V threads allowed. Travel stops shall be in the inlet/shoe and are not allowed in the bonnet area. Screws, pins, bolts or fasteners used in conjunction with the stem coupling shall be stainless steel.

11. The inside diameter of the hydrant barrels shall not be less than 7 1/4 inches and the hydrant shall be painted **Yellow**.

12. Heavy duty drop shutoff (top plate) and valve seat shall be high strength manganese bronze. Valve seat shall be installed in the valve body. The drop shutoff shall be plugged, bronze lined and 3/8 inch diameter minimum. They shall operate without the use of springs, toggles, tubes, levers or other intricate synchronizing mechanisms. Lower valve plate shall be secured to the drop shutoff by a bolt and nut. A separate cap nut. Drains shall be open and flushed during the first 4 turns of operating the hydrant before positively closing while operating the hydrant.

13. The shoe connection shall be **Mechanical Joint** or as specified. The inlet/shoe shall be fusion bonded epoxy coated per NFPA 1130. The shoe shall be fitted with a shoe fitting having ample blocking pads for sturdy setting. Six stainless steel bolts and nuts are required to fasten the shoe to the lower barrel. The shoe/inlet shall be directly connected to the shoe fitting. The shoe/inlet shall be welded in between the standpipe and shoe/inlet shall not be allowed.

14. External parts- the top bonnet, upper standpipe, lower standpipe and shoe shall be ductile iron to ensure strength throughout the exterior of the hydrant- Gray Iron hydrant body parts will not be allowed.

Municipality reserves the right to accept only those materials which are in full compliance with these specifications and deemed most advantageous to its interests.

Upon request, supplier shall furnish flow data indicating friction loss in psi at a flow of 1,000 gpm from the pumper nozzle. Such friction loss shall not exceed 2.5 psi. Also, the municipality may request the manufacturing "point of origin" for any/or all hydrant parts. All cast components shall be made in the USA.

Failure to comply with any of these above requirements is sufficient cause for rejection of proposed hydrants.

Hydrant shall be EJ WaterMaster® **5BR250**.
55726D 6' 0" DOB
53726D 5' 0" DOB
54727D 5'6" DOB

ejco.com

800 626 4653

1

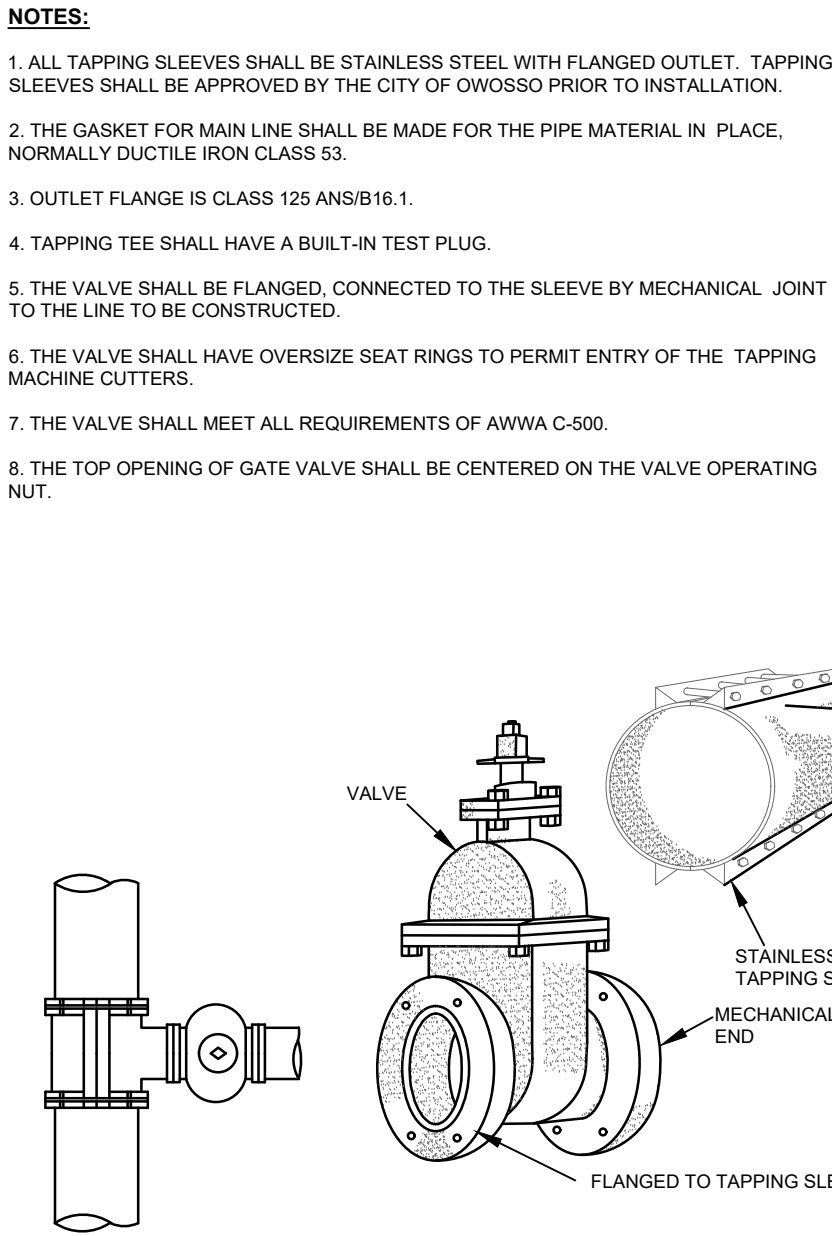
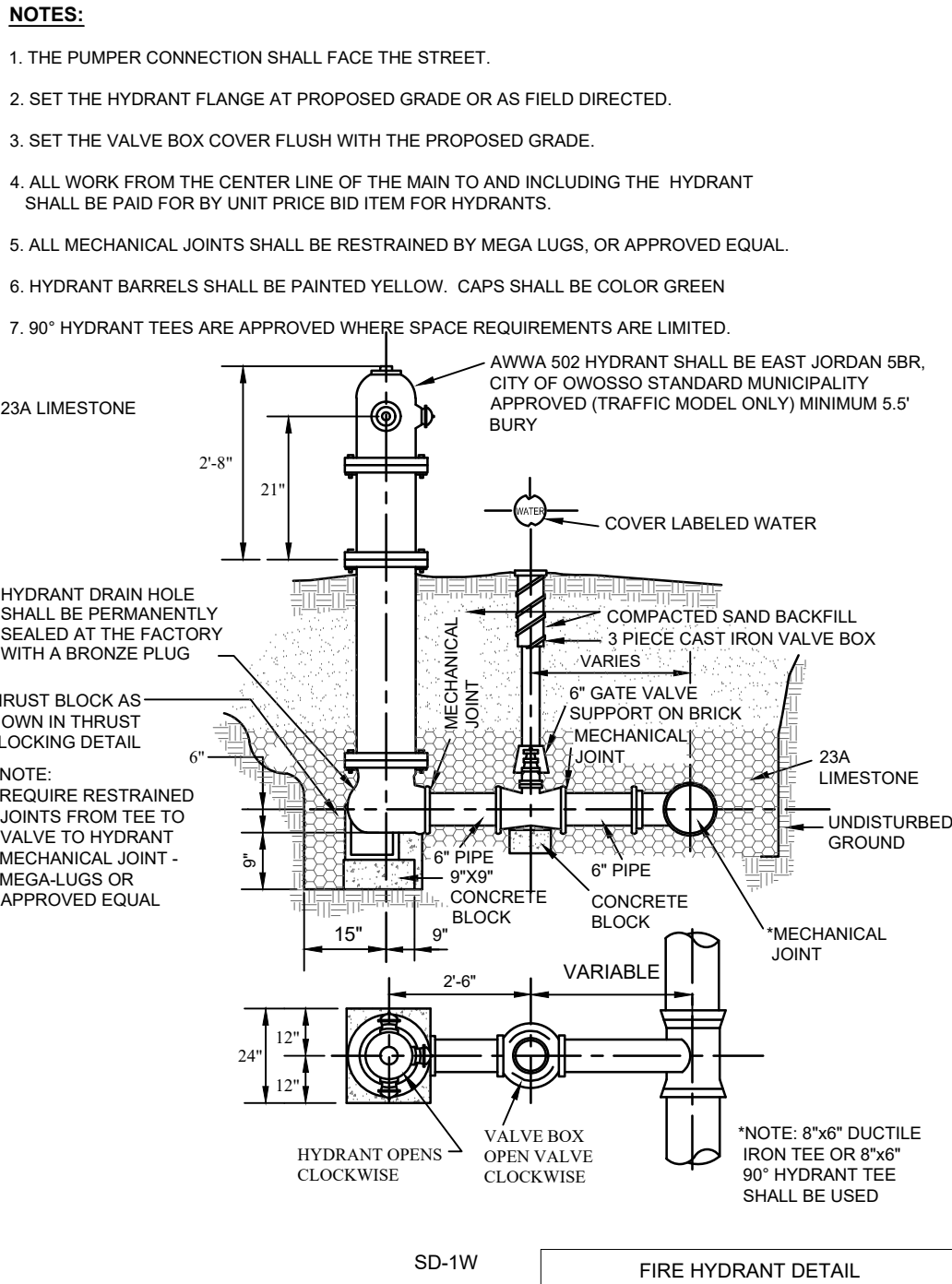


CITY OF OWOSSO, MICHIGAN
ENGINEERING DIVISION
DEPT. OF PUBLIC SERVICE

NO.	REVISIONS	DATE	BY
1	DRAFT PLANS	1/17/25	CW
2	ELGE PERMIT SUBMITTAL	2/24/25	CW
3	IFB PLANS	4/17/25	CW
ORIGINAL PLAN			
CHECKED BY			APPROVED BY

BENCH MARK DATA	
ELEV.	DESCRIPTION

MAIN REPLACEMENT PROJECT - CONTRACT 2 -01 WATER MAIN NOTES AND DETAILS	JANUARY, 2025 PROJECT NO.	FIELD BOOK PG.
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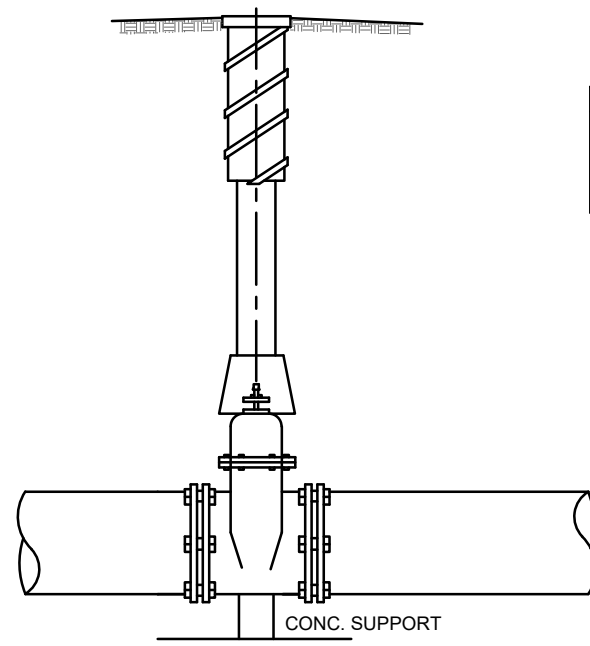
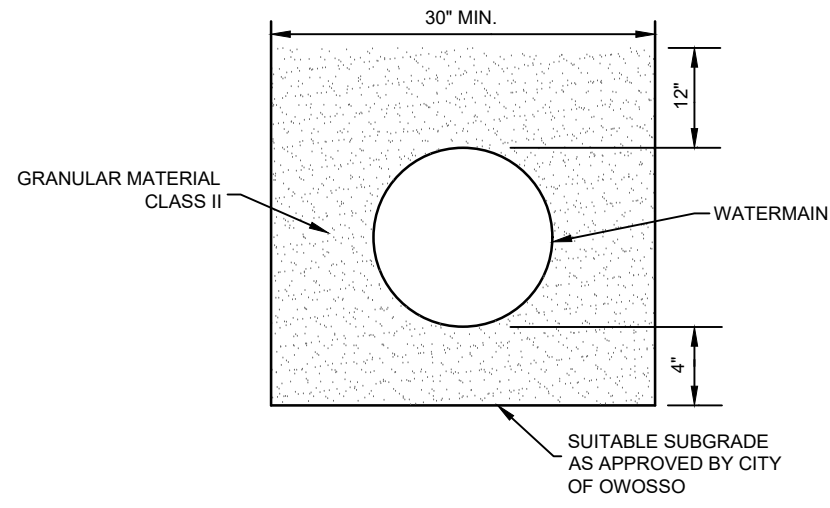
MINIMUM PIPE RESTRAINT LENGTH SCHEDULE FOR GROUND BURIED PRESSURE PIPES(1)

LENGTH (IN FEET) OF RESTRAINT REQUIRED (2)									
DEFLECTION ANGLE	22 1/4°	33 3/4°	45°	56 1/4°	67 1/2°	78 3/4°	90° OR DEAD END		
PIPE									
6"	3	6	11	16	23	29	37		
8"	4	8	15	22	31	41	50		
10"	5	11	18	28	38	49	61		

* WHEN MANUFACTURER SPECIFICATIONS CALL FOR GREATER RESTRAINT LENGTHS THE GREATER LENGTHS SHALL BE INSTALLED. WHEN THE MANUFACTURER SPECIFICATIONS CALL FOR LESSER RESTRAINT LENGTHS THEN THE ABOVE LENGTHS SHALL BE INSTALLED

1. THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE + WATER HAMMER). FOR OTHER TEST PROCEDURES, ALL VALUES ARE TO BE INCREASED PROPORTIONALLY.

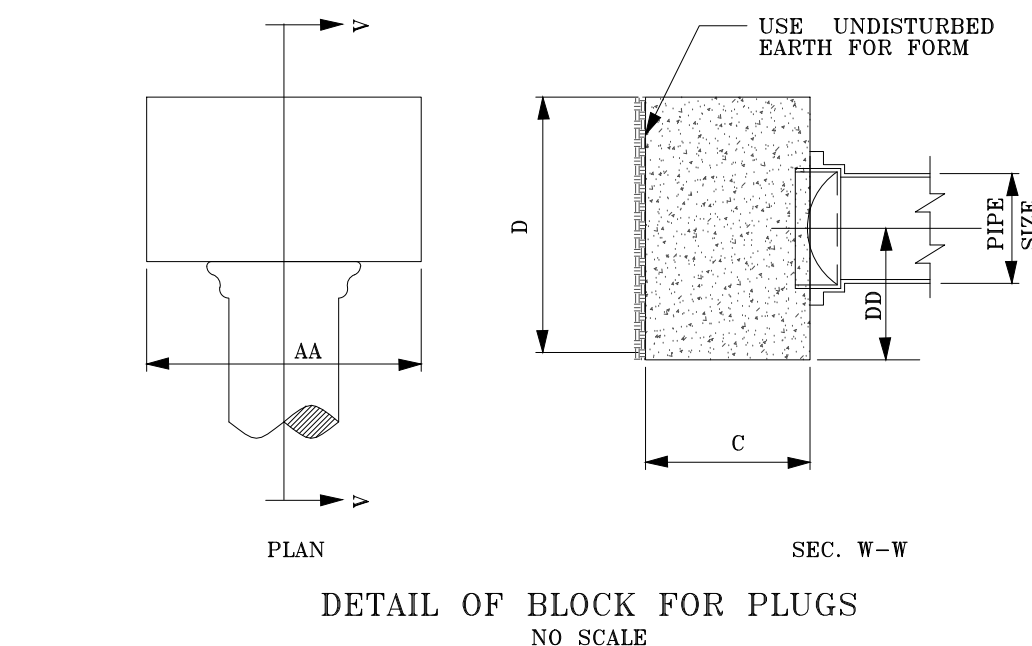
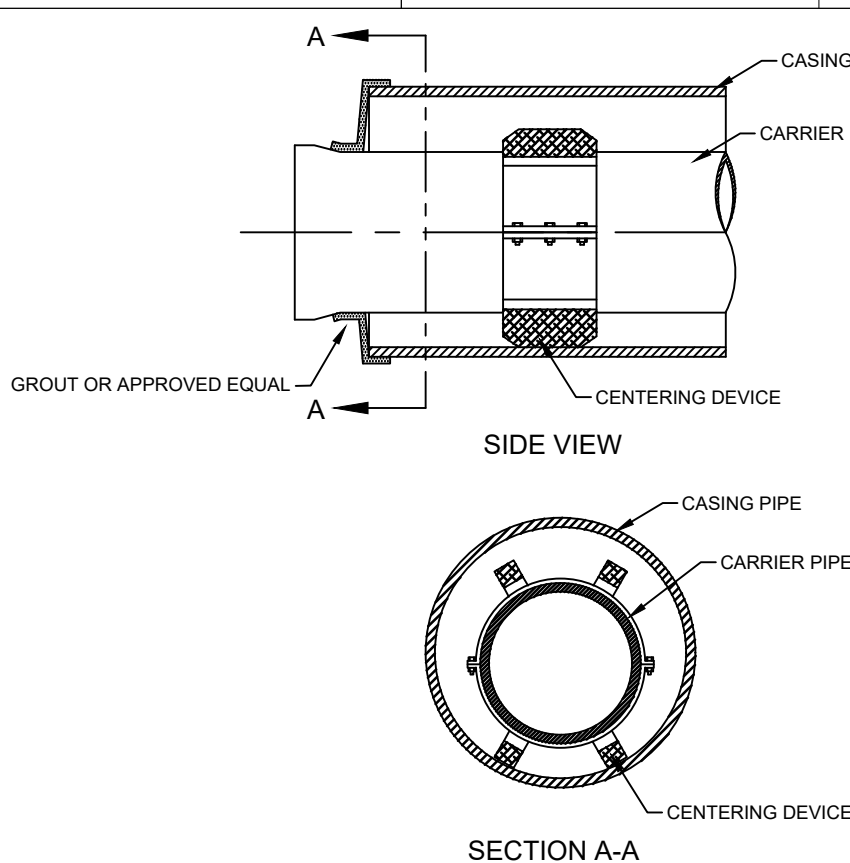
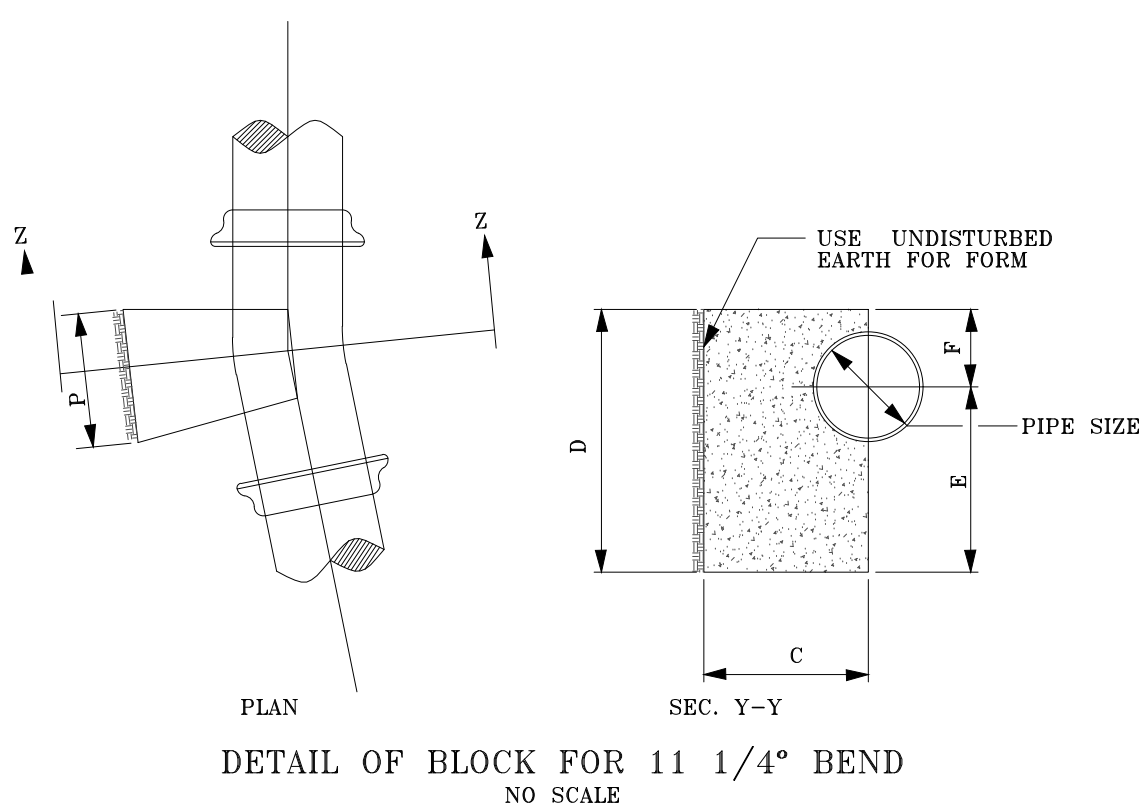
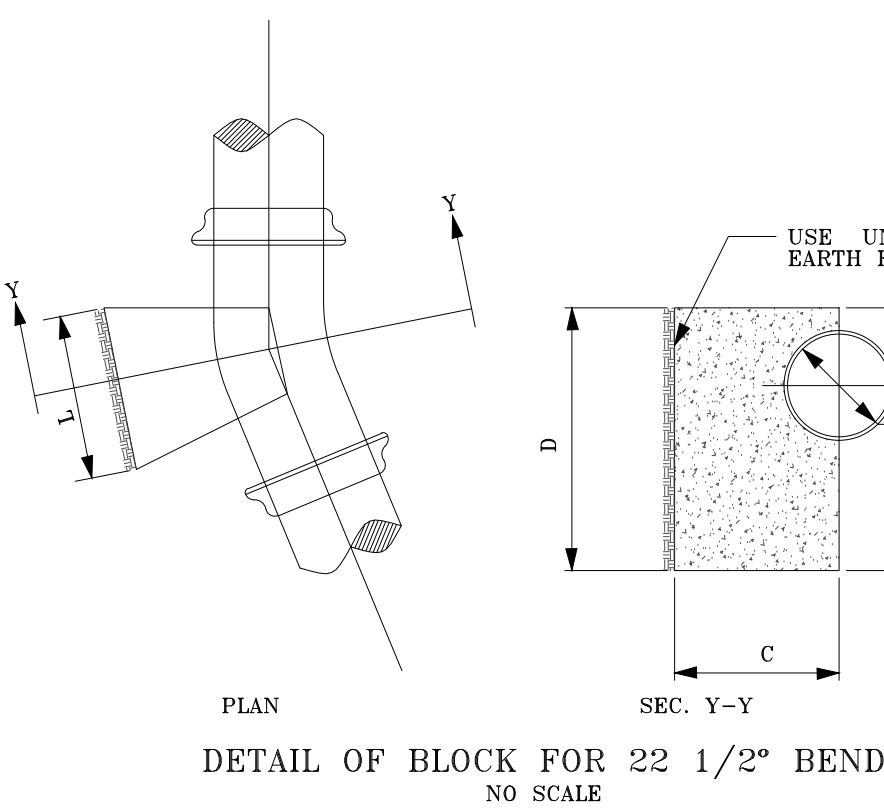
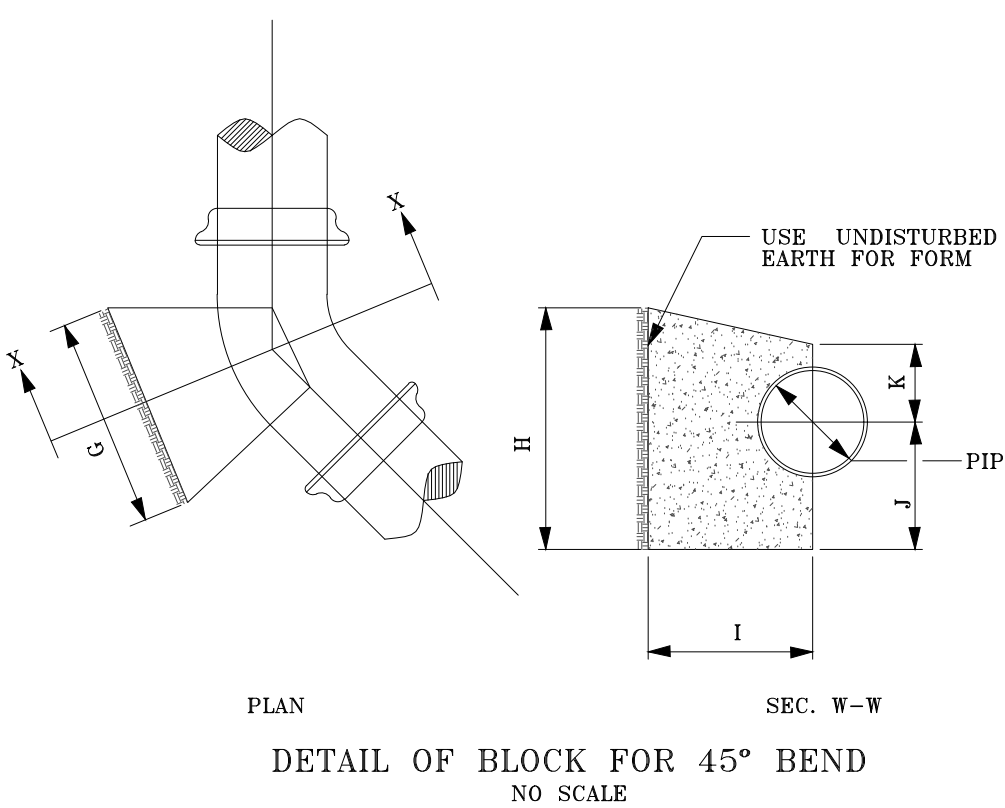
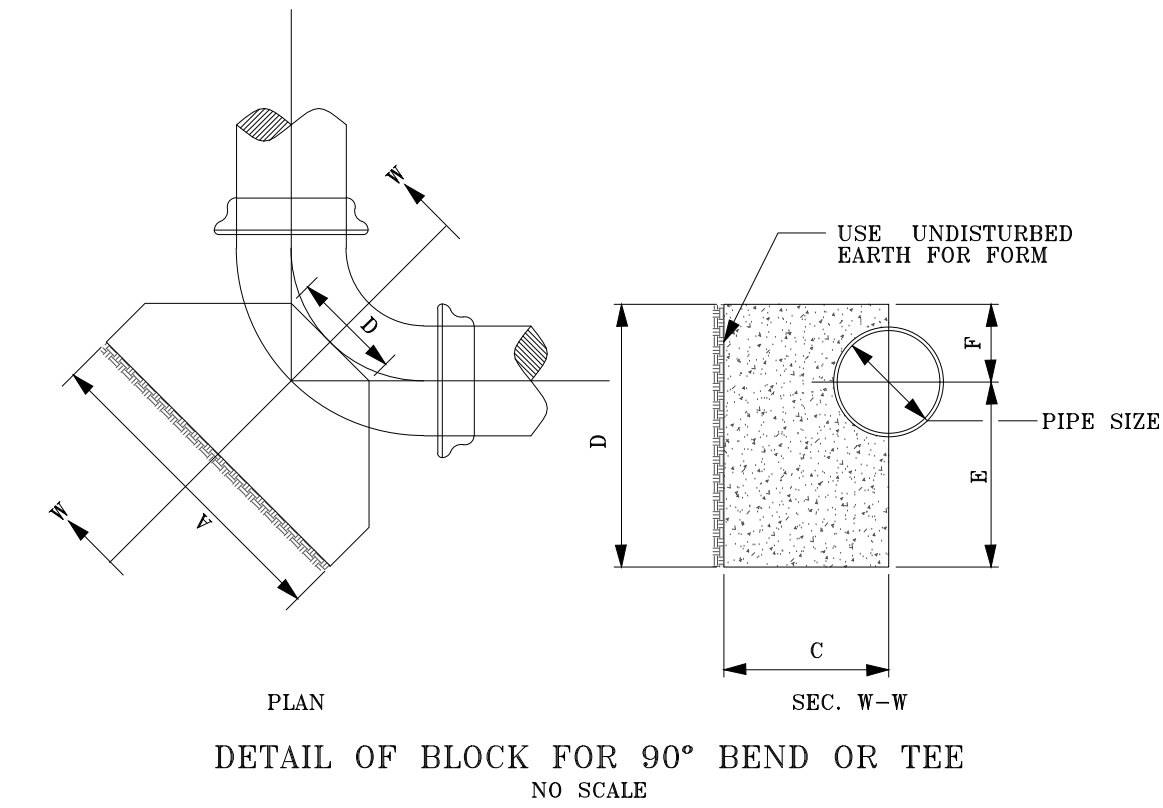
2. IN EACH DIRECTION FROM POINT OF DEFLECTION OR TERMINATION EXCEPT FOR A TEE AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE TEE STEM.



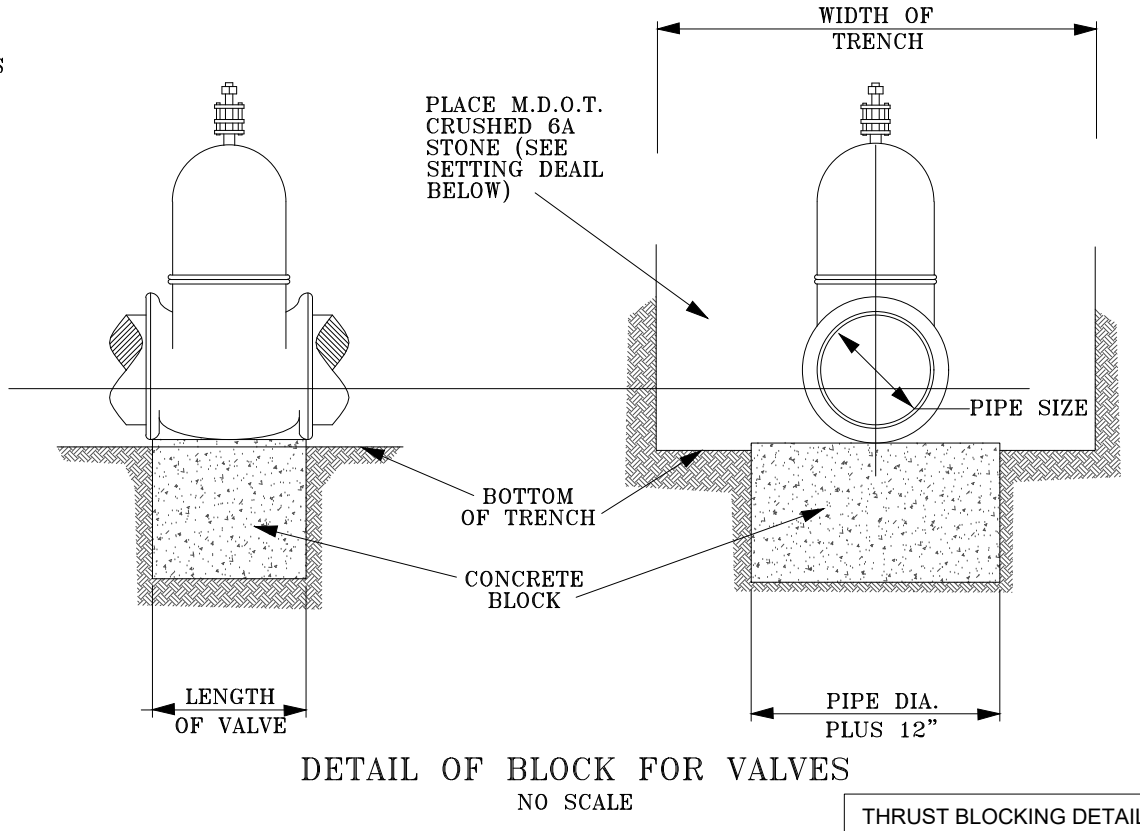
VALVE SIZE	MIN. BASIN SIZE
6"	BOX-3 PIECE
8"	BOX-3 PIECE
10"	BOX-3 PIECE
12"	BOX-3 PIECE

NOTE:

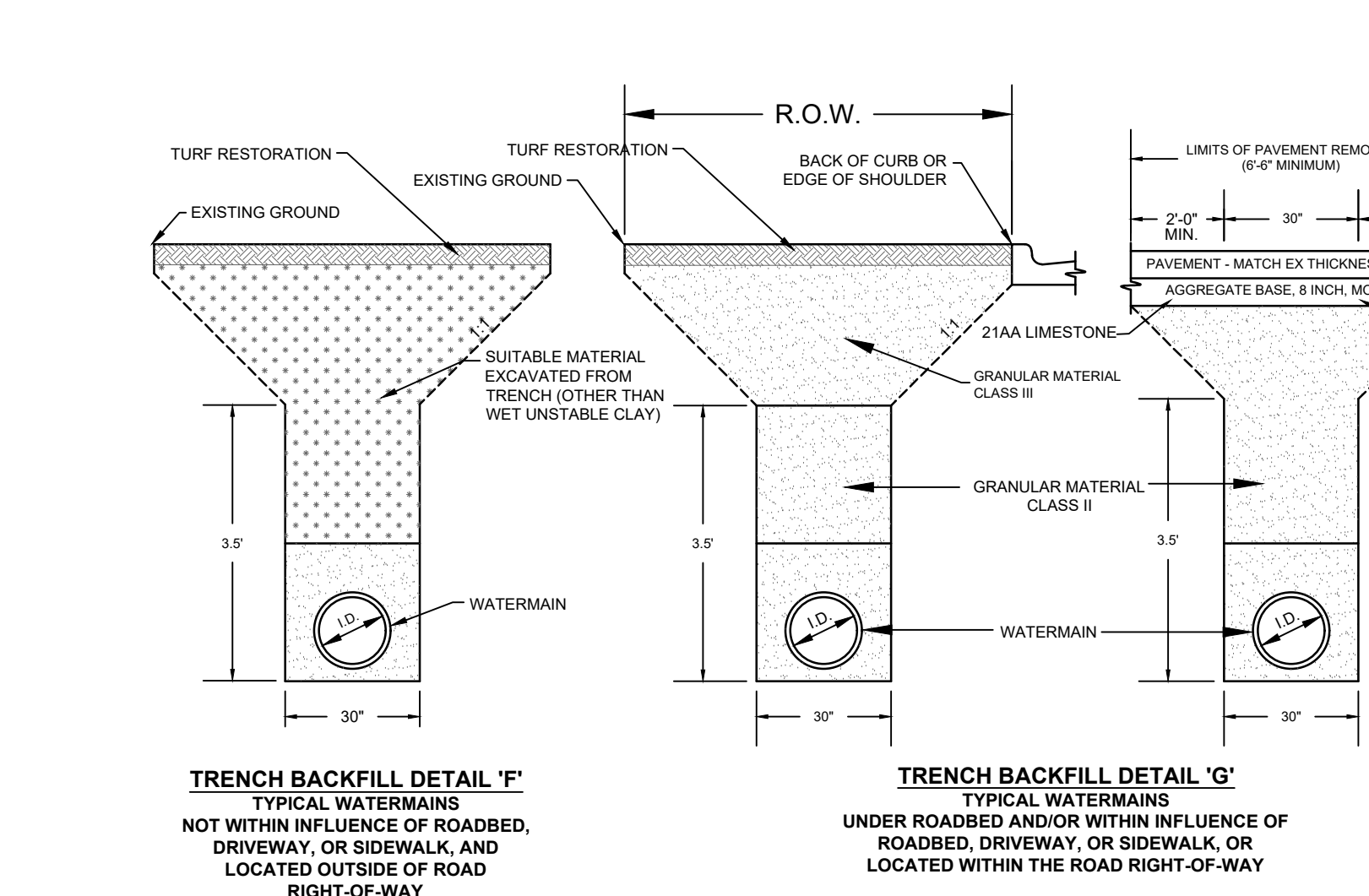
ALL MECHANICAL JOINTS SHALL BE RESTRAINED WITH MEGA LUGS OR APPROVED EQUAL. LENGTH OF RESTRAINT SHALL BE DETERMINED BY MANUFACTURER AND DIPRA, AND APPROVED BY CITY OF OWOSSO. THE MINIMUM REQUIRED RESTRAINT LENGTHS ARE SHOWN IN DETAIL SD-7W. MANUFACTURER RESTRAINT LENGTHS THAT ARE LESS THAN SHOWN IN SD-7W MUST BE APPROVED BY CITY OF OWOSSO.



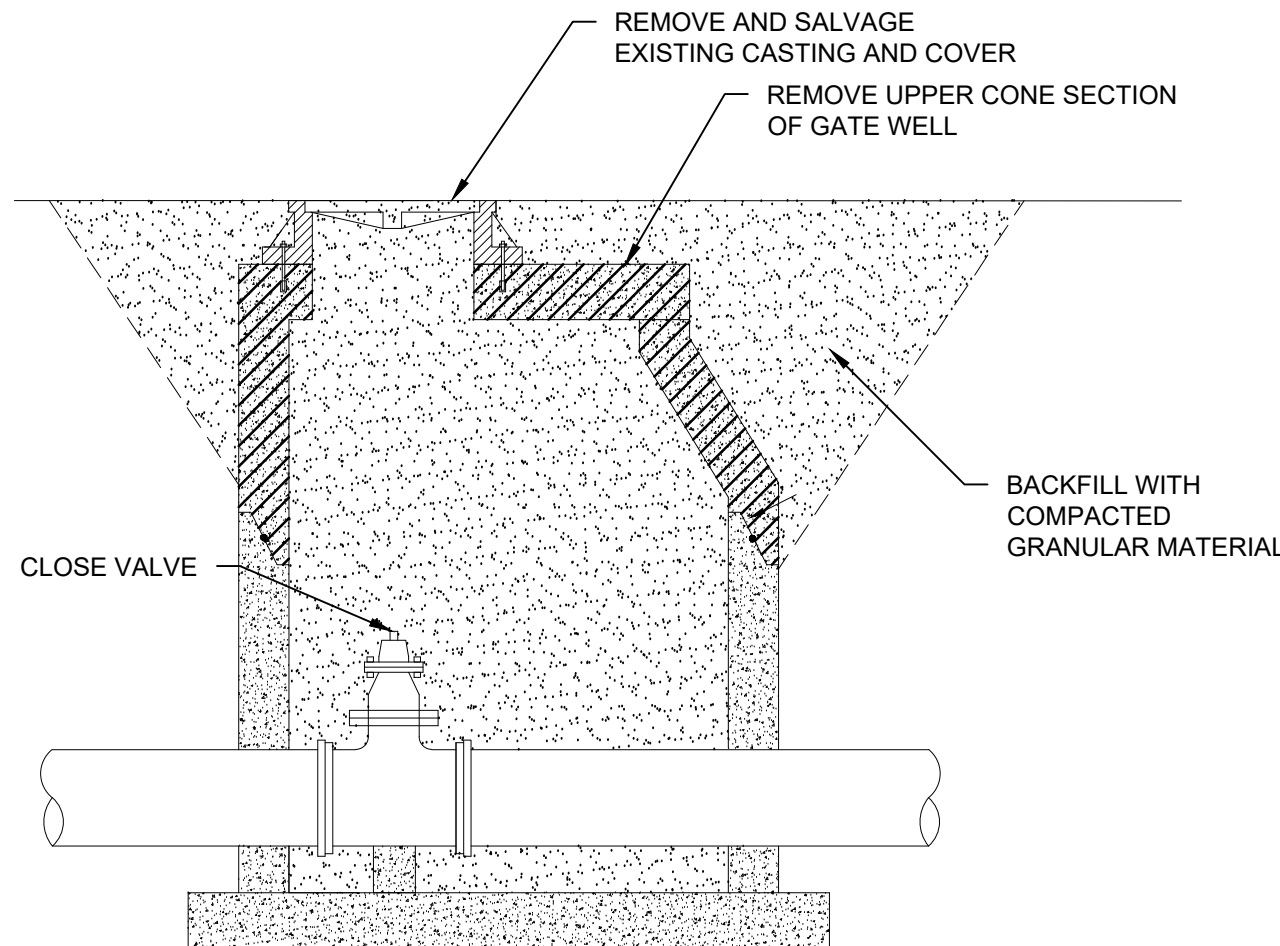
NOTE: TABLE BELOW IS BASED IN WATER MAIN PRESSURE OF 100 P.S.I. WIRTH NOMAL CLAY SOIL FOR WATER MAIN PRESSURE OF 150 P.S.I., INCREASE THE AREA BY 50%; FOR 180 P.S.I., INCREASE BY 80% AND ETC.. FOR SOFT AND ABNORMAL SOIL CONITIONS, THE THRUST BLOCK SIZE SHALL BE DETERMINED BY THE ENGINEER.														NOTE: THE CONCRETE USED FOR BLOCKING SHALL MINIMUM COMPRESSIVE STRENGTH OF 3000 PER SQUARE INCH IN TWENTY-EIGHT (28)														
SIZE OF MAIN	PLUGS				MINIMUM CONCRETE REQUIRED	90° BENDS OR TEE				MINIMUM CONCRETE REQUIRED	45° BENDS				MINIMUM CONCRETE REQUIRED	22 1/2° BENDS				MINIMUM CONCRETE REQUIRED	11 1/4° BENDS				MINIMUM CONCRETE REQUIRED	SIZE OF MAIN		
	AA	BB	CC	DD		A	B	C	D	E	F	G	H	I	J	K		L	M	N	O		P	Q	R	S		
4"	1'-0"	1'-0"	1'-0"	0'-6"	0.04 CYD	1'-0"	1'-0"	1'-0"	0'-8"	0'-6"	0'-6"	1'-6"	1'-0"	1'-0"	0'-6"	0'-6"	0.04 CYD	0'-8"	0'-8"	1'-0"	0'-4"	0.03 CYD	0'-6"	0'-6"	1'-0"	0'-4"	4"	
6"	1'-6"	1'-0"	1'-0"	0'-6"	0.06 "	2'-0"	1'-0"	1'-0"	0'-8"	0'-6"	0'-6"	0"	1'-6"	1'-0"	1'-0"	0'-6"	0'-6"	0.04 "	1'-0"	1'-0"	1'-0"	0'-6"	0.03 "	0'-7"	0'-7"	1'-0"	0'-6"	6"
8"	2'-0"	1'-6"	1'-0"	0'-9"	0.11 "	2'-0"	2'-0"	1'-0"	0'-10"	1'-0"	0'-9"	0.12 "	2'-0"	1'-0"	1'-0"	0'-6"	0'-6"	0.04 "	1'-6"	1'-0"	1'-0"	0'-6"	0.04 "	0'-9"	0'-9"	1'-0"	0'-02 "	8"
10"	2'-0"	2'-0"	1'-3"	1'-0"	0.19 "	3'-0"	2'-0"	1'-3"	1'-0"	0'-9"	0'-9"	0.19 "	3'-0"	1'-6"	1'-3"	0'-9"	0'-9"	0.11 "	1'-6"	1'-6"	1'-3"	0'-6"	0.07 "	1'-0"	1'-0"	1'-3"	0'-04 "	10"
12"	2'-6"	2'-0"	1'-6"	1'-0"	0.28 "	3'-0"	2'-0"	1'-6"	1'-2"	1'-3"	1'-0"	0.32 "	2'-0"	2'-0"	1'-6"	1'-0"	0'-9"	0.15 "	2'-0"	1'-2"	1'-6"	0'-07 "	0.07 "	1'-0"	1'-8"	1'-6"	0.05 "	12"
14"	3'-0"	2'-6"	1'-9"	1'-3"	0.49 "	3'-0"	2'-6"	1'-9"	1'-4"	1'-6"	1'-3"	0.49 "	3'-0"	2'-0"	1'-9"	1'-0"	0.29 "	0.29 "	2'-0"	1'-9"	0'-09 "	0.16 "	1'-6"	1'-4"	1'-9"	0.12 "	14"	
16"	3'-6"	3'-0"	2'-0"	1'-6"	0.52 "	4'-0"	3'-0"	2'-0"	1'-6"	1'-6"	1'-3"	0.69 "	3'-0"	3'-0"	2'-0"	1'-6"	1'-3"	0.47 "	2'-0"	2'-0"	1'-0"	0.24 "	2'-0"	1'-6"	2'-0"	0.20 "	16"	
18"	4'-0"	3'-0"	2'-3"	1'-6"	1.00 "	4'-0"	4'-0"	2'-3"	1'-8"	2'-0"	1'-6"	1.06 "	4'-0"	3'-0"	2'-3"	1'-6"	1'-3"	0.51 "	3'-0"	2'-0"	2'-3"	1'-0"	0.48 "	2'-0"	1'-8"	2'-3"	0.24 "	18"
20"	4'-0"	4'-0"	2'-6"	2'-0"	1.45 "	5'-0"	4'-6"	2'-6"	2'-0"	2'-3"	1'-9"	1.23 "	4'-0"	3'-0"	2'-6"	1'-6"	1'-6"	0.82 "	3'-0"	2'-6"	2'-6"	1'-3"	0.58 "	2'-0"	1'-10"	2'-6"	0.30 "	20"
24"	5'-0"	5'-0"	3'-0"	2'-6"	2.78 "	6'-0"	5'-6"	3'-0"	2'-3"	2'-9"	1'-9"	2.74 "	4'-0"	4'-0"	3'-0"	2'-0"	1'-9"	1.21 "	3'-0"	3'-0"	3'-0"	1'-6"	0.80 "	2'-6"	2'-2"	3'-0"	0.42 "	24"
30"	6'-0"	6'-0"	3'-9"	3'-0"	4.96 "	7'-0"	7'-0"	3'-9"	2'-6"	3'-6"	2'-6"	5.39 "	5'-6"	5'-0"	3'-9"	2'-6"	2'-0"	2.14 "	4'-0"	4'-0"	3'-9"	1'-6"	1.35 "	3'-0"	2'-8"	3'-9"	0.48 "	30"
36"	8'-0"	6'-0"	4'-6"	3'-0"	8.00 "	8'-0"	7'-6"	4'-6"	3'-0"	3'-9"	2'-9"	8.12 "	6'-0"	6'-0"	4'-6"	3'-0"	2'-6"	4.03 "	5'-0"	4'-0"	4'-6"	2'-0"	2.77 "	3'-0"	3'-2"	4'-6"	1.36 "	36"
42"	8'-0"	8'-0"	5'-3"	4'-0"	12.44 "	9'-0"	8'-0"	5'-3"	3'-6"	4'-0"	3'-0"	11.58 "	7'-0"	7'-0"	5'-3"	3'-6"	3'-0"	6.43 "	5'-0"	5'-0"	5'-3"	2'-6"	3.85 "	4'-0"	3'-9"	5'-3"	1.77 "	42"



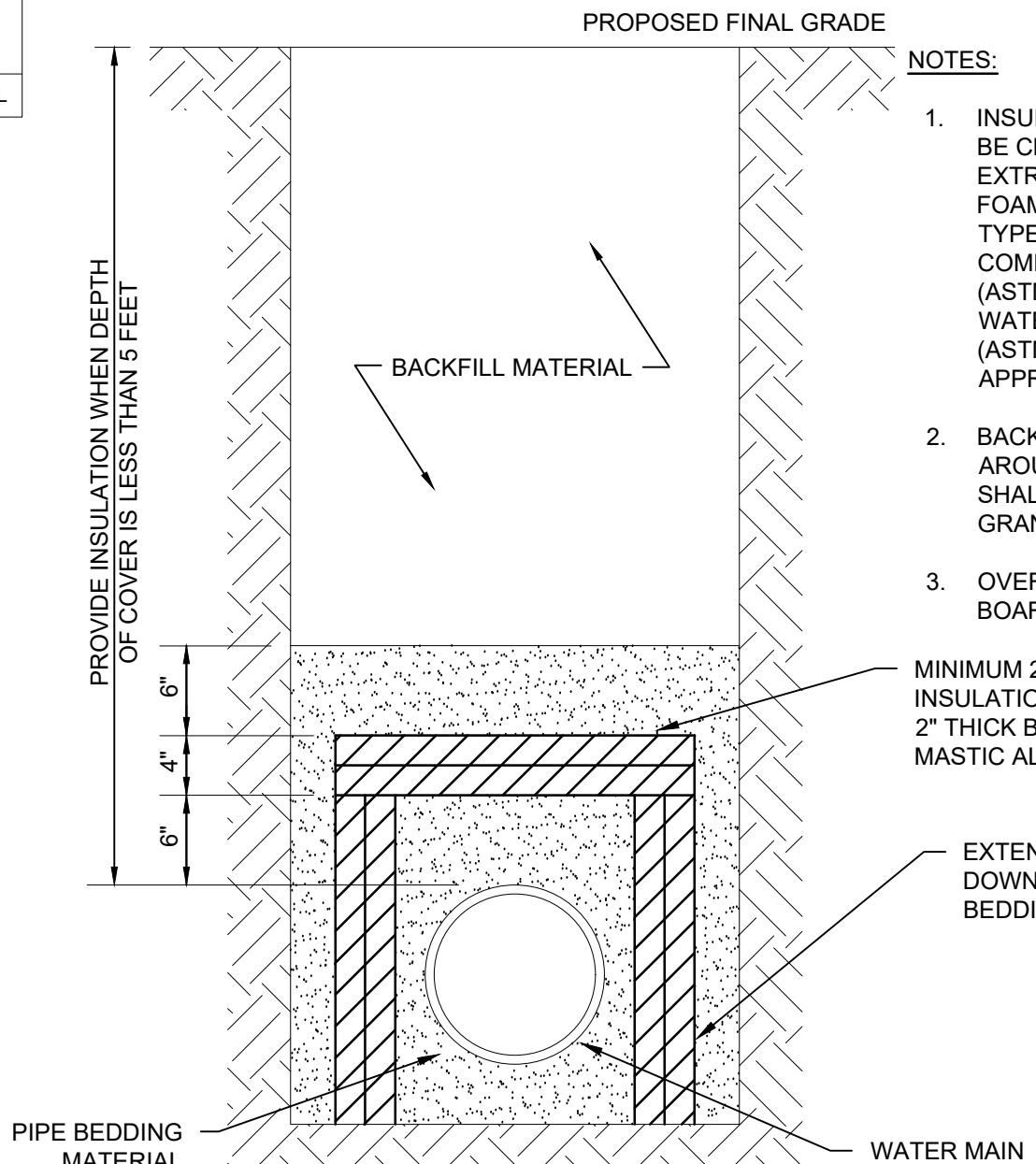
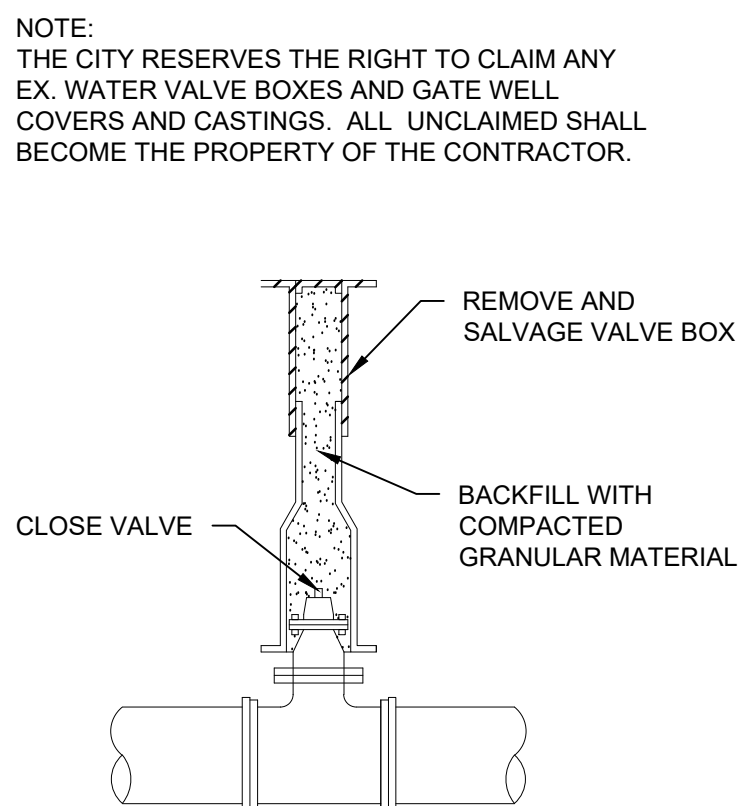
- NOTES:**
1. CASING PIPE SHALL BE EITHER REINFORCED CONCRETE PIPE OR SDR-26 PLASTIC PIPE
 2. FOR CARRIER PIPES LESS THAN SIX (6) INCHES IN DIAMETER, THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE AT LEAST TWO (2) INCHES GREATER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE JOINTS OR COUPLINGS.
 3. FOR CARRIER PIPES SIX (6) INCHES OR GREATER IN DIAMETER, THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE AT LEAST FOUR (4) INCHES GREATER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE JOINTS OR COUPLINGS.
 4. ALL CASING PIPE ENDS THAT ARE BELOW GROUND LEVEL SHALL BE CONSTRUCTED AS TO PREVENT LEAKAGE OF ANY SUBSTANCE FROM THE CASING THROUGHOUT ITS LENGTH. EACH END OF THE CASING SHALL REQUIRE A SUFFICIENT SEAL TO PREVENT THE POTENTIAL FOR LEAKAGE OF ANY SUBSTANCE FROM THE CASING PIPE. GROUT FILL IS AN ACCEPTABLE METHOD INSTALLED BY PRESSURE GROUTING. IF USED, THE GROUT MATERIAL SHALL CONSIST OF NON-SHRINK SAND CEMENT SLURRY OR APPROVED EQUAL, AND SUFFICIENTLY SEAL THE CASING PIPE ENDS.



TRENCH BACKFILL DETAIL 'G' TYPICAL WATERMAINS UNDER ROADBED AND/OR WITHIN INFLUENCE OF ROADBED, DRIVEWAY, OR SIDEWALK, OR LOCATED WITHIN THE ROAD RIGHT-OF-WAY



EXISTING VALVE WITH VALVE BOX ABANDONMENT DETAIL NOT TO SCALE



WATER MAIN TRENCH INSULATION DETAIL NOT TO SCALE

MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
EROSION CONTROLS			
E1	SELECTIVE GRADING AND SHAPING		To reduce steep slopes and erosive velocities.
E2	GRUBBING OMITTED		For use on steep slopes to prevent rilling, gullyng, and reduce sheet flow velocity or where clear vision corridors are necessary.
E3	SLOPE ROUGHENING AND SCARRIFICATION		Where created grades cause increased erosive velocities. Promotes infiltration and reduces runoff velocity.
E4	TERRACES		On relatively long slopes up to 8% grades with fairly stable soils.
E5	DUST CONTROL		For use on construction sites, unpaved roads, etc. to reduce dust and sedimentation from wind and construction activities.
E6	MULCH		For use in areas subject to erosive surface flows or severe wind or on newly seeded areas.
E7	TEMPORARY SEEDING		Stabilization method utilized on construction sites where earth change has been initiated but not completed within a 2 week period.
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
E9	MULCH BLANKETS		On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.
E10	SODDING		On areas and slopes where immediate stabilization is required.
E11	VEGETATED CHANNELS		For use in created stormwater channels. Vegetation is used to slow water velocity and reduce erosion within the channel.
E12	RIPRAP		Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.
E13	GABION WALLS		On newly created or denuded stream banks to reduce velocity until permanent stabilization is achieved or on existing banks to retard erosive velocities.
E14	ENERGY DISSIPATOR		Where the energy transmitted from a concentrated flow of surface runoff is sufficient to erode receiving area or watercourse.
E15	TEMPORARY SLOPE DRAIN		Where surface runoff temporarily accumulates or sheet flows over the top of a slope and must be conveyed down a slope in order to prevent erosion.
E16	SLOPE DRAIN		Where concentrated flow of surface runoff must be permanently conveyed down a slope in order to prevent erosion.

B = BIOENGINEERING

MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E17	CELLULAR CONFINEMENT SYSTEMS		Used on steep slopes and high velocity channels.
E18	PLASTIC SHEETS		Used on exposed slopes, seeded areas, new ditch bottoms, and areas subject to surface runoff and erosion. Used as a liner in temporary channels and to stabilize stockpiles.
E19	TEMPORARY DRAINAGEWAY/ STREAM CROSSING		Use on construction sites where stream/ drainage way crossings are required.
E20	TEMPORARY BYPASS CHANNEL		Use within existing stream corridors when existing flow cannot be interrupted, and at culvert and bridge repair sites.
E21	LIVE STAKING		In areas requiring protection of slopes against surface erosion and shallow mass wasting.
EROSION / SEDIMENT CONTROLS			
ES31	CHECK DAM		Used to reduce surface flow velocities within constructed and existing flow corridors.
ES32	STONE FILTER BERM		Use primarily in areas where sheet or rill flow occurs and to accommodate dewatering flow.
ES33	FILTER ROLLS		In areas requiring immediate protection of slopes against surface erosion and gully formation and for perimeter sediment control.
ES34	SAND FENCE		For use in areas susceptible to wind erosion, especially where the ground has not yet been stabilized by other means.
ES35	DEWATERING		Use where construction activities are limited by the presence of water and dry work is required.
ES36	DIVERSION DIKE/BERM		Within existing flow corridors to address or prevent erosion and sedimentation, or on disturbed or unstable slopes subject to erosive surface water velocities.
ES37	DIVERSION DITCH		In conjunction with a diversion dike, or where diversion of upslope runoff is necessary to prevent damage to unstabilized or disturbed construction areas.
ES38	COFFERDAM/ SHEET PILING		Constructed along or within water corridor or waterbody to provide dry construction area.
ES39	STREAMBANK BIOSTABILIZATION		For use along banks where stream and riparian zones may have difficulty recovering from the long-term effects of erosion.
ES40	POLYMERS		To minimize soil erosion and reduce sedimentation in water bodies by increasing soil particle size.
ES41	WATTLES		In areas requiring protection of slopes against surface erosion and gully formation.

B = BIOENGINEERING

MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
SEDIMENT CONTROLS			
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S52	CATCH BASIN SEDIMENT GUARD		Use in or at stormwater inlets, especially at construction sites.
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
S54	TIRE WASH		For use on construction sites where vehicular traffic requires sediment removed from its tires in highly erosive areas.
S55	SEDIMENT BASIN		At the outlet of disturbed areas and at the location of a permanent detention basin.
S56	SEDIMENT TRAP		In small drainage areas, along construction site perimeters, and above check dams or drain inlets.
S57	VEGETATED BUFFER/ FILTER STRIP		Use along shorelines, waterways, or other sensitive areas. Slows velocity, reduces sediment load, and reduces erosion in areas of sheet flow.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.
S59	INLET PROTECTION FABRIC FENCE		Use at stormwater inlets, especially at construction sites.
S60	INLET PROTECTION STONE		Use around urban stormwater inlets.
S61	TURBIDITY CURTAIN		Use during construction adjacent to a water esource, to contain sediment within the work area when other BMP's cannot be used.

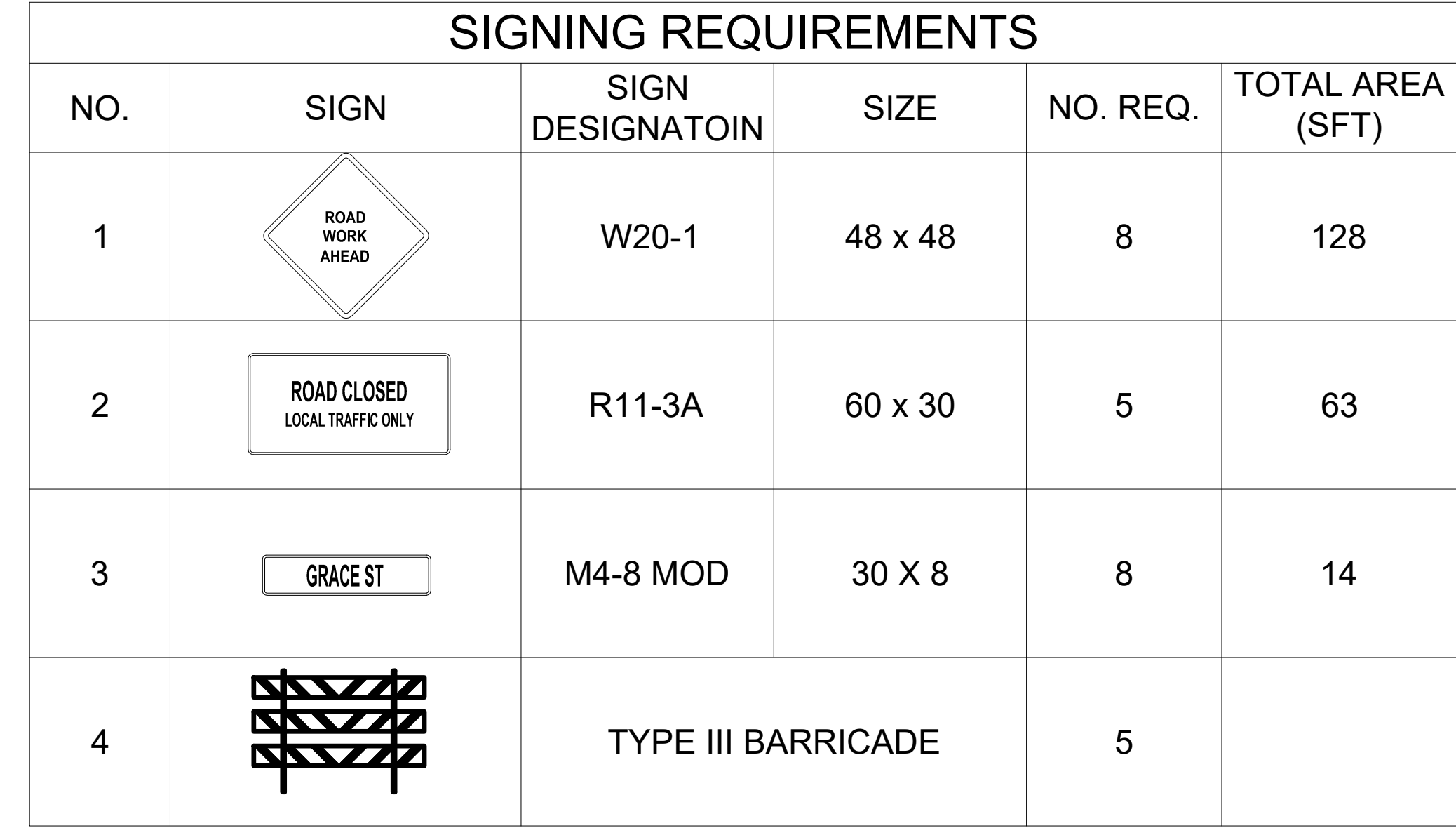
B = BIOENGINEERING

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE											
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV/DEC
STRIP AND STOCKPILE TOPSOIL											
ROUGH GRADE/ SEDIMENT CONTROL											
TEMP CONTROL MEASURES											
STORM FACILITIES								N/A			
TEMP CONSTRUCTION ROADS								N/A			
FOUNDATION/ BLDG. CONSTRUCTION								N/A			
SITE CONSTRUCTION											
PERM CONTROL MEASURES											
FINISH GRADING											
LANDSCAPING								N/A			

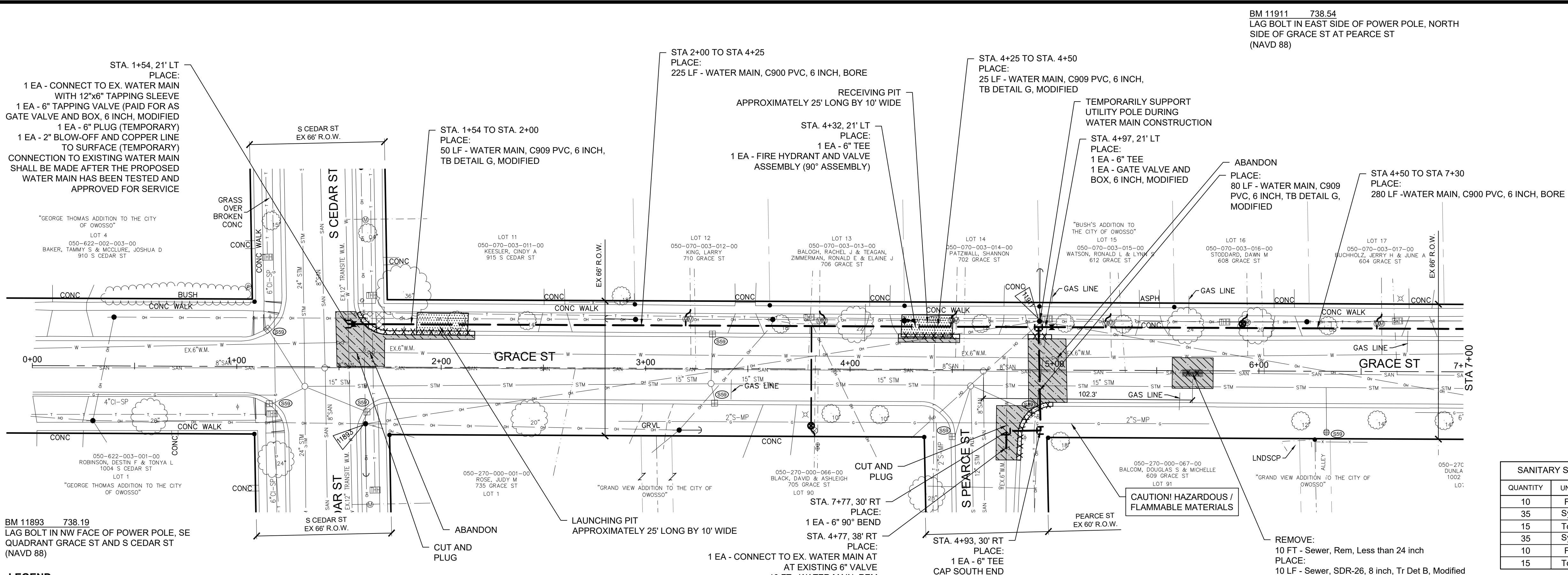
CONSTRUCTION SEQUENCE

1. INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES.
2. TRENCH EXCAVATION, WATER MAIN INSTALLATION, AND BACKFILL.
3. PERMANENT MEASURES, FINAL GRADING, SEEDING AND MULCHING.

SHEET NO.	DESCRIPTION
GR1	GRACE ST - COVER SHEET & TRAFFIC CONTROL PLAN
GR2-GR3	GRACE ST - WATER MAIN PLAN AND PROFILE
GR4	GRACE ST - SIDEWALK RAMP DETAIL



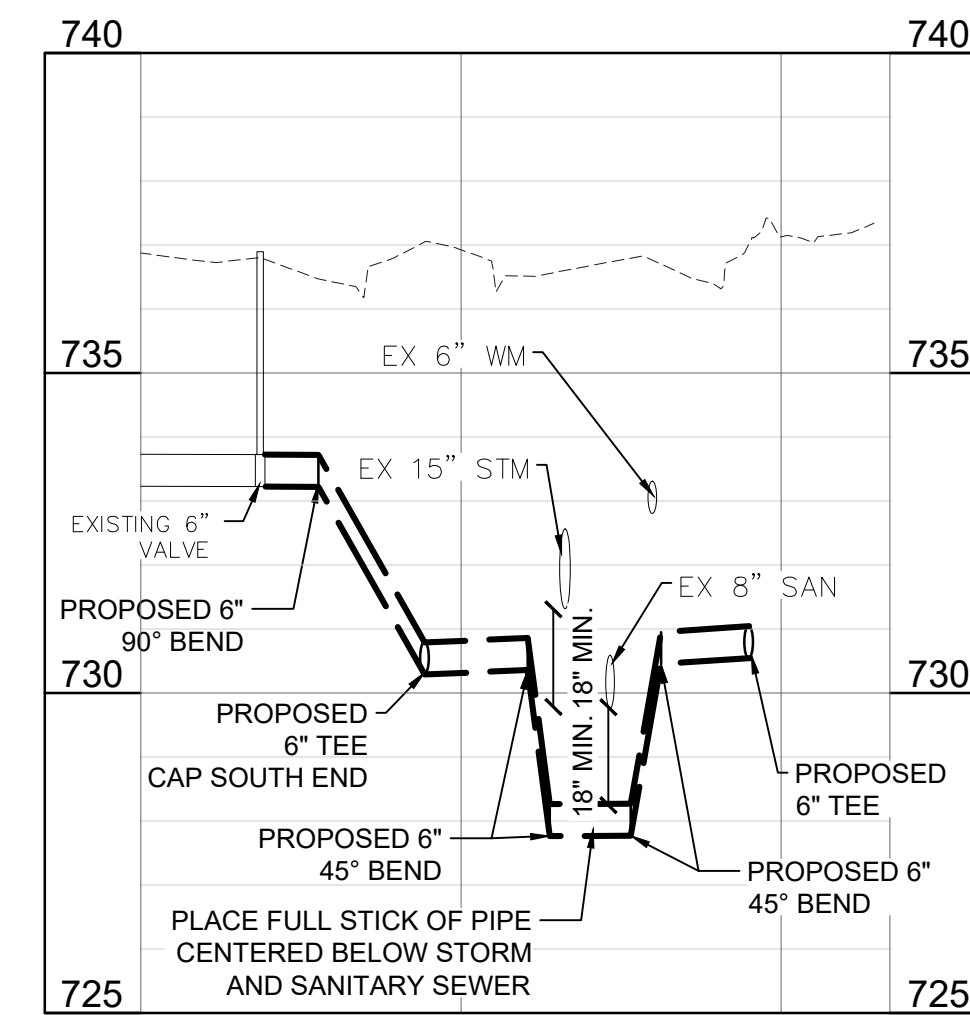
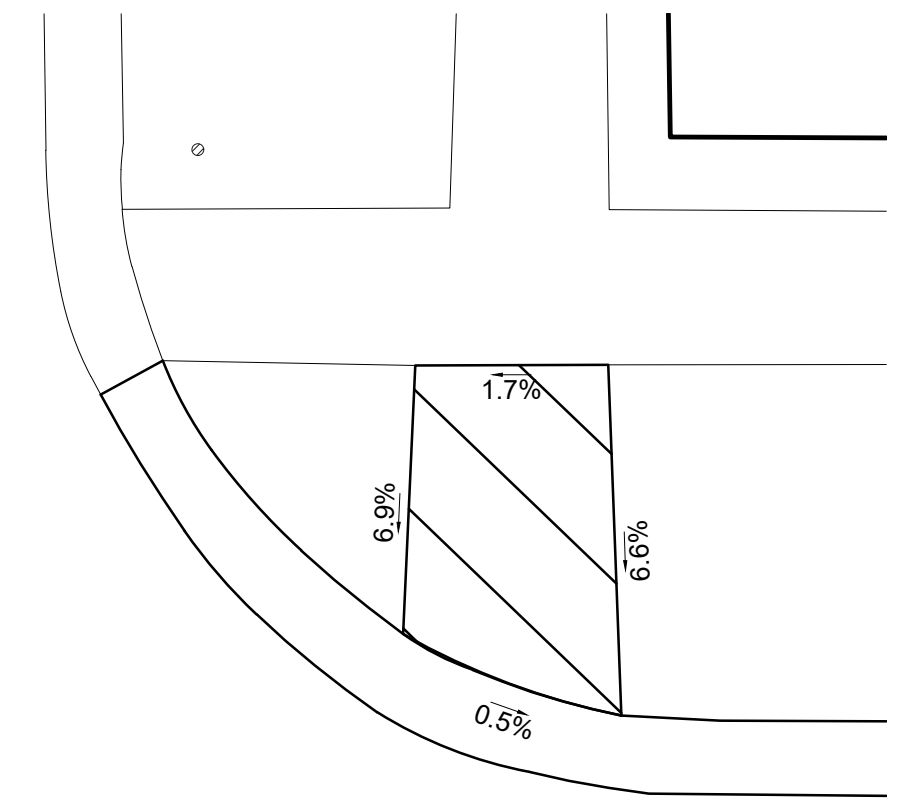
GR1	2025 WATER MAIN REPLACEMENT PROJECT - CONTRACT 2 DWSRF 7880-01		BENCH MARK DATA						CITY OF OWOSSO, MICHIGAN ENGINEERING DIVISION DEPT. OF PUBLIC SERVICE			
	GRACE STREET COVER SHEET & TRAFFIC CONTROL PLAN		ELEV.	DESCRIPTION	NO.	REVISIONS	DATE	BY				
					1	DRAFT PLANS	1/17/25	CW				
					2	ELGE PERMIT SUBMITTAL	2/24/25	CW				
					3	I/FB PLANS	4/17/25	CW				
JANUARY, 2025 PROJECT NO.	FIELD BOOK PG.								CHECKED BY	ORIGINAL PLAN	APPROVED BY	



- LEGEND**
- WATER MAIN
 - - - WATER SERVICE LINE
 - x GATE VALVE AND BOX, _INCH
 - REDUCER
 - ⬮ HYDRANT / VALVE
 - ⊙ CURB STOP
 - ⊙ METER PIT
 - XXXXXX Curb and Gutter, Rem
 - X-X-X-X- Sewer, Rem
 - ▨ Pavt, Rem
 - ▨ Sidewalk, Rem and Sidewalk, Conc, _inch or Curb Ramp, Conc, _inch (Proposed sidewalk shall be 5' wide)
 - ▬ Curb and Gutter, Conc, Det F4, Modified
 - ▬ Sewer, SDR-26, _inch, Tr Det B, Modified
 - ▬ Aggregate Base, 8 inch, Modified and HMA, 13
 - ▬ Driveway, Nonrein Conc, _inch
 - ▬ Approach, CI II, LM
 - ▬ Bore Pit
 - ⊙ STANDARD SOIL EROSION KEY

GRACE STREET
WATER MAIN PLAN

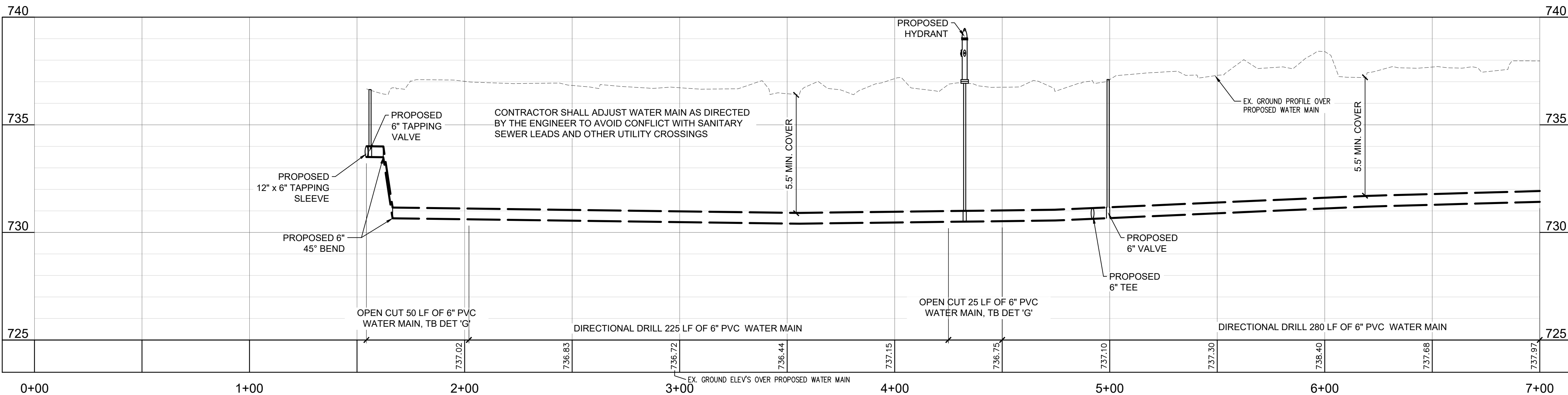
SIDEWALK RAMP DETAIL AT S CEDAR

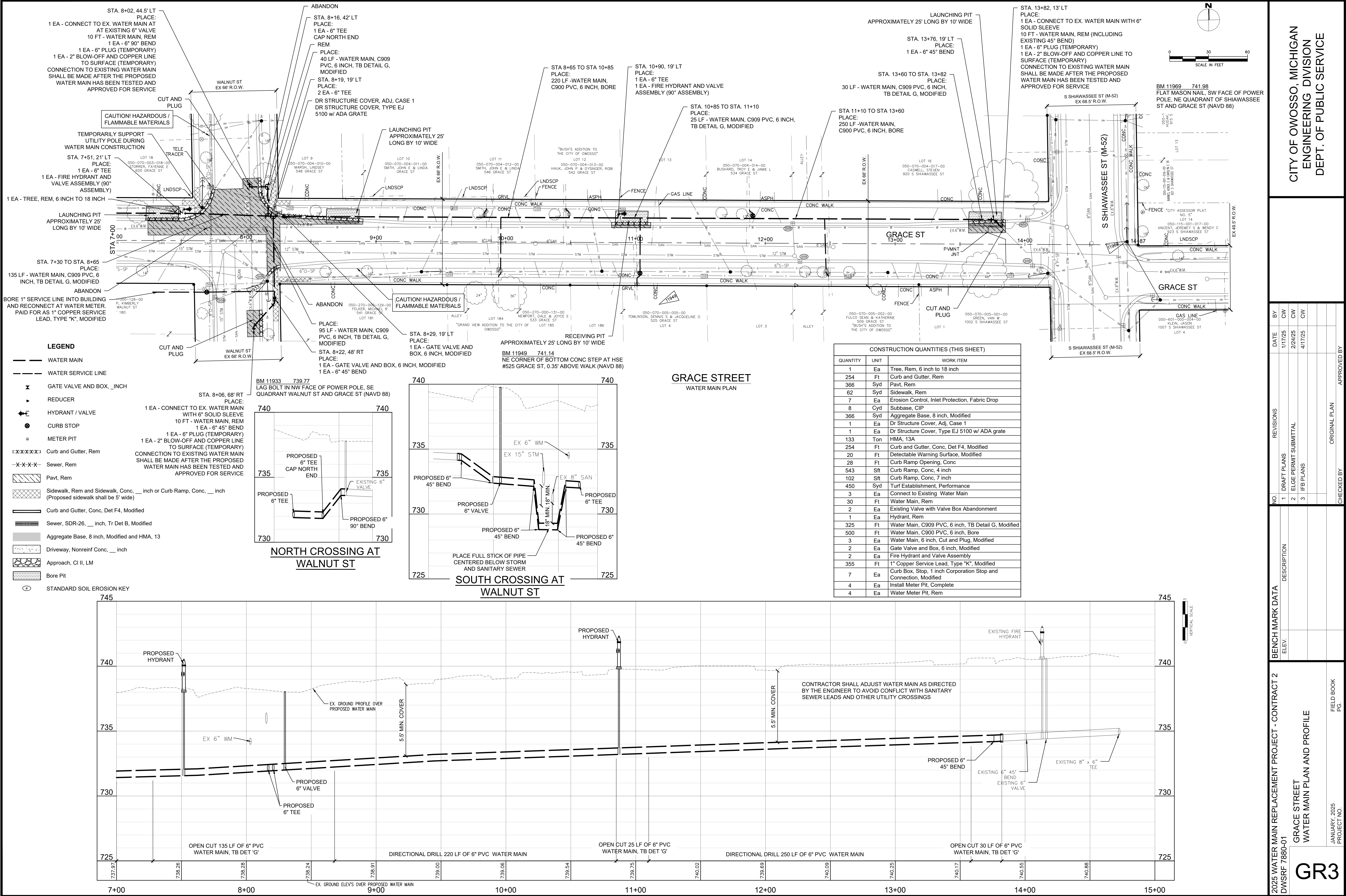


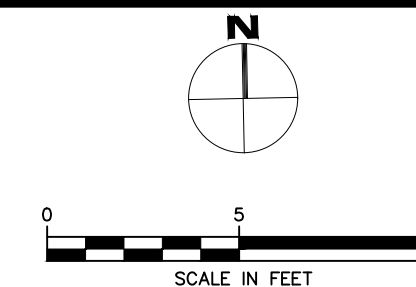
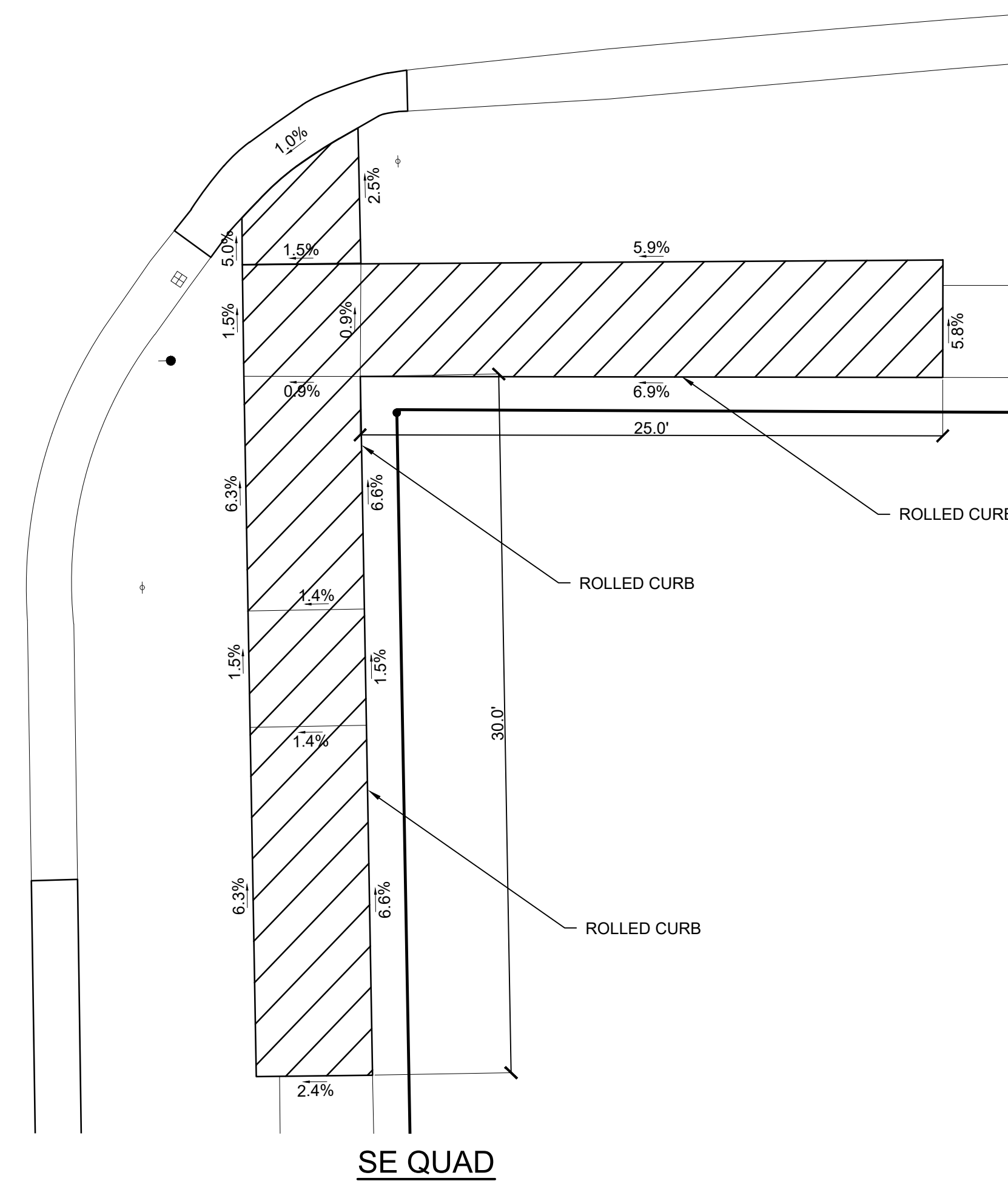
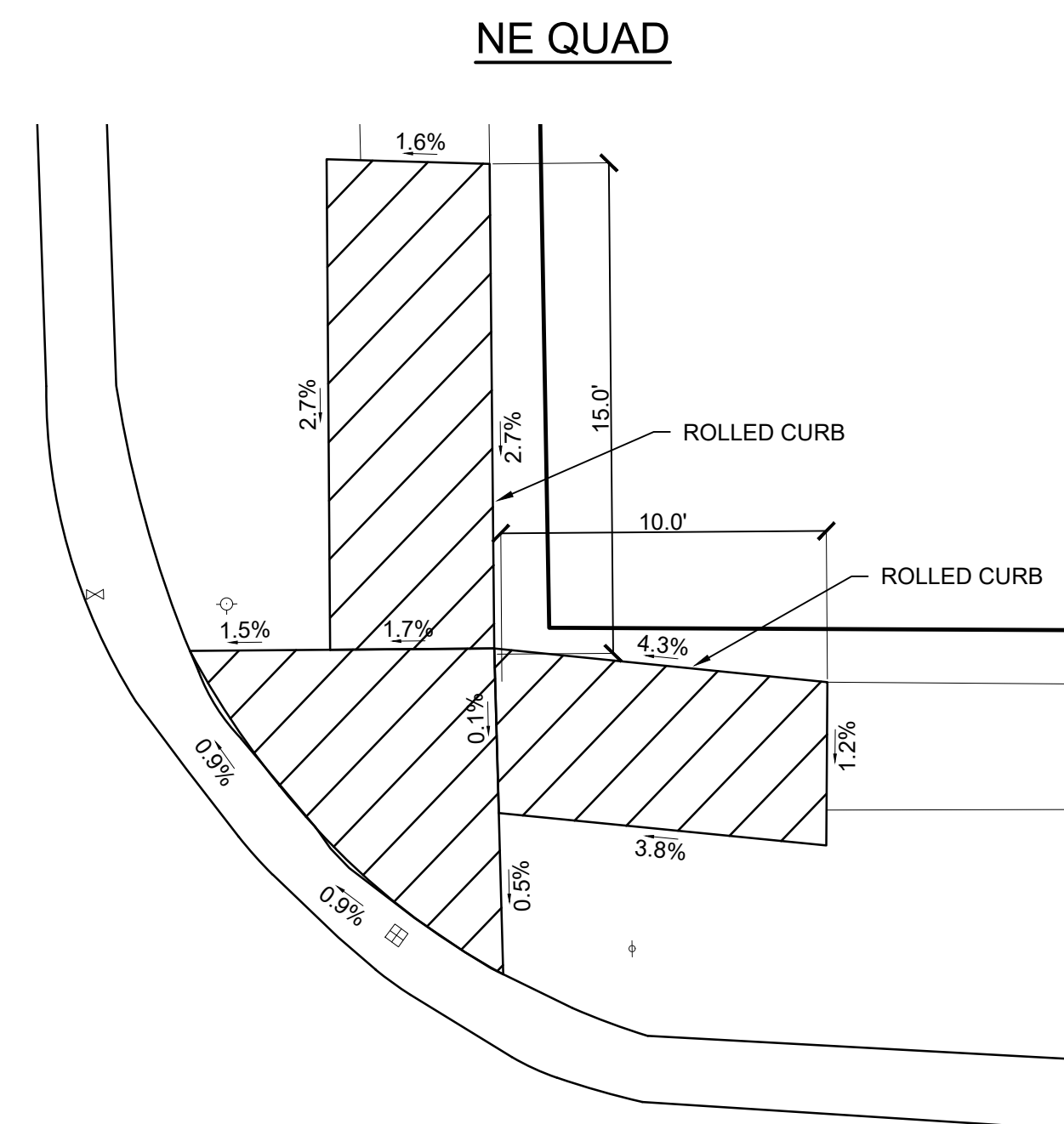
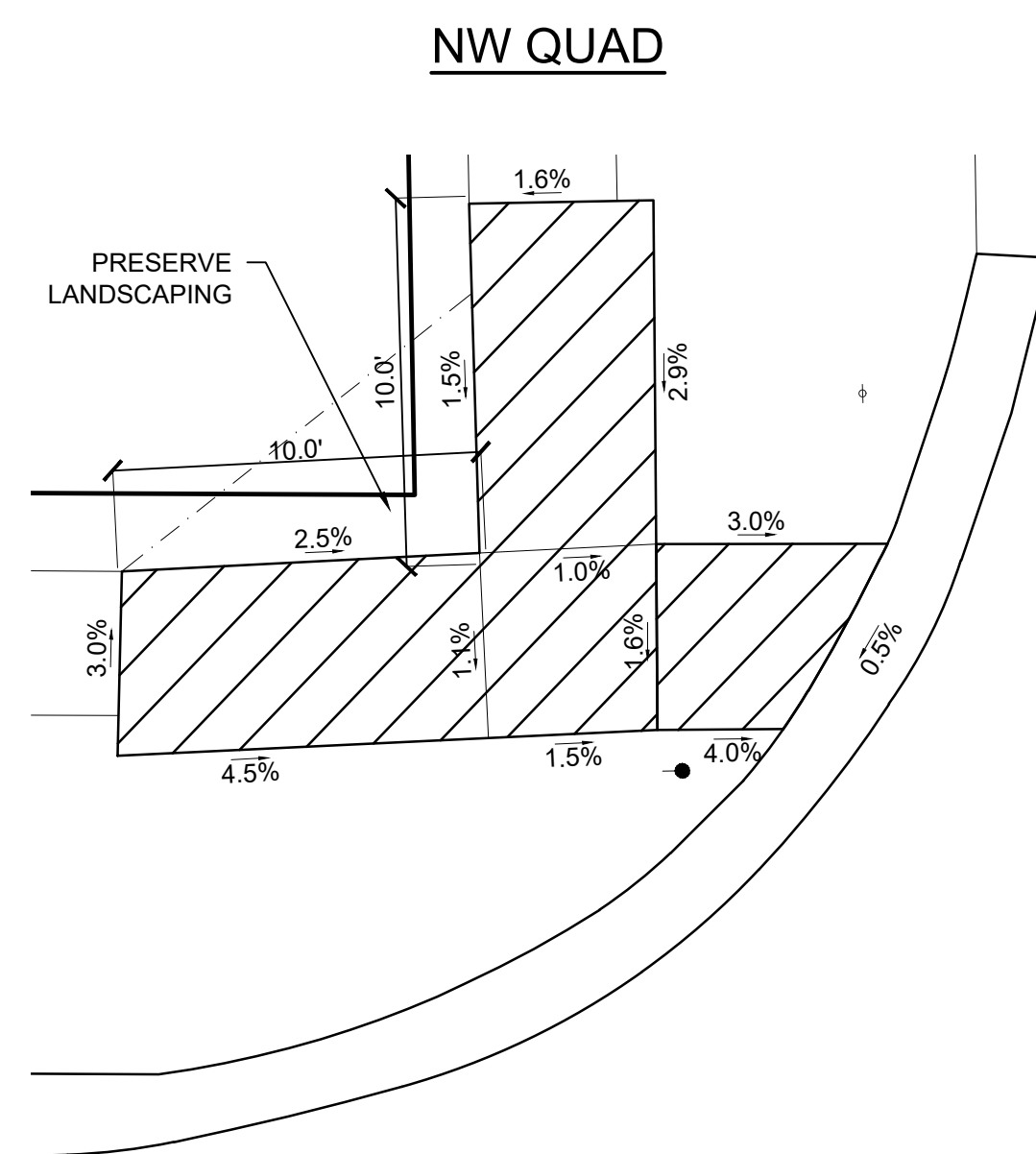
CROSSING AT PEARCE ST

SANITARY SEWER CONSTRUCTION QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	WORK ITEM
10	Ft	Sewer, Rem, Less than 24 inch
35	Syd	Pavt, Rem
15	Ton	Maintenance Gravel
35	Syd	Aggregate Base, 8 inch, Modified
10	Ft	Sewer, SDR-26, 8 inch, Tr Det B, Modified
15	Ton	HMA, 13A

WATER MAIN CONSTRUCTION QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	WORK ITEM
127	Ft	Curb and Gutter, Rem
177	Syd	Pavt, Rem
4	Syd	Sidewalk, Rem
8	Ea	Erosion Control, Inlet Protection, Fabric Drop
1	Cyd	Subbase, CIP
177	Syd	Aggregate Base, 8 inch, Modified
64	Ton	HMA, 13A
127	Ft	Curb and Gutter, Conc, Det F4, Modified
5	Ft	Detectable Warning Surface, Modified
7	Ft	Curb Ramp Opening, Conc
45	Sft	Curb Ramp, Conc, 7 inch
250	Syd	Turf Establishment, Performance
2	Ea	Connect to Existing Water Main
10	Ft	Water Main, Rem
2	Ea	Existing Valve with Valve Box Abandonment
155	Ft	Water Main, C909 PVC, 6 inch, TB Detail G, Modified
475	Ft	Water Main, C900 PVC, 6 inch, Bore
2	Ea	Water Main, 6 inch, Cut and Plug, Modified
2	Ea	Gate Valve and Box, 6 inch, Modified
1	Ea	Fire Hydrant and Valve Assembly
145	Ft	1" Copper Service Lead, Type "K", Modified
7	Ea	Curb Box, Stop, 1 inch Corporation Stop and Connection, Modified
5	Ea	Install Meter Pit, Complete
5	Ea	Water Meter Pit, Rem







SIDEWALK RAMP DETAIL AT WALNUT ST

2025 WATER MAIN REPLACEMENT PROJECT - CONTRACT 2
DWSRF 7880-01

2025 WATER MA
DWSRF 7880-01

GRACE STREET
SIDEWALK RAMP DETAIL

JANUARY, 2025
PROJECT NO. _____
FIELD BOOK
PG. _____

FIELD BOOK
PG.

NO.	REVISIONS	DATE	BY
1	DRAFT PLANS	1/17/25	CW
2	ELGE PERMIT SUBMITTAL	2/24/25	CW
3	IFB PLANS	4/17/25	CW
	ORIGINAL PLAN		
CHECKED BY	APPROVED BY		

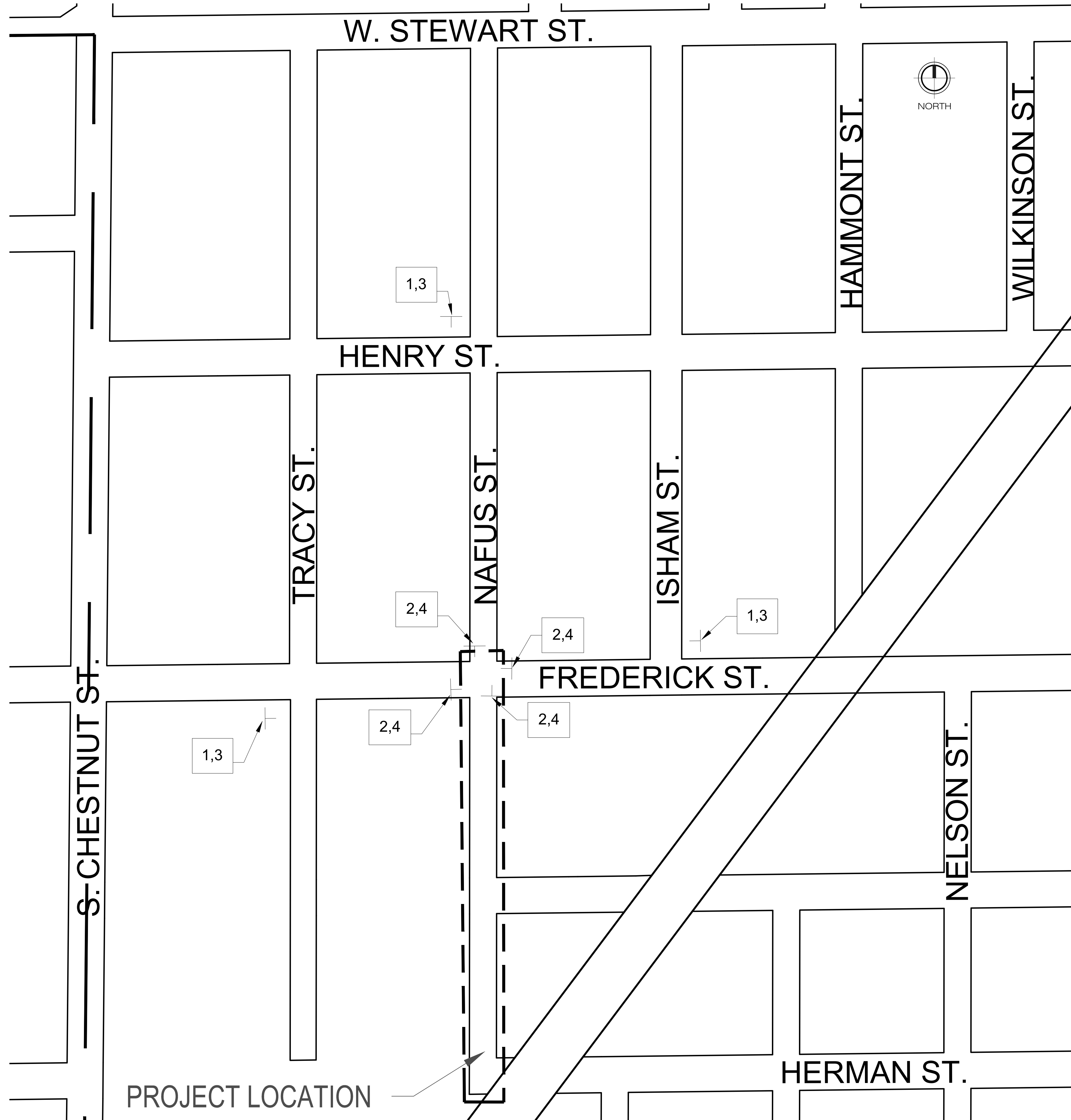
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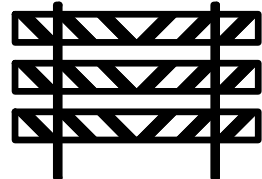
CITY OF OWOSSO, MICHIGAN
ENGINEERING DIVISION
DEPT. OF PUBLIC SERVICE

GR4

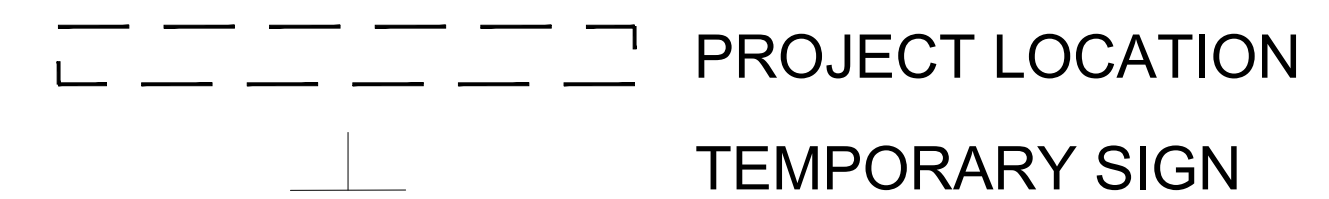
2025 WATER MAIN REPLACEMENT PROJECT - CONTRACT 2

SHEET NO.	DESCRIPTION
NF1	NAFUS ST - COVER SHEET & TRAFFIC CONTROL PLAN
NF2	NAFUS ST - WATER MAIN PLAN AND PROFILE



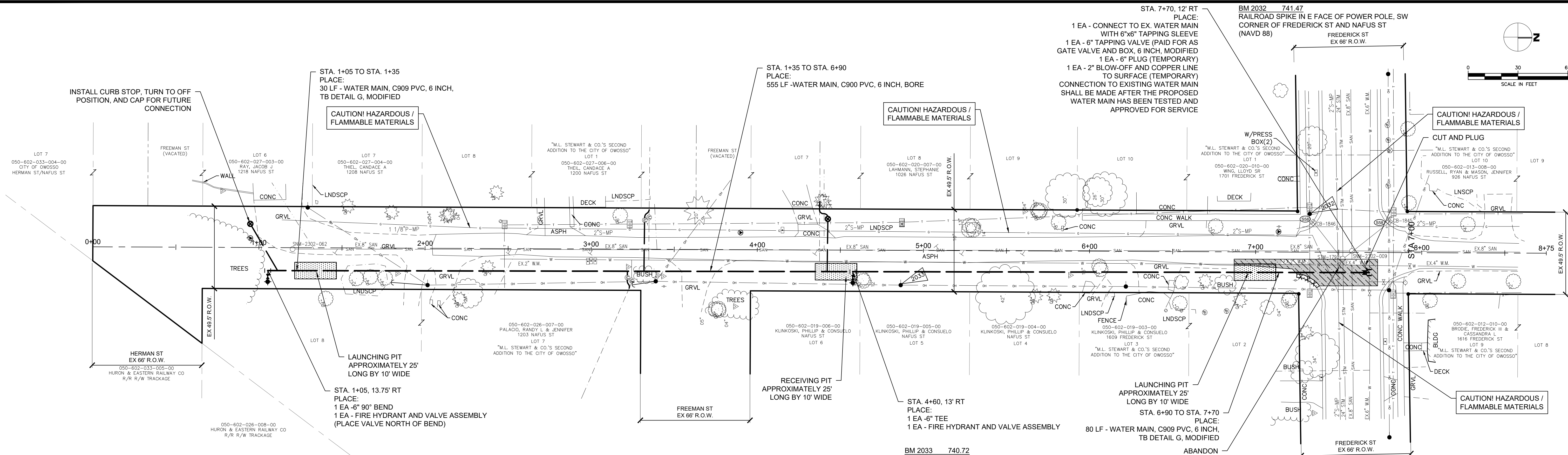
SIGNING REQUIREMENTS					
NO.	SIGN	SIGN DESIGNATION	SIZE	NO. REQ.	TOTAL AREA (SFT)
1		W20-1	48 x 48	3	48
2		R11-3A	60 x 30	4	50
3		M4-8 MOD	30 X 8	3	5
4		TYPE III BARRICADE		4	

MAINTAINING TRAFFIC LEGEND

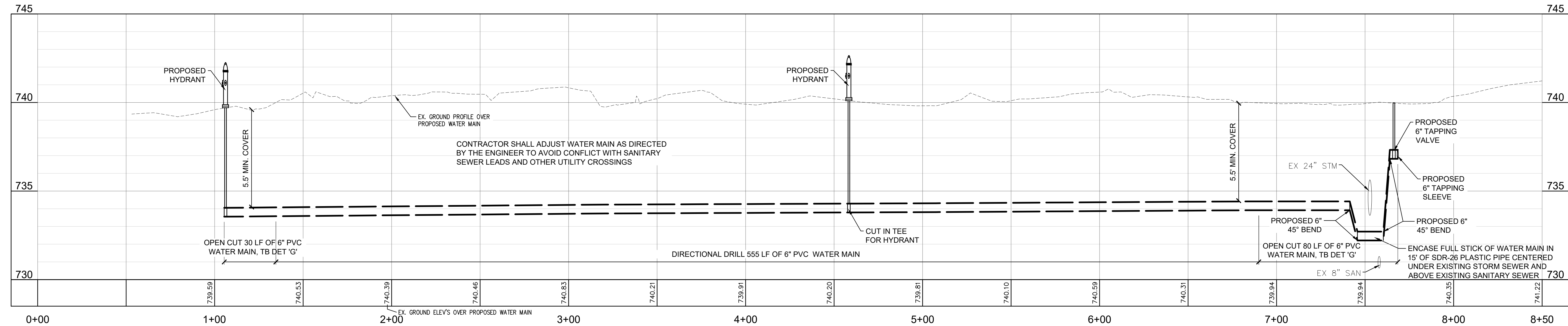


THE FREDERICK & NAFUS INTERSECTION SHALL
REMAIN OPEN WHEN WORK IS NOT TAKING
PLACE WITHIN THE INTERSECTION.

NF1	DWSRF 7880-01	INTERNAL ENGINEERING PROJECT: CONTINUATION 2	NAFUS STREET COVER SHEET & TRAFFIC CONTROL PLAN	JANUARY, 2025 PROJECT NO.	FIELD BOOK PG.	ELEV.	DESCRIPTION	REVISIONS						APPROVED BY
								1	DRAFT PLANS	1/17/25	CW			
								2	ELGE PERMIT SUBMITTAL	2/24/25	CW			
								3	IFB PLANS	4/17/25	CW			
								CHECKED BY	ORIGINAL PLAN					
CITY OF OWOSSO, MICHIGAN ENGINEERING DIVISION DEPT. OF PUBLIC SERVICE														



- LEGEND**
- WATER MAIN
 - - - WATER SERVICE LINE
 - x GATE VALVE AND BOX, _INCH
 - REDUCER
 - ⚡ HYDRANT / VALVE
 - ⊙ CURB STOP
 - ⊙ METER PIT
 - ▨ Curb Ramp, Conc, _ inch
 - ▨ Aggregate Base, 8 inch, Modified and HMA, 13
 - ▨ HMA Approach
 - ▨ Driveway, Nonreinf Conc, _ inch
 - ▨ Approach, CI II, LM
 - ▨ Bore Pit
 - ⊙ STANDARD SOIL EROSION KEY



CONSTRUCTION QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	WORK ITEM
15	Ft	Curb and Gutter, Rem
105	Syd	Pavt, Rem
2	Ea	Erosion Control, Inlet Protection, Fabric Drop
105	Syd	Aggregate Base, 8 inch, Modified
50	Ton	HMA, 13A
15	Ft	Curb and Gutter, Conc, Det F4, Modified
175	Syd	Turf Establishment, Performance
1	Ea	Connect to Existing Water Main
1	Ea	Existing Valve with Valve Box Abandonment
110	Ft	Water Main, C909 PVC, 6 inch, TB Detail G, Modified
555	Ft	Water Main, C900 PVC, 6 inch, Bore
1	Ea	Water Main, 4 inch, Cut and Plug, Modified
1	Ea	Gate Valve and Box, 6 inch, Modified
2	Ea	Fire Hydrant and Valve Assembly
140	Ft	1" Copper Service Lead, Type "K", Modified
4	Ea	Curb Box, Stop, 1 inch Corporation Stop and Connection, Modified
2	Ea	Install Meter Pit, Complete
2	Ea	Water Meter Pit, Rem

CITY OF OWOSSO, MICHIGAN
ENGINEERING DIVISION
DEPT. OF PUBLIC SERVICE

NO.

DATE

BY

REVISIONS

1

1/17/25

CW

DRAFT PLANS

2

2/24/25

CW

ELGE PERMIT SUBMITTAL

3

4/17/25

CW

IFB PLANS

CHECKED BY

APPROVED BY

ORIGINAL PLAN

2025 WATER MAIN REPLACEMENT PROJECT - CONTRACT 2

DWSRF 7880-01

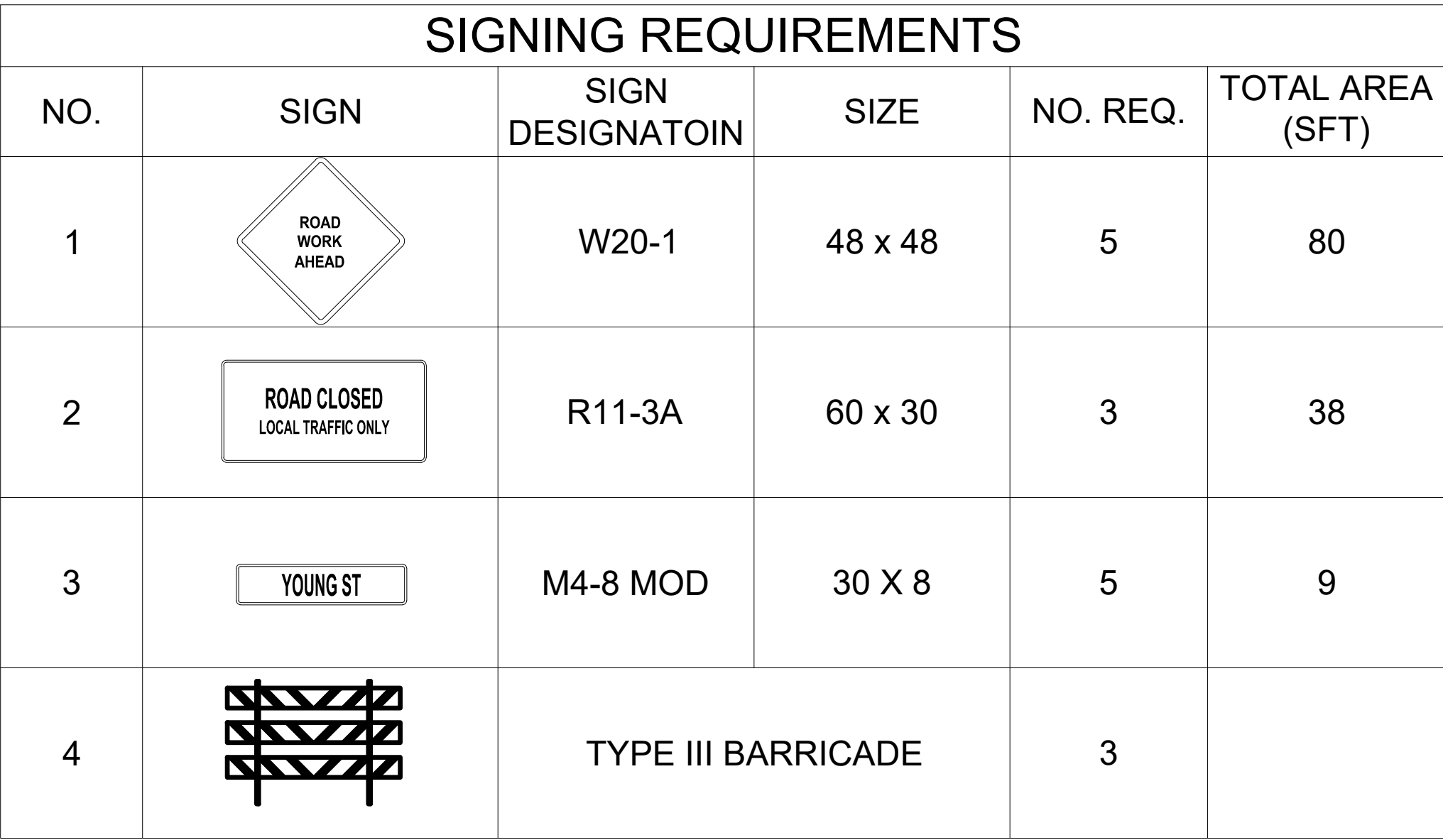
NAFUS STREET
WATER MAIN PLAN AND PROFILE

JANUARY, 2025
PROJECT NO.

FIELD BOOK
PG.

NF2

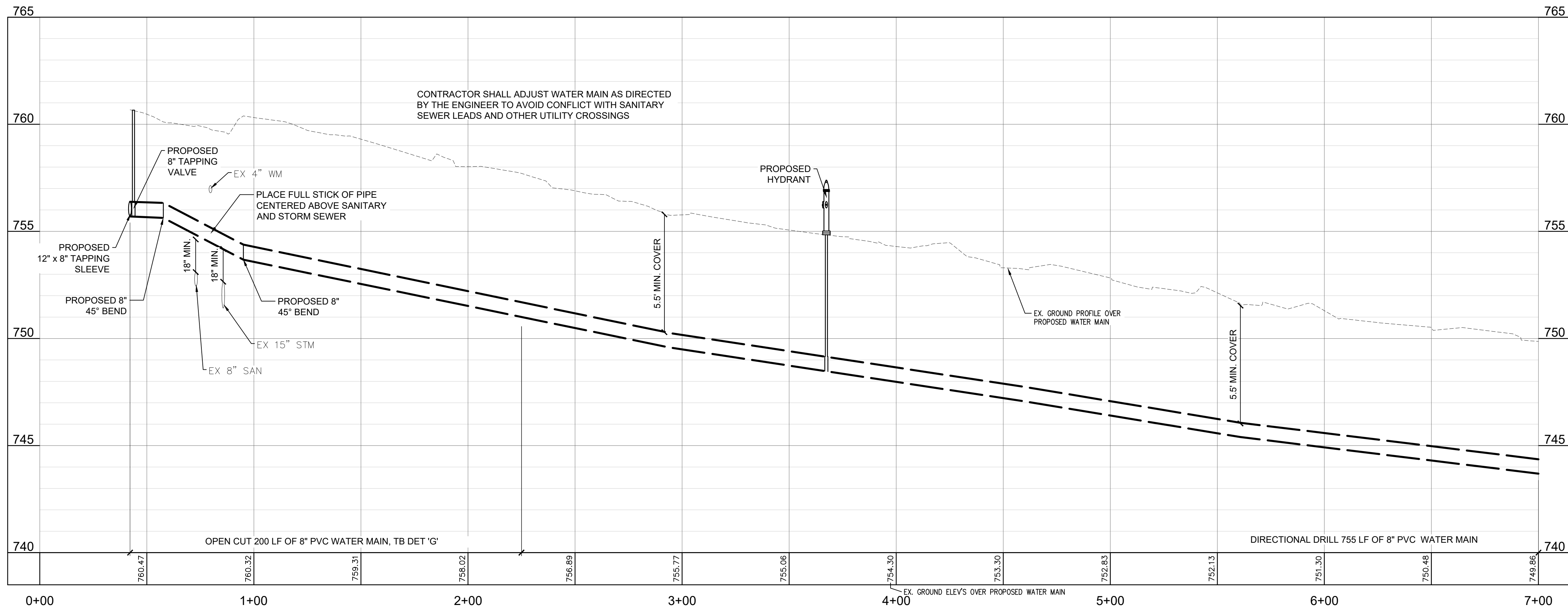
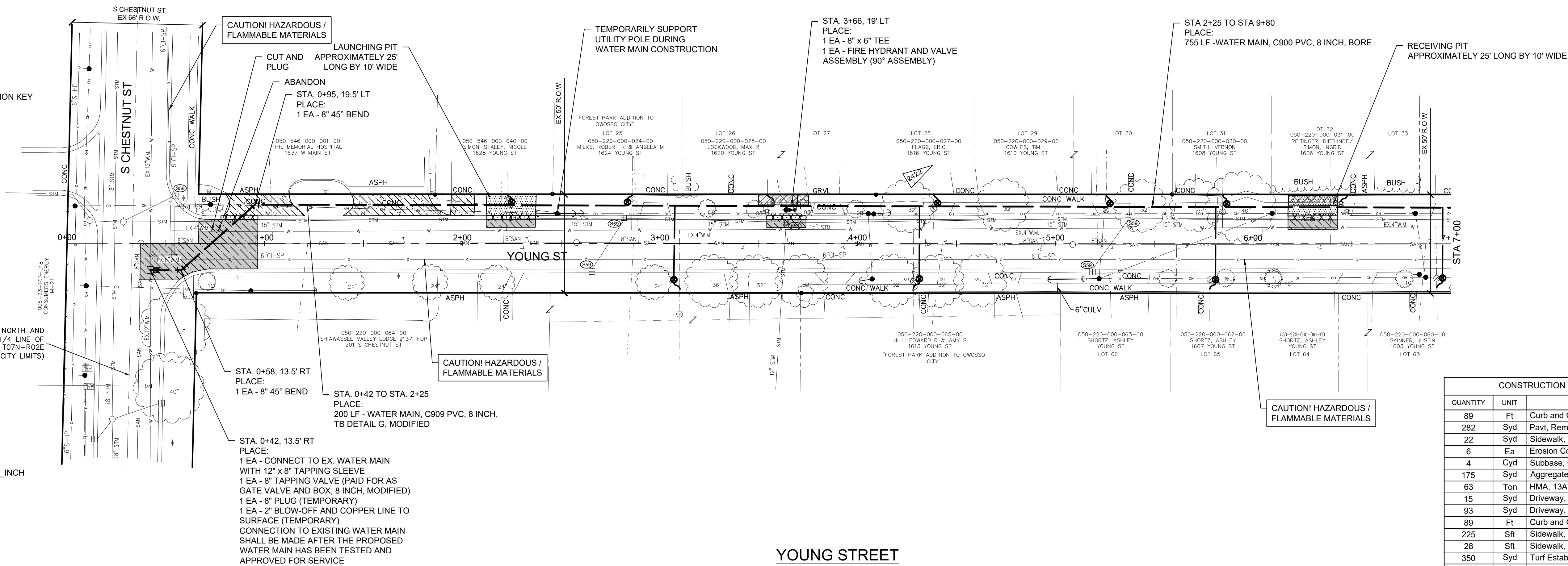
SHEET NO.	DESCRIPTION
YN1	YOUNG ST - COVER SHEET & TRAFFIC CONTROL PLAN
YN2-YN3	YOUNG ST - WATER MAIN PLAN AND PROFILE



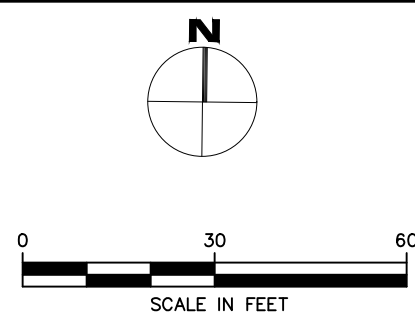
THE NORTHBOUND LANE ON CHESTNUT STREET WEST OF YOUNG STREET SHALL BE CLOSED DURING THE WATER MAIN TIE-IN AND ASSOCIATED WORK IN ACCORDANCE WITH MDOT MAINTAINING TRAFFIC TYPICAL 110-TR-NFW-2L. QUANTITIES FOR THIS CLOSURE ARE INCLUDED IN THE MAINTAINING TRAFFIC QUANTITIES TABLE ON THE WATER MAIN NOTES AND DETAILS SHEET.

PROJECT LOCATION

TEMPORARY SIGN



CONSTRUCTION QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	WORK ITEM
89	Ft	Curb and Gutter, Rem
282	Syd	Pavt, Rem
22	Syd	Sidewalk, Rem
6	Ea	Erosion Control, Inlet Protection, Fabric Drop
4	Cyd	Subbase, CIP
175	Syd	Aggregate Base, 8 inch, Modified
63	Ton	HMA, 13A
15	Syd	Driveway, Nonreinf Conc, 6 inch
93	Syd	Driveway, Nonreinf Conc, 7 inch
89	Ft	Curb and Gutter, Conc, Det F4, Modified
225	Sft	Sidewalk, Conc, 4 inch
28	Sft	Sidewalk, Conc, 6 inch
350	Syd	Turf Establishment, Performance
1	Ea	Connect to Existing Water Main
1	Ea	Existing Valve with Valve Box Abandonment
200	Ft	Water Main, C909 PVC, 8 inch, TB Detail G, Modified
475	Ft	Water Main, C900 PVC, 8 inch, Bore
1	Ea	Water Main, 4 inch, Cut and Plug, Modified
1	Ea	Gate Valve and Box, 8 inch, Modified
1	Ea	Fire Hydrant and Valve Assembly
250	Ft	1" Copper Service Lead, Type "K", Modified
11	Ea	Curb Box, Stop, 1 inch Corporation Stop and Connection, Modified
2	Ea	Install Meter Pit, Complete
2	Ea	Water Meter Pit, Rem



BM 2422 755.04
SE CORNER OF BOTTOM STEP, HSE #1616
(NAVD 88)

CITY OF OWOSSO, MICHIGAN
ENGINEERING DIVISION
DEPT. OF PUBLIC SERVICE

2025 WATER MAIN REPLACEMENT PROJECT - CONTRACT 2
DWSRF 7880-01

YOUNG STREET
WATER MAIN PLAN AND PROFILE

JANUARY, 2025
PROJECT NO.

JANUARY, 2023
PROJECT NO.

YN2

- LEGEND**
- XXXXXX Curb and Gutter, Rem
 - X-X-X- Sewer, Rem
 - Pavt, Rem
 - Sidewalk, Rem
 - STANDARD SOIL EROSION KEY

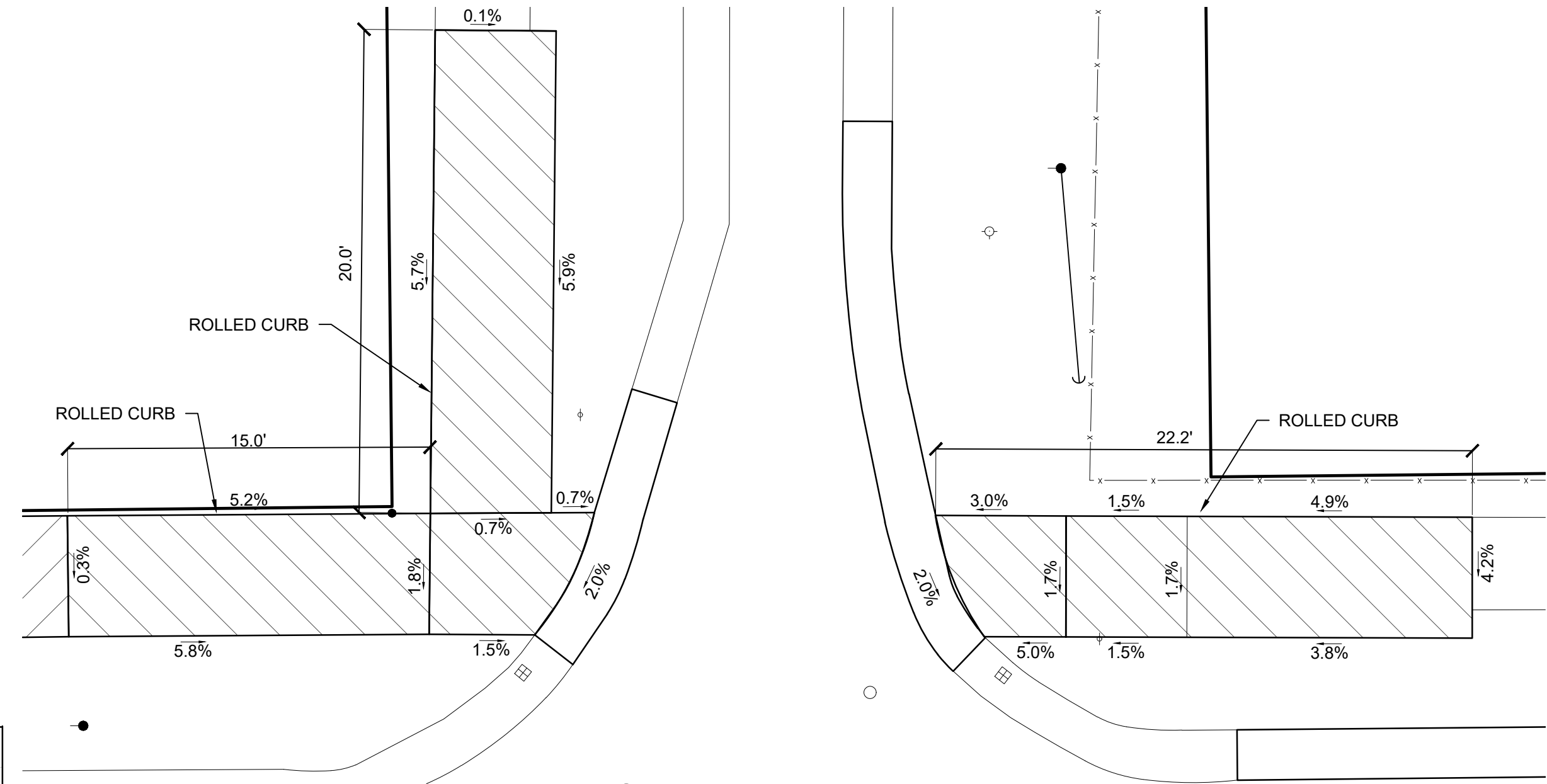
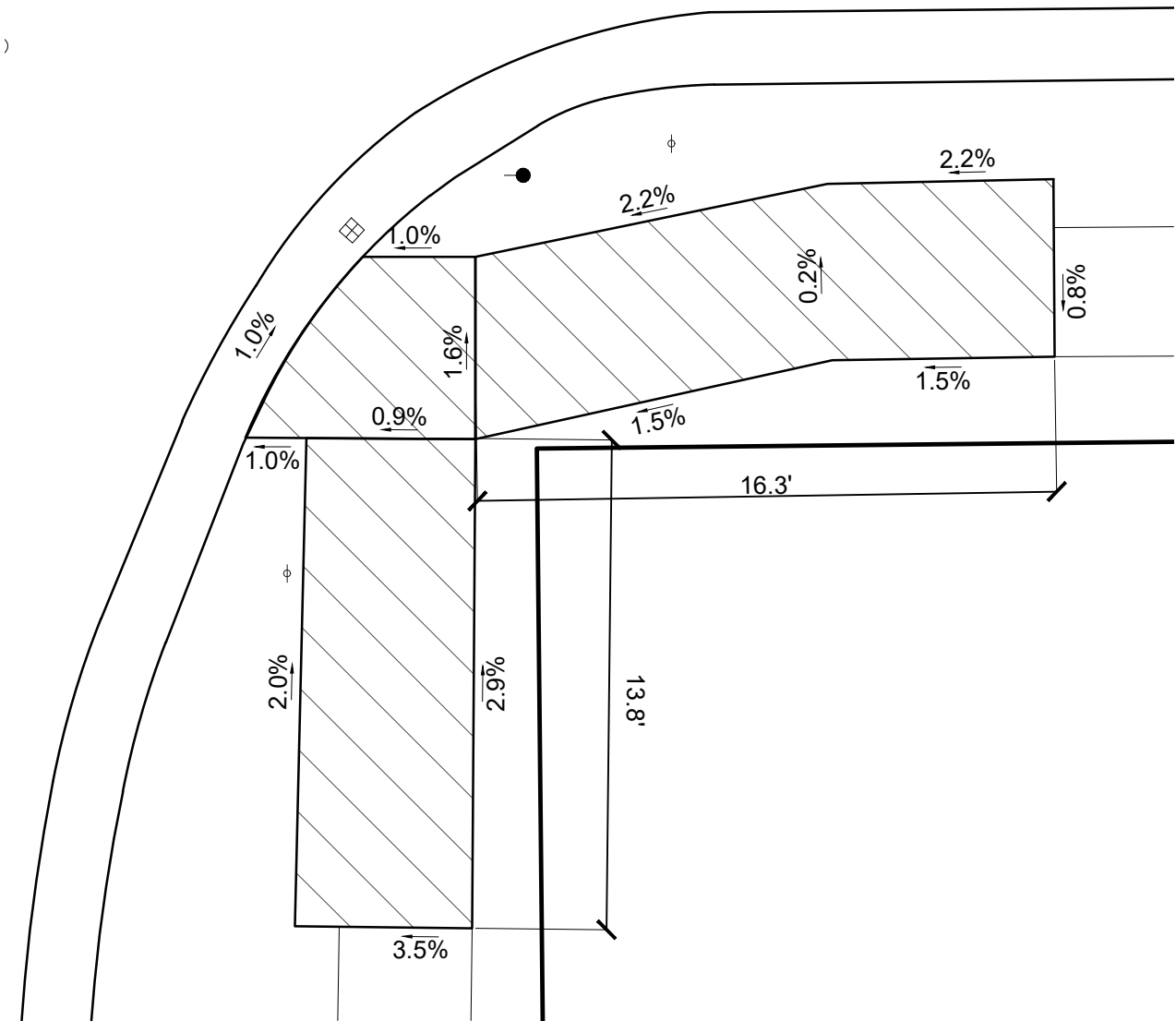
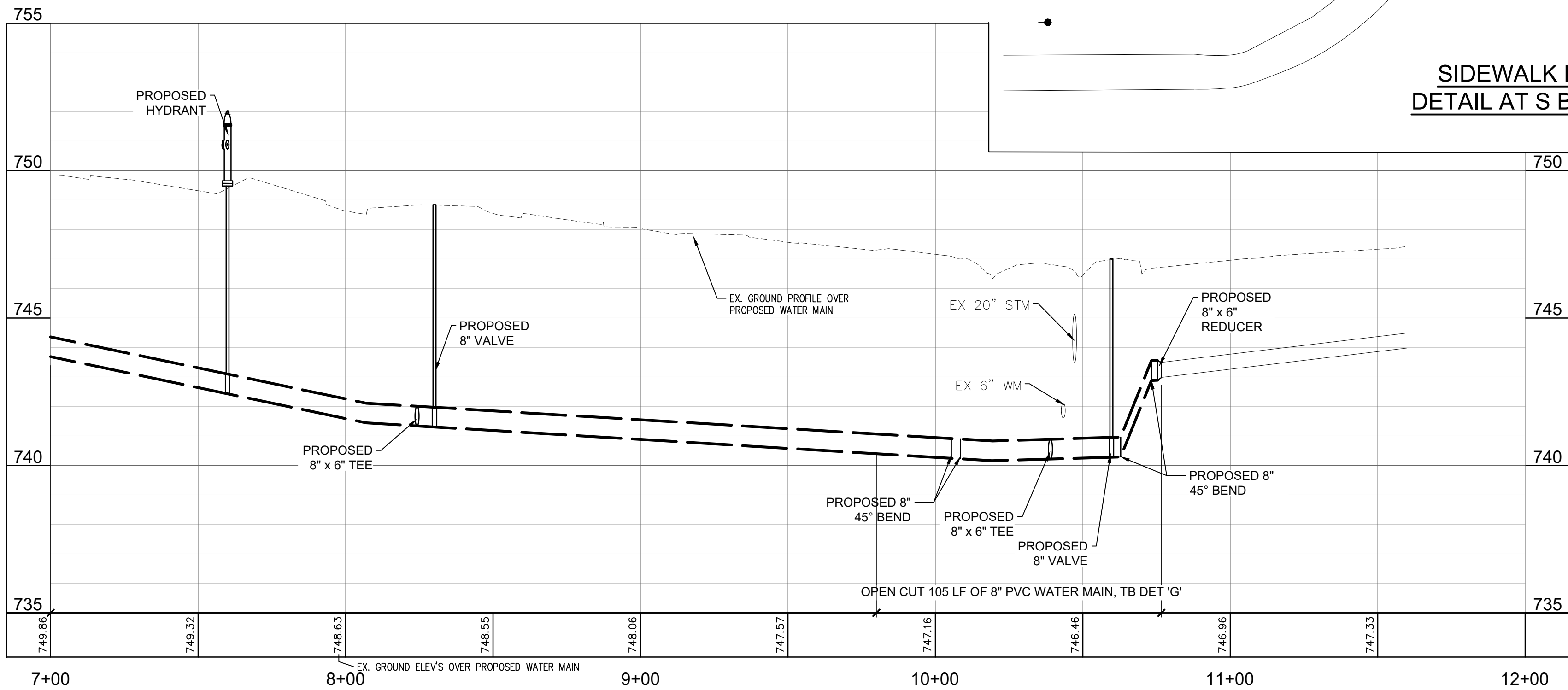
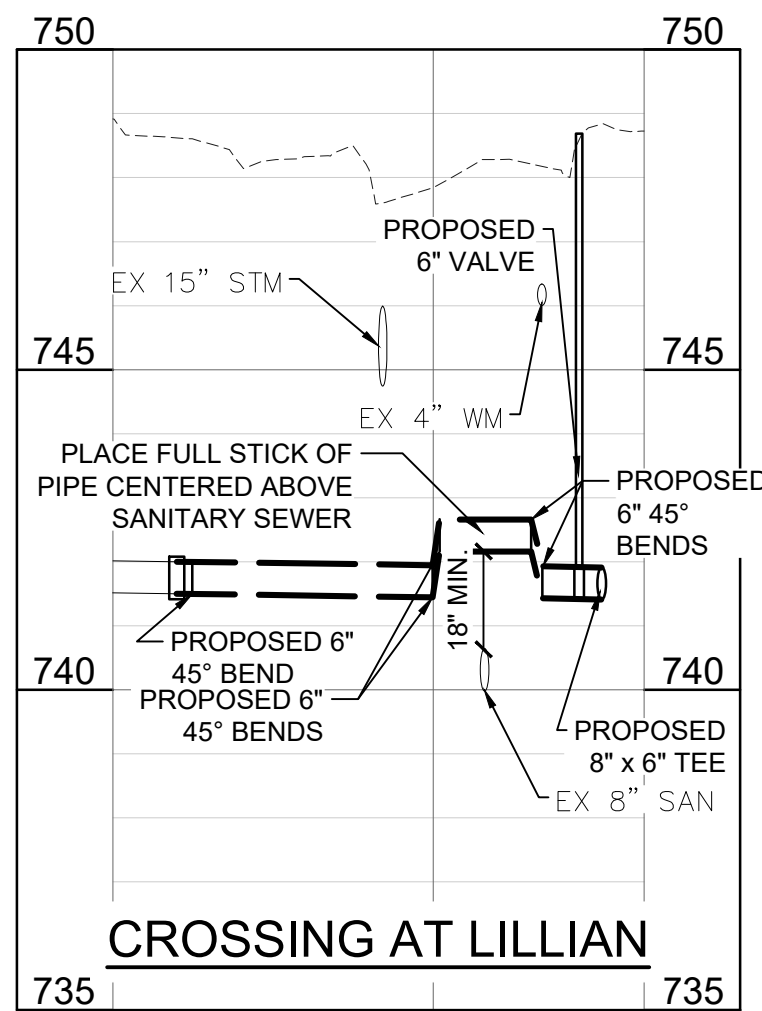
- LEGEND**
- WATER MAIN
 - WATER SERVICE LINE
 - GATE VALVE AND BOX, _INCH
 - REDUCER
 - HYDRANT / VALVE
 - CURB STOP
 - METER PIT
 - Curb Ramp, Conc., _inch
 - Sidewalk, Conc., _inch
 - Aggregate Base, 8 inch, Modified and HMA, 13
 - Driveway, Nonreinf Conc., _inch
 - Approach, Cl II, LM
 - Bore Pit
 - STANDARD SOIL EROSION KEY

BORE 1" SERVICE LINE INTO BUILDING AND RECONNECT AT WATER METER. PAID FOR AS 1" COPPER SERVICE LEAD, TYPE "K", MODIFIED

STA. 7+59, 18' LT
PLACE:
1 EA - 8" x 6" TEE
1 EA - FIRE HYDRANT AND VALVE ASSEMBLY (90° ASSEMBLY)

BORE 1" SERVICE LINE INTO BUILDING AND RECONNECT AT WATER METER. PAID FOR AS 1" COPPER SERVICE LEAD, TYPE "K", MODIFIED

BM 2617 751.07
NE CORNER OF BOTTOM STEP, HSE #1601 (NAVD 88)



CONSTRUCTION QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	WORK ITEM
158	Ft	Curb and Gutter, Rem
148	Syd	Pavt, Rem
68	Syd	Sidewalk, Rem
5	Ea	Erosion Control, Inlet Protection, Fabric Drop
11	Cyd	Subbase, CIP
148	Syd	Aggregate Base, 8 inch, Modified
54	Ton	HMA, 13A
158	Ft	Curb and Gutter, Conc, Det F4, Modified
15	Ft	Detectable Warning Surface, Modified
21	Ft	Curb Ramp Opening, Conc
408	Sft	Curb Ramp, Conc, 4 inch
79	Sft	Curb Ramp, Conc, 7 inch
337	Sft	Sidewalk, Conc, 4 inch
350	Syd	Turf Establishment, Performance
3	Ea	Connect to Existing Water Main
30	Ft	Water Main, Rem
3	Ea	Existing Valve with Valve Box Abandonment
90	Ft	Water Main, C909 PVC, 6 inch, TB Detail G, Modified
105	Ft	Water Main, C909 PVC, 8 inch, TB Detail G, Modified
280	Ft	Water Main, C900 PVC, 8 inch, Bore
1	Ea	Water Main, 4 inch, Cut and Plug, Modified
2	Ea	Water Main, 6 inch, Cut and Plug, Modified
2	Ea	Gate Valve and Box, 6 inch, Modified
2	Ea	Gate Valve and Box, 8 inch, Modified
1	Ea	Fire Hydrant and Valve Assembly
340	Ft	1" Copper Service Lead, Type "K", Modified
10	Ea	Curb Box, Stop, 1 inch Corporation Stop and Connection, Modified
3	Ea	Install Meter Pit, Complete
3	Ea	Water Meter Pit, Rem

CITY OF OWOSO, MICHIGAN
ENGINEERING DIVISION
DEPT. OF PUBLIC SERVICE

NO.	DATE	BY	REVISIONS
1	1/17/25	CW	DRAFT PLANS
2	2/24/25	CW	EDGE PERMIT SUBMITTAL
3	4/17/25	CW	IFB PLANS

CHECKED BY: _____ APPROVED BY: _____

2025 WATER MAIN REPLACEMENT PROJECT - CONTRACT 2
DWSRF 7880-01

YOUNG STREET
WATER MAIN PLAN AND PROFILE

JANUARY, 2025
PROJECT NO. YN3

FIELD BOOK
PG.