



CITY OF ANN ARBOR ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT FINAL 12-15-21

BID No. ITB# 4702, FILE No. 2018-032

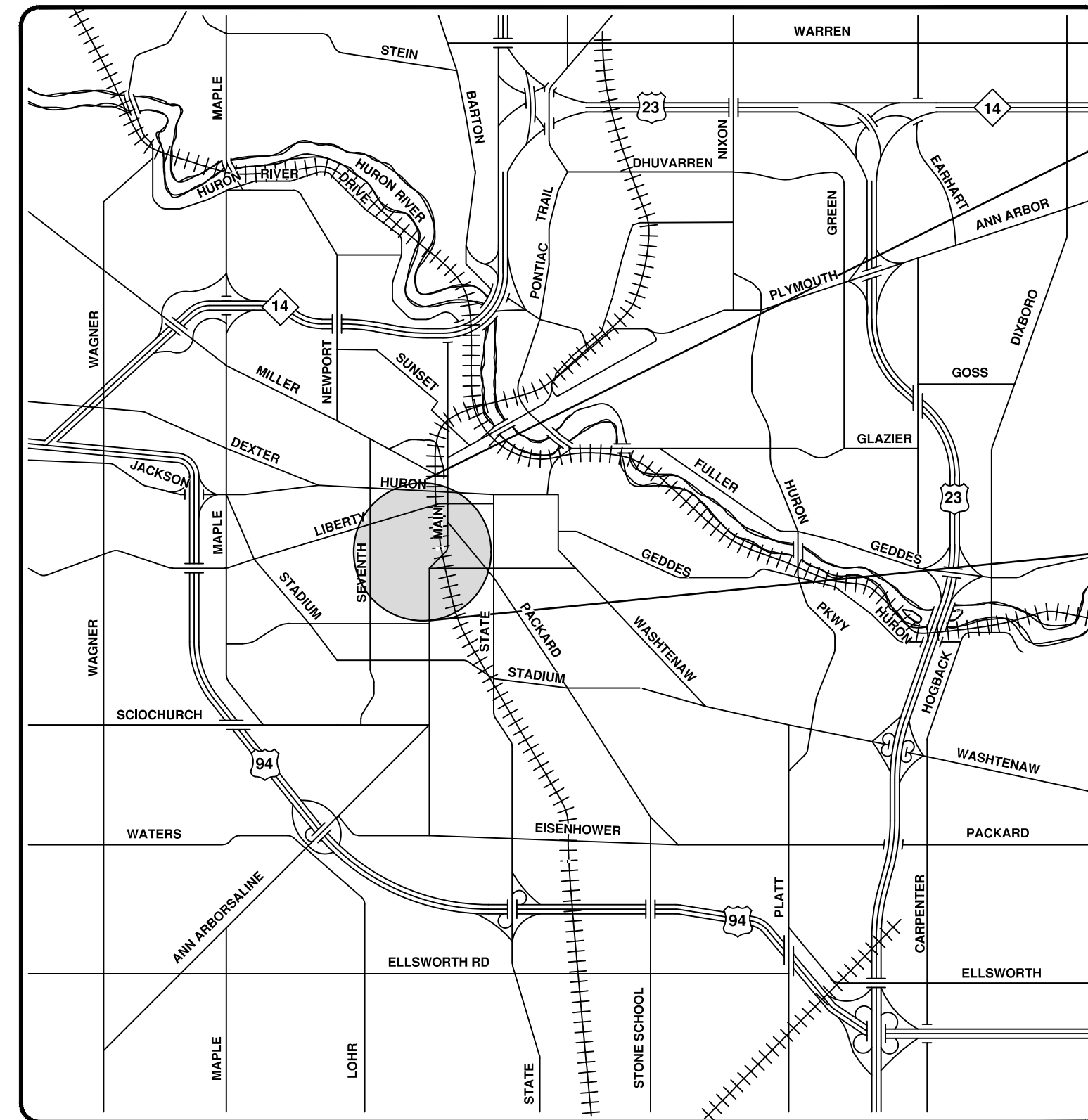
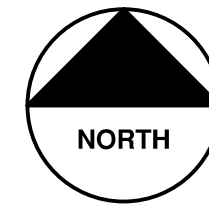
NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, 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.

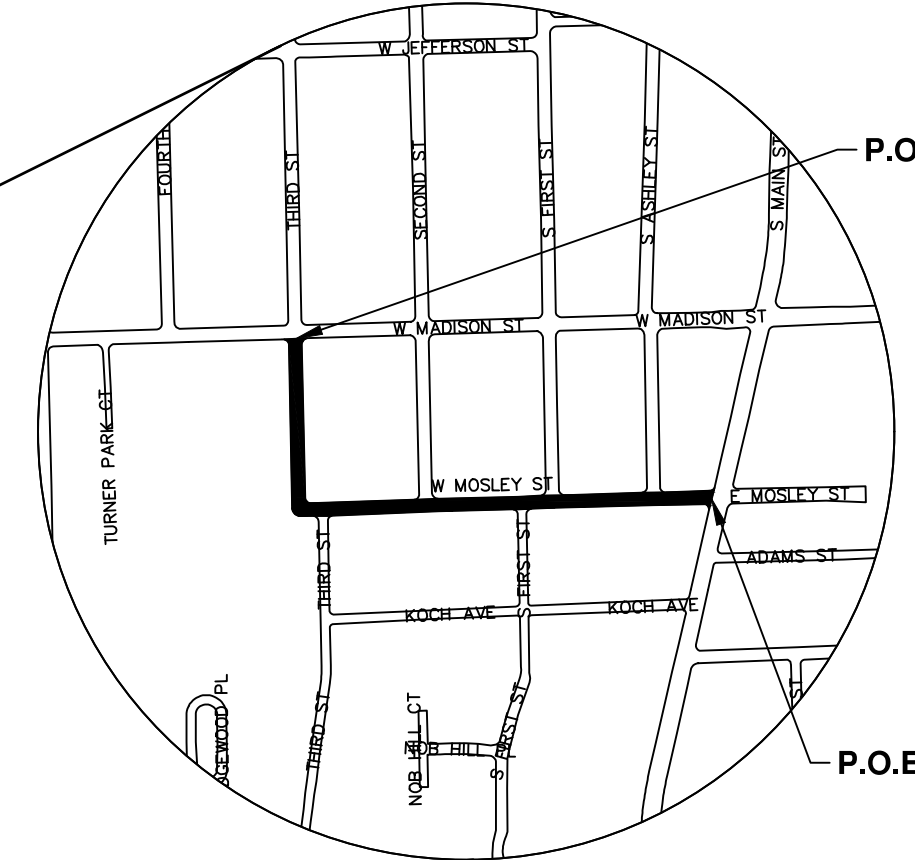
THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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

Sheet Number	Sheet Title
1	COVER
2	LEGEND
3	NOTES & BENCHMARKS
4	OVERALL SITE PLAN
5	ALIGNMENT PLAN - THIRD STREET
6	ALIGNMENT PLAN - MOSLEY STREET STA 0+00 TO STA 5+50
7	ALIGNMENT PLAN - MOSLEY STREET STA 5+50 TO STA 10+82.01
8	3rd STREET EXISTING TYPICAL SECTION
9	MOSLEY STREET EXISTING TYPICAL SECTION
10	3RD STREET PROPOSED TYPICAL SECTIONS
11	MOSLEY STREET PROPOSED TYPICAL SECTIONS
12	WATER MAIN DETAILS
13	MISCELLANEOUS DETAILS
14	MISCELLANEOUS DETAILS
15	MISCELLANEOUS DETAILS
16	MISCELLANEOUS DETAILS
17	SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS
18	SESC AND REMOVAL PLAN
19	WATER MAIN PLAN AND PROFILE - THIRD STREET STA 0+00 TO 3+00
20	WATER MAIN PLAN AND PROFILE - THIRD STREET STA 3+00 TO 5+50
21	WATER MAIN PLAN AND PROFILE - MOSLEY STREET STA 5+50 TO 9+00
22	WATER MAIN PLAN AND PROFILE - MOSLEY STREET STA 9+00 TO 12+00
23	WATER MAIN PLAN AND PROFILE - MOSLEY STREET STA 12+00 TO 15+00
24	WATER MAIN CONNECTIONS - HYDRANT 1, CONNECTION AT THIRD
25	WATER MAIN CONNECTIONS - CONNECTION AT SECOND & ASHLEY, HYDRANTS
26	PAVING PLAN AND PROFILE - THIRD STREET
27	PAVING PLAN AND PROFILE - MOSLEY STREET STA 0+00 TO STA 5+50
28	PAVING PLAN AND PROFILE - MOSLEY STREET STA 5+50 TO STA 10+82.01
29	INTERSECTION GRADING- THIRD STREET & MOSLEY STREET
30	INTERSECTION GRADING - SECOND ST
31	INTERSECTION GRADING - FIRST ST
32	INTERSECTION GRADING - ASHLEY ST
33	INTERSECTION GRADING - MAIN STREET
34	MAINTENANCE OF TRAFFIC PLAN
35	MOT STAGE 1 - WEST SIDE OF INTERSECTION CLOSED
36	MOT STAGE 2 - EAST SIDE OF INTERSECTION CLOSED
37	MAINTENANCE OF TRAFFIC PLAN PED DETOUR
38	PEDESTRIAN DETAILS
39	QUANTITIES



VICINITY MAP



PREPARED UNDER THE SUPERVISION OF

T.B.B.

Theresa Bridges, P.E. - MI LICENSE No. 52180
PROJECT MANAGER

12/15/2021
DATE

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

REV.	DATE	DESCRIPTION	CHECKED	DRAWN

CITY OF ANN ARBOR PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-6647
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

SCALE: _____ DRAWING No. 2018-032-1 SHEET No. 1 OF 39

© THIRD, MOSLEY WATER MAIN AND RESURFACING PROJECT; BID No. ITB# 4702; 2018-032

EXISTING LEGEND

- FIRE HYDRANT
- GATE VALVE IN BOX
- GATE VALVE IN WELL
- STOP BOX
- WATER VAULT
- WELL
- CATCH BASIN (SQ)
- CATCH BASIN (RD)
- STORM MANHOLE
- NON-CURB CATCH BASIN (SQ)
- END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- POST
- PEDESTRIAN SIGNAL
- SIGN
- HAND HOLE
- ORNAMENTAL LIGHT
- FLOOD LIGHT
- UNKNOWN MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- GAS VALVE
- GAS VENT
- GAS BOX
- ELECTRICAL RISER
- TRANSFORMER
- UTILITY POLE
- LAMP POLE
- GUY ANCHOR
- GUY POLE
- MONITORING WELL
- MAILBOX
- SOIL BORING
- TRAVERSE POINT
- BENCH MARK
- IRON PIPE
- MON BOX

- WATER MAIN
- WATER MAIN ABANDONED
- STORM SEWER
- STORM SEWER ABANDONED
- SANITARY SEWER
- SANITARY SEWER ABANDONED
- GAS MAIN
- GAS MAIN (DEAD)
- ELECTRICAL OVER HEAD
- ELECTRICAL UNDER GROUND
- ELECTRICAL DUCT BANK
- TELEPHONE OVER HEAD
- TELEPHONE UNDER GROUND
- TELEPHONE DUCT BANK
- CABLE TV OVER HEAD
- CABLE TV UNDER GROUND
- FIBER OPTIC
- FIBER OPTIC DUCT BANK
- BOUNDARY
- BUILDING
- CENTERLINE OF DITCH
- CENTERLINE/CROWN OF ROAD
- CONTOUR MAJOR 800
- CONTOUR MINOR 799
- EDGE OF WATER
- FLOODPLAIN
- FENCE
- GRAVEL
- GUARDRAIL
- STONE WALL
- R.O.W.
- TREELINE
- WETLAND
- EDGE OF BRUSH
- HEDGE
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- SHRUB (DECIDUOUS)
- STUMP
- TREE TO REMAIN & PROTECT (DECIDUOUS)
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10
- TREE TO REMAIN & PROTECT (CONIFEROUS)
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10

PROPOSED LEGEND

- HYDRANT (PLAN)
- WATER GATE WELL
- REDUCER
- WATER GATE VALVE
- WATER STOP BOX
- WATER VAULT
- INLET
- DOUBLE INLET
- INLET JUNCTION CHAMBER
- ROUND CATCH BASIN
- STORM MANHOLE
- DRAIN ARROW
- FLARED END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- SIGN
- PUSH BUTTON
- HAND HOLE
- WATER MAIN
- STORM SEWER
- SANITARY SEWER
- FIBER OPTIC
- ELECTRICAL
- CENTERLINE OF DITCH
- CENTERLINE OF ROAD
- FENCE
- GRAVEL
- SILT FENCE
- PROTECTIVE FENCE
- GUARDRAIL
- LOT/UNIT
- CURB
- TEMPORARY GRADING PERMIT
- CONTOUR MAJOR 800
- CONTOUR MINOR 799
- WATER EASEMENT
- STORM EASEMENT
- SANITARY EASEMENT
- R.O.W.
- LIMITS OF CONSTRUCTION
- LIMIT OF GRADING
- STONE WALL
- DETECTABLE WARNING
- ASPHALT
- CONCRETE
- SIDEWALK
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- TREE TO BE REMOVED (DECIDUOUS)
- TREE TO BE REMOVED (CONIFEROUS)
- STUMP TO BE REMOVED



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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1667
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
LEGEND

C:\pwwork\mflanogon\0867624\3 NOTES & BENCHMARKS.dwg - a2 standard bw.stb - Plot Date: 12/15/2021 11:29:03 AM

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, MAX".
- TRENCHES FOR NEW WATER SERVICES SHALL BE EXCAVATED TO MIOSHA AND CITY OF ANN ARBOR PUBLIC WORKS REQUIREMENTS.
- CITY OF ANN ARBOR PUBLIC WORKS 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 PUBLIC WORKS.
- 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 PUBLIC WORKS.
- THE CONTRACTOR SHALL BACKFILL TRENCHES IN ACCORDANCE WITH TRENCH DETAIL SPECIFIED ON PLANS. 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-BLU BOLTS TO BE USED AT ALL MECHANICAL WATER MAIN JOINTS AT HYDRANTS AND MEGALUG FITTINGS
- THE CONTRACTOR SHALL CONSTRUCT, FLUSH, AND BACTERIOLOGICALLY TEST THE WATER MAIN PER DETAILED SPECIFICATION "WATER MAIN INSTALLATION AND TESTING" 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 THIRST 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.
- 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 PUBLIC WORKS 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.

CONSTRUCTION NOTES (con't):

- 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, MAX".
- 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, 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 PUBLIC WORKS 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 DETAILED IN THE SPECIFICATIONS OR SHOWN ON PLANS. BACKFILL FOR SEWER AND WATER CONSTRUCTION SHALL BE MDT 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.
- WHEN NOT UNDER CONSTRUCTION, THE CONTRACTOR IS TO MAINTAIN CROSSWALK RAMP ACCESS WITHIN THE PROJECT INFLUENCE WITH MAINTENANCE AGGREGATE AND HORSE MATS TO REDUCE TRIPPING HAZARDS AT THE RAMP OPENING. THIS WORK SHALL BE PAID FOR AS "MAINTENANCE GRAVEL" AND THE HORSE MATS SHALL BE INCLUDED IN "GENERAL CONDITIONS, MAX" AND NOT BE PAID FOR SEPARATELY.

CITY OF ANN ARBOR STANDARD DETAILS

DETAILS REQUIRED ON THIS PROJECT AND NOT INCLUDED IN THE PLAN SET ARE AS FOLLOWS:	
ITEM OF WORK	
MAILBOX/NEWSPAPER TUBE INSTALLATION AND RELOCATION	SD-M-2

MISCELLANEOUS QUANTITIES

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

Item	Description	Unit	Totals	
			Qty	
130	Protective Fencing	Ft	400	
206	"No Parking" Sign	Each	27	
207	Type III Lighted Barricade, Furn. & Oper.	Each	15	
208	Sign, Portable, Changeable Message, Furn & Oper	Each	2	
209	Plastic Drum, Lighted, Furn. & Oper.	Each	75	
210	Temporary Type B Signs, Furn & Oper	SF	802	
211	Temporary Type B Sign, Special, Furn & Oper	SF	68	
212	Sidewalk Barricade, Furn & Oper	Each	8	
213	Lighted Arrow, Type C, Furn & Oper	Each	2	
221	Additional Depth Structure Cover, Adjust/Repair	Each	7	
242	6 inch Temporary Water Main Line Stop	Each	2	
243	8 inch Temporary Water Main Line Stop	Each	2	
244	12 inch Temporary Water Main Line Stop	Each	2	
245	6 inch Temporary Water Main Line Stop, Additional Rental Day	Each	2	
246	8 inch Temporary Water Main Line Stop, Additional Rental Day	Each	2	
247	12 inch Temporary Water Main Line Stop, Additional Rental Day	Each	2	
264	Maintenance Gravel	Ton	200	
265	Subgrade Undercutting and Backfill, Type IIB, Modified	CY	150	
268	Flowable Fill (Backfill)	Cyd	5	
270	21AA Limestone - C.I.P	Cyd	880	
273	Cold-Milling HMA Surface	SY	2370	
274	Hand Patching, Modified	Ton	10	
295	Fertilizer, Chemical Nutrient, CL A	Lbs	115	
296	Mulch Blanket, High Velocity	Syd	845	
297	Seeding, Mixture THM	Lbs	50	
298	Topsoil Surface, Furn, 4 inch	Syd	845	
460	Excavate and Backfill for Water Service Tap and Lead	LFt	335	
516	6" Wrapped Edge Drain	Lt	1045	
703	Silt Fence	LF	400	

STRUCTURE	TYPE	STATION	RIM	WELL DEPTH	CASTING
V1	12" GVIW	MAIN 8+20	848.81	7.49	TYPE B
V2	12" GVIW	MAIN 15+25	825.23	7.12	TYPE B
V3	12" GVIW	AUX B 0+05	866.26	7.67	TYPE B
V4	12" GVIW	AUX C 0+46	849.38	7.30	TYPE B

STRUCTURE	TYPE	STATION	FG	DEPTH
H1	HYDRANT ASSEMBLY	AUX A 0+32	865.48	6.39
H2	HYDRANT ASSEMBLY	AUX D 0+35	847.43	6.13

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
TRAFFIC CONTROL PERMIT*	CITY OF ANN ARBOR ENGINEERING
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
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
EGLE WATER MAIN CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER		
SANITARY		
STORM	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
FORESTRY		
SIGNS SIGNALS STREET LIGHTS		(734) 794-6361
ALLEN CREEK DRAIN	WASHTENAW COUNTY WATER RESOURCE COMMISSIONER 705 N ZEEB ROAD P.O. BOX 8645 ANN ARBOR, MI 48107	(734) 222-6860
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
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

WATER MAIN QUANTITIES--FOR EGLE PERMIT PURPOSES ONLY

596	LFT	8 INCH CL 50 DIP W/POLYWRAP, TR DET I, MOD
110	LFT	12 INCH CL 50 DIP W/POLYWRAP, TRENCH DETAIL I
3	EA	FIRE HYDRANT ASSEMBLY, INCLUDING 8"X6" REDUCER
4	EA	12" GATE VALVE-IN WELL

BM #	ELEV	DESCRIPTION
1	846.300	BM SPIKE SOUTH SIDE UTILITY POLE AT SOUTHEAST CORNER OF 3RD & MADISON
2	866.490	BM SPIKE EAST SIDE UTILITY POLE, WEST SIDE OF 3RD AT HOUSE #628
3	849.330	BM SPIKE SOUTH SIDE UTILITY POLE AT NORTHEAST CORNER 2ND & MOSELY
4	826.230	BM SPIKE SOUTHWEST SIDE UTILITY POLE AT NORTHEAST CORNER S. ASHLEY & MOSELY



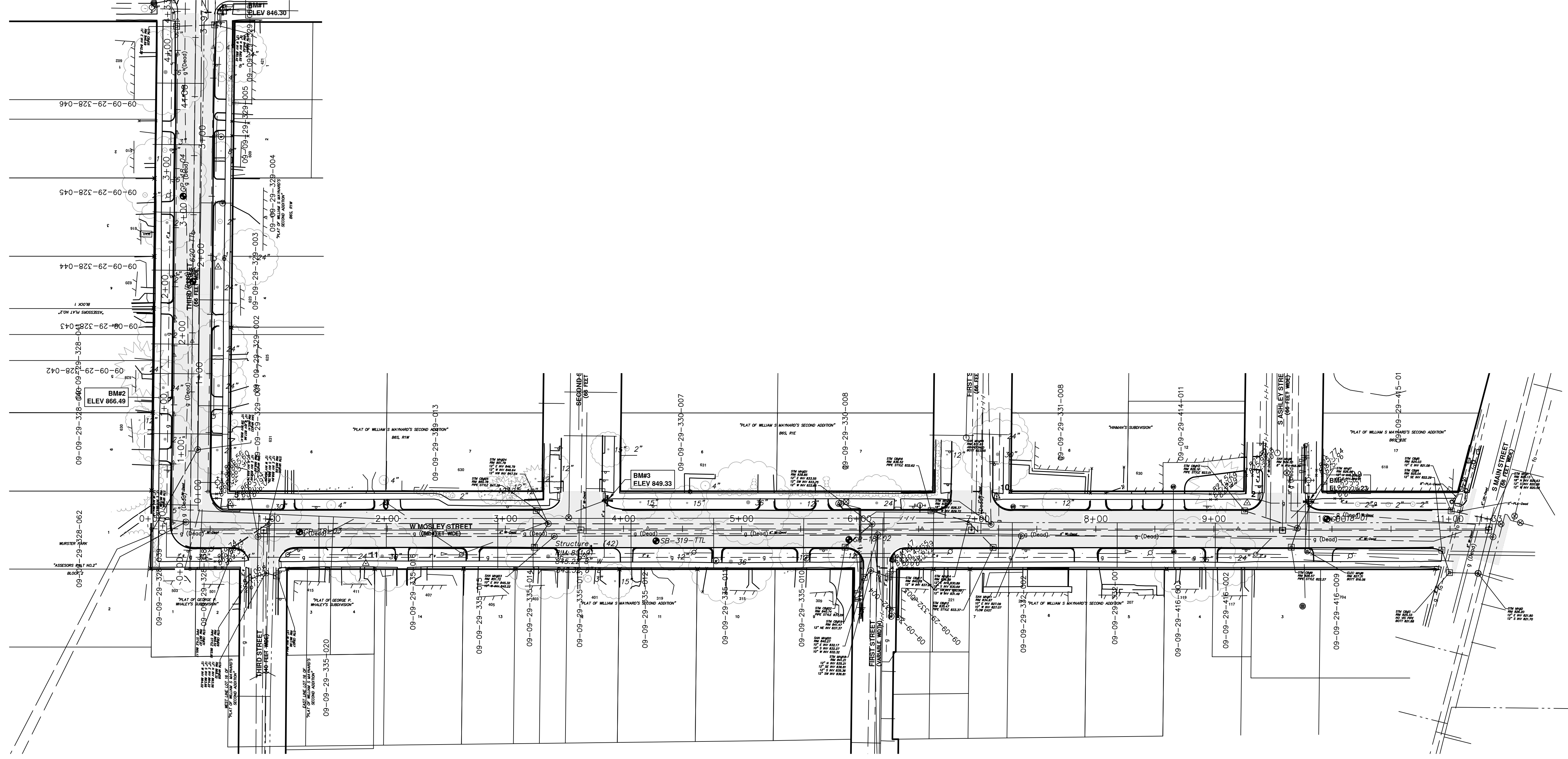
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8645
ANN ARBOR, MI 48107
734.794.6410
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THIRD & MOSLEY WATER MAIN
AND RESURFACING PROJECT
NOTES & BENCHMARKS

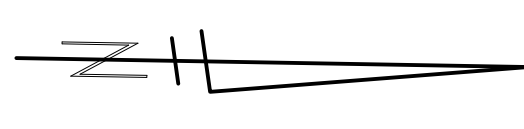
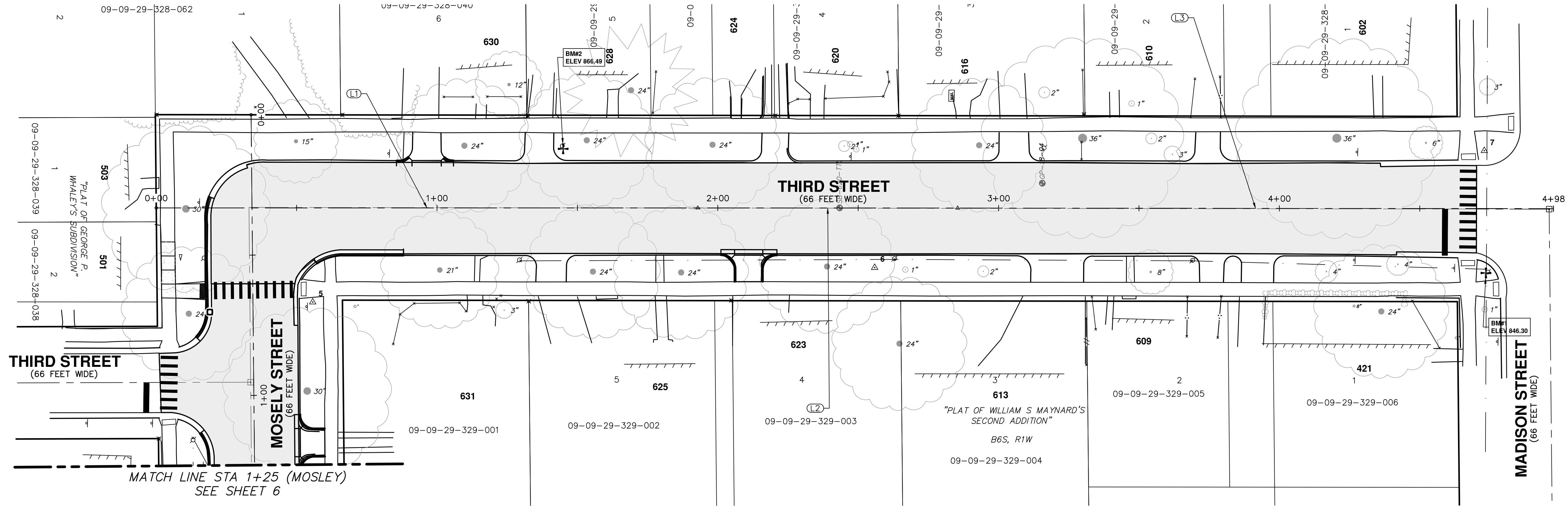
SCALE: NTS
DRAWING NO.: 2018-032-3

SHEET No.



REV.	DESCRIPTION

DATE	DRAWN	CHECKED



LINE SEGMENT AND CURVE INFORMATION		
Line #	Start Point	End Point
L1	N = 282173.0923 E = 13289316.5750	N = 282365.9299 E = 13289312.6746
L2	N = 282365.9299 E = 13289312.6746	N = 282458.4565 E = 13289310.8439
L3	N = 282458.4565 E = 13289310.8439	N = 282670.6253 E = 13289306.7703

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

ALIGNMENT PLAN - THIRD STREET

SCALE PLAN: 1" = 20'

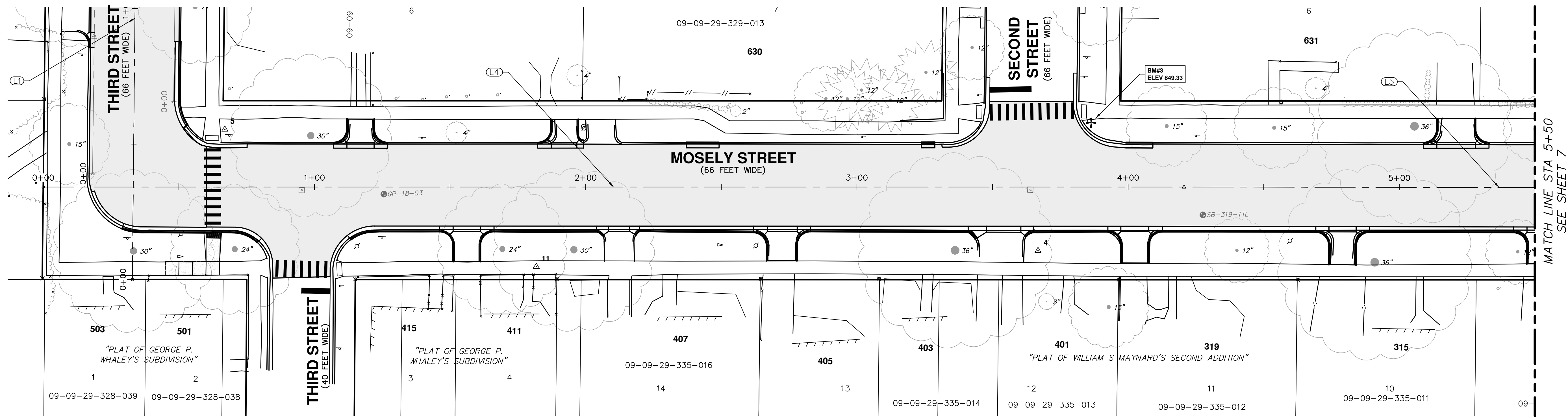
DRAWING No. 2018-032-5

SHEET No. 5 OF 39

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1667
www.a3gov.org



LINE SEGMENT AND CURVE INFORMATION			
Line #	Start Point		End Point
L4	N = 282206.1969	E = 13289282.7082	N = 282218.8599 E = 13289703.1295
L5	N = 282218.8599	E = 13289703.1295	N = 282225.6502 E = 13289935.3276
L6	N = 282225.6502	E = 13289935.3276	N = 282233.7178 E = 13290202.8480
L7	N = 282233.7178	E = 13290202.8480	N = 282240.1171 E = 13290414.8191

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING


THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

ALIGNMENT PLAN - MOSLEY STREET STA 0+00 TO STA 5+50

SCALE PLAN: 1" = 20'


DRAWING No. 2018-032-6

SHEET No. 6 OF 39

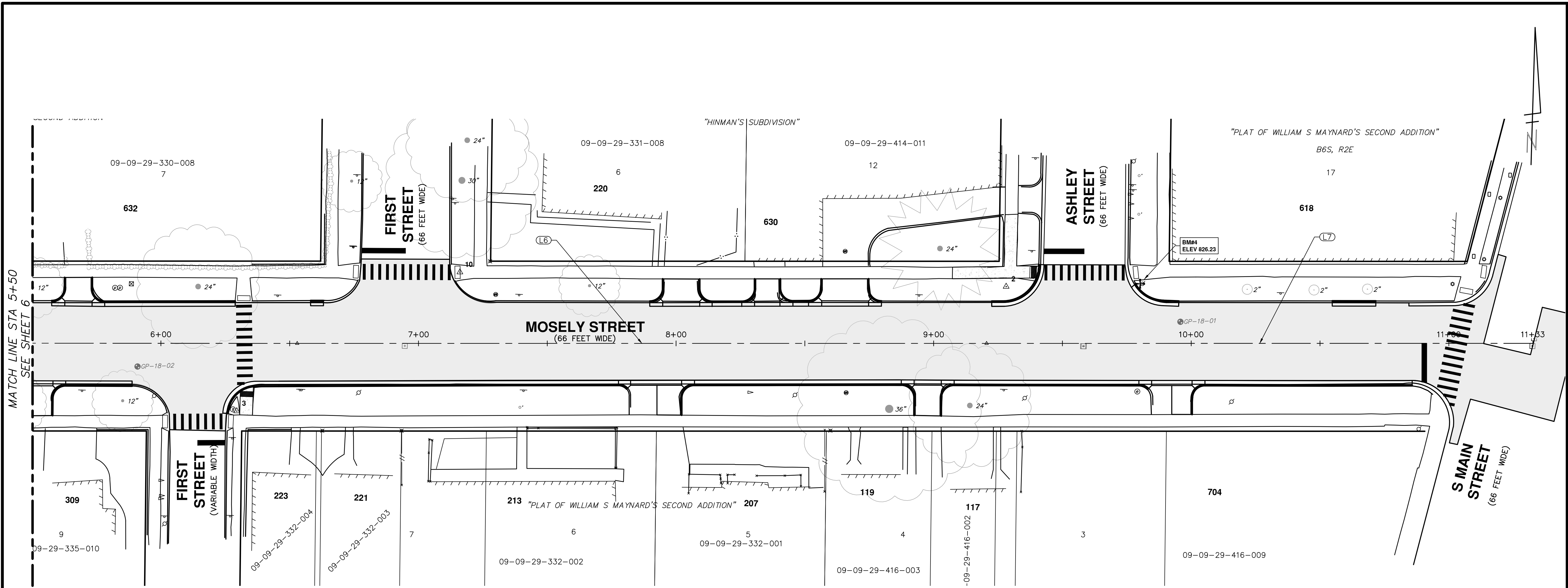


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www.a2gov.org

REV.	DESCRIPTION	DATE	DRAWN	CHECKED



Know what's below.
Call Before you dig.



MATCH LINE STA 5+50
SEE SHEET 6

LINE SEGMENT AND CURVE INFORMATION		
Line #	Start Point	End Point
L4	N = 282206.1969 E = 13289282.7082	N = 282218.8599 E = 13289703.1295
L5	N = 282218.8599 E = 13289703.1295	N = 282225.6502 E = 13289935.3276
L6	N = 282225.6502 E = 13289935.3276	N = 282233.7178 E = 13290202.8480
L7	N = 282233.7178 E = 13290202.8480	N = 282240.1171 E = 13290414.8191

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING


THIRD & MOSELY WATER MAIN
AND RESURFACING PROJECT

ALIGNMENT PLAN - MOSELY STREET STA 5+50 TO STA 10+82.01

SCALE PLAN: 1" = 20'


DRAWING No. 2018-032-7

SHEET No. 7 OF 39

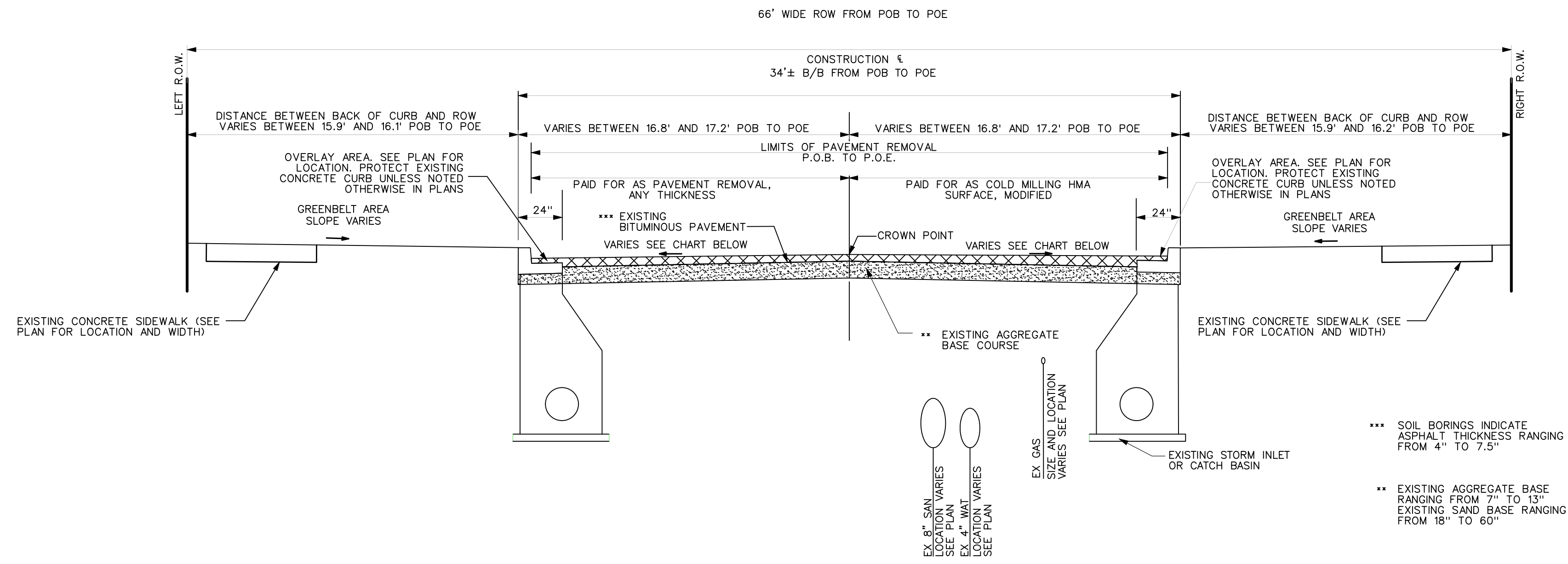


CITY OF ANN ARBOR
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED



Know what's below.
Call Before you dig.



**EXISTING TYPICAL CROSS SECTION
THIRD STREET**
P.O.B. STA 0+60.21 TO P.O.E. STA 11+13.48
NOT TO SCALE

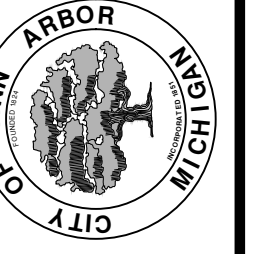
LEFT GRADE	STATION	RIGHT GRADE
0.39%	0+66	-6.68%
1.08%	0+75	-6.42%
1.70%	1+00	-6.44%
1.31%	1+25	-7.02%
1.90%	1+50	-6.66%
0.98%	1+75	-6.01%
0.58%	2+00	-6.28%
1.74%	2+25	-7.33%
2.21%	2+50	-7.70%
3.24%	2+75	-8.03%
-0.67%	3+00	-9.24%
-0.28%	3+25	-9.57%
-0.61%	3+50	-7.86%
-0.08%	3+75	-6.50%
1.41%	4+00	-5.25%
2.52%	4+25	-3.94%
2.31%	4+50	-4.89%
2.00%	4+60	-4.65%

* EXISTING GRADES ARE RELATIVE TO CROWN ELEVATION



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

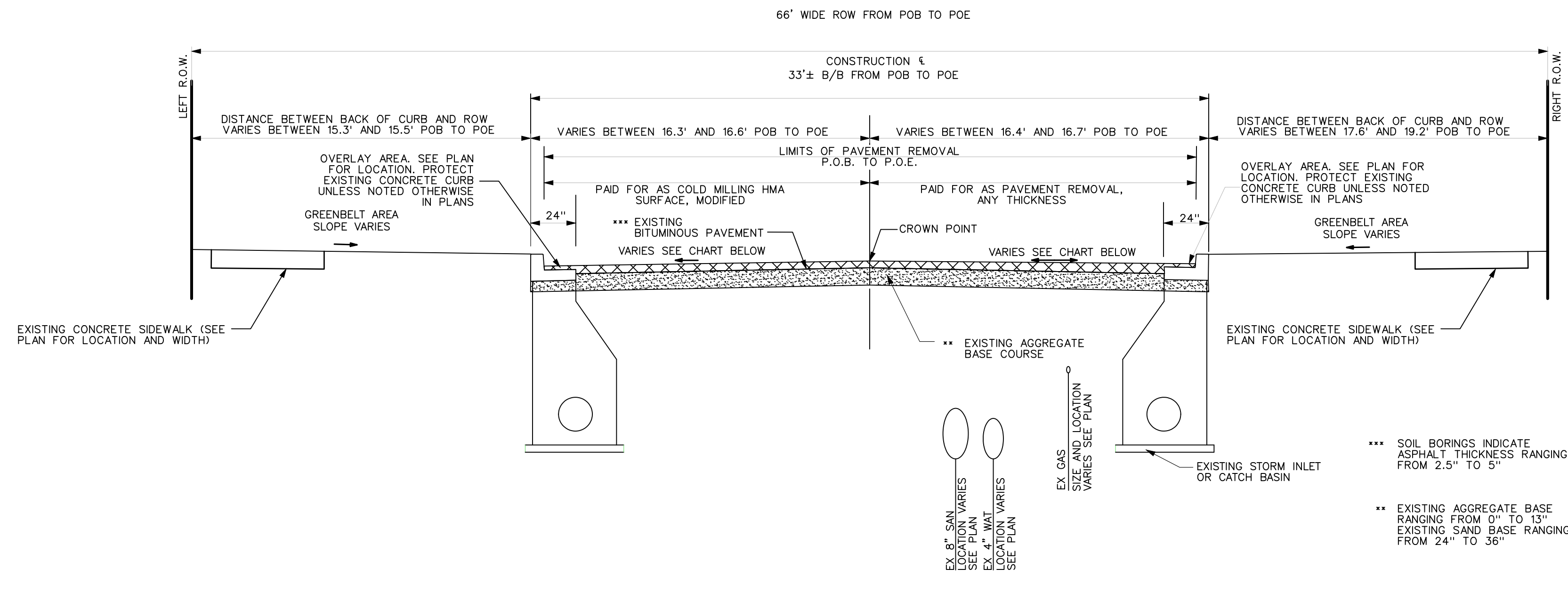
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PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1667
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
**THIRD & MOSLEY WATER MAIN
AND RESURFACING PROJECT**
3RD STREET EXISTING TYPICAL SECTION

SCALE PLAN: NTS
DRAWING No. 2018-032-8

C:\pwork\mflnagon\0867624\10 TYPICAL SECTIONS.dwg Dwg Created: 14-Sep-18 - _a2 standard bw.stb - Plot Date: 15-Dec-21



**EXISTING TYPICAL CROSS SECTION
MOSLEY STREET**

P.O.B. STA 1+25.91 TO P.O.E. STA 11+13.48

NOT TO SCALE

LEFT GRADE	STATION	RIGHT GRADE
-9.01%	1+25	-1.09%
-8.45%	1+50	-2.06%
-8.71%	1+75	-2.59%
-8.79%	2+00	-2.41%
-8.74%	2+25	-2.01%
-8.95%	2+50	0.27%
-9.07%	2+75	-0.18%
-9.66%	3+00	-1.46%
-10.87%	3+25	-1.50%
-6.09%	3+50	0.58%
-7.27%	3+75	-1.80%
-10.50%	4+00	-0.59%
-10.13%	4+25	-0.91%
-9.90%	4+50	-1.11%
-9.72%	4+75	-0.37%
-9.40%	5+00	0.21%
-8.89%	5+25	0.67%
-9.27%	5+50	0.61%
-10.50%	5+75	-0.37%
-10.38%	6+00	1.40%
-9.19%	6+25	2.00%
-9.55%	6+50	2.77%
-8.79%	6+75	1.35%
-6.63%	7+00	-0.44%
-9.49%	7+25	-0.97%
-9.57%	7+50	0.31%
-8.68%	7+75	1.57%
-9.15%	8+00	1.75%
-9.74%	8+25	1.35%
-10.25%	8+50	1.14%
-8.44%	8+75	0.81%
-9.79%	9+00	1.07%
-10.88%	9+25	-0.47%
-7.11%	9+50	-1.95%
-8.60%	9+75	-2.66%
-8.44%	10+00	-1.62%
-8.59%	10+25	-1.12%
-8.07%	10+50	-0.32%
-6.68%	10+75	0.59%

* EXISTING GRADES ARE RELATIVE TO CROWN ELEVATION



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

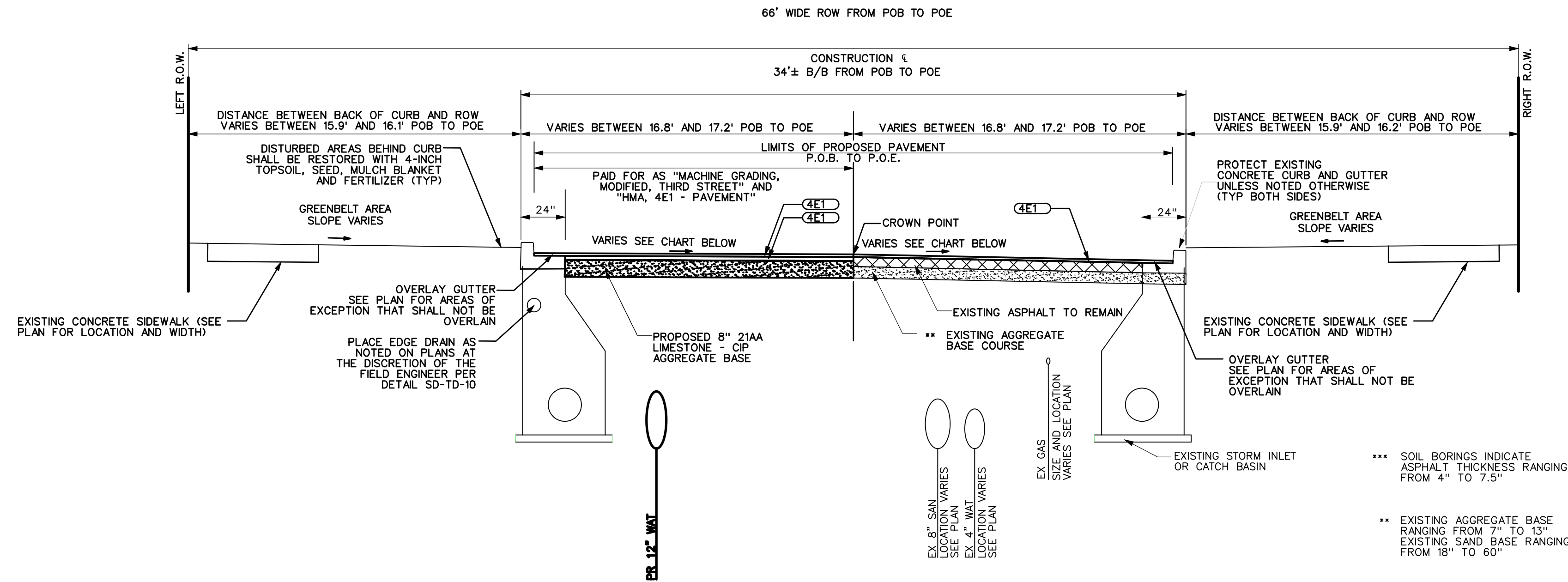
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
**THIRD & MOSLEY WATER MAIN
AND RESURFACING PROJECT**
MOSLEY STREET EXISTING TYPICAL SECTION

SCALE PLAN: NTS
DRAWING No. 2018-032-9

C:\pwork\mflanagan\00667624\PROPOSED TYPICALS.dwg Dwg Created: 15-Nov-18 - _a2 standard bw.stb - Plot Date: 15-Dec-21



**PROPOSED TYPICAL CROSS SECTION
THIRD STREET**

P.O.B. STA 0+66.31 TO P.O.E. STA 4+59.85
NOT TO SCALE

HMA APPLICATION ESTIMATE

STREET NAME	PAY ITEM	HMA MIX	APPLICATION RATE	EST. THICKNESS	PERF GRADE	AWI (MIN)
THIRD STREET	HMA, 4E1	4E1 (TOP)	226 LB/SYD	2.0"	PG 58-28	260
	HMA, 4E1	4E1 (BASE)	226 LB/SYD	2.0"	PG 58-28	260

LEFT GRADE	STATION	RIGHT GRADE
0.50%	0+66	-6.84%
1.50%	0+75	-6.47%
2.50%	1+00	-6.79%
2.50%	1+25	-6.98%
2.50%	1+50	-7.14%
2.50%	1+75	-5.59%
2.00%	2+00	-6.06%
2.00%	2+25	-7.08%
2.00%	2+50	-7.96%
2.00%	2+75	-9.27%
0.50%	3+00	-9.22%
0.50%	3+25	-9.15%
0.50%	3+50	-7.75%
0.50%	3+75	-5.65%
2.00%	4+00	-4.51%
2.00%	4+25	-4.43%
2.00%	4+50	-5.21%
2.50%	4+60	-4.19%

* PROPOSED GRADES ARE RELATIVE TO CROWN ELEVATION

THE FIELD ENGINEER SHALL REVIEW EXISTING ASPHALT DEPTH DURING WATER MAIN INSTALLATION AND DETERMINE FINAL MILL DEPTH IN THE EVENT THAT THE EXISTING ASPHALT DEPTH IS LESS THAN 4-INCHES.



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

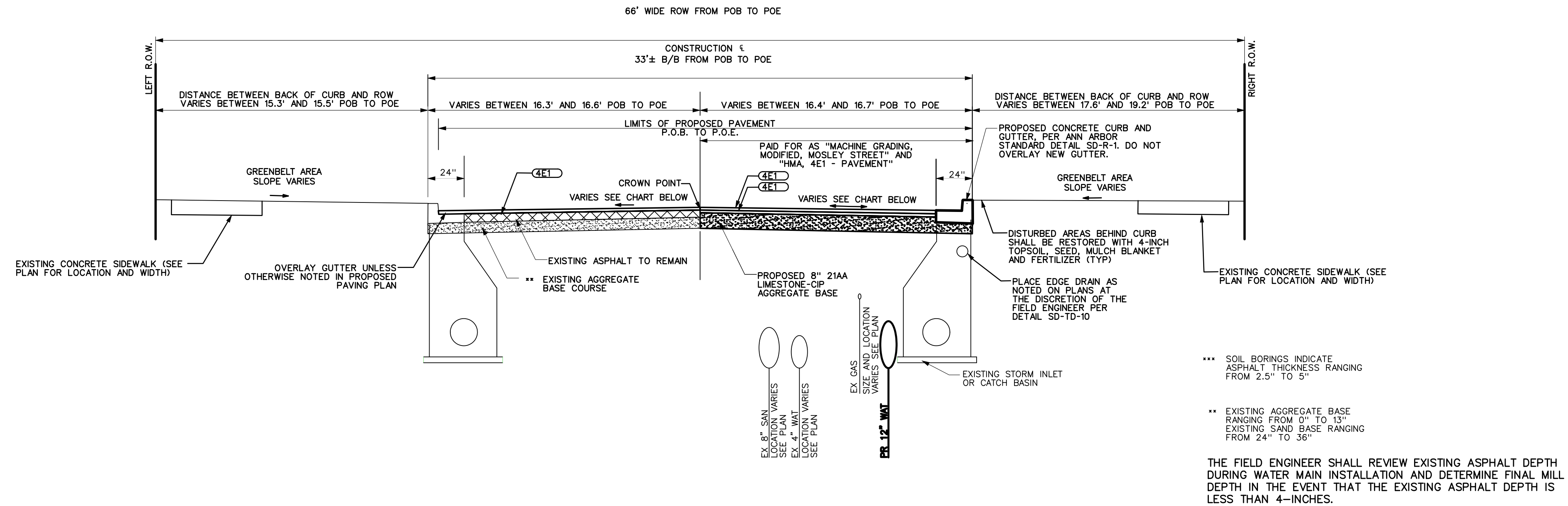
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
3RD STREET PROPOSED TYPICAL SECTIONS

SCALE PLAN: NTS
DRAWING No. 2018-032-10
SHEET No.

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**PROPOSED TYPICAL CROSS SECTION
MOSLEY STREET**
P.O.B. STA 1+21.99 TO P.O.E. STA 10+81.73
NOT TO SCALE

LEFT GRADE	STATION	RIGHT GRADE
-10.48%	1+25	-1.78%
-9.17%	1+50	-2.77%
-9.03%	1+75	-2.92%
-8.90%	2+00	-2.50%
-8.76%	2+25	-2.04%
-9.07%	2+50	0.10%
-9.53%	2+75	-0.30%
-10.19%	3+00	-1.96%
-11.14%	3+25	-1.77%
	3+50	0.46%
	3+75	-1.97%
-10.90%	4+00	-0.97%
-10.19%	4+25	-0.98%
-10.98%	4+50	-1.05%
-10.64%	4+75	-0.14%
-9.18%	5+00	0.43%
-8.79%	5+25	0.72%
-9.19%	5+50	0.67%
-11.46%	5+75	-0.17%
-10.23%	6+00	
-8.89%	6+25	
-9.08%	6+50	3.31%
	6+75	1.57%
	7+00	-0.17%
	7+25	-0.46%
-9.16%	7+50	0.74%
-8.88%	7+75	1.36%
-7.94%	8+00	1.75%
-9.98%	8+25	1.52%
-10.09%	8+50	1.31%
-8.38%	8+75	0.88%
-9.69%	9+00	1.16%
-10.92%	9+25	-0.57%
	9+50	-1.93%
	9+75	-2.93%
-8.74%	10+00	-1.94%
-8.75%	10+25	-1.20%
-9.34%	10+50	-0.46%
-6.80%	10+75	0.40%

* PROPOSED GRADES ARE RELATIVE TO CROWN ELEVATION

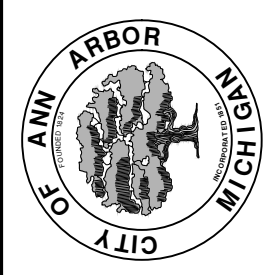
HMA APPLICATION ESTIMATE

STREET NAME	PAY ITEM	HMA MIX	APPLICATION RATE	EST. THICKNESS	PERF GRADE	AWI (MIN)
MOSLEY STREET	HMA, 4E1 HMA, 4E1	4E1 (TOP) 4E1 (BASE)	226 LB/SYD 226 LB/SYD	2.0" 2.0"	PG 58-28 PG 58-28	260 260



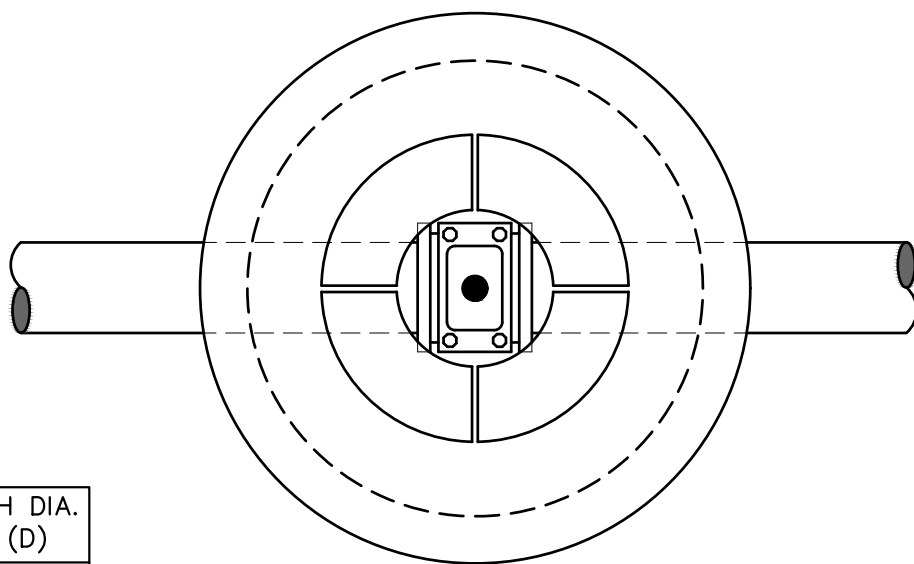
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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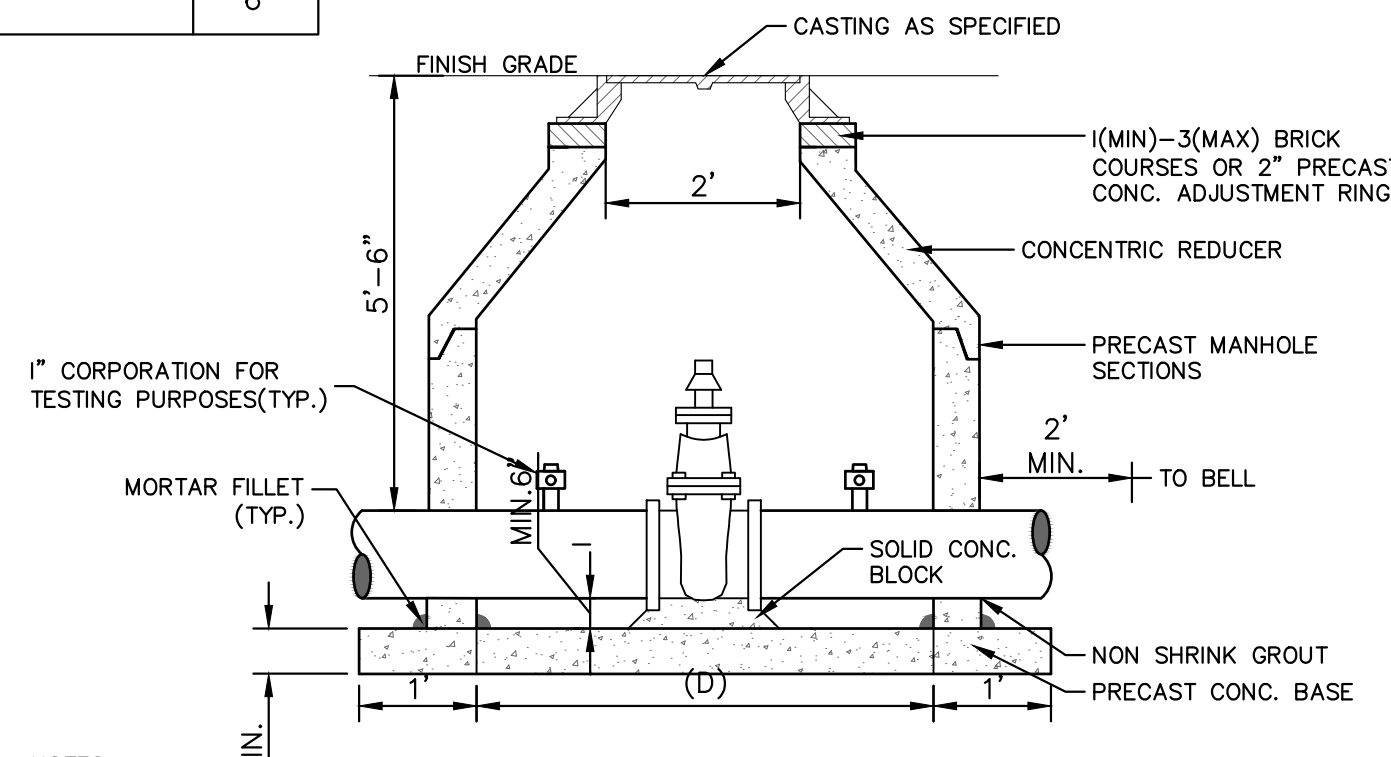


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
MOSLEY STREET PROPOSED TYPICAL SECTIONS

SCALE PLAN: NTS
DRAWING No. 2018-032-11



PIPE SIZE	MH DIA. (D)
12" OR LESS	5'
	6'



- NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE
 2. ALL JOINTS SHALL BE MADE WATER TIGHT WITH RUBBER GASKET JOINTS
 3. NO STEPS ARE PERMITTED
 4. MANHOLE SECTIONS SHALL MEET ASTM C-478

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

PAID FOR AS GATE VALVE-IN-WELL, 12 INCH

MINIMUM STANDARDS

THE MDOT GRADE PI OR P-NC CONCRETE AT THE FITTING FACE SHALL EXTEND TO WITHIN 2 INCHES OF THE BELL AND SHALL EXTEND FROM THE FITTING FACE A MINIMUM OF 2 FEET TO THE UNDISTURBED SOLID GROUND.

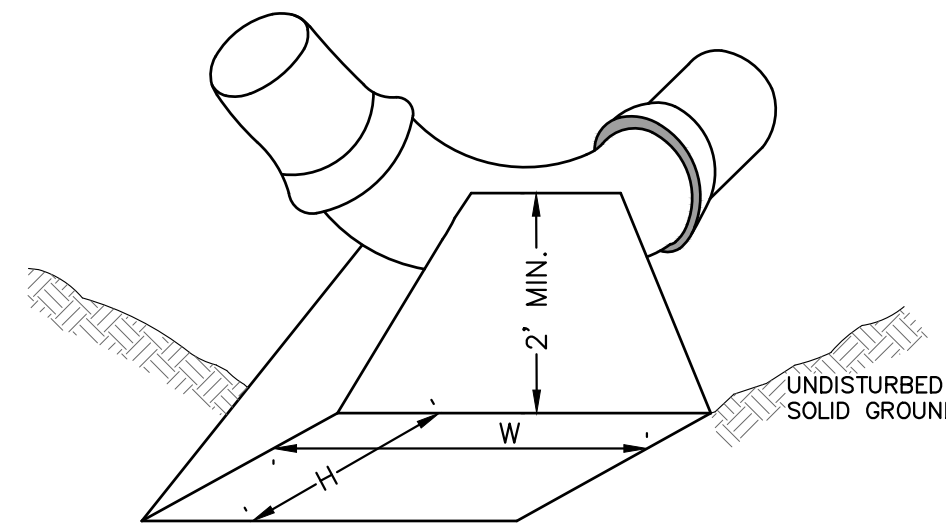
THE DIMENSIONS OF THE THRUST BLOCK AT THE FACE OF THE UNDISTURBED SOLID GROUND SHALL BE AS SHOWN IN THE TABLE BELOW.

IF THERE ISN'T SUFFICIENT SPACE FOR THE INSTALLATION OF THE THRUST BLOCK WITHOUT INTERFERENCE WITH OTHER SERVICES, ANOTHER ARRANGEMENT SATISFACTORY TO THE ENGINEER SHALL BE USED.

FITTINGS I.D.	PLUG TEE CROSS	BENDS								HYDRANT	
		90°		45°		22½°		11¼°		W	H
4	1.0 1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.5
6	2.0 1.5	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	1.5
8	2.5 2.0	3.5	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.5	2.0
12	3.5 3.0	5.5	3.0	3.5	2.5	2.0	2.0	2.0	1.0		
16	6.0 3.5	6.0	4.0	5.0	3.0	3.5	2.5	2.0	2.0		

FOR FITTING SIZES LARGER THAN 16", THRUST BLOCK DIMENSIONS SHALL BE AS SPECIFIED BY ENGINEER.

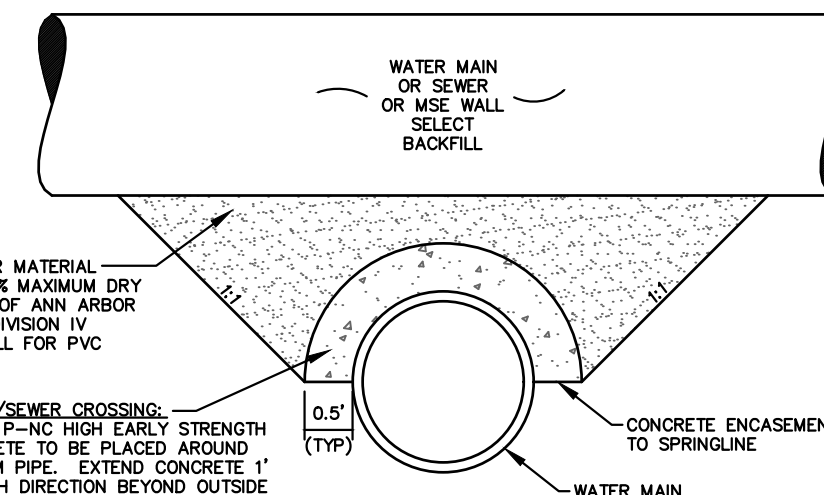
W = WIDTH IN FEET
H = HEIGHT IN FEET



- NOTE:
- THESE ARE MINIMUM STANDARDS. WHERE SOIL CONDITIONS DICTATE, ADJUSTMENTS IN SIZE SHALL BE MADE AS DIRECTED BY THE PUBLIC SERVICES AREA ADMINISTRATOR.

THRUST BLOCK SD-W-2

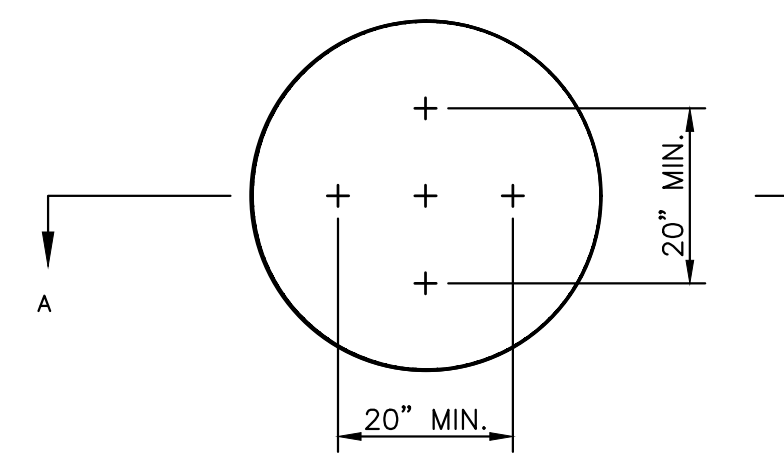
INCLUDED IN PIPE PAY ITEM



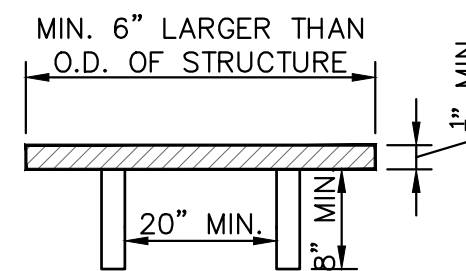
APPLIES TO: WATER AND/OR SEWER CROSSINGS WITH LESS THAN 1.5' OF VERTICAL CLEARANCE

CONCRETE UTILITY SADDLE

INCLUDED IN PIPE PAY ITEM

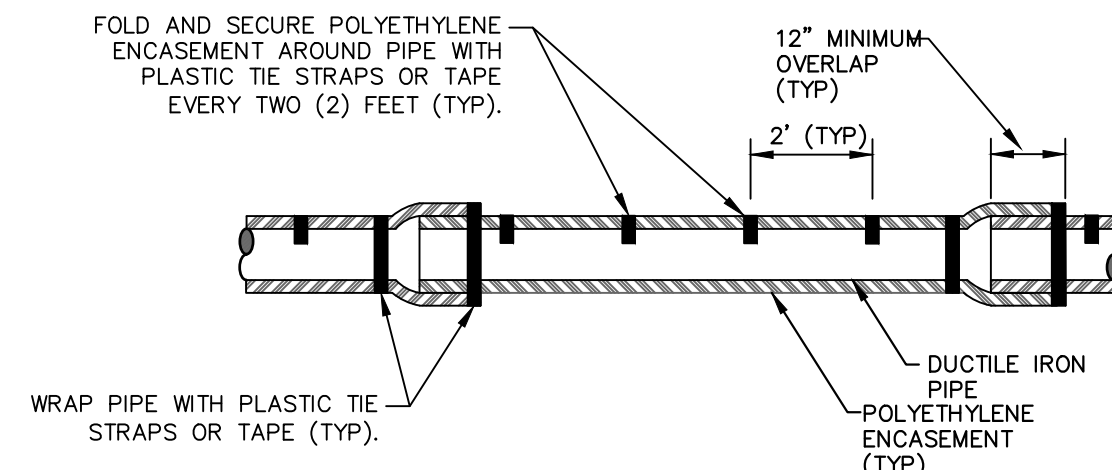


NOTE: PLATE MAY BE CIRCULAR, SQUARE OR RECTANGULAR SECTION A - A



1/4" MIN. THICKNESS AND SUFFICIENT TO CARRY THE CONSTRUCTION LOAD.

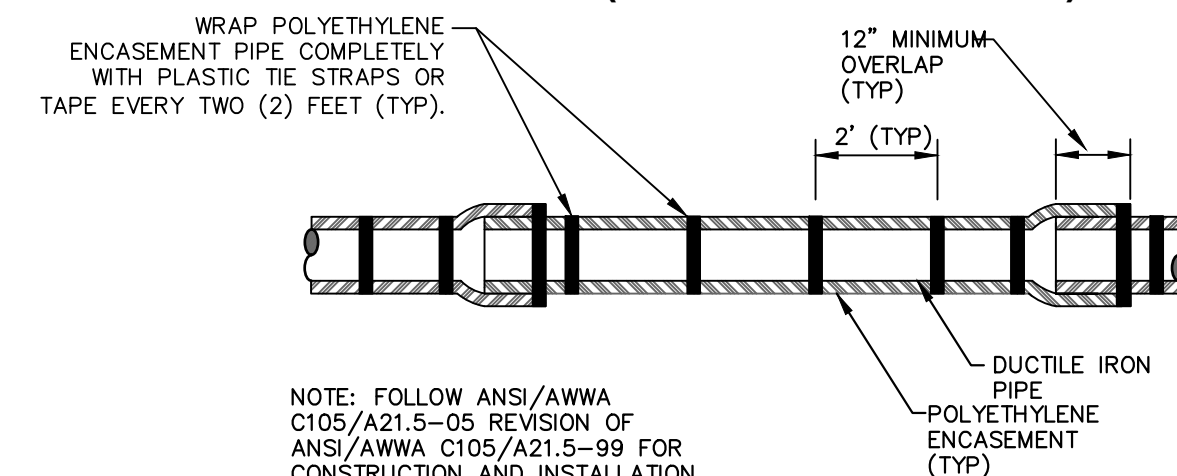
STRUCTURE PLATE SD-GU-8



NOTE: FOLLOW ANSI/AWWA C105/A21.5-05 REVISION OF ANSI/AWWA C105/A21.5-99 FOR CONSTRUCTION AND INSTALLATION METHODS. USE MODIFIED METHOD A

APPLIES TO: POLYETHYLENE WRAPPED D.I. WATERMAIN SEE PLANS FOR LOCATIONS

POLYETHYLENE ENCASEMENT (DRY INSTALLATION)

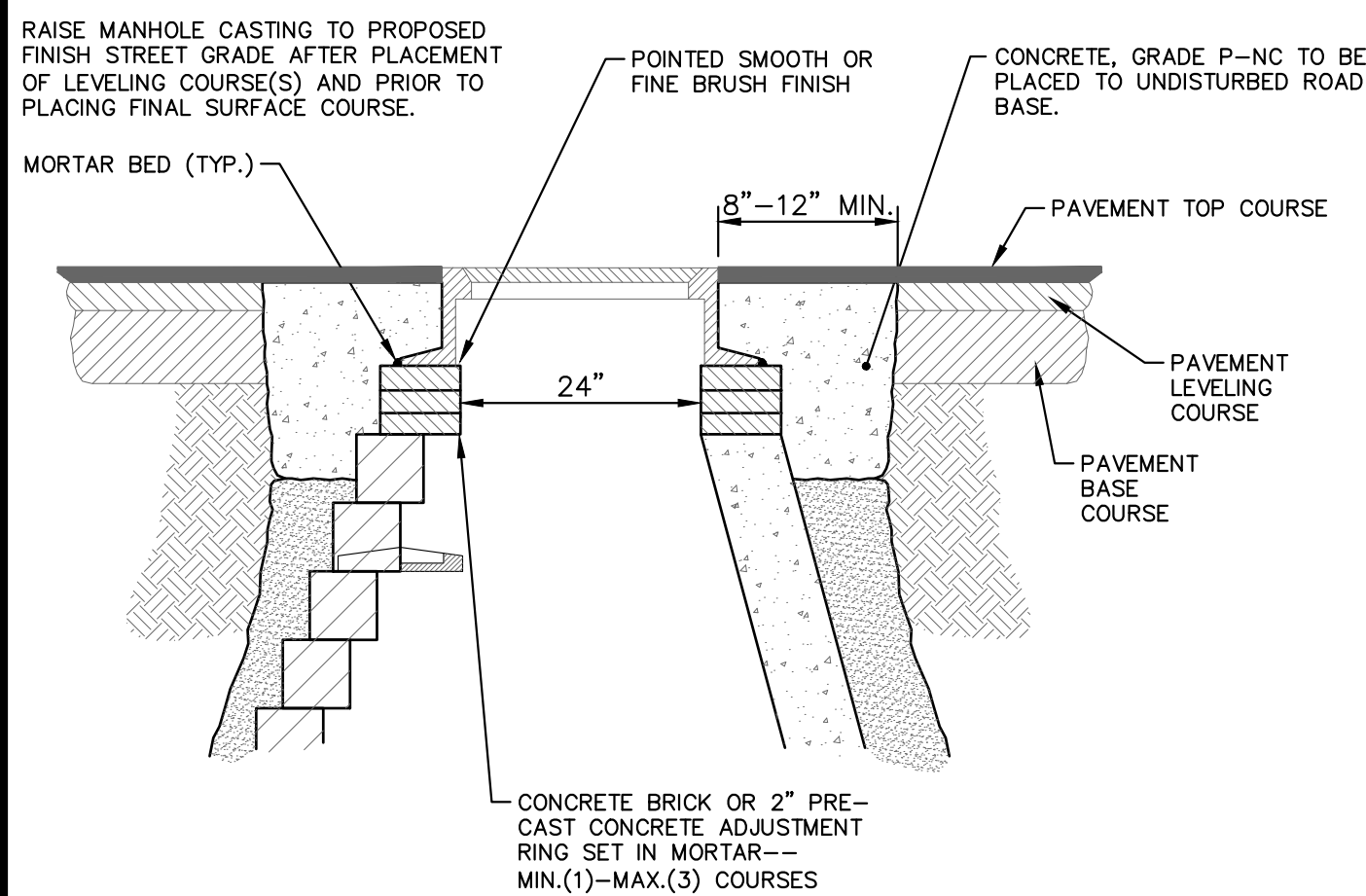


NOTE: FOLLOW ANSI/AWWA C105/A21.5-05 REVISION OF ANSI/AWWA C105/A21.5-99 FOR CONSTRUCTION AND INSTALLATION METHODS. USE MODIFIED METHOD A

APPLIES TO: POLYETHYLENE WRAPPED D.I. WATERMAIN SEE PLANS FOR LOCATIONS

POLYETHYLENE ENCASEMENT (WET INSTALLATION)

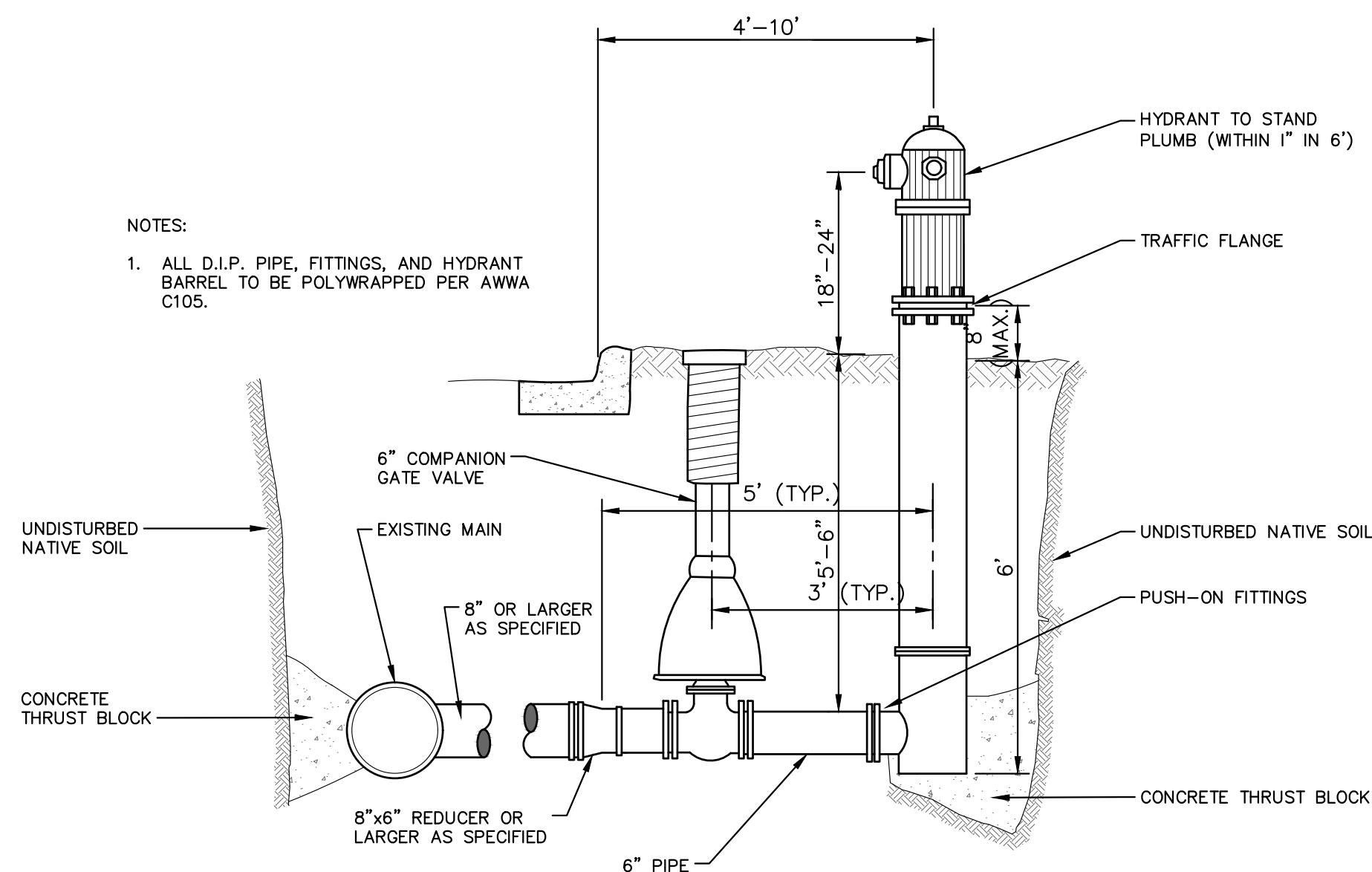
INCLUDED IN PIPE PAY ITEM



NOTE: IF MANHOLE WILL BE PLACED IN GRAVEL ROAD, CASTING TO BE SET 6" TO 8" BELOW ROADWAY GRADE. ALL CONSTRUCTION METHODS SHALL REMAIN AS SHOWN ABOVE.

MANHOLE CASTING ADJUSTMENT SD-GU-6

PAID FOR AS ADJUST STRUCTURE COVER

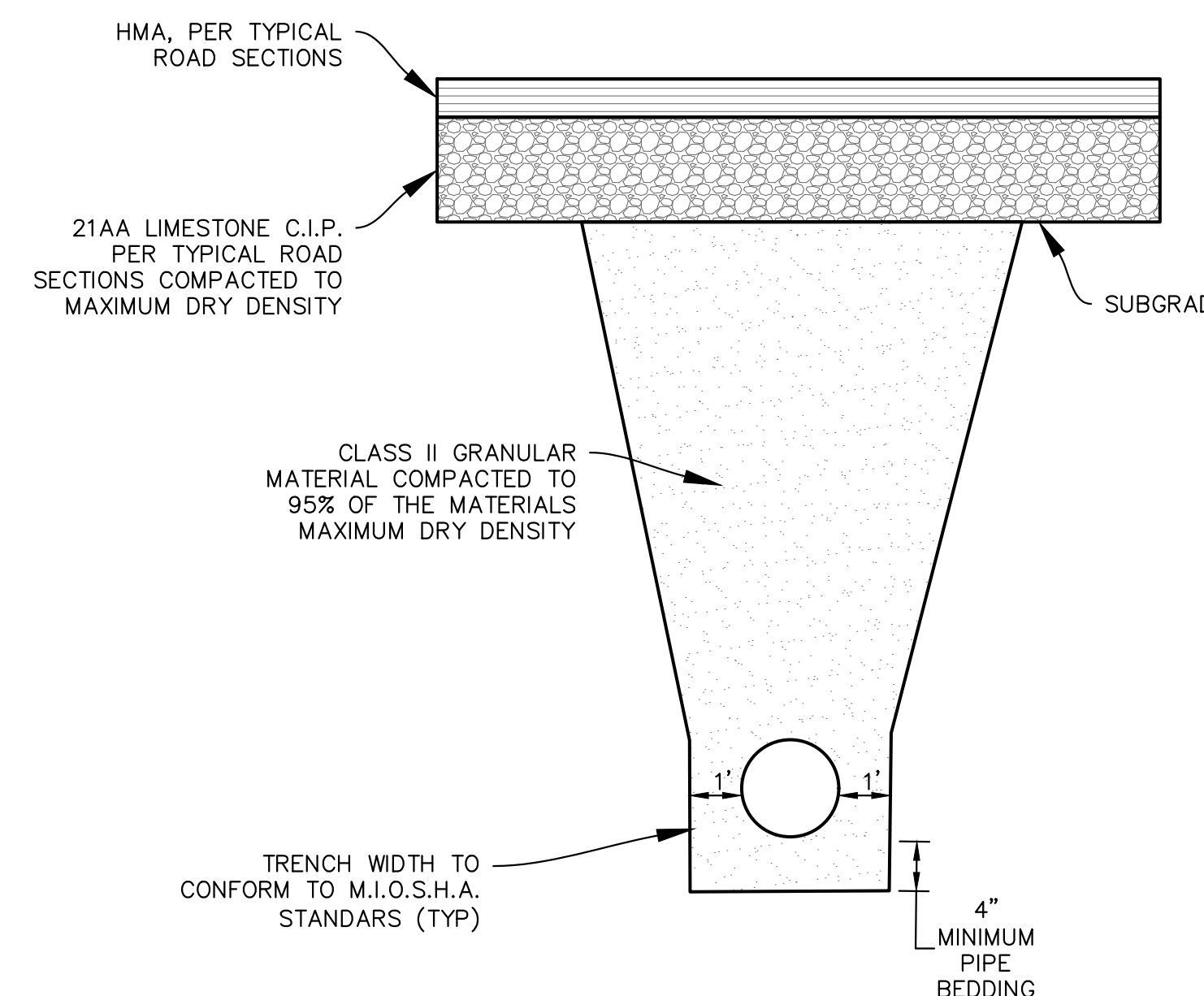


NOTES:

1. ALL D.I.P. PIPE, FITTINGS, AND HYDRANT BARREL TO BE POLYWRAPPED PER AWWA C105.

FIRE HYDRANT ASSEMBLY

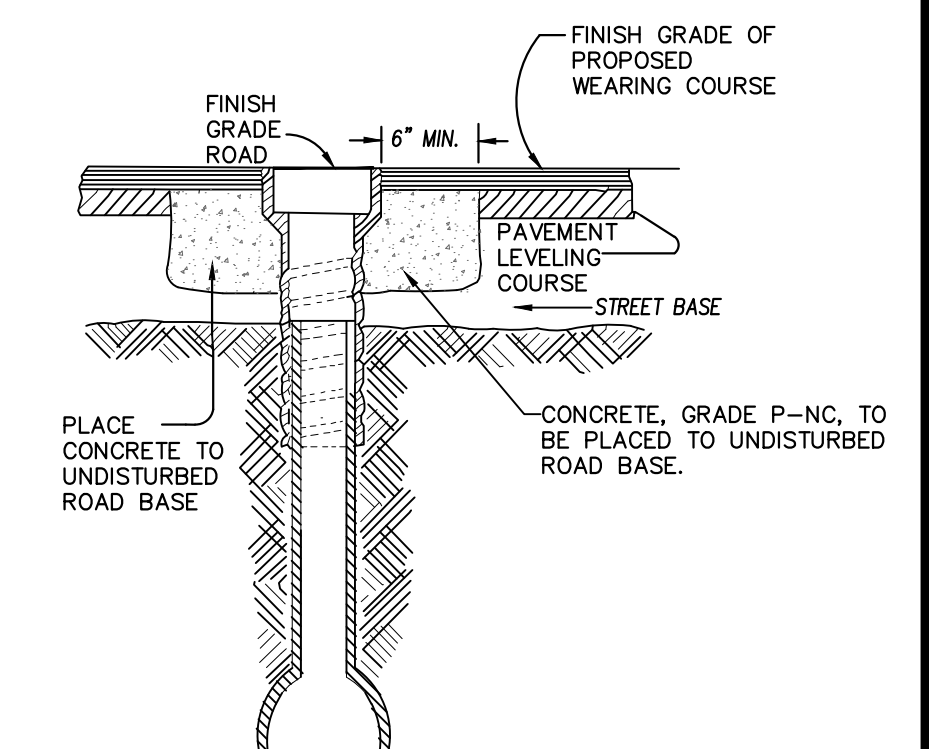
PAID FOR AS FIRE HYDRANT ASSY, W/EXTENSIONS, COMPLETE



TRENCH WIDTH TO CONFORM TO M.I.O.S.H.A. STANDARDS (TYP)

TRENCH DETAIL I

APPLIES TO WATERMAIN AND STORM SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED - SEE PLANS FOR LOCATIONS



NOTE: RAISE CASTING TO PROPOSED FINISH STREET GRADE AFTER PLACEMENT OF LEVELING COURSE(S) AND PRIOR TO PLACING FINAL SURFACE COURSE

WATER VALVE BOX ADJUSTMENT

PAID FOR AS ADJUST MONUMENT BOX OR GATE VALVE BOX

C:\pwork\mflanagan\0867624\15 DETAILS.dwg Dwg Created: 1-Aug-18 - _o2_standard bw.stb - Plot Date: 15-Dec-21



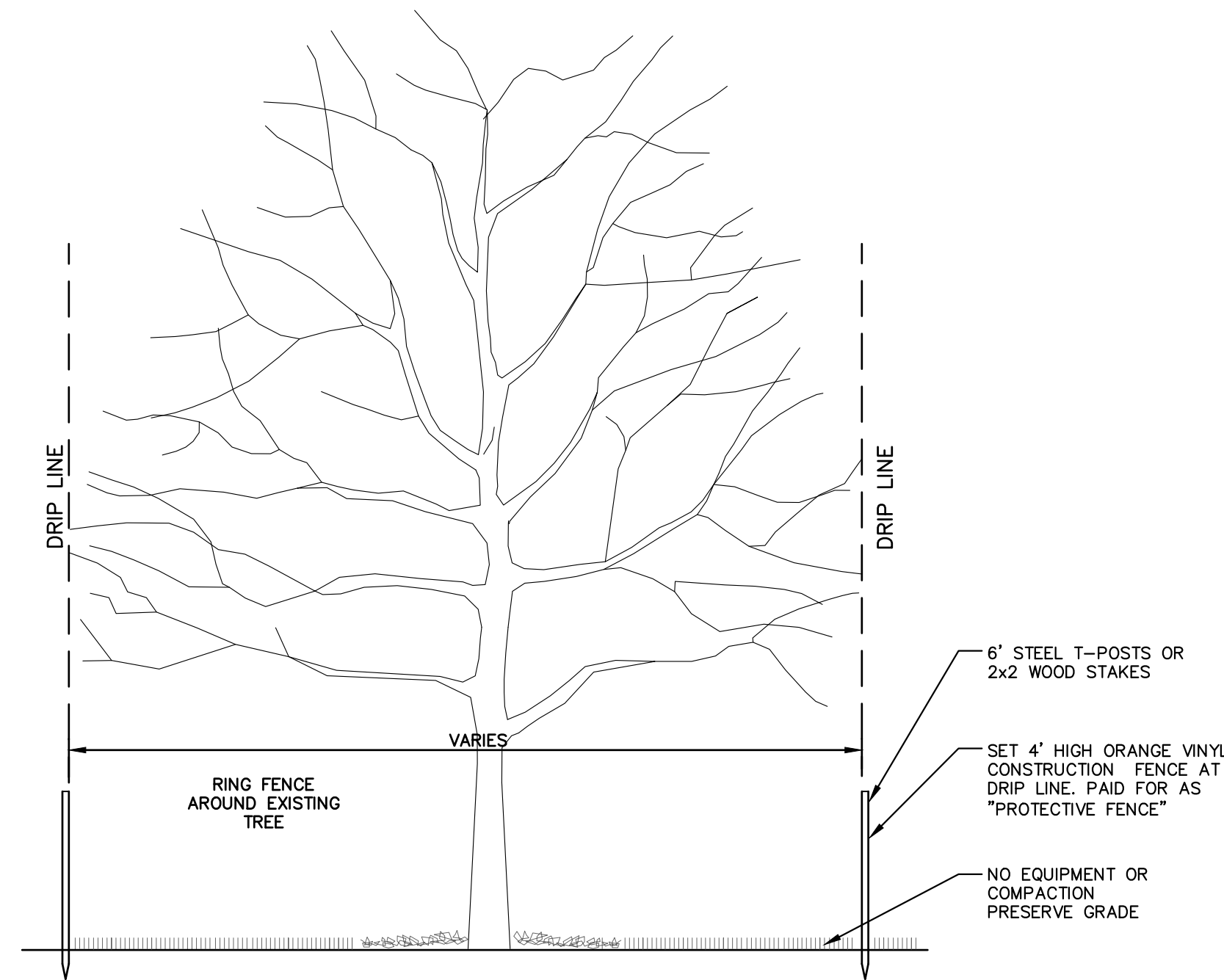
NO.	DATE	DESCRIPTION	REV.

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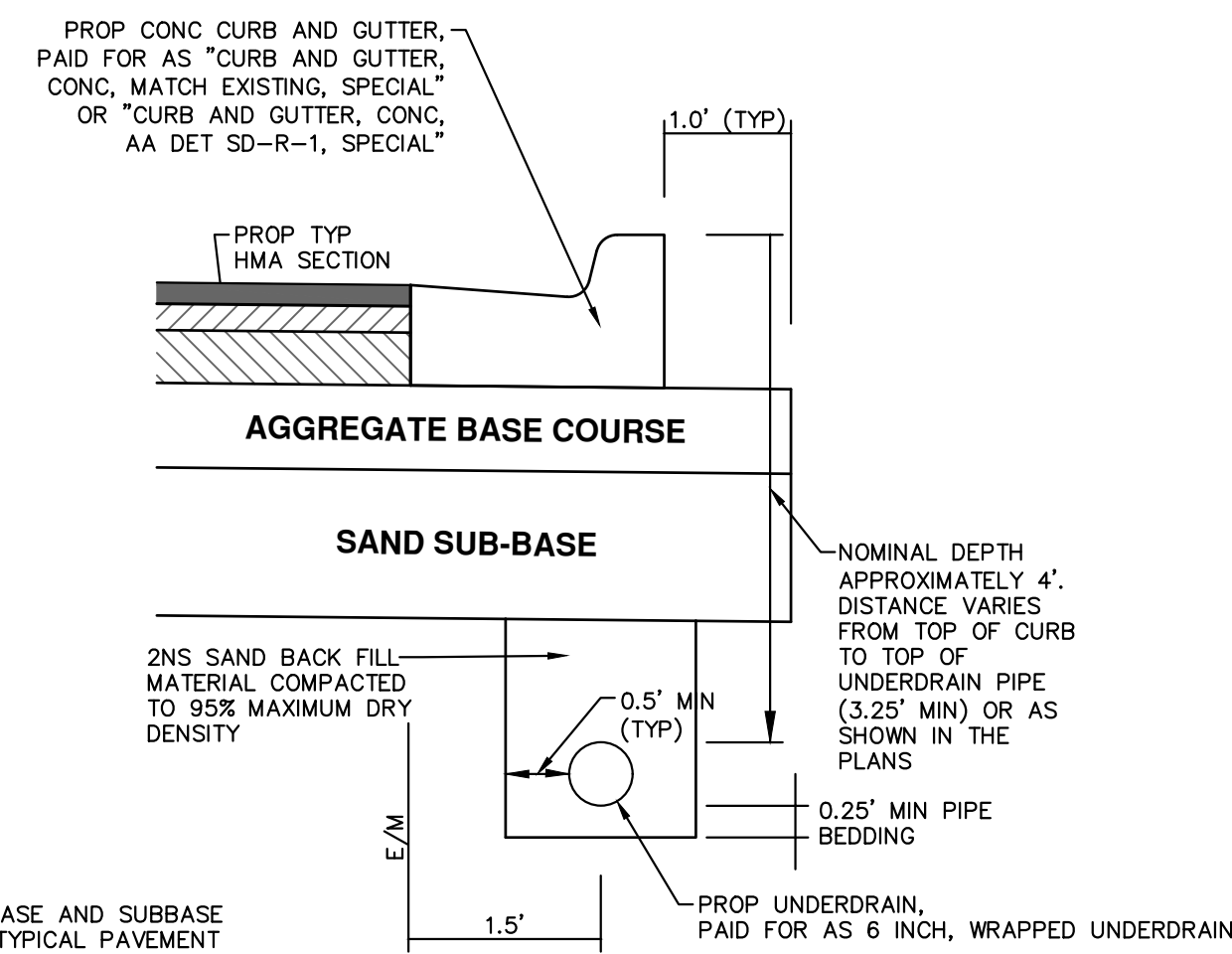


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
WATER MAIN DETAILS

SCALE PLAN: NTS
DRAWING NO: 2018-032-12
SHEET NO.

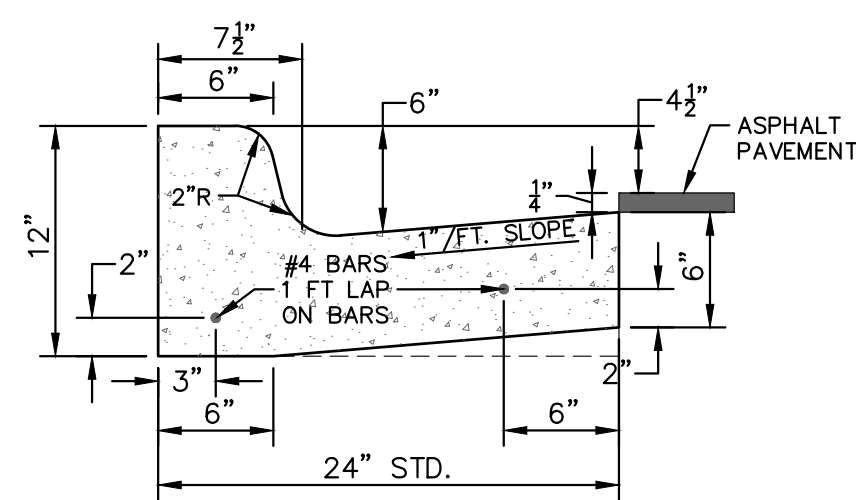


TREE PROTECTION DETAIL
PAID FOR AS PROTECTION FENCING



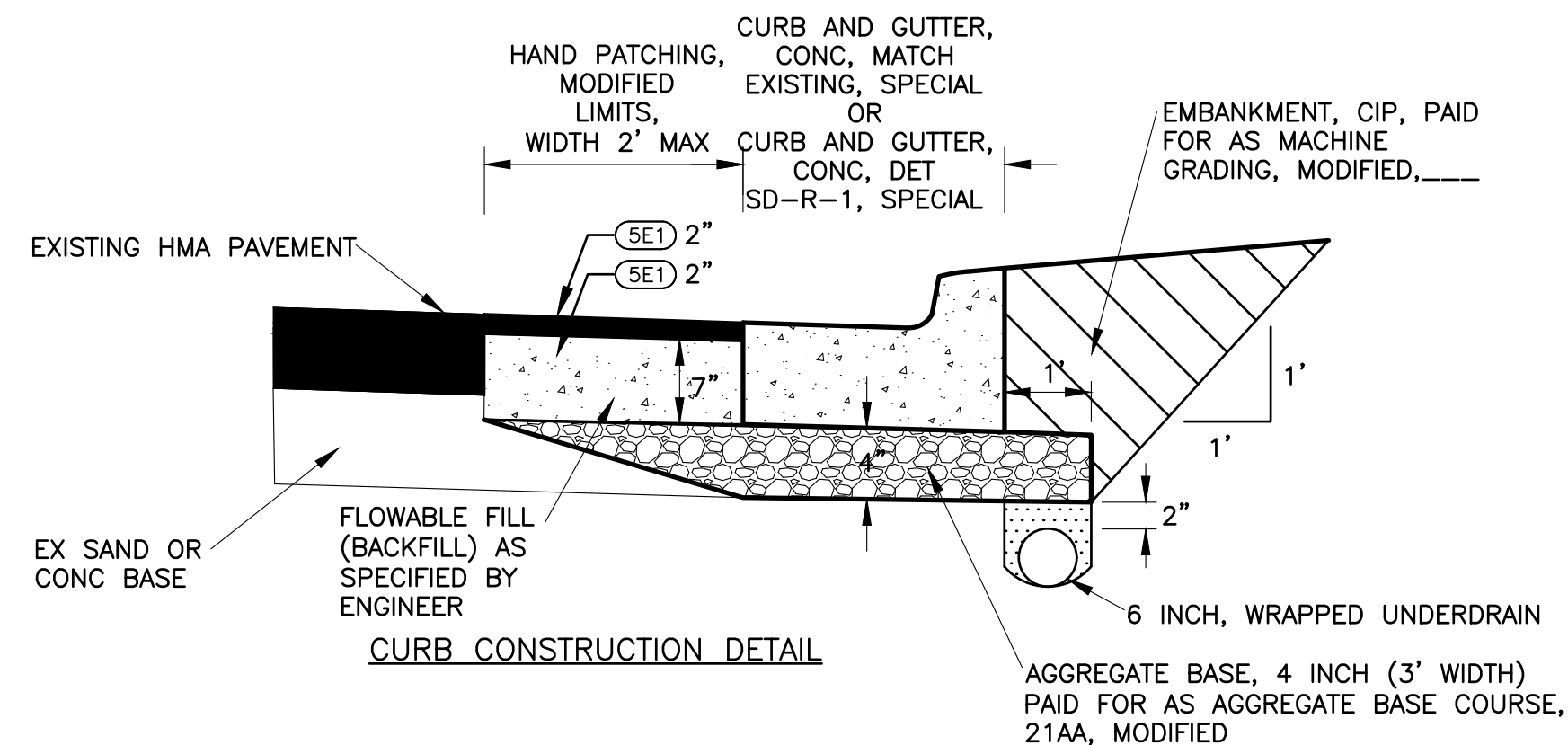
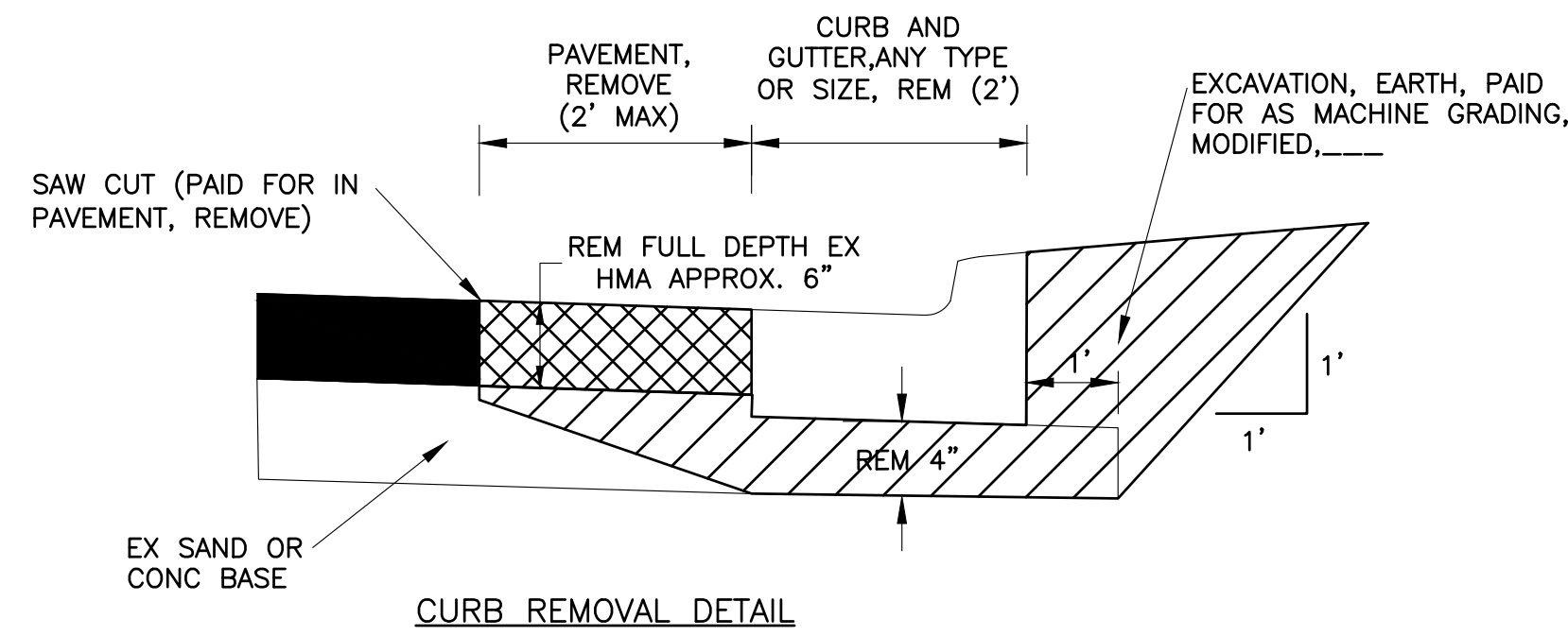
NOTES:
FOR PAVEMENT BASE AND SUBBASE THICKNESS, SEE TYPICAL PAVEMENT CROSS-SECTION(S)
TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY
ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS
BASED ON CITY OF ANN ARBOR STANDARD SD-TD-10 APPLIES TO: HOOVER AVE, STA 0+00 TO 4+30 GREEN AVE, STA 10+70 TO 15+20, IN ALL AREAS OF CURB REPLACEMENT AND AS DIRECTED BY THE CITY ENGINEER

TRENCH DETAIL FOR UNDER DRAIN (UNDER HMA PAVEMENT)
PAID FOR AS 6 INCH, WRAPPED UNDERDRAIN



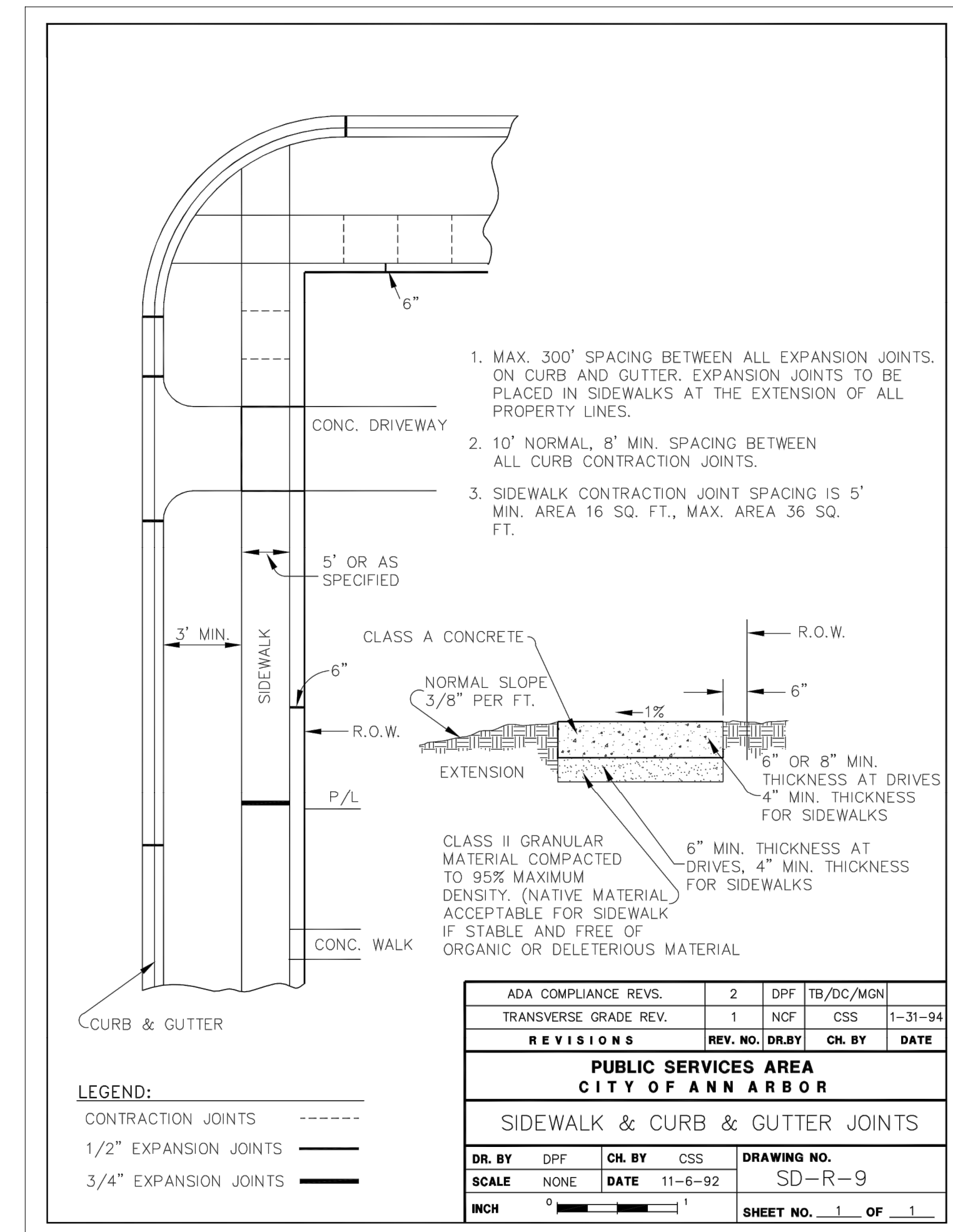
CURB AND GUTTER, CONC, DET SD-R-1, SPECIAL
NO SCALE

PAID FOR AS CURB AND GUTTER, CONC, AA DET SD-R-1, SPECIAL
NOTE: CURB AND GUTTER, CONC, MATCH EXISTING, SPECIAL SHALL HAVE SIMILAR COMPONENTS AS SHOWN IN DETAIL SD-R-1 AND CONSTRUCTED TO MATCH EXISTING CURB AND GUTTER, AND AS DIRECTED BY THE ENGINEER.



DETAIL FOR CURB REPLACEMENT AREAS

NOTE: 6 INCH, WRAPPED UNDERDRAIN SHALL BE PLACED UNDER ALL NEW CURB AND GUTTER AND AS DIRECTED BY THE ENGINEER.



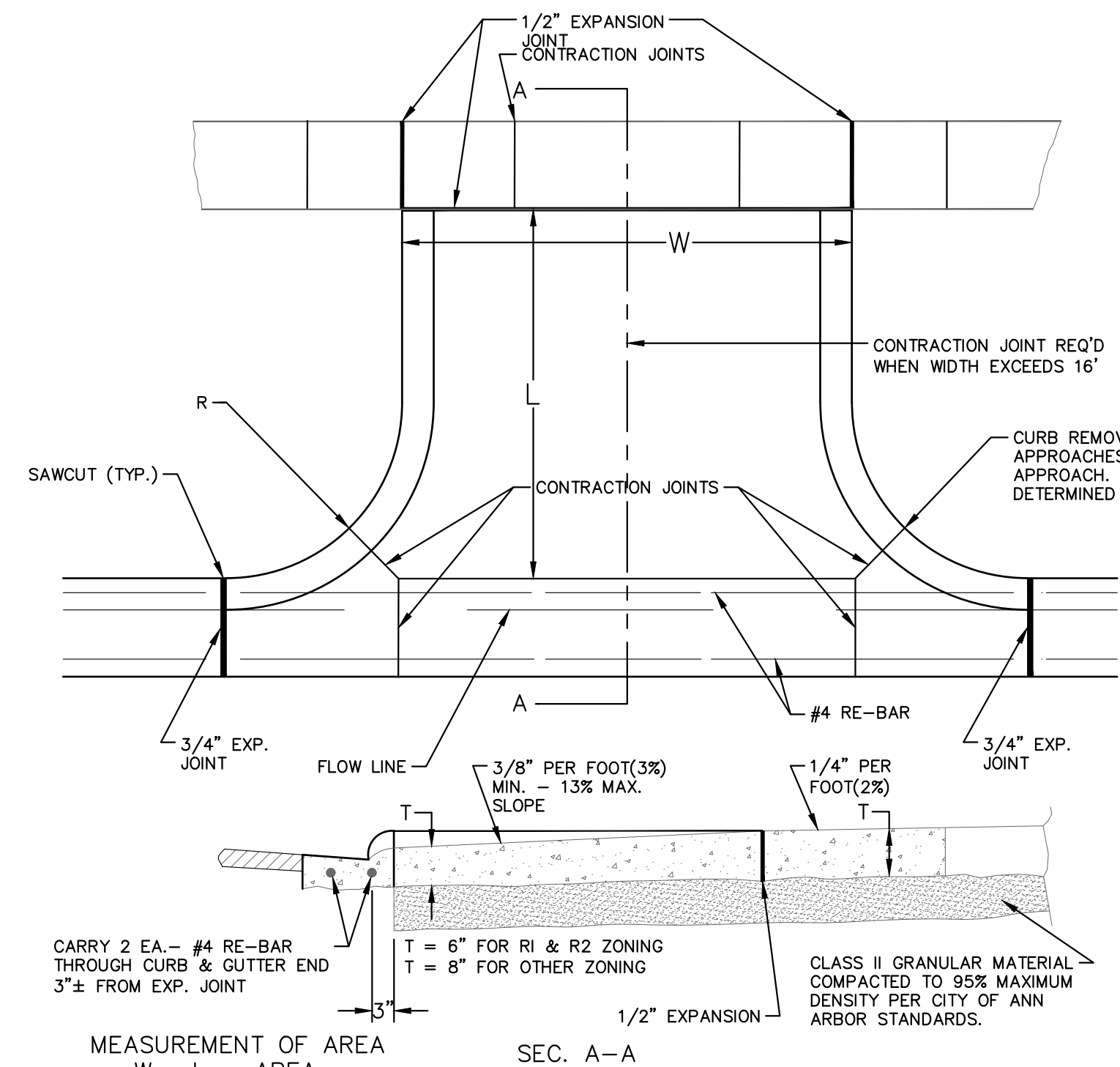
LEGEND:
CONTRACTION JOINTS - - - - -
1/2\"/>

- MAX. 300' SPACING BETWEEN ALL EXPANSION JOINTS ON CURB AND GUTTER. EXPANSION JOINTS TO BE PLACED IN SIDEWALKS AT THE EXTENSION OF ALL PROPERTY LINES.
- 10' NORMAL, 8' MIN. SPACING BETWEEN ALL CURB CONTRACTION JOINTS.
- SIDEWALK CONTRACTION JOINT SPACING IS 5' MIN. AREA 16 SQ. FT., MAX. AREA 36 SQ. FT.

ADA COMPLIANCE REVS.	2	DPF	TB/DC/MGN
TRANSVERSE GRADE REV.	1	NCF	CSS
REV. NO.	DR BY	CH. BY	DATE

PUBLIC SERVICES AREA CITY OF ANN ARBOR
SIDEWALK & CURB & GUTTER JOINTS

DR. BY	DPF	CH. BY	CSS	DRAWING NO.
SCALE	NONE	DATE	11-6-92	SD-R-9
INCH	0		1	SHEET NO. 1 OF 1



MEASUREMENT OF AREA
 $W \times L = \text{AREA}$
NOTE:

- DRIVE APPROACH TO BE CLASS 'A' CONCRETE.
- R(RADIUS) AND W(DRIVE WIDTH) AS REQUIRED FOR ZONING BY CITY CODE
- IF GUTTER IS OVERLAPPED, GUTTER OF THE APPROACH SHALL BE AT SAME ELEVATION AS EXISTING GUTTER AND ASPHALT WEDGE SHALL BE PLACED IN THE APPROACH.

TYPE 'M' DRIVE APPROACH SD-R-6
PAID FOR AS DRIVEWAY OPENING, CONC, DETAIL M, P-NC

C:\pwwork\mflanogan\00667624\15 DETAILS.dwg Dwg Created: 1-Aug-18 - _c02_standard_bw.stb - Plot Date: 15-Dec-21

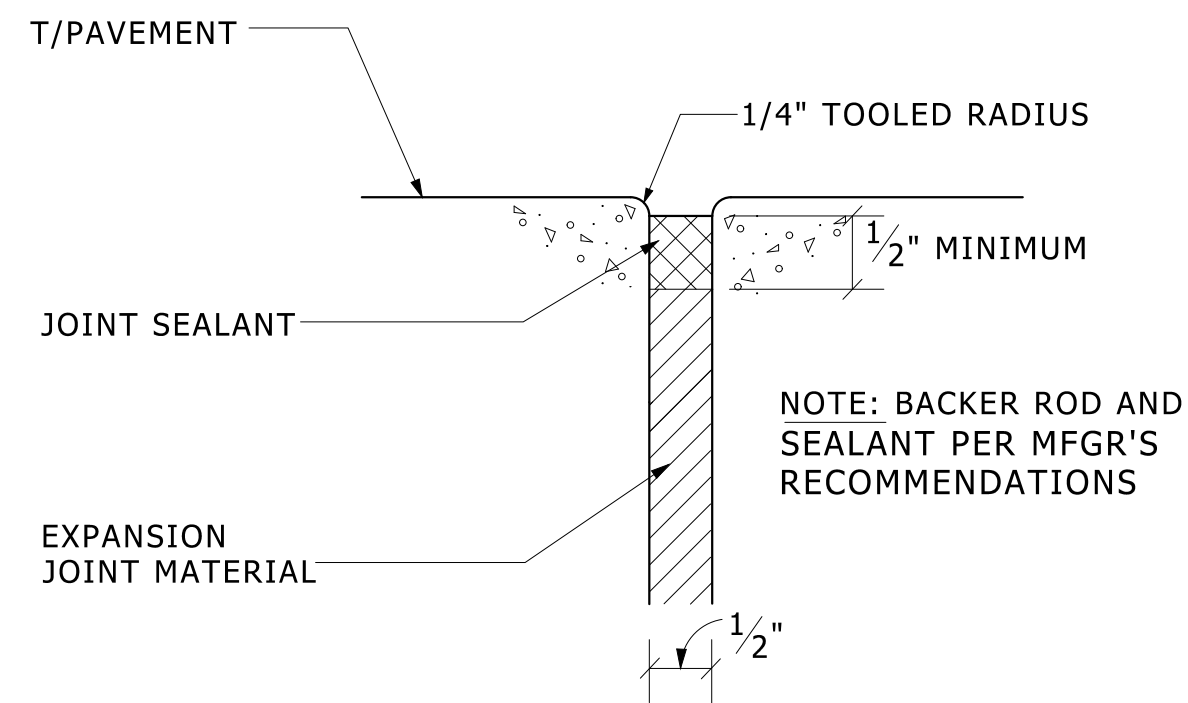


CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR MI 48107-8647
www.a3gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
MISCELLANEOUS DETAILS

SCALE PLAN: NTS
DRAWING NO.: 2018-032-13
SHEET NO.

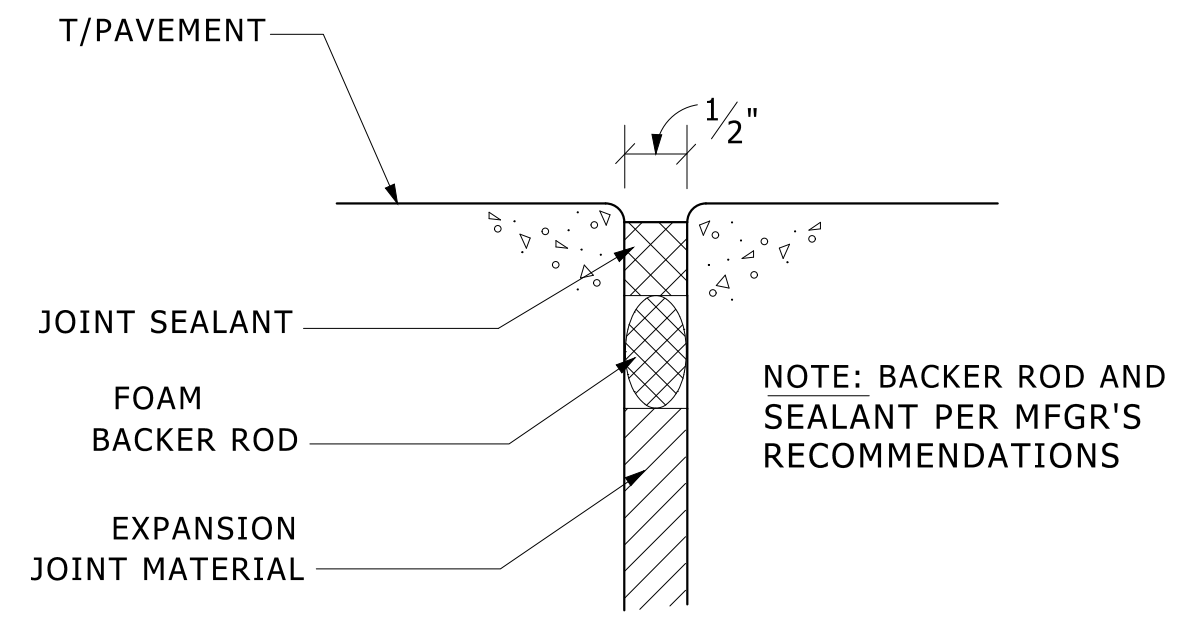


PAVEMENT EXPANSION JOINT (E.J.)

NO SCALE

1. VERTICAL SURFACES:
PROVIDE MANUFACTURER'S STANDARD, NON-MODIFIED, TWO-OR-MORE-PART, POLY-SULFIDE-BASED, ELASTOMERIC SEALANT; COMPLYING WITH EITHER ASTM C 920 TYPE M CLASS 25, OR FS TT-S-00227E CLASS A; NON-SAG GRADE/TYPE.
2. HORIZONTAL SURFACES:
PROVIDE MANUFACTURER'S STANDARD, NON-MODIFIED, TWO-OR-MORE-PART, POLYURETHANE-BASED, ELASTOMERIC SEALANT; COMPLYING WITH EITHER ASTM C 920 TYPE M CLASS 25, OR FS TT-S-00227E CLASS A; SELF-LEVELING GRADE/TYPE.
3. SET UP TIME FOR SEALANT ON WALKING SURFACES SHALL BE NO LONGER THAN 8 HOURS.
4. PROVIDE PRODUCT OF ONE OF THE FOLLOWING MANUFACTURERS:
a. CONTECH/SONNEBORN
b. MAMECO INTERNATIONAL
c. W.R. MEADOWS, INC.
d. PECORA CORP.
e. PRODUCTS RESEARCH & CHEMICAL CORP.
f. SIKA CHEMICAL CORP.
g. TREMCO, INC.
h. TOCH/CARBOLINE
5. DO NOT ALLOW SEALANTS TO OVERFLOW OR SPILL ONTO ADJOINING SURFACES. REMOVE EXCESS AND SPILLAGE OF SEALANTS PROMPTLY.

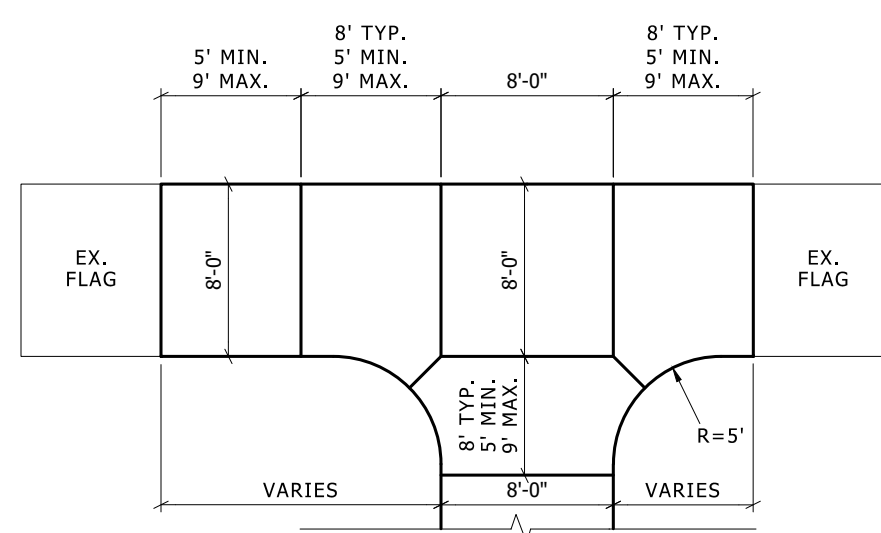
SEALED ZIP STRIPS ARE ACCEPTABLE.



EXPANSION JOINT REPLACEMENT

NO SCALE

1. VERTICAL SURFACES:
PROVIDE MANUFACTURER'S STANDARD, NON-MODIFIED, TWO-OR-MORE-PART, POLY-SULFIDE-BASED, ELASTOMERIC SEALANT; COMPLYING WITH EITHER ASTM C 920 TYPE M CLASS 25, OR FS TT-S-00227E CLASS A; NON-SAG GRADE/TYPE.
2. HORIZONTAL SURFACES:
PROVIDE MANUFACTURER'S STANDARD, NON-MODIFIED, TWO-OR-MORE-PART, POLYURETHANE-BASED, ELASTOMERIC SEALANT; COMPLYING WITH EITHER ASTM C 920 TYPE M CLASS 25, OR FS TT-S-00227E CLASS A; SELF-LEVELING GRADE/TYPE.
3. SET UP TIME FOR SEALANT ON WALKING SURFACES SHALL BE NO LONGER THAN 8 HOURS.
4. PROVIDE PRODUCT OF ONE OF THE FOLLOWING MANUFACTURERS:
a. CONTECH/SONNEBORN
b. MAMECO INTERNATIONAL
c. W.R. MEADOWS, INC.
d. PECORA CORP.
e. PRODUCTS RESEARCH & CHEMICAL CORP.
f. SIKA CHEMICAL CORP.
g. TREMCO, INC.
h. TOCH/CARBOLINE
5. DO NOT ALLOW SEALANTS TO OVERFLOW OR SPILL ONTO ADJOINING SURFACES. REMOVE EXCESS AND SPILLAGE OF SEALANTS PROMPTLY.



SIDEWALK CONTROL JOINT LAYOUT

NO SCALE

SD-SW-CTRL_JNT

TYPE OF CASTING	MDOT DESIGNATION	EJ CASTING NO.	NEENAH CASTING NO.
MANHOLE AND GATE WELL FRAME AND COVER	Q	1040Z W/ TYPE A COVER*	R-1642 W/ TYPE C COVER*
BARRIER CURB INLET FRAME AND COVER	K	7045Z W/ TYPE M1 GRATE	R-3031-B W/ TYPE S GRATE
BARRIER CURB DOUBLE INLET FRAME AND COVER	K	7035Z W/ TYPE M2 GRATE	N/A
GUTTER INLET FRAME AND COVER	R	5080Z W/ TYPE 5000M2 GRATE	R-3448C, W/ TYPE S GRATE
GUTTER DOUBLE INLET FRAME AND COVER	R	7034Z W/ TYPE M GRATE	N/A
MOUNTABLE CURB INLET ASSEMBLY		7065	N/A
YARD DRAIN (BEE HIVE) FRAME AND COVER	G	1040Z, TYPE 02 GRATE	R-2560-E1
WATER VALVE BOX ASSEMBLY IN PAVEMENT		8560	N/A
MONUMENT BOX ASSEMBLY		8360	N/A

NOTES:
*EACH COVER SHALL HAVE "SANITARY", "STORM", OR "WATER" CAST IN THE SURFACE, WHICHEVER IS APPLICABLE. SANITARY SEWER COVERS SHALL BE GASKETED IN FLOOD PRONE AREAS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE PSAA. FRAMES AND COVERS MUST HAVE MACHINED BEARING SURFACES.

STANDARD CASTING SCHEDULE SD-GU-4

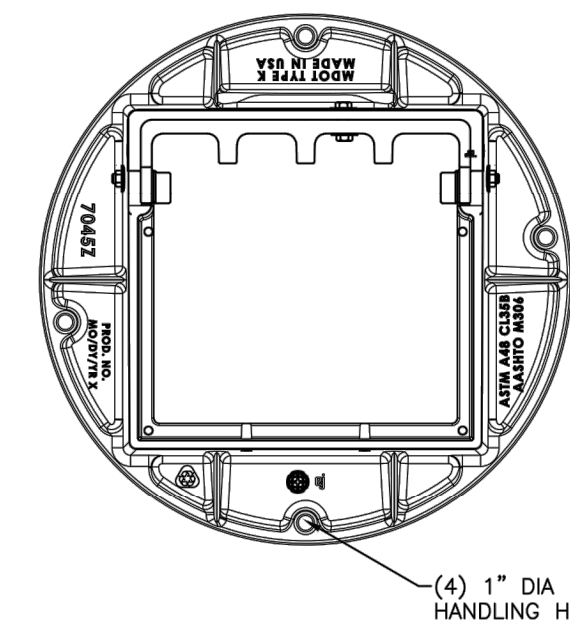
REVISED 6-22-21



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301 EAST HURON STREET
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REV. NO.	DATE	DRAWN BY	CHECKED BY
DR. JPB	CH. CSS	DRAWING NO. SD-GU-4	
SCALE N.T.S.	DATE 06/12/92		

7045Z 7060T1 Assembly



UNIT IS SHIPPED WITH 5/8" BOLTS AND NUTS INSTALLED.
DO NOT REMOVE NUTS AND BOLTS WHEN SETTING
UNIT IN CONCRETE.



Product Number
00706500
Design Features
-Materials
Curb Inlet Frame
Gray Iron (CL35B)
Hood
Gray Iron (CL35B)

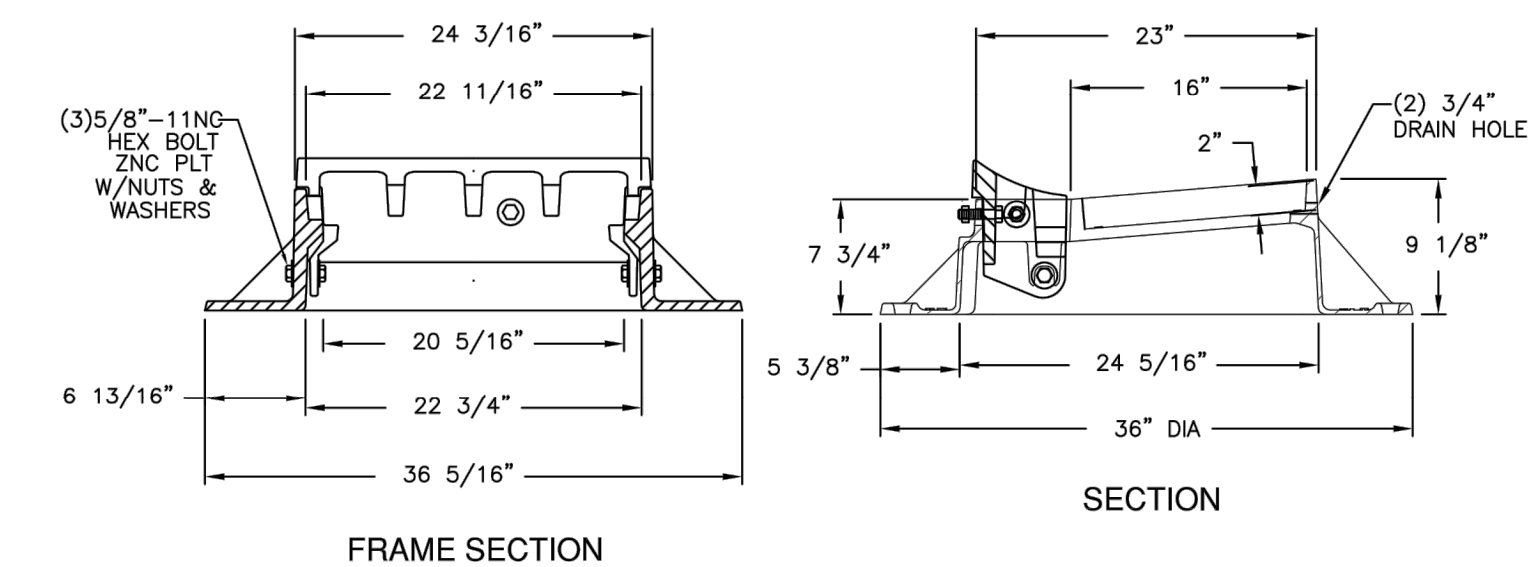
-Design Load
Heavy Duty
-Open Area
n/a
-Coating
Dipped
-√ Designates Machined Surface

Certification
- AASHTO M306
- ASTM A48
- Country of Origin: USA

Major Components
00704510
00706064

Drawing Revision
05/14/2009 Designer: SBB
10/01/2014 Revised By: MAH

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FRAME SECTION

SECTION



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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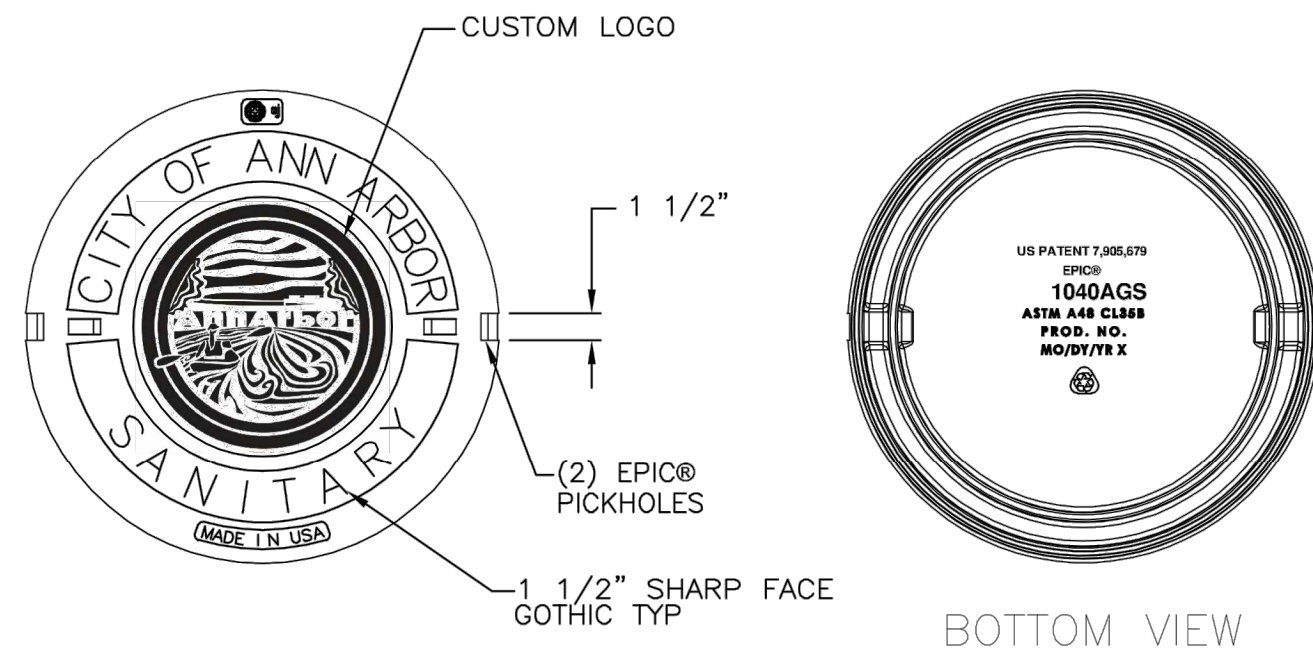
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
MISCELLANEOUS DETAILS

SCALE PLAN: NTS
DRAWING NO. 2018-032-14

SHEET No.

C:\pwork\mflanagan\0867624\15 DETAILS.dwg Dwg Created: 1-Aug-18 - _a2_standard bw.sib - Plot Date: 15-Dec-21

1040AGS Cover



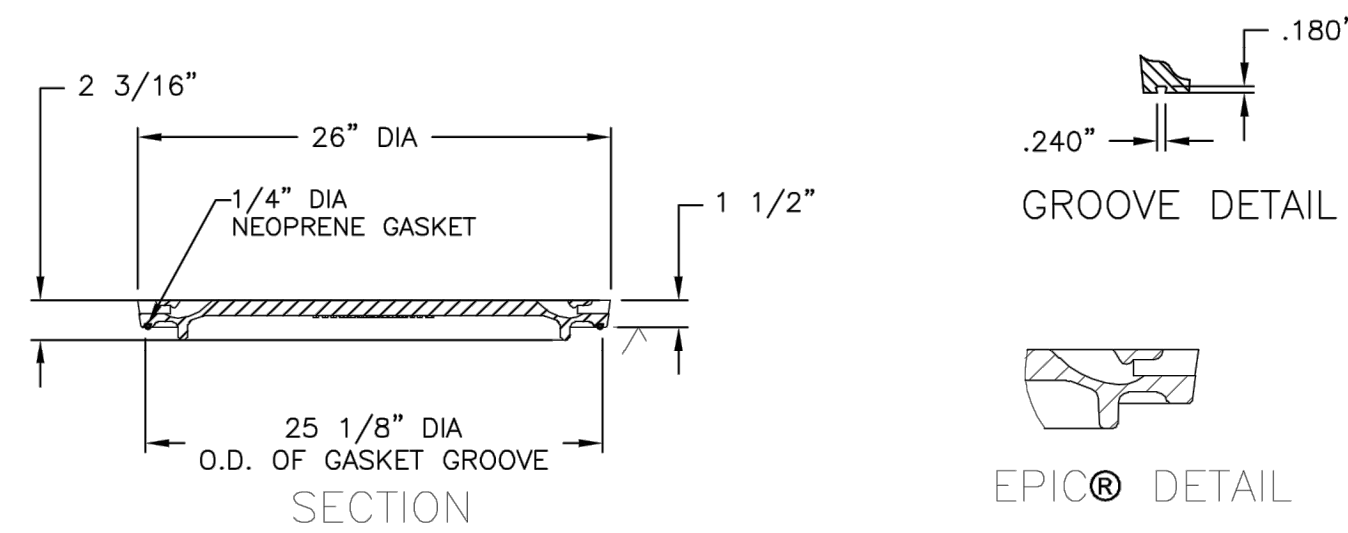
Product Number
001040572

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

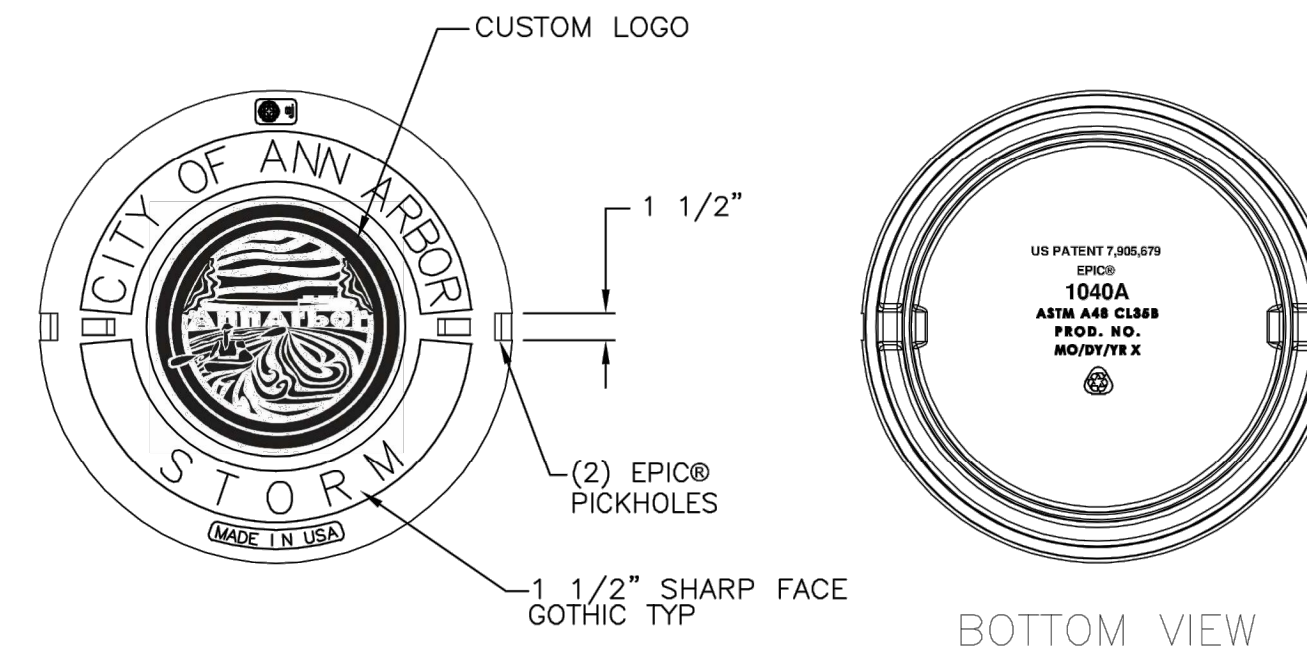


Drawing Revision
5/4/2018 Designer: MAH
4/16/2021 Revised By: MAH

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1040A Cover



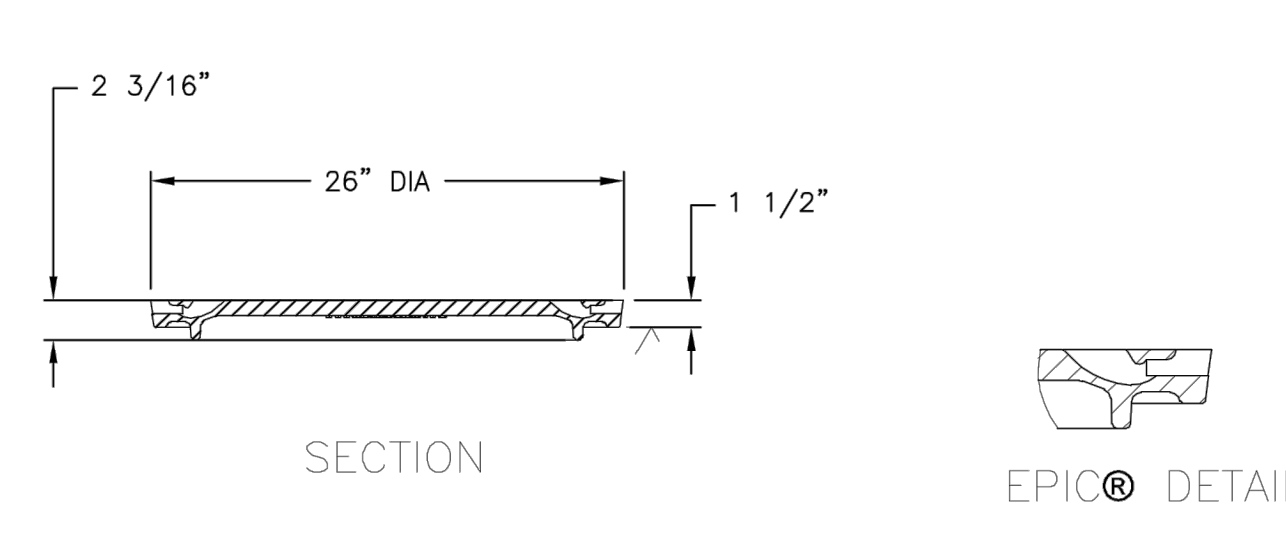
Product Number
001040571

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

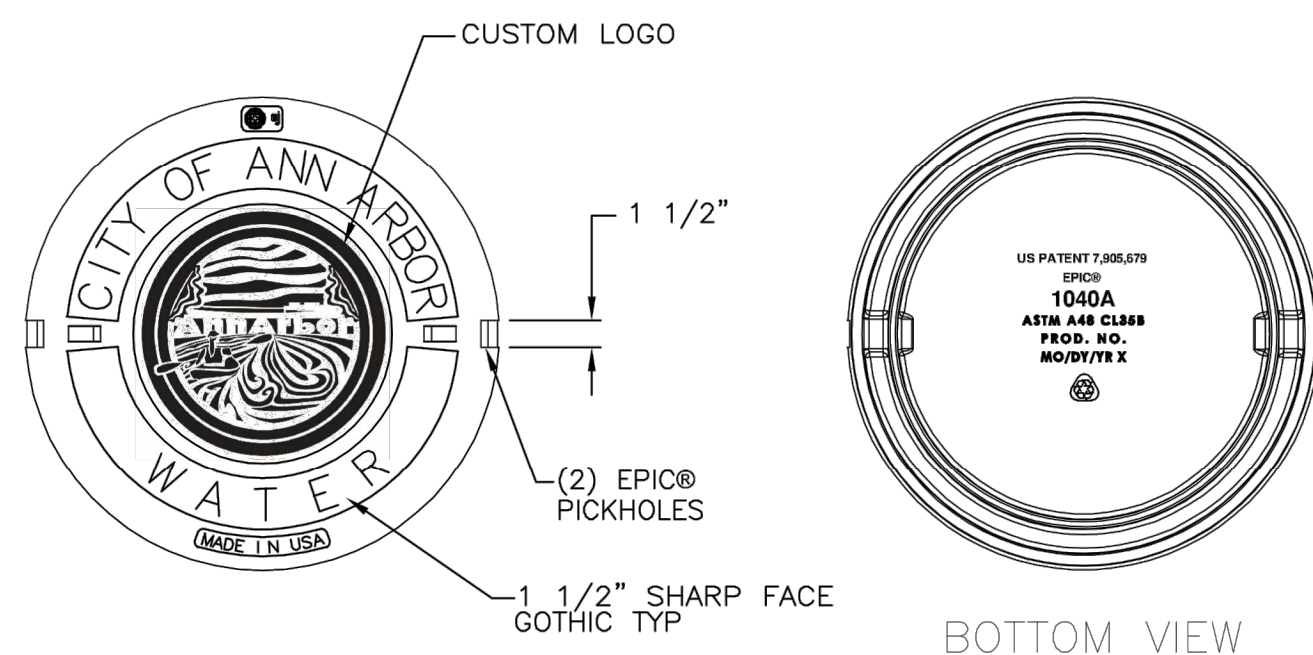


Drawing Revision
5/4/2018 Designer: MAH
4/16/2021 Revised By: MAH

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1040A Cover



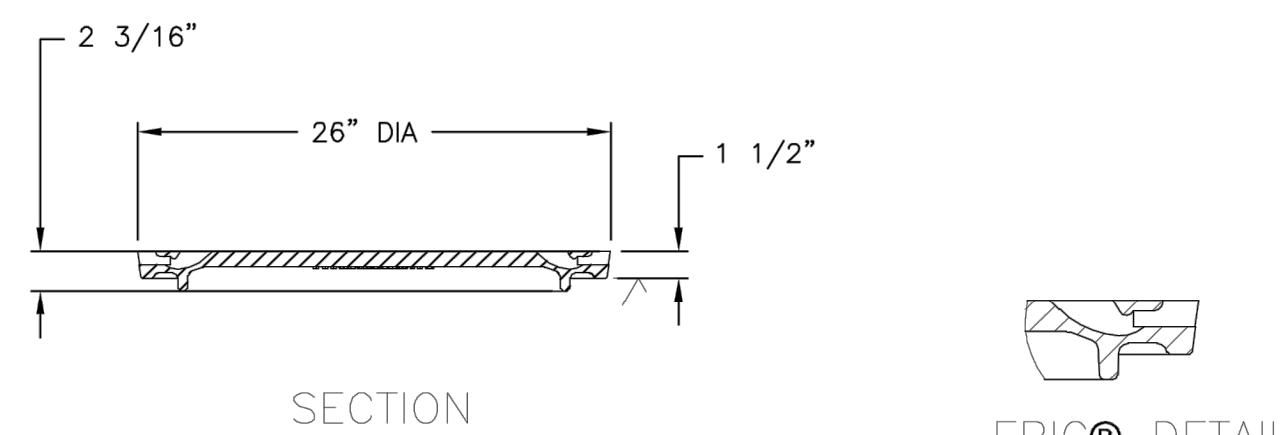
Product Number
001040570

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

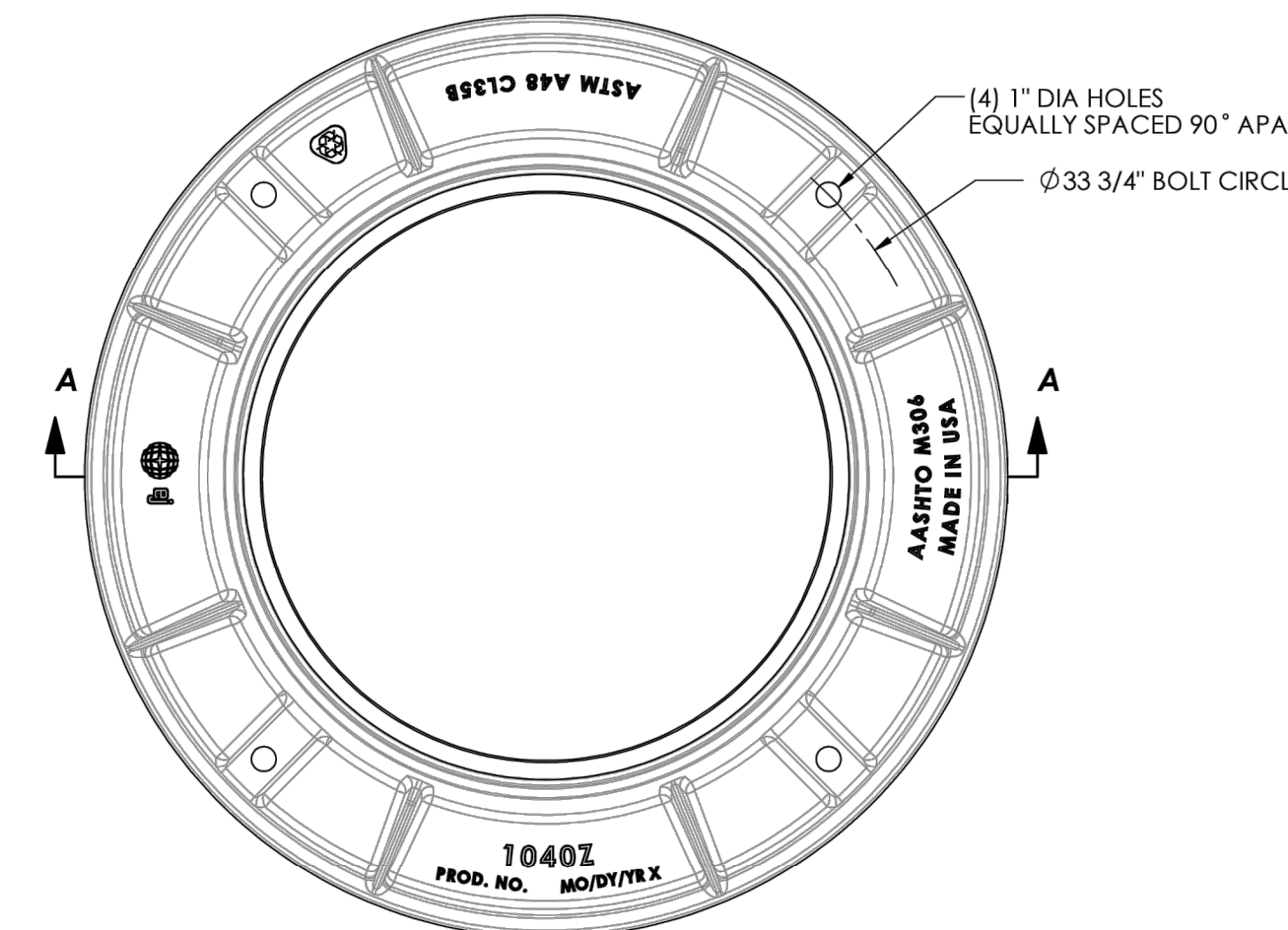


Drawing Revision
3/15/2018 Designer: MAH
4/16/2021 Revised By: MAH

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1040Z Frame



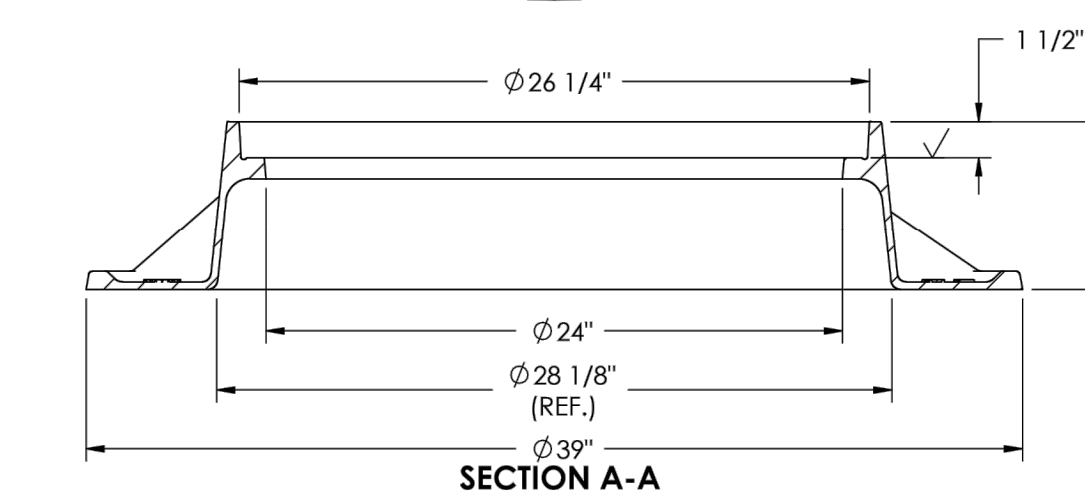
Product Number
00104010

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- AASHTO M306
- Country of Origin: USA



Drawing Revision
6/5/2008 Designer: JJJ
9/13/2013 Revised By: DEF

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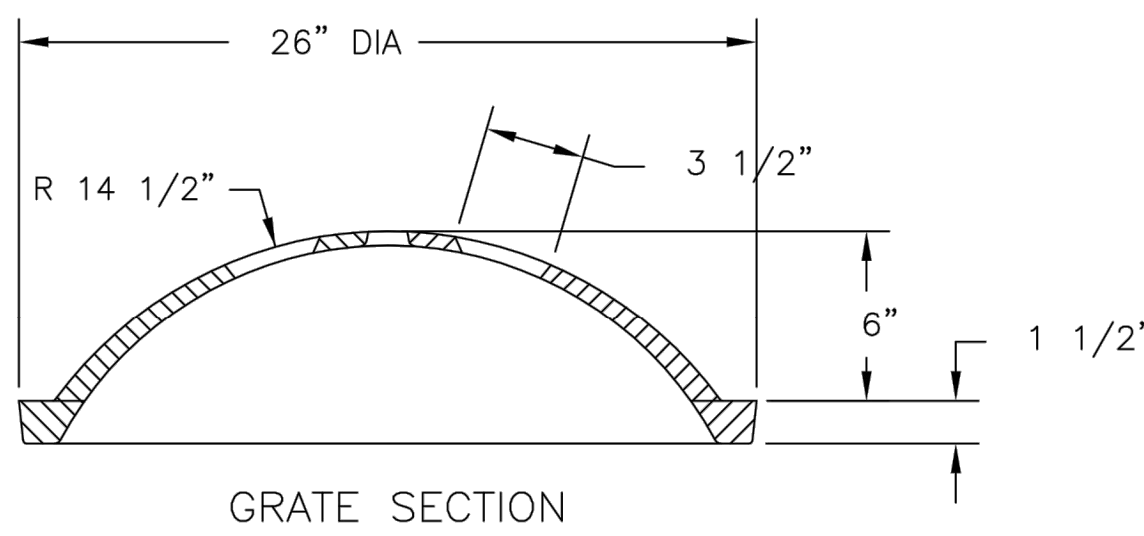
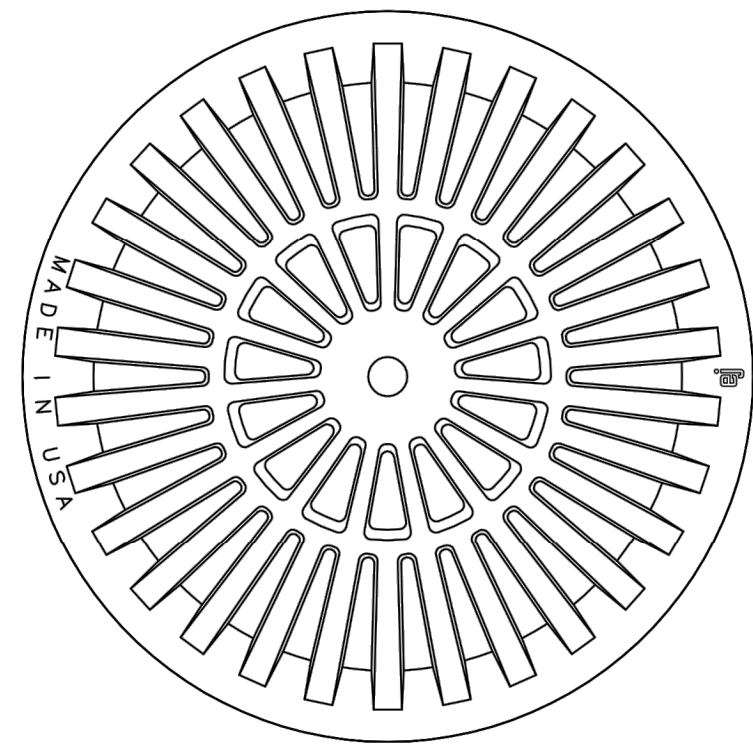
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
MISCELLANEOUS DETAILS

SCALE PLAN: NTS

DRAWING No. 2018-032-15

SHEET No. 15 OF 39

1040 O2 Grate



Product Number
00104045

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
185 sq in
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

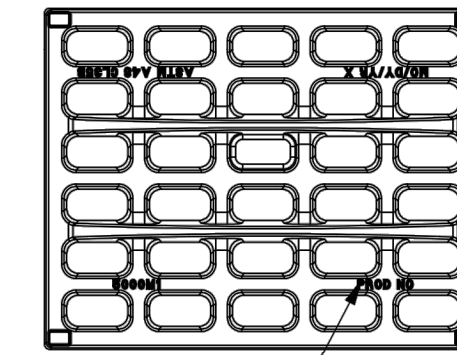
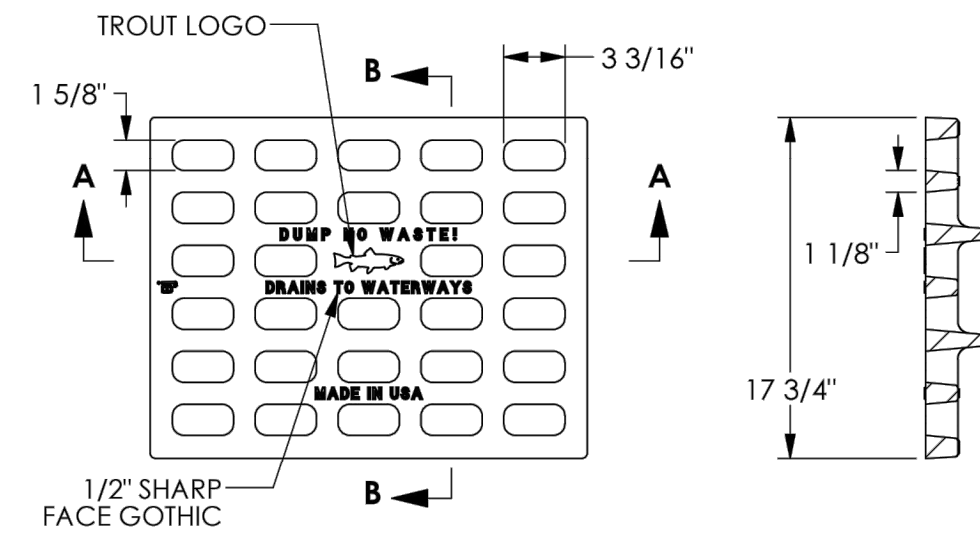
Drawing Revision
05/10/2005 Designer: TCL
5/30/2017 Revised By: CSF

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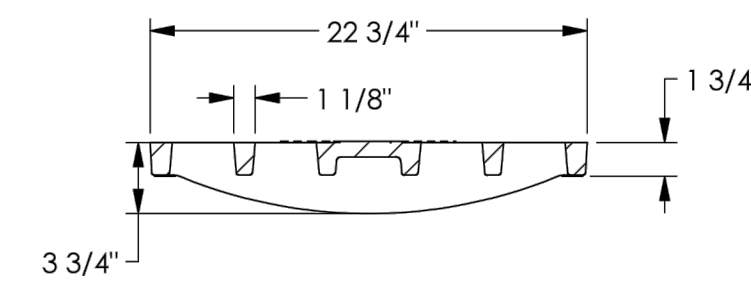
5000M1 Grate



SECTION B-B

5000M1
PROD NO
MO/DY/YR X
ASTM A48 CL35B

BOTTOM VIEW



SECTION A-A



Product Number
00500050

Design Features

- Materials
Gray Iron (CL35B)
- Load Rating
Heavy Duty H20
- Open Area
141 Sq. Inches
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

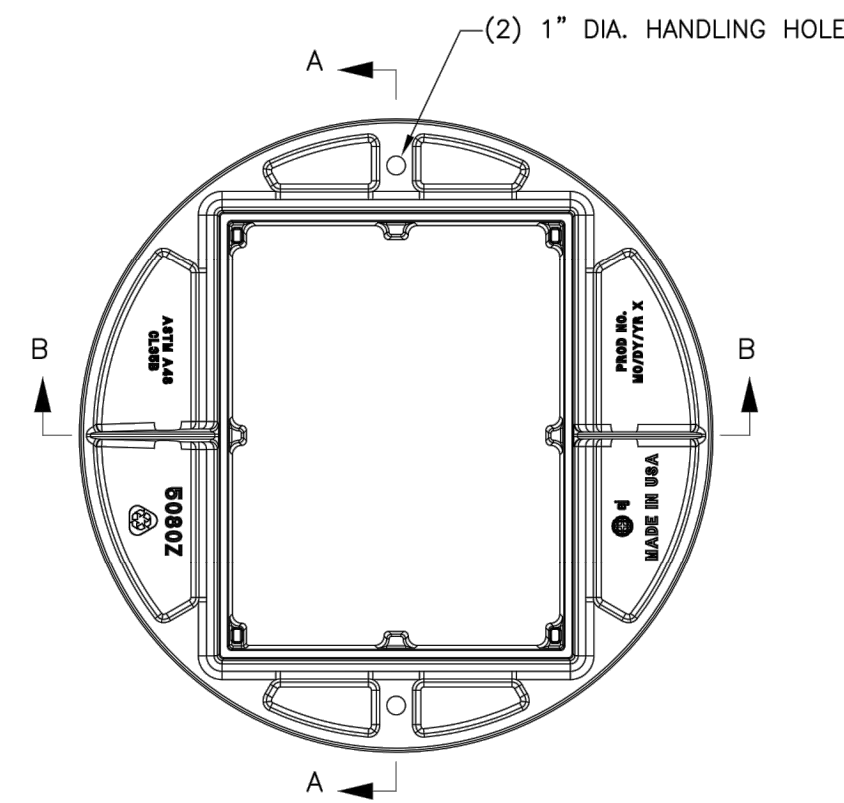
Drawing Revision
08/19/2019 Designer: DJH
Revised By:

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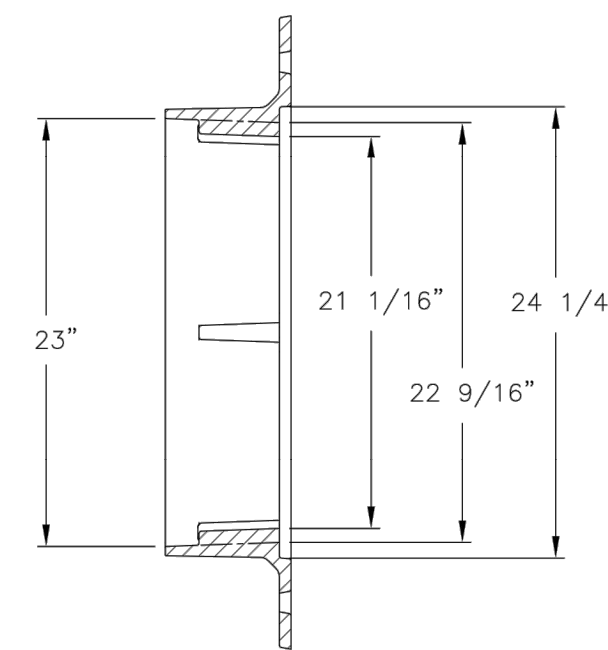
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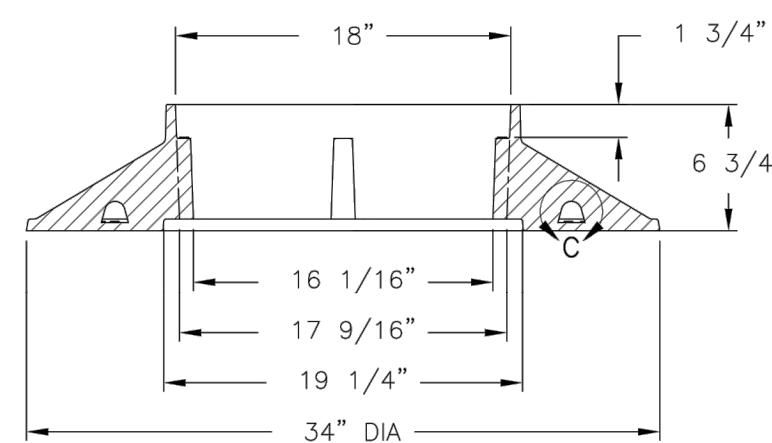
5080Z Frame



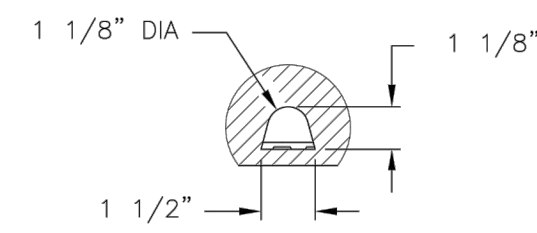
PLAN VIEW



SECTION A-A



SECTION B-B



DETAIL C
SCALE 1:5



Product Number
00508010

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- AASHTO M306
- Country of Origin: USA

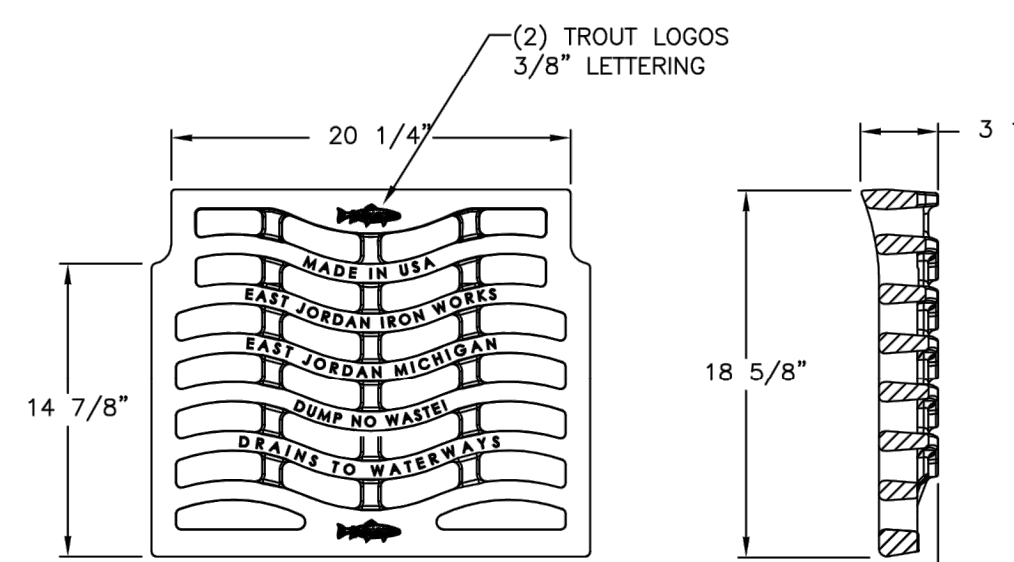
Drawing Revision
07/05/1988 Designer: DEW
10/20/2016 Revised By: DVD

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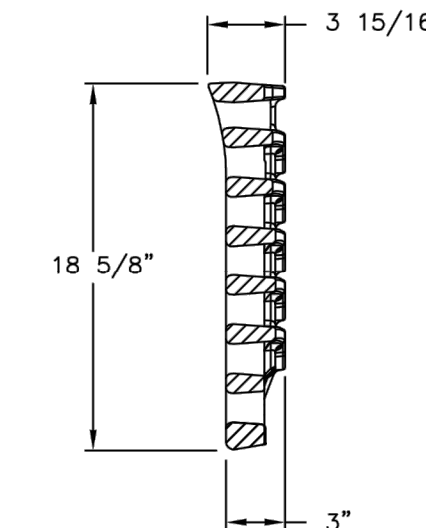
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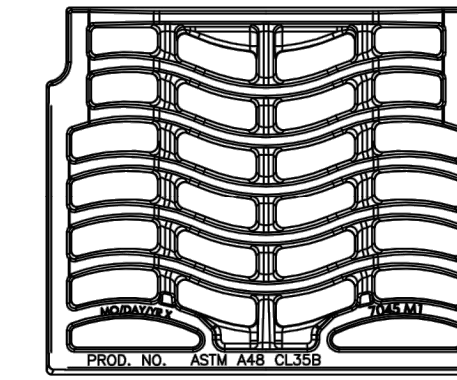
7045 Grate



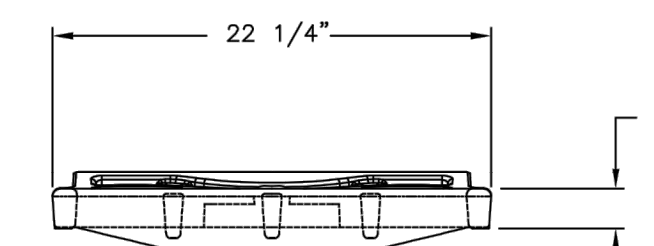
PLAN VIEW



SECTION VIEW



BOTTOM VIEW



SECTION VIEW



Product Number
00704530

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
- Coating
Dipped
- √ Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

Drawing Revision
11/13/2004 Designer: TCL
6/19/2012 Revised By: SDC

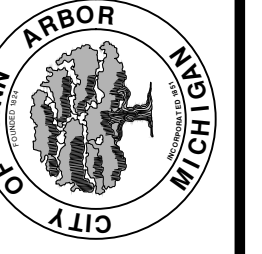
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN
AND RESURFACING PROJECT
MISCELLANEOUS DETAILS

SCALE PLAN: NTS
DRAWING No. 2018-032-16

C:\pwwork\mflnagon\0667624\6 SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS.dwg Dwg Created: 2-Aug-18 - _a2 standard bw.stb - Plot Date: 15-Dec-21

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/SOIL 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.
- ALL AREAS TO BE PERMANENTLY RESTORED WITH GRASS SHALL RECEIVE TOPSOIL, HYDROSEED, AND STAKED EROSION CONTROL BLANKETS (MULCH BLANKETS) AND 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
 1. 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.

- SOIL EROSION SEQUENCE OF CONSTRUCTION:**
- PLACE INLET FILTERS ON EXISTING DRAINAGE FEATURES THAT WILL REMAIN IN PLACE AFTER CONSTRUCTION BEGINS.
 - INSTALL WATER MAIN AND PAVEMENT IMPROVEMENTS.
 - RESTORE ALL DISTURBED AREAS TO A CONDITION THAT IS BETTER THAN, OR EQUAL TO, THAT WHICH EXISTED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
 - INSPECT & REPAIR OR REPLACE ALL TEMPORARY SESC MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.
 - ESTABLISH VEGETATION FOR ALL DISTURBED AREAS WITHIN CONSTRUCTION LIMITS.
 - CLEAN OUT STORM SEWER SYSTEMS.
 - REMOVE TEMPORARY SESC FEATURES (CALL FOR FINAL INSPECTION).
 - REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY'S SESC OFFICIAL.

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

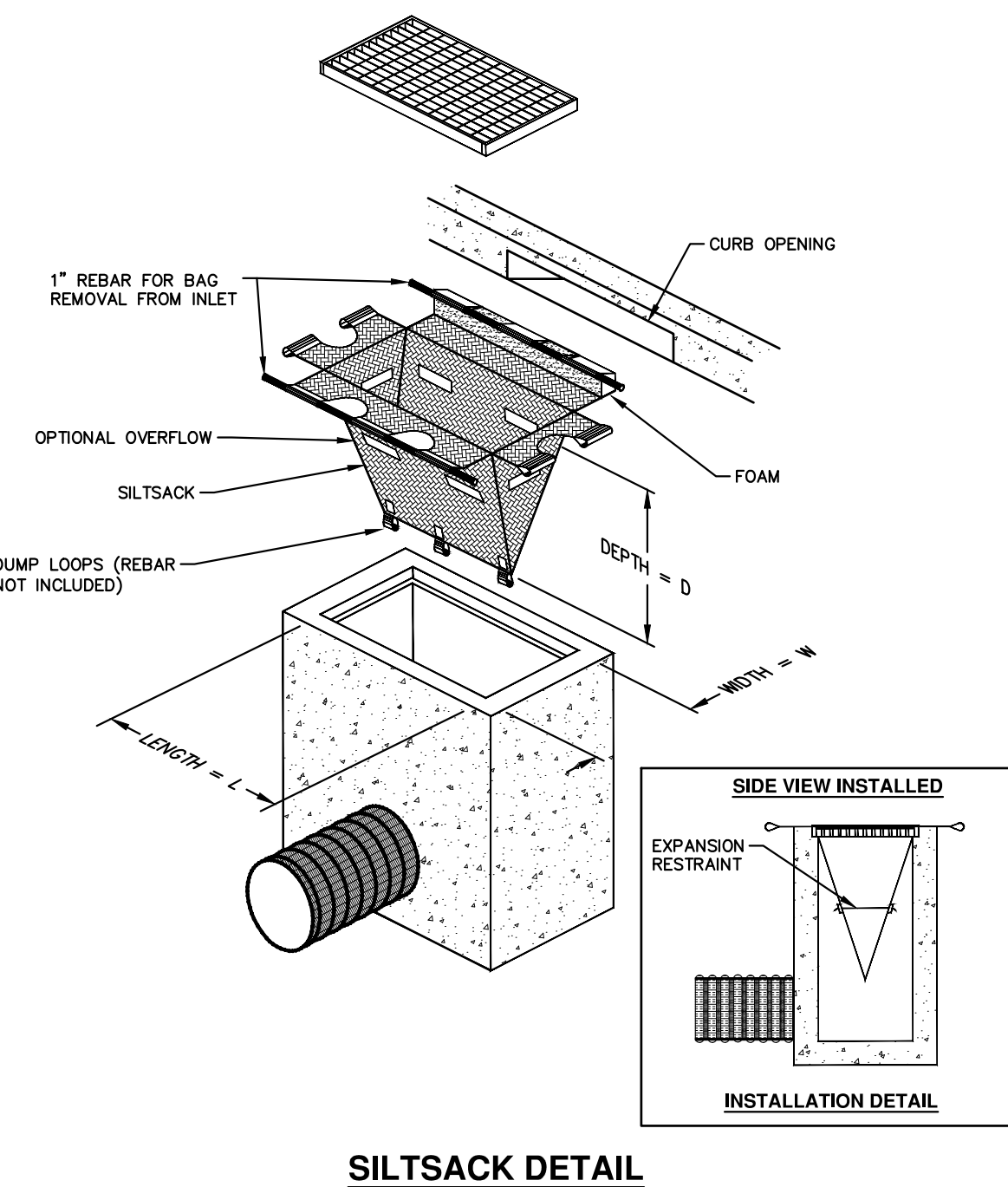
- TEMPORARY SEEDING:**
- SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
 - ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = \$14,698.00

ON SITE SOILS PER THE USDA SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN:
 • FoA - FOX SANDY LOAM, 0 TO 2 PERCENT SLOPE
 • FoB - FOX SANDY LOAM, 2 TO 6 PERCENT SLOPE
 • WawabC - WAWASEE LOAM, 6 TO 12 PERCENT SLOPE

IMPERVIOUS PROJECT AREA APPROXIMATELY 1.2 AC

TOTAL AREA OF PROPOSED DISTURBANCE = 1.2 AC



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 PSF
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

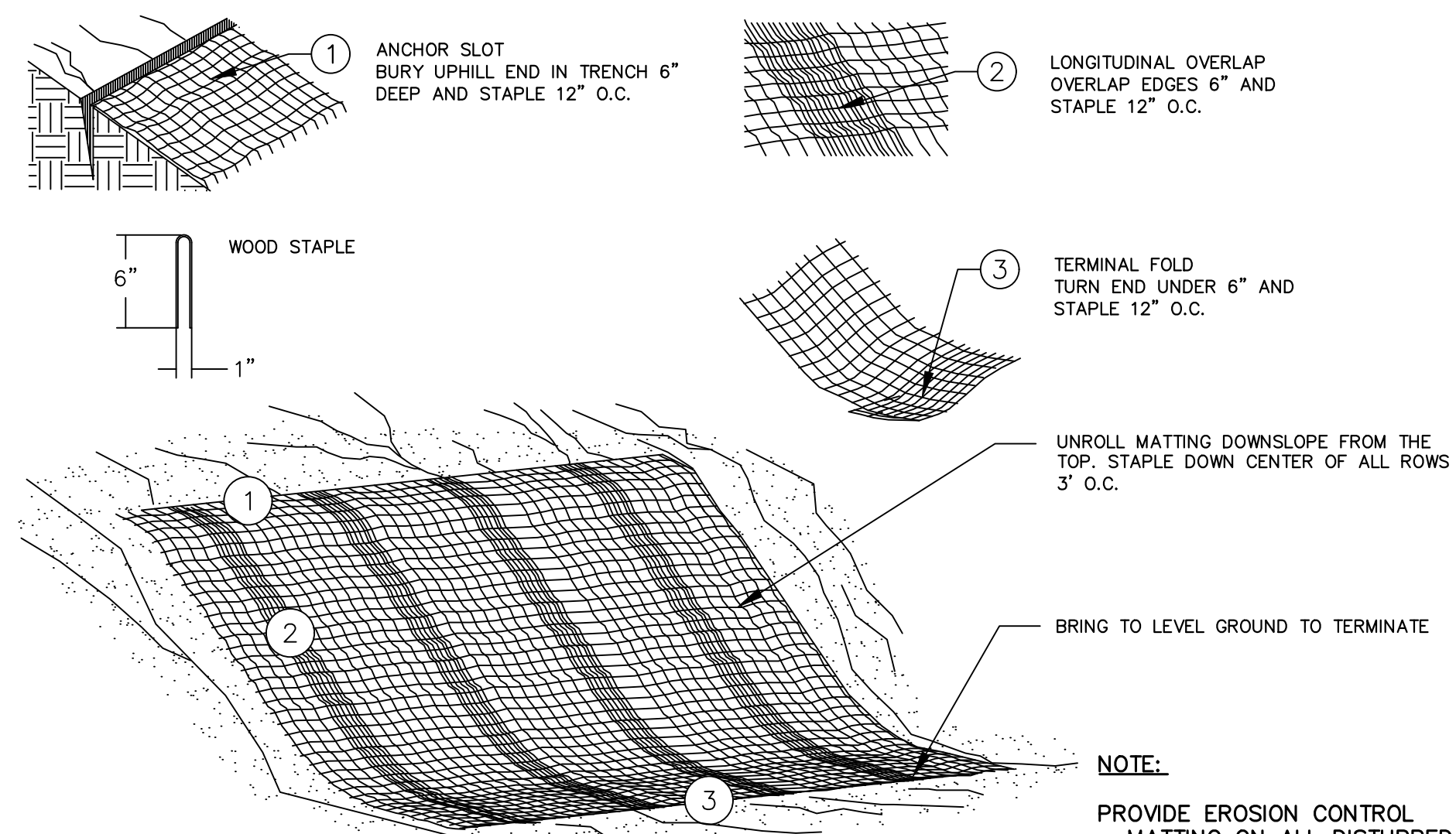
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

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 PSF
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

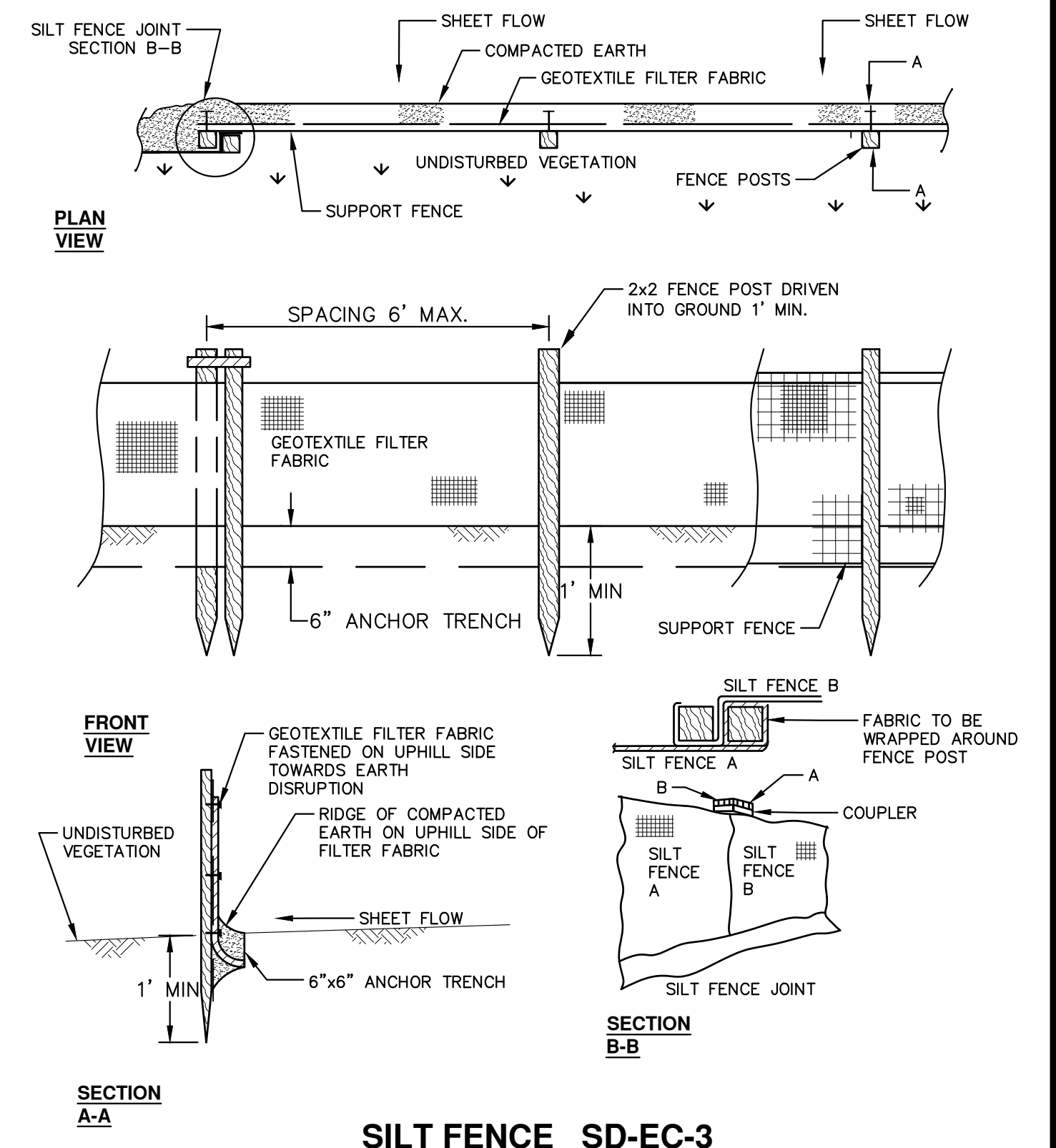
OIL-ABSORBANT SILTSACK

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

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO PROVIDE A FULLY FUNCTIONING UNIT. ALL COSTS ASSOCIATED WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.



MULCH BLANKET DETAIL
 APPLIES TO ALL AREAS TO BE PERMANENTLY RESTORED WITH GRASS. SEE LANDSCAPE PLANS FOR MORE DETAILS.



SILT FENCE SD-EC-3

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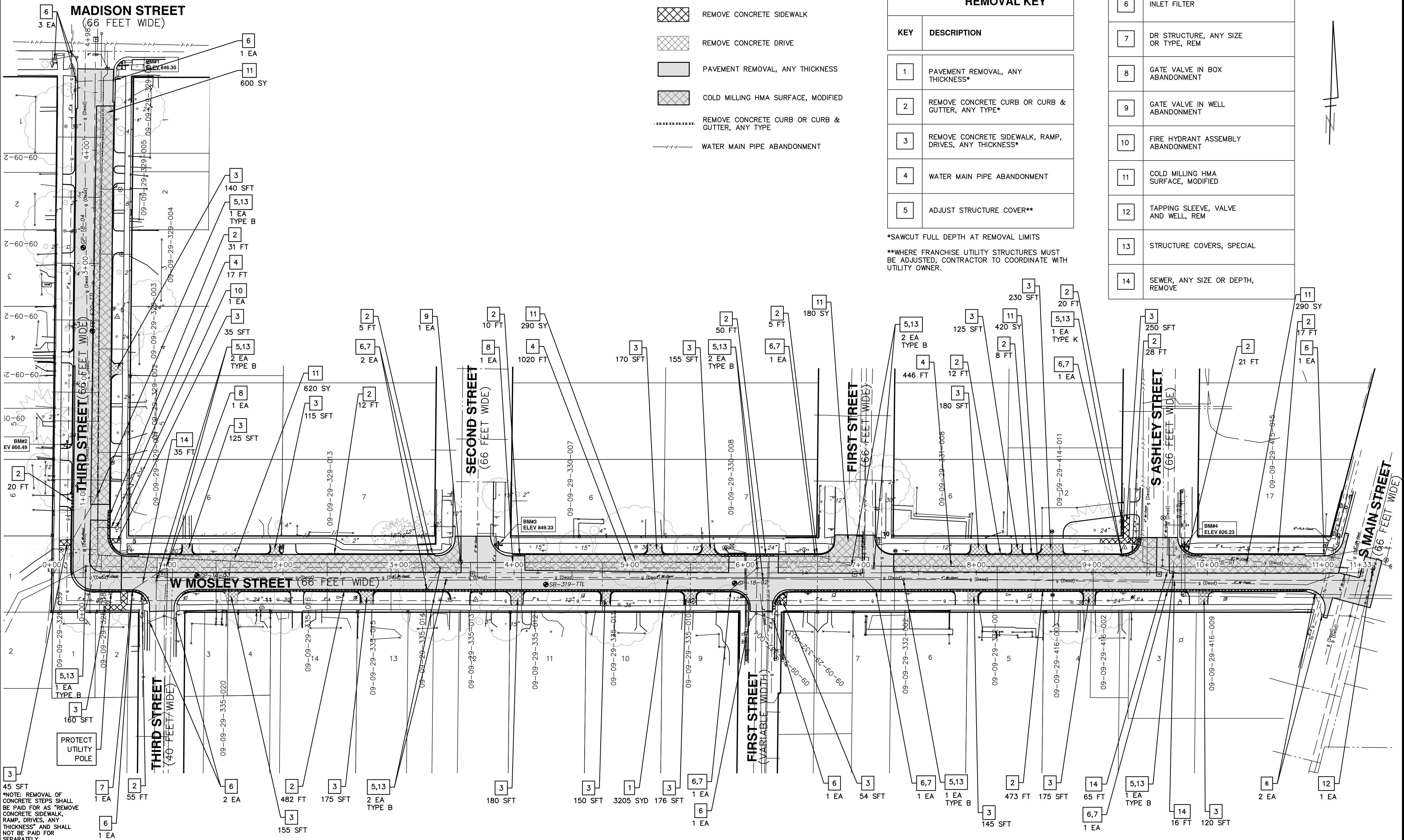
CITY OF ANN ARBOR
 PUBLIC SERVICES
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 ANN ARBOR, MI 48106-1007
 734-794-6410
 www.aagov.org

CITY OF ANN ARBOR
 ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
 SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

SCALE: NTS
 DRAWING No. 2018-032-17
 SHEET No. 17 OF 39

C:\pwork\mflnagon\0867624\5 SOIL EROSION AND SEDIMENTATION CONTROL PLAN.dwg Dwg Created: 27-Sep-18 - a2 standard bw.stb - Plot Date: 15-Dec-21



45 SFT
 *NOTE: REMOVAL OF CONCRETE STEPS SHALL BE PAID FOR AS "REMOVE CONCRETE SIDEWALK, RAMP, DRIVES ANY THICKNESS" AND SHALL NOT BE PAID FOR SEPARATELY

LEGEND

- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE DRIVE
- PAVEMENT REMOVAL, ANY THICKNESS
- COLD MILLING HMA SURFACE, MODIFIED
- REMOVE CONCRETE CURB OR CURB & GUTTER, ANY TYPE
- WATER MAIN PIPE ABANDONMENT

REMOVAL KEY

KEY	DESCRIPTION
1	PAVEMENT REMOVAL, ANY THICKNESS*
2	REMOVE CONCRETE CURB OR CURB & GUTTER, ANY TYPE*
3	REMOVE CONCRETE SIDEWALK, RAMP, DRIVES, ANY THICKNESS*
4	WATER MAIN PIPE ABANDONMENT
5	ADJUST STRUCTURE COVER**

*SAWCUT FULL DEPTH AT REMOVAL LIMITS
 **WHERE FRANCHISE UTILITY STRUCTURES MUST BE ADJUSTED, CONTRACTOR TO COORDINATE WITH UTILITY OWNER.

6	INLET FILTER
7	DR STRUCTURE, ANY SIZE OR TYPE, REM
8	GATE VALVE IN BOX ABANDONMENT
9	GATE VALVE IN WELL ABANDONMENT
10	FIRE HYDRANT ASSEMBLY ABANDONMENT
11	COLD MILLING HMA SURFACE, MODIFIED
12	TAPPING SLEEVE, VALVE AND WELL, REM
13	STRUCTURE COVERS, SPECIAL
14	SEWER, ANY SIZE OR DEPTH, REMOVE

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

SESC AND REMOVAL PLAN

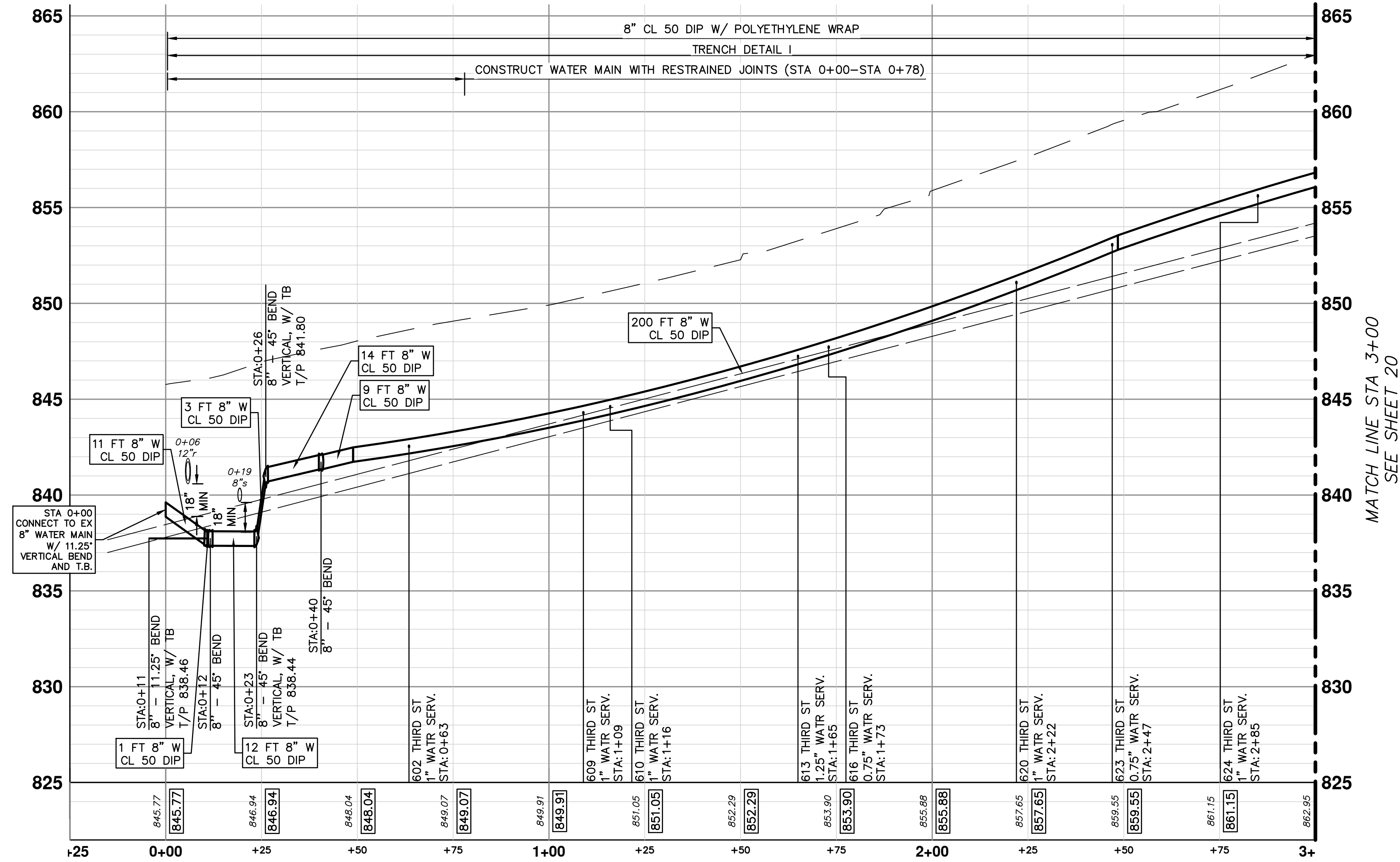
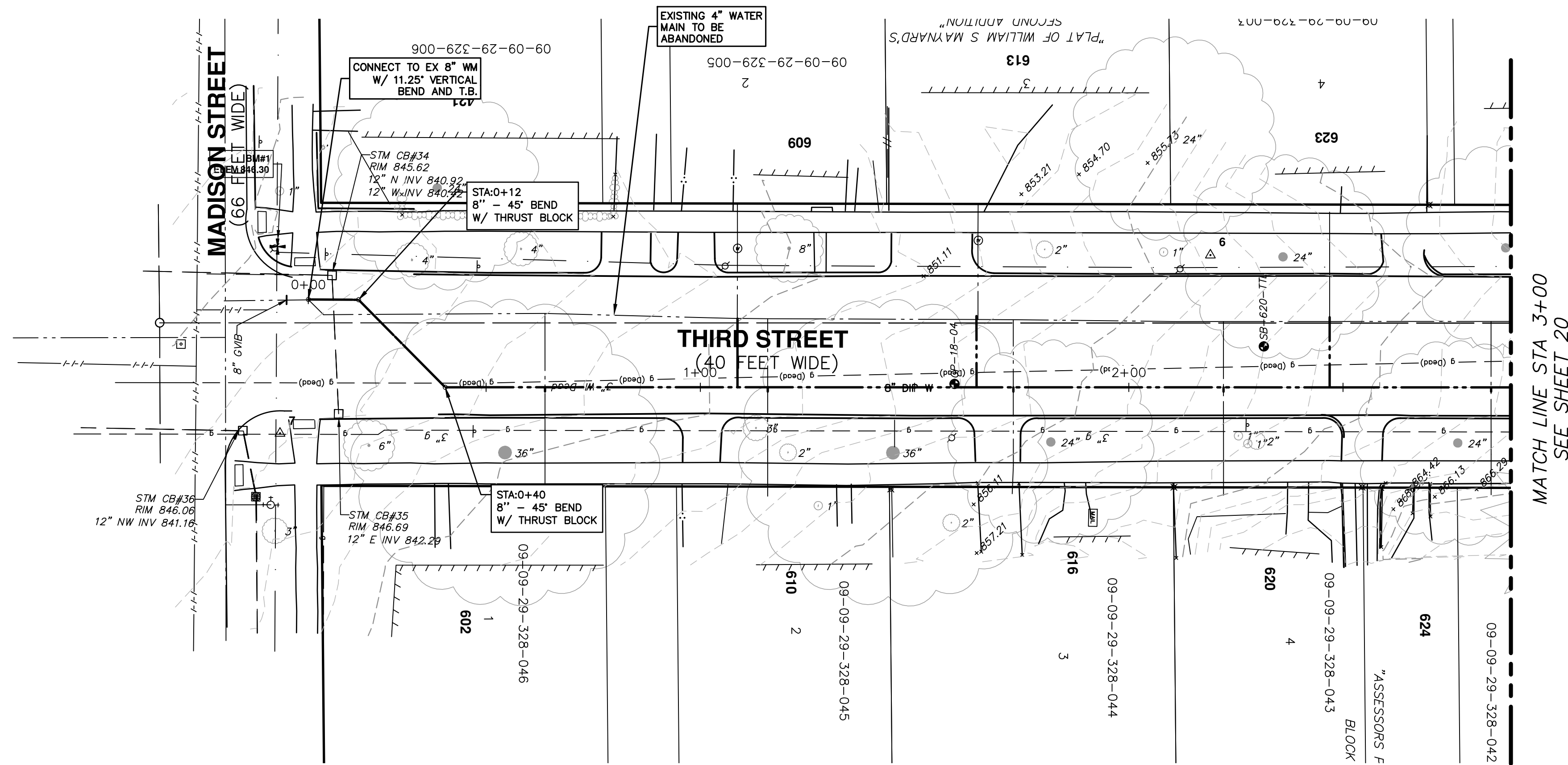
SCALE PLAN: 1"=40'

DRAWING No. 2018-032-18

SHEET No. 18 OF 39

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WATER MAIN CONSTRUCTION NOTES

- 1: SEE EROSION CONTROL SHEETS FOR DETAILS ON PLACEMENT, MAINTENANCE, AND REMOVAL OF EROSION CONTROL ITEMS.
- 2: THE CONTRACTOR SHALL CAREFULLY PROTECT FROM DAMAGE OR INJURY DURING CONSTRUCTION OPERATIONS ALL UTILITIES, SITE FEATURES, LANDSCAPING, AND OTHER ITEMS NOT DESIGNATED FOR REMOVAL OR ABANDONMENT. PAYMENT FOR PROTECTION OF UTILITIES INCLUDED IN "GENERAL CONDITIONS, MAX". EXISTING FACILITIES NOT DESIGNATED FOR REMOVAL OR ABANDONMENT, BUT WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS SOLE EXPENSE, AS DETERMINED BY THE ENGINEER.
- 3: THE EXISTING UTILITIES SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED THROUGH SURVEYS AND/OR EXISTING PLANS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES. IF STORM OR WATERMAINS CROSS OTHER UTILITIES, CONTACT THEIR RESPECTIVE OWNERS FOR INFORMATION ON HOW TO PROCEED. PAYMENT FOR THE COORDINATION EFFORTS AND ASSOCIATED ITEMS SHALL BE INCLUDED IN ASSOCIATED PROPOSED STORM OR WATERMAIN ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.
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- 6: THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS WHICH ARE INCLUDED BY REFERENCE. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THE REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH CURRENT PUBLIC SERVICE DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS.
- 7: ALL WATER MAIN SHALL BE CL 50 DUCTILE IRON WATER MAIN, CEMENT-LINED (DOUBLE THICKNESS), WITH POLYWRAP UNLESS NOTED OTHERWISE.
- 8: RESTRAINED JOINT SYSTEMS FOR WATER MAIN SHALL BE UTILIZED WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. RESTRAINED JOINT GASKET SYSTEMS ARE TO BE USED. (FIELD-LOK 350 BY U.S. PIPE, FAST-GRIP BY AMERICAN DUCTILE IRON PIPE, OR APPROVED EQUAL)
- 9: ALL WATER MAIN TO HAVE 5.5 FEET OF COVER. MAINTAIN A MINIMUM OF 18-INCH VERTICAL CLEARANCE FOR STORM AND SANITARY CROSSINGS AND A MINIMUM OF 12-INCH VERTICAL CLEARANCE WITH ALL OTHER UTILITIES.
- 10: UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL UTILIZE STANDARD PIPE DEFLECTIONS FOR FOLLOWING THE PROPOSED ALIGNMENT.
- 11: NEW FIRE HYDRANTS SHALL BE EJIW 5BR-250 WITH 4-INCH STORZ QUICK CONNEX AND 2-2 1/2 HYDRANT OUTLETS.
- 12: FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL NECESSARY HYDRANT EXTENSIONS, THRUST BLOCKS, PIPE AND FITTINGS, INCLUDING ADJUSTMENT OF THE COMPANION VALVE. FIRE HYDRANT ASSEMBLY INCLUDES 6-INCH COMPANION VALVE LOCATED THREE FEET FROM THE HYDRANT.
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

WATER MAIN PLAN AND PROFILE - THIRD STREET STA 0+00 TO 3+00

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING NO. 2018-032-19

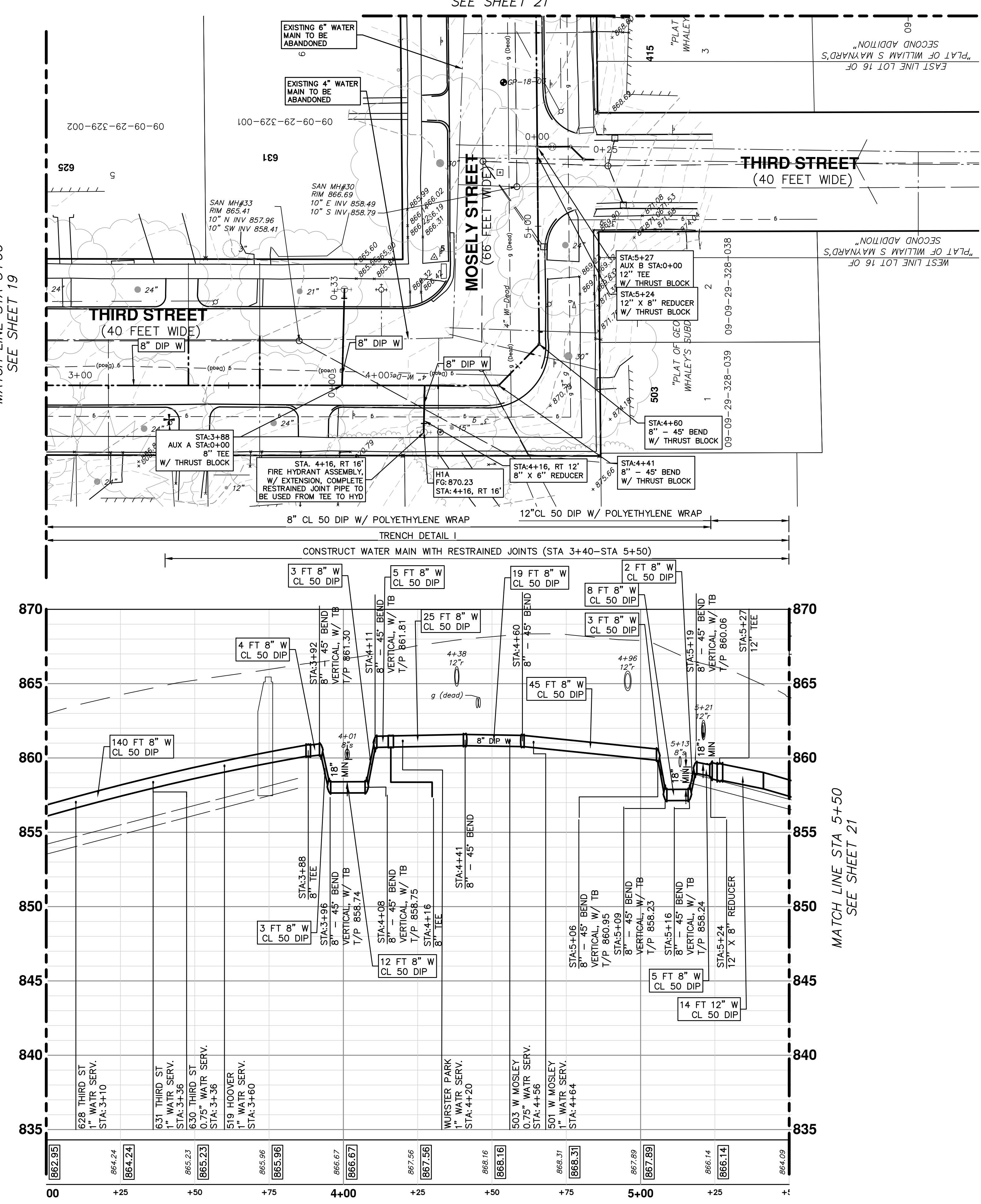
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www.a3gov.org

MATCH LINE STA 3+00
SEE SHEET 19



MATCH LINE STA 5+50
SEE SHEET 21

MATCH LINE STA 3+00
SEE SHEET 19

MATCH LINE STA 5+50
SEE SHEET 21

WATER MAIN CONSTRUCTION NOTES

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

WATER MAIN PLAN AND PROFILE - THIRD STREET STA 3+00 TO 5+50

SCALE PLAN: 1" = 40'
PROFILE: 1" = 4'

DRAWING NO. 2018-032-20

SHEET NO. 20 OF 39

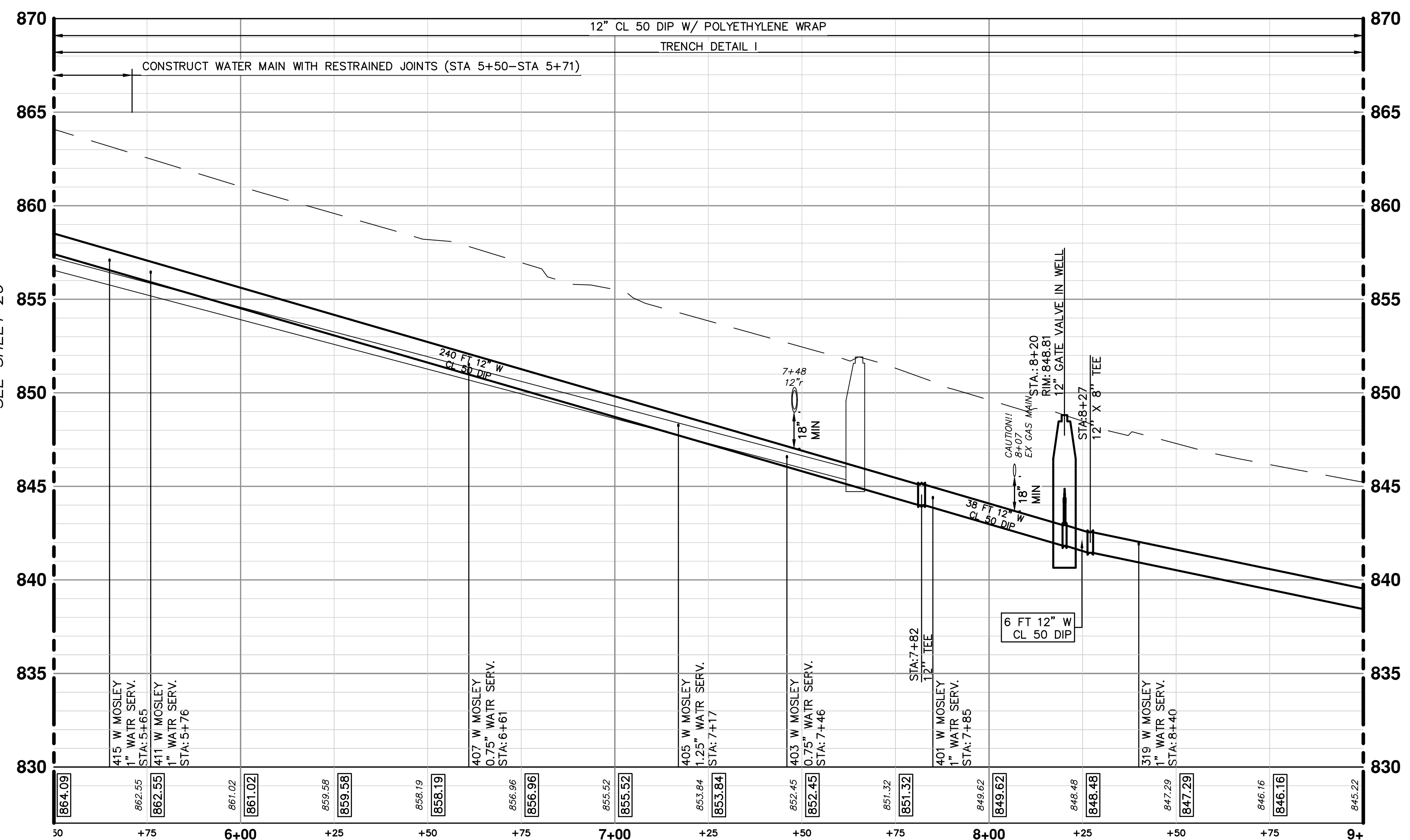
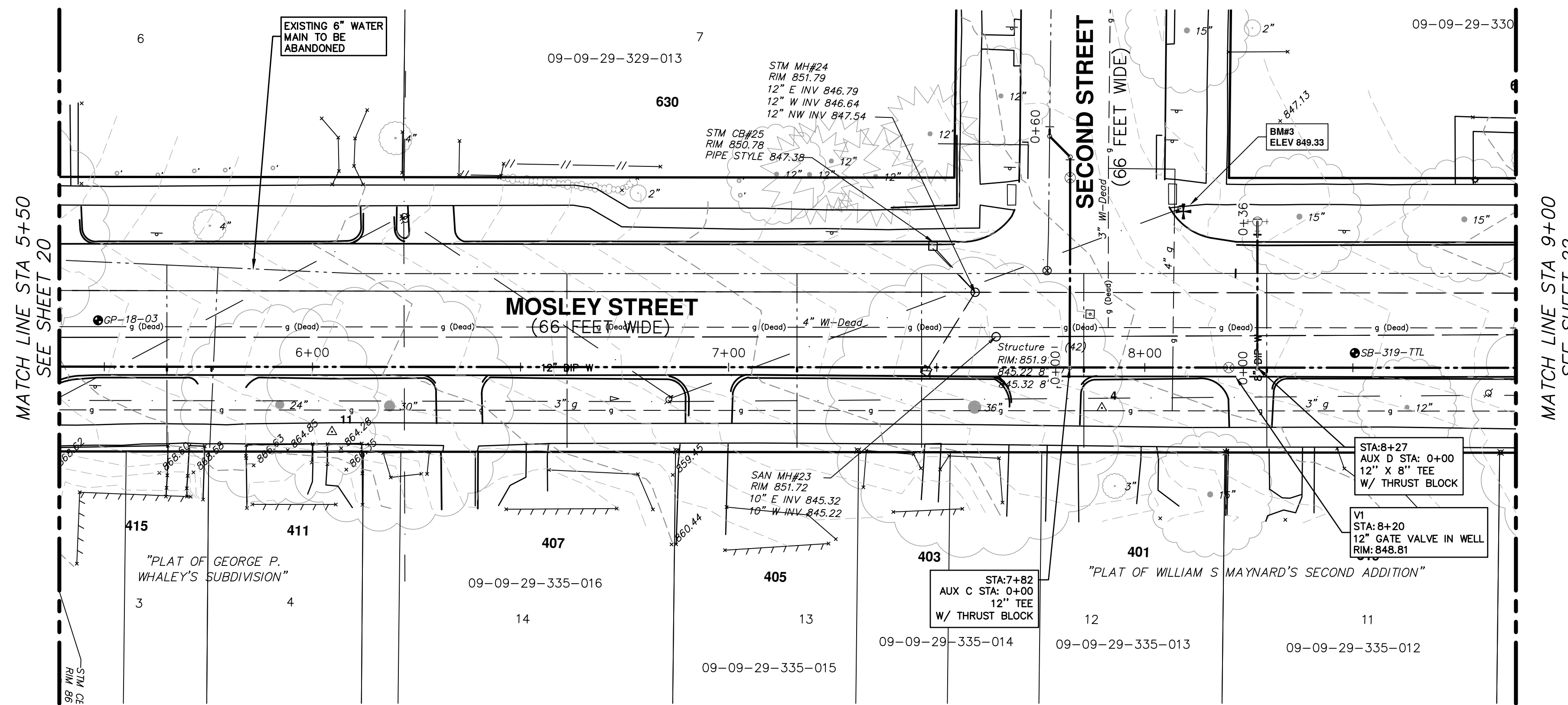
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C:\pwork\mflnagon\0667624\8 WATER MAIN PLAN AND PROFILE - MOSELY STREET.dwg Dwg Created: 25-Oct-18 - _o2_standard_bw.stb - Plot Date: 15-Dec-21




STRUCTURE	TYPE	STATION	RIM	WELL DEPTH	CASTING
V2	12" GVW	MAIN 15+25	825.23	7.12	TYPE B

- WATER MAIN CONSTRUCTION NOTES**
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THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

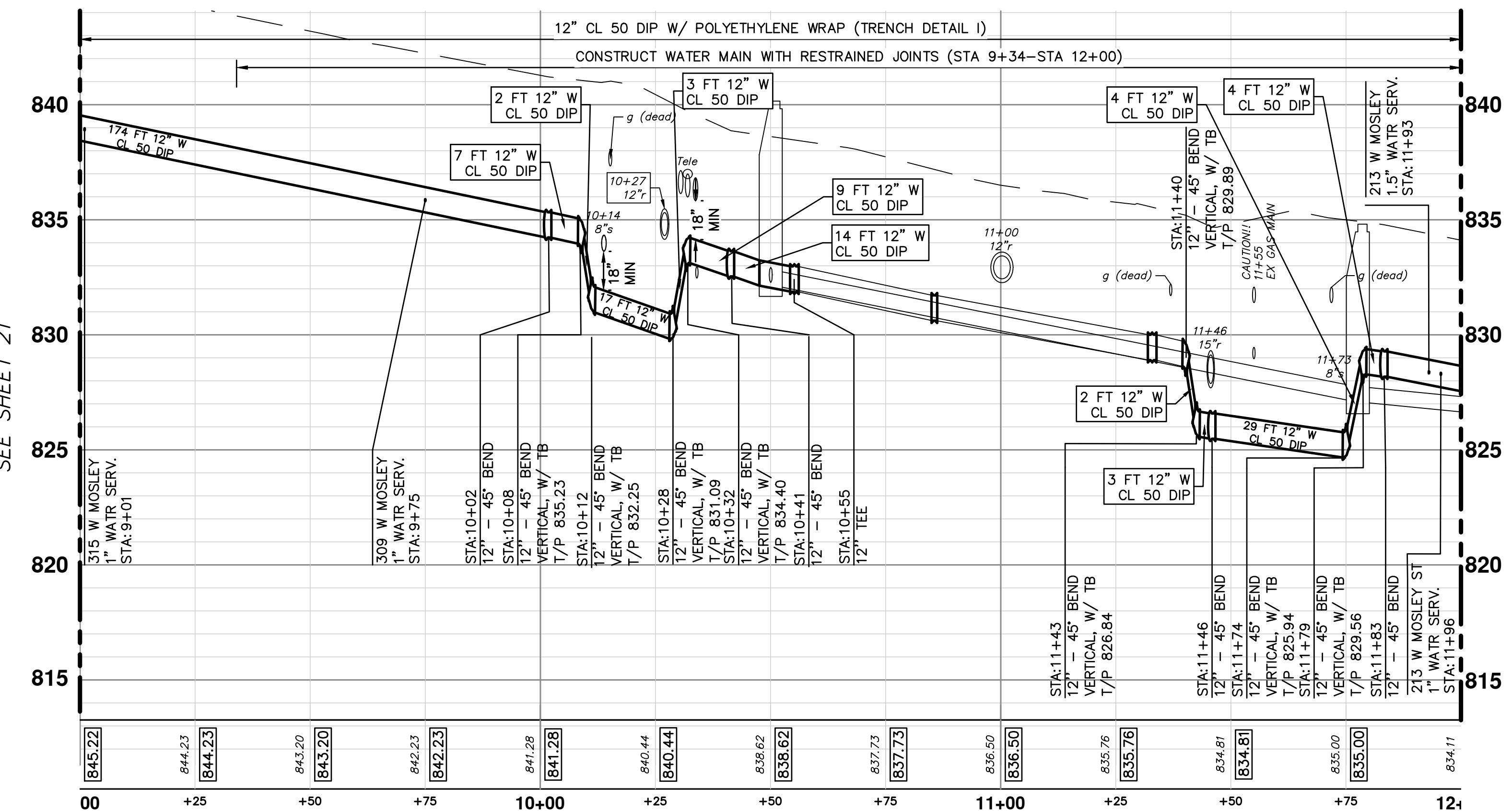
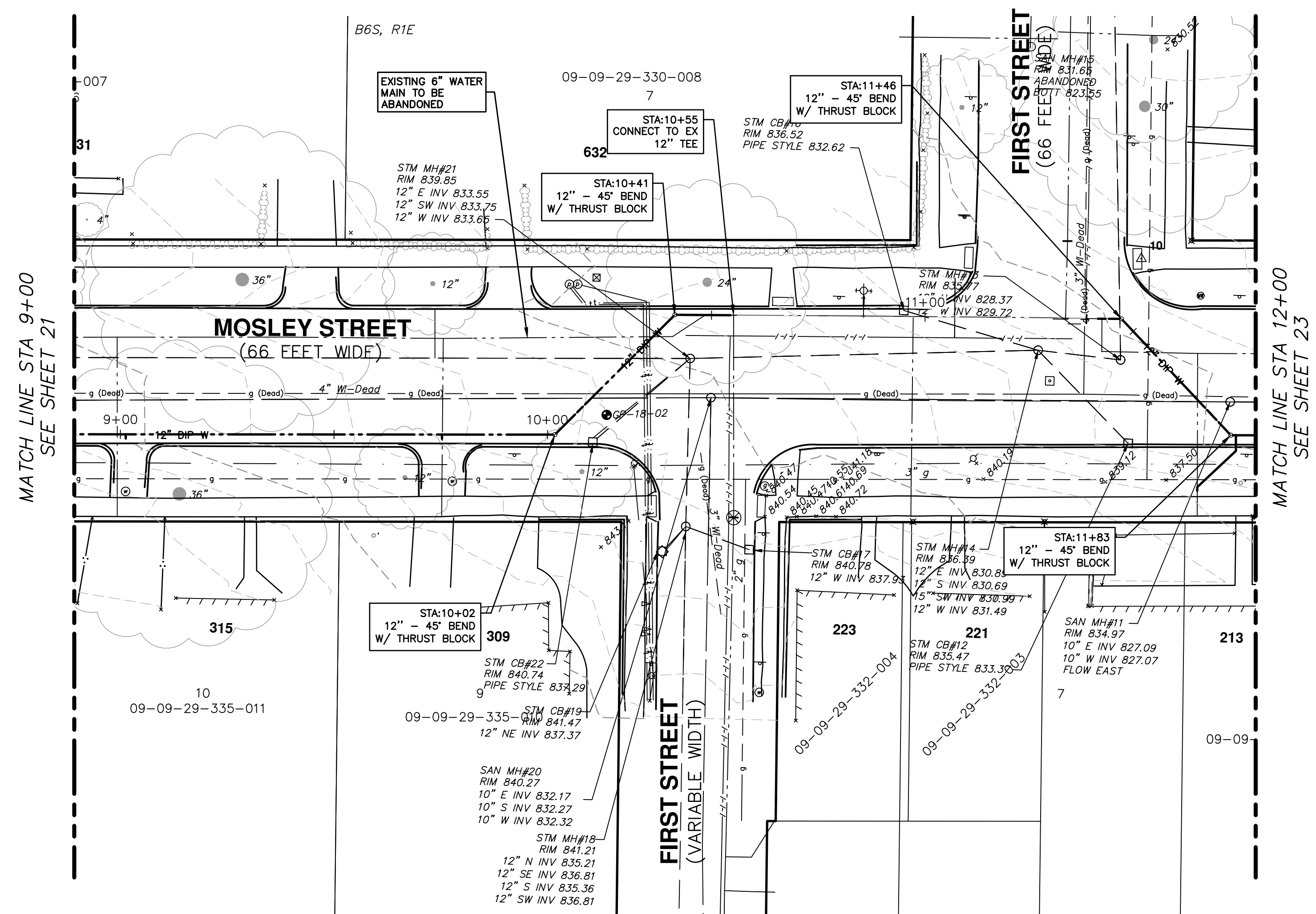
WATER MAIN PLAN AND PROFILE - MOSLEY STREET STA. 5+50 TO 9+00

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING NO. 2018-032-21

SHEET NO. 21 OF 39



WATER MAIN CONSTRUCTION NOTES

- 1: SEE EROSION CONTROL SHEETS FOR DETAILS ON PLACEMENT, MAINTENANCE, AND REMOVAL OF EROSION CONTROL ITEMS.
- 2: THE CONTRACTOR SHALL CAREFULLY PROTECT FROM DAMAGE OR INJURY DURING CONSTRUCTION OPERATIONS ALL UTILITIES, SITE FEATURES, LANDSCAPING, AND OTHER ITEMS NOT DESIGNATED FOR REMOVAL OR ABANDONMENT. PAYMENT FOR PROTECTION OF UTILITIES INCLUDED IN "GENERAL CONDITIONS, MAX". EXISTING FACILITIES NOT DESIGNATED FOR REMOVAL OR ABANDONMENT, BUT WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS SOLE EXPENSE, AS DETERMINED BY THE ENGINEER.
- 3: THE EXISTING UTILITIES SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED THROUGH SURVEYS AND/OR EXISTING PLANS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES. IF STORM OR WATERMANS CROSS OTHER UTILITIES, CONTACT THEIR RESPECTIVE OWNERS FOR INFORMATION ON HOW TO PROCEED. PAYMENT FOR THE COORDINATION EFFORTS AND ASSOCIATED ITEMS SHALL BE INCLUDED IN ASSOCIATED PROPOSED STORM OR WATERMAIN ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.
- 4: THE CONTRACTOR SHALL CAREFULLY PROTECT FROM DAMAGE OR INJURY THE EXISTING WATER MAIN DURING CONSTRUCTION OPERATIONS. ANY DAMAGE TO THIS FACILITY BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE, AS DETERMINED BY THE ENGINEER. PAYMENT FOR PROTECTION OF THE EXISTING WATER MAIN WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "GENERAL CONDITIONS, MAX".
- 5: THE CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING SANITARY SEWER OR WATER MAIN LEADS FOR EASE OF CONSTRUCTING OTHER ASPECTS OF WORK. THE CONTRACTOR SHALL CAREFULLY PROTECT ALL LEADS FROM DAMAGE OR INJURY.
- 6: THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS WHICH ARE INCLUDED BY REFERENCE. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THE REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH CURRENT PUBLIC SERVICE DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS.
- 7: ALL WATER MAIN SHALL BE CL 50 DUCTILE IRON WATER MAIN, CEMENT-LINED (DOUBLE THICKNESS), WITH POLYWRAP UNLESS NOTED OTHERWISE.
- 8: RESTRAINED JOINT SYSTEMS FOR WATER MAIN SHALL BE UTILIZED WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. RESTRAINED JOINT GASKET SYSTEMS ARE TO BE USED. (FIELD-LOK 350 BY U.S. PIPE, FAST-GRIP BY AMERICAN DUCTILE IRON PIPE, OR APPROVED EQUAL)
- 9: ALL WATER MAIN TO HAVE 5.5 FEET OF COVER. MAINTAIN A MINIMUM OF 18-INCH VERTICAL CLEARANCE FOR STORM AND SANITARY CROSSINGS AND A MINIMUM OF 12-INCH VERTICAL CLEARANCE WITH ALL OTHER UTILITIES.
- 10: UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL UTILIZE STANDARD PIPE DEFLECTIONS FOR FOLLOWING THE PROPOSED ALIGNMENT.
- 11: NEW FIRE HYDRANTS SHALL BE EJIW 5BR-250 WITH 4-INCH STORZ QUICK CONNEX AND 2-1/2" HYDRANT OUTLETS.
- 12: FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL NECESSARY HYDRANT EXTENSIONS, THRUST BLOCKS, PIPE AND FITTINGS, INCLUDING ADJUSTMENT OF THE COMPANION VALVE. FIRE HYDRANT ASSEMBLY INCLUDES 6-INCH COMPANION VALVE LOCATED THREE FEET FROM THE HYDRANT.
- 13: ALL WATER MAIN TRENCH BACKFILL SHALL BE MDOT CLASS II GRANULAR MATERIAL (SEE UTILITY TRENCH TYPE I DETAIL).
- 14: CONNECTIONS TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE NEW MAIN HAS BEEN SUCCESSFULLY TESTED AND HAS PASSED ALL HYDROSTATIC AND BACTERIOLOGICAL TESTING. FINAL CONNECTIONS SHALL BE COORDINATED WITH THE ENGINEER.
- 15: THE CONTRACTOR SHALL PERFORM ALL WATER SYSTEM SHUT DOWNS AFTER APPROPRIATE NOTIFICATION TO THOSE AFFECTED AND APPROVAL HAS BEEN GRANTED BY THE ENGINEER.
- 16: WATER SERVICES SHOWN REPRESENT THE BEST INFORMATION AVAILABLE BASED ON RECORDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE CITY IN LOCATING, VERIFYING AND RECONNECTING ALL EXISTING ACTIVE SERVICES.
- 17: ALL LINE STOP LOCATIONS SHALL BE DETERMINED BY THE CITY ENGINEER AS NEEDED. THIS ITEM OF WORK SHALL BE PAID FOR AS " 1/2 INCH TEMPORARY WATER MAIN LINE STOP"

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING NO. 2018-032-22

SHEET NO. 22 OF 39

THIRD & MOSELY WATER MAIN AND RESURFACING PROJECT

WATER MAIN PLAN AND PROFILE - MOSELY STREET STA 9+00 TO 12+00

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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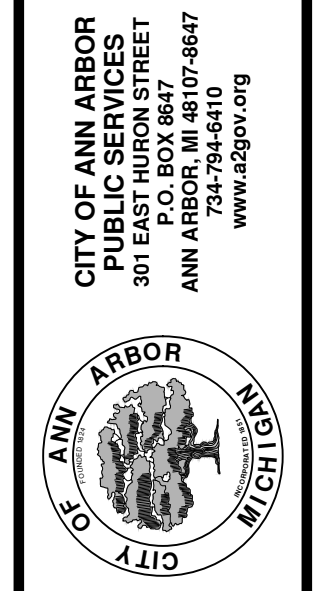
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301 EAST HURON STREET
P.O. BOX 86470
ANN ARBOR MI 48108-6647
www.a3gov.org

C:\pwwork\mflnagon\0867624\8 WATER MAIN PLAN AND PROFILE - MOSLEY STREET.dwg Dwg Created: 25-Oct-18 - _o2_standard_bw.stb - Plot Date: 15-Dec-21

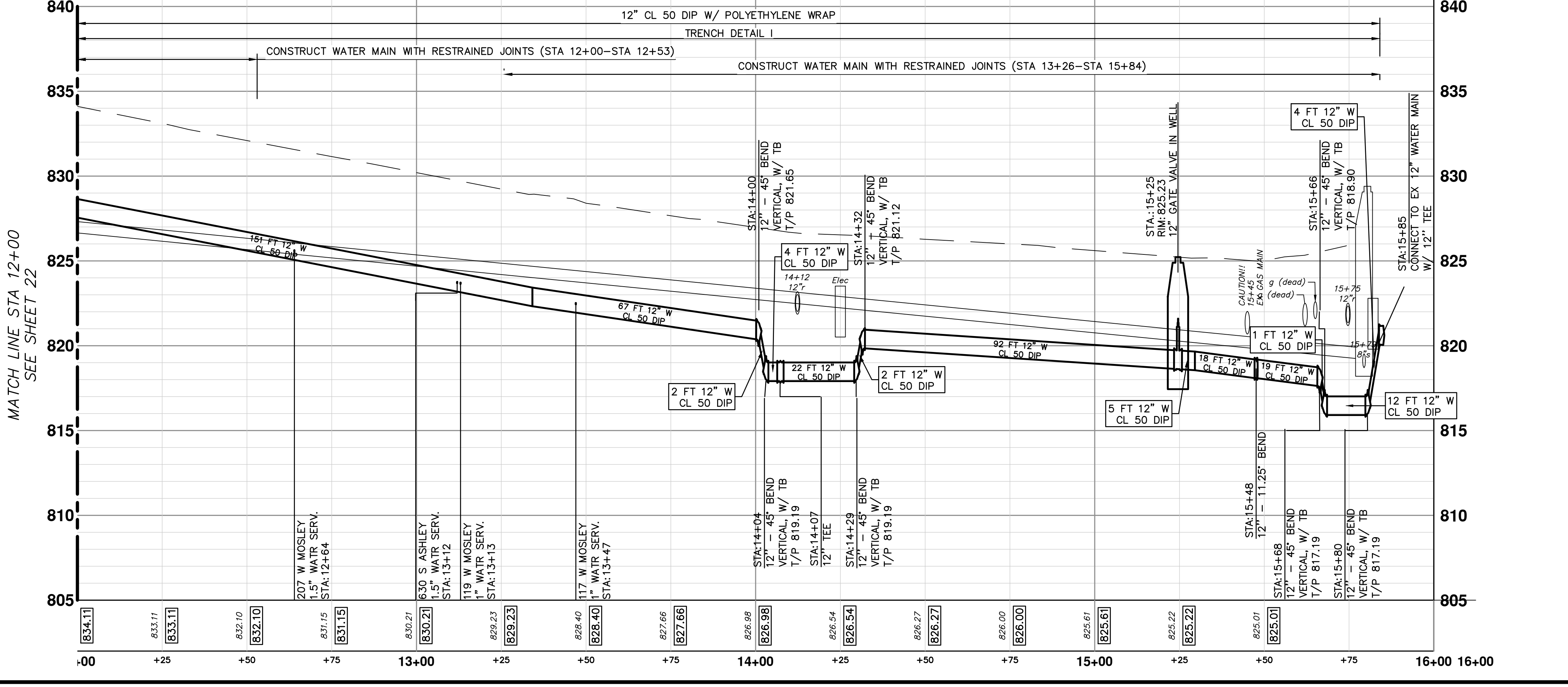
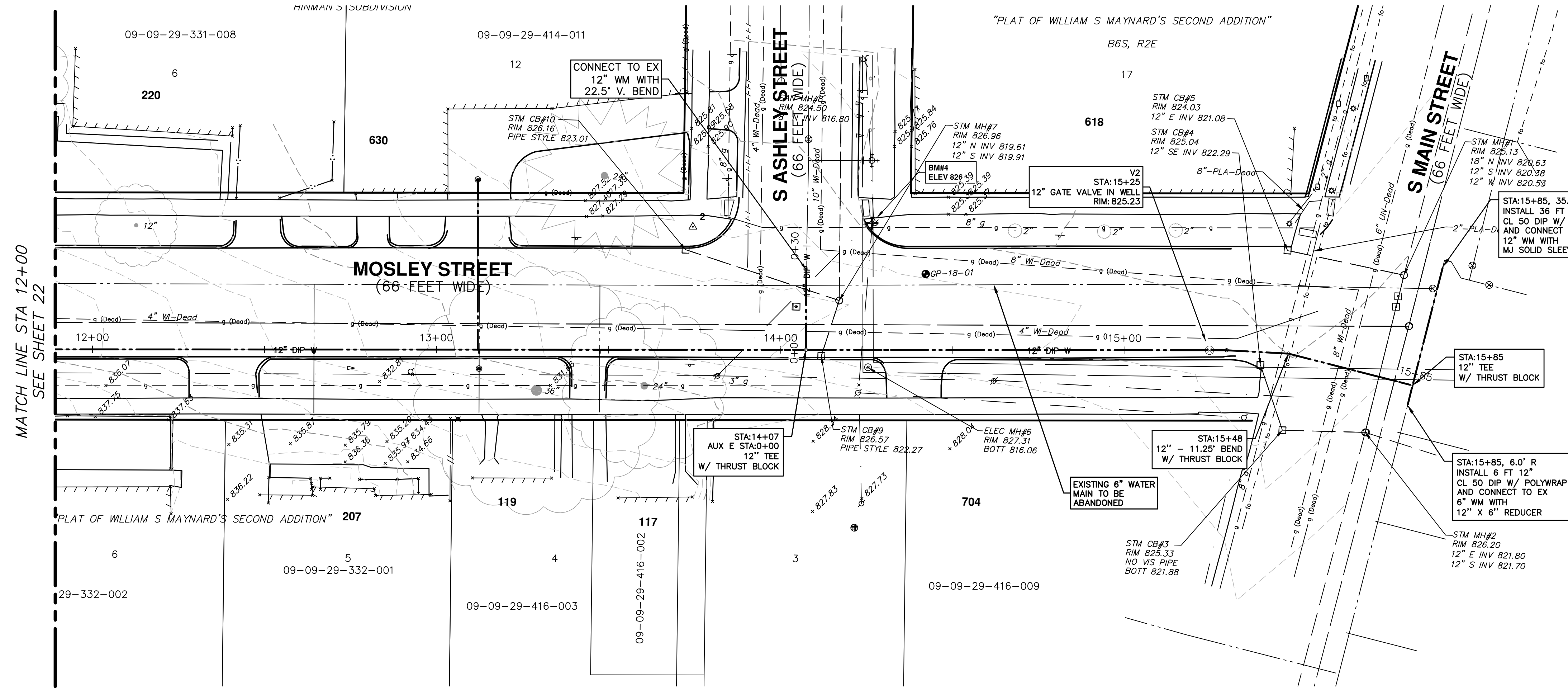
WATER MAIN STRUCTURE TABLE					
STRUCTURE	TYPE	STATION	RIM	WELL DEPTH	CASTING
V2	12" GVW	MAIN 15+25	825.23	7.12	TYPE B



REV.	DESCRIPTION	DATE	DRAWN	CHECKED



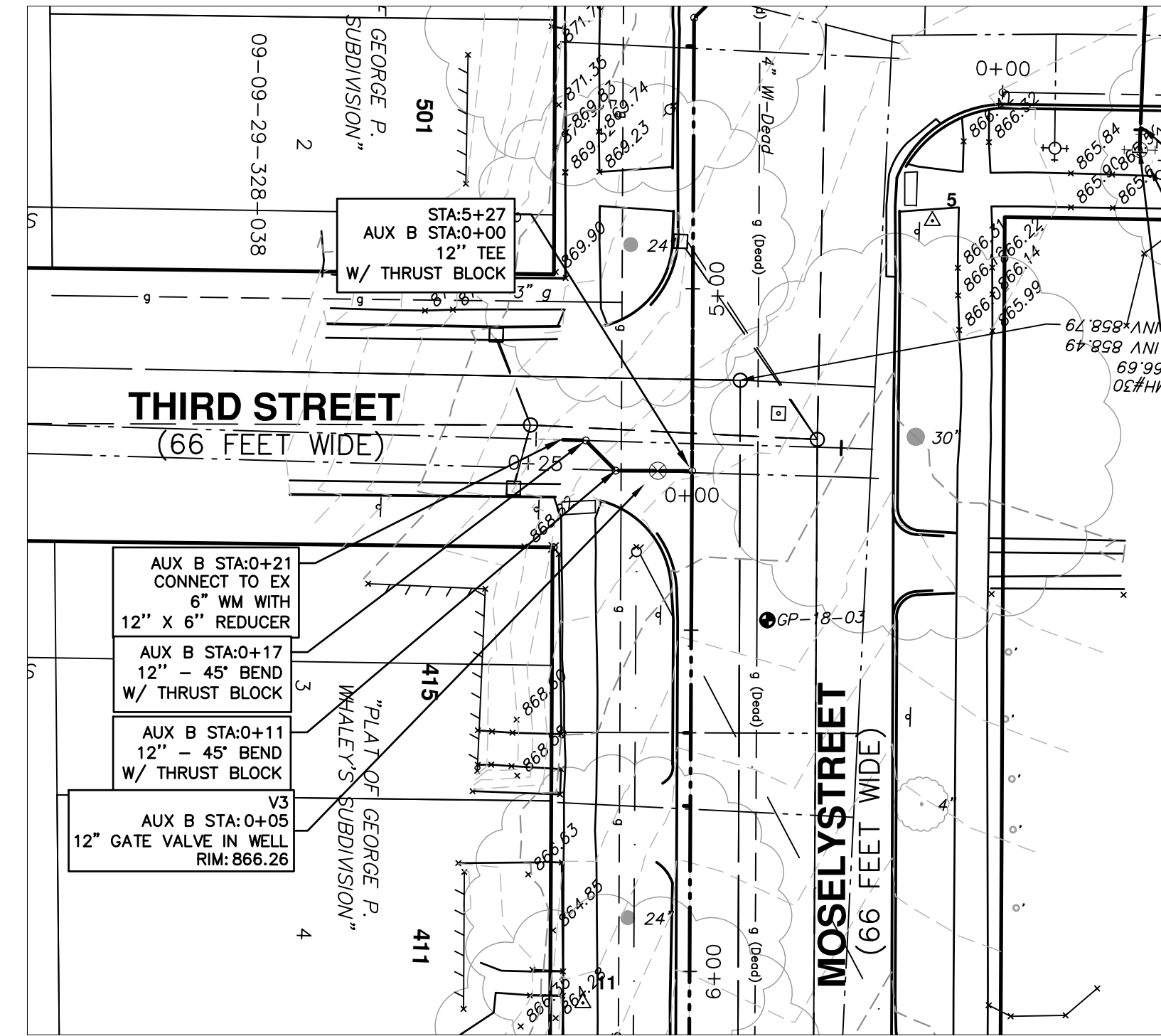
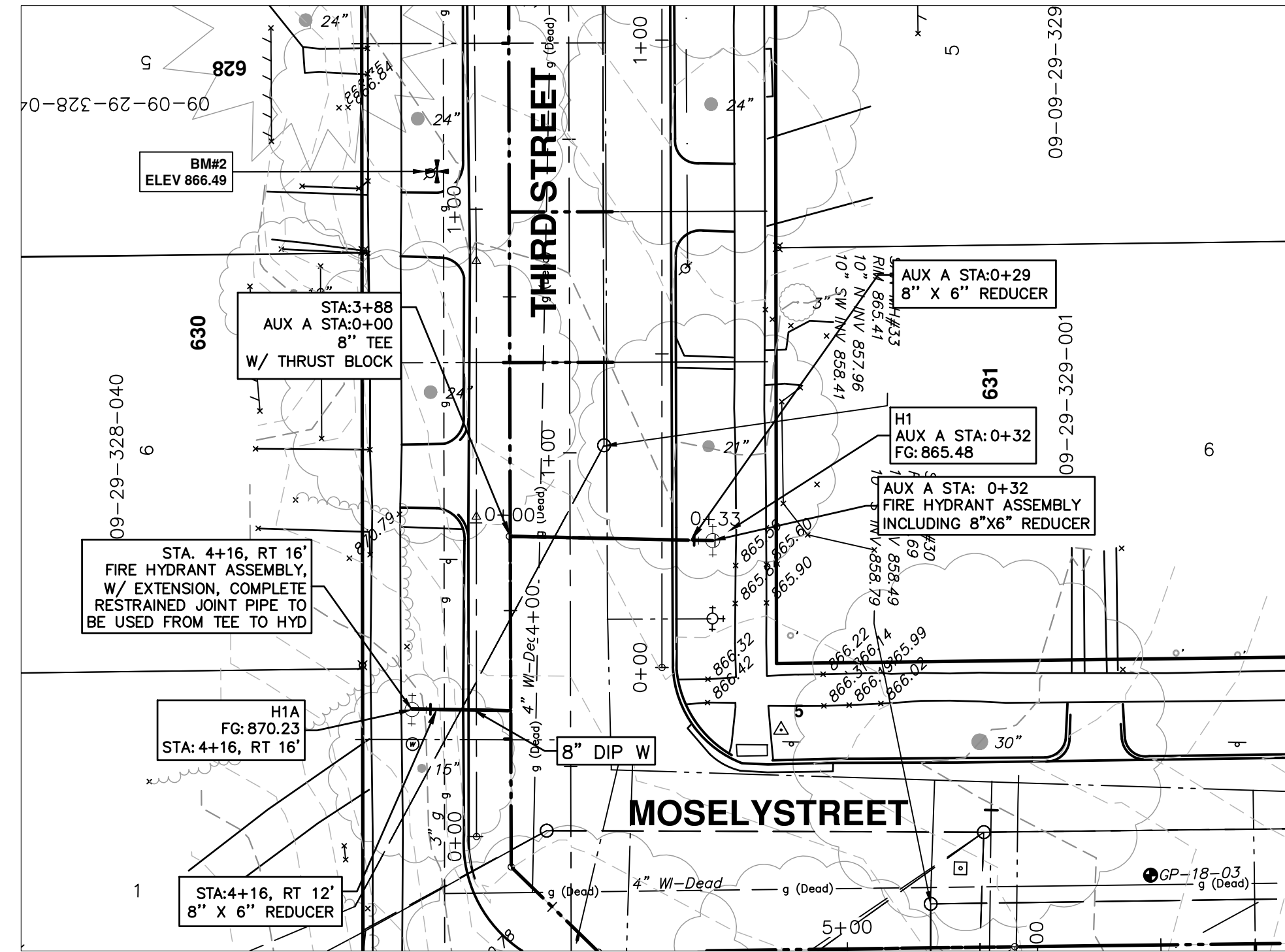
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
 THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
 WATER MAIN PLAN AND PROFILE - MOSLEY STREET STA 12+00 TO 15+00
 SCALE PLAN: 1" = 20'
 PROFILE: 1" = 4'
 SHEET No. 23 OF 39
 DRAWING No. 2018-032-23



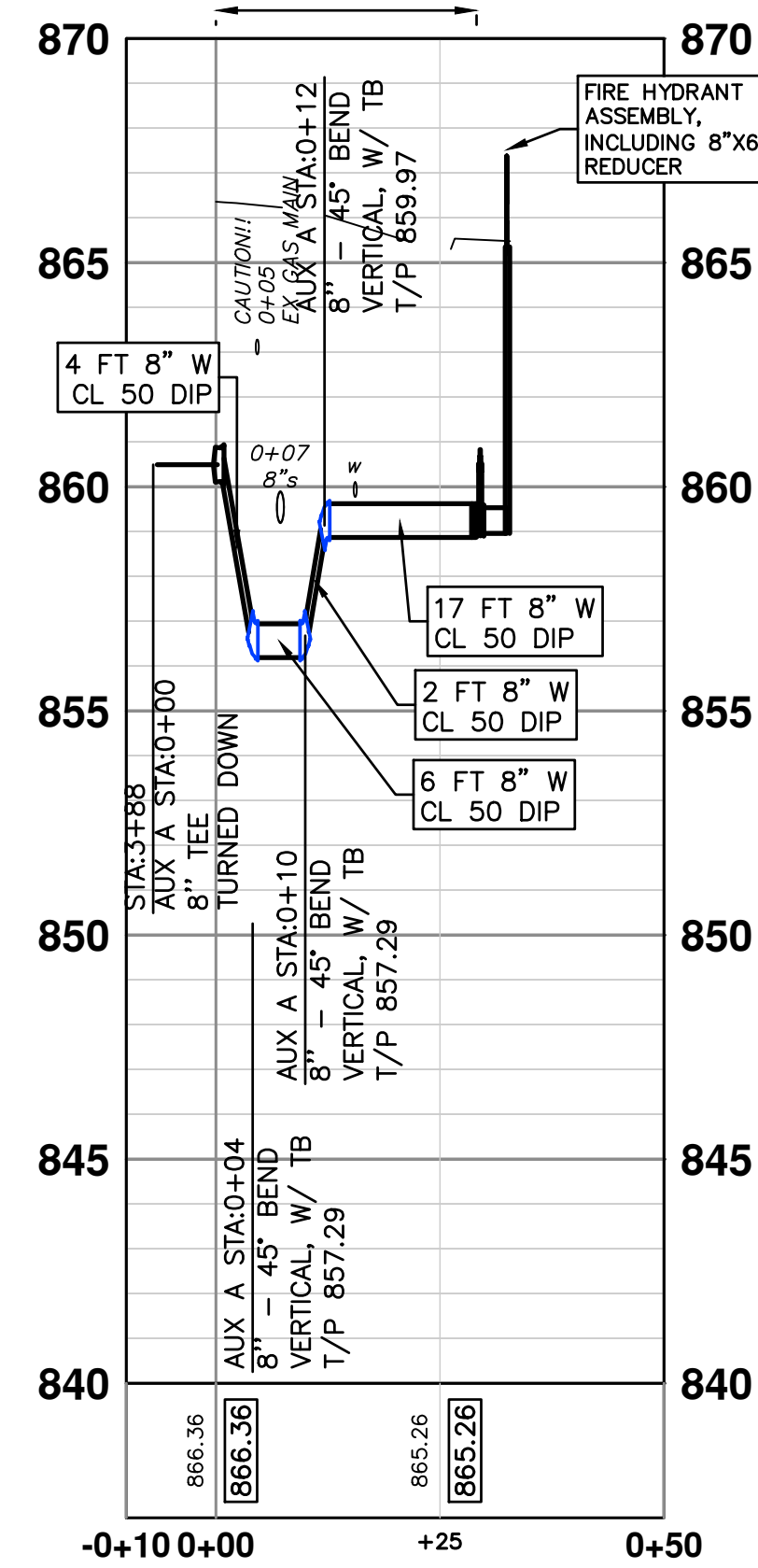
- WATER MAIN CONSTRUCTION NOTES**
- SEE EROSION CONTROL SHEETS FOR DETAILS ON PLACEMENT, MAINTENANCE, AND REMOVAL OF EROSION CONTROL ITEMS.
 - THE CONTRACTOR SHALL CAREFULLY PROTECT FROM DAMAGE OR INJURY DURING CONSTRUCTION OPERATIONS ALL UTILITIES, SITE FEATURES, LANDSCAPING, AND OTHER ITEMS NOT DESIGNATED FOR REMOVAL OR ABANDONMENT. PAYMENT FOR PROTECTION OF UTILITIES INCLUDED IN "GENERAL CONDITIONS, MAX". EXISTING FACILITIES NOT DESIGNATED FOR REMOVAL OR ABANDONMENT, BUT WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS SOLE EXPENSE, AS DETERMINED BY THE ENGINEER.
 - THE EXISTING UTILITIES SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED THROUGH SURVEYS AND/OR EXISTING PLANS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES. IF STORM OR WATERMANS CROSS OTHER UTILITIES, CONTACT THEIR RESPECTIVE OWNERS FOR INFORMATION ON HOW TO PROCEED. PAYMENT FOR THE COORDINATION EFFORTS AND ASSOCIATED ITEMS SHALL BE INCLUDED IN ASSOCIATED PROPOSED STORM OR WATERMAIN ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.
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 - THE CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING SANITARY SEWER OR WATER MAIN LEADS FOR EASE OF CONSTRUCTING OTHER ASPECTS OF WORK. THE CONTRACTOR SHALL CAREFULLY PROTECT ALL LEADS FROM DAMAGE OR INJURY.
 - THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS WHICH ARE INCLUDED BY REFERENCE. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THE REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH CURRENT PUBLIC SERVICE DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS.
 - ALL WATER MAIN SHALL BE CL 50 DUCTILE IRON WATER MAIN, CEMENT-LINED (DOUBLE THICKNESS), WITH POLYWRAP UNLESS NOTED OTHERWISE.
 - RESTRAINED JOINT SYSTEMS FOR WATER MAIN SHALL BE UTILIZED WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. RESTRAINED JOINT GASKET SYSTEMS ARE TO BE USED. (FIELD-LOK 350 BY U.S. PIPE, FAST-GRIP BY AMERICAN DUCTILE IRON PIPE, OR APPROVED EQUAL)
 - ALL WATER MAIN TO HAVE 5.5 FEET OF COVER. MAINTAIN A MINIMUM OF 18-INCH VERTICAL CLEARANCE FOR STORM AND SANITARY CROSSINGS AND A MINIMUM OF 12-INCH VERTICAL CLEARANCE WITH ALL OTHER UTILITIES.
 - UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL UTILIZE STANDARD PIPE DEFLECTIONS FOR FOLLOWING THE PROPOSED ALIGNMENT.
 - NEW FIRE HYDRANTS SHALL BE EJIW 5BR-250 WITH 4-INCH STORZ QUICK CONNOC AND 2-2 1/2 HYDRANT OUTLETS.
 - FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL NECESSARY HYDRANT EXTENSIONS, THRUST BLOCKS, PIPE AND FITTINGS, INCLUDING ADJUSTMENT OF THE COMPANION VALVE. FIRE HYDRANT ASSEMBLY INCLUDES 6-INCH COMPANION VALVE LOCATED THREE FEET FROM THE HYDRANT.
 - ALL WATER MAIN TRENCH BACKFILL SHALL BE MDOT CLASS II GRANULAR MATERIAL (SEE UTILITY TRENCH TYPE I DETAIL).
 - CONNECTIONS TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE NEW MAIN HAS BEEN SUCCESSFULLY TESTED AND HAS PASSED ALL HYDROSTATIC AND BACTERIOLOGICAL TESTING. FINAL CONNECTIONS SHALL BE COORDINATED WITH THE ENGINEER.
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 - ALL LINE STOP LOCATIONS SHALL BE DETERMINED BY THE CITY ENGINEER, AS NEEDED. THIS ITEM OF WORK SHALL BE PAID FOR AS " 1/2 INCH TEMPORARY WATER MAIN LINE STOP"

MATCH LINE STA 12+00 SEE SHEET 22

MATCH LINE STA 12+00 SEE SHEET 22

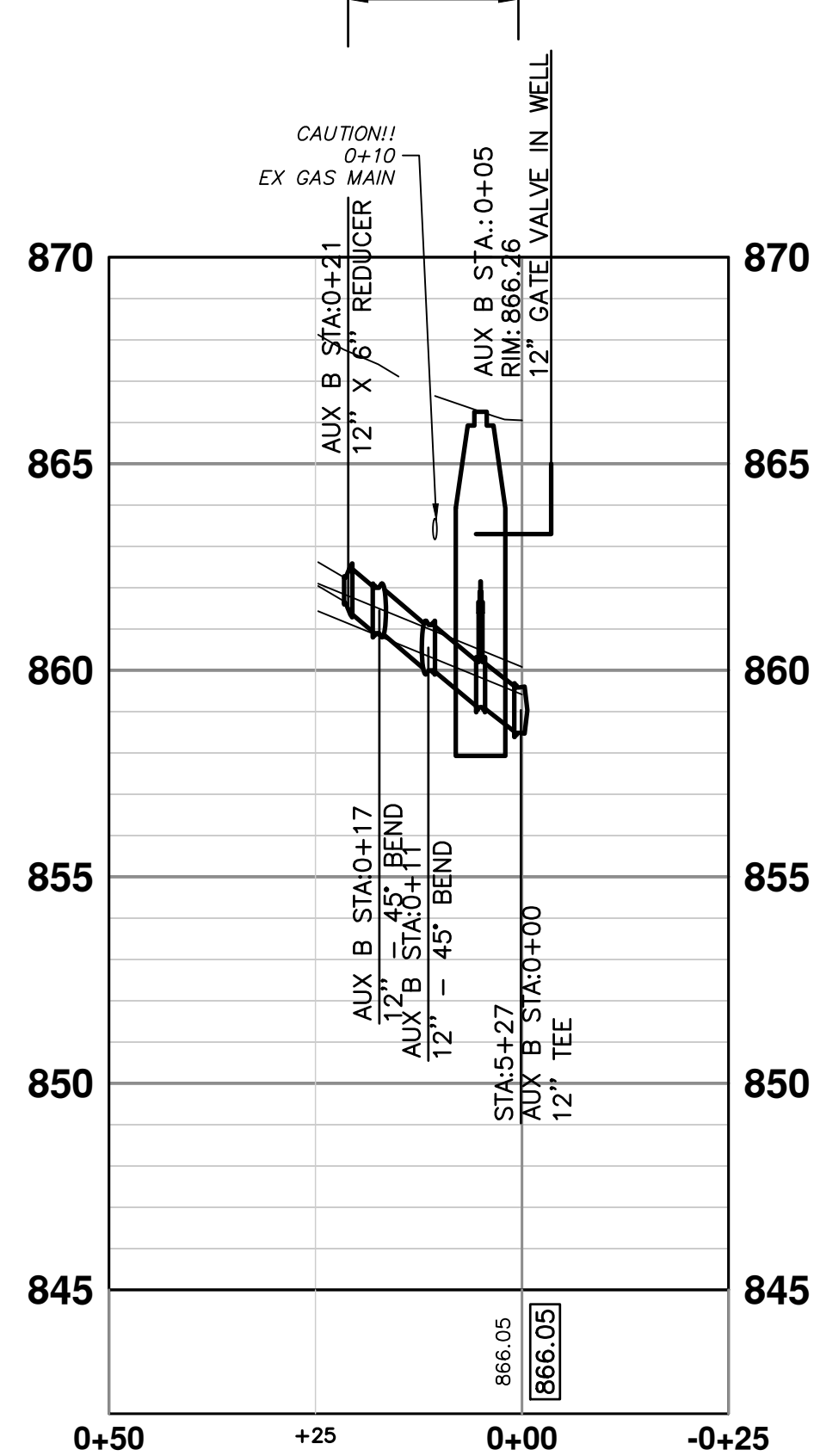


29 FT 8" CL 50 DIP W/ POLYETHYLENE WRAP (TRENCH DETAIL I)
CONSTRUCT WATER MAIN WITH RESTRAINED JOINTS



AUXILIARY A PROFILE

21 FT 12" CL 50 DIP W/ POLYETHYLENE WRAP (TRENCH DETAIL I)
CONSTRUCT WATER MAIN WITH RESTRAINED JOINTS



AUXILIARY B PROFILE

WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	FG	DEPTH
H1	HYDRANT ASSEMBLY	AUX A 0+32	865.48	6.39

WATER MAIN STRUCTURE TABLE					
STRUCTURE	TYPE	STATION	RIM	WELL DEPTH	CASTING
V3	12" GVIW	AUX B 0+05	866.26	7.67	TYPE B



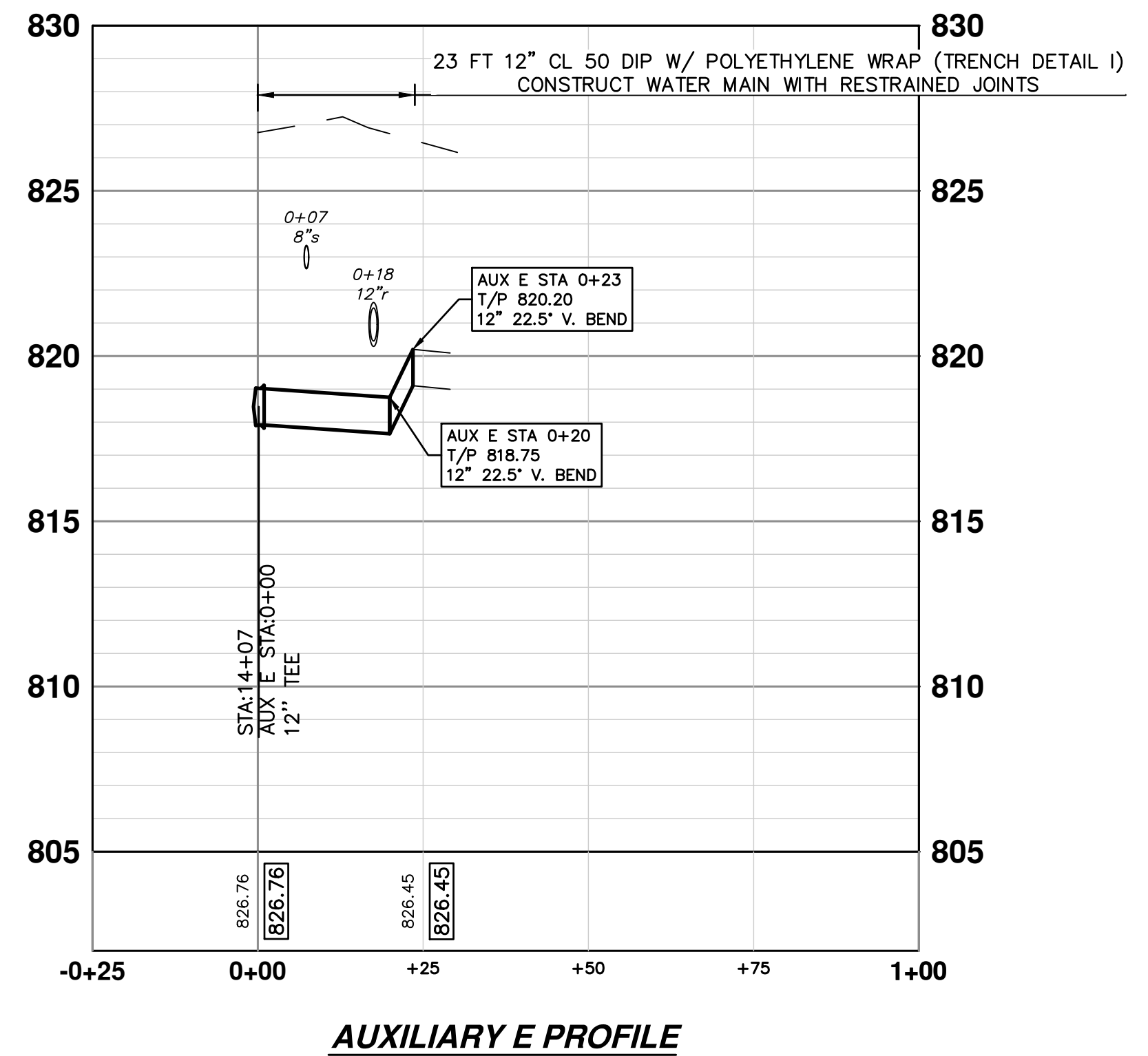
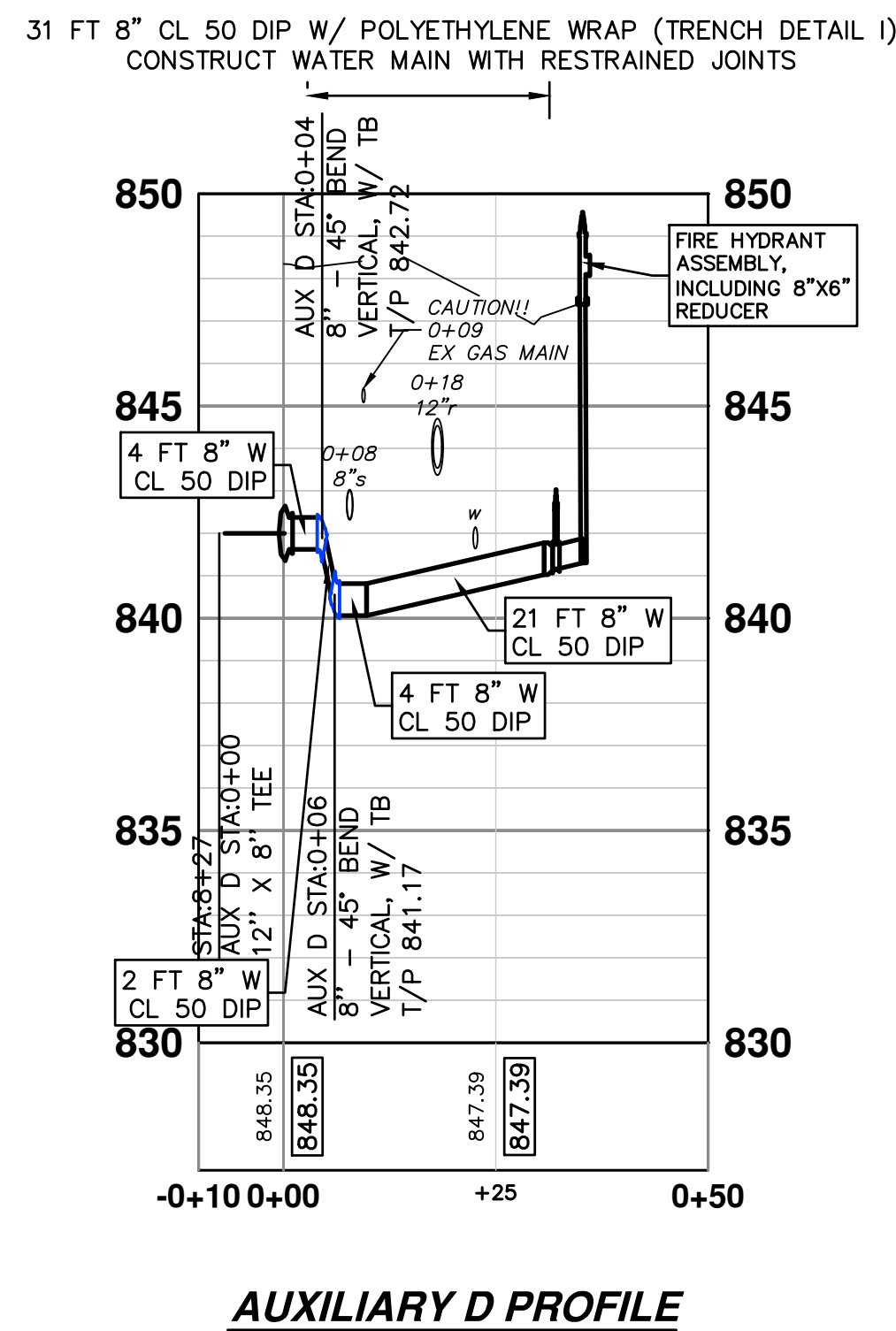
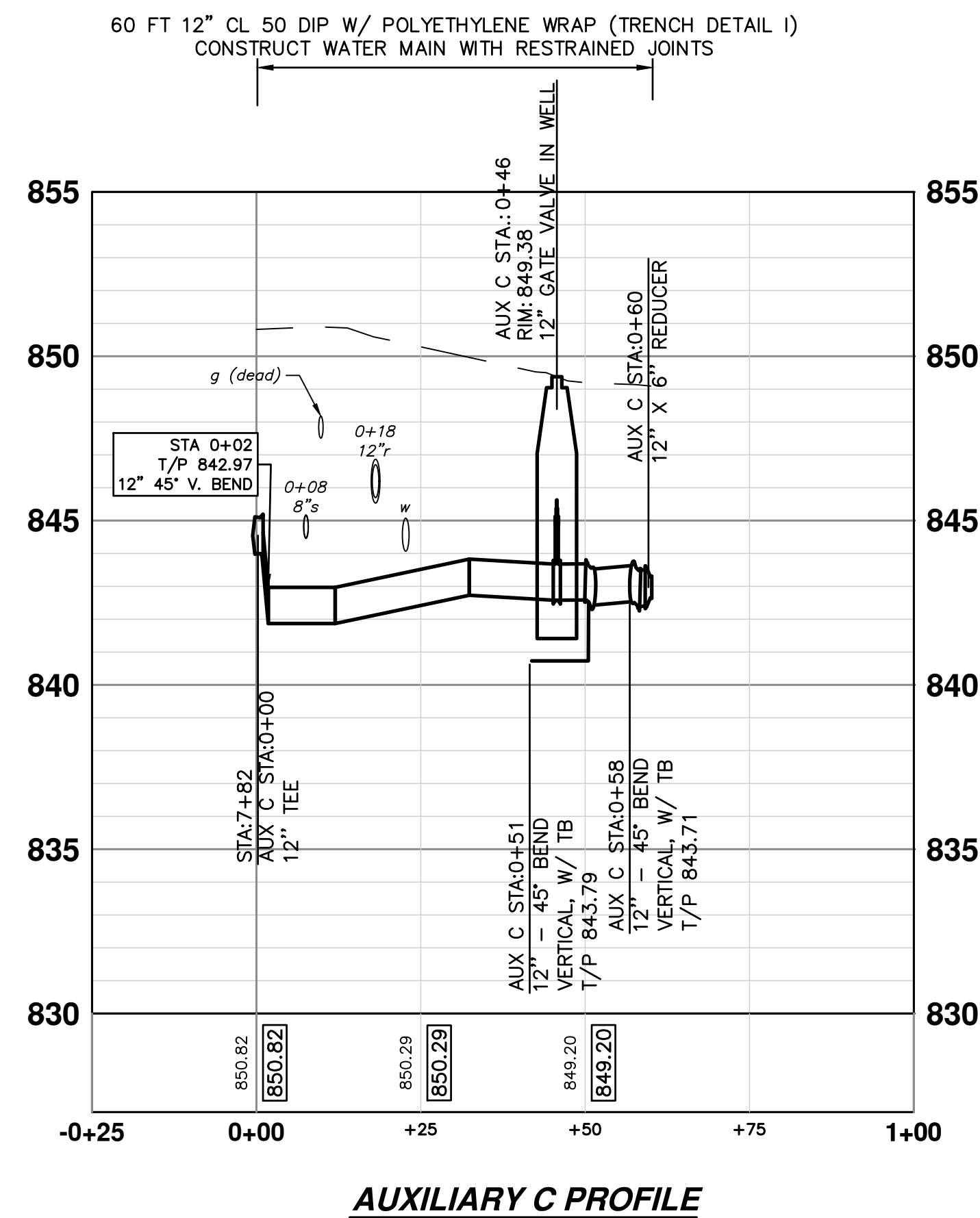
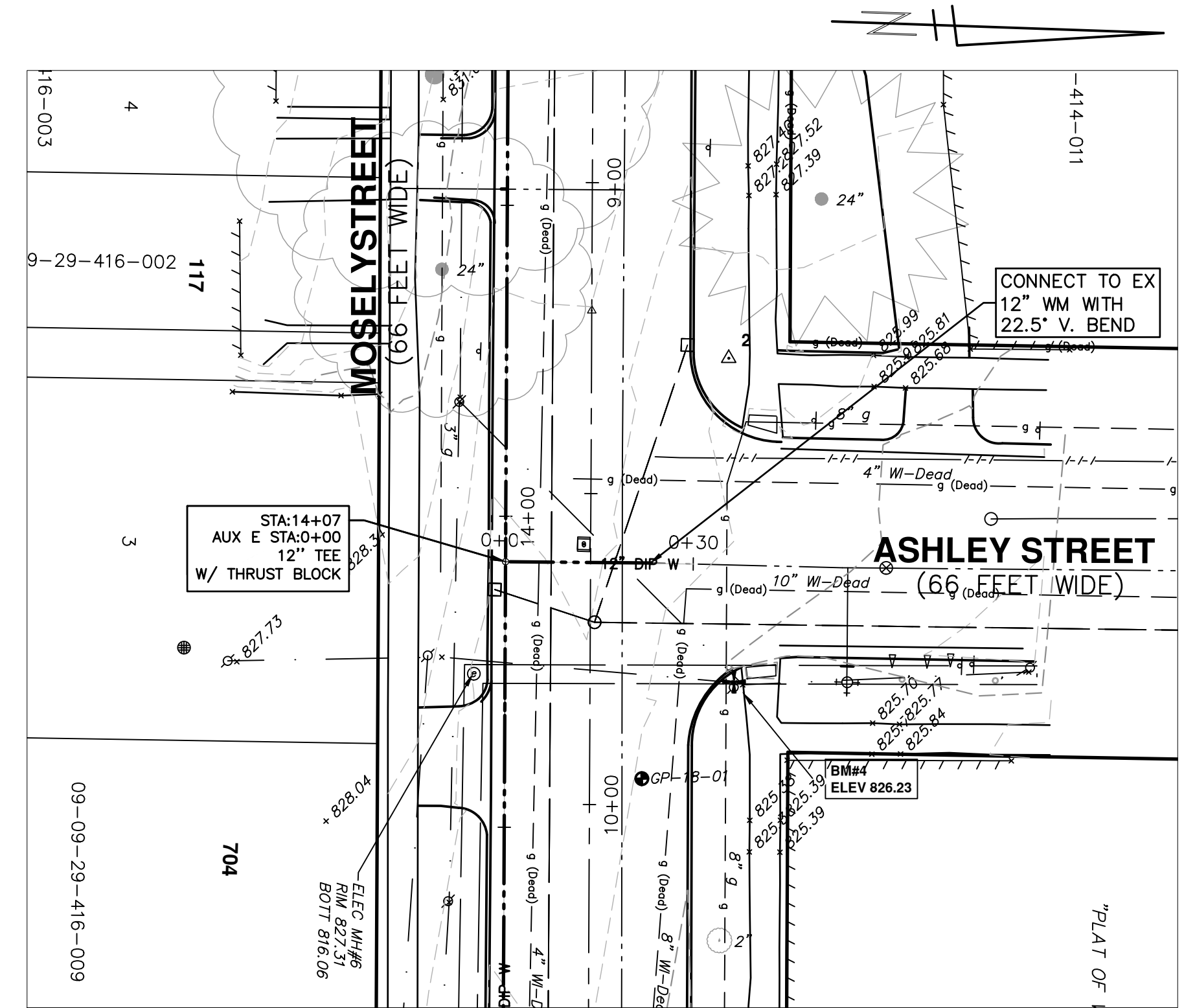
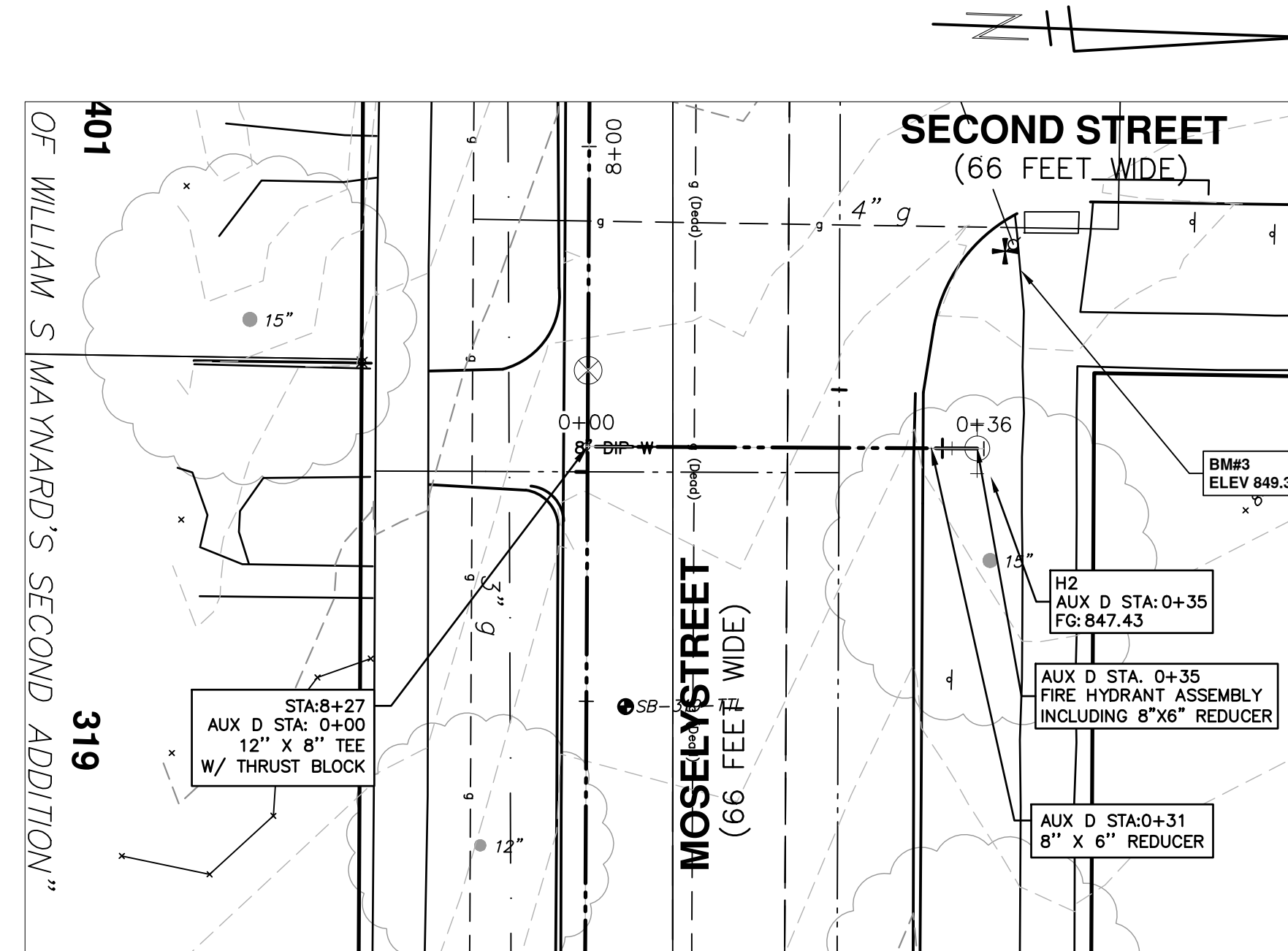
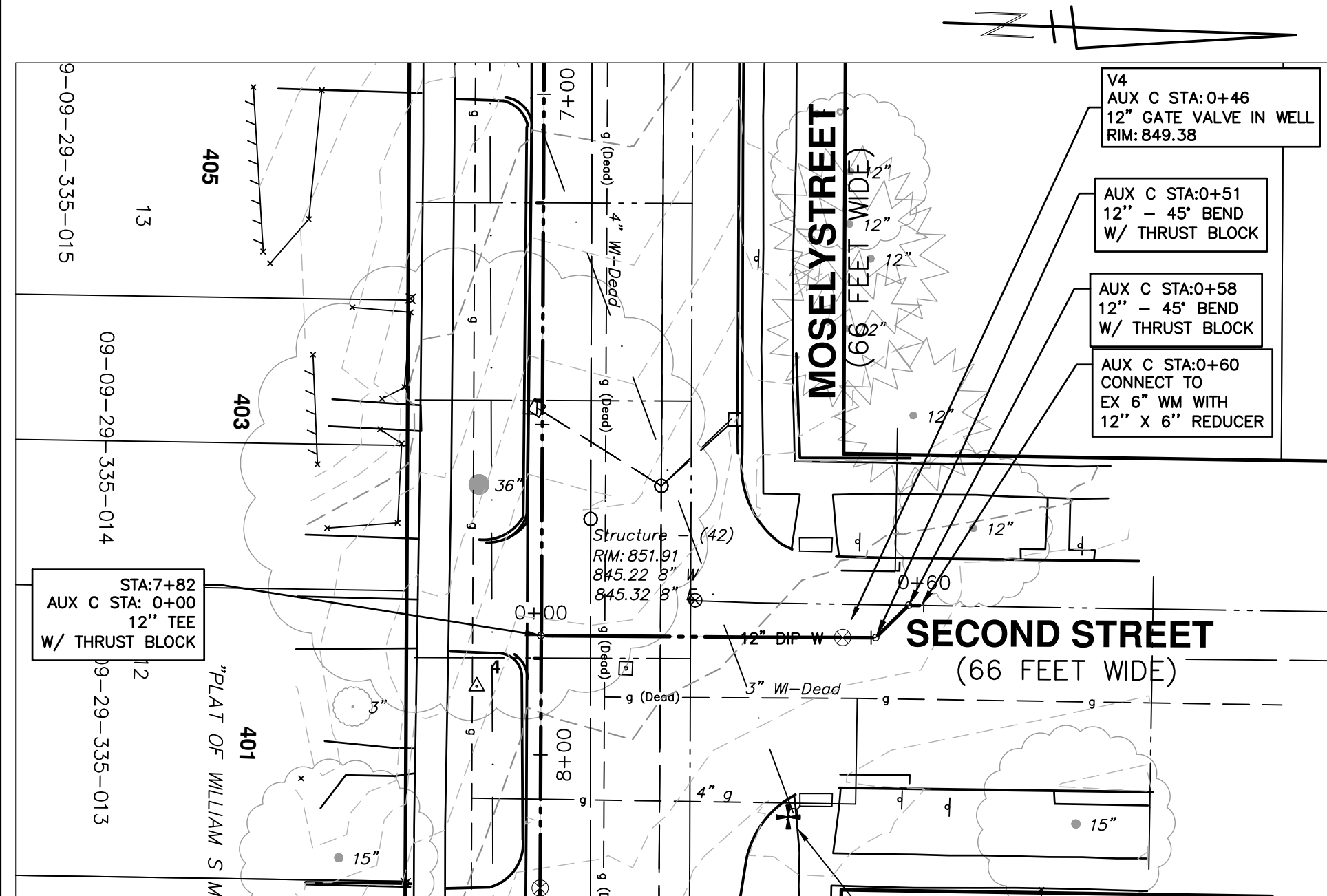
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN
AND RESURFACING PROJECT
WATER MAIN CONNECTIONS - HYDRANT 1, CONNECTION AT THIRD

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'
DRAWING No. 2018-035-24
SHEET No.

C:\pwork\mflnagon\0867624\PROPOSED WATER MAIN CONNECTIONS.dwg Dwg Created: 26-Nov-18 - _a2 standard bw.stb - Plot Date: 15-Dec-21



WATER MAIN STRUCTURE TABLE					
STRUCTURE	TYPE	STATION	FG	DEPTH	
H2	HYDRANT ASSEMBLY	AUX D 0+35	847.43	6.13	

WATER MAIN STRUCTURE TABLE					
STRUCTURE	TYPE	STATION	RIM	WELL DEPTH	CASTING
V4	12" GWV	AUX C 0+46	849.38	7.30	TYPE B

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

WATER MAIN CONNECTIONS - CONNECTION AT SECOND & ASHLEY, HYDRANTS

SCALE PLAN: 1" = 20'

PROFILE: 1" = 4'

DRAWING No. 2018-035-25

SHEET No. 25 OF 39

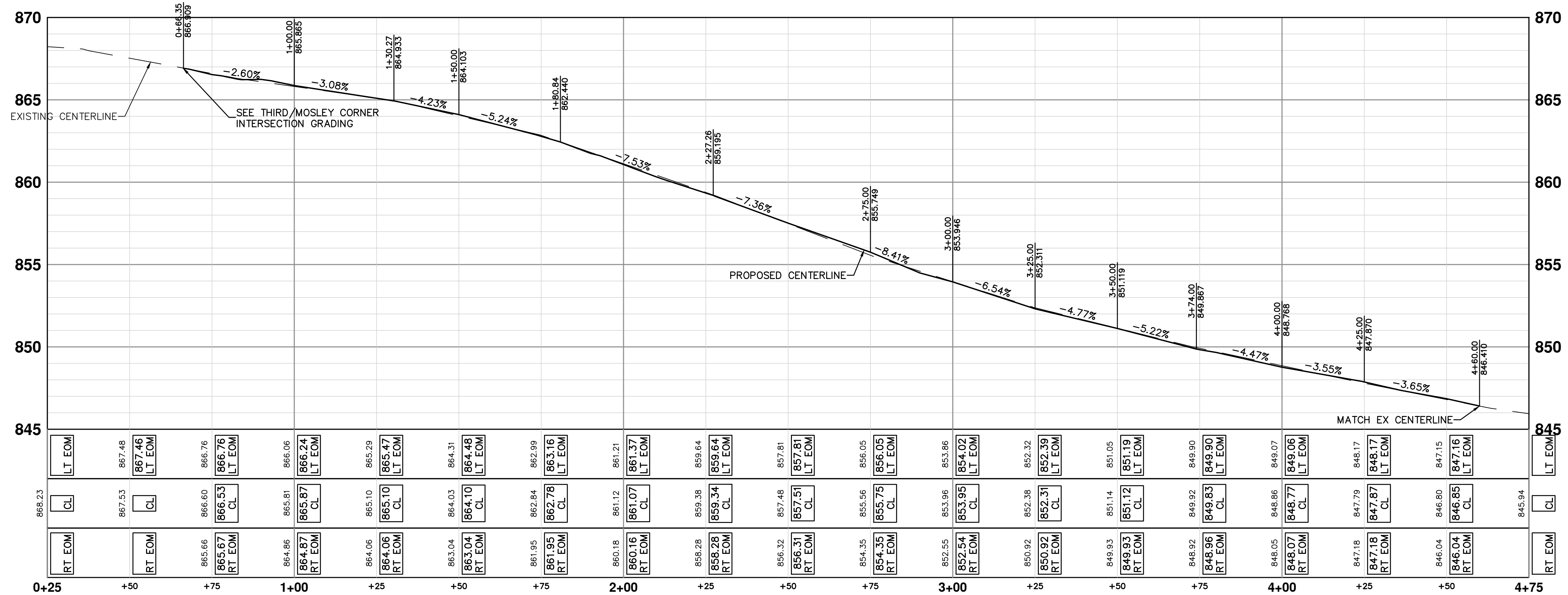
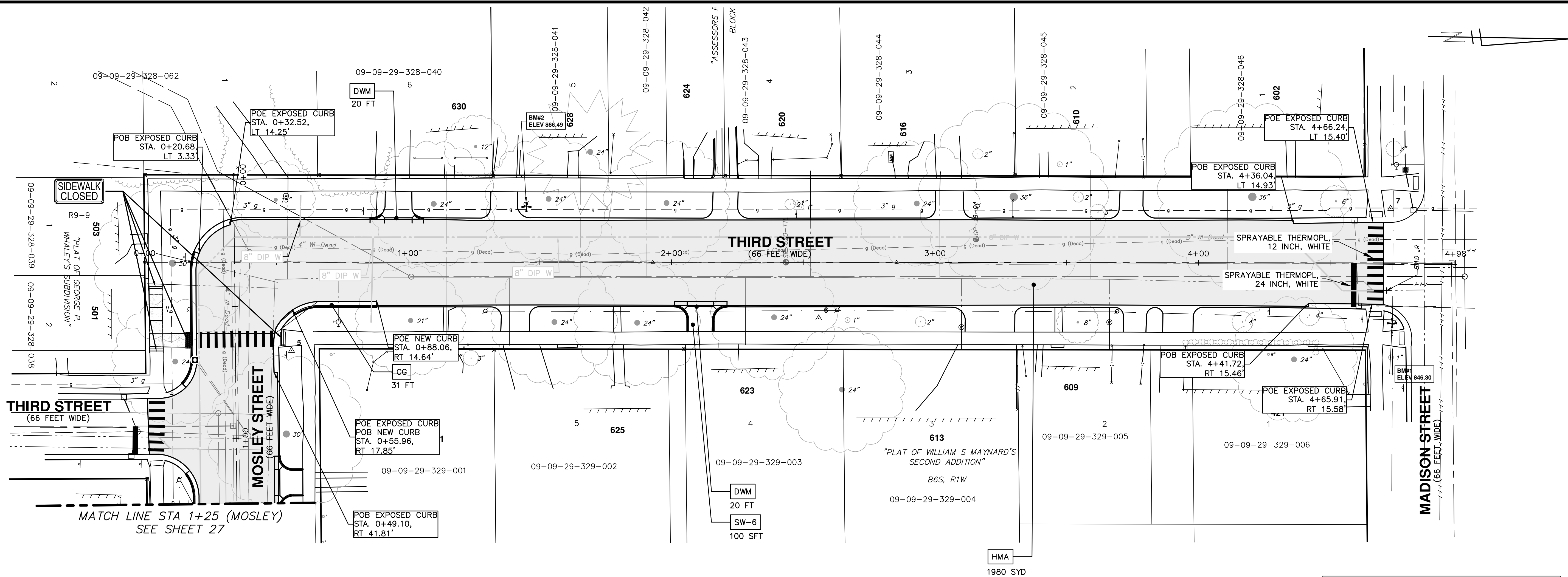
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C:\pwork\mflnagon\0867624\12 PAVING PLAN AND PROFILE - THIRD STREET.dwg Created: 27-Sep-18 - _a2 standard bw.stb - Plot Date: 15-Dec-21



CONSTRUCTION KEY

HMA	HMA, 4E1 - PAVEMENT BASE COURSE HMA, 4E1 - PAVEMENT TOP COURSE
CG	CURB & GUTTER, CONG, DET SD-R-1, SPECIAL
SW-4	4" CONCRETE SIDEWALK
SW-6	6" CONCRETE SIDEWALK, RAMP, DRIVE APPROACH - HE
DWS	DETECTABLE WARNING, CAST IN PLACE
DWM	CONCRETE TYPE M DRIVE OPENING, HE

NOTE:

- PLACE HMA PAVEMENT PER TYPICAL SECTION ON SHEET 10.
- GUTTER PAN SHALL REMAIN EXPOSED ON ALL NEW CURB UNLESS OTHERWISE NOTED.
- EDGE DRAIN TO BE PLACED ALONG CURB WHERE FULL LANE PAVEMENT REMOVAL OCCURS AND CONNECTED TO EXISTING STRUCTURES AT THE SOLE DISCRETION OF THE FIELD ENGINEER.

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

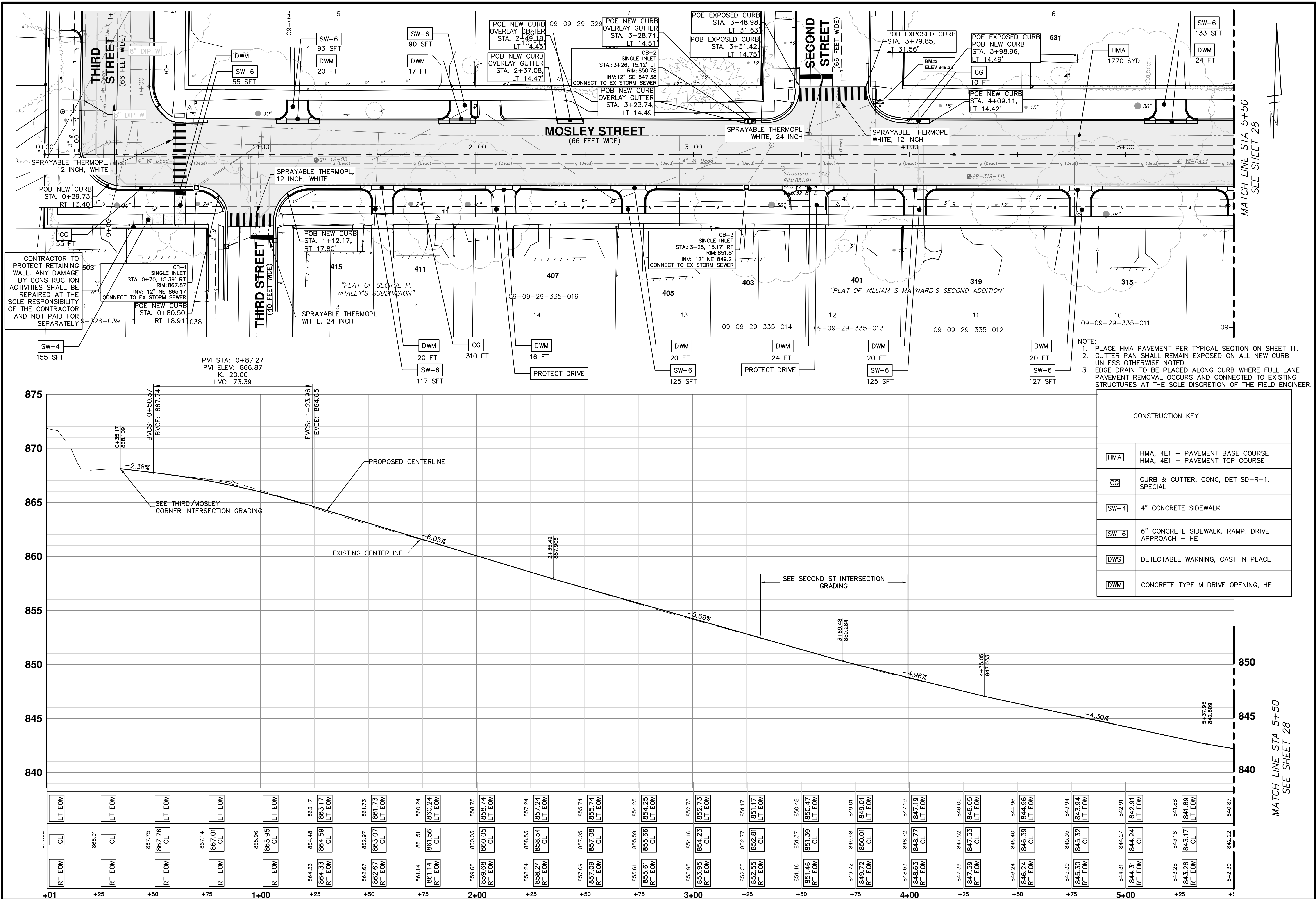
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

PAVING PLAN AND PROFILE - THIRD STREET

DRAWING NO. 2018-032-26

SHEET NO. 26 OF 39

C:\pwwork\mflnagon\0867624\13 PAVING PLAN AND PROFILE - MOSELY STREET.dwg Dwg Created: 27-Sep-18 - _o2 standard bw.stb - Plot Date: 15-Dec-21



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

PAVING PLAN AND PROFILE - MOSLEY STREET STA 0+00 TO STA 5+50

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING NO: 2018-035-27

SHEET NO: 27 OF 39

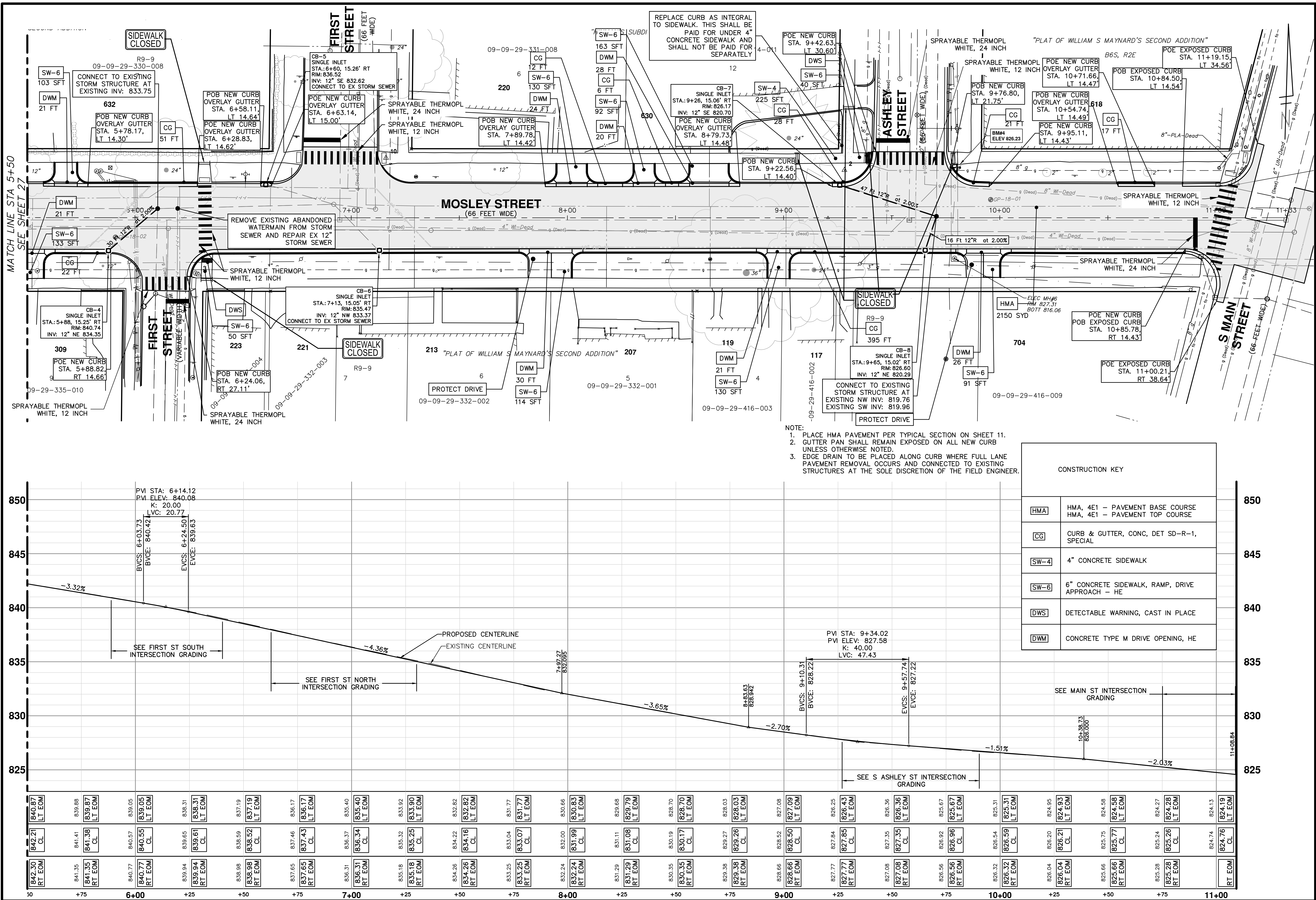
CONSTRUCTION KEY

HMA	HMA, 4E1 - PAVEMENT BASE COURSE HMA, 4E1 - PAVEMENT TOP COURSE
CG	CURB & GUTTER, CONC, DET SD-R-1, SPECIAL
SW-4	4" CONCRETE SIDEWALK
SW-6	6" CONCRETE SIDEWALK, RAMP, DRIVE APPROACH - HE
DWS	DETECTABLE WARNING, CAST IN PLACE
DWM	CONCRETE TYPE M DRIVE OPENING, HE

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MATCH LINE STA 5+50
SEE SHEET 27

- NOTE:
1. PLACE HMA PAVEMENT PER TYPICAL SECTION ON SHEET 11.
 2. GUTTER PAN SHALL REMAIN EXPOSED ON ALL NEW CURB UNLESS OTHERWISE NOTED.
 3. EDGE DRAIN TO BE PLACED ALONG CURB WHERE FULL LANE PAVEMENT REMOVAL OCCURS AND CONNECTED TO EXISTING STRUCTURES AT THE SOLE DISCRETION OF THE FIELD ENGINEER.

CONSTRUCTION KEY	
HMA	HMA, 4E1 - PAVEMENT BASE COURSE HMA, 4E1 - PAVEMENT TOP COURSE
CG	CURB & GUTTER, CONC, DET SD-R-1, SPECIAL
SW-4	4" CONCRETE SIDEWALK
SW-6	6" CONCRETE SIDEWALK, RAMP, DRIVE APPROACH - HE
DWS	DETECTABLE WARNING, CAST IN PLACE
DWM	CONCRETE TYPE M DRIVE OPENING, HE

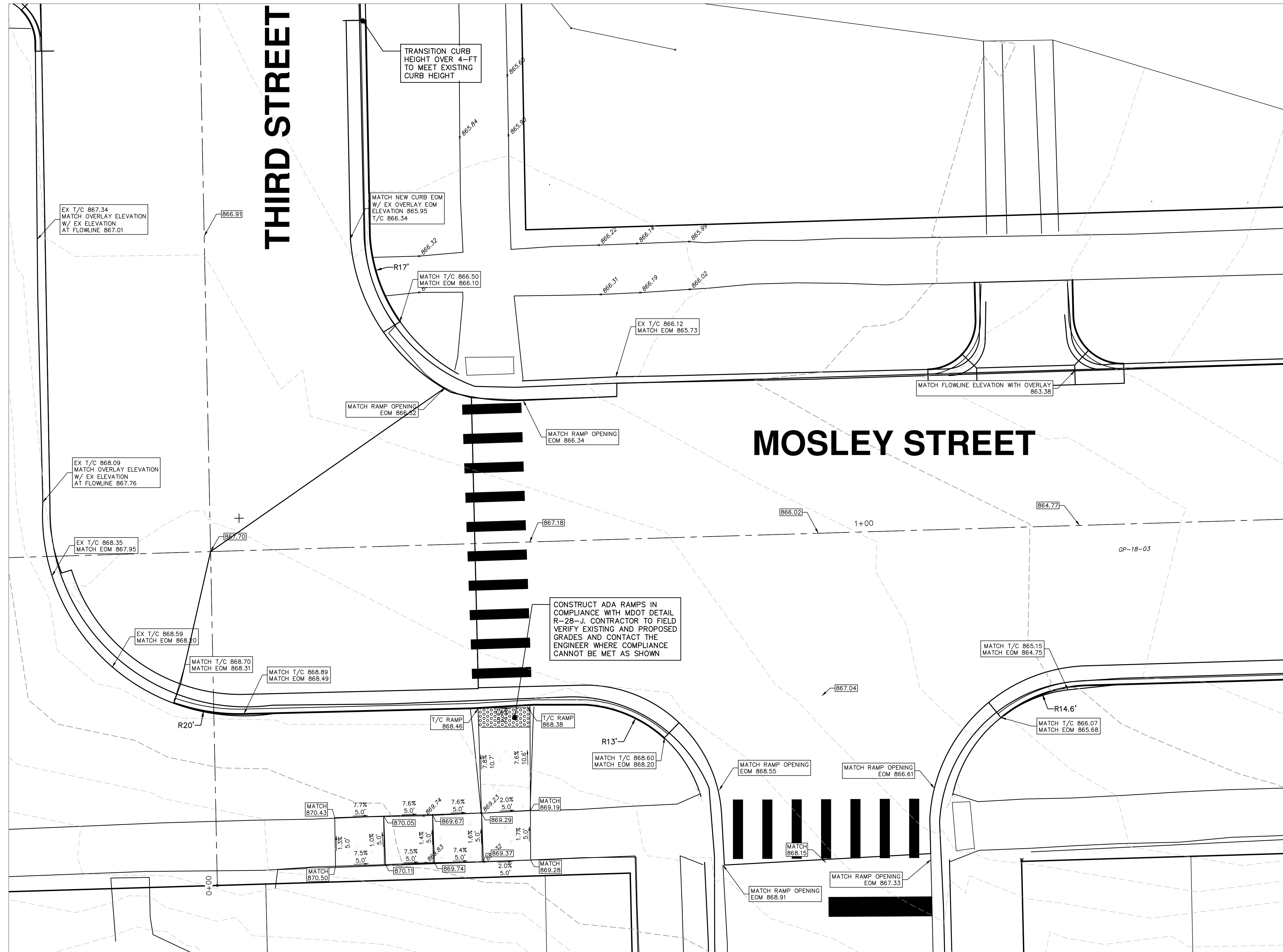


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THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
 PAVING PLAN AND PROFILE - MOSLEY STREET STA 5+50 TO STA 10+82.01

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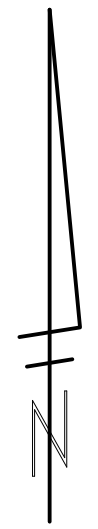
SHEET NO. **28 OF 39**
 SCALE PLAN: 1" = 20'
 PROFILE: 1" = 4'
 DRAWING NO. **2018-035-28**
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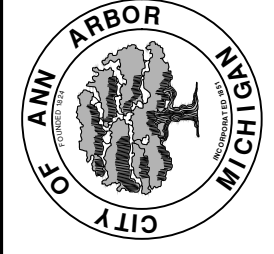
THIRD STREET

MOSLEY STREET



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

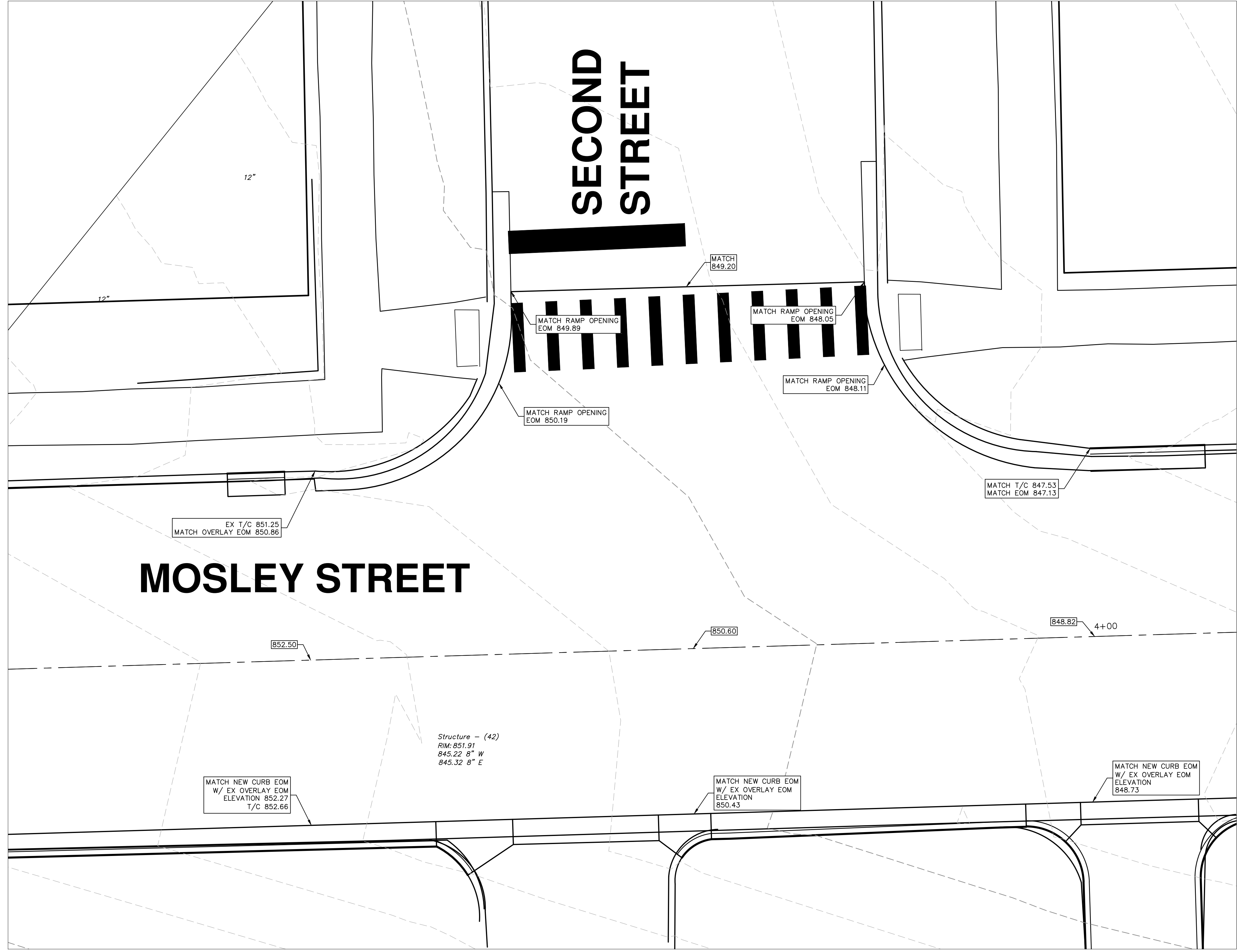
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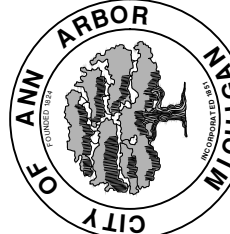



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
 THIRD & MOSLEY WATER MAIN
 AND RESURFACING PROJECT
 INTERSECTION GRADING- THIRD STREET & MOSLEY STREET

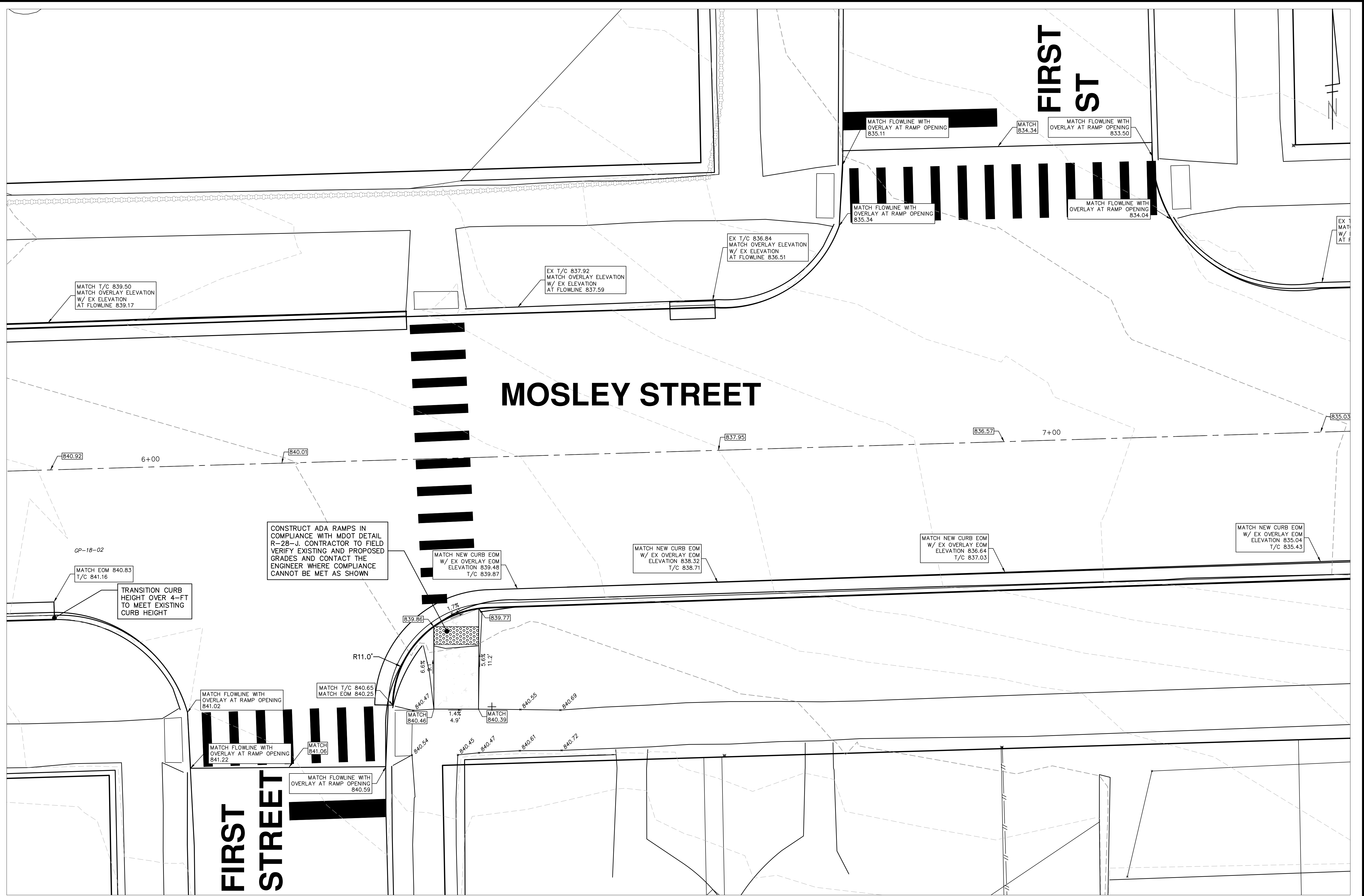
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 DRAWING No. 2018-032-29

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED											

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

INTERSECTION GRADING - FIRST ST

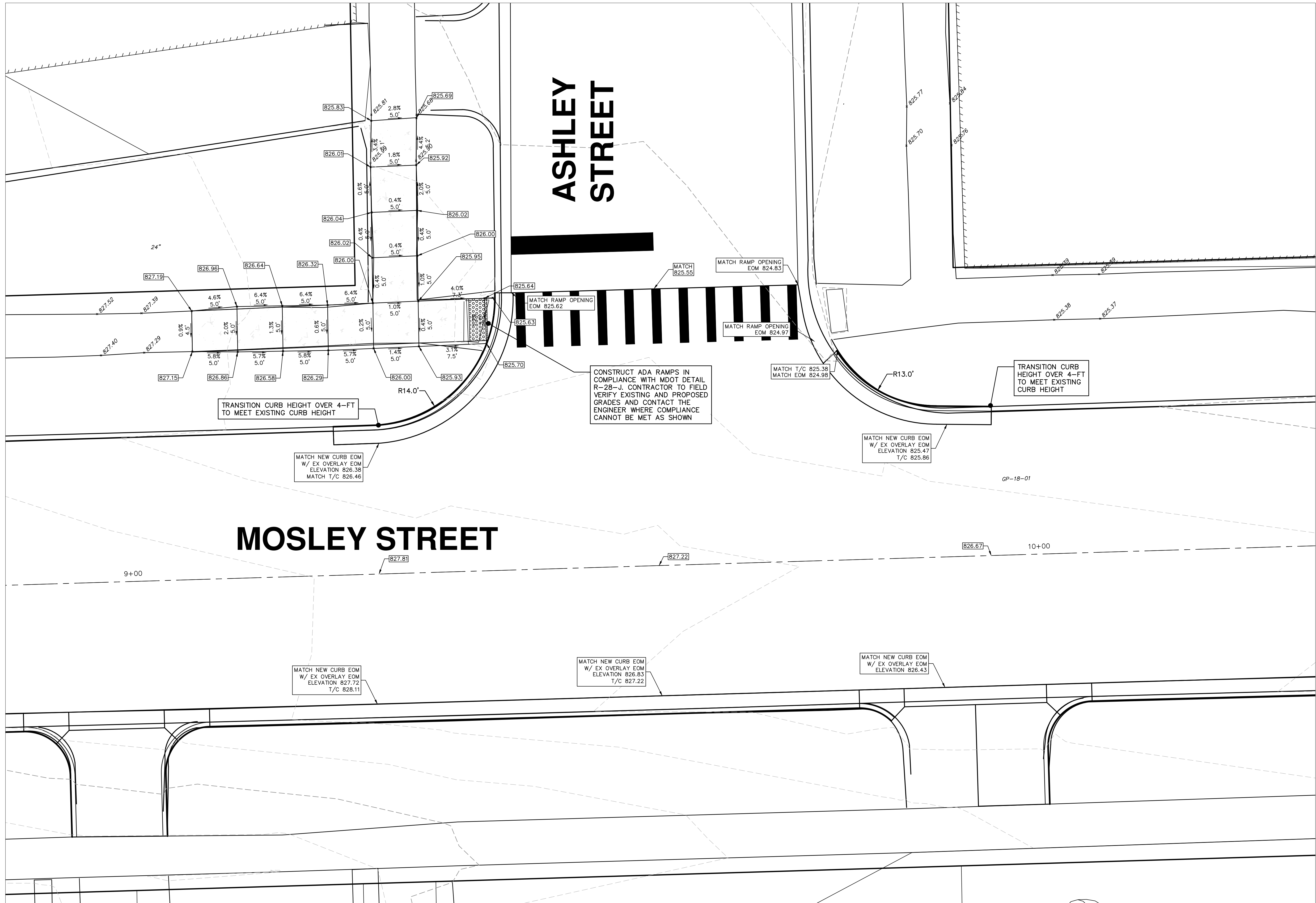
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SCALE PLAN: 1" = 5'

DRAWING No. 2018-032-31

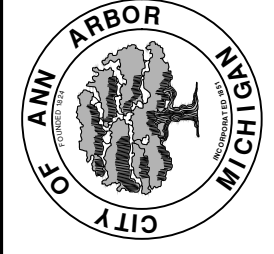
SHEET No. 31 OF 39

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

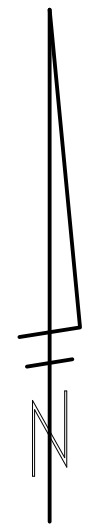
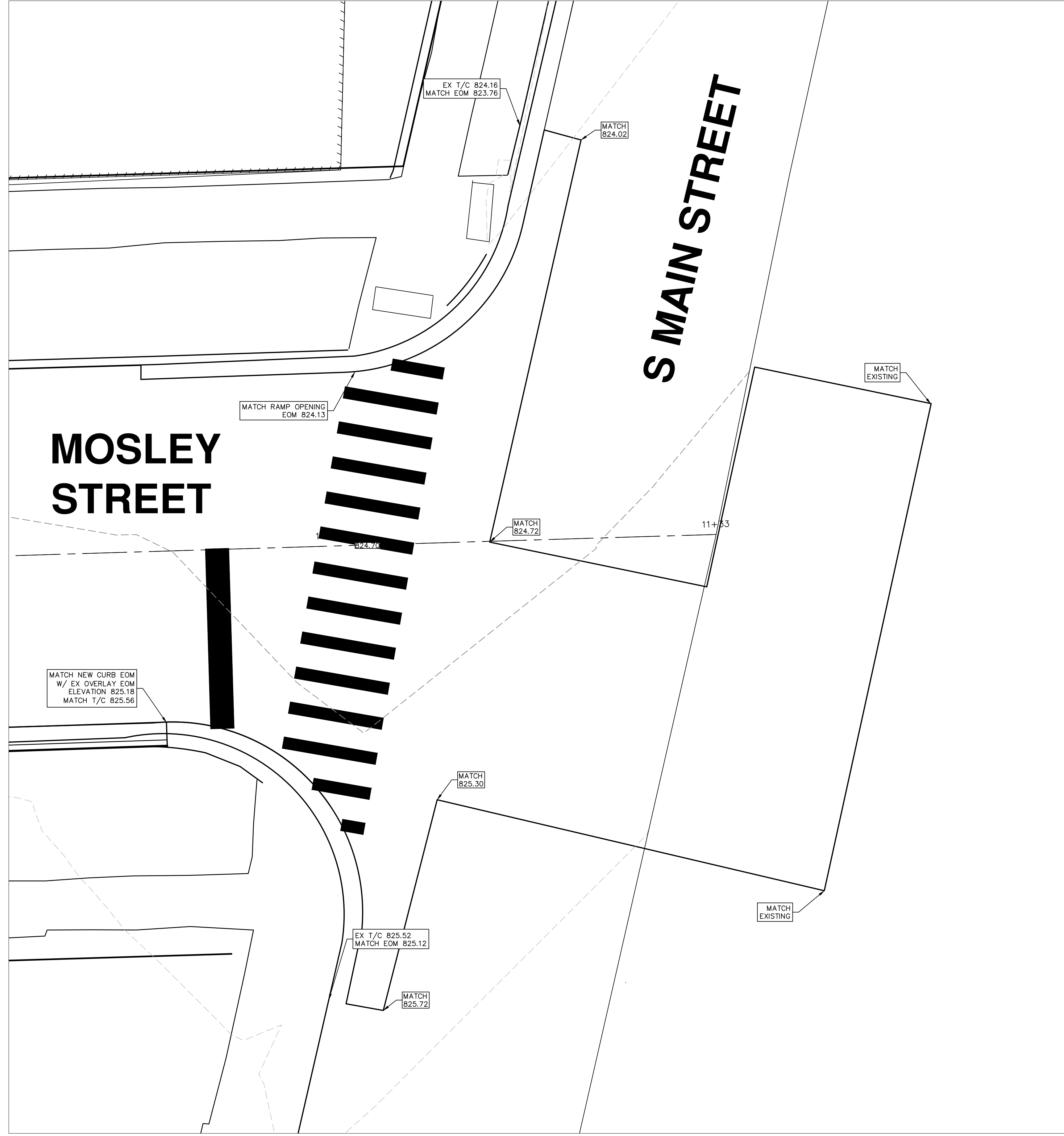
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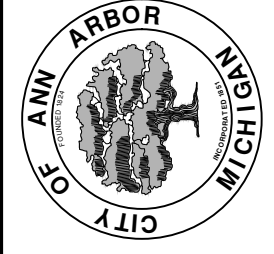
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
INTERSECTION GRADING - ASHLEY ST

SCALE PLAN: 1" = 5'
DRAWING No. 2018-032-32

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
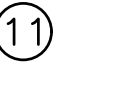

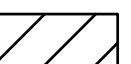

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
**THIRD & MOSLEY WATER MAIN
AND RESURFACING PROJECT**
INTERSECTION GRADING - MAIN STREET






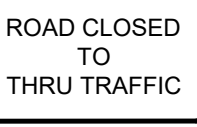

SCALE PLAN: 1" = 5'
DRAWING No. 2018-032-33

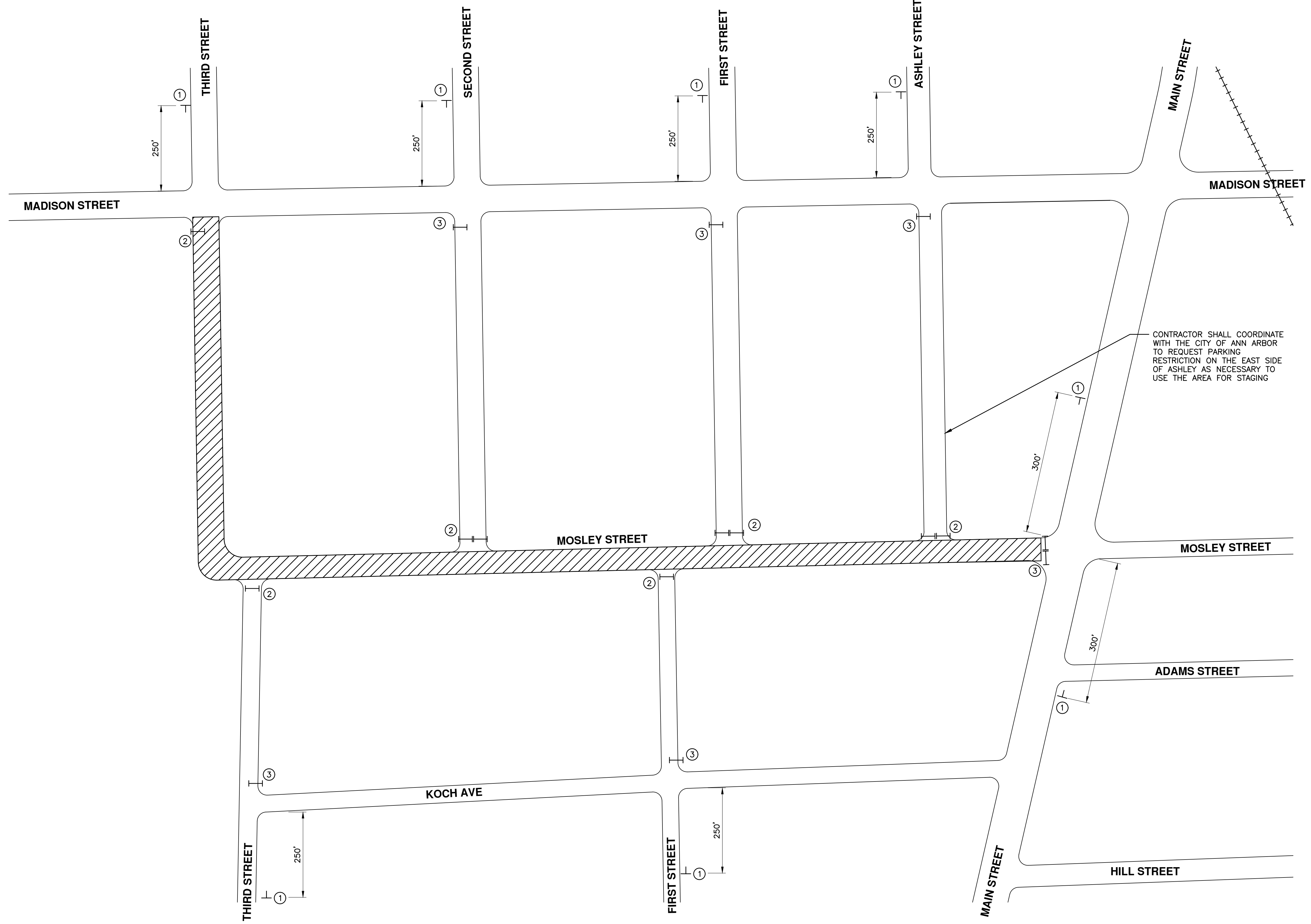
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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LEGEND

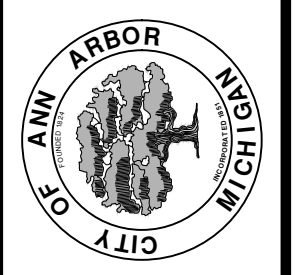
-  SIGN
-  SIGN CALL OUT
-  TYPE III BARRICADE
-  WORK ZONE
-  CHANNELING DEVICES

-  ROAD CLOSED AHEAD
-  MOSLEY ST
-  ①
-  ROAD CLOSED
-  ②
-  ROAD CLOSED TO THRU TRAFFIC
-  ③



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

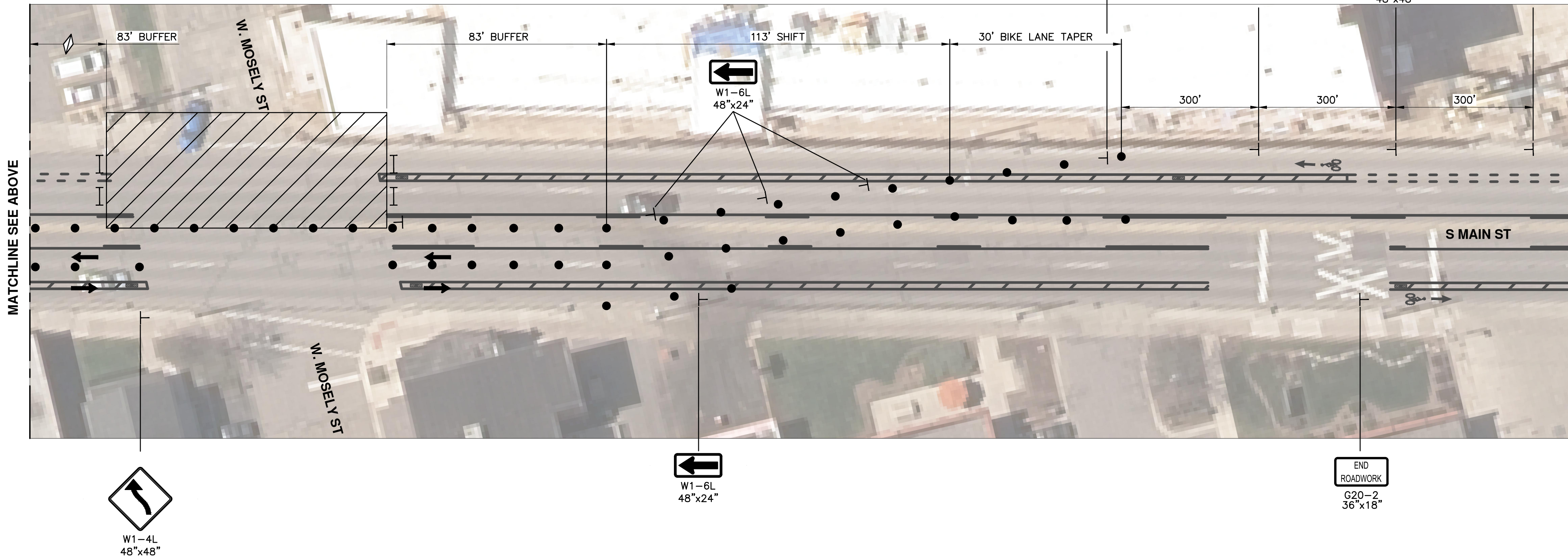
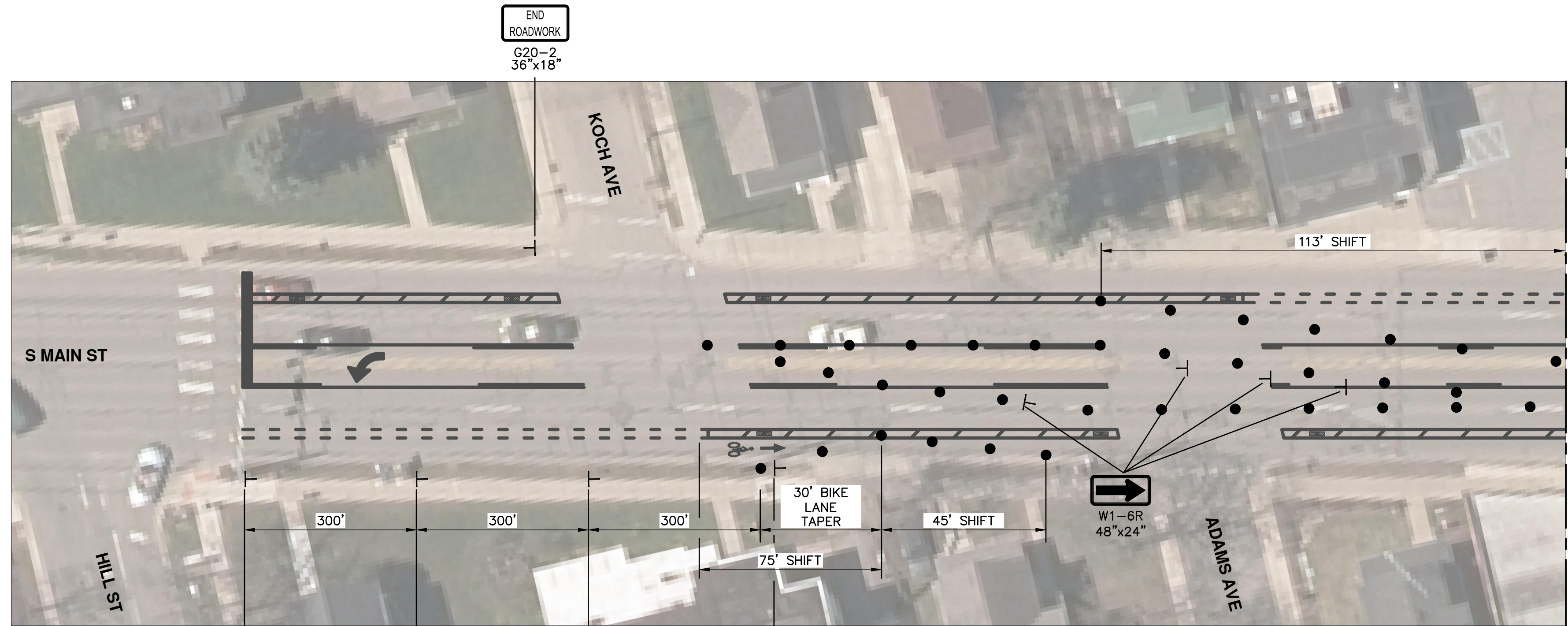
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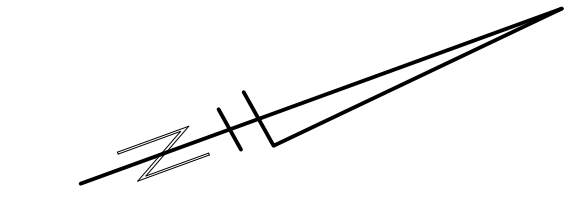
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THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
 MAINTENANCE OF TRAFFIC PLAN

SCALE PLAN: NTS
 DRAWING No. 2018-032-34

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STAGE 1: WEST SIDE OF INTERSECTION CLOSED



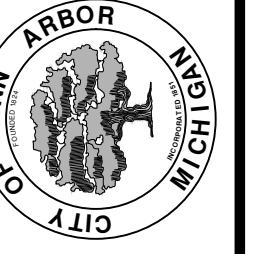
- LEGEND**
- SIGN
 - TYPE III BARRICADE
 - WORK ZONE
 - TRAFFIC FLOW
 - CHANNELIZING DEVICES

- NOTES**
1. TO BE USED WITH MOSLEY ST CLOSURE, AS SHOWN IN MAINTENANCE OF TRAFFIC PLAN.
 2. CHANNELIZING DEVICE SPACING MUST BE A MAXIMUM OF 25' IN TAPERS AND 50' IN TANGENTS.
 3. ALL LANE SEPARATOR SYSTEMS FOR THE BICYCLE LANE MUST BE REMOVED.
 4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR THE PLACEMENT AND LANGUAGE OF PCMS ONE WEEK PRIOR TO THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN.



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

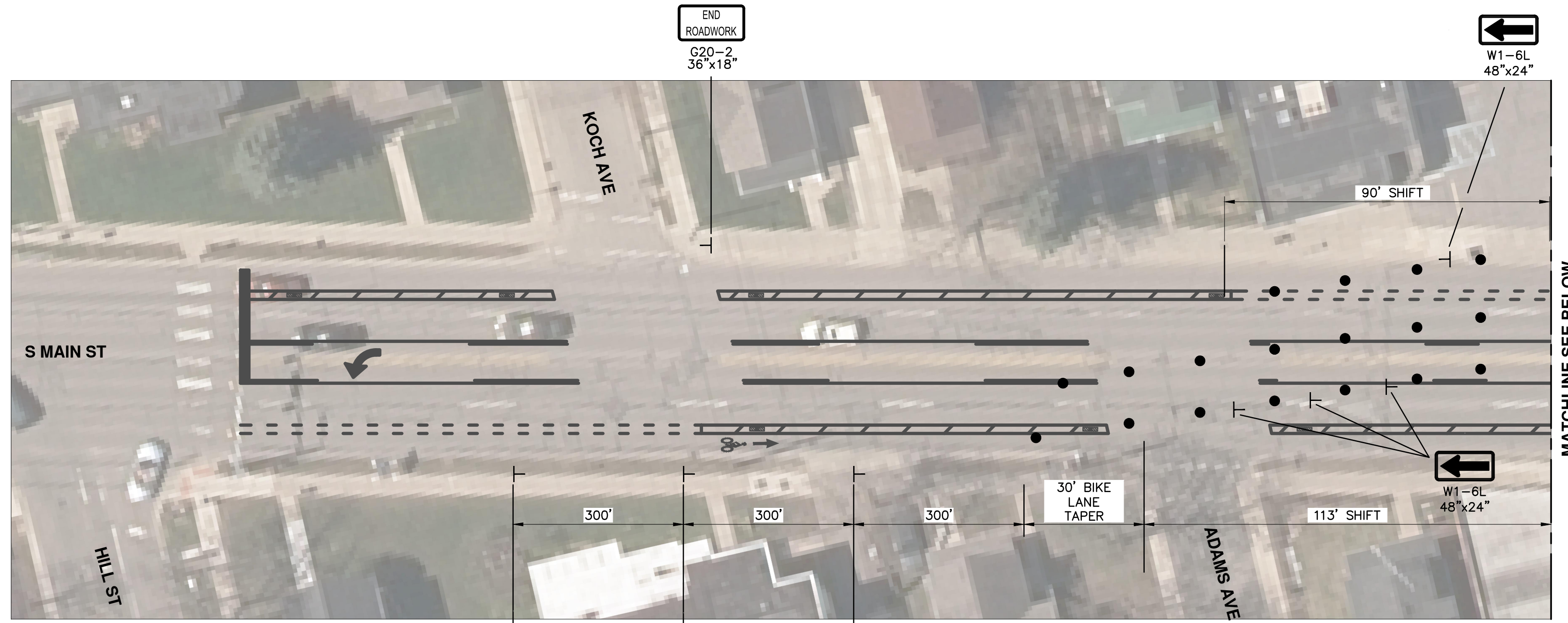
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AND RESURFACING PROJECT
MOT STAGE 1 - WEST SIDE OF INTERSECTION CLOSED

SCALE PLAN: NTS
DRAWING No. 2018-032-35

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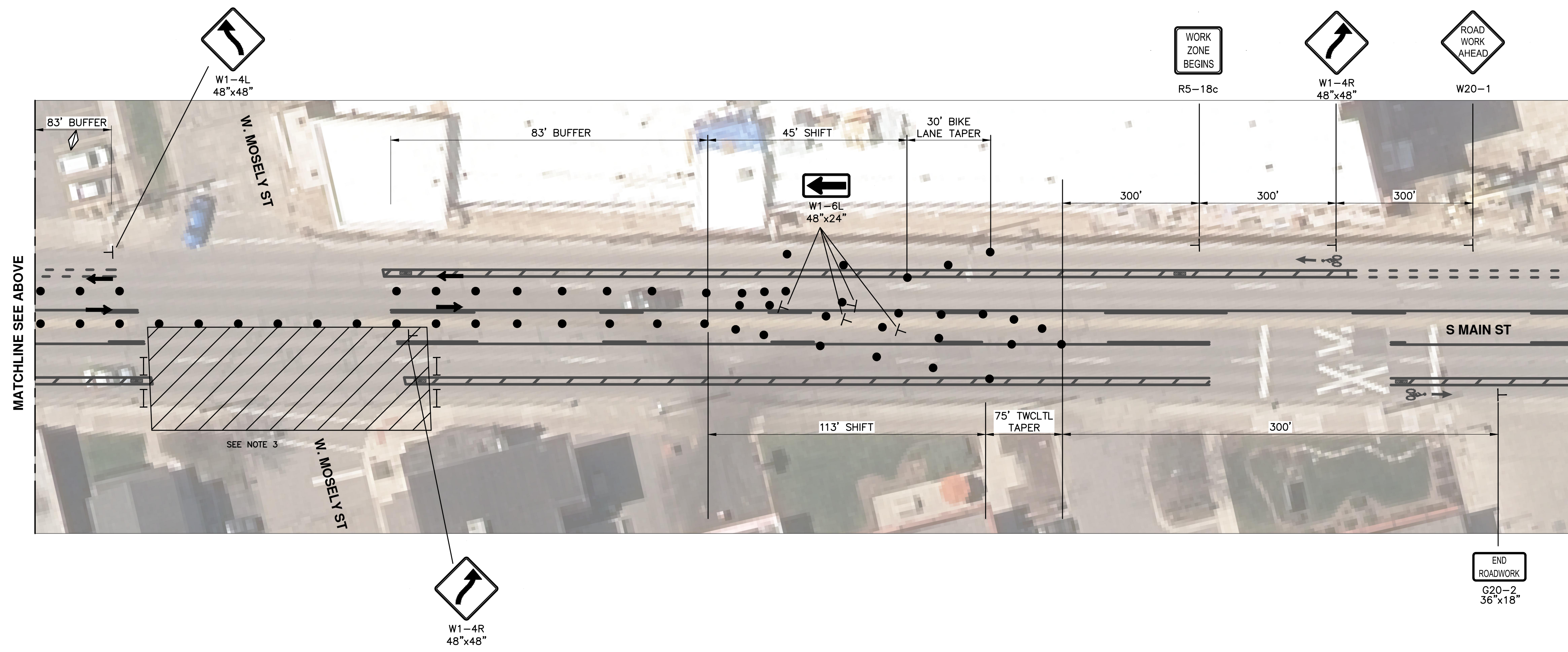


LEGEND

- T SIGN
- ||| TYPE III BARRICADE
- ▨ WORK ZONE
- ➔ TRAFFIC FLOW
- CHANNELIZING DEVICES

NOTES

1. CHANNELIZING DEVICE SPACING MUST BE A MAXIMUM OF 25' IN TAPERS AND 50' IN TANGENTS.
2. ALL LANE SEPARATOR SYSTEMS FOR THE BICYCLE LANE MUST BE REMOVED.
3. CONTRACTOR MUST MAINTAIN RESIDENTIAL AND EMERGENCY ACCESS TO MOSLEY ST EAST OF MAIN ST.
4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR THE PLACEMENT AND LANGUAGE OF PCMS ONE WEEK PRIOR TO THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN.

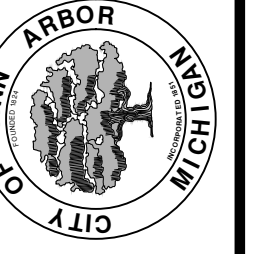


STAGE 2: EAST SIDE OF INTERSECTION CLOSED



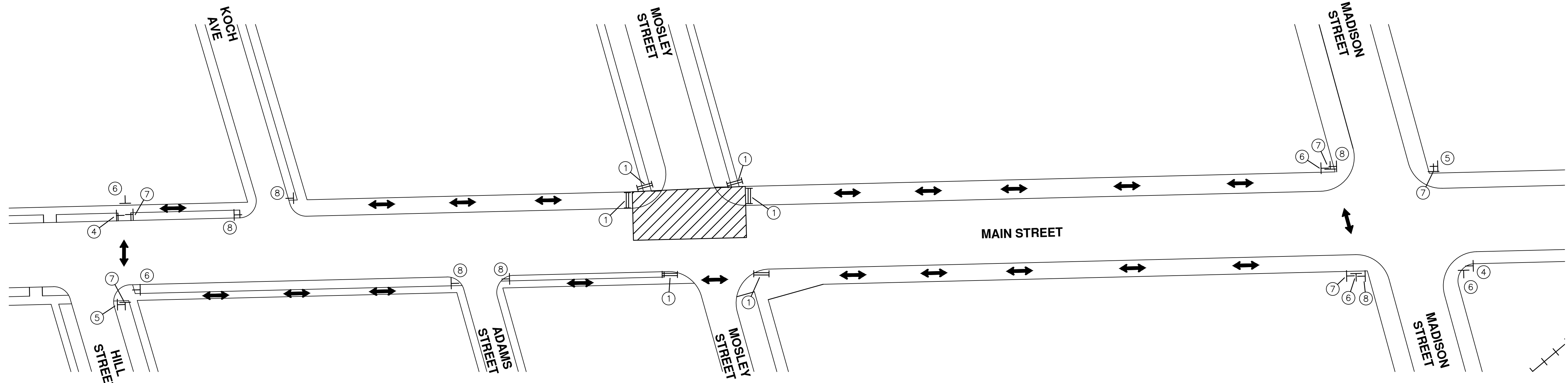
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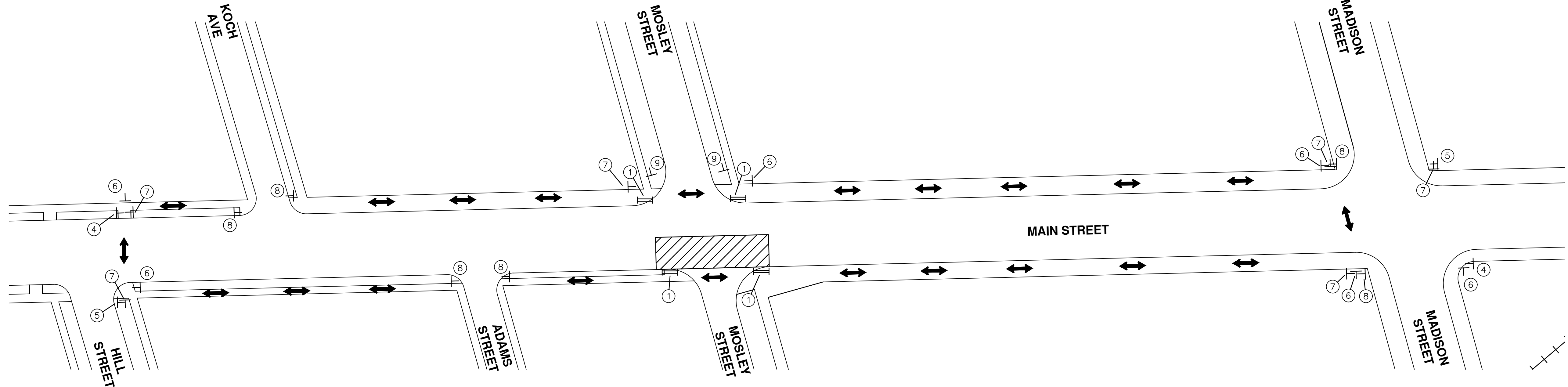


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THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT
MOT STAGE 2 - EAST SIDE OF INTERSECTION CLOSED

SCALE PLAN: NTS
DRAWING No. 2018-032-36



STAGE 2 PEDESTRIAN DETOUR



STAGE 3 PEDESTRIAN DETOUR

NOTE:
 "SIDEWALK CLOSED" SIGNS ARE TO BE PLACED AT THE SIDEWALK REPLACEMENT AREAS SHOWN ON SHEETS 24 & 26

- LEGEND**
- SIGN
 - SIGN CALL OUT
 - TYPE II BARRICADE
 - TYPE III BARRICADE
 - WORK ZONE
 - DETOUR ROUTE
 - TRAFFIC FLOW
 - CHANNELING DEVICES
 - LIGHTED ARROW PANEL

- R9-9 ①
- R9-11aR ②
- R9-11aL ③
- R9-11R ④
- R9-11L ⑤
- M4-9BR ⑥
- M4-9BL ⑦
- M4-9BS ⑧
- M4-8a ⑨

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

THIRD & MOSLEY WATER MAIN AND RESURFACING PROJECT

MAINTENANCE OF TRAFFIC PLAN PED DETOUR

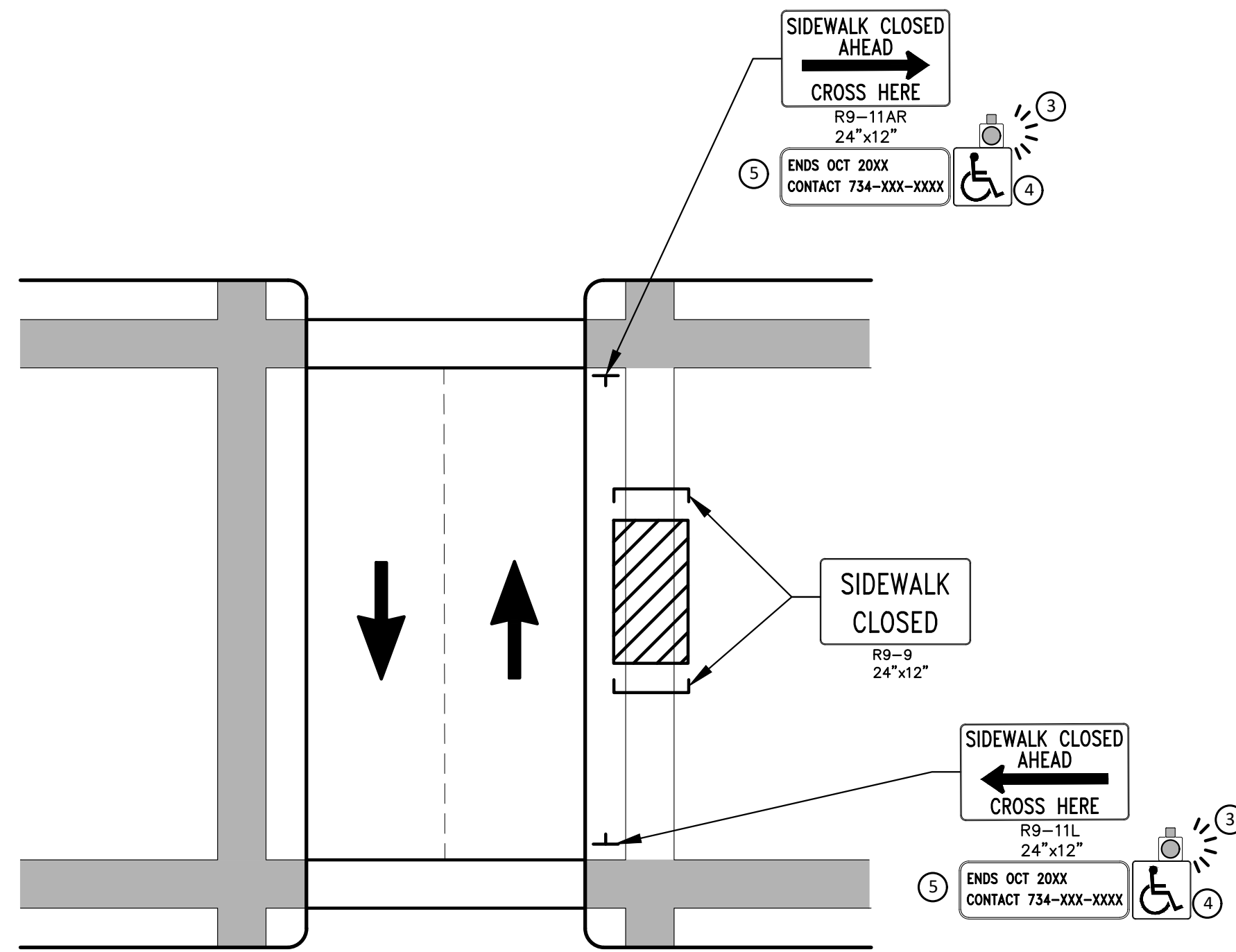
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SCALE PLAN: NTS

DRAWING No. 2018-032-37

SHEET No. 37 OF 39

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PEDESTRIAN DETOUR USING OPPOSITE SIDE OF STREET

GENERAL NOTES

- WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, THE CONTRACTOR SHALL PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.
- THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED BY THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE THIS WORK WITH THE ENGINEER A MINIMUM OF 72 HOURS (NOT INCLUDING WEEKENDS & HOLIDAYS) PRIOR TO THE BEGINNING OF WORK THAT REQUIRES A SIDEWALK CLOSURE.
- POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.
- WHEN THE ENGINEER DETERMINES THAT THE CONTRACTOR'S OPERATIONS OR PLACEMENT OF TRAFFIC CONTROL DEVICES HAS CAUSED A SITUATION THAT THE VISIBILITY OF IS REDUCED ENOUGH TO CREATE A HAZARD, THE TRAFFIC CONTROL DEVICES SHALL BE DELINEATED WITH FLAGS OR OTHER ENGINEER-APPROVED DEVICES AT NO ADDITIONAL COST TO THE PROJECT.

PEDESTRIAN TEMPORARY TRAFFIC CONTROL NOTES

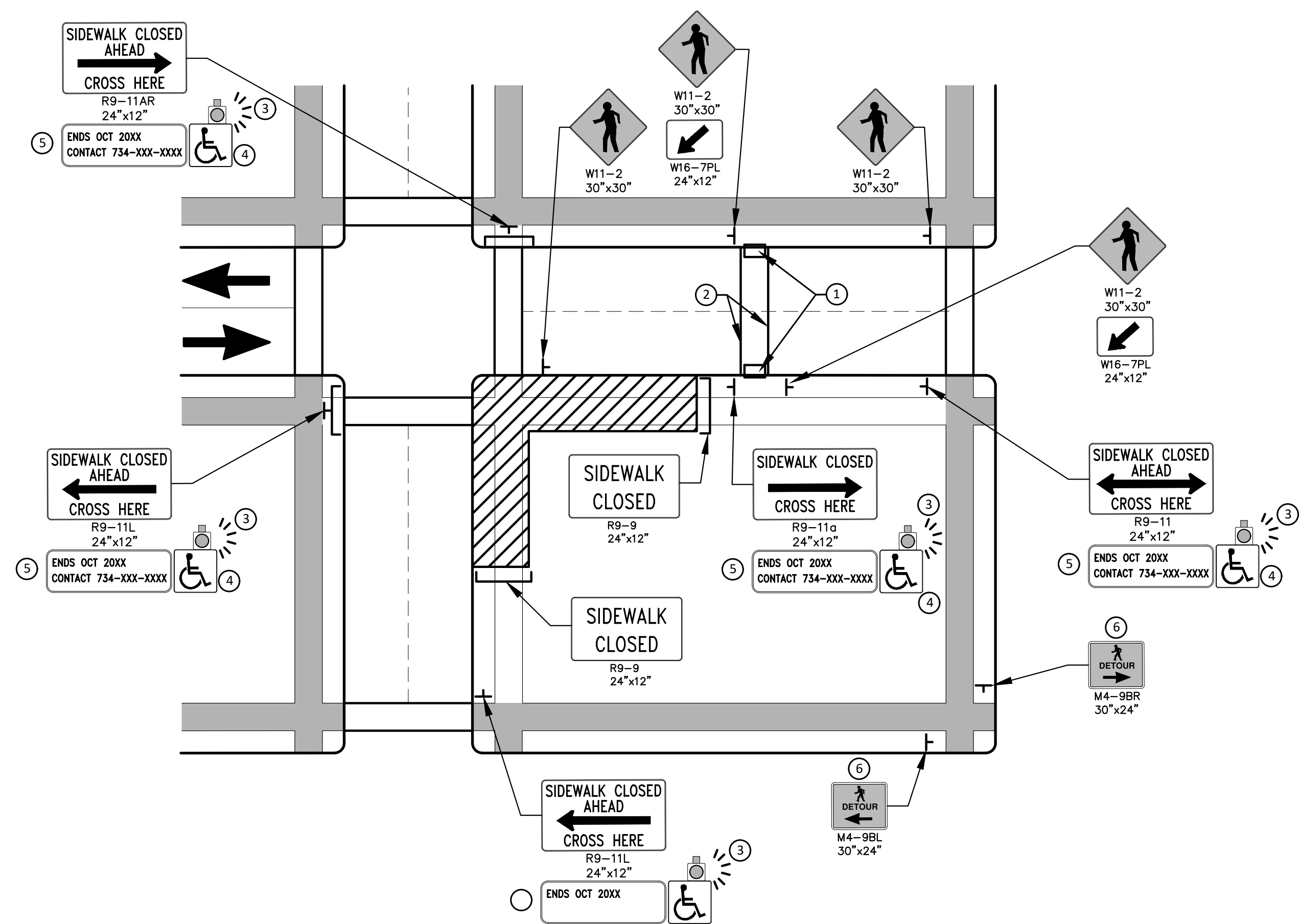
1. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MMUTCD, PART 6.
2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
3. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
4. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.
5. WHEN DIRECTED BY THE ENGINEER, OR STATED ON THE PLANS, THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL BY THE ENGINEER A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC. NO WORK SHALL BE ALLOWED TO BEGIN UNTIL THIS PLAN IS APPROVED BY THE ENGINEER IN WRITING.
6. PROVISION OF THE TPAR AND ALL OF ITS ELEMENTS, INCLUDING BUT NOT LIMITED TO, CREATION OF THE TEMPORARY PEDESTRIAN CONTROL PLAN, SIGNS, CHANNELIZING DEVICES, BARRICADES, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "MINOR TRAF DEVICES."

SPECIFIC NOTES

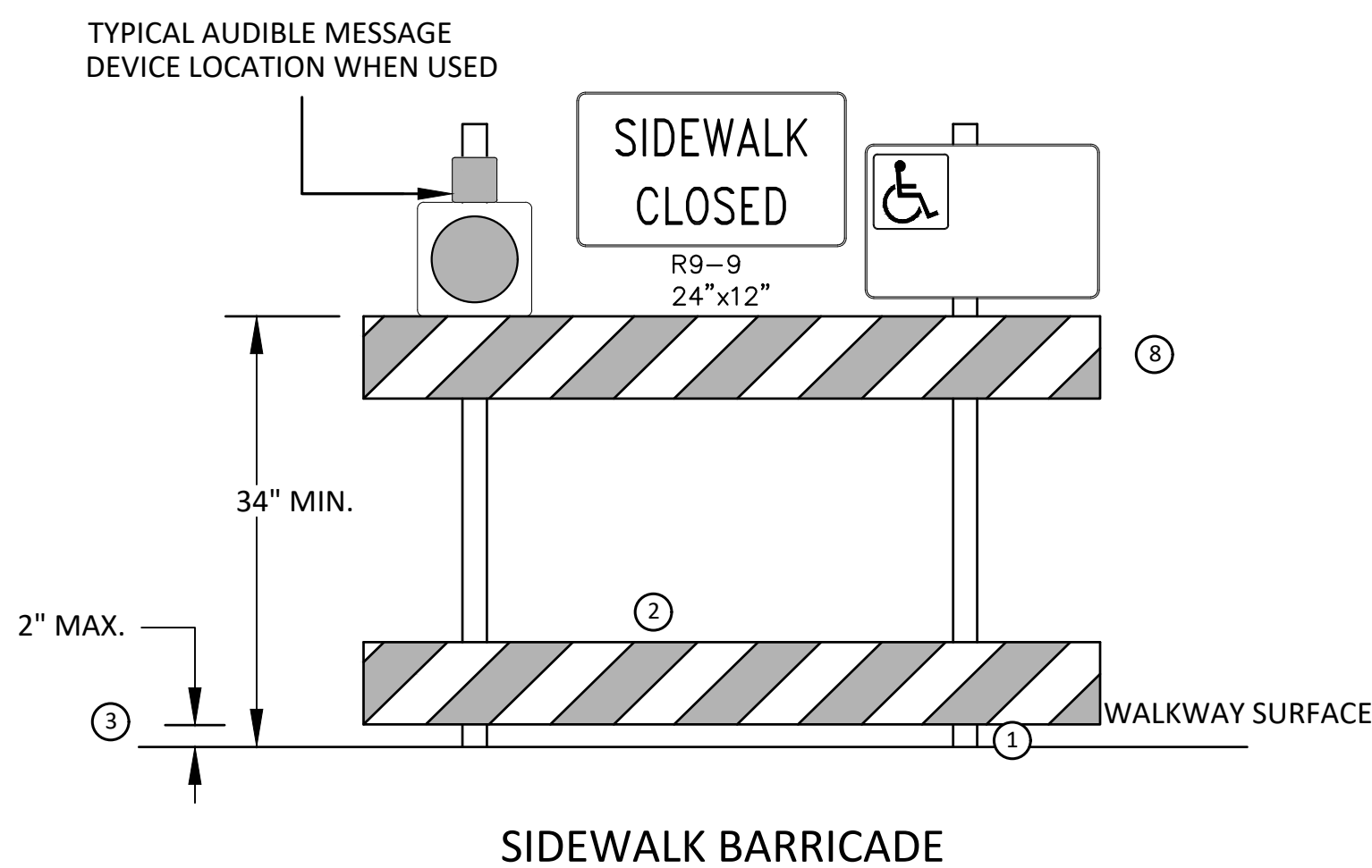
1. TEMPORARY CURB RAMP WITH DETECTABLE WARNINGS.
2. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
3. AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHALL BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS.
4. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOULD BE DISPLAYED WHEN ANY WALKWAY THROUGH A WORK ZONE HAS BEEN DETERMINED TO BE TPAR COMPLIANT. THE SYMBOL OF ACCESSIBILITY SHALL NOT BE DISPLAYED IF PERSONS WITH DISABILITIES SHOULD NOT USE THE PRIMARY TEMPORARY PEDESTRIAN DETOUR. THE REASON FOR THE NON-COMPLIANCE SHALL BE POSTED AND AN ALTERNATE ROUTE SHALL BE POSTED WHEN THE PRIMARY TEMPORARY PEDESTRIAN DETOUR IS NON-COMPLIANT TO TPAR STANDARDS.
5. TYPICAL SIGN MESSAGE FOR A TEMPORARY PEDESTRIAN DETOUR SHALL INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24 / 7 QUESTIONS OR REPORTING HAZARDS.
6. PEDESTRIAN DETOUR TRAILBLAZING SIGNS SHALL BE USED IF THE PEDESTRIAN DETOUR IS IN A LOCATION OTHER THAN ACROSS THE STREET FROM THE SIDEWALK CLOSURE.

LEGEND

- SIGN
- EXISTING PEDESTRIAN SURFACE
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- BARRIER
- SIDEWALK BARRICADE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DEVICE



OTHER SIDE OF STREET DETOUR OR DETOUR WITH TRAILBLAZING SIGNS (FOR CORNER SIDEWALK CLOSURE WITH OPTIONAL TEMPORARY CROSSWALK)



SIDEWALK BARRICADE

GENERAL NOTES

- ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS APPROPRIATE FOR THE BARRIER'S APPLICATION.
- BARRICADES SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE WIDTH OF THE WALKWAY SURFACE BEING CLOSED.

SPECIFIC NOTES

1. ANY TRIPPING HAZARD IN THE WALKWAY NEEDS A DETECTABLE EDGE. BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHALL NOT EXTEND INTO THE 48 INCH MINIMUM WALKWAY CLEAR SPACE AND SHALL NOT EXCEED 0.5 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE.
2. DETECTABLE EDGES SHALL BE CONTINUOUS AND A MINIMUM OF 6 INCHES IN HEIGHT ABOVE WALKWAY SURFACE AND HAVE COLOR MARKINGS CONTRASTING WITH THE WALKWAY SURFACE.
3. DEVICES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2 INCHES IS ALLOWED FOR DRAINAGE PURPOSES.
4. A WALKWAY SURFACE SHALL BE FIRM, STABLE, AND SLIP RESISTANT. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED.
5. LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL BE 32 INCHES IN HEIGHT OR GREATER.

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CITY OF ANN ARBOR
THIRD & MOSLEY WATER MAIN
AND RESURFACING PROJECT
PEDESTRIAN DETAILS

SCALE: NTS
DRAWING No. 2018-032-38
SHEET No. 38 OF 39

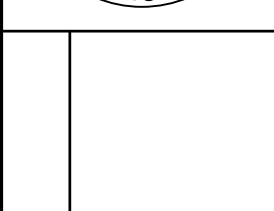
Item	Description	Unit	Totals Qty
130	Protective Fencing	Ft	400
201	General Conditions, Max \$135,000 (10%)	LS	1
202	Project Supervision, Max \$35,000 (2.5%)	LS	1
203	Minor Traffic Control, Max \$65,000 (5%)	LS	1
204	Digital Audio Visual Coverage	LS	1
205	Certified Payroll Compliance and Reporting	LS	1
206	"No Parking" Sign	Each	27
207	Type III Lighted Barricade, Furn. & Oper.	Each	15
208	Sign, Portable, Changeable Message, Furn & Oper	Each	2
209	Plastic Drum, Lighted, Furn. & Oper.	Each	75
210	Temporary Type B Signs, Furn & Oper	SF	802
211	Temporary Type B Sign, Special, Furn & Oper	SF	68
212	Sidewalk Barricade, Furn & Oper	Each	8
213	Lighted Arrow, Type C, Furn & Oper	Each	2
214	Clean-Up & Restoration, Special, Max \$25,000 (1.7%)	LS	1
215	Pedestrian Type II Channelizer, Temp	LF	300
216	Pedestrian Path, Temp	LF	100
217	Pedestrian Ramp, Temp	Each	4
218	Irrigation System, Protection and Maintenance	LS	1
220	Adjust Structure Cover, Modified	Each	13
221	Additional Depth Structure Cover, Adjust/Repair	Each	7
222	Structure Cover, Special	Lbs	4200
230	Sewer Any Size or Depth, Remove	Lt	120
231	Dr Structure, Any Size or Type, Rem	Each	8
240	Water Main Pipe Abandonment, Modified	LF	1483
241	Fire Hydrant Assembly Abandonment	Each	3
242	6 inch Temporary Water Main Line Stop	Each	2
243	8 inch Temporary Water Main Line Stop	Each	2
244	12 inch Temporary Water Main Line Stop	Each	2
245	6 inch Temporary Water Main Line Stop, Additional Rental Day	Each	2
246	8 inch Temporary Water Main Line Stop, Additional Rental Day	Each	2
247	12 inch Temporary Water Main Line Stop, Additional Rental Day	Each	2
248	Tapping Sleeve, Valve and Well, Remove	Each	1
250	Fire Hydrant Assembly	Each	3
260	Pavement Removal, Any Thickness	SY	3750
262	Remove Concrete Curb or Curb and Gutter - Any Type, Modified	LF	1400
263	Remove Concrete Sidewalk, Ramp, and Drives - Any Thickness, Modified	SF	3060
264	Maintenance Gravel	Ton	200
265	Subgrade Undercutting and Backfill, Type IIB, Modified	CY	150
266	Machine Grading, Modified (Third)	Sta	4.7
267	Machine Grading, Modified (Mosely)	Sta	10.5
268	Flowable Fill (Backfill)	Cyd	5
269	Non-Hazardous Contam'd Material Handling & Disposal	Cyd	50

Item	Description	Unit	Totals Qty
270	21AA Limestone - C.I.P	Cyd	880
273	Cold-Milling HMA Surface	SY	2370
274	Hand Patching, Modified	Ton	10
275	HMA, 4E1 -Top Course	Ton	710
277	HMA, 4E1 - Base Course	Ton	415
280	Concrete Curb and Gutter, Conc, Det SD-R-1, Special	LF	1000
282	4" Concrete Sidewalk	SF	380
283	6" Concrete Sidewalk, Ramp, or Drive Approach	SF	200
284	6" Concrete Sidewalk, Ramp, or Drive Approach-HE	SF	2065
285	Concrete Type M Drive Opening, HE	LF	400
287	Detectable Warning, Cast In Place	SF	30
290	Sprayable Thermoplastic, White, 12 inch	Lt	565
291	Sprayable Thermoplastic, White, 24 inch Stop Bar	Lt	105
295	Fertilizer, Chemical Nutrient, CL A	Lbs	115
296	Mulch Blanket, High Velocity	Syd	845
297	Seeding, Mixture THM	Lbs	50
298	Topsoli Surface, Furn, 4 inch	Syd	845
320	RCP, Sewer, C76, CL-IV, 12 inch, Tr Det I	Lft	120
335	SDR 35, PVC Tee	Each	2
350	SDR 35, PVC Riser	Vft	10
353	SDR 35, PVC Service Lead 4 inch	LF	40
367	Single Inlet	Each	11
400	12 inch, Class 50, DIP w/polywrap, Tr Det I, Mod	LF	1110
401	8 inch, Class 50, DIP w/polywrap, Tr Det I, Mod	LF	596
410	12" 11.25° Bend	Each	1
411	12" 22.5° Bend	Each	2
412	12" 45° Bend	Each	24
413	8" 11.25° Bend	Each	2
415	8" 45° Bend	Each	19
416	12" x 8" Reducer	Each	1
417	12" x 6" Reducer	Each	3
418	8" x 6" Reducer	Each	3
430	12" x 12" x 12" Tee	Each	5
431	12" x 12" x 8" Tee	Each	1
432	8" x 8" x 8" Tee	Each	2
442	8" Gate Valve-in-Box	Each	1
443	12" Gate Valve-in-Box	Each	1
446	12" Gate Valve-in Well	Each	4
460	Excavate and Backfill for Water Service Tap and Lead	Lft	335
482	Gate Valve-in-Box Abandonment	Each	2
483	Gate Valve-in-Well Abandonment	Each	1
516	6" Wrapped Edge Drain	Lt	1045
702	Inlet Filter	Each	19
703	Silt Fence	LF	400



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