

# CITY OF ANN ARBOR ENGINEERING

PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR

ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE

STANDARD SPECIFICATIONS, IT'S DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR

## 2019 SIDEWALK GAP ELIMINATION PROJECT

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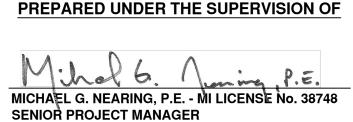
ITB No. 4619, FILE No. 2019-034

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STANDARD PLANS					
CONSTRUCTION OF THE FOLLOWING ITEMS, WHERE CALLED FOR ON THE PLANS, WILL BE CONSTRUCTED ACCORDING TO THE CITY OF ANN ARBOR STANDARD SPECIFICATIONS AS INDICATED.					
REQUIRED ON THIS PROJECT	ITEM OF WORK	STANDARD PLAN NUMBERS			
x	UTILITY TRENCH TYPE I	SD-TD-1			
X	UTILITY TRENCH TYPE V	SD-TD-5			
x	SINGLE INLET STRUCTURE	SD-S-10			
x	THRUST BLOCK	SD-W-2			
x	STANDARD CASTING SCHEDULE	SD-GU-5			
x	MANHOLE CASTING ADJUSTMENT	SD-GU-6			
x	VALVE/MONUMENT BOX ADJUSTMENT	SD-GU-7			
x	BARRIER CURB & GUTTER	SD-R-1			
x	SIDEWALK AND CURB & GUTTER JOINTS	SD-R-9			
x	TREE PROTECTION	SD-M-1			

STANDARD PLANS  CONSTRUCTION OF THE FOLLOWING ITEMS, WHERE CALLED FOR ON THE PLANS, WILL BE CONSTRUCTED ACCORDING TO MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD PLANS AS INDICATED.				
Х	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS	R-28-J*		
x	BEDDING AND FILLING AROUND PIPE CULVERTS	R-82-D*		
X	UTILITY TRENCHES	R-83-C*		
X	STEEL END SECTION	R-88-D*		
TRAFFIC AND SAFETY STANDARD PLANS				
х	ONE-LANE CLOSURE ON AN UNDIVIDED MULTI-LANE ROADWAY, NO SPEED REDUCTION	MD-23A*		
x	PARKING AREA PAVEMENT MARKINGS	PAVE-956-C*		

<sup>\*</sup> SPECIAL DETAIL LOCATED IN PROPOSAL



2/21/2020





#### **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. DURING NON-WORKING HOURS NO MORE THAN TEN (10)
  FEET OF TRENCH SHALL REMAIN OPEN. ANY OPEN
  TRENCH SHALL BE PROPERLY SECURED WITH PROTECTIVE
  FENCING. THIS WORK SHALL BE INCLUDED IN THE ITEMS
  OF WORK BEING UNDERTAKEN AND WILL NOT BE PAID
  FOR SEPARATELY.
- 4. THE LOCATION OF MATERIAL STOCK PILES AND ON—SITE STAGING AREAS SHALL BE APPROVED BY THE ENGINEER. ALL MATERIAL STOCKPILES SHALL BE MAINTAINED SUCH THAT DRAINAGE AND SIGHT DISTANCES ARE NOT ADVERSELY IMPACTED. SOIL EROSION REQUIREMENTS SHALL APPLY TO ALL MATERIAL STOCKPILES.
- 5. ALL EXCAVATION REQUIRED FOR PROJECT GRADING WITHIN THE PROJECT LIMITS, INCLUDING PROPOSED PAVEMENT, SIDEWALK, AND SIDEWALK RAMPS SHALL BE INCLUDED IN "STATION GRADING, \_\_\_\_."
- 6. EXCAVATON AND BACKFILL BEHIND CURB AND GUTTER SHALL BE INCLUDED IN "STATION GRADING, \_\_\_\_." ALL BACKFILL UNDER PROPOSED CONCRETE PAVEMENTS SUCH AS DRIVE APPROACHES, RAMPS, SIDEWALK, ETC., SHALL BE MDOT CLASS II GRANULAR MATERIAL, COMPACTED TO 95% OF ITS MAX. DRY DENSITY AND WILL BE PAID FOR AS "SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED." BACKFILL FOR OTHER AREAS MUST BE APPROVED BY THE ENGINEER AND COMPACTED TO 95% OF ITS MAX. DRY DENSITY. NO PAYMENT WILL BE MADE FOR SUB-BASE OR AGGREGATE BASE THAT EXTENDS BEYOND 12" BEHIND THE BACK OF CURB. REFERENCE THE TYPICAL CROSS SECTIONS.
- 7. SOME STORM SEWER MAY UNAVOIDABLY BECOME DAMAGED DURING CONSTRUCTION, OR IT MAY BE DETERMINED BY THE ENGINEER THAT EXISTING STORM SEWER NEEDS TO BE REPLACED. IN EITHER CASE THE ENGINEER MAY DIRECT THE SEWER TO BE REMOVED AND REPLACED. THE REMOVAL OF THE EXISTING SEWER AND/OR DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE CONTRACT WORK ITEMS "SEWER, ANY SIZE OR DEPTH, REM," AND THE REPLACEMENT SEWER SHALL BE INSTALLED AND PAID FOR AT THE CORRESPONDING CONTRACT UNIT PRICE, IF CONTAINED WITHIN THE CONTRACT, FOR THE VARIOUS TYPES AND SIZES OF SEWER TO BE REPLACED.
- 8. WHERE EXISTING SEWER AND/OR DRAINAGE STRUCTURES ARE TO BE REMOVED, THEY SHALL BE PROPERLY DISPOSED OF OFF-SITE AND THE EXCAVATION SHALL BE BACKFILLED WITH MDOT CLASS II GRANULAR MATERIAL COMPACTED TO 95% OF ITS MAX. DRY DENSITY. THIS WORK SHALL BE INCLUDED IN THE CONTRACT ITEMS "SEWER, ANY SIZE OR DEPTH, REM" AND/OR "DR STRUCTURE, ANY SIZE OR DEPTH, REM."
- 9. ALL STRUCTURES SHALL RECEIVE NEW CASTINGS, EITHER TYPE B, TYPE K, TYPE Q, OR TYPE R AS SPECIFIED ON THE STANDARD CASTING SCHEDULE. THE EXISTING CASTINGS SHALL BE NEATLY STACKED ON—SITE IN A SINGLE LOCATION SO THAT CITY OF ANN ARBOR FORCES CAN RETRIEVE THEM AT A LATER DATE. THE CONTRACTOR SHALL ASSIST CITY FORCES BY LOADING THEM INTO CITY TRUCKS. ALL COSTS ASSOCIATED WITH STORING, STOCKPILING, AND LOADING CASTINGS INTO CITY VEHICLES SHALL BE INCLUDED IN THE ITEM OF WORK, "GENERAL CONDITIONS, MAX. \$ \_\_\_\_\_" AND WILL NOT BE PAID FOR SEPARATELY.
- 10. ALL FITTINGS, HYDRANTS, VALVES AND CASTINGS REMOVED DURING CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL COORDINATE PICK UP BY THE CITY OF ANN ABOR FIELD OPERATIONS UNIT. SEE NOTE 9 FOR ADDITIONAL INFORMATION.
- 11. PAYMENT FOR DRAINAGE STRUCTURE SUMPS WHERE SPECIFIED SHALL BE INCLUDED IN THE PAYMENT FOR THE VARIOUS DRAINAGE STRUCTURE SIZES AND OR TYPES.
- 12. WHERE PIPES OF DIFFERENT SIZES OR MATERIALS ARE JOINED OR SAWED SEWER PIPE CONNECTIONS ARE MADE, 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.
- 13. WHERE STORM SEWER IS TO BE REMOVED AND REPLACED OR ADDED, ALL PIPE SHALL BE INSTALLED USING THE UTILITY TRENCH DETAILS SHOWN ELSEWHERE IN THE PLAN SHEETS AND/OR DETAILED IN THE SPECIFICATIONS. TRENCH DETAILS I AND V REQUIRE THE USE OF MDOT CLASS II GRANULAR MATERIAL.
- 14. IF THE CONTRACTOR ENCOUNTERS EXISTING EDGE DRAIN(S) DURING CONSTRUCTION OF THE PROPOSED EDGE DRAINS, INLET LEADS, OR CATCH BASINS, IT SHALL BE CAPPED AT EACH END TO PREVENT MATERIAL FROM ENTERING THE PIPE. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE PARTICULAR ITEM OF WORK BEING PERFORMED WHEN EXISTING EDGE DRAIN(S) ARE ENCOUNTERED.
- 15. IN AREAS WHERE EDGE DRAIN CANNOT BE INSTALLED IN ACCORDANCE WITH THE DETAILS, THE EDGE DRAIN SHALL BE INSTALLED AT THE DEPTH AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. IN NO CASE SHALL THE EDGE DRAIN BE INSTALLED AT A GRADE LESS THAN 0.50% OR AT A DEPTH LESS THAN 3.25' BELOW THE TOP OF PAVEMENT.
- 16. EXISTING STREET NAME SIGNS, GUIDE, BUS STOP, 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 "GENERAL CONDITIONS, MAX. \$\_\_\_\_."

- 17. ALL CURB, SIDEWALK, AND DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY ENGINEER BEFORE THE WORK IS PERFORMED. ALL CONCRETE AND BITUMINOUS MATERIALS SHALL BE SAW—CUT FULL—DEPTH AT THEIR REMOVAL LIMITS PRIOR TO REMOVAL. SAW—CUTTING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "STATION GRADING, \_\_\_\_."
- 18. PLACE 4" (MINIMUM) OR 6" (MINIMUM) THICKNESS CLASS II GRANULAR MATERIAL COMPACTED TO 95% OF ITS MAX. DRY DENSITY UNDER CONCRETE SIDEWALK AS SHOWN ON THE DETAILS. THIS WORK SHALL BE INCLUDED IN THE CONTRACT ITEMS "SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED."
- 19. PLACE 6" (MINIMUM) CLASS II GRANULAR MATERIAL COMPACTED TO 95% OF ITS MAX. DRY DENSITY UNDER DRIVE APPROACHES. THIS WORK SHALL BE INCLUDED IN THE CONTRACT ITEM "SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED."
- 20. A UNIFORM COAT(S) OF CURING COMPOUND SHALL BE APPLIED TO FRESHLY PLACED CONCRETE ACCORDING TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS REGARDLESS OF THE DIFFICULTY INVOLVED. THE CONTRACTOR SHALL TAKE CARE TO PREVENT OVERSPRAY WHEN APPLYING CURING COMPOUND. SEVERAL DIFFERENT METHODS MAY NEED TO BE DEVELOPED TO PROTECT VARIOUS SITUATIONS, BUT ALL METHODS USED TO PREVENT OVERSPRAY OF THE CURING COMPOUND SHALL BE COMPLETELY EFFECTIVE. METHODS USED SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE, HOWEVER APPROVAL OF A METHOD DOES NOT GUARANTEE SUCCESS OR ACCEPTABILITY. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR COMPLYING WITH THESE REQUIREMENTS.
- 21. THE CONTRACTOR IS TO TAKE SPECIAL CARE TO PROTECT THE EXISTING WATER MAIN AND BE RESPONSIBLE FOR MAINTAINING CONSISTENT WATER SERVICE.
- 22. TRENCHES FOR NEW WATER MAIN AND SEWERS SHALL BE EXCAVATED TO MIOSHA AND CITY OF ANN ARBOR FIELD SERVICE REQUIREMENTS.
- 23. CITY OF ANN ARBOR FIELD SERVICES WILL INSTALL THE CORPORATION AND COPPER SERVICE LEAD(S) TO TRANSFER THE CONNECTION(S). IF AN EXISTING WATER SERVICE IS FOUND TO BE FAILING OR IS NOT COPPER, THE LEAD WILL BE REPLACED TO THE CURB BOX BY FIELD SERVICES.
- 24. FOR THE INSTALLATION OF CORPORATIONS OR ANY OTHER RELATED ACTIVITIES, THE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR DELAYS DUE TO THE SCHEDULING OF OR COORDINATION WITH THE CITY OF ANN ARBOR FIELD SERVICES.
- 25. THE CONTRACTOR SHALL CONSTRUCT, FLUSH, AND BACTERIOLOGICALLY TEST THE WATER MAIN PER DETAILED SPECIFICATIONS "WATER MAIN AND APPURTENANCES" 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.
- 26. WATER MAIN FITTINGS, OTHER THAN THOSE SPECIFICALLY LISTED AS SEPARATE PAY ITEMS, WHICH ARE REQUIRED TO COMPLETE THE WORK, SUCH AS, BUT NOT LIMITED TO, 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.
- 27. POSTAL DELIVERY AND REFUSE PICKUP SERVICE SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.

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

PERMIT	ISSUING AUTHORITY
LANE CLOSURE 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

PUBLIC UTILITIES	OWNER	CONTACT
WATER		
SANITARY		
STORM	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER	(734) 794–6350
FORESTRY	4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	
SIGNS SIGNALS STREET LIGHTS		CHUCK FOJTIK (734) 794-6361
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSK (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIAK (734) 397-4447
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	JEFF LEHMAN SR (734) 996-5334
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	WINDSTREAM 1295 S LINDEN ROAD, SUITE B FLINT, MI 48532	GREG SERICH (810) 244-3500
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188

JACKSON AVENUE BENCHMARKS				
BM#	ELEV	DESCRIPTION		
2	931.01	SET CHISELED "X" ON NORTH RIM OF SANITARY MANHOLE IN APPROACH TO WESTOVER AVENUE AT JACKSON ROAD, 30'± SOUTH OF CENTERLINE OF JACKSON ROAD & 3'± EAST OF CENTERLINE OF WESTOVER AVENUE		
4	931.18	SET CHISELED "X" ON NORTH RIM OF STORM MANHOLE IN JACKSON ROAD MEDIAN, 21'± NORTH OF NORTH EDGE OF ASPHALT OF JACKSON ROAD & 143'± WEST OF WESTERLY EDGE OF ASPHALT OF MEDIAN TURN AROUND		
6	926.82	SET SPIKE IN NORTHEAST FACE OF 10" TREE (#577) ON THE SOUTH SIDE OF JACKSON ROAD, 220'± SOUTHEAST OF TURN AROUND & 10'± SOUTH OF EDGE OF ASPHALT		
10	922.40	SET CHISELED "X" ON NORTH RIM OF WATER MANHOLE, 6'± SOUTH OF EDGE OF ASPHALT OF EAST BOUND JACKSON ROAD & 10'± EAST OF CENTERLINE OF DRAIN GOING SOUTH		
12	926.14	SET CHISELED "X" ON NORTH RIM OF SANITARY MANHOLE, 3'± WEST OF CENTERLINE OF PARK LANE AVENUE, IN INTERSECTION OF EAST BOUND JACKSON ROAD		

WASHTENAW AVENUE BENCHMARKS				
BM#	ELEV	DESCRIPTION		
2	824.41	SET CHISELED "X" ON SOUTHWEST BOLT OF FIRST LIGHT POLE WEST OF PITTSFIELD BOULEVARD ON THE SOUTH SIDE OF WASHTENAW AVENUE		
4	820.31	NORTHWEST BOLT OF LIGHT POLE IN FRONT OF SHERWIN WILLIAMS PAINT STORE		
6	806.63	NORTHWEST BOLT OF LIGHT POLE AT THE NORTHWEST CORNER OF MIMI'S BRIDAL		
10	794.99	SET CHISELED "X" ON NORTHWEST FLANGE BOLT OF FIRST HYDRANT WEST OF CENTERLINE OF ENTRANCE TO PARKING LOT AT PET PEOPLE		
12	797.01	SOUTHWEST BOLT OF TRAFFIC SIGNAL POLE IN THE SOUTHEAST QUADRANT OF WASHTENAW AVENUE AND HURON PARKWAY		

MGN Know what's below.

Call before you dig.

2-21-2020 CEC,DPF,KB MGN Know v Cal

UN ARBOR
ERVICES
RON STREET
X 8647
MI 48107-8647
Gov.org

REV.





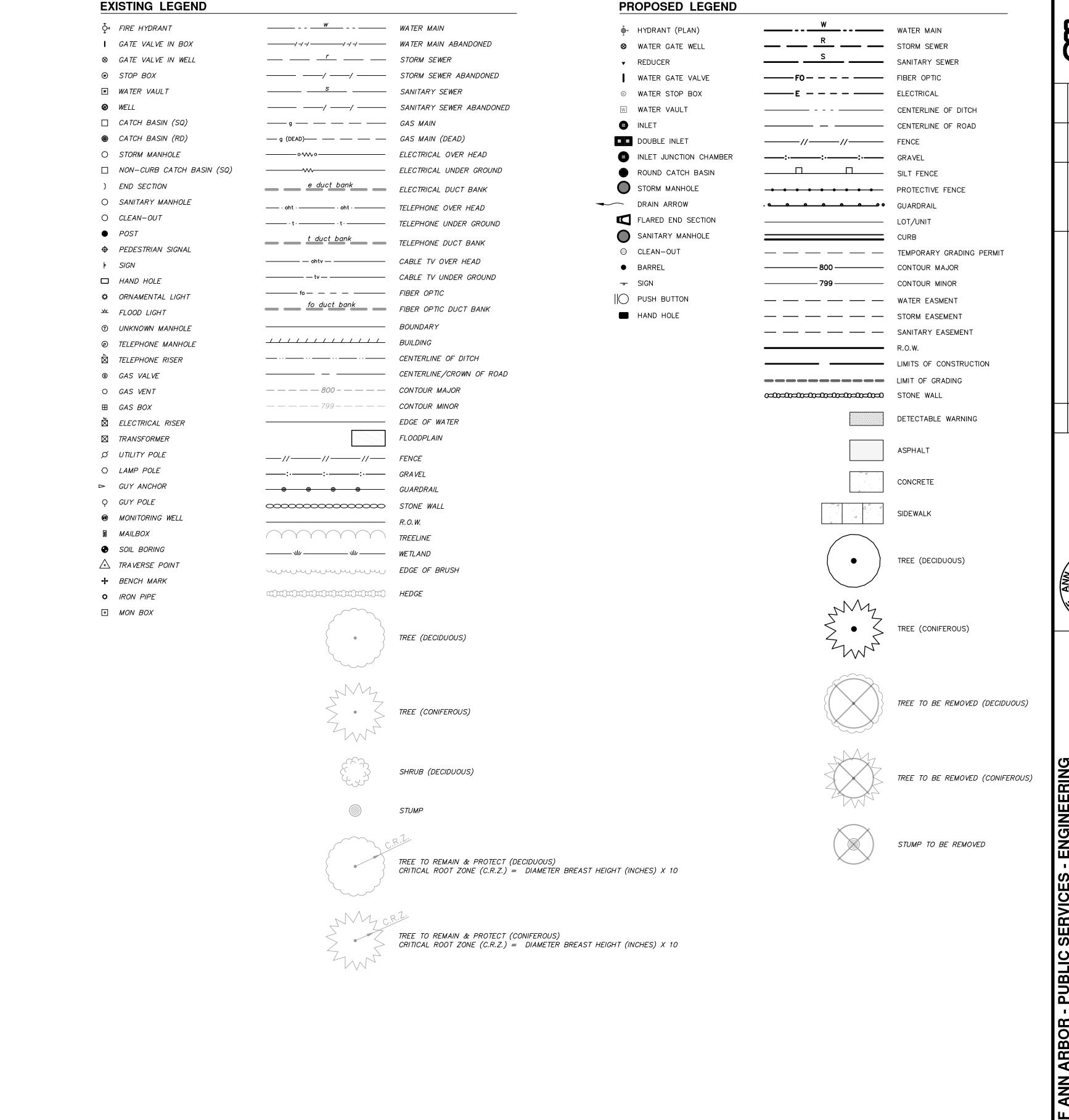
ON PROJECT

ONSTRUCTION NOTES

ARBOR - PUBLIC SERVICES
2019 SIDEWALK

ITY OF ANN ARBOR - I

SHEET No.



OF ANN ARBOR SHEET No.

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 ENGINEER.
- 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 THE CITY OF ANN
- 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 ARBOR.
- 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 FINAL GRADE.
- 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 OPERATIONS.

- 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. FUGITIVE DUST SHALL BE MINIMIZED BY THE CONTRACTOR. THE ROADWAYS AND PARKING AREAS SHALL BE SWEPT DAILY OR AS DIRECTED BY THE ENGINEER TO PREVENT A NUISANCE FROM
- 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.
- 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:

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

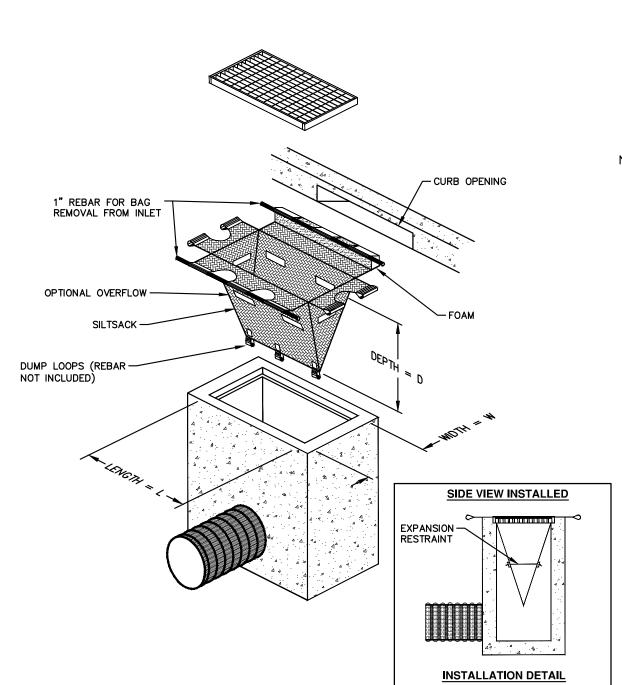
- REQUIREMENTS: INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- 1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
- 1.3. INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.

- 1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- 1.5. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- 1.6. COMPLETE ALL FINE GRADING.
- 1.7. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED
- 1.8. REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- 1.9. CLEAN OUT STORM SEWER SYSTEMS.
- 1.10. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 1.11. ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION

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

#### TEMPORARY SEEDING:

- 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.



SILTSACK DETAIL

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) TEST METHOD **PROPERTIES** REQUIRED VALUE GRAB TENSILE STRENGTH GRAB TENSILE ELONGATION MULLEN BURST ASTM D-3786 TRAPEZOID TEAR ASTM D-4533

ASTM D-4751

ASTM D-4491

ASTM D-4491

40 US SIEVE 40 GAL/MIN/SQ FT 0.55 SEC -1

#### HI-FLOW SILTSACK

FLOW RATE

PERMITTIVITY

APPARENT OPENING SIZE

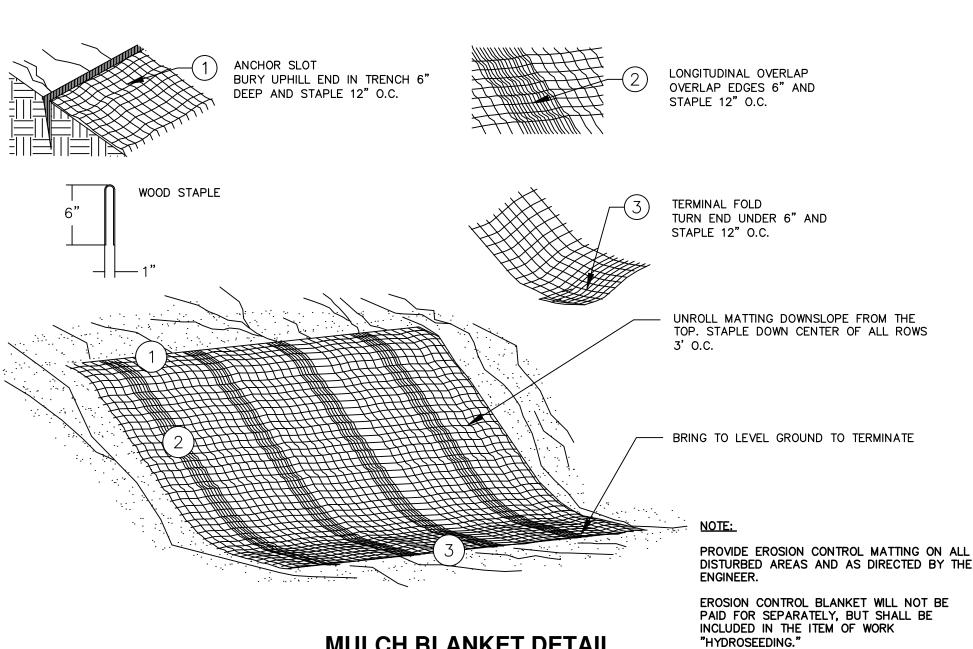
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

REQUIRED VALUE TEST METHOD **PROPERTIES** GRAB TENSILE STRENGTH
GRAB TENSILE ELONGATION
PUNCTURE
MULLEN BURST
TRAPEZOID TEAR ASTM D-4533 UV RESISTANCE 20 US SIEVE APPARENT OPENING SIZE ASTM D-4751 200 GAL/MIN/SQ FT 1.5 SEC-1 FLOW RATE ASTM D-4491

#### **OIL-ABSORBANT SILTSACK**

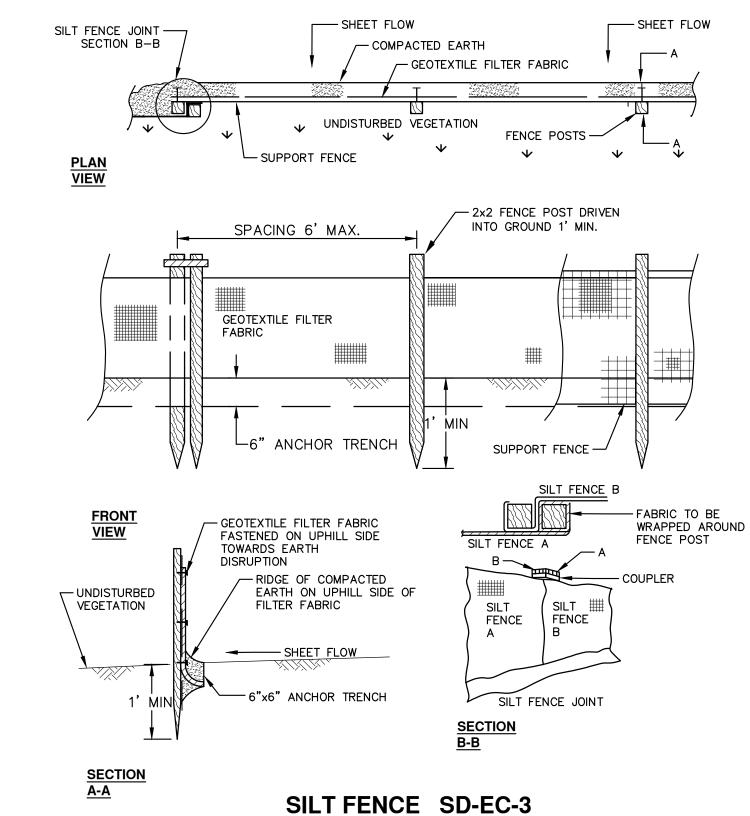
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

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.



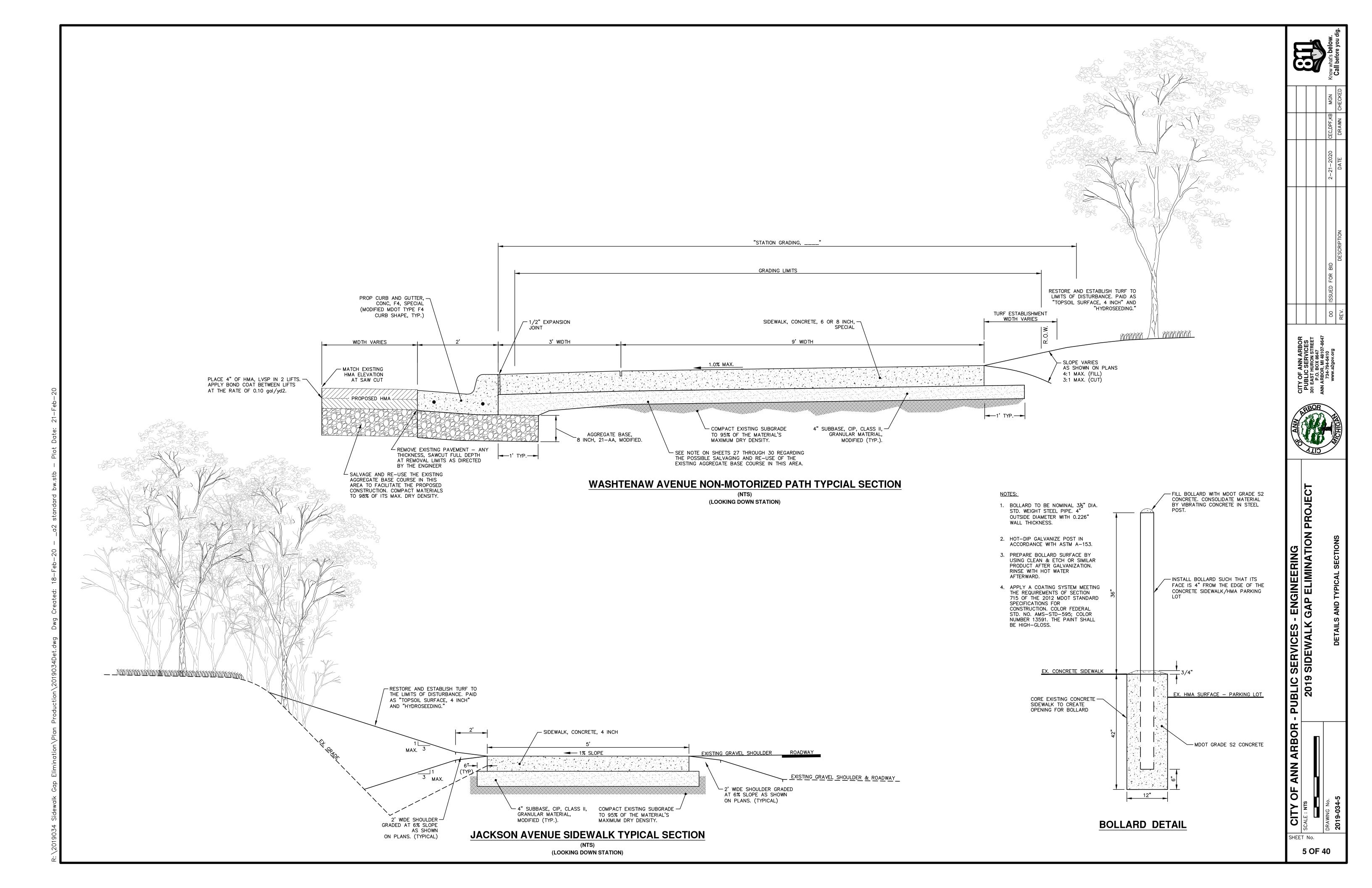
#### **MULCH BLANKET DETAIL**

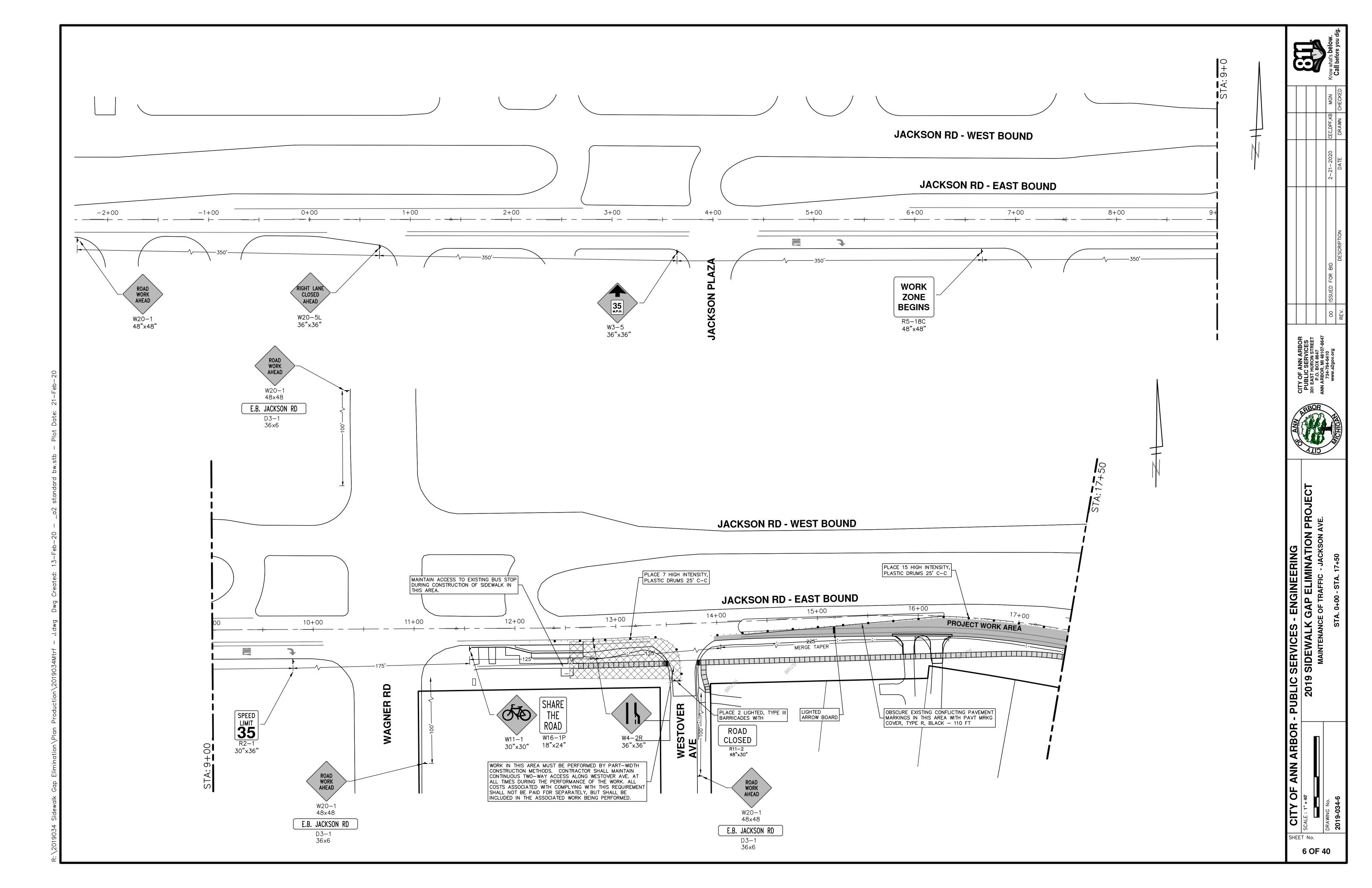
APPLIES TO ALL AREAS TO BE PERMANENTLY RESTORED WITH GRASS. SEE LANDSCAPE PLANS FOR MORE DETAILS.

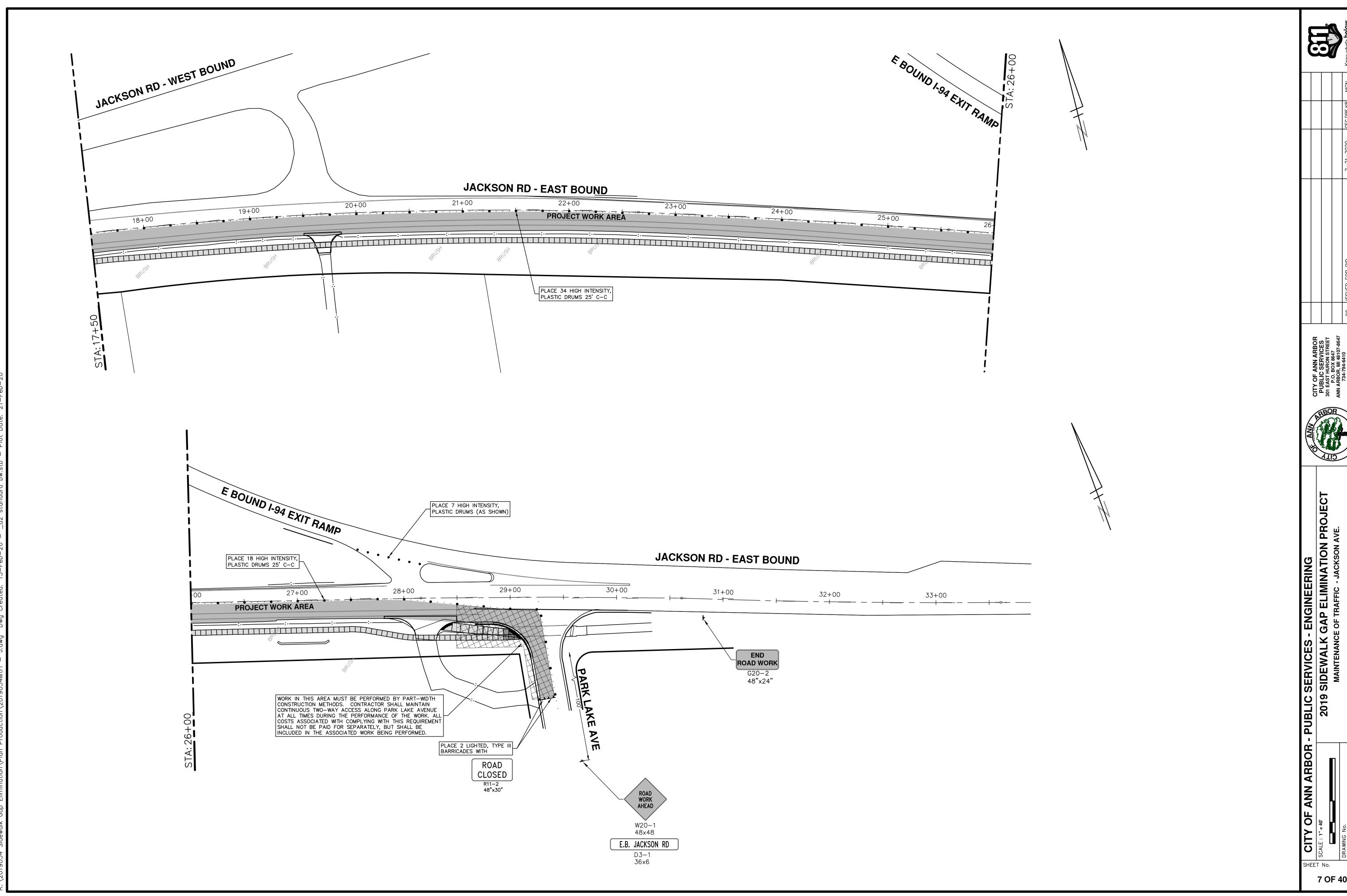


**ANN ARBO** 

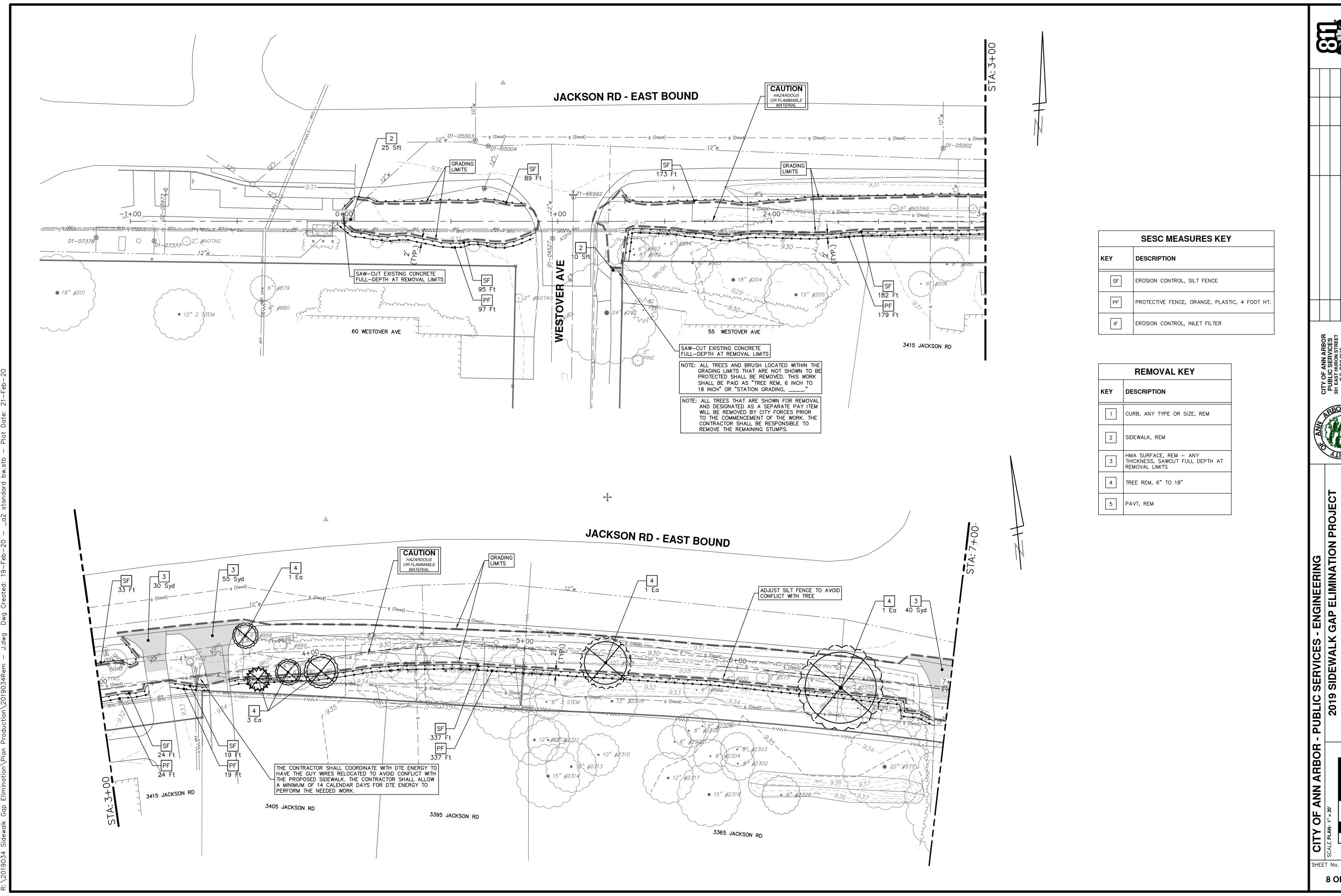
SHEET No.







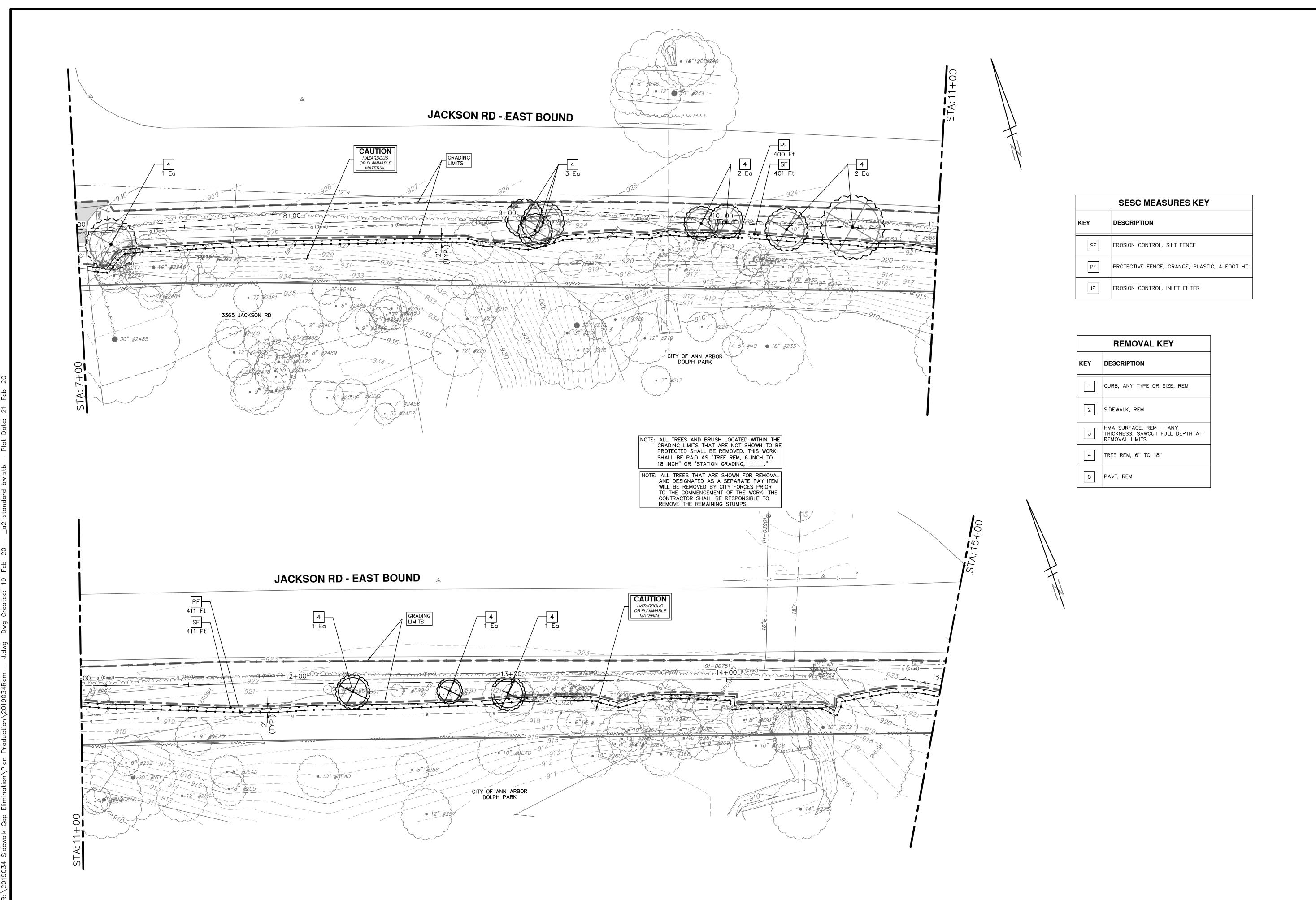








SHEET No.

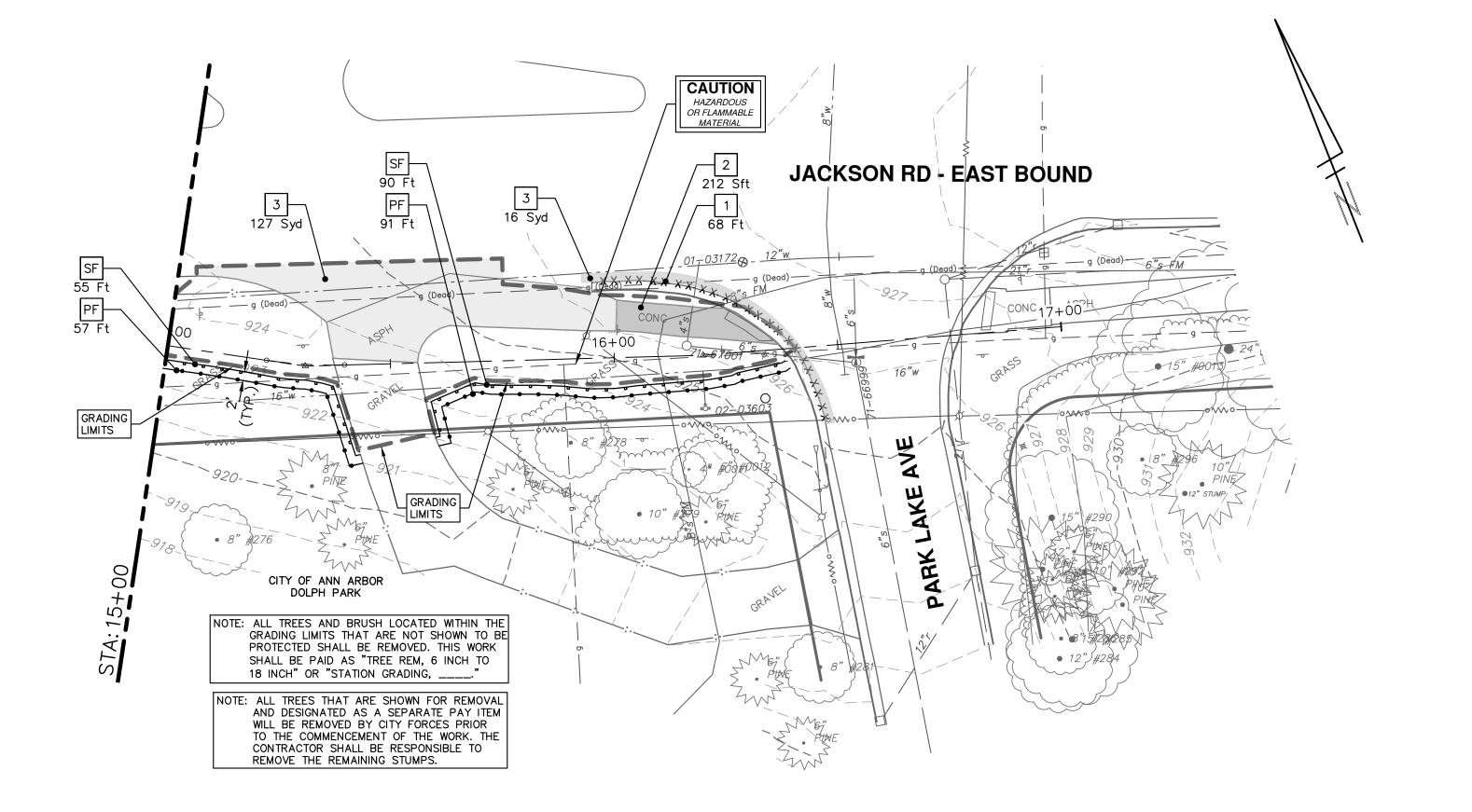




ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2019 SIDEWALK GAP ELIMINATI

REMOVALS - JACKSON AVE



SESC MEASURES KEY			
KEY	DESCRIPTION		
SF	EROSION CONTROL, SILT FENCE		
PF	PROTECTIVE FENCE, ORANGE, PLASTIC, 4 FOOT HT.		
IF	EROSION CONTROL, INLET FILTER		

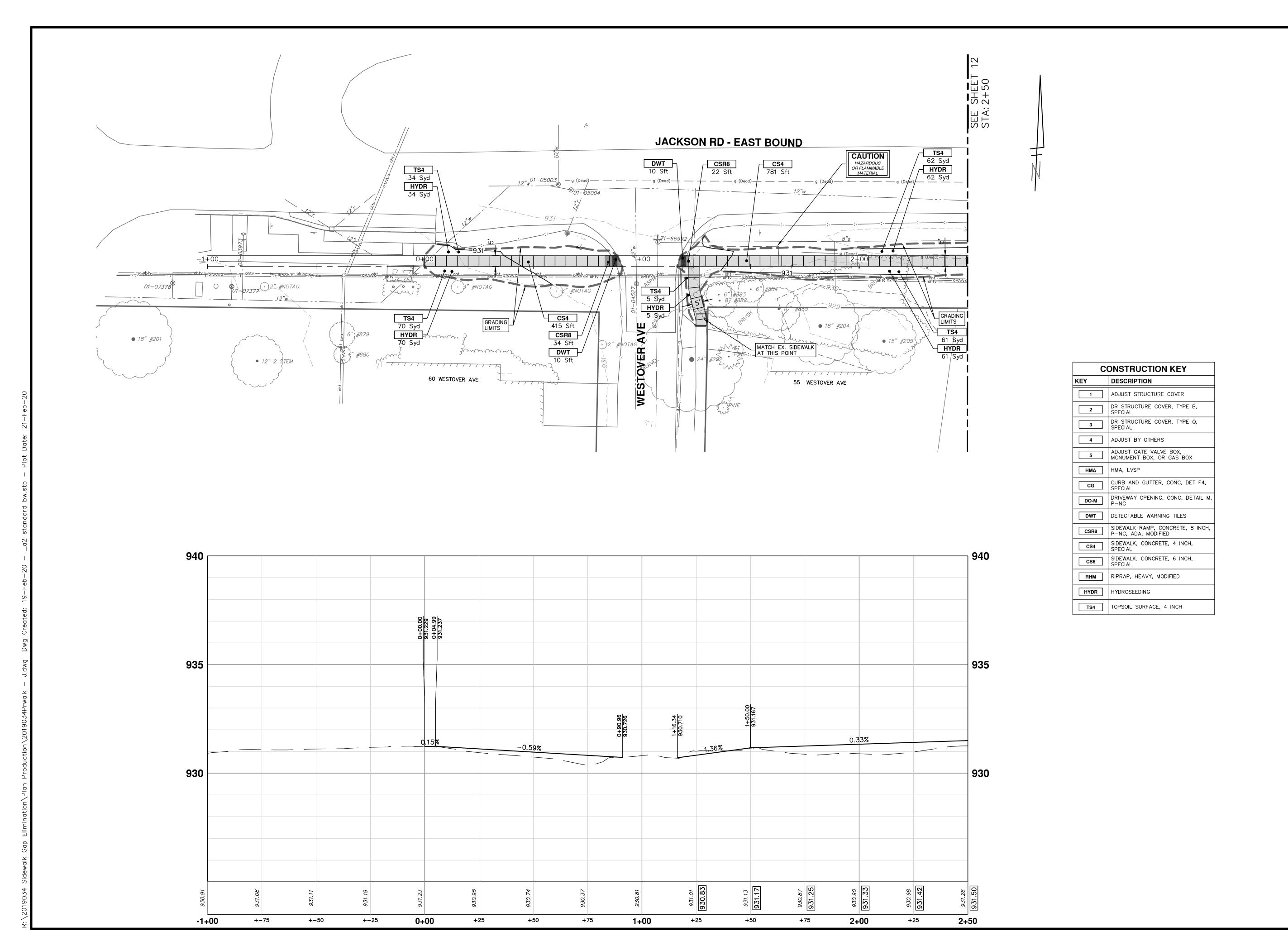
	REMOVAL KEY
ΕY	DESCRIPTION
1	CURB, ANY TYPE OR SIZE, REM
2	SIDEWALK, REM
3	HMA SURFACE, REM — ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS
4	TREE REM, 6" TO 18"
5	PAVT, REM

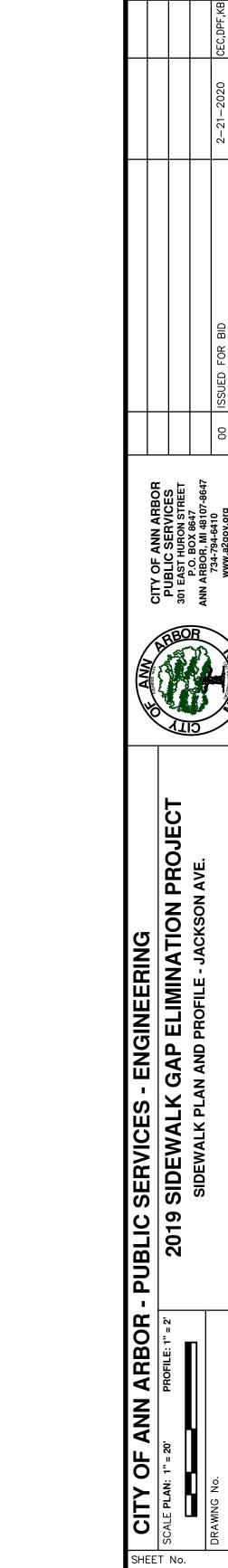
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		сес, DPF, КВ	DRAWN C
		2-21-2020	DATE
		NO ISSUED FOR BID	DESCRIPTION
		0	>

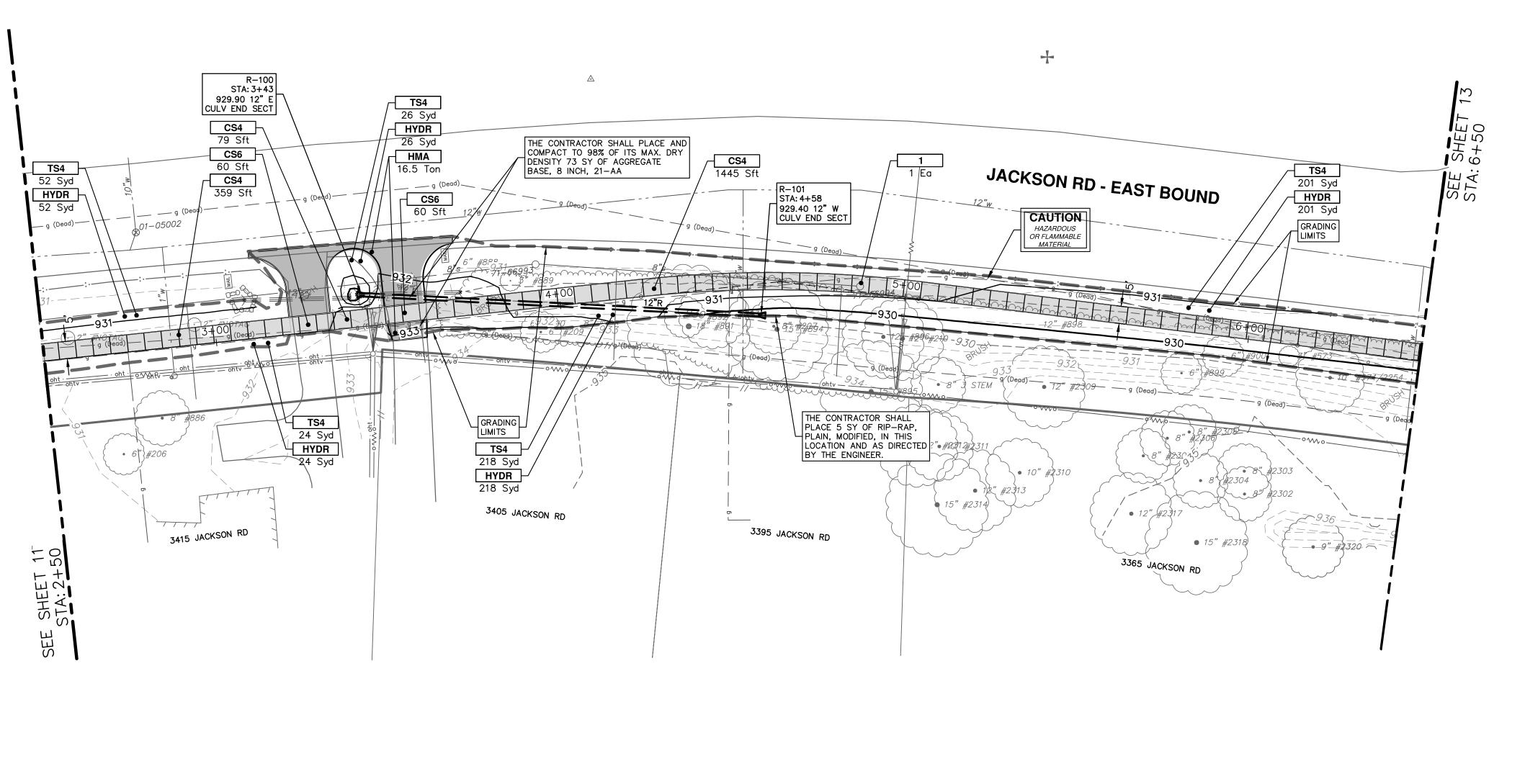
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OF ANN	11	R	A COUNTY OF THE PARTY OF THE PA

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1"= 20'







CONSTRUCTION KEY				
KEY	DESCRIPTION			
1	ADJUST STRUCTURE COVER			
2	DR STRUCTURE COVER, TYPE B, SPECIAL			
3	DR STRUCTURE COVER, TYPE Q, SPECIAL			
4	ADJUST BY OTHERS			
5	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX			
НМА	HMA, LVSP			
CG	CURB AND GUTTER, CONC, DET F4, SPECIAL			
DO-M	DRIVEWAY OPENING, CONC, DETAIL MP-NC			
DWT	DETECTABLE WARNING TILES			
CSR8	SIDEWALK RAMP, CONCRETE, 8 INCH, P-NC, ADA, MODIFIED			
CS4	SIDEWALK, CONCRETE, 4 INCH, SPECIAL			
CS6	SIDEWALK, CONCRETE, 6 INCH, SPECIAL			
RHM	RIPRAP, HEAVY, MODIFIED			
HYDR	HYDROSEEDING			
TS4	TOPSOIL SURFACE, 4 INCH			

#### CULVERT INSTALLATION NOTES

- CONSTRUCT 12 INCH CSP CULVERT, CLASS F
- CULVERT MATERIAL SHALL BE POLYMER PRE-COATED, GALVANIZED CORRUGATED STEEL PIPE.
- WALL THICKNESS SHALL BE MIN. 0.064" (16 ga). CORRUGATIONS SHALL BE 2%" x 1%".
- INSTALL CULVERT IN ACCORDANCE WITH MDOT TRENCH DETAIL B1.
- FOLLOW MDOT STD. PLANS R-82-D, R-83-C, AND R-88-D.
- ALL WORK SHALL MEET THE REQUIREMENTS OF THE 2012 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, SECTION 401.

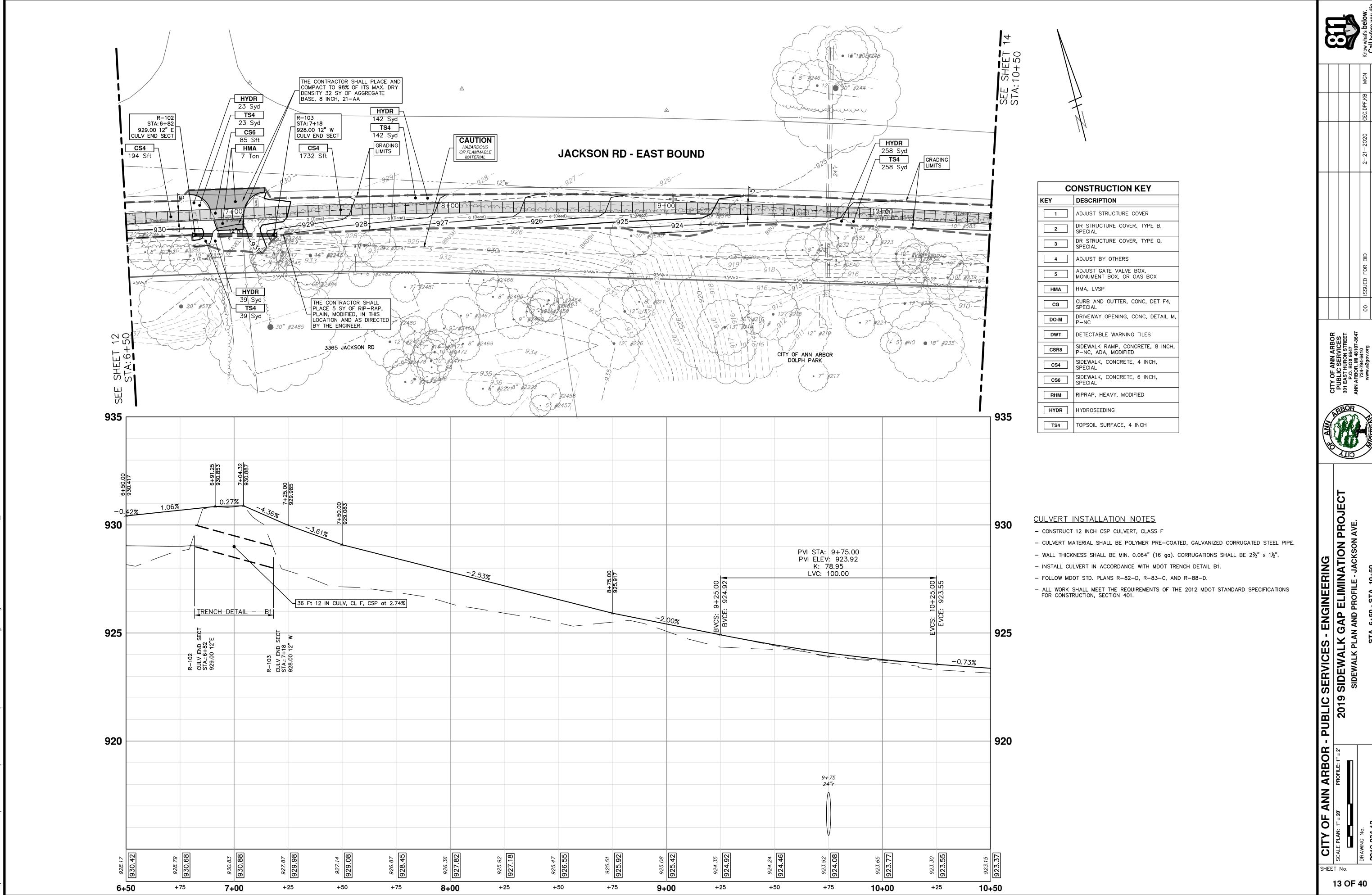
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		001107			

5			20 20 20 20 20 20 20 20 20 20 20 20 20 2	3+50.00 932.542 3+61.06 932.684	2.000 2.000 2.000						9
	0.33%	0.91%	31.5	1.28%	-1.67%	-0.83%	931.250		-0.42%		% 930.417
		*	72 / x x	EX 12" CULVI	Ft 12 IN CULV, GL F, CS						9:
			R-100 CULV END SECT	29.90 12.E			R-101 CULV END SECT STA.: 4+58 929.40 12" W				9

ANN ARBOR - PUBLIC SERVICES - ENGINEERING

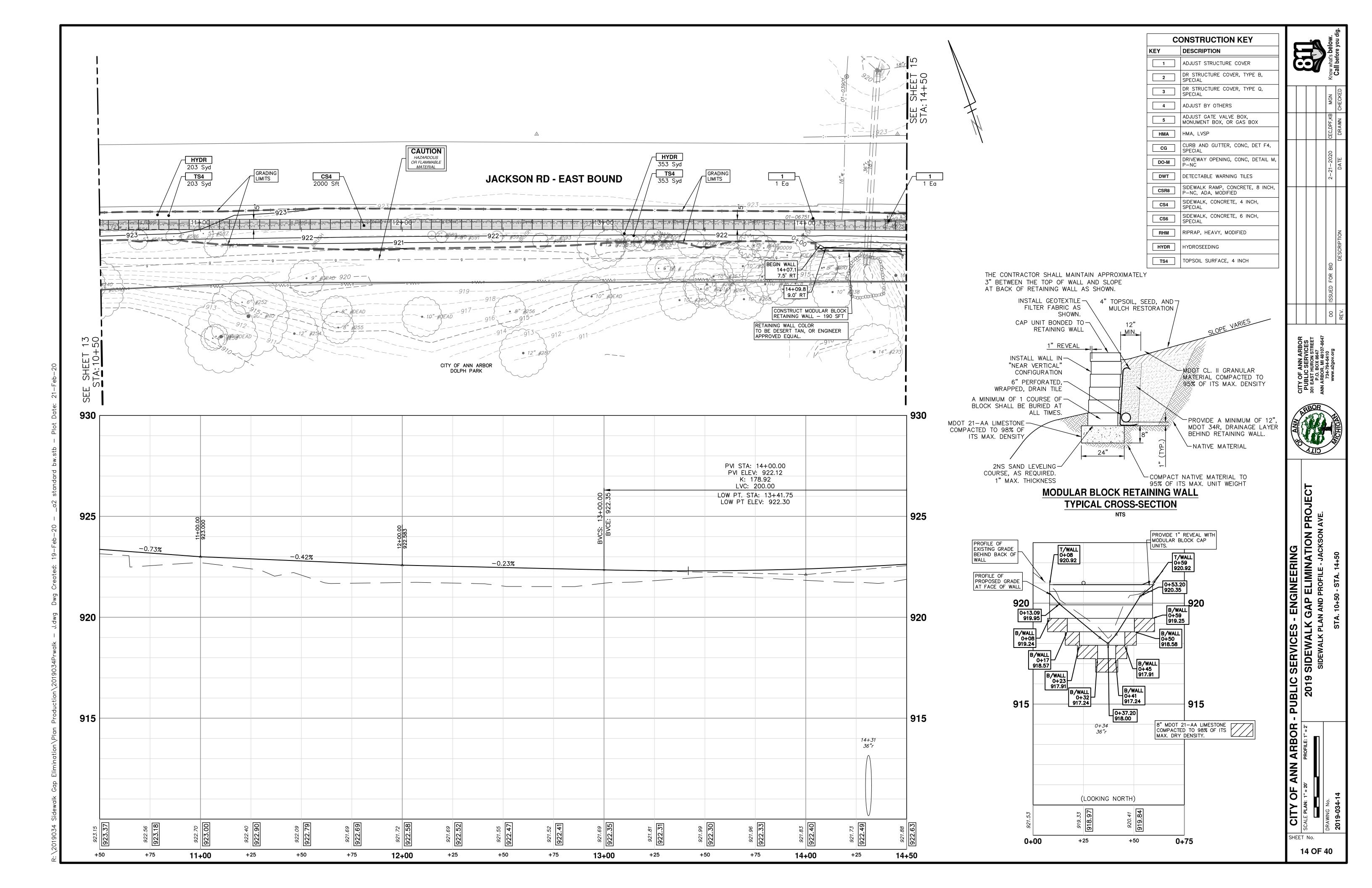
2019 SIDEWALK GAP ELIMINATION PRO

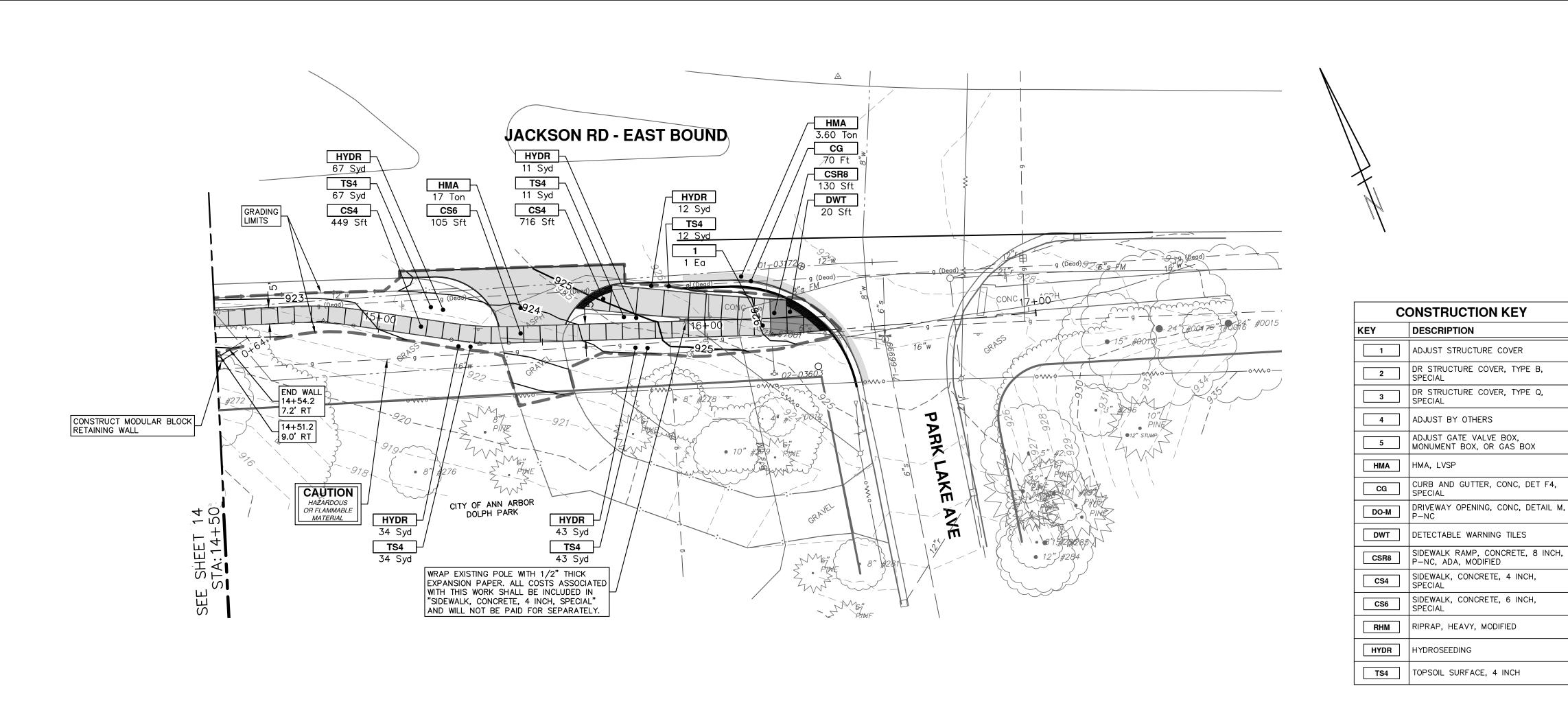
SIDEWALK PLAN AND PROFILE - JACKSON AVE. SHEET No.

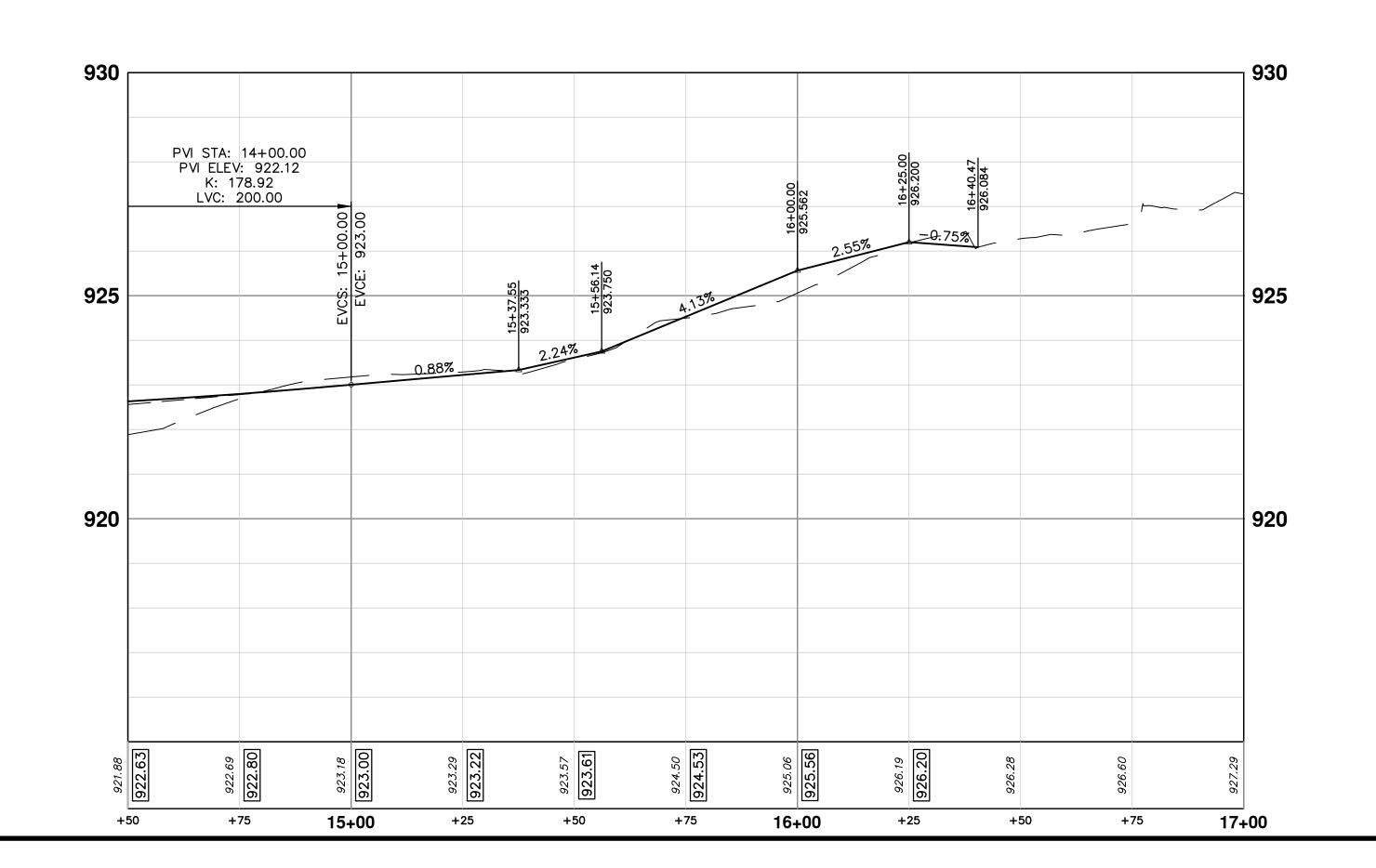




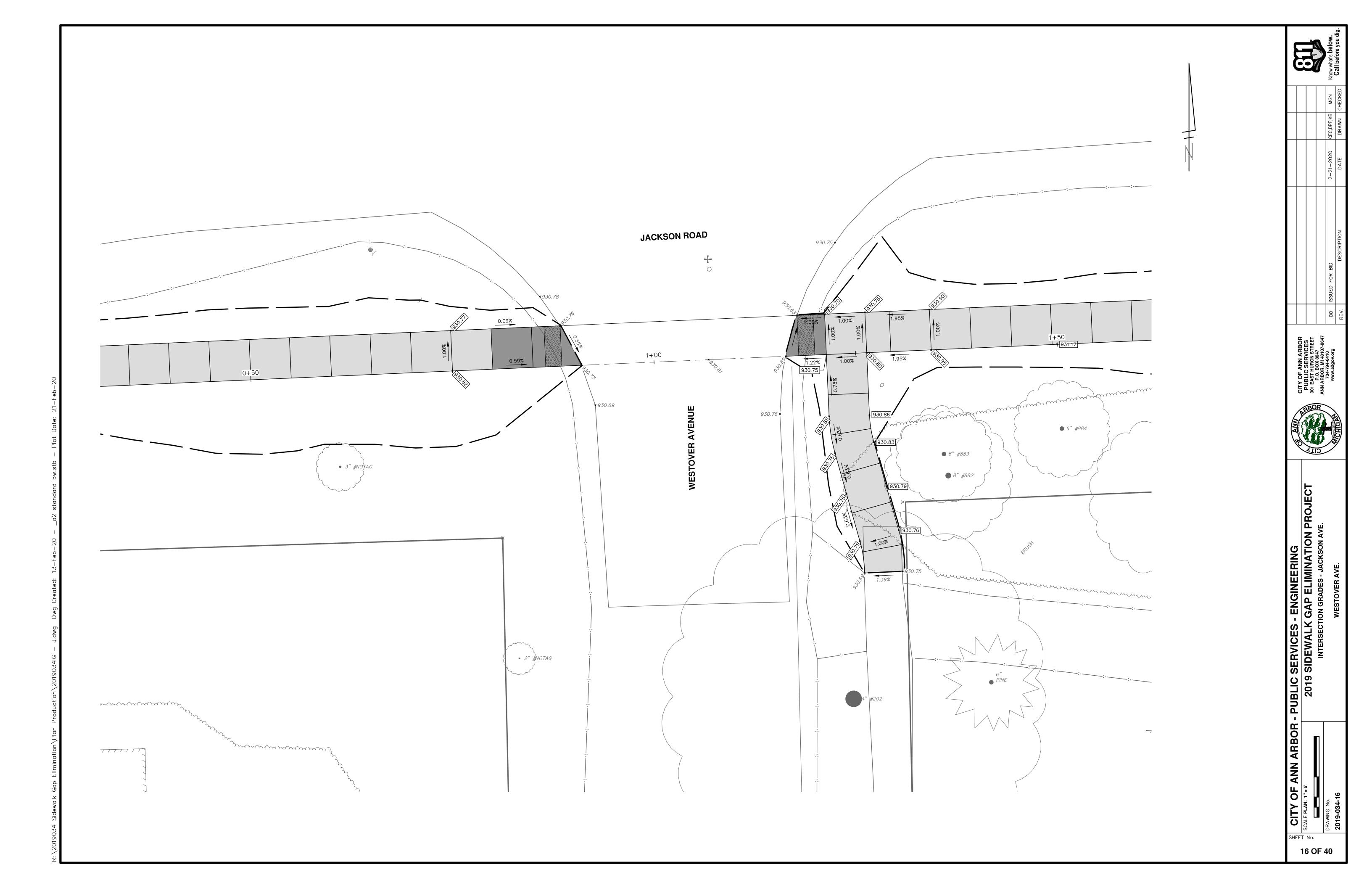
ID FOR BID	2-21-2020	CEC,DPF,KB	
DESCRIPTION	DATE	DRAWN	C

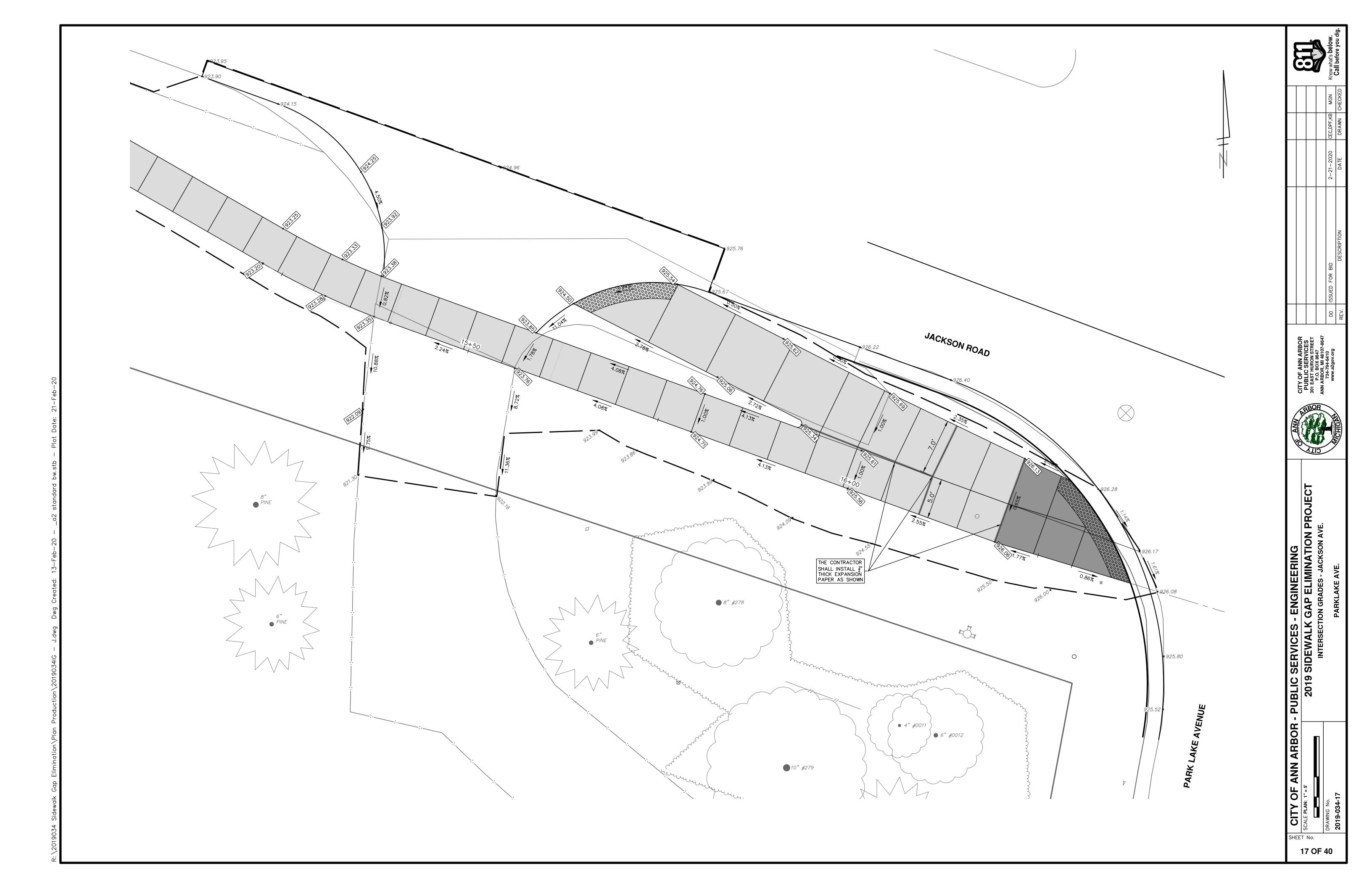


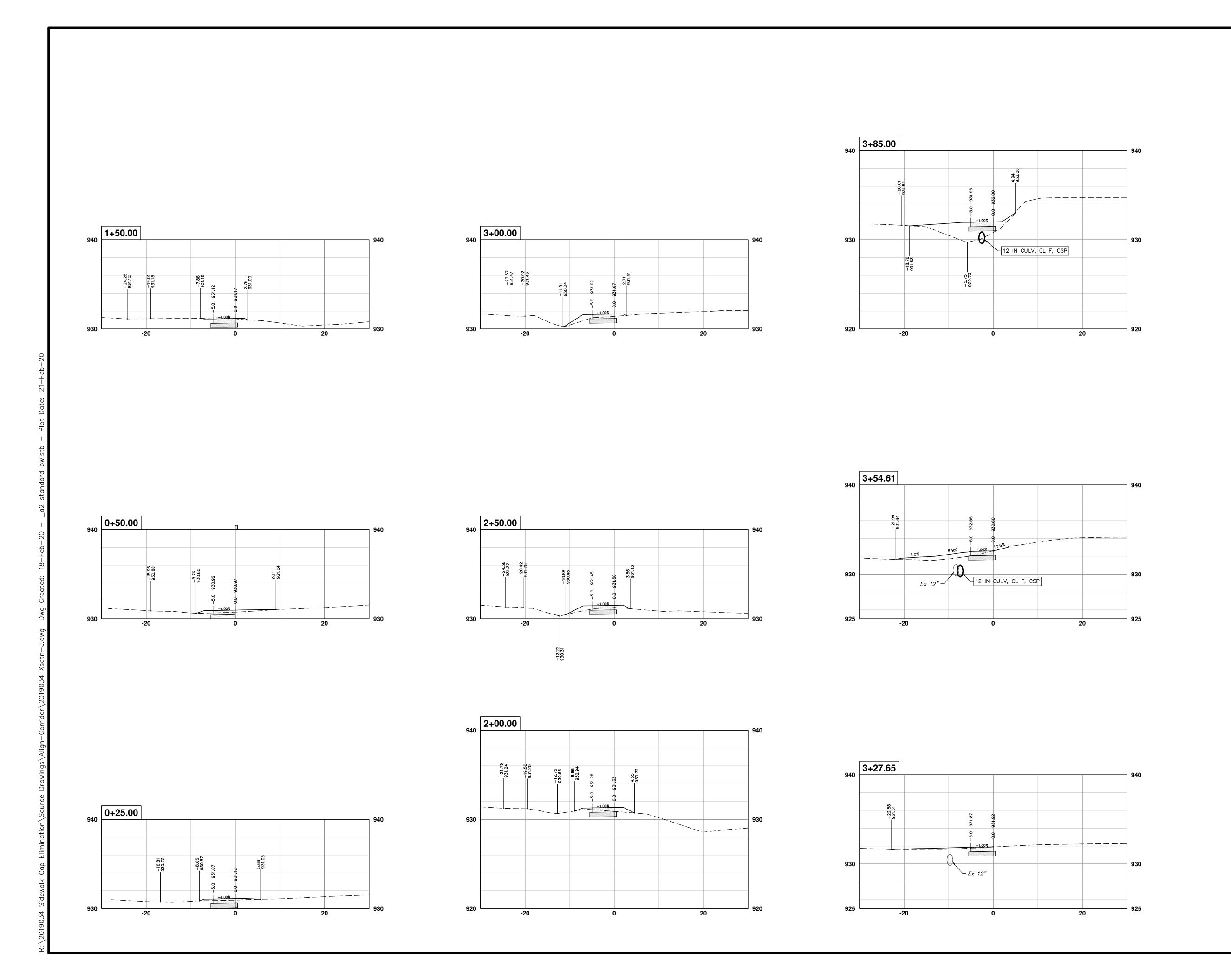




Know what's below.  Call before you dig.						
				MGN	DRAWN CHECKED	
				CEC,DPF,KB MGN	DRAWN	
				2-21-2020	DATE	
				ISSUED FOR BID	DESCRIPTION	
				00	REV.	
JECT  CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, MI 48107-8647 734-794-6410 www.a2gov.org						
		JECT				
ANN ARBOR - PUBLIC SFRVICES - FNGINFFRING		2019 SIDEWALK GAP ELIMINATION PROJECT	SIDEWALK PLAN AND PROFILE - JACKSON AVE.		SIA. 14+50 - P.O.E.	







CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

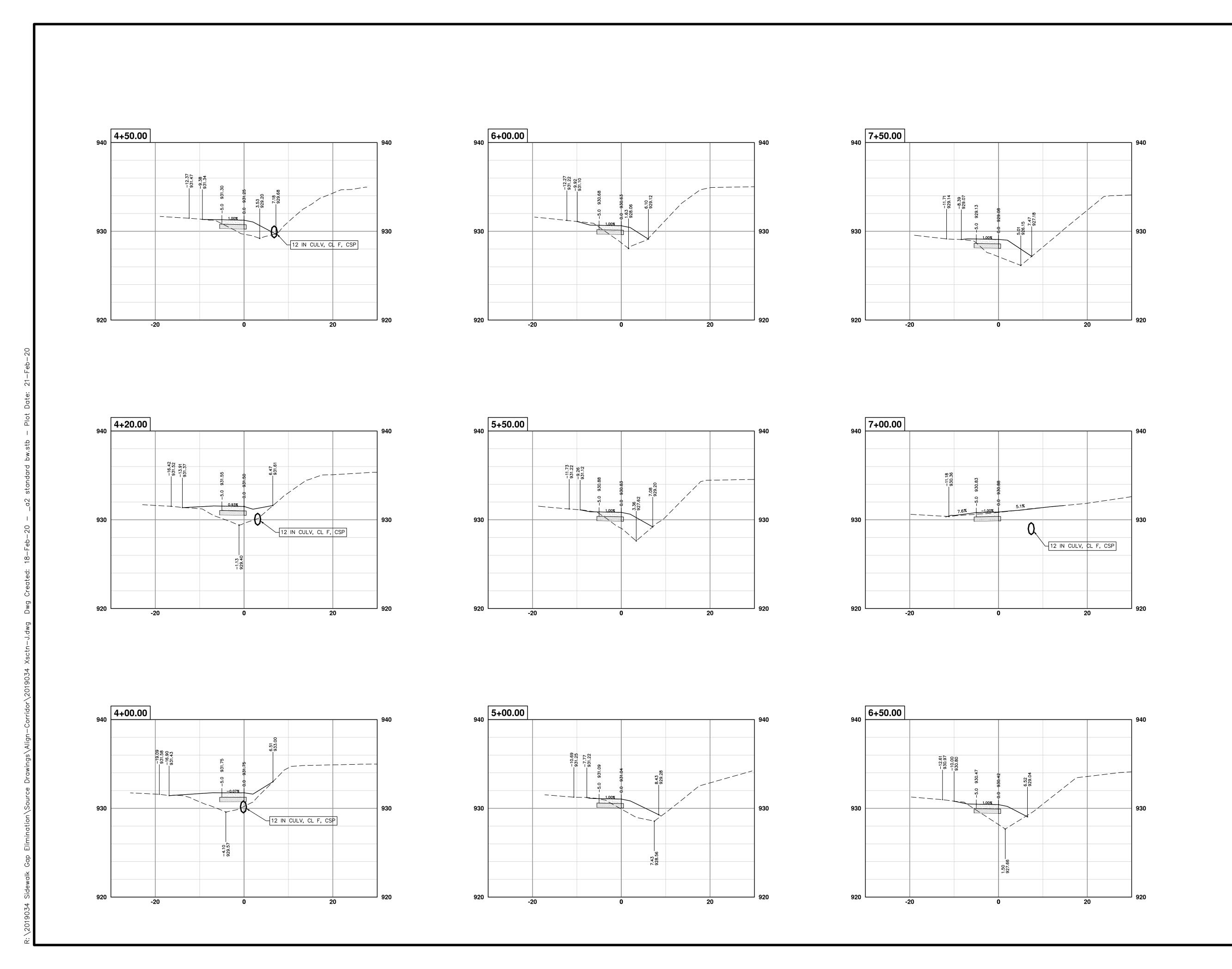
SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

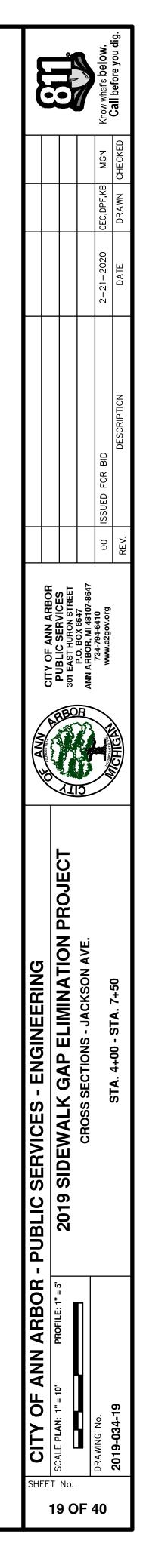
SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

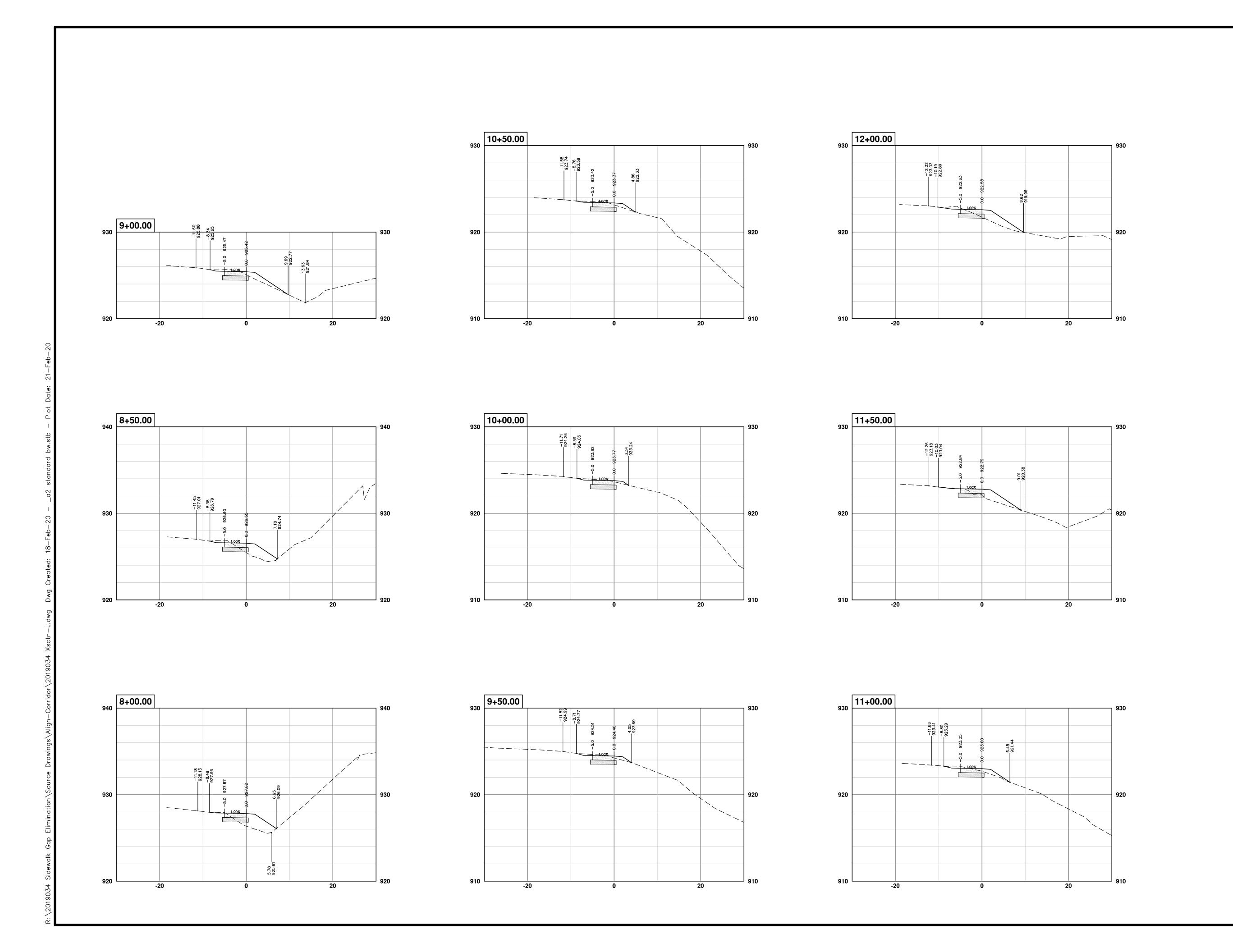
SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

CROSS SECTIONS - JACKSON AVE.

CROSS SECTIONS - JACKSON AVE.







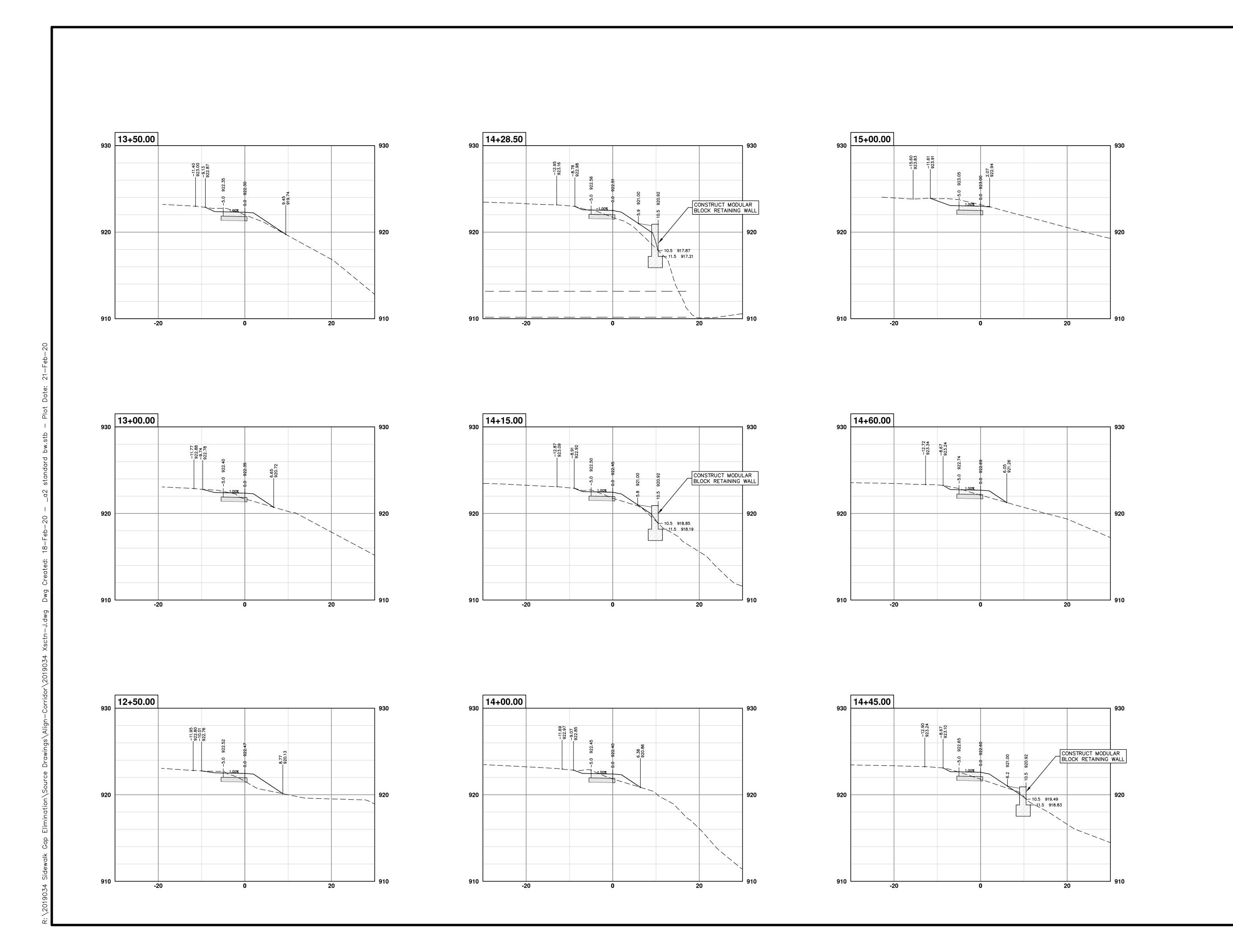
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1"= 10' PROFILE: 1"=5'

DRAWING No.

CROSS SECTIONS - JACKSON AVE.

STA. 8+00 - STA. 12+00



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

DRAWING NO.

2019-034-21

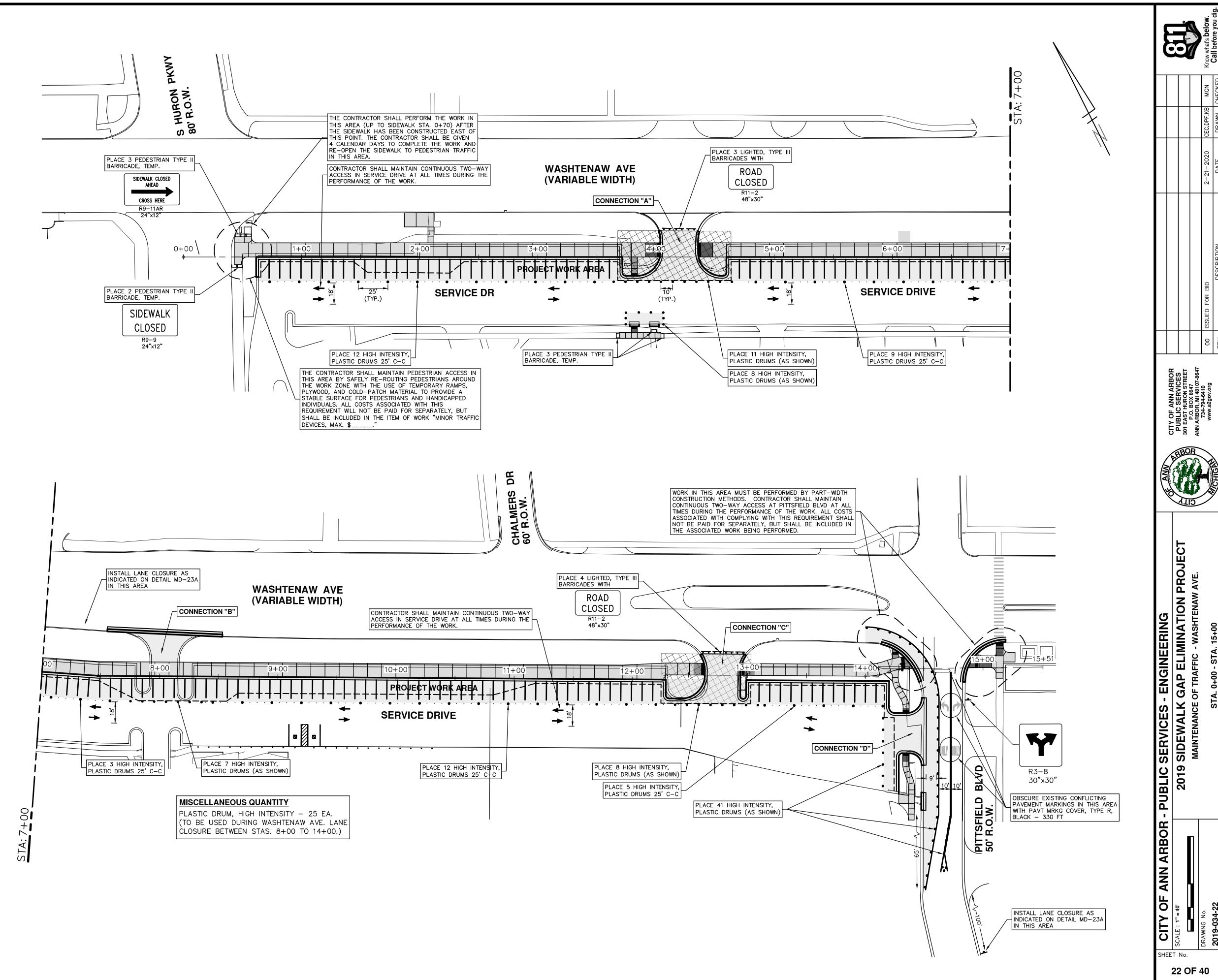
SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

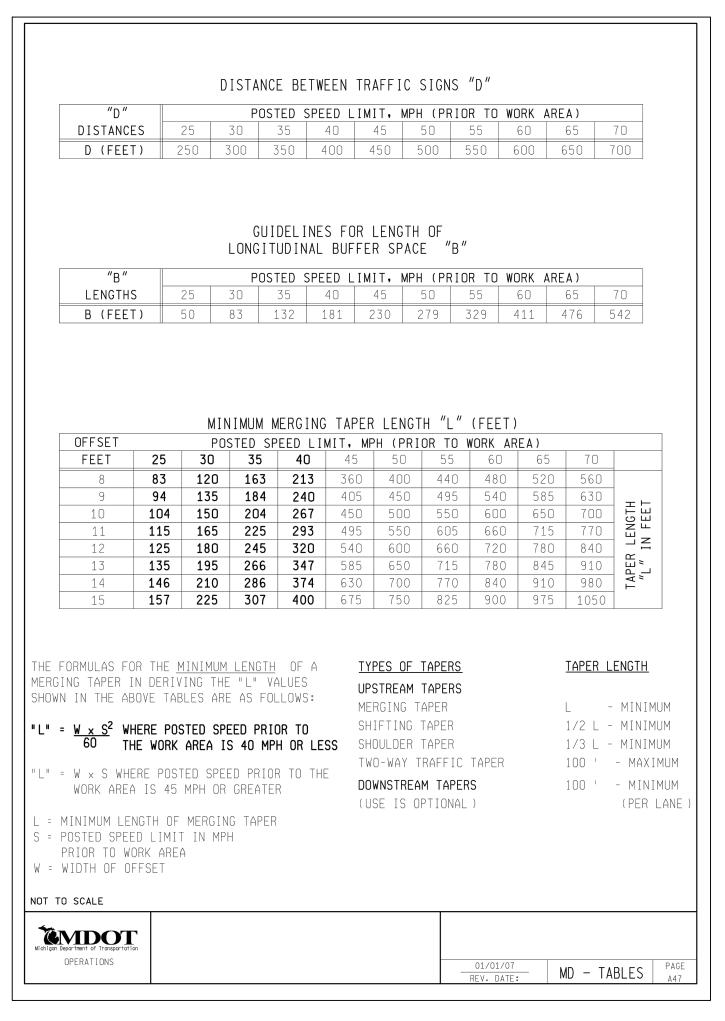
CROSS SECTIONS - JACKSON AVE.

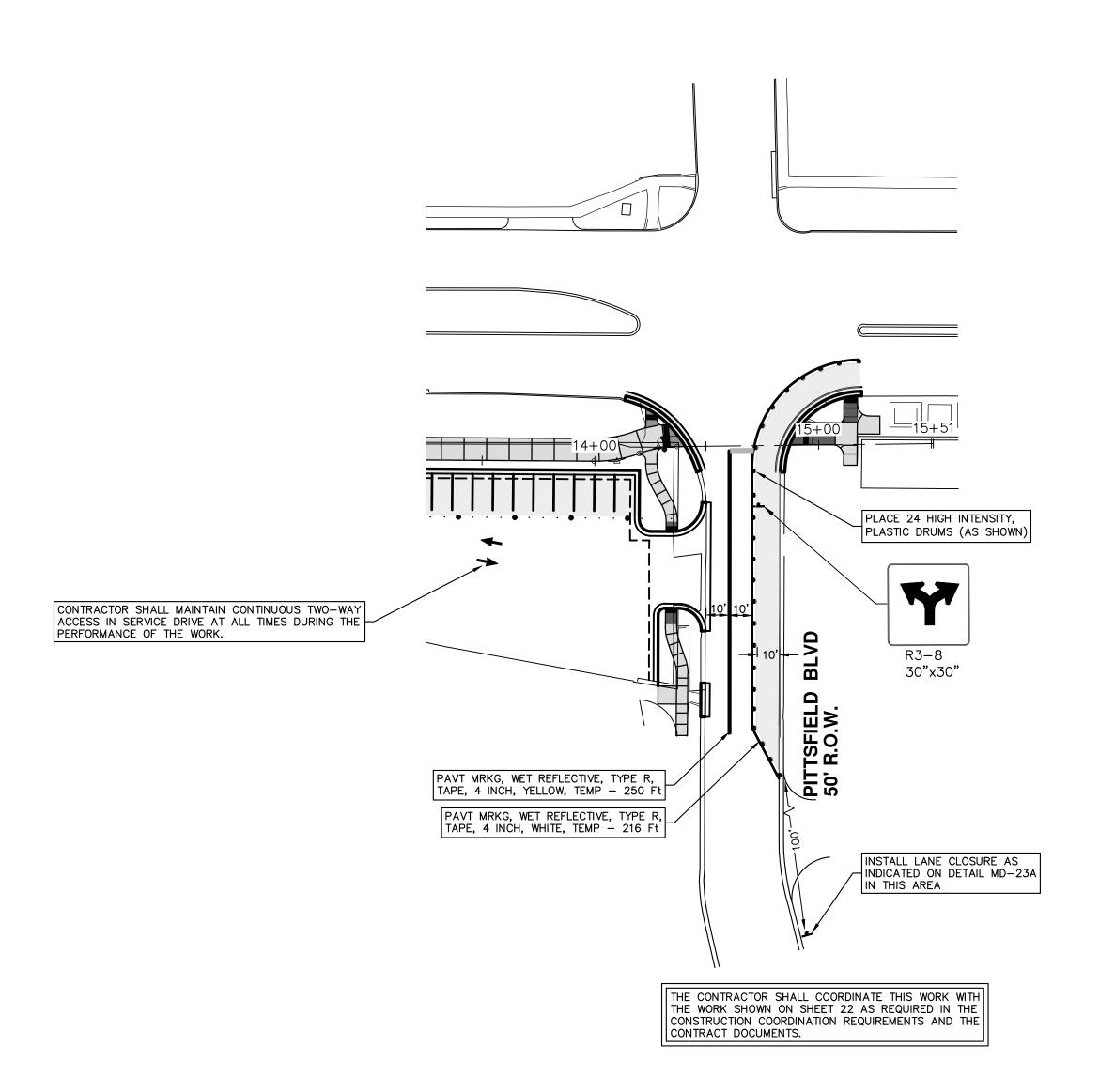
STA. 12+50 - STA. 15+00

#### CONSTRUCTION COORDINATION AND MAINTENANCE OF TRAFFIC REQUIREMENTS:

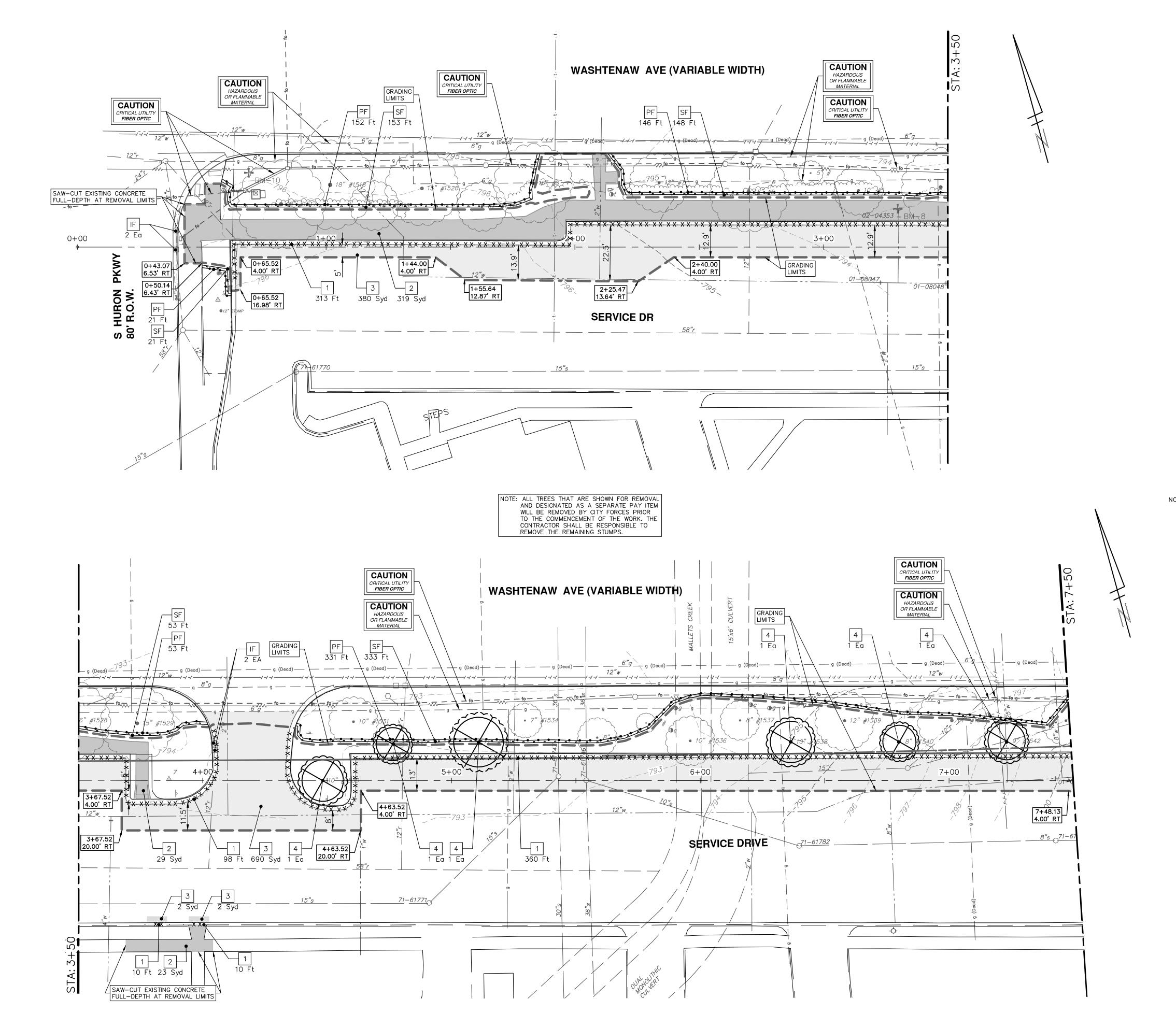
- 1. THE CONTRACTOR SHALL STAGE AND EXECUTE THE PROJECT'S CONSTRUCTION SUCH THAT NO MORE THAN TWO ROADWAY CONNECTIONS BETWEEN WASHTENAW AVENUE, PITTSFIELD BOULEVARD, AND THE SERVICE DRIVE ARE CLOSED AT ANY ONE TIME. ADDITIONALLY, IF CONNECTION "A" IS CLOSED, THEN CONNECTION "B" MUST REMAIN OPEN. SIMILARLY, CONNECTION "C" AND "D" CANNOT BOTH BE CLOSED SIMULTANEOUSLY.
- 2. THE CONTRACTOR SHALL BE ALLOWED SEVEN (7) CONSECUTIVE CALENDAR DAYS TO INSTALL AND OPERATE THE NEEDED LANE CLOSURE WITHIN WASHTENAW AVENUE FOR THE INSTALLATION OF THE PROPOSED CURB AND GUTTER NEEDED TO PERMANENTLY CLOSE CONNECTION "B" AND TO FORM AND POUR THE CURB AND GUTTER AND SIDEWALK RAMPS AT THE WASHTENAW AVENUE/PITTSFIELD BOULEVARD INTERSECTION. THE CONTRACTOR MAY TAKE MORE THAN SEVEN (7) CALENDAR DAYS TO COMPLETE CONSTRUCTION OF THE PROPOSED SIDEWALK CONTAINED WITHIN CONNECTION "B" AND ALL OTHER ASSOCIATED WORK, HOWEVER THE LANE CLOSURE SHALL ONLY BE ALLOWED TO REMAIN IN PLACE FOR SEVEN (7) CONSECUTIVE CALENDAR DAYS.
- 3. WHILE PERFORMING THE WORK IN WASHTENAW AVENUE ASSOCIATED WITH CONNECTIONS "B" AND "D", THE CONTRACTOR SHALL INSTALL HIGH INTENSITY PLASTIC DRUMS ALONG THE SOUTHERN-MOST LANE OF WASHTENAW AVENUE TO PREVENT VEHICULAR TRAFFIC FROM ENTERING LANE CLOSURE. CONNECTION "C" MUST REMAIN OPEN DURING THIS PERIOD.
- 4. THE CONTRACTOR SHALL BE ALLOWED SEVEN (7) CONSECUTIVE CALENDAR DAYS TO INSTALL AND OPERATE THE NEEDED LANE CLOSURE WITHIN PITTSFIELD BOULEVARD FOR THE CONSTRUCTION OF THE DRIVEWAY OPENING, DRIVE APPROACH, AND SIDEWALK TO BE CONSTRUCTED THROUGH CONNECTION "D". THE CONTRACTOR MAY TAKE MORE THAN SEVEN (7) CALENDAR DAYS TO COMPLETE CONSTRUCTION OF THE REMAINING SIDEWALK AND OTHER ANCILLARY WORK ASSOCIATED WITH CONNECTION "D". THIS LANE CLOSURE SHALL NOT INTERFERE WITH TRAFFIC ALONG WASHTENAW AVENUE.
- 5. DURING THE PLACEMENT OF THE HMA OVERLAY OF THE CURB AND GUTTER ALONG WASHTENAW AVENUE AT CONNECTION "B" AND PITTSFIELD BOULEVARD, THE CONTRACTOR SHALL INSTALL A DAYTIME LANE CLOSURE BETWEEN THE HOURS OF 9:00 A.M. AND 3:30 P.M. AND COMPLETE THE REQUIRED HAND PATCHING OPERATION.

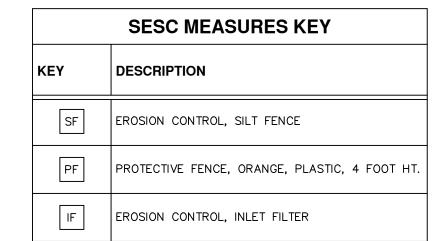






SERVICES - ENGINEERING SIDEWALK GAP ELIMINATION CITY OF ANN ARBOR - PUBLIC SHEET No. 23 OF 40





REMOVAL KEY				
KEY DESCRIPTION				
1	CURB, ANY TYPE OR SIZE, REM			
2	SIDEWALK, REM			
3	HMA SURFACE, REM — ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS			
4	TREE REM, 6" TO 18"			
5	PAVT, REM			

NOTE: THE CONTRACTOR SHALL NEATLY PRUNE ALL TREE ROOTS ENCOUNTERED WHILE EXCAVATING FOR THE CONSTRUCTION OF THE PROPOSED SIDEWALK WITH CLEAN, SHARP TOOLS DESIGNED FOR THIS PURPOSE. TREE ROOTS SHALL BE NEATLY CUT AT A RIGHT ANGLE TO THE ROOT. DO NOT TEAR OR DAMAGE THE "BARK" ON ROOTS WHILE PRUNING. ALL PRUNING SHALL BE COMPLETED WITHIN THE SAME DAY THE ROOTS ARE EXPOSED.

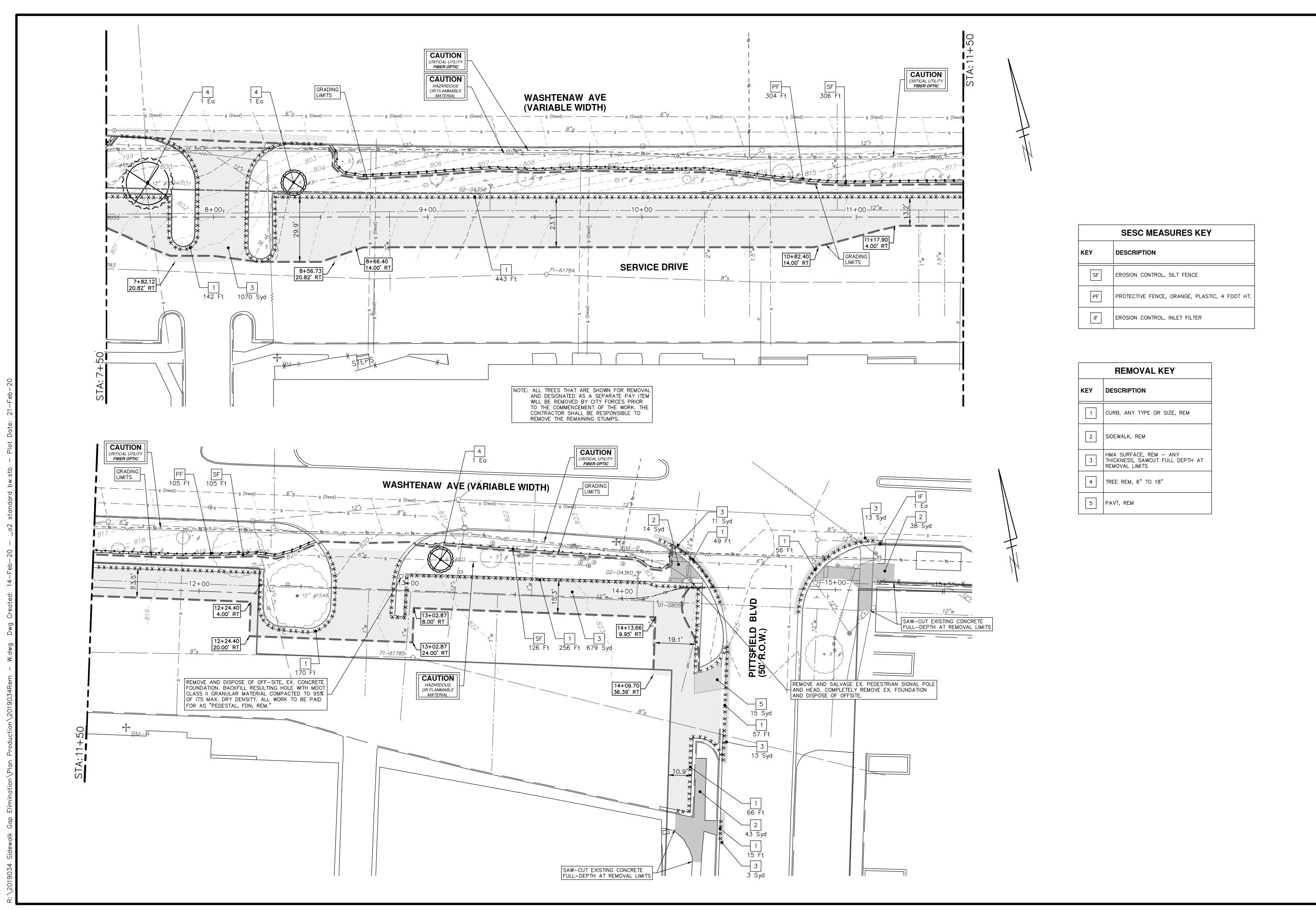
> THE CONTRACTOR SHALL SAVE AND PROTECT ALL TREES NOT DESIGNATED FOR REMOVAL.

> ALL BITUMINOUS PAVEMENT AND CONCRETE CURB AND GUTTER SHALL BE SAW-CUT FULL DEPTH AT ITS REMOVAL LIMITS. THE CONTRACTOR SHALL PRESERVE A 2-FOOT LONG SEGMENT OF EXISTING REINFORCEMENT TO TIE THE NEW AND OLD POURS TOGETHER.



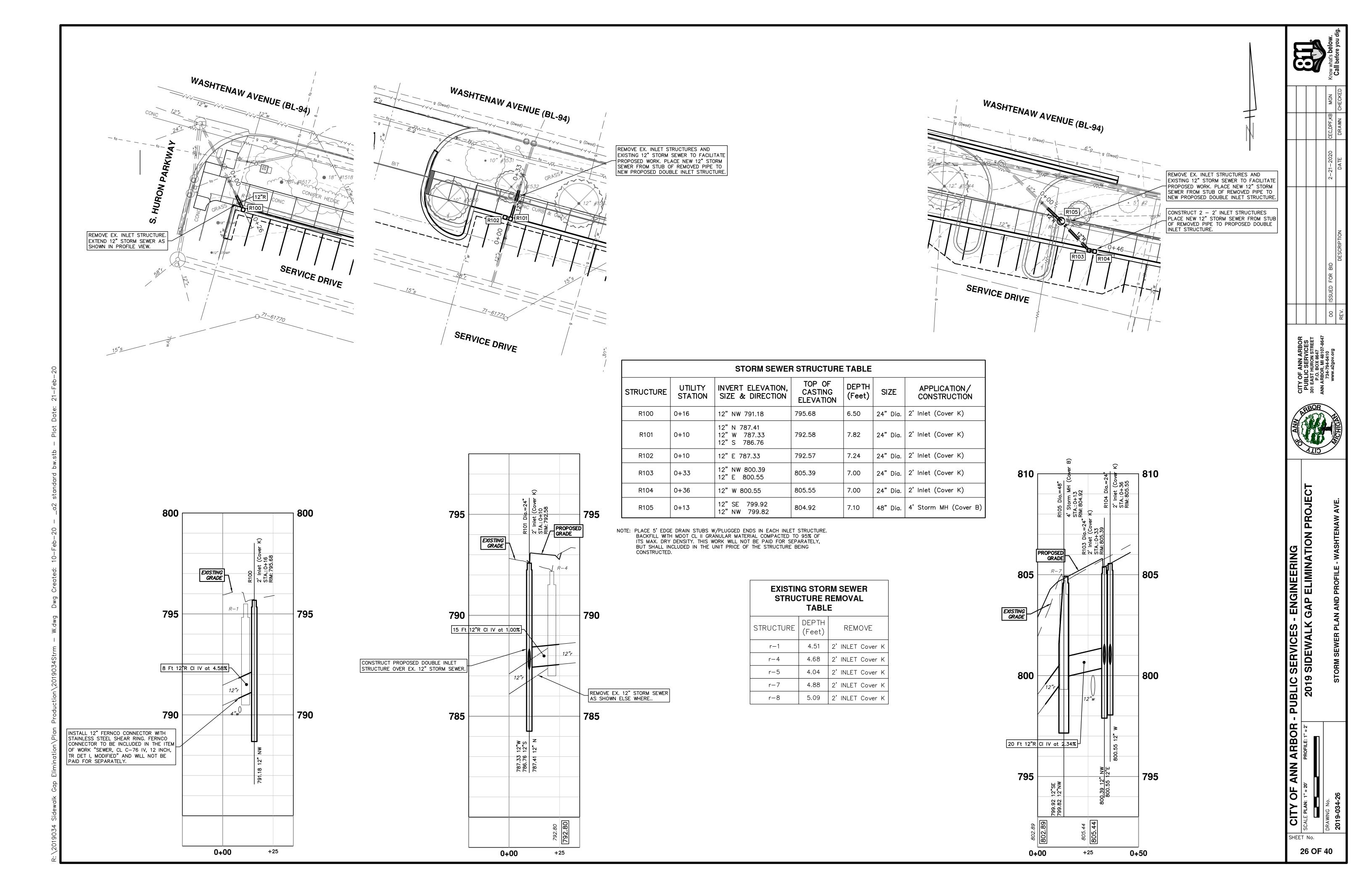
ANN ARBOR - PUBLIC CITY OF

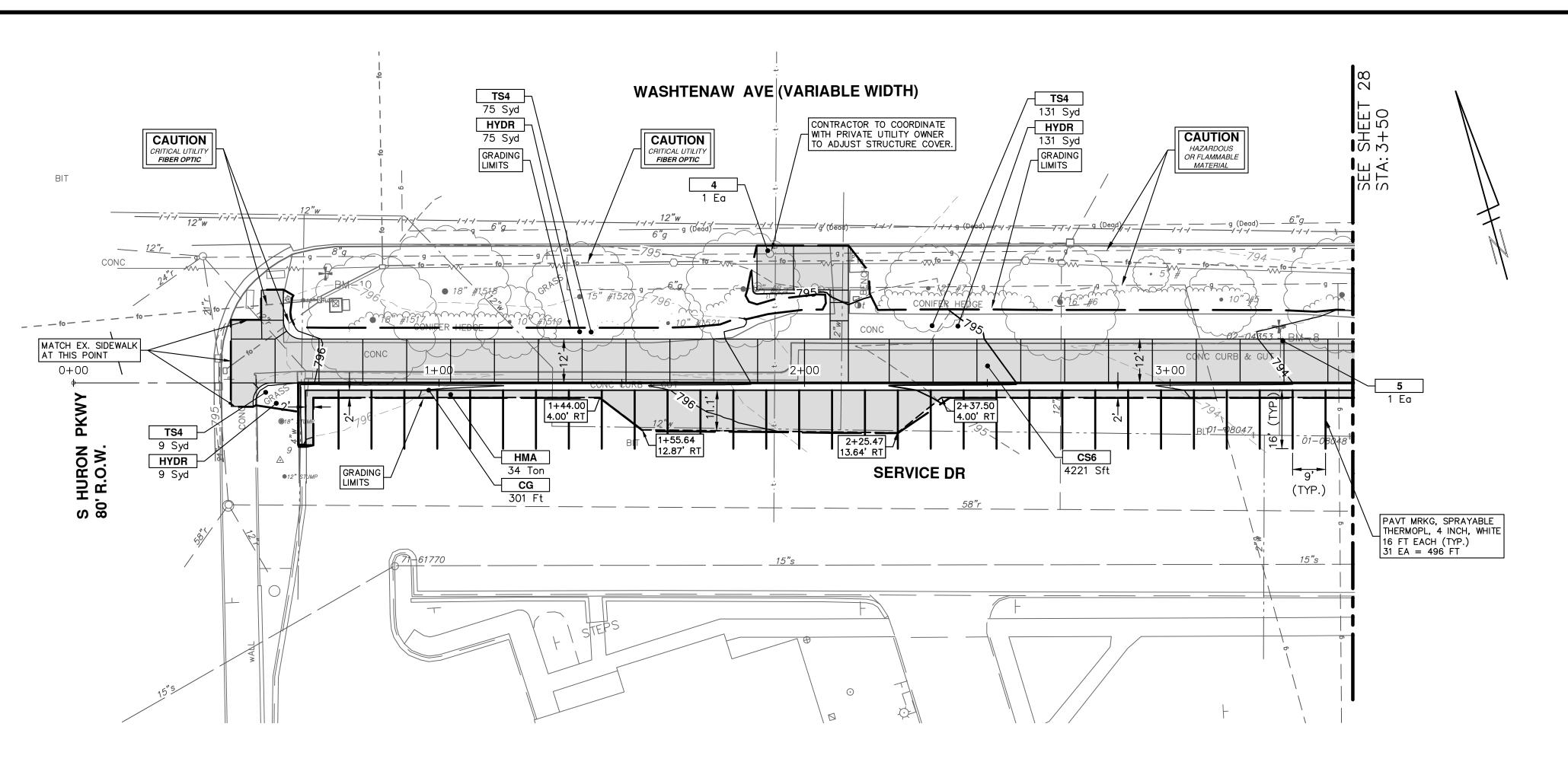
SHEET No.



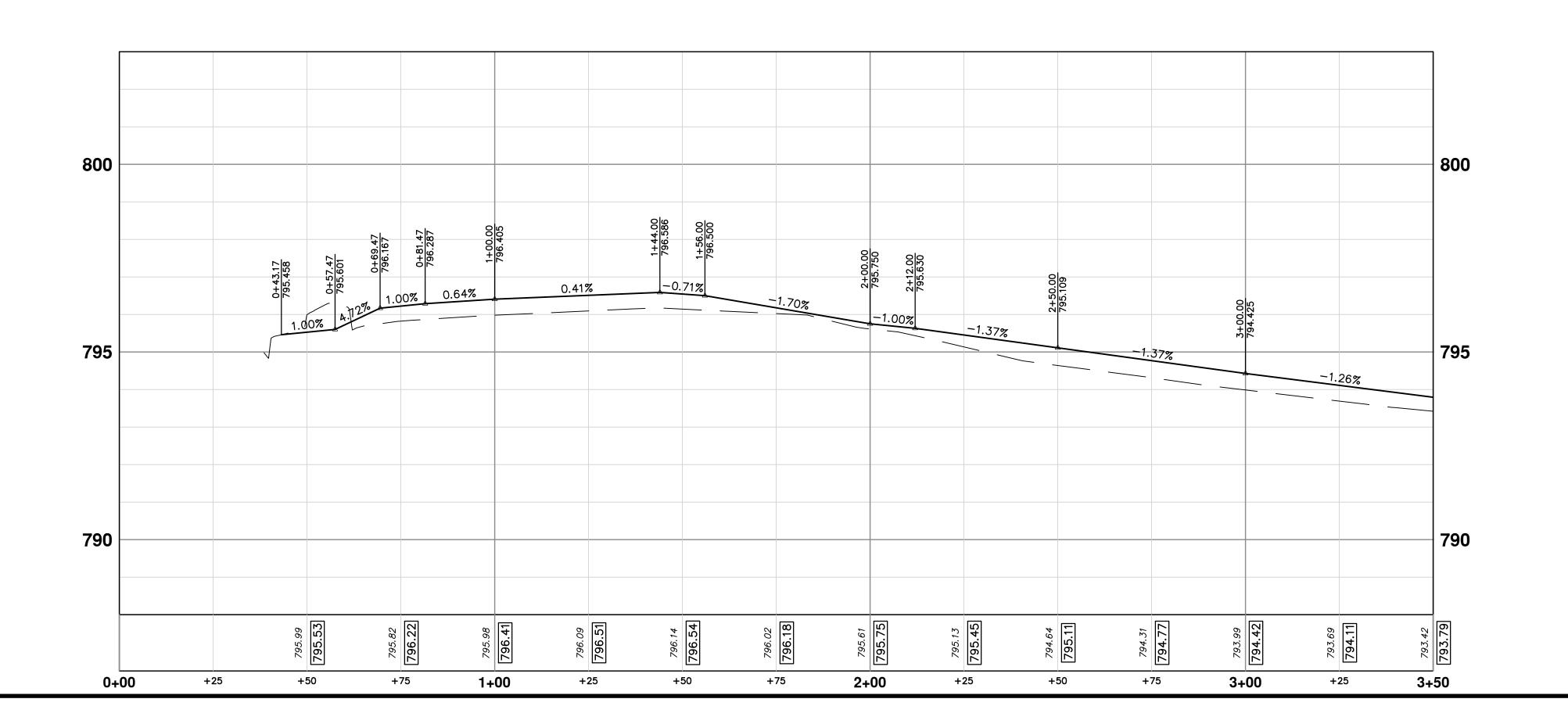
SERVICES - ENGINEERING
SIDEWALK GAP ELIMINATION
REMOVALS - WASHTENAW AVE.

ANN ARBOR SHEET No.





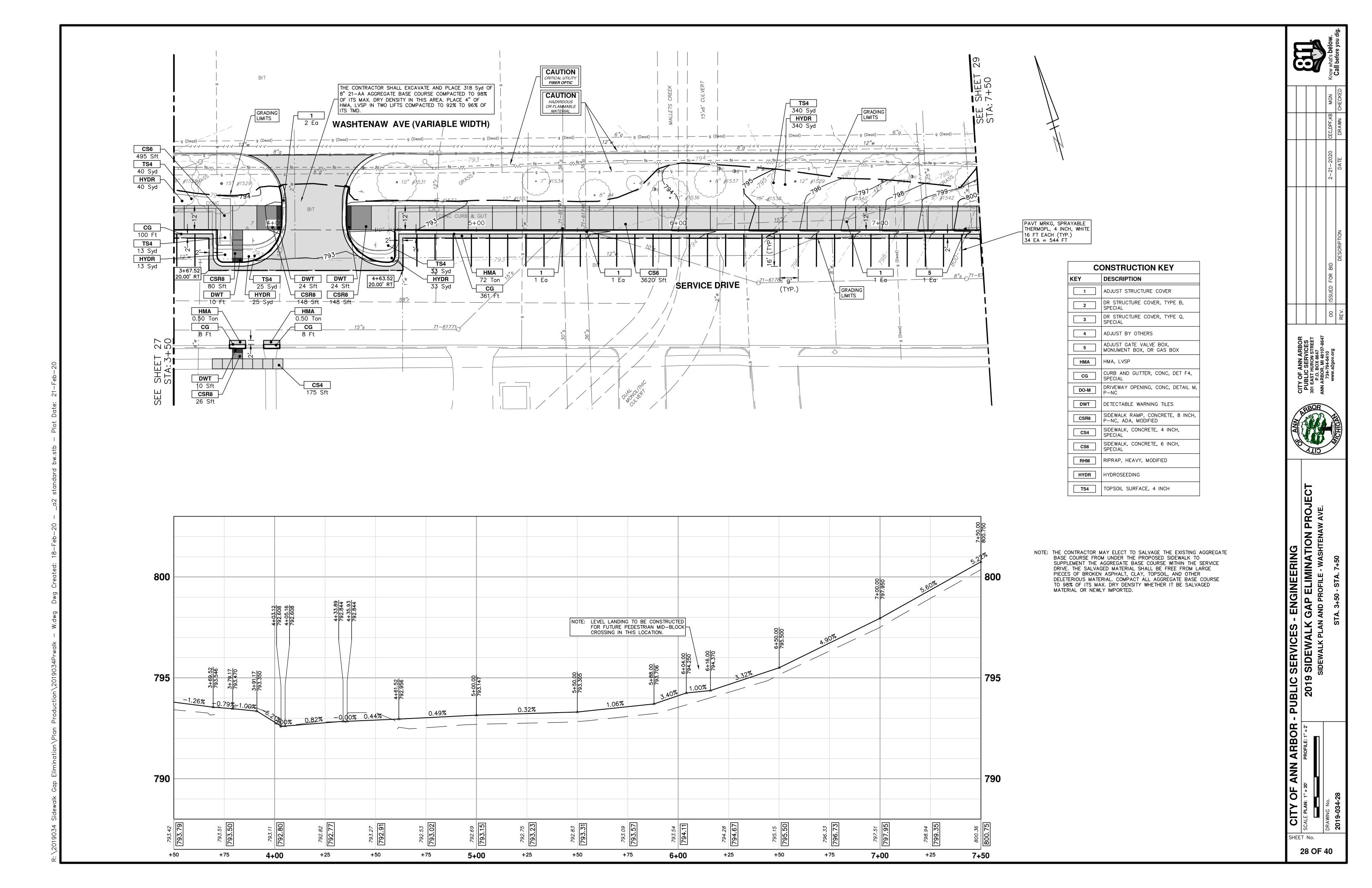
С	ONSTRUCTION KEY
KEY	DESCRIPTION
1	ADJUST STRUCTURE COVER
2	DR STRUCTURE COVER, TYPE B, SPECIAL
3	DR STRUCTURE COVER, TYPE Q, SPECIAL
4	ADJUST BY OTHERS
5	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX
НМА	HMA, LVSP
CG	CURB AND GUTTER, CONC, DET F4, SPECIAL
DO-M	DRIVEWAY OPENING, CONC, DETAIL P-NC
DWT	DETECTABLE WARNING TILES
CSR8	SIDEWALK RAMP, CONCRETE, 8 INC P-NC, ADA, MODIFIED
CS4	SIDEWALK, CONCRETE, 4 INCH, SPECIAL
CS6	SIDEWALK, CONCRETE, 6 INCH, SPECIAL
RHM	RIPRAP, HEAVY, MODIFIED
HYDR	HYDROSEEDING
TS4	TOPSOIL SURFACE, 4 INCH

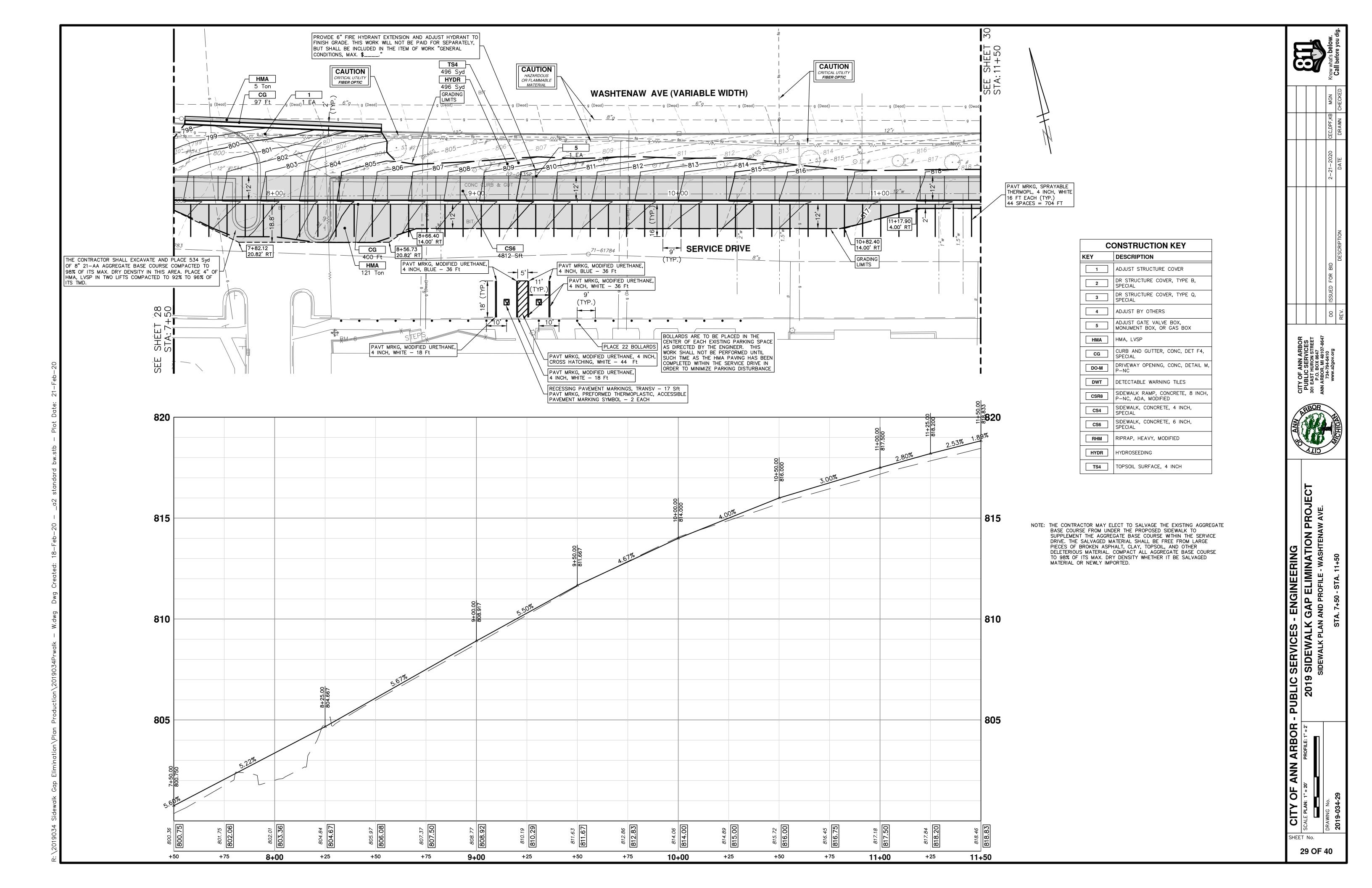


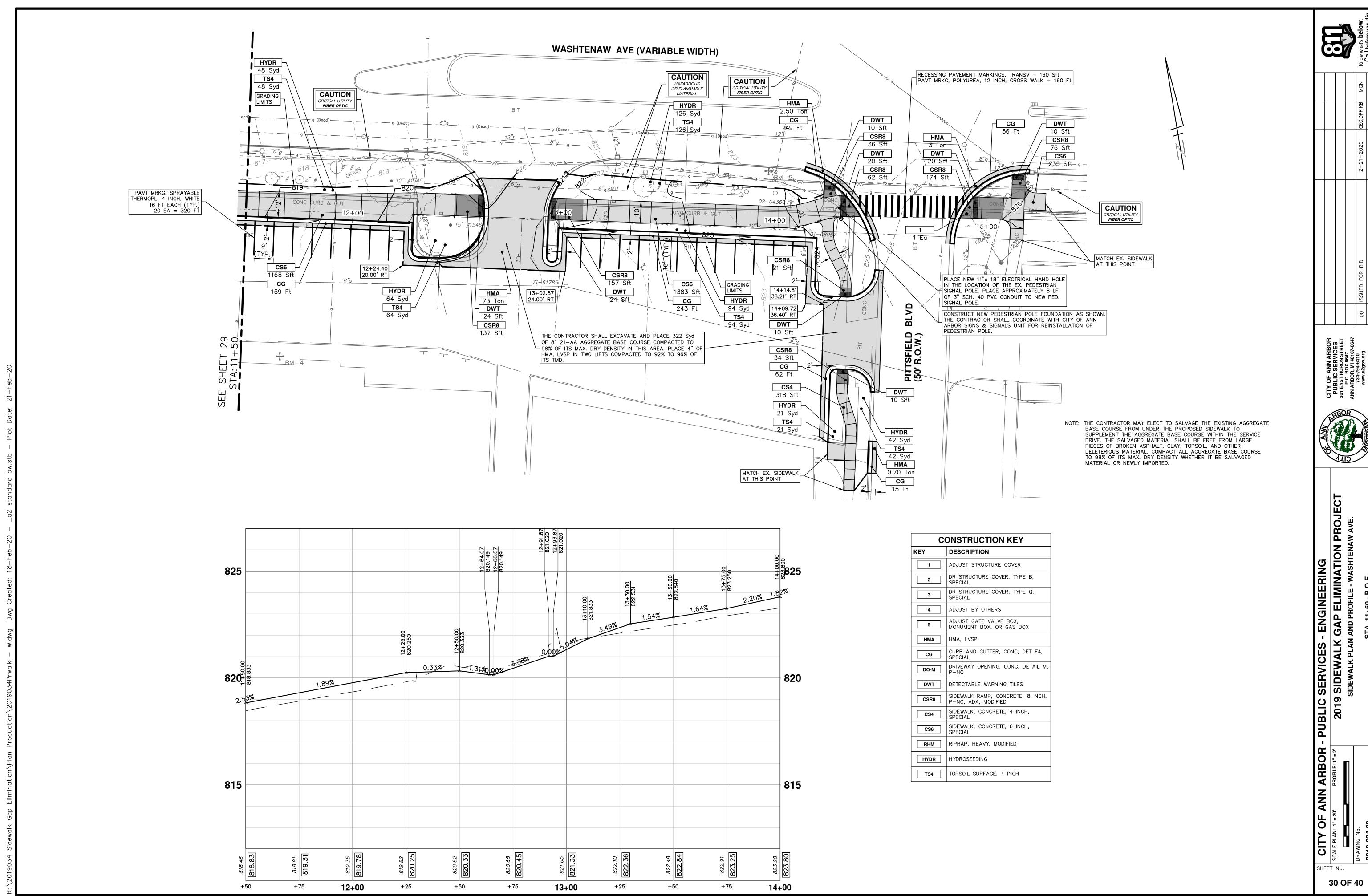
NOTE: THE CONTRACTOR MAY ELECT TO SALVAGE THE EXISTING AGGREGATE BASE COURSE FROM UNDER THE PROPOSED SIDEWALK TO SUPPLEMENT THE AGGREGATE BASE COURSE WITHIN THE SERVICE DRIVE. THE SALVAGED MATERIAL SHALL BE FREE FROM LARGE PIECES OF BROKEN ASPHALT, CLAY, TOPSOIL, AND OTHER DELETERIOUS MATERIAL. COMPACT ALL AGGREGATE BASE COURSE TO 98% OF ITS MAX. DRY DENSITY WHETHER IT BE SALVAGED MATERIAL OR NEWLY IMPORTED.

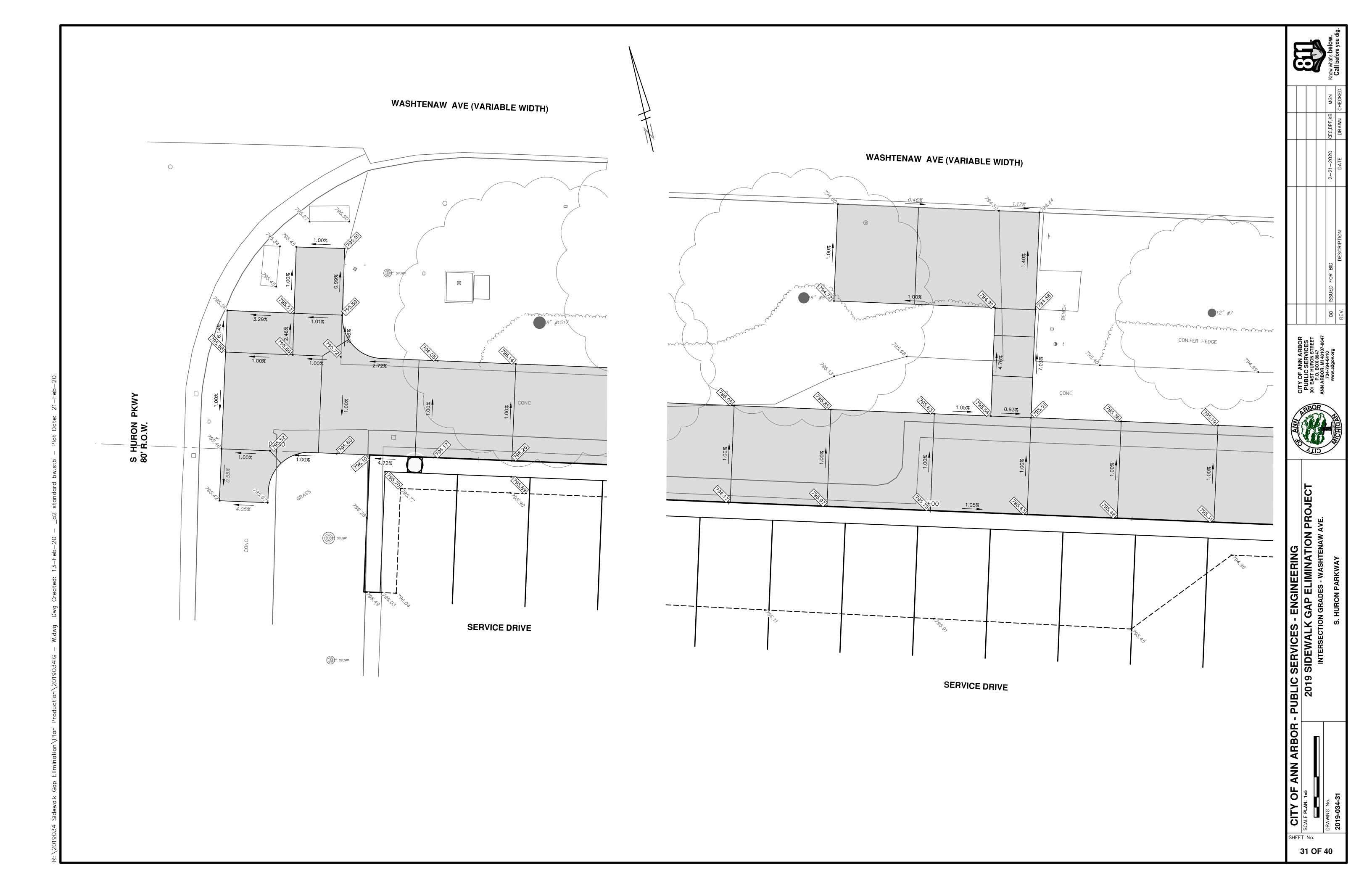
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

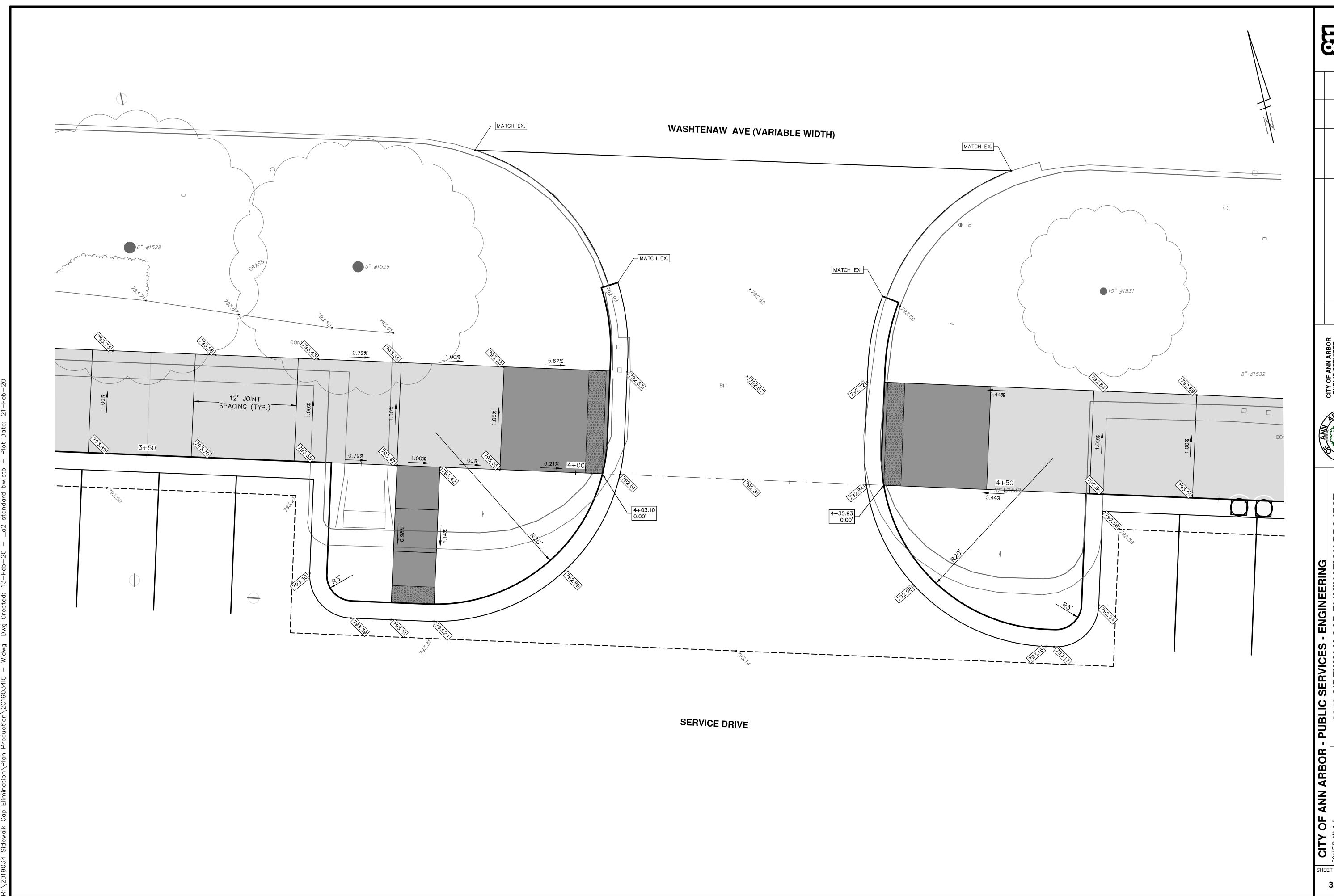
SCALE PLAN: 1" = 20









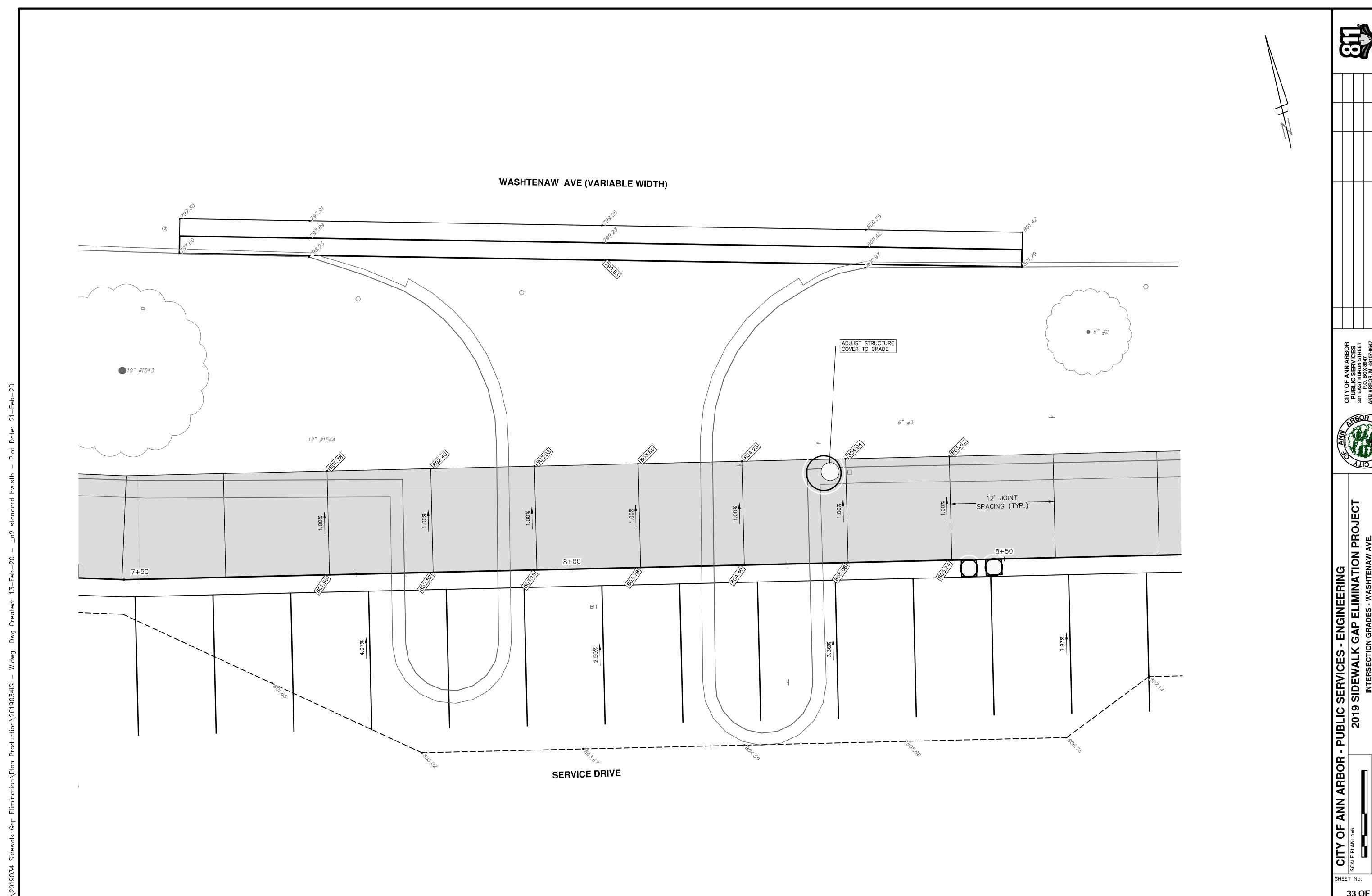


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1=5

SCALE PLAN: 1=5

INTERSECTION GRADES - WASHTENAW AVE.



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1=5

DRAWING No.

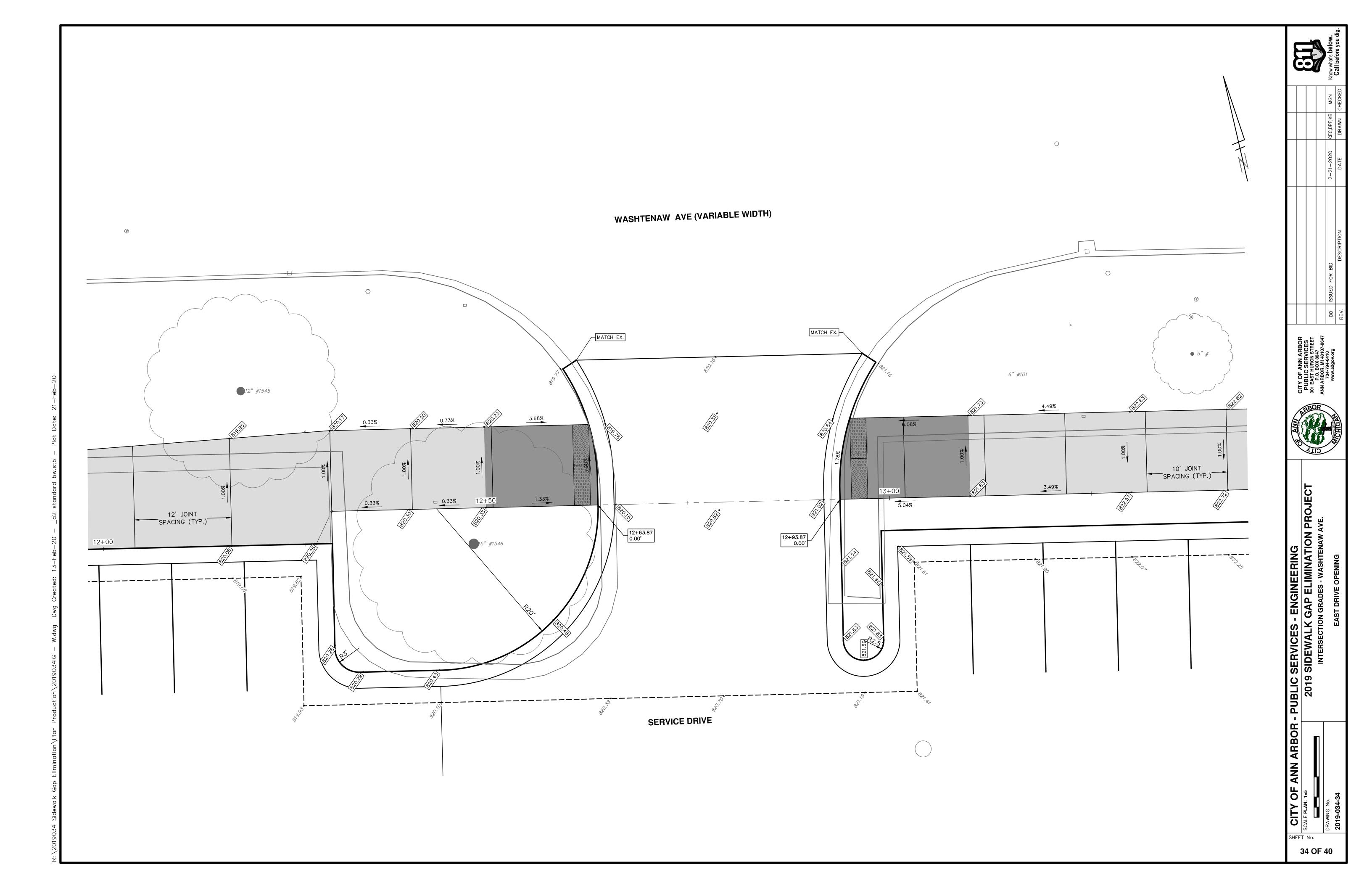
DRAWING No.

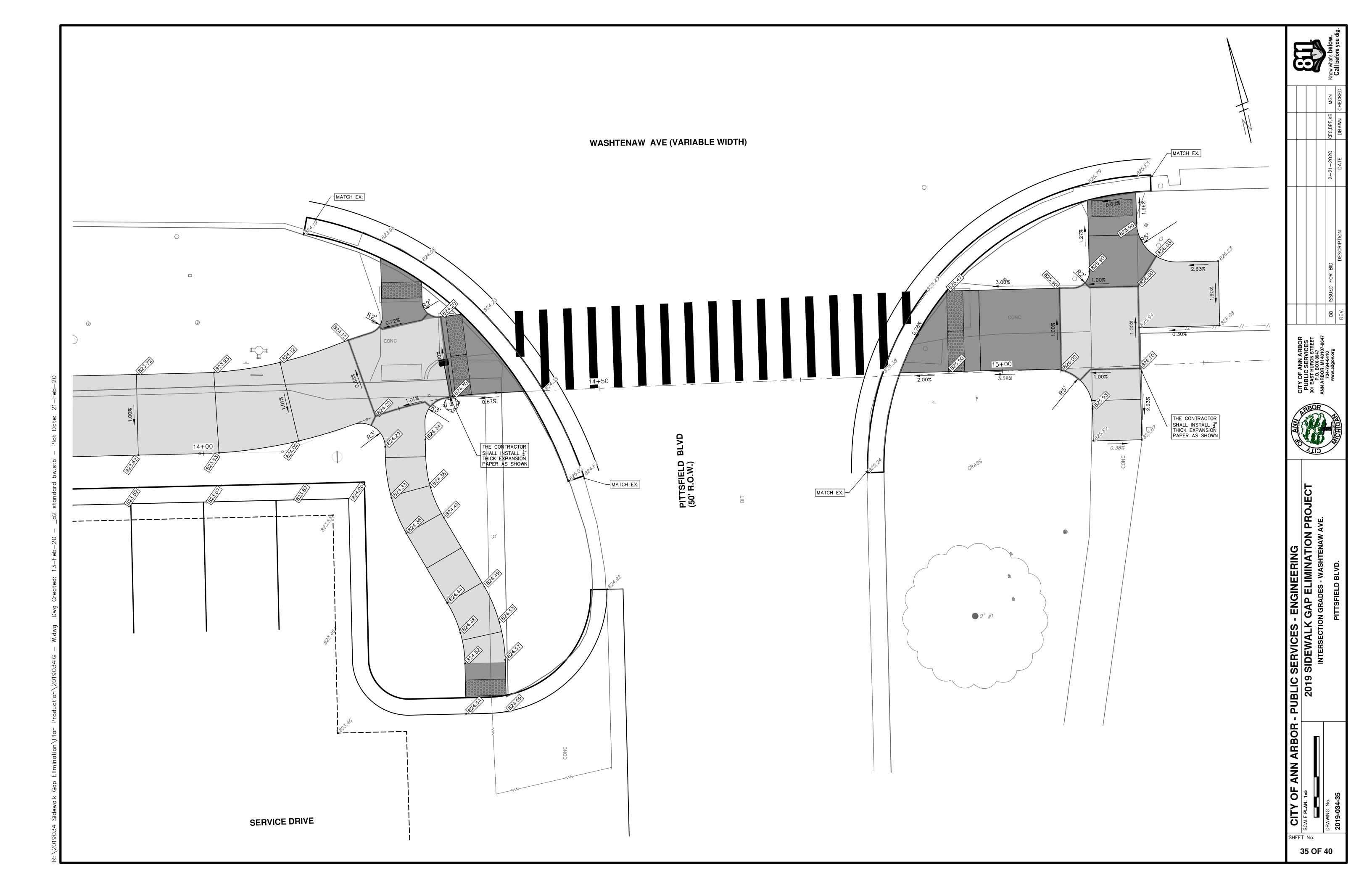
2019-034-33

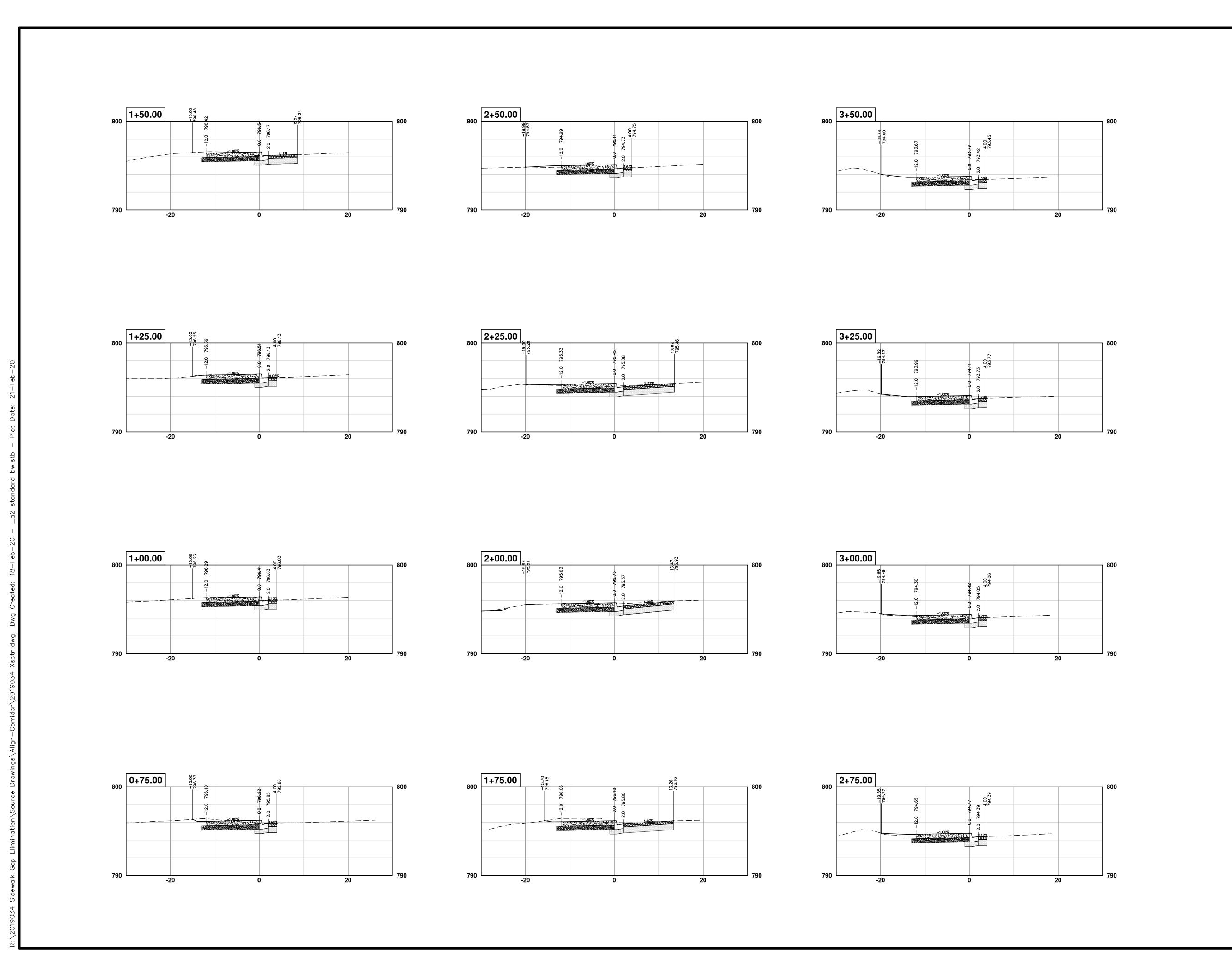
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2019-034-33

2019-034-33







CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

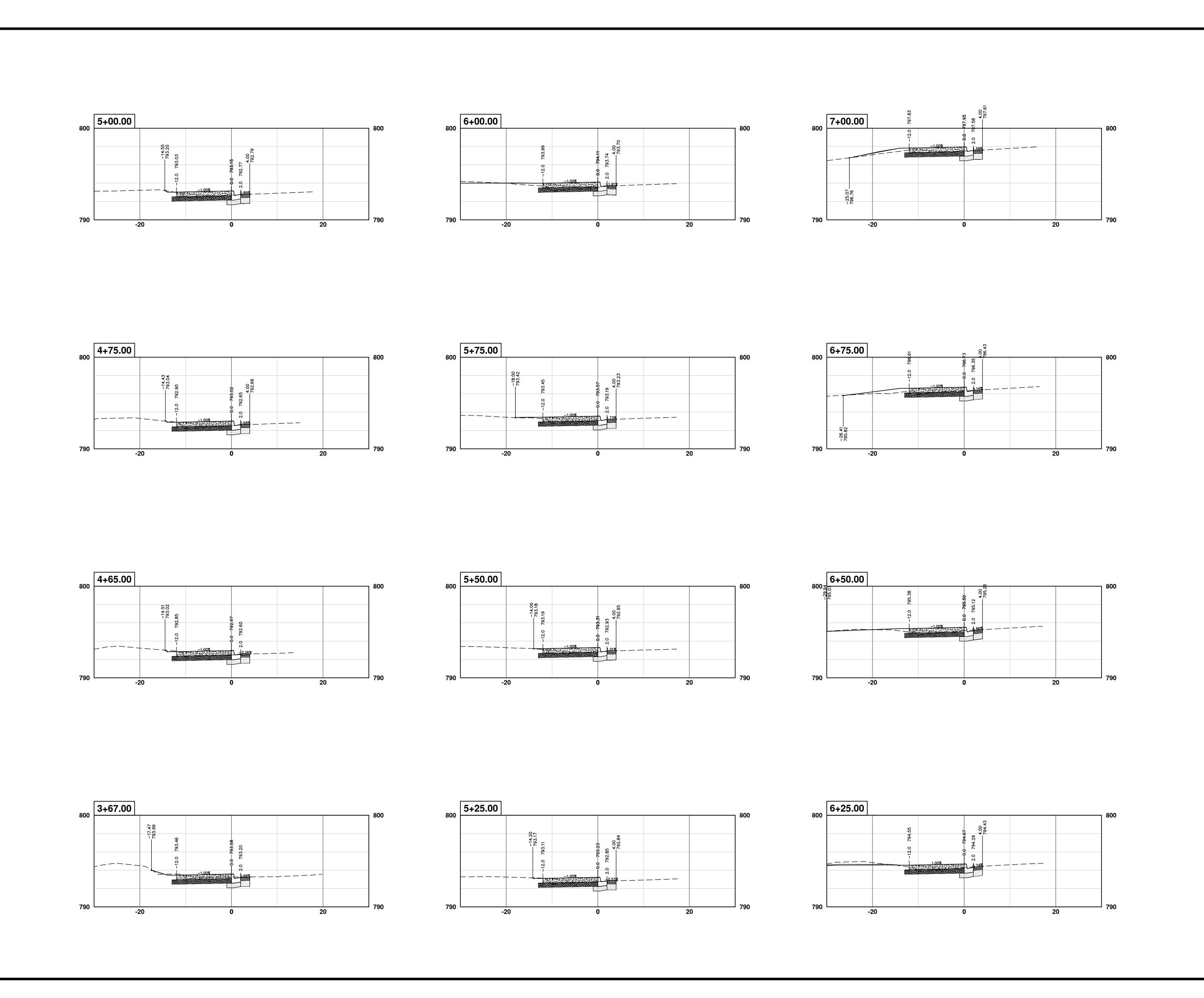
SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

CROSS SECTIONS - WASHENTAW AVE.

CROSS SECTIONS - WASHENTAW AVE.

STA. 0+75 - STA. 3+50



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

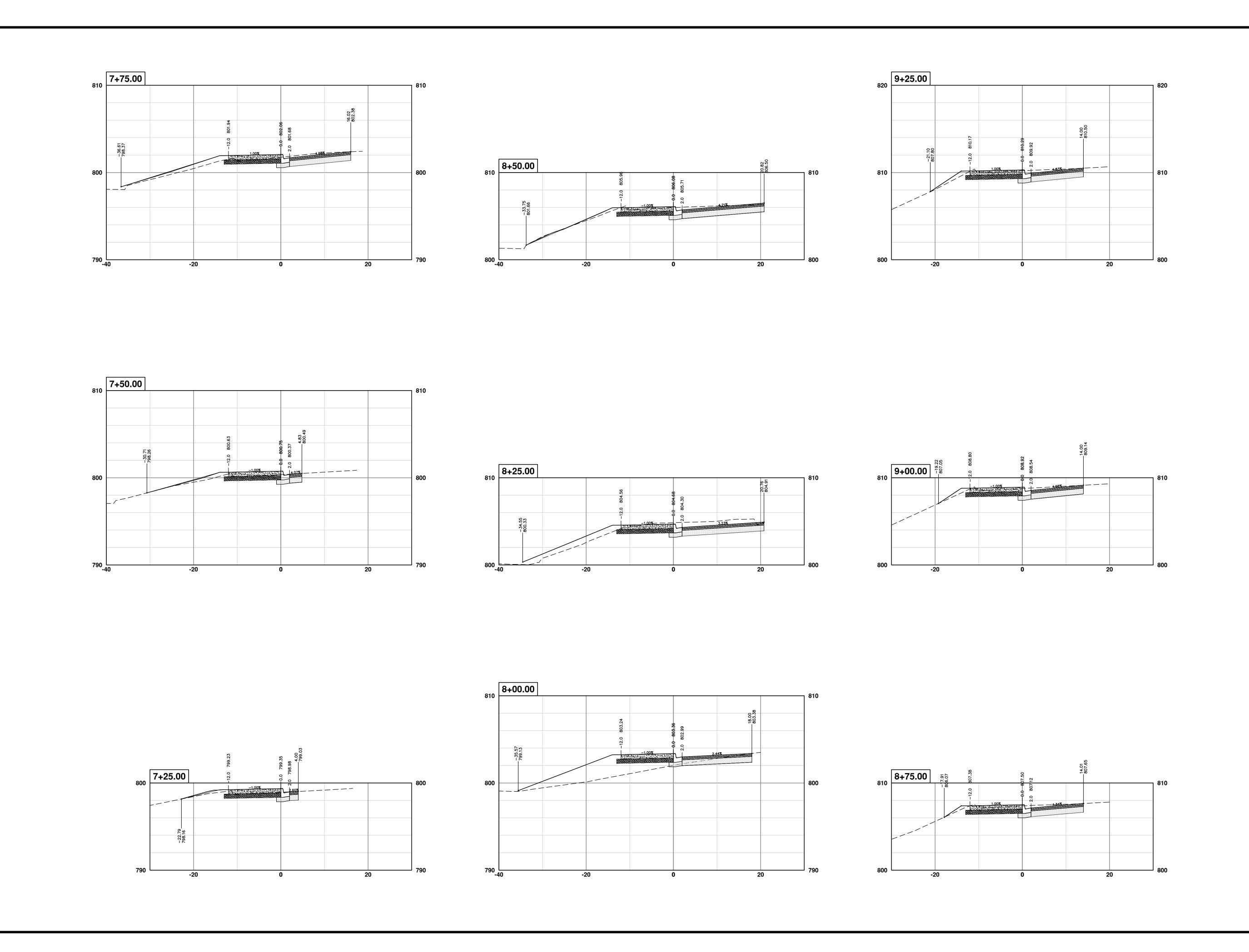
SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

DRAWING No.

CROSS SECTIONS - WASHENTAW AVE.

CROSS SECTIONS - WASHENTAW AVE.

STA. 4+00 - STA. 6+75



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

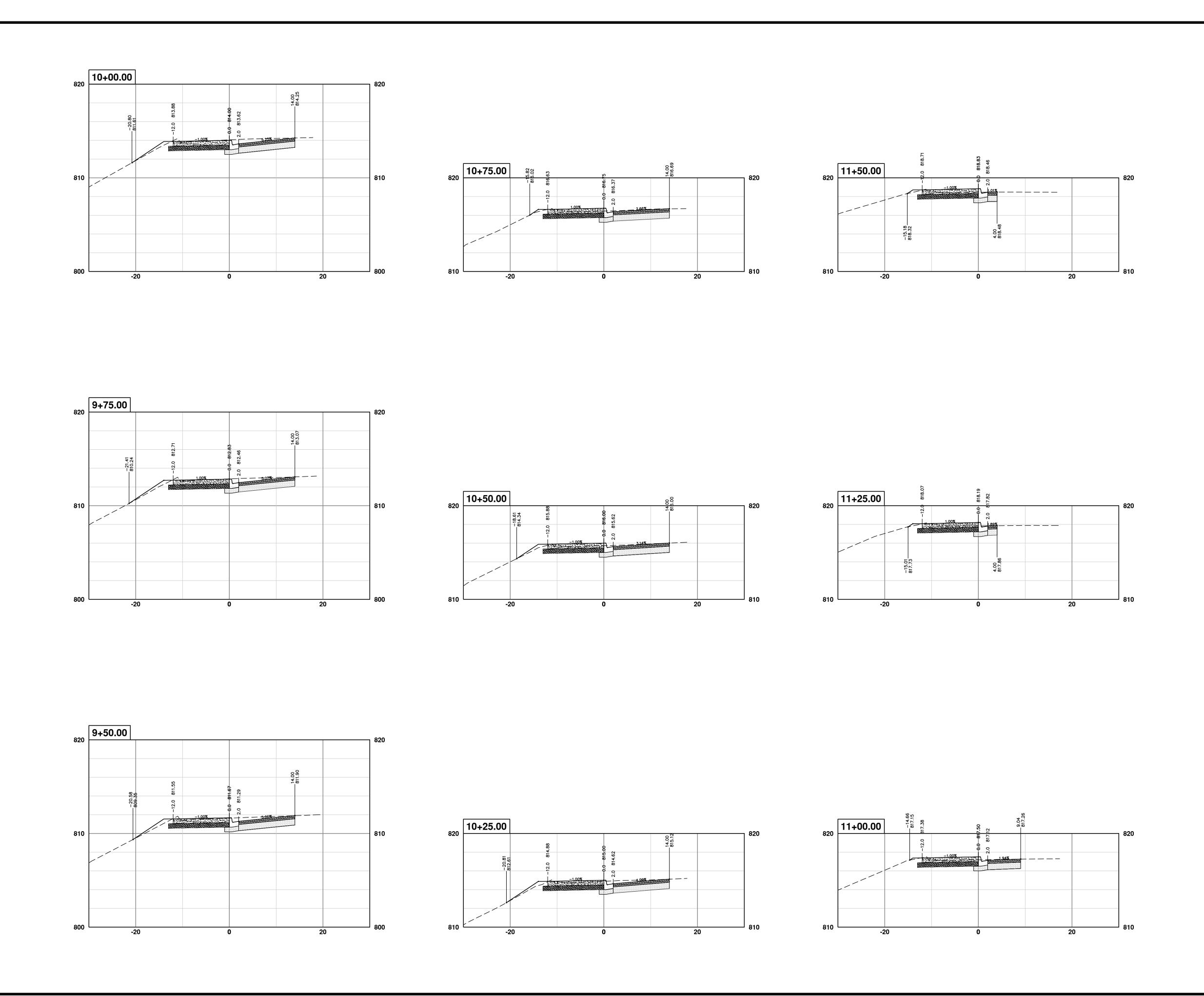
DRAWING No.

2019-034-38

SCALE PLAN: 1" = 10' PROFILE: 1" = 5'

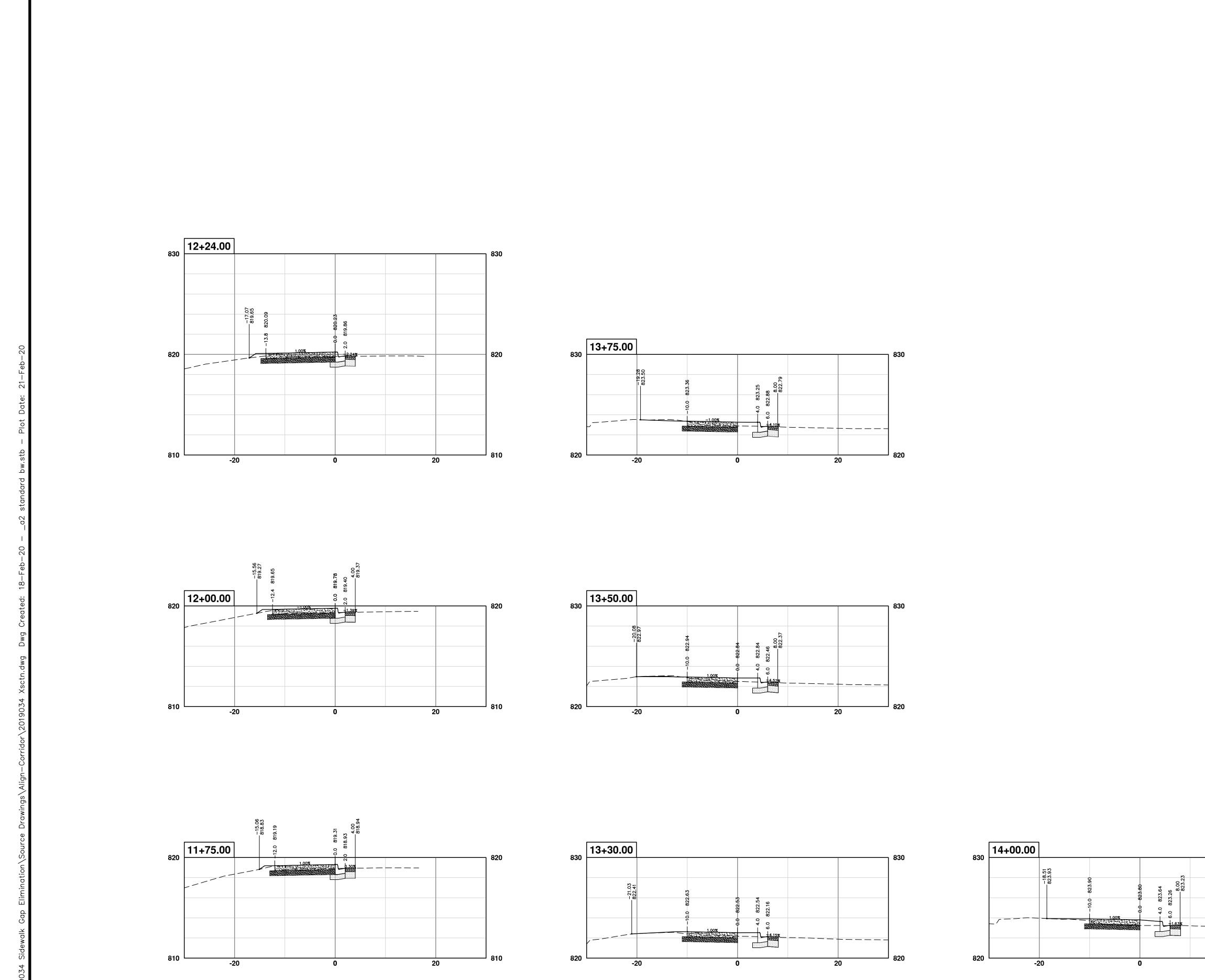
CROSS SECTIONS - WASHENTAW AVE.

STA. 7+00 - STA. 9+00



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1"= 10 PROFILE: 1"=5 2019 SIDEWALK GAP ELIMINATION PROC



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 10 PROFILE: 1" = 5 CROSS SECTIONS - WASHENTAW AVE.

CROSS SECTIONS - WASHENTAW AVE. 40 OF 40

820

20