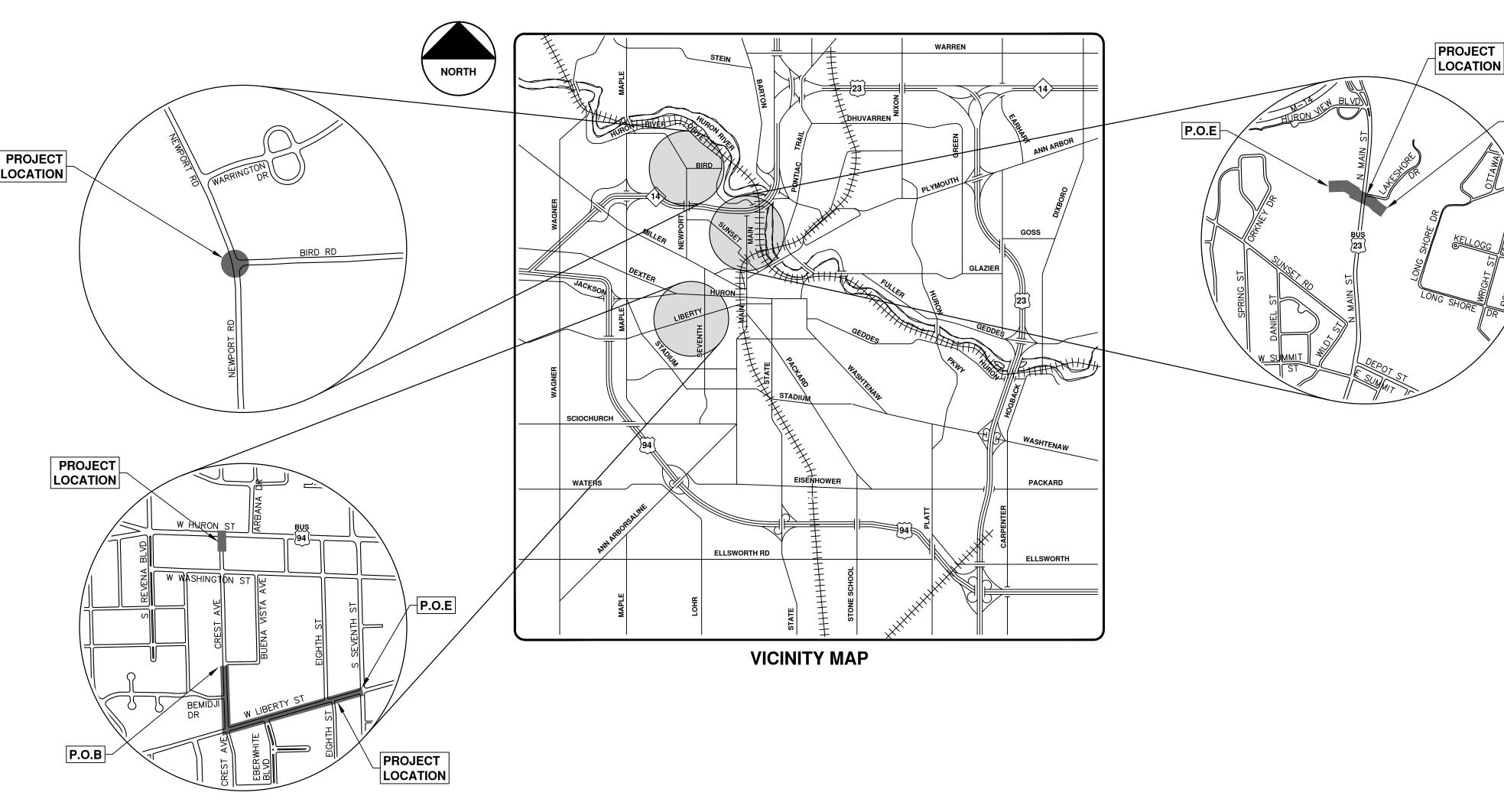


CITY OF ANN ARBOR ENGINEERING **2021 MISC. UTILITIES PROJECT**



BID No. 4669, FILE No. 2021005

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WIT 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 TH 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 LIST TABLE
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	STANDARD NOTES
3	LEGEND
4	N MAIN STREET TYPICAL SECTIONS
5	NEWPORT ROAD - BIRD ROAD TYPICAL SECTIONS
6	LIBERTY STREET TYPICAL SECTIONS
7	CREST AVE TYPICAL SECTIONS
8	WATER MAIN DETAILS
9	STORM SEWER AND TRENCH DETAILS
10	MISC. DETAILS
11 - 14	TEMPORARY PEDESTRIAN ACCESS DETAILS
15 - 20	N MAIN ST TRAFFIC CONTROL - PH I & PH II
21	N MAIN ST REMOVALS & SITE PREP
22 - 24	N MAIN ST PROPOSED STORM SEWER
25	N MAIN ST PROPOSED ROAD AND PAVEMENT MARKINGS
26	NEWPORT RD - BIRD RD DETOUR
27	NEWPORT RD PRESSURE REDUCING VALVE
28	W LIBERTY ST DETOUR
29 - 32	HURON ST TRAFFIC CONTROL - PH I & PH II
33 - 34	W LIBERTY ST TRAFFIC CONTROL
35	CREST AVE TRAFFIC CONTROL
36 - 38	W LIBERTY ST - CREST AVE REMOVALS
39 - 42	LIBERTY 8 IN WATER MAIN
43 - 46	LIBERTY ST 12 IN WATER MAIN
47 - 48	CREST AVE 8 IN WATER MAIN
49	CREST AVE 12 IN WATER MAIN
50	CREST AVE - HURON ST 8 IN WATER MAIN CONNECTION
51	LIBERTY STORM SEWER
52 - 54	W LIBERTY ST - CREST AVE PROPOSED ROAD
55 - 56	W LIBERTY ST - CREST AVE PROPOSED PAVEMENT MARKINGS

- PUBLIC SERVICES - ENGINEERING 2021005 4669; PROJECT; BID No. **ANN ARBOR UTILITIES** ЧО

~P.O.B



THERESA BRIDGES, P.E. - MI LICENSE No. 6201052180

03/17/2021

DATE

PROJECT MANAGER

PREPARED UNDER THE SUPERVISION OF



CIT

HEET N

1 OF 56

2021

CONSTRUCTION NOTES:

- 1. 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.
- 2. The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
- 3. 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.
- 4. The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.
- 5. 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".
- 6. Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.
- 7. 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.
- 8. 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.
- 9. 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.
- 10. All ductile iron pipe and fittings shall be wrapped per ANSI/AWWA polyethylene C105/A21.5.
- 11. Cor-blu bolts to be used at all mechanical water main joints at hydrants and Megalug fittings
- 12. 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.
- 13. Water main fittings, other than those specifically listed as separate pay items, which are required to complete the work, such as blow-off assemblies, concrete thrust blocks, solid sleeves and mechanical plugs, shall not be paid for separately, but shall be included in the pipe pay items.
- 14. "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.

- 15. Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.
- 16. 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.
- 17. Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
- 18. 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".
- 19. All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
- 20. Sawed sewer pipe connections shall be coupled with a Fernco flexible coupling and a stainless steel shear ring.
- 21. The location of material stock piles and on-site staging areas to be approved by the Engineer.
- 22. 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.
- 23. 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.
- 24. Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structure sizes and or types.
- 25. 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.
- 26. 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 MDOT Granular Material, Class II, Modified.
- 27. 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"
- 28. 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.

- **FNGINFFR**
- THE CITY OF ANN ARBOR.

- FINAL GRADE.
- OPERATIONS

11. 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.

12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE. SEQUENCE OF EROSION CONTROL MEASURES:

SAME LL	
1.1.	INSTALL SIL DRAINAGE F CLEARING OF
1.2.	STRIP AND S
1.3.	INSTALL WA FEATURES. NEW DRAINA
1.4.	PERFORM MA
1.5.	CONTINUALLY ALLOW DRA IMMEDIATELY
1.6.	COMPLETE A
1.7.	TEMPORARY
1.8.	REFER TO LA
1.9.	CLEAN OUT
1.10.	REMEDY AN EROSION AN
1.11.	ALL TEMP. S PRIOR TO FI
NOTE: CONSTR CONTRA SCHEDU	THIS SEQUI CUCTION WITH CTOR IS RE ILE TO THE E
TEMPOR	ARY SEEDING

THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. TOPSOIL, SEEDING. AND MULCH = \$50.000

W. LIBERTY ST./CREST AVE.

NEWPORT RD./BIRD RD.

N. MAIN ST.

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

1. 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

2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 55 ANN ARBOR UNIFIED DEVELOPMENT CODE, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

3. 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

4. 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.

5. 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

6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF

7. 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

8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.

9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.

10. 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.

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.

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS: 1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY OR EARTH MOVING OPERATION.

STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.

ATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF AGE INLETS.

ACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS,

LY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO AINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT

ALL FINE GRADING.

SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.

ANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION

STORM SEWER SYSTEMS.

NY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL ND SEDIMENTATION CONTROL OFFICIAL.

SOIL EROSION CONTROL MEASURES MUST BE REMOVED. WITH ENGINEERS APPROVAL. INAL INSPECTION

JENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF H RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. TH ESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

1. SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.

2. ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

ON SITE SOILS PER THE USDA SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN:

• FoB - FOX SANDY LOAM, TILL PLAIN, 2 TO 6 PERCENT SLOPES • FoC - FOX SANDY LOAM, HURON LOBE, 6 TO 12 PERCENT SLOPES

• WawabB - WAWASEE LOAM, 2 TO 6 PERCENT SLOPES

• MmF - MIAMI LOAM, 25 TO 35 PERCENT SLOPES • WaA - WASEPI SANDY LOAM, 0 TO 4 PERCENT SLOPES

AREA OF PROPOSED DISTURBANCE NORTH MAIN STREET = 0.42 ACRES NEWPORT ROAD = 0.06 ACRES WEST LIBERTY STREET = 1.67 ACRES

		NEWPORT RD - BIRD RD BENCHMARKS	BM #	ELEV
BM #	ELEV	DESCRIPTION	41	795.65
1	795.52	EASTERLY FLANGE BOLT ON HYDRANT @ NE CORNER OF NEWPORT AND BIRD RD	1110	782.95

ΙΡΚΙΟ	OR TO THE BEGI		TAINED BY THE] F		Know what's below.	
LANE (PERMIT		ISSUING	AUTHORITY ENGINEERING] [6		Know wha
"NO PA	ARKING" SIGNS PERMIT*		CITY OF ANN ARBOR	ENGINEERING			TB
GRADIN	G/SOIL EROSION & SED	IMENTATION	CITY OF ANN ARBOR		+	DF/CC	
	DĹ PERMIT* OF-WAY PERMIT*		CITY OF ANN ARBOR	╎┠┼	++	DF/	
M.D.O.T	. RIGHT-OF-WAY PERM	T*	MICHIGAN DEPARTMEI	NT OF TRANSPORTATION			7-21
		* NO COST TO	CONTRACTOR		╧		3-17.
	MITS REQUIRED OR PRIOR TO T]		
	PERMIT				╡┃│		
EGLE V	ATER MAIN CONSTRUCT	ION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY				BID
					, 		FOR
	ACT INFORMAT		WNER	CONTACT	┥┠┼	+	OUT
WATER				DAN WOODEN	┥┠┴		8
SANITARY STORM		CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL BOAD					OR, MI 48107-8647 4-794-6410 w.a2gov.org
FORESTRY	1	4251 STONE SC ANN ARBOR, MI		(734) 794–6350 KSCHNEIDER@A2GOV.ORG MATT WALDSMITH (734) 794–6350 MWALDSMITH@A2GOV.ORG			ANN ARBOR, M 734-794- www.a2g
SIGNS SIGNALS STREET L	IGHTS			CHUCK FOJTIK (734) 794–6361 CFOJTIK©A2GOV.ORG		ARD	
PR	VATE UTILITIES	C	WNER	CONTACT			
GAS		DTE ENERGY 3150 E. MICHIG		ROBERT CZAPIEWSKI (734) 544–7818] [_`		ン
ELECTRIC		DTE ENERGY		ANTHONY IGNASIAK (734) 397–4447			
CABLE		COMCAST 27800 FRANKLII SOUTHFIELD, MI		RON SUTHERLAND (313) 999–8300		╞╾	
PHONE		AT&T 550 S. MAPLE ANN ARBOR, MI		SHAWN BURNSIDE (734) 996-5322 (313) 683-7349(MOBILE)		PROJECT	
FIBER OP	ПС	MCI 2800 N. GLENFI RICHARDSON, TX		DEAN BOYERS (972) 729–6016	ENGINEERING		
FIBER OP	ПС	WINDSTREAM 1295 S LINDEN FLINT, MI 48532	ROAD, SUITE B 2	GREG SERICH (810) 244–3500		UTILITIES	
STREET L	IGHTING	DTE ENERGY 8001 HAGGERTY BELLEVILLE, MI		LANCE ALLEY (734) 397–4188	ENG	C. UTII	
	WEST LIBE	RTY STREET	BENCHMARKS		SERVICES -	MIS	
ELEV	DESCRIPTION				N	2021	
870.21	N.W. BOLT ON CROSS						
863.02	R.R. SPIKE IN NORTH F LOCATED AT S.E. COR			VD.			
860.83	R.R. SPIKE IN NORTH F				PUB		
857.99	R.R. SPIKE IN NORTH F						<u> </u>
854.47	R.R. SPIKE IN SOUTH F	ACE OF POWER P	OLE.		BOI		
<u> </u>	N.W. CORNER OF TOP	OF CONC. BASE T	O PEDESTRIAN SIGNAI		≤		
852.25	LOCATED AT N.W. COF	KINER OF W. LIDER					
852.25			BENCHMARKS		OF ANN		

PK NAIL IN SOUTH SIDE OF POWER POLE ON WEST SIDE OF N. MAIN ST. NEAR THE NORTH PROPERTY LINE OF 1251 N. MAIN ST.

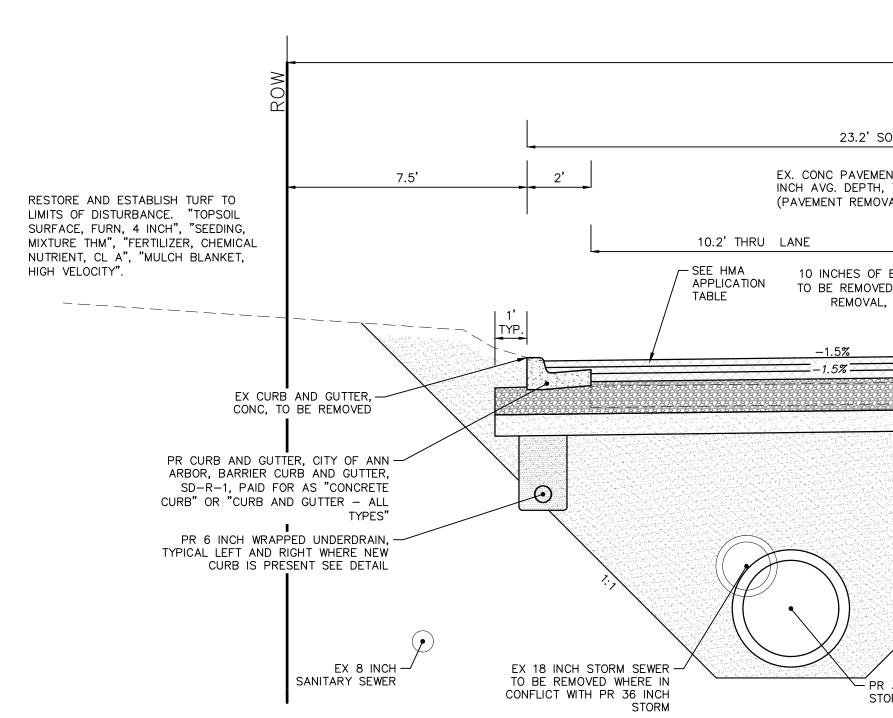
SPIKE IN SOUTH SIDE OF POWER POLE AT N.W. CORNER OF ENTRANCE TO BANDEMER PARK . EAST SIDE OF RAILROAD TRACKS, LAKE SHORE DRIVE

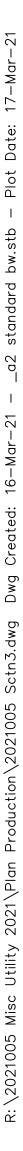
U I

SHEET No.

EXISTING LEGEND			PROPOSED LEGEND			
∳+ FIRE HYDRANT	<i>W</i>	WATER MAIN	∳+ HYDRANT (PLAN)	W	WATER MAIN	
GATE VALVE IN BOX	/-/-/-/-/-//-/-/-/-/	WATER MAIN ABANDONED	❷ WATER GATE WELL	<u> </u>	STORM SEWER	Know what's be
8 GATE VALVE IN WELL	<u> </u>	STORM SEWER	✓ REDUCER	<u> </u>	SANITARY SEWER	
STOP BOX	///	STORM SEWER ABANDONED	WATER GATE VALVE		FIBER OPTIC	, Z
WATER VAULT	<u>\$</u>	SANITARY SEWER	◎ WATER STOP BOX	——Е — — — — —	ELECTRICAL	
) WELL	///	SANITARY SEWER ABANDONED	W WATER VAULT		CENTERLINE OF DITCH	
] CATCH BASIN (SQ)	g	GAS MAIN			CENTERLINE OF ROAD	
CATCH BASIN (RD)	g (DEAD)	GAS MAIN (DEAD)	DOUBLE INLET	////	FENCE	DF/CC
) STORM MANHOLE		ELECTRICAL OVER HEAD	INLET JUNCTION CHAMBER	:::	GRAVEL	DF
] NON-CURB CATCH BASIN (SQ)		ELECTRICAL UNDER GROUND	ROUND CATCH BASIN	<u> </u>	SILT FENCE	
END SECTION	e duct bank	ELECTRICAL DUCT BANK	STORM MANHOLE		PROTECTIVE FENCE	5
) SANITARY MANHOLE				. • • • • • • • • • •		17-1
) CLEAN-OUT		TELEPHONE OVER HEAD	FLARED END SECTION	•		м Ч
POST		TELEPHONE UNDER GROUND				
PEDESTRIAN SIGNAL	t duct bank	TELEPHONE DUCT BANK	SANITARY MANHOLE		CURB	
	ohtv	CABLE TV OVER HEAD	CLEAN-OUT		TEMPORARY GRADING PERMIT	
SIGN	tv	CABLE TV UNDER GROUND	• BARREL		CONTOUR MAJOR	
J HAND HOLE	fo	FIBER OPTIC	SIGN	799	CONTOUR MINOR	
ORNAMENTAL LIGHT	fo duct bank		C PUSH BUTTON		WATER EASMENT	
FLOOD LIGHT		FIBER OPTIC DUCT BANK	HAND HOLE		STORM EASEMENT	
) UNKNOWN MANHOLE		BOUNDARY			SANITARY EASEMENT	
TELEPHONE MANHOLE		BUILDING			R.O.W.	
TELEPHONE RISER	······	CENTERLINE OF DITCH			LIMITS OF CONSTRUCTION	BD
D GAS VALVE	<u> </u>	CENTERLINE/CROWN OF ROAD			LIMIT OF GRADING	FOR
GAS VENT	<i>800</i>	CONTOUR MAJOR			STONE WALL	OUT
GAS BOX	799	CONTOUR MINOR				
ELECTRICAL RISER		EDGE OF WATER			DETECTABLE WARNING	8
TRANSFORMER		FLOODPLAIN				
۲ UTILITY POLE					ASPHALT	CH F 64
LAMP POLE	//////	FENCE				BOR CES CES 7-8647
GUY ANCHOR	:·:·:·	GRAVEL			CONCRETE	N AF RVIG 8647 8647 86410 6410
	<u> </u>	GUARDRAIL				ANN HURC BOX 794-41
O GUY POLE	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	STONE WALL			SIDEWALK	OF AST I 734. 734. 734.
MONITORING WELL		R.O.W.		4		CITY OI PUBLI 301 EAST P.C ANN ARB 73 WWW
] MAILBOX		TREELINE				A C
SOIL BORING		WETLAND			TREE (DECIDUOUS)	ABOR
TRAVERSE POINT		EDGE OF BRUSH			TREE (DECIDOOUS)	
BENCH MARK						
IRON PIPE	alalalalalalalalalalalala	HEDGE				
] MON BOX				2Mz		
				$\leq \bullet \leq$	TREE (CONIFEROUS)	
		TREE (DECIDUOUS)		Σ		
				Zwr		
	JMY					
	7777			$\{(\times)\}$	TREE TO BE REMOVED (DECIDUOUS)	
	\geq • \leq	TREE (CONIFEROUS)				
	Zwr					
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	Ê. 3	SHRUB (DECIDUOUS)		$\forall X $	TREE TO BE REMOVED (CONIFEROUS)	IŽ I
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		STIMD				
		STUMP				ENGINEERING . UTILITIES PROJE
	~~~~	01:		$\bigwedge$		
	C De			( 🔍 )	STUMP TO BE REMOVED	
		TREE TO REMAIN & PROTECT (DECIDUOUS) CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER	RREAST HEICHT (INCLES) V 10	XX		ت ^ا
		$\bigcup_{n \in \mathbb{N}} \bigcup_{n \in \mathbb{N}} \bigcup_{$	UNENDI TIERUTI (TROFES) A TU			CES - MISC.
						SERVICES 2021 MIS
	N A	- 7.				2021
	LNV4 C.	Z				<b>2</b>
		TREE TO REMAIN & PROTECT (CONIFEROUS) CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER	RREAST HEIGHT (INCLES) V 10			l S   ``
	4.5	CREAL ROOT ZONE (C.R.Z.) = DIAMETER	UNLASI HLIOHI (HYUHLS) A IU			
						PUBLIC
						<u> </u>

CITY OF ANN ARBOR -SCALE : NTS SHEET NO DRAWING No. 2021005-3 3 OF 56





FOR PAVEMENT REMOVAL MATERIAL FULL-DEPTH A DIRECTED BY THE ENGINE REMOVALS SHALL BE TO AND/OR TO AN EXISTING	T REMOVAL LIMITS, AS ER. PAVEMENT THE FULL LANE WIDTH	66'		
SOUTHBOUND ENT SUBBASE, 8 , TO BE REMOVED VAL, ANY DEPTH)	VARIES 1' TO 2.3'		3.8' NORTHBOUND	2'
	U LANE	11' THRU LANE	10.8' THRU LANE	
EX. ASPHALT ED (PAVEMENT _, ANY DEPTH)			 =-1.0%	
R 36 INCH FORM SEWER	(DEAD)         AGGREGATE E C.I.P., 12 INC   	E COURSE, 21AA – H. COMPACTED TO 98%. E COURSE, CLASS II, COMPACTED TO 95% SITY I TING SUBGRADE TO MATERIAL'S MAXIMUM	ATERMAIN	

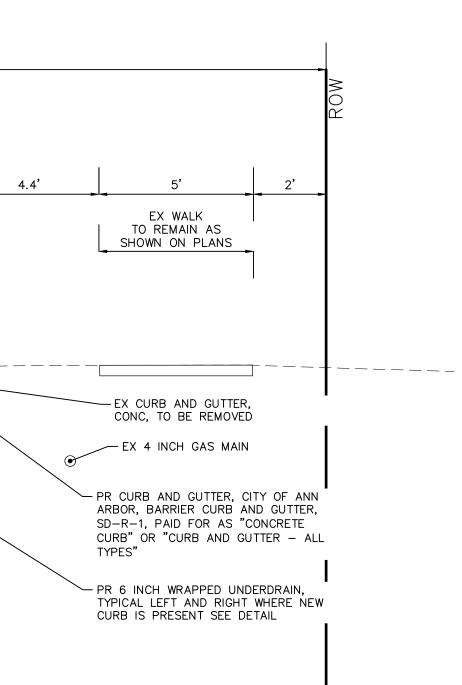
# NORTH MAIN STREET PROPOSED TYPICAL SECTION

LOOKING NORTH N.T.S.

		HMA A	<b>PPLICATION ES</b>	TIMATE		
HMA PAVEMENT	НМА МІХ	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
HMA PAVEMENT TOP	5E1 HS	220 LB/SYD	2	260 (TOP)	PG 70-28P*	TOP COURSE
HMA PAVEMENT LEVELING	4E1 HS	275 LB/SYD	2.5	-	PG 70-28P*	LEVELING COURSE
HMA PAVEMENT BASE	2C	385 LB/SYD	3.5	-	PG 64-28P	BASE COURSE
HMA APPROACH TOP	LVSP	220 LB/SYD	2	220 (TOP)	PG 58-28	TOP COURSE
HMA APPROACH LEVELING	LVSP	220 LB/SYD	2	-	PG 58-28	LEVELING COURSE
HAND PATCHING	4E1	0 - 440 LB/SYD			PG 58-28	HAND PATCHING
ASPHALT EMULSION	SS-1h	0.05 - 0.15 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM

NOTE: LAKE SHORE DRIVE AND THE PARKING AREA FOR 1250 N. MAIN, ARE TO BE RESTORED AND PAID FOR AS HMA APPROACH.

N MAIN STREET ASPHALT MIXTURE TO BE HIGH STRESS HOT MIX



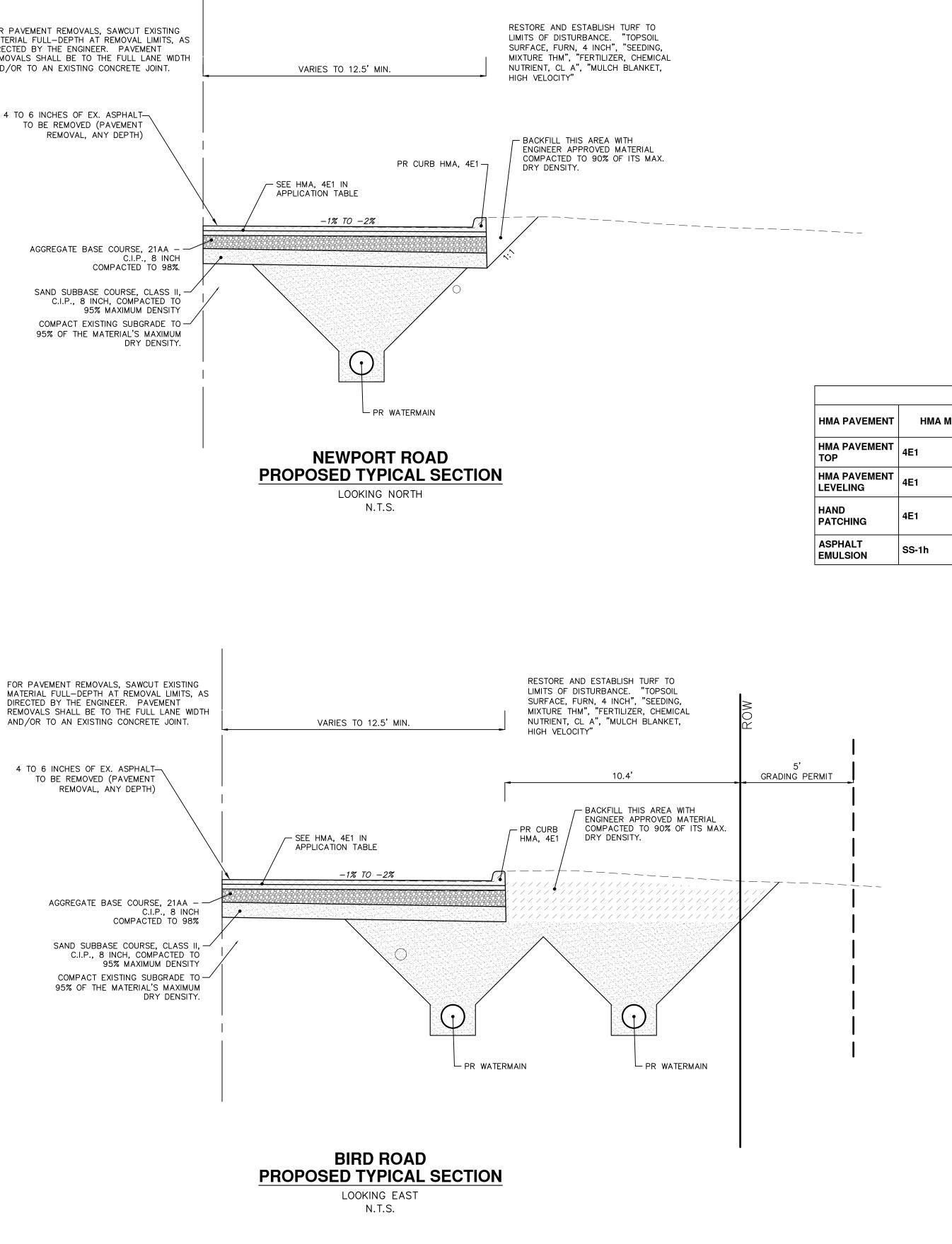
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_C			CITY OF ANN ARROR					
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5			ANN AHBOR, MI 4810/-864/					
6	DRAWING No.		734-794-6410	ON NUT FOR BID	3-17-21	DF/CC	TB Kn	Know what's below.
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	2021005-4	N MAIN STREET TTPICAL SECTIONS	<b>WCHIGH</b>	REV. DESCRIPTION	DATE	DRAWN CHECKED		uall perore you αιg.

FOR PAVEMENT REMOVALS, SAWCUT EXISTING MATERIAL FULL-DEPTH AT REMOVAL LIMITS, AS DIRECTED BY THE ENGINEER. PAVEMENT REMOVALS SHALL BE TO THE FULL LANE WIDTH AND/OR TO AN EXISTING CONCRETE JOINT.

4 TO 6 INCHES OF EX. ASPHALT-TO BE REMOVED (PAVEMENT REMOVAL, ANY DEPTH)

DIRECTED BY THE ENGINEER. PAVEMENT

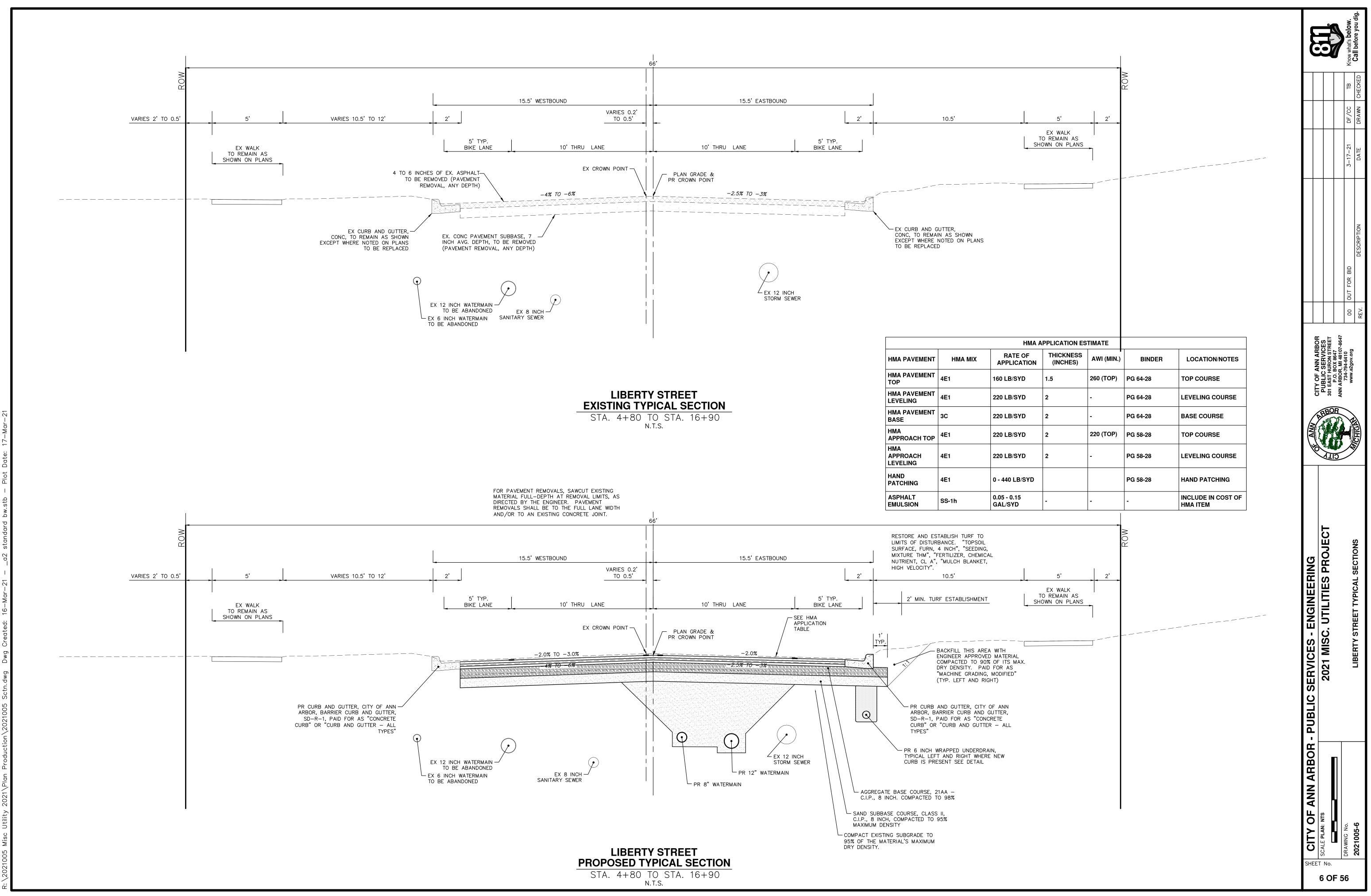
4 TO 6 INCHES OF EX. ASPHALT-TO BE REMOVED (PAVEMENT

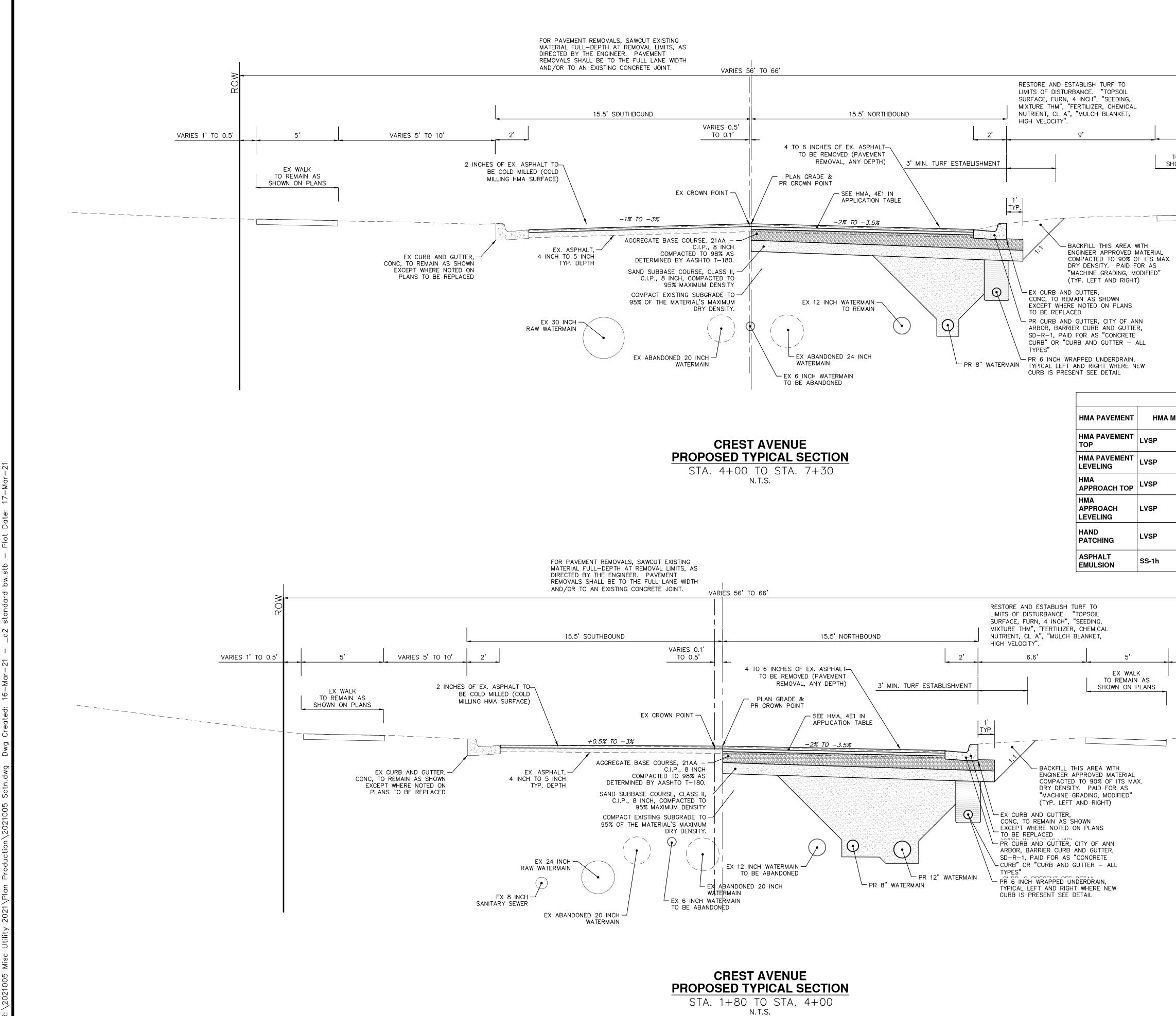


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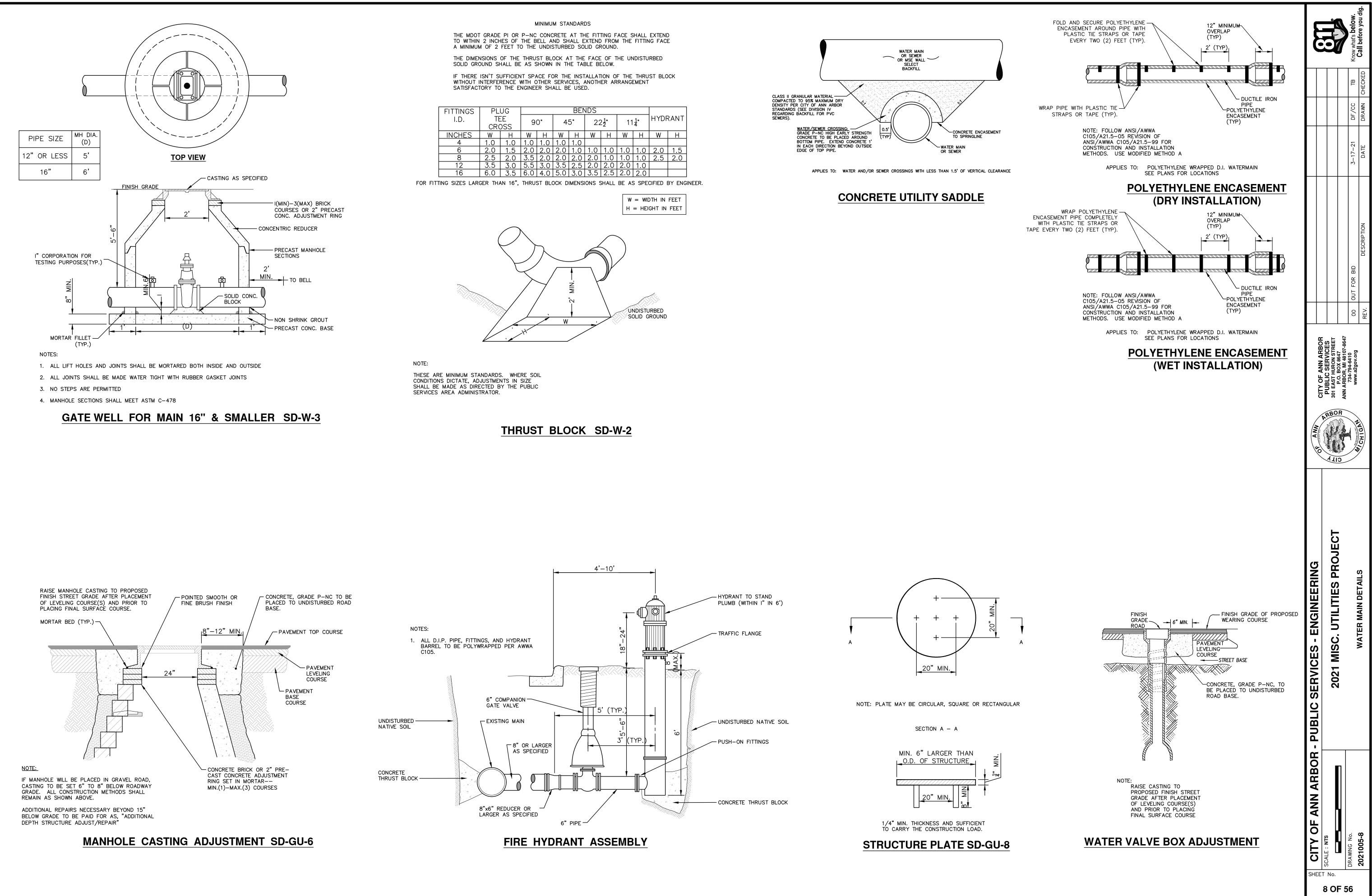
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МІХ	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
	275 LB/SYD	2.5	220 (TOP)	PG 64-28	TOP COURSE
	275 LB/SYD	2.5	-	PG 64-28	LEVELING COURSE
	0 - 440 LB/SYD			PG 64-28	HAND PATCHING
	0.05 - 0.15 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM





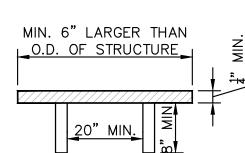
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MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES	CITY OF ANN PUBLIC SER 301 EAST HUBON	P.O. BOX 8647 ANN ARBOR, MI 48107 734-794-6410 www a2000 000	
	220 LB/SYD 220 LB/SYD	2	220 (TOP)	PG 58-28 PG 58-28	TOP COURSE			
	220 LB/SYD	2	220 (TOP)	PG 58-28	TOP COURSE	ARD		
	220 LB/SYD	2	-	PG 58-28	LEVELING COURSE	HON		
	0 - 440 LB/SYD			PG 58-28	HAND PATCHING			
	0.05 - 0.15 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM			
2'						CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING CALE PLAN: NTS C		5-7 CREST AVE TYPICAL SECTIONS
						CITY OF SCALE PLAN: NTS	DRAWING No.	2021005-7

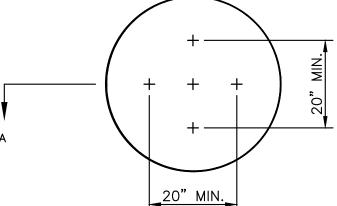
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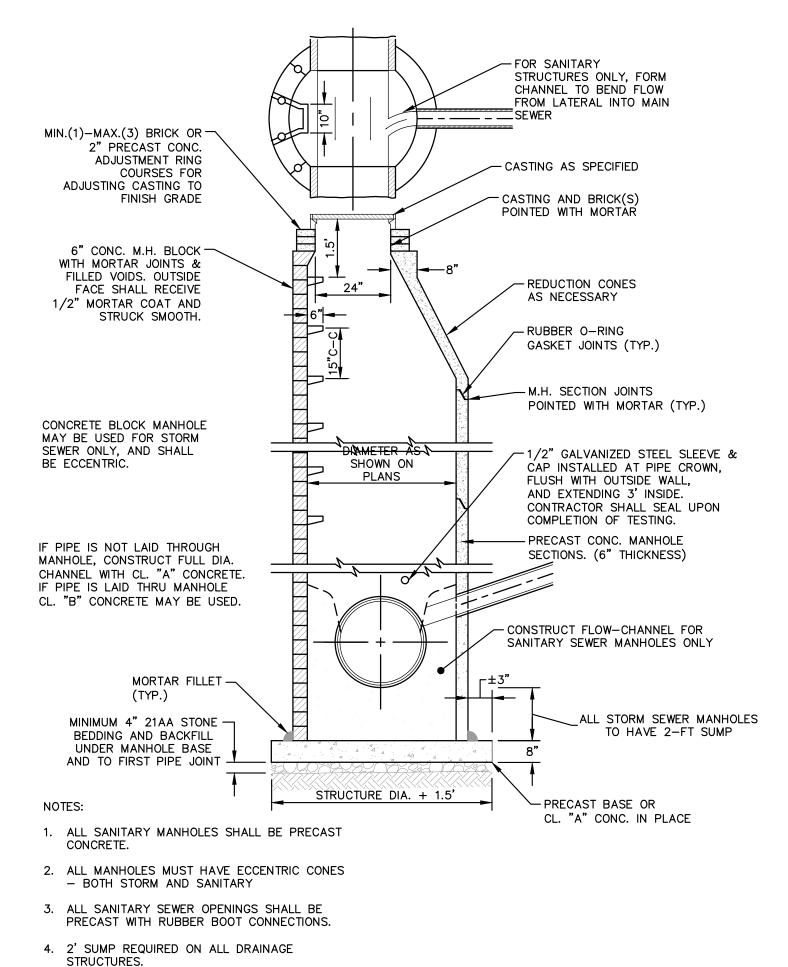


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	2.0	1.5	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	1.5	
	2.5	2.0	3.5	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.5	2.0	
	3.5	3.0	5.5	3.0	3.5	2.5	2.0	2.0	2.0	1.0			
	6.0	3.5	6.0	4.0	5.0	3.0	3.5	2.5	2.0	2.0			

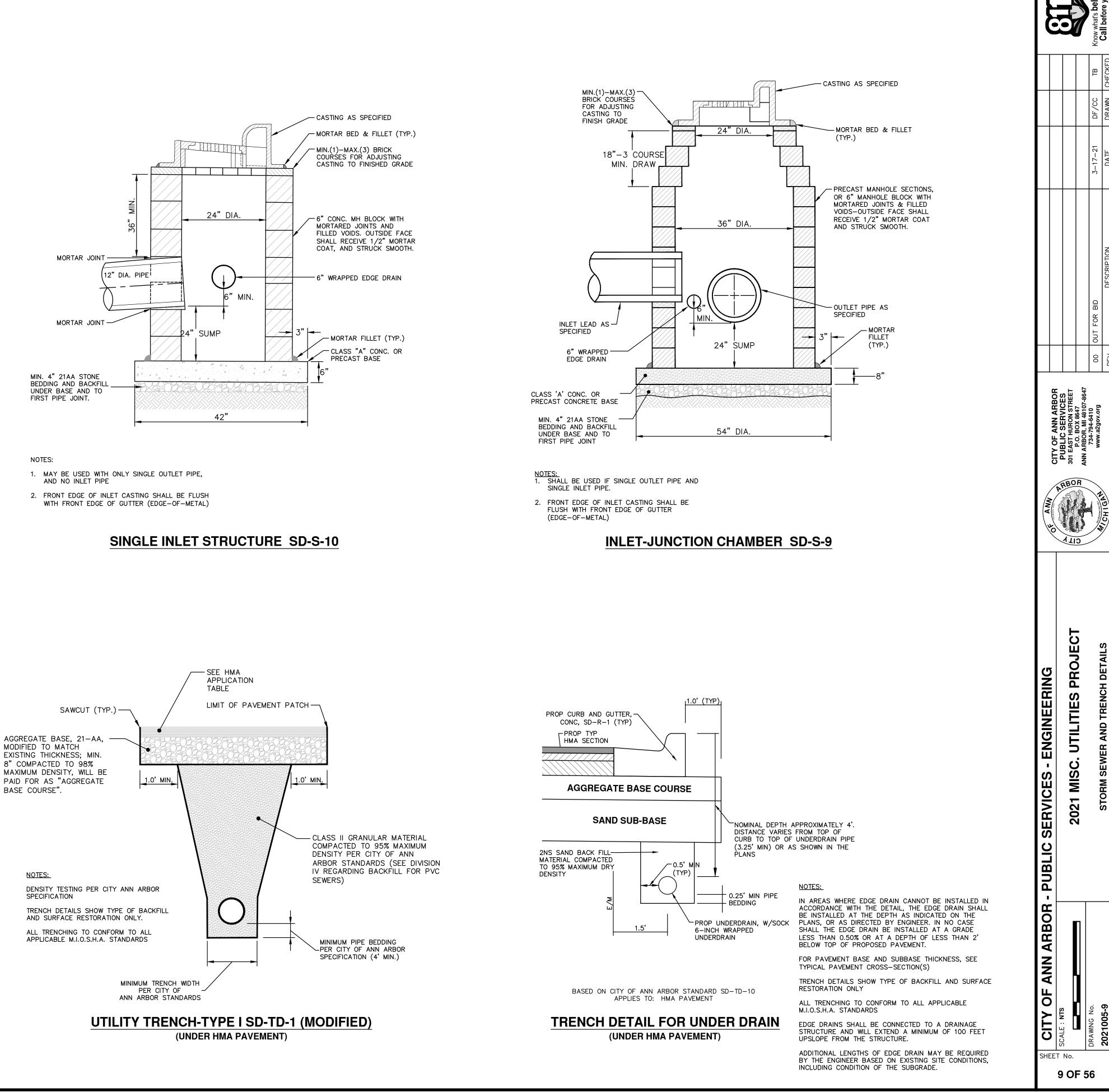


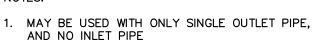


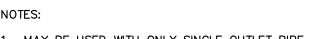








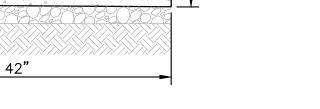


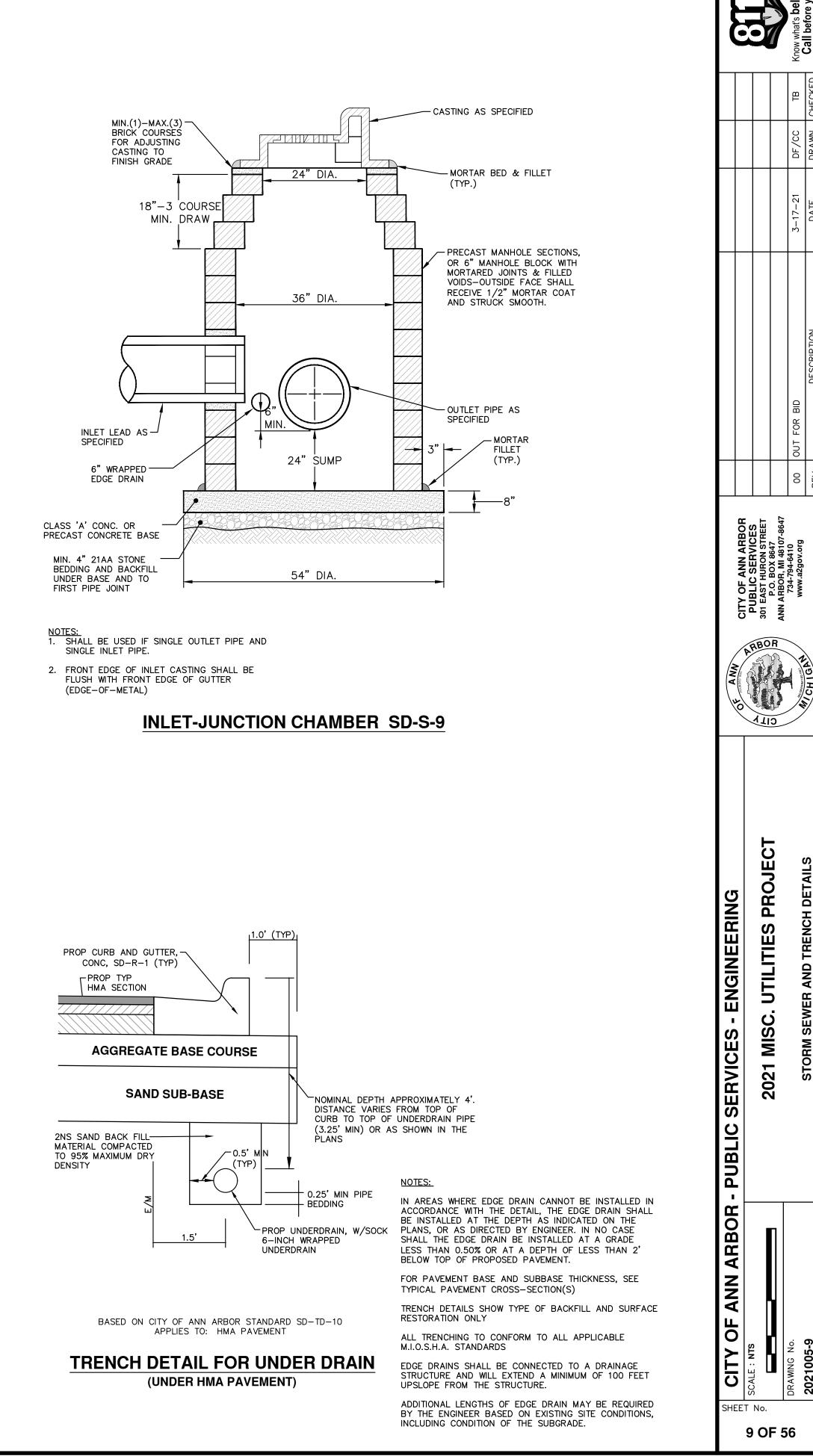


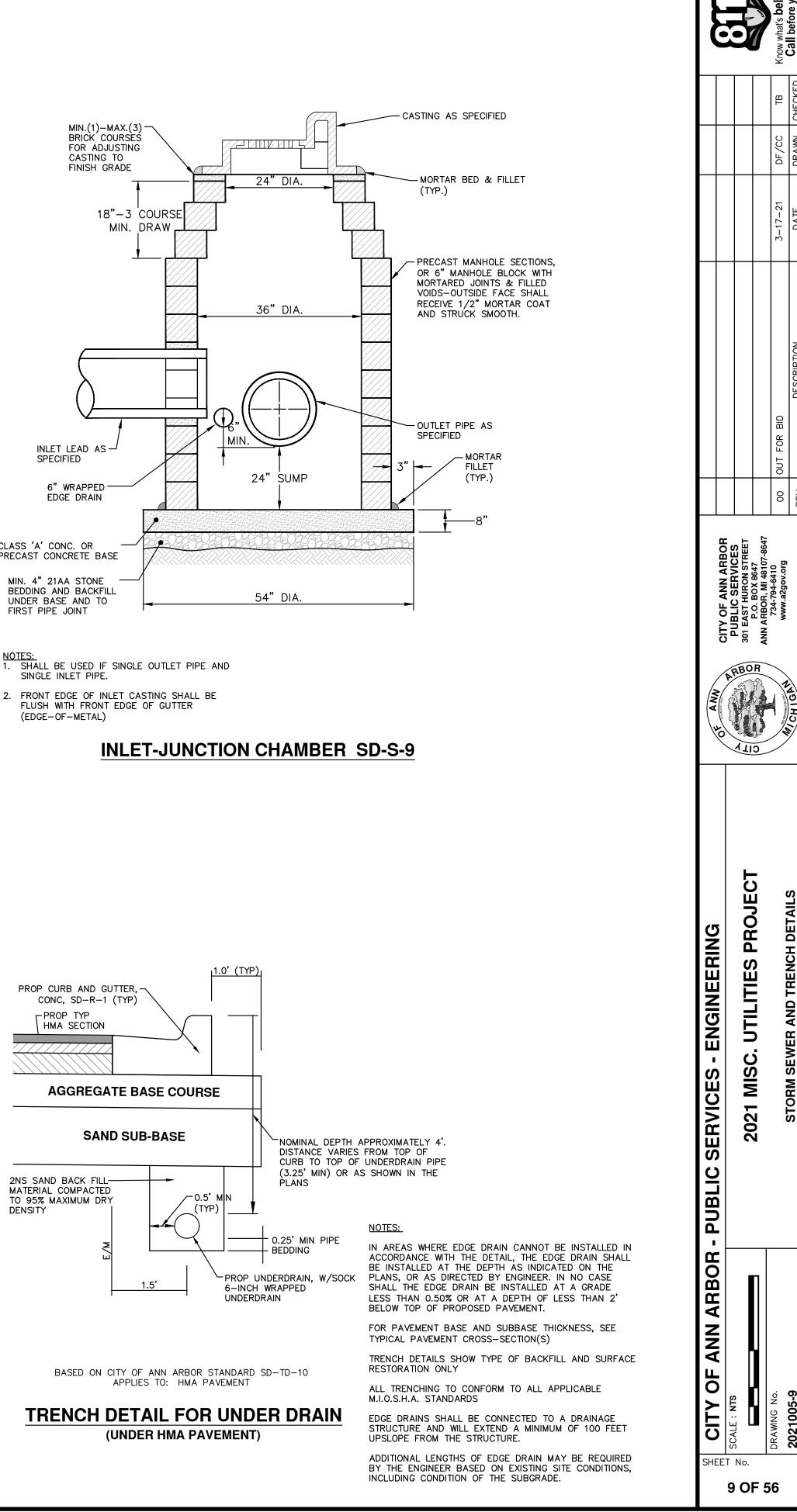


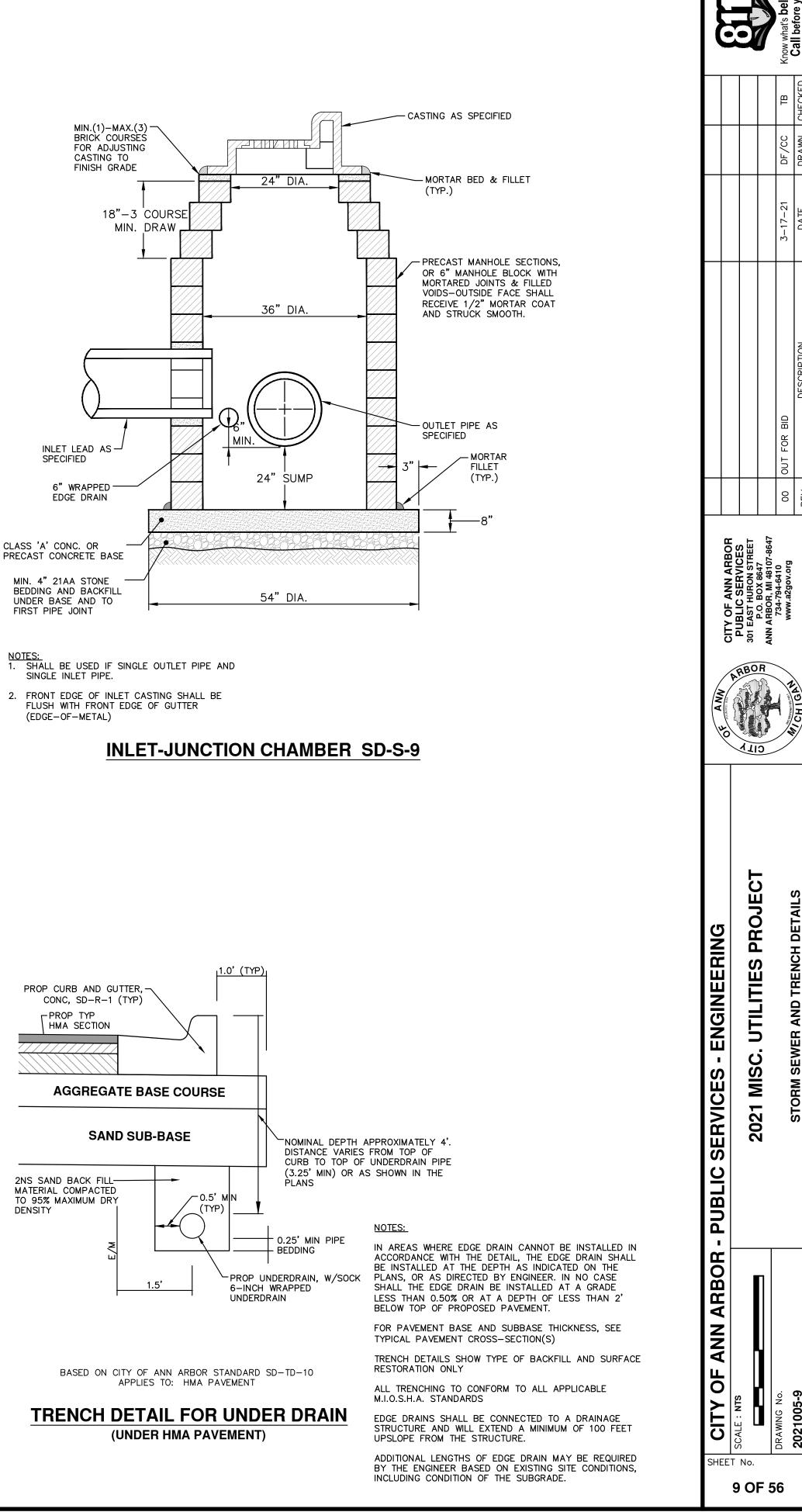


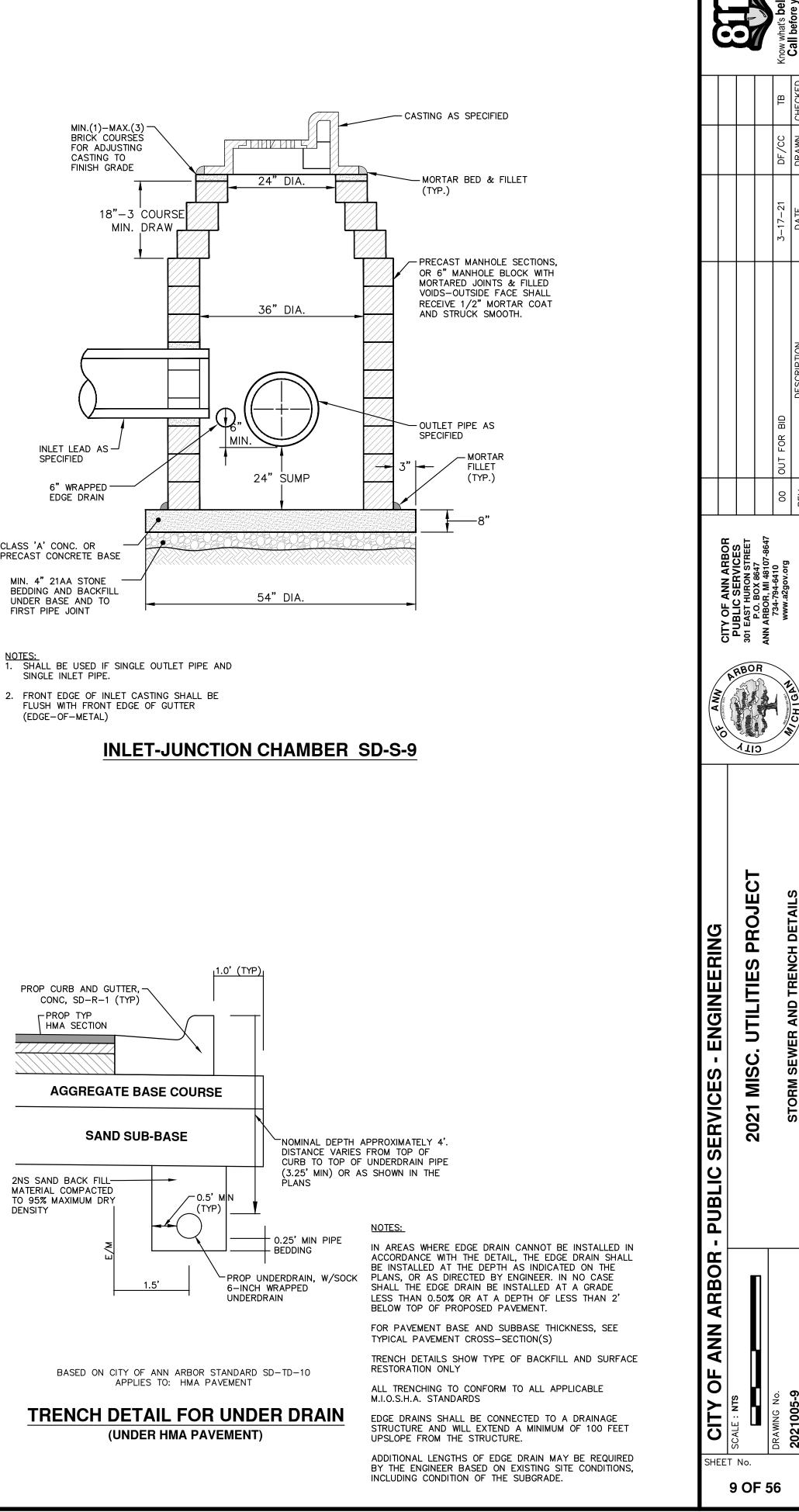


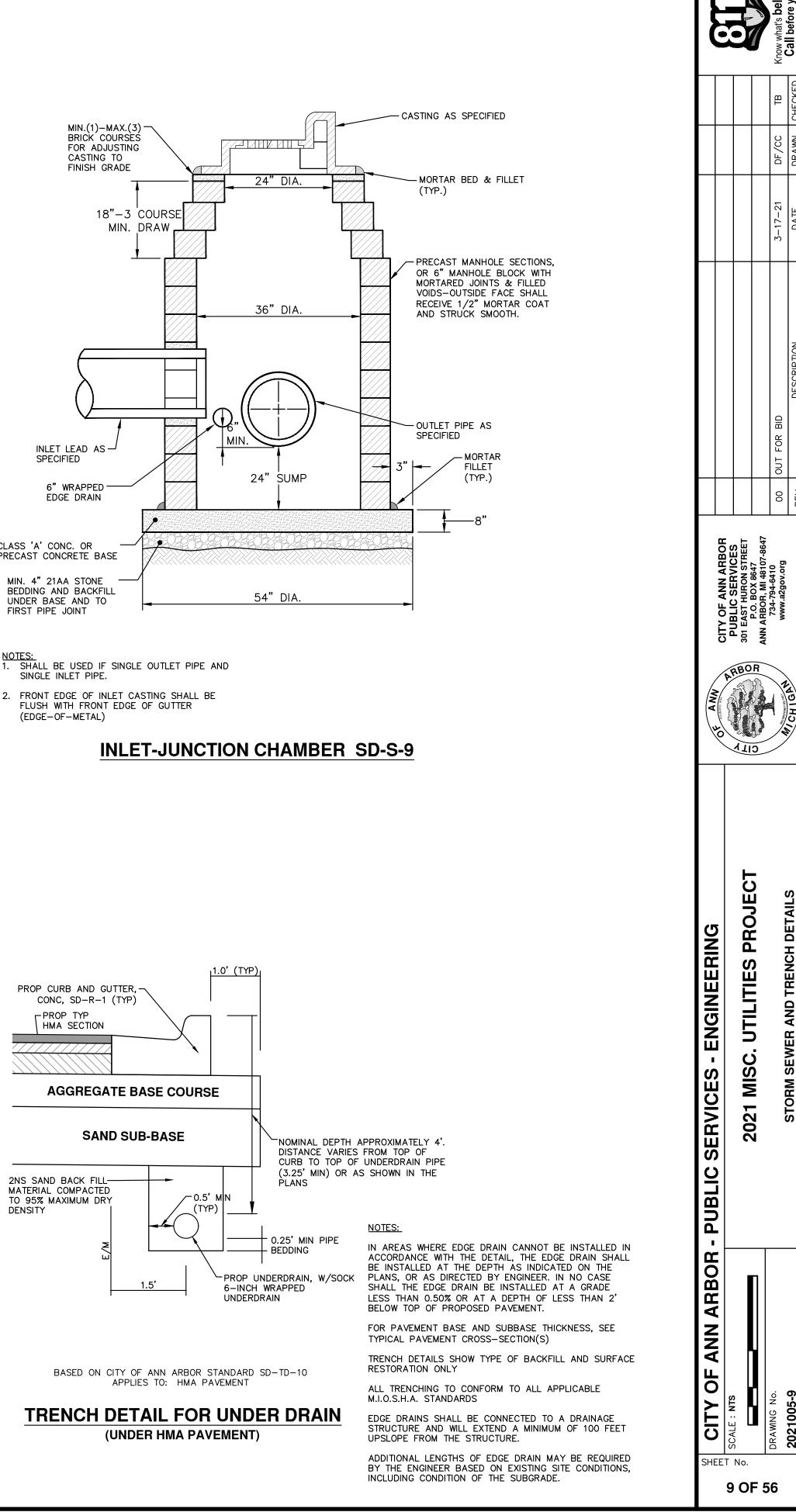


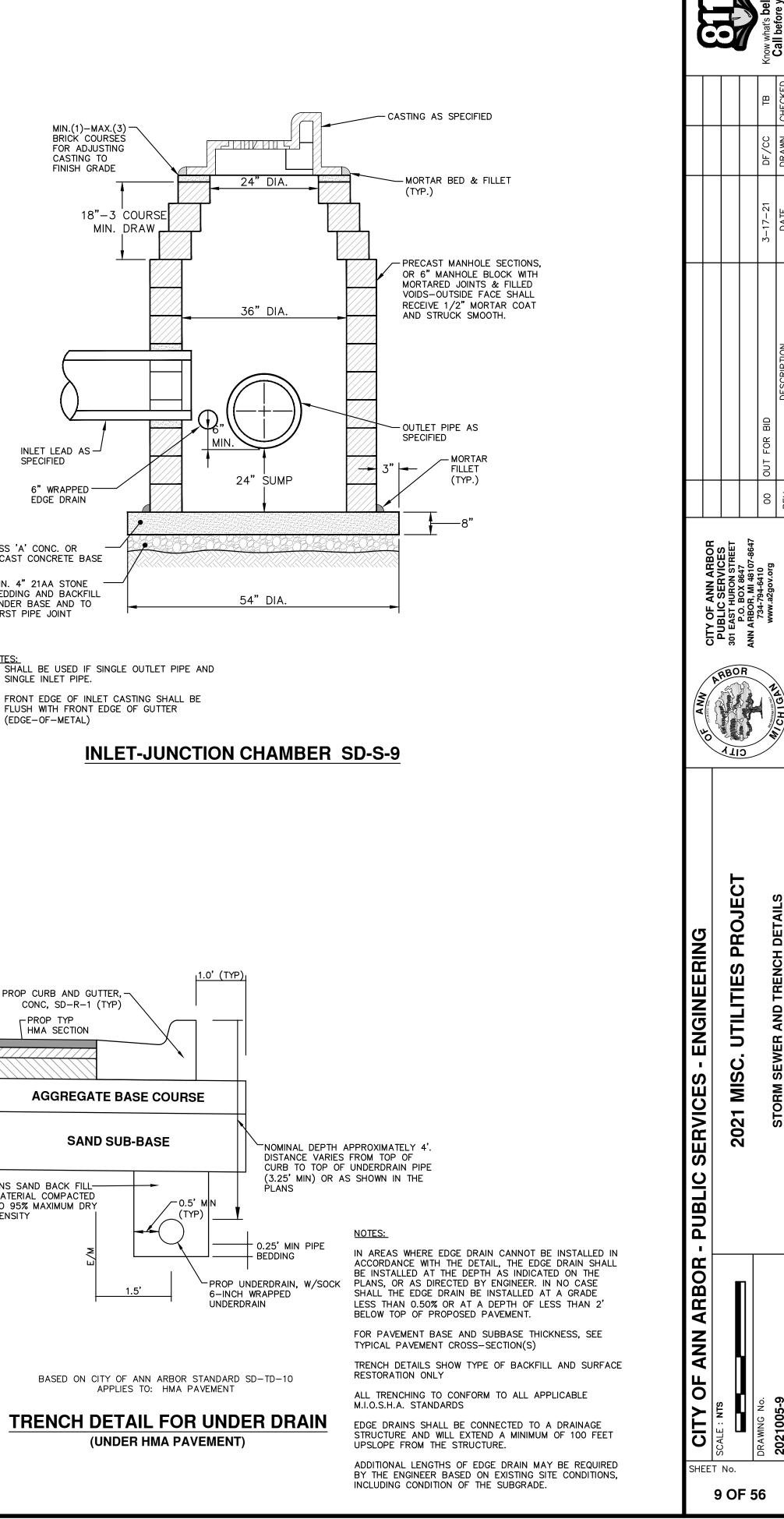


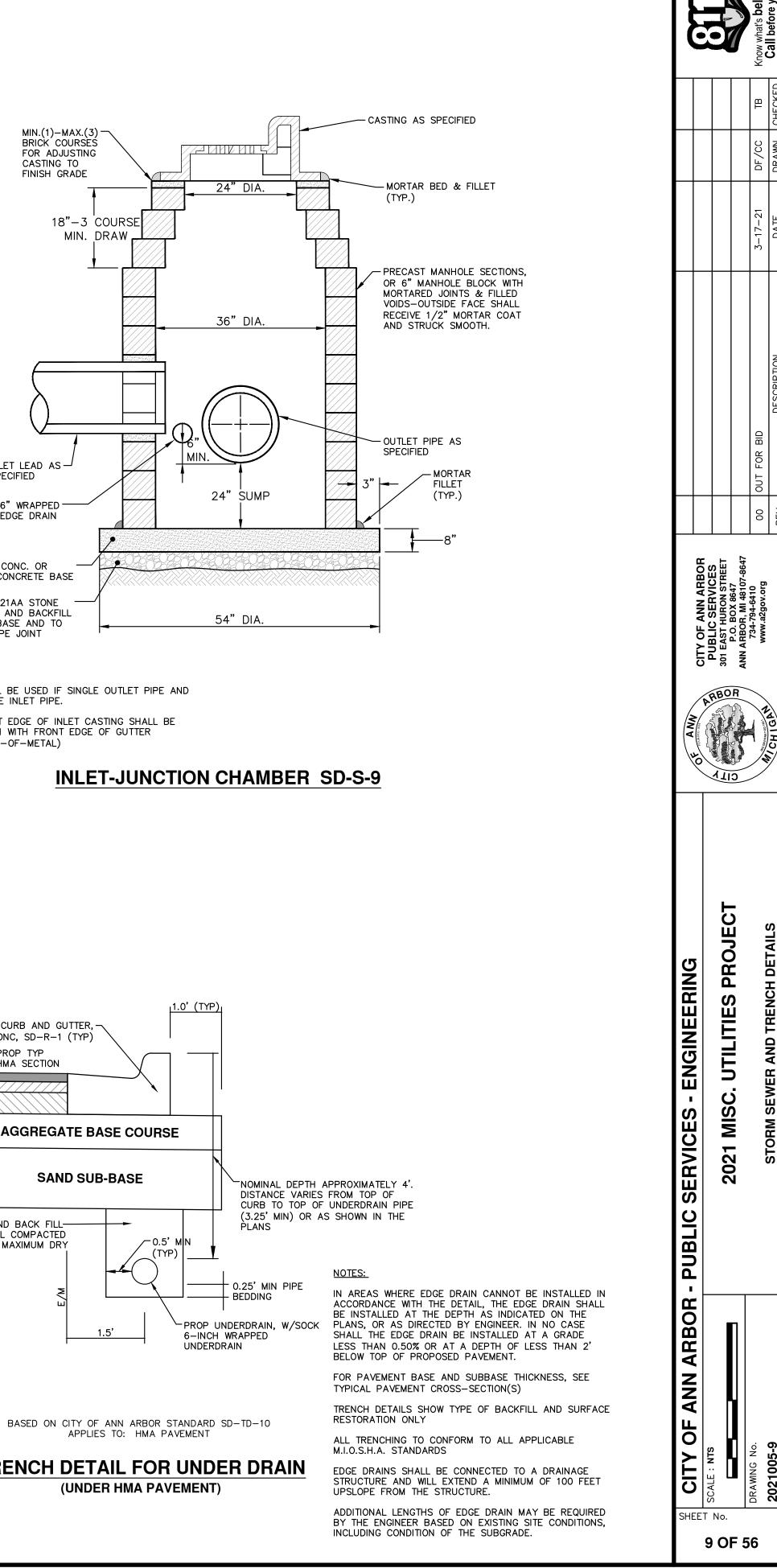


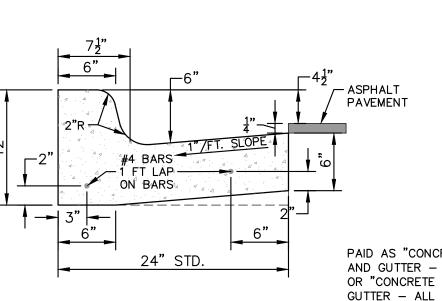


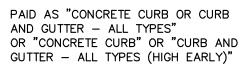




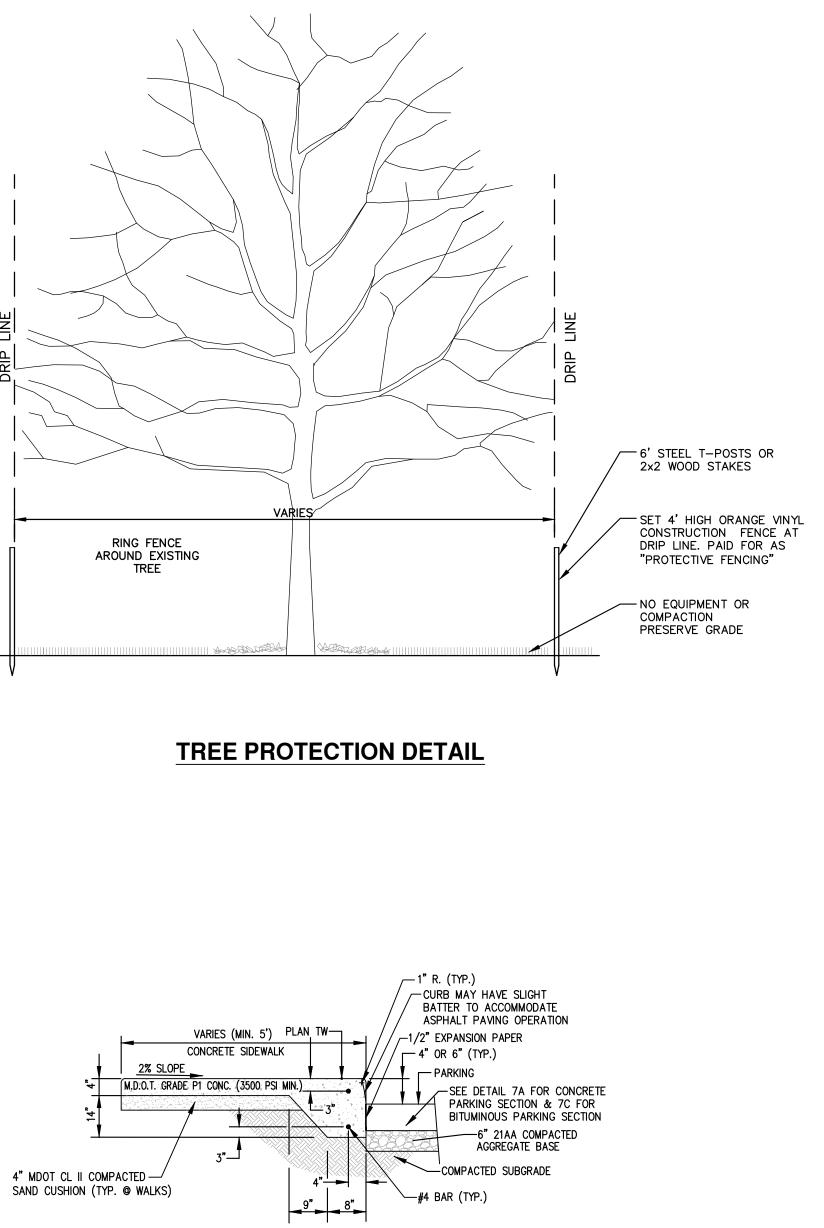




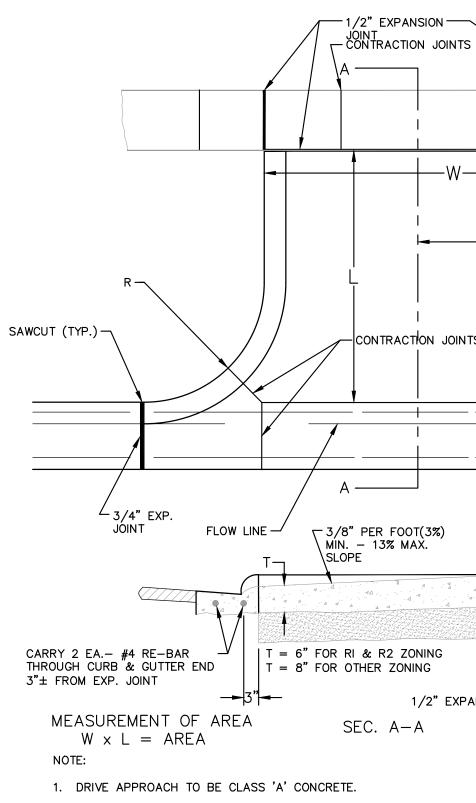






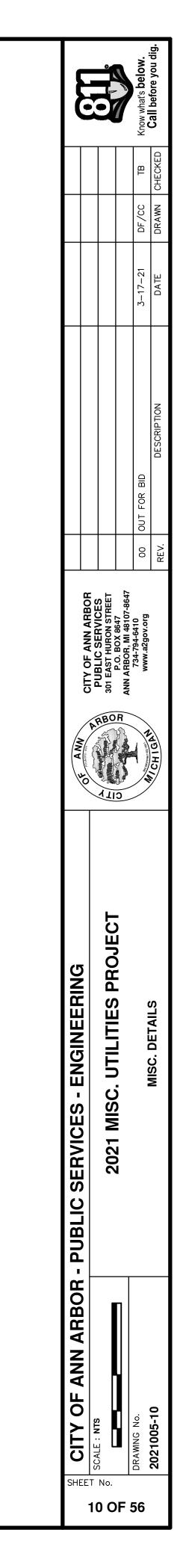




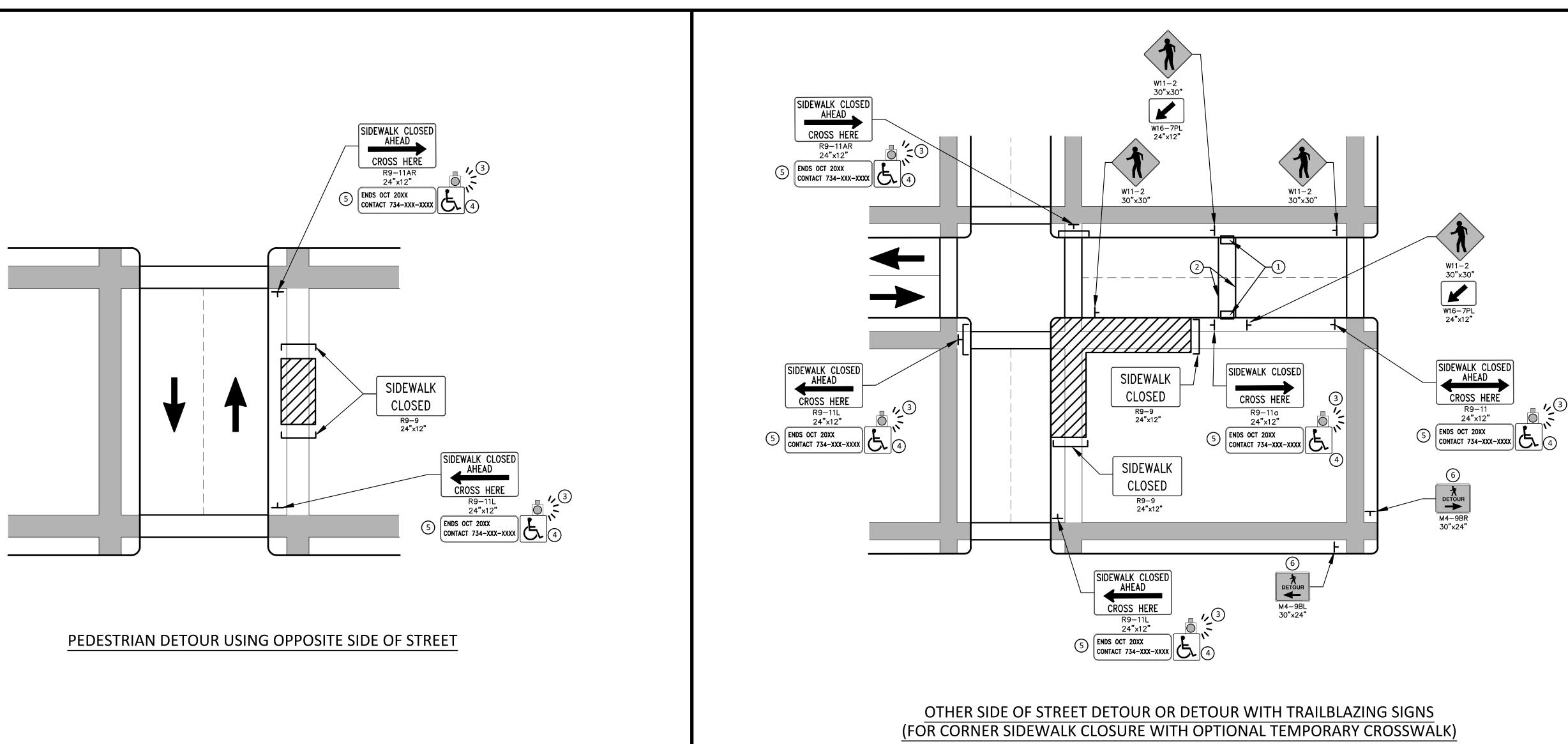


- 2. R(RADIUS) AND W(DRIVE WIDTH) AS REQUIRED FOR ZONING BY CITY CODE
- 3. IF GUTTER IS OVERLAYED, GUTTER OF THE APPROACH SHALL BE AT SAME ELEVATION AS EXISTING GUTTER AND ASPHALT WEDGE SHALL BE PLACED IN THE APPROACH.

# **TYPE 'M' DRIVE APPROACH SD-R-6**



# - CONTRACTION JOINT REQ'D WHEN WIDTH EXCEEDS 16' - CURB REMOVAL FRONT OF EXISTING DRIVE APPROACHES WILL REQUIRE SAW CUT OF APPROACH. LOCATION OF SAW CUT TO BE -CONTRACTION JOINTS-DETERMINED BY ENGINEER. – #4 RE–BAR ∠ 3/4" EXP. JOINT √1/4"PER \ FOOT(2%) T-SAND SUBBASE COURSE, CLASS II, C.I.P., COMPACTED TO 95% MAXIMUM DENSITY PER CITY OF ANN ARBOR 1/2" EXPANSION STANDARDS. SEC. A-A



# 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.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED. PROVIDE A FIRM, STABLE, AND SLIP RESISTANT TEMPORARY WALKWAY SURFACE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND.

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. MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

- 1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
- 2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE OTHER SIDE OF THE STREET.
- 3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON THE OTHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS AS SHOWN ON THE PROJECT PLANS.

## SPECIFIC NOTES

- (1) TEMPORARY CURB RAMPS 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.

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. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHALL BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.
- 4. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF NCHRP 350 AND THE MMUTCD SHALL BE USED.
- 5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
- 6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.
- 7. 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.
- 8. 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."





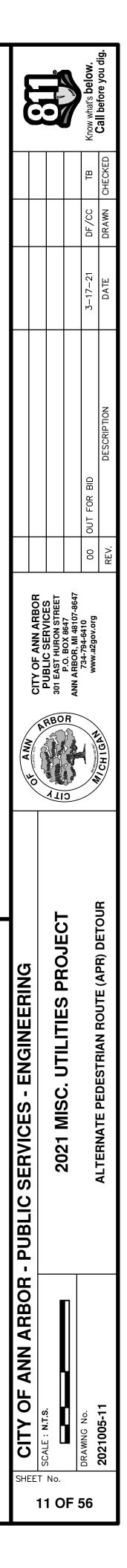
EXISTING PEDESTRIAN SURFACE WORK AREA PEDESTRIAN CHANNELIZATION DEVICE

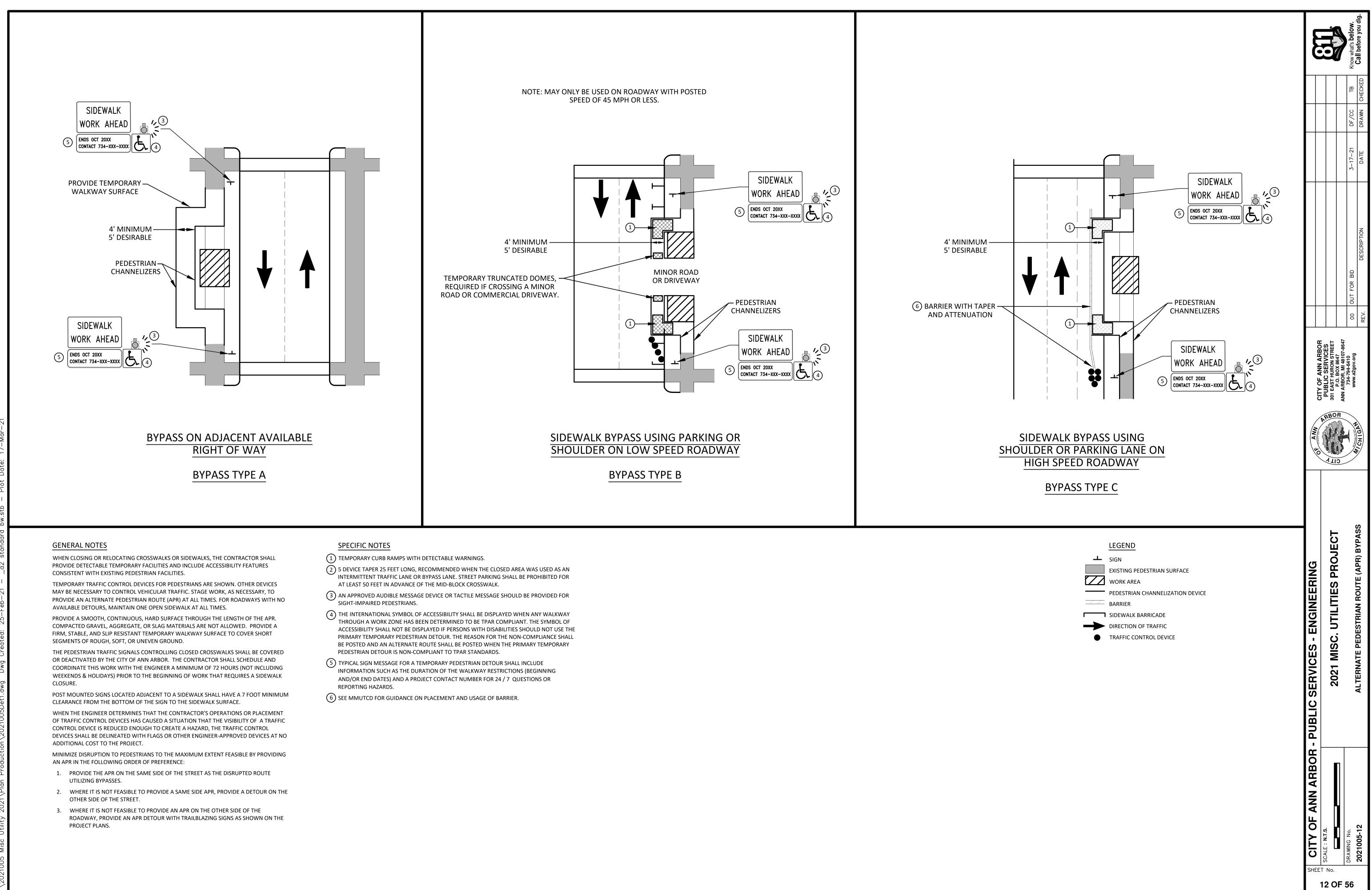
BARRIER

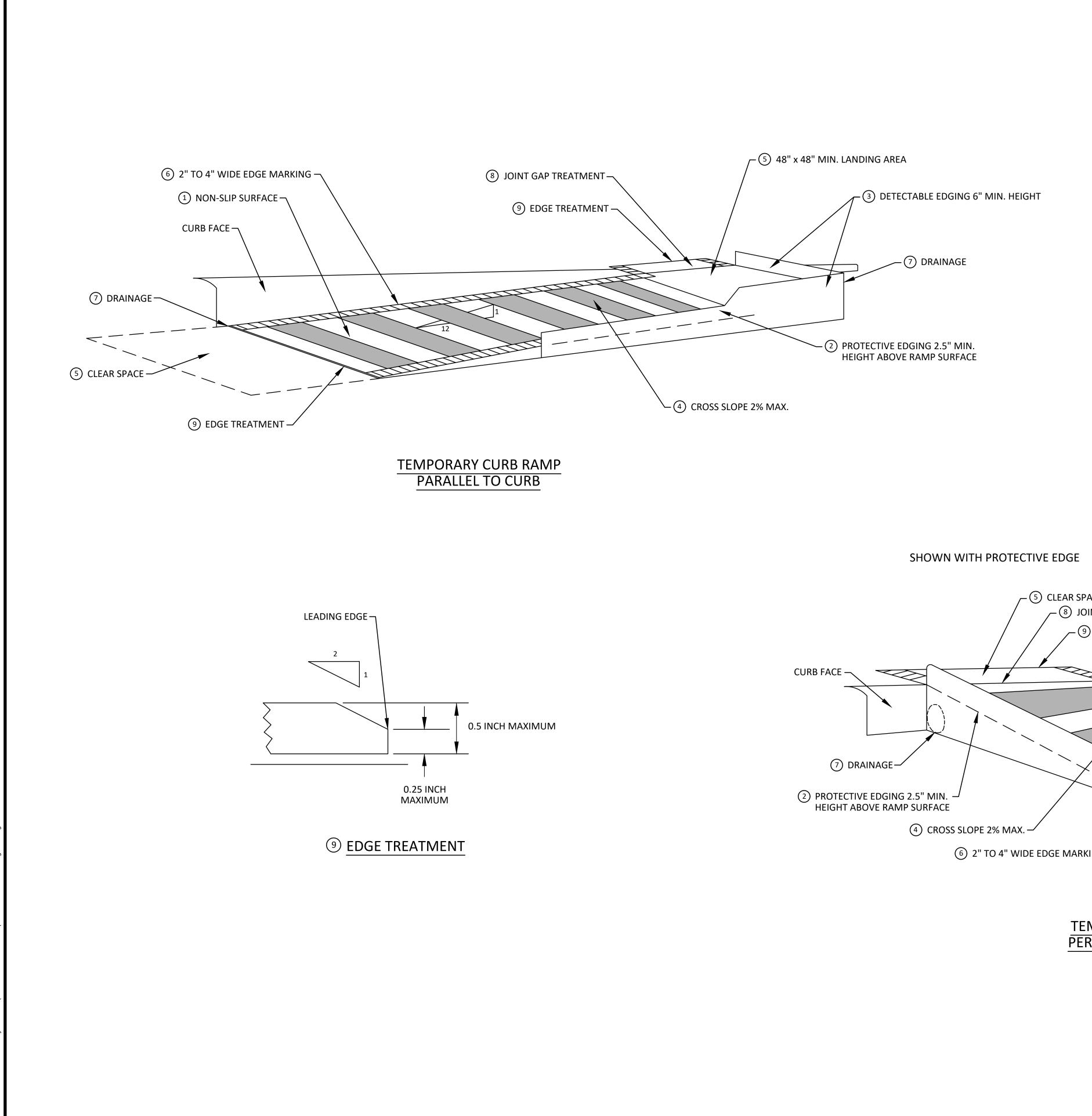
SIDEWALK BARRICADE

DIRECTION OF TRAFFIC

TRAFFIC CONTROL DEVICE





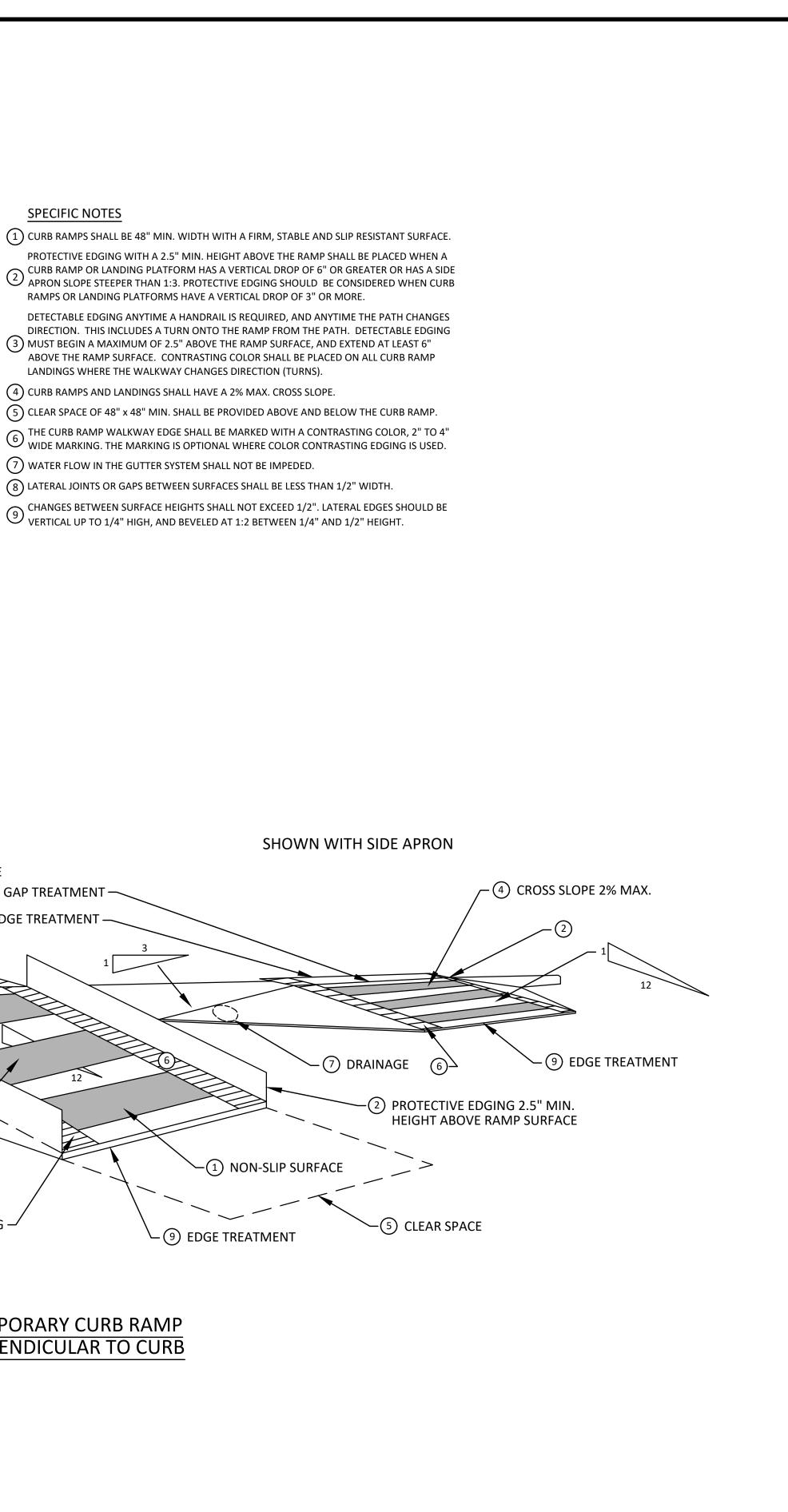


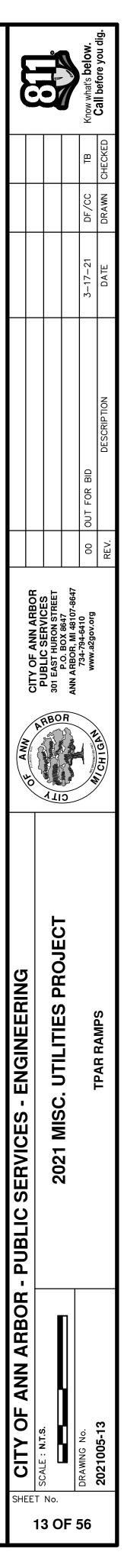
PROTECTIVE EDGING WITH A 2.5" MIN. HEIGHT ABOVE THE RAMP SHALL BE PLACED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE. DETECTABLE EDGING ANYTIME A HANDRAIL IS REQUIRED, AND ANYTIME THE PATH CHANGES DIRECTION. THIS INCLUDES A TURN ONTO THE RAMP FROM THE PATH. DETECTABLE EDGING (3) MUST BEGIN A MAXIMUM OF 2.5" ABOVE THE RAMP SURFACE, AND EXTEND AT LEAST 6" ABOVE THE RAMP SURFACE. CONTRASTING COLOR SHALL BE PLACED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS). 4 CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE. 5 CLEAR SPACE OF 48" x 48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. 6 THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR, 2" TO 4" WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED. 7 WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.

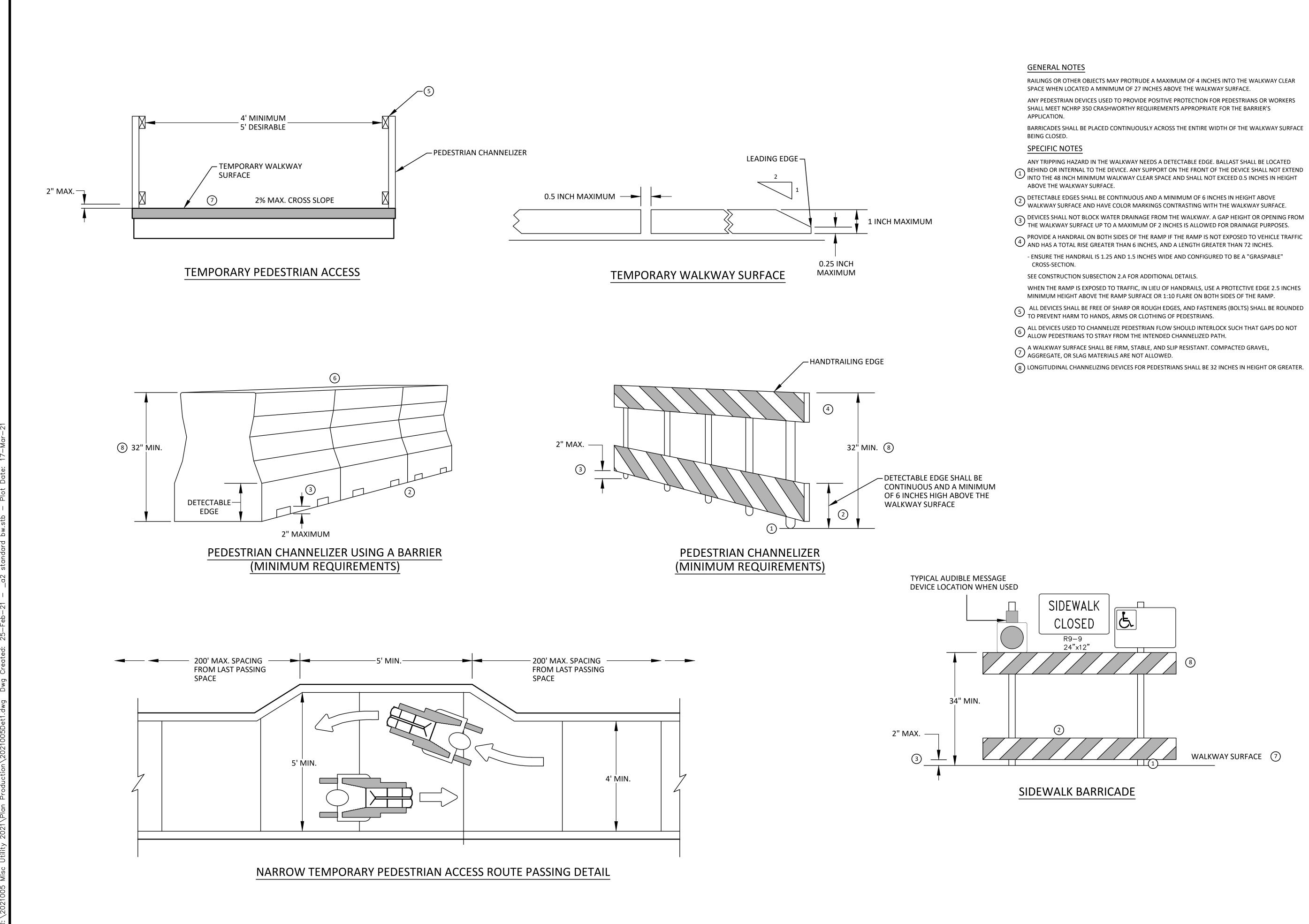
SPECIFIC NOTES

– ⁵ CLEAR SPACE - ⑧ JOINT GAP TREATMENT ,- (9) EDGE TREATMENT --1 NON-SLIP SURFACE 6 2" TO 4" WIDE EDGE MARKING 9 EDGE TREATMENT

# TEMPORARY CURB RAMP PERPENDICULAR TO CURB





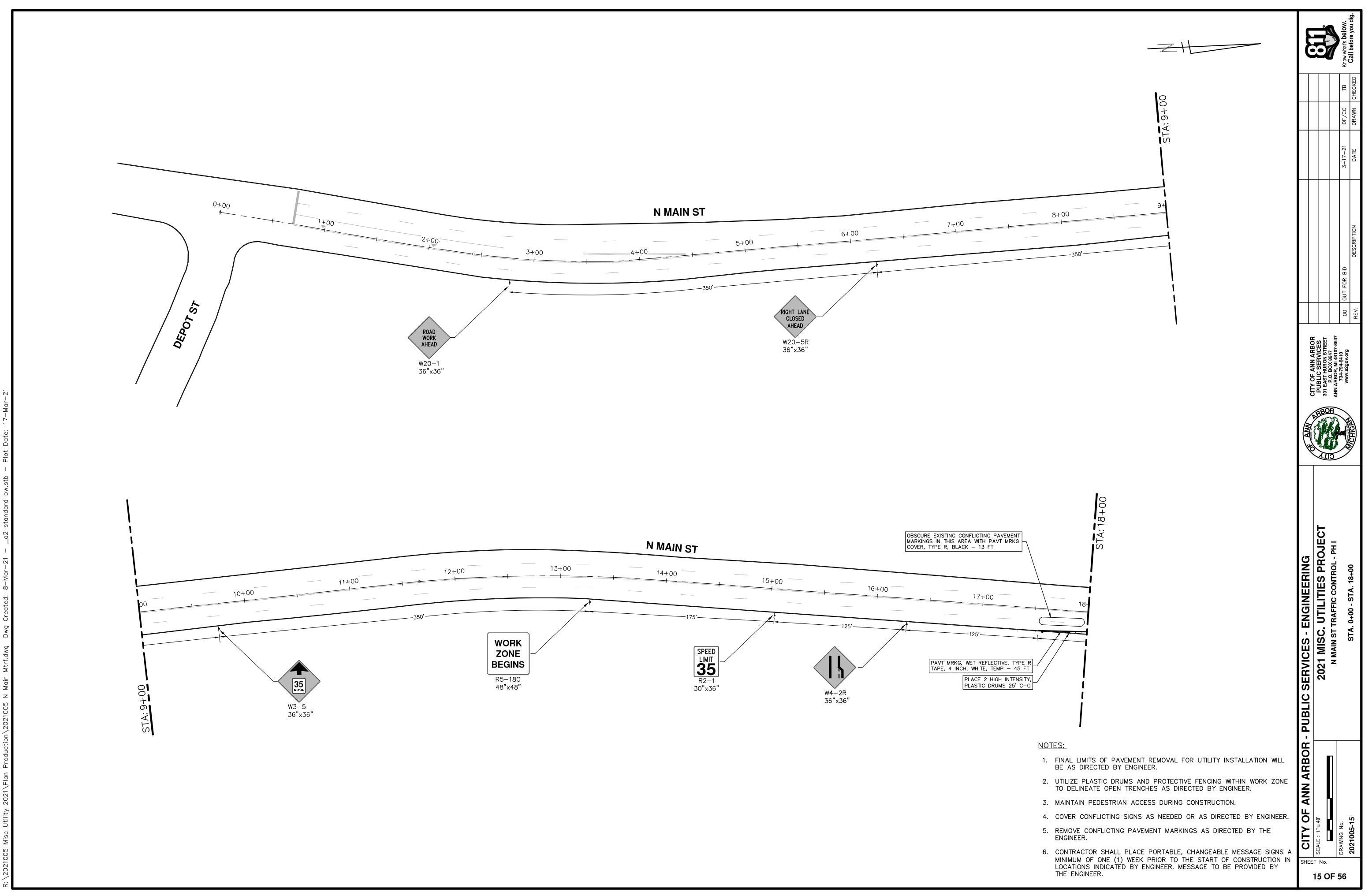


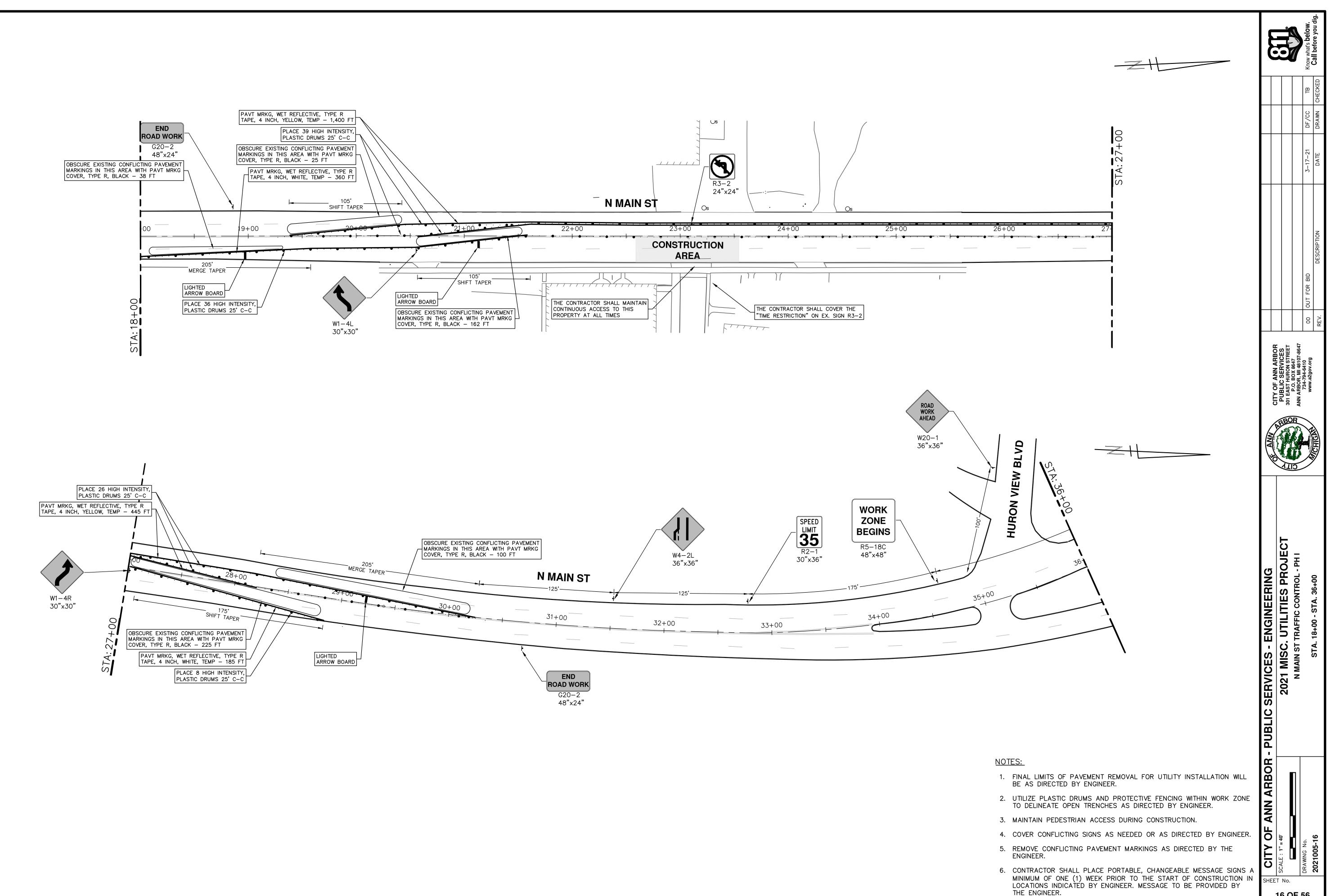
ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS

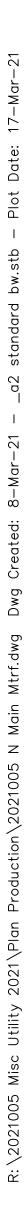
BARRICADES SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE WIDTH OF THE WALKWAY SURFACE

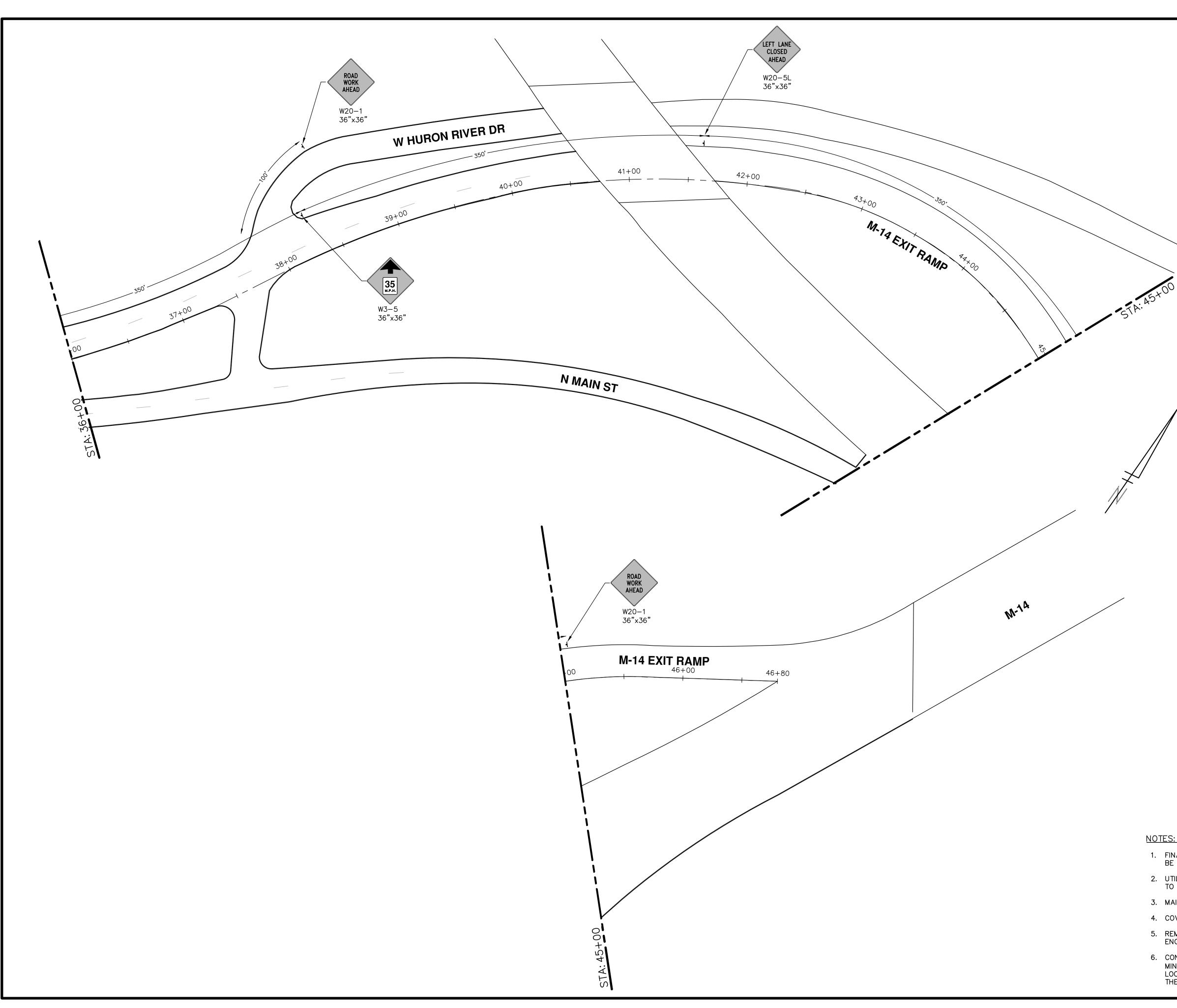
- WHEN THE RAMP IS EXPOSED TO TRAFFIC, IN LIEU OF HANDRAILS, USE A PROTECTIVE EDGE 2.5 INCHES

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· PUBLIC SERVICES - ENGINEERING						TPAR WALKWAY DEVICES
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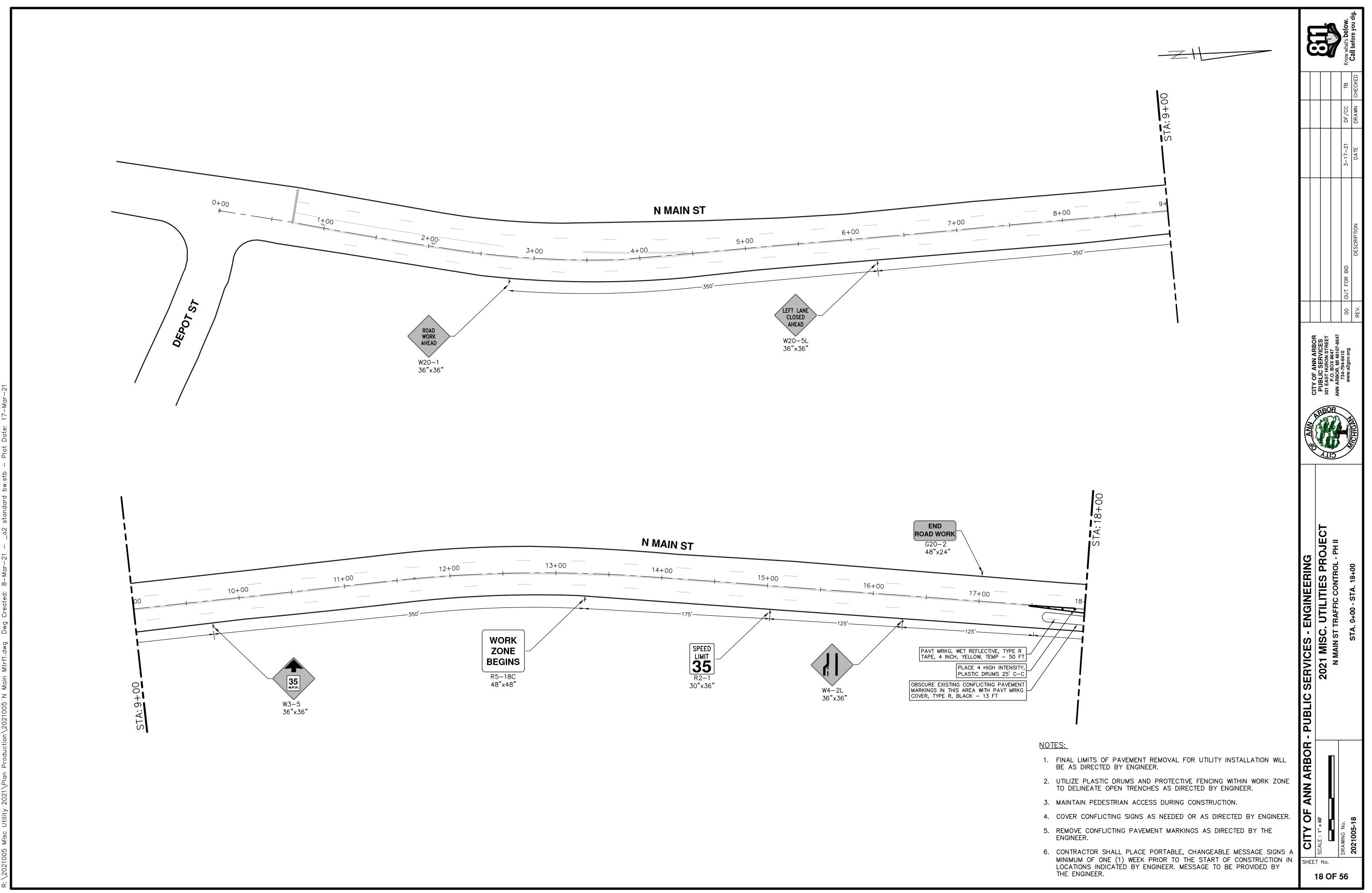


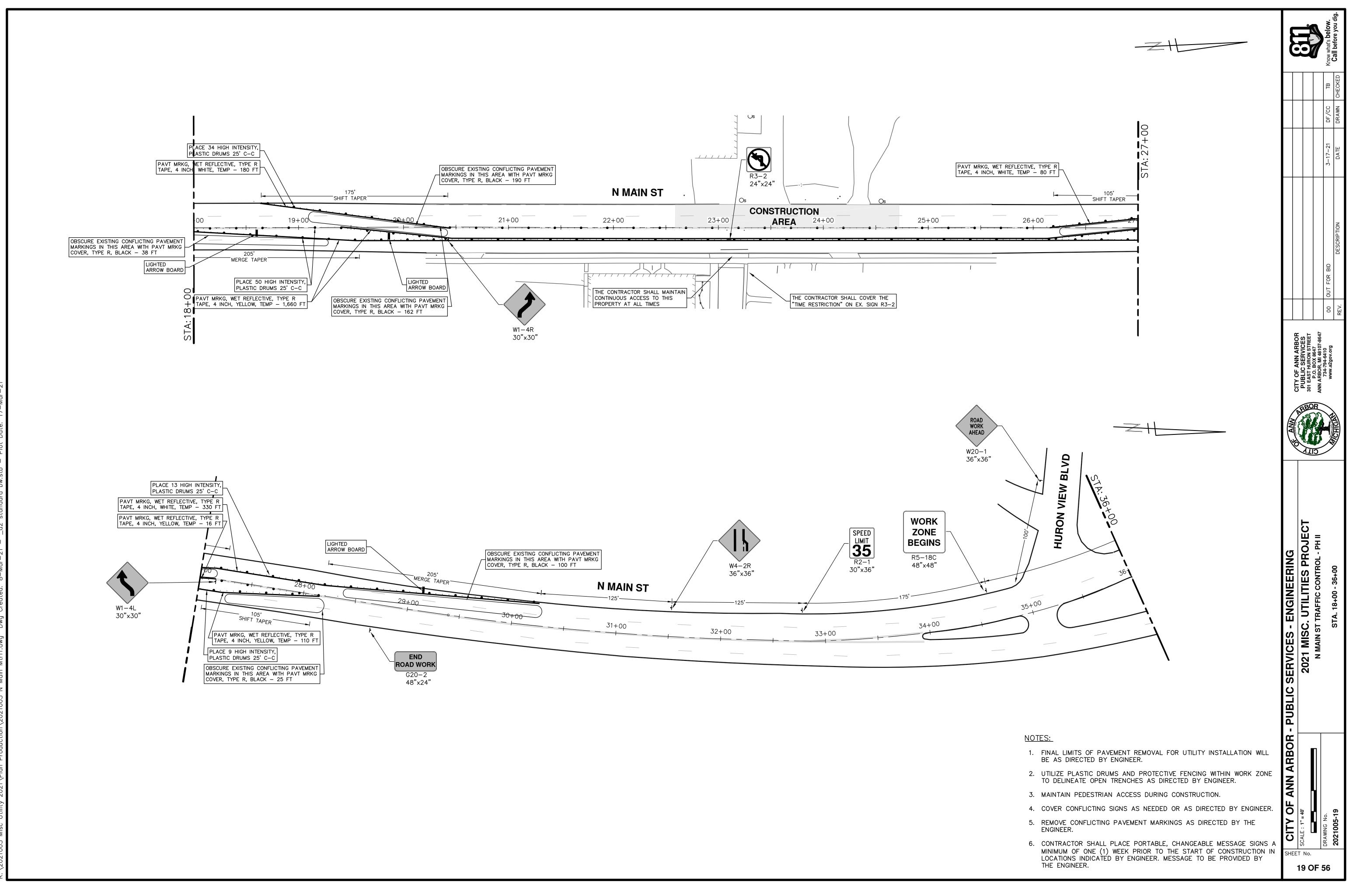


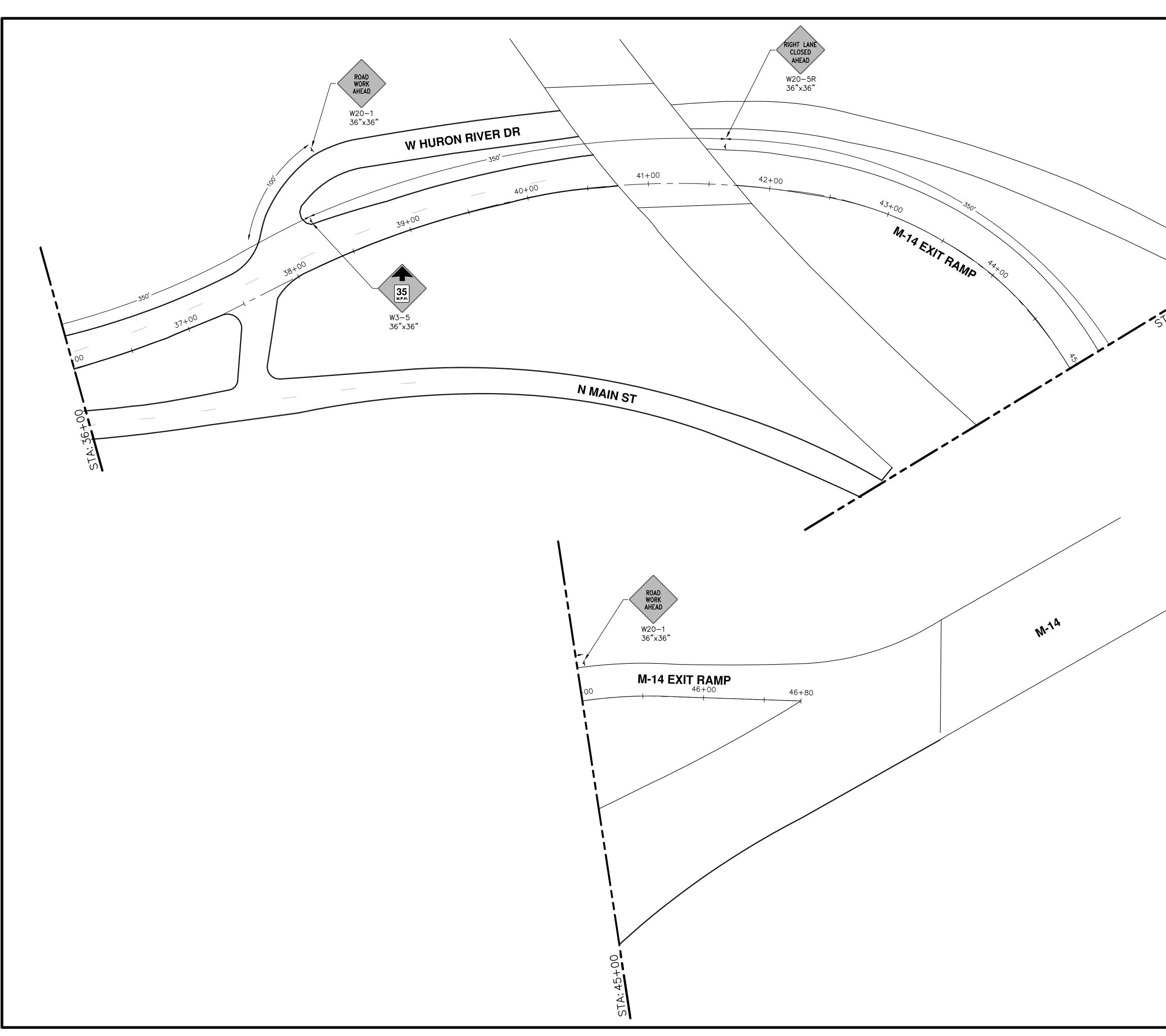
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	IN ARBOR - PUBLIC SERVICES - ENGINEERING	2021 MISC. UTILITIES PROJECT N MAIN ST TRAFFIC CONTROL - PH I	STA. 36+00 - STA. 46+80
LATION WILL I WORK ZONE R. BY ENGINEER. BY THE SAGE SIGNS A ISTRUCTION IN OVIDED BY	CITY OF AN	SCALE : 1" = 40' T No' T No' T AOL T No'	<b>5</b> DEAMING NO. 2021005-17

<u>NOTES:</u>

- FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLA BE AS DIRECTED BY ENGINEER.
- 2. UTILIZE PLASTIC DRUMS AND PROTECTIVE FENCING WITHIN TO DELINEATE OPEN TRENCHES AS DIRECTED BY ENGINEER.
- 3. MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.
- 4. COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED
- 5. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED I ENGINEER.
- 6. CONTRACTOR SHALL PLACE PORTABLE, CHANGEABLE MESSA MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF CONST LOCATIONS INDICATED BY ENGINEER. MESSAGE TO BE PROV THE ENGINEER.

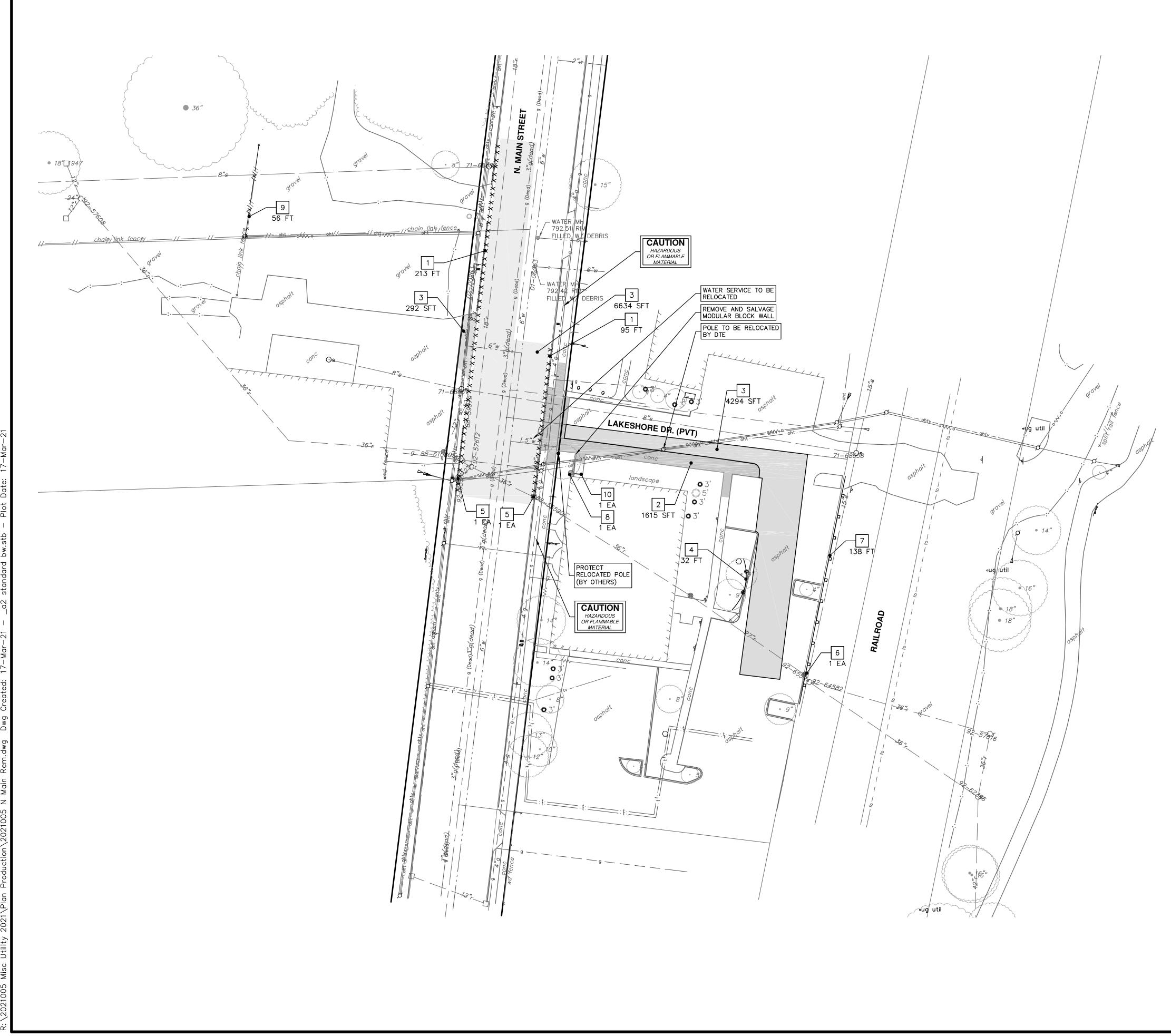






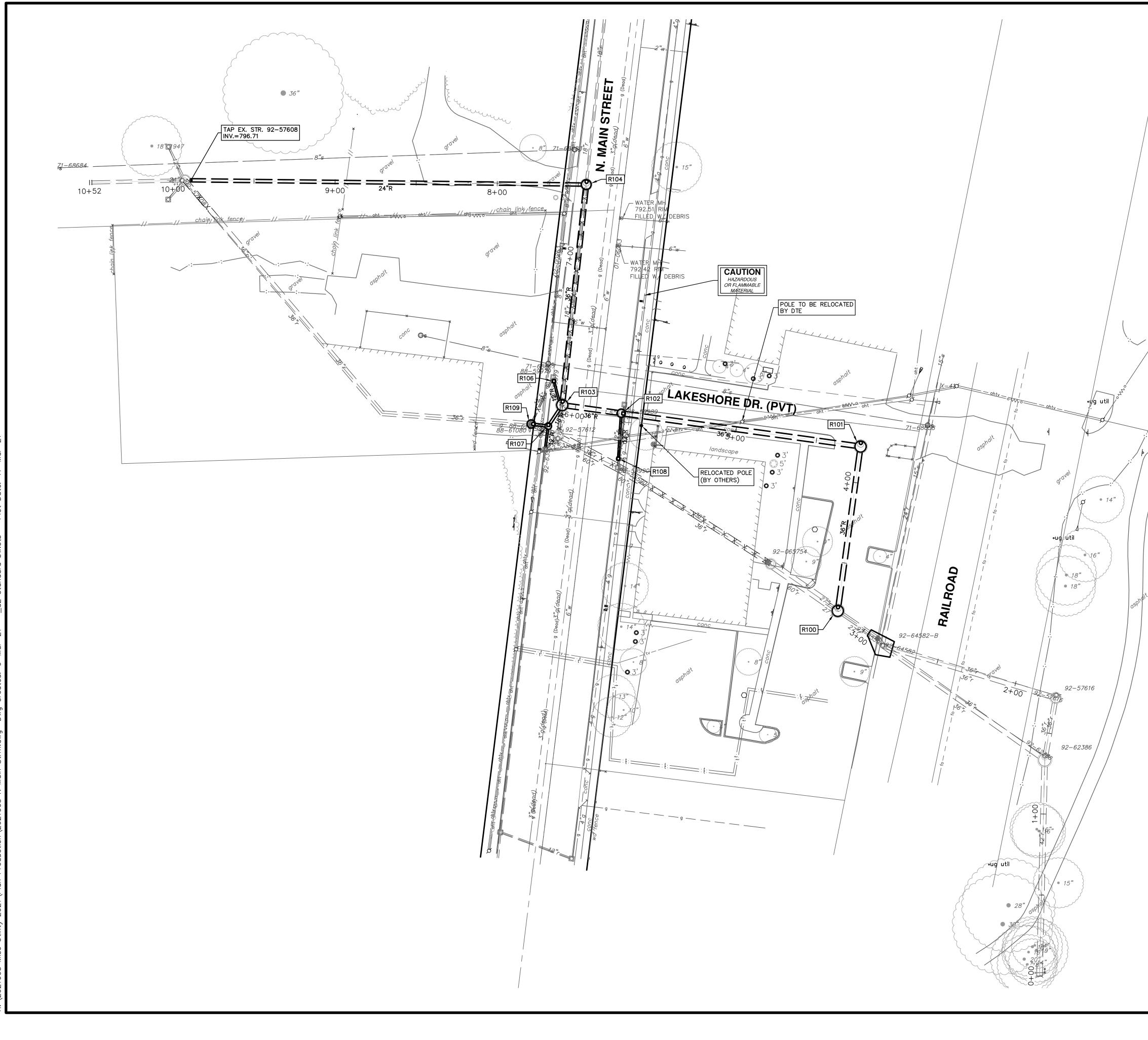


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	ARBOR HOLENO
	PUBLIC SERVICES - ENGINEERING 2021 MISC. UTILITIES PROJECT N MAIN ST TRAFFIC CONTROL - PH II STA. 36+00 - STA. 46+80
NOTES: 1. FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLATION WILL BE AS DIRECTED BY ENGINEER.	ANN ARBOR - F
<ol> <li>UTILIZE PLASTIC DRUMS AND PROTECTIVE FENCING WITHIN WORK ZONE TO DELINEATE OPEN TRENCHES AS DIRECTED BY ENGINEER.</li> <li>MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.</li> </ol>	ANN
<ol> <li>COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY ENGINEER.</li> <li>REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE</li> </ol>	<b>Y OF</b> = 40 [°]
<ol> <li>KEMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.</li> <li>CONTRACTOR SHALL PLACE PORTABLE, CHANGEABLE MESSAGE SIGNS A MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF CONSTRUCTION IN LOCATIONS INDICATED BY ENGINEER. MESSAGE TO BE PROVIDED BY THE ENGINEER.</li> </ol>	N 16 N

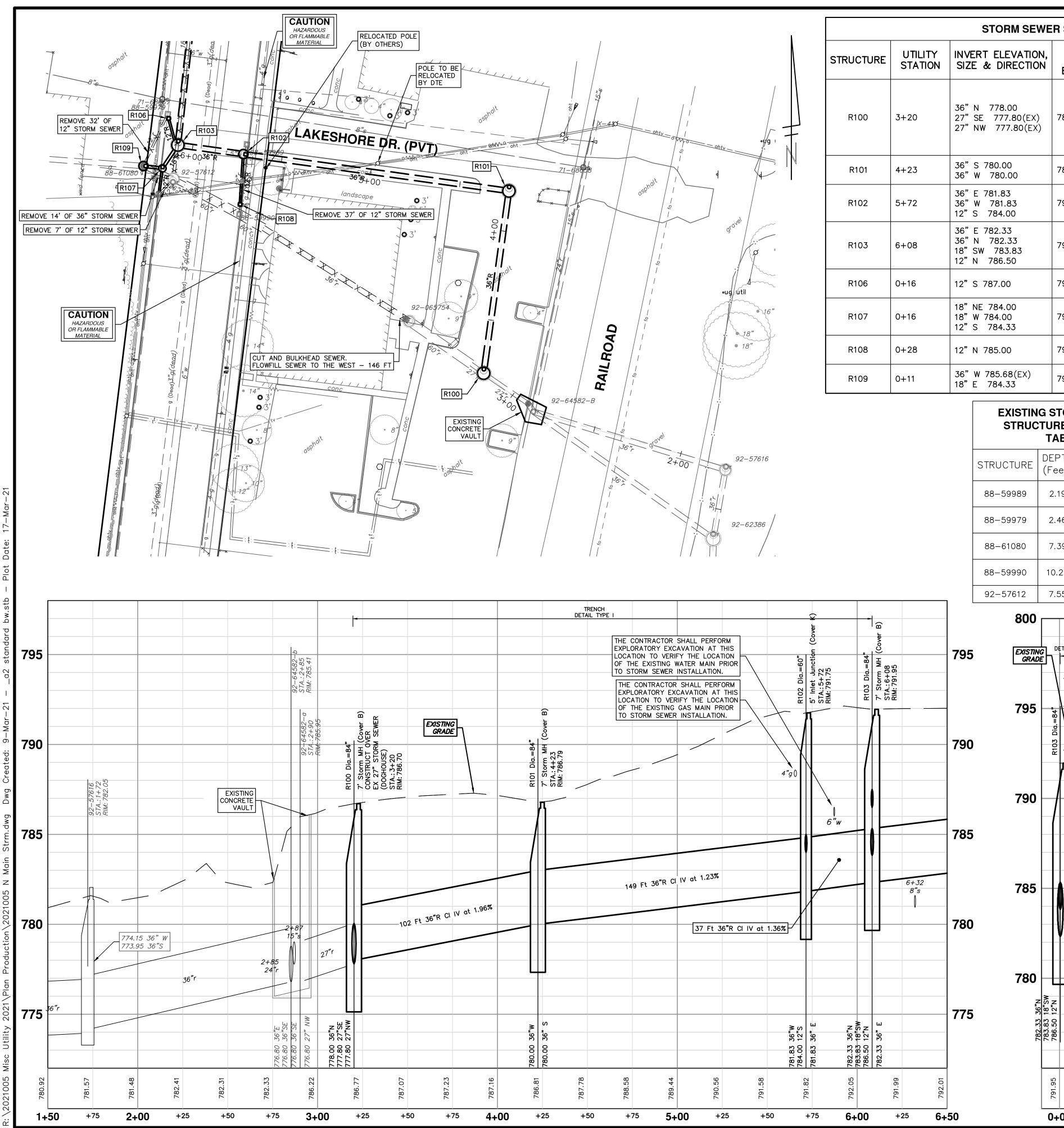


	REMOVAL KEY					
КЕҮ	DESCRIPTION					
1	REMOVE CONCRETE CURB OR CURB AND GUTTER, – ANY TYPE					
2	REMOVE CONCRETE SIDEWALK AND DRIVE – ANY THICKNESS					
3	PAVEMENT REMOVAL, ANY DEPTH					
4	PROTECTIVE FENCING					
5	INLET FILTER					
6	SILT SACK					
7	SILT FENCE					
8	STONE FILTER					
9	REMOVE FENCE					
10	TRENCH DRAIN INLET FILTER					
* SAWCUT	FULL DEPTH AT					

SAWCUT FULL DEPTH AT REMOVAL LIMITS

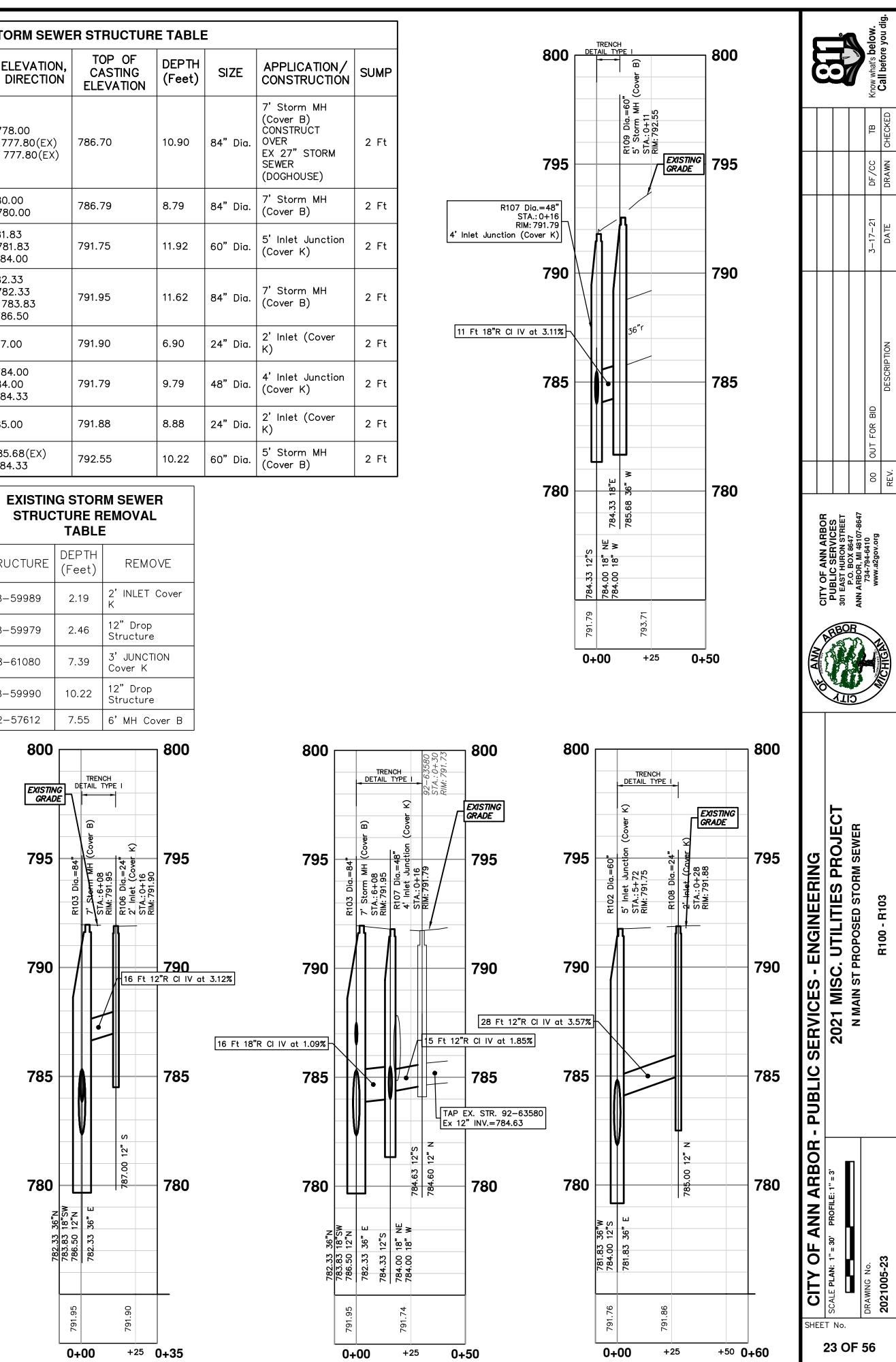


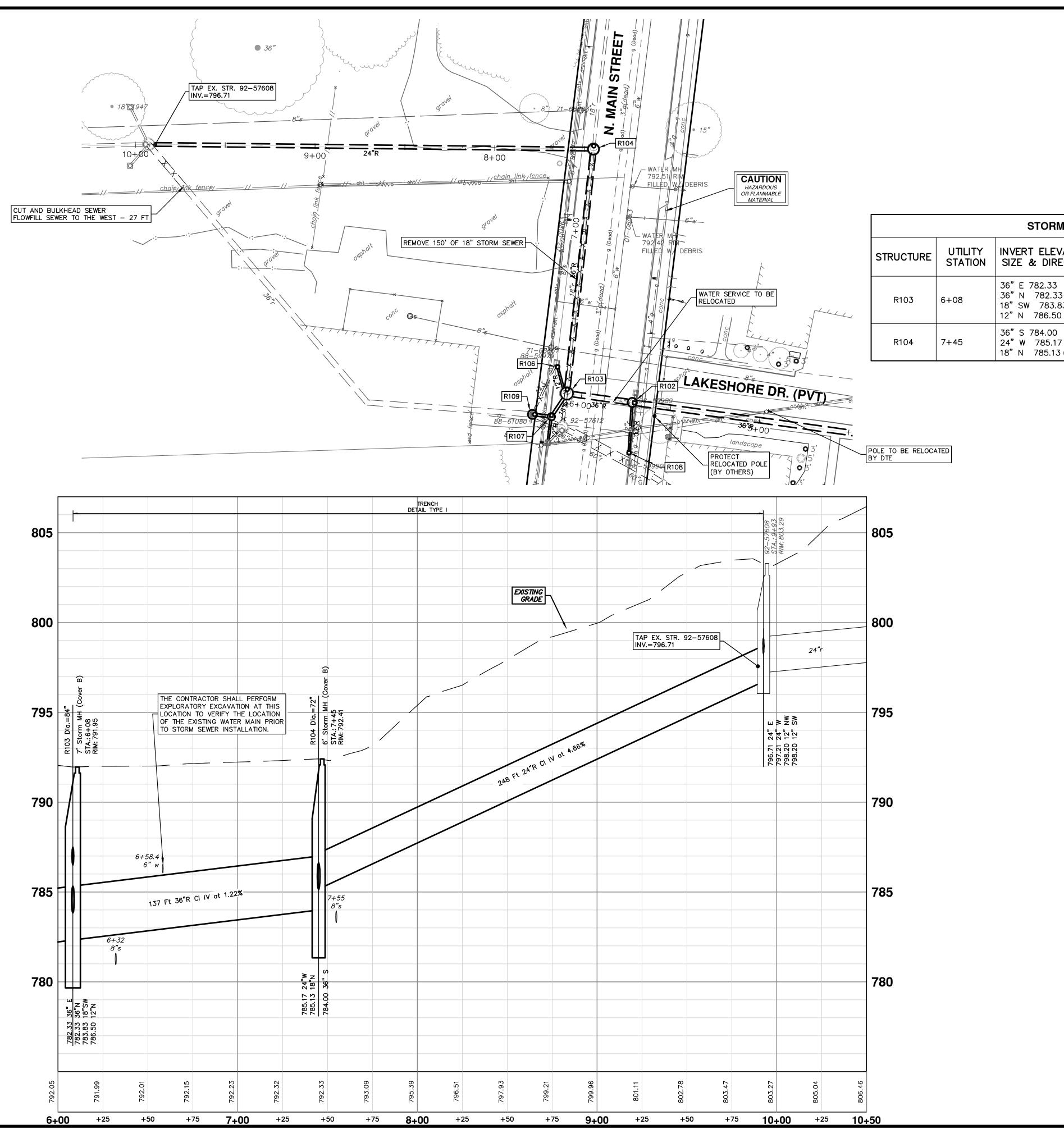
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osphow	CITY OF ANN ARBOR DUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, MI 48107-8647 734-794-6410 www.a2gov.org
HURON RIVER	I ARBOR - PUBLIC SERVICES - ENGINEERING         2021 MISC. UTILITIES PROJECT         NAIN ST PROPOSED STORM SEWER         OVERALL STORM SEWER SHEET
	CITY OF ANN ARBOR - PL CITY OF ANN ARBOR - PL SCALE PLAN: 1" = 30" DRAWING NO. 2021005-22 SHEET No. 2021005-22

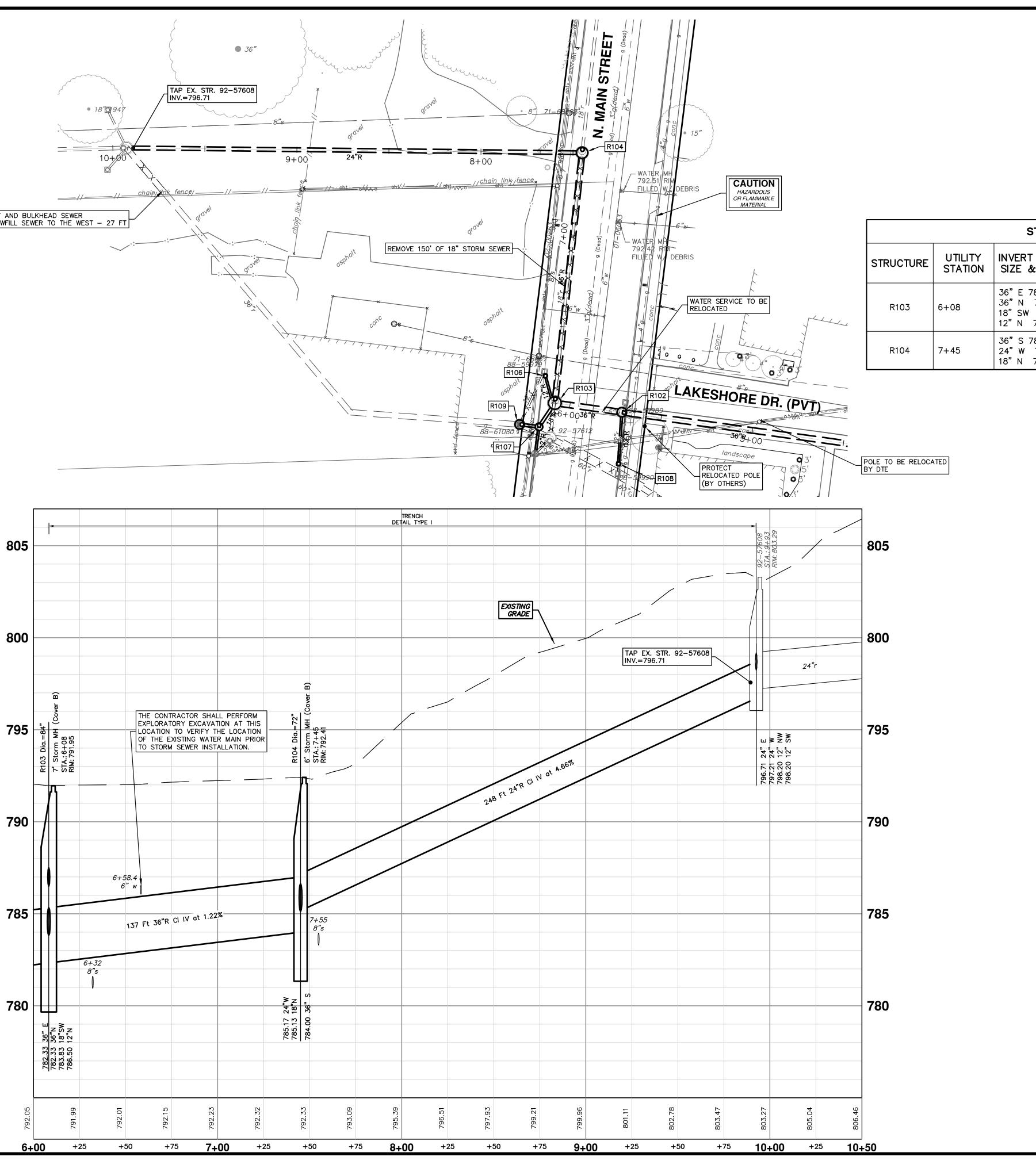


	STORM SEWER STRUCTURE TABLE							
STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/ CONSTRUCTION		
R100	3+20	36" N 778.00 27" SE 777.80(EX) 27" NW 777.80(EX)	786.70	10.90	84" Dia.	7' Storm MH (Cover B) CONSTRUCT OVER EX 27" STORM SEWER (DOGHOUSE)		
R101	4+23	36"S 780.00 36"W 780.00	786.79	8.79	84" Dia.	7' Storm MH (Cover B)		
R102	5+72	36" E 781.83 36" W 781.83 12" S 784.00	791.75	11.92	60" Dia.	5' Inlet Junction (Cover K)		
R103	6+08	36"E 782.33 36"N 782.33 18"SW 783.83 12"N 786.50	791.95	11.62	84" Dia.	7' Storm MH (Cover B)		
R106	0+16	12"S 787.00	791.90	6.90	24" Dia.	2' Inlet (Cover K)		
R107	0+16	18" NE 784.00 18" W 784.00 12" S 784.33	791.79	9.79	48" Dia.	4' Inlet Junction (Cover K)		
R108	0+28	12"N 785.00	791.88	8.88	24" Dia.	2' Inlet (Cover K)		
R109	0+11	36"W 785.68(EX) 18"E 784.33	792.55	10.22	60" Dia.	5' Storm MH (Cover B)		

EXISTING STORM SEWER STRUCTURE REMOVAL TABLE						
STRUCTURE	DEPTH (Feet)	REMOVE				
88-59989	2.19	2' INLET Cover K				
88-59979	2.46	12" Drop Structure				
88–61080	7.39	3' JUNCTION Cover K				
88-59990	10.22	12" Drop Structure				
92-57612	7.55	6'MH Cover B				

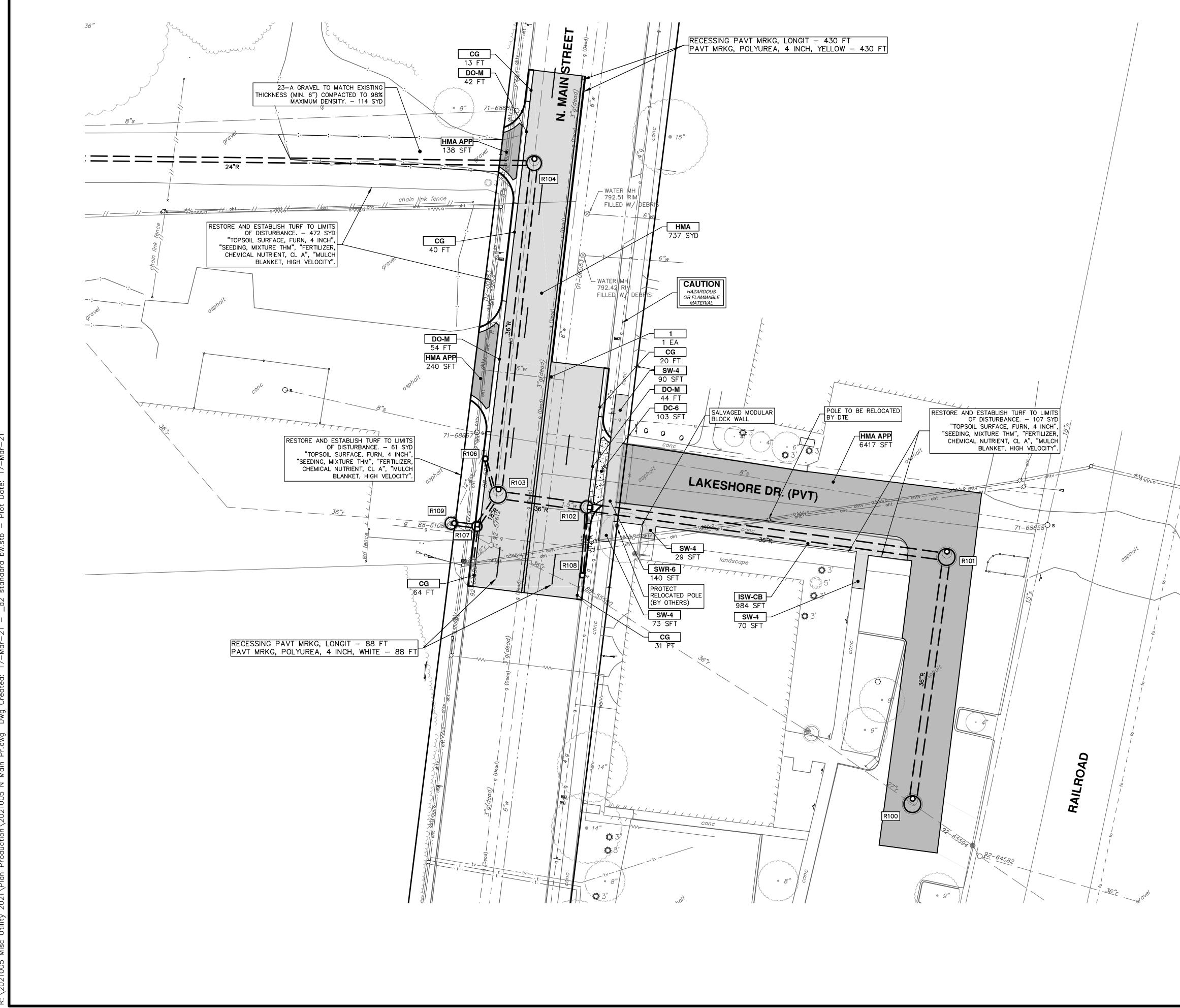






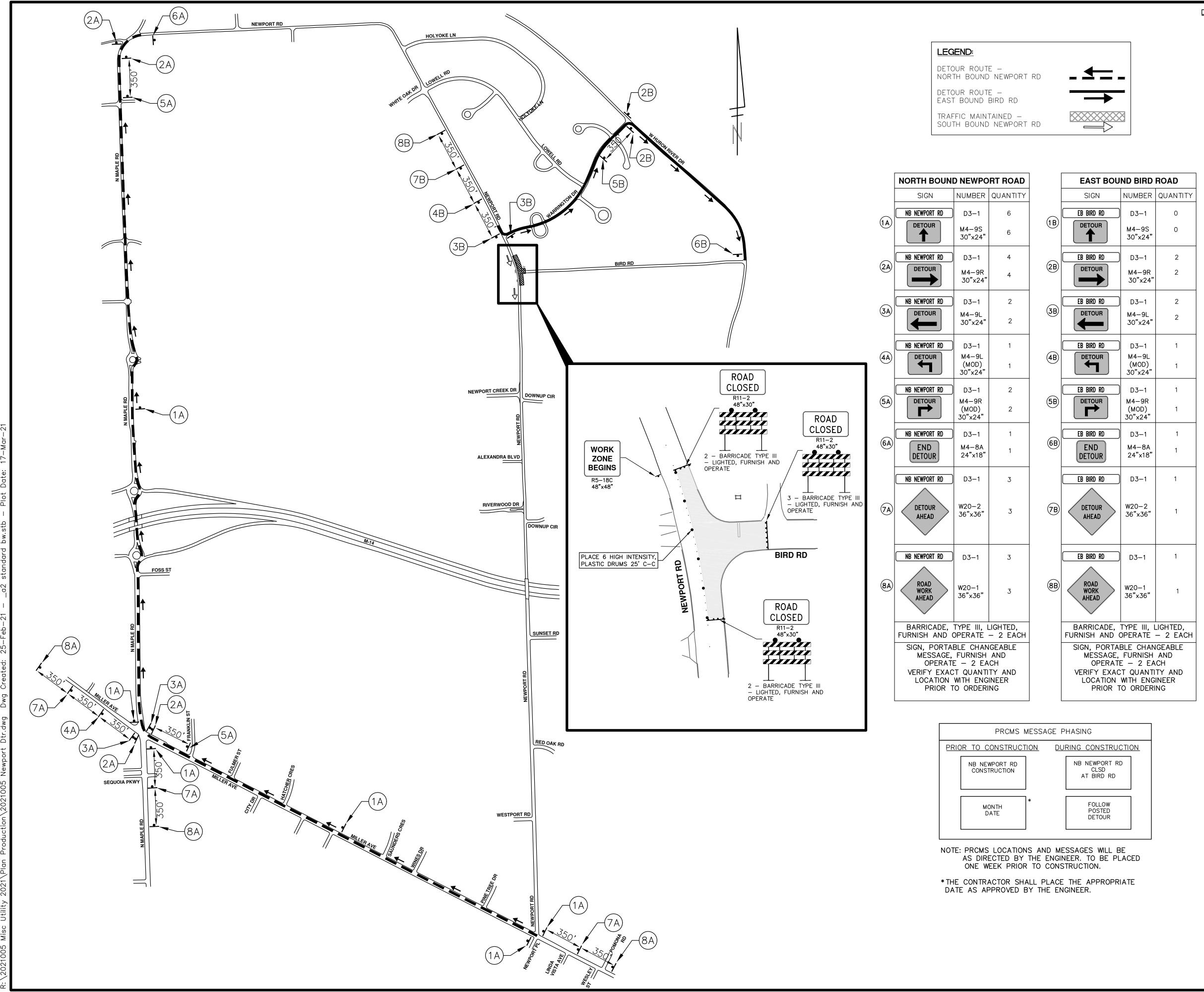
RM SEWE		E TABLE			
EVATION, RECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/ CONSTRUCTION	SUMP
3 33 5.83 50	791.95	11.62	84" Dia.	7' Storm MH (Cover B)	2 Ft
0 17 13 (EX)	792.41	10.41	72" Dia.	6' Storm MH (Cover B)	2 Ft

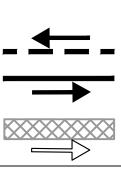
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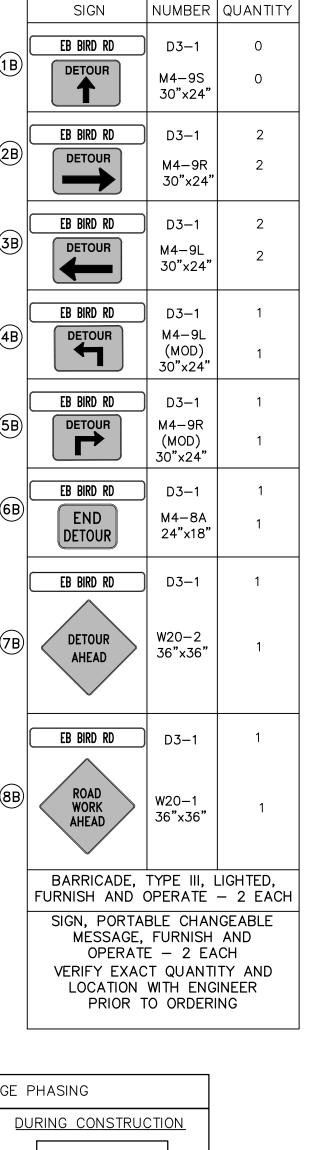


CONSTRUCTION KEY					
KEY	DESCRIPTION				
НМА	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.				
HMA APP	PLACE HMA APPROACH				
HP	HAND PATCHING				
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL				
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC				
DC-6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.				
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED				
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED				
DWS	DETECTABLE WARNING, CAST IN PLACE				
ISW-CB	INTEGRAL SIDEWALK/CURB				
ABO	ADJUST BY OTHERS				
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.				
2	ADJUST STRUCTURE COVER				

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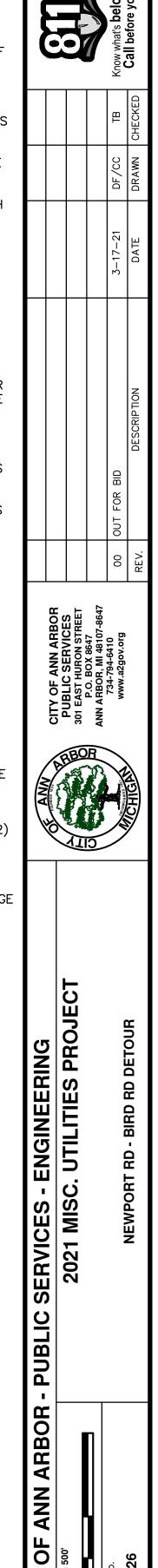






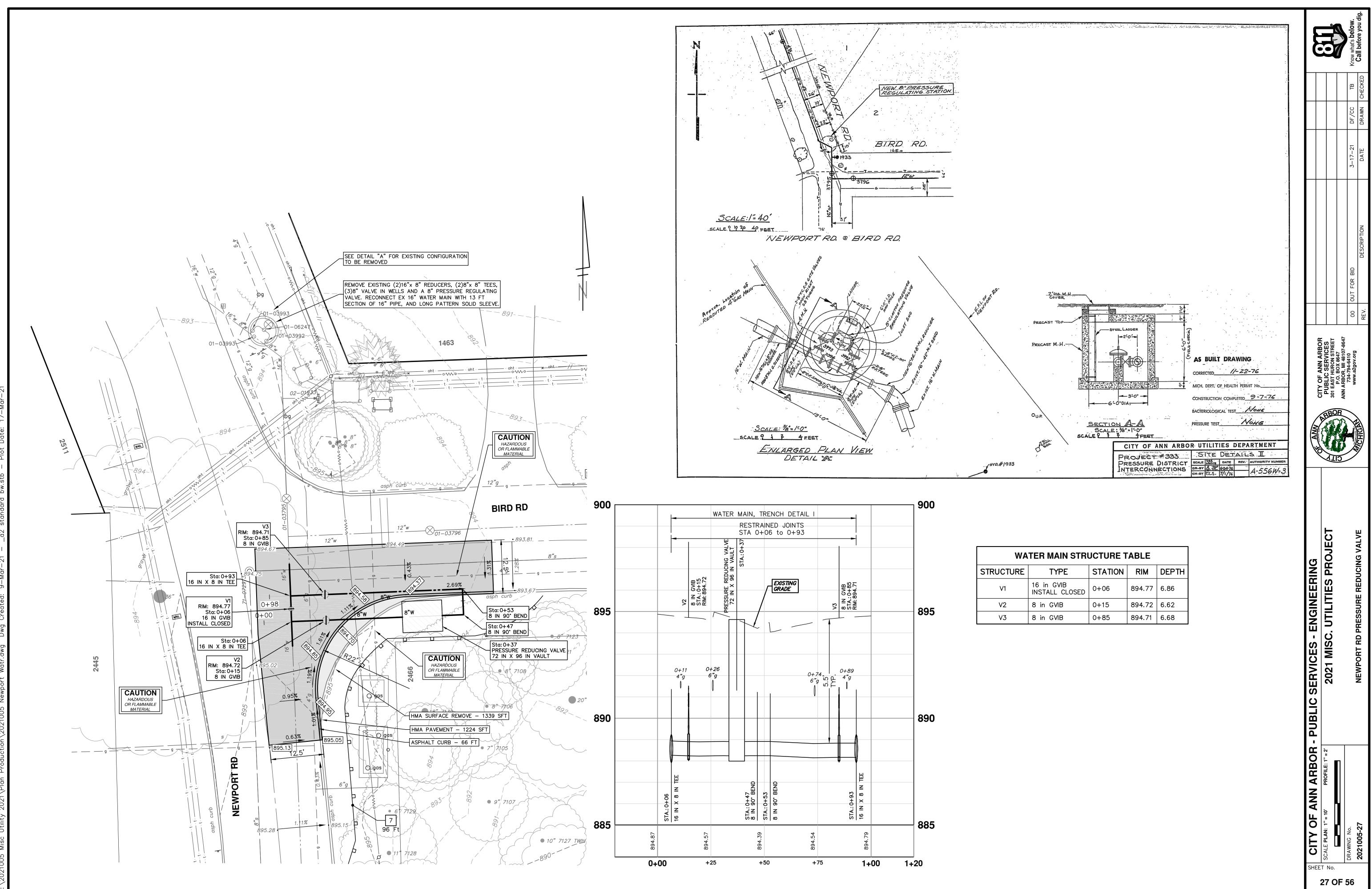
- DEPENDING ON THE DETOUR ROUTE THAT IS PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
- 2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
- 3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT DURING THE COURSE OF THE DETOUR ROUTE ESTABLISHMENT TO EFFECTIVELY AND SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF INSTALLATION IS APPROVED BY THE ENGINEER.
- THE DETOUR IS TO BE IN PLACE DURING NEWPORT-BIRD WATER MAIN PROJECT AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR NORTH BOUND NEWPORT RD TRAFFIC. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE AND DETOUR LIMITATIONS, AND OTHER DETAILS.
- REFERENCE THE "SPECIAL PROVISION FOR MAINTAINING 5. TRAFFIC AND CONSTRUCTION SEQUENCING" FOR ADDITIONAL PROJECT REQUIREMENTS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO THE SECTION OF SAME SPECIAL PROVISION REGARDING COORDINATION WITH THE CITY SIGNS AND SIGNALS UNIT FOR MODIFICATIONS TO TRAFFIC SIGNALS FOR THE DETOUR.
- 6. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN SIGNS AS SHOWN ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
- 7. CONSTRUCTION WARNING SIGNS SHALL HAVE AN ORANGE, HIGH-INTENSITY, REFLECTORIZED BACKGROUND.
- 8. SIGNS SHALL CONFORM TO THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL DRIVE ALL SIGNS INTO EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER-APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY SIGN, TYPE B, FURNISH AND OPERATE"
- 10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.
- 11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING NORTH BOUND NEWPORT RD DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.

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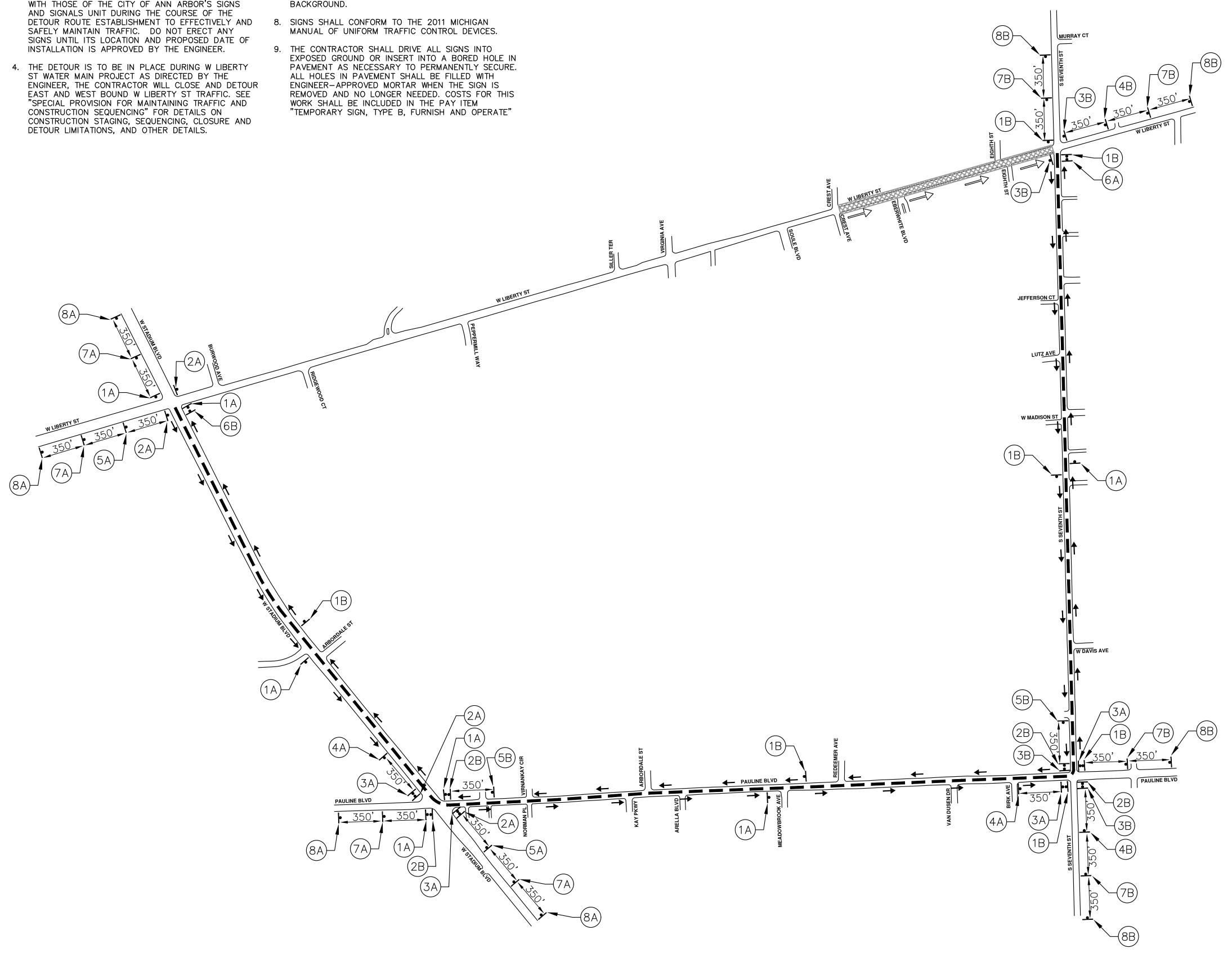
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DETOUR CONSTRUCTION NOTES:

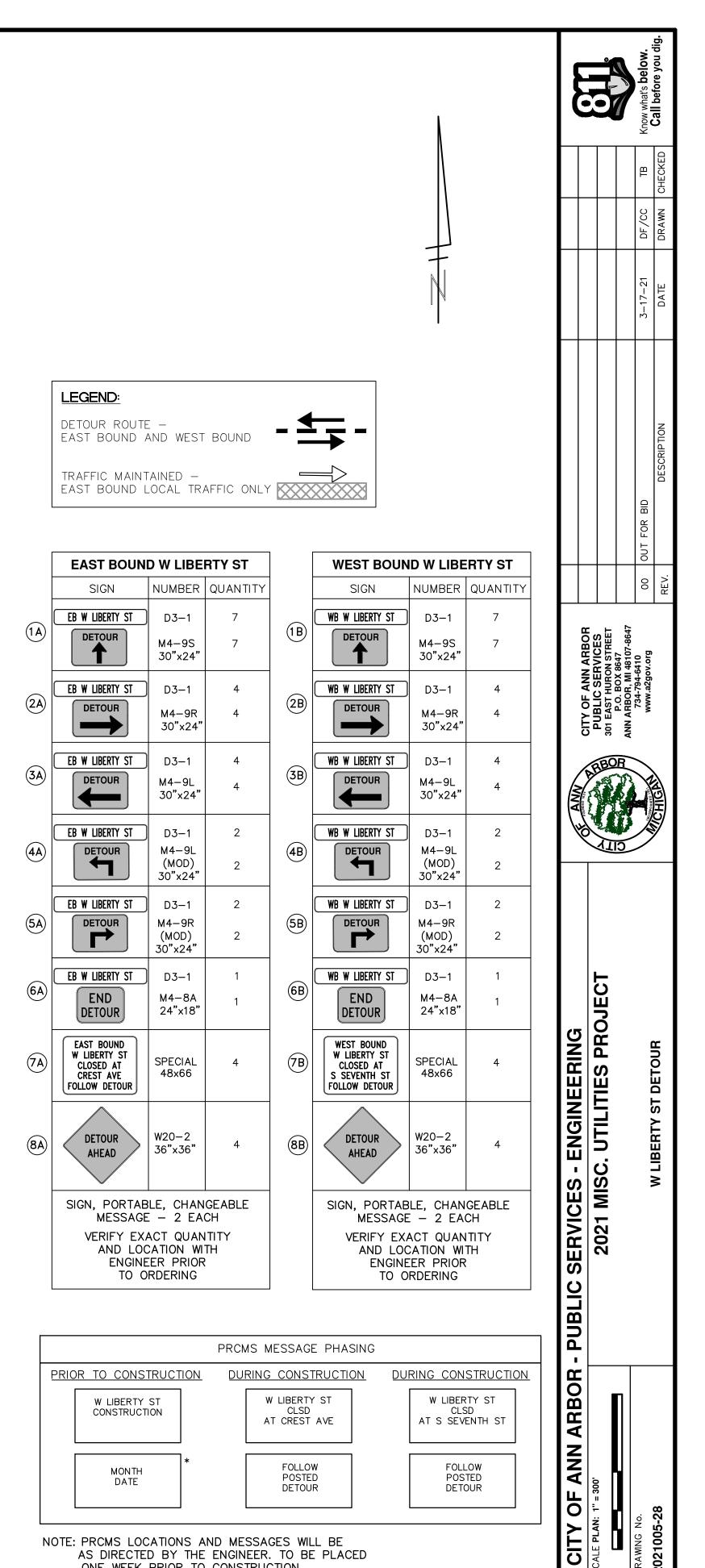
- DEPENDING ON THE DETOUR ROUTE THAT IS PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
- 2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
- 3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT DURING THE COURSE OF THE SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF
- ST WATER MAIN PROJECT AS DIRECTED BY THE EAST AND WEST BOUND W LIBERTY ST TRAFFIC. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE AND DETOUR LIMITATIONS, AND OTHER DETAILS.

- 5. REFERENCE THE "SPECIAL PROVISION FOR MAINTAINING 10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TRAFFIC AND CONSTRUCTION SEQUENCING" FOR ADDITIONAL PROJECT REQUIREMENTS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO THE SECTION OF SAME SPECIAL PROVISION REGARDING COORDINATION WITH THE CITY SIGNS AND SIGNALS UNIT FOR MODIFICATIONS TO TRAFFIC SIGNALS FOR THE DETOUR.
- 6. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN SIGNS AS SHOWN ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
- 7. CONSTRUCTION WARNING SIGNS SHALL HAVE AN ORANGE, HIGH-INTENSITY, REFLECTORIZED BACKGROUND.
- EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER-APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY SIGN, TYPE B, FURNISH AND OPERATE"



TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.

11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING W LIBERTY ST DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.

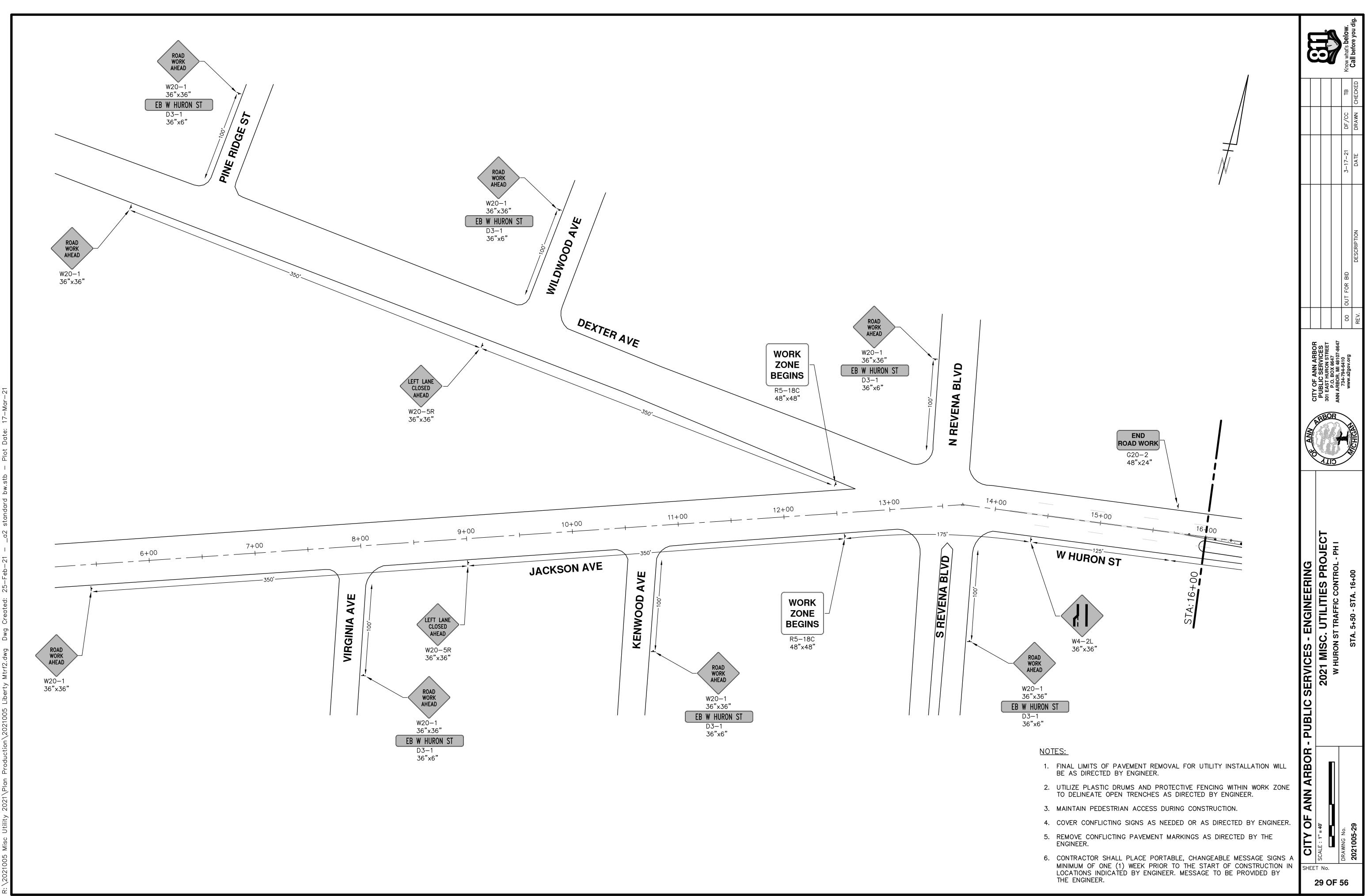


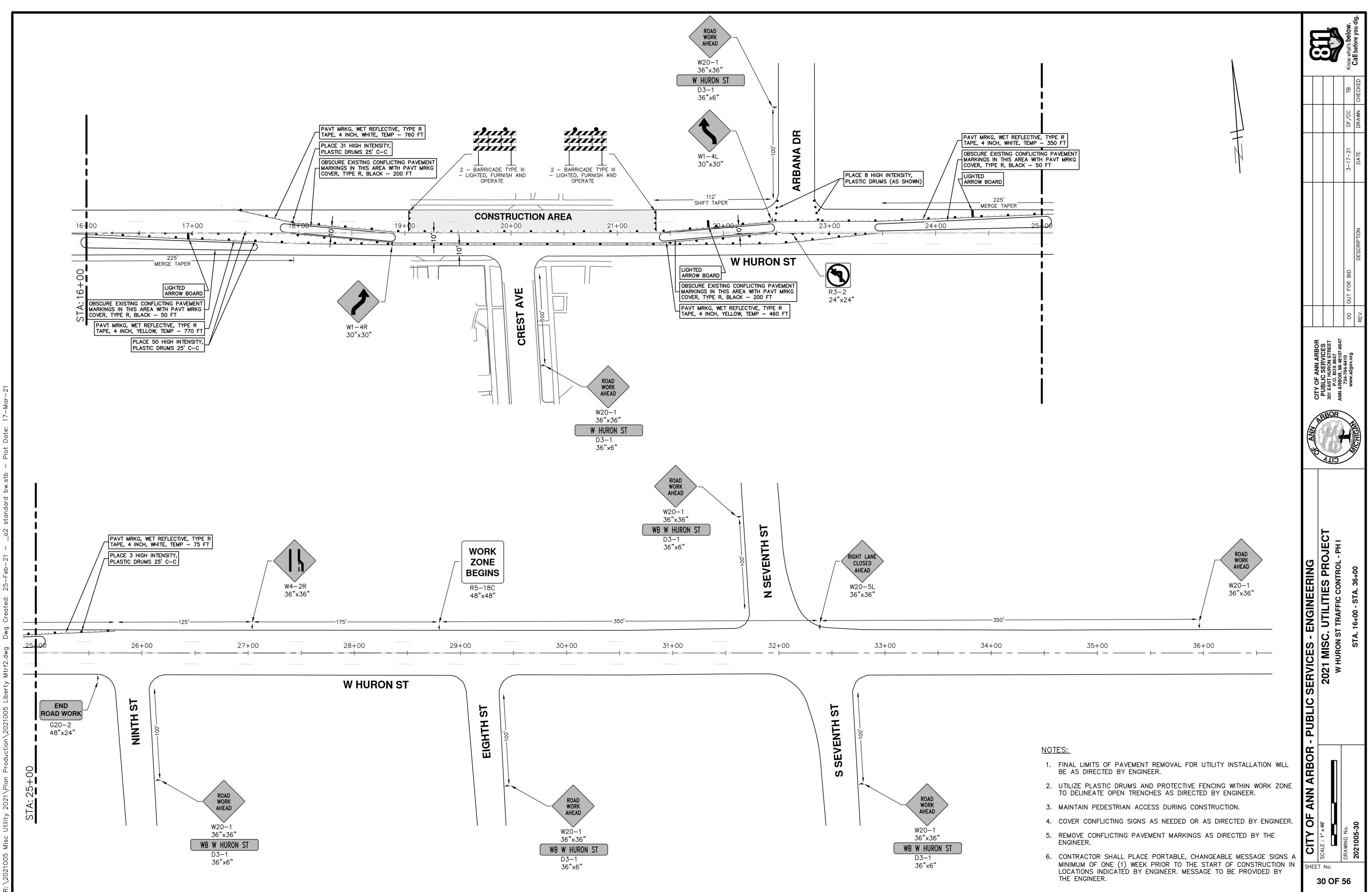
NOTE: PRCMS LOCATIONS AND MESSAGES WILL BE AS DIRECTED BY THE ENGINEER. TO BE PLACED ONE WEEK PRIOR TO CONSTRUCTION.

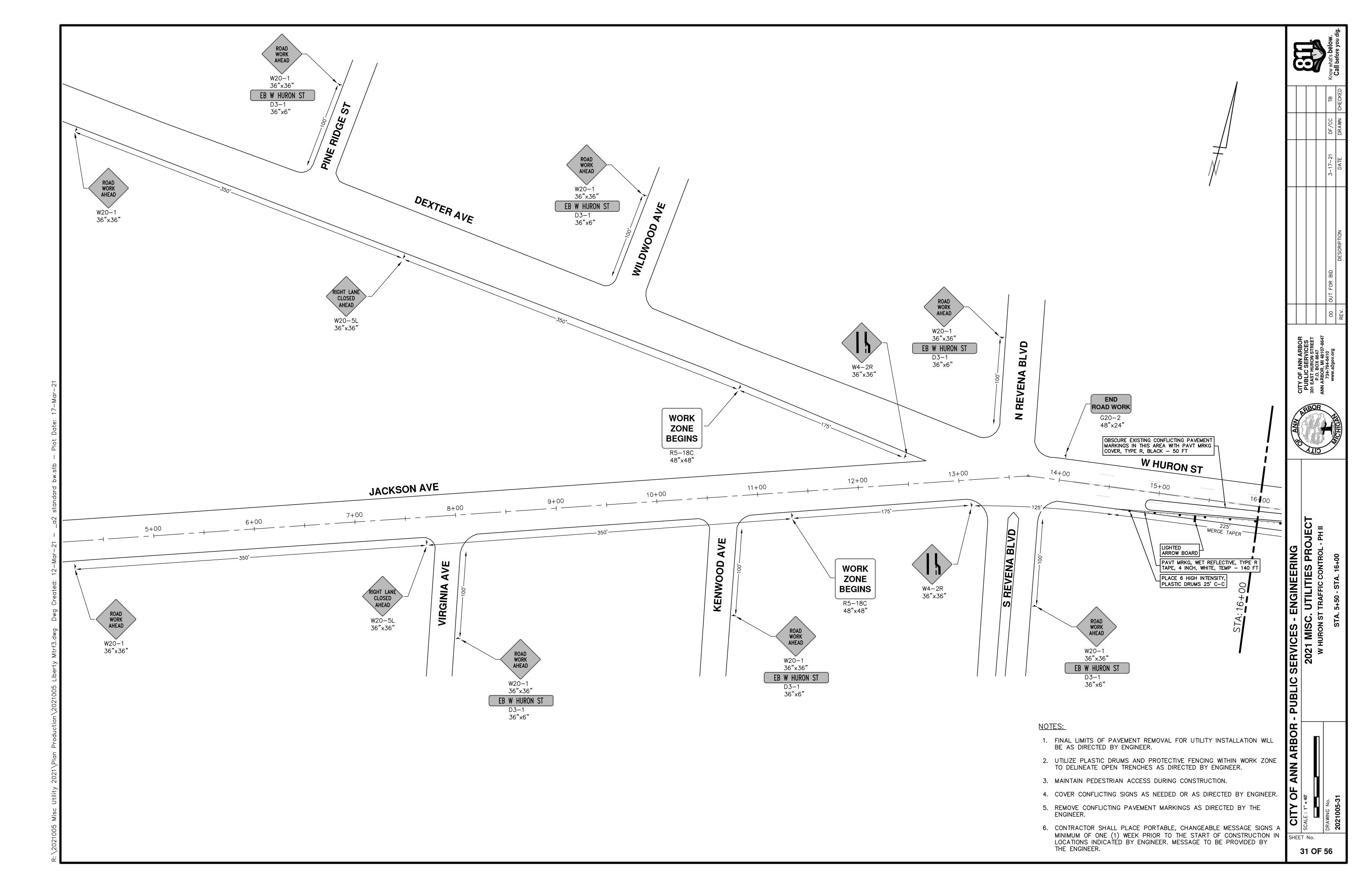
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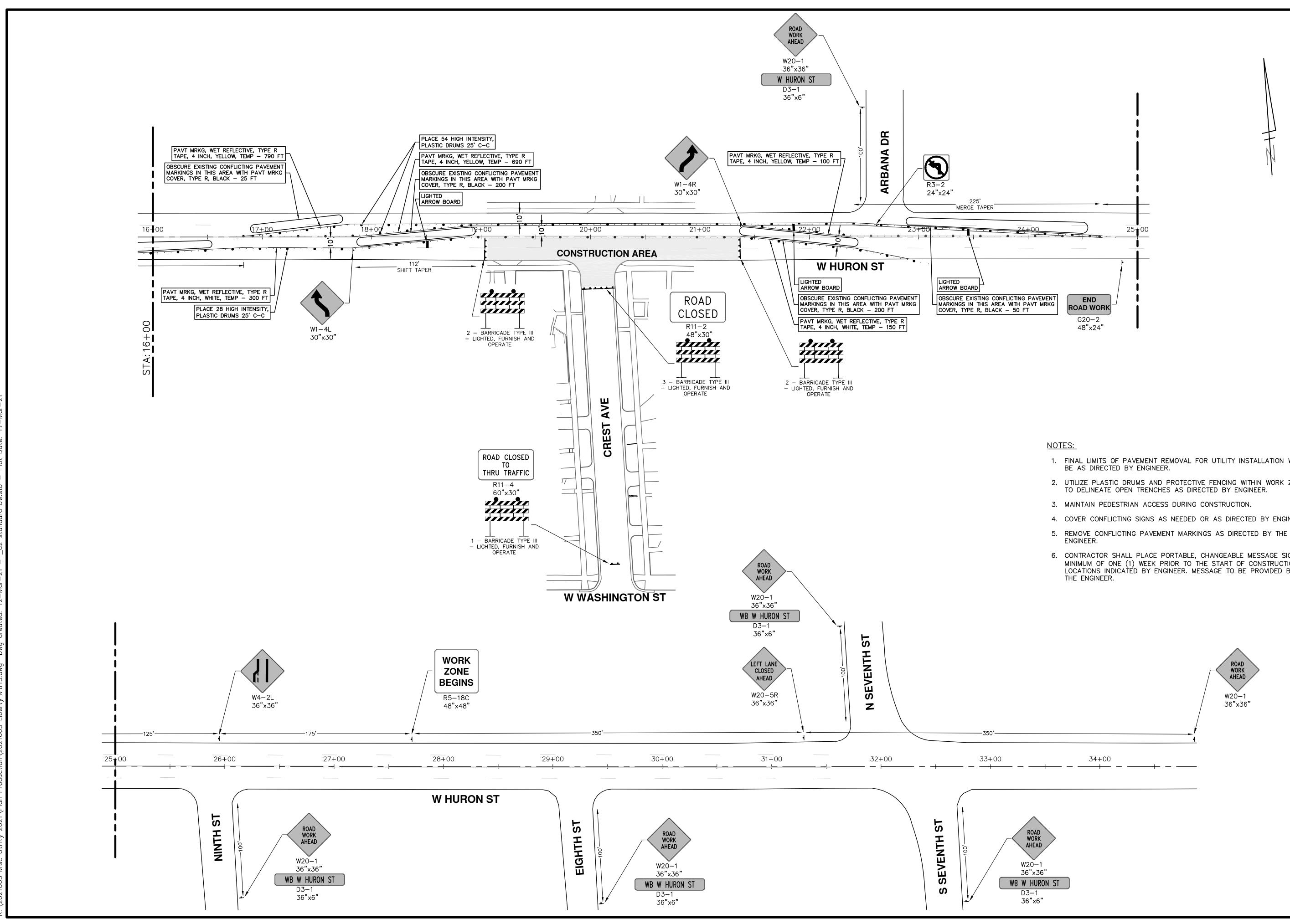
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* THE CONTRACTOR SHALL PLACE THE APPROPRIATE DATE AS APPROVED BY THE ENGINEER.

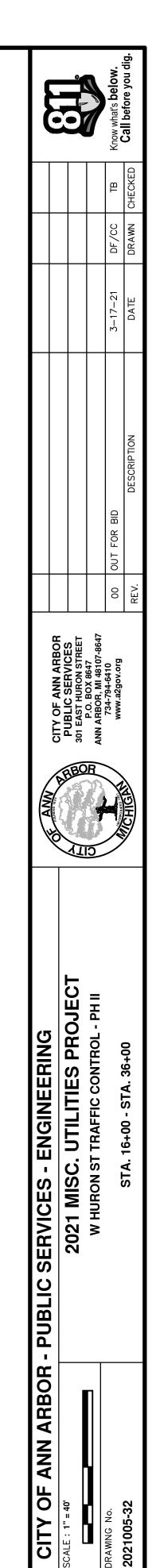




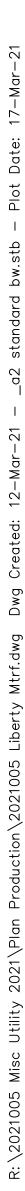


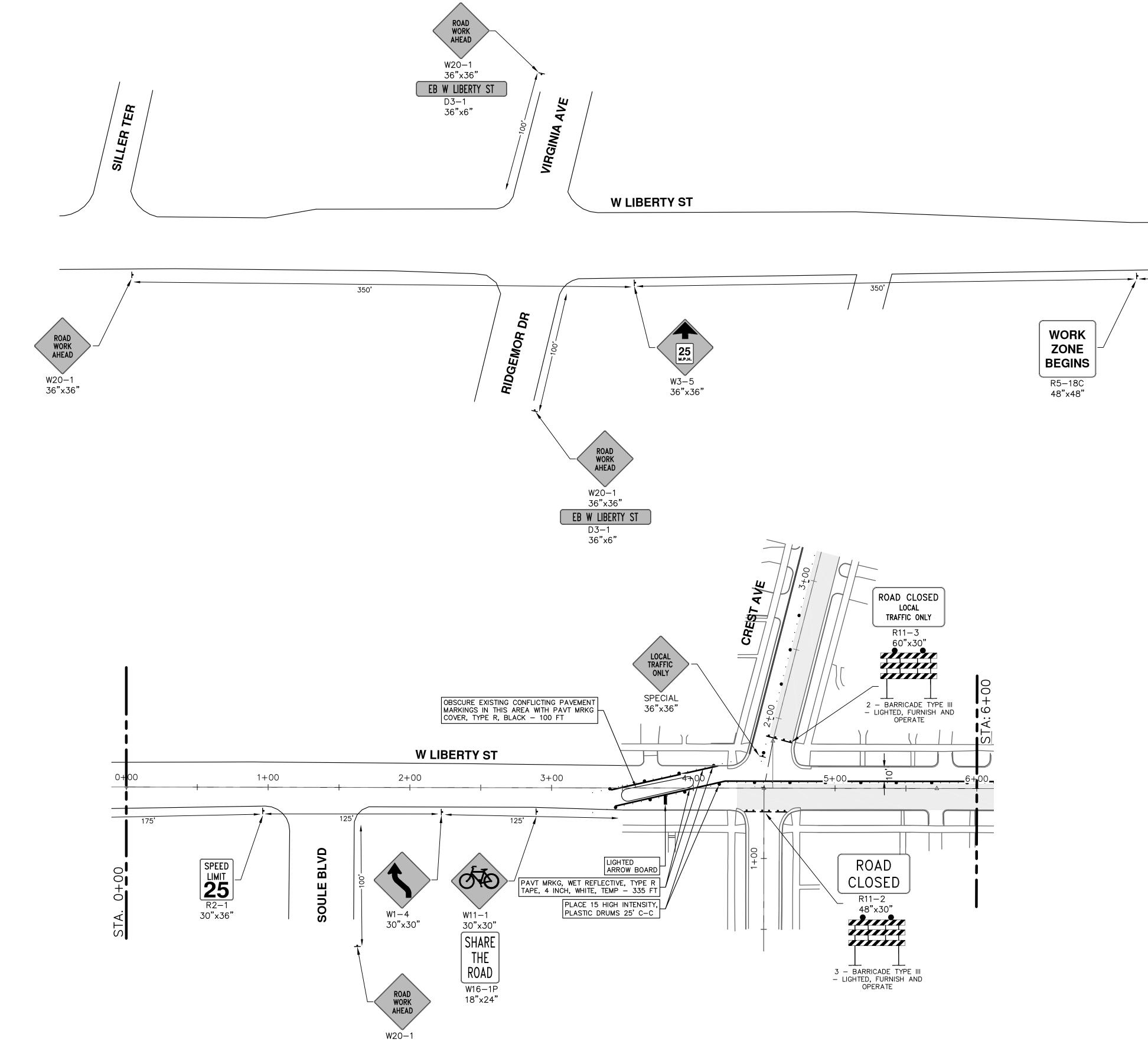


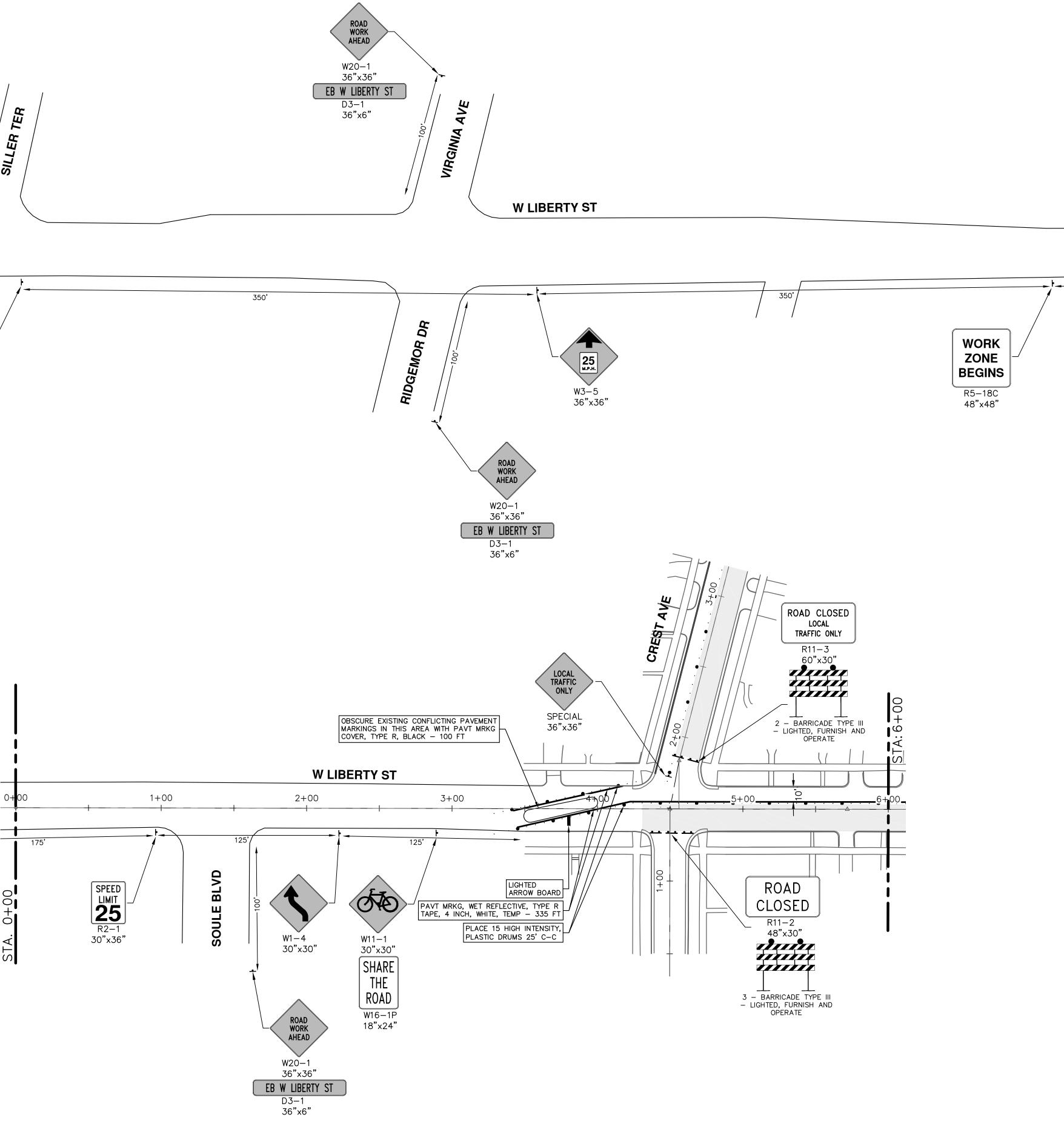
- 1. FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLATION WILL
- 2. UTILIZE PLASTIC DRUMS AND PROTECTIVE FENCING WITHIN WORK ZONE
- 4. COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY ENGINEER.
- 6. CONTRACTOR SHALL PLACE PORTABLE, CHANGEABLE MESSAGE SIGNS A MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF CONSTRUCTION IN LOCATIONS INDICATED BY ENGINEER. MESSAGE TO BE PROVIDED BY THE ENGINEER.



SHEET No.







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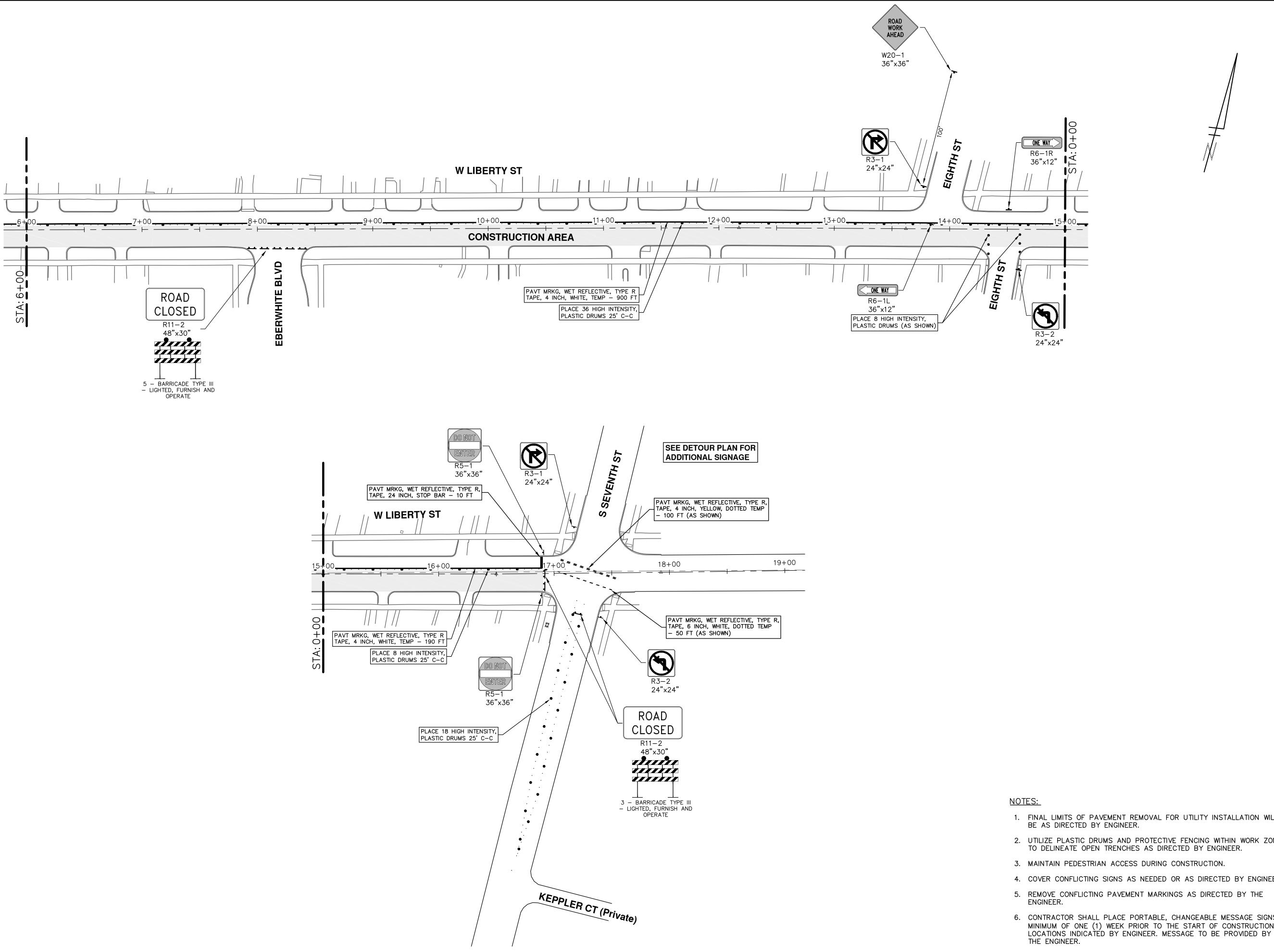
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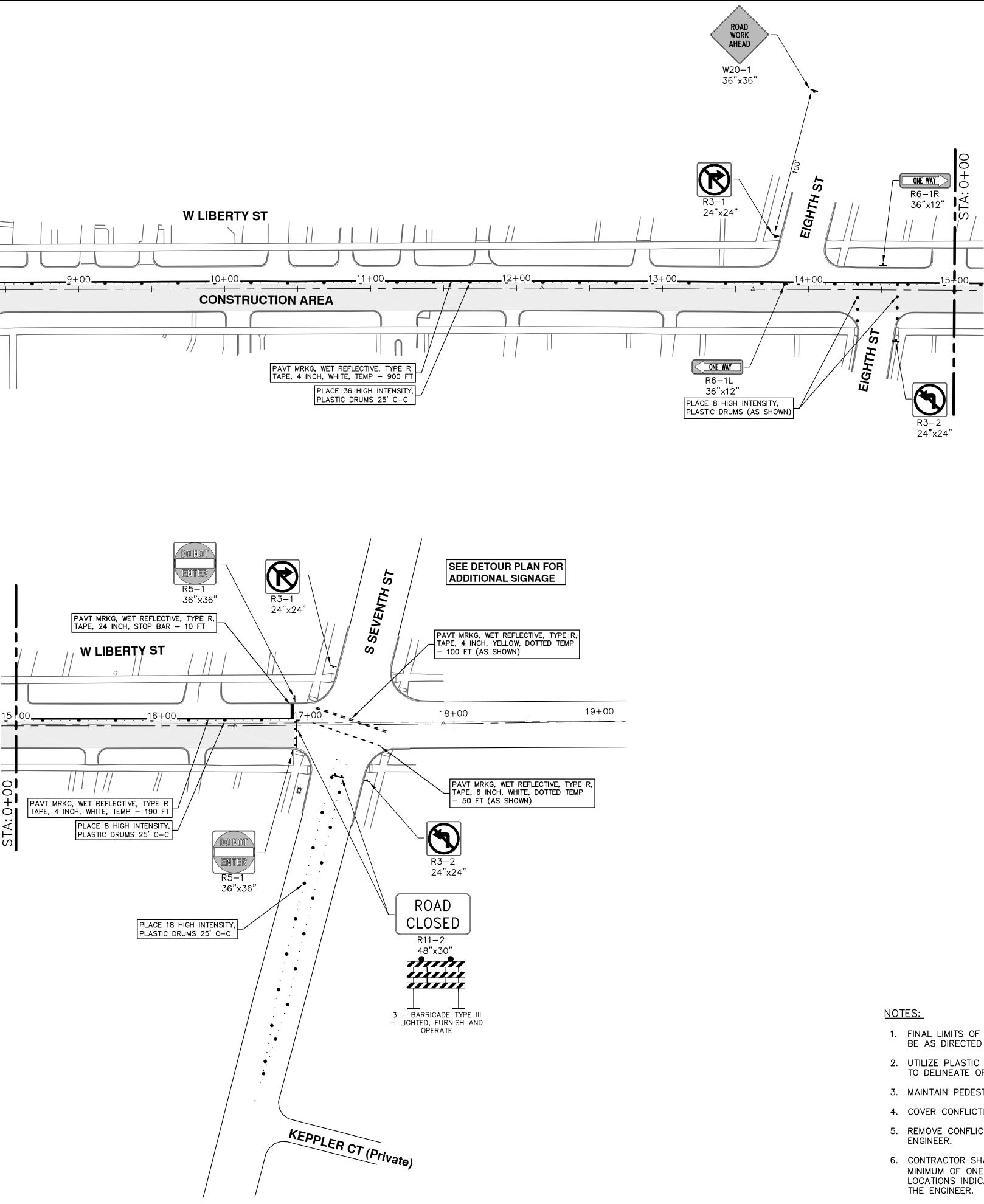
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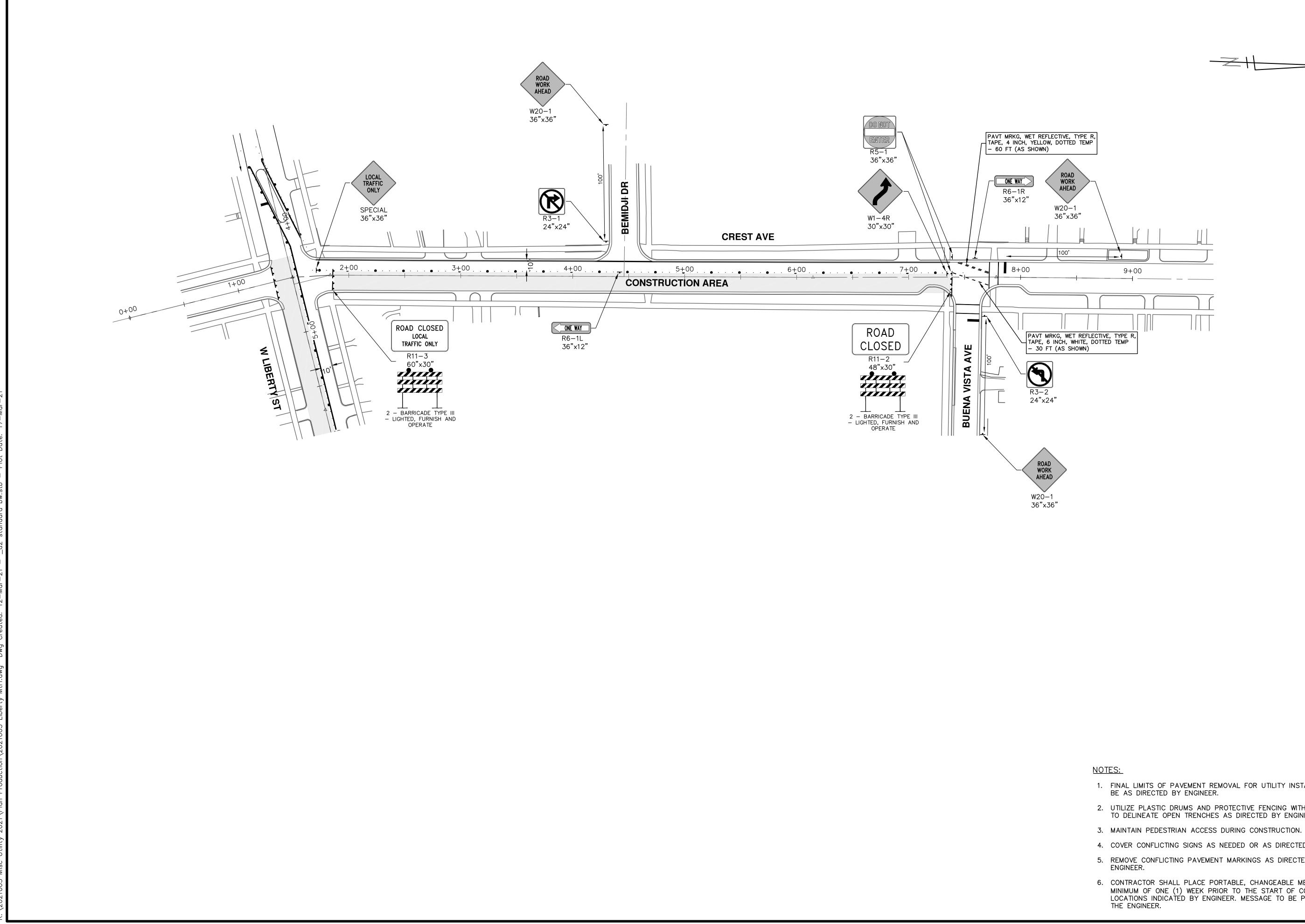
- 1. FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLATION BE AS DIRECTED BY ENGINEER.
- 2. UTILIZE PLASTIC DRUMS AND PROTECTIVE FENCING WITHIN WOR TO DELINEATE OPEN TRENCHES AS DIRECTED BY ENGINEER.
- 3. MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.
- 4. COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY E 5. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY ENGINEER.
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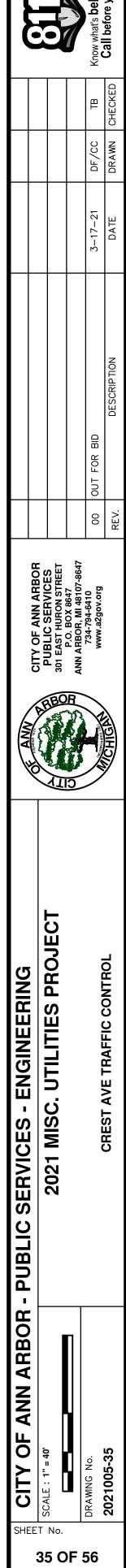




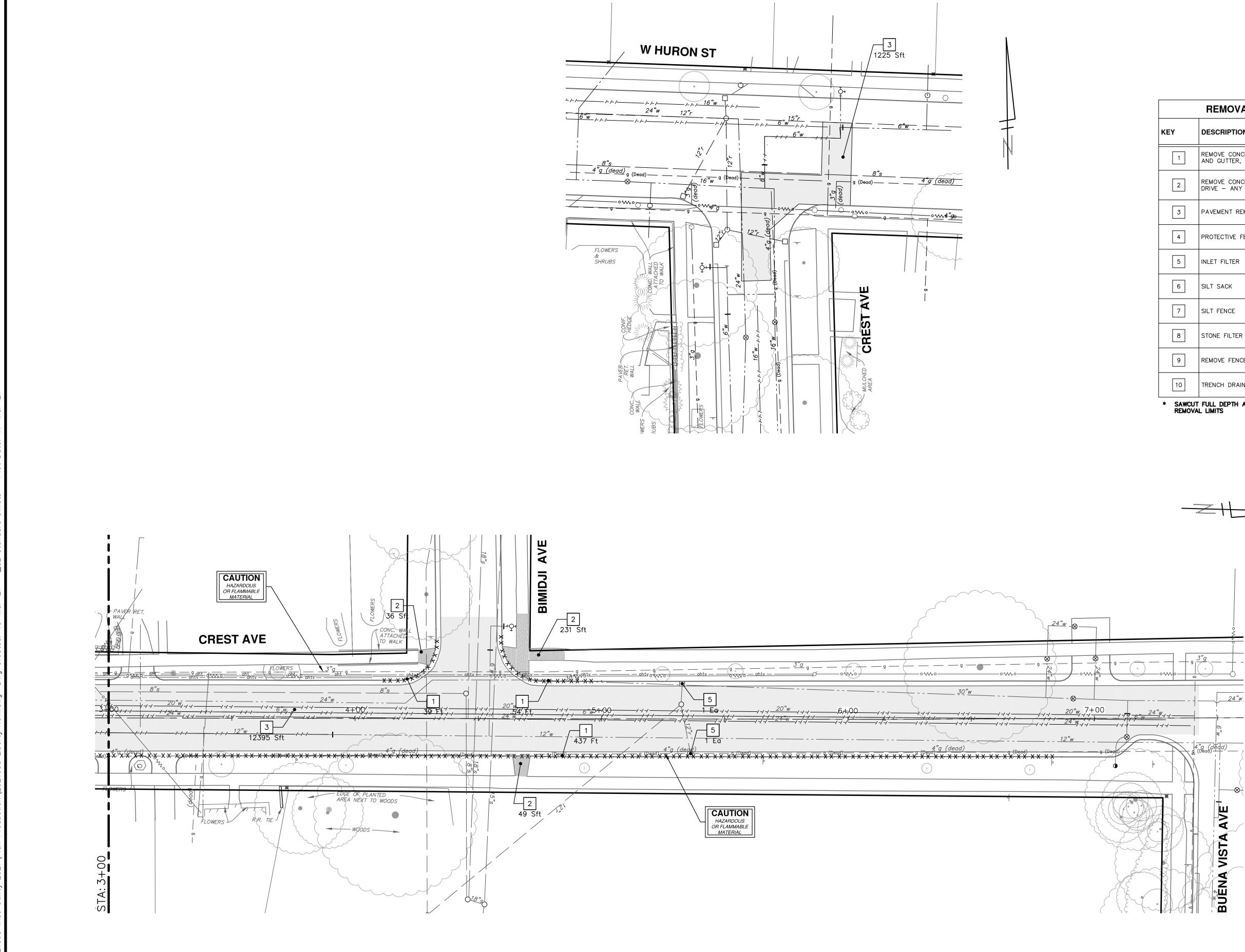
# 18 CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, MI 48107-8647 734-794-6410 Ö - PUBLIC SERVICES - ENGINEERING 2021 MISC. UTILITIES PROJE W LIBERTY ST TRAFFIC CONTROL STA. 6+00 - STA. 19+00 BOR Ľ V ANN Ю ₹ 00 . . DRAV 202 SHEET No.

- 1. FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLATION WILL BE AS DIRECTED BY ENGINEER.
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- 4. COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY ENGINEER. 5. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE
- 6. CONTRACTOR SHALL PLACE PORTABLE, CHANGEABLE MESSAGE SIGNS A MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF CONSTRUCTION IN





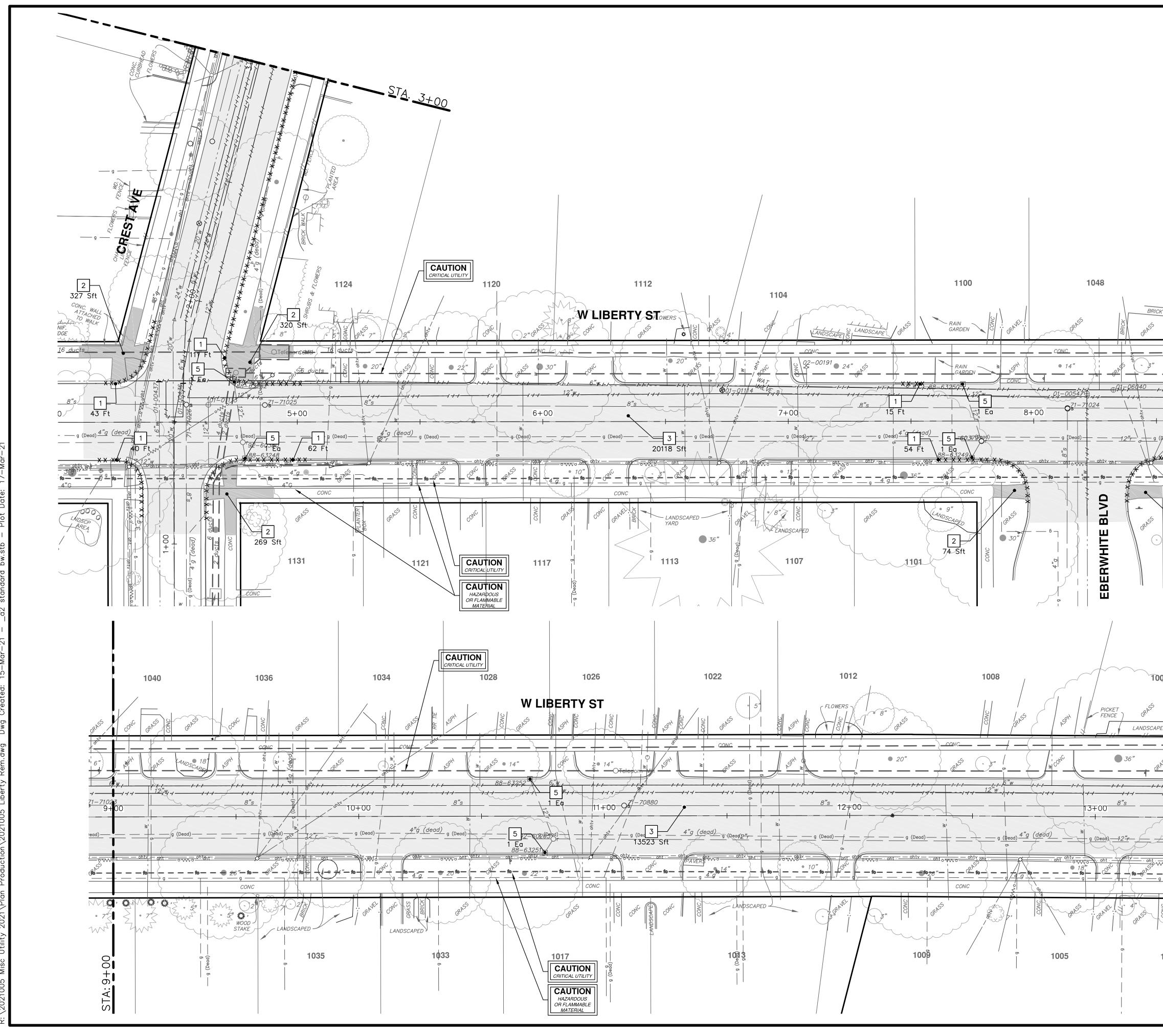
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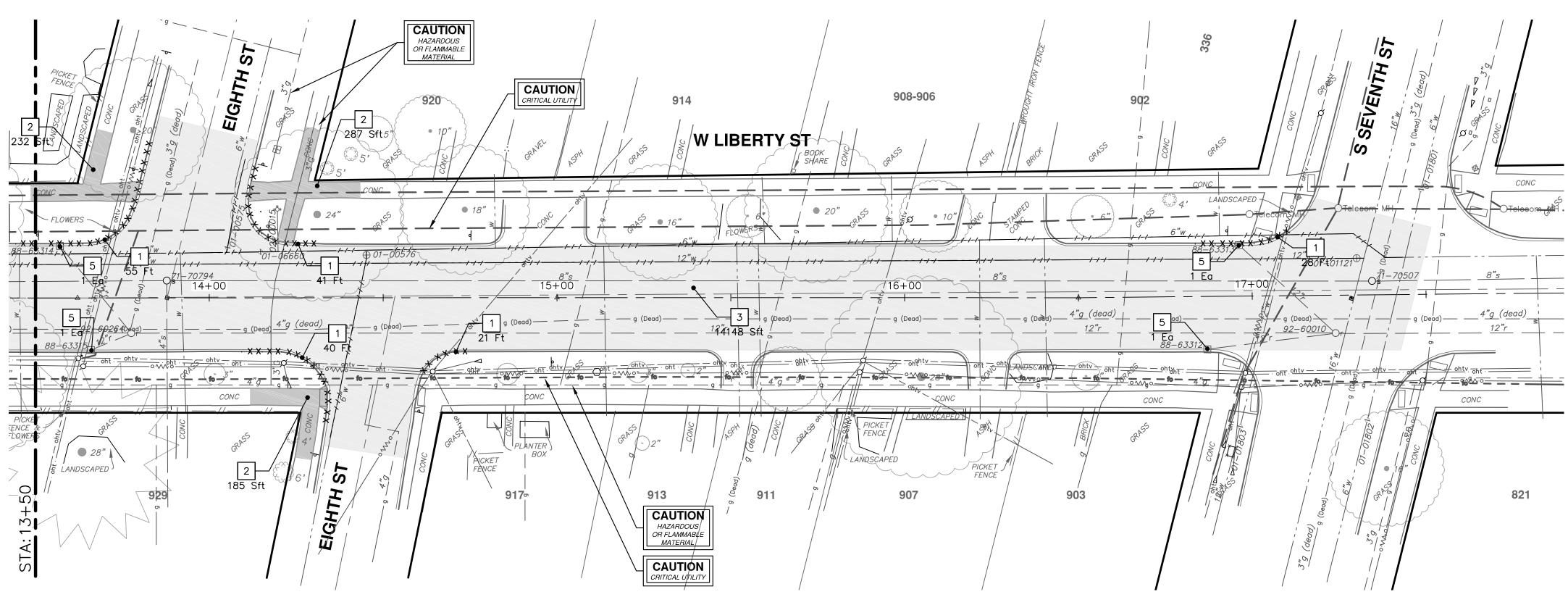
REMOVAL KEY		
KEY	DESCRIPTION	
1	REMOVE CONCRETE CURB OR CURB AND GUTTER, - ANY TYPE	
2	REMOVE CONCRETE SIDEWALK AND DRIVE – ANY THICKNESS	
3	PAVEMENT REMOVAL, ANY DEPTH	
4	PROTECTIVE FENCING	
5	INLET FILTER	
6	SILT SACK	
7	SILT FENCE	
8	STONE FILTER	
9	REMOVE FENCE	
10	TRENCH DRAIN INLET FILTER	
* SAWCUT FULL DEPTH AT REMOVAL LIMITS		







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$\frac{g}{55} \text{ Ft} \xrightarrow{4''g} (dead) = (Dead) = 0$	4	PROTECTIVE FENCING	TV OF A	UBLIC S I EAST HU P.O. BC	N AHBOH, 734-79 www.a2	
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2" 2" 75 Sft	9	REMOVE FENCE			-	
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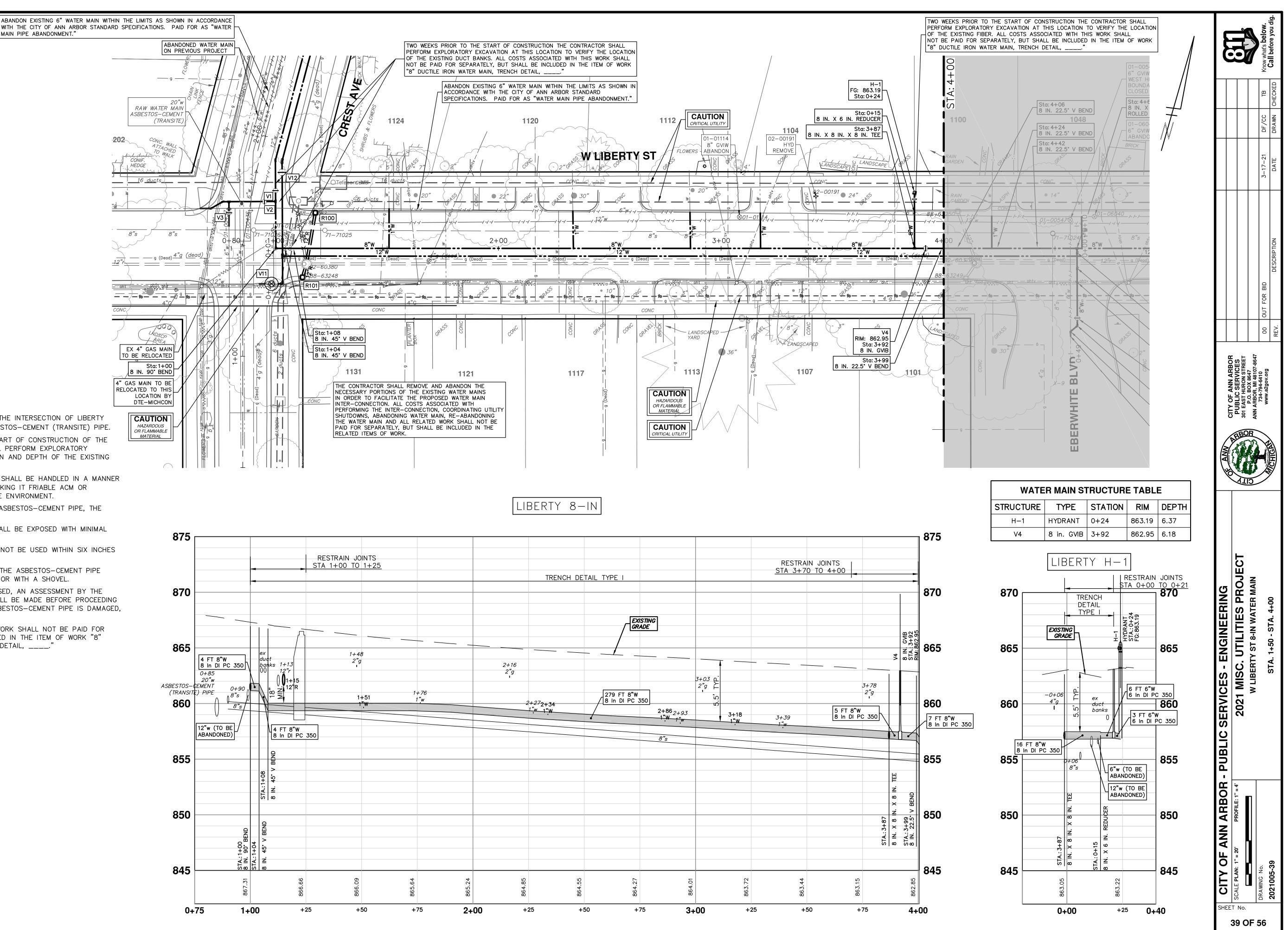




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8	STONE FILTER
9	REMOVE FENCE
10	TRENCH DRAIN INLET FILTER

* SAWCUT FULL DEPTH AT REMOVAL LIMITS

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ĿĨ	SCALE . 1" - 20'								
No. <b>B C</b>		2021 MISC. UTILITIES PROJECT	TO BELLA SERVICES						
		W LIBERTY ST - CREST AVE REMOVALS	O         P.O. BOX 8647           ANN ARBOR. MI 48107-8647						
	DRAWING No.		734-794-6410 www.a2gov.org	00 OUT FOR BID		3-17-21	DF/CC	E E	Know what's <b>below</b> .
	2021005-38	W LIBERTY ST STA. 13+50 - P.O.E.	CHIGH	REV.	DESCRIPTION	DATE	DRAWN CHECKED		Call before you



## NOTE:

THE 20-INCH RAW WATER MAIN AT THE INTERSECTION OF LIBERTY STREET AND CREST AVENUE IS ASBESTOS-CEMENT (TRANSITE) PIPE. THE CONTRACTOR, PRIOR TO THE START OF CONSTRUCTION OF THE WATER MAIN IN INTERSECTION, SHALL PERFORM EXPLORATORY EXCAVATION TO VERIFY THE LOCATION AND DEPTH OF THE EXISTING 20-INCH RAW WATER MAIN.

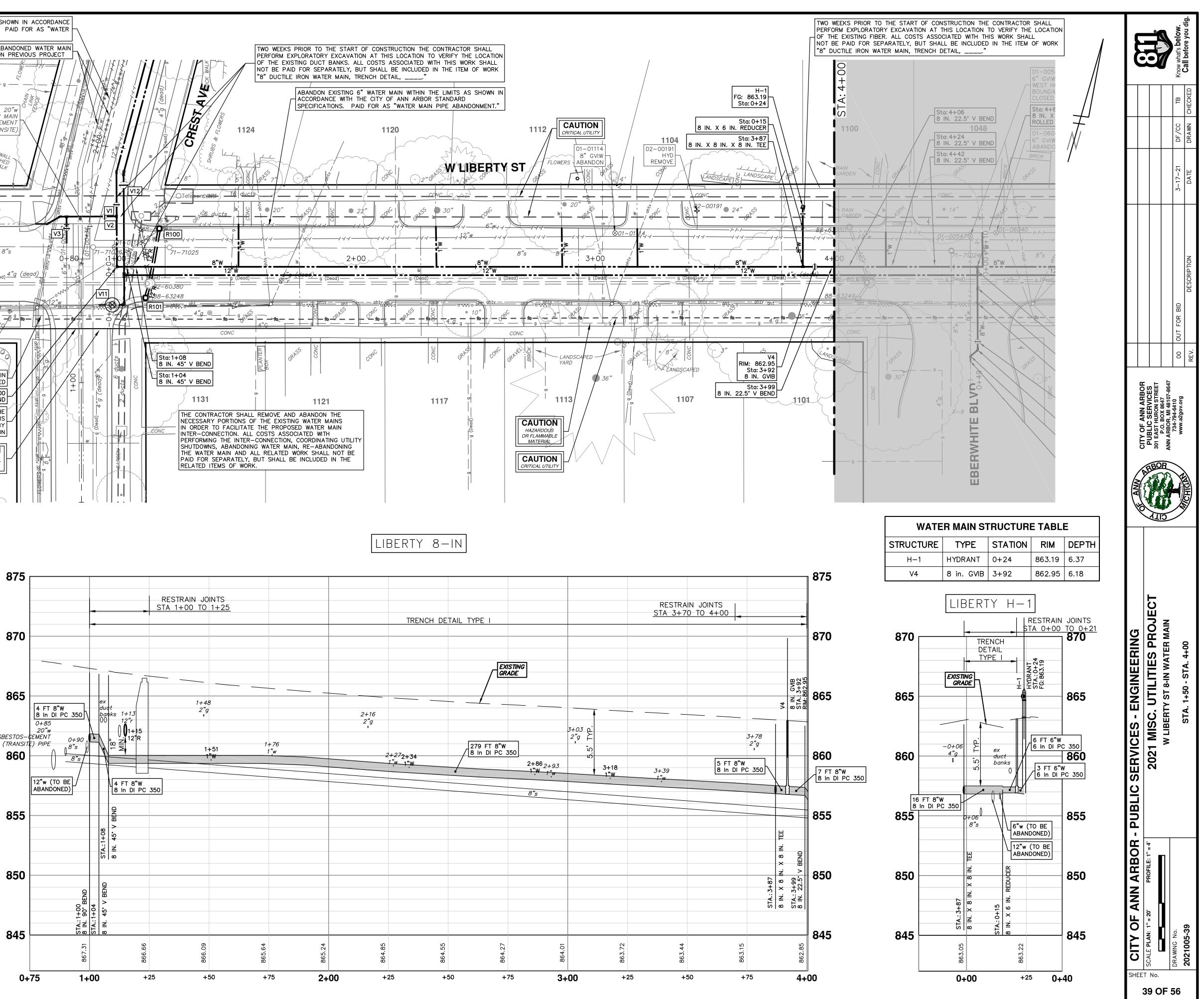
MAIN PIPE ABANDONMENT."

ASBESTOS-CEMENT (TRANSITE) PIPE SHALL BE HANDLED IN A MANNER THAT WILL MINIMIZE THE RISK OF MAKING IT FRIABLE ACM OR RELEASING ASBESTOS DUST INTO THE ENVIRONMENT.

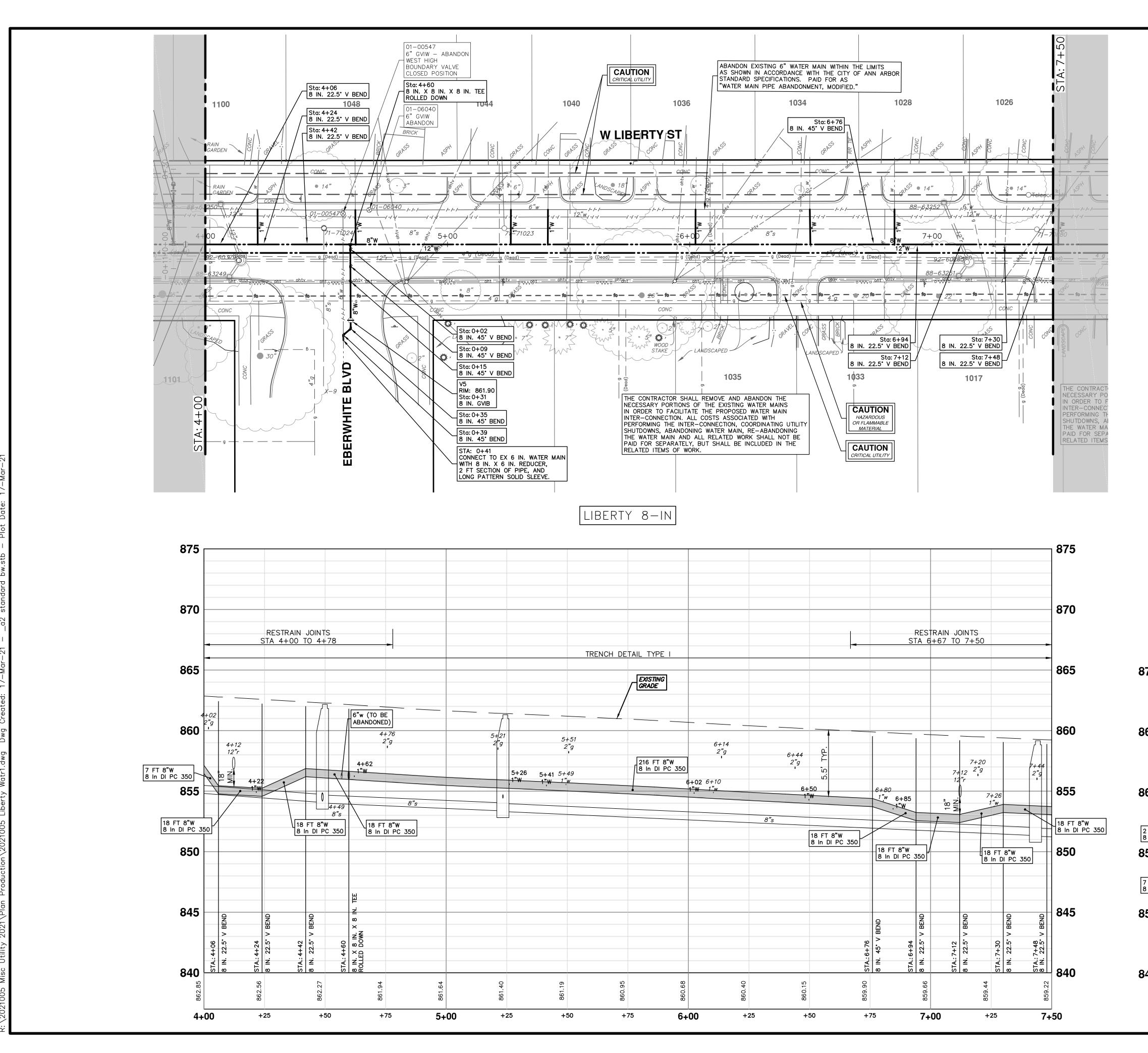
AT THE START OF WORK INVOLVING ASBESTOS-CEMENT PIPE, THE CONTRACTOR SHALL ENSURE THAT:

- THE ASBESTOS-CEMENT PIPE SHALL BE EXPOSED WITH MINIMAL DISTURBANCE.
- MECHANICAL EXCAVATION SHALL NOT BE USED WITHIN SIX INCHES OF THE ASBESTOS CEMENT PIPE.
- THE SOIL WITHIN SIX INCHES OF THE ASBESTOS-CEMENT PIPE SHALL BE UNCOVERED BY HAND OR WITH A SHOVEL.
- ONCE THE PIPE HAS BEEN EXPOSED, AN ASSESSMENT BY THE ENGINEER AND CONTRACTOR SHALL BE MADE BEFORE PROCEEDING TO DETERMINE WHETHER THE ASBESTOS-CEMENT PIPE IS DAMAGED, CRACKED OR BROKEN.

ALL COSTS ASSOCIATED WITH THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "8" DUCTILE IRON WATER MAIN, TRENCH DETAIL, ____."

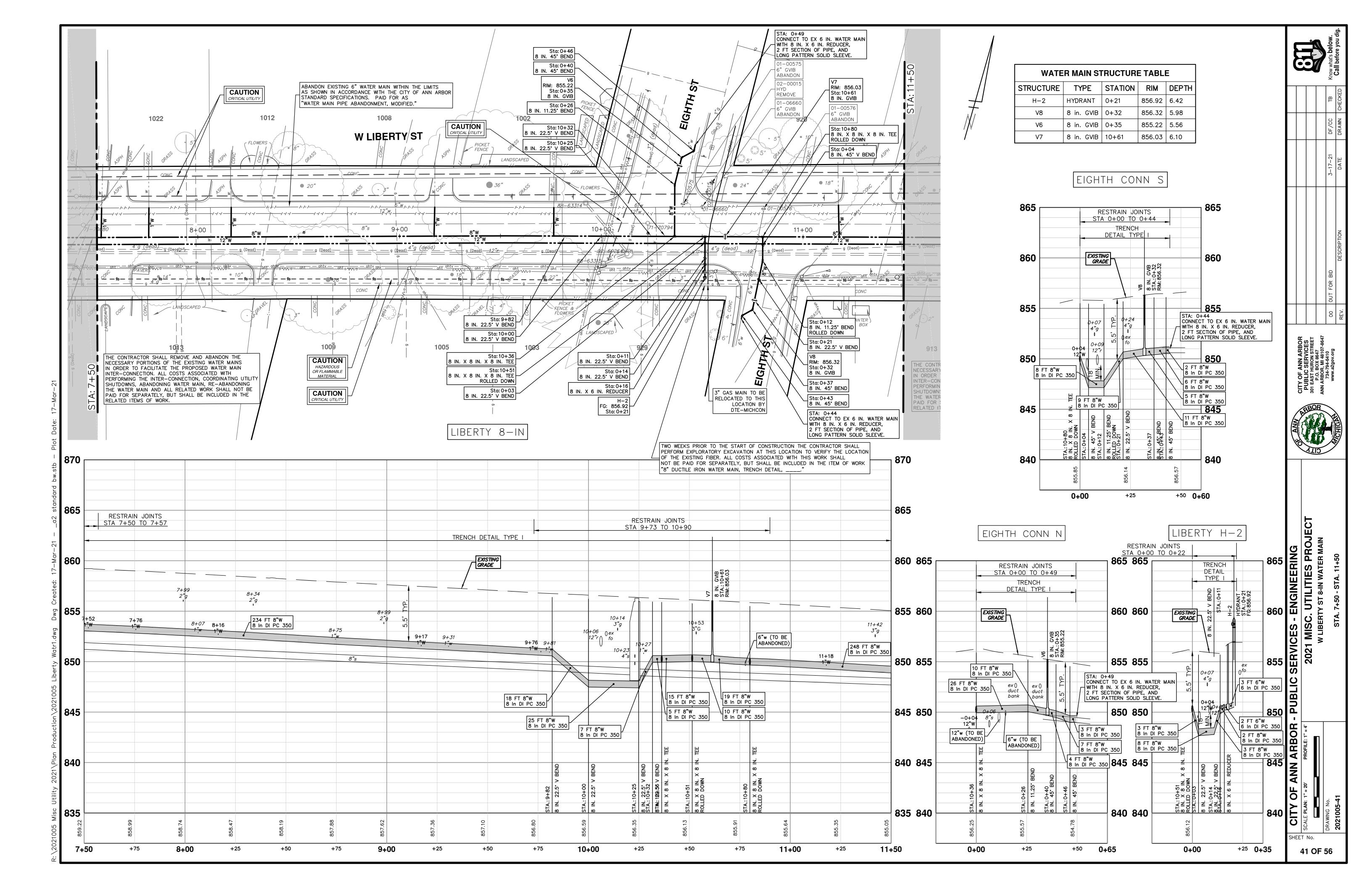


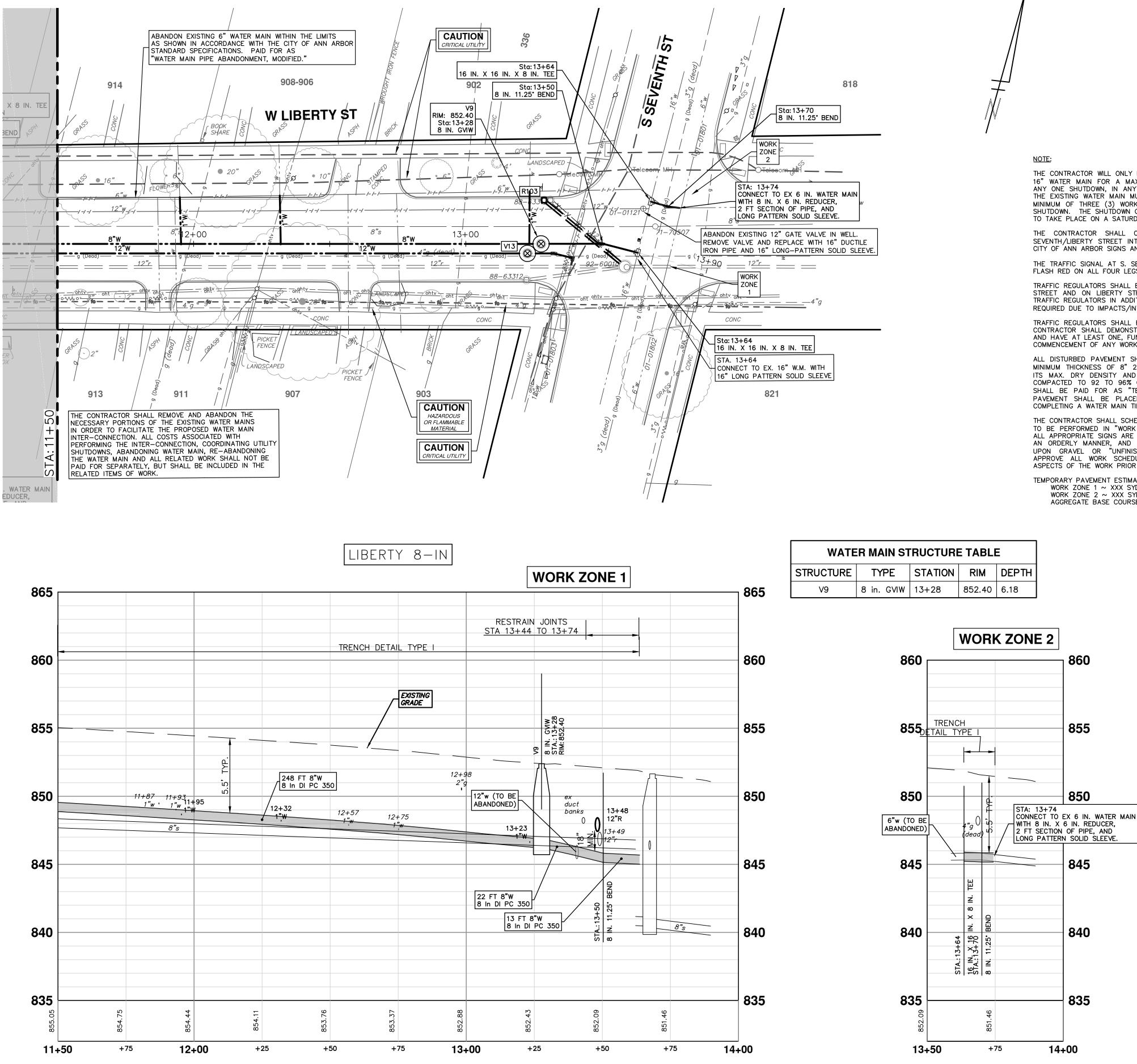




										3-17-	DAT
			TRUCTUR							00 OUT FOR BID	
3	V5	TYPE 8 in. GVIB	O+31	<b>RIM</b> 861.90	<b>DEPTH</b> 6.16			0	PUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, MI 48107-8647	734-794-6410 www.a2gov.org	
								ANN ANN ANN	EL CL		
870		RESTRA STA 0+0 TF DETA	ITE CO NIN JOINTS DO TO 0+41 RENCH IL TYPE I	N N 	8	70			MISC. UTILITIES PROJECT W LIBERTY ST 8-IN WATER MAIN	STA 4±00 - STA 7±50	
865				RIM: 861.90	STA: 0+4 CONNECT WITH 8 IN 2 FT SEC LONG PA	65 TO EX 6 IN. WATER M. N. X 6 IN. REDUCER, TION OF PIPE, AND TTERN SOLID SLEEVE. 60	AIN	PUBLIC SERVICES - ENG	2021 MISC. UTII W LIBERTY ST 8	STA 4100	
855	3"W I PC 350 3"W I PC 350	0+07 12"r ∞ Z 0+03 ⊔ 12"W			W PC 350 W PC 350 W PC 350	55		•	PROFILE: 1" = 4'		
850 845	14 STA.: 4+60	8 IN. X 8 IN. X 8 IN. TE ROLLED DOWN STA.: 0+15 8 IN AF. V DEND	STA.: 0+35 8 IN. 45* BE	16 FT 8 8 In DI	3 ^{"W} PC 350 T 8 ^{"W} DI PC 350			ANN	1"= 20'	DRAWING No.	04-000120
	<b>+0</b>	00	+25	+5	⁵⁰ 0+60			HEET			

		3-17-21 DF/CC TB	DESCRIPTION DATE DRAWN CHECKED Call before you dig.
		00 OUT FOR BID	RFV
			51A. 4+00 - 51A. 7+50
CITY OF AN	N SCALE FLAN: I = 20 FROFILE: I = 4	DRAWING NO.	2021005-40







THE CONTRACTOR WILL ONLY BE ALLOWED TO SHUT DOWN THE EXISTING 16" WATER MAIN FOR A MAXIMUM DURATION OF EIGHT (8) HOURS IN ANY ONE SHUTDOWN, IN ANY GIVEN 24 HOUR PERIOD. SHUTDOWN OF THE EXISTING WATER MAIN MUST BE SCHEDULED WITH THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS IN ADVANCE OF THE INTENDED SHUTDOWN. THE SHUTDOWN OF THE WATER MAIN WILL NOT BE ALLOWED TO TAKE PLACE ON A SATURDAY OR A SUNDAY.

THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE S. SEVENTH/LIBERTY STREET INTERSECTION WITH THE ENGINEER AND THE CITY OF ANN ARBOR SIGNS AND SIGNAL UNIT.

THE TRAFFIC SIGNAL AT S. SEVENTH/LIBERTY STREET SHALL BE SET TO FLASH RED ON ALL FOUR LEGS DURING THE WORK OF THIS CLOSURE.

TRAFFIC REGULATORS SHALL BE PLACED ON BOTH LEGS OF S. SEVENTH STREET AND ON LIBERTY STREET SOUTH OF S. SEVENTH. ADDITIONAL TRAFFIC REGULATORS IN ADDITION TO THOSE MENTIONED ABOVE MAY BE REQUIRED DUE TO IMPACTS/INTERACTION WITH THE LOCAL TRAFFIC.

TRAFFIC REGULATORS SHALL BE EQUIPPED WITH TWO-WAY RADIOS. THE CONTRACTOR SHALL DEMONSTRATE THE FUNCTIONALITY OF THE RADIOS AND HAVE AT LEAST ONE, FUNCTIONING, BACK-UP RADIO, PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN THE INTERSECTION.

ALL DISTURBED PAVEMENT SHALL BE TEMPORARILY REPAIRED USING A MINIMUM THICKNESS OF 8" 21-AA LIMESTONE COMPACTED TO 98% OF ITS MAX. DRY DENSITY AND 4" OF ENGINEER APPROVED LVSP HMA COMPACTED TO 92 TO 96% OF THE Gmm. THE PLACEMENT OF HMA SHALL BE PAID FOR AS "TEMPORARY PAVEMENT". ALL TEMPORARY PAVEMENT SHALL BE PLACED WITHIN FIVE (5) CALENDAR DAYS OF COMPLETING A WATER MAIN TIE-IN OR ABANDONMENT

THE CONTRACTOR SHALL SCHEDULE AND COORDINATE THE CONSTRUCTION TO BE PERFORMED IN "WORK ZONE 1" AND "WORK ZONE 2" SO THAT ALL APPROPRIATE SIGNS ARE IN PLACE, THAT TRAFFIC IS MAINTAINED IN AN ORDERLY MANNER, AND THAT TRAFFIC IS NOT FORCED TO DRIVE UPON GRAVEL OR "UNFINISHED" SURFACES. THE ENGINEER SHALL APPROVE ALL WORK SCHEDULES, DURATIONS AND OTHER RELEVANT ASPECTS OF THE WORK PRIOR TO ITS COMMENCEMENT.

TEMPORARY PAVEMENT ESTIMATED QUANTITIES WORK ZONE 1 ~ XXX SYD WORK ZONE 2 ~ XXX SYD AGGREGATE BASE COURSE, 8 INCH, 21-AA, MODIFIED ~ XXX SYD

WATE	R MAIN ST	RUCTUR	ETABL	E
STRUCTURE	TYPE	STATION	RIM	DEPTH
V9	8 in. GVIW	13+28	852.40	6.18

CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 734-794-6410 www.a2gov.org



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ANN ARBOR - PUBLIC SERVICES - ENGINEERING PROFILE: 1"=4' 2021 MISC. UTILITIES PROJE W LIBERTY ST 8-IN WATER MAIN Ю СІТҮ SHEET No. 42 OF 56

ABANDON EXISTING 6" WATER MAIN WITHIN THE LIMITS AS SHOWN IN ACCORDANCE WITH THE CITY OF ANN ARBOR STANDARD SPECIFICATIONS. PAID FOR AS "WATER MAIN PIPE ABANDONMENT."

## NOTE:

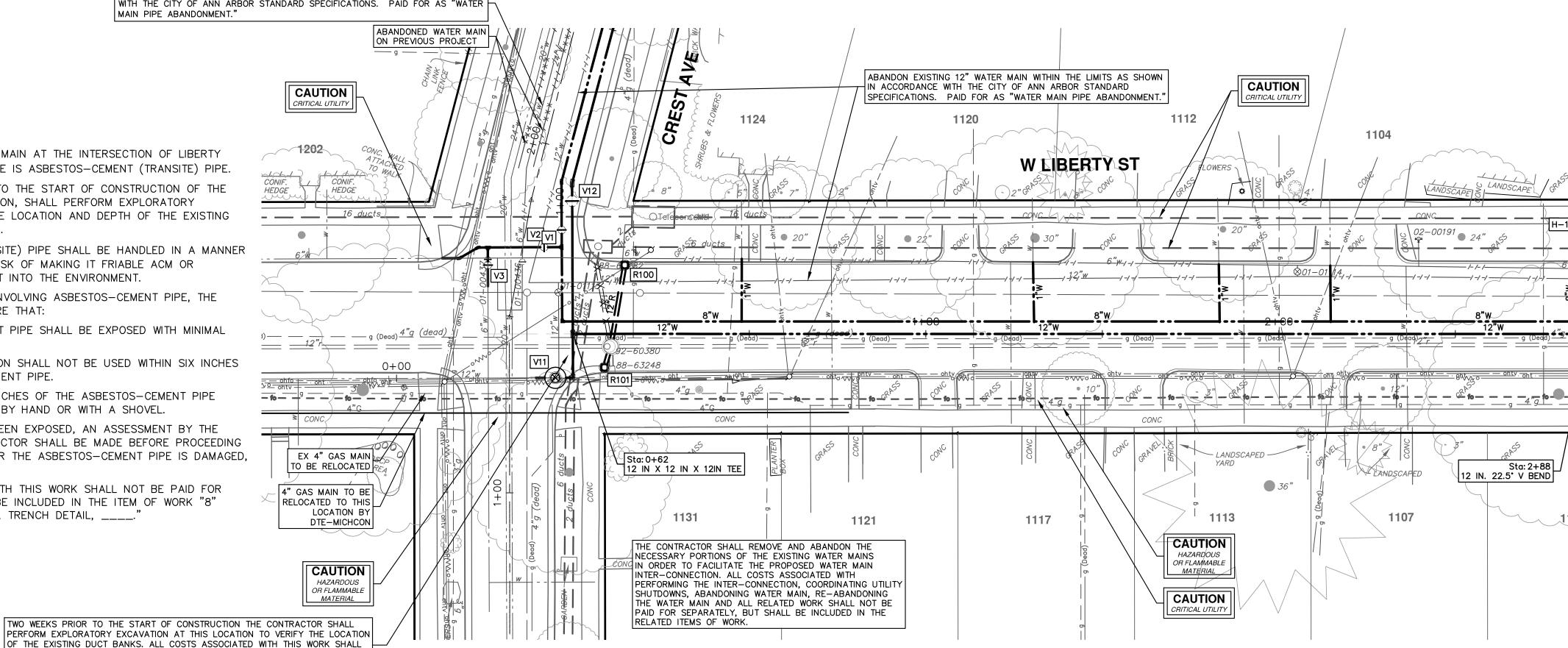
THE 20-INCH RAW WATER MAIN AT THE INTERSECTION OF LIBERTY STREET AND CREST AVENUE IS ASBESTOS-CEMENT (TRANSITE) PIPE. THE CONTRACTOR, PRIOR TO THE START OF CONSTRUCTION OF THE WATER MAIN IN INTERSECTION, SHALL PERFORM EXPLORATORY EXCAVATION TO VERIFY THE LOCATION AND DEPTH OF THE EXISTING 20-INCH RAW WATER MAIN.

ASBESTOS-CEMENT (TRANSITE) PIPE SHALL BE HANDLED IN A MANNER THAT WILL MINIMIZE THE RISK OF MAKING IT FRIABLE ACM OR RELEASING ASBESTOS DUST INTO THE ENVIRONMENT.

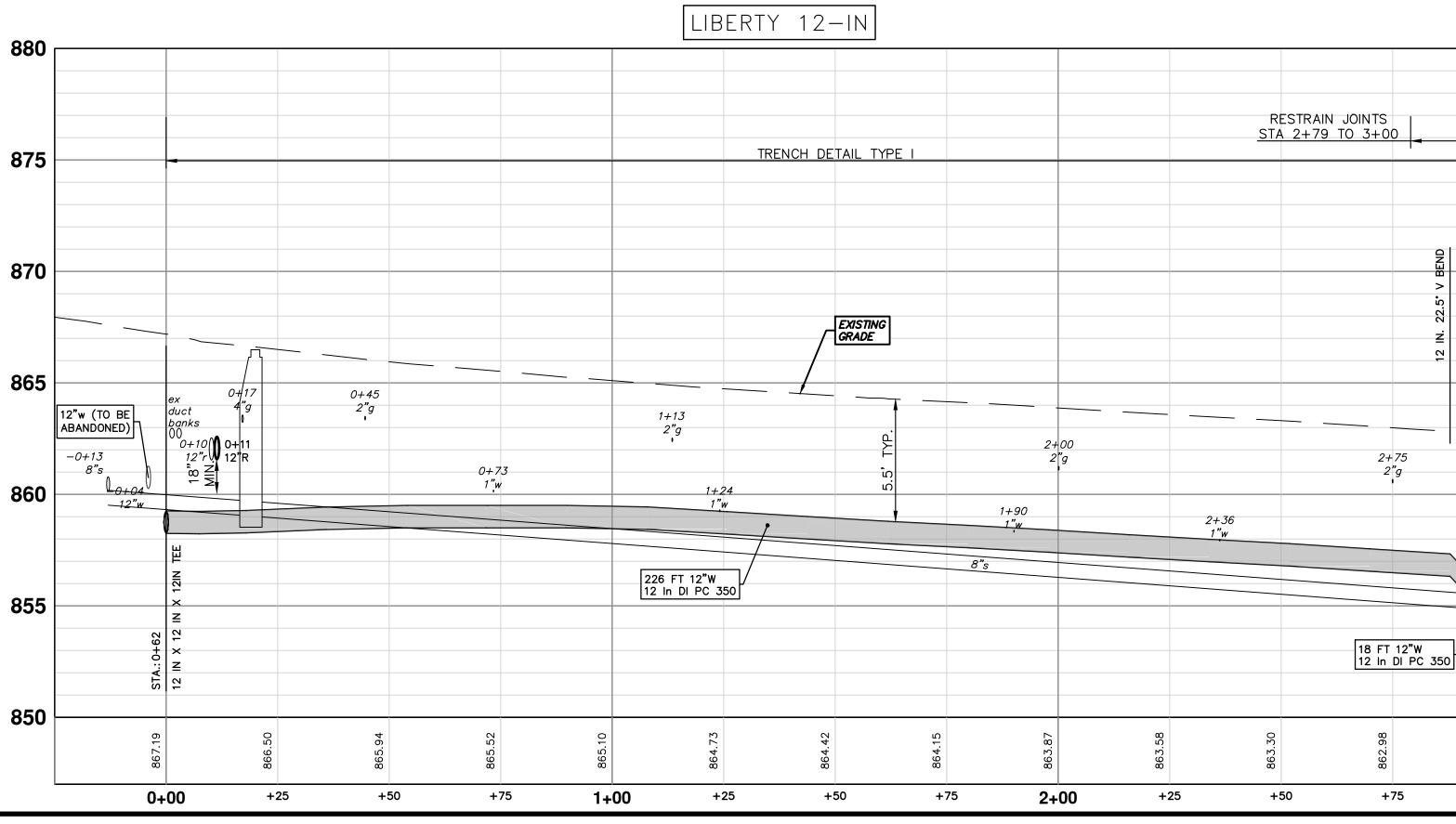
AT THE START OF WORK INVOLVING ASBESTOS-CEMENT PIPE, THE CONTRACTOR SHALL ENSURE THAT:

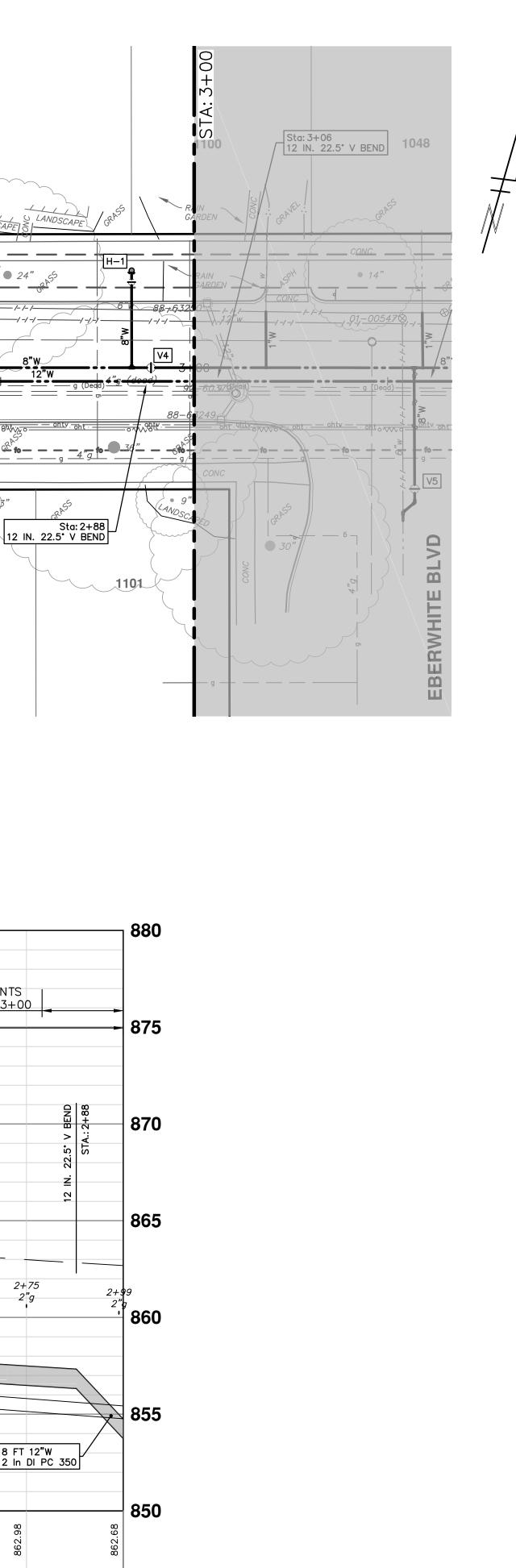
- 1. THE ASBESTOS-CEMENT PIPE SHALL BE EXPOSED WITH MINIMAL DISTURBANCE.
- 2. MECHANICAL EXCAVATION SHALL NOT BE USED WITHIN SIX INCHES OF THE ASBESTOS CEMENT PIPE.
- 3. THE SOIL WITHIN SIX INCHES OF THE ASBESTOS-CEMENT PIPE SHALL BE UNCOVERED BY HAND OR WITH A SHOVEL.
- 4. ONCE THE PIPE HAS BEEN EXPOSED, AN ASSESSMENT BY THE ENGINEER AND CONTRACTOR SHALL BE MADE BEFORE PROCEEDING TO DETERMINE WHETHER THE ASBESTOS-CEMENT PIPE IS DAMAGED, CRACKED OR BROKEN.

ALL COSTS ASSOCIATED WITH THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "8" DUCTILE IRON WATER MAIN, TRENCH DETAIL, ____."

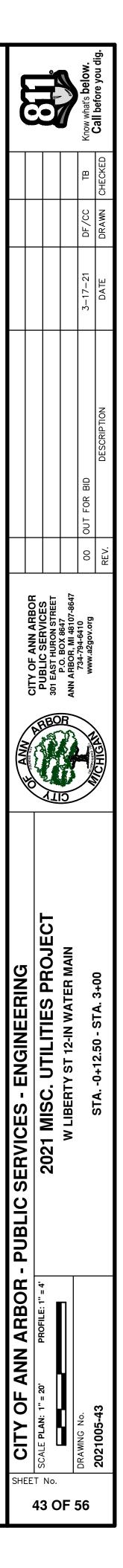


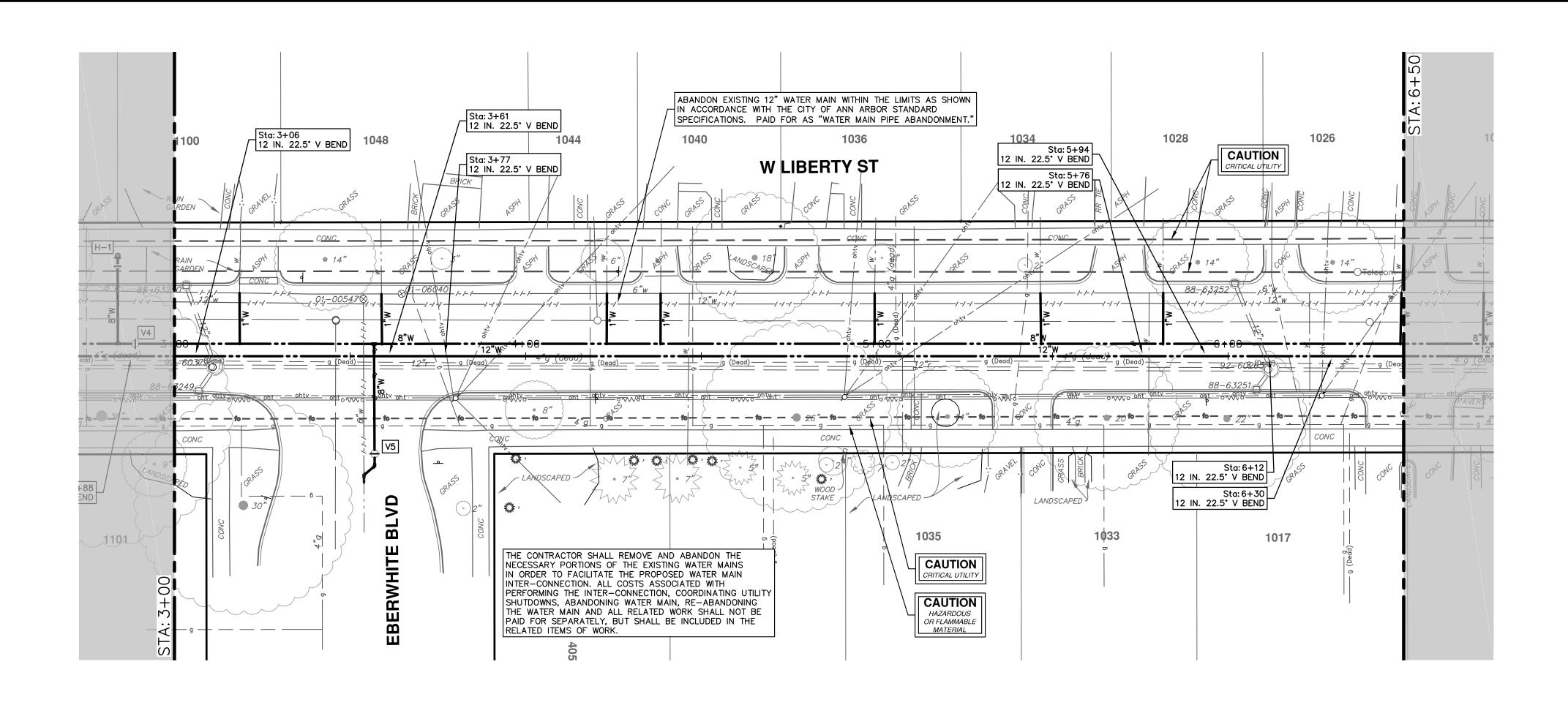
PERFORM EXPLORATORY EXCAVATION AT THIS LOCATION TO VERIFY THE LOCATION OF THE EXISTING DUCT BANKS. ALL COSTS ASSOCIATED WITH THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "12" DUCTILE IRON WATER MAIN, TRENCH DETAIL, ____

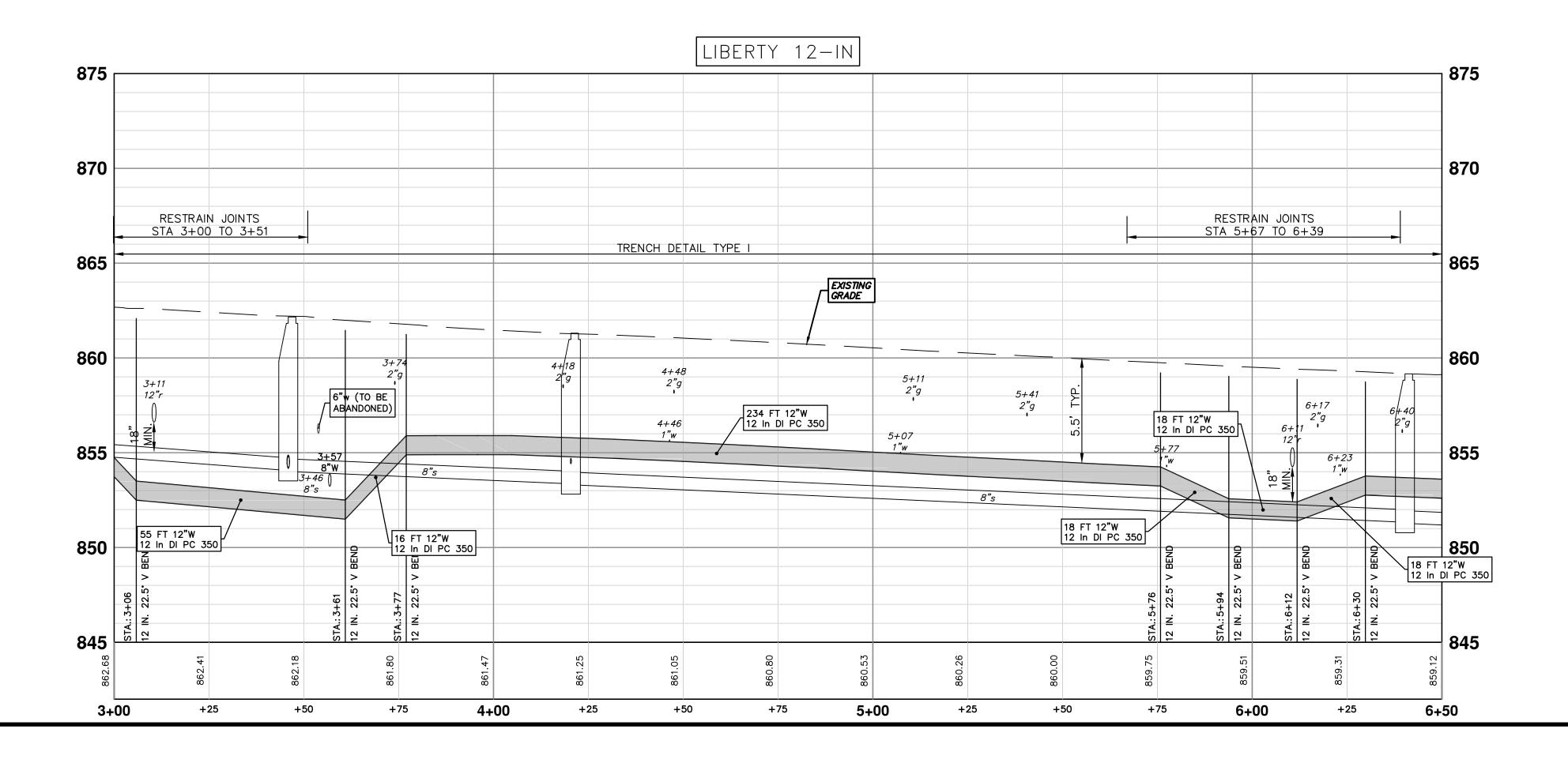




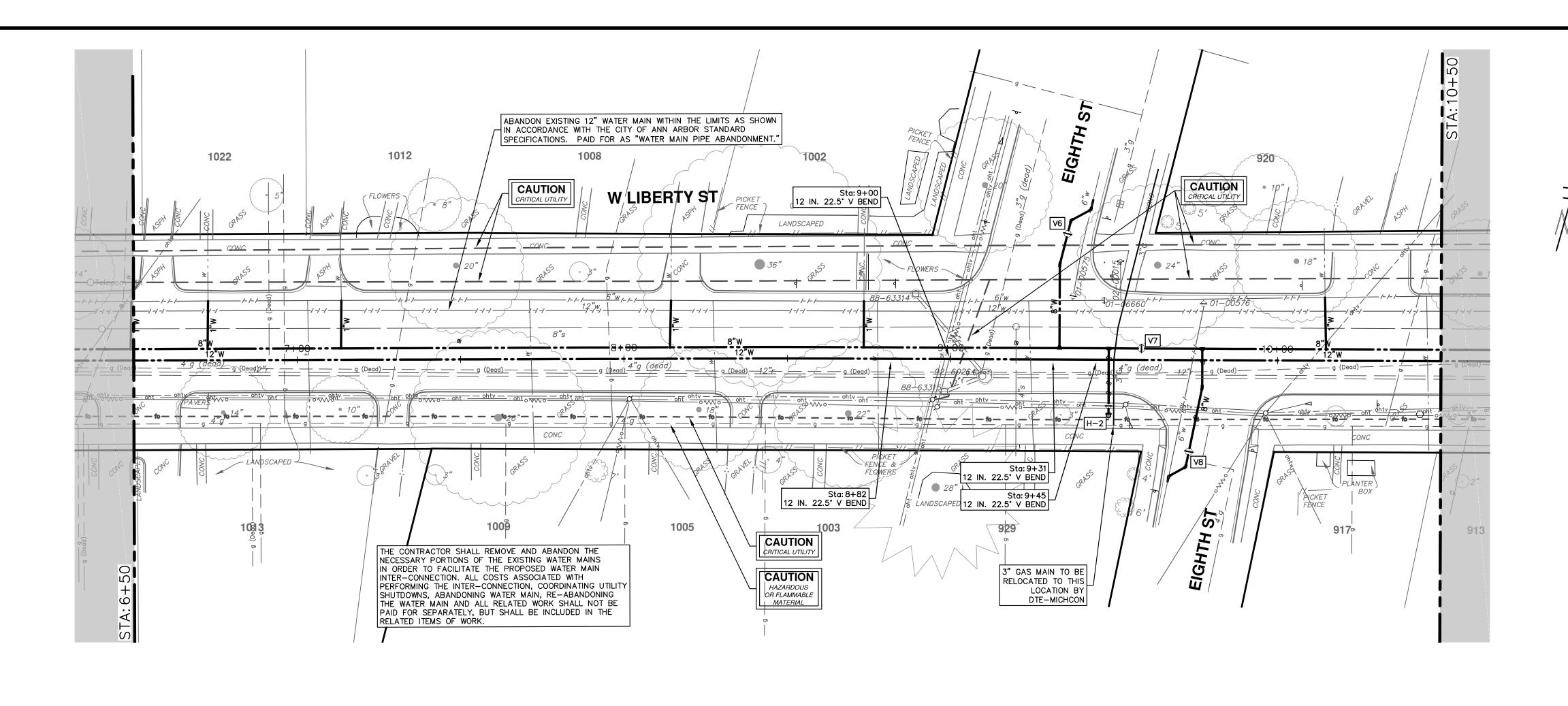
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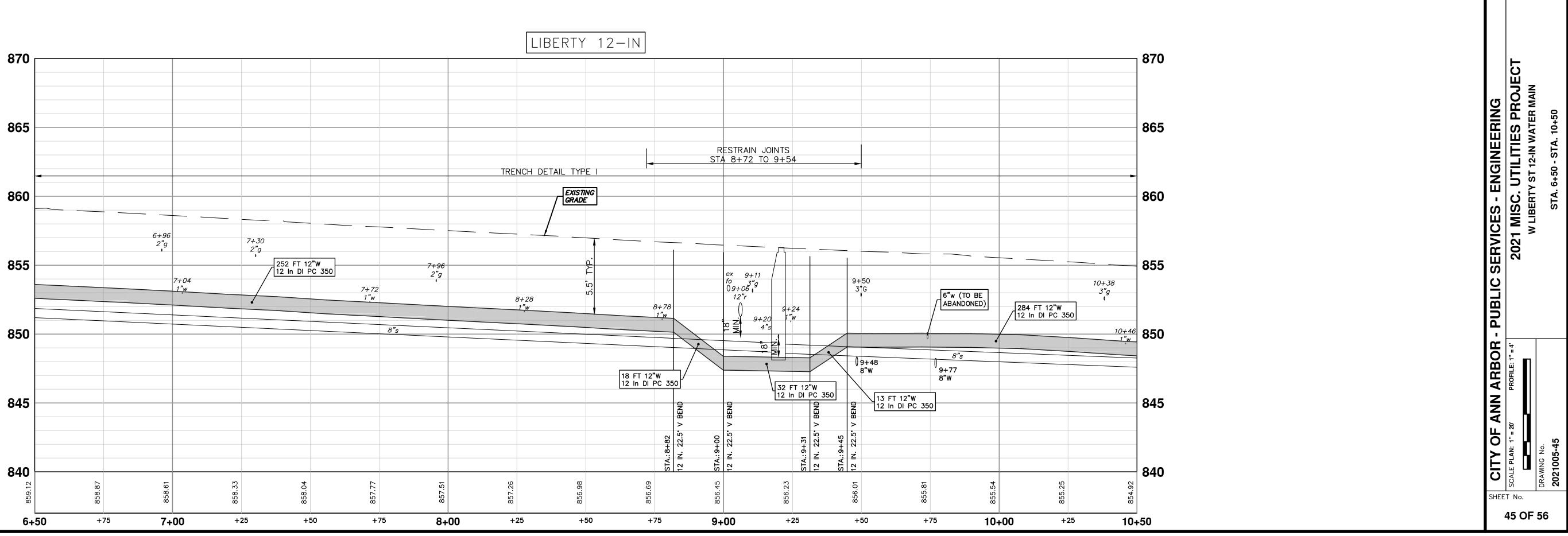






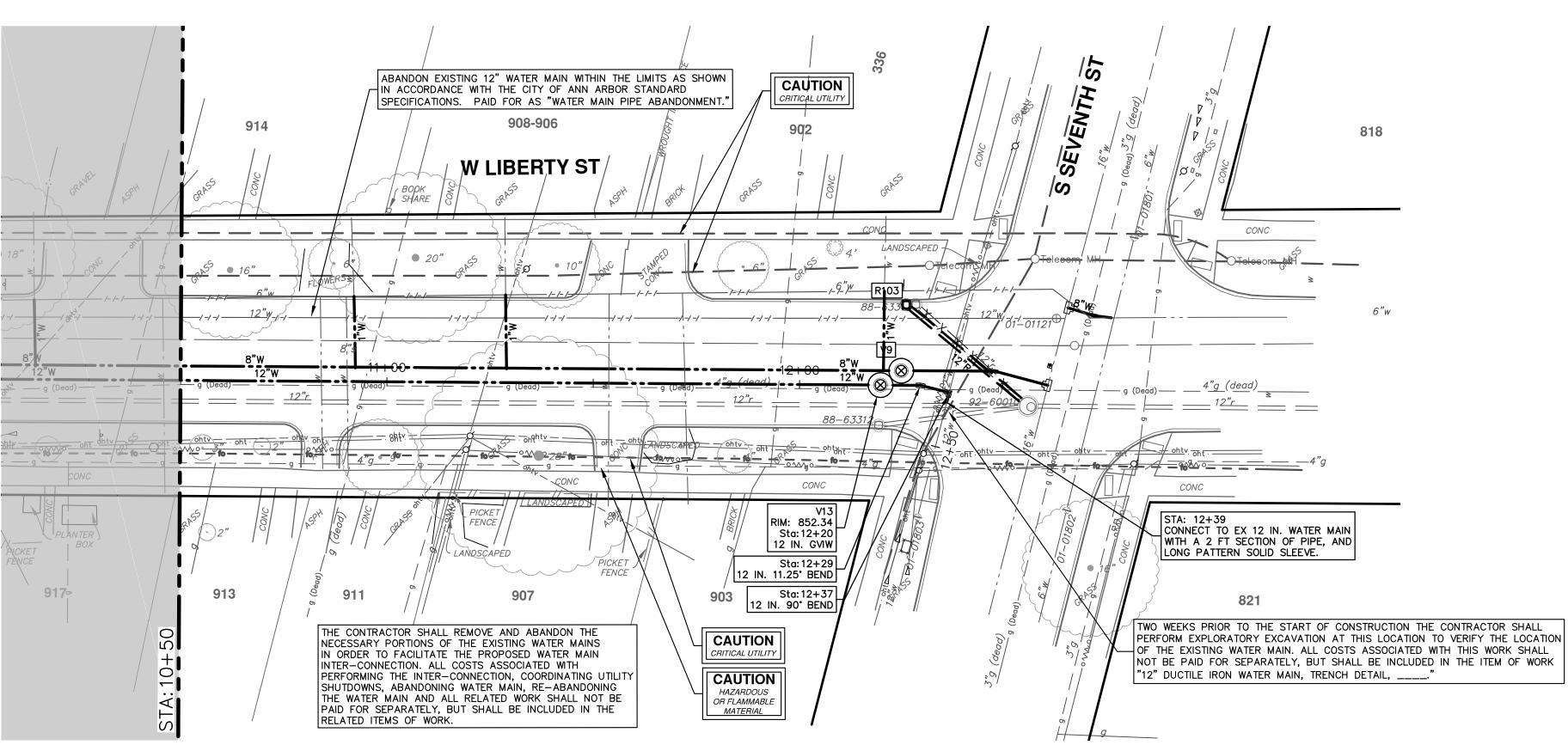
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		3-17-21	DATE
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IN ARBOR - PUBLIC SERVICES - ENGINEERING	2021 MISC. UTILITIES PROJECT W LIBERTY ST 12-IN WATER MAIN		STA. 3+00 - STA. 6+50
CITY OF AN	ON The second se	DRAWING No.	2021005-44

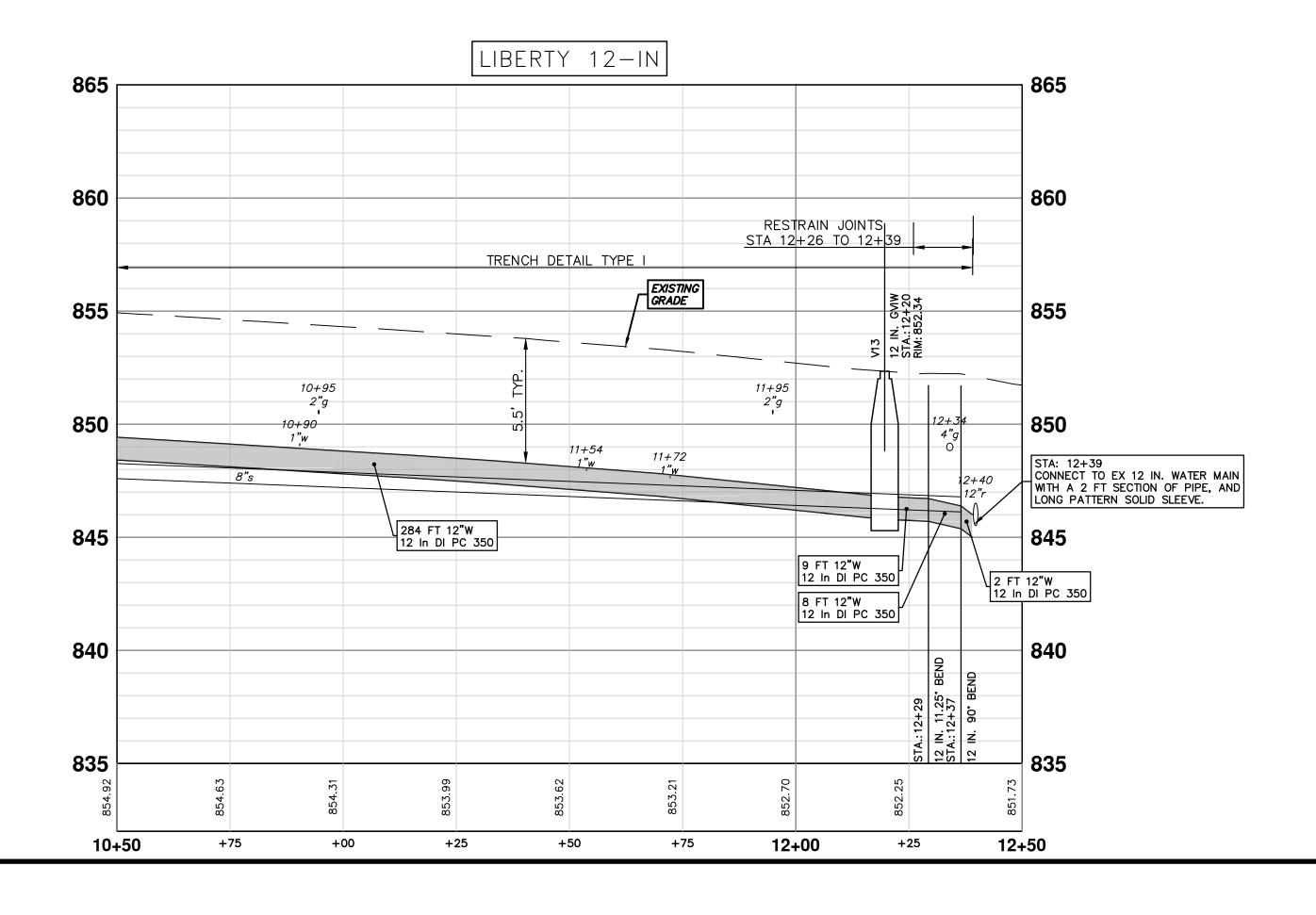




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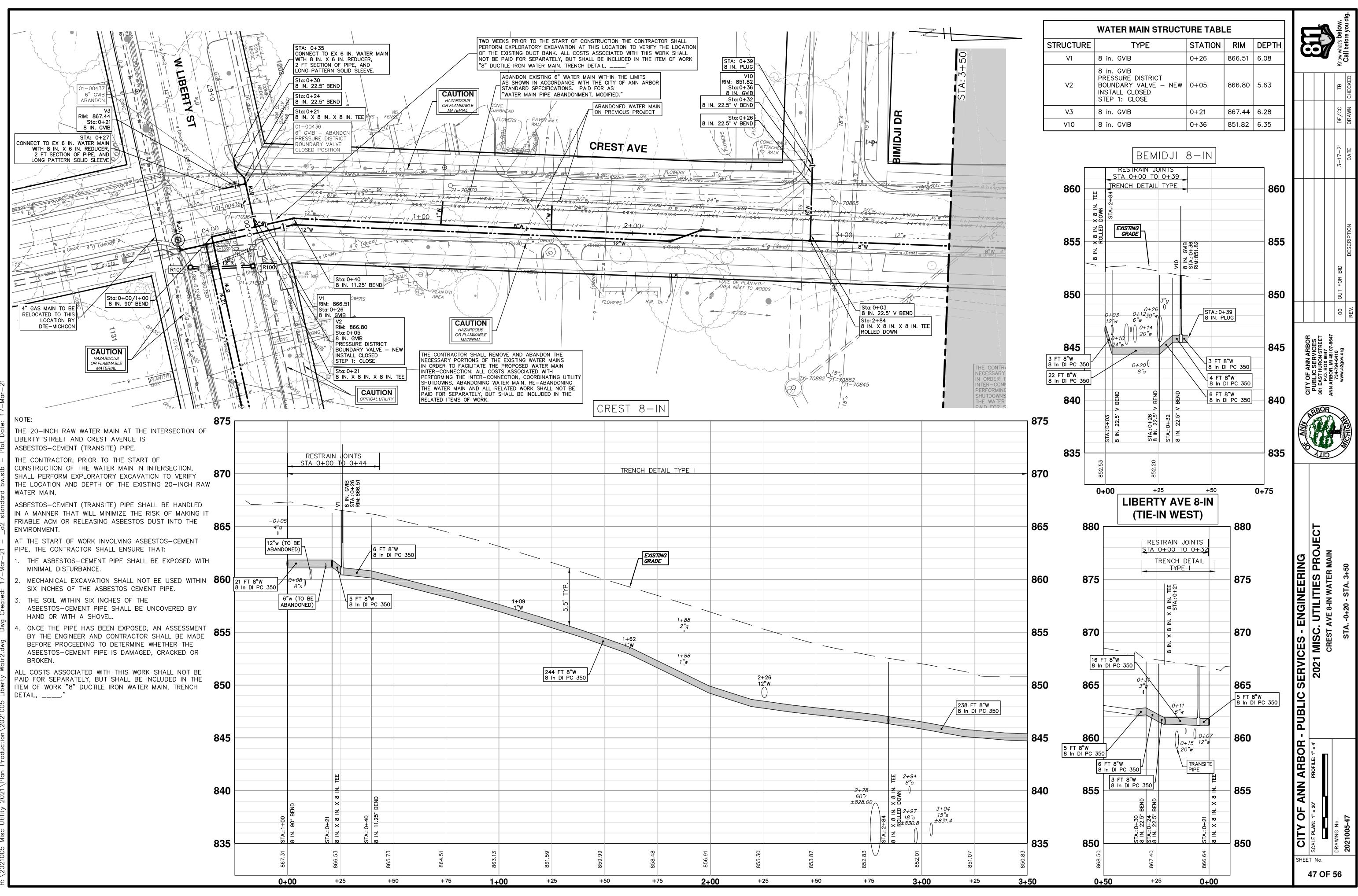
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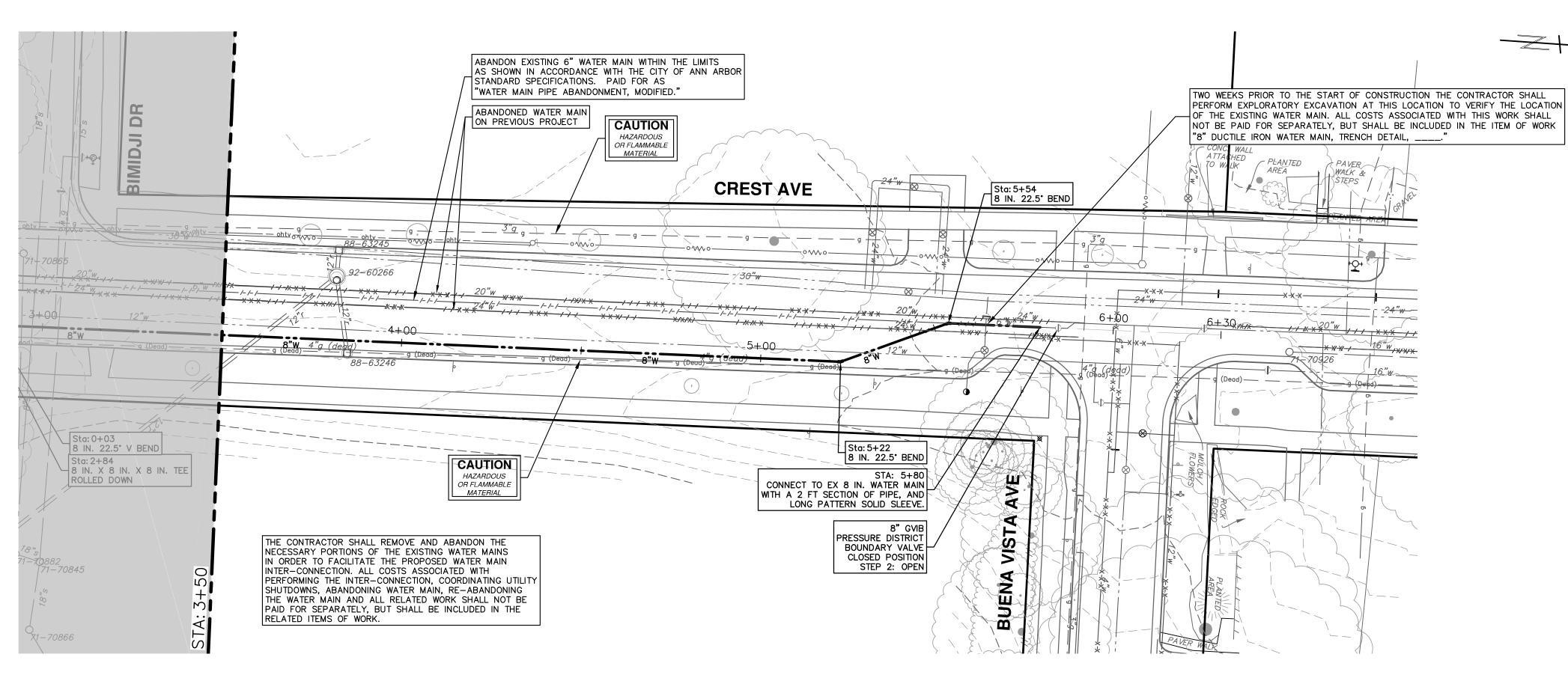
818

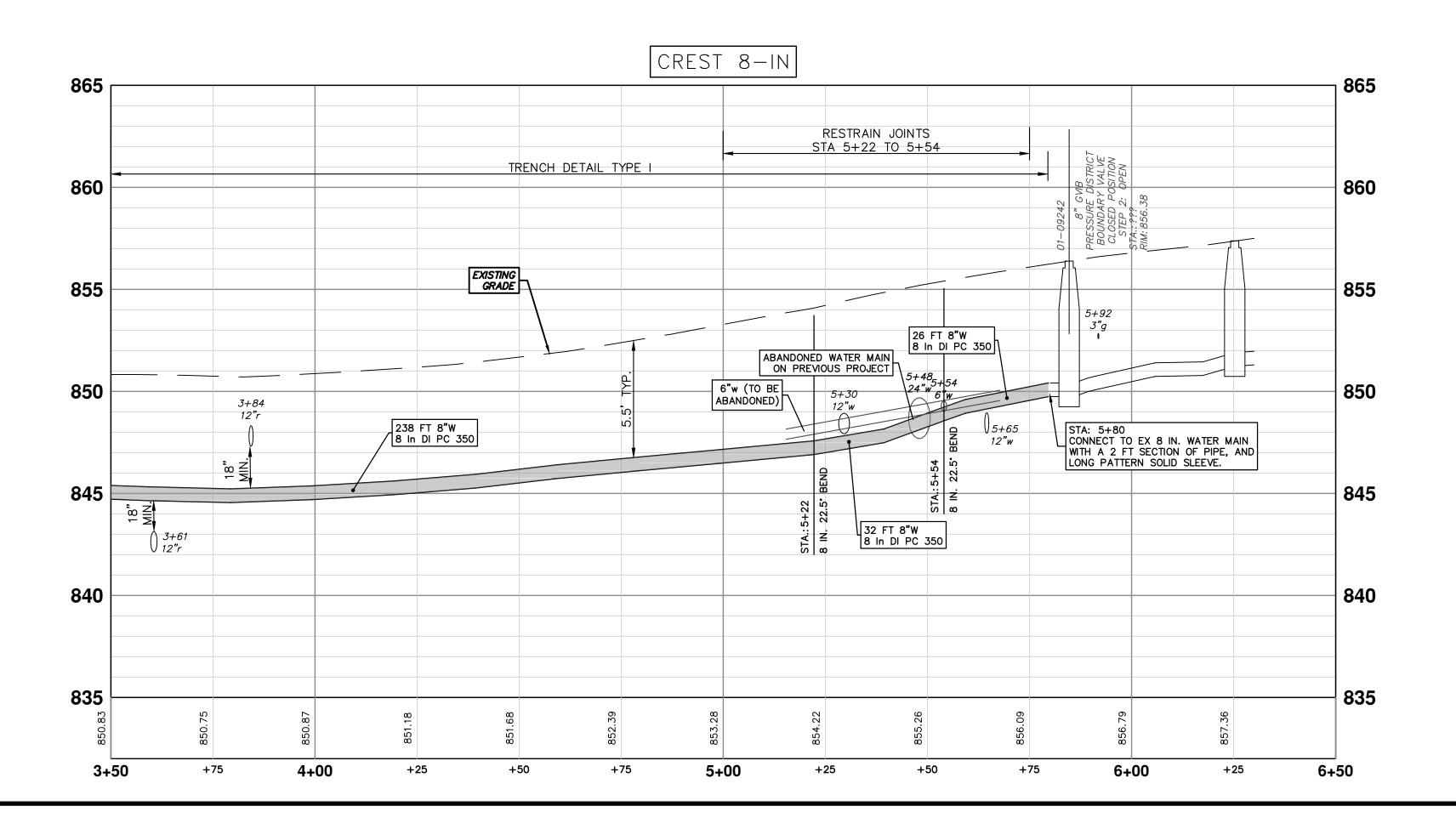
6"w

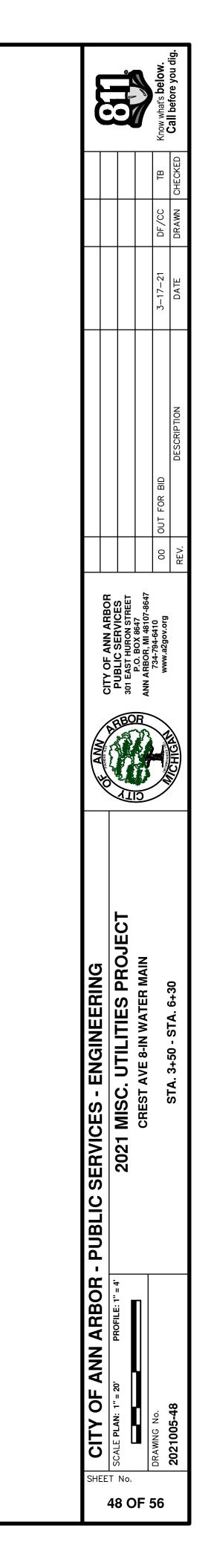
WATE	ER MAIN ST	RUCTURE	TABLE	
RUCTURE	TYPE	STATION	RIM	DEPTH
V13	12 in. GVIW	12+20	852.34	6.55

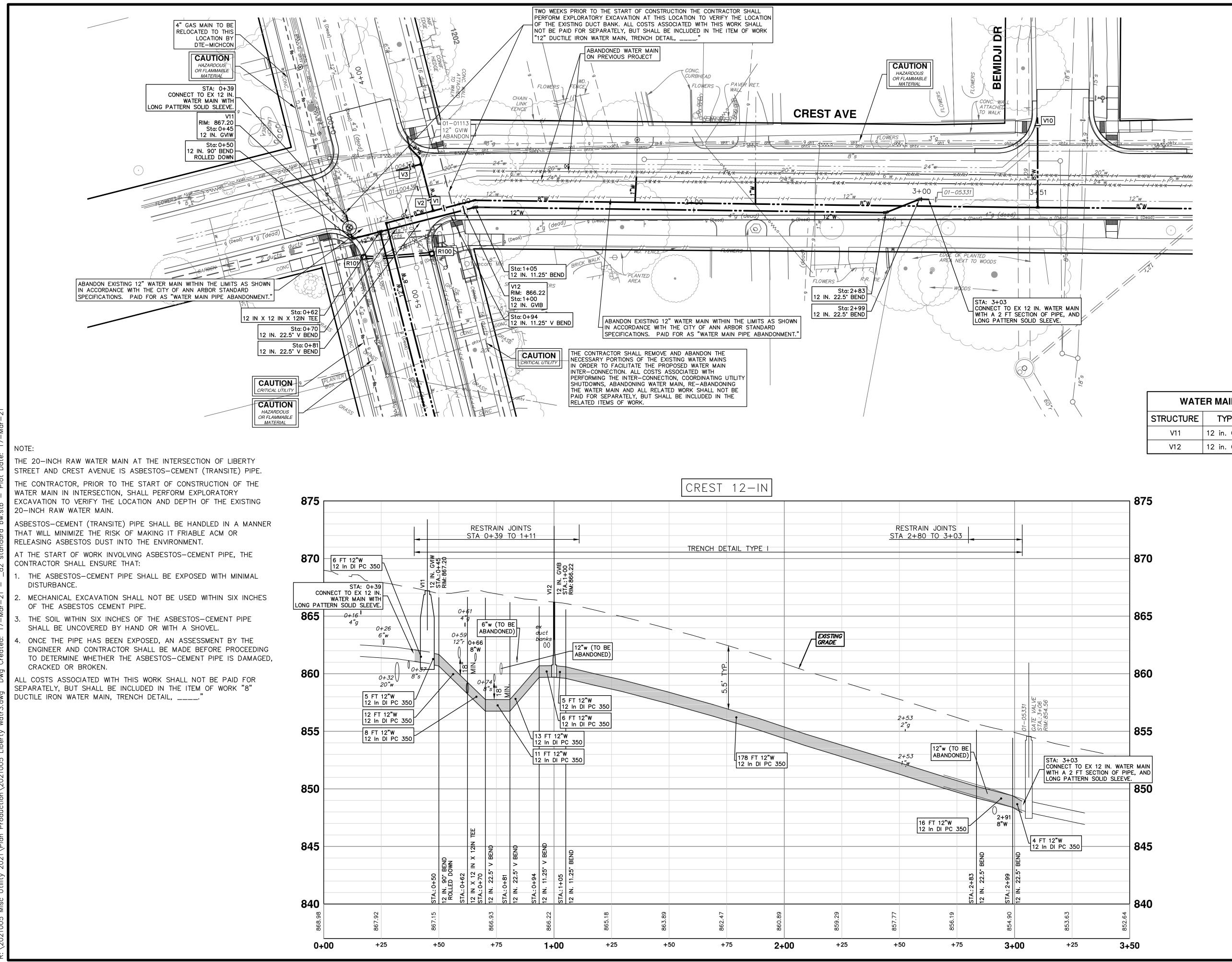
IN ARBOR - PUBLIC SERVICES - ENGINEERING PROFILE: 1" = 4 2021 MISC. UTILITIES PROJECT W LIBERTY ST 12-IN WATER MAIN	CIT OF ANN ANN ANN ANN	CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, MI 48107-8647 724794-6410 724704-6410	00 OUT FOR BID	3-17-21		Know what's below.
STA. 10+50 - STA. 12+50			REV. DESCRIPTION	DATE	DRAWN CHECKED	Call before you dig.





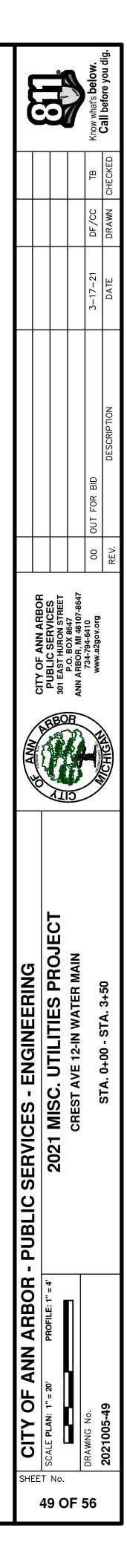


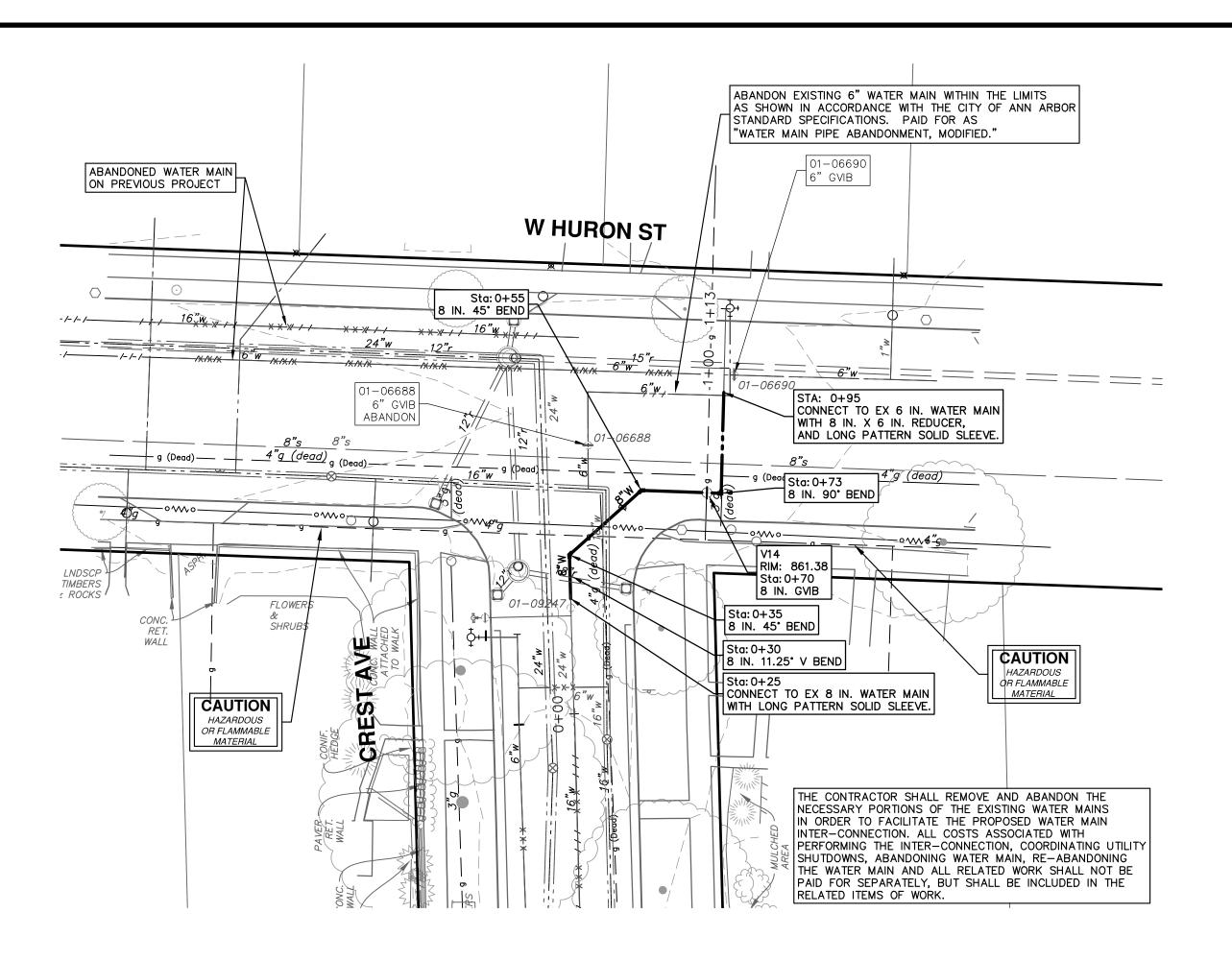




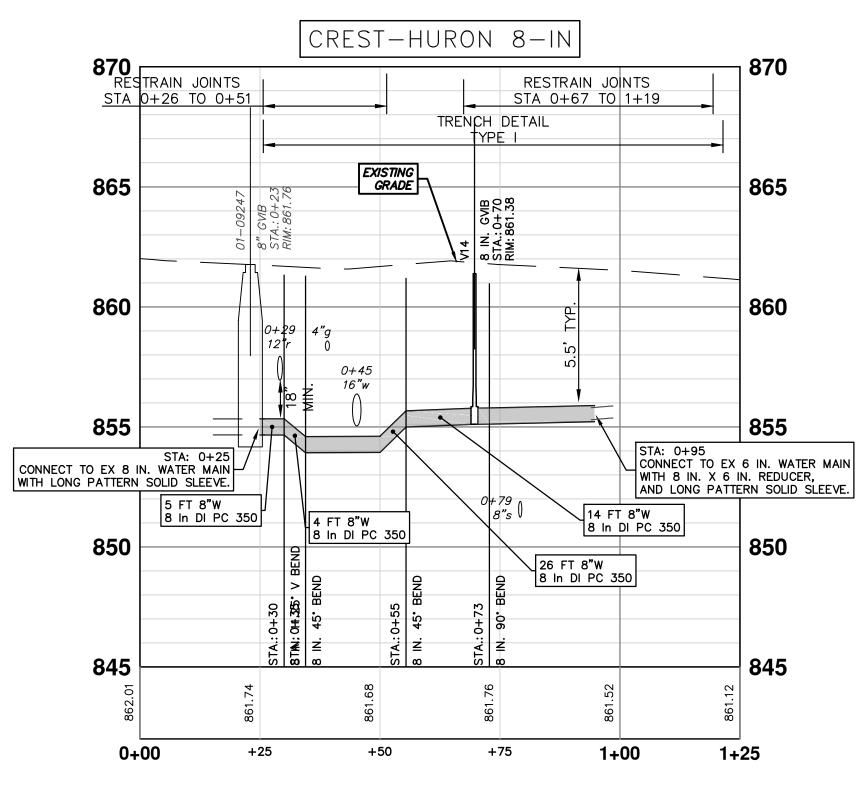
WATE	ER MAIN ST	RUCTURE		
STRUCTURE	TYPE	STATION	RIM	DEPTH
V11	12 in. GVIW	0+45	867.20	6.33
V12	12 in. GVIB	1+00	866.22	6.52

 $\mathbb{Z}$ 

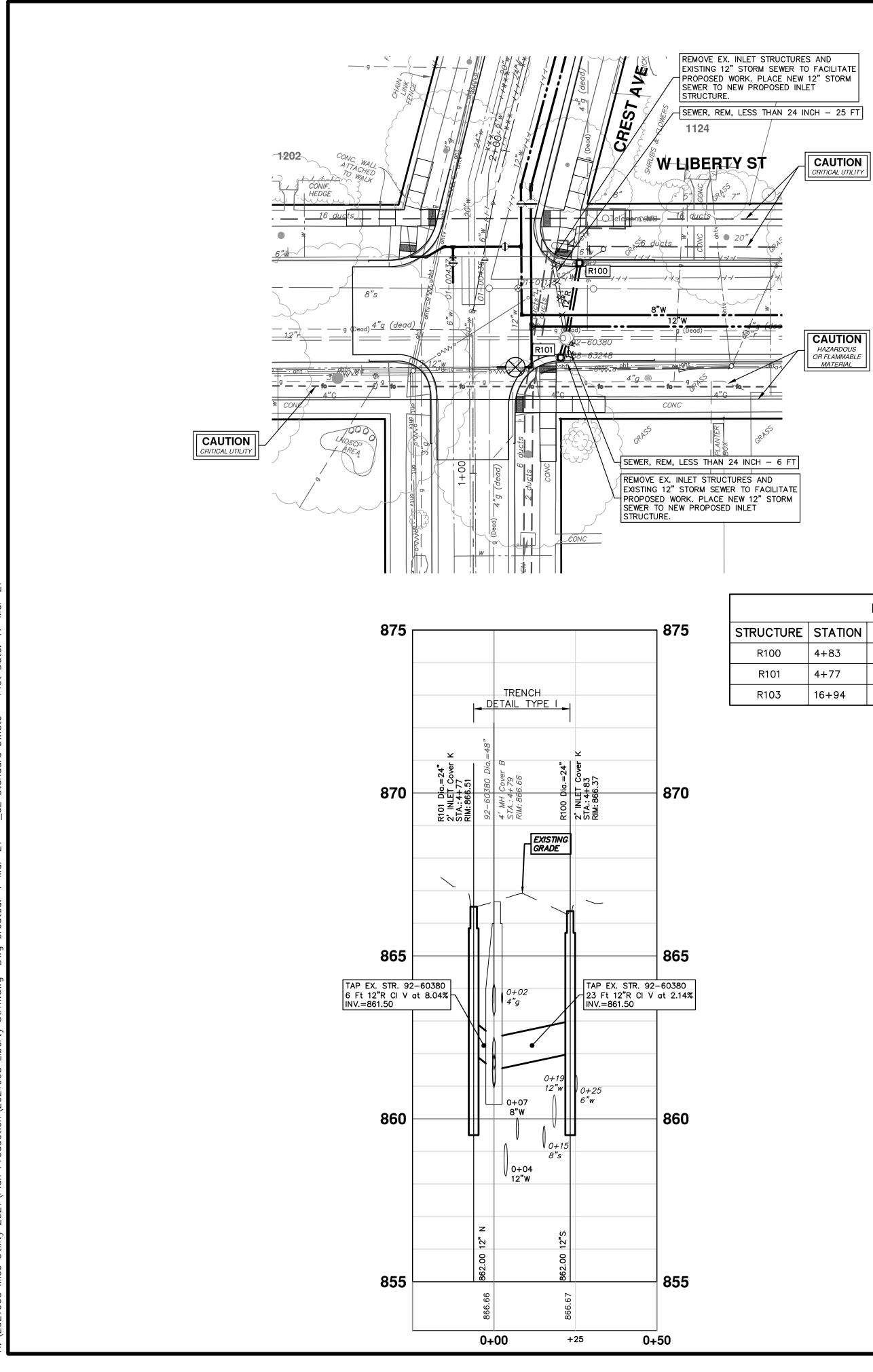




WATE	R MAIN ST	RUCTURI	E TABL	E
STRUCTURE	TYPE	STATION	RIM	DEPTH
V14	8 in. GVIB	0+70	861.38	6.27



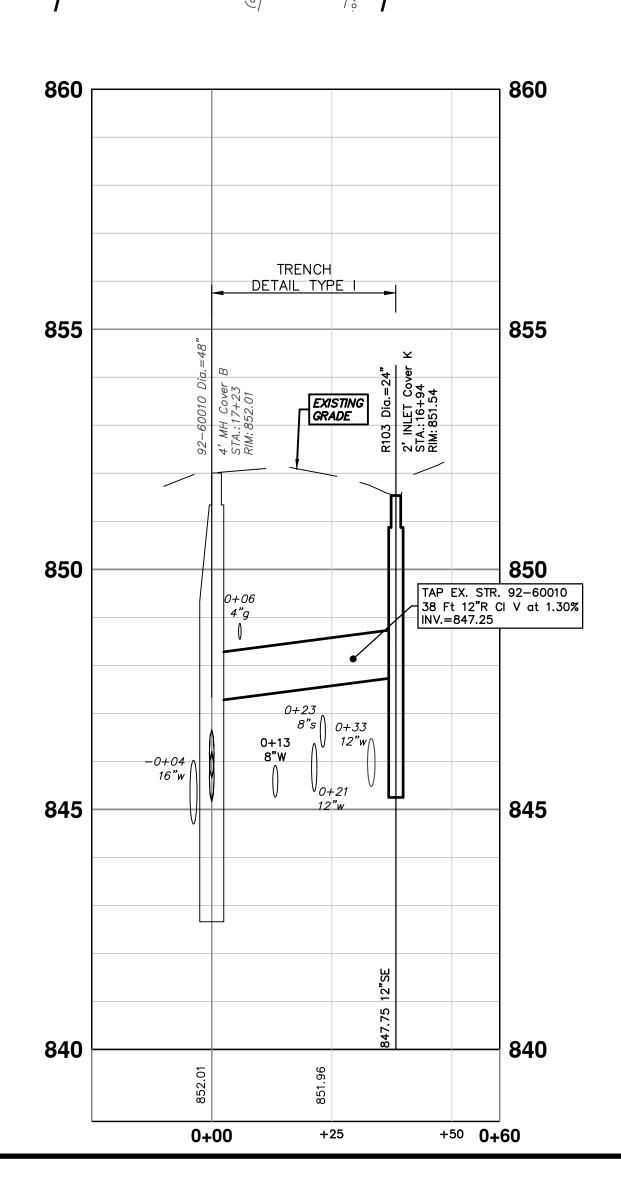
<b>CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING</b>	<b>PUBLIC SERVICES - ENGINEE</b>	RING	CITY OF ANN ABOD						e S
SCALE PLAN: 1" = 20' PROFILE: 1" = 4' 2021 MISC. UTILITIES PROJECT	2021 MISC. UTILITIE CREST AVE - W HURON ST 8-IN WAT	S PROJECT	DIBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARROR MI 42107-8647						
DRAWING No.			734-794-6410 www.a2gov.org	8	OUT FOR BID	3-17-21	DF/CC	TB	Know what's below
2021005-50 SIA. 0+26 - SIA. 1+14	SIA. 0+26 - SIA. 1+	-14	MCHIGH STATE	REV.	DESCRIPTION	DATE	DRAWN	DRAWN CHECKED	Call before you dig.

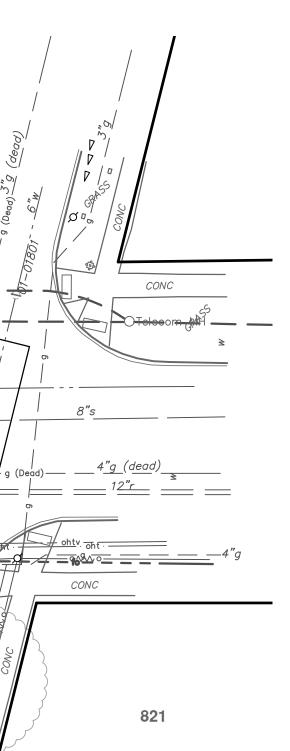


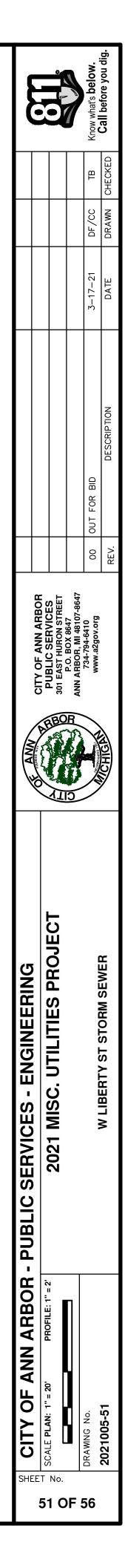
1	
330	115
SEWER, REM, LESS THAN 24 INCH - 36 FT	
REMOVE EX. INLET STRUCTURES AND EXISTING 12" STORM SEWER TO FACILITATE PROPOSED WORK. PLACE NEW 12" STORM SEWER TO NEW PROPOSED INLET STRUCTURE.	SSEVENTH ST
GRIW LIBERTY STRASS	
E ANDSCAPED	Telocom MH
<u><u><u></u><u></u><u><u></u><u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u></u>	12"w.
/8"W	8"w "
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$\frac{88 \ 63312}{\text{or}}$	
CONC	6
BOST BRIES	01802
903	
	(deod) 3"g

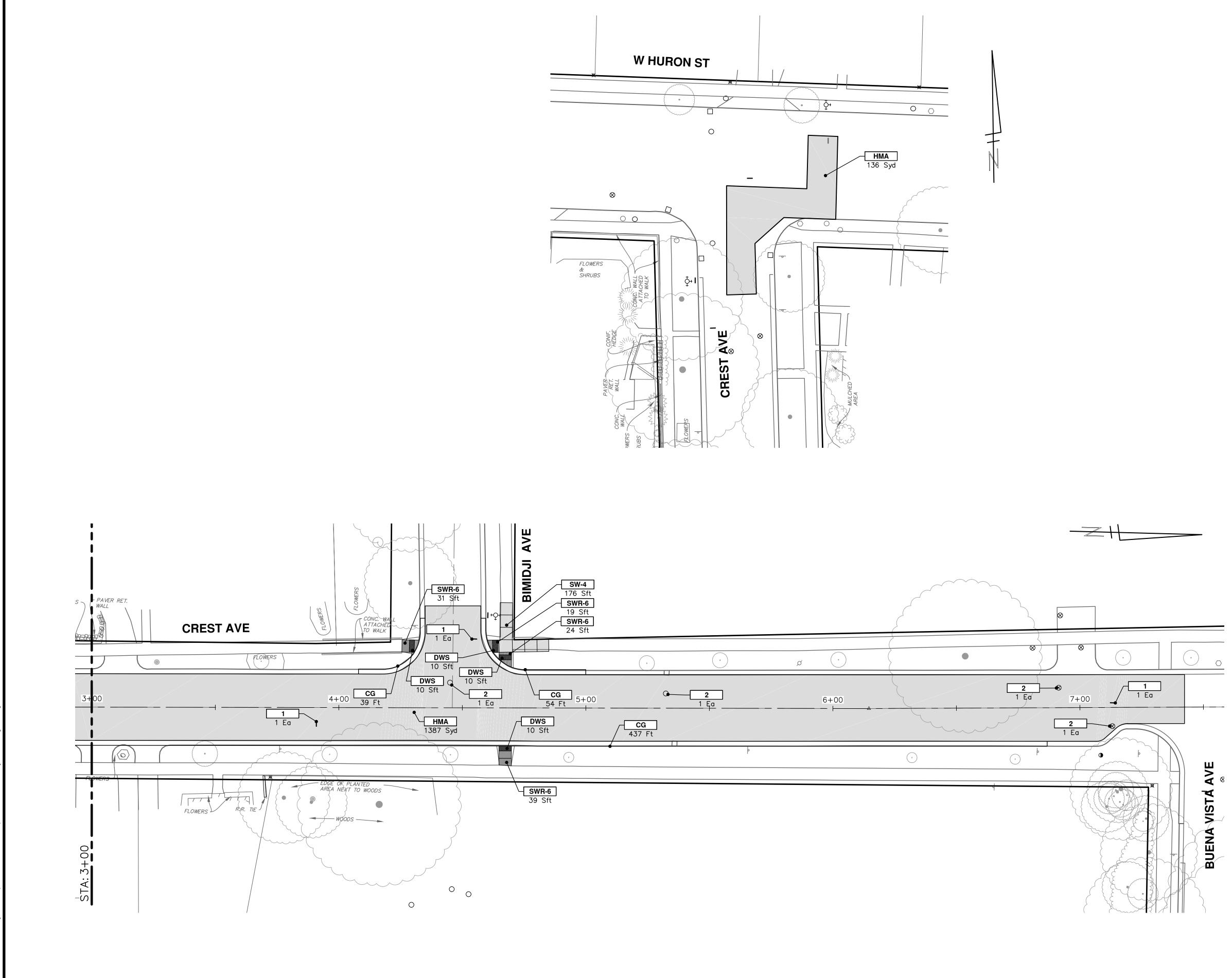
	PROPOSED STORM STRUCTURE TABLE					
STRUCTURE	STATION	TYPE	RIM	INVERTS	PIPE	SUMP
R100	4+83	2' INLET Cover K	866.37	12"S 862.00	23 LF OF 12" @ 2.14%	2'
R101	4+77	2' INLET Cover K	866.51	12"N 862.00	6 LF OF 12" @ 8.04%	2'
R103	16+94	2' INLET Cover K	851.54	12"SE 847.75	38 LF OF 12" @ 1.30%	2'

EXISTING STORM SEWER STRUCTURE REMOVAL TABLE			
STRUCTURE	STRUCTURE DEPTH (Feet) REMOVE		
88–63313	88-63313 5.79 2' INLET Cover		
88–63248	88-63248 3.31 12" Drop Structure		
88–63282 4.77 12" Drop Structure		12" Drop Structure	



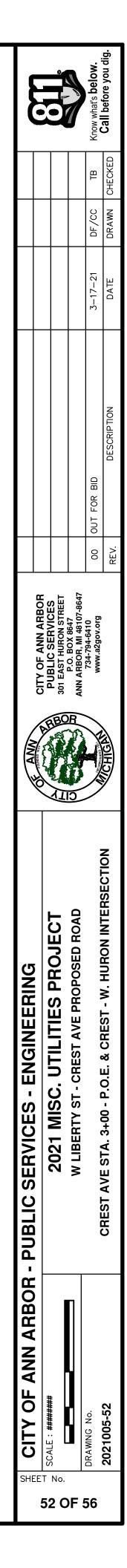


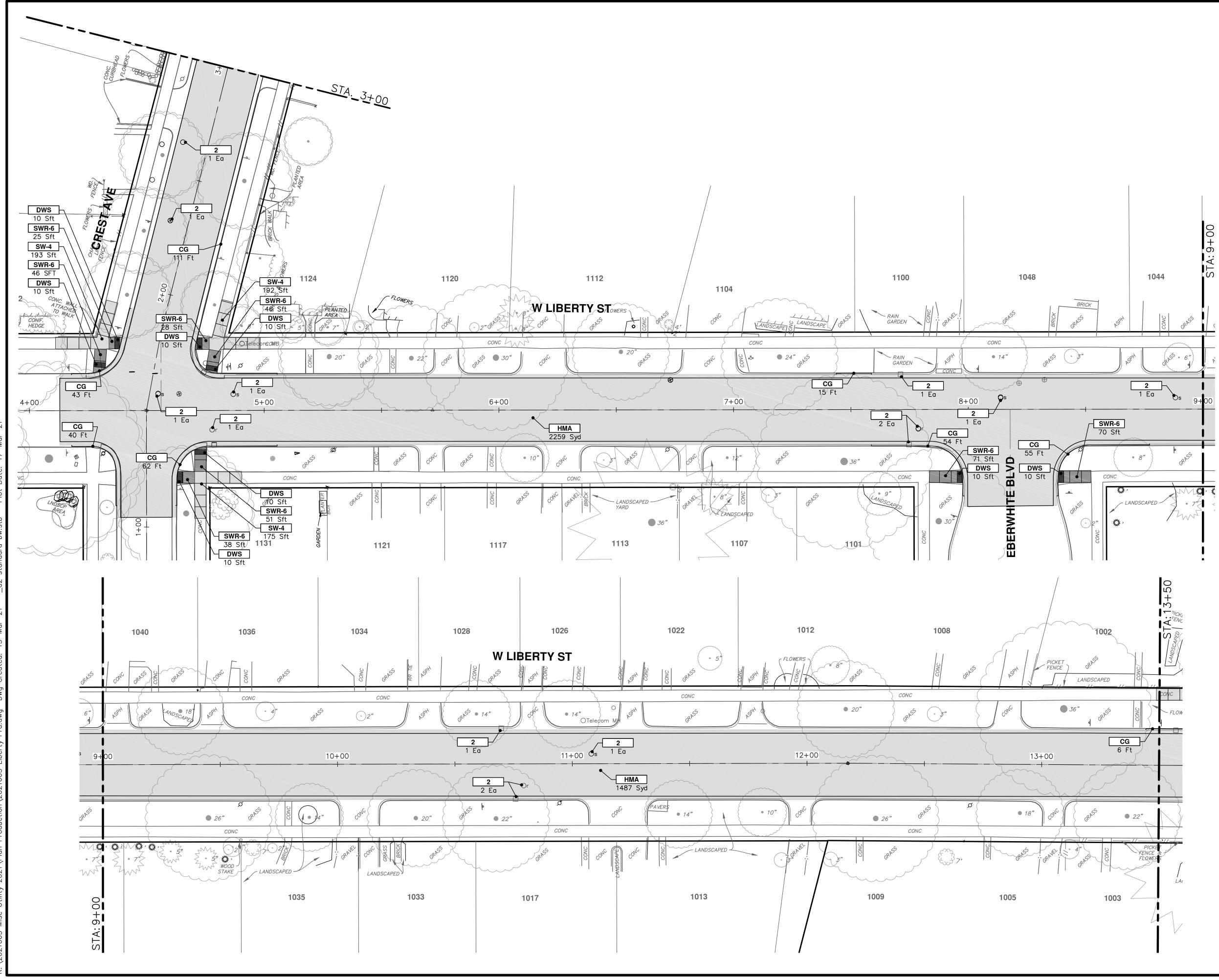




.021005 Misc Utility 2021\Plan Production\2021005 Liberty Prd.dwg Dwg Created: 15-Mar-21 - _a2 standard bw.stb - Plot Date: 17-M

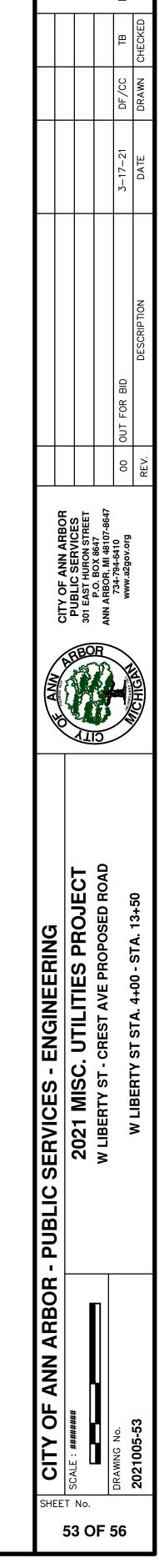
CONSTRUCTION KEY		
KEY	DESCRIPTION	
НМА	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.	
HMA APP	PLACE HMA APPROACH	
НР	HAND PATCHING	
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL	
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC	
DC-6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.	
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED	
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED	
DWS	DETECTABLE WARNING, CAST IN PLACE	
ISW-CB	INTEGRAL SIDEWALK/CURB	
ABO	ADJUST BY OTHERS	
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.	
2	ADJUST STRUCTURE COVER	

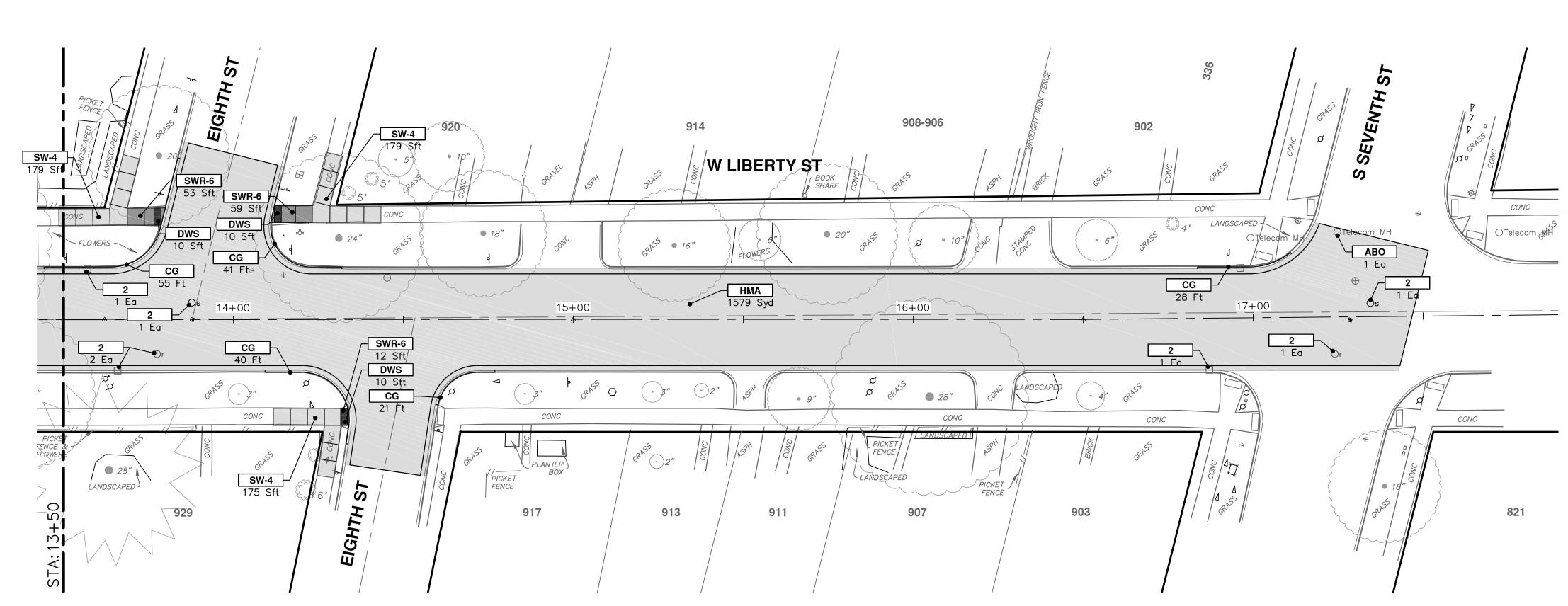


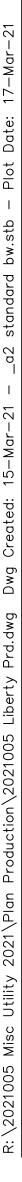




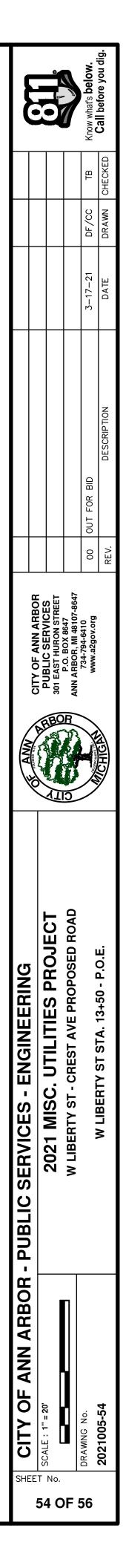
CONSTRUCTION KEY	
KEY	DESCRIPTION
НМА	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
НР	HAND PATCHING
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC
DC-6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
ABO	ADJUST BY OTHERS
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	ADJUST STRUCTURE COVER







CONSTRUCTION KEY		
KEY	DESCRIPTION	
НМА	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.	
HMA APP	PLACE HMA APPROACH	
НР	HAND PATCHING	
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL	
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC	
DC-6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.	
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED	
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED	
DWS	DETECTABLE WARNING, CAST IN PLACE	
ISW-CB	INTEGRAL SIDEWALK/CURB	
ABO	ADJUST BY OTHERS	
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.	
2	ADJUST STRUCTURE COVER	



RECESSING PAVT MRKG, LONGIT - 140 FT PAVT MRKG, POLYUREA, 4 INCH, YELLOW – 140 FT STA. 3+50 TO STA. 4+20 PAVT MRKG, OVLY COLD PLASTIC, 24 INCH, PAVT MRKG, OVLY COLD PLASTIC, 12 INCH, STOPBAR – 14 FT CROSSWALK - 72 FT PAVT MRKG, OVLY COLD PLASTIC, 12 INCH, VE CROSSWALK – 72 FT V CREST BEMIDJI DR 4+00 STA.3+50 _/ OFF: 0.15Lt  $\cap$ PAVT MRKG, OVLY COLD PLASTIC, 12 INCH, CROSSWALK - 64 FT PAVT MRKG, OVLY COLD PLASTIC, 24 INCH, STOPBAR – 11 FT PAVT MRKG, OVLY COLD PLASTIC, 12 INCH, CROSSWALK - 80 FT PAVT MRKG, OVLY COLD PLASTIC, 12 INCH, CROSSWALK - 56 FT PAVT MRKG, OVLY COLD PLASTIC, 24 INCH, STOPBAR – 11 FT PAVT MRKG, OVLY COLD PLASTIC, DIRECTION ARROW SYM, BIKE - 1 EA PAVT MRKG, OVLY COLD PLASTIC, BIKE, SMALL SYM - 1 EA <del>∢_</del> ~8 STA.7+74 STA.7+84 OFF:12.55Lt OFF:12.74Lt 0 8+00 STA.8+52 _/ OFF: 0.14Rt STA.7+84 _/ OFF: 0.08Rt STA.7+84 OFF:10.08Rt STA.8+52 OFF:10.18Rt RECESSING PAVT MRKG, LONGIT – 68 FT PAVT MRKG, POLYUREA, 4 INCH, YELLOW – 68 FT STA. 7+50 TO STA. 7+84 RECESSING PAVT MRKG, LONGIT – 34 FT PAVT MRKG, POLYUREA, 6 INCH, WHITE – 34 FT-STA. 7+50 TO STA. 7+84 STA.8+18 OFF: 37.74Rt BLVD 50 ш 1 ERWHI STA:

