

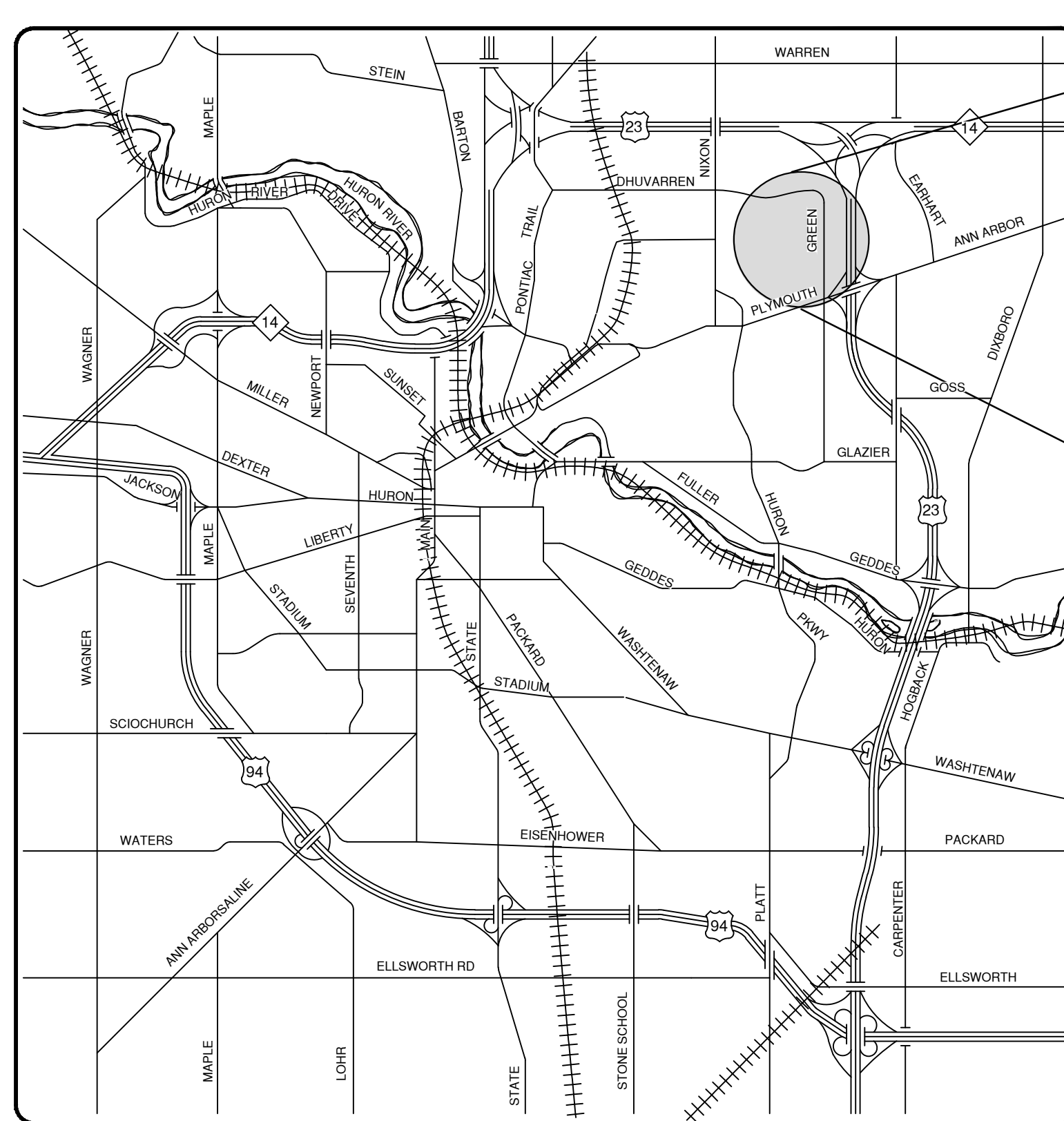
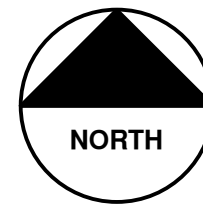


CITY OF ANN ARBOR PROJECT MANAGEMENT

YELLOWSTONE WATER MAIN

BID No. ITB-4327, FILE No. 2013026

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	NOTES AND CASTING SCHEDULES
3	NOTES, LEGENDS, BENCHMARKS AND CONTACTS
4	ROAD SECTION, TRENCH DETAIL AND INLET FILTER DETAIL
5	TRAFFIC CONTROL
6-8	REMOVALS
9-14	WATERMAIN PLAN & PROFILE
15	STORM SEWER PLAN AND PROFILE
16-18	ROAD GRADING



VICINITY MAP

NOTES:

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND ITS DETAILS WHICH ARE INCLUDED BY REFERENCE. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

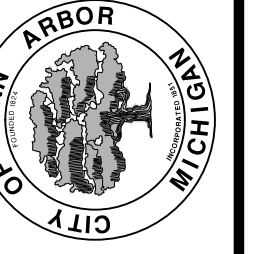
FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS (GAS), TELEPHONE (TEL), ELECTRICAL POWER (PWR), CABLE TV (CTV) AND FIBER OPTIC LINES (FIBER) ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

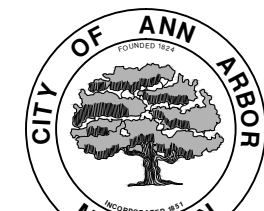
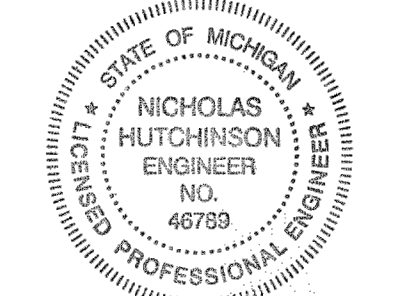
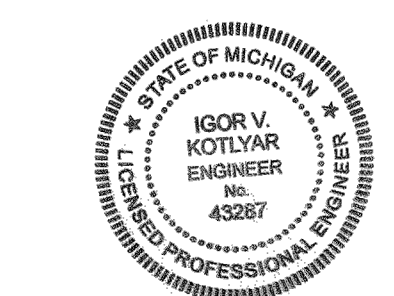


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CITY OF ANN ARBOR
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301 EAST HURON STREET
ANN ARBOR, MI 48106-3667
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PROJECT DESCRIPTION
CONTRACT FOR CONSTRUCTION WORK ON YELLOWSTONE DR. BETWEEN BLUETT DR. AND BLUETT DR. INCLUDES REPLACEMENT OF WATER MAIN, HMA PAVEMENT, AGGREGATE BASE, CURB, STORM SEWER, AND PERMANENT PAVEMENT MARKINGS.

 PROJECT MANAGEMENT SERVICE UNIT	
<p><i>Nicholas Hutchinson</i> NICHOLAS HUTCHINSON, P.E. - MI LICENSE No. 46789 CITY ENGINEER</p> <p style="text-align: right;">1/14/14 DATE</p>	
<p style="text-align: center;">PREPARED UNDER THE SUPERVISION OF</p> <p><i>Igor V. Kotlyar</i> IGOR V. KOTLYAR, P.E. - MI LICENSE No. 43287 PROJECT ENGINEER</p> <p style="text-align: right;">1/14/14 DATE</p>	

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	DRAWING No. 2013026 - 01
SHEET No. 01 TO 18	

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PROPOSED STORM SEWER STRUCTURE TABLE					
STRUCTURE	UTILITY STATION	RIM	DEPTH	TYPE	INVERTS
R1	50+70	921.32	6.50	Construct Double Inlet	12" SW 916.82
R2	54+83	926.34	6.50	Construct Single Inlet	12" S 921.84
R3	57+88	934.52	6.50	Construct Single Inlet	12" NW 930.02
R4	61+05	930.05	6.50	Construct Double Inlet Str.	12" W 925.55
R5	62+07	931.17	10.04	Construct 6" Mh Over Existing 36" Storm Sewer	12" W 926.13
R6	62+07	930.73	6.50	Construct Single Inlet	12" E 926.23
TAP r03	61+06	930.60	10.00	Tap Existing Mh	12" E 925.45 12" W 922.80 12" E 924.15 24" N 922.60
TAP r22	50+76	921.64	10.20	Tap Existing Mh	12" NE 916.72 12" N 915.54 12" S 913.74 36" E 913.44 36" W 913.89
TAP r27	57+92	935.41	7.49	Tap Existing Mh	12" SE 929.92
TAP r34	54+76	926.66	12.35	Tap Existing Mh	12" N 921.47 36" SE 916.31 36" NW 917.31 12" SW 919.06 12" NE 919.61

EXISTING SANITARY SEWER STRUCTURE TABLE						
STRUCTURE	STATION	RIM	DEPTH	DIA.	TYPE	INVERTS
s1		922.15	13.30	48	MH	8" W 910.85
s2	52+94.63	924.08	12.90	48	MH	8" W 913.23 8" E 913.18
s3	53+74.26	925.36	13.60	48	MH	8" W 913.91 8" E 913.76
s4	54+56.32	926.27	13.65	48	MH	8" NW 916.57 8" E 914.62
s5	55+64.62	928.88	11.80	48	MH	8" NW 919.13 8" SE 919.08
s6	56+73.69	931.99	12.25	48	MH	8" N 921.74 8" SE 921.79
s7	57+81.85	935.42	13.10	48	MH	8" W 925.12 8" S 924.32
s8	57+82.02	936.36	11.50	48	MH	8" W 926.86 8" E 926.86
s9	59+22.48	935.53	11.35	48	MH	8" N 926.18
s10	60+91.55	930.69	12.50	48	MH	8" S 921.99 8" N 920.19
s11	62+60.35	931.79	14.45	48	MH	8" S 919.35 8" W 919.39 8" N 919.34
s12	62+59.88	932.69	12.75	48	MH	8" E 921.94
s13		932.78	18.25	48	MH	8" S 918.33 8" N 918.23 8" E 916.53
s14		935.01	16.50	48	MH	8" S 920.51

EXISTING STORM SEWER STRUCTURE TABLE					
STRUCTURE	UTILITY STATION	RIM	DEPTH	TYPE	INVERTS
r01	61+06	930.04	7.39	CB	12" S 924.65
r02	61+03	930.05	7.40	CB	12" N 924.65 12" W 924.65
r03	61+06	930.60	10.00	MH	12" E 924.15 12" W 922.80 24" N 922.60
r04	62+71	932.10	12.80	MH	24" S 921.30 12" SW 924.10 12" NW 924.20 24" N 921.40
r05	63+92	932.68	14.80	MH	24" S 920.33 12" NW 924.88 12" NE 925.18 48" N 920.33 48" E 919.88
r06	61+04	930.87	5.00	CB	12" E -0.50
r07	61+05	929.89	7.37	CB	12" W 924.52 12" E 924.52
r08	62+29	931.34	8.30	CB	12" NE 925.04
r09	63+01	931.32	8.79	CB	12" SE 924.52
r10	63+98	932.14	8.10	CB	12" SE 926.04
r11		932.57	8.20	CB	12" SW 926.37
r12	63+93	931.45	14.30	MH	48" W 919.40 12" S 924.45 12" N 925.05 48" E 919.15
r13	63+82	931.08	8.05	CB	12" N 925.03
r14		930.88	7.30	CB	12" S 925.58
r15		935.25	14.60	MH	12" N 922.70 48" S 922.65
r16	50+05	924.15	12.65	CB	24" N 913.50
r17	50+05	922.00	11.70	MH	24" S 912.55 12" E 914.90 36" W 912.85 36" N 912.30
r18	50+06	919.86	11.10	CB	36" S 910.76
r19	50+16	922.24	110.00	CB	12" E 814.24
r20		921.82	8.10	CB	12" W 915.72
r21	52+44	923.47	10.70	MH	36" W 914.82 36" E 914.77
r22	50+76	921.64	10.20	MH	36" W 913.69 12" S 913.74 12" N 915.54 36" E 913.44
r23	50+77	921.23	8.75	CB	12" E 914.48
r24	50+74	921.23	8.75	CB	12" W 914.48 12" N 914.48
r25	50+78	921.33	7.32	CB	12" E 916.01
r26	50+75	921.31	7.30	CB	12" W 916.01 12" S 916.01
r27	57+92	935.41	18.60	MH	12" W 918.81 12" SW 926.31 12" SE 928.51 12" NW 926.31 36" S 918.91
r28	57+93	936.49	20.20	MH	12" NW 918.39 12" E 918.29
r29	58+42	1.25	3.75	CB	12" SE -0.50
r30	57+55	933.95	7.80	CB	12" NE 928.15
r31	57+88	934.52	8.00	CB	12" NW 928.52
r32	58+23	935.31	9.90	CB	12" SE 927.41
r33	54+75	926.26	9.00	CB	12" NE 919.26
r34	54+76	926.66	12.35	MH	12" SW 919.06 12" NE 919.61 36" NW 917.31 36" SE 916.31
r35	54+76	926.07	8.95	CB	12" SW 919.12

WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
w1	ABANDON GVIW	0+06	921.88	4.86
h1	ABANDON HYDRANT	0+06	922.29	6.86
H2	INSTALL F.H. ASSEMBLY	0+08	925.91	8.08
H1	INSTALL F.H. ASSEMBLY	0+09	922.15	8.00
W2	8" GVIW	0+38	921.73	6.26
W3	8" GVIB	3+98	925.30	6.24

WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H4	INSTALL F.H. ASSEMBLY	0+08	933.53	8.00
w2	Abandon GVIW	7+12	933.19	5.67
h2	ABANDON HYDRANT	7+21	934.00	6.53
w3	Abandon GVIW	7+83	935.74	6.37
W4	8" GVIB	7+83	934.94	7.11
W5	8" GVIB	9+67	933.25	6.17

WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H5	INSTALL F.H. ASSEMBLY	1+37	933.11	8.00
W6	8" GVIB	12+30	931.22	6.22
w4	Abandon GVIB	12+61	932.53	6.84
w5	Abandon GVIW	13+52	932.25	5.86
W7	8" GVIW	13+59	932.22	6.17

CONSTRUCTION SEQUENCE:

The Contractor shall review the Traffic Maintenance Plans of the Contract Documents and note that they are required to maintain access at all times to residences solely accessed off of Yellowstone Dr. Leave 10 feet of existing pavement for access road during utility installation, final removal limits of pavement as directed by Engineer. The driveways are to be maintained at all times. During crossing of drives with utilities and road building, residents must be notified by the contractor at least a day in advance so vehicles can be moved prior to the closure. Drives are to be temporarily put back as soon as possible, and opened for resident use at the end of each day. The Contractor may choose to adjust the limits or sequencing of construction in order to complete the work more efficiently. However, changes to the stages and phases shown in the plans must be approved in writing by the Engineer prior to construction and must assure that access is maintained as described above.

- Installation of traffic control devices, and maintenance of traffic plan. Installation of portable, changeable message signs with messages as directed by the Engineer one week prior to construction. Installation of Soil Erosion Control Devices.
- Removal of pavement and concrete items on east side leaving a minimum of 10 feet of existing pavement for access lane on the side detailed on Maintenance of Traffic Plan or as directed by Engineer. Access lane to be open and free of obstructions at end of each day.
- Install 8 inch water main.
- With passing pressure test, schedule and make connection of 8" main to existing 8" main. With placement of aqua swab during water main placement flush and remove 8 inch swab from water main.
- Test water main per City Detailed Specification for Water Main Testing.
- Once bacteriological samples have passed schedule with Field Operations and transfer water services to new 8" Water Main.
- Schedule and finish the remaining water main connections and abandon the old main.
- Place edge drain and construct road cross section for east half of road. Proposed aggregate base will be used as access road during storm placement. Aggregate base will be ramped at driveways and be maintained at all times. Any areas of base that become contaminated or deficient will be removed and replaced as directed by Engineer.
- Removal of hma and concrete items on west side of Yellowstone. Install storm sewer improvements as indicated on plans. Clean and video inspect storm per City of Ann Arbor Standards.
- Finish installation of road cross section and edge drain on west half of Yellowstone. This work is to take place behind storm sewer installation.
- Grade aggregate base for curb, prep driveways and sidewalk and install concrete items on both sides of street. Pre pour meeting required to discuss resident parking during cure time. Drive approaches to be placed same day as curb or no later than next day. Only one side of sidewalk to be removed and replaced at a time. Pedestrian traffic to be maintained on one side of Yellowstone at all times.
- Topsoil, seed and install mulch blankets at all disturbed areas.
- Fine grade aggregate and place hma leveling course.
- Adjust structures in road to finish grade.
- Schedule and pave wearing course.
- Place permanent pavement markings
- Remove soil erosion control and construction signage. Open road to normal traffic.

SOIL EROSION CONTROL NOTES:

GENERAL
NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CITY ORDINANCE CHAPTER 63, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
- ALL MUD/DIRT TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR, WITHIN FOUR (4) HOURS OF BEING SO ORDERED.
- RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
- CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
- SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLIATIVE AS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
- THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
- TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

- THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:

- INSTALL SILT FENCE, TREE PROTECTION FENCING, AND INLET FILTERS ON EXISTING DRAINAGE FEATURES PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- INSTALL WATER MAINS, STORM, SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- COMPLETE ALL FINE GRADING.
- TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- CLEAN OUT STORM SEWER SYSTEMS.
- REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES UPON FINAL INSPECTION AND APPROVAL BY THE ENGINEER.
- REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.

NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.



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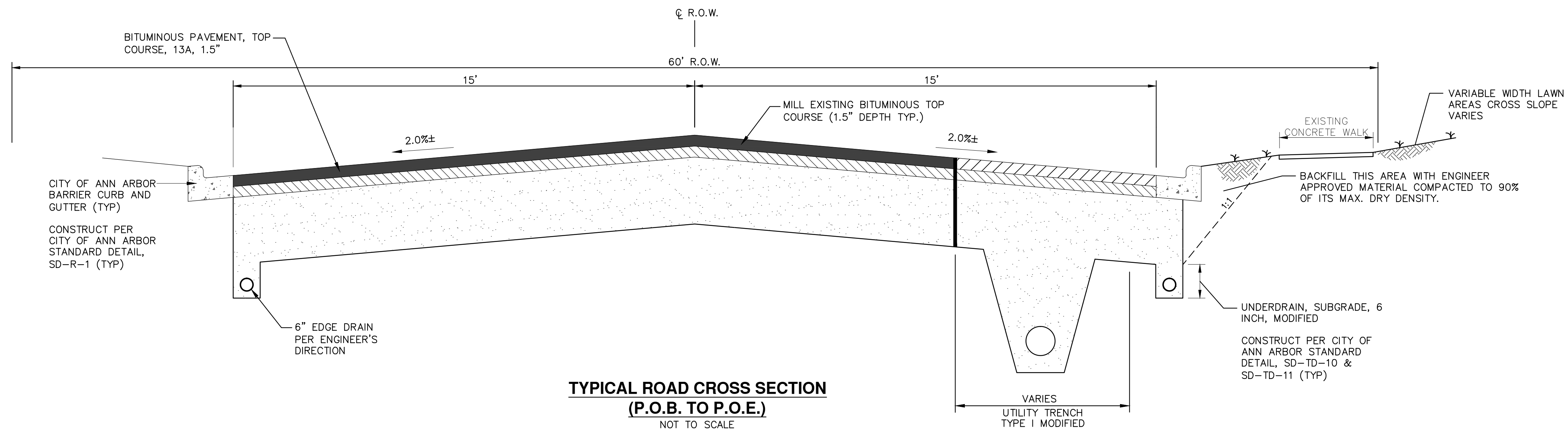


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
NOTES AND CASTING SCHEDULES

SCALE: NTS
DRAWING No. 2013026-02

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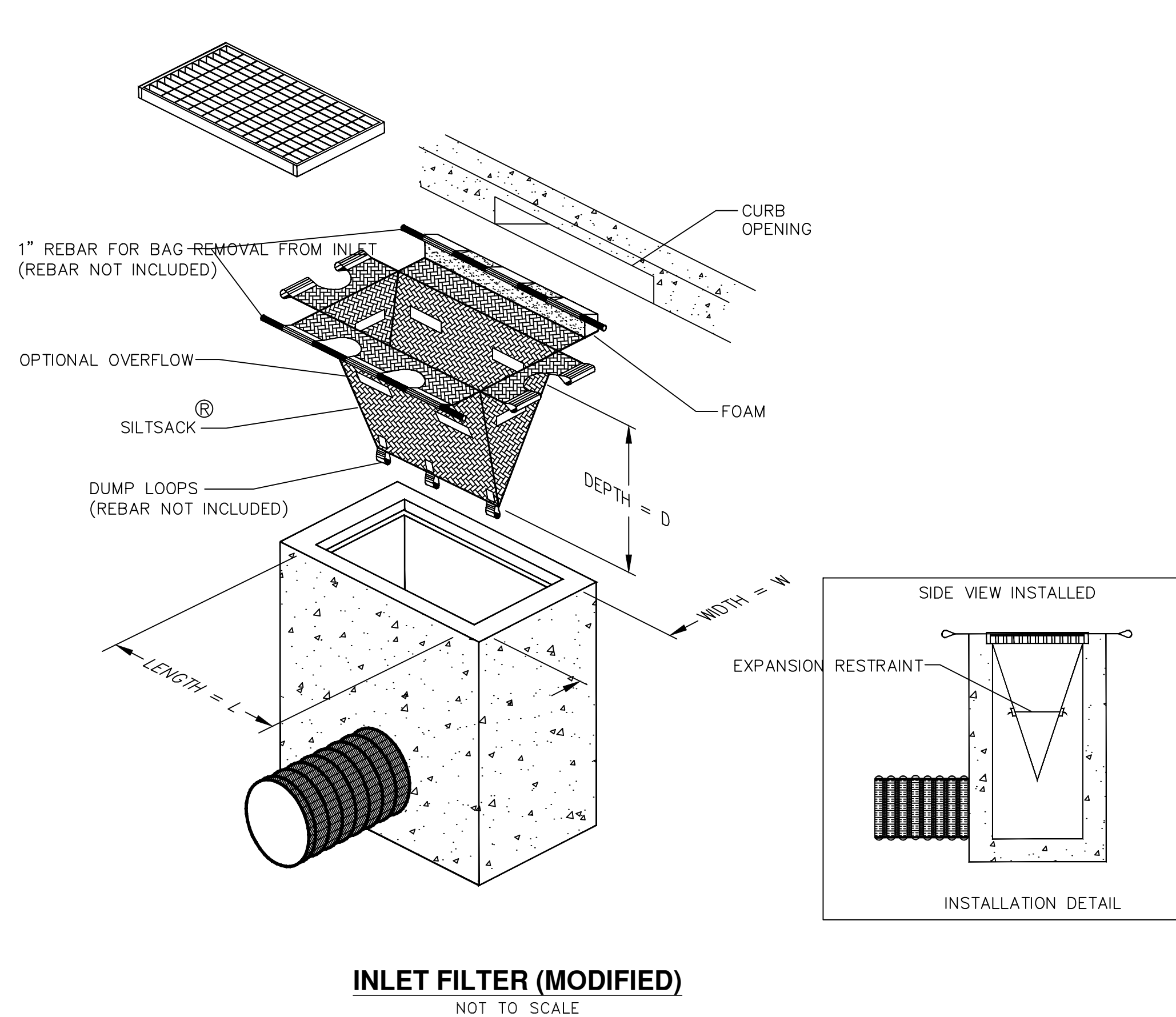
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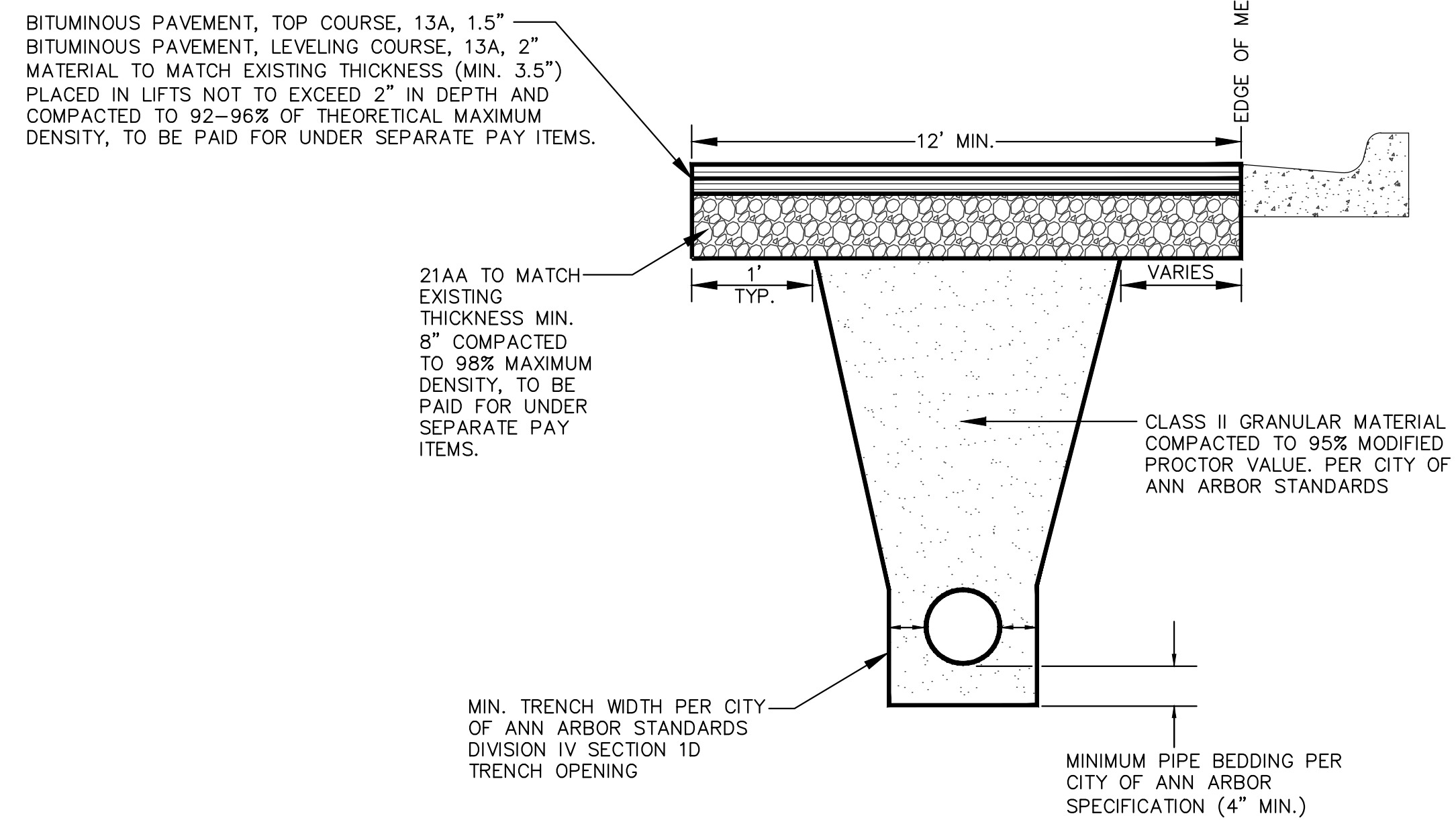
TYPICAL ROAD CROSS SECTION
(P.O.B. TO P.O.E.)
NOT TO SCALE

YELLOWSTONE - HMA APPLICATION ESTIMATE

HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI	BINDER	LOCATION/NOTES
13A	170 LB/SYD	1.5	260	PG 64-28	TOP COURSE
13A	226 LB/SYD	2.0	-	PG 64-28	LEVELING COURSE
Bond Coat SS-1h	0.05 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM



INLET FILTER (MODIFIED)
NOT TO SCALE



NOTE: DENSITY TESTING PER CITY OF ANN ARBOR SPECIFICATION
NOTE: TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY.
NOTE: ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS

UTILITY TRENCH - TYPE I MODIFIED
NOT TO SCALE



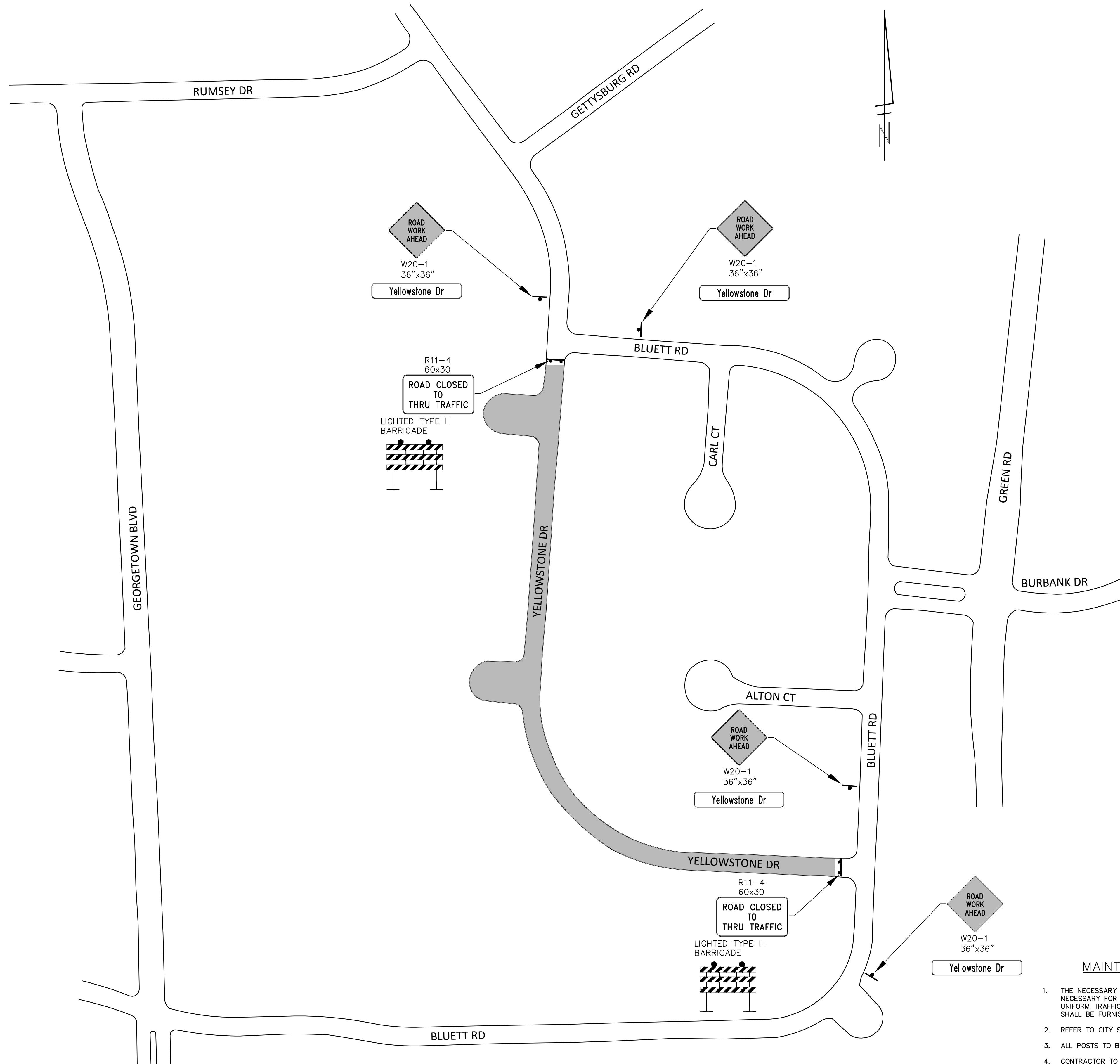
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CITY OF ANN ARBOR
PUBLIC SERVICES
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
ROAD SECTION, TRENCH DETAIL, INLET FILTER DETAIL
SCALE: NTS
DRAWING No. 2013026-04

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MAINTAINING TRAFFIC AND TRAFFIC CONTROL

1. THE NECESSARY SIGNS AND SIGN SUPPORT STANDARDS, BARRICADES, AND TRAFFIC CONTROL DEVICES NECESSARY FOR THE PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS APPROVED BY THE CITY OF ANN ARBOR. ALL SUCH DEVICES SHALL BE FURNISHED, INSTALLED, AND MAINTAINED BY THE CONTRACTOR.
2. REFER TO CITY SPECIFICATIONS FOR DETAILS ON MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS.
3. ALL POSTS TO BE DRIVEN INTO GROUND.
4. CONTRACTOR TO FIELD STAKE ALL SIGNS AND CONTACT CITY FOR REVIEW AND APPROVAL OF SIGN PLACEMENT PRIOR TO INSTALLATION.



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**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN**

TRAFFIC CONTROL

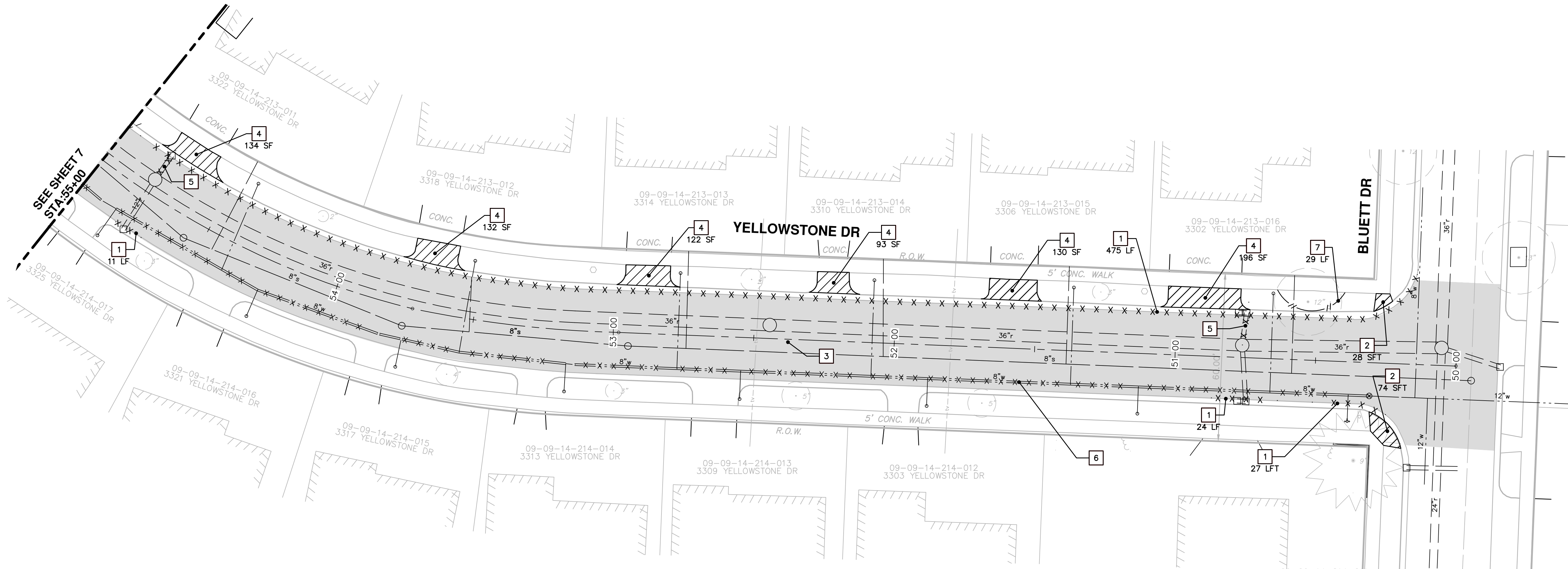
SCALE PLAN: 1" = 100'

DRAWING No. 2013026-05

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SEE SHEET 7
STA. 35+00

REMOVAL KEY	
KEY	DESCRIPTION
1	REMOVE EXISTING CURB AND GUTTER - ANY TYPE
2	REMOVE EXISTING SIDEWALK OR RAMP - ANY TYPE OR THICKNESS
3	MILL EXISTING PAVEMENT - ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS
4	REMOVE EXISTING DRIVEWAY ANY THICKNESS
5	REMOVE STORM SEWER AND CATCH BASINS-SEE NOTES SHEET 18
6	ABANDON WATERMAIN AND APPURTENANCES-SEE NOTES SHEET 9
7	PROTECTIVE FENCING

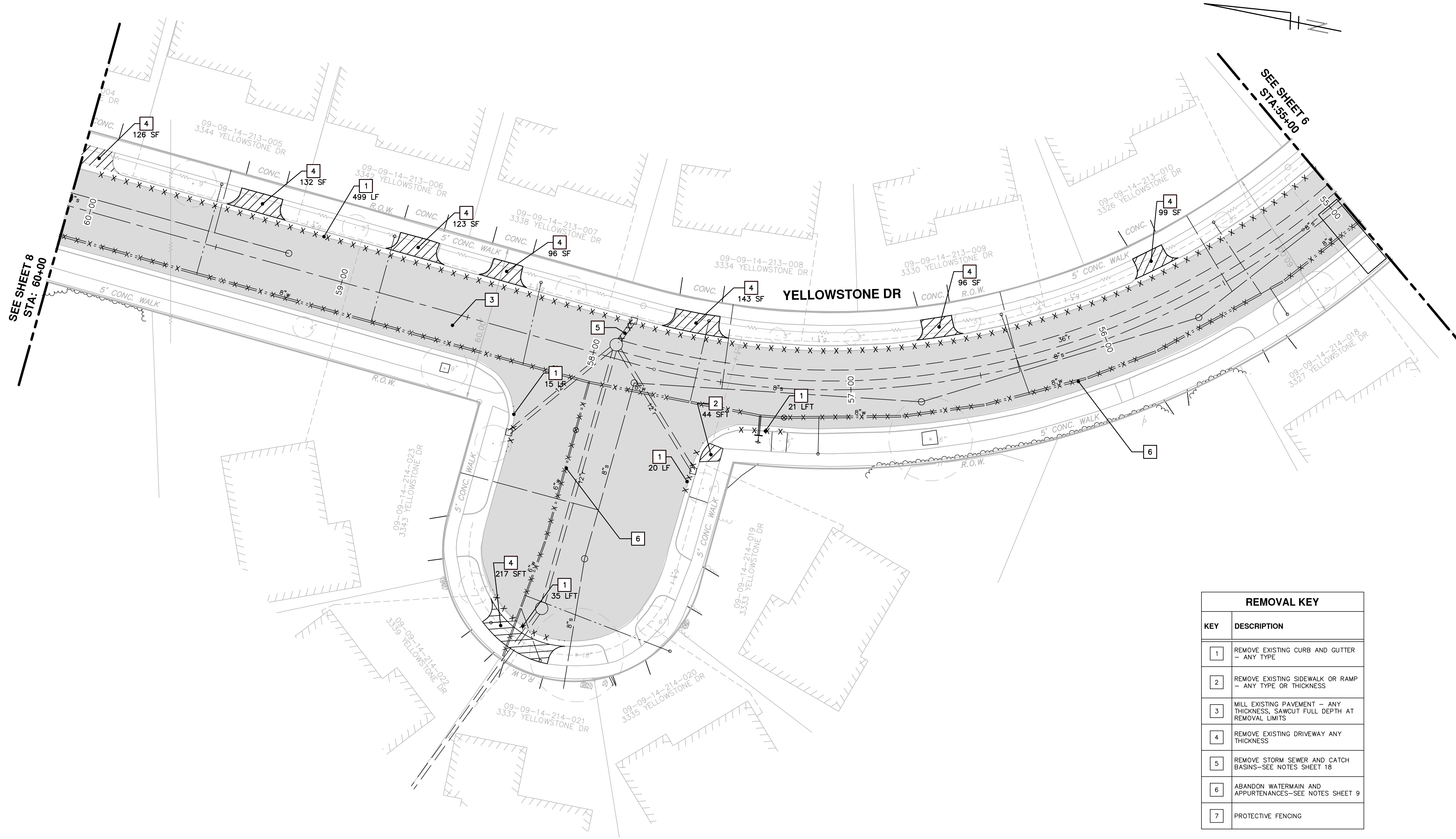
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN REMOVALS
 STA. 50+00 TO STA. 55+00

SCALE PLAN: 1" = 20'
 DRAWING No. 2013026-06

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00	BID SET	2-7-14	MS/DFP	IWK

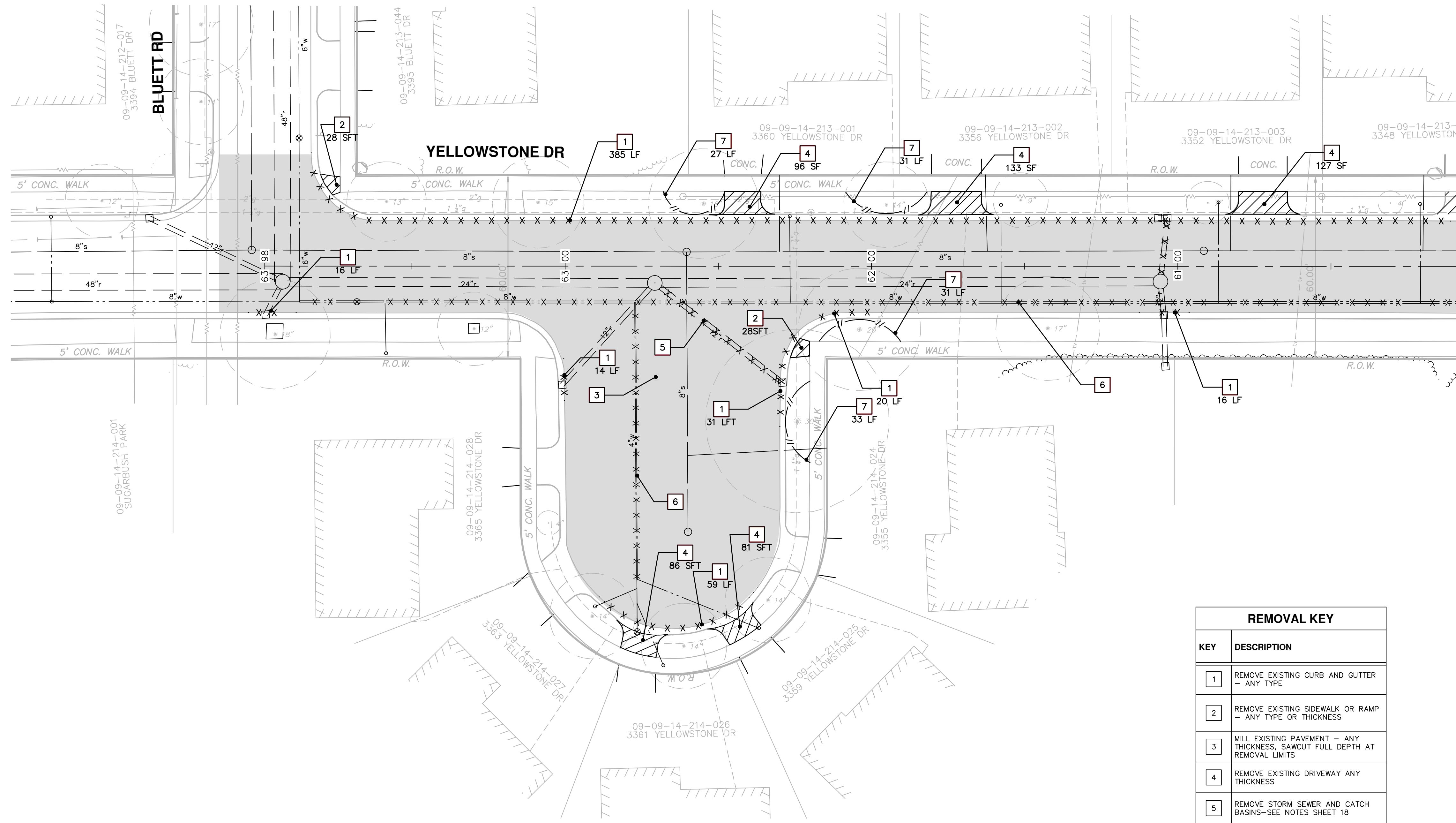


SEE SHEET 8
STA: 60+00

SEE SHEET 6
STA: 55+00

REMOVAL KEY	
KEY	DESCRIPTION
1	REMOVE EXISTING CURB AND GUTTER - ANY TYPE
2	REMOVE EXISTING SIDEWALK OR RAMP - ANY TYPE OR THICKNESS
3	MILL EXISTING PAVEMENT - ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS
4	REMOVE EXISTING DRIVEWAY ANY THICKNESS
5	REMOVE STORM SEWER AND CATCH BASINS-SEE NOTES SHEET 18
6	ABANDON WATERMAIN AND APPURTENANCES-SEE NOTES SHEET 9
7	PROTECTIVE FENCING

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	2-7-14	MS/DFP	IWK



SEE SHEET 7
STA: 60+00

REMOVAL KEY	
KEY	DESCRIPTION
1	REMOVE EXISTING CURB AND GUTTER - ANY TYPE
2	REMOVE EXISTING SIDEWALK OR RAMP - ANY TYPE OR THICKNESS
3	MILL EXISTING PAVEMENT - ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS
4	REMOVE EXISTING DRIVEWAY ANY THICKNESS
5	REMOVE STORM SEWER AND CATCH BASINS-SEE NOTES SHEET 18
6	ABANDON WATERMAIN AND APPURTENANCES-SEE NOTES SHEET 9
7	PROTECTIVE FENCING

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN REMOVALS

SCALE PLAN: 1" = 20'
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STA. 60+00 TO P.O.E.

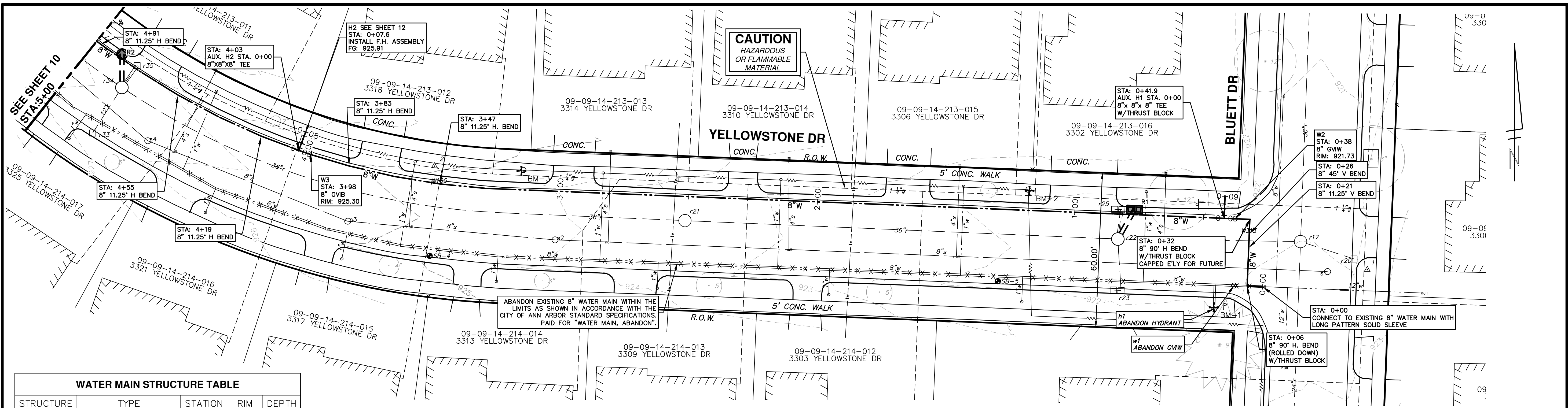
8 OF 18

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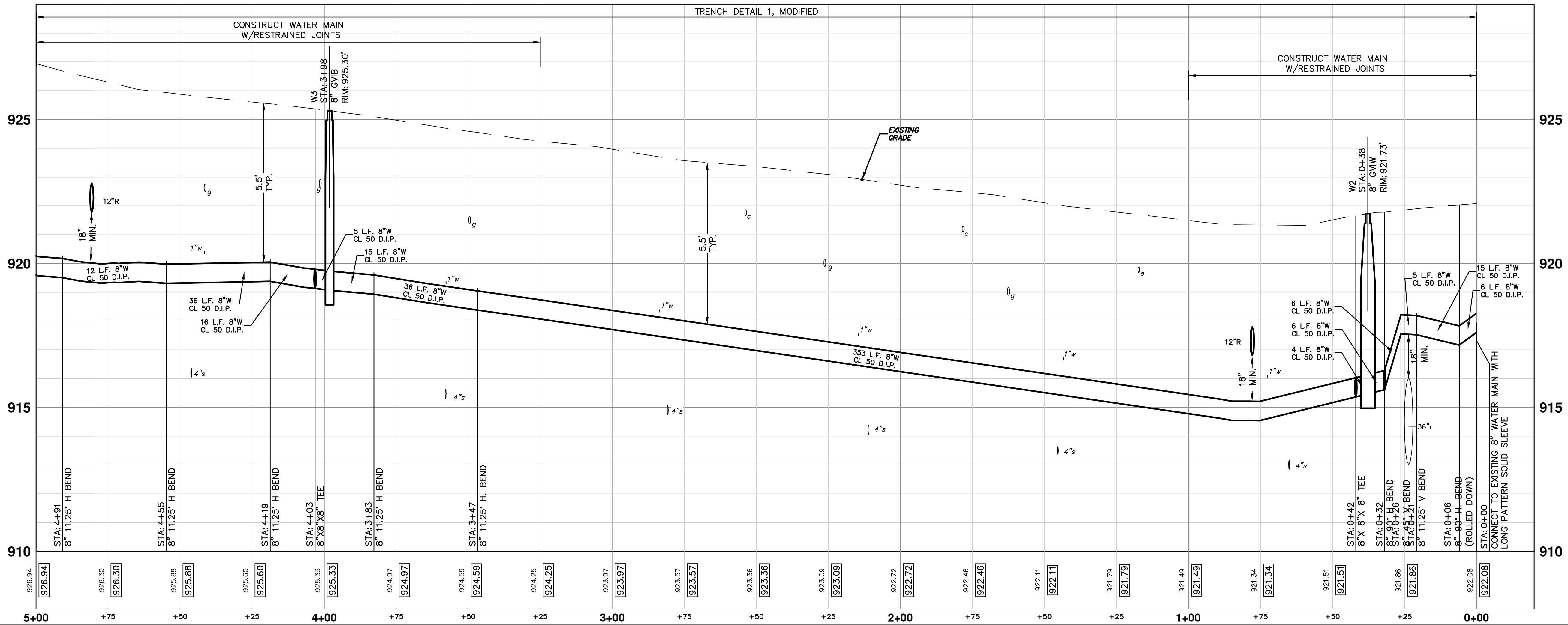
S:\Project Management\Design\2013026 Yellowstone\Plan Production\Primary\2013026Watr.dwg Dwg Created: 10-Dec-13 - c02 standard bw.stb - Plot Date: 12-Feb-14



WATER MAIN STRUCTURE TABLE

STRUCTURE	TYPE	STATION	RIM	DEPTH
w1	ABANDON GWV	0+06	921.88	4.86
h1	ABANDON HYDRANT	0+06	922.29	6.86
H2	INSTALL F.H. ASSEMBLY	0+08	925.91	8.08
H1	INSTALL F.H. ASSEMBLY	0+09	922.15	8.00
W2	8" GVW	0+38	921.73	6.26
W3	8" GVVB	3+98	925.30	6.24

THE CONTRACTOR SHALL REMOVE AND ABANDON THE NECESSARY PORTIONS OF THE EXISTING WATER MAINS IN ORDER TO FACILITATE THE PROPOSED WATER MAIN INTER-CONNECTION. ALL COSTS ASSOCIATED WITH PERFORMING THE INTER-CONNECTION, COORDINATING UTILITY SHUTDOWNS, ABANDONING WATER MAIN, RE-ABANDONING THE WATER MAIN AND ALL RELATED WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK.



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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
WATER MAIN PLAN & PROFILE

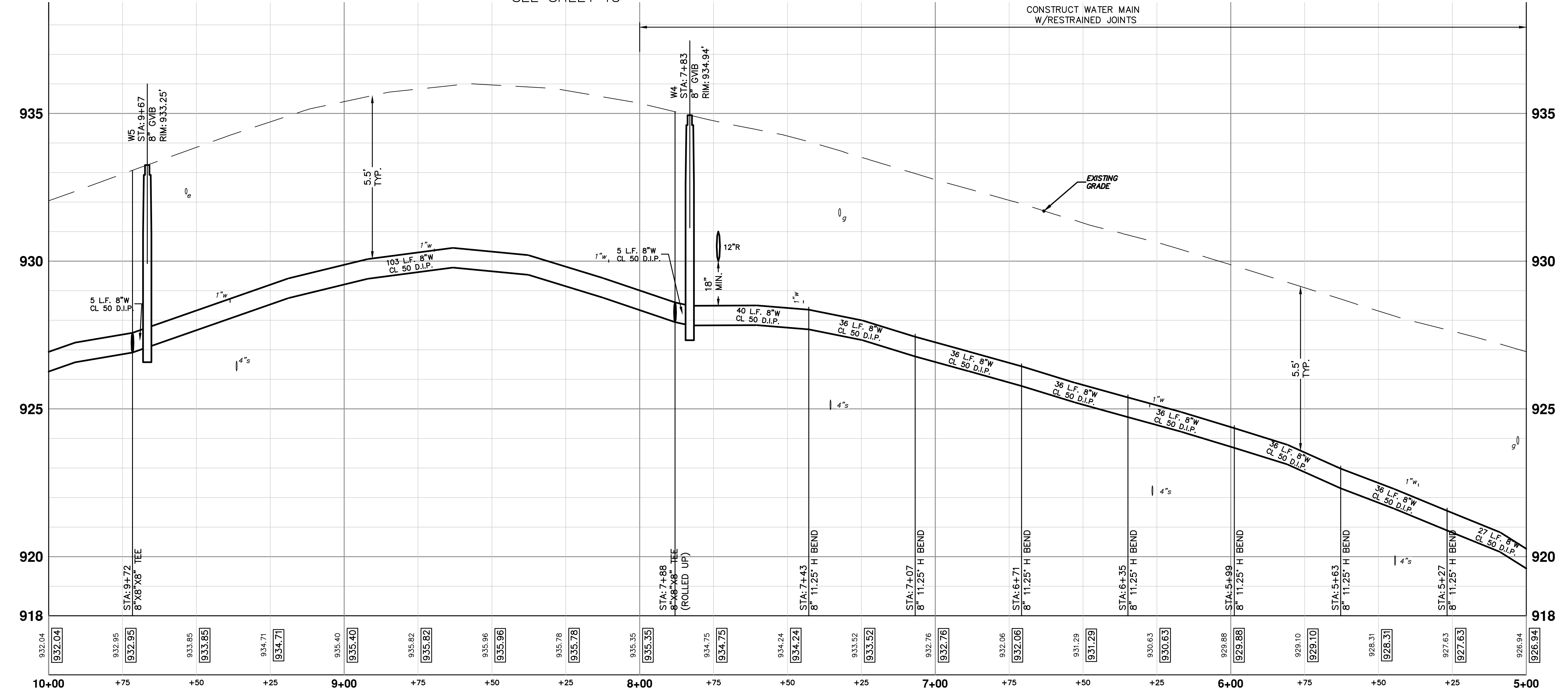
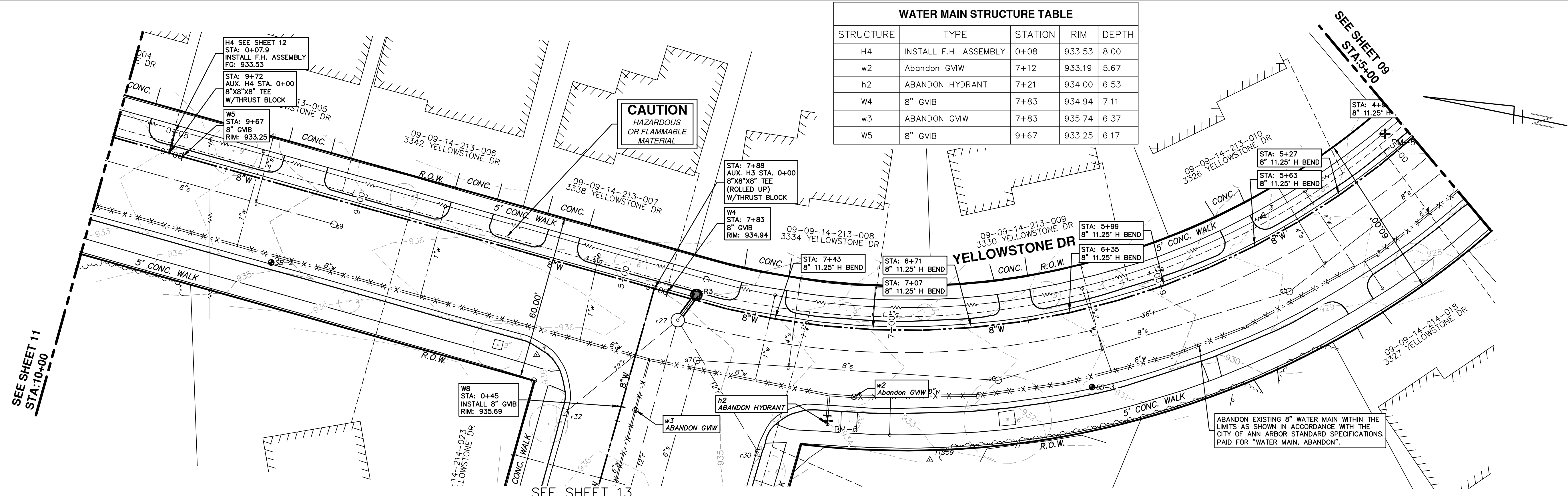
STA. 0+00 - STA. 5+00

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING NO. 2013026-09

SHEET NO. 09 OF 18

WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H4	INSTALL F.H. ASSEMBLY	0+08	933.53	8.00
w2	Abandon GVIW	7+12	933.19	5.67
h2	ABANDON HYDRANT	7+21	934.00	6.53
W4	8" GVIW	7+83	934.94	7.11
w3	ABANDON GVIW	7+83	935.74	6.37
W5	8" GVIW	9+67	933.25	6.17



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ANN ARBOR MI CITY

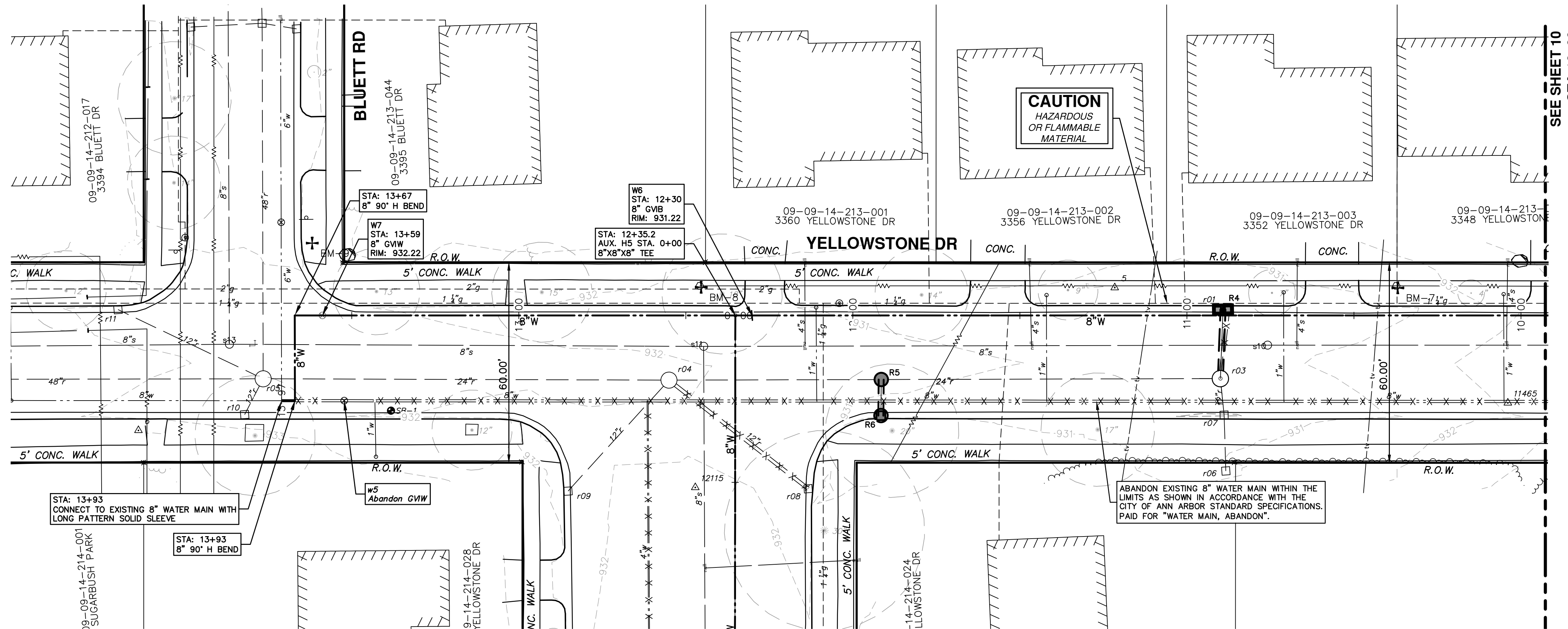
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
WATER MAIN PLAN & PROFILE

STA. 5+00 - STA. 10+00

SHEET No. 10 OF 18

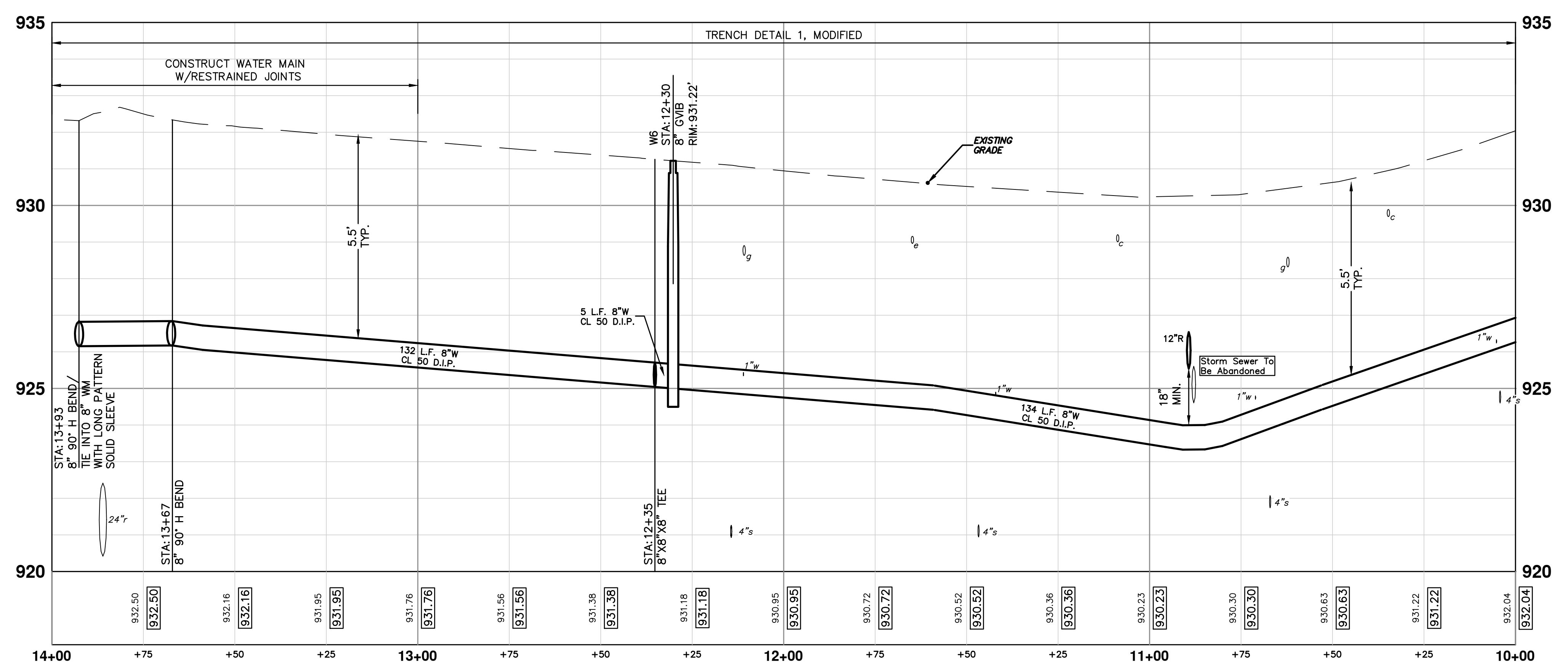
SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'
DRAWING No. 2013026-10

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WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
W6	8" GVB	12+30	931.22	6.22
w5	ABANDON GVIW	13+52	932.25	5.86
W7	8" GVIW	13+59	932.22	6.17

SEE SHEET 14



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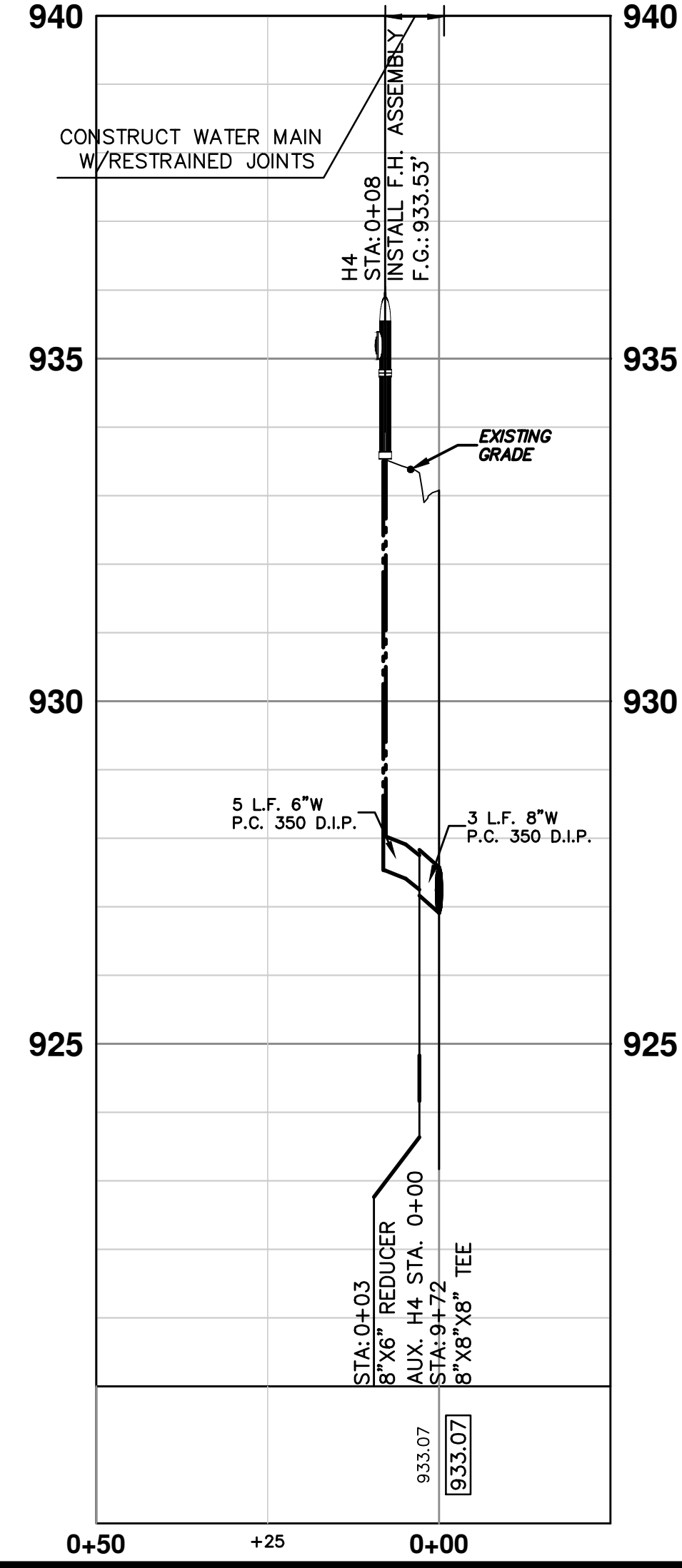
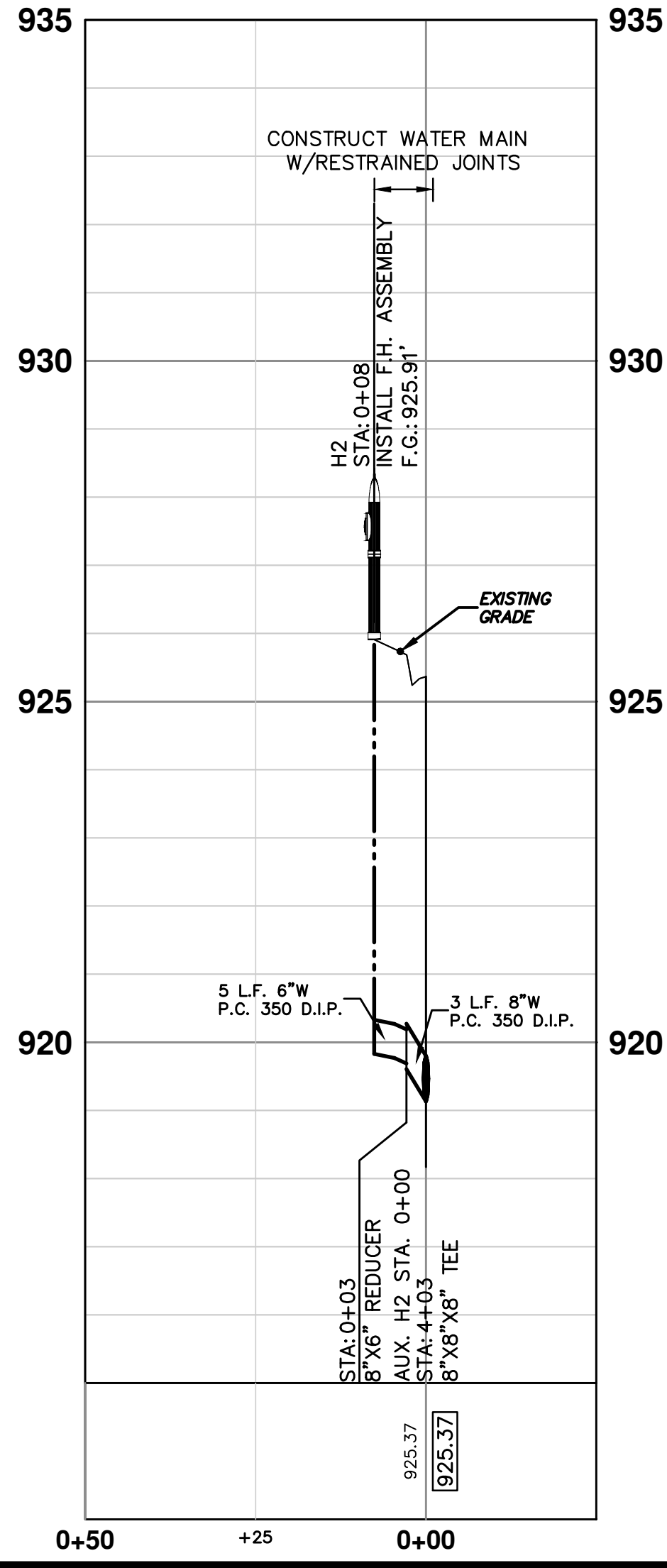
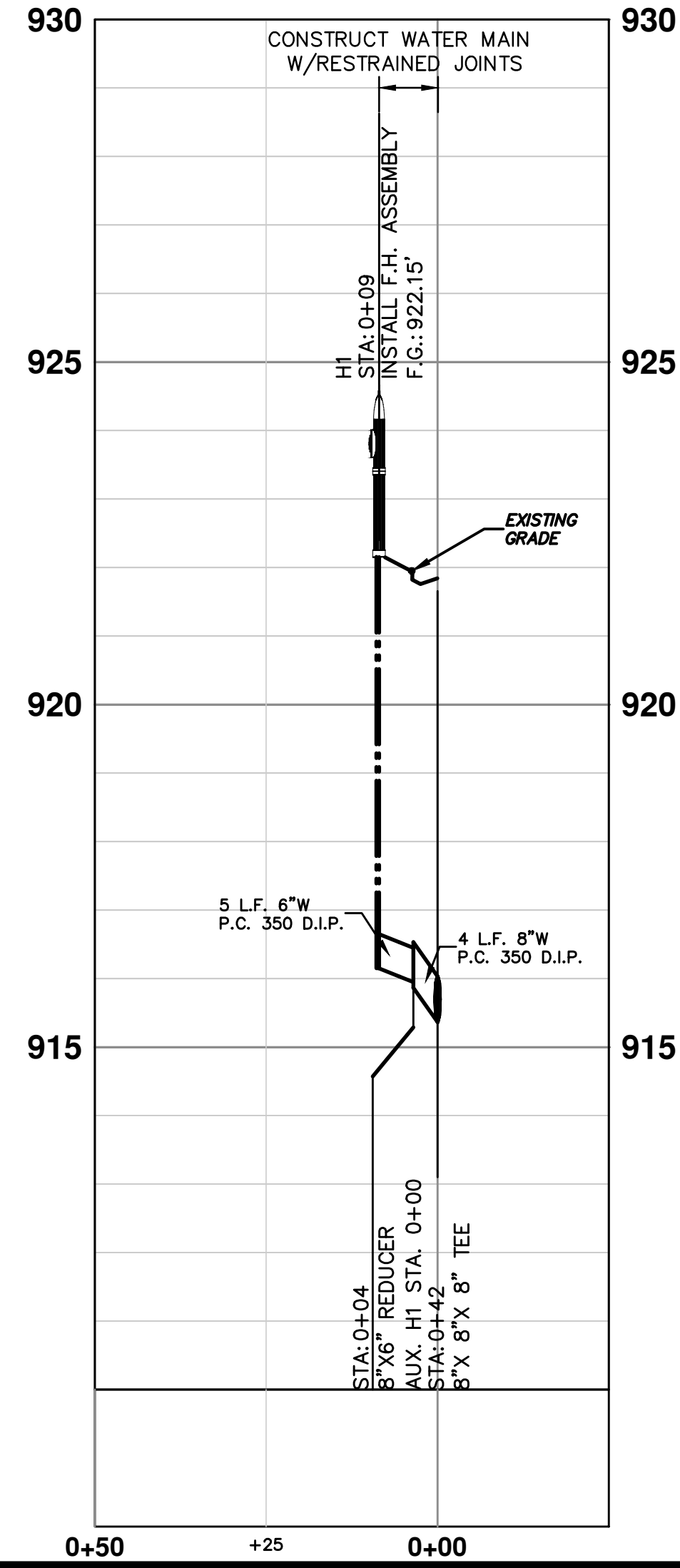
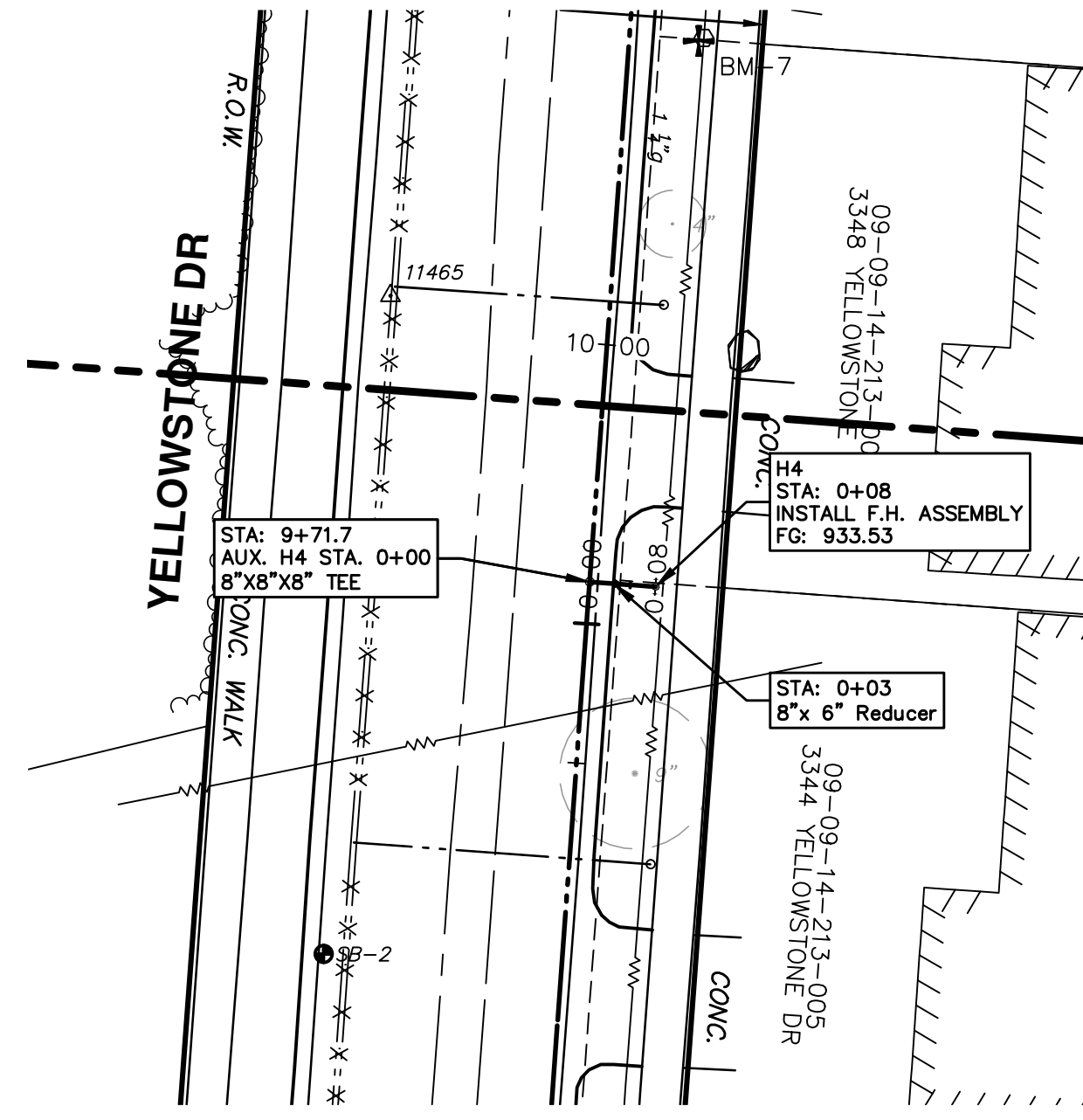
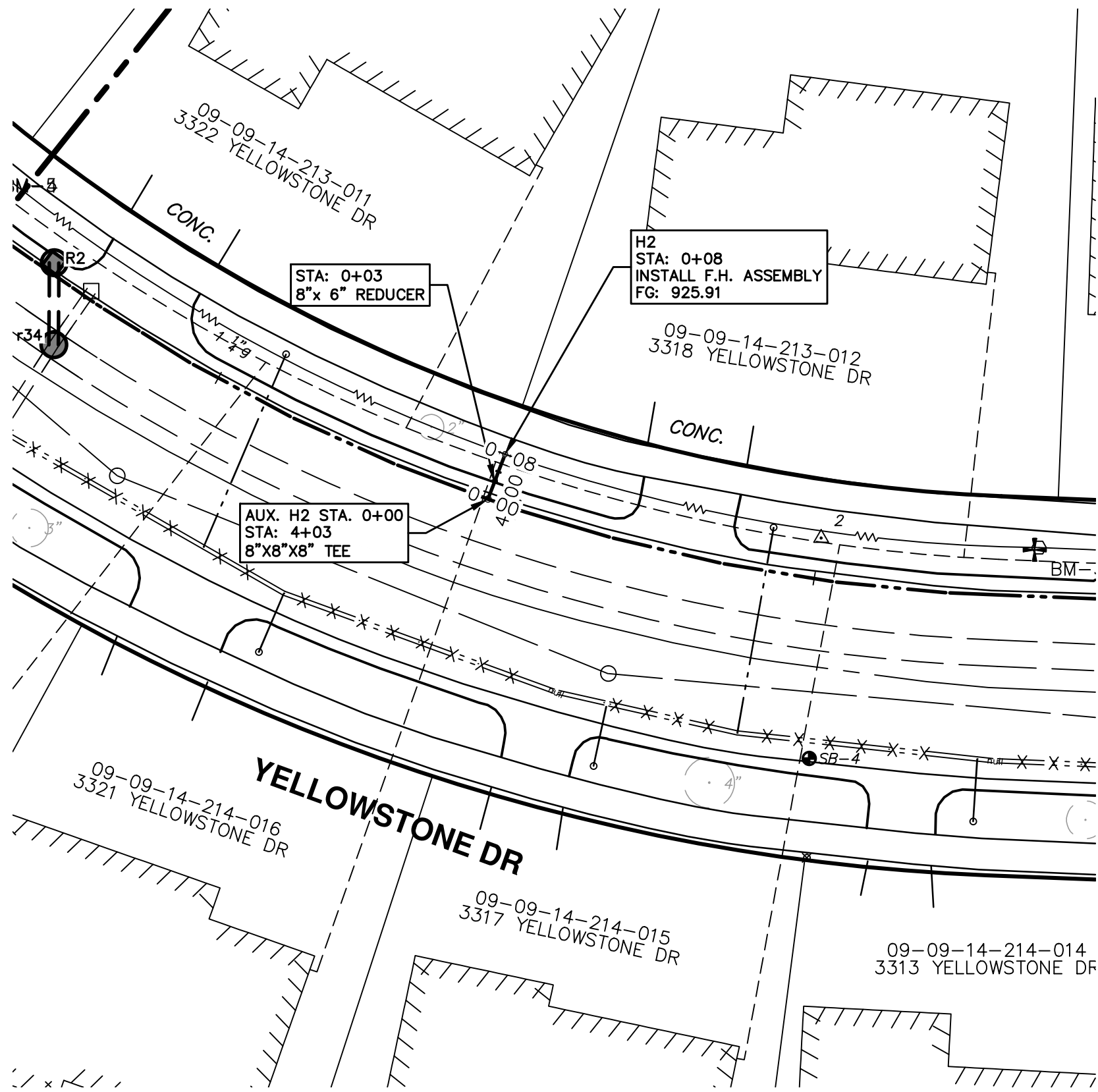
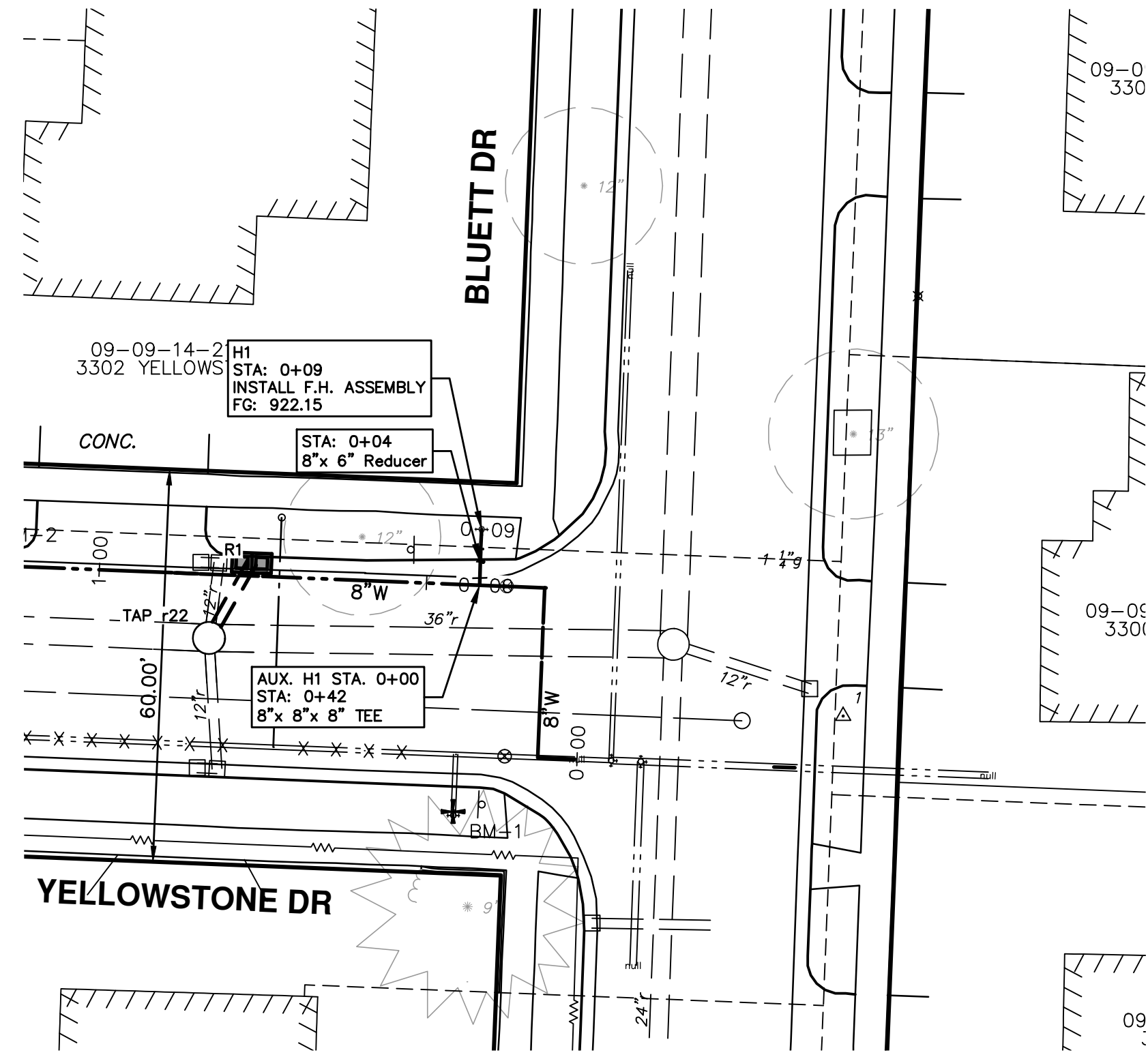
DATE: 2-7-14
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
WATER MAIN PLAN & PROFILE

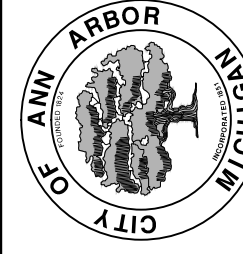
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SHEET No. 11 OF 18

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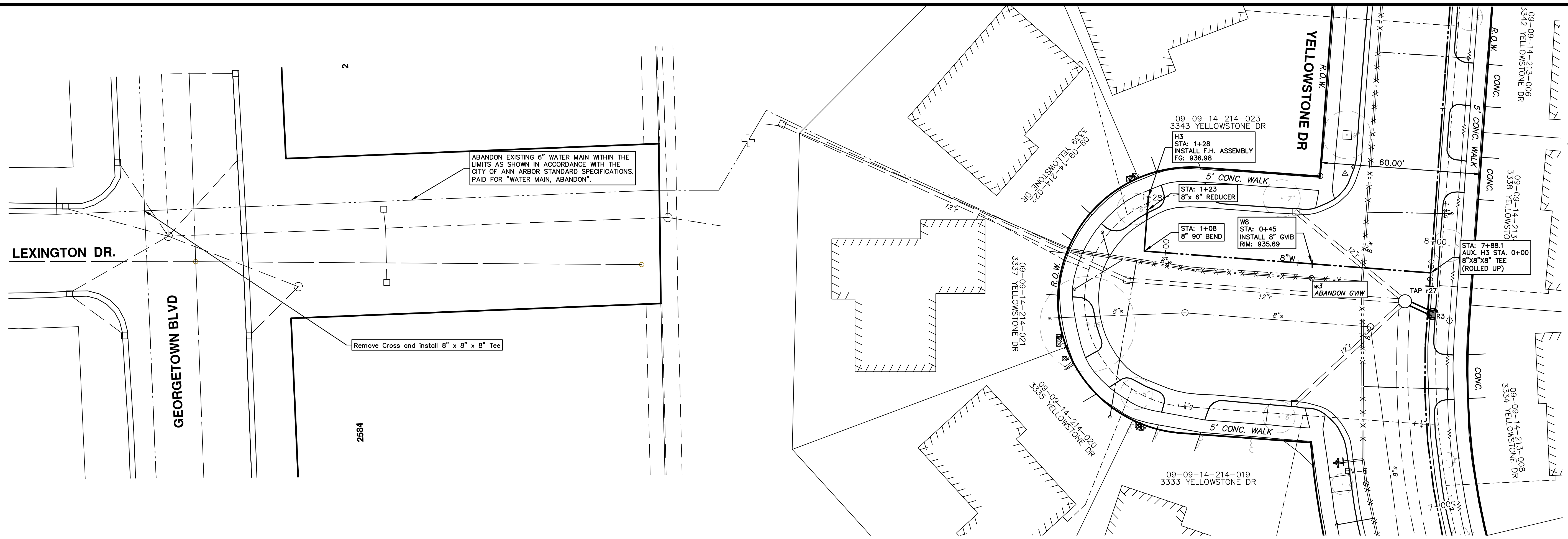
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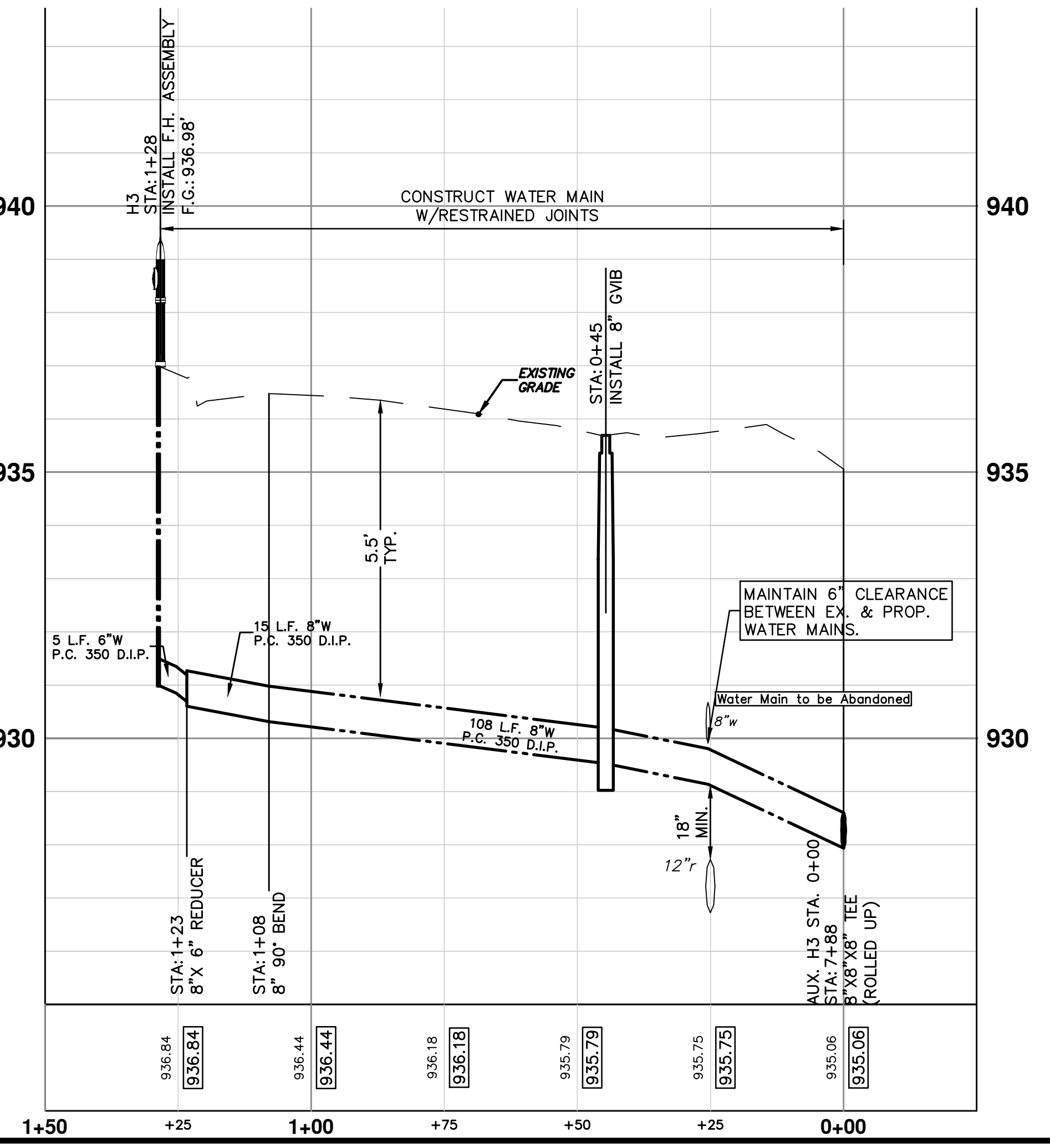


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
WATER MAIN PLAN & PROFILE
AUX H1, H2 & H4

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'
DRAWING No. 2013026-12



WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H3	INSTALL F.H. ASSEMBLY	1+28	936.98	6.37
w3	ABANDON GVIW	7+83	935.74	6.37



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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
WATER MAIN PLAN & PROFILE

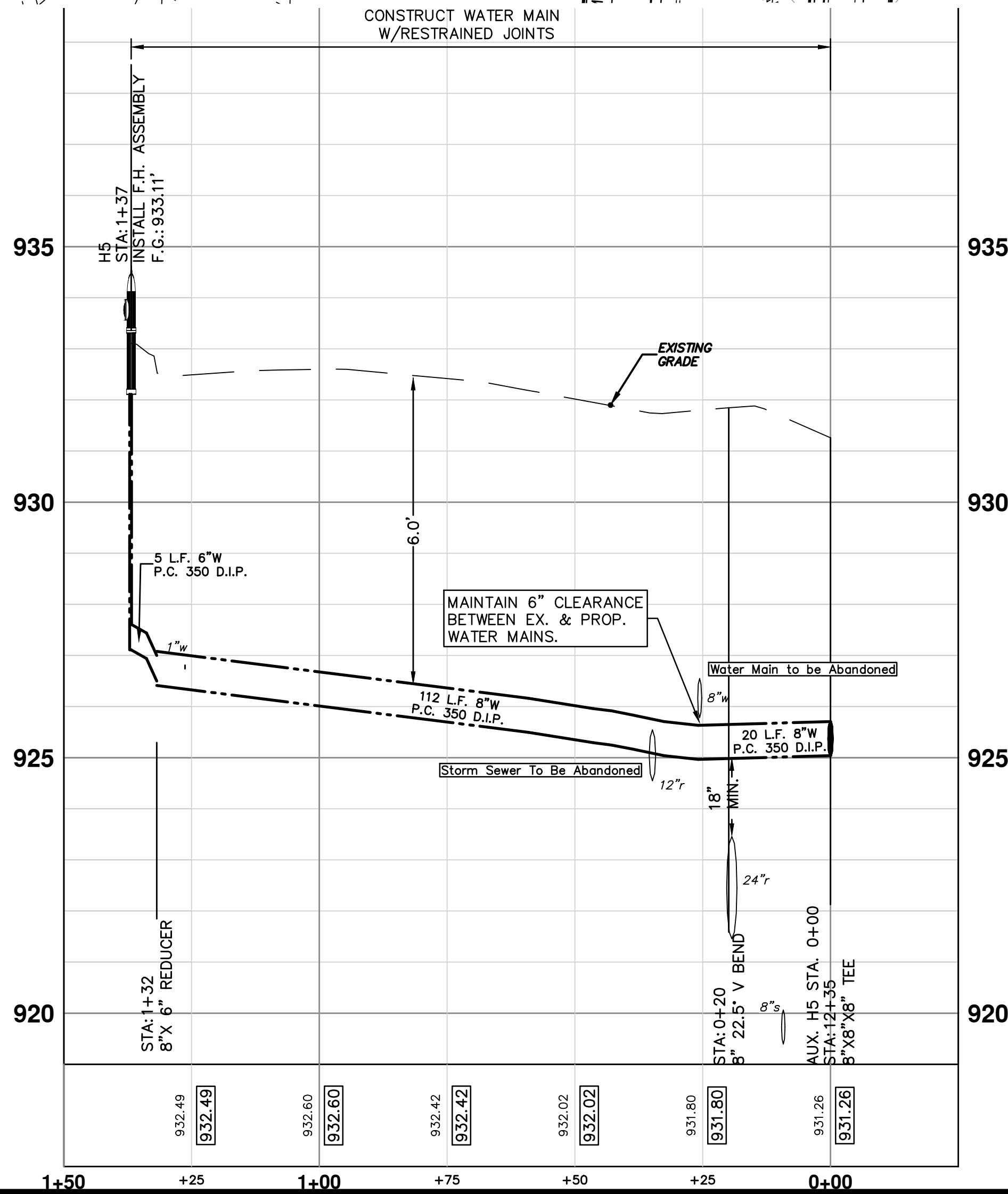
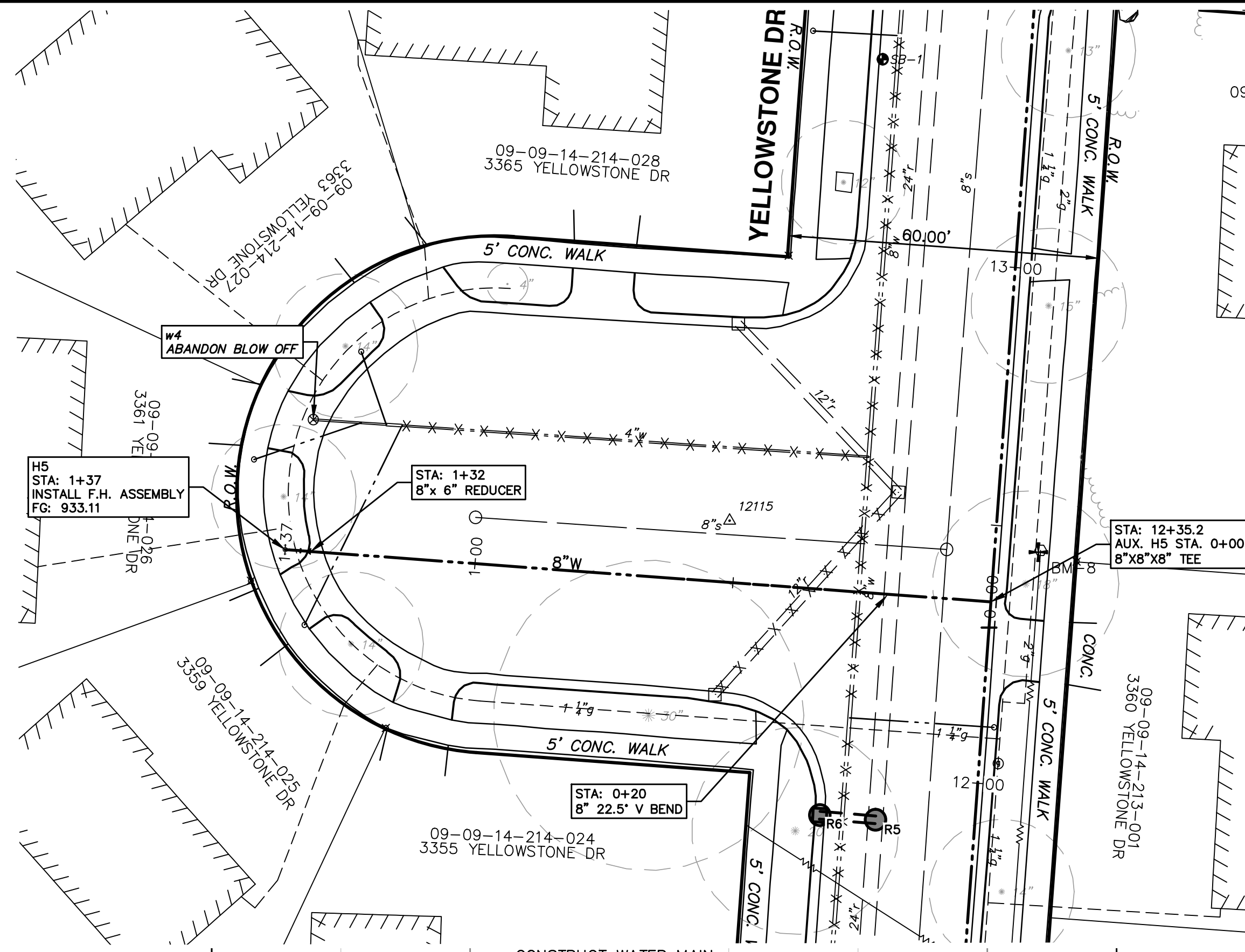
AUX H3

SHEET No. **13 OF 18**

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'
DRAWING No. **2013026-13**

S:\Project Management\Design\2013026 Yellowstone\Plan Production\Primary\2013026Watr1.dwg Dwg Created: 11-Dec-13 - _a2 standard bw.stb - Plot Date: 12-Feb-14

WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H5	INSTALL F.H. ASSEMBLY	1+37	933.11	8.00
w4	ABANDON BLOW OFF	12+61	932.53	6.84



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
 WATER MAIN PLAN & PROFILE
 AUX. H5

SCALE PLAN: 1" = 20'
 PROFILE: 1" = 2'

DRAWING No. **2013026-14**

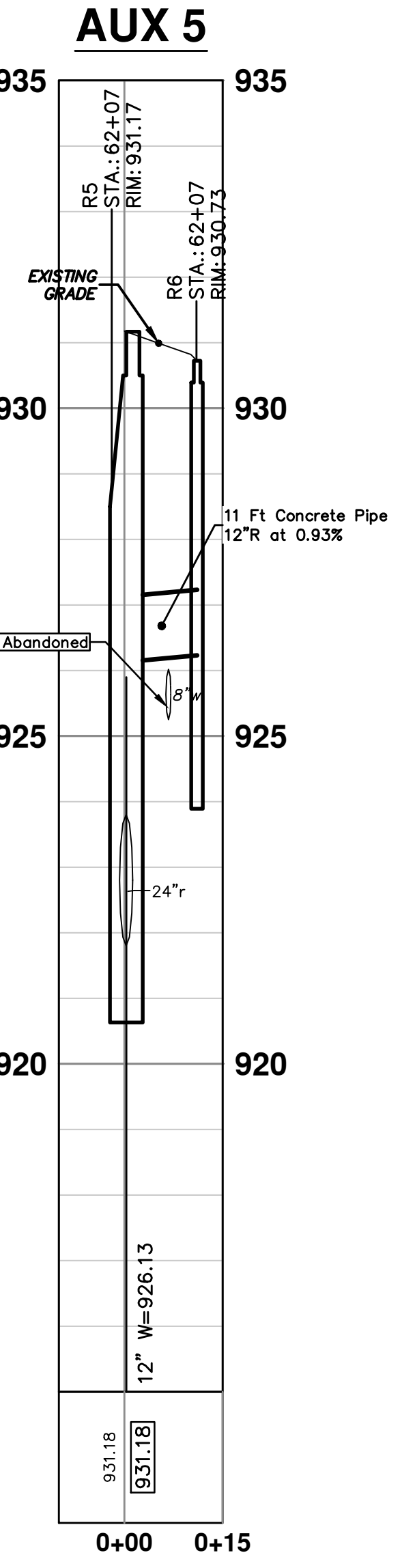
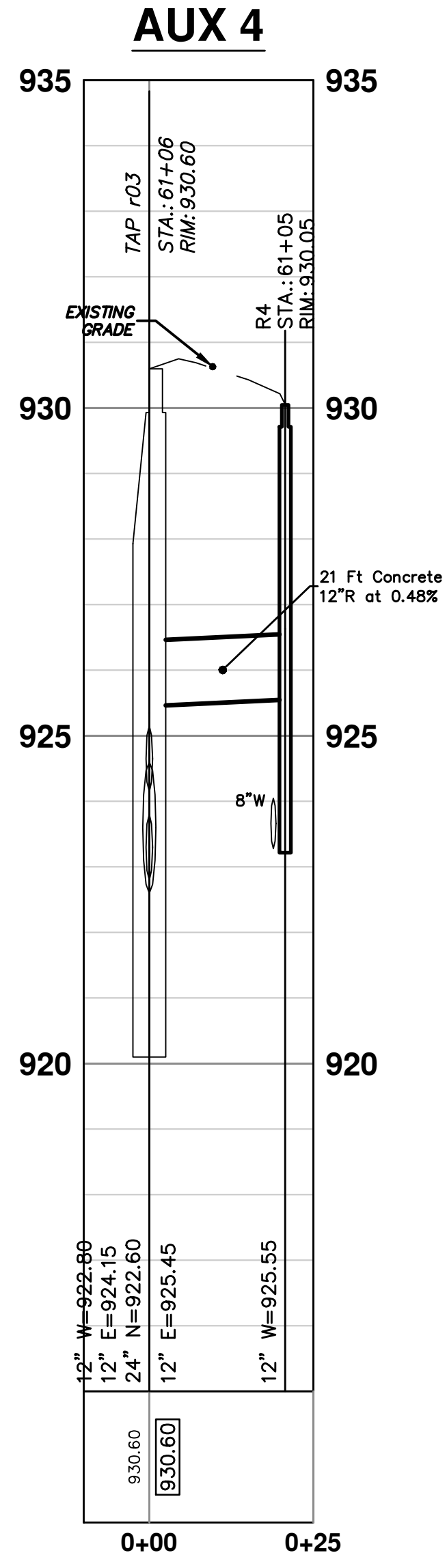
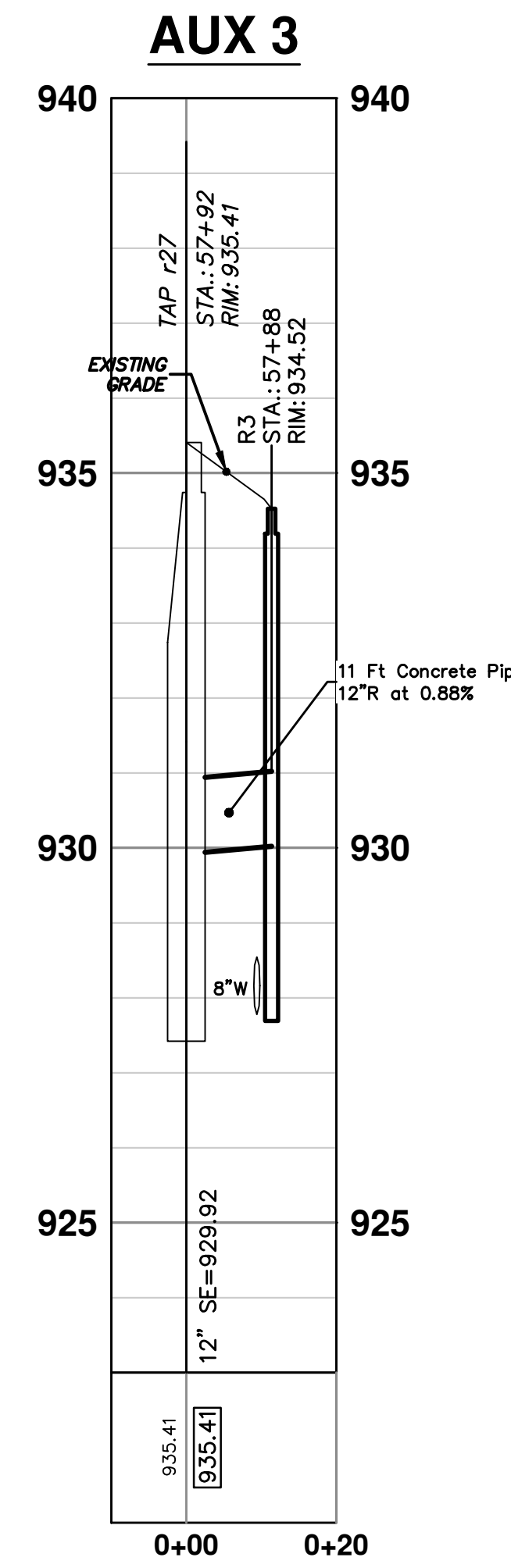
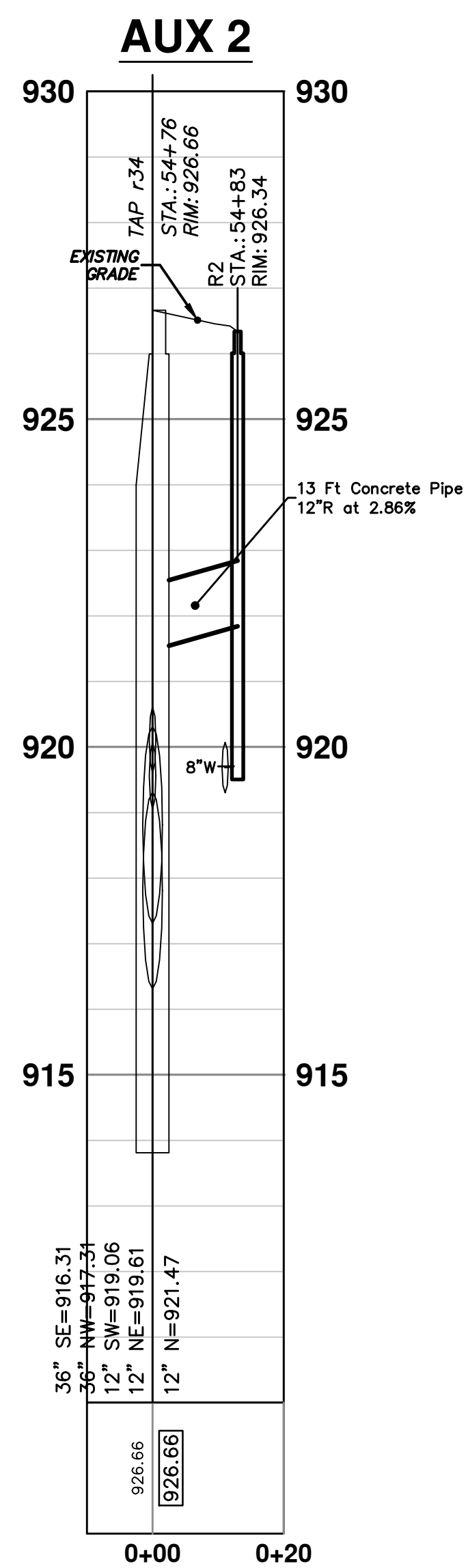
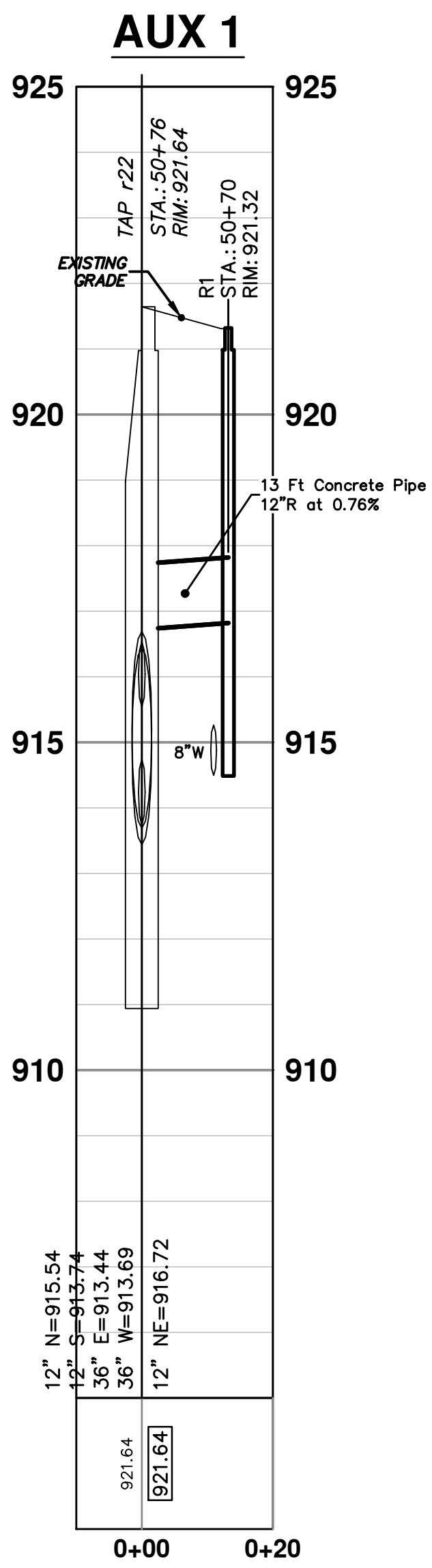
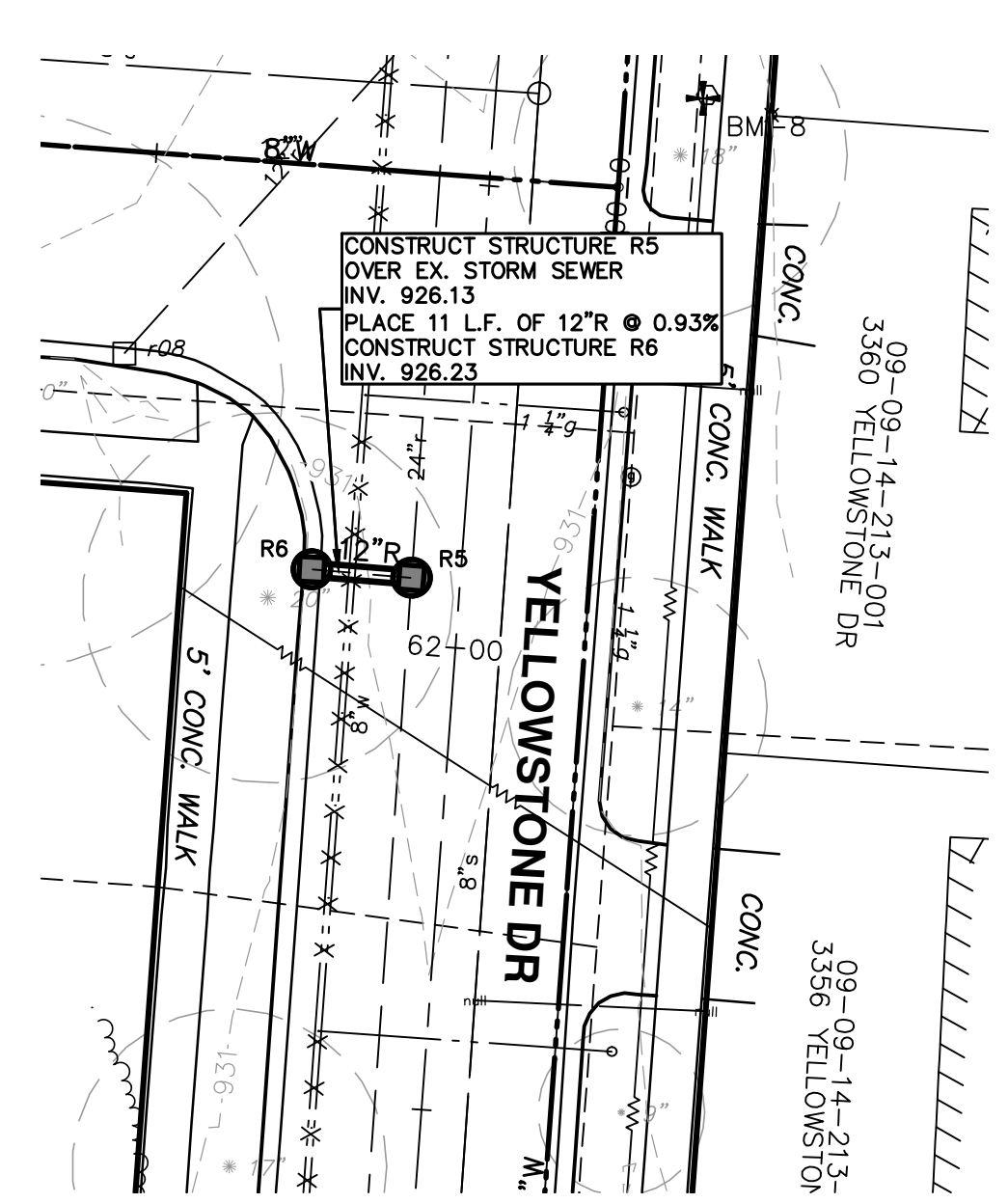
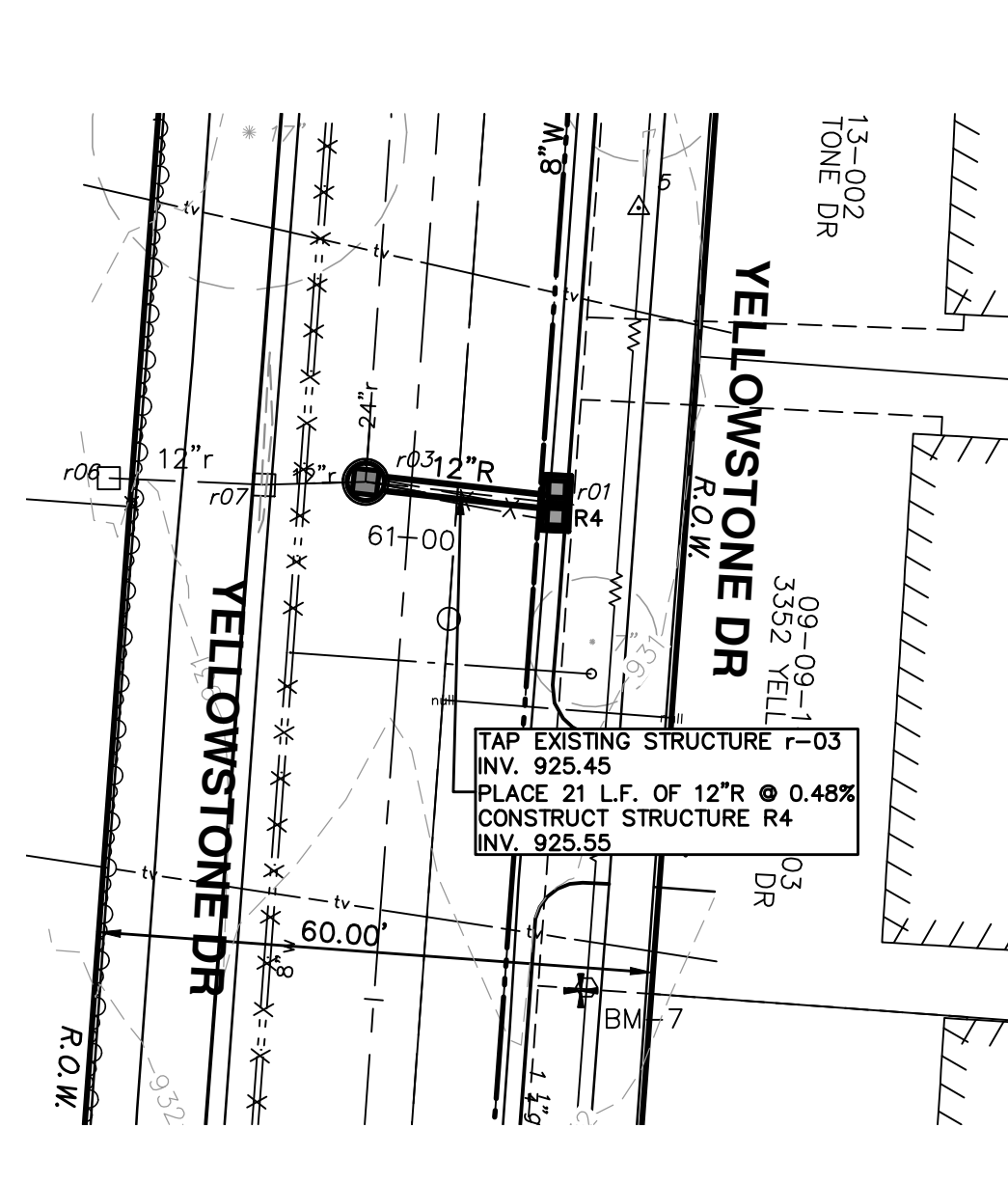
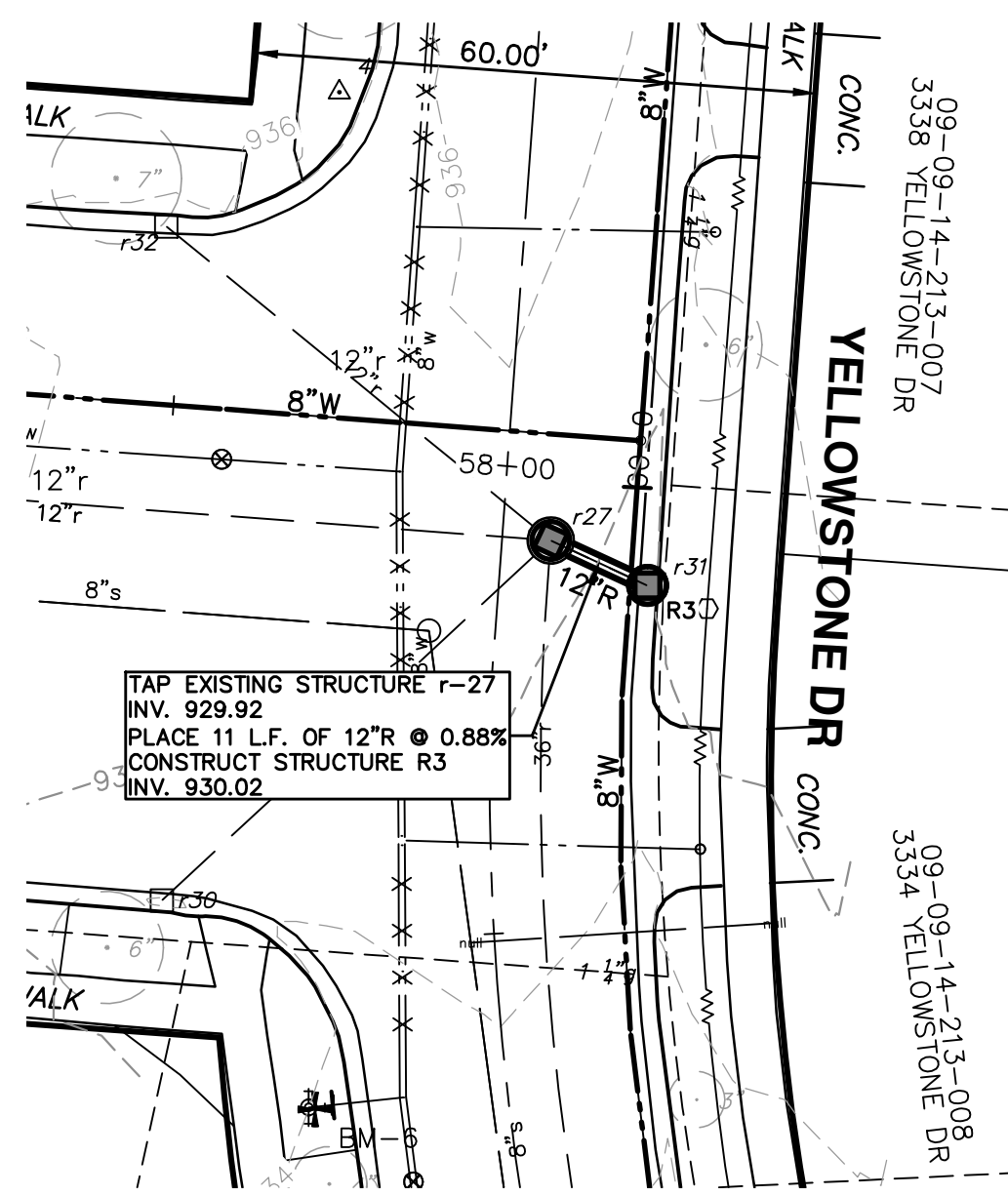
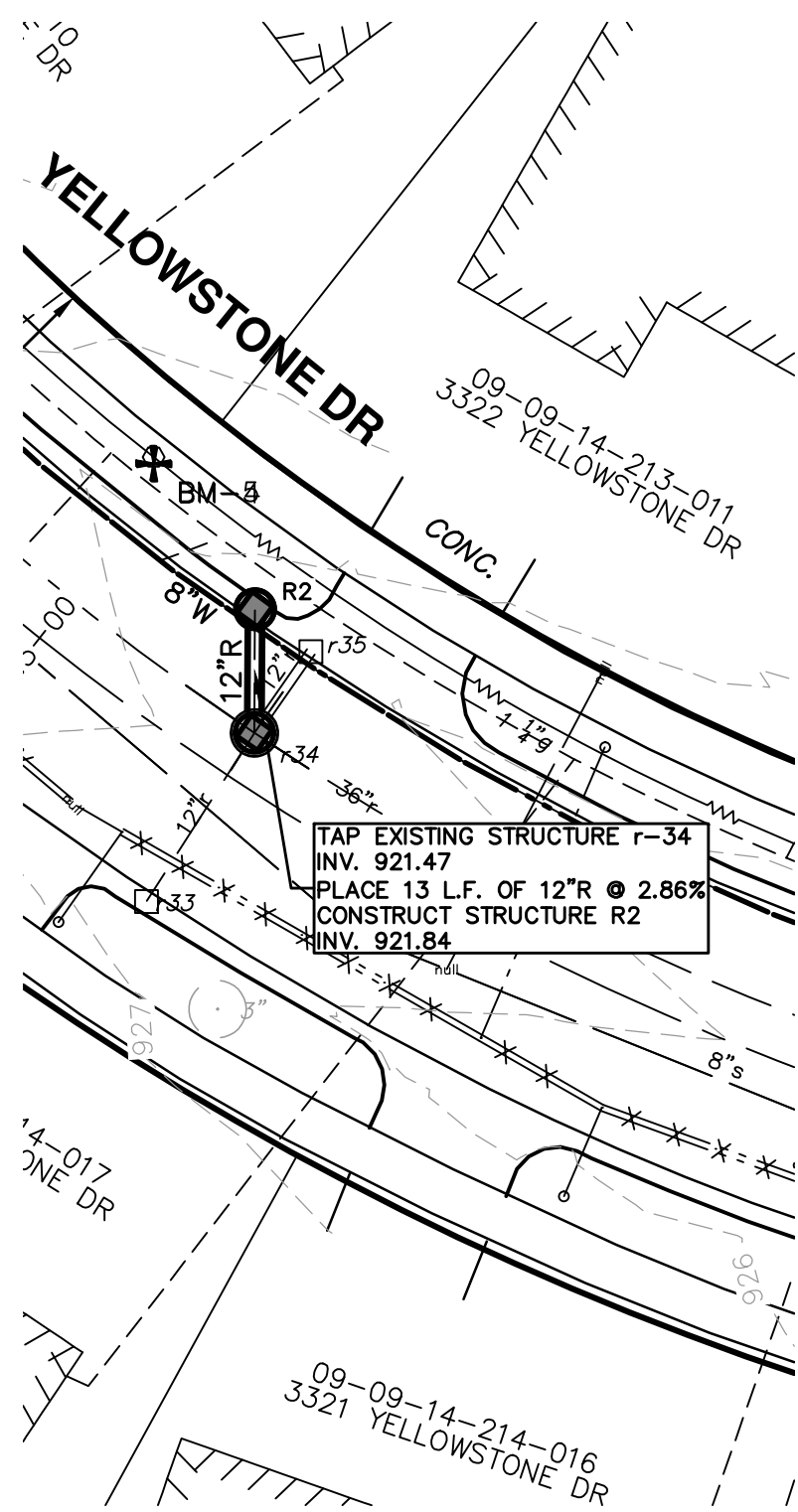
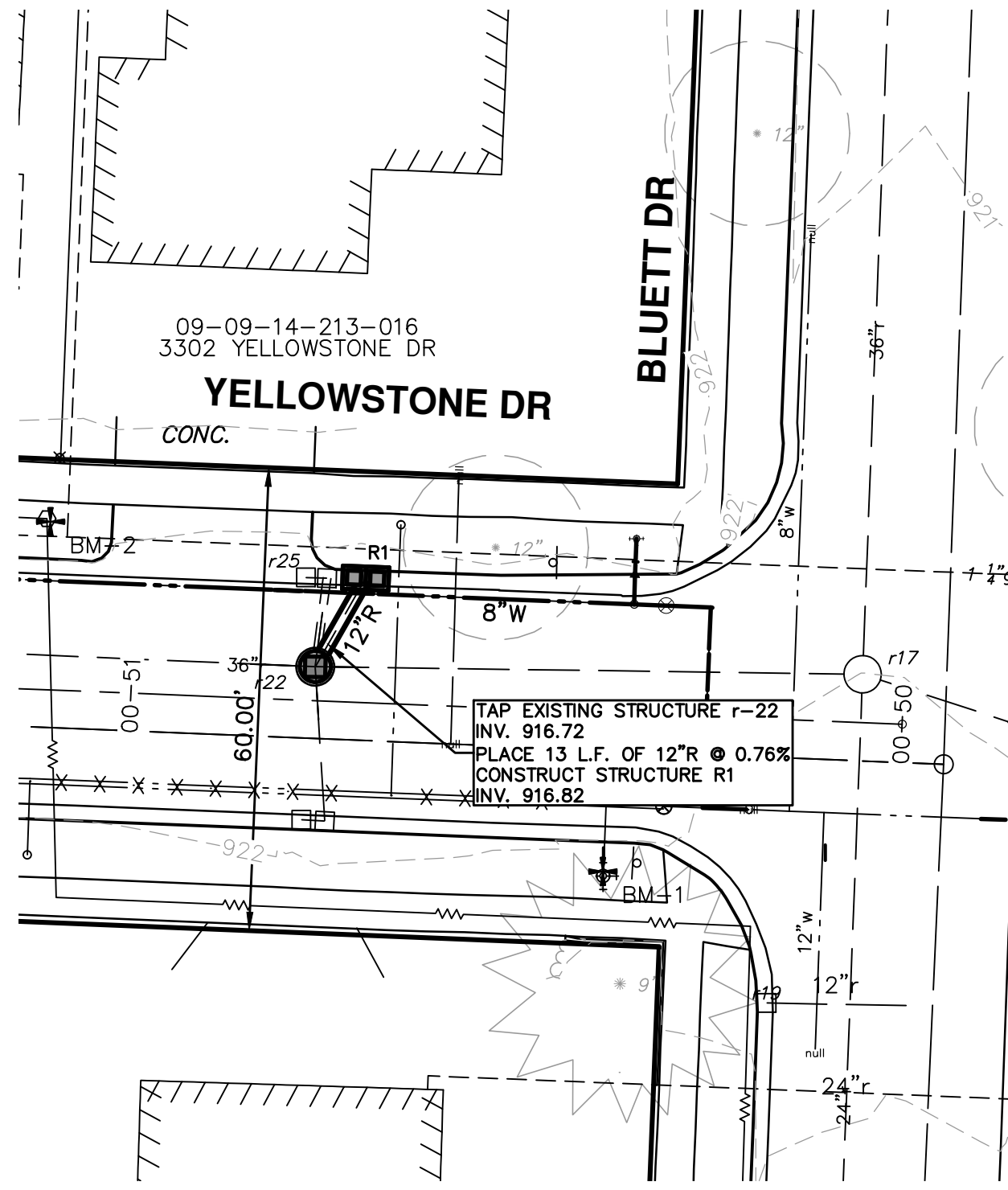
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PROPOSED STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	RIM	DEPTH	TYPE	INVERTS
R1	50+70	921.32	6.50	Construct Double Inlet	12" SW 916.82
R2	54+83	926.34	6.50	Construct Single Inlet, 2'D	12" S 921.84
R3	57+88	934.52	6.50	Construct Single Inlet, 2'D	12" NW 930.02
R4	61+05	930.05	6.50	Construct Double Inlet Str.	12" W 925.55
R5	62+07	931.17	10.04	Construct 6" Mh Over Existing 36" Storm Sewer	12" W 926.13
R6	62+07	930.73	6.50	Construct Single Inlet, 2'D	12" E 926.23
TAP r03	61+06	930.60	10.00	Top Existing Mh	12" E 925.45 12" W 922.80 24" N 922.60
TAP r22	50+76	921.64	10.20	Top Existing Mh	12" NE 916.72 12" N 915.54 36" E 913.74 36" W 913.69
TAP r27	57+92	935.41	7.49	Top Existing Mh	12" SE 929.92
TAP r34	54+76	926.66	12.35	Top Existing Mh	12" N 921.47 36" SE 916.31 36" NW 917.31 12" SW 919.06 12" NE 919.61

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
STORM SEWER PLAN & PROFILE

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING No. 2013026-15
SHEET No. 15 OF 18

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CONSTRUCTION KEY	
KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC
DC6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH
SW6	PLACE 6" CONC. ADA RAMP WITH DETECTABLE WARNING STRIP
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	ADJUST INLET STRUCTURE COVER
3	ADJUST MANHOLE COVER

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
YELLOWSTONE WATERMAIN
 ROAD GRADING
 STA. 50+00 TO STA. 55+00

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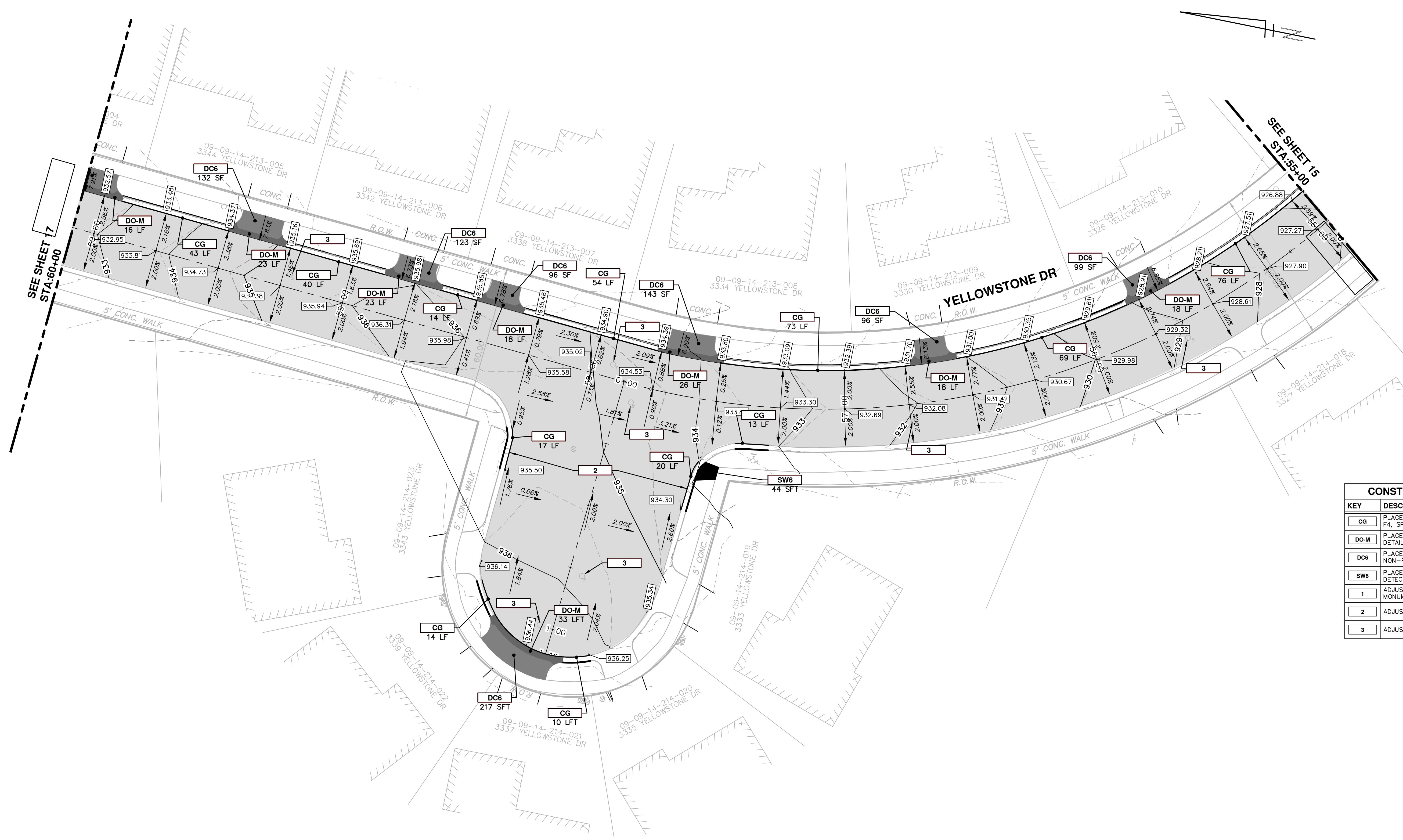
SCALE PLAN: 1" = 20'
 DRAWING No.
2013026-16

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SHEET No.
16 OF 18

SEE SHEET 16
 STA. 55+00



SEE SHEET 17
STA: 60+00

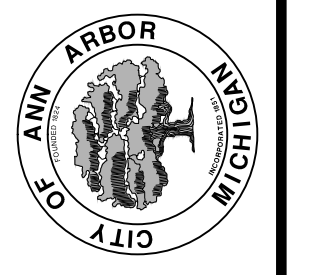
SEE SHEET 15
STA: 55+00

CONSTRUCTION KEY	
KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONC. F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC. DETAIL M, P-NC
DC6	PLACE CONC. DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH
SW6	PLACE 6" CONC. ADA RAMP WITH DETECTABLE WARNING STRIP
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	ADJUST INLET STRUCTURE COVER
3	ADJUST MANHOLE COVER



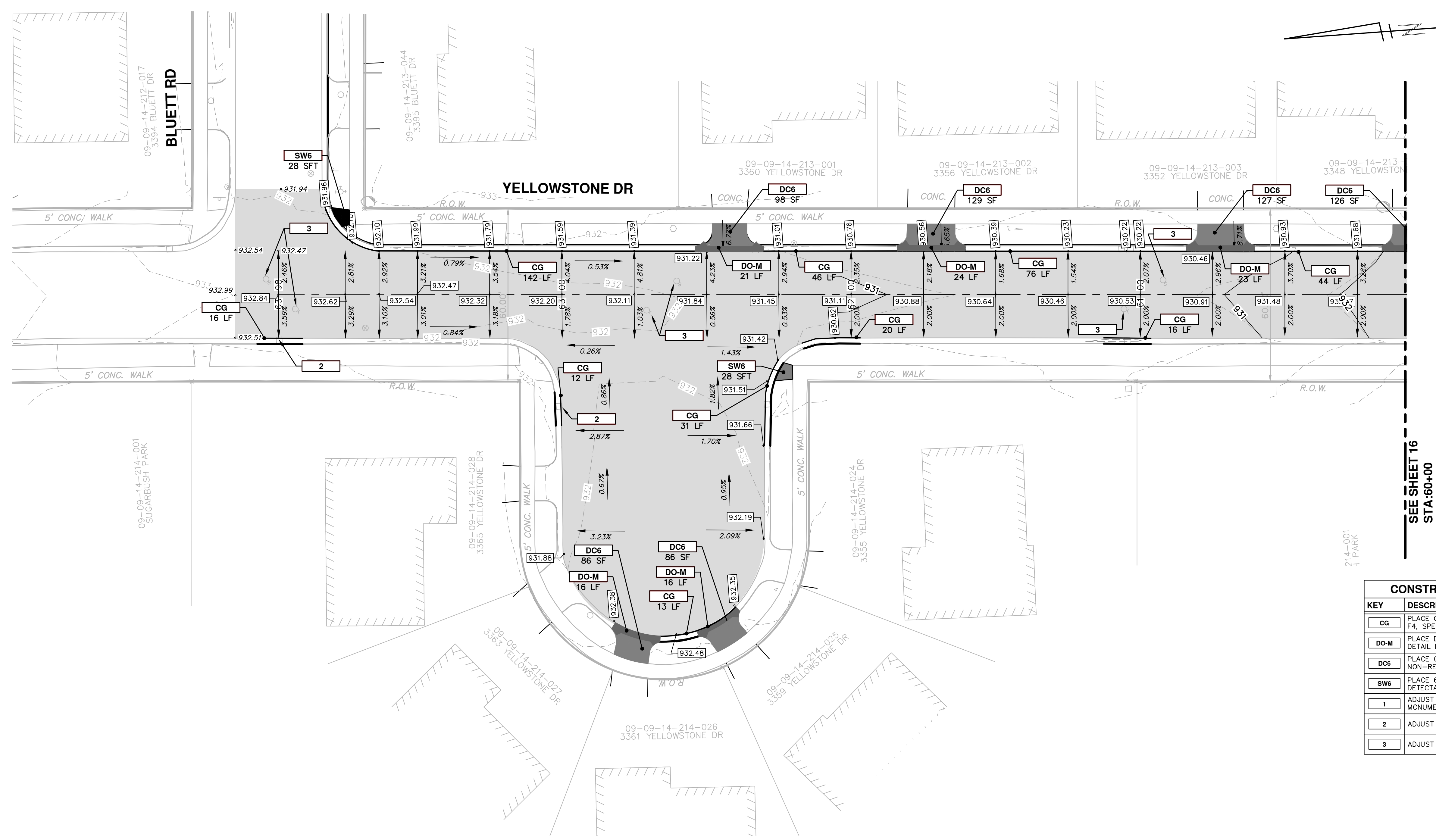
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YELLOWSTONE WATERMAIN
ROAD GRADING
STA. 55+00 TO STA. 60+00

SCALE PLAN: 1" = 20'
DRAWING No. 2013026-17



CONSTRUCTION KEY	
KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC
DC6	PLACE CONC. DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH
SW6	PLACE 6" CONC. ADA RAMP WITH DETECTABLE WARNING STRIP
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	ADJUST INLET STRUCTURE COVER
3	ADJUST MANHOLE COVER

SEE SHEET 16
STA. 60+00

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YELLOWSTONE WATERMAIN
 ROAD GRADING
 STA. 60+00 TO STA. 64+00

SCALE PLAN: 1" = 20'
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 SHEET No. 18 OF 18

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