



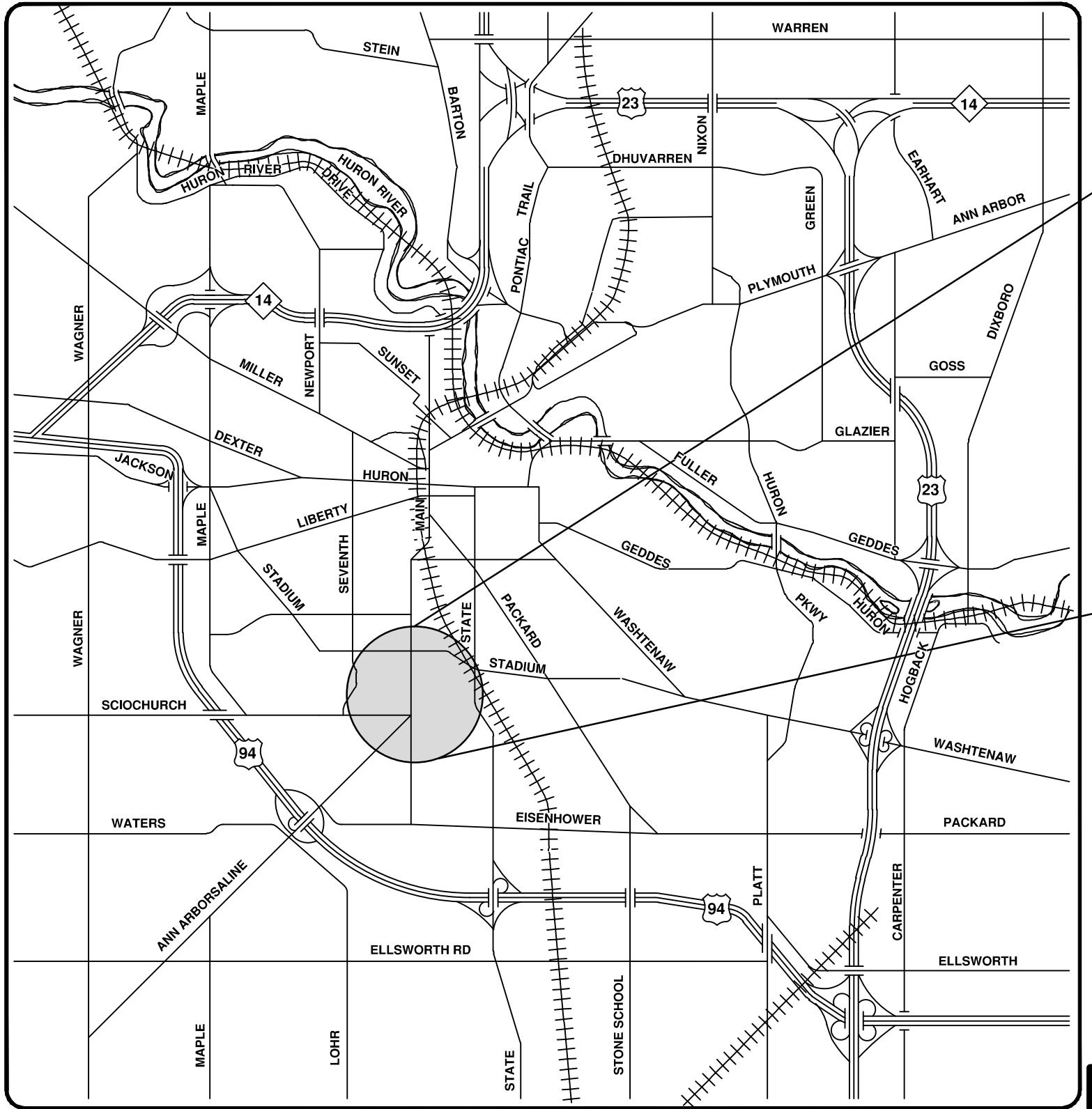
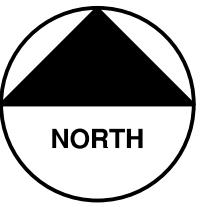
# CITY OF ANN ARBOR ENGINEERING

## SOUTH MAIN STREET SIDEWALK PROJECT

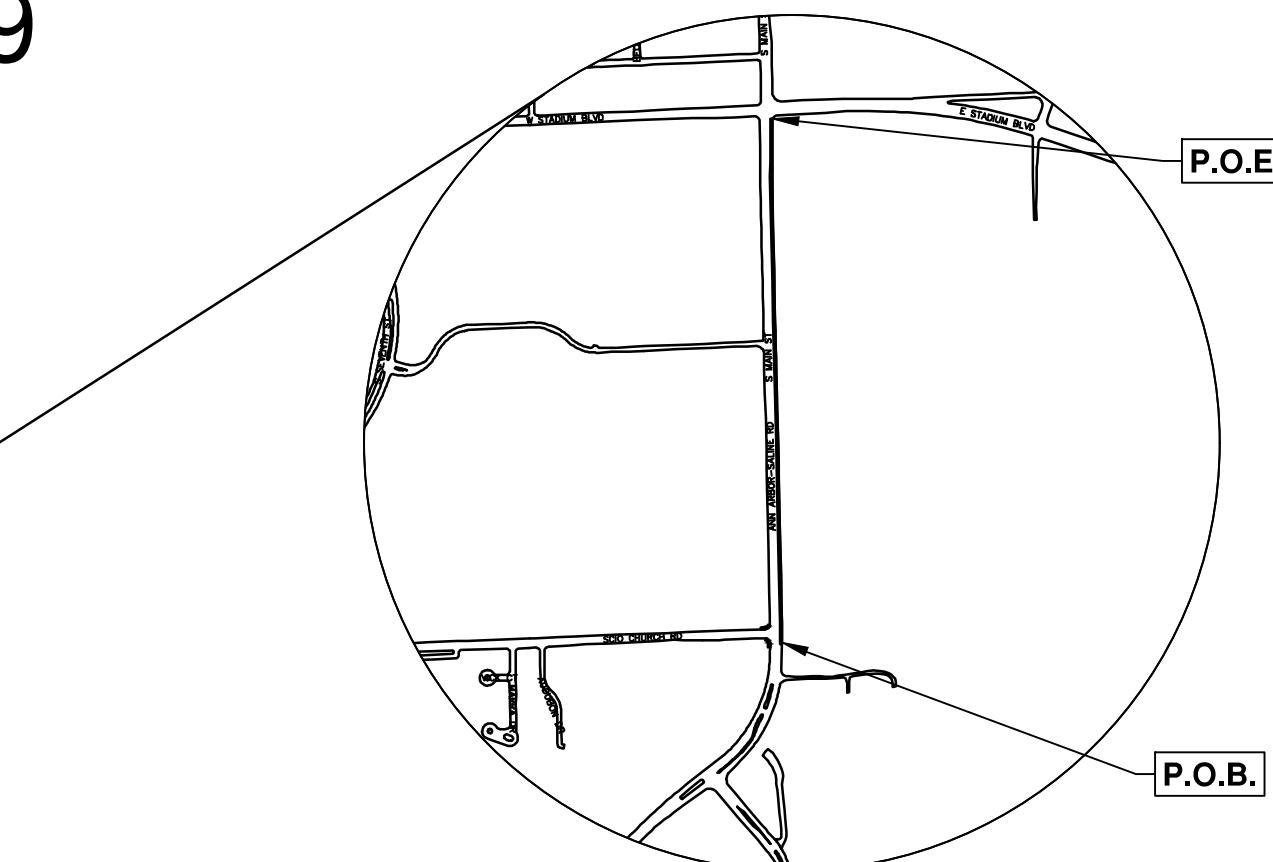
### 100% PLAN SUBMITTAL

RFP No. 26-10, FILE No. 2020-029

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VICINITY MAP



NOT FOR CONSTRUCTION

NOT

FOR

CON

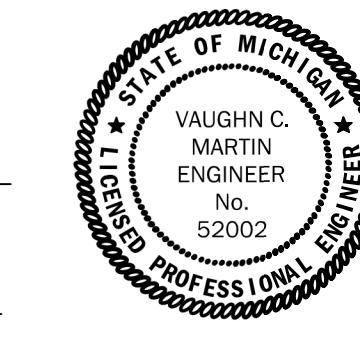
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UCTION

PREPARED UNDER THE SUPERVISION OF

VAUGHN C. MARTIN, P.E.  
MI LICENSE No. 52002  
WADE TRIM, PROJECT MANAGER

1/23/2026  
DATE



CITY APPROVAL

TERESA CISCO BRIDGES, P.E.  
MI LICENSE No. 6201052180  
PROJECT MANAGER

1/23/2026  
DATE



**CONSTRUCTION NOTES:**

GENERAL  
NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-946-6265.

- 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. SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL NECESSARY DRIVEWAY CLOSURES WITH THE PROPERTY OWNER(S) AND RESIDENT(S) IN THE AREAS OF CONSTRUCTION.
- THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND SERVICE LEADS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- LOCATION AND DEPTH OF UTILITIES AS DEPICTED ON THE PLANS IS APPROXIMATE AND SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE AHEAD AND ADJUST DEPTH OF CONFLICT UTILITIES ACCORDINGLY. ANY DAMAGE TO UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY TO AVOID AND/OR REPAIR AS NECESSARY.
- 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".
- WHERE STREET CURBS ARE UNDERRUN DUE TO CONSTRUCTION ACTIVITIES, THEY SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUOUS MAINTENANCE OF SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL THE FULL COMPLETION OF THE PROJECT. THIS WORK SHALL BE INCLUDED IN THE ITEM OF WORK "GENERAL CONDITIONS".
- ALL CURB, SIDEWALK, DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY ENGINEER BEFORE THE WORK IS DONE.
- SAWED SEWER PIPE CONNECTIONS SHALL BE COUPLED WITH A FERNO FLEXIBLE COUPLING AND A STAINLESS STEEL SHEAR RING.
- THE LOCATION OF MATERIAL STOCK PILES AND ON-SITE STAGING AREAS TO BE APPROVED BY THE ENGINEER.
- ALL STRUCTURES SHALL RECEIVE NEW CASTINGS AS DIRECTED BY THE ENGINEER, AS SPECIFIED ON THE STANDARD CASTING SCHEDULE. THE EXISTING CASTINGS ARE THE PROPERTY OF THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL DELIVER TO CITY OF ANN ARBOR PUBLIC WORKS FACILITY AT THE W.R. WHEELER SERVICE CENTER LOCATED AT 4251 STONE SCHOOL ROAD.
- PAYMENT FOR DRAINAGE STRUCTURE SUMPS, WHERE SPECIFIED, SHALL BE INCLUDED IN THE PAYMENT FOR THE VARIOUS DRAINAGE STRUCTURE SIZES AND OR TYPES.
- WHERE SEWER PIPES OF DIFFERENT SIZES OR MATERIALS ARE JOINED, FERNO FLEXIBLE COUPLINGS WITH STAINLESS STEEL SHEAR RINGS SHALL BE USED. THE CONTRACTOR'S PURCHASE PRICE FOR THESE DEVICES, INCLUDING SHIPPING, SHALL BE PAID AS AN EXTRA, PRIOR TO PAYMENT FOR THIS ITEM. THE CONTRACTOR SHALL SUBMIT RECEIPTS FOR THE ENGINEER'S REVIEW AND APPROVAL. ALL OTHER COSTS ASSOCIATED WITH THE INSTALLATION OF THESE DEVICES SHALL BE INCLUDED IN THE PAYMENT FOR THE SEWER.
- WHERE SEWER AND WATER MAINS 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 MDDT GRANULAR MATERIAL, CLASS II.
- 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 "DS-MACHINE GRADING, MODIFIED".
- IN AREAS WHERE EDGE DRAIN CANNOT BE INSTALLED IN ACCORDANCE WITH CITY OF ANN ARBOR DETAIL SD-TD-11, THE EDGE DRAIN SHALL BE INSTALLED AT THE DEPTH AS INDICATED ON THE PLANS, OR AS DIRECTED BY ENGINEER. IN NO CASE SHALL THE EDGE DRAIN BE INSTALLED AT A GRADE LESS THAN 0.50% OR AT A DEPTH OF LESS THAN 2' BELOW TOP OF PROPOSED PAVEMENT.
- SIGN, REM. SALV INCLUDES THE COST OF REMOVING ATTACHING OR FASTENING HARDWARE AS SHOWN ON THE PLANS AND REMOVING SIGNS FROM SUPPORTS; STORING SIGNS AFTER REMOVAL, LOADING, TRANSPORTING, AND UNLOADING THE SALVAGE SIGN. CONTRACTOR TO COORDINATE WITH THE CITY AND ENGINEER FOR UNLOADING LOCATION.

- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 55 ANN ARBOR UNIFIED DEVELOPMENT CODE, CITY OF ANN ARBOR STANDARDS DIVISION VI, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
- ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
- CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
- SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLIATE AS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
- THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
- TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

**SEQUENCE OF EROSION CONTROL MEASURES:**

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

**SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:**

- 1.1. INSTALL SIL 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 STORM 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 AREAS.
- 1.8. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 1.9. 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, SEDED, MULCHED, SODDED OR BUILT UPON BY OCTOBER 15TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = \$47,050

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

- Bntgad - BLOUNT LOAM - SLOPE IS 2% TO 6%
- WwabD - WAWASEE LOAM - SLOPE IS 2% TO 6%
- WwabC - WAWASEE LOAM - SLOPE IS 6% TO 12%

**NO MOW SEED MIX**

Recommended Seeding Rate: 200 lbs per acre  
4 Varieties of Non-native Tall Fescues  
~2500 seeds per sq ft

Call, email or visit our website for pricing.

Grasses	Lbs/Acre	% by Weight
Festuca brevipila	Hard Fescue (premium variety)	40.00 20%
Festuca ovina	Sheep Fescue	30.00 15%
Festuca rubra commutata	Chewings Fescue (premium variety)	70.00 35%
Festuca rubra arenaria	Creeping Red Fescue	60.00 30%
	Total lbs/acre	200.00 100%

Call, email or visit our website for pricing.

**PRAIRIE SEED MIX**

Total Seeding Rate: 31.98 lbs per acre  
3.94 lbs grasses + 2.94 lbs forbs + 25 lbs nurse crop  
74.08 native seeds per sq ft + up to 4 ft

Call, email or visit our website for pricing.

Grasses	PLS Oz/acre	Seeds/sq ft
Bouteloua curtipendula	Side-oats Grama	11.00 1.52
Bromus kalmii	Prairie Brome	2.00 0.37
Carex pumila	Bicknell's Sedge	0.50 0.20
Carex brevior	Purple Sedge	0.50 1.00
Oryzopsis pallens	Canada Wild Rye	6.00 0.72
Koeleria cristata	June Grass	1.50 6.89
Schizachyrium scoparium	Little Bluestem	36.00 12.40
Sporobolus cryptandrus	Sand Dropseed	2.00 9.18
Sporobolus heterolepis	Prairie Dropseed	2.50 0.92
	Total Grasses	63.00 33.20

Call, email or visit our website for pricing.

Forbs	PLS Oz/acre	Seeds/sq ft
Achillea millefolium	Yarrow	0.50 2.05
Anemone virginiana	Tall Thimbleweed	0.75 0.48
Asclepias tuberosa	Butterfly Milkweed	1.50 0.15
Baptisia lactea (B. leucantha, B. alba)	Wild Indigo	0.50 0.02
Coreopsis tinctoria	Lance-leaf Coreopsis	6.00 2.76
Chamomilla recutita	Partridge Pea	8.00 0.50
Dalea purpurea (Petalostemum p.)	Purple Prairie Clover	4.00 1.65
Echinacea purpurea	Purple Coneflower	5.00 0.76
Euphorbia corollata	Flowering Spurge	0.25 0.05
Lespedeza capitata	Round-headed Bush Clover	0.00 0.16
Liatris spicata	Rough Blazingstar	0.25 0.09
Lupinus perennis	Lupine	1.00 0.03
Monarda fistulosa	Wild Bergamot	1.75 2.81
Monarda punctata	Horsemint	0.50 1.03
Polygonum perfoliatum	Foxglove Beardtongue	1.25 3.73
Potentilla argentea	Hairy Beardtongue	0.75 2.15
Potentilla gracilis (Drymocallis a.)	Prairie Cinquefoil	0.75 3.96
Ratibida pinnata	Yellow Coneflower	1.50 1.03
Rudbeckia hirta	Black-eyed Susan	4.00 8.45
Solidago nemoralis	Old-field Goldenrod	0.50 3.44
Solidago rugosa	Stiff Goldenrod	0.75 0.71
Symphytum laeve	Smooth Blue Aster	0.75 0.95
Sympetrum columbianum	Sky Blue Aster	1.00 1.84
Tradescantia virginiana	Common Spiderwort	1.50 0.28
Verbena stricta	Hoary Vervain	1.25 0.80
Zizia aurea	Prairie Golden Alexander	2.00 0.51
	Total Forbs	47.00 40.40

Call, email or visit our website for pricing.

Woody-Shrub,Tree,Vine	PLS Oz/acre	Seeds/sq ft
Amorpha canescens	Leadplant	1.00 0.39
Ceanothus americanus	New Jersey Tea	0.75 0.12
	Total Forbs	1.75 0.51

Call, email or visit our website for pricing.

Temporary Grass Cover	Oz/acre	Seeds/sq ft
Lolium multiflorum	Annual Ryegrass	60.00 24.79
Avena sativa	Seed Oats	320.00 7.35
	Total Temp Grasses	400.00 32.14

Call, email or visit our website for pricing.

IMPERVIOUS PROJECT AREA

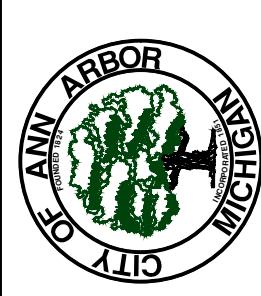
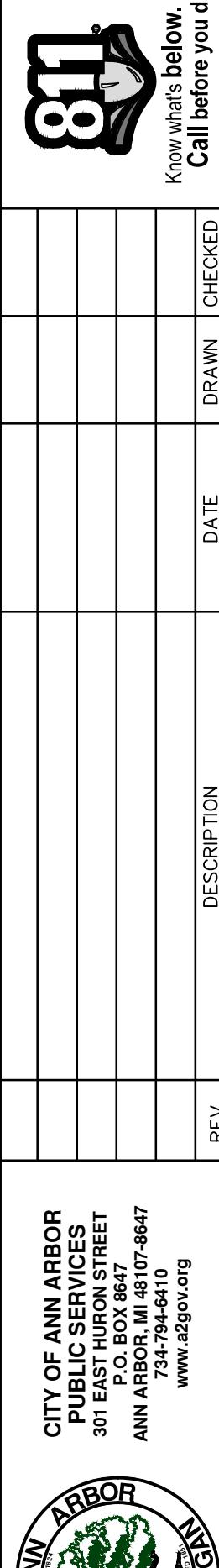
PRIOR TO CONSTRUCTION = .01 ACRES  
POST CONSTRUCTION = .51 ACRES

AREA OF PROPOSED DISTURBANCE = 0.67 ACRES

**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
RIGHT-OF-WAY STREET TREE*	CITY OF ANN ARBOR FORESTRY

\* NO COST TO CONTRACTOR

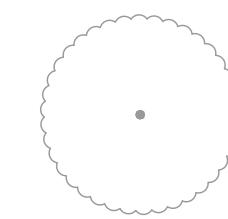


SOUTH

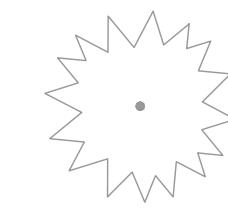
### EXISTING LEGEND

EX = EXISTING

❖ FIRE HYDRANT	W	WATER MAIN
▀ GATE VALVE IN BOX	W/	WATER MAIN ABANDONED
⊗ GATE VALVE IN WELL	R	STORM SEWER
◎ STOP BOX	/	STORM SEWER ABANDONED
□ WATER VAULT	S	SANITARY SEWER
◎ WELL	/	SANITARY SEWER ABANDONED
□ CATCH BASIN (SQ)	g	GAS MAIN
● CATCH BASIN (RD)	g (Dead)	GAS MAIN (DEAD)
○ STORM MANHOLE		ELECTRICAL OVER HEAD
□ NON-CURB CATCH BASIN (SQ)		ELECTRICAL UNDER GROUND
) END SECTION		COMMUNICATION OVER HEAD
○ SANITARY MANHOLE	e duct bank	ELECTRICAL DUCT BANK
○ CLEAN-OUT	oht	TELEPHONE OVER HEAD
• POST	t	TELEPHONE UNDER GROUND
❖ PEDESTRIAN SIGNAL	t duct bank	TELEPHONE DUCT BANK
♪ SIGN	ohtv	CABLE TV OVER HEAD
□ HAND HOLE	tv	CABLE TV UNDER GROUND
⊗ ORNAMENTAL LIGHT	fo	FIBER OPTIC
✳ FLOOD LIGHT	fo duct bank	FIBER OPTIC DUCT BANK
⊗ UNKNOWN MANHOLE		BOUNDARY
◎ TELEPHONE MANHOLE		BUILDING
❖ TELEPHONE RISER		CENTERLINE OF DITCH
◎ GAS VALVE		CENTERLINE/CROWN OF ROAD
○ GAS VENT	800	CONTOUR MAJOR
■ GAS BOX	799	CONTOUR MINOR
❖ ELECTRICAL RISER		EDGE OF WATER
⊗ TRANSFORMER		FLOODPLAIN
♂ UTILITY POLE		FENCE
○ LAMP POLE		GRAVEL
▷ GUY ANCHOR		GUARDRAIL
♀ GUY POLE		STONE WALL
⊗ MONITORING WELL		R.O.W.
■ MAILBOX		TREELINE
● SOIL BORING		WETLAND
△ TRAVERSE POINT		EDGE OF BRUSH
+		HEDGE
○ BENCH MARK		
○ IRON PIPE		
□ MON BOX		



TREE (DECIDUOUS)



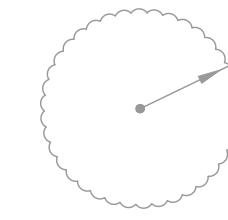
TREE (CONIFEROUS)



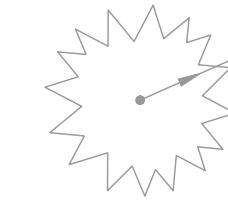
SHRUB (DECIDUOUS)



STUMP



TREE TO REMAIN & PROTECT (DECIDUOUS)  
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10



TREE TO REMAIN & PROTECT (CONIFEROUS)  
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10

### PROPOSED LEGEND

PROP = PROPOSED

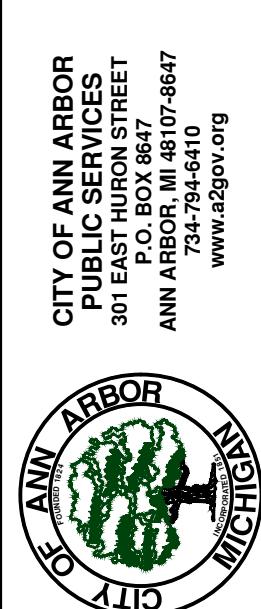
❖ HYDRANT (PLAN)	W	WATER MAIN
⊗ WATER GATE WELL	R	STORM SEWER
▼ REDUCER	S	SANITARY SEWER
▀ WATER GATE VALVE	FO	FIBER OPTIC
□ WATER STOP BOX	E	ELECTRICAL
□ WATER VAULT		CENTERLINE OF DITCH
● INLET		CENTERLINE OF ROAD
■ DOUBLE INLET	□	FENCE
● INLET JUNCTION CHAMBER	▪▪▪▪▪▪▪▪▪▪	GRAVEL
● ROUND CATCH BASIN	//	SILT FENCE
● STORM MANHOLE	□ □ □ □	PROTECTIVE FENCE
→ DRAIN ARROW	•••••	GUARDRAIL
❖ FLARED END SECTION		LOT/UNIT
● SANITARY MANHOLE		CURB
○ CLEAN-OUT		TEMPORARY GRADING PERMIT
● BARREL	800	CONTOUR MAJOR
→ SIGN	799	CONTOUR MINOR
○ PUSH BUTTON		WATER EASEMENT
■ HAND HOLE		STORM EASEMENT
		SANITARY EASEMENT
		R.O.W.
		LIMITS OF CONSTRUCTION/GRADING

■■■■■■■■■■	DETECTABLE WARNING
■■■■■■■■■■	ASPHALT
■■■■■■■■■■	CONCRETE
■■■■■■■■■■	SIDEWALK
●	TREE (DECIDUOUS)

●	TREE (CONIFEROUS)
●	TREE TO BE REMOVED (DECIDUOUS)
●	TREE TO BE REMOVED (CONIFEROUS)
●	TREE TO BE REMOVED (CONIFEROUS)
●	STUMP TO BE REMOVED



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



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH-MAIN-STREET-SIDEWALK  
PROJECT

LEGEND

SCALE : 1INCH  
DRAWING No.  
2020-029-3  
SHEET No.  
3 OF 38

## GENERAL NOTES

1. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES ARE BASED ON PREVIOUS CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING WITH FIELD MEASUREMENTS ALL DIMENSIONS AND ELEVATIONS FOR FABRICATION AND/OR MODIFICATIONS OR ADDITIONS BEING MADE UNDER THIS CONTRACT. ANY DISCREPANCIES SHALL BE PRESENTED TO THE OWNER AND ANY DESIGN CONFLICTS SHALL BE RESOLVED WITH OWNER PRIOR TO FABRICATIONS OR CONSTRUCTION OF IMPACTED ITEMS.
2. ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN WITH THE  $\pm$  SYMBOL, ARE APPROXIMATE AND SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR BEFORE FABRICATION AND CONSTRUCTION.
3. ALL DIMENSIONS OR ELEVATIONS MARKED WITH AN ASTERISK \*\*\* SHALL BE DETERMINED OR VERIFIED WITH EQUIP. MFR. CERTIFIED SHOP DRAWINGS OR FIELD MEASUREMENTS OF EXISTING CONSTRUCTION BEFORE FABRICATION AND CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF STRUCTURES DURING CONSTRUCTION. THE STRUCTURAL INTEGRITY OF THE RETAINING WALL SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. THE ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURES, MEANS AND METHODS, OR SAFETY DURING CONSTRUCTION, MEANS AND METHOD OF CONSTRUCTION, TEMPORARY SHORING AND BRACING, AND CONSTRUCTION SITE SAFETY ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL ELEVATIONS ARE BASED ON NAVD 88.

## CODES, LOADS AND GEOTECHNICAL

1. ALL STRUCTURES SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES:
  - A. MICHIGAN BUILDING CODE (2015)
  - B. INTERNATIONAL BUILDING CODE (2015)
  - C. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES - AMERICAN SOCIETY OF CIVIL ENGINEERS" ASCE 7-16
  - D. AISC STEEL CONSTRUCTION MANUAL, FOURTEENTH EDITION
  - E. AMERICAN WELDING SOCIETY (AWS)
    1. AWS D1.1: 2010 STRUCTURAL STEEL
    2. AWS D1.3: 2008 SHEET STEEL
    3. AWS D1.4: 2001 REINFORCING STEEL
  - F. OCCUPATIONAL SAFETY AND HEALTH ACT, OSHA REGULATIONS (STANDARDS-29 CFR) PART 1926 SUBPART R-STEEL ERECTION
  - G. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318-19
  - H. GEOTECHNICAL INVESTIGATION FOR S. MAIN STREET SIDEWALK, ANN ARBOR MICHIGAN, MAY 4, 2023.
  - I. MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

## DESIGN LOADS

1. DESIGN LOADS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2015 (IBC) AND NFPA 68/69.
2. DESIGN LOADS:
  - A. EARTH LATERAL LOADS
    - 1.) SEE SOIL LOAD GRAPH ON THIS SHEET.
  - B. ALL GUARDRAILS AND HANDRAILS SHALL BE DESIGNED TO MEET LOADING CRITERIA CONFORMING TO REQUIREMENTS OF INTERNATIONAL BUILDING CODE 2015.

## DEMOLITION/REMOVAL

1. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO EXISTING STRUCTURES, WHICH ARE TO REMAIN, DURING REMOVAL WORK. ALL DAMAGE SHALL BE REPAIRED TO THE COMPLETE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. WHEN REMOVING EXISTING CONCRETE BY CUTTING OR CHIPPING THE CONTRACTOR SHALL ONLY REMOVE REINFORCING BARS WHICH CANNOT BE BENT INTO AREAS WHERE NEW CONCRETE WOULD COMPLETELY COVER THEM.
3. IF FRACTURE OF ADJACENT CONCRETE OCCURS DURING REMOVAL/ALTERATION WORK, THE REPAIR SHALL BE WITH AN ENGINEER APPROVED PRESSURE INJECTED EPOXY, TO THE COMPLETE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR SHALL PROVIDE WRITTEN PLAN AND DESCRIPTION OF ALL REMOVAL, MODIFICATION, OR ALTERATION WORK ON EXISTING STRUCTURES FOR REVIEW AND ACCEPTANCE PRIOR TO BEGINNING WORK.

## EXCAVATION

1. CONTRACTOR SHALL PREPARE AN EXCAVATION PLAN INCLUDING SIDE SLOPES PROPOSED, TEMPORARY OR PERMANENT EARTH RETENTION SYSTEMS, AND Dewatering OR DEPRESSURIZING SYSTEMS, IF REQUIRED, FOR REVIEW PRIOR TO START OF WORK.
2. SOIL BORING DATA IS INCLUDED IN THE SPECIFICATIONS FOR INFORMATION ABOUT THE UNDERGROUND CONDITIONS ONLY AT THE LOCATIONS WHERE THE BORINGS WERE MADE. THE OWNER DOES NOT REPRESENT OR WARRANT THE UNDERGROUND CONDITIONS ENCOUNTERED DURING CONSTRUCTION SHALL COMPLY TO THE REQUIREMENTS OF THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT. THE CONTRACTOR SHALL DRAW THEIR OWN CONCLUSIONS AS TO SOIL CONDITIONS FROM THEIR OWN EXPERIENCE, INDEPENDENT KNOWLEDGE, AND INVESTIGATION OF THE SITE. THE CONTRACTOR SHALL OBTAIN ADDITIONAL SUBSURFACE CONDITION INFORMATION AS THEY CONSIDER NECESSARY TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
3. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN AN APPROVED MANNER.
4. ALL EXCAVATIONS SHALL CONFORM TO OSHA REQUIREMENTS.
5. ALL EXCAVATIONS, FILLING, BACKFILLING, FOUNDATION AND COMPACTION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL INVESTIGATION REPORT, REQUIREMENTS NOTED ON THE DRAWINGS, AND PROJECT SPECIFICATIONS, UNO.
6. BARRICADE ALL OPEN EXCAVATIONS OCCURRING AS PART OF THE WORK AND POST WITH WARNING LIGHTS.
7. SLOPE OR BENCH SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION, PROVIDE SHORING OR SHIELDING WHERE OPEN CUT SLOPES ARE NOT POSSIBLE BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED.
8. IF ENCOUNTERED, THE EXISTING SEWER PIPES WITHIN THE EXCAVATION AREA SHALL BE BACKFILLED WITH CLSM TO THE SPRINGLINE OF THE PIPE. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY SUPPORTING THE EXISTING PIPES DURING CONSTRUCTION UNTIL PIPES HAVE BEEN ADEQUATELY BACKFILLED.

## SOLDIER PILE AND LAGGING WALLS

1. CONTRACTOR SHALL BE AWARE OF AND VERIFY LOCATION OF ALL UNDERGROUND UTILITIES, TANKS, ETC. DUE CARE SHALL BE EXERCISED DURING CONSTRUCTION ACTIVITIES (INCLUDING DRILLED SHAFTS) SUCH THAT EXISTING UTILITIES ARE NOT DAMAGED.
2. THE OWNER WILL RETAIN THE SERVICES OF A GEOTECHNICAL ENGINEER TO MONITOR THE DRILLING ACTIVITIES AND DETERMINE THE QUALITY OF SOIL OR ROCK AT ALL DRILLED SHAFT LOCATIONS.
3. SOLDIER PILE DRILLED SHAFTS SHALL BE BACKFILLED WITH 5000 PSI CONCRETE.
4. LAGGING SHALL EXTEND AT LEAST 12" BELOW THE FINAL GRADE ELEVATION.
5. SEE DRAWINGS FOR MINIMUM REQUIRED PRECAST CONCRETE LAGGING THICKNESS. CONTRACTOR SHALL DESIGN PRECAST LAGGING TO RESIST THE EARTH LATERAL LOADS INDICATED ON THIS SHEET.
6. CONTRACTOR SHALL MEET THE FOLLOWING TOLERANCES:
  - A. OUT OF PLAN LOCATION TOLERANCE: WITHIN 1" OF THEORETICAL LOCATION.
  - B. VERTICALITY TOLERANCE: SHALL NOT EXCEED 1%.
7. IN CASE OF CONFLICT WITH EXISTING UTILITIES, THE SOLDIER PILE SPACING SHALL BE DECREASED SO THAT NO EXISTING UTILITIES ARE AFFECTED BY DRILLING ACTIVITY.

## WEEP HOLES

1. WEEP HOLES USED TO CONTROL GROUNDWATER LEVEL SHALL BE INSTALLED AS EXCAVATION PROGRESSES.
2. WEEP HOLES TO BE CAPPED. SEE CAP DETAILS ON SHEET 5.
3. ADDITIONAL WEEP HOLES SHALL BE INSTALLED AS REQUIRED AT LOCATIONS OF SEEPAGE OR WHERE SEAMS OF SAND AND/OR SILT ARE OBSERVED IN THE EXCAVATION.

## CAST-IN-PLACE CONCRETE

1. THE DETAILING, BENDING, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318-19 CODE AND ACI DETAILING MANUAL, SP-66 (94). FIELD BENDING WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER.
2. ALL REINFORCING SHALL BE NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
3. STRUCTURAL CONCRETE SPECIFICATIONS PER MDOT DIVISION 7, ALL STRUCTURAL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 5000 PSI @ 28 DAYS, UNO. REFER TO CIVIL SHEETS FOR THE COMPRESSIVE STRENGTH REQUIREMENT FOR CIVIL COMPONENTS SUCH AS SIDEWALKS, WALKS, RAMPS AND LANDINGS.
4. STEEL REINFORCING SHALL NOT BE SPLICED AT POINTS OTHER THAN SHOWN ON THE PLANS, EXCEPT AS APPROVED BY THE ENGINEER, UNO.
5. ALL STIRRUPS AND TIES SHALL BE CLOSED TYPE WITH 135 DEGREE HOOKS, UNO.
6. THE LENGTH OF ALL LAP SPLICES SHALL BE AS SPECIFIED IN "REINFORCING TENSION SPLICE TABLE" ON THIS SHEET UNLESS OTHERWISE INDICATED IN DRAWINGS. WHEN BARS OF DIFFERENT SIZE ARE BEING LAPPED, THE LENGTH SHALL BE THE SPECIFIED LAP LENGTH OF THE LARGER BAR.
7. CONCRETE COVER OVER PRIMARY REINFORCEMENT SHALL BE 2 INCHES MINIMUM (1 1/2" FOR COLUMN TIES AND BEAM STIRRUPS), UNLESS NOTED OTHERWISE, AND 3 INCHES MINIMUM WHERE CAST AGAINST EARTH.

## PRECAST CONCRETE

1. DESIGN OF PRECAST STRUCTURAL MEMBERS SHALL CONFORM TO THE LATEST EDITION OF ACI 350 AND PCI MNL 120 AND SHALL BE DESIGNED TO SUSTAIN THE SUPERIMPOSED LOADS INDICATED.
2. ALL PRECAST SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.
3. PRECAST MANUFACTURER SHALL DESIGN PRECAST STRUCTURAL SYSTEMS, INCLUDING ALL REQUIRED STEEL HANGERS WHICH SHALL BE HOT-DIPPED GALVANIZED STEEL ABOVE DRY AREAS, AND A316 STAINLESS STEEL ABOVE WET AREAS. DESIGN CALCULATIONS SHALL BE MADE BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN, AND SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.

## METALS - STEEL

1. STRUCTURAL STEEL AND MISCELLANEOUS METALS DESIGN SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC/ANSI 360.
2. BOLTS SHALL BE A MINIMUM 3/4" DIAMETER, ASTM A325N, TYPE 1, UNO, PROVIDE COMPATIBLE A563 GRADE DH, HEAVY HEX NUTS, AND F436 GRADE 1 WASHERS.
3. ALL GALVANIZED STEEL SHALL BE HOT-DIP GALVANIZED CONFORMING TO ASTM A123, UNO.
4. STRUCTURAL STEEL HP PILING SHALL BE ASTM A572 GRADE 50 (f=50 KSI) STEEL HOT-DIP GALVANIZED.

## MISCELLANEOUS

1. CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND ACCOMMODATE OPENINGS AND EMBEDDED ITEMS SHOWN ON OTHER DRAWINGS.
2. ALL ADHESIVE ANCHORING SYSTEMS FOR POST INSTALLED ANCHORS AND/OR REINFORCING DOWELS IN CONCRETE SHALL BE "HIT-HY 200 ADHESIVE ANCHORING SYSTEM" BY HILTI AT SIZE AND SPACING INDICATED ON DRAWINGS (OR APPROVED EQUAL).
3. ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN WITH THE  $\pm$  SYMBOL, ARE APPROXIMATE AND SHALL BE VERIFIED IN FIELD BY SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR BEFORE FABRICATION AND CONSTRUCTION.

## STRUCTURAL DEFERRED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD:
  - A. PRECAST CONCRETE LAGGING
  - B. ALL TEMPORARY GROUND SUPPORT SYSTEMS
2. DEFERRED SUBMITTAL ITEMS WILL BE SUBMITTED TO THE OWNER FOR APPROVAL DURING THE CONSTRUCTION OF THE PROJECT. CONSTRUCTION OF DEFERRED SUBMITTAL ITEMS SHALL NOT COMMENCE UNTIL THE OWNER HAS APPROVED THE SUBMITTAL.

## STRUCTURAL SPECIAL INSPECTIONS

1. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED IN COMPLIANCE WITH MICHIGAN BUILDING CODE.

## ADHESIVE ANCHORING SYSTEM MINIMUM EMBEDMENT DEPTH FOR DOWELS AND RODS

BAR SIZE	EMBED DEPTH	REMARKS
#3	5 1/2"	
#4	5 1/2"	
#5	7"	
#6	8 1/2"	
#7	10"	
#8	11 3/4"	

## ANCHOR RODS

BOLT DIAMETER	EMBED DEPTH
3/8"	3 1/2"
1/2"	4 1/4"
5/8"	5"
3/4"	6 5/8"
1"	8 1/4"

NOTES:  
 1. ABOVE TABLE IS FOR NORMAL WEIGHT CONCRETE WITH A COMPRESSIVE STRENGTH OF 5,000 PSI AND REINFORCING STEEL WITH A TENSILE STRENGTH OF 50,000 PSI.  
 2. ALL SPLICES SHALL BE CONSIDERED TENSION SPLICES USING LAP LENGTHS IN TABLE ABOVE UNLESS SPECIFICALLY SHOWN OTHERWISE IN THE DRAWINGS.  
 3. LENGTHS ARE BASED ON LAP CLASS B SPLICES WITH CENTER TO CENTER SPACING BARS GREATER THAN 6 DIAMETERS.  
 4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST UNDER THEM.  
 5. USE TENSION LAP LENGTHS FOR HORIZONTAL & VERTICAL WALL BARS.

## REINFORCING TENSION SPLICE TABLE

BAR SIZE	TENSION LAP	TOP BARS <sup>4</sup>
#3	16"	22"
#4	20"	29"
#5	24"	36"
#6	29"	43"
#7	42"	63"
#8	48"	72"
#9	54"	81"
#10	61"	91"
#11	67"	101"

NOTES:  
 1. ABOVE TABLE IS FOR NORMAL WEIGHT CONCRETE WITH A COMPRESSIVE STRENGTH OF 5,000 PSI AND REINFORCING STEEL WITH A TENSILE STRENGTH OF 50,000 PSI.  
 2. ALL SPLICES SHALL BE CONSIDERED TENSION SPLICES USING LAP LENGTHS IN TABLE ABOVE UNLESS SPECIFICALLY SHOWN OTHERWISE IN THE DRAWINGS.  
 3. LENGTHS ARE BASED ON LAP CLASS B SPLICES WITH CENTER TO CENTER SPACING BARS GREATER THAN 6 DIAMETERS.  
 4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST UNDER THEM.  
 5. USE TENSION LAP LENGTHS FOR HORIZONTAL & VERTICAL WALL BARS.

ALT APPROX	ALTERNATE APPROXIMATE
B/ BOTTOM	BTM
C/ CONTROL (CONTRACTION) JOINT	JOINT
CL/ CENTERLINE	LT
CONC/ CONCRETE	MAX
CONT/ CONTINUOUS	MDOT
COR/ CORNER	MICHIGAN DEPARTMENT OF TRANSPORTATION
D/ DEPTH	MINIMUM
DIA/ DIAMETER	NEAR SIDE
DIAG/ DIAGONAL	NOT TO SCALE
DT/ DRAIN TILE	ON CENTER
DWLS/ DOWELS	OUTSIDE FACE
EJ/ EXPANSION JOINT	OPENING
EF/ EACH FACE	REINFORCEMENT
ES/ EACH SIDE	SHEET
EW/ EACH WAY	SIMILAR
EA/ EACH	STAINLESS STEEL
EL/ ELEVATION	STEEL-SHEET PILING
EX/ EXISTING	STRUCTURAL
EXIST/ EXISTING	STRUCTURAL REMOVAL
EXP/ EXPANSION	TOP
FF/ FAR FACE	TOP OF
FS/ FAR SIDE	TOP AND BOTTOM
FT/ FEET	THICK
FV/ FIELD VERIFIED	TYPICAL
GALV/ GALVANIZED	UNLESS NOTED OTHERWISE
GR/ GRADE	VERTICAL
H/ HORIZONTAL	VERTICAL EACH FACE
HEF/ HORIZONTAL EACH FACE	VERTICAL INSIDE FACE
HIF/ HORIZONTAL INSIDE FACE	VERTICAL OUTSIDE FACE
HOF/ HORIZONTAL OUTSIDE FACE	VERTICAL WIDTH
HORIZ/ HORIZONTAL	WELDED WIRE FABRIC

## ADHESIVE ANCHOR TABLE

SCALE: NONE

NOTES:

1. ALL ANCHORS INSTALLED WITH AN ADHESIVE ANCHORING SYSTEM SHALL, AT A MINIMUM, HAVE THE EMBEDMENT DEPTHS INDICATED IN THE DRAWINGS. USE 12" UNLESS SPECIFICALLY INDICATED OTHERWISE ON DRAWINGS.

## REINFORCING TENSION SPLICE TABLE

SCALE: NONE

NOTES:

1. ABOVE TABLE IS FOR NORMAL WEIGHT CONCRETE WITH A COMPRESSIVE STRENGTH OF 5,000 PSI AND REINFORCING STEEL WITH A TENSILE STRENGTH OF 50,000 PSI.

2. ALL SPLICES SHALL BE CONSIDERED TENSION SPLICES USING LAP LENGTHS IN TABLE ABOVE UNLESS SPECIFICALLY SHOWN OTHERWISE IN THE DRAWINGS.

3. LENGTHS ARE BASED ON LAP CLASS B SPLICES WITH CENTER TO CENTER SPACING BARS GREATER THAN 6 DIAMETERS.

4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST UNDER THEM.



# TYPE A SOLDIER PILE WALL ELEVATION

SCALE: 1:3

The diagram illustrates the cross-section of a Type A Soldier Pile Wall. Key components and dimensions include:

- ROW:** The top horizontal line of the wall.
- FENCE:** A fence is to be installed above the concrete cap. Details are to be seen in Civil Drawings and Fence Post Base Plate Detail on Sheet 9.
- CONCRETE CAP:** The top horizontal concrete slab.
- REMOVE EXISTING STONE WALL:** The height of the existing stone wall to be removed is 1'-6".
- 8" PRECAST CONCRETE LAGGING W/ ARCHITECTURAL STAMP:** The lagging panels.
- 4" TOP SOIL:** The top layer of soil.
- BACK-GRADE TO SLOPE AWAY FROM RETAINING WALL:** The backfill slope.
- MIN. 20°:** The minimum required slope angle.
- COMPACTED BACKFILL MDOT 22A:** The fill material.
- MDOT DRAINAGE MATERIAL 34R WRAPPED WITH GEOTEXTILE PER MDOT 910:** The drainage material.
- 6" PERFORATED PVC:** The perforated PVC pipe.
- 3" ID WEEP HOLE AT 10' OC:** The weep holes.
- 2'-0" DIA DRILLED SHAFT:** The diameter of the drilled shaft.
- HP 12x84 SOLDIER PILE:** The type and size of the soldier pile.
- VARIES 3" TO 14" SEE PROFILE:** The variation in thickness of the wall, to be seen in the profile.
- SIDEWALK SEE CIVIL DRAWINGS:** The sidewalk details.
- EXISTING CURB AND GUTTER:** The existing curb and gutter.
- EXCAVATE AS REQUIRED SEE NOTE 1 ON THIS SHEET:** Excavation requirements.
- COMPACTED BACKFILL MDOT 22A:** The fill material at the bottom.
- 8"** and **MIN. 4"**: Specific dimensions for the bottom fill.

1 TYPE A SOLDIER PILE WALL SECTION  
6 SCALE: 1:3

# TYPE A CONCRETE CAP REINFORCEMENT SECTION

2011.12

# TYPE A CONCRETE CAP REINFORCEMENT SECTION

111111

**C SERVICES - ENGINEERING**

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**SOUTH MAIN STREET SIDEWALK**

' OF ANN ARBOR  
BLIC SERVICES  
AST HURON STREET  
P.O. BOX 8647  
ARBOR, MI 48107-8647  
34-794-6410  
[www.a2gov.org](http://www.a2gov.org)

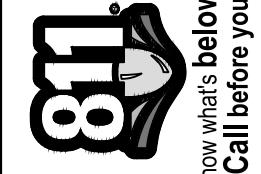
The image features a large, bold '81' logo on the left. To the right of the '1', there is a black and white illustration of a shovel digging into the ground, with a small cloud of dust or dirt. Below the logo is a grid of 12 empty lines for writing. The entire graphic is set against a white background.

SHEET No.

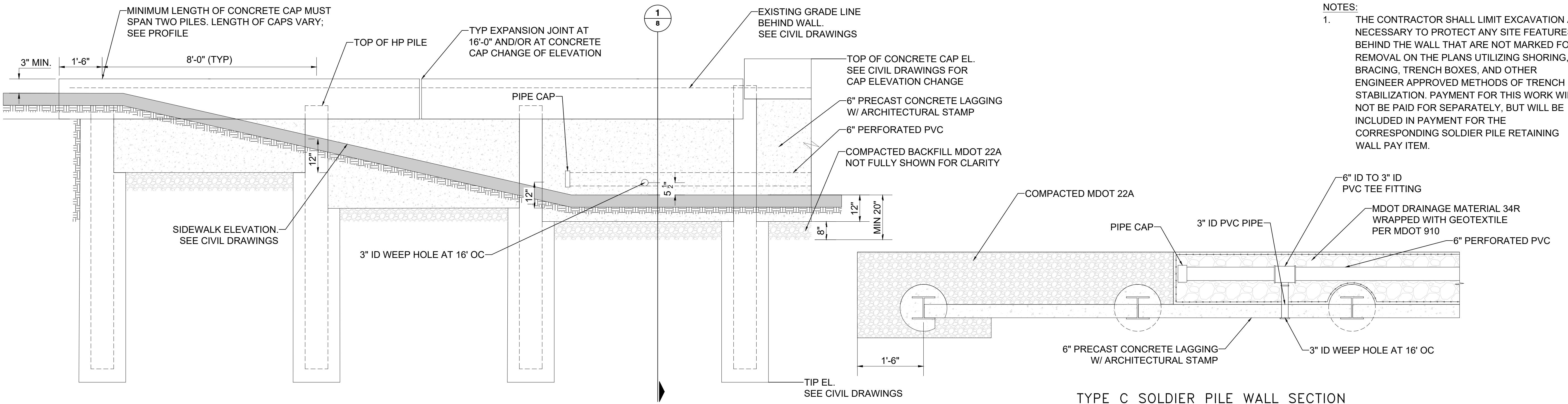
Page 1 of 1

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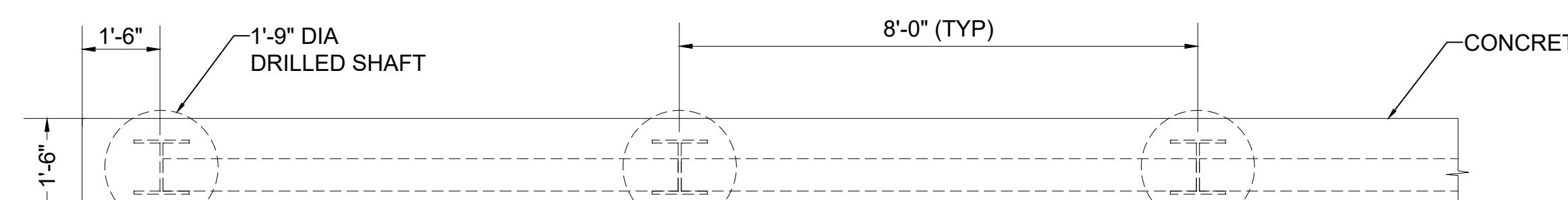
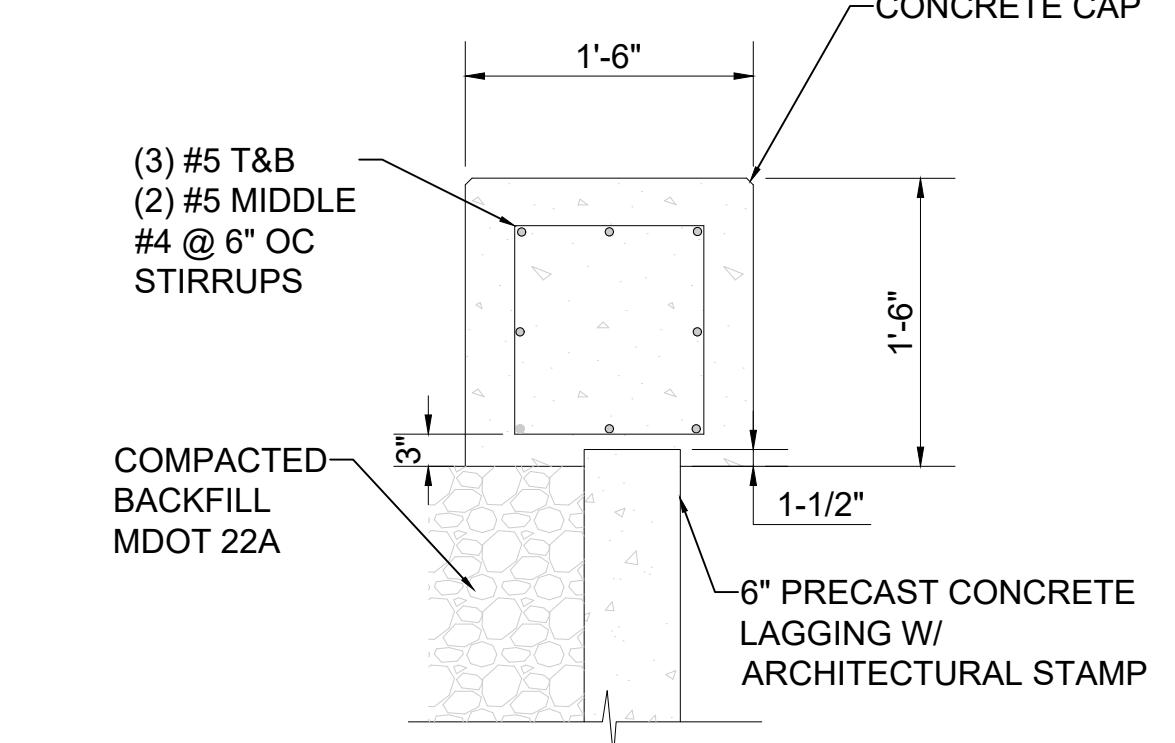
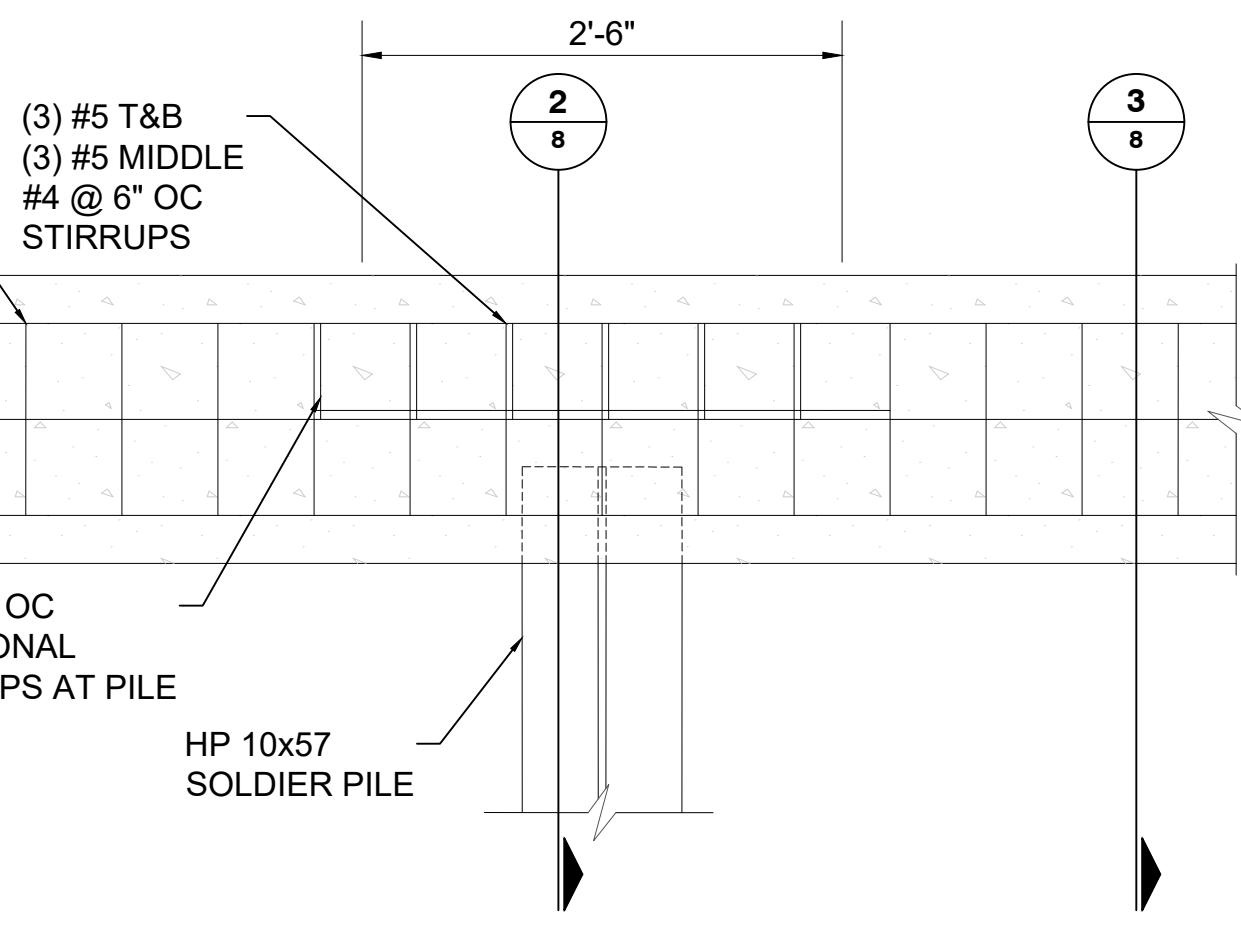
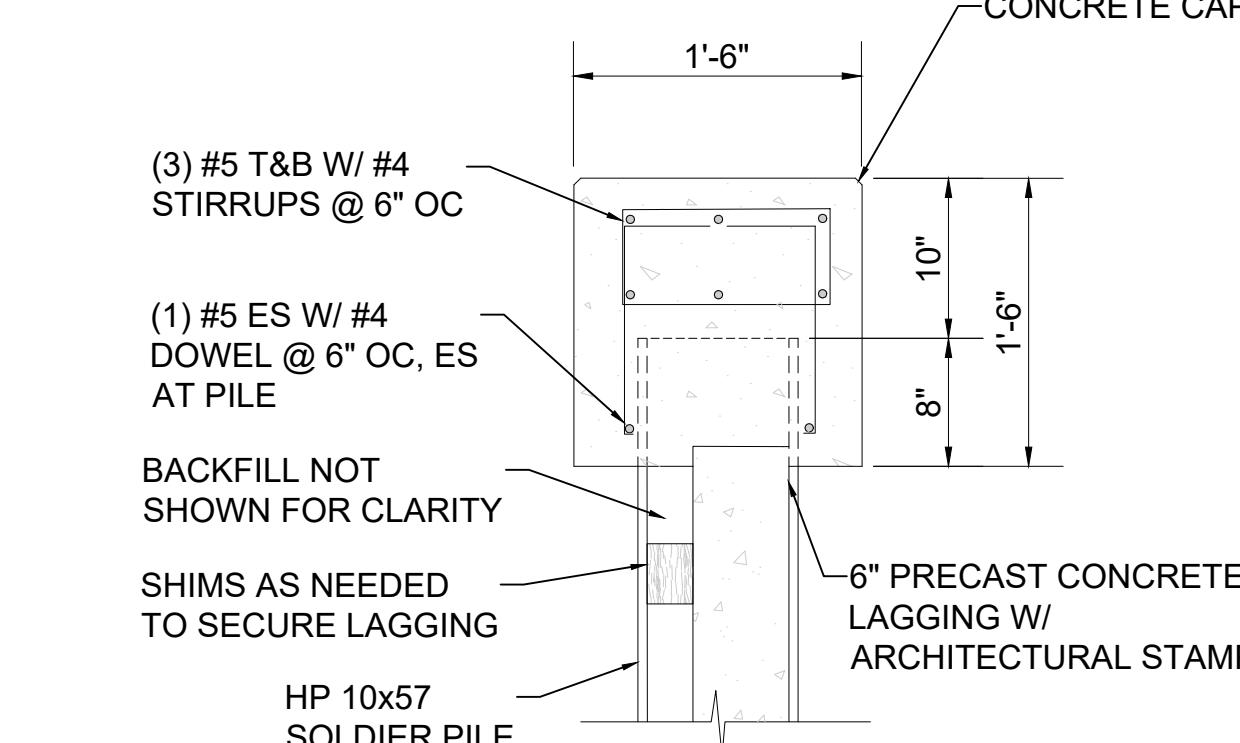
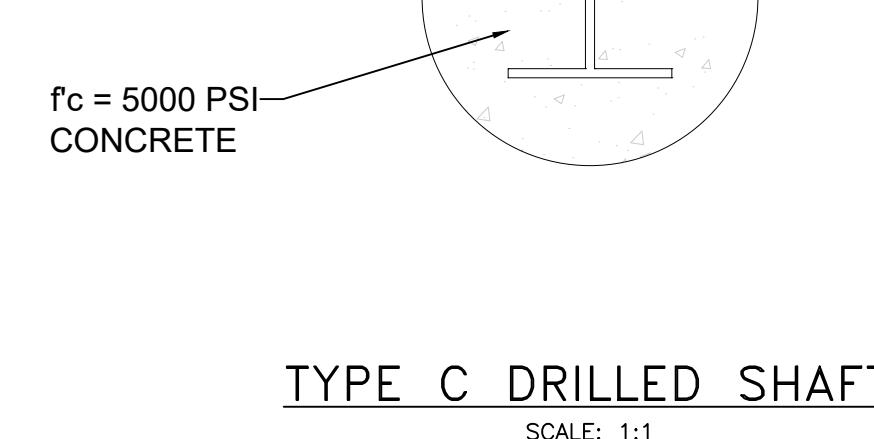
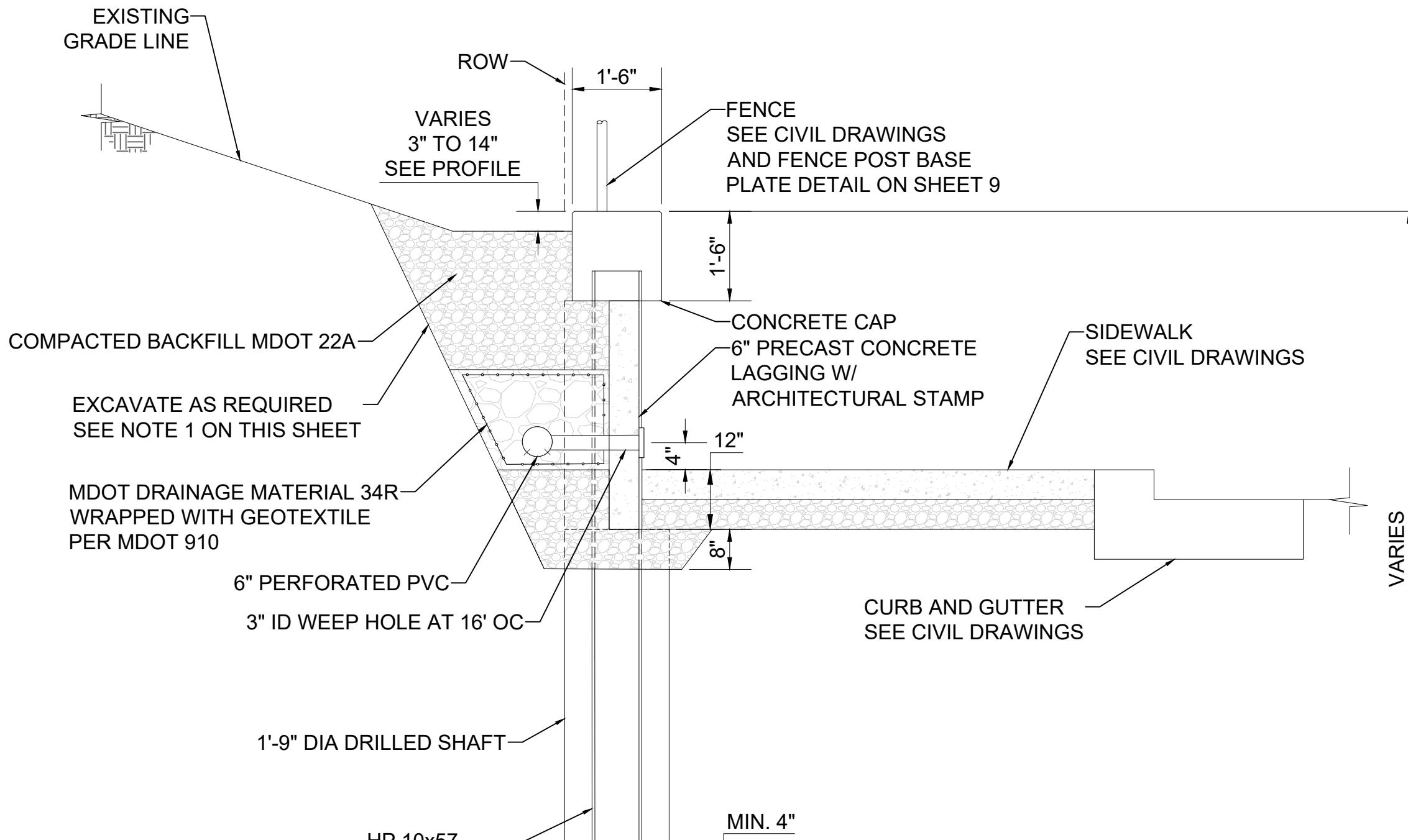


Know what's below.  
Call before you dig.



TYPE C SOLDIER PILE WALL ELEVATION

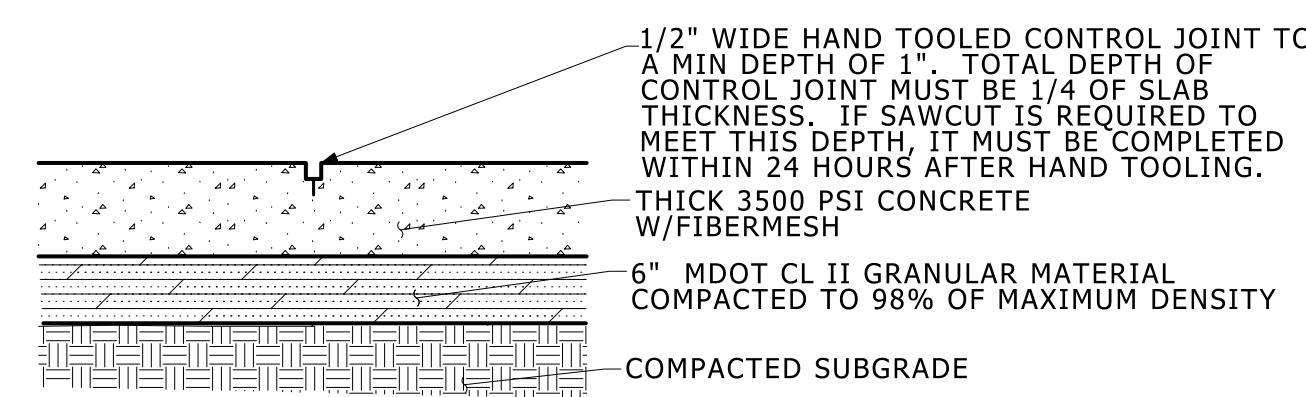
SCALE: 1:2



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH MAIN STREET SIDEWALK  
TYPE C RETAINING WALL STA 11+00 TO 20+38

SHEET No. 7 OF 38  
DRAWING No. 2020-425-8  
SCALE : 1:2

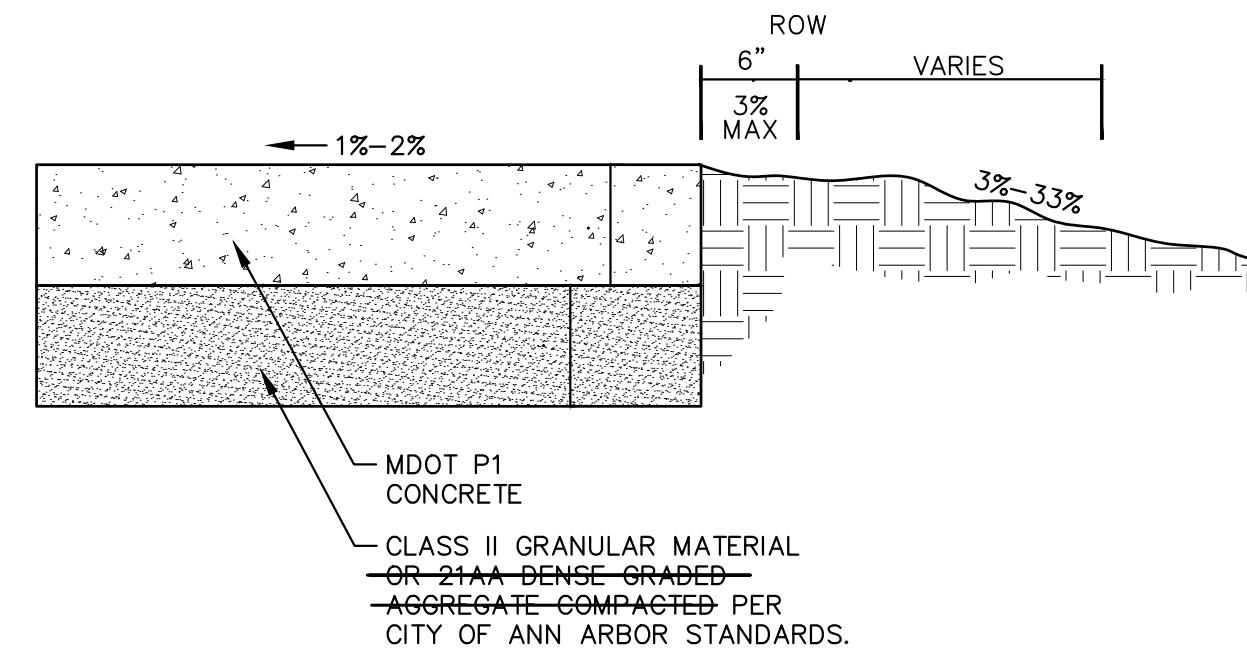




**DS\_CONC, SIDEWALK, FIBERMESH, 4 IN. &  
DS\_CONC, SIDEWALK, FIBERMESH, 8 IN.**

NO SCALE

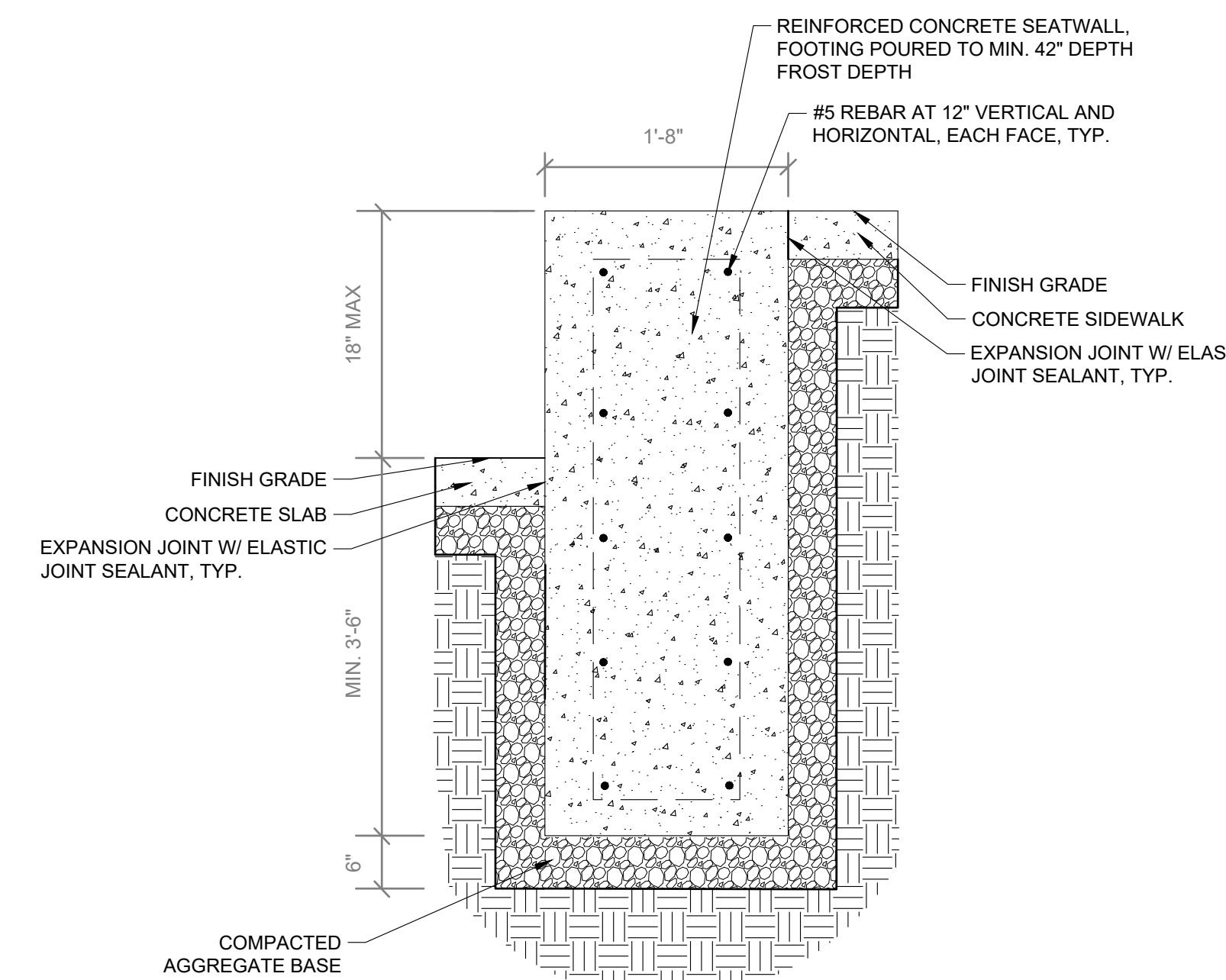
NOTES: EXPANSION JOINTS SHALL BE INSTALLED SUCH THAT NO SINGLE DIMENSION EXCEEDS 50 FT. AREA BETWEEN EXPANSION JOINTS NOT TO EXCEED 320 SQ.FT.  
1/2" EXPANSION PAPER SHALL BE PLACED AT ALL LOCATIONS WHERE NEW SIDEWALK ABUTS CONCRETE CURB, EXISTING SIDEWALK, LIGHT POLE BASES AND RETAINING WALLS.  
SNAP-CAP EXPANSION JOINT STRIPS CAN BE USED ON ALL EXPANSION JOINTS.  
ALL EXPANSION JOINTS SHALL BE SEALED.  
BROOM FINISH PARALLEL TO JOINTS AND PERPENDICULAR TO TRAFFIC (IF BROOMING PATTERN NOT SHOWN).



NOTES:

1. STANDARD SIDEWALK WIDTH SHALL BE 5'.
2. STANDARD SLAB LENGTH SHALL BE 5'.
3. MINIMUM SLAB LENGTH SHALL BE 3' AND MAXIMUM 7'.
4. MINIMUM SIDEWALK THICKNESS (T1) SHALL BE 4".
5. SIDEWALK THICKNESS (T1) SHALL BE INCREASED AT DRIVE APPROACHES TO 6" FOR SINGLE OR DUPLEX USES AND TO 8" FOR ALL OTHER USES.
6. BASE THICKNESS (T2) SHALL BE 4".
7. BASE THICKNESS (T2) SHALL BE INCREASED TO 6" AT DRIVE APPROACHES.
8. NATIVE MATERIAL IS ACCEPTABLE FOR SIDEWALK REPLACEMENT IF BASE IS STABLE AND FREE OF ORGANIC OR DELETERIOUS MATERIALS.
9. SIDEWALK RAMPS SHALL BE CONSTRUCTED AT LOCATIONS AS SHOWN ON THE PLANS AND SHALL COMPLY WITH THE REQUIREMENTS OF MDOT DETAIL R-28 (LATEST VERSION).
10. EXPANSION AND CONTRACTION JOINTS SHALL BE PROVIDED PER STANDARD DETAIL SD-R-10.

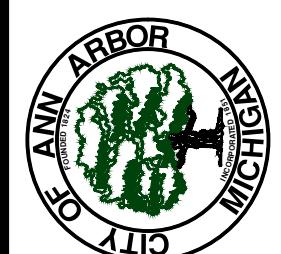
**SIDEWALK CROSS SECTION SD-R-9**



**DS\_CIP RETAINING WALL**  
NOT TO SCALE

**STRUCTURAL NOTES**

1. ALL STRUCTURES SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES:  
A. MICHIGAN BUILDING CODE (2021)  
B. INTERNATIONAL BUILDING CODE (2021)  
C. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES - AMERICAN SOCIETY OF CIVIL ENGINEERS" ASCE 7-16  
D. CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES - AMERICAN CONCRETE ASSOCIATION ACI 350 (2006)
2. WIND LOADS, PER ASCE 7-16 (RISK CATEGORY I)  
1. BASIC WIND SPEED,  $V_{ult}=103$  MPH  
2. EXPOSURE CATEGORY - C  
3. TOPOGRAPHIC FACTOR -  $K_{zt} = 1.0$
3. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3500 PSI @ 28 DAYS UNLESS OTHERWISE NOTED
4. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
5. THE DETAILING, BENDING, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI STANDARD 350-06/350R-06 CODE AND ACI DETAILING MANUAL, SP-66 (94). FIELD BENDING WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER
6. THE LENGTH OF #4 LAP SPLICES SHALL BE 20" BY DEFAULT OR 29" FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE OF CONCRETE CAST UNDERNEATH (UNLESS OTHERWISE INDICATED IN DRAWINGS).
7. CONCRETE COVER OVER PRIMARY REINFORCEMENT SHALL BE (2) INCHES MINIMUM, UNLESS NOTED OTHERWISE, AND (3) INCHES MINIMUM WHERE CAST AGAINST EARTH.
8. BOTTOM AND TOP REINFORCING BARS FOR ALL DISCONTINUOUS ENDS OF BEAMS AND SLABS SHALL HAVE HOOKS AND SPLICES CONFORMING TO ACI MANUAL OF STANDARD PRACTICE.
9. ALL ADHESIVE ANCHORING SYSTEMS FOR POST INSTALLED ANCHORS AND/OR REINFORCING DOWELS IN CONCRETE AND MASONRY SHALL BE "HIT-HY 200 ADHESIVE ANCHORING SYSTEM" BY HITLIT AT SIZE AND SPACING INDICATED ON DRAWINGS (OR APPROVED EQUAL).
10. ALL POST-INSTALLED ANCHOR BOLTS INTO NEW OR EXISTING CONCRETE SHALL BE ASTM A316 STAINLESS STEEL THREADED ROD WITH STAINLESS STEEL WASHER AND NUT, UNO.



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH MAIN STREET SIDEWALK PROJECT

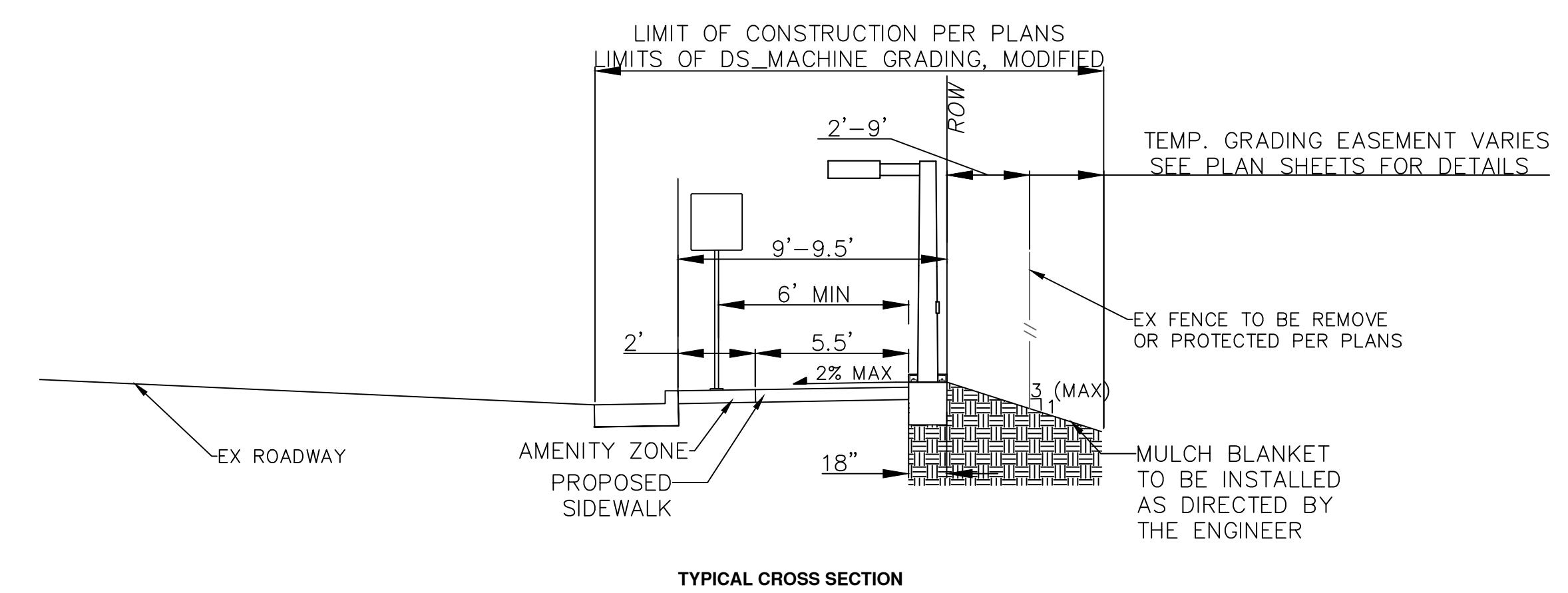
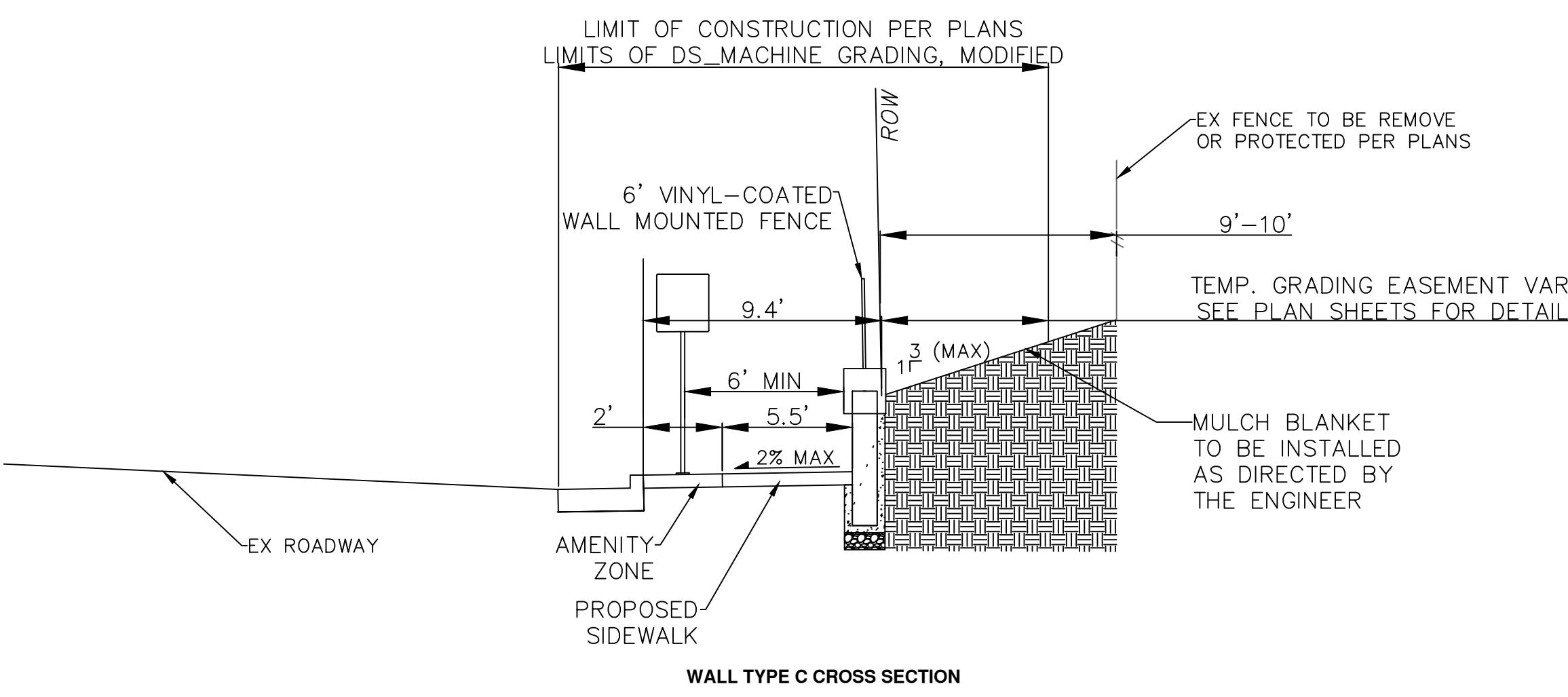
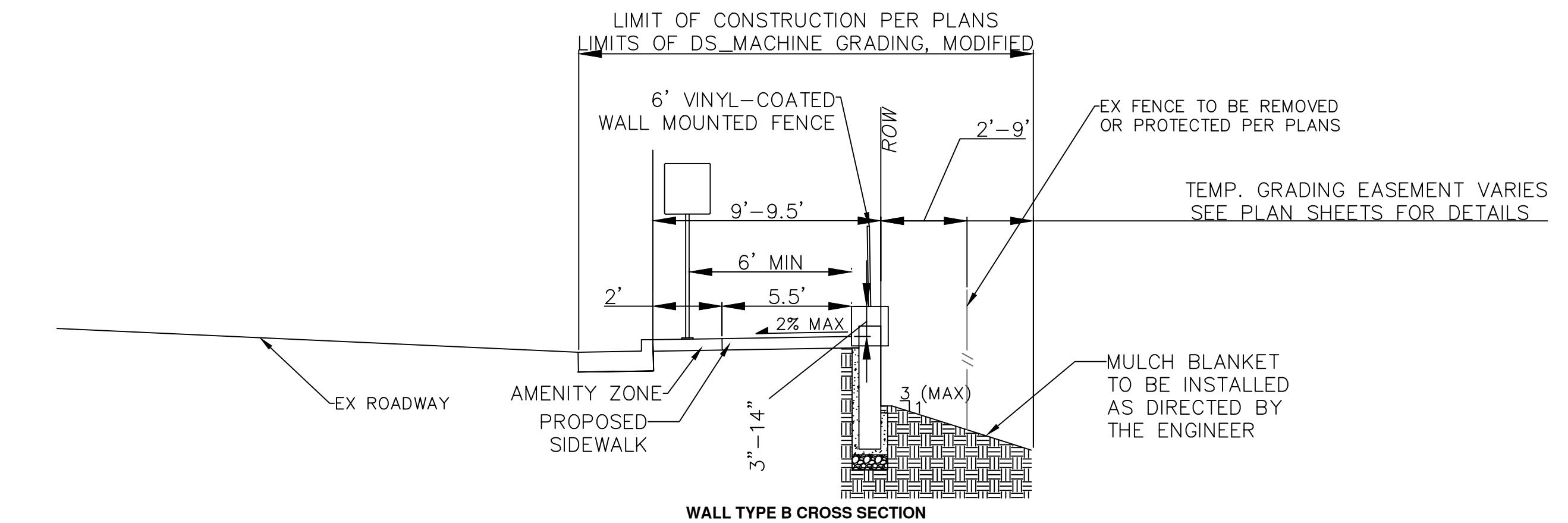
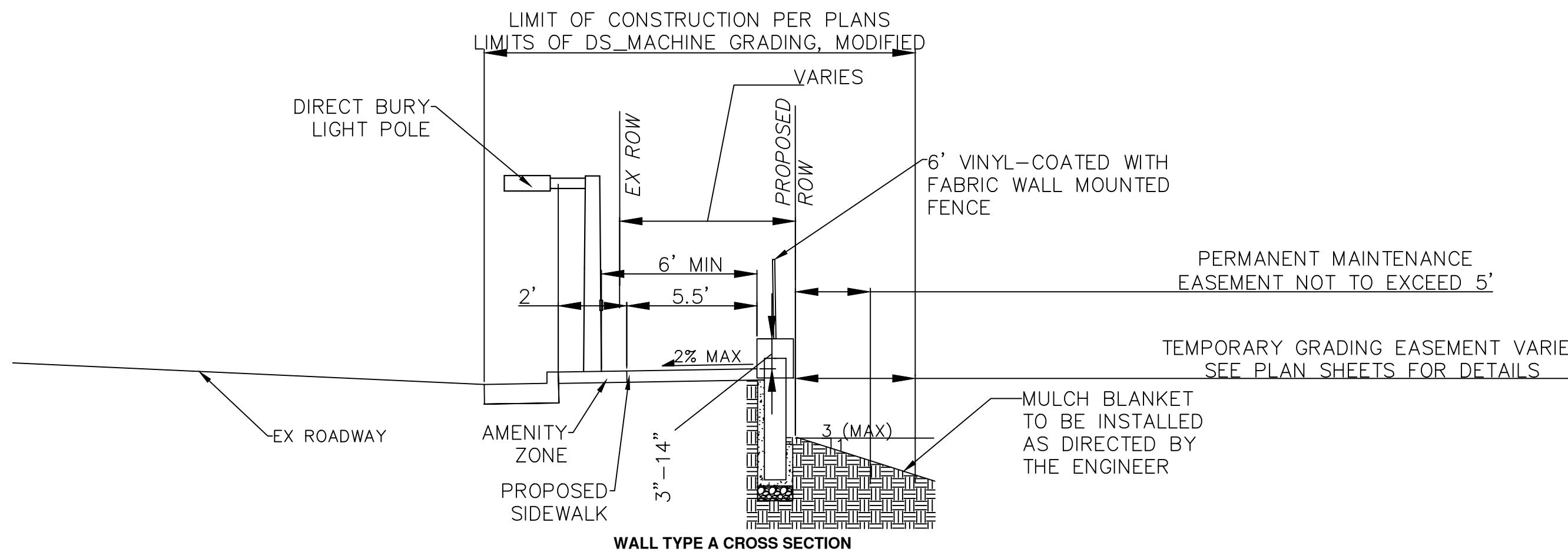
DETAILS

CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST LUDINGTON STREET  
ANN ARBOR, MI 48104-0647  
734-761-5610  
www.a2gov.org

SCALE PLAN. MTS  
DRAWING No.  
2020-029-8  
SHEET No.  
8 OF 38

81  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH-MAIN-STREET-SIDEWALK  
PROJECT

PROPOSED CROSS SECTIONS

SCALE : 1IN=10'

DRAWING No.

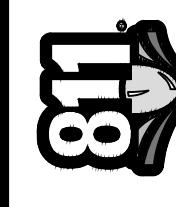
2020-029-10

SHEET No.

10 OF 38

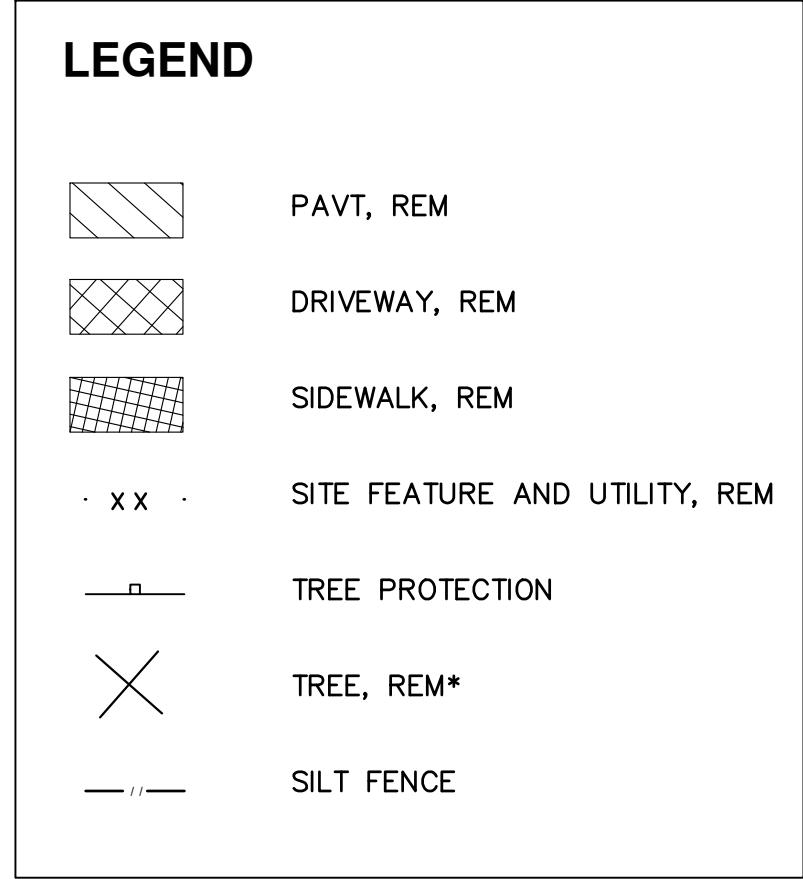
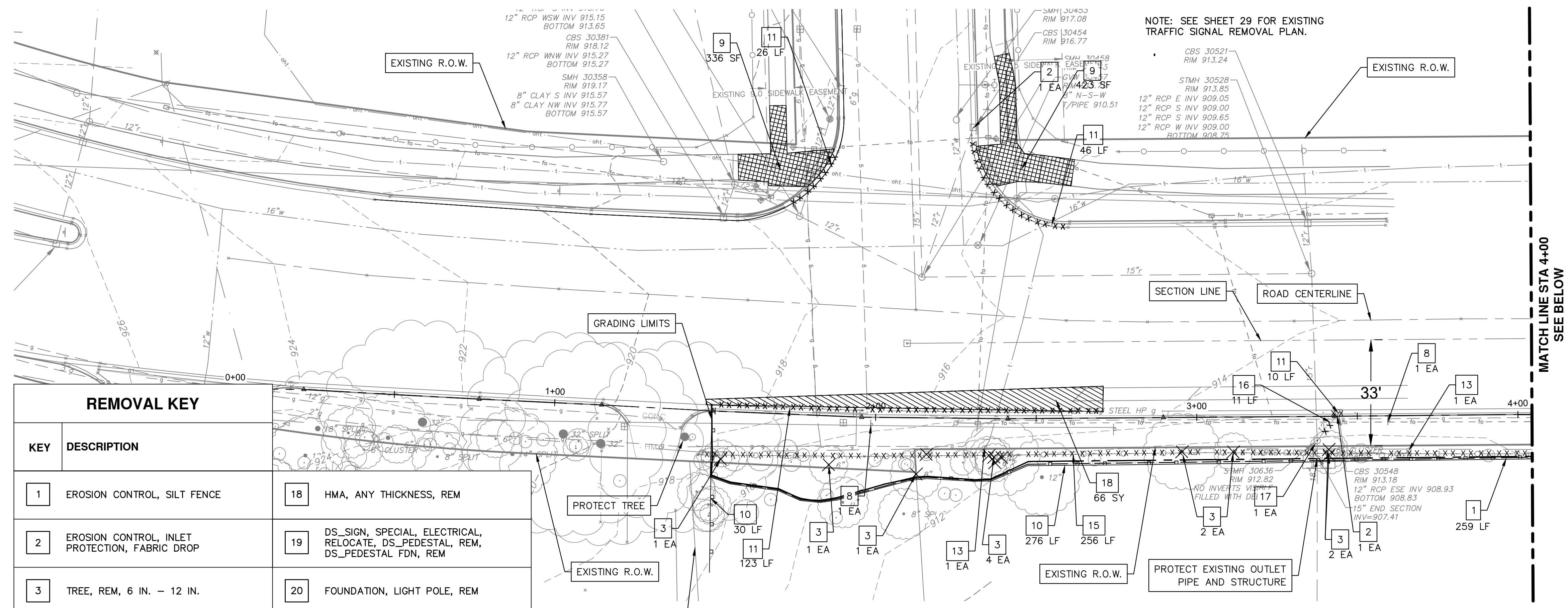


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PUBLIC SERVICES  
301 EAST LUDINGTON STREET  
ANN ARBOR, MI 48104  
734-763-5610  
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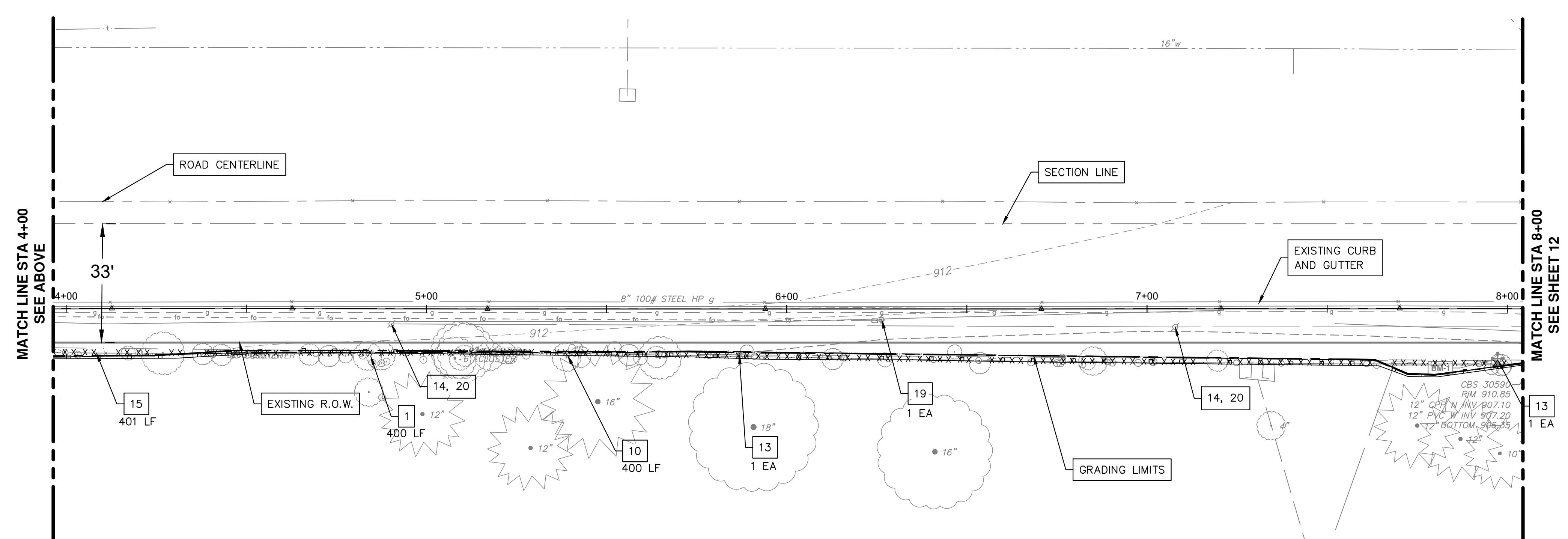
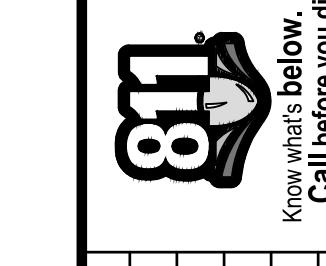
**CITY OF ANN ARBOR**  
PUBLIC SERVICES  
301 EAST FIFTH STREET  
ANN ARBOR, MI 48104-3647  
www.aagov.org



**SOUTH MAIN STREET SIDEWALK PROJECT**  
REMOVAL AND SES-PLAN STA 0+00 TO STA 8+00

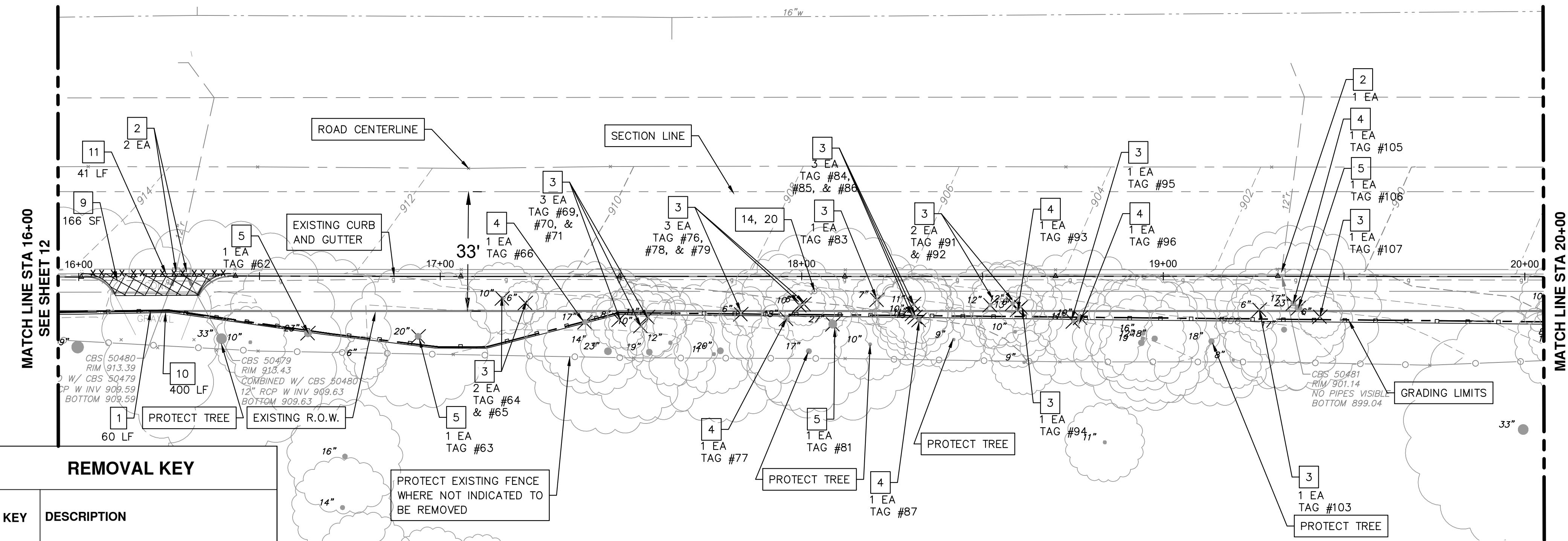
**CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING**  
SHEET No. 2020-029-11  
DRAWING No. 2020-029-11  
SCALE PLAN 1"=20'

11 OF 38



**\*NOTE:** THE CONTRACTOR SHALL REMOVE TREES ONLY AS NEEDED FOR THE CONSTRUCTION OF THE SIDEWALK AND ASSOCIATED ITEMS. THE CONTRACTOR SHALL INVESTIGATE SITE CONDITIONS PRIOR TO TREE REMOVAL AND NOTIFY THE ENGINEER AND THE CITY OF ANN ARBOR IF ANY OF THE PROPOSED TREE REMOVALS SHOWN ON THE PLANS MAY BE PRESERVED. IF ANY TREES NEED TO BE REMOVED IN ADDITION TO THOSE SHOWN ON THE PLANS, THE CONTRACTOR MAY ONLY DO SO WITH THE EXPRESSED CONSENT OF THE CITY OF ANN ARBOR.





#### REMOVAL KEY

KEY	DESCRIPTION
1	EROSION CONTROL, SILT FENCE
2	EROSION CONTROL, INLET PROTECTION, FABRIC DROP
3	TREE, REM, 6 IN. - 12 IN.
4	TREE, REM, 13 IN. - 19 IN.
5	TREE, REM, 20 IN. - 29 IN.
6	TREE, REM, 30 IN. - 39 IN.
7	DS_GUARDRAIL, REM
8	SIGN, REM, SALV
9	SIDEWALK, SIDEWALK RAMP, & DRIVEWAY APPROACH, ANY THICK, REM
10	DS_CONSTRUCTION FENCE
11	CURB, GUTTER, AND CURB AND GUTTER, ANY TYPE, REM
12	POLE, REM (UTILITY ABANDONED PREVIOUSLY BY OTHER)
13	UTILITY, PROTECT (PAID FOR AS PART OF GENERAL CONDITIONS)
14	UTILITY RELOCATED PRIOR TO PROJECT CONSTRUCTION
15	FENCE, REM
16	STORM SEWER PIPE, 12 IN. DIA., REM
17	STORM SEWER STRUCTURE, REM
18	HMA, ANY THICKNESS, REM
19	SIGN, SPECIAL, REM, SALV
20	FOUNDATION, LIGHT POLE, REM
21	DS_POST, REM, SALV

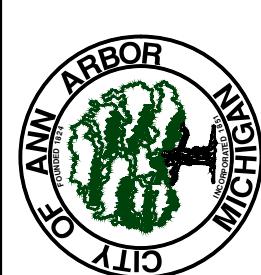
\*\*NOTE: THE CONTRACTOR SHALL REMOVE TREES ONLY AS NEEDED FOR THE CONSTRUCTION OF THE SIDEWALK AND ASSOCIATED ITEMS. THE CONTRACTOR SHALL INVESTIGATE SITE CONDITIONS PRIOR TO TREE REMOVAL AND NOTIFY THE ENGINEER AND THE CITY OF ANN ARBOR IF ANY OF THE PROPOSED TREE REMOVALS SHOWN ON THE PLANS MAY BE PRESERVED. IF ANY TREES NEED TO BE REMOVED IN ADDITION TO THOSE SHOWN ON THE PLANS, THE CONTRACTOR MAY ONLY DO SO WITH THE EXPRESSED CONSENT OF THE CITY OF ANN ARBOR.

#### LEGEND

	DRIVEWAY, REM (CONCRETE)
	SIDEWALK, REM
	SITE FEATURE AND UTILITY, REM
	TREE PROTECTION
	TREE, REM*
	SILT FENCE

#### NOTE:

- \*THE CONTRACTOR SHALL REMOVE BRUSH, STUMPS, AND TREES WITH DIAMETERS SMALLER THAN 6 INCHES AS NEEDED FOR CONSTRUCTION OF THE SIDEWALK AND ASSOCIATED ITEMS. THIS SHALL BE INCLUDED AS PART OF PAYMENT FOR DS\_MACHINE GRADING MODIFIED.
- EXCAVATION AND EARTHWORK TO ESTABLISH SUBBASE SHALL BE PAID FOR AS MACHINE GRADING



#### SOUTH MAIN STREET SIDEWALK PROJECT

REMOVAL AND SESC PLAN STA 16+00 TO STA 24+00 SEE SHEET 14

SHEET No.

13 OF 38

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

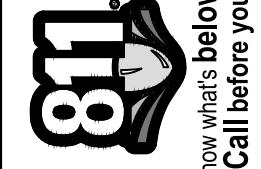
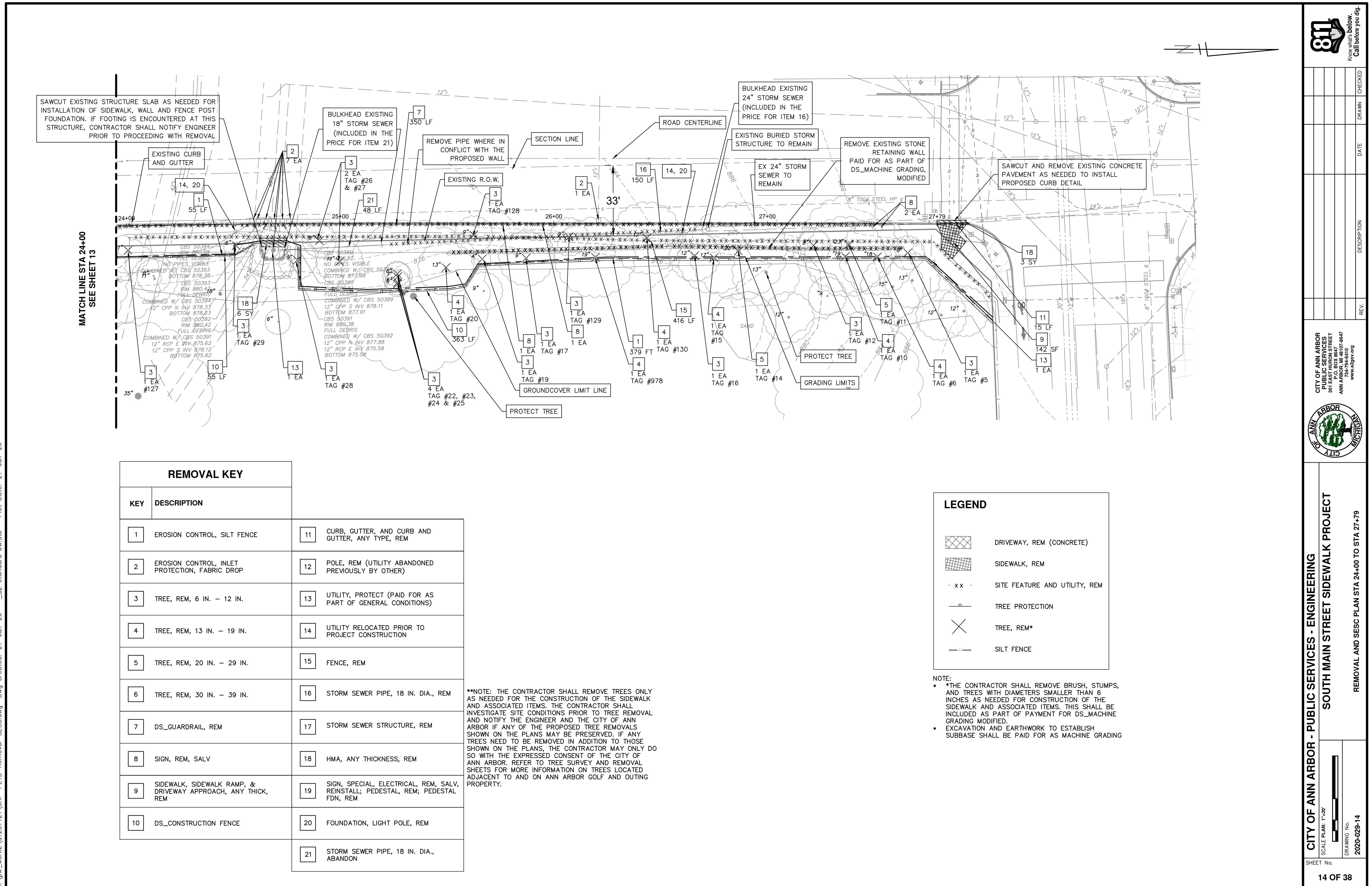
SCALE PLAN 1"=20'

DRAWING No.

2020-029-13



Know what's below.  
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Now what's new.

ATCH LINE STA 24+00  
SCE SURF '12

SEE SHEET 13

## REMOVAL KEY

## REMOVAL KEY

KEY	DESCRIPTION	
1	EROSION CONTROL, SILT FENCE	11 CURB, GUTTER, AND CURB AND GUTTER, ANY TYPE, REM
2	EROSION CONTROL, INLET PROTECTION, FABRIC DROP	12 POLE, REM (UTILITY ABANDONED PREVIOUSLY BY OTHER)
3	TREE, REM, 6 IN. – 12 IN.	13 UTILITY, PROTECT (PAID FOR AS PART OF GENERAL CONDITIONS)
4	TREE, REM, 13 IN. – 19 IN.	14 UTILITY RELOCATED PRIOR TO PROJECT CONSTRUCTION
5	TREE, REM, 20 IN. – 29 IN.	15 FENCE, REM
6	TREE, REM, 30 IN. – 39 IN.	16 STORM SEWER PIPE, 18 IN. DIA., REM
7	DS_GUARDRAIL, REM	17 STORM SEWER STRUCTURE, REM
8	SIGN, REM, SALV	18 HMA, ANY THICKNESS, REM
9	SIDEWALK, SIDEWALK RAMP, & DRIVEWAY APPROACH, ANY THICK, REM	19 SIGN, SPECIAL, ELECTRICAL, REM, SALV REINSTALL; PEDESTAL, REM; PEDESTAL FDN, REM
10	DS_CONSTRUCTION FENCE	20 FOUNDATION, LIGHT POLE, REM
		21 STORM SEWER PIPE, 18 IN. DIA., ABANDON

## LEGEND

	DRIVEWAY, REM (CONCRETE)
	SIDEWALK, REM
· XX ·	SITE FEATURE AND UTILITY, REM
	TREE PROTECTION
	TREE, REM*
	SILT FENCE

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**NOTE**

NOTE:

- \*THE CONTRACTOR SHALL REMOVE BRUSH, STUMPS, AND TREES WITH DIAMETERS SMALLER THAN 6 INCHES AS NEEDED FOR CONSTRUCTION OF THE SIDEWALK AND ASSOCIATED ITEMS. THIS SHALL BE INCLUDED AS PART OF PAYMENT FOR DS\_MACHINE GRADING MODIFIED.
- EXCAVATION AND EARTHWORK TO ESTABLISH SUBBASE SHALL BE PAID FOR AS MACHINE GRADING

## LIC SERVICES - ENGINEERING

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## LIC SERVICES - ENGINEERING

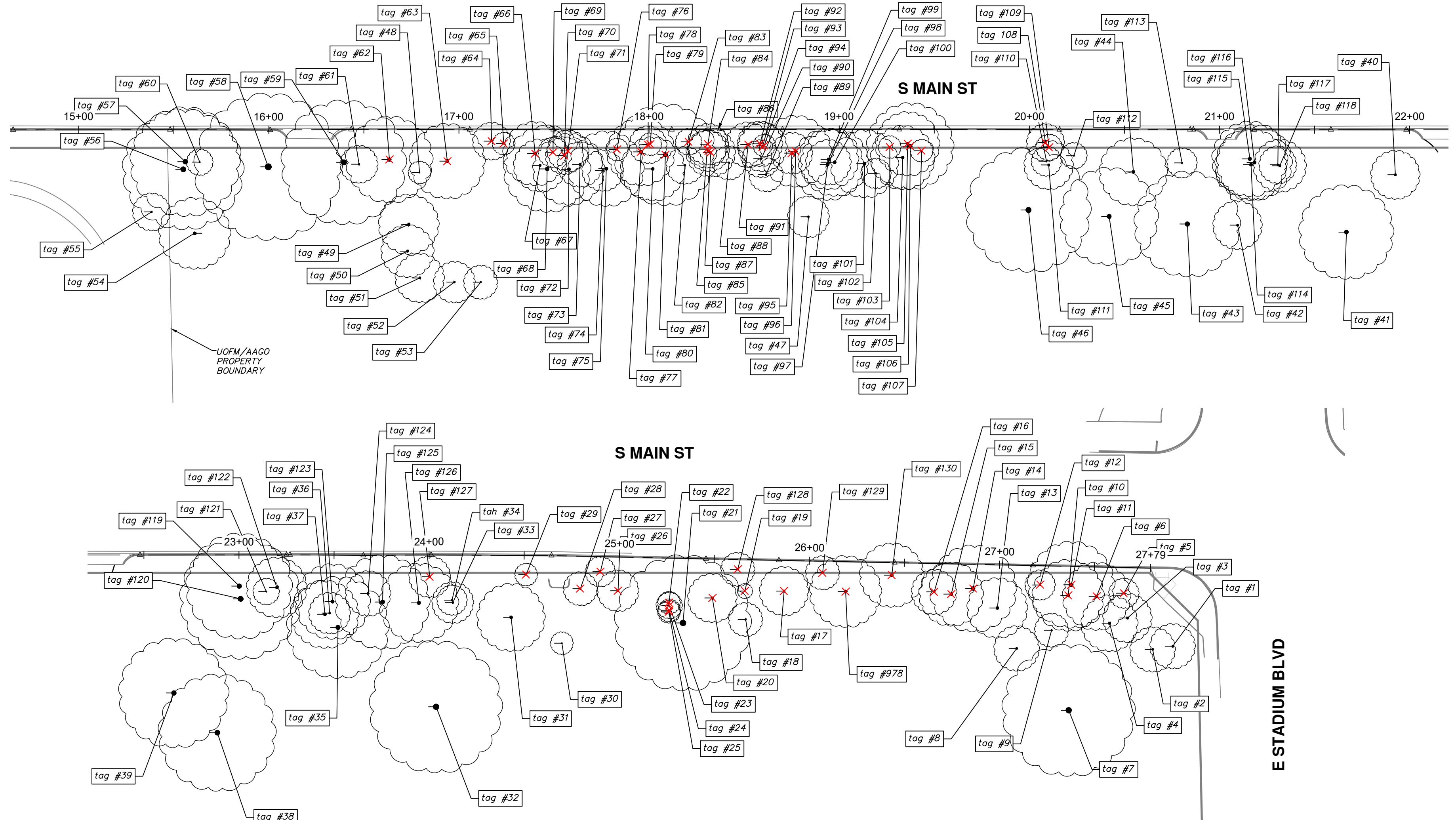
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## SOUTH MAIN STREET SIDEWALK PROJECT

**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](http://www.a2gov.org)

SHEET No.



TAG#	DBH	COMMON NAME	GENUS/SPECIES	STEMS	SCORE	LM	INV	EX ROW	AAGO	To be Rem.
1	12"	Blue Spruce	Picea pungens						X	
2	12"	Blue Spruce	Picea pungens						X	
3	13"	Blue Spruce	Picea pungens						X	
4	15"	Blue Spruce	Picea pungens						X	
5	8"	Redbud	Cercis canadensis	21	X			X	X	
6	18"	Tree-of-heaven	Allianthus altissima			X		X	X	
7	35"	Honey Locust	Gleditsia triacanthos	18	X			X		
8	12"	Ginko	Ginkgo biloba	22	X			X		
9	9"	Ginko	Ginkgo biloba					X		
10	19"	Tree-of-heaven	Allianthus altissima			X		X	X	
11	23"	Siberian Elm	Ulmus pumila	twin		X		X	X	
12	8"	American Elm	Ulmus americana	twin				X	X	
13	13"	Ginko	Ginkgo biloba	21	X			X		
14	23"	Tree-of-heaven	Allianthus altissima			X		X	X	
15	17"	Hawthorn	Crataegus	18	X			X	X	
16	12"	Hawthorn	Crataegus	twin	18	X		X	X	
17	13"	Hawthorn	Crataegus	twin	19	X		X	X	
18	9"	Crab Apple	Malus coronaria					X		
19	4"	Buckthorn	Rhamnus cathartica	quint		X		X	X	
20	13"	American Elm	Ulmus americana					X	X	
21	36"	Bur Oak	Quercus macrocarpa	20	X			X		
22	6"	Dogwood	Cornus florida					X		
23	7"	Dogwood	Cornus florida					X		
24	6"	Dogwood	Cornus florida					X		
25	6"	Dogwood	Cornus florida					X		
26	11"	Box Elder	Acer negundo			X		X		
27	8"	Box Elder	Acer negundo					X		
28	9"	Crab Apple	Malus coronaria					X		
29	6"	Buckthorn	Rhamnus cathartica	twin		X		X	X	
30	6"	Red Maple	Acer rubrum					X		
31	18"	Norway Maple	Acer platanoides			X		X		
32	35"	Silver Maple	Acer saccharinum	21	X			X		
33	11"	Hawthorn	Crataegus					X		
34	8"	Hawthorn	Crataegus					X		
35	27"	American Elm	Ulmus americana	20	X			X		
36	11"	American Elm	Ulmus americana					X		
37	18"	American Elm	Ulmus americana	18	X			X		
38	31"	Red Oak	Quercus rubra	21	X			X		
39	29"	Red Oak	Quercus rubra	21	X			X		
40	13"	Tree-of-heaven	Allianthus altissima			X		X		
41	25"	Red Oak	Quercus rubra	20	X			X		
42	13"	Blue Spruce	Picea pungens					X		
43	28"	Honey Locust	Gleditsia triacanthos	21	X			X		

TAG# DBH COMMON NAME GENUS/SPECIES STEMS SCORE LM INV EX ROW AAGO To be Rem.

TAG#	DBH	COMMON NAME	GENUS/SPECIES	STEMS	SCORE	LM	INV	EX ROW	AAGO	To be Rem.
44	18"	Linden	Tilia americana	17	X			X		
45	26"	Norway Maple	Acer platanoides	21	X			X		
46	33"	Silver Maple	Acer saccharinum					X		
47	11"	Crab Apple	Malus coronaria					X		
48	6"	White Mulberry	Morus alba			X		X		
49	16"	Blue Spruce	Picea pungens					X		
50	14"	Blue Spruce	Picea pungens					X		
51	13"	Blue Spruce	Picea pungens					X		
52	11"	Blue Spruce	Picea pungens					X		
53	9"	Blue Spruce	Picea pungens					X		
54	19"	Black Pine	Pinus nigra			X		X		
55	10"	Crab Apple	Malus coronaria					X		
56	32"	Siberian Elm	Ulmus pumila			X		X		
57	29"	Siberian Elm	Ulmus pumila			X		X		
58	39"	Black Walnut	Juglans nigra	20	X			X		
59	33"	American Elm	Ulmus americana	21	X			X		
60	7"	American Elm	Ulmus americana					X		
61	10"	Linden	Tilia americana					X		
62	23"	Linden	Tilia americana	18	X			X		
63	20"	Siberian Elm	Ulmus pumila			X		X		
64	10"	Siberian Elm	Ulmus pumila			X	X	X		
65	6"	Siberian Elm	Ulmus pumila			X	X	X		
66	17"	American Elm	Ulmus americana					X		
67	14"	Pignut Hickory	Carya glabra					X		
68	23"	Black Walnut	Juglans nigra	19	X			X		
69	8"	Red Elm	Ulmus rubra					X		
70	10"	Red Elm	Ulmus rubra					X		
71	11"	Red Elm	Ulmus rubra					X		
72	19"	Black Walnut	Juglans nigra	21	X			X		
73	12"	Norway Maple	Acer platanoides			X		X		
74	11"	Black Walnut	Juglans nigra					X		
75	20"	Black Walnut	Juglans nigra	19	X			X		
76	6"	Linden	Tilia americana					X		
77	18"	American Elm	Ulmus americana	21	X			X		
78	10"	American Elm	Ulmus americana					X		
79	6"	American Elm	Ulmus americana					X		
80	17"	Black Walnut	Juglans nigra					X		
81	27"	Siberian Elm	Ulmus pumila			X		X		
82	10"	Black Walnut	Juglans nigra					X		
83	7"	Siberian Elm	Ulmus pumila			X	X	X		
84	11"	Red Elm	Ulmus rubra					X		
85	10"	Red Elm	Ulmus rubra					X		
86	11"	Red Elm	Ulmus rubra					X		

TAG# DBH COMMON NAME GENUS/SPECIES STEMS SCORE LM INV EX ROW AAGO To be Rem.

TAG#	DBH	COMMON NAME	GENUS/SPECIES	STEMS	SCORE	LM	INV	EX ROW	AAGO	To be Rem.
87	13"	Red Elm	Ulmus rubra						X	X
88	9"	Dogwood	Cornus florida						X	
89	9"	Linden	Tilia americana						X	
90	10"	Black Walnut	Juglans nigra						X	
91	12"	Red Elm	Ulmus rubra						X	X
92	12"	Red Elm	Ulmus rubra						X	X
93	13"	Red Elm	Ulmus rubra						X	X
94	6"	Red Elm	Ulmus rubra						X	X
95	11"	Linden	Tilia americana						X	X
96	19"	Red Elm	Ulmus							







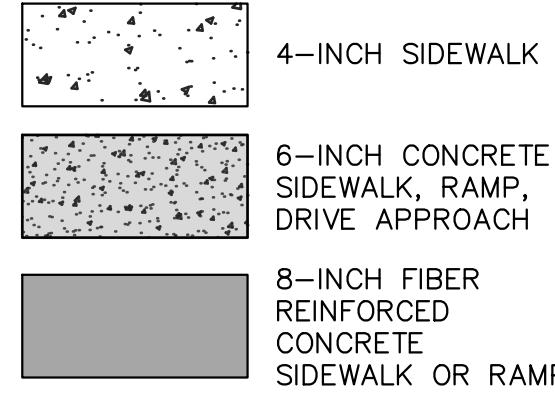


## CONSTRUCTION KEY

# CONSTRUCTION KEY

KEY	DESCRIPTION
RET-A	DS_SOLDIER PILE RETAINING WALL, TYPE A
RET-B	DS_SOLDIER PILE RETAINING WALL, TYPE B
RET-C	DS_SOLDIER PILE RETAINING WALL, TYPE C
REST	TURF RESTORATION
SW-4	CONC, SIDEWALK, 4 IN.
SW-6	CONC, SIDEWALK, DRIVE APPROACH, OR RAMP, 6 IN.
SW-8	DS_CONC, SIDEWALK, FIBERMESH, 8 IN.
SW-4R	DS_CONC, SIDEWALK, FIBERMESH, 4 IN.
CG	CONC, CURB, OR CURB & GUTTER, ALL TYPES
DWS	DETECTABLE WARNING SURFACE
DW-M	CONC, DRIVEWAY OPENING, TYPE M
HP	HAND PATCHING
FNC	DS_FENCE, CHAIN LINK, 72 INCH, VINYL-COATED
FNC-WM	DS_FENCE, CHAIN LINK, 72 INCH, VINYL-COATED, WALL MOUNTED
GUY-A	DS_GUY ANCHOR, REM
DW-8	8 INCH DRIVEWAY, CONC, NON-REINFORCED

## LEGEND



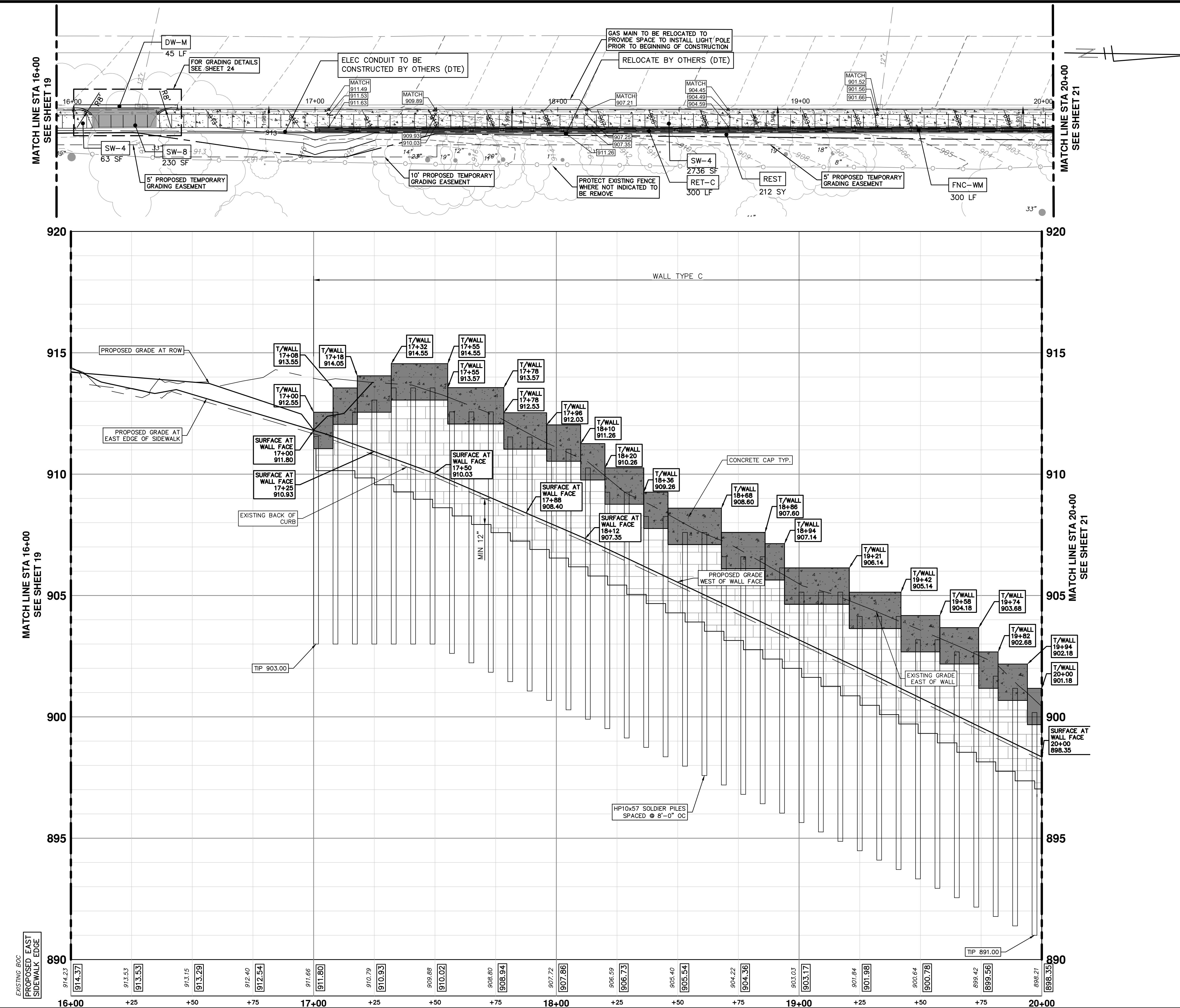
**NOTE**

- ALL SIDEWALK BETWEEN STATIONS 01+40 & 15+47 ON THE EAST SIDE OF S MAIN ST SHALL BE FIBER REINFORCED PER SPECS
- LIMITS OF SIDEWALK GRADING EXTEND FROM EDGE OF METAL OF EXISTING CURB OR NEW CURB TO THE ROW, EDGE OF EXISTING SIDEWALK EASEMENT, EDGE OF TEMPORARY GRADING PERMIT OR PROPOSED PERMANENT EASEMENT( WHICHEVER IS WIDER) FOR THE ENTIRE LENGTH OF THE SIDEWALK, INCLUDING QUADRANTS ON THE WEST SIDE OF THE SCIO/MAIN INTERSECTION.

CONTRACTOR SHALL NOTE THE PRESENCE OF OVERHEAD UTILITIES IN THE FOLLOWING AREAS:

## OVERHEAD UTILITY

TYPE	START STA	END STA
ELECTRIC	—	—
COMMUNICATIONS	—	—



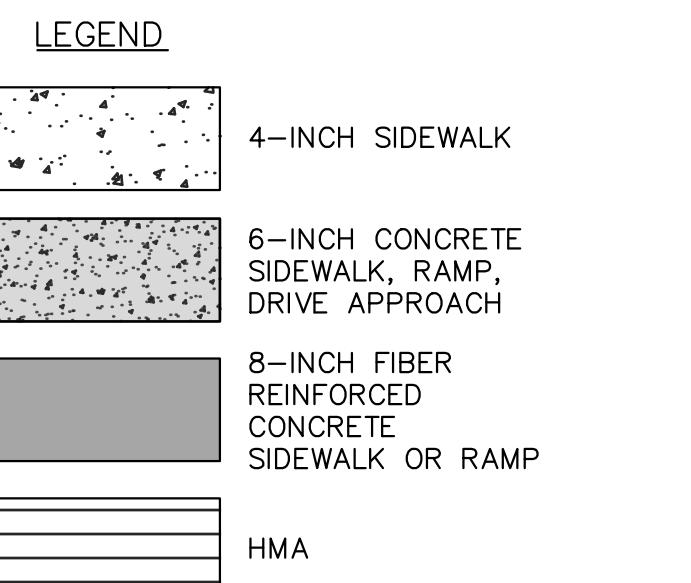
The seal of the City of Ann Arbor, Michigan. It is a circular emblem. The outer ring contains the words "CITY OF ANN ARBOR" at the top and "MICHIGAN" at the bottom. The inner circle features a green illustration of a tree, possibly a maple, with a black bridge or path leading towards it. The text "FOUNDED 1824" is positioned above the tree, and "INCORPORATED 1851" is positioned below it.

**PUBLIC SERVICES - ENGINEERING**  
**SOUTH MAIN STREET SIDEWALK PROJECT**

8

CIT	SCALE P	■	DRAWING	2020-C
SHEET No.			20 OF 38	

CONSTRUCTION KEY	
KEY	DESCRIPTION
[RET-A]	DS_SOLDIER PILE RETAINING WALL, TYPE A
[RET-B]	DS_SOLDIER PILE RETAINING WALL, TYPE B
[RET-C]	DS_SOLDIER PILE RETAINING WALL, TYPE C
[REST]	TURF RESTORATION
[SW-4]	CONC. SIDEWALK, 4 IN.
[SW-6]	CONC. SIDEWALK, DRIVE APPROACH, OR RAMP, 6 IN.
[SW-8]	DS_CONC. SIDEWALK, FIBERMESH, 8 IN.
[SW-4R]	DS_CONC. SIDEWALK, FIBERMESH, 4 IN.
[CG]	CONC. CURB, OR CURB & GUTTER, ALL TYPES
[DWS]	DETECTABLE WARNING SURFACE
[DW-M]	CONC. DRIVEWAY OPENING, TYPE M
[HP]	HAND PATCHING
[FNC]	DS_FENCE, CHAIN LINK, 72 INCH, VINYL-COATED
[FNC-WM]	DS_FENCE, CHAIN LINK, 72 INCH, VINYL-COATED, WALL MOUNTED
[GUY-A]	DS_GUY ANCHOR, REM
[DW-8]	8 INCH DRIVEWAY, CONC, NON-REINFORCED

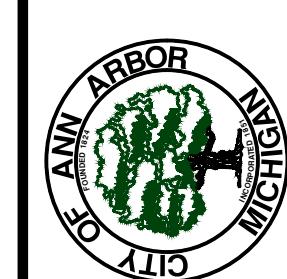
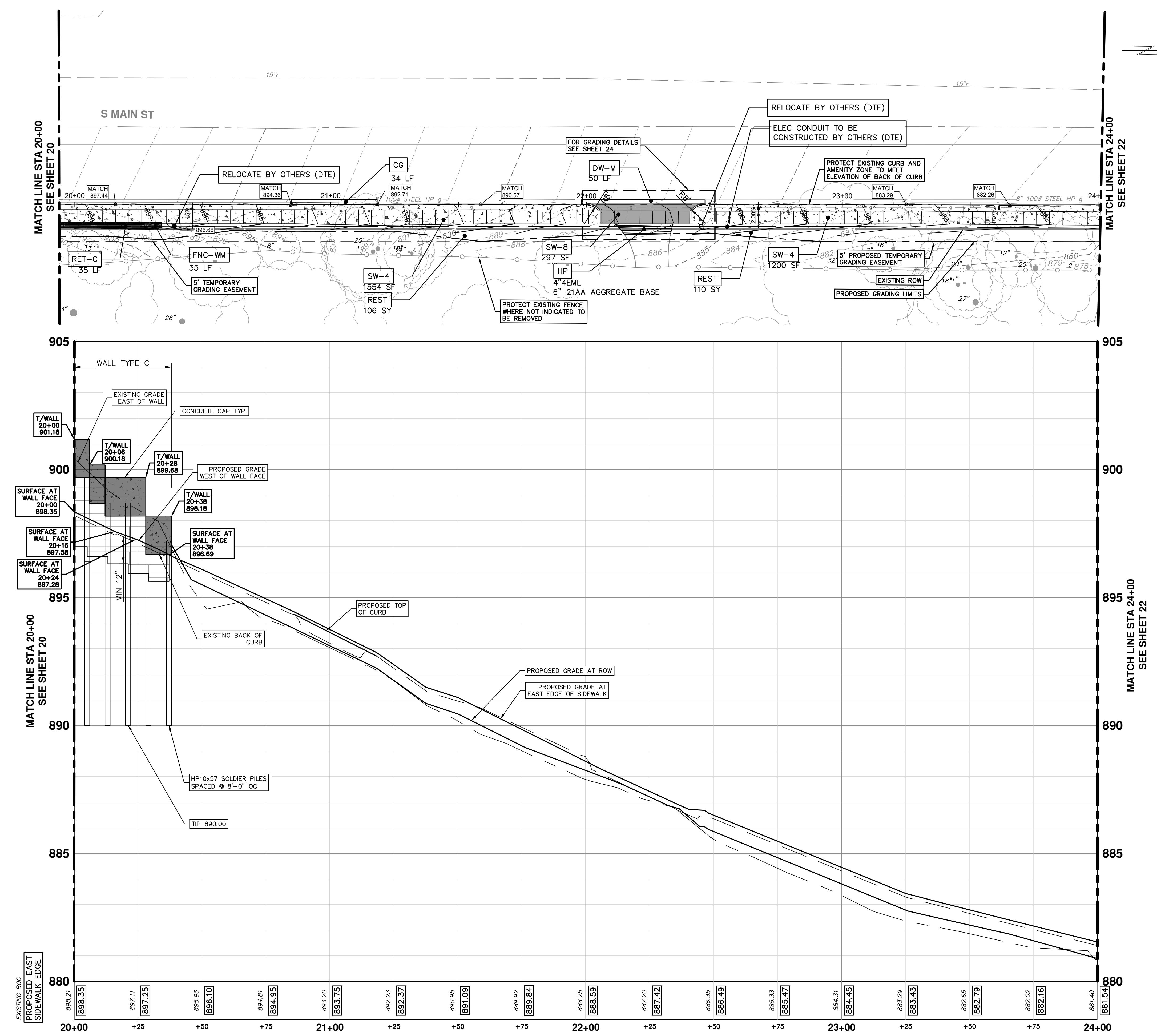


## NOTE

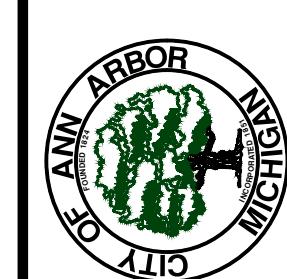
- ALL SIDEWALK BETWEEN STATIONS 01+40 & 15+47 ON THE EAST SIDE OF S MAIN ST SHALL BE FIBER REINFORCED PER SPECS
- LIMITS OF SIDEWALK GRADING EXTEND FROM EDGE OF METAL OF EXISTING CURB OR NEW CURB TO THE ROW, EDGE OF EXISTING SIDEWALK EASEMENT, EDGE OF TEMPORARY GRADING PERMIT OR PROPOSED PERMANENT EASEMENT (WHICHEVER IS WIDER) FOR THE ENTIRE LENGTH OF THE SIDEWALK, INCLUDING QUADRANTS ON THE WEST SIDE OF THE SCIO/MAIN INTERSECTION.

CONTRACTOR SHALL NOTE THE PRESENCE OF OVERHEAD UTILITIES IN THE FOLLOWING AREAS:

OVERHEAD UTILITY		
TYPE	START STA	END STA
ELECTRIC	—	—
COMMUNICATIONS	—	—



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

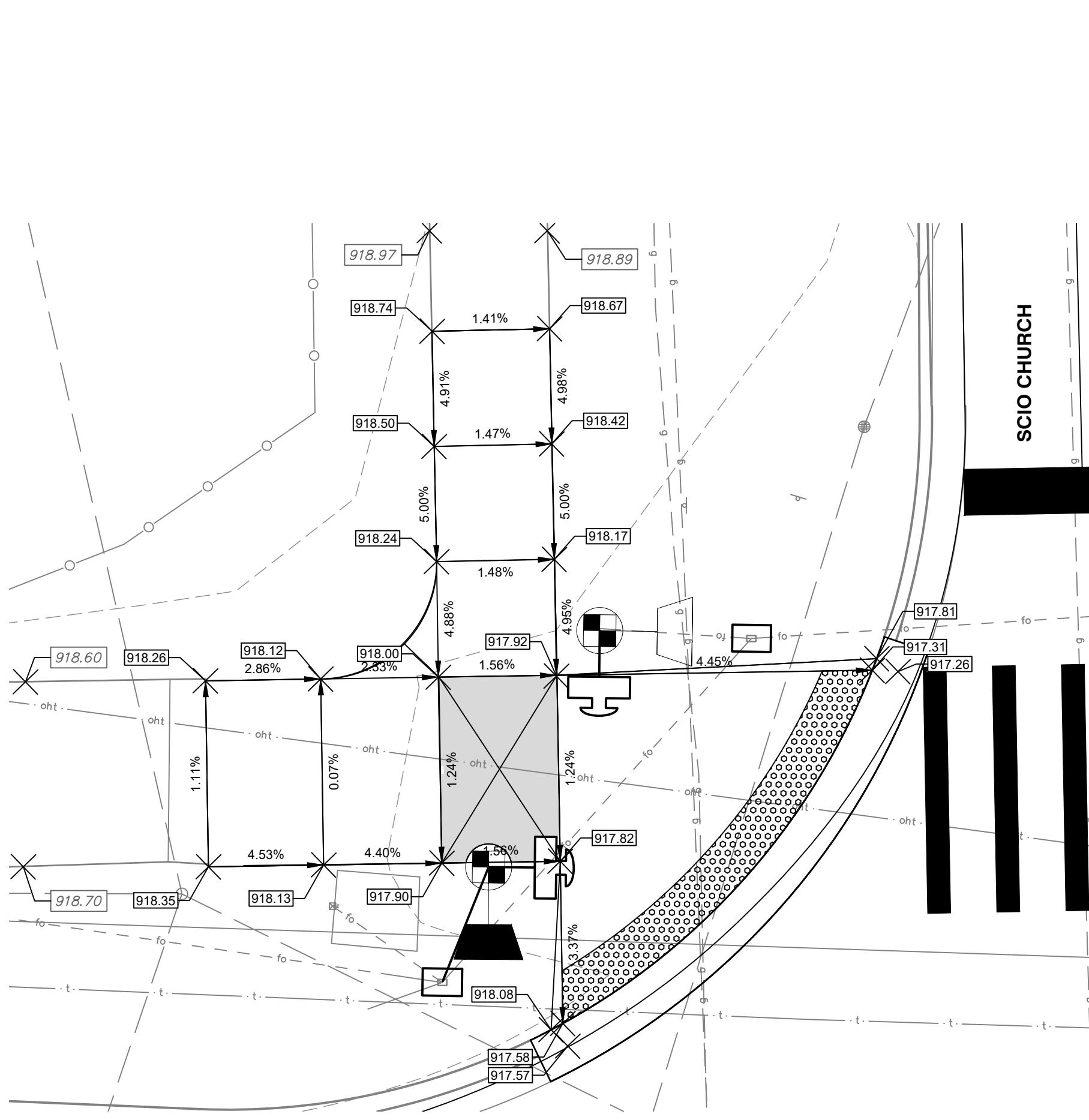


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH MAIN STREET SIDEWALK PROJECT  
PROPOSED SIDEWALK PLAN AND PROFILE STA 20+00 TO STA 24+00

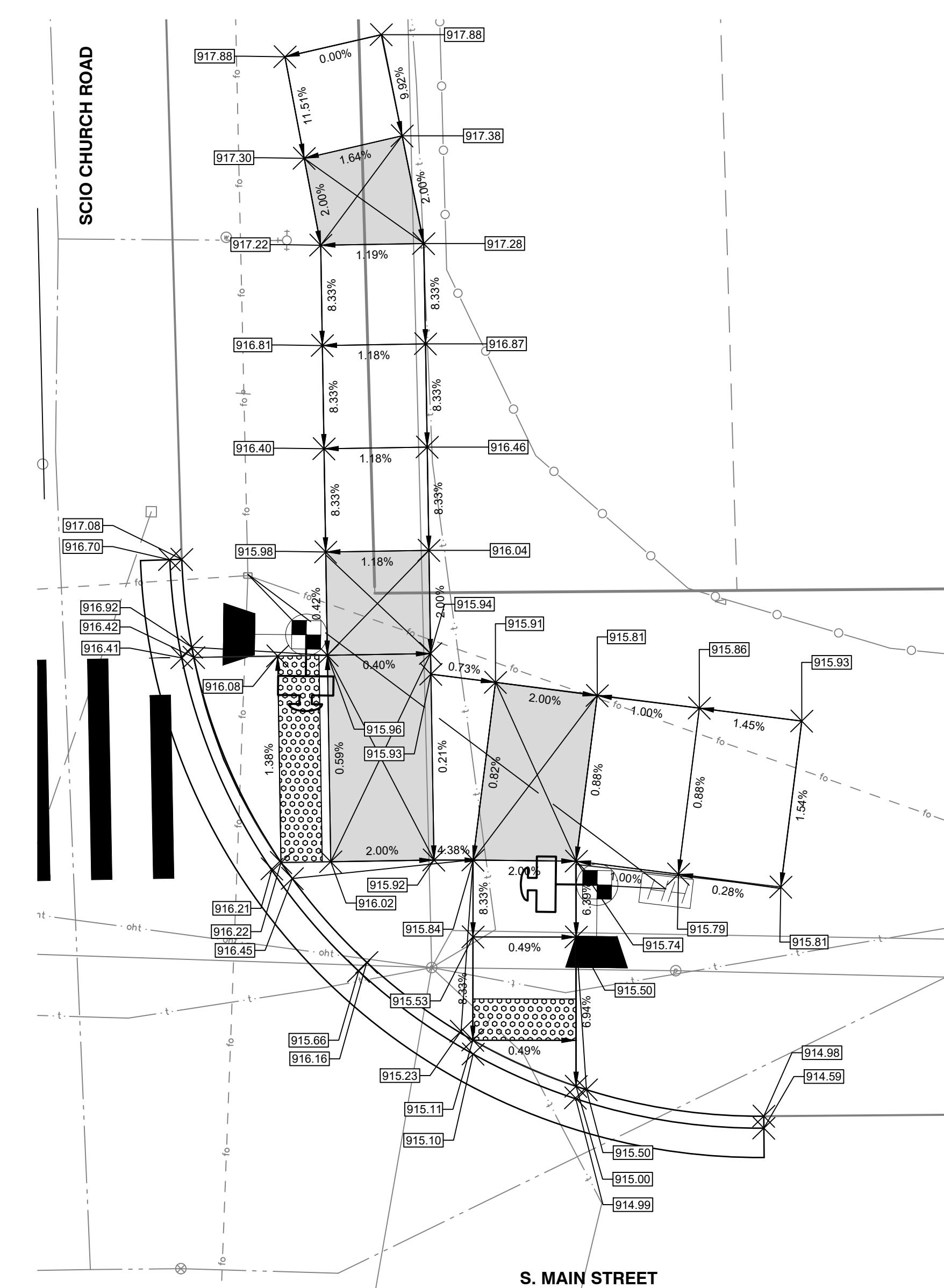
21 OF 38

SCALE PLAN 1"=20'  
PROFILE 1"=20'  
DRAWING No.  
2020-029-21  
SHEET No.

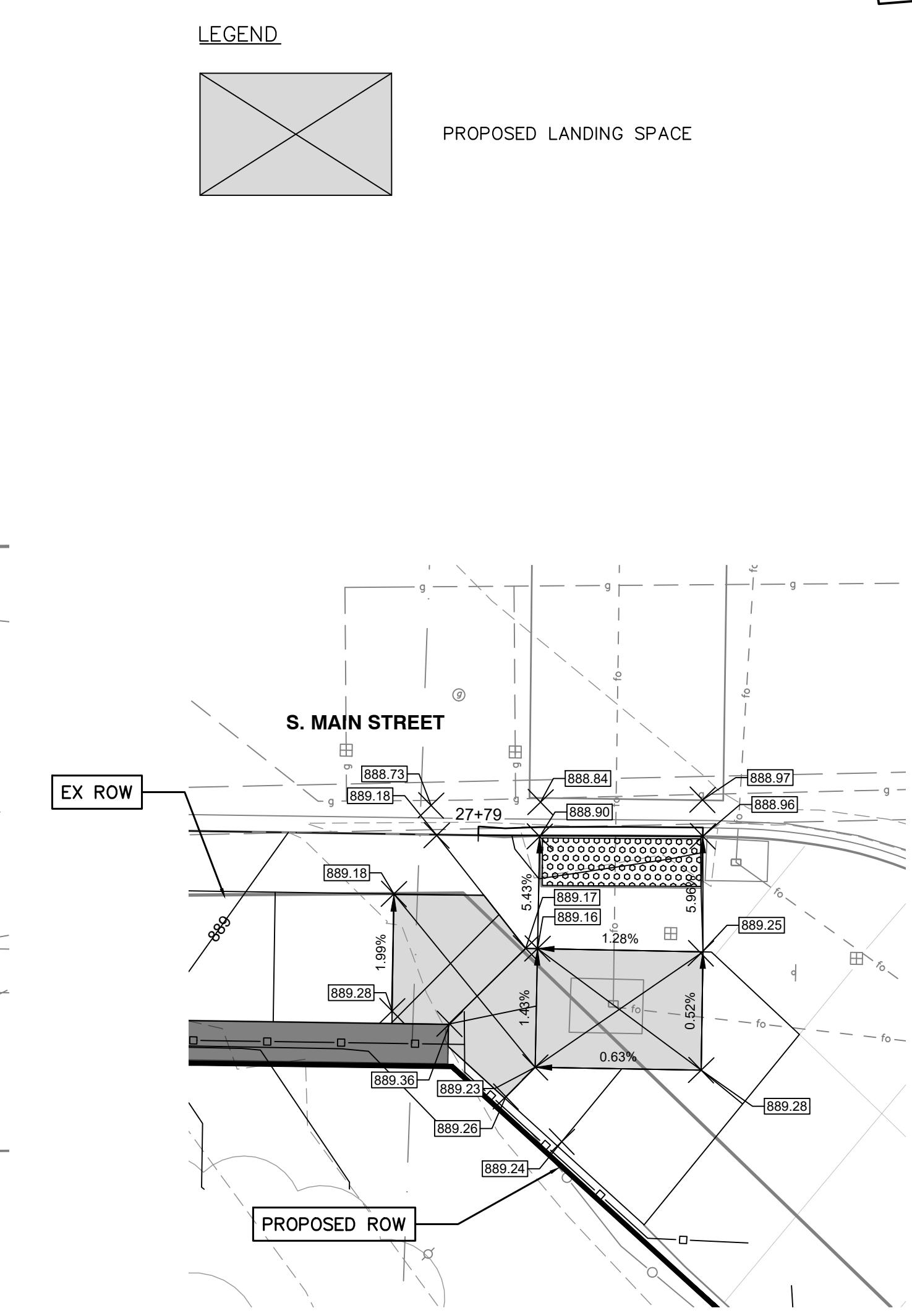




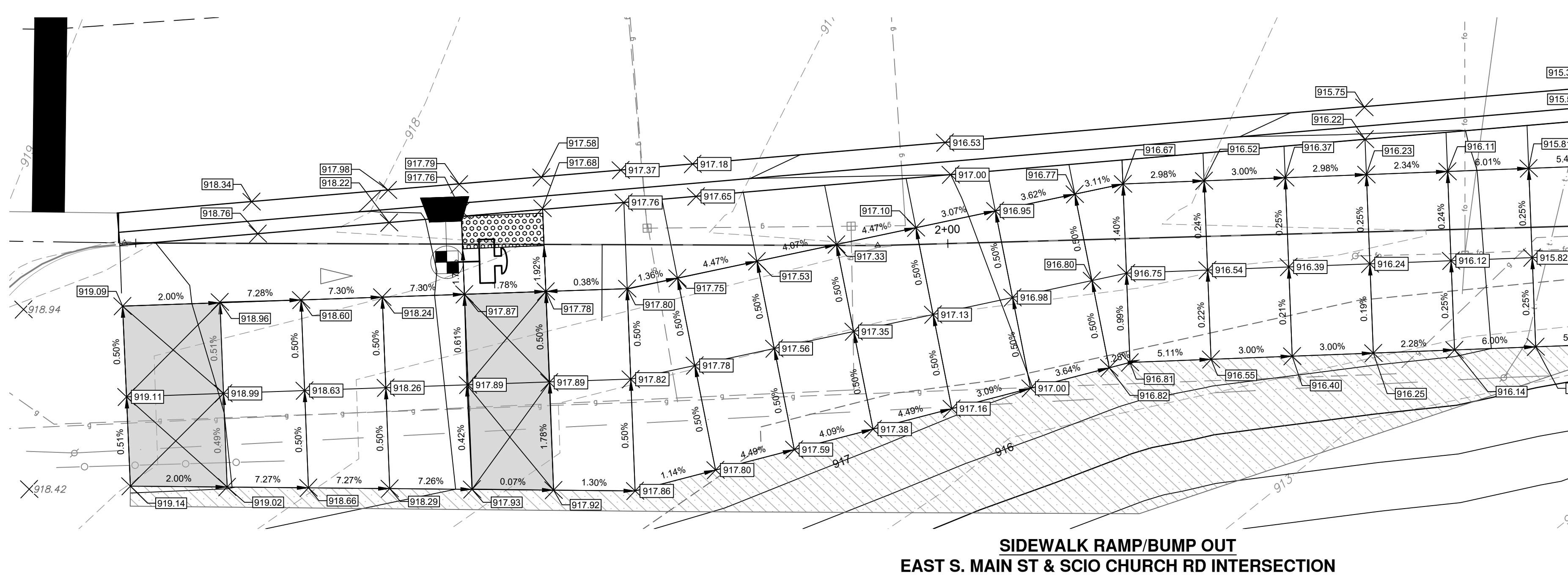
SIDWALK RAMP  
SOUTHWEST QUADRANT



SIDWALK RAMP  
NORTHWEST QUADRANT



SIDWALK RAMP  
S. MAIN ST & STADIUM BLVD SOUTHEAST QUADRANT



SIDWALK RAMP/BUMP OUT  
EAST S. MAIN ST & SCIO CHURCH RD INTERSECTION

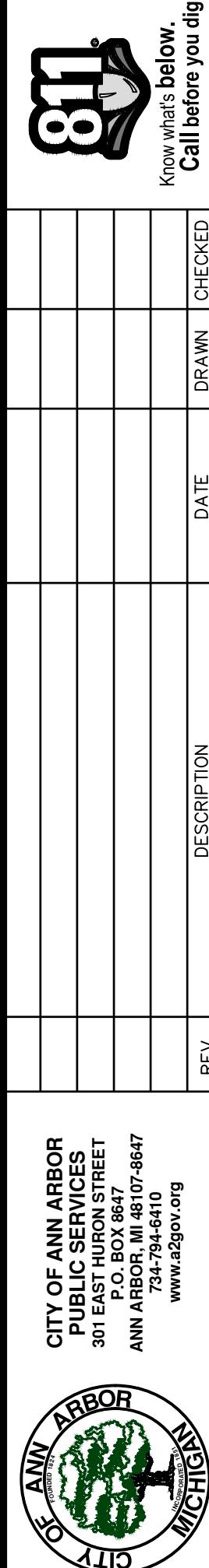
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH MAIN STREET SIDEWALK PROJECT

SIDEWALK GRADING PLANS

SCALE PLAN 1"=5'  
PROFILE 1"=2'

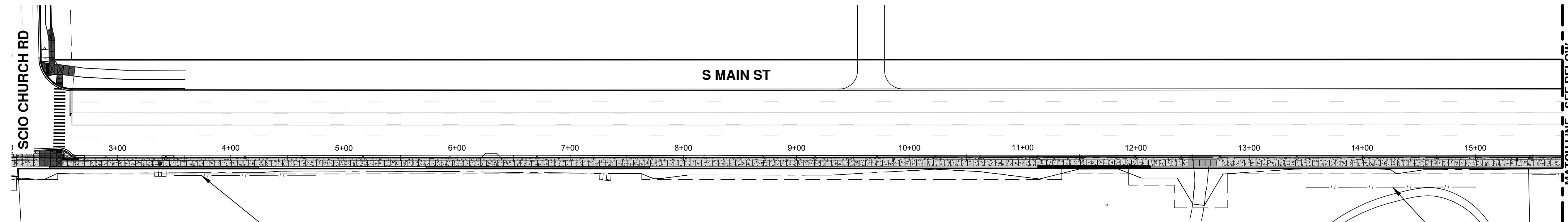
DRAWING No.  
2020-029-23

SHEET No.  
23 OF 38

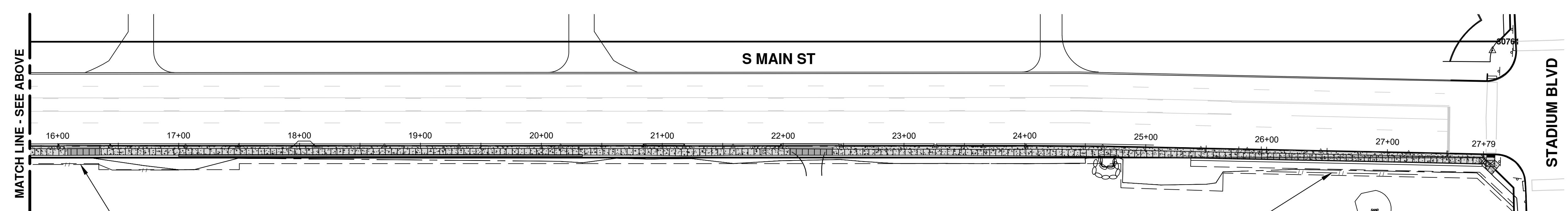


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APPROXIMATE LIMITS OF DS\_TEMPORARY PROTECTIVE FENCE FROM STATION 13+50 TO 15+00. CONTRACTOR TO COORDINATE WITH THE UNIVERSITY OF MICHIGAN AND CITY ENGINEER TO CONFIRM SUFFICIENT PROTECTION AND REVISE LIMITS AS NECESSARY TO PROVIDE SAFE WORKING CONDITIONS. MAINTAIN MIN 10 FT HORIZONTAL CLEARANCE FROM OVERHEAD ELECTRICAL LINES.



APPROXIMATE LIMITS OF DS\_TEMPORARY PROTECTIVE FENCE FROM STATION 26+00 TO 27+25. CONTRACTOR TO COORDINATE WITH ANN ARBOR GOLF AND OUTING AND CITY ENGINEER TO CONFIRM SUFFICIENT PROTECTION AND REVISE LIMITS AS NECESSARY TO PROVIDE SAFE WORKING CONDITIONS

#### LEGEND

— / — TEMPORARY PROTECTIVE NETTING LIMITS

**CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING**

**SOUTH MAIN STREET SIDEWALK**

**TEMPORARY PROTECTIVE FENCE LIMITS**

**PROFILE 1' = 2'**

**SCALE PLAN 1" = 30'**

**DRAWING No.** 2020-029-30

**REVISION**

**DESCRIPTION**

**DATE**

**DRAWN**

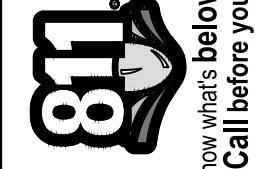
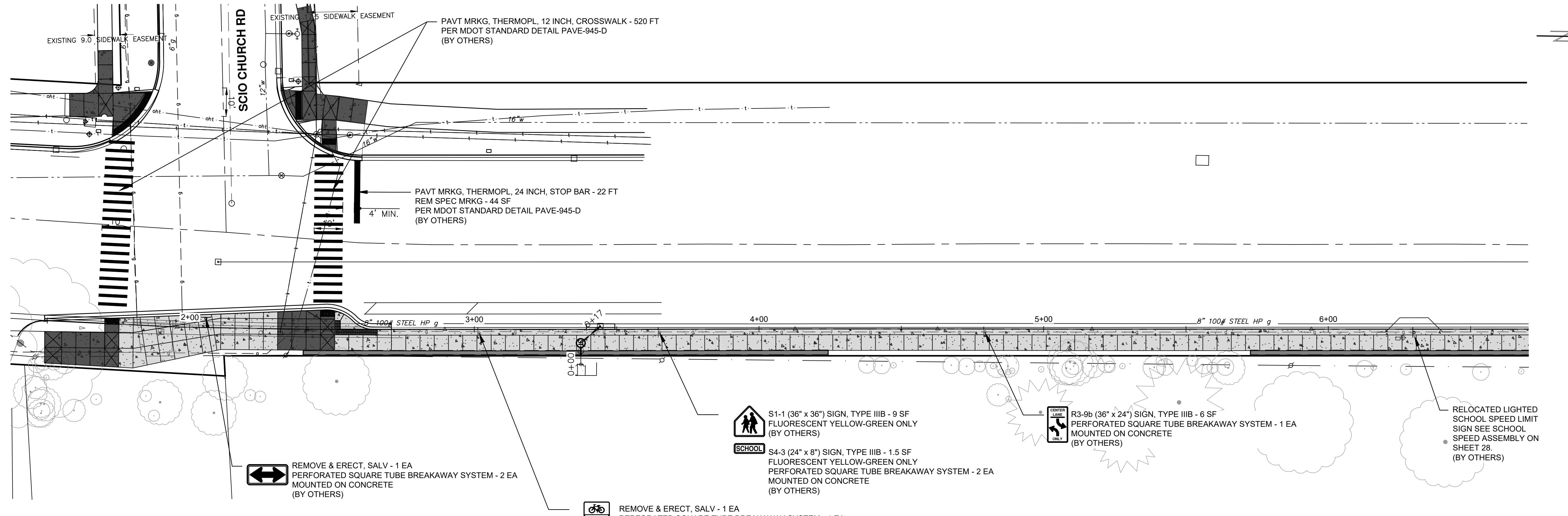
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**CITY OF ANN ARBOR**  
MICHIGAN

**25 OF 38**



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Now will be slow.	Call before you dig			

The logo for the City of Ann Arbor Public Services. It features a circular seal with a green tree in the center. The words "CITY OF ANN ARBOR" are written in a circular path around the tree, and "MICHIGAN" is written on the right side of the seal. The seal is set against a white background with a thin black border.

**LIC SERVICES - ENGINEERING**  
**SOUTH MAIN STREET SIDEWALK PROJECT**

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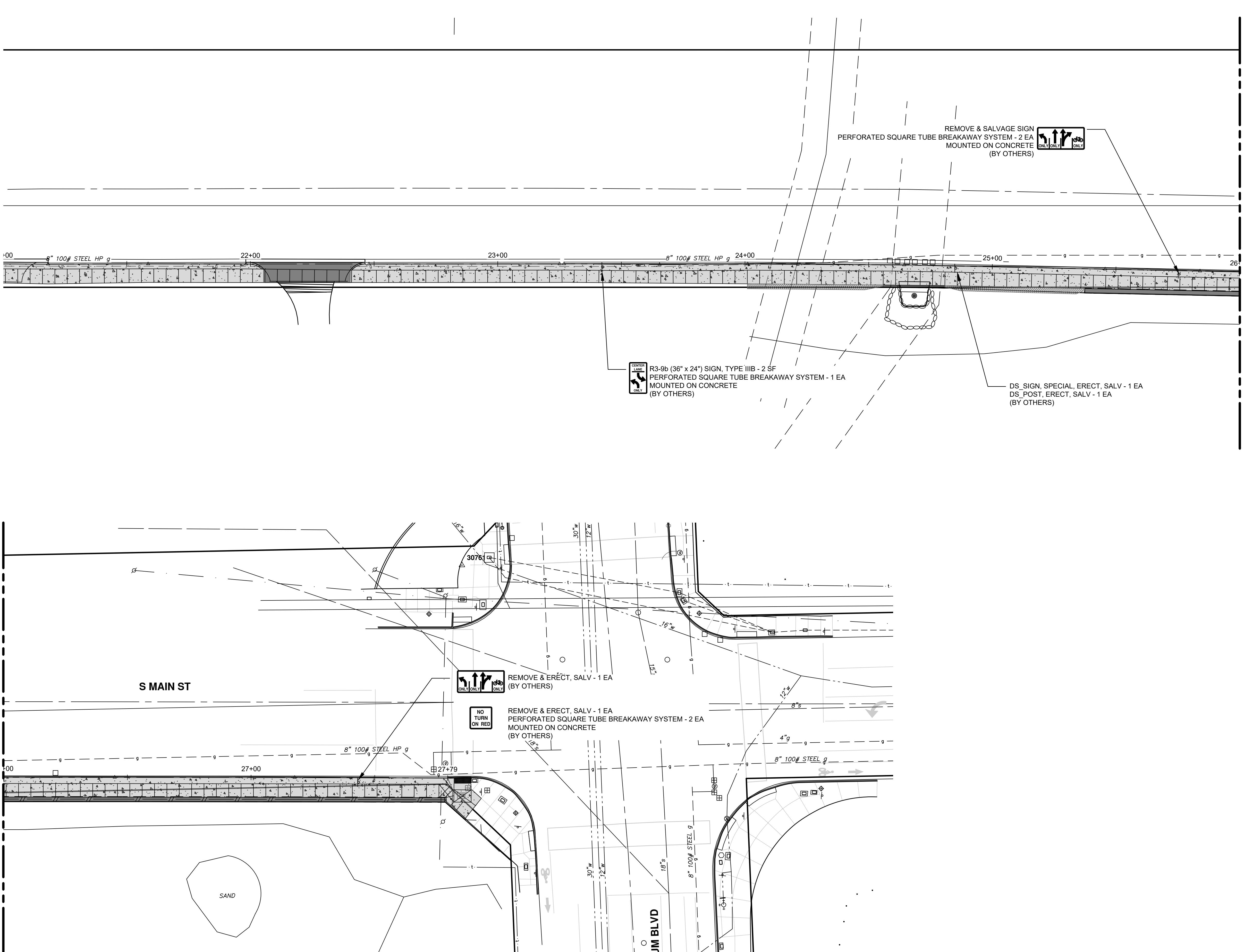
**SIGNAGE & PAVEMENT MARKING PLAN 1**

SHEET No. 26 OF 28

26 OF 38

Page 1 of 1

26 OF 38



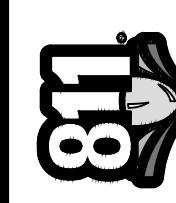
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH MAIN STREET SIDEWALK PROJECT  
SIGNAGE & PAVEMENT MARKING PLAN 2

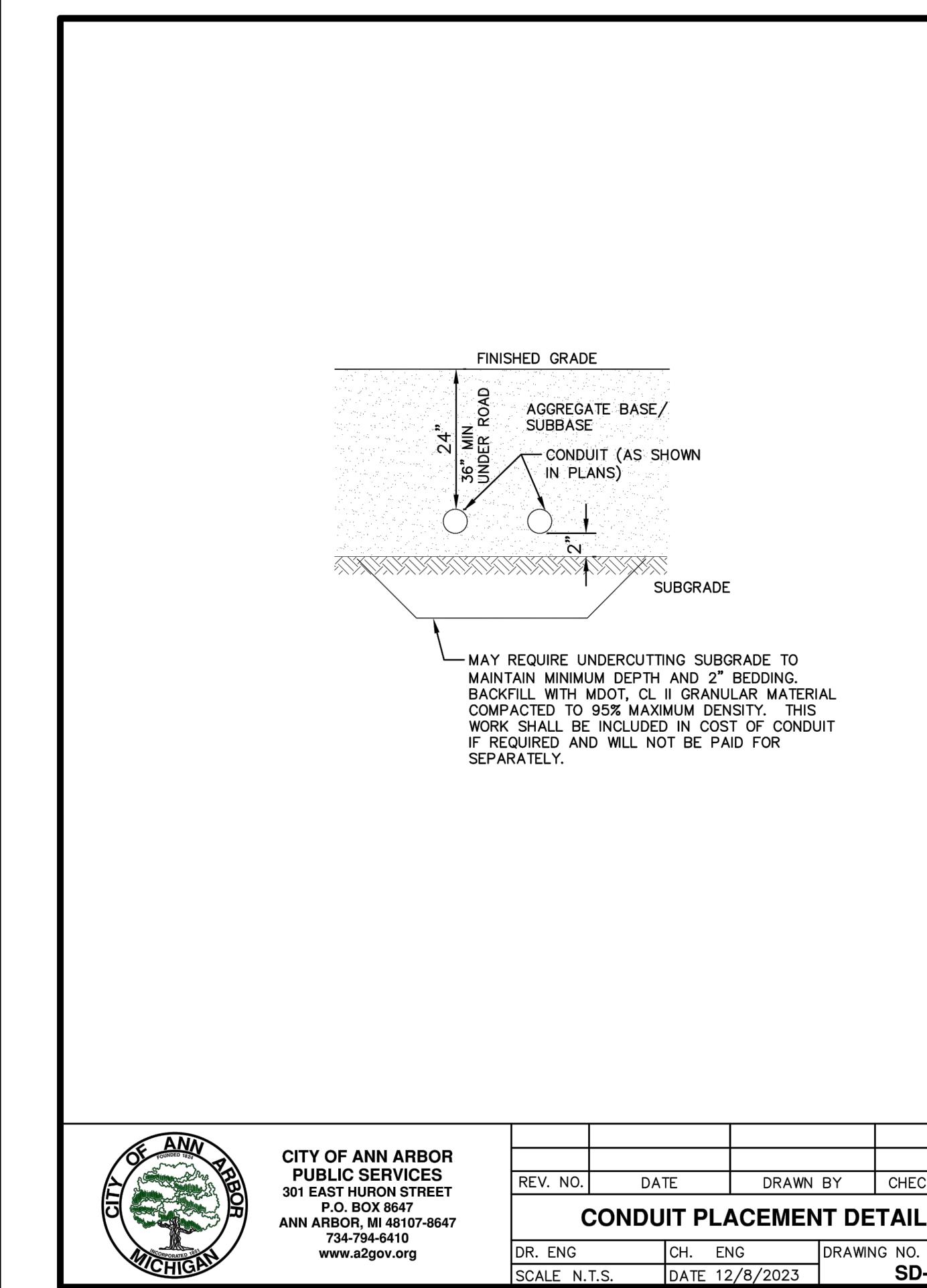
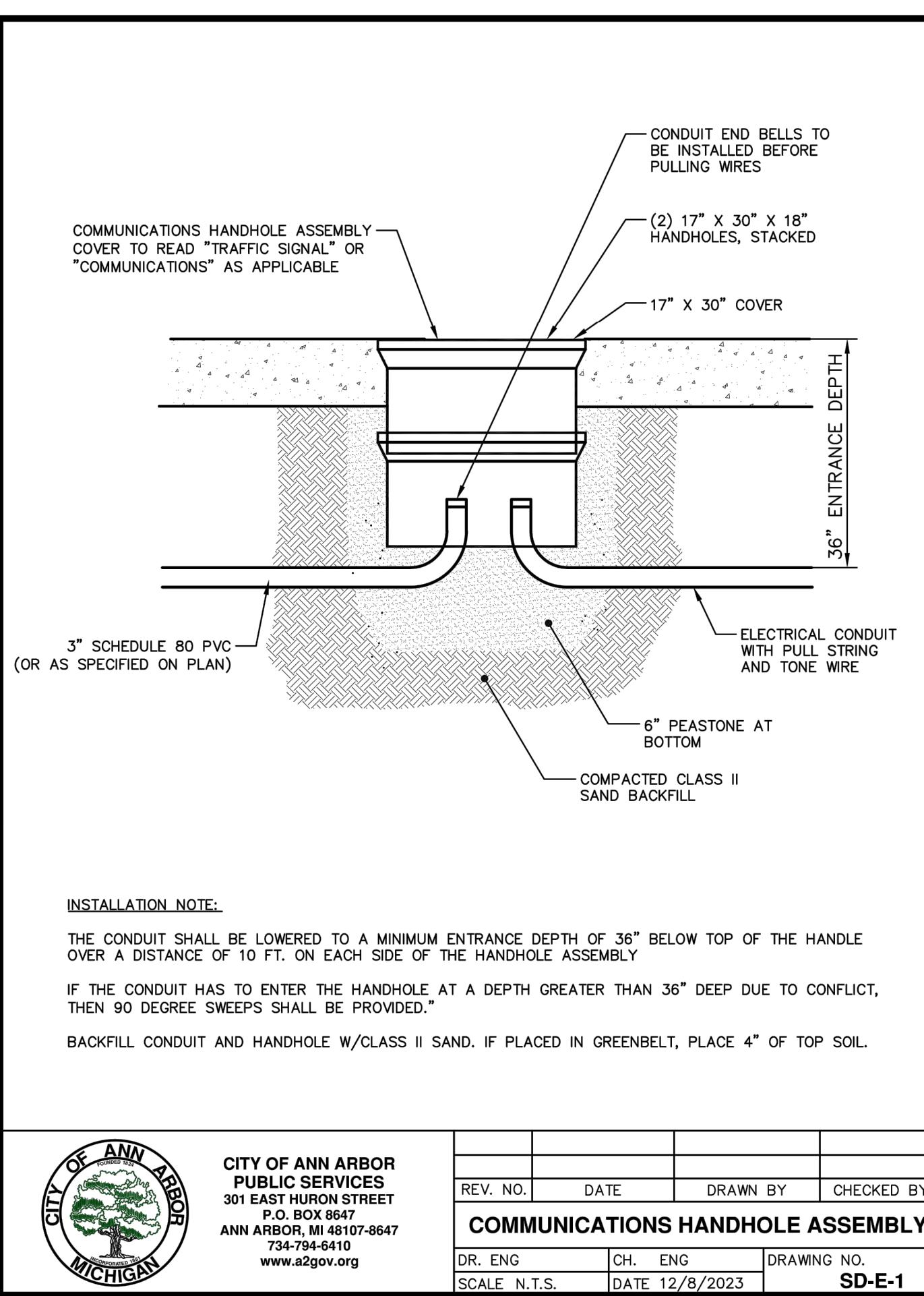
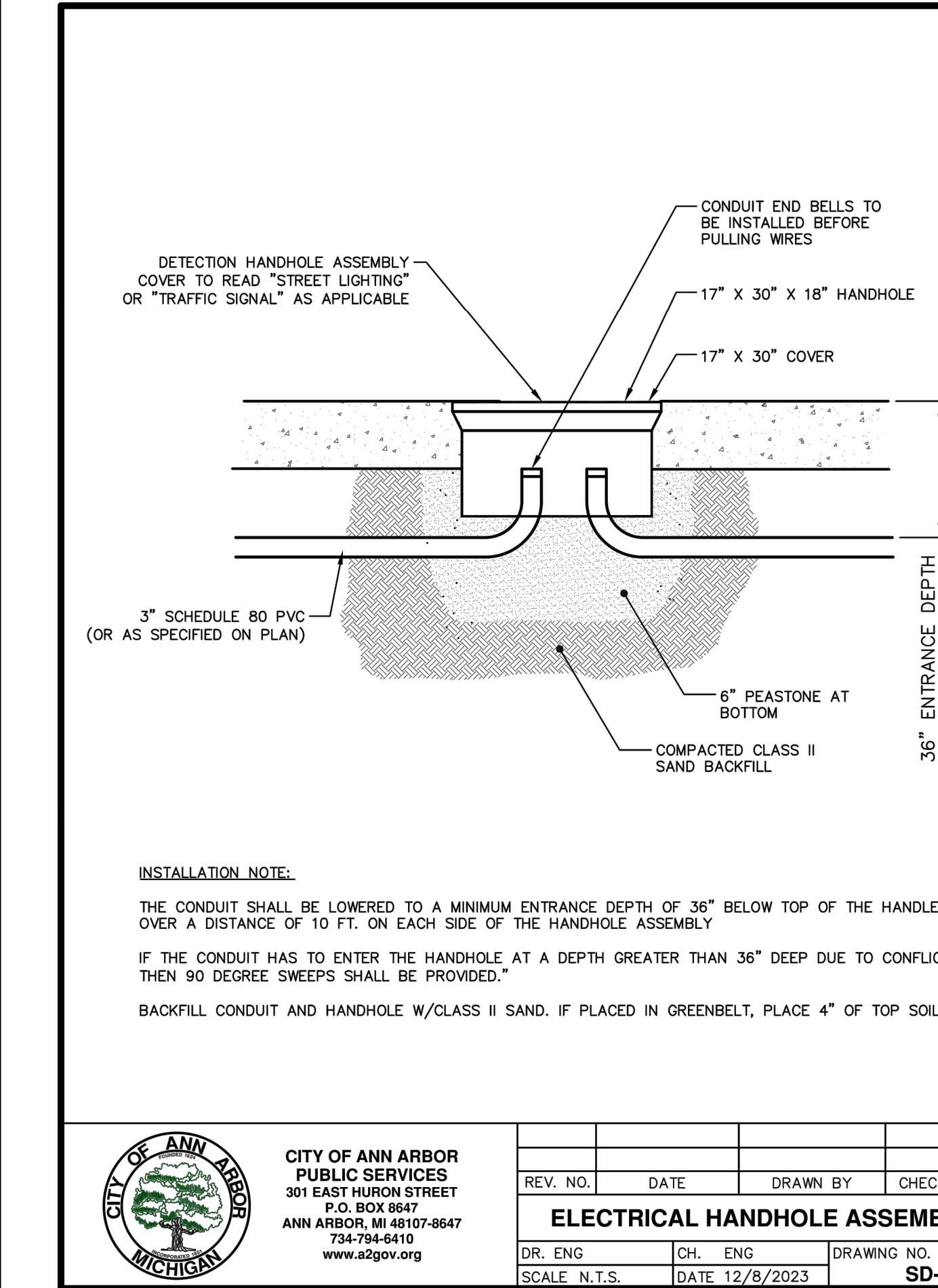
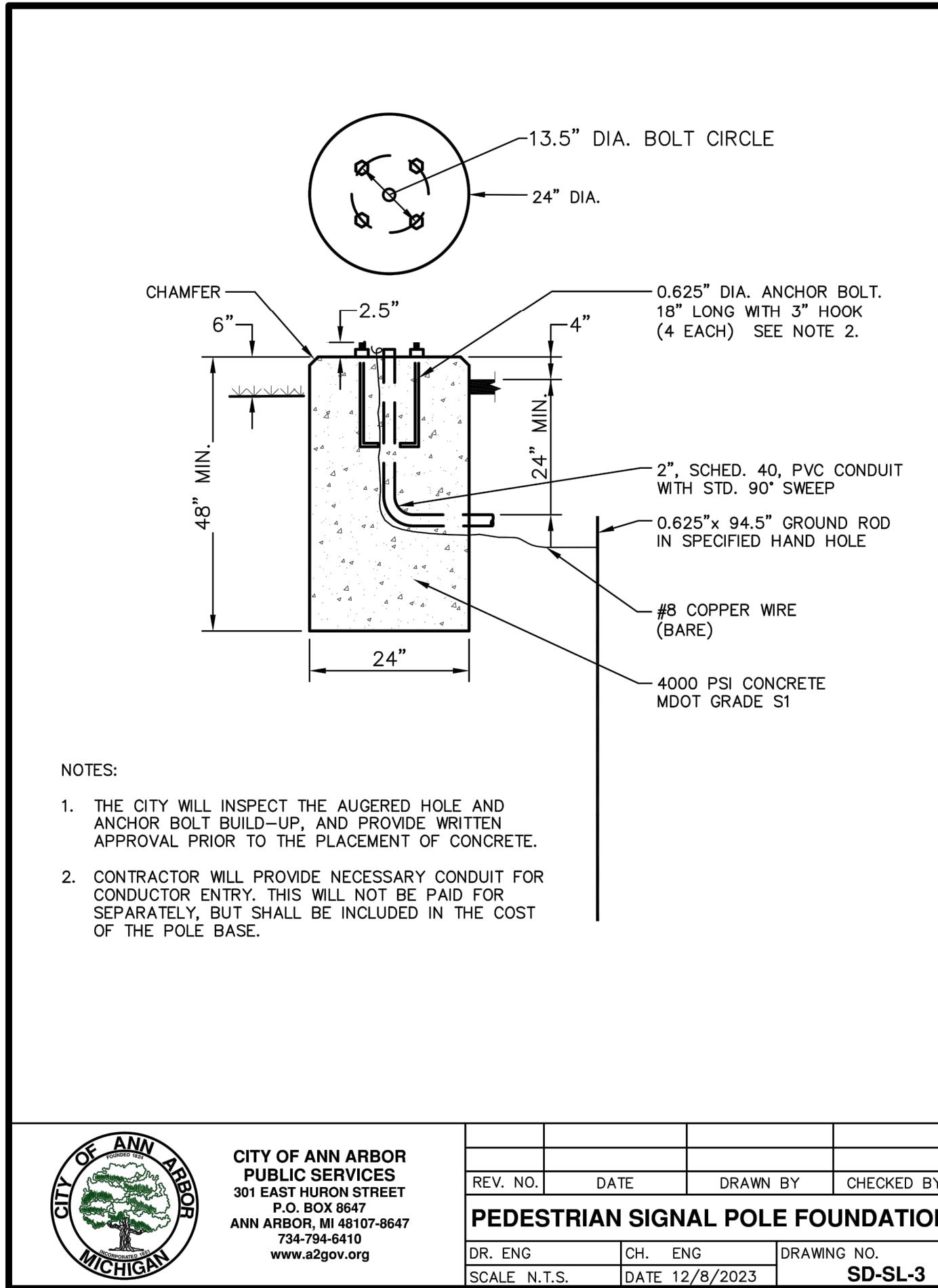


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## SIGNAL NOTES

MAINTAINING AGENCY CONTACT INFORMATION  
• CITY OF ANN ARBOR: (734) 794-6361

NOTIFICATIONS TO MAINTAINING AGENCIES  
CONTACT THE CITY OF ANN ARBOR SEVEN WORKING DAYS PRIOR TO START OF CONSTRUCTION AND SEVEN WORKING DAYS PRIOR TO SIGNAL ACTIVATION.

FACILITIES NOT ON PLANS  
EXISTING O.H. & T.S. FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.

UNDERGROUND UTILITY SEPARATION  
A MINIMUM CLEARANCE OF 3'-6" HORIZONTAL & 1'-0" VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED FACILITIES & EXISTING U.G. WATER FACILITIES.

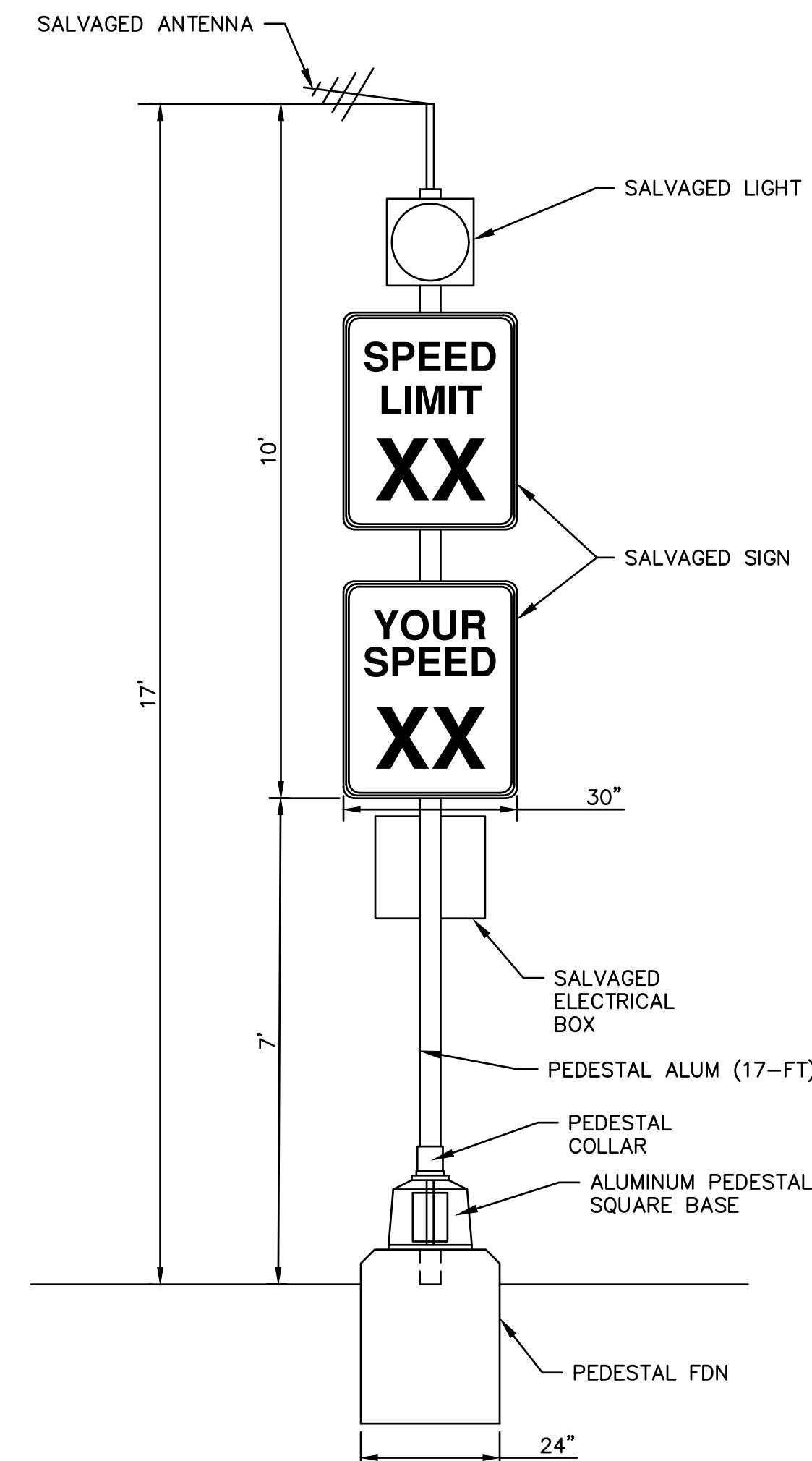
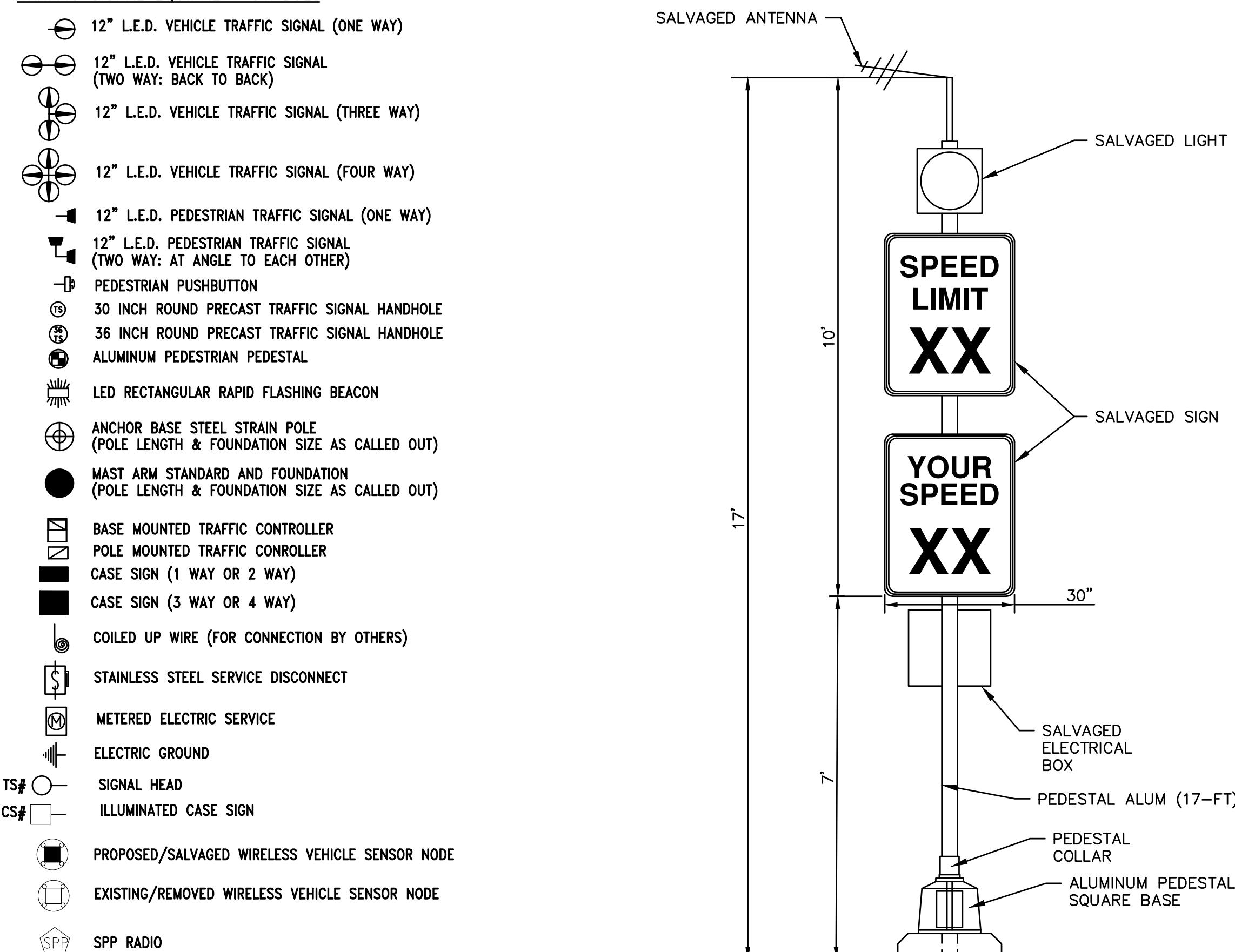
SIGNAL EQUIPMENT DISPOSAL  
DISPOSAL OF ALL TRAFFIC SIGNAL EQUIPMENT IS INCLUDED IN THE REMOVAL PAY ITEMS AND SHALL ALSO INCLUDE THE FOLLOWING:  

- NOTIFICATION TO THE CITY OF ANN ARBOR THAT TRAFFIC SIGNAL EQUIPMENT IS BEING REMOVED.
- TEMPORARY STORAGE OF EQUIPMENT IN A DUMPSTER ON SITE (OR AS DIRECTED BY THE ENGINEER) ALLOWING THE CITY OF ANN ARBOR 48 HOURS TO SALVAGE ANY EQUIPMENT.
- PROPER DISPOSAL OF ANY EQUIPMENT CONTAINING ENVIRONMENTALLY SENSITIVE MATERIALS (MERCURY RELAY SWITCHES FOR EXAMPLE)
- DISABLING OR DESTRUCTION OF ALL REMAINING EQUIPMENT TO THE SATISFACTION OF THE ENGINEER SUCH THAT IT CANNOT BE REUSED OR RESOLD.
- PROPER DISPOSAL OF ALL REMAINING EQUIPMENT.

PLAN DEVIATIONS DURING CONSTRUCTION  
NO CHANGES FROM PLANS IN LOCATION OF SUPPORTING STRUCTURES SIGNAL HEAD PLACEMENT OR TRAFFIC SIGNAL EQUIPMENT WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE CITY OF ANN ARBOR.

CONTINUOUS TRAFFIC SIGNAL OPERATION  
PLACE PROPOSED TRAFFIC SIGNAL INTO OPERATION AT TIME OF REMOVAL OF EXISTING TRAFFIC SIGNAL FACILITIES. CONTACT CITY OF ANN ARBOR IF UNABLE TO MAINTAIN THE TRAFFIC SIGNAL IN AN OPERABLE CONDITION AT ALL TIMES.

## TRAFFIC SIGNAL EQUIPMENT SYMBOLS



## MDOT SIGNAL STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR IN THE PLANS  
THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARDS  
GIVEN BELOW, OPPOSITE EACH ITEM, UNLESS OTHERWISE INDICATED.

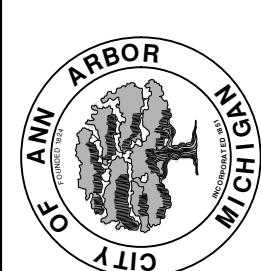
- \*SIG-230-A COLOR CODE WIRING/EQUIPMENT GROUNDING
- \*SIG-330-A PEDESTAL MOUNTED SIGNAL DISPLAYS
- \*SIG-331-A PEDESTAL MOUNTING FOR SIGNALS
- \*SIG-400-A PEDESTRIAN PUSH BUTTON DETAILS

\*MDOT SPECIAL DETAILS - LOCATED IN PROPOSAL

## SCHOOL SPEED ASSEMBLY DETAIL

ALL SALVAGED AND REINSTALLED MATERIALS INCLUDED IN THIS  
DETAIL SHALL BE PAID FOR AS SIGN, SPECIAL, ELECTRICAL, REM  
SALV, REINSTALL

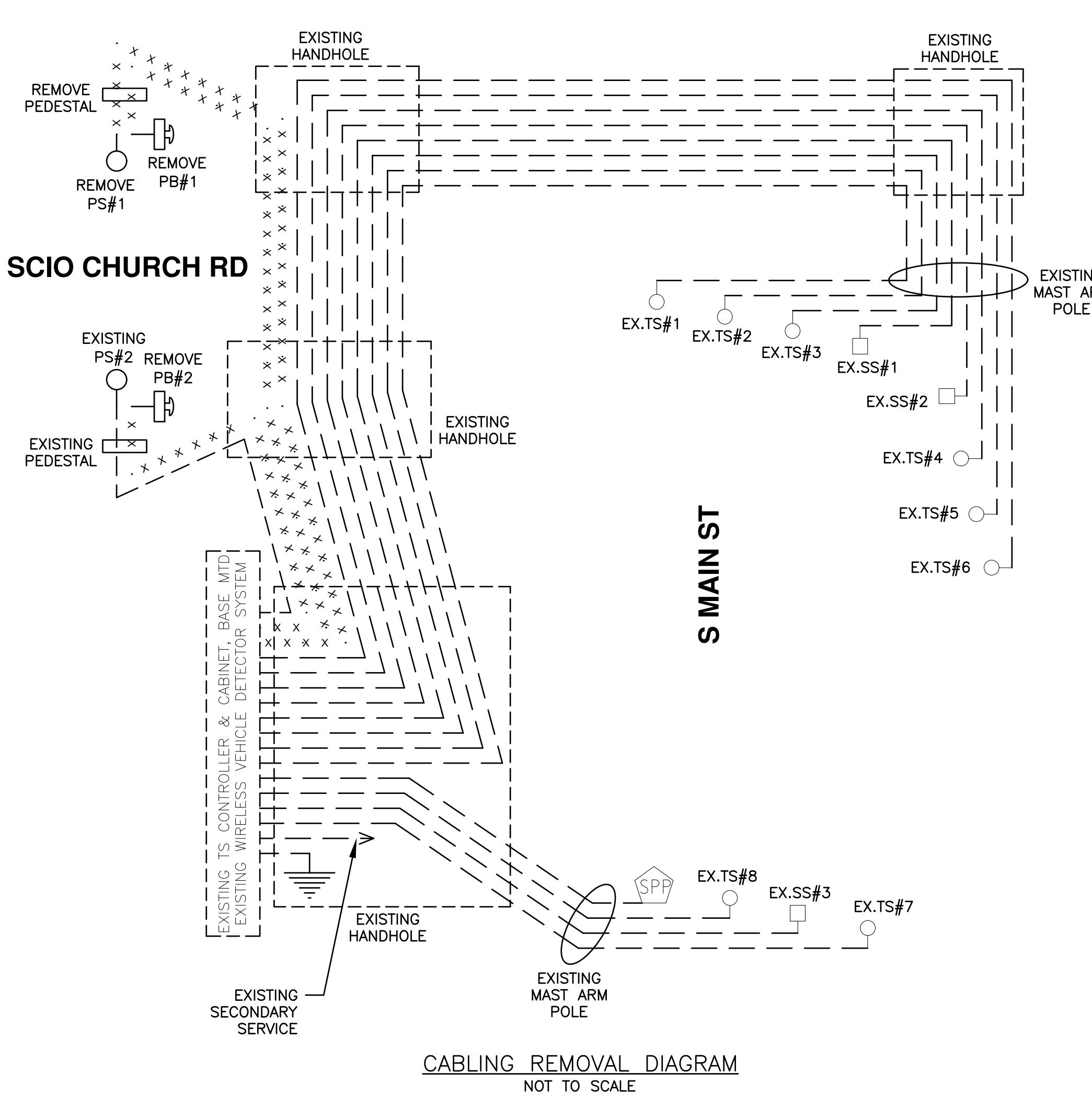
THE NEW ALUMINUM PEDESTALS SHALL BE INSTALLED WITH SQUARE  
BASES AND SUPPORT COLLARS. THE SUPPORT COLLARS SHALL BE  
INCLUDED IN THE PAY ITEM SIGN, SPECIAL, ELECTRICAL, REM SALV,  
REINSTALL AND WILL NOT BE PAID FOR SEPARATELY.

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH MAIN STREET SIDEWALK PROJECT

## SIGNAL NOTES

SCALE PLAN: #####  
DRAWING No. 2020-029-28

SHEET No. 28 OF 38



## CABLING REMOVAL DIAGRAM

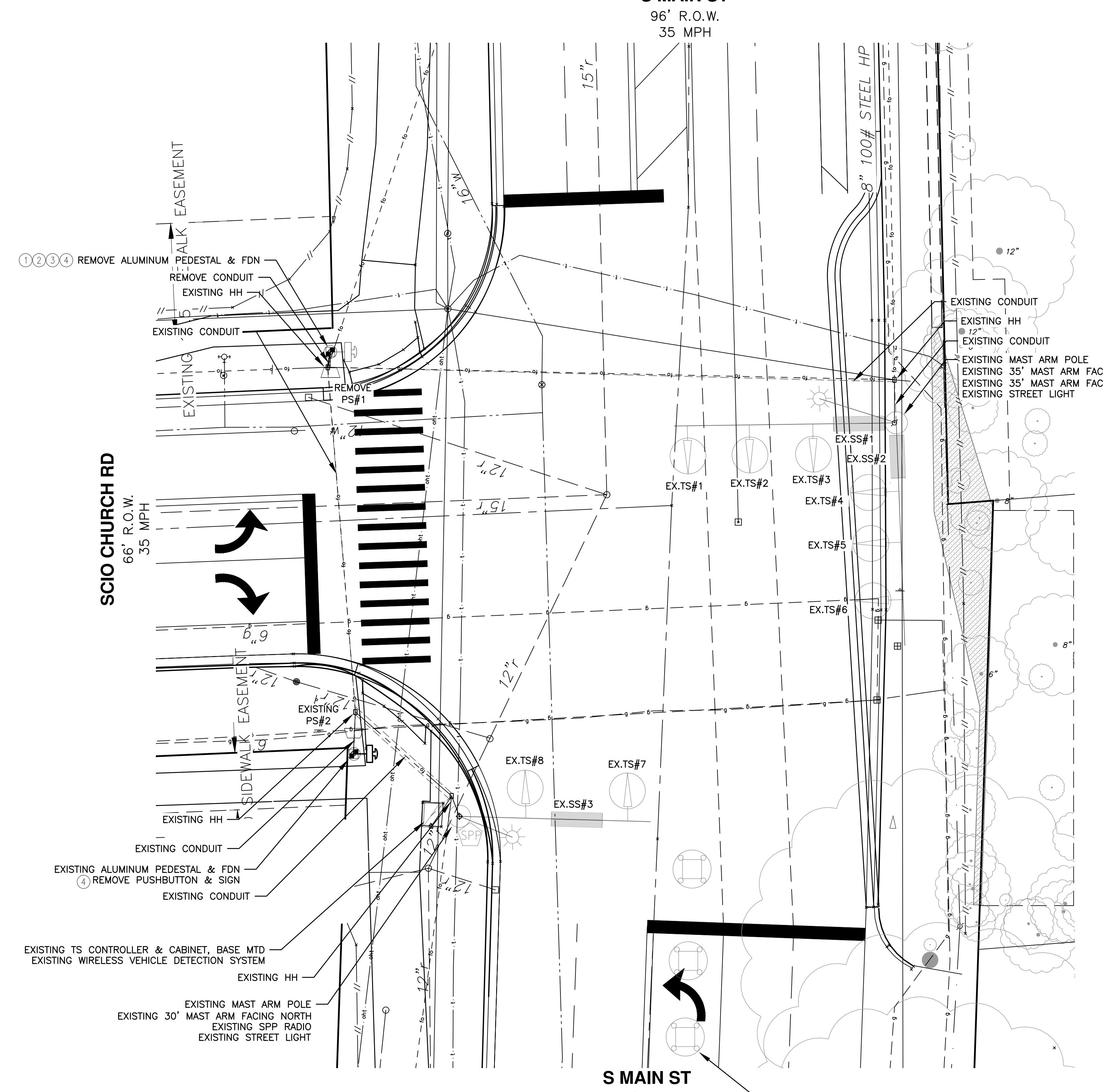
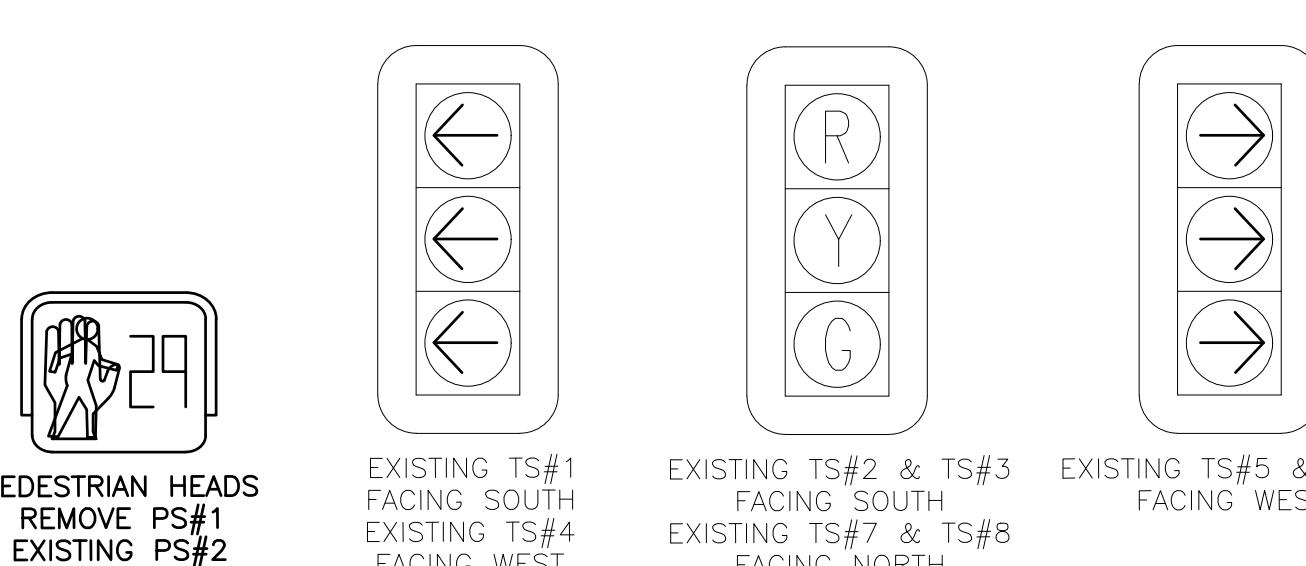


#### INTERSECTION SPECIFIC NOTES:

REMOVAL OF TRAFFIC SIGNAL EQUIPMENT SHALL BE COORDINATED WITH ROAD CONSTRUCTION. TIME OF REMOVAL SHALL BE AS DIRECTED BY THE ENGINEER.

## LIST OF MATERIAL

NO.	ITEM	QUANTITY
①	DS_TS, Pedestrian, Pedestal Mtd, Rem	1 Ea
②	DS_Pedestal, Rem	1 Ea
③	DS_Pedestal Fdn, Rem	1 Ea
④	DS_Pushbutton, Rem	2 Ea
⑤	DS_Conduit, Rem	5 Ft



## S MAIN ST

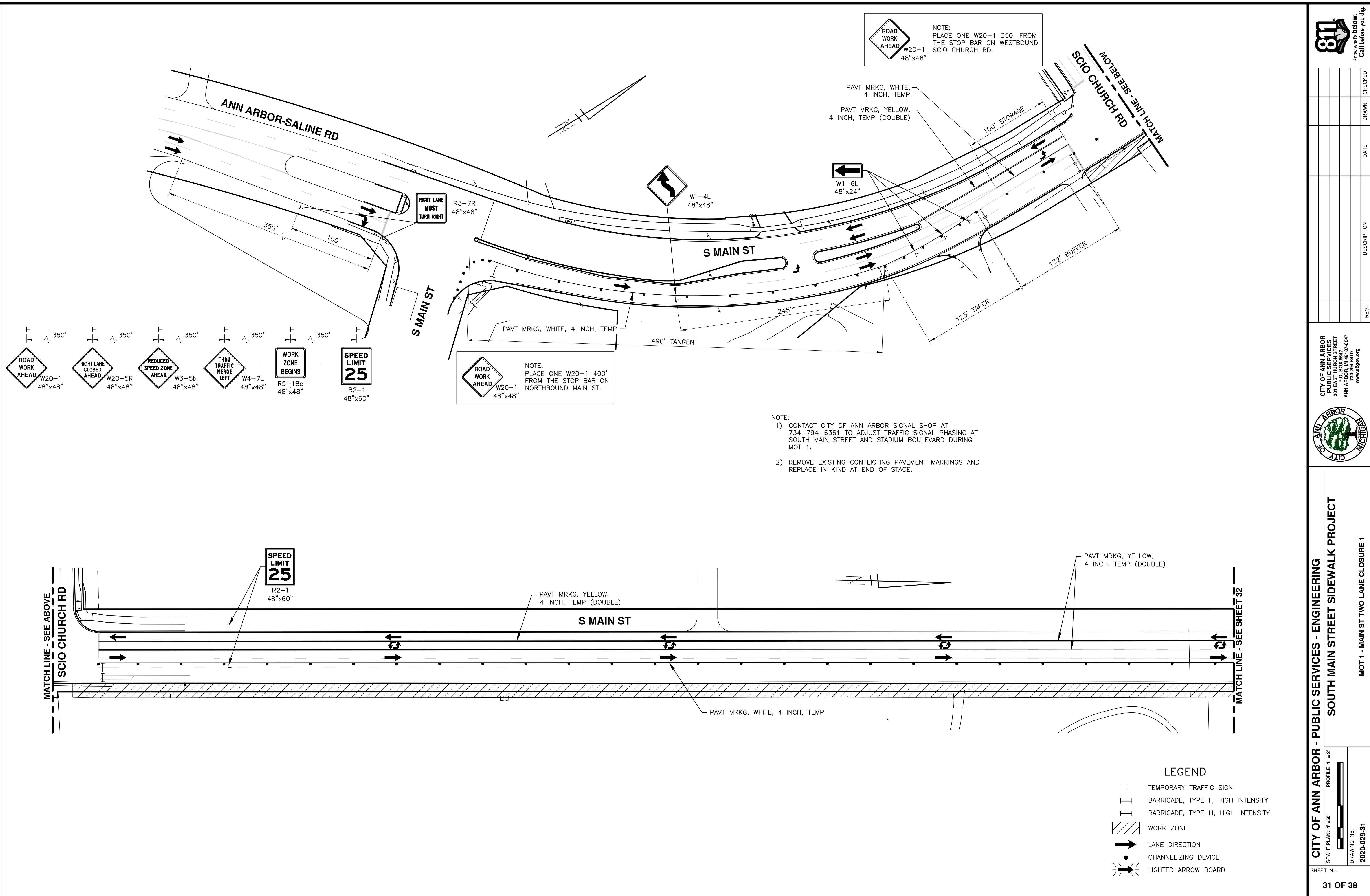
100' R.O.W.  
35 MPH

## EXISTING WIRELESS VEHICLE SENSOR NODES (3)

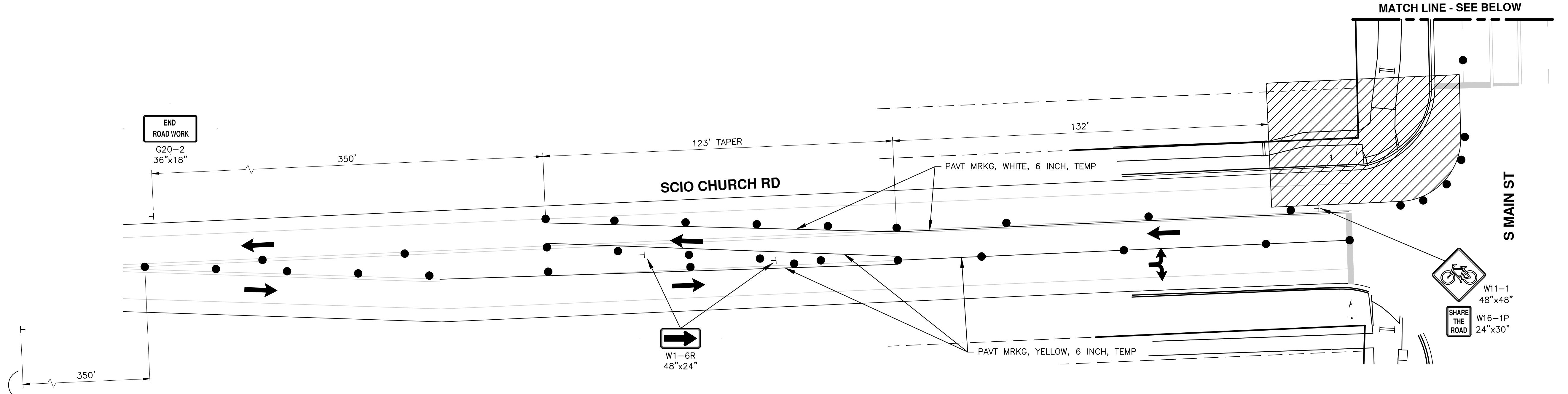


OPENINGS	31
CYCLIC WATTS	282
STEADY WATTS	304

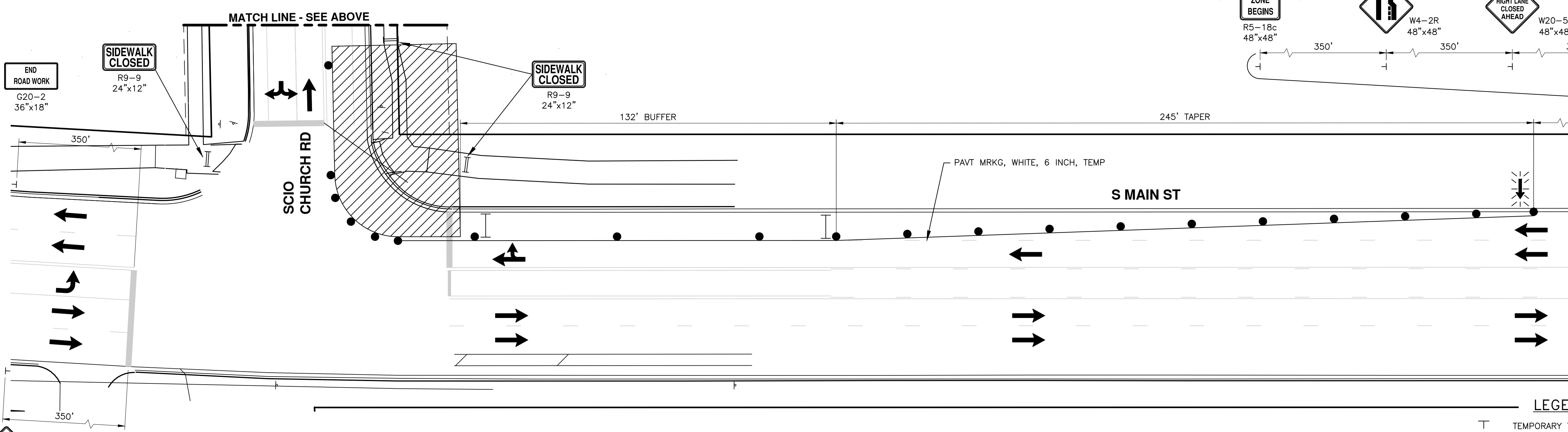








NOTE:  
 1) CONTACT CITY OF ANN ARBOR SIGNAL SHOP AT 734-794-6361 TO ADJUST TRAFFIC SIGNAL PHASING AT SOUTH MAIN STREET AND SCIO CHURCH RD. EASTBOUND RIGHT TURN OVERLAP ON SCIO CHURCH ROAD TO BE REMOVED DURING MOT 2A, EASTBOUNDS RIGHTS & LEFTS TO OPERATE CONCURRENTLY.  
 2) REMOVE EXISTING CONFLICTING PAVEMENT MARKINGS AND REPLACE IN KIND AT END OF STAGE.

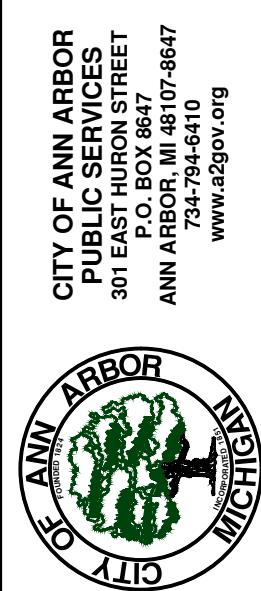


NORTHWEST QUADRANT SCIO CHURCH RD

**LEGEND**

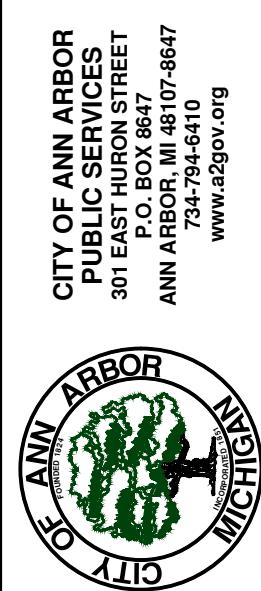
- TEMPORARY TRAFFIC SIGN
- BARRICADE, TYPE II, HIGH INTENSITY
- BARRICADE, TYPE III, HIGH INTENSITY
- WORK ZONE
- LANE DIRECTION
- CHANNELIZING DEVICE
- LIGHTED ARROW BOARD

**CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING**  
**SOUTH MAIN STREET SIDEWALK PROJECT**  
 MOT 2A - NORTHWEST QUADRANT SCIO CHURCH RD



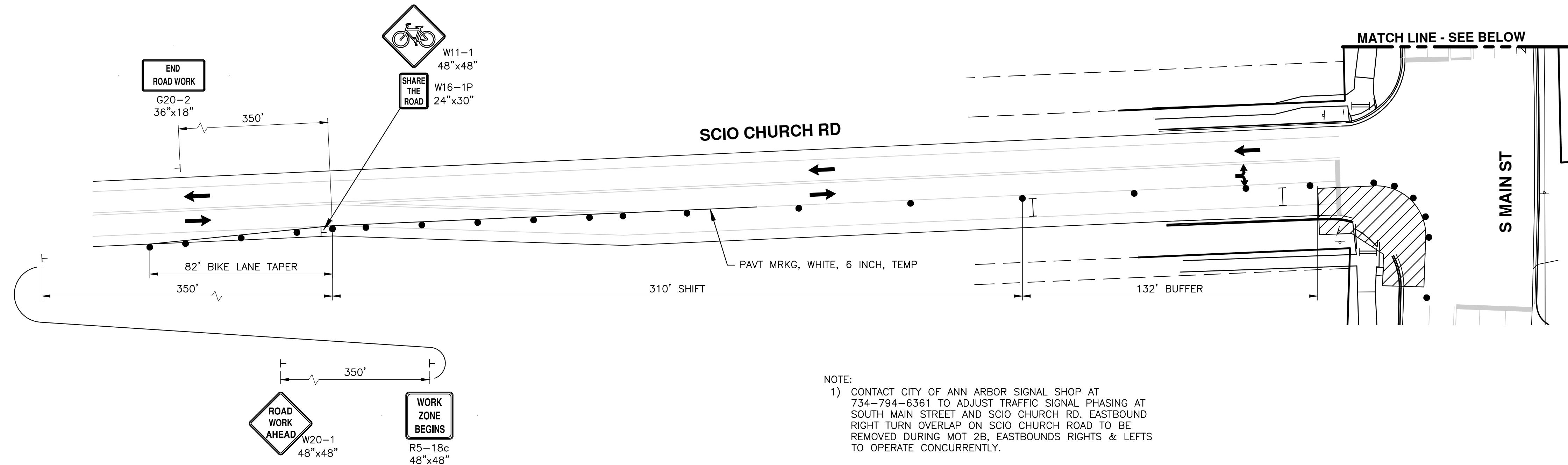
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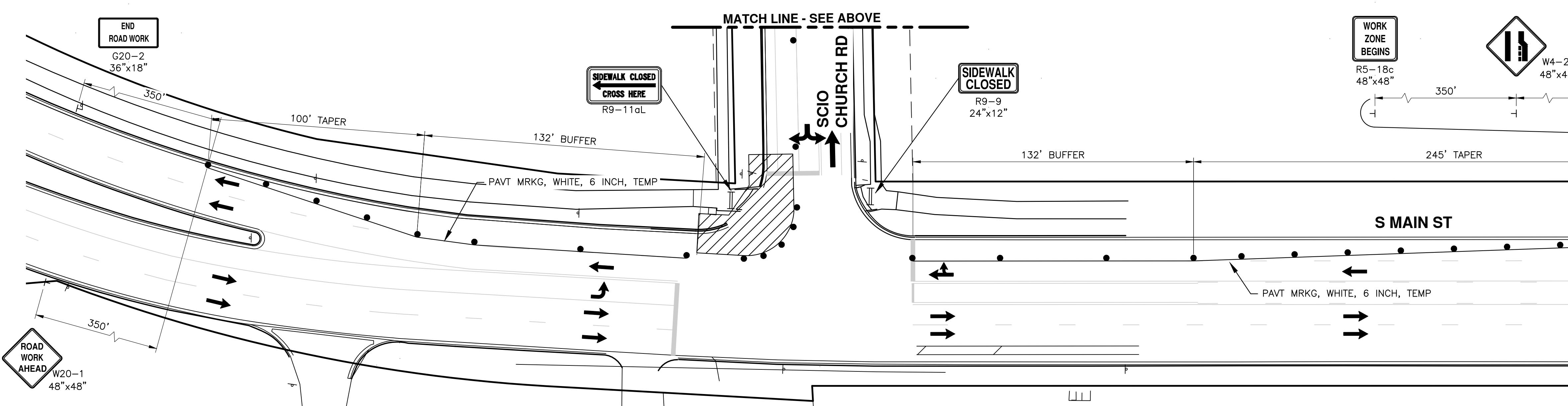
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SHEET No. 2020-029-33  
 DRAWING No. 33 OF 38



NOTE:

- 1) CONTACT CITY OF ANN ARBOR SIGNAL SHOP AT 734-794-6361 TO ADJUST TRAFFIC SIGNAL PHASING AT SOUTH MAIN STREET AND SCIO CHURCH RD. EASTBOUND RIGHT TURN OVERLAP ON SCIO CHURCH ROAD TO BE REMOVED DURING MOT 2B, EASTBOUNDS RIGHTS & LEFTS TO OPERATE CONCURRENTLY.
- 2) REMOVE EXISTING CONFLICTING PAVEMENT MARKINGS AND REPLACE IN KIND AT END OF STAGE.



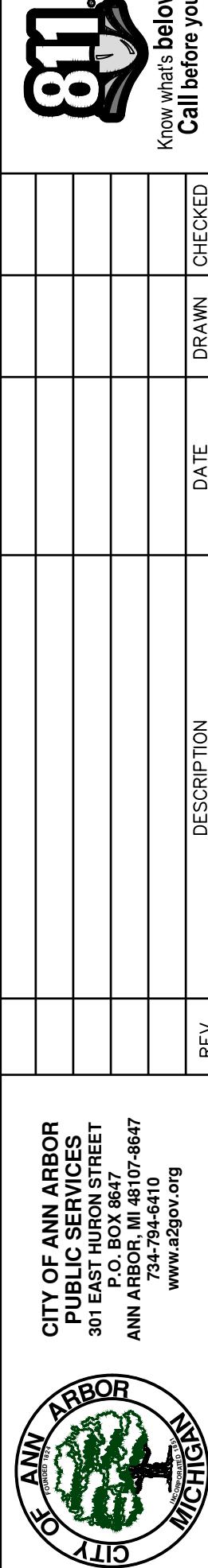
SOUTHWEST QUADRANT SCIO CHURCH RD

**LEGEND**

- TEMPORARY TRAFFIC SIGN
- BARRICADE, TYPE II, HIGH INTENSITY
- BARRICADE, TYPE III, HIGH INTENSITY
- WORK ZONE
- LANE DIRECTION
- CHANNELIZING DEVICE
- LIGHTED ARROW BOARD

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**SOUTH MAIN STREET SIDEWALK PROJECT**

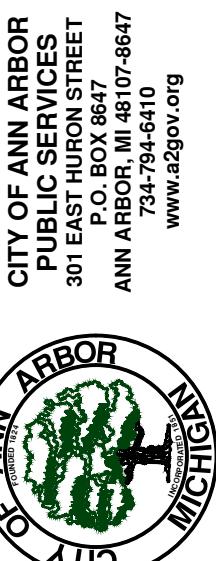
MOT 2B - SOUTHWEST QUADRANT SCIO CHURCH RD



REV.	DESCRIPTION	DATE DRAWN	DATE CHECKED



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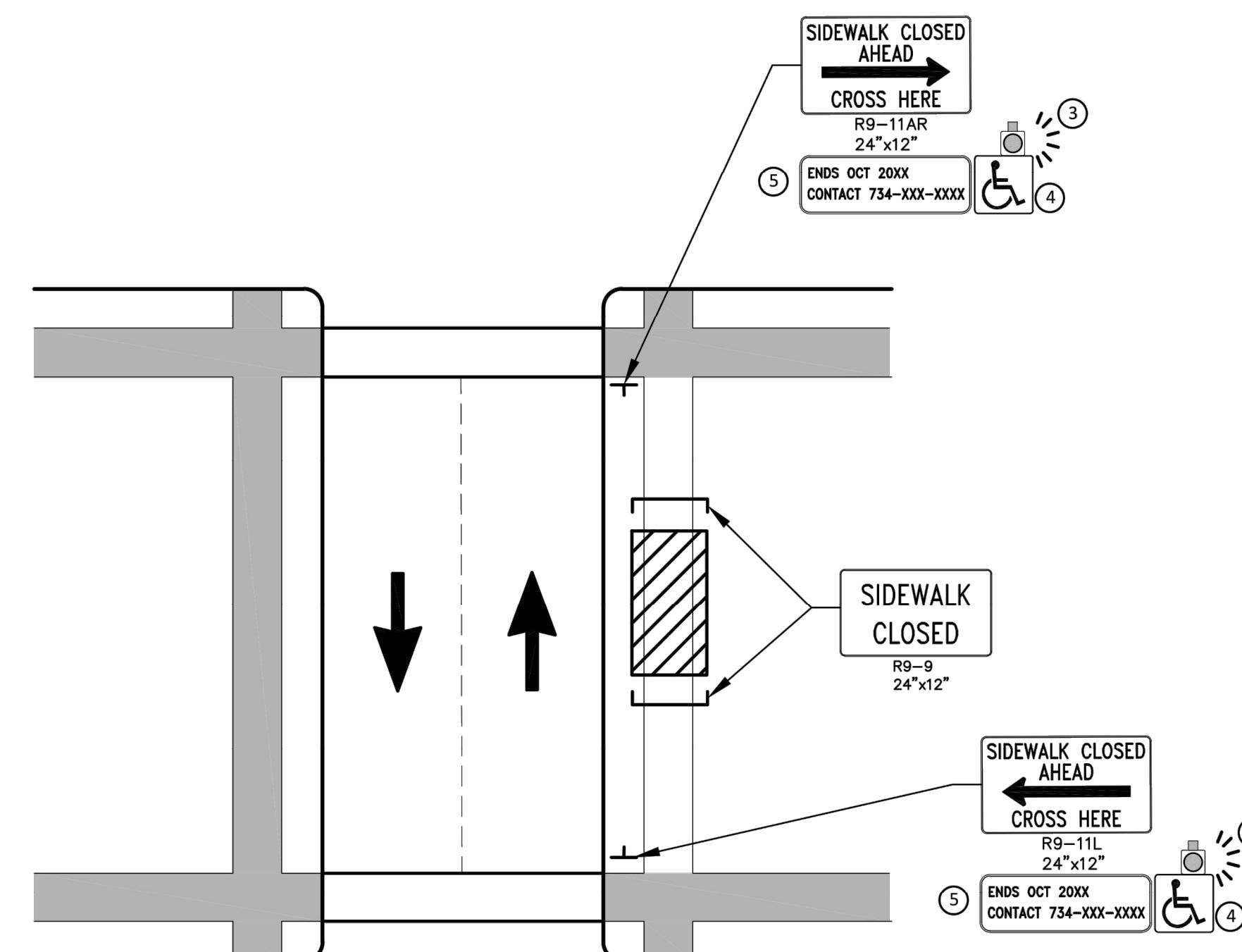
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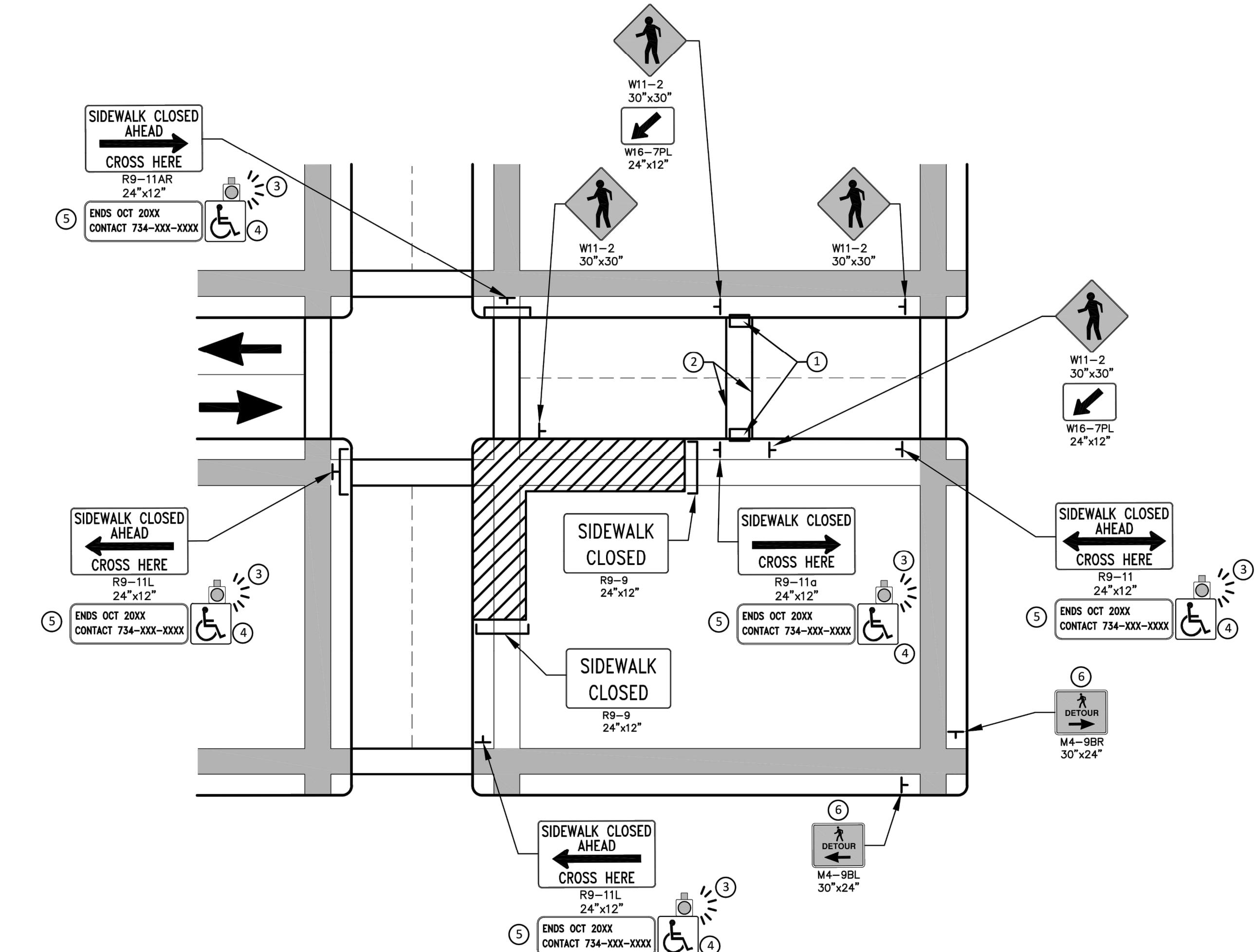
SOUTH-MAIN-STREET-SIDEWALK  
PROJECT

NOT PEDESTRIAN DETAILS 1

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SHEET : INTS  
DRAWING No. 2020-029-35  
SCALE : 1:100  
SHEET No. 35 OF 38



PEDESTRIAN DETOUR USING OPPOSITE SIDE OF STREET



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

#### 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 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 MMTCD, 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 20 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 MMTCD 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".

#### LEGEND

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





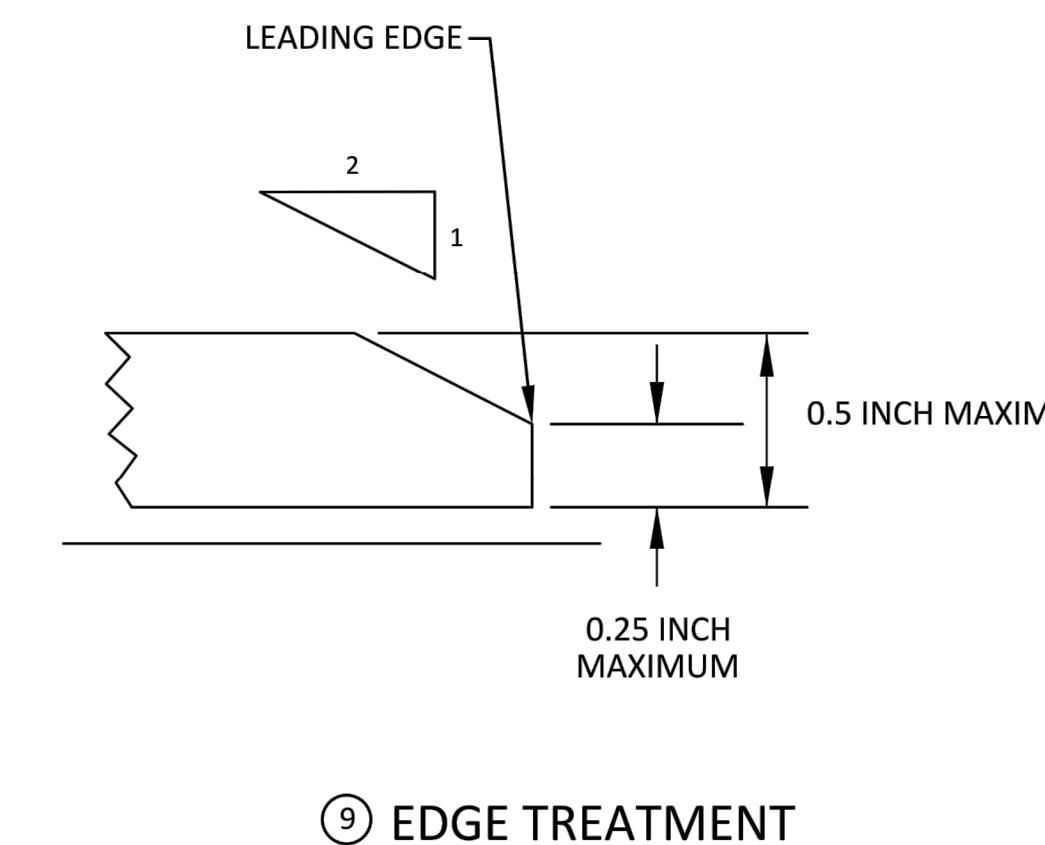
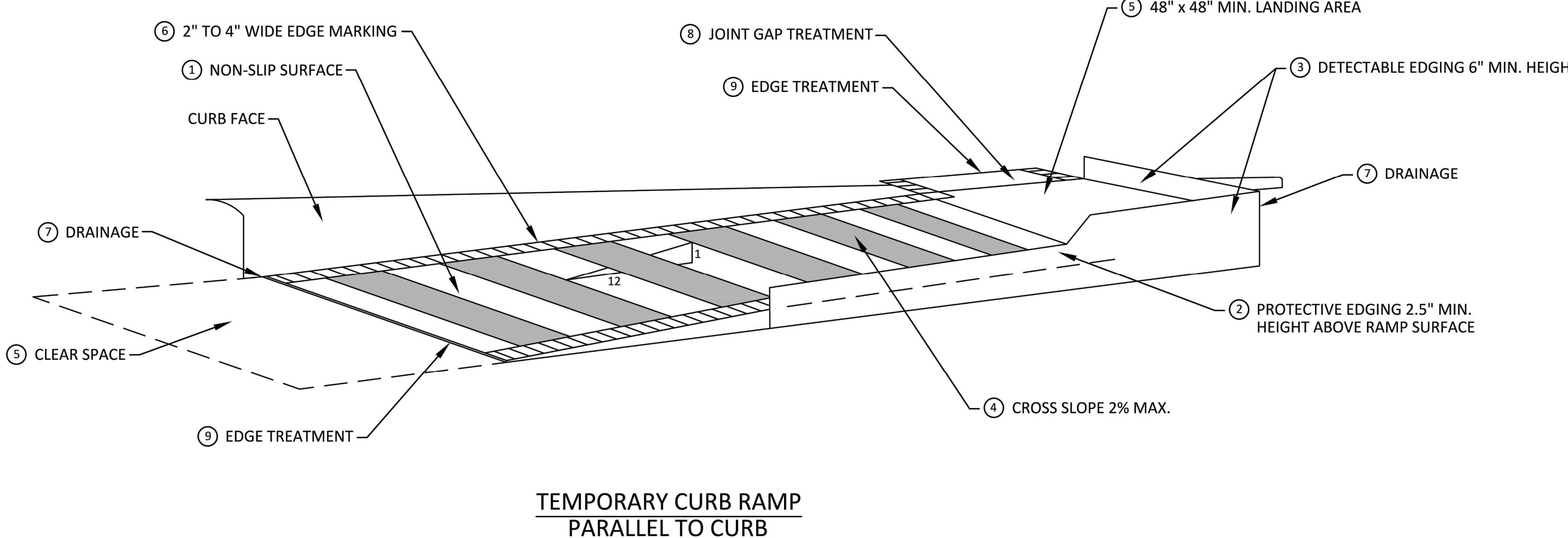
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SOUTH MAIN STREET SIDEWALK  
PROJECT  
MOT PEDESTRIAN DETAILS 3

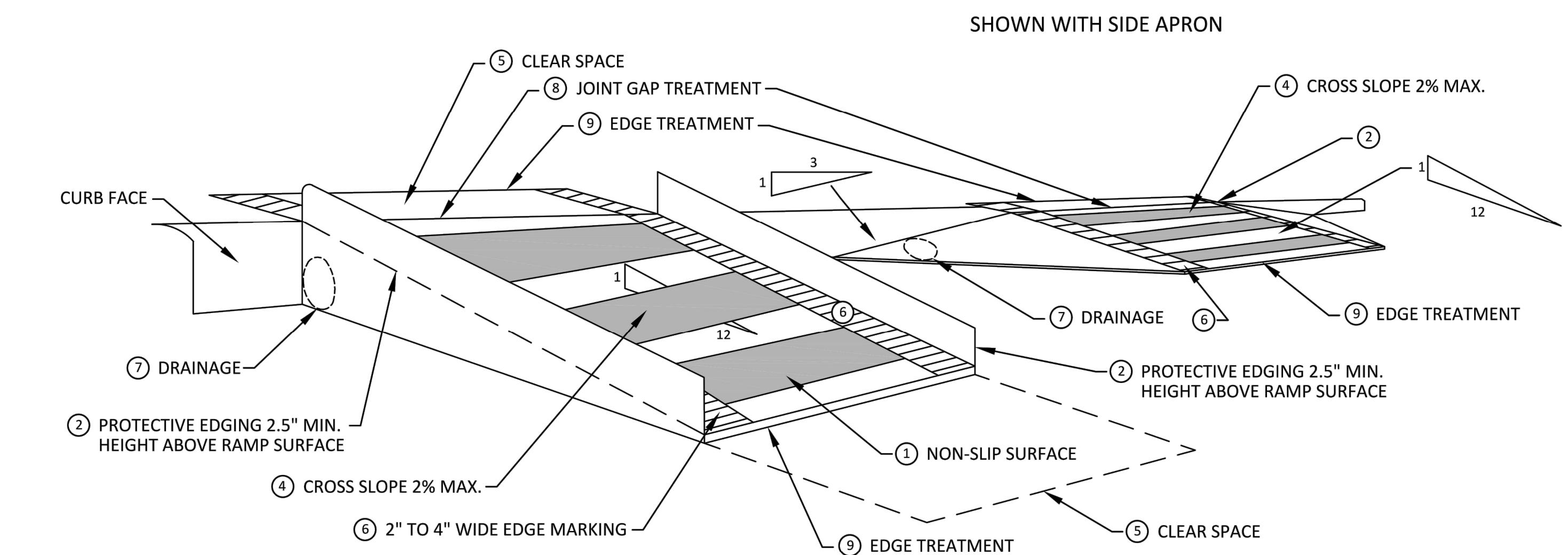
SCALE : 1/16'  
DRAWING No.  
2020-029-37  
SHEET No.



SPECIFIC NOTES

- ① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. 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.
- ② 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 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).
- ③ CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE.
- ④ CLEAR SPACE OF 48" x 48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- ⑤ 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.
- ⑥ WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.
- ⑦ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- ⑧ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHOULD BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2" HEIGHT.

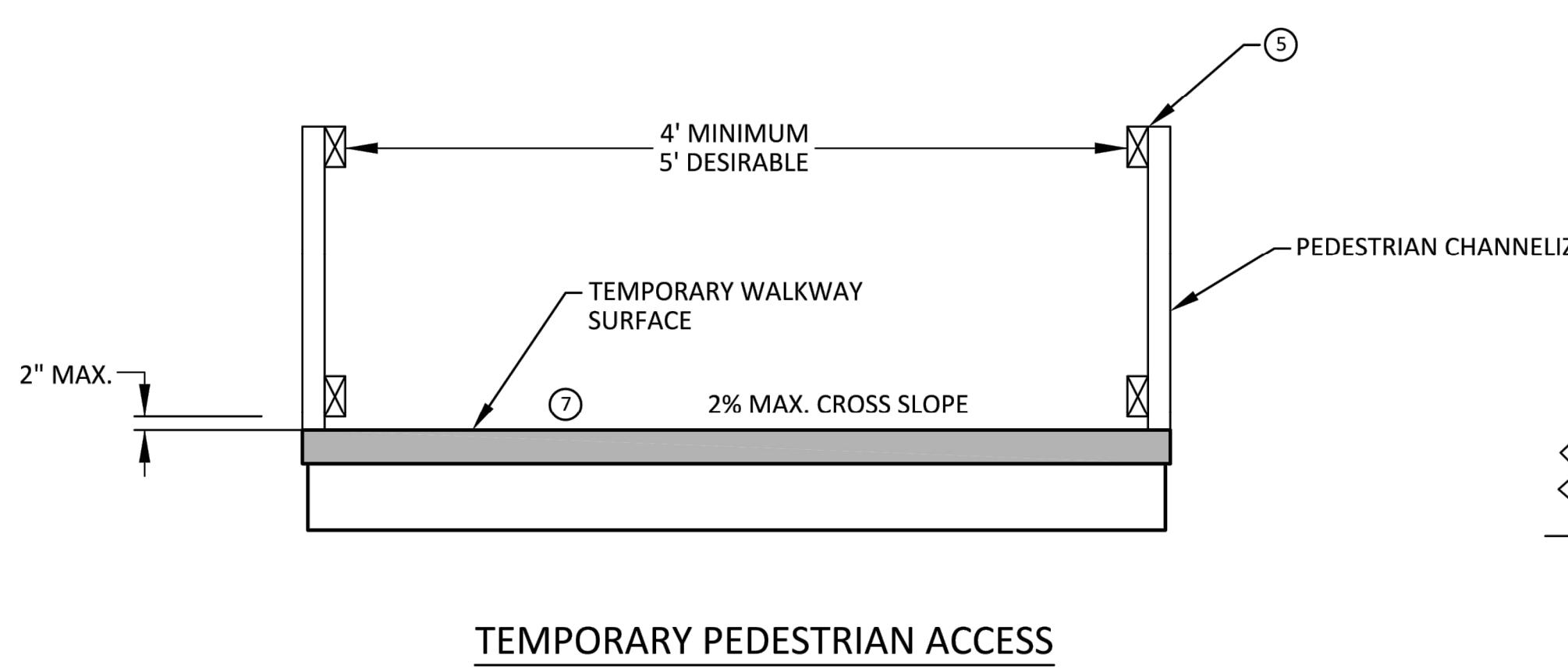
SHOWN WITH PROTECTIVE EDGE



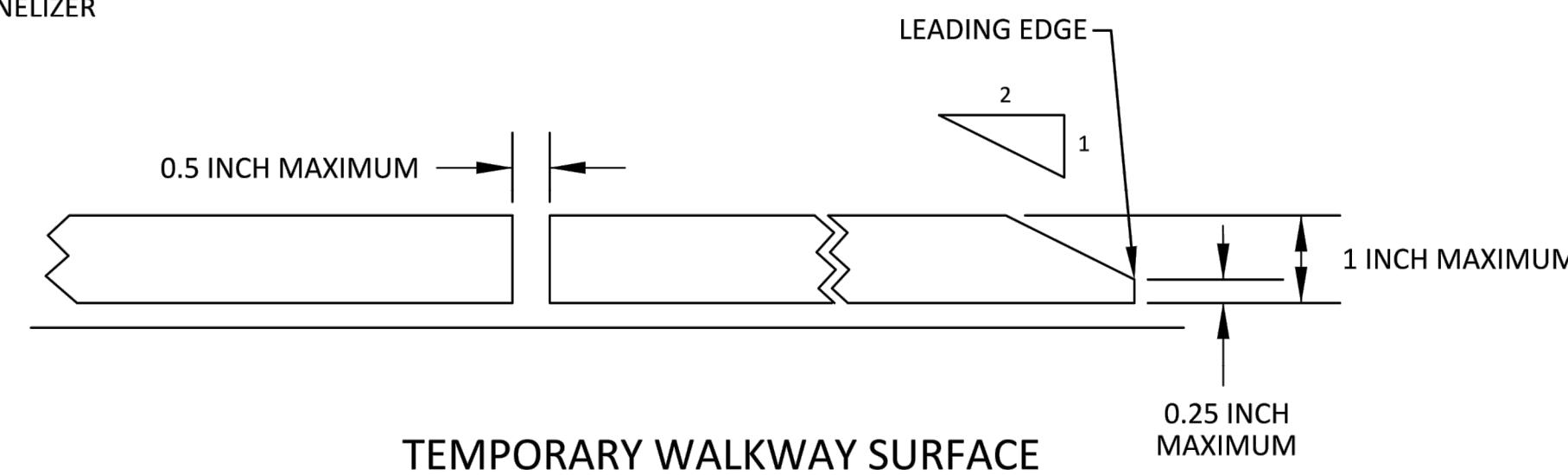
TEMPORARY CURB RAMP  
PERPENDICULAR TO CURB



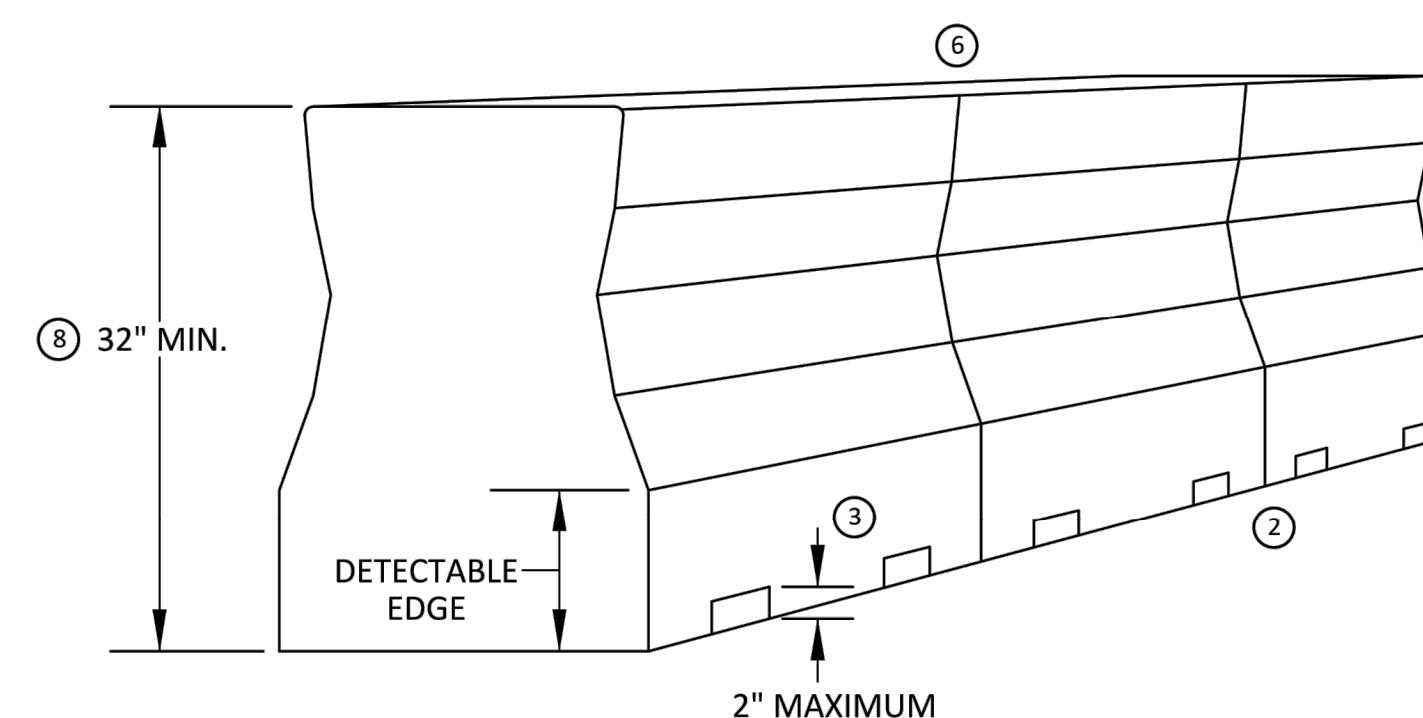
Know what's below.  
Call before you dig.



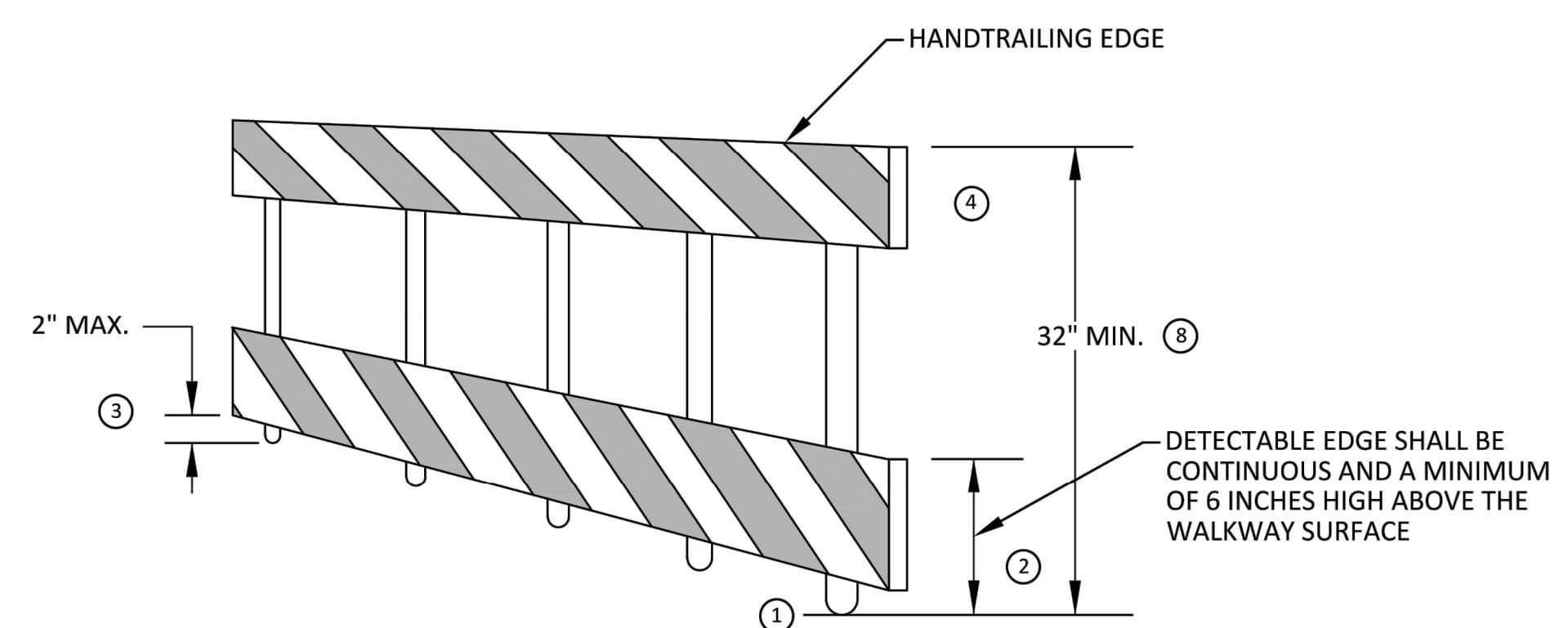
TEMPORARY PEDESTRIAN ACCESS



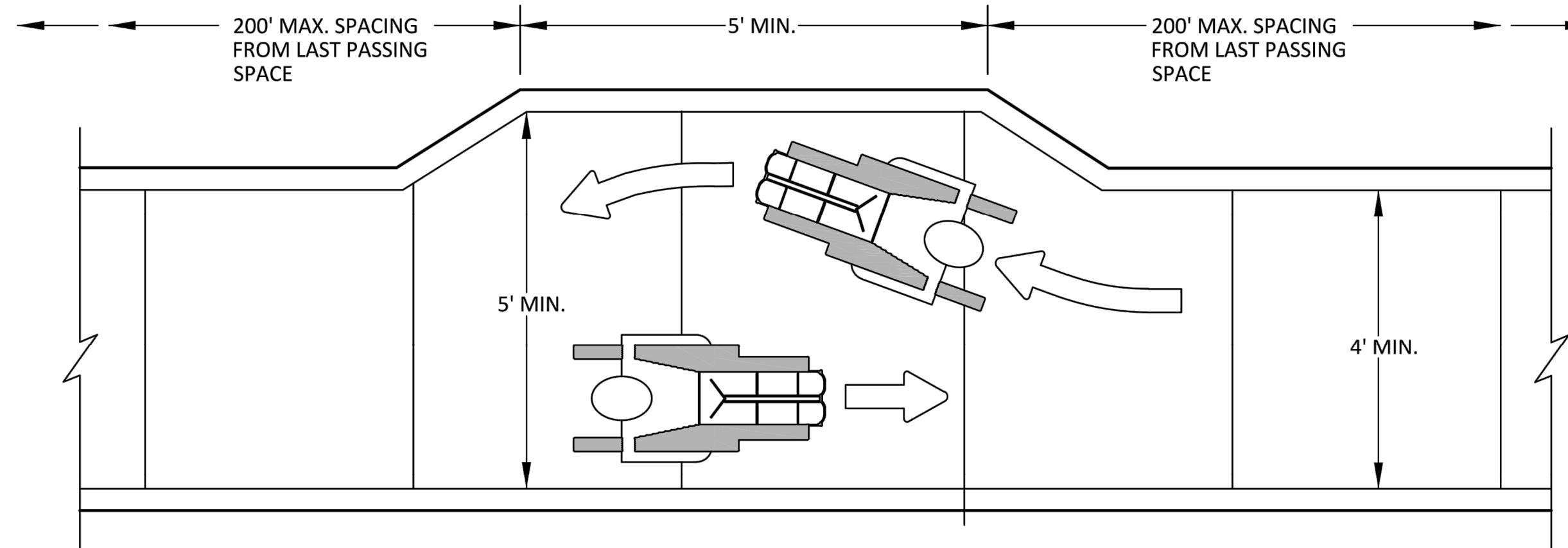
TEMPORARY WALKWAY SURFACE



PEDESTRIAN CHANNELIZER USING A BARRIER  
(MINIMUM REQUIREMENTS)



PEDESTRIAN CHANNELIZER  
(MINIMUM REQUIREMENTS)



NARROW TEMPORARY PEDESTRIAN ACCESS ROUTE PASSING DETAIL

#### GENERAL NOTES

RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4 INCHES INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27 INCHES ABOVE THE WALKWAY SURFACE.

ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS APPROPRIATE FOR THE BARRIER'S APPLICATION.

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

#### SPECIFIC NOTES

ANY TRIPPING HAZARD IN THE WALKWAY NEEDS A DETECTABLE EDGE. BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHALL NOT EXTEND INTO THE 48 INCH MINIMUM WALKWAY CLEAR SPACE AND SHALL NOT EXCEED 0.5 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE.

① DETECTABLE EDGES SHALL BE CONTINUOUS AND A MINIMUM OF 6 INCHES IN HEIGHT ABOVE WALKWAY SURFACE AND HAVE COLOR MARKINGS CONTRASTING WITH THE WALKWAY SURFACE.

② DEVICES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2 INCHES IS ALLOWED FOR DRAINAGE PURPOSES.

③ PROVIDE A HANDRAIL ON BOTH SIDES OF THE RAMP IF THE RAMP IS NOT EXPOSED TO VEHICLE TRAFFIC AND HAS A TOTAL RISE GREATER THAN 6 INCHES, AND A LENGTH GREATER THAN 72 INCHES.

- ENSURE THE HANDRAIL IS 1.25 AND 1.5 INCHES WIDE AND CONFIGURED TO BE A "GRASPABLE" CROSS-SECTION.

SEE CONSTRUCTION SUBSECTION 2.A FOR ADDITIONAL DETAILS.

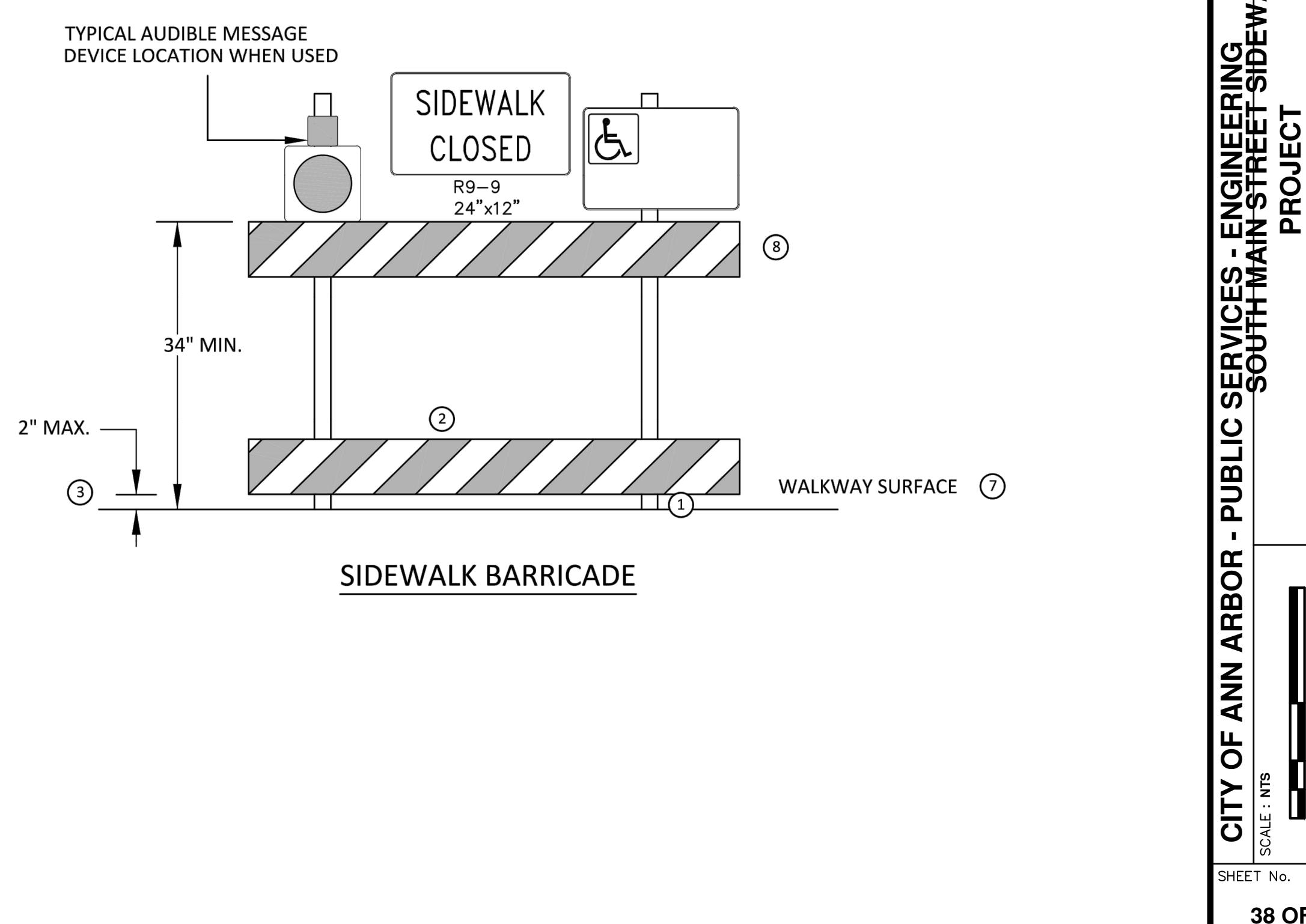
WHEN THE RAMP IS EXPOSED TO TRAFFIC, IN LIEU OF HANDRAILS, USE A PROTECTIVE EDGE 2.5 INCHES MINIMUM HEIGHT ABOVE THE RAMP SURFACE OR 1:10 FLARE ON BOTH SIDES OF THE RAMP.

⑤ ALL DEVICES SHALL BE FREE OF SHARP OR ROUGH EDGES, AND FASTENERS (BOLTS) SHALL BE ROUNDED TO PREVENT HARM TO HANDS, ARMS OR CLOTHING OF PEDESTRIANS.

⑥ ALL DEVICES USED TO CHANNELIZE PEDESTRIAN FLOW SHOULD INTERLOCK SUCH THAT GAPS DO NOT ALLOW PEDESTRIANS TO STRAY FROM THE INTENDED CHANNELIZED PATH.

⑦ A WALKWAY SURFACE SHALL BE FIRM, STABLE, AND SLIP RESISTANT. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED.

⑧ LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL BE 32 INCHES IN HEIGHT OR GREATER.



MOT PEDESTRIAN DETAILS 4

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
SOUTH-MAIN-STREET-SIDEWALK  
PROJECT

SCALE : 1INCH

DRAWING No.

2020-029-38

SHEET No.

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