

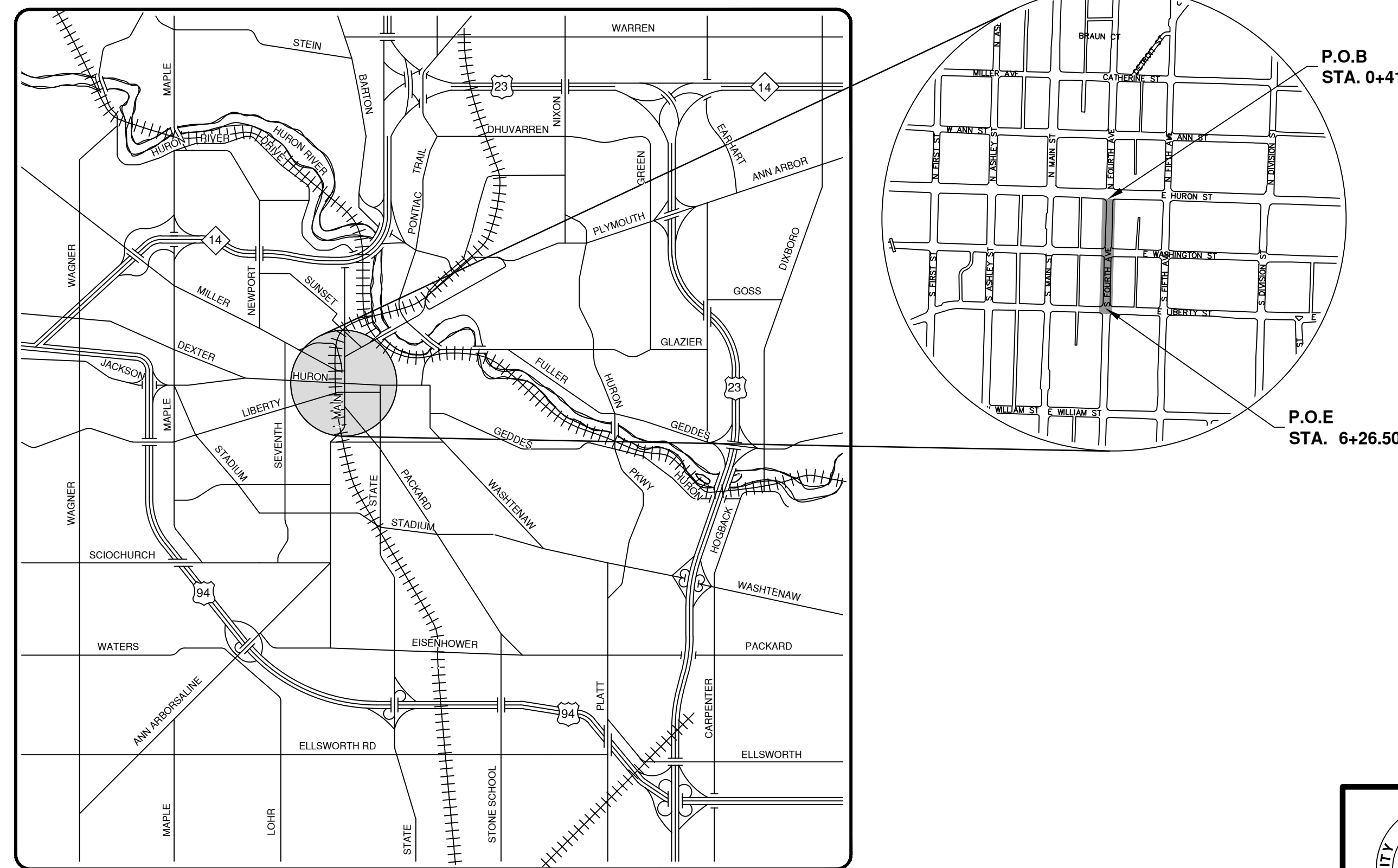
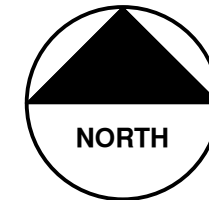


CITY OF ANN ARBOR PROJECT MANAGEMENT SOUTH FOURTH AVENUE IMPROVEMENT PROJECT

BID No. ITB 4280

FILE No. 2011033

MARCH 2013



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. ALL WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT PUBLIC SERVICES STANDARD SPECIFICATIONS AND DETAILS.

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 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, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES 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.

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
1	COVER
2	LEGEND
3	PROPOSED TYPICAL ROAD SECTION
4	DETAILS
5	REMOVALS
6	WATERMAIN PLAN AND PROFILE
7-8	STORM SEWER PLAN AND PROFILE
9-10	GRADES
11-12	ROAD PLAN AND PROFILE
13	DETOUR PLAN
14-16	MAINTENANCE OF TRAFFIC
17	PAVEMENT MARKINGS

 PROJECT MANAGEMENT SERVICE UNIT	
<p><i>Igor V. Kotlyar</i> IGOR V. KOTLYAR, P.E. - MI LICENSE No. 43287 PROJECT ENGINEER</p> <p style="text-align: right;">2/15/2013 DATE</p>	 <p style="text-align: center;">ENGINEER'S SEAL</p>
<p><i>Christopher E. Carson</i> CHRISTOPHER CARSON, P.E. - MI LICENSE No. 47156 PROJECT ENGINEER</p> <p style="text-align: right;">2/15/2013 DATE</p>	 <p style="text-align: center;">ENGINEER'S SEAL</p>

<p style="text-align: center;">PROJECT MANAGEMENT - CITY OF ANN ARBOR</p> <p style="text-align: center;">CONTRACT FOR RECONSTRUCTION OF S. FOURTH AVENUE BETWEEN E. LIBERTY STREET AND E. HURON STREET INCLUDES REPLACEMENT OF HMA PAVEMENT, AGGREGATE BASE, CURB, STORM SEWER, WATER MAIN AND PERMANENT PAVEMENT MARKINGS</p> <p style="text-align: right;">DRAWING No. 2011033 - 1</p>	<p style="text-align: center;">PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR</p> <p style="text-align: center;">CONTRACT FOR RECONSTRUCTION OF S. FOURTH AVENUE BETWEEN E. LIBERTY STREET AND E. HURON STREET INCLUDES REPLACEMENT OF HMA PAVEMENT, AGGREGATE BASE, CURB, STORM SEWER, WATER MAIN AND PERMANENT PAVEMENT MARKINGS</p> <p style="text-align: right;">DRAWING No. 2011033 - 1</p>															
<p style="text-align: center;">CITY OF ANN ARBOR PUBLIC SERVICE 301 EAST HURON STREET ANN ARBOR, MI 48106-1500 www.a2gov.org</p>	<p style="text-align: center;">CITY OF ANN ARBOR MICHIGAN</p>															
<p style="text-align: center;">SHEET No. 1 TO 17</p>	<p style="text-align: center;">SHEET LIST TABLE</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECKED</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>MOEQ SUBMITTAL</td> <td>2-15-13</td> <td>DPF</td> <td>IVK</td> </tr> <tr> <td>01</td> <td>BID SET</td> <td>3-6-13</td> <td>DPF</td> <td>IVK</td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECKED	00	MOEQ SUBMITTAL	2-15-13	DPF	IVK	01	BID SET	3-6-13	DPF	IVK
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PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.	
PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT *	CITY OF ANN ARBOR PROJECT MANAGEMENT UNIT
NO PARKING SIGNS PERMIT *	CITY OF ANN ARBOR PROJECT MANAGEMENT UNIT
RIGHT-OF-WAY PERMIT *	CITY OF ANN ARBOR CUSTOMER SERVICE
* NO COST TO CONTRACTOR	

PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.	
PERMIT	ISSUING AUTHORITY
M.D.E.Q. WATER MAIN CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT	CITY OF ANN ARBOR CUSTOMER SERVICE

CONTACT INFORMATION		
PUBLIC UTILITIES	OWNER	CONTACT
WATER SEWER		DAN WOODEN (734)794-6350
STORM	CITY OF ANN ARBOR FIELD OPERATIONS SERVICE UNIT W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	KEVIN ERNST (734) 794-6350
FORESTRY		TRACY PENNINGTON (734) 794-6350
SIGNS SIGNALS STREET LIGHTS		CHUCK FOJTKI (734) 794-6361
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 17150 ALLEN ROAD MELVINDALE, MI 48122	JAY WILLIAMS (313) 380-7303
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	CLAY COMBEE (734) 397-4112
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	(734) 996-2135
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016

CONSTRUCTION SEQUENCE:

- Set up Stage 1 Phase I traffic control along with S. Fourth Ave. detour plan.
- Install erosion control devices for entire project.
- Coordinate with the City removal/replacement of the street light at station 1+20 and contractor to remove trees at station 1+10 and 1+35.
- Lower and offset existing manholes prior to machine grading operation. Machine grading limits and width for each work phase will be determined by Contractors proposed work schedule to be reviewed at Pre-Construction meeting.
- Construct 12 inch water main without connecting from station 0+00 to station 2+90 in Fourth Ave. between Washington St. and Huron St. Coordinate with City of Ann Arbor Field Operations Unit to begin transfer of water services from existing 4-inch to existing 8-inch in Fourth Ave from Liberty St. to Washington St.
- During water main work and testing reconstruct Fourth Ave. from Washington St. to Liberty St. and place new storm structures and detention system. Proposed storm sewer work at the intersection of Washington St. and S. Fourth Ave. to be coordinated with water main connection at Washington St.
- Place temporary blow off at station 2+90 for removal, aqua-swab and installation of 2 inch temporary blow off for flushing and sampling.
- Pressure test entire length of water main.
- After passing pressure test, connect new water main to existing main at station 0+00, flush, and remove aqua-swab.
- During testing of water main install proposed storm sewer in S. Fourth Ave. between Washington St. and Huron St. and start road reconstruction in this area.
- Inject chlorine solution into the new water main at gvw station 0+02. Flush main and perform bacteriological testing per City of Ann Arbor Standards.
- After bacteriological testing of the water main is complete coordinate with City of Ann Arbor Field Operations Unit to transfer water services from existing 4-inch main to new 12-inch main in S. Fourth Ave. between Washington St. and Huron St.
- Install Washington St. detour and schedule water, water abandonment, storm, and road work in intersection. Complete all work in intersection except for paving. Place temporary HMA lane for eastbound traffic only.
- Once all services are transferred, schedule to abandon 4 inch water main connection at the intersection of S. Fourth Ave. and Liberty St.
- Upon completion of utility work, stone reservoir and aggregate base, remove and replace concrete curb as indicated on plans or as directed by Engineer.
- Grade aggregate base for proposed HMA placement from Liberty St. to Huron St. Keep one eastbound lane open on Washington St.
- Place HMA base and leveling course from Liberty St. to Huron St. Use flag control to pave entire Washington/Fourth intersection.
- Adjust manholes to grade and place HMA wearing course.
- Install permanent pavement markings
- Remove all erosion control devices.
- Remove all temporary signage and traffic control devices.

CONSTRUCTION NOTES:

- Driveways and entrances to buildings, real property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.
- The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
- Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.
- The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.
- During non-working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the item of work "General Conditions".
- Trenches for transferring water services shall be excavated to MIOSHA and City of Ann Arbor Field Services requirements.
- City of Ann Arbor Field Services will install the corporation and copper service lead(s) to transfer the connection(s). If an existing water service is found to be failing or is not copper, the lead will be replaced to the curb box by Field Services.
- For the installation of corporations, or any other related activities, the Contractor shall not receive additional compensation for delays due to the scheduling of or coordination with the City of Ann Arbor Field Services.
- The Contractor shall backfill trenches in accordance with Trench Detail Type 1, Modified. This work shall be included in the item of work "Excavate and Backfill for Water Service Tap and Lead". All concrete removals and replacements required for this work will be paid for separately.
- All ductile iron pipe and fittings shall be polyethylene wrapped per ANSI/AWWA C105/A21.5.
- Cor-blw bolts to be used at all mechanical water main joints at hydrants and Megalug fittings
- When all water services are transferred the Contractor shall abandon the existing water main. Reference the Public Services Department Standard Specifications for water main abandonment procedures. Caps and plugs shall be installed by the Contractor where shown on the plans and shall be included in the item of work for water main abandonment or as directed by Engineer.
- The Contractor shall construct, flush, and bacteriologically test the water main as detailed in the Public Services Department Standard Specifications, "Water Main Testing" (item 3H, pg. IV-34) and as approved by the Engineer. All chlorinated water shall be discharged directly into an approved sanitary sewer. The Contractor shall supply all necessary hoses, fittings and the like to accomplish this work.
- Water main fittings, other than those specifically listed as separate pay items, which are required to complete the work, such as blow-off assemblies, concrete thrust blocks, solid sleeves and mechanical plugs, shall not be paid for separately, but shall be included in the pipe pay items.
- "No Parking" signs shall be installed by the Contractor at locations as approved or directed by the Engineer. All signs shall be installed in accordance with the detailed specifications. Contractor to coordinate with DDA and Republic Parking to obtain meter bags for parking meters within the construction limits. The cost of parking meter bags to be included in pay item "General Conditions, Modified".
- Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.
- All fittings, hydrants, valves and castings removed during construction are the property of the City of Ann Arbor. The Contractor within 48 hours shall deliver to City of Ann Arbor Field Operations and Maintenance Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.
- Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
- The Contractor shall be responsible for the continuous maintenance of the temporary road surface and soil erosion control measures within the construction area until the full completion of the project. This work shall be included in the item of work "General Conditions".
- All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
- Sawed sewer pipe connections shall be coupled with a Fernco flexible coupling and a stainless steel shear ring.
- The location of material stock piles and on-site staging areas to be approved by the Engineer.
- For mainline paving, the width of the mat for each pass of the paver shall be not less than 10.5' or greater than 15', as directed by the Engineer. The Engineer will direct the layout of the longitudinal joints during construction.
- All structures shall receive new castings as directed by the Engineer, either Type B or Type K, or as specified on the standard casting schedule. The existing castings are the property of the City of Ann Arbor. The Contractor shall deliver to City of Ann Arbor Field Operations and Maintenance Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.
- Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structure sizes and or types.
- Where sewer pipes of different sizes or materials are joined, Fernco flexible couplings with stainless steel shear rings shall be used. The Contractor's purchase price for these devices, including shipping, shall be paid as an extra. Prior to payment for this item, the Contractor shall submit receipts for the Engineer's review and approval. All other costs associated with the installation of these devices shall be included in the payment for the sewer.
- Where sewer and water main are to be removed & replaced or added, all pipe shall be installed using Trench Detail 1, Modified as detailed in the specifications. Trench Detail 1 backfill for sewer and water construction shall be MDOT Granular Material, Class II, Modified.
- Existing street name, guide, and regulatory signs, and mailboxes which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re-set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in "Machine Grading, Modified"
- In areas where edge drain cannot be installed in accordance with City of Ann Arbor Detail SD-TD-11, the edge drain shall be installed at the depth as indicated on the plans, or as directed by Engineer. In no case shall the edge drain be installed at a grade less than 0.50% or at a depth of less than 2' below top of proposed pavement.

SOIL EROSION CONTROL NOTES:

GENERAL

- The contractor shall implement and maintain the soil erosion control measures as shown on the plans at all times during construction on this project. Any modifications or additions to the soil erosion control measures due to construction or changed conditions shall be compiled with as required or directed by the owner, project engineer, or the City of Ann Arbor. The contractor is required to obtain a Soil Erosion Control Permit anytime the disturbed area exceeds 1 acre.
 - All soil erosion and sedimentation control work shall conform to the permit requirements of the City of Ann Arbor, Chapter 63, and the laws of the State of Michigan.
 - Daily or after storm events inspections shall be made by the contractor. Periodic inspections may be made by the owner/project 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 Owner.
 - 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 or waterways.
 - All mud/dirt tracked onto roads from the site due to construction, shall be promptly removed by the contractor. If so ordered, the Contractor shall employ a mechanical street sweeper at no additional cost to the Owner.
 - Restoration of all disturbed areas, including placement of topsoil, seed, fertilizer and mulch and/or sod shall be done within 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 chloride as required or as directed by Engineer.
 - The contractor shall be responsible for maintaining all temporary soil erosion control measures and removal of some upon authorized completion of the project. 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 fence shall be installed and maintained to prevent grading, erosion and sedimentation into them.
 - Tree protection fencing must remain intact until restoration of the site is complete.
- SEQUENCE OF EROSION CONTROL MEASURES:
- Install silt fence, tree protection fencing and inlet filters on existing storm inlets prior to any clearing or earth moving operation.
 - Install inlet filters immediately following installation of proposed storm drainage system.
 - Contractor to continually maintain erosion and sedimentation control measures, as required to allow drainage and sediment removal. Remove any accumulated sediment.
 - Strip and clear - maintain erosion control measures around temporary stock piles.
 - Rough grade
 - Install stormwater management system.
 - Connect stormwater management system.
- TEMPORARY SEEDING:
- Seed in accordance with project drawings and specifications.
 - Any disturbed area not paved, seeded, mulched, sodded or built upon by November 15th or June 30th is to be temporarily stabilized per specifications.
- ROADS:
- During construction, all roads shall be protected from unvegetated areas washing onto road surface by placement of silt fence behind curb or a 10 foot wide straw mulch bank behind curb or other approved method and/or as shown on the plans.
 - During construction of any portion of the project, adjoining roads shall be maintained free of dirt, silt and construction debris. Contractor required to use vacuum sweeper equipment for cleaning construction site and adjoining roads. The use of broom sweeper is not permitted.
- CATCH BASIN/MANHOLE PROTECTION:
- Protect storm sewer catch basins with approved inlet filters.

EXISTING LEGEND

↖ FIRE HYDRANT	W	WATER MAIN
GATE VALVE IN BOX	r	STORM SEWER
⊗ GATE VALVE IN WELL	s	SANITARY SEWER
⊙ STOP BOX	----	GAS MAIN
⊞ WATER VAULT	o-v-v-o	ELECTRICAL OVER HEAD
⊗ WELL	—w—w—	ELECTRICAL UNDER GROUND
⊞ CATCH BASIN (SQ)	----	BOUNDARY
⊗ CATCH BASIN (RD)	////	BUILDING
⊙ STORM MANHOLE	----	CENTERLINE OF DITCH
⊞ NON-CURB CATCH BASIN (SQ)	----	CENTERLINE/CROWN OF ROAD
⊙ SANITARY MANHOLE	----	EDGE OF WATER
⊙ CLEAN-OUT	—//—//—//—	FENCE
● POST	— — — — —	GRAVEL
⬥ PEDESTRIAN SIGNAL	o-o-o-o-o-o	STONE WALL
▲ SIGN	— — — —	R.O.W.
⊞ HAND HOLE	—w—w—w—w—	TREELINE
* ORNAMENTAL LIGHT	—w—w—w—w—	WETLAND
* FLOOD LIGHT		
⊙ UNKNOWN MANHOLE		
⊙ TELEPHONE MANHOLE		TREE (DECIDUOUS)
⊞ TELEPHONE RISER		
⊙ GAS VALVE		
⊙ GAS VENT		
⊞ GAS BOX		TREE (CONIFEROUS)
⊞ ELECTRICAL RISER		
⊞ TRANSFORMER		
⊞ UTILITY POLE		STUMP
○ LAMP POLE		
△ GUY ANCHOR		
○ GUY POLE		SHRUB (DECIDUOUS)
⊙ MONITORING WELL		
■ MAILBOX		
● SOIL BORING		
△ TRAVERSE POINT		
+ BENCH MARK		
○ IRON PIPE		
⊞ MON BOX		

PROPOSED LEGEND

⊞+ HYDRANT (PLAN)	W	WATER MAIN
⊗ WATER GATE WELL	R	STORM SEWER
▼ REDUCER	S	SANITARY SEWER
WATER GATE VALVE	----	CENTERLINE OF DITCH
⊙ WATER STOP BOX	----	CENTERLINE OF ROAD
⊞ WATER VAULT	//	FENCE
⊞ INLET	⊞	SILT FENCE
■ DOUBLE INLET	⊞	LOT/UNIT
⊞ INLET JUNCTION CHAMBER	=====	STAGE LINE
● ROUND CATCH BASIN	=====	CURB
⊙ STORM MANHOLE	----	TEMPORARY GRADING PERMIT
▷ DRAIN ARROW	----	WATER EASMENT
▽ FLARED END SECTION	----	STORM EASEMENT
○ SANITARY MANHOLE	----	SANITARY EASEMENT
○ CLEAN-OUT	----	R.O.W.
● BARREL	=====	LIMITS OF CONSTRUCTION
▼ SIGN	o-o-o-o-o-o	STONE WALL
○ PUSH BUTTON		
	■	DETECTABLE WARNING
	■	ASPHALT
	■	CONCRETE
	■	SIDEWALK
	⊙	TREE (DECIDUOUS)
	⊙	TREE (CONIFEROUS)

BENCHMARKS:

- STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
- STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)

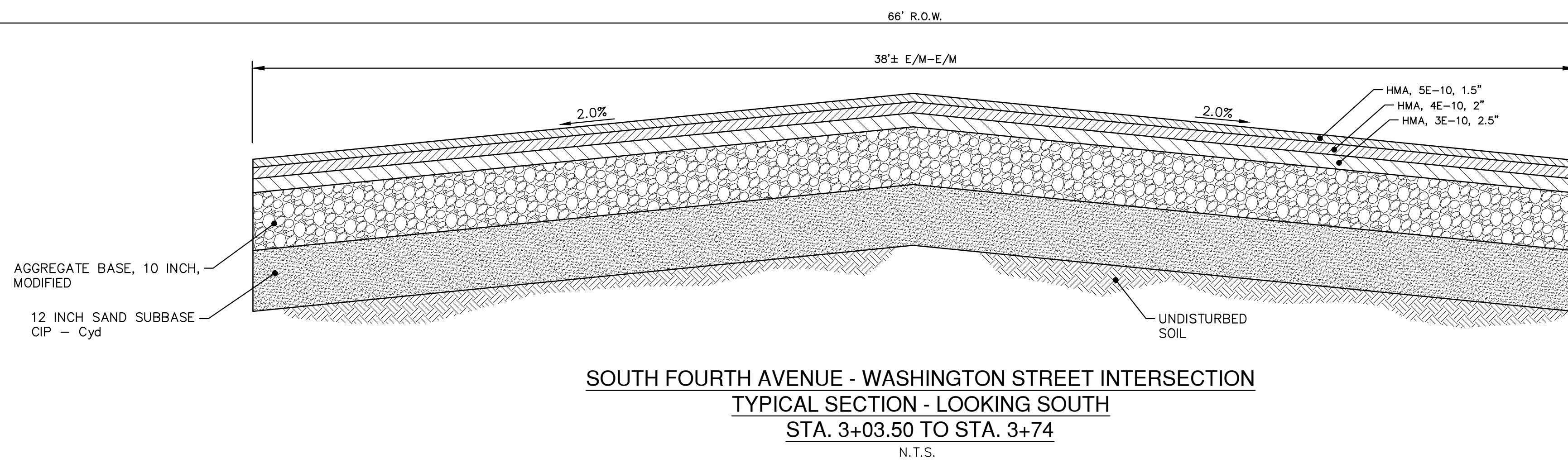
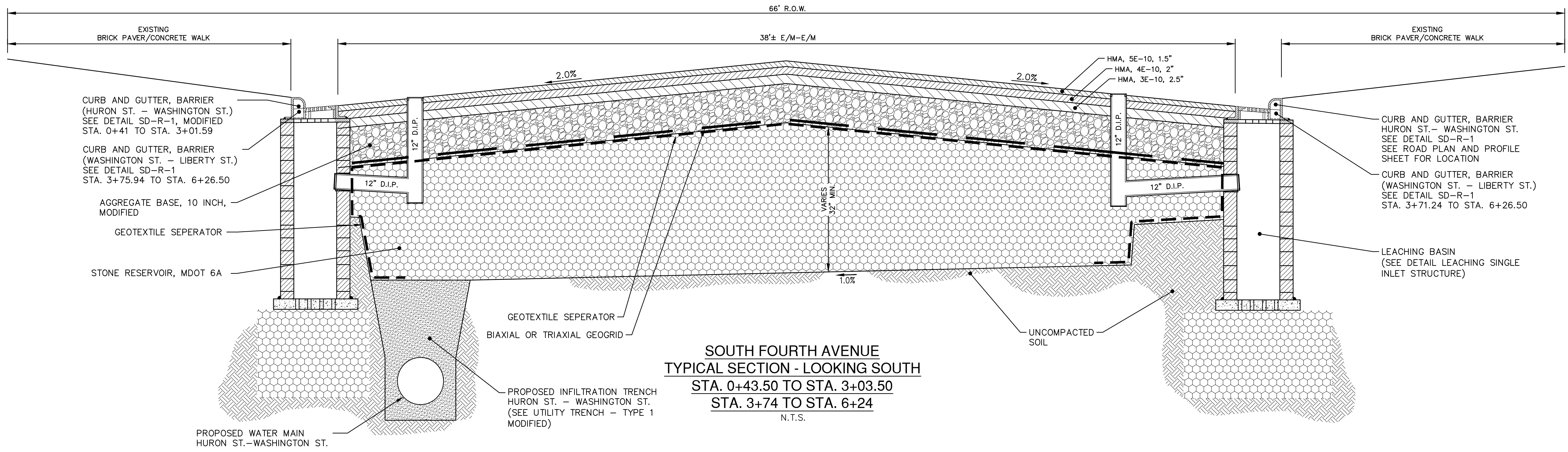
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DATE	DESCRIPTION
01	BID SET
00	MOEQ SUBMITTAL
	REV.

**CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-0687
www.aagov.org**

S:\Project Management\Design\2011033 South Fourth Ave\Plan Production\Primary\20110330DET.dwg Dwg Created: 11-Oct-12 - _g2 standard bw.stb - Plot Date: 6-Mar-13



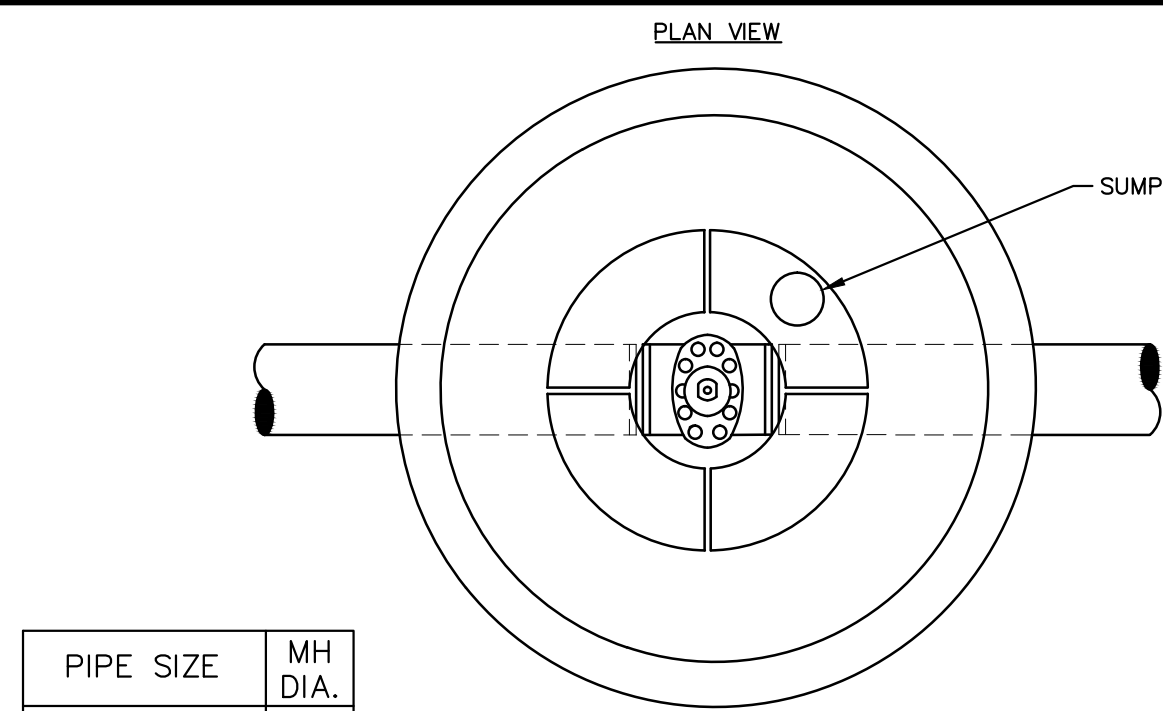
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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1647
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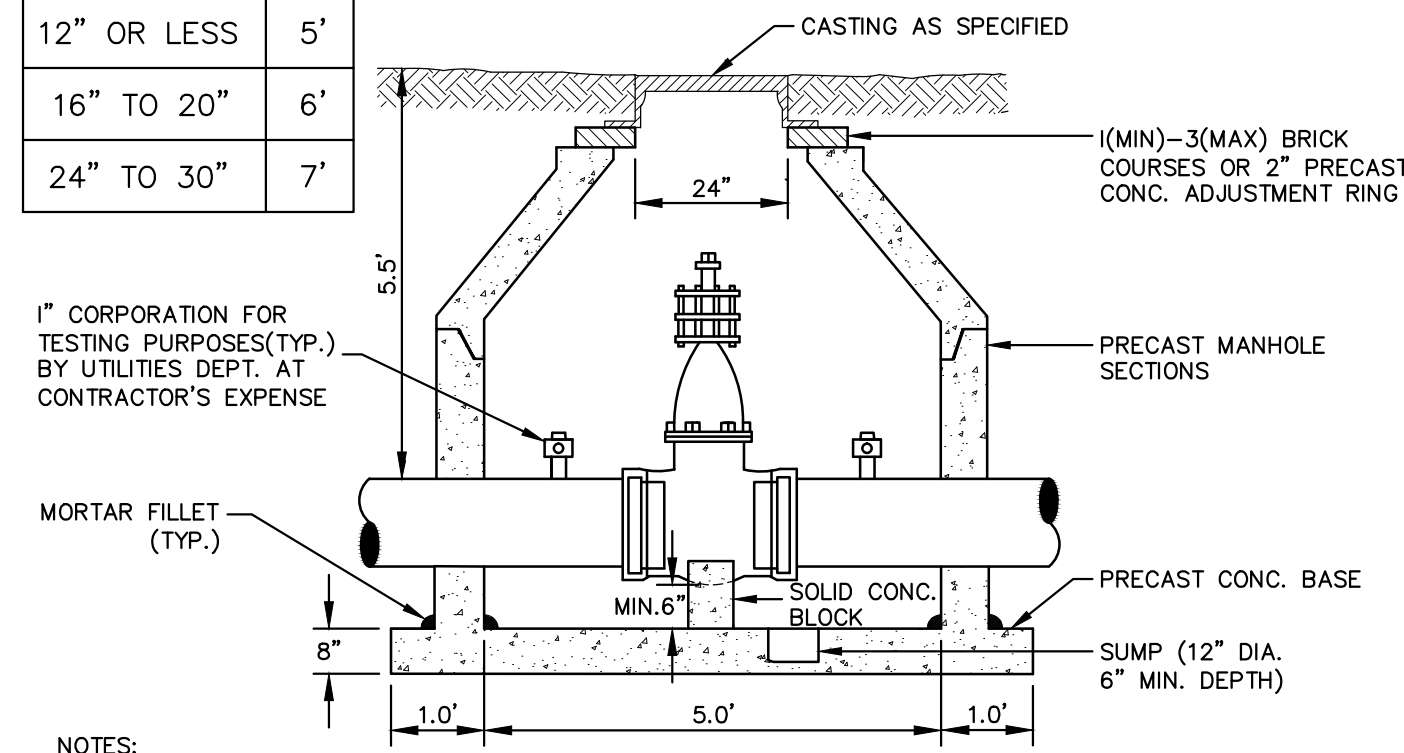
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
PROPOSED TYPICAL ROAD SECTION

SCALE: INTS
DRAWING No. 2011033-3

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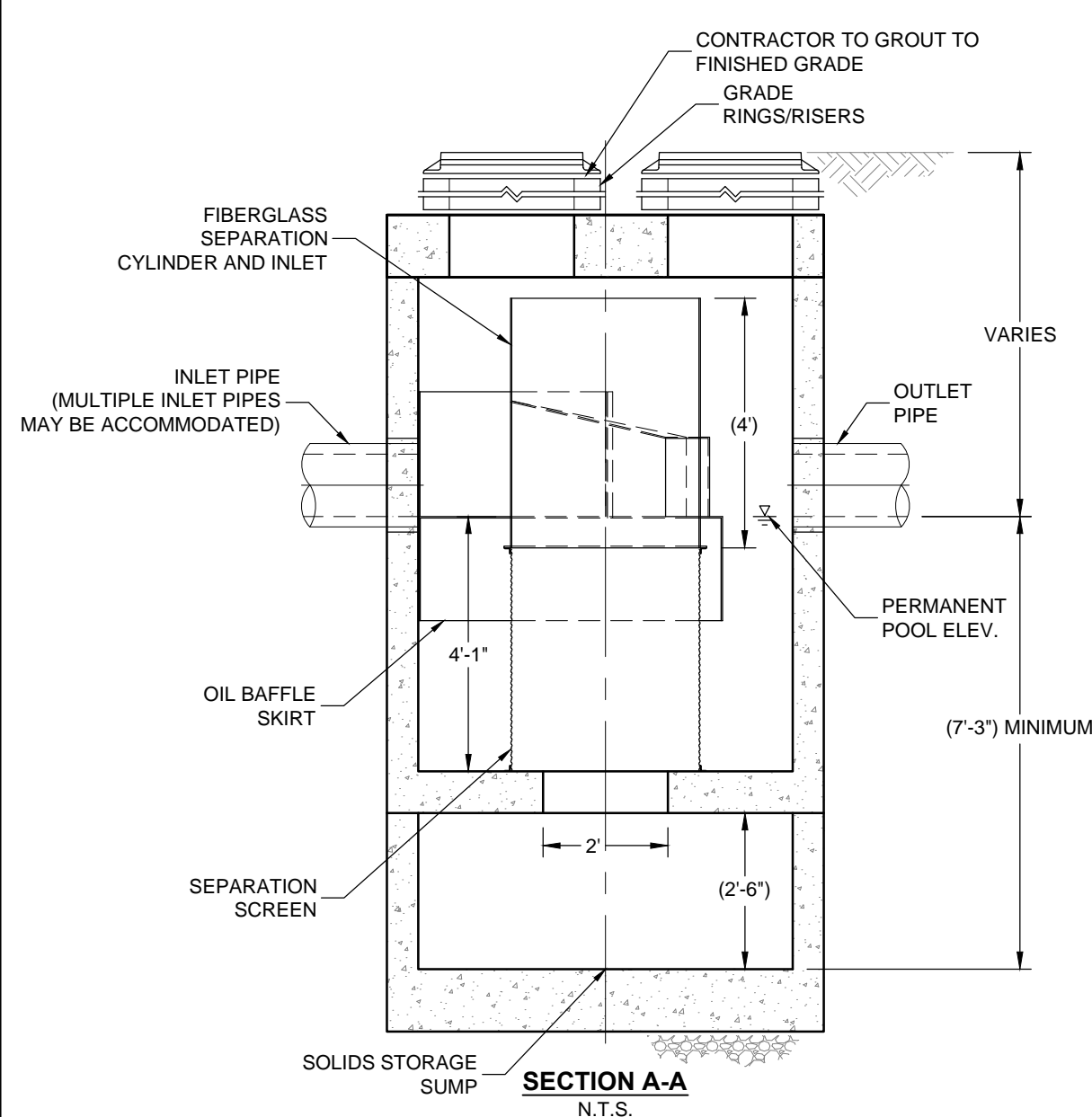
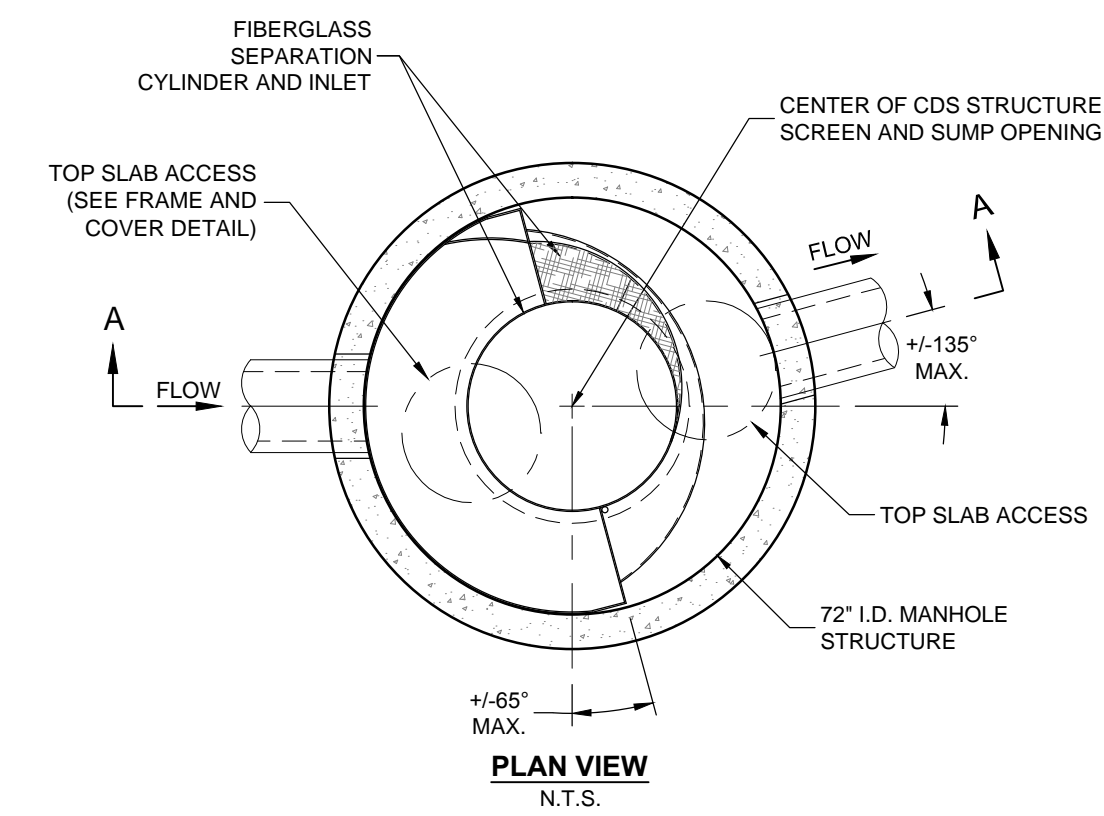


PIPE SIZE	MH DIA.
12" OR LESS	5'
16" TO 20"	6'
24" TO 30"	7'

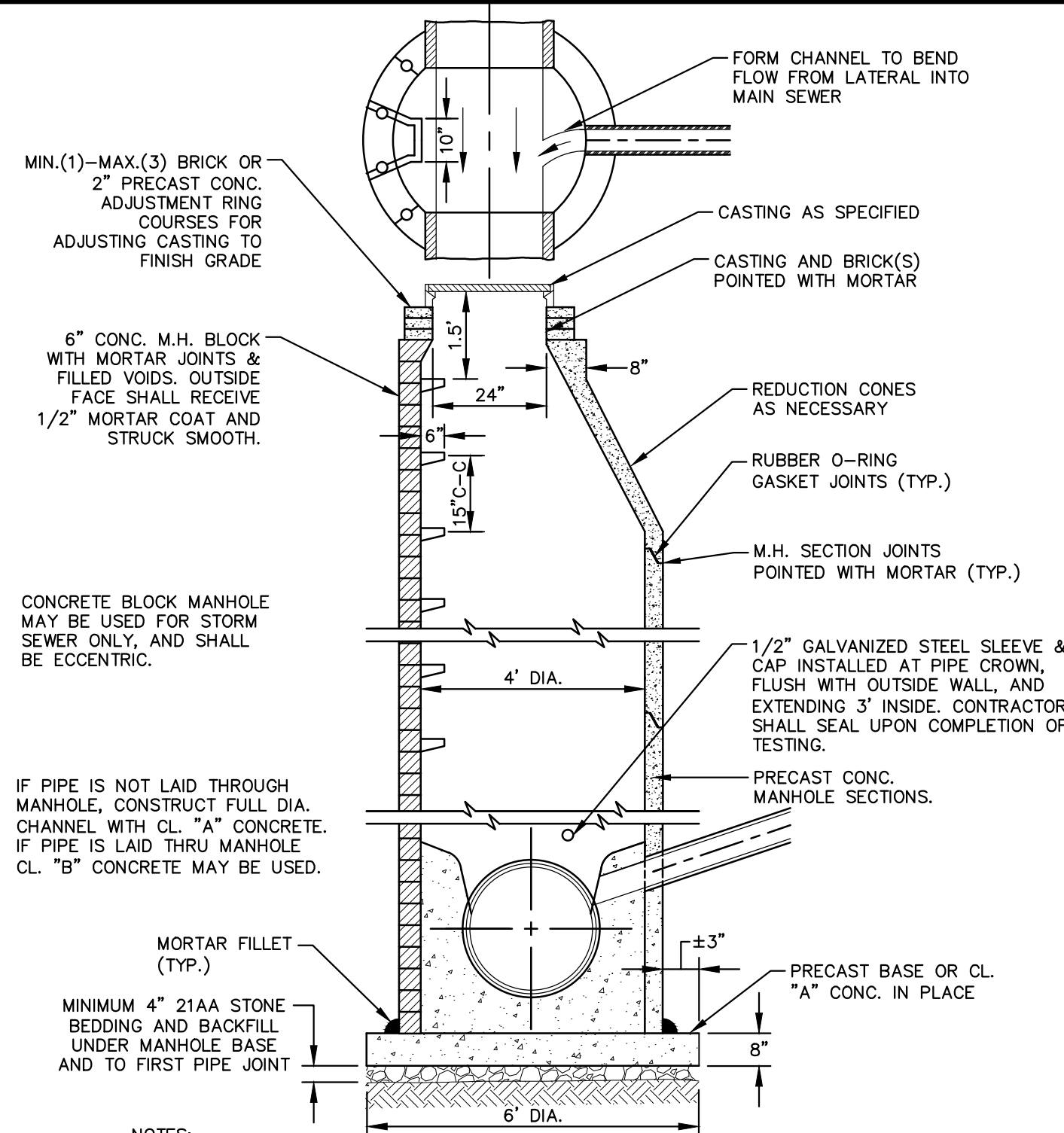


- NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
 2. ALL JOINTS MADE WATER TIGHT WITH RUBBER GASKET JOINTS.
 3. NO STEPS PERMITTED

GATE WELL FOR MAIN 16" & SMALLER SD-W-3

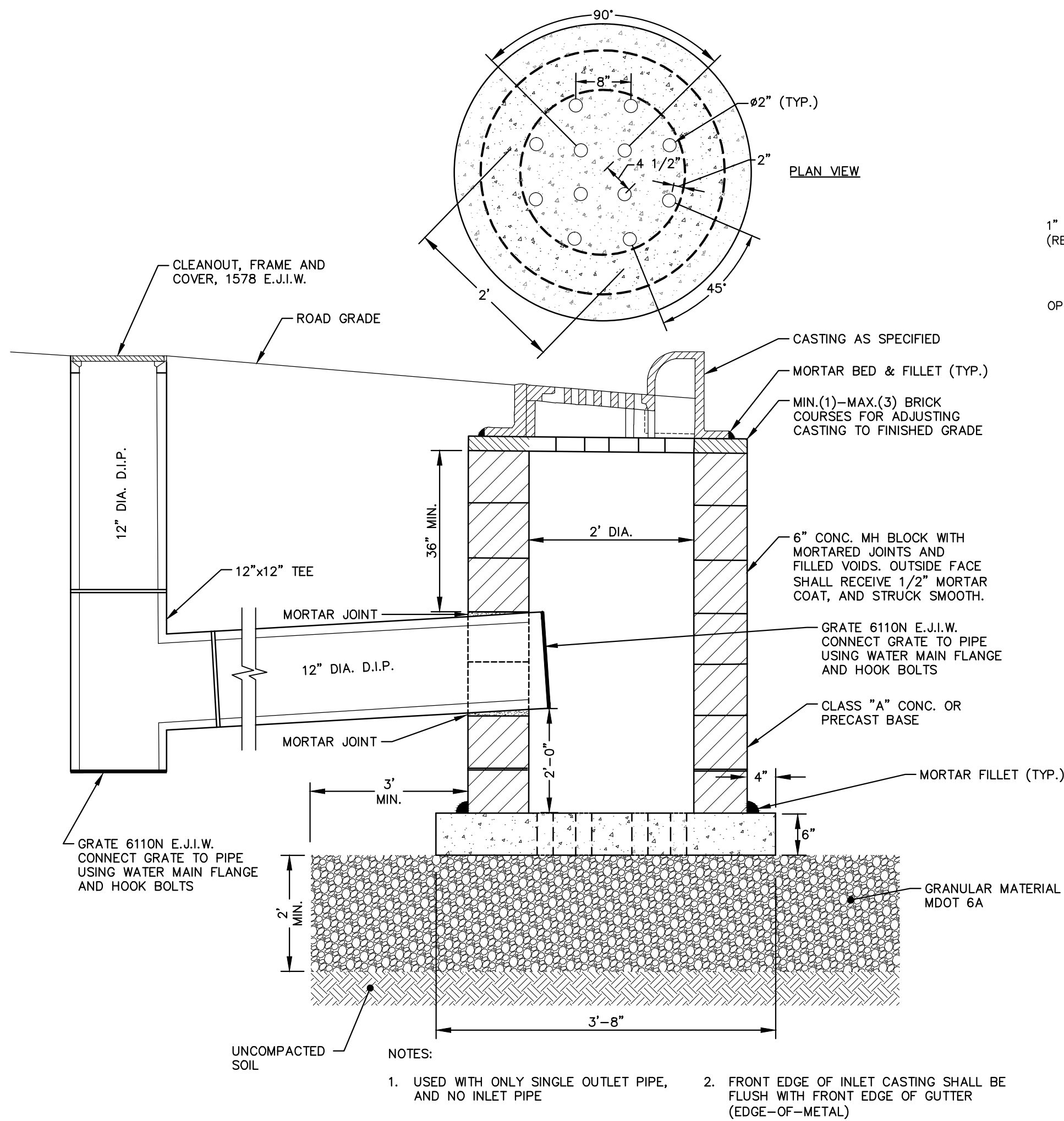


CDS STORM WATER TREATMENT DEVICE, 72" DIA.

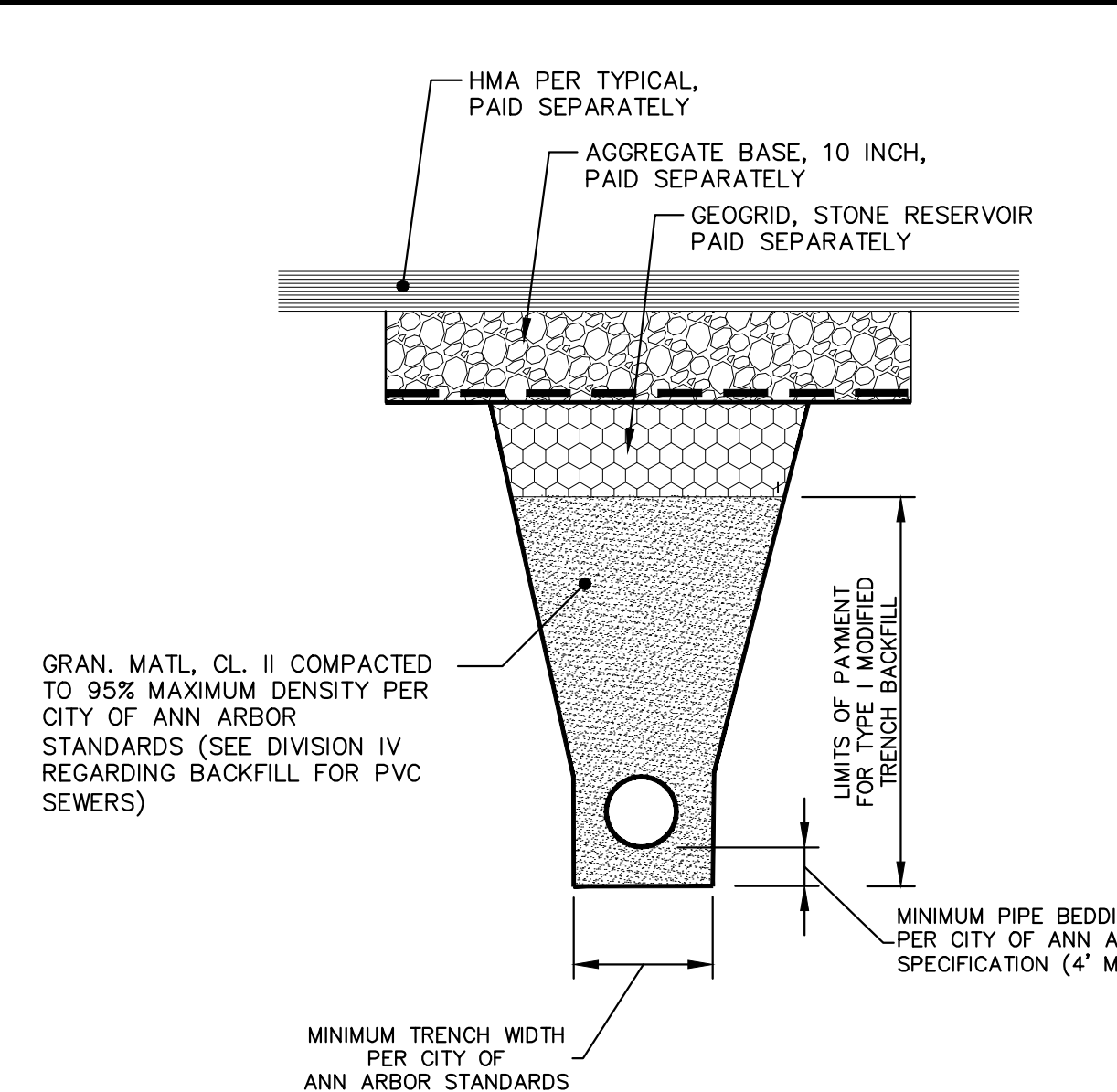


- NOTES:
1. ALL SANITARY MANHOLES SHALL BE PRECAST CONCRETE.
 2. ALL MANHOLES MUST HAVE ECCENTRIC CONES - BOTH STORM AND SANITARY
 3. ALL SANITARY SEWER OPENINGS SHALL BE PRECAST WITH RUBBER BOOT CONNECTIONS.
 4. 2' SUMP REQUIRED ON ALL DRAINAGE STRUCTURES.

STANDARD MANHOLE (TYPE 1) SD-S-1

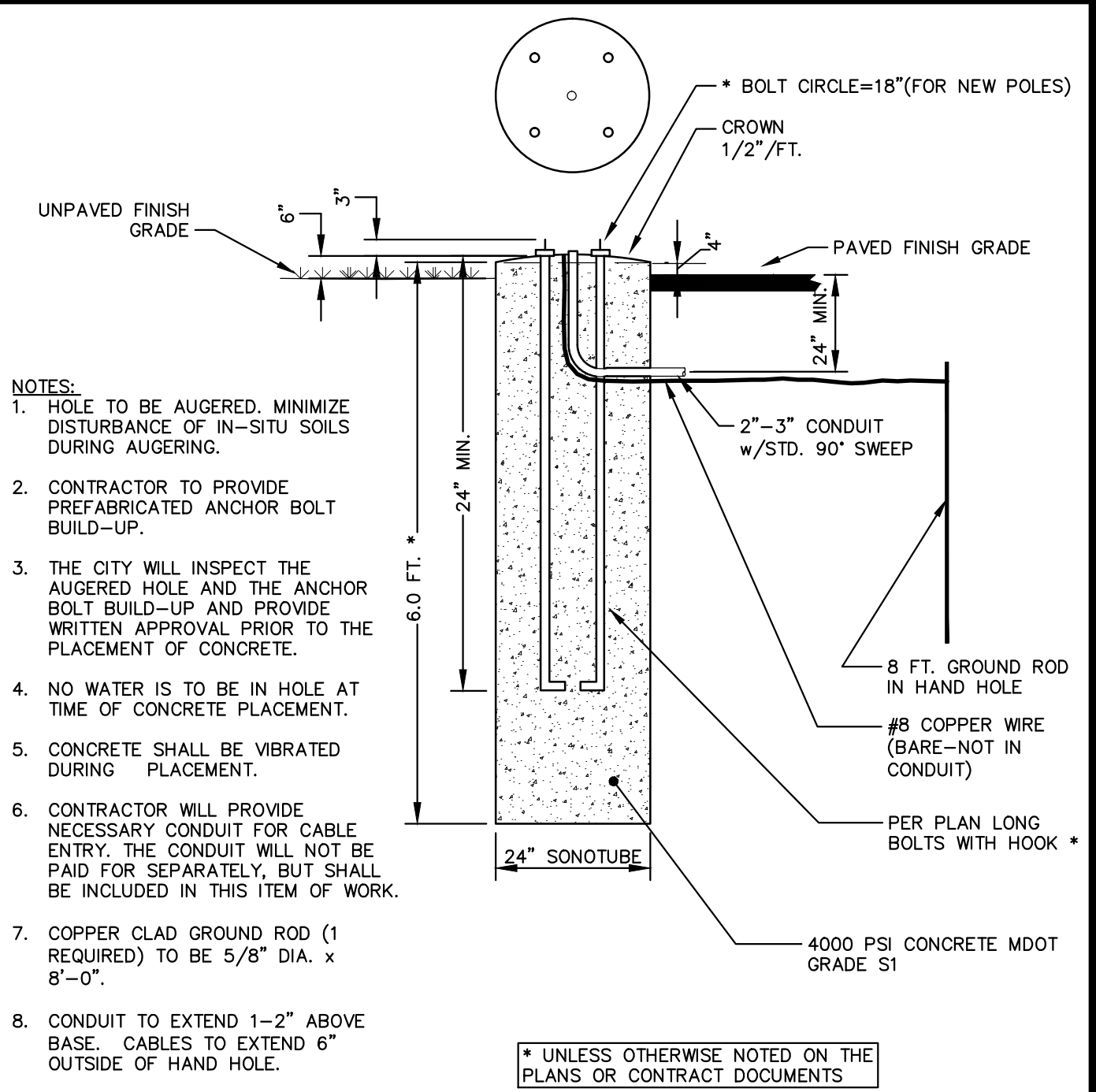


LEACHING SINGLE INLET STRUCTURE



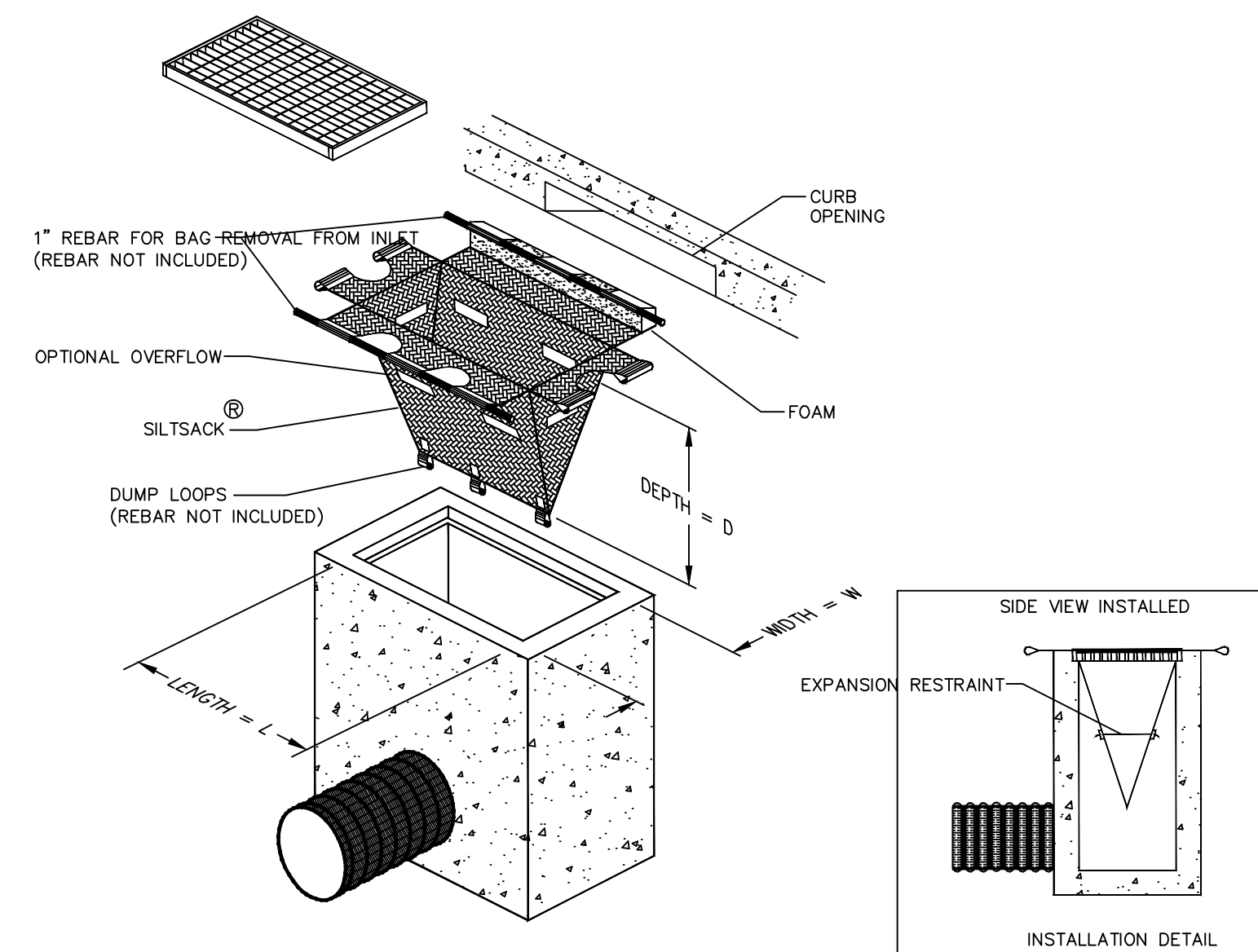
- NOTE: DENSITY TESTING PER CITY ANN ARBOR STANDARD SPECIFICATIONS
- NOTE: TRENCH DETAILS SHOW TYPE OF BACKFILL ONLY
- NOTE: ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS
- NOTE: GEOGRID, STONE RESERVOIR, AGGREGATE BASE AND HMA PAID SEPARATELY

UTILITY TRENCH - TYPE I MODIFIED

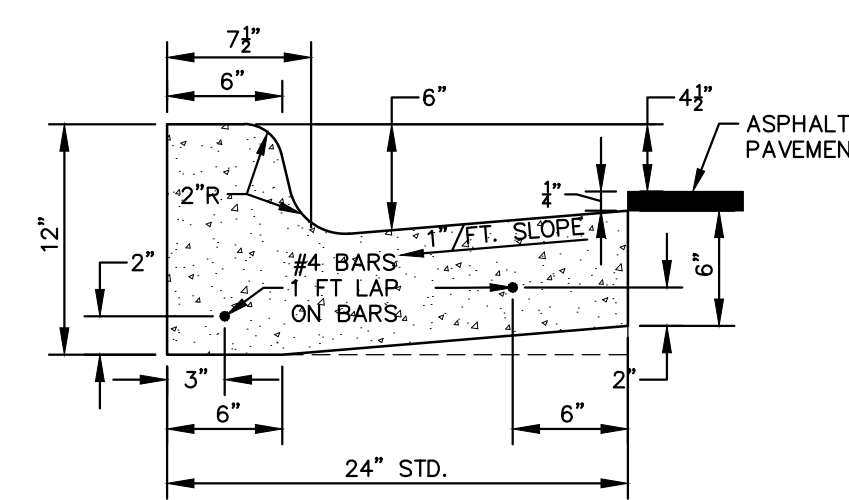


- NOTES:
1. HOLE TO BE AUGERED. MINIMIZE DISTURBANCE OF IN-SITU SOILS DURING AUGERING.
 2. CONTRACTOR TO PROVIDE PREFABRICATED ANCHOR BOLT BUILD-UP.
 3. THE CITY WILL INSPECT THE AUGERED HOLE AND THE ANCHOR BOLT BUILD-UP AND PROVIDE WRITTEN APPROVAL PRIOR TO THE PLACEMENT OF CONCRETE.
 4. NO WATER IS TO BE IN HOLE AT TIME OF CONCRETE PLACEMENT.
 5. CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
 6. CONTRACTOR WILL PROVIDE NECESSARY CONDUIT FOR CABLE ENTRY. THE CONDUIT WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THIS ITEM OF WORK.
 7. COPPER CLAD GROUND ROD (1 REQUIRED) TO BE 5/8" DIA. x 8'-0".
 8. CONDUIT TO EXTEND 1'-2" ABOVE BASE. CABLES TO EXTEND 6" OUTSIDE OF HAND HOLE.
 9. SHIMS TO BE 1/2" MIN., PER D.E. SPEC
 10. GROUND CABLE SHALL BE #6 SOFT BARE COPPER WIRE WELDED TO GROUND ROD WITH 24" SLACK ABOVE FOUNDATION TOP. THE NEUTRAL AT THE POLE IS TO BE CONNECTED TO THIS GROUND CABLE.

STREETLIGHT FOUNDATION SD-SL-1



INLET FILTER (MODIFIED)



BARRIER CURB AND GUTTER SD-R-1

SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

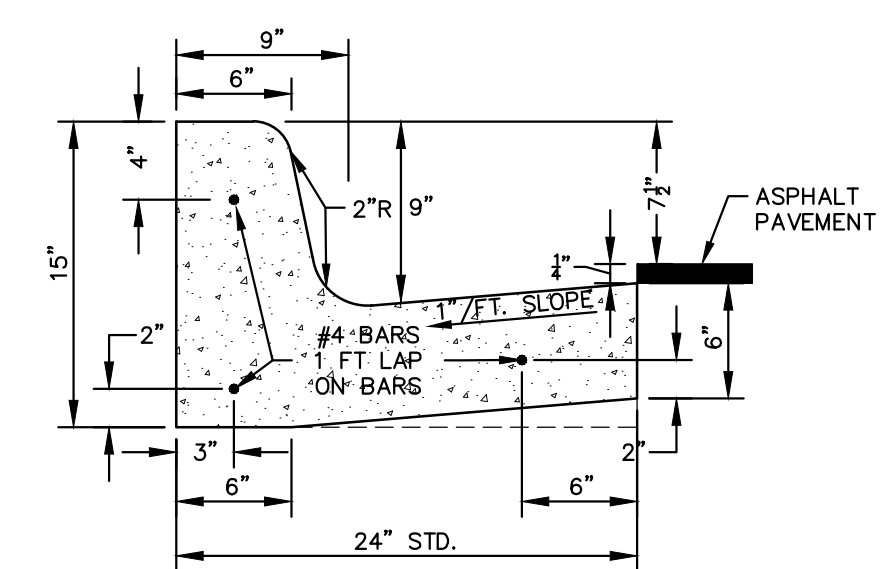
PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC-1

HI-FLOW SILTSACK®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1

OIL-ABSORBANT SILTSACK®
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK® CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK WITH A WOVEN PILLOW INSERT.



BARRIER CURB AND GUTTER SD-R-1, MODIFIED

Know what's below. Call before you dig.

NO.	DATE	DESCRIPTION	REV.
00	2-15-13	MDCO SUBMITTAL	00
		DATE	
		DRAWN	
		CHK'D	
		IVK	

CITY OF ANN ARBOR

PUBLIC SERVICES

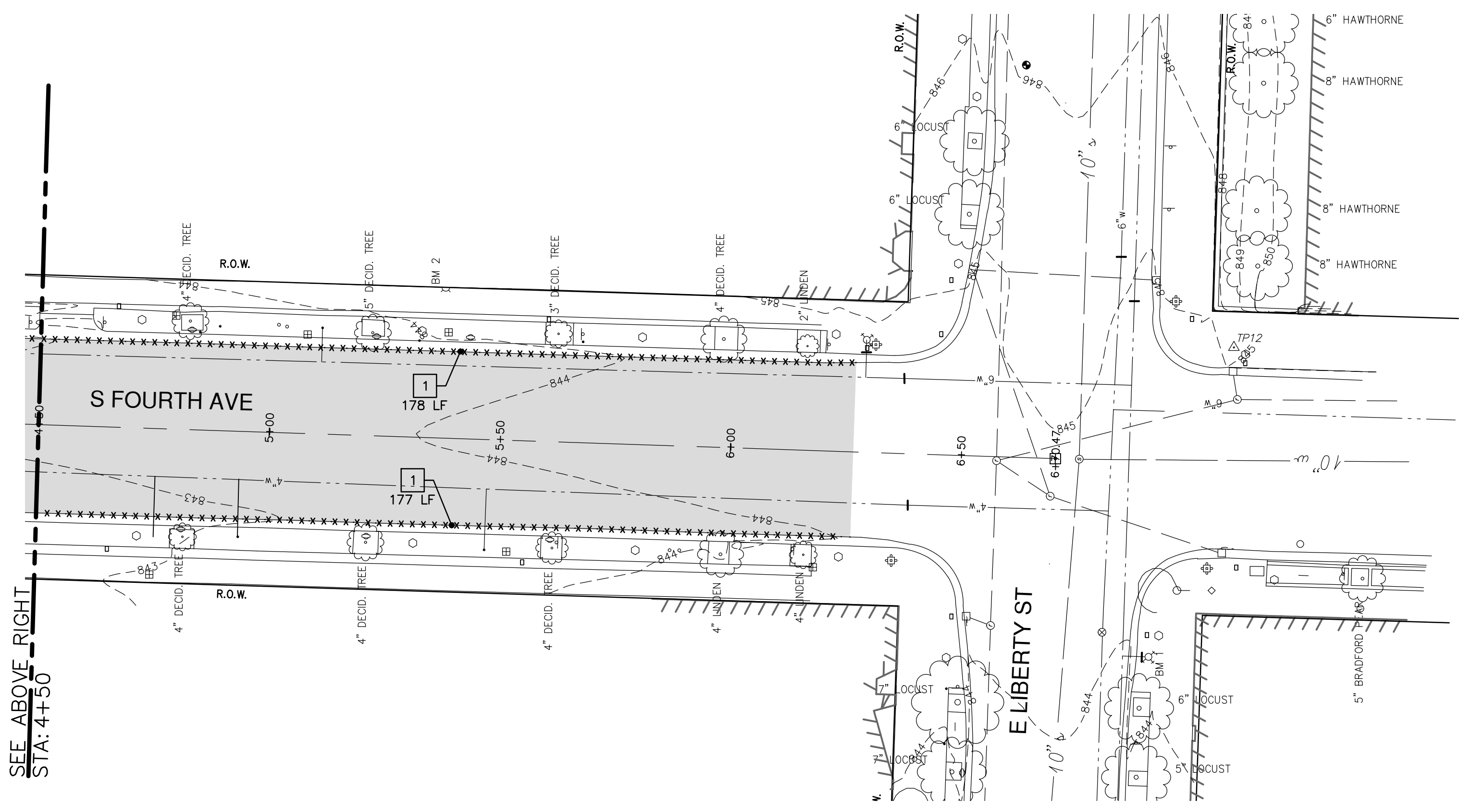
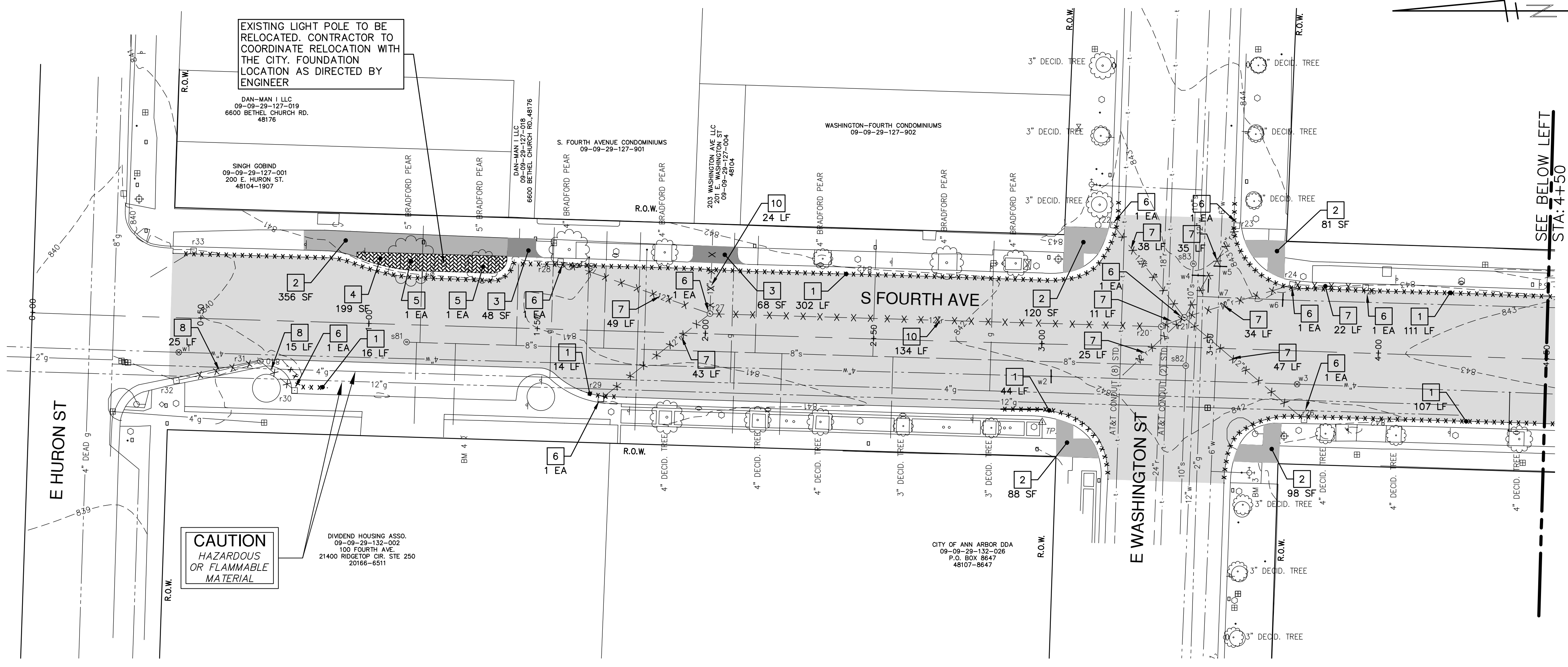
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

SOUTH FOURTH AVENUE IMPROVEMENT PROJECT

DETAILS

SCALE: INTS
DRAWING NO. 2011033-4
SHEET NO. 4 OF 17



BENCHMARKS


- STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
- STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)

Existing Storm				
Str #	Type	T/C	Inverts	
r-20	MH	842.71	834.91	12" N
			834.51	24" E
			834.41	24" W
			835.81	15" SE
r-21	MH	842.86	837.26	12" NE
			836.96	12" SE
			836.16	12" SSE
			836.66	12" SW
			837.36	12" NE
r-22	INLET	842.48	838.38	12" SW
			838.06	12" NW
r-23	INLET	843.03	838.23	12" NW
r-24	INLET	843.06	839.06	12" S
			838.06	12" NW
r-25	INLET	842.52	839.72	12" N
r-26	INLET	841.54	837.94	12" NE
			836.83	12" E
			836.23	12" S
r-27	MH	841.43	837.13	12" NE
			836.93	12" NW
r-28	INLET	840.78	838.28	12" SW
r-29	INLET	840.18	837.98	12" SE
r-30	INLET	839.48	837.18	12" NE
r-31	MH	839.86	837.16	12" SW
			837.16	12" NW
r-32	INLET	839.20	836.90	12" SE
r-33	INLET	839.66	836.66	12" NW

Existing Sanitary				
Str #	Type	T/C	Inverts	
s-81	MH	840.46	833.66	8" S
s-82	MH	842.58	831.48	8" N
			830.78	18" E
			830.78	18" W
s-83	MH	843.20	831.80	18" E
			832.60	18" W

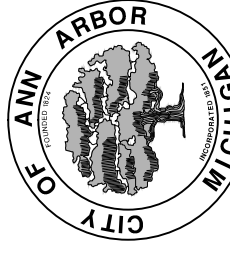
Existing Water						
Str #	Station	T/CASTING	T/PIPE	DEPTH	SIZE	APPLICATION/ CONSTRUCTION
w-1		834.57	839.67	5.1'	4.00	G.V.I.W. TO BE REMOVED #01-00717
w-2		836.38	841.88	5.5'	4.00	G.V.I.B. TO BE REMOVED #01-00721
w-3		837.26	842.36	5.1'	4.00	G.V.I.B. TO BE REMOVED #01-00722
w-4		842.94			12.00	G.V.I.W. TO BE REMOVED #01-04386 INSTALL G.V.I.B.
w-5		842.86			6.00	G.V.I.W. TO BE REMOVED #01-04388 INSTALL G.V.I.B.
w-6		842.94			8.00	G.V.I.W. TO BE REMOVED #01-04391 INSTALL G.V.I.B.
w-7		842.86			8.00	G.V.I.W. TO BE REMOVED #01-04387 INSTALL G.V.I.B.

REMOVAL KEY			
KEY	DESCRIPTION	KEY	DESCRIPTION
1	CURB AND GUTTER, REMOVAL	6	DRAINAGE STRUCTURE, REMOVAL
2	SIDEWALK, REMOVAL	7	STORM SEWER, 12", REMOVAL
3	PAVEMENT, REMOVAL	8	STORM SEWER, 12", ABANDONMENT
4	BRICK PAVER, REMOVAL	9	DRAINAGE STRUCTURE, ABANDONMENT
5	TREE REMOVAL	10	STORM SEWER, 12", REMOVE AND REPLACE



Know what's below.
Call before you dig.

DATE	DESCRIPTION	BY	CHECKED
2-15-13		IVK	
		DF/CEC	
		DRAWN	

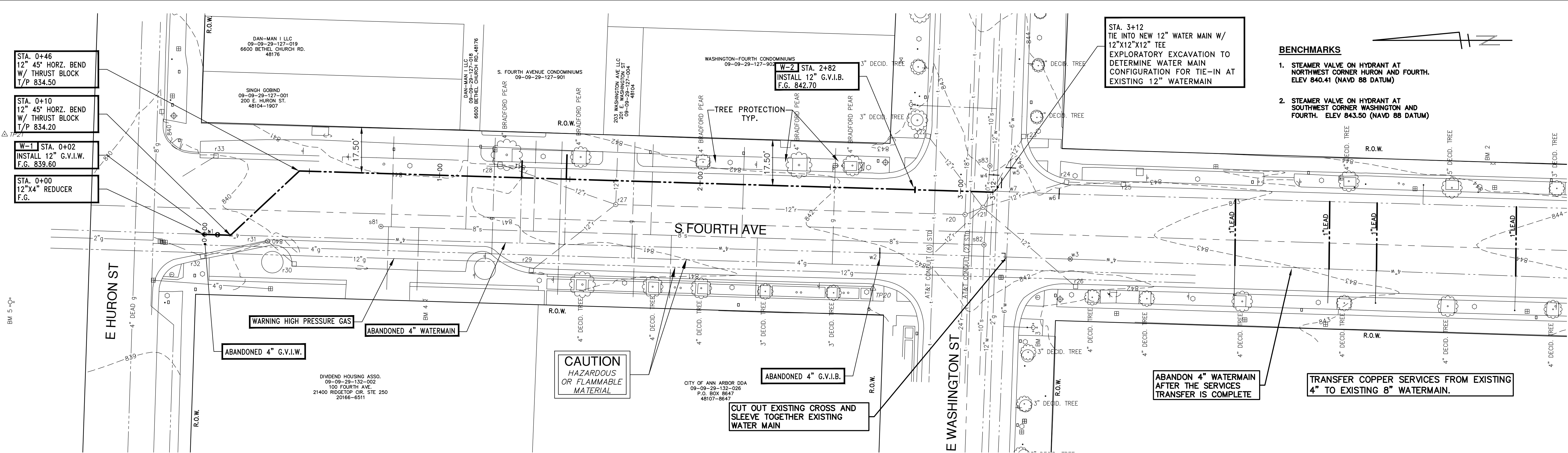


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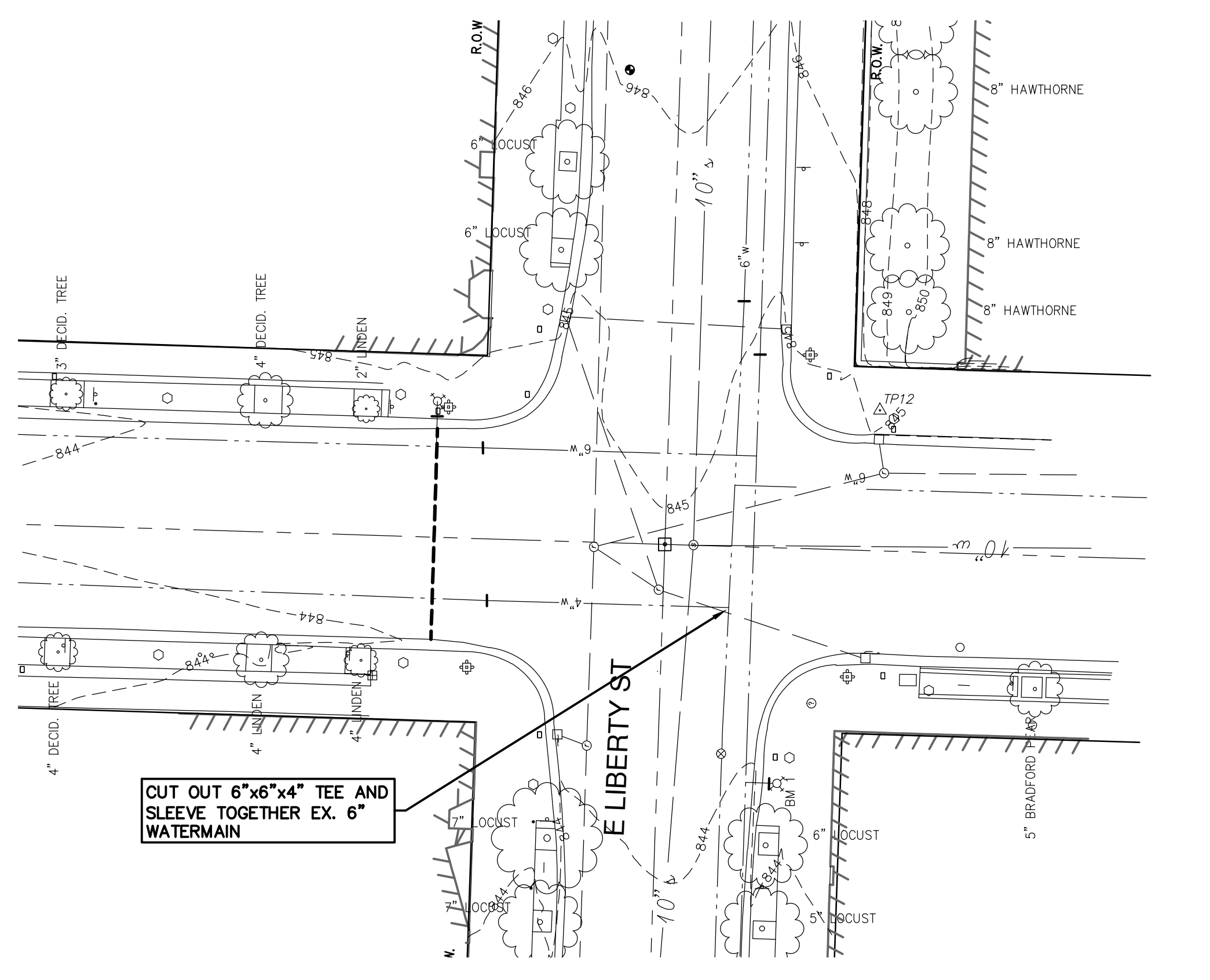
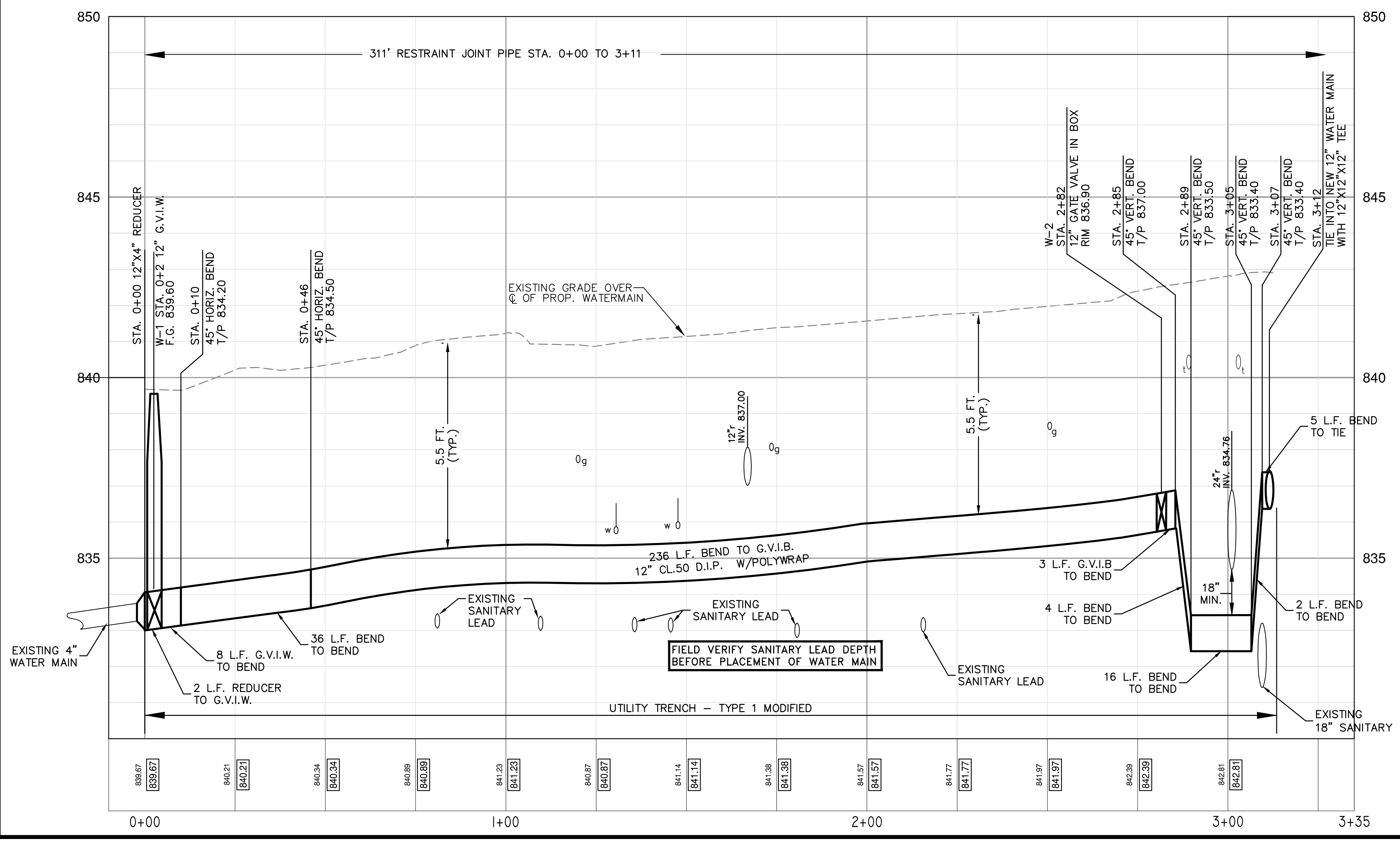
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT

SCALE PLAN: 1" = 20'
DRAWING No. **2011033 - 5**
SHEET No. **5 OF 17**

S:\Project Management\Design\2011033 South Fourth Ave\Plan Production\Primary\2011033Pfw.dwg Dwg Created: 13-Dec-12 - _g2 standard bw.stb - Plot Date: 6-Mar-13



Proposed Water Main




Proposed Water

Str #	Station	T/CASTING	DEPTH	SIZE	APPLICATION/ CONSTRUCTION
W-1	0+11	839.60	5.50	12.00	G.V.I.W.
W-2	2+95	842.70	5.50	12.00	G.V.I.B.


BENCHMARKS

- STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
- STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)



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REV.	DATE	DESCRIPTION	DRAWN	CHECKED
00	2-15-13	MOEQ SUBMITTAL	DPF/CEC	IVK



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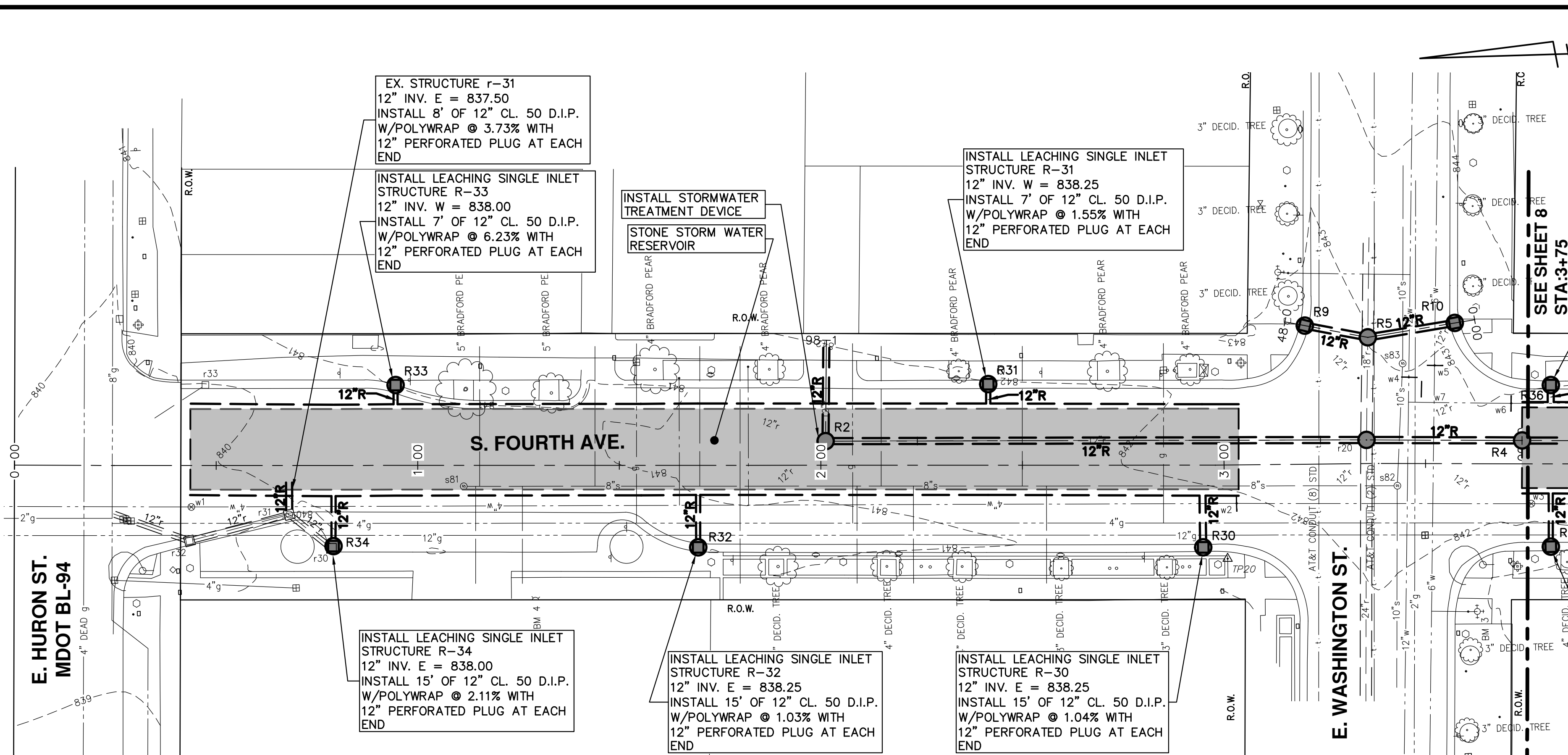
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
WATERMAIN
PLAN AND PROFILE

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

DRAWING NO. **2011033 - 6**

SHEET NO. **6 OF 17**

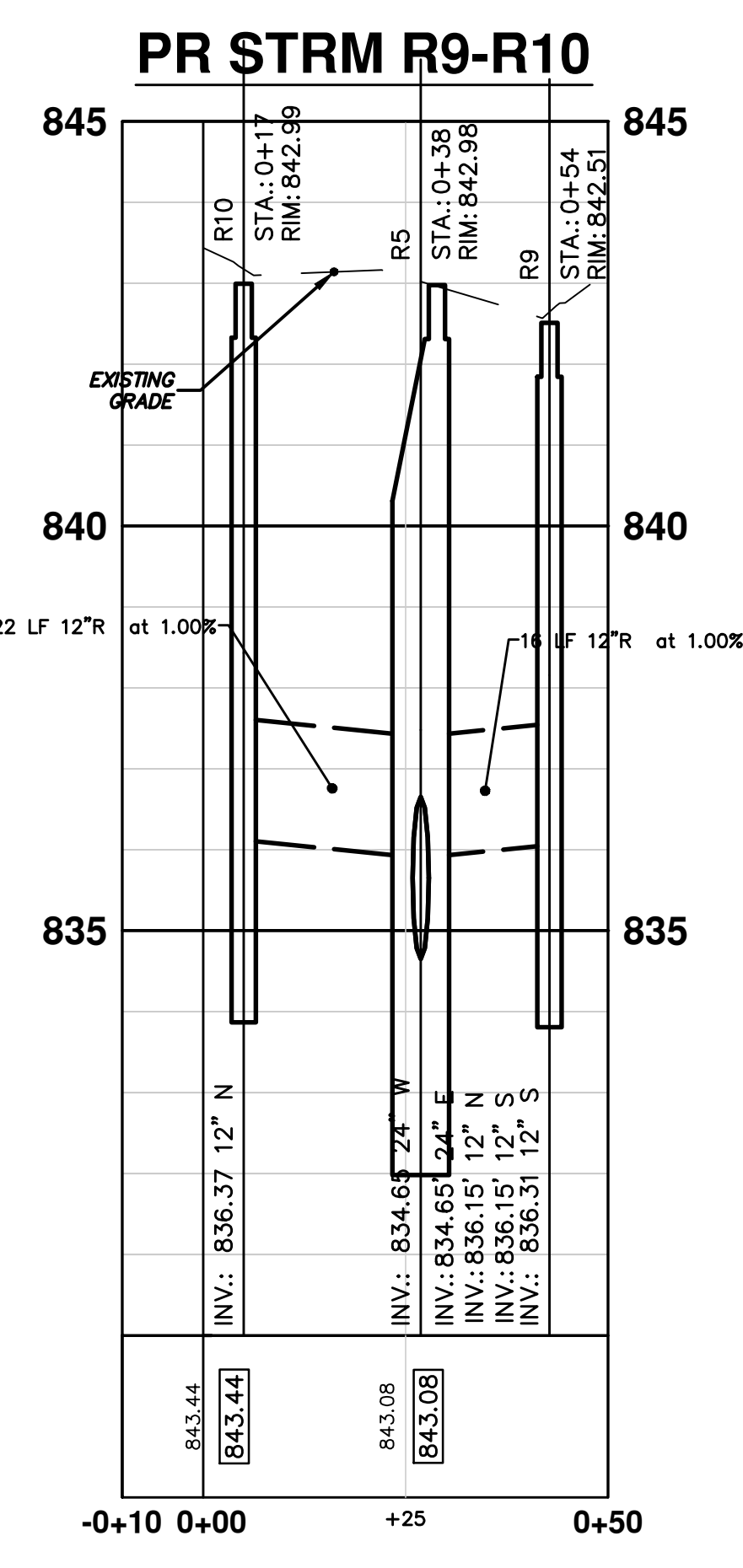
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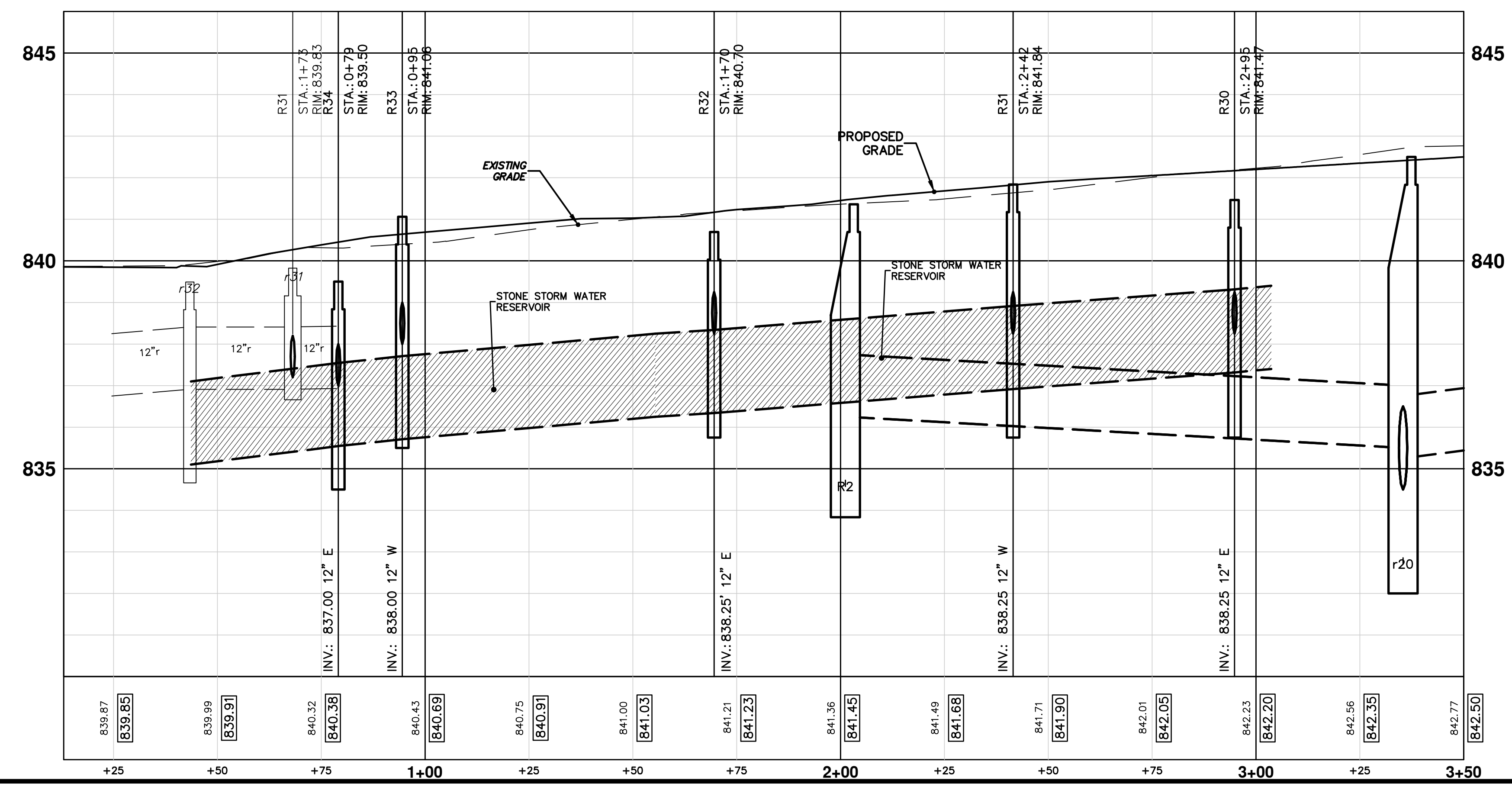
PR. STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	RIM	DEPTH	TYPE	INVERTS
r20	0+39	842.50	10.00	6' MH Doghouse Cover B	24" E 834.50 12" S 835.50 24" W 834.50 12" N 835.75
r30	1+73	840.12	2.94	EX INLET	12" NE 837.18
r31	1+73	839.83	2.67	Ex MH	12" N 837.16 12" SW 837.16 12" E 837.20
r32	1+73	839.49	4.33	EX INLET	12" N 837.16 12" S 837.16
R2	1+73	841.36	6.86	HYDRO	12" S 836.50 12" E 836.50
R4	0+00	842.75	8.75	4' MH Cover B	12" S 838.00 12" N 836.00
R5	0+38	842.98	10.33	6' MH Doghouse Cover B	24" E 834.65 12" N 836.15 12" S 836.15 24" W 834.65
R9	0+54	842.51	8.20	4' CB Cover K	12" S 836.31
R10	0+17	842.99	8.62	4' CB Cover K	12" N 836.37
R30	2+95	841.47	5.22	2' INLET Cover K	12" E 838.25
R31	2+42	841.84	5.59	2' INLET Cover K	12" W 838.25
R32	1+70	840.70	4.45	2' INLET Cover K	12" E 838.25
R33	0+95	841.06	5.06	2' INLET Cover K	12" W 838.00
R34	0+79	839.50	4.50	2' INLET Cover K	12" E 837.00

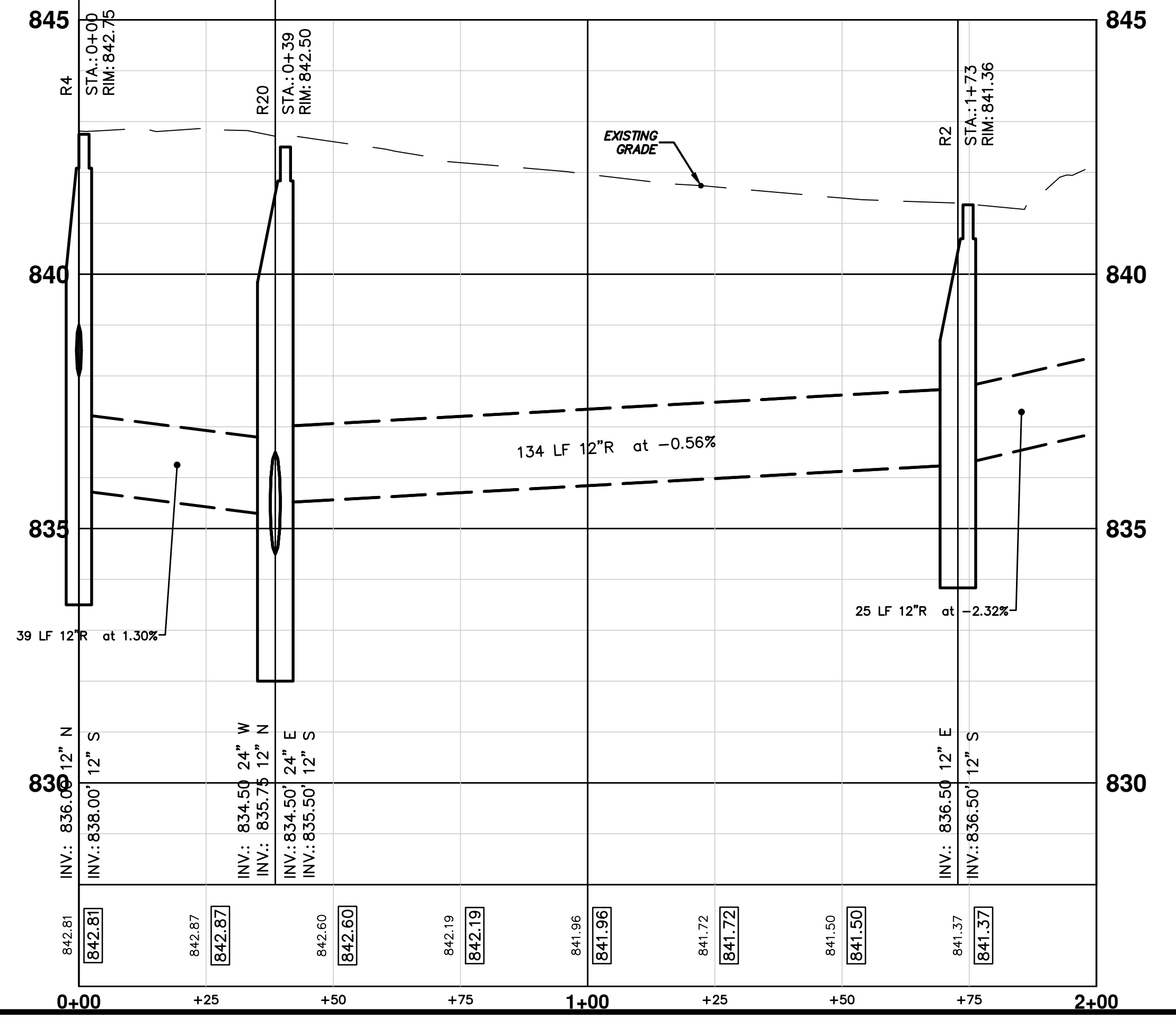
- BENCHMARKS**
- STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
 - STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)



FOURTH AVENUE



PR STRM R4-R3



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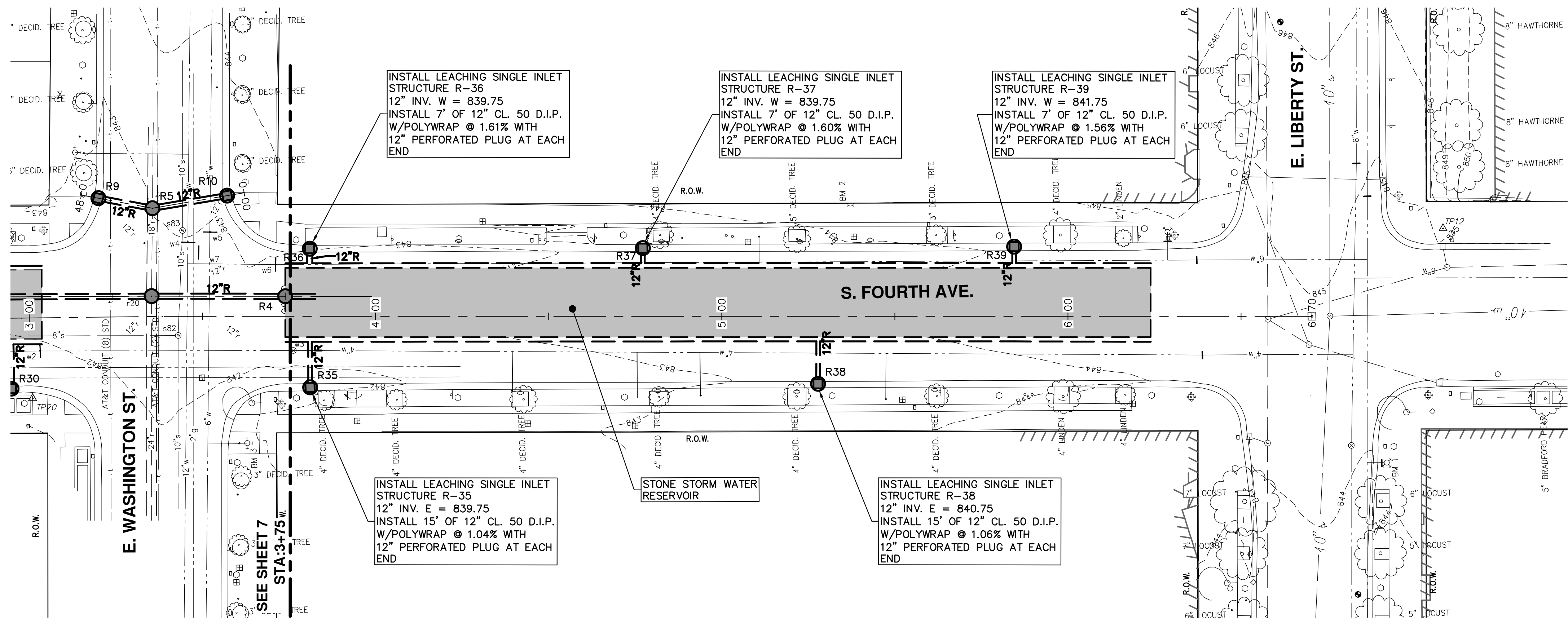
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
STORM SEWER
PLAN AND PROFILE

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

DRAWING NO. 2011033-7
SHEET NO. 7 OF 17

REV.	DATE	DESCRIPTION
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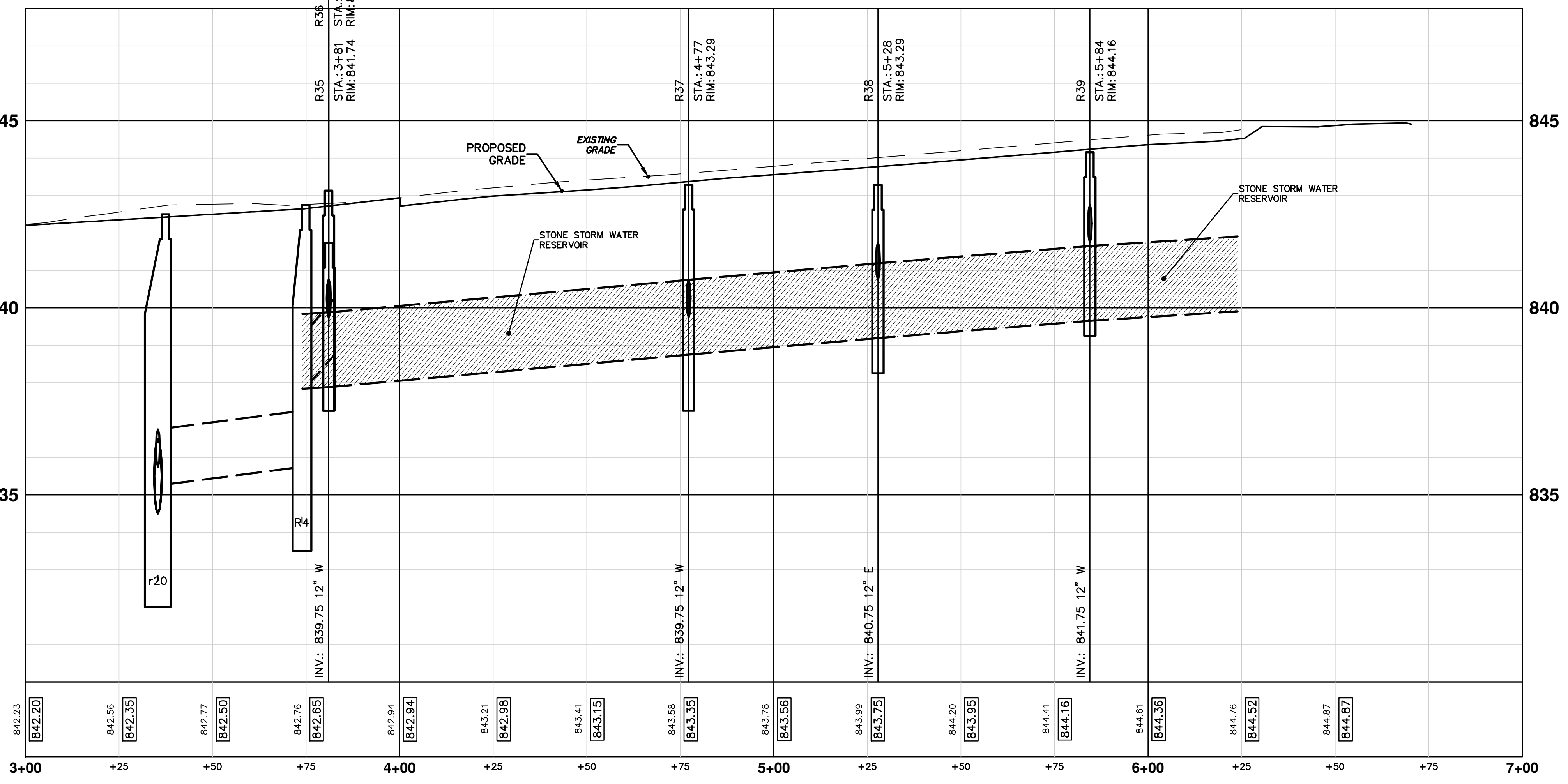


PR. STORM SEWER STRUCTURE TABLE

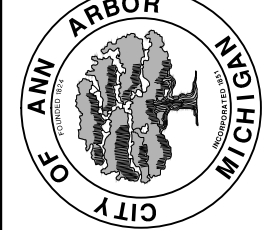
STRUCTURE	UTILITY STATION	RIM	DEPTH	TYPE	INVERTS
R4	0+00	842.75	8.75	4' MH Cover B	12" S 838.00 12" N 836.00
R35	3+81	841.74	3.99	2' INLET Cover K	12" E 839.75
R36	3+81	843.13	5.38	2' INLET Cover K	12" W 839.75
R37	4+77	843.29	5.54	2' INLET Cover K	12" W 839.75
R38	5+28	843.29	4.54	2' INLET Cover K	12" E 840.75
R39	5+84	844.16	4.41	2' INLET Cover K	12" W 841.75

- BENCHMARKS**
- STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
 - STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)

FOURTH AVENUE



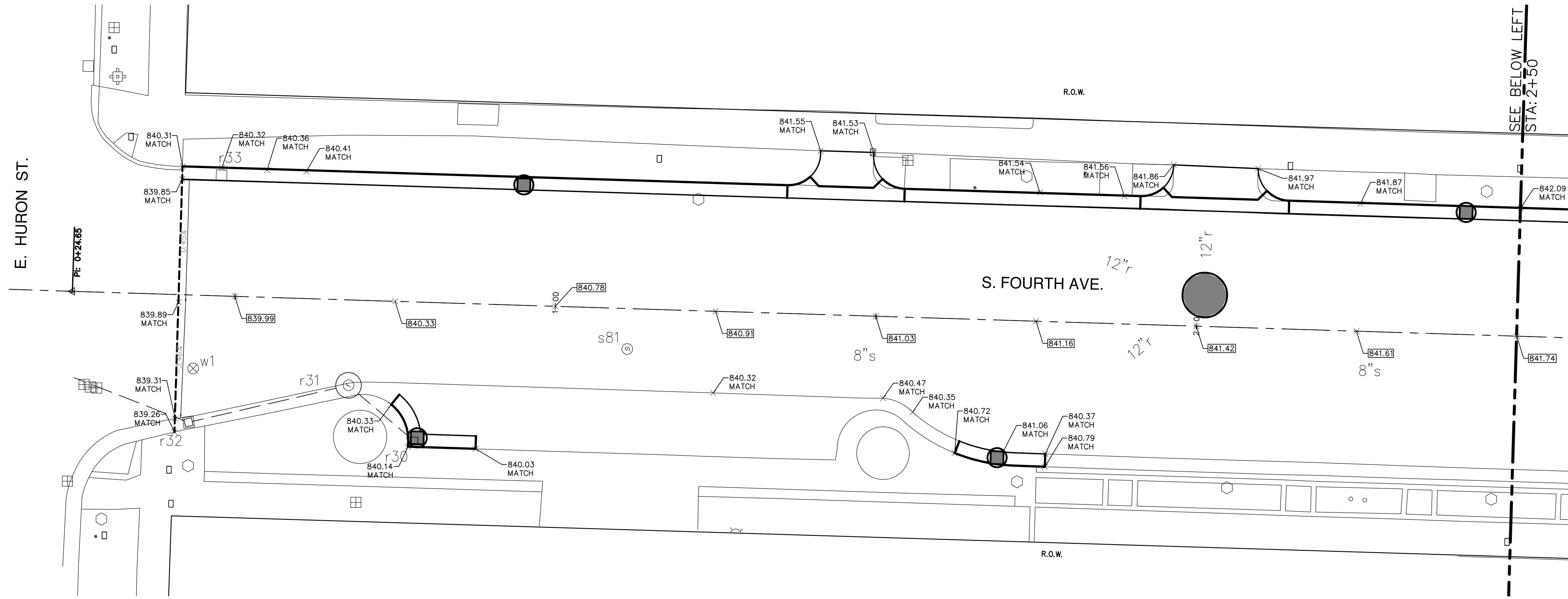
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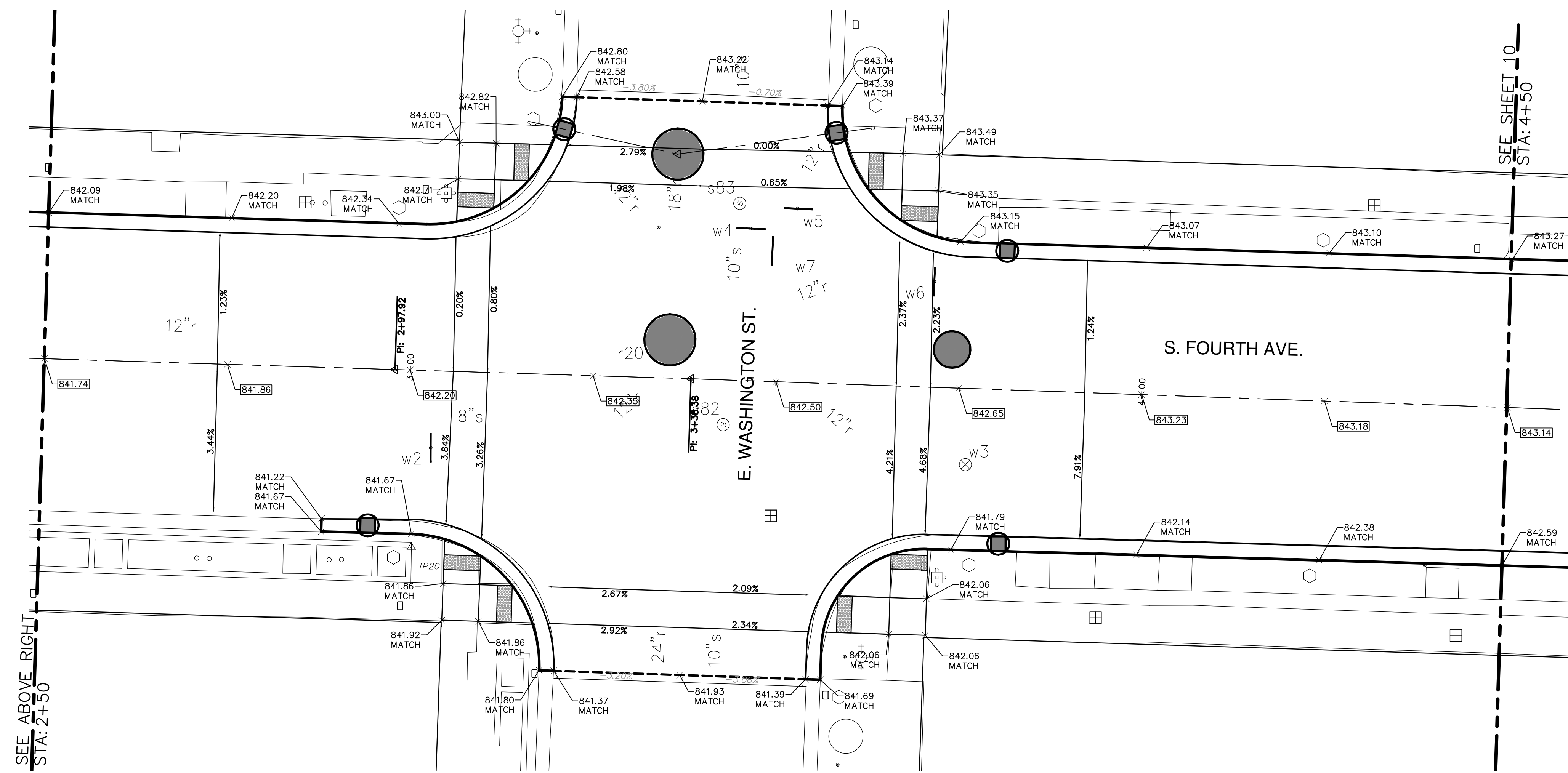
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
STORM SEWER
PLAN AND PROFILE

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'
DRAWING No. 2011033 - 8

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- BENCHMARKS**
- STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
 - STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)



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2-15-13	DATE
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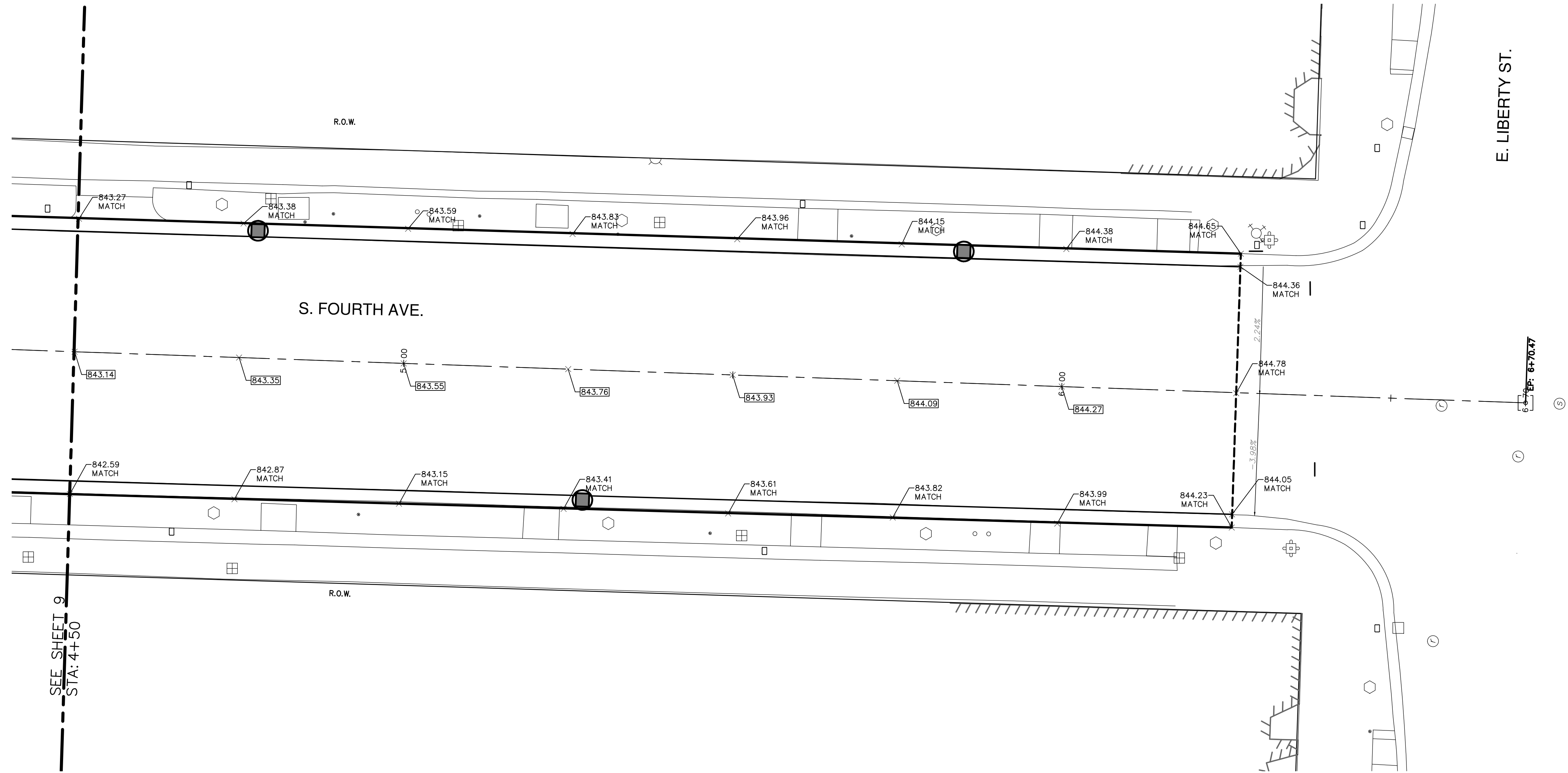
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SOUTH FOURTH AVENUE IMPROVEMENT PROJECT

SCALE PLAN: 1" = 10'
DRAWING No. **2011033 - 9**

SHEET No. **9 OF 17**

GRADES



SEE SHEET 9
STA: 4+50

S. FOURTH AVE.

E. LIBERTY ST.

BENCHMARKS

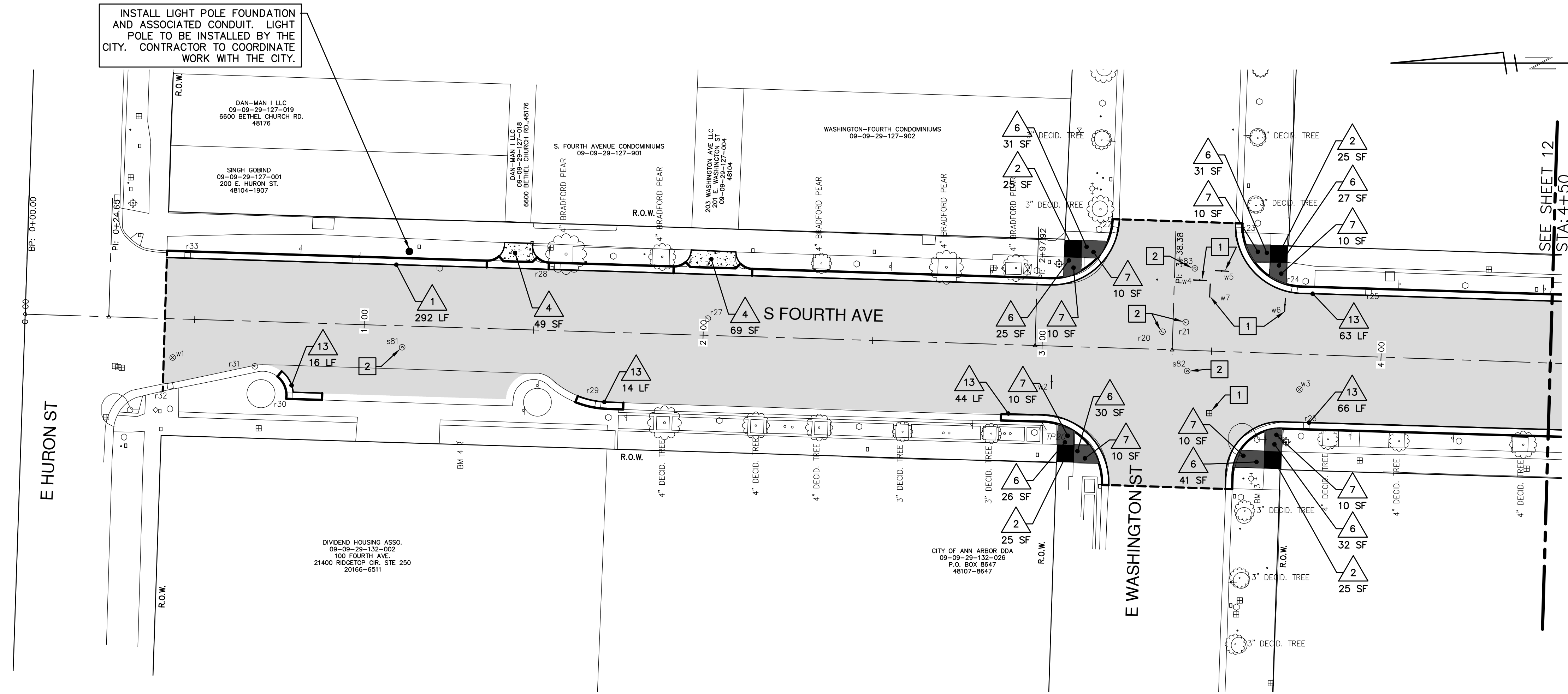
1. STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
2. STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
 SCALE PLAN: 1" = 10'
 DRAWING No. 2011033 - 10
 SHEET No. 10 OF 17

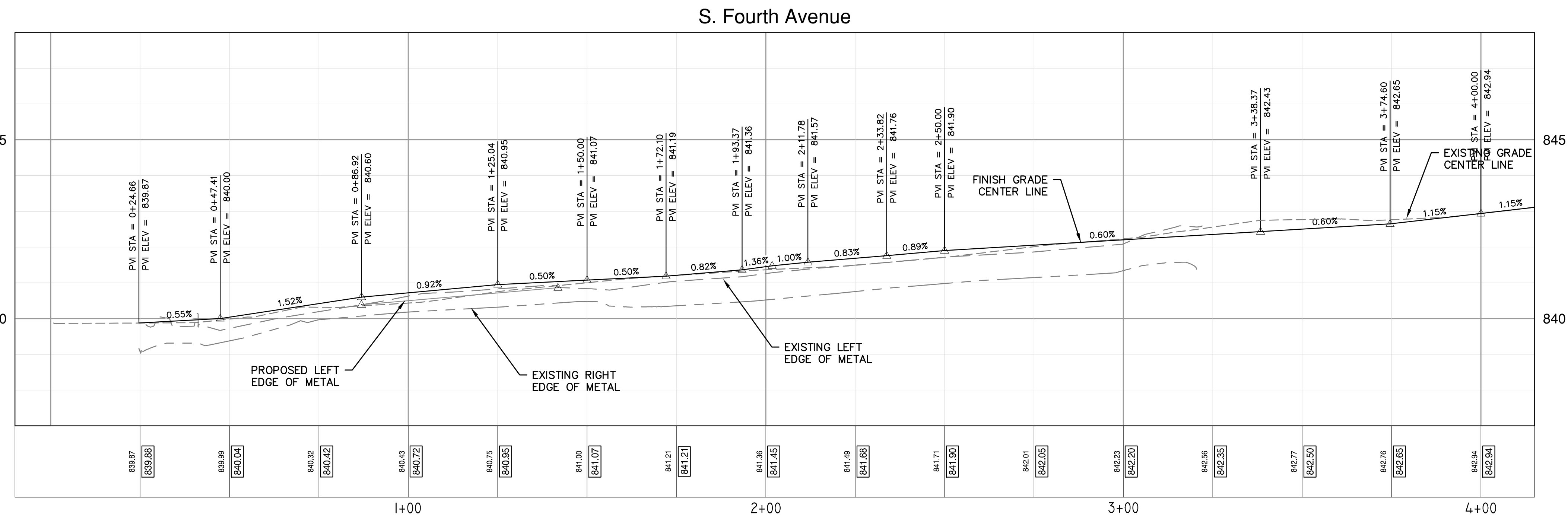
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
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- BENCHMARKS**
1. STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
 2. STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)



CONSTRUCTION KEY	
KEY	DESCRIPTION
1	PLACE CURB AND GUTTER, CONCRETE, MODIFIED
2	PLACE SIDEWALK, CONCRETE, 4 INCH
3	PLACE SIDEWALK, CONCRETE, 6 INCH
4	PLACE DRIVEWAY, NON REINFORCE, CONCRETE, 6 INCH MODIFIED
5	PLACE DRIVEWAY, NON REINFORCE, CONCRETE, 8 INCH MODIFIED
6	SIDEWALK RAMP, CONCRETE, 6 INCH MODIFIED
7	DETECTABLE WARNING SURFACE, MODIFIED
8	DRIVE OPENING, CONCRETE, DET M, MODIFIED
9	PLACE BRICK PAVERS
10	HMA DRIVEWAY WEDGING
11	SIDEWALK RETAINING WALL, GREATER THAN 18 INCH
12	BLOCK RETAINING WALL, MORTARLESS, UNREINF, MODIFIED
13	PLACE CURB AND GUTTER, CONCRETE
1	ADJUST GATE VALVE BOX OR MONUMENT BOX. GAS BOX
2	REMOVE AND REPLACE TYPE A CASTING, MODIFIED
3	ABANDON WATER STRUCTURE
4	REMOVE STRUCTURE AND REPLACE 2' DIA. DRAINAGE STRUCTURE.
5	POINT STRUCTURE.
6	ADJUST MDOOT TYPE B CASTING TO FINISH GRADE
7	ADJUST MDOOT TYPE K CASTING TO FINISH GRADE
8	REMOVE AND REPLACE MDOOT TYPE K CASTING, MODIFIED

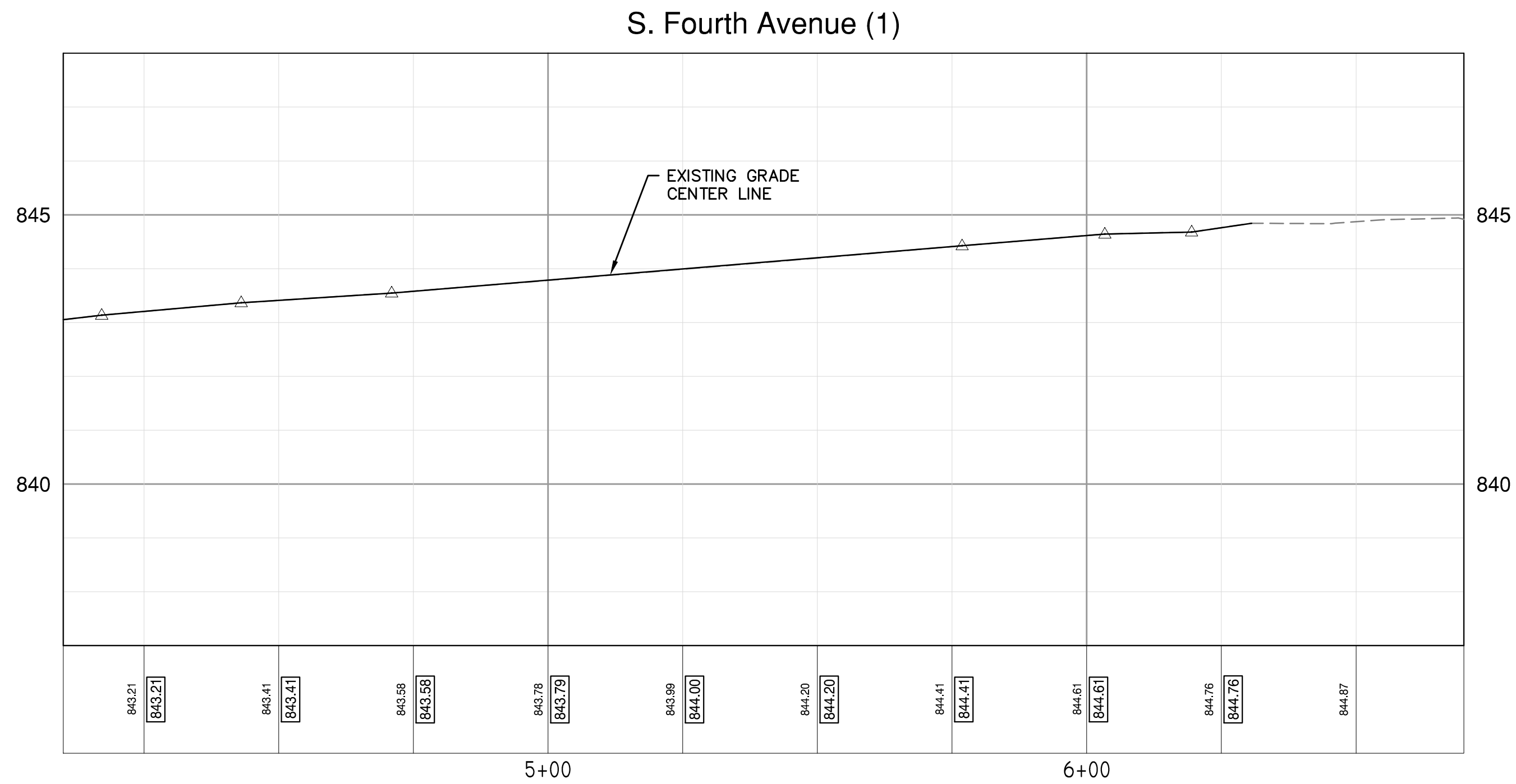
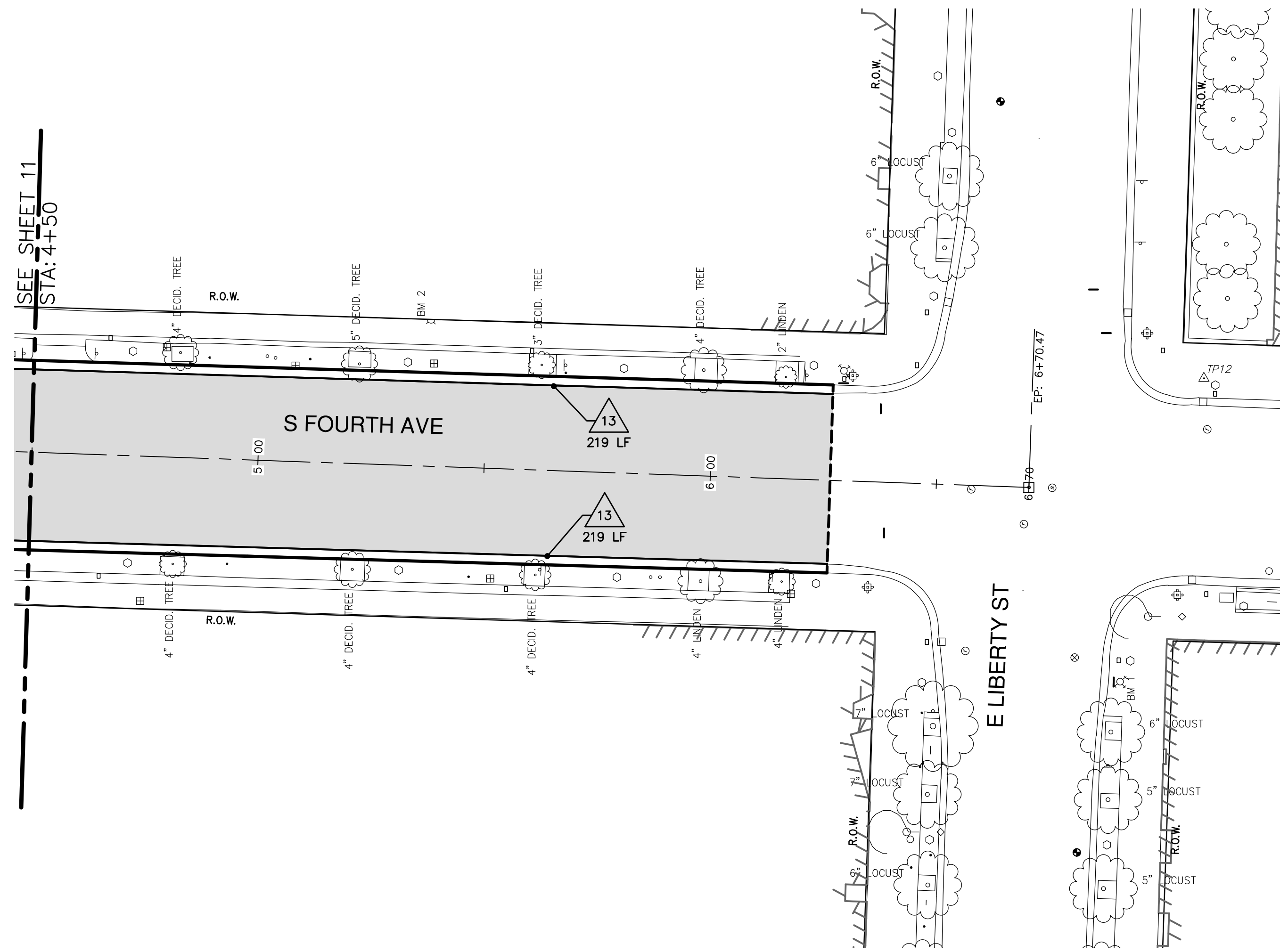
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SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
 ROAD PLAN AND PROFILE
 STA. 0+00 TO STA. 4+50

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SCALE PLAN: 1" = 20'
 PROFILE: 1" = 2'
 DRAWING No. **2011033 - 11**
 SHEET No. **11 OF 17**



- BENCHMARKS**
1. STEAMER VALVE ON HYDRANT AT NORTHWEST CORNER HURON AND FOURTH. ELEV 840.41 (NAVD 88 DATUM)
 2. STEAMER VALVE ON HYDRANT AT SOUTHWEST CORNER WASHINGTON AND FOURTH. ELEV 843.50 (NAVD 88 DATUM)

CONSTRUCTION KEY	
KEY	DESCRIPTION
1	PLACE CURB AND GUTTER, CONCRETE, MODIFIED
2	PLACE SIDEWALK, CONCRETE, 4 INCH
3	PLACE SIDEWALK, CONCRETE, 6 INCH
4	PLACE DRIVEWAY, NON REINFORCE, CONCRETE, 6 INCH MODIFIED
5	PLACE DRIVEWAY, NON REINFORCE, CONCRETE, 8 INCH MODIFIED
6	SIDEWALK RAMP, CONCRETE, 6 INCH MODIFIED
7	DETECTABLE WARNING SURFACE, MODIFIED
8	DRIVE OPENING, CONCRETE, DET M, MODIFIED
9	PLACE BRICK PAVERS
10	HMA DRIVEWAY WEDGING
11	SIDEWALK RETAINING WALL, GREATER THAN 18 INCH
12	BLOCK RETAINING WALL, MORTARLESS, UNREINF, MODIFIED
13	PLACE CURB AND GUTTER, CONCRETE
1	ADJUST GATE VALVE BOX OR MONUMENT BOX. GAS BOX
2	REMOVE AND REPLACE TYPE A CASTING, MODIFIED
3	ABANDON WATER STRUCTURE
4	REMOVE STRUCTURE AND REPLACE 2' DIA. DRAINAGE STRUCTURE.
5	POINT STRUCTURE.
6	ADJUST MDOT TYPE B CASTING TO FINISH GRADE
7	ADJUST MDOT TYPE K CASTING TO FINISH GRADE
8	REMOVE AND REPLACE MDOT TYPE K CASTING, MODIFIED



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ROAD PLAN AND PROFILE
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
STA. 4+50 TO P.O.E.

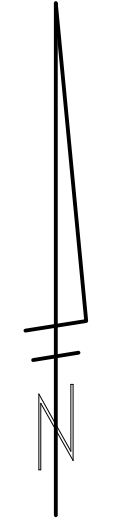
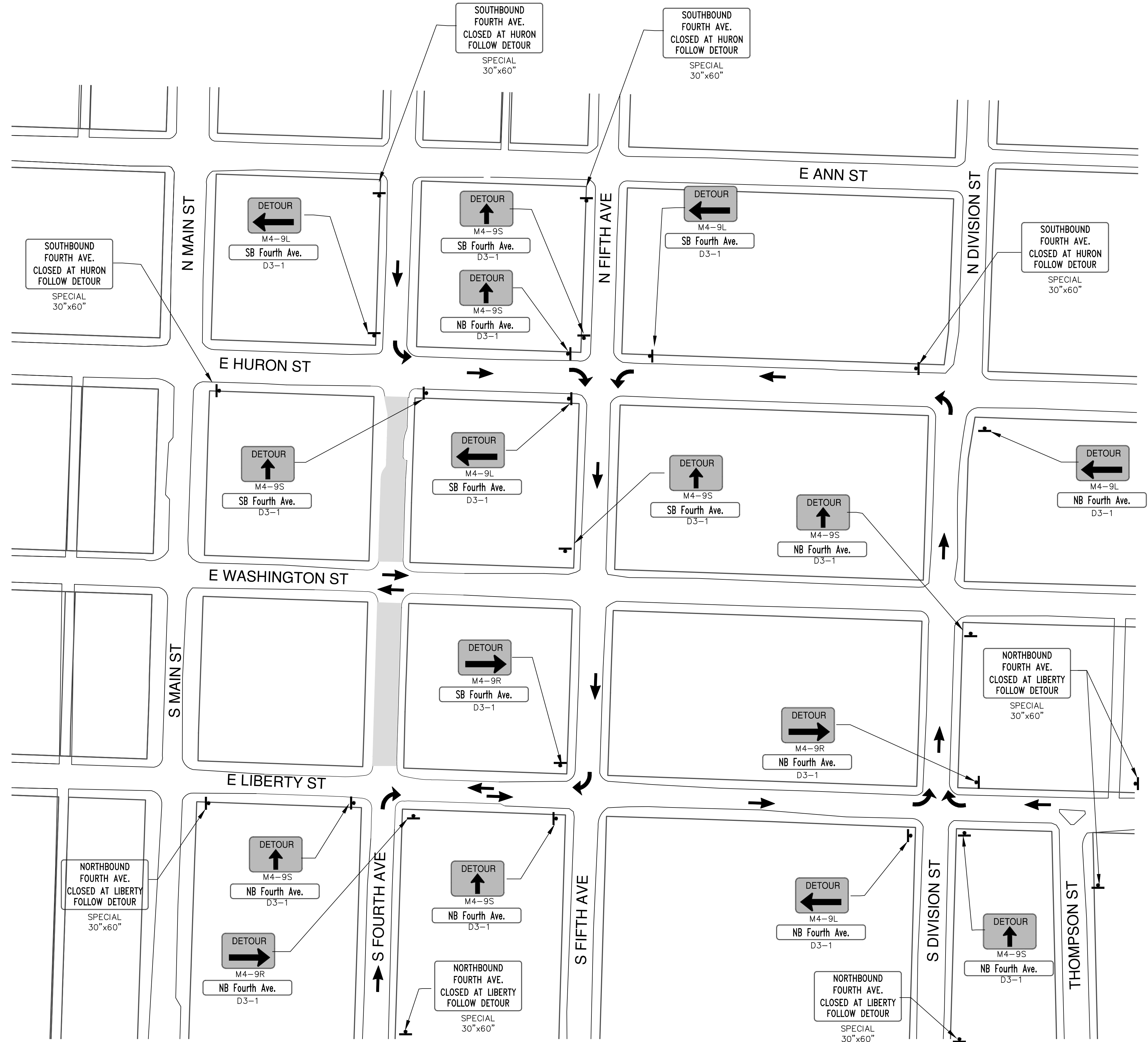
SCALE PLAN: 1" = 20'
DRAWING No. 2011033 - 12

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	MOEQ SUBMITTAL	2-15-13	DPF/CEC	IWK

S:\Project Management\Design\20110333 South Fourth Ave\Plan Production\Primary\20110333dr.dwg Dwg Created: 28-Jan-13 - _a2 standard bw.stb - Plot Date: 6-Mar-13

TRAFFIC CONTROL SIGN			
SIGN	NUMBER	QUANTITY	TOTAL AREA (SFT)
	D3-1	5	8
	M4-9S 30x30	5	32
	D3-1	3	5
	M4-9R 30x24	3	15
	D3-1	2	3
	M4-9L 30x24	2	10
	D3-1	1	2
	M4-8a 24x18	1	3
	D3-1	3	5
	M4-9S 30x30	3	19
	D3-1	1	2
	M4-9R 30x24	1	5
	D3-1	4	8
	M4-9L 30x24	4	20
	D3-1	2	3
	M4-9S 30x30	2	13
	D3-1	2	3
	M4-9R 30x24	2	10
	D3-1	1	2
	M4-9L 30x24	1	5
	SPECIAL 48x60	4	80
	SPECIAL 48x60	2	40
	SPECIAL 48x60	4	80
	W1-6L 24 X 48	1	8
	R11-2 48"x30"	4	40
	M4-10R 30"x24"	1	5
	W20-1 48 X 48	8	128
	D3-1	8	12
	R3-2 24x24	1	4
	M4-10L 30"x24"	1	5
	M4-10L 30"x24"	1	5
TYPE III BARRICADE		14	
PLASTIC DRUM LIGHTED FURNISHED/OPERATE		70	

SIGN TYPE B TOTAL THIS SHEET 580 SFT



811
Know what's below.
Call Before you dig.

DATE: 2-15-13
DRAWN: [blank]
CHECKED: [blank]

REV. 00
DESCRIPTION: MDEQ SUBMITTAL

DATE: 2-15-13
DRAWN: [blank]
CHECKED: [blank]

CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR MI 48106-1500
www.a2gov.org

ANN ARBOR MI
CITY

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
MAINTENANCE OF TRAFFIC

DETOUR PLAN

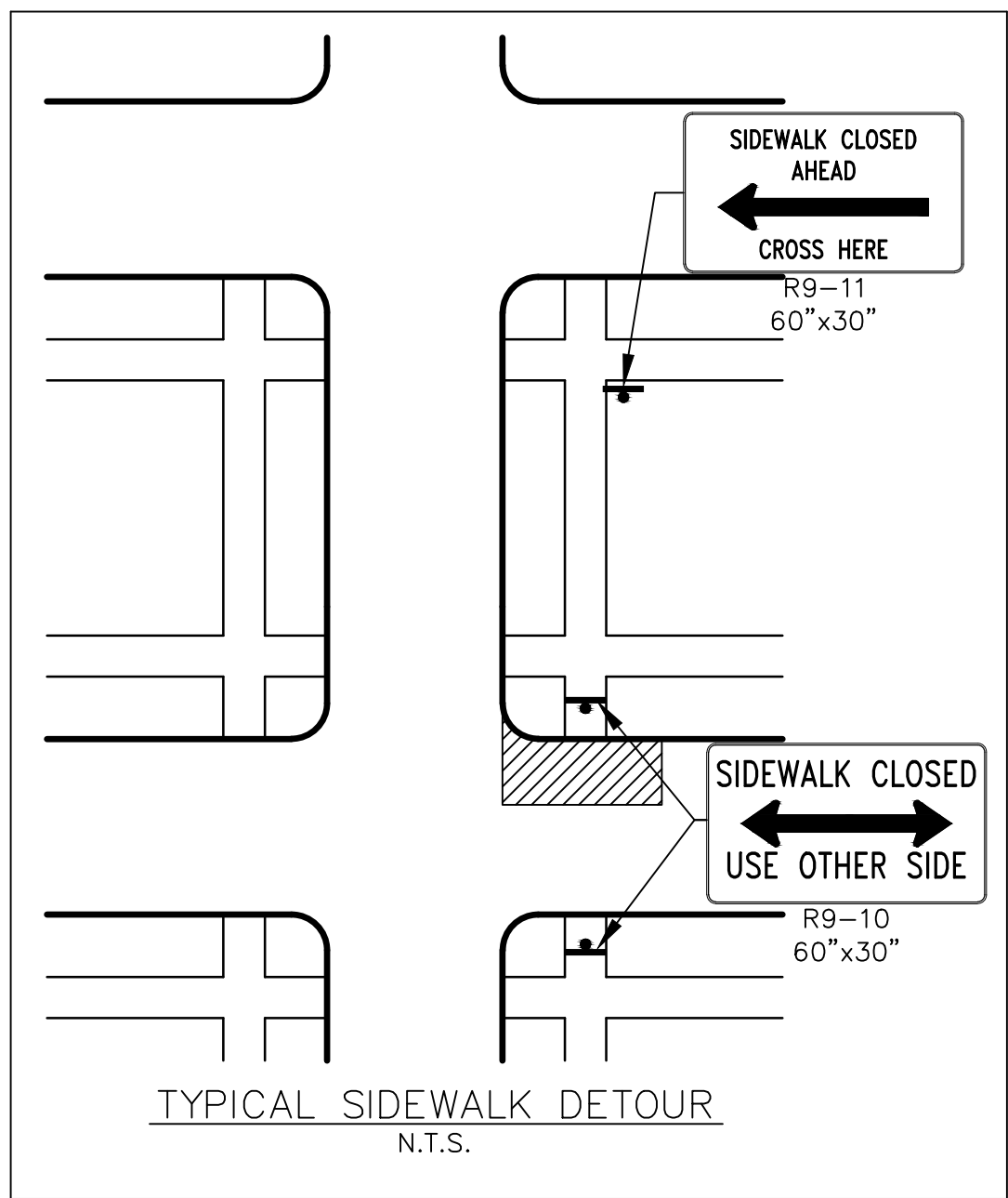
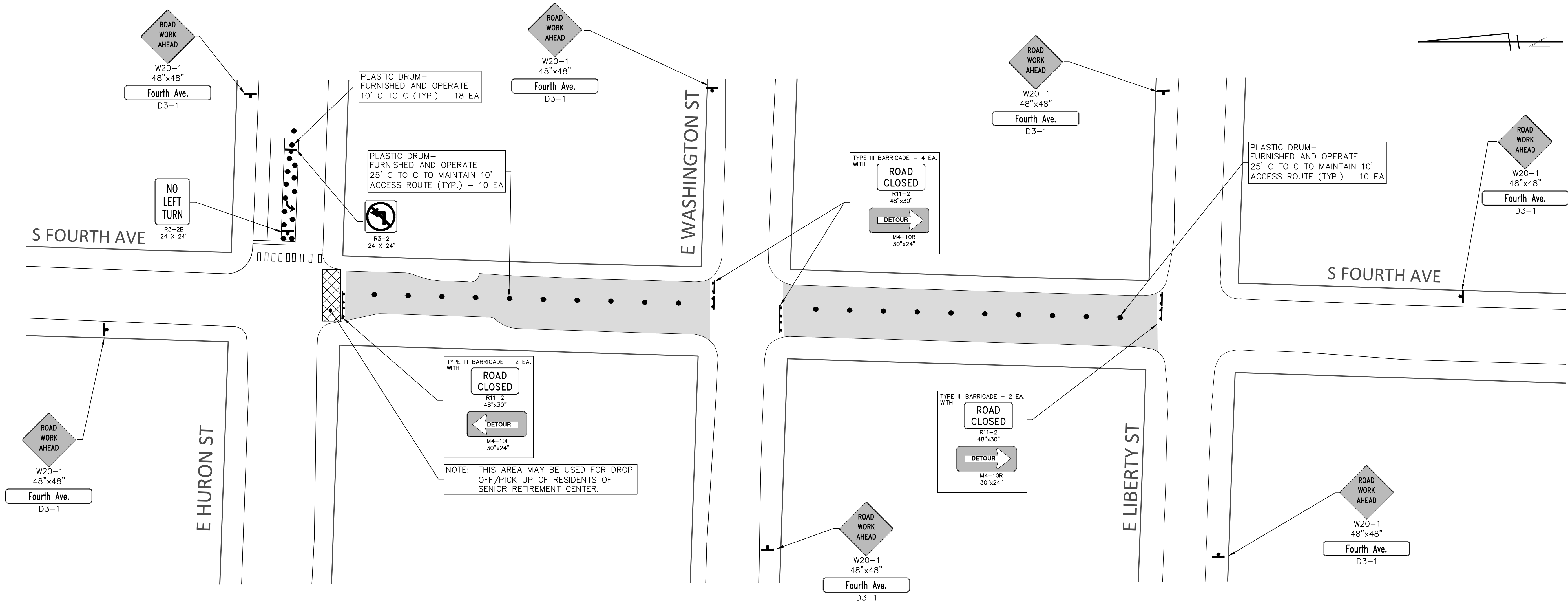
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DRAWING No. 2011033 - 13

SHEET No.

13 OF 17

S:\Project Management\Design\2011033 South Fourth Ave\Plan Production\Primary\2011033Mtrf.dwg Dwg Created: 15-Feb-13 -- _a2_standard bw.stb -- Plot Date: 6-Mar-13



TRAFFIC CONTROL SIGN			
SIGN	NUMBER	QUANTITY	TOTAL AREA (SFT)
	R9-10 60X30	2	25
	M4-9B 30x24	2	10
	R9-11 60X30	2	25
	R9-9 30x18	2	8
	R9-11 48x36	2	24

SIGN TYPE B TOTAL THIS SHEET 92 SFT

NOTES:

- ONLY ONE CORNER OF AN INTERSECTION CAN BE CLOSED AT A TIME TO PEDESTRIAN TRAFFIC. MISCELLANEOUS QUANTITIES FOR FURNISHING AND PLACING TYPE B SIGNS HAVE BEEN PROVIDED
- COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY ENGINEER.
- REMOVE OR OBSCURE AS DIRECTED CONFLICTING PAVEMENT MARKINGS AND SYMBOLS
- ALL TRAFFIC CONTROL DEVICES MUST MEET CURRENT MMUTCD PART 6
- PARKING METERS IN WORK ZONE TO BE BAGGED OR REMOVED AS DIRECTED BY ENGINEER.
- MAINTAIN FOURTH AVE ACCESS TO PROPERTY AT SW CORNER HURON ST. AND FOURTH AVE.
- 10 WIDE NORTH/SOUTH EMERGENCY ACCESS ROAD TO BE MAINTAINED AT ALL TIMES.
- NO STAGING OF EQUIPMENT OR MATERIAL ON HURON ST WITHOUT PERMISSION FROM CITY AND MDOT.
- CONTRACTOR TO PROVIDE TRAFFIC REGULATORS AS DIRECTED BY ENGINEER.

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
 MAINTENANCE OF TRAFFIC
 STAGE 1 PHASE 1

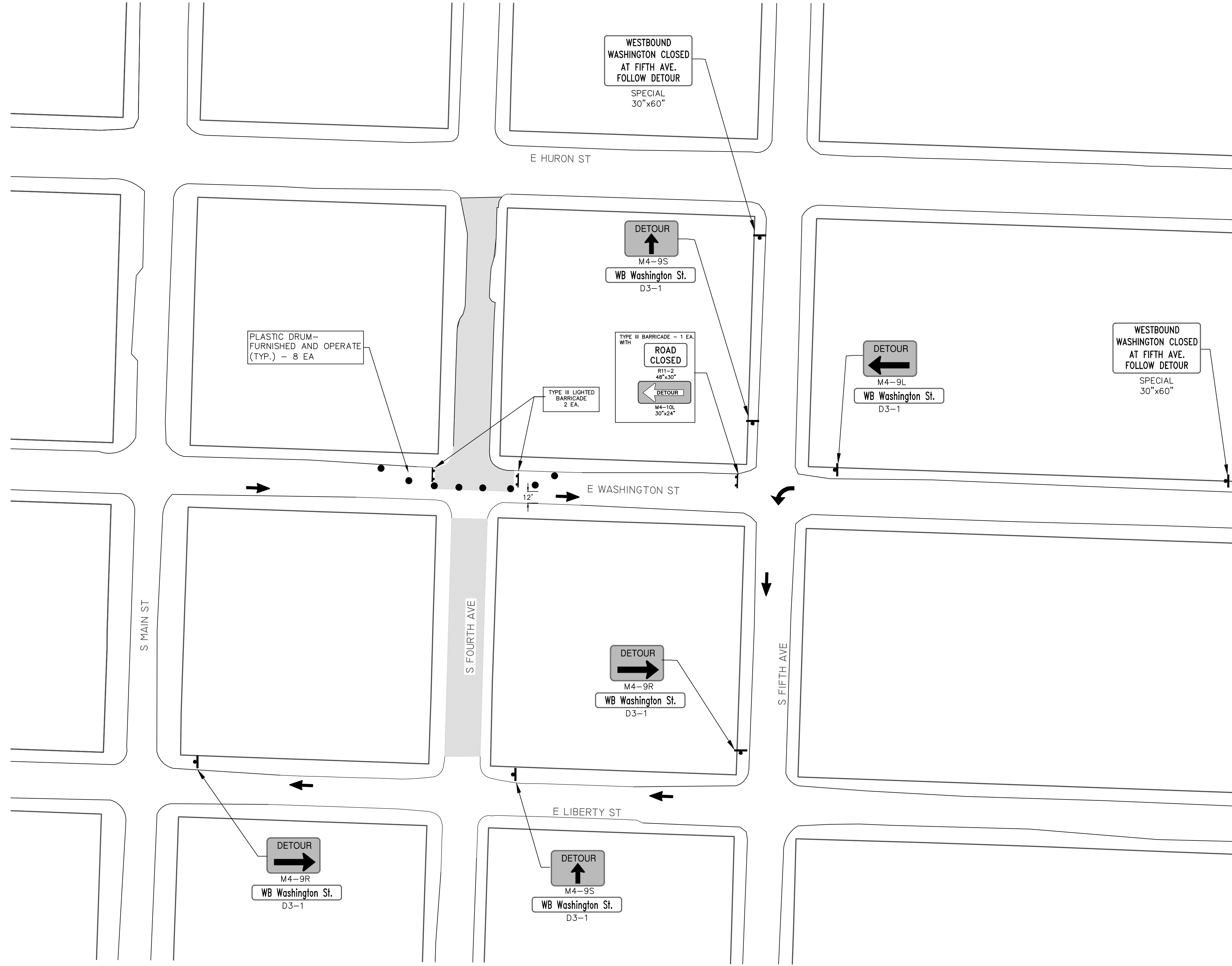
SCALE PLAN: 1" = 40'
 DRAWING No. 2011033 - 14

811
 Know what's below.
 Call Before you dig.

CITY OF ANN ARBOR
 PUBLIC SERVICE
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-1000
 ANN ARBOR 734.764.4410
 www.a2gov.org

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00	2-15-13	MOEQ SUBMITTAL
		DATE
		DRAWN
		CHECKED
		IVK

14 OF 17



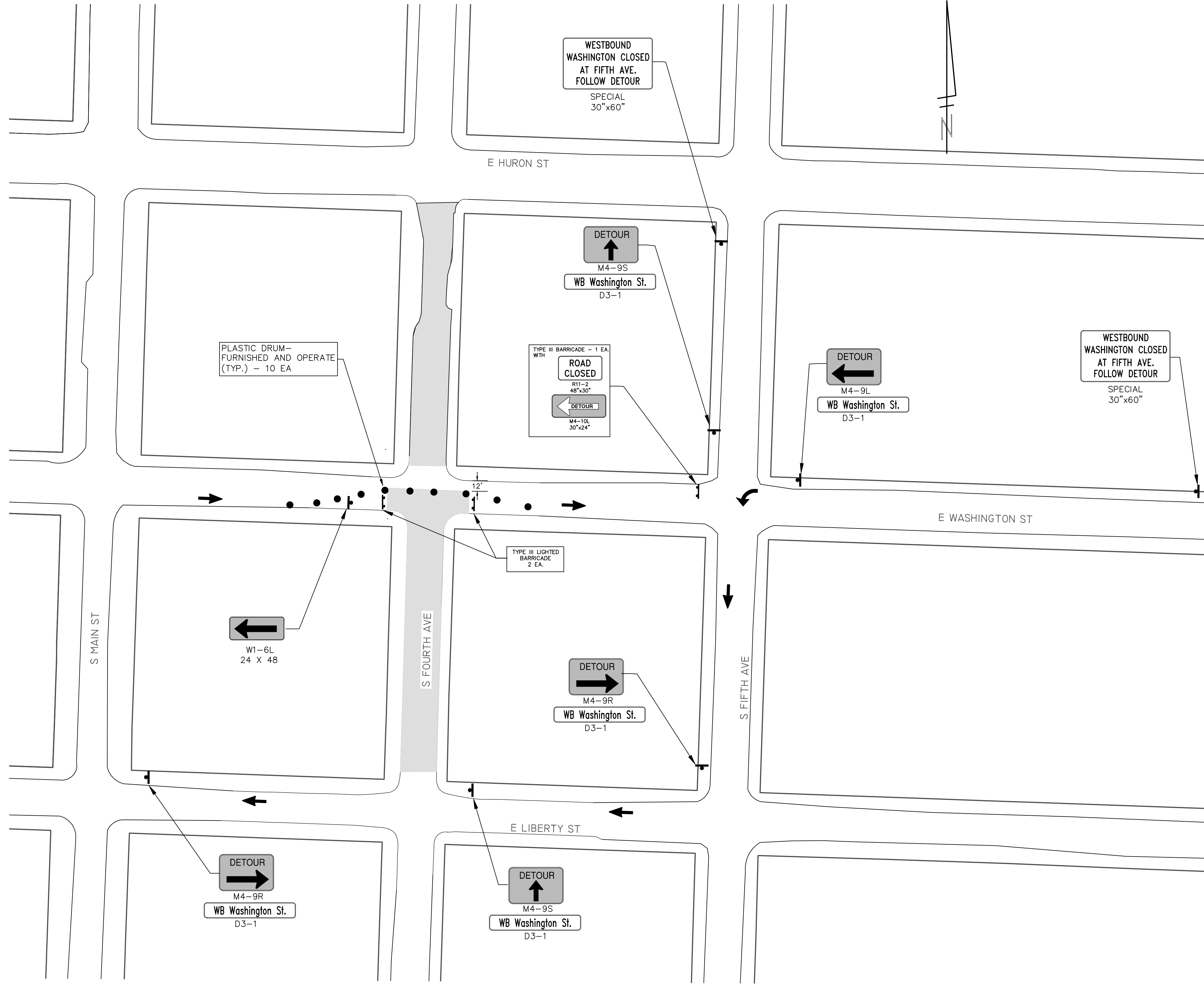
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2-15-13	DATE
DWF/CEC	DRAWN
IVK	CHECKED

CITY OF ANN ARBOR
 PUBLIC SERVICES
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-3667
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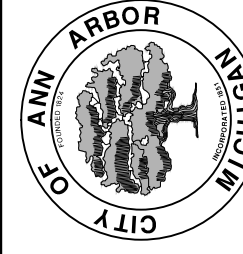
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
 MAINTENANCE OF TRAFFIC
 STAGE 1 PHASE 2

SCALE PLAN: 1" = 60'
 DRAWING No. 2011033 - 15

SHEET No. 15 OF 17



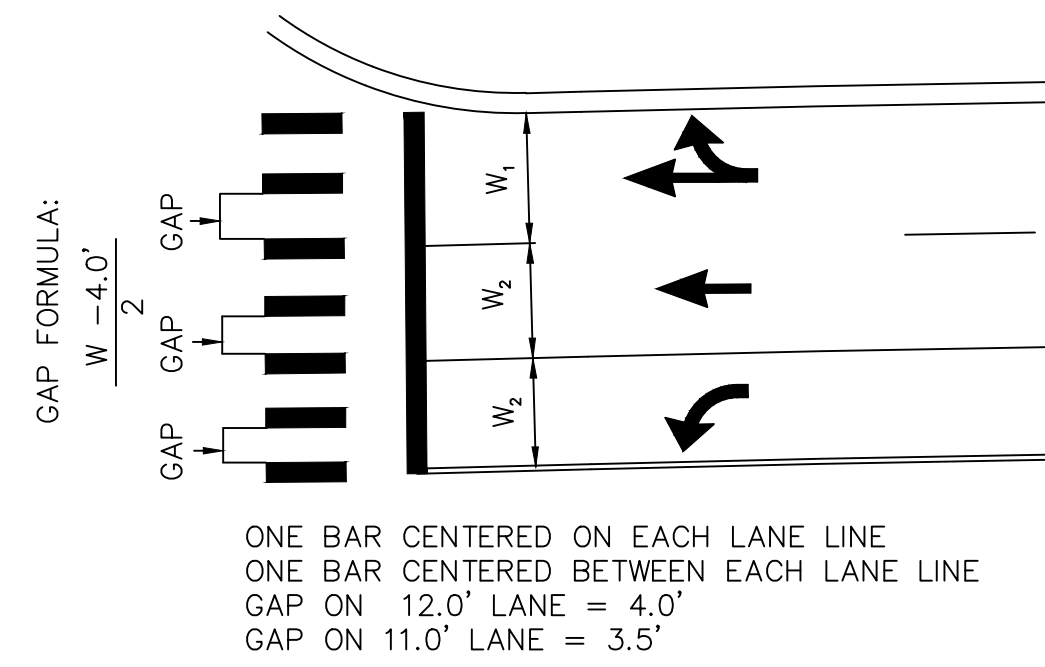
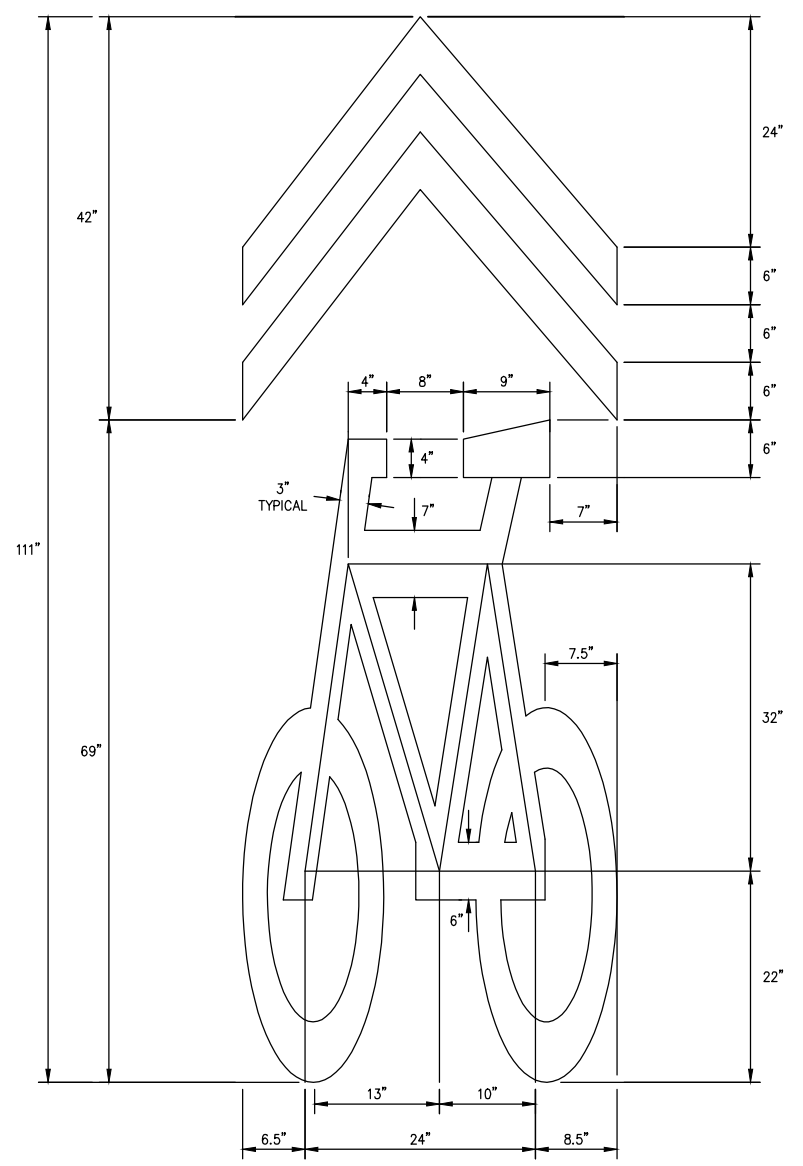
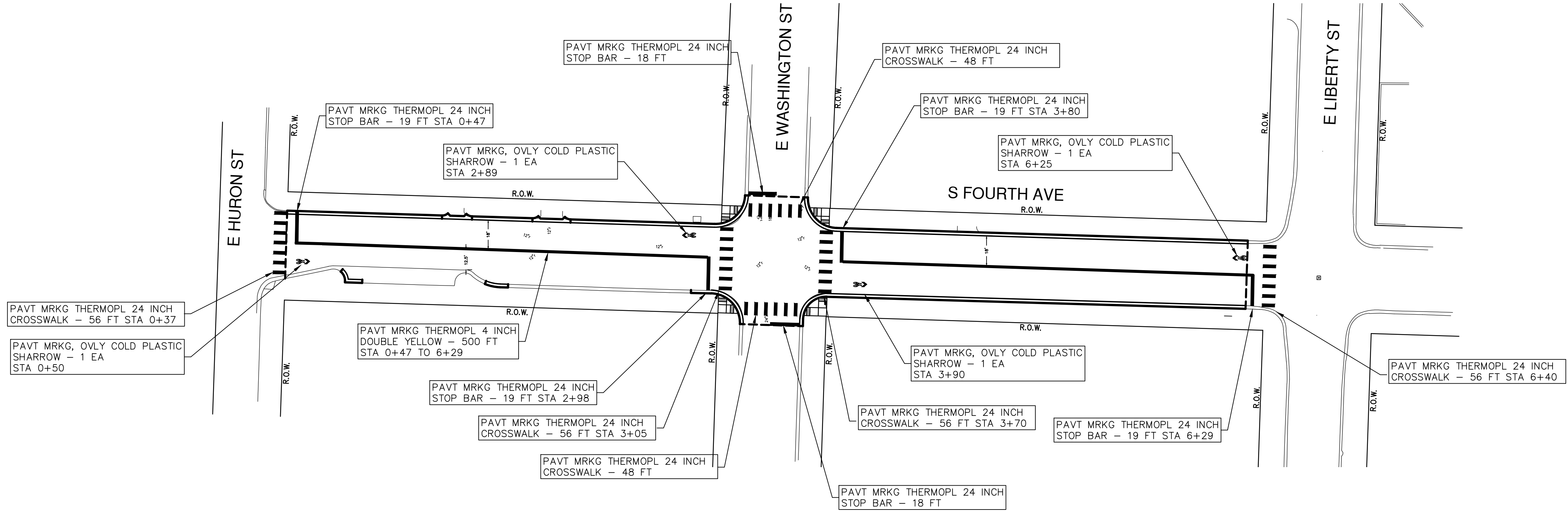
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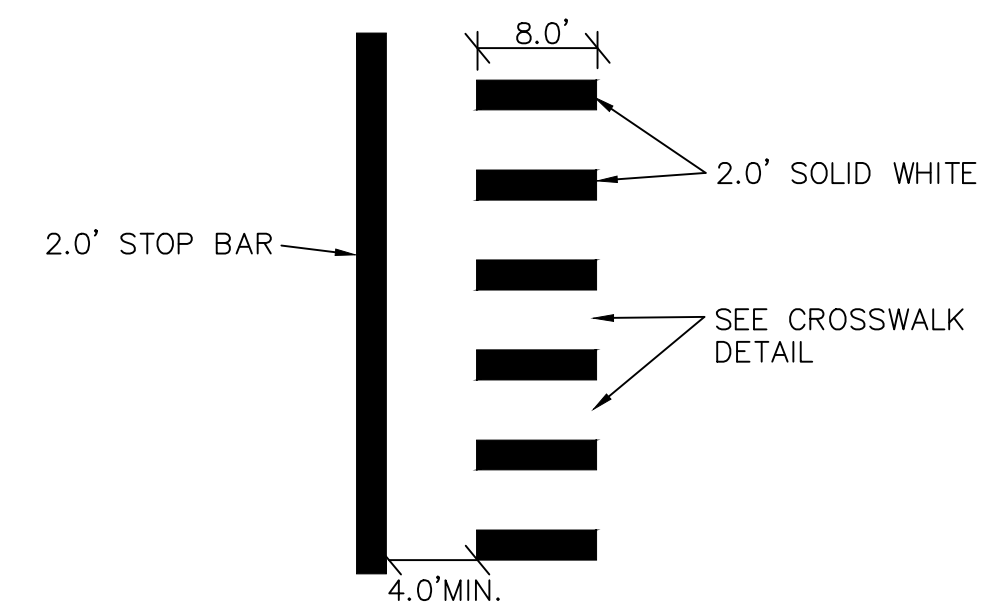
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
SOUTH FOURTH AVENUE IMPROVEMENT PROJECT
MAINTENANCE OF TRAFFIC
STAGE 1 PHASE 3

SCALE PLAN: 1" = 60'
DRAWING No.
2011033 - 16

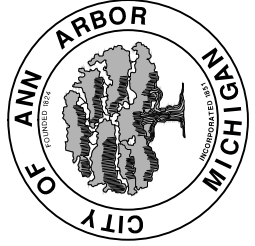
REV.	DATE	DESCRIPTION
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		IVK
		DF/CEC
		DRAWN
		CHECKED



CROSSWALK
DETAIL



STOP BAR
DETAIL



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 SOUTH FOURTH AVENUE IMPROVEMENT PROJECT

SCALE PLAN: 1" = 40'
 DRAWING No. 2011033 - 17

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	MOEQ Submittal	2-15-13		
			IVK	

