

# CITY OF ANN ARBOR **ENGINEERING**

IN COOPERATION WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS. WHO MAY NOT BE A PART OF THE "MISS DIG

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

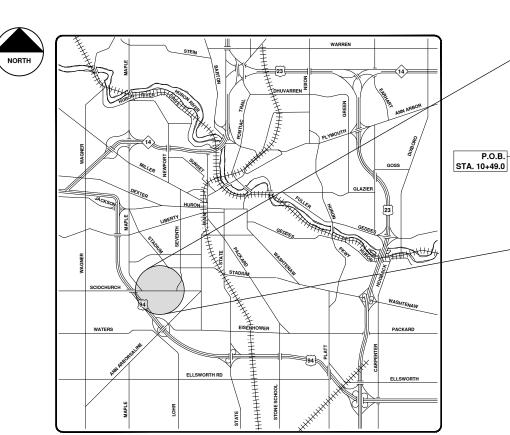
ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION (INCLUDING REFERENCED M.D.O.T. PUBLICATIONS) AND THIS PROJECT'S CONTRACT DOCUMENTS.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE DESIGNED IN ACCORDANCE WITH THE LOCAL AGENCY PROGRAMS 3R GUIDELINES FOR GEOMETRICS ON LOCAL AGENCY PROJECTS 2017 EDITION, 2012 A.A.S.H.T.O. "GUIDE FOR PLANNING, DESIGN, AND OPERATION OF BICYCLE FACILITIES", AND THE TRAFFIC CONTROL IN ACCORDANCE WITH THE 2011 "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

# SCIO CHURCH ROAD IMPROVEMENT PROJECT

**MDOT JOB NO. 205591** 

**MDOT CONTROL SECTION NO. 81000** 



VICINITY MAP

2022 ANNUAL DAILY TRAFFIC (ADT)	10,117	
2042 ADT	11,179	
2022 % COMMERCIAL	5.0%	
2042 % COMMERCIAL	5.5%	
POSTED SPEED	35 MPH	
DESIGN SPEED	35 MPH	

TRAFFIC DATA

SHEET TITLE NUMBER COVER SHEET STANDARD NOTES AND SESC NOTES LEGEND DETAILS DETAILS INFILTRATION TRENCH DETAIL TYPICAL SECTIONS PEDESTRIAN DETAILS 13 - 15 DETOUR ROUTE 16 - 27 WATER MAIN ABANDONMENT AND WATER 31 - 36 REMOVALS 37 - 42 ROAD PLANS CONCRETE JOINTING PLAN LANDSCAPE PLAN PAVEMENT MARKINGS

SHEET LIST TABLE

# **CITY OF ANN ARBOR**

MICHIGAN DEPARTMENT OF TRANSPORTATION AND

FEDERAL HIGHWAY ADMINISTRATION

LOCATION SCIO CHURCH ROAD, S. MAPLE RD. TO S. SEVENTH ST. CONTRACT FOR THE CITY OF ANN ARBOR IS PROPOSING 0.825 MILES OF HMA SURFACE REMOVAL AND HMA RESURFACING, ADA SIDEWALK RAMP IMPROVEMENTS, ASSIDEWALK RAMP IMPROVEMENTS, PACEMENT MARKINGS AND RESTORATION FROM S. MAPLE RD. TO S. SEVENTH ST.

## PREPARED UNDER THE SUPERVISION OF



02 / 19 / 2021

02 / 19 / 2021

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	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.	
REQUIRED ON THIS PROJECT	ITEM OF WORK	STANDARD PLAN NUMBERS
х	COVER B	R-7-F
x	MONUMENT BOXES	R-11-E
x	COVER K	R-15-G
x	COVER Q	R-18-F
x	COVER R	R-20-D
x	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS	R-28-J
x	DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK	R-29-I
x	CONCRETE CURB AND CONCRETE CURB & GUTTER	R-30-G
x	INTEGRAL CURB AND INTEGRAL CURB & GUTTER	R-31-F
x	ISOLATION JOINT DETAILS	R-37-B
x	TRANSVERSE PAVEMENT JOINTS (PLAIN CONCRETE PAVEMENT)	R-39-K
x	LOAD TRANSFER ASSEMBLIES FOR TRANSVERSE JOINTS	R-40-I
x	LONGITUDINAL PAVEMENT JOINTS	R-41-H
x	TYPICAL JOINT LAYOUTS FOR CONCRETE PAVEMENT	R-42-F
x	LOCATION OF TRANSVERSE JOINTS IN PLAIN CONCRETE PAVEMENT	R-43-J*
x	CONCRETE PAVEMENT REPAIR	R-44-F
x	TEMPORARY CONCRETE BARRIER LIMITED DEFLECTION	R-53-A*
x	GUARDDRAIL TYPES A, B, BD, T, TD, MGS-8, & MGS-8D	R-60-J*
x	GUARDRAIL APPROACH TERMINAL TYPES 2B & 2T (SKT)	R-62-H*
x	GUARDRAIL DEPARTING TERMINAL TYPES B, T & MGS	R-66-E*
x	GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS	R-80-F*
x	SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-E
x	SEEDING AND TREE PLANTING	R-100-I*
x	GRADING CROSS-SECTIONS	R-105-D
	TRAFFIC AND SAFETY STANDARD PLAN	NS
x	GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS	WZD-100-A*
x	TEMPORARY TRAFFIC CONTROL DEVICES	WZD-125-E*
x	IMPACT ATTENUATOR OBJECT MARKER	WZD-150-A*
x	SAND MODULE IMPACT ATTENUATOR (TEMPORARY)	WZD-175-A*
x	PAVEMENT ARROW AND MESSAGE DETAILS	PAVE-900-G
x	LONGITUDINAL LINE TYPES AND PLACEMENT	PAVE-905-E
x	SHARED LANE (SHARROW) MARKING	PAVE-961-C

SPECIAL DETAIL LOCATED IN PROPOSAL

- 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.
- The location of material stock piles and on-site staging areas shall be approved by the
- 5. For mainline HMA Paving, the width of the mat for each pass of the paver shall be not less than 10.5', nor greater than 16', except as noted in the plans and as directed by the Engineer. The Engineer will direct the layout of all HMA Longitudinal Joints during construction.
- All excavation required for roadway grading within the project limits, including proposed curbs, pavement and infiltration trench, shall be included in "Machine Grading, Modified."
- All excavation required for project grading within the project limits, including proposed sidewalks and sidewalk ramps, shall be included in "Sidewalk Grading" and "Sidewalk Ramp
- 8. Excavation and backfill behind curb and gutter shall be included in "Machine Grading, Modified." 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\*. 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
- Excavation and backfill for sidewalks sidewalk ramps shall be included in "Sidewalk Grading" and "Sidewalk Ramp 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". Backfill for will be paid for as subsets, cir. Backilli of the areas must be approved by the Englineer and compacted to 95% of its max. dry density. No payment will be made for sub-base or aggregate base that extends beyond 6° behind the back of walk. Reference the Typical Cross
- 10. 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 appropriate contract items and will be paid for at the corresponding contract unit price.
- All Structures shall receive new castings, as specified on the Standard Casting Schedule. The existing castings shall be neetly 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 Mobilization, Max." and will not be paid for separately.
- 12. 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 Arbor Public Works

- Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structures sizes and/or
- 14. Where pipes of different sizes or materials are joined, Engineer approved 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.
- 15. 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.
- 16. 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.
- 17. Existing street name signs, guide, bus stop, and regulatory signs 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 the pay item "Minor Traf Devices".
- 18. All curb, sidewalk, driveway\_approach removals shall be approved by the Engineer before the work is performed.
- 19. Place 4" (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"
- 20. Place 8" (minimum) MDOT Dense Graded Aggregate 21AA, compacted to 95% of its max. dry density under drive approaches. This work shall be included in the contract item "Aggregate Base."
- 21. Prior to placing the adjacent paving pass on the leveling and wearing courses of HMA, the Contractor shall cut and remove 6" to 8" of the previously placed pavement by means of a coulter wheel. The Engineer reserves the right to reject any method(s) for cutting the pavement that does not provide a satisfactory edge as determined by the Engineer. Any method(s) employed by the Contractor shall be completely effective. The cut edge shall have a uniform bead of Engineer approved joint adhesive applied. The removal of this HMA material, cleaning the HMA surface and pavement edge, and condition of the resulting edge must be approved by the Engineer prior to proceeding with the placement of the succeeding poss of HMA. The base course of HMA will only have its edges tacked in edge as determined by the Engineer. An HMA will only have its edges tacked in accordance with standard paving practices. All costs associated with complying with these requirements will be included in the pay item "Machine Grading, Modified".

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

- 1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ROINEER 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, 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 MITHOUT 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.
- 5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDREED, 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.
- 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 OTHER METHODS APPROVED BY THE ENGINEER.
- 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:

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

- SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION
  MINIMUM REQUIREMENTS:
  1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS,
  INLET FILTERS ON EXISTING 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
- 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 AREAS.
- 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 ROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SCUENCE AND SCHEDULE TO THE EMPIREER FOR REVIEW, COMMENT, AND

#### TEMPORARY SEEDING:

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

THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = \$35,000.

ESTIMATE OF EXCAVATION AND FILL FROM EXISTING TO FINAL GRADE:
• EXCAVATION = 400 CY, FILL = 250 CY

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

#### GROUND DISTURBING ACTIVITIES NOTES

- NO KNOWN EMR HIBERBACULA ARE DESTROYED OR DISTURBED AT ANY TIME OF THE YEAR. BECAUSE THESE AREAS ARE OFTEN NOT KNOWN:
- 1.1. WHEN OPERATING IN POTENTIAL HIBERNATION AREAS (E.G. EMR WETLANDS AND ADJACENT WHEN OPERATING IN POTENTIAL HIBERNATION AREAS (E.G. EMR WETLANDS AND ADJACENT AREAS WITH CRAYFISH BURROWS, RODENT HOLES, SMALL MAMMAL BURROWS, ECT.), WORK IS CONDUCTED WILL WITHIN THE ACTIVE SEASON (JUNE-AUGUST) TO AVOID WHEN SNAKES ARE LIKELY TO BE PRESENT. DURING THIS TIME, THEY ARE MOST LIKELY TO BE ABLE TO MOVE OUT OF THE WAY OF DISTURBANCE AND HAVE GREATER CHANCES TO FIND ALTERNATIVE HIBERNATION SITES. DESTROYING POTENTIAL HIBERNATION LIBERS STATION. STEEN DESTROYING POTENTIAL HIBERNATION THE EXTENT POSSIBLE.

#### 2. GRADING

- GRADING
   WHEN WORKING DURING EMR ACTIVE SEASON, USE EXCLUSIONARY FENCING TO SEPARATE EMR HABITAT FROM THE WORK SITE TO PREVENT EMR FROM ACCESSING THE DISTURBANCE AREA. EACH END OF THE EXCLUSIONARY FENCING SHOULD BE ANGLED AWAY FROM THE AREA OF DISTURBANCE TO DIRECT SNAKES TRAVELING ALONG THE FENCING AWAY FROM THE SITE. THE EXCLUSIONARY FENCING WILL TYPICALLY BE TRADITIONAL SILT FENCE THAT IS SET UP OUTSIDE OF ALL AREAS OF DISTURBANCE. DO NOT USE FENCING MAREAILS THAT CAN ENTANGLE OR INJURE SNAKES.
   ANY AREAS USING EXCLUSIONARY FENCING SHOULD FIRST BE "CLEARED" BY A QUALIFIED INDIVIDUAL BEFORE BEGINNING CONSTRUCTION ACTIVITIES. FENCING SHOULD BE INSTALLED A MINIMUM OF 1 DAY BEFORE CONSTRUCTION ACTIVITIES. FENCING SHOULD BE INSTALLED A MINIMUM OF 1 DAY BEFORE CONSTRUCTION ACTIVITIES. OCCUR AND WALKED WEEKLY TO ENDURE THE INTEGRITY OF THE FENCE. IF SNAKES ARE SEEN WITHIN THE WORK ZONE, ACTIVITY SHOULD STOP UNITL THE SNAKES CAN BE SAFELY MOVED, AND THE FENCE EXAMINED FOR BRECCHES.
   REVECETATE ALD ISTURBED HABITAT WITH APPROPRIATE PLANT SPECIES (I.E. NATIVE SPECIES OR OTHER SUITABLE NON-INVASIVE SPECIES PRESENT ON SITE PRIOR TO DISTURBANCE). MONITOR ALL RESTORATION PLANTINGS FOR PROPER ESTABLISHMENT AND IMPLEMENT SUPPLEMENTAL PLANTINGS AS NECESSARY TO ENDURE RESTORATIONS ARE OF EQUAL TO OR BETTER HABITAT QUALITY THAN PREVIOUS CONDITIONS.
   AVOID SPREAD OF INVASIVE SPECIES INTO EMM HABITAT BY FOLLOWING BEST PRACTICES. THIS INCLUES INSPECTING AND CLEANING EQUIPMENT AND VEHICLES BETWEEN WORK SITES AS NEEDED TO AVOID THE SPREAD OF INVASIVE PLANT MATERIALS.

- 3.1. AVOID TRENCHING IN EMR WETLANDS WHEN POSSIBLE. IN TIER 1, IF OPEN TRENCHING IS REQUIRED, INSTALL EXCLUSIONARY FENCING AND ENSURE THE AREA IS CLEAR PRIOR TO
- REQUIRED, INSTALL EXCLUSIONARY FENCING AND ENSURE THE AREA IS CLEAR PRIOR TO TRENCHING.

  3.2. ENSURE ALL IMPORTED FILL MATERIAL IS FREE FROM CONTAMINANTS OR INVASIVE SPECIES THAT COULD AFFECT THE SPECIES OR HABITAT THROUGH ACQUISITION OF MATERIALS AT AN APPROPRIATE QUARRY OR OTHER SUCH MEASURES.

  3.3. CONDUCT WORK WELL WITHIN THE ACTIVE SEASON (JUNE-AUGUST) WHEN SNAKES ARE NOT LIKELY TO BE NEAR HIBERNATION SITES AND CAN ESCAPE DISTURBANCE, OR CONTACT SERVICE FOR PROJECT SPECIFIC RECOMMENDATIONS TO BE DISTURBED AND HAVE THE FOR THE CLEARED BY A QUALIFIED INDIVIDUAL PRIOR TO CONSTRUCTION ACTIVITIES.

  3.5. FOR TIER 1, CONTACT THE SERVICE FOR WORK GREATER THAN 200° FOR PROJECT SPECIFIC RECOMMENDATIONS.

#### SITE ACCESS NOTES

- 1. LIMIT OPERATING VEHICLES/EQUIPMENT, CLEARING TREES, ETC., IN EMR HABITAT TO THE INACTIVE SEASON WHEN THE GROUND IS FROZEN. DURING THIS TIME, UNDER THESE CONDITIONS, EMR ARE MOST LIKELY UNDERGROUND AND WILL NOT BE IMPACTED BY THESE ACTIVITIES. WHEN POSSIBLE, USE LOW-IMPACT EQUIPMENT SUCH AS LIGHT WEIGHT TRUCK MOUNTED VEHICLES WITH LOW GROUND PRESSURE. IN TER 1, IF THE GROUND INTIC COMPLETELY FROZEN (DUE TO WEATHER CONDITIONS DURING THE INACTIVE SEASON OR IF WORKING NEAR SEEPS AND SPRINGS THAT ARE LESS LIKELY TO FREEZE), OR IF WORKING NEAR SEEPS AND SPRINGS THAT ARE LESS LIKELY TO FREEZE), OR IF WORKING NEAR POTENTIAL HIBERNACULA, MANUAL ACCESS (ON FOOT) MAY BE REQUIRED.
- C. STRICTLY CONTROL AND MINIMIZE VEHICLE ACTUITY IN KNOWN/PRESUMED OCCUPIED EMR HABITAT TO THE EXTENT POSSIBLE. DURING EMR ACTIVE SEASON, SPEED LIMITS AT FACILITIES AND ACCESS ROADS (LE. 2-TRACK AND GRAVEL) IN OCCUPIED HABITAT SHOULD BE <15 MPH. 3. DRIVERS SHOULD BE AWARE OF THE POTENTIAL DANGER TO THE DRIVER OF SWERVING TO INTENTIONALLY DRIVE OVER SNAKES AS WELL AS LEGAL AND CONSERVATION IMPLICATIONS.

#### GENERAL BEST MANAGEMENT PRACTICES NOTES

- 1. USE WILDLIFE-SAFE MATERIALS FOR EROSION CONTROL AND SITE RESTORATION. IN TIER 1 HABITAT, IMMEDIATELY ELIMINATE USE OF EROSION CONTROL PRODUCTS CONTAINING PLASTIC MESH NETTING OR OTHER SIMILAR MATERIAL THAT COULD ENTANGLE BUR.

  2. TO INCREASE HUMAN SAFETY AND AWARENESS OF EMR, THOSE IMPLEMENTING THE PROJECT SHOULD FIRST WATCH MONR'S "60-SECOND SNAKES: THE EASTERN MASSASAUGA RATILESHAME" WIDEO OR REVIEW THE EMF FACTSHEET BY CALLING 517-351-255.

  3. REQUIRE REPORTING OF ANY EMR OBSERVATIONS, OR OBSERVATION OF ANY OTHER LISTED THREATENED OR ENDANGERED SPECIES, DURING PROJECT IMPLEMENTATION TO THE SERVICE WITHIN 24 HOURS.

#### HYDROLOGY IMPACTS NOTES

- WATER LEVELS IN KNOWN/PRESUMED OCCUPIED HABITATS SHOULD NOT BE ARTIFICIALLY MANIPULATED DURING THE INACTIVE SEASON.
   WHERE APPLICABLE, WATER LEVELS SHOULD BE ALLOWED TO FLOW NATURALLY AND NOT BE ARTIFICIALLY STABILIZED.

#### HEAVY EQUIPMENT NOTES

- SITE STAGING AREAS FOR EQUIPMENT, FUEL, MATERIALS, AND PERSONNEL AT LEAST 100 FEET FROM THE WATERWAY, IF AVAILABLE, TO REDUCE POTENTIAL FOR SEDIMENT AND HAZARDOUS SPILLS ENTERING THE WATERWAY. IF SUFFICIENT SPACE IS NOT AVAILABLE, A SHORTER DISTANCE CAN BE USED WITH ADDITIONAL CONTROL MEASURES. IF A REPORTABLE SPILL HAS IMPACTED OCCUPIED HABITAT:
- FOLLOW SPILL RESPONSE PLAN
- 1.2. CALL MDEQ AND THE NATIONAL RESPONSE CENTER (800-424-8802), AND THE SERVICE'S MICHIGAN ECOLOGICAL SERVICES FIELD OFFICE (517-351-2555) TO REPORT THE RELEASE
- 2. DO NOT USE LARGE EQUIPMENT OR PERFORM EARTH-MOVING ACTIVITIES, WATER WITHDRAWAL AND DISCHARGE FOR HYDROSTATIC TESTING, OR OTHER ACTIVITIES THAT SUBSTANTIALLY AFFECT THE GROUND OR WATER LEVELS IN POTENTIAL EMR HIBERNACULA AREAS. AVOIDANCE MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, RE-ROUTING OF PIPELINE AND APPURTENANCE FACILITIES, BORNING OR DRILLING, AND TIMING/WEATHER-RELAD RESTRICTIONS. MEASURES WILL BE DETERMINED ON A STIE-SPECIFIC BASIS, BASED ON LOCAL HABITAT CONDITIONS, CONTACT SERVICE FOR MORE INFORMATION.

# PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR

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		DAN WOODEN (734) 794-6350 DCWOODEN@A2GOV.ORG
SANITARY	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER	TRAVIS CONLEY (734) 794-6350 TCONLEY@A2GOV.ORG KEVIN SCHNEIDER (734) 794-6350
FORESTRY	4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	KSCHNEIDER@A2GOV.ORG MATT WALDSMITH (734) 794-6350 MWALDSMITH@A2GOV.ORG
SIGNS SIGNALS STREET LIGHTS		CHUCK FOJTIK (734) 794-6361 CFOJTIK@A2GOV.ORG
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	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	SHAWN BURNSIDE (734) 996-5322 (313) 683-7349(MOBILE
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	MNDSTREAM 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

		PROJECT NAME BENCHMARKS
BM#	ELEV	DESCRIPTION
1	927.016	FND RR SPIKE IN W. SIDE OF U.P. AT N.E. CORNER OF SCIO CHURCH RD. AND S. SEVENTH ST.
2	929.992	TOP OF N.E. ANCHOR BOLT FOR L.P. ON S. SIDE OF SCIO CHURCH RD. L.P. IS SECOND POLE WEST OF S. SEVENTH ST.
3	929.733	TOP OF N.E. ANCHOR BOLT FOR L.P. ON S. SIDE OF SCIO CHURCH RD. L.P. IS SECOND POLE EAST OF GREENVIEW.
4	931.982	TOP OF S.E. ANCHOR BOLT FOR L.P. AT N.W. CORNER OF SCIO CHURCH RD. AND GREENVIEW.
5	938.099	SET RR SPIKE IN S. SIDE OF U.P. ON N. SIDE OF SCIO CHURCH RD. IN FRONT OF HSE NO. 1550
6	937.170	SET RR SPIKE IN S. SIDE OF L.P. AT N.E. CORNER OF SCIO CHURCH RD. AND MERSHON
7	933.359	SET RR SPIKE IN S. SIDE OF L.P. AT N.E. CORNER OF SCIO CHURCH RD. AND WINSTED
8	928.485	SET RR SPIKE IN W. SIDE OF L.P. ON E. SIDE OF DELAWARE. POLE IS 125'± S. OF € OF SCIO CHURCH RD.
9	931.120	TOP OF N.E. ANCHOR BOLT FOR L.P. AT S.W. CORNER OF SCIO CHURCH RD. AND CHURCHHILL.
10	934.745	WSW BONETT BOLT ON HYDRANT AT N.W. CORNER OF SCIO CHURCH RD. AND OLD PEAR TREE CT.
11	938.324	SET R.R. SPIKE IN S. SIDE OF U.P. AT N.E. CORNER OF SCIO CHURCH RD. AND COVINGTON.
12	939.725	SET R.R. SPIKE IN S. SIDE OF L.P. ON N. SIDE OF SCIO CHURCH RD. IN FRONT OF HSE NO. 2116
13	945.685	SET R.R. SPIKE IN S. SIDE OF U.P. AT N.W. CORNER OF SCIO CHURCH RD. AND WALTHAM.
14	958.745	TOP, E. SIDE OF CONC. BASE FOR MAST ARM POLE AT N.W. CORNER OF SCIO CHURCH RD. AND S. MAPLE RD.
0002B	931.520	CITY OF ANN ARBOR PRIMARY CONTROL STATION. LOCATED IN SCIO CHURCH RD., APPROX. 175' W. OFTHE € OF DELAWARE DR.

Know what's <b>below</b> Call before you dig.	JKA	CC,DF	
	JKA	CC,DF	
3	JKA	CC,DF	
	CW	CC,DF	

CITY OF A PUBLIC 301 EAST H P.O. E ANN ARBOR 734-7

00 07 03



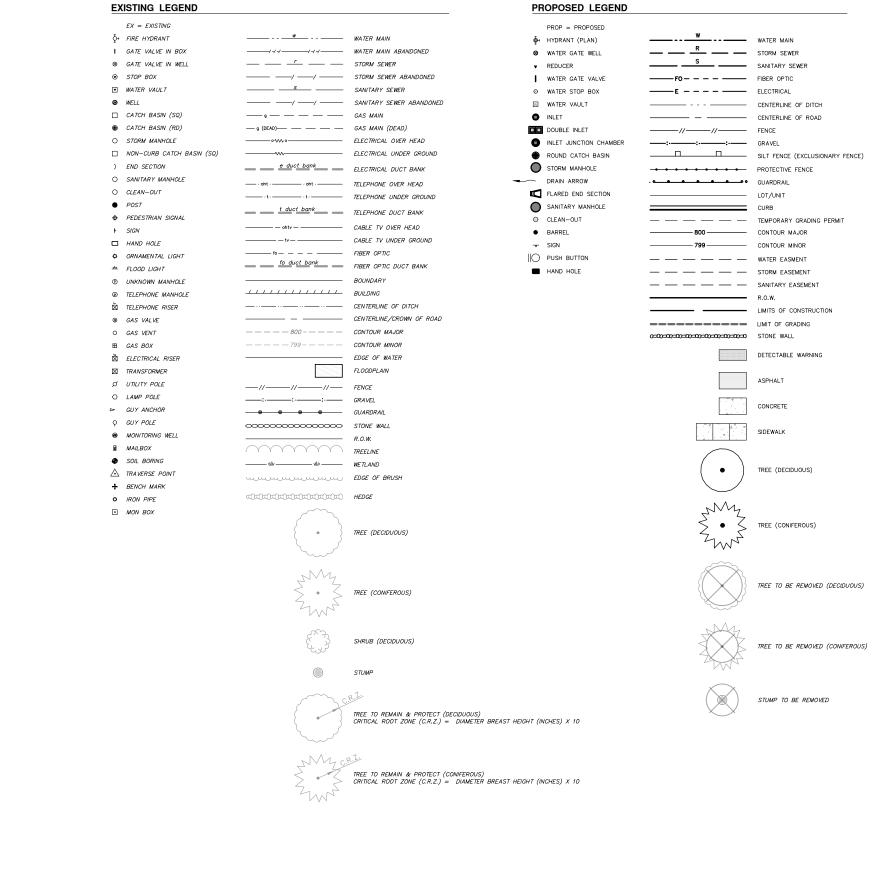
**PROJECT** 

ROAD IMPROVEMENT RING - ENGINEI

SERVICES CHURCH I PUBLIC 0

ARBOR.

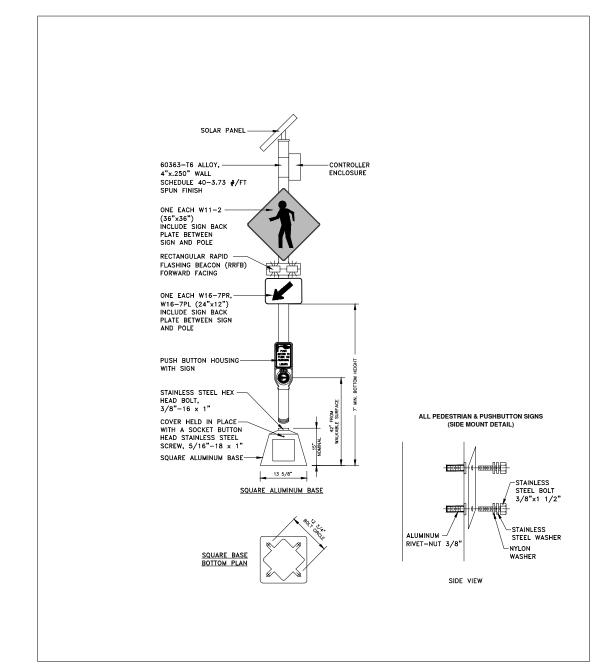
ANN OF CITY SCALE: NTS





PROJECT SERVICES - ENGINEERING
CHURCH ROAD IMPROVEMENT

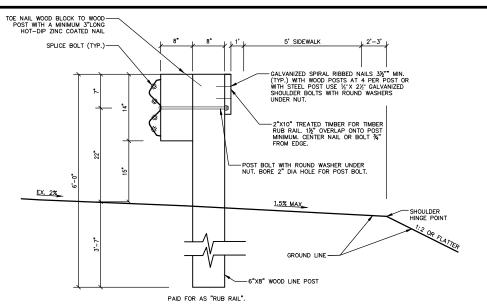
CITY OF ANN ARBOR - PUBLIC



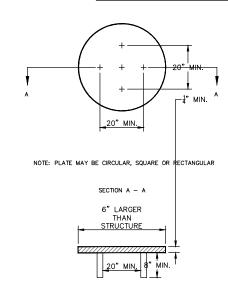
RECTANGULAR RAPID FLASHING BEACON ASSEMBLY

N ARBOR	03	03 FINAL RE-SUBMITTAL	05-20-22	CC,DF	CW
ON STREET	02	02 RESPONSE TO FINAL MDOT REVIEW	09-07-21	CC,DF	JKA
11 48107-8647	10	01 MDOT FINAL SUBMITTAL	07-23-21	CC,DF	JKA
-6410 Jov.org	00	00 G.I. SUBMITTAL	10-5-20	CC,DF	JKA
	REV.	DESCRIPTION	DATE	DRAWN	DRAWN CHECKED

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
SCALE: MS
SCALE: MS
SCIO CHURCH ROAD IMPROVEMENT PROJECT

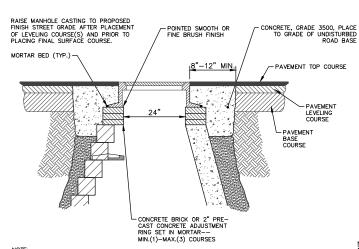


## **TIMBER RUB RAIL DETAIL**



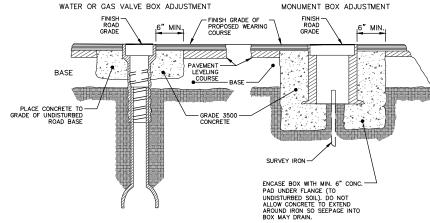
1/4" MIN. THICKNESS AND SUFFICIENT TO CARRY THE CONSTRUCTION LOAD.

## STRUCTURE PLATE SD-GU-8



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

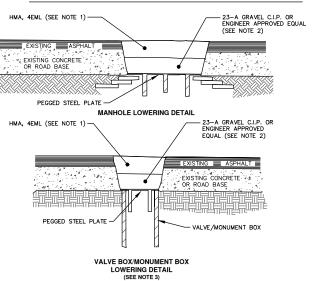
#### MANHOLE CASTING ADJUSTMENT SD-GU-6



 $\frac{\mathsf{NOTES}:}{\mathsf{1.}}$  GAS VALVE BOXES TO BE ADJUSTED BY THE GAS COMPANY.

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

#### VALVE/MONUMENT BOX ADJUSTMENT SD-GU-7



NOTES:

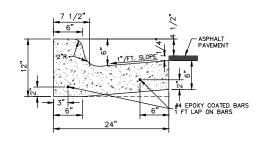
1. IF TRAFTIC IS TO BE MAINTAINED ON THE ROADWAY BEFORE OR AFTER THE COLD MILLING OPERATION, THE STRUCTURE SHALL BE LOWERED TO THE EXTENT THAT A MINIMUM OF THREE(3) INCHES ASPHALT MATERIAL HMA, 4EML OR ENGINEER APPROVED EQUAL, REMAINS TO SUPPORT TRAFFIC.

- IF THE ROADWAY BEING MILLED IS CLOSED TO TRAFFIC, THE STRUCTURE SHALL BE LOWERED SUCH THAT THE STEEL PLATE IS A MINIMUM OF FOUR(4) INCHES BELOW THE PROPOSED ROAD GRADE AND THE RESULTING VOID SHALL BE FILLED WITH COMPACTED 23—A GRAVEL OR ENGINEER APPROVED EQUAL.
- 3. WHERE A MONUMENT IS TO BE LOWERED, THE CONTRACTOR SHALL GIVE THE ENGINEER A MINIMUM OF 48 HOURS WRITTEN NOTICE SO THAT THE MONUMENT CAN BE PROPERLY WITNESSED OR PROTECTED. FAILURE TO DO SO SHALL RESULT IN THE ENGINEER REPLACING SAID MONUMENT AT THE CONTRACTORS EXPENSE.

#### MANHOLE & VALVE/MONUMENT BOX LOWERING SD-GU-9



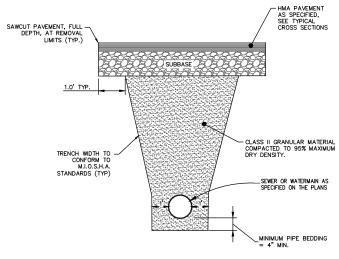
#### STANDARD CASTING SCHEDULE



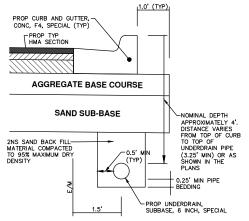
#### NOTES:

- 3. BARRIER CURB AND GUTTER ON ASPHALT STREETS SHALL CONFORM TO THIS DETAIL PAID FOR AS "CURB AND GUTTER, CONC, DET F4, SPECIAL"
- 4. BARRIER CURB AND GUTTER ON CONCRETE STREETS SHALL CONFORM TO MDOT CURB AND GUTTER DETAIL F3.

#### **CONCRETE CURB AND GUTTER SD-R-1**



#### **UTILITY TRENCH-TYPE I** (UNDER BITUMINOUS SURFACE)



#### UNDERDRAIN TRENCH NOTES

- FOR PAVEMENT BASE AND SUBBASE THICKNESS, SEE TYPICAL PAVEMENT CROSS-SECTION(S).
- TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY.
- ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS.

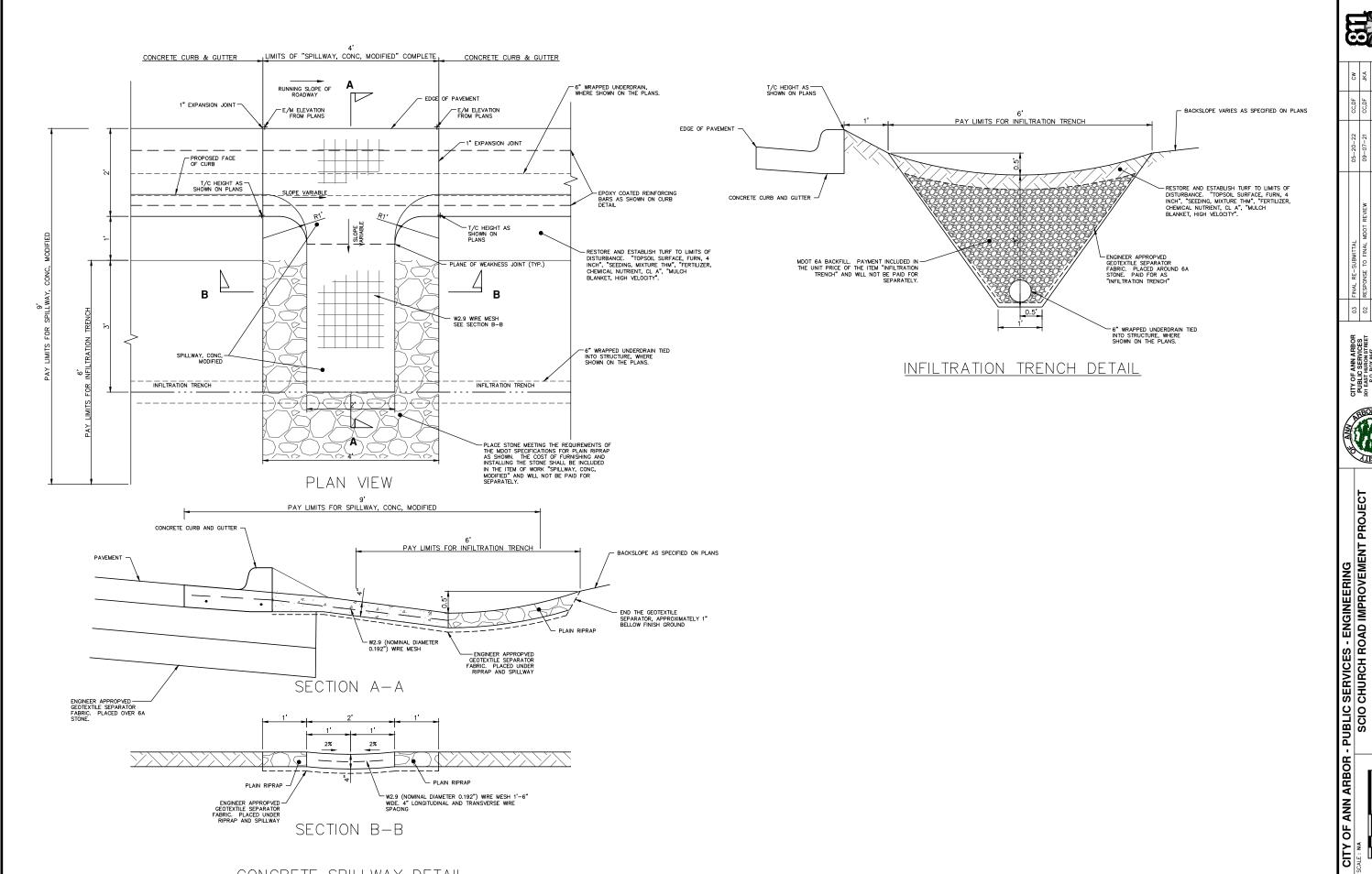
TRENCH DETAIL FOR **UNDERDRAIN SD-TD-10** (UNDER HMA PAVEMENT)







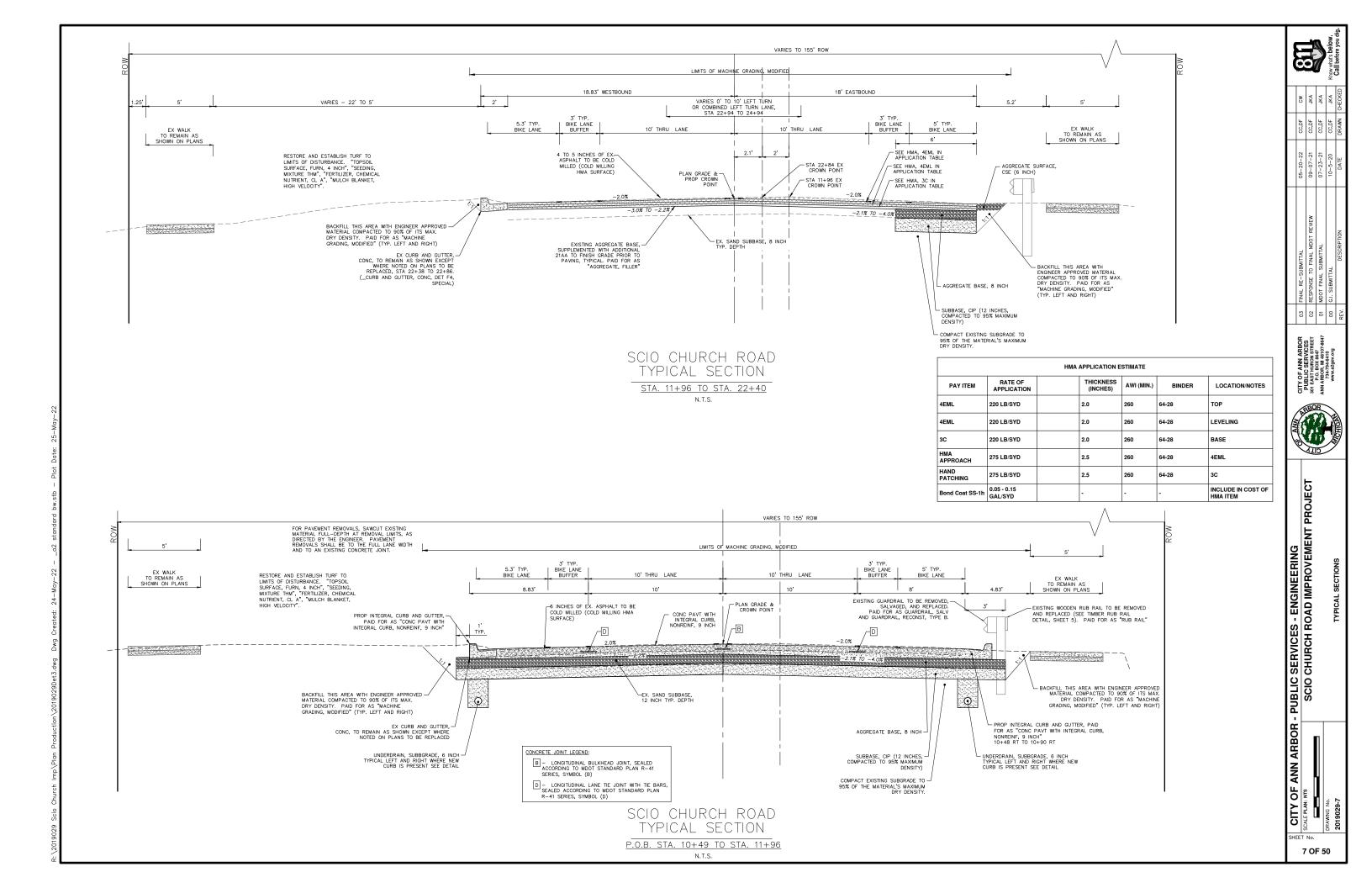
**ANN ARBOR** Ы CITY (

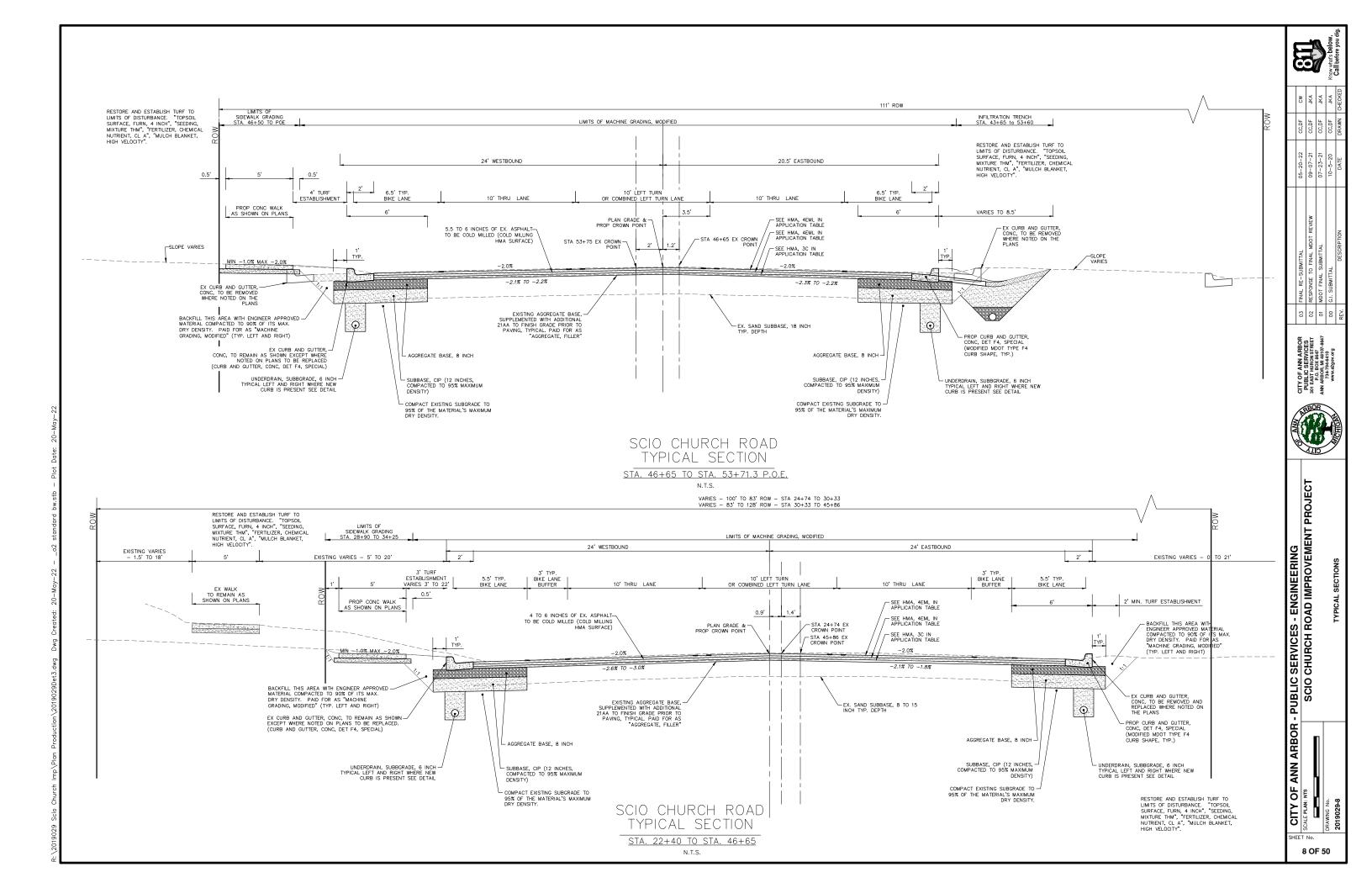


CONCRETE SPILLWAY DETAIL

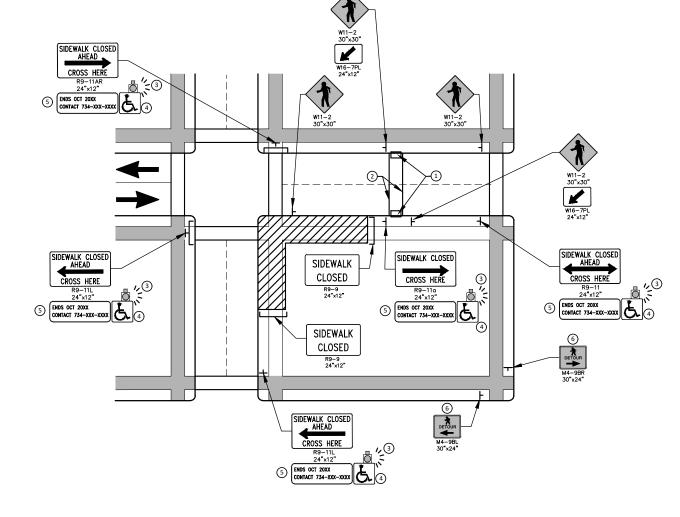
PAID FOR AS, "SPILLWAY, CONC, MODIFIED"







#### 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)

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS. THE CONTRACTOR SHALL PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

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

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

THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED BY THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE THIS WORK WITH THE ENGINEER A MINIMUM OF 72 HOURS (NOT INCLUDING WEEKENDS & HOLIDAYS) PRIOR TO THE BEGINNING OF WORK THAT REQUIRES A SIDEWALK CLOSURE.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN THE ENGINEER DETERMINES THAT THE CONTRACTOR'S OPERATIONS OR PLACEMENT OF TRAFFIC CONTROL DEVICES HAS CAUSED A SITUATION THAT THE VISIBILITY OF IS REDUCED ENOUGH TO CREATE A HAZARD, THE TRAFFIC CONTROL DEVICES SHALL BE DELINEATED WITH FLAGS OR OTHER ENGINEER-APPROVED DEVICES AT NO ADDITIONAL COST TO THE PROJECT.

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

- 1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE
- 2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE
- 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.

- 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
- 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
- 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 THI REQUIREMENTS OF THE MMUTCD, PART 6.
- 2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES, THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
- 3. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHALL BE LESS THAN 3 FEET IN WIDTH, A FOUR BY 5 FOUR PASSING SPACE SHALL BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.
- 4. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF NCHRP 350 AND THE MMUTCD SHALL BE USED.
- 5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS. EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
- 6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.
- 7. WHEN DIRECTED BY THE ENGINEER, OR STATED ON THE PLANS, THE CONTRACTOR 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 AS SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TRARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC. NO MORE SHALL BE ALL OWER TO TO BEGIN LINITY THIS PLAN IS APPROVED BY THE WORK SHALL BE ALLOWED TO BEGIN UNTIL THIS PLAN IS APPROVED BY THE



TRAFFIC CONTROL DEVICE

SCIO CHURCH ROAD IMPROVEMENT PROJECT

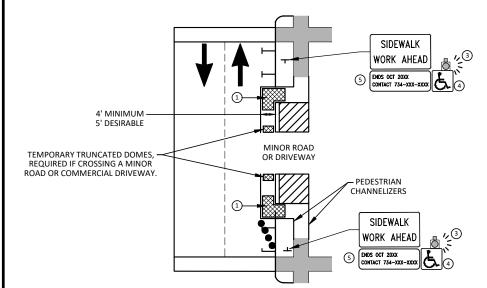
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

BYPASS ON ADJACENT AVAILABLE

RIGHT OF WAY

**BYPASS TYPE A** 

NOTE: MAY ONLY BE USED ON ROADWAY WITH POSTED SPEED OF 45 MPH OR LESS.



SIDEWALK BYPASS USING SHOULDER OR PARKING LANE ON HIGH SPEED ROADWAY

4' MINIMUM -

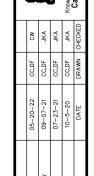
5' DESIRABLE

6 BARRIER WITH TAPER AND ATTENUATION

BYPASS TYPE C

SIDEWALK BYPASS USING PARKING OR SHOULDER ON LOW SPEED ROADWAY

BYPASS TYPE B



SIDEWALK

WORK AHEAD

PEDESTRIAN

CHANNELIZERS

SIDEWALK

WORK AHEAD

S ENDS OCT 20XX CONTACT 734-XXX-

ENDS OCT 20XX CONTACT 734-XXX-XXXX



PEDESTRIAN CHANNELIZATION DEVICE

## 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

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN THE ENGINEER DETERMINES THAT THE CONTRACTOR'S OPERATIONS OR PLACEMENT OF TRAFFIC CONTROL DEVICES HAS CAUSED A SITUATION THAT THE VISIBILITY OF A TRAFFIC CONTROL DEVICE 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 5 DEVICE TAPER 25 FEET LONG, RECOMMENDED WHEN THE CLOSED AREA WAS USED AS AN INTERMITTENT TRAFFIC LANE OR BYPASS LANE. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- (3) AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHOULD BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS
- 4) THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE DISPLAYED WHEN ANY WALKWAY THROUGH A WORK ZONE HAS REEN DETERMINED TO BE TPAR COMPULANT. 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
- 6 SEE MMUTCD FOR GUIDANCE ON PLACEMENT AND USAGE OF BARRIER.



SCIO CHURCH ROAD IMPROVEMENT PROJECT CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

- 4 CROSS SLOPE 2% MAX.

### TEMPORARY CURB RAMP PARALLEL TO CURB

0.5 INCH MAXIMUM

0.25 INCH

**9** EDGE TREATMENT

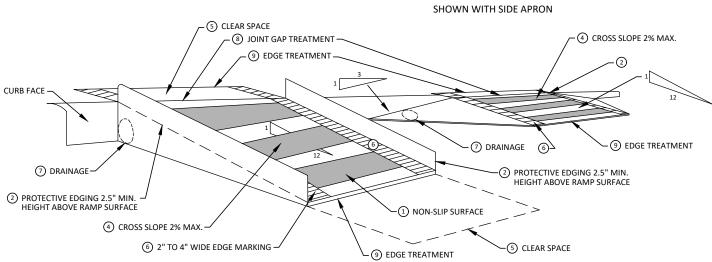
MAXIMUM

#### 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 CUBB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APPROVED THE ABOVE APRON SLOPE STEEPER THAN 1:3. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- DETECTABLE EDGING ANYTIME A HANDRAIL IS REQUIRED, AND ANYTIME THE PATH CHANGES DIRECTION. THIS INCLUDES A TURN ONTO THE RAMP FROM THE PATH. DETECTABLE EDGING

  3 MUST BEGIN A MAXIMUM OF 2.5" ABOVE THE RAMP SURFACE, AND EXTEND AT LEAST 6" ABOVE THE RAMP SURFACE. CONTRASTING COLOR SHALL BE PLACED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- 4 CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE.
- (5) CLEAR SPACE OF 48" x 48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- (6) THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR, 2" TO 4" WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
- 7 WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.
- (8) LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- (3) 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



ı				
	снескер	DRAWN	DATE	DESCRIPTION
	JKA	CC,DF	10-5-20	
	JKA	CC,DF	07-23-21	MDOT FINAL SUBMITTAL
	JKA	CC,DF	09-07-21	RESPONSE TO FINAL MDOT REVIEW
	MO	CC,DF	05-20-22	



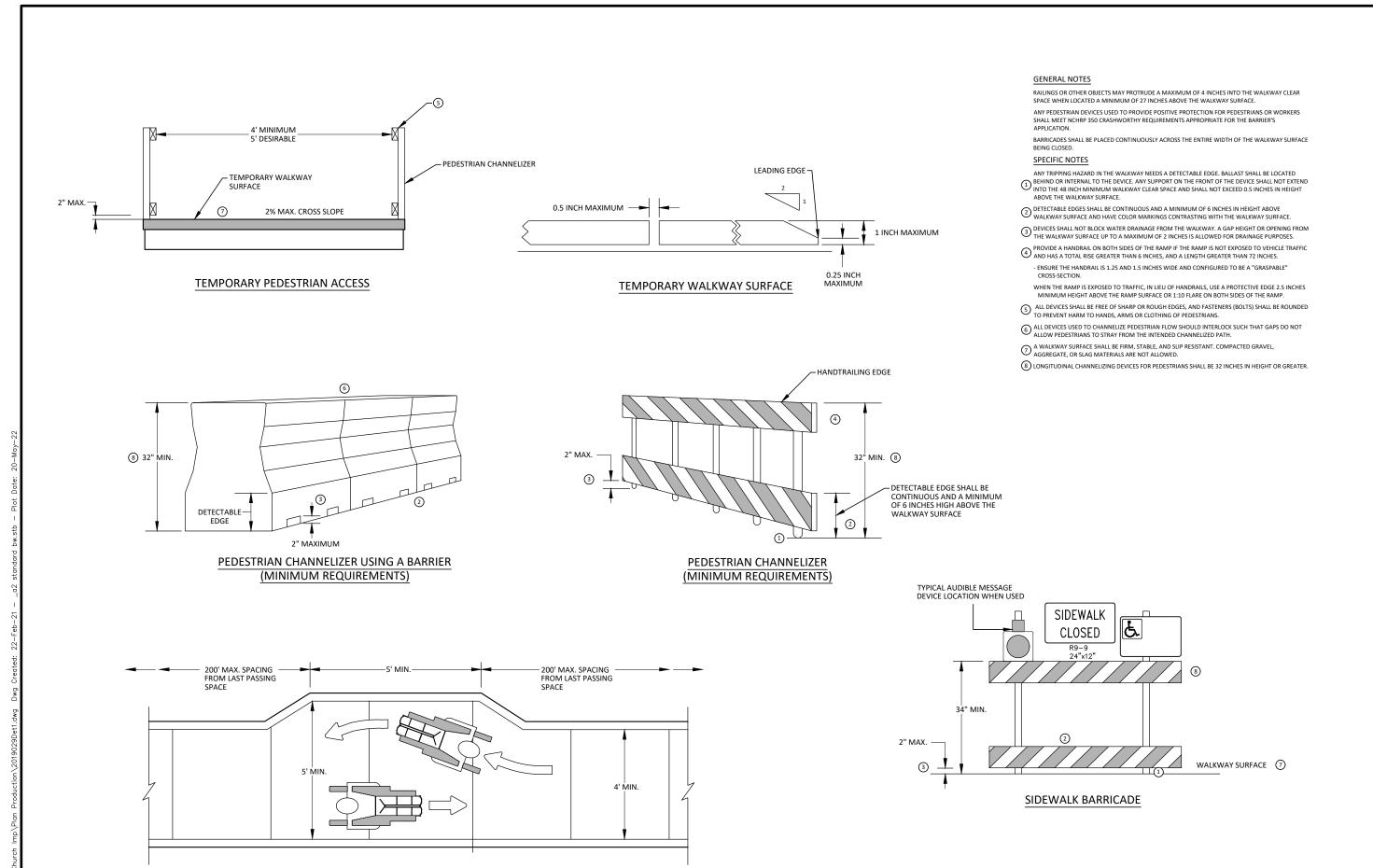
SCIO CHURCH ROAD IMPROVEMENT PROJECT CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

11 OF 50

(5) CLEAR SPACE -

EDGE TREATMENT

LEADING EDGE -

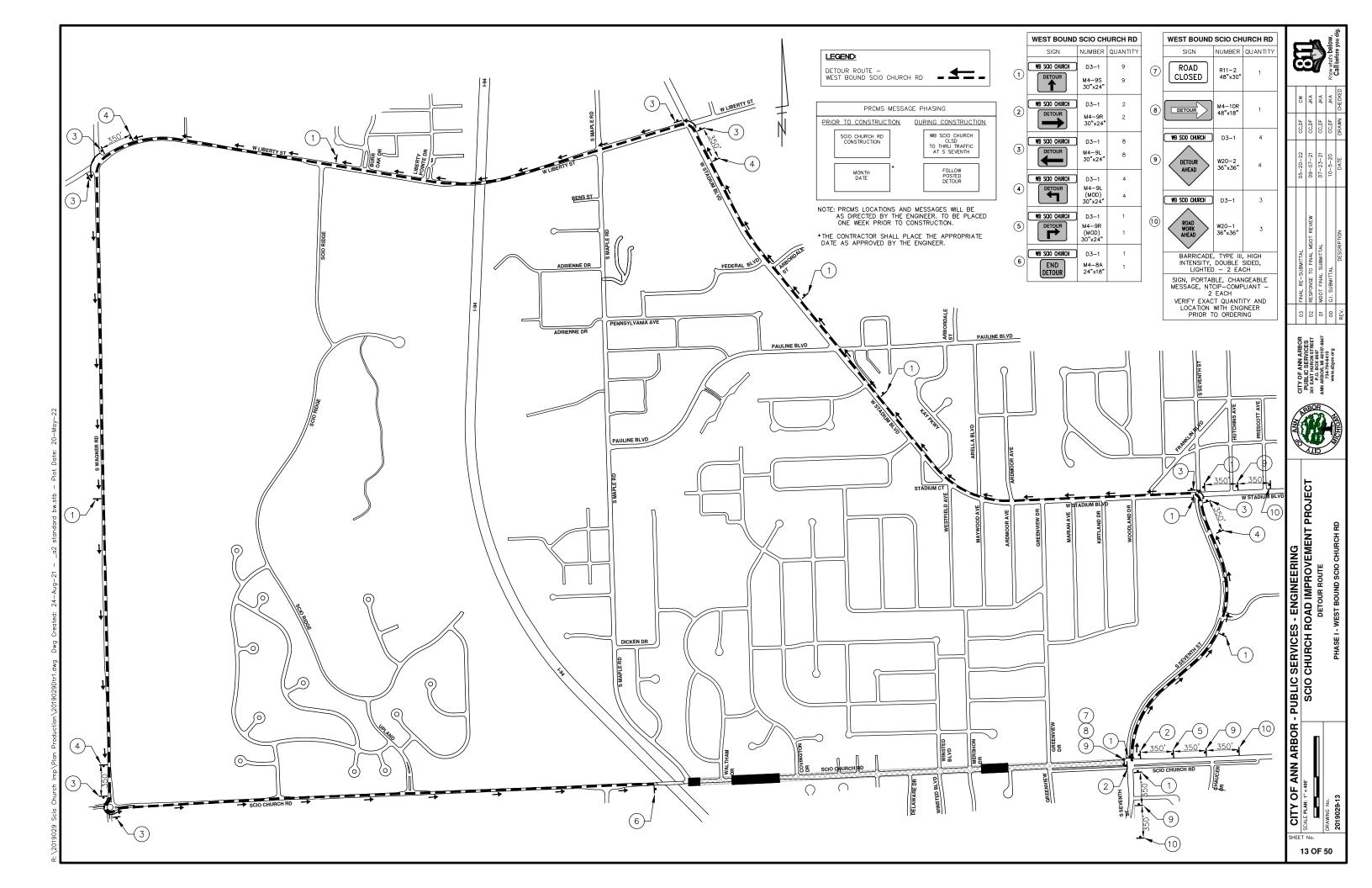


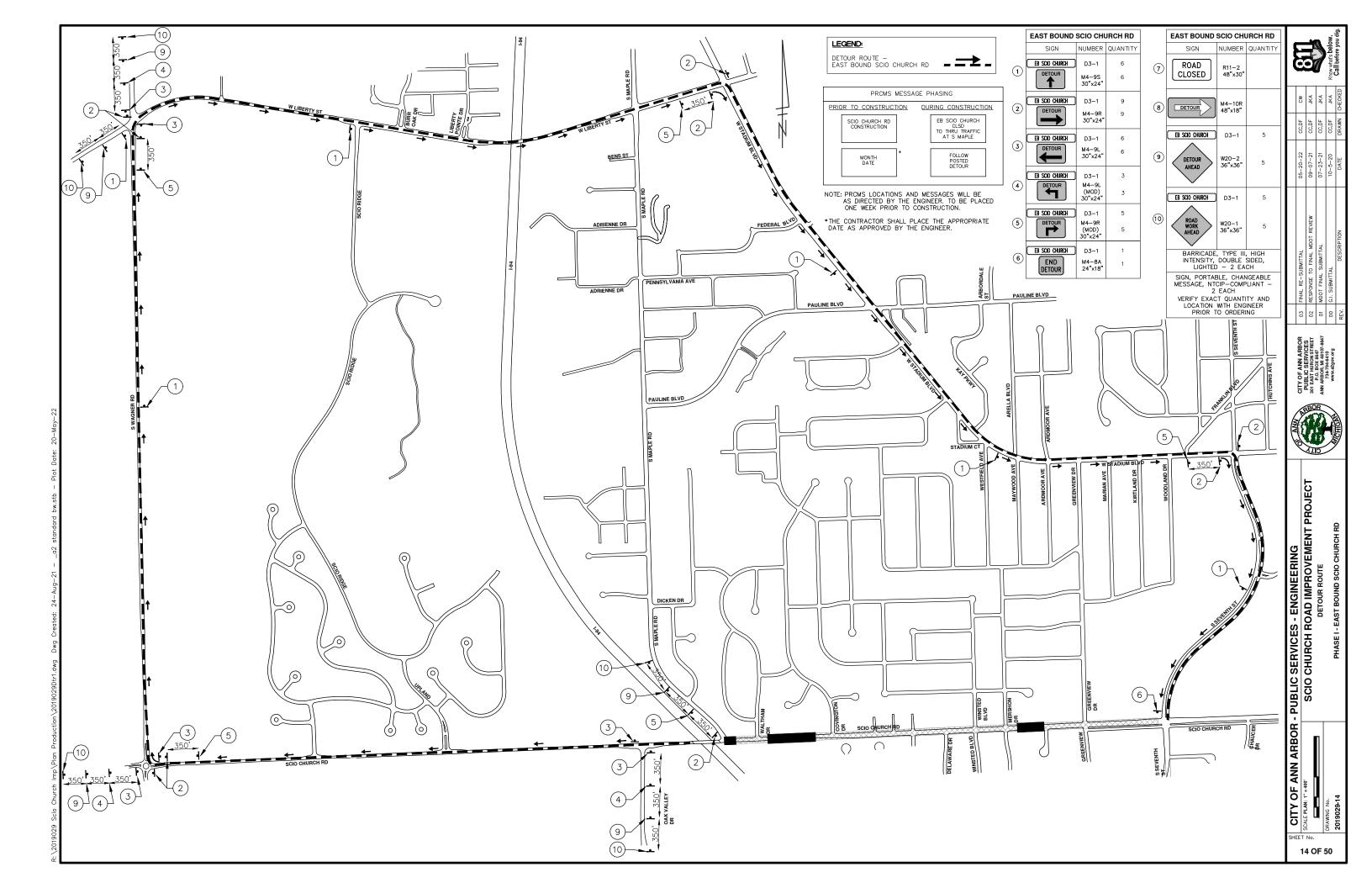
NARROW TEMPORARY PEDESTRIAN ACCESS ROUTE PASSING DETAIL

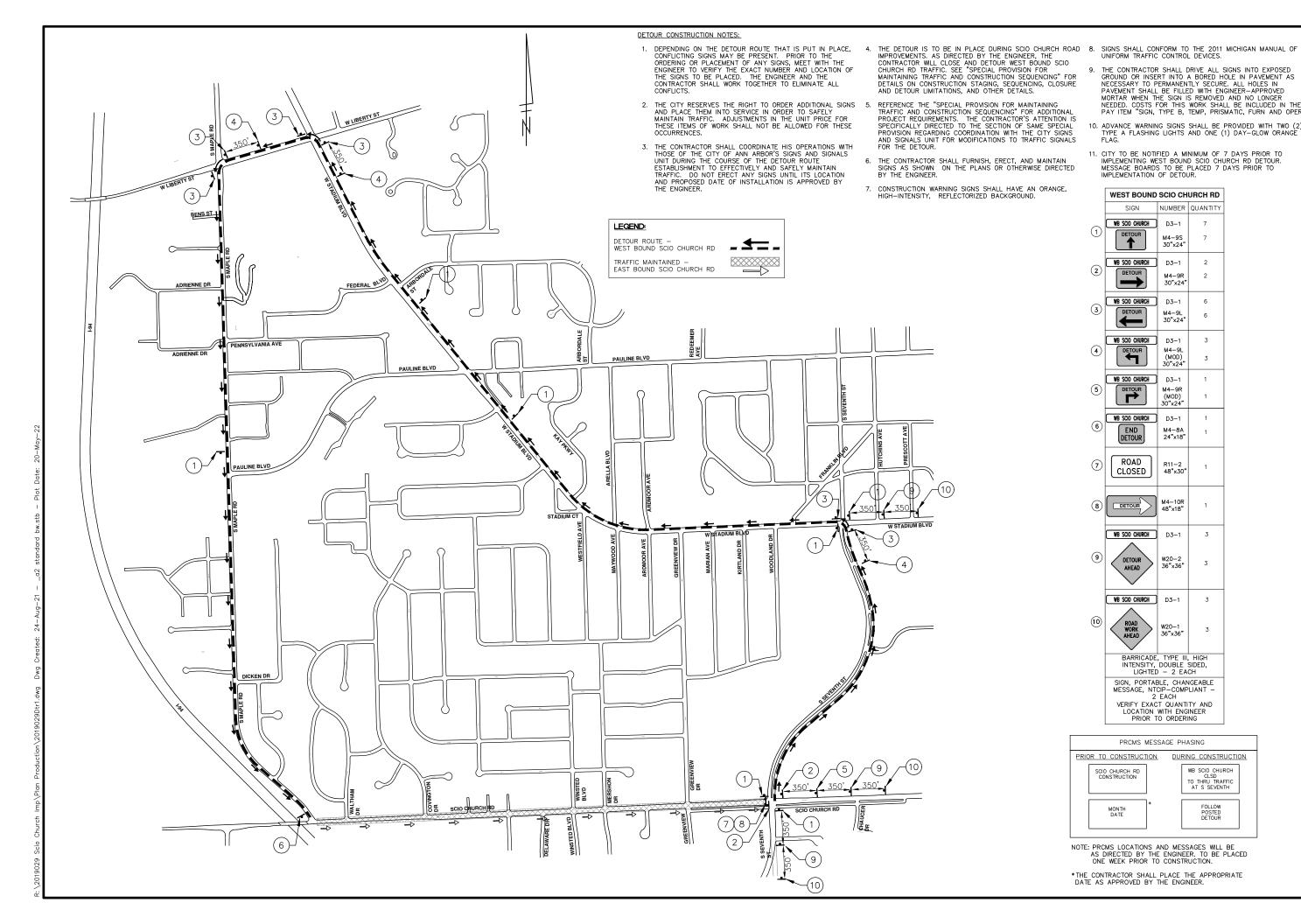


SCIO CHURCH ROAD IMPROVEMENT PROJECT

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

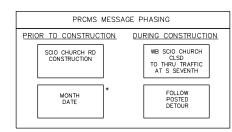






- THE CONTRACTOR SHALL DRIVE ALL SIGNS INTO EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER—APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "SIGN, TYPE B, TEMP, PRISMATIC, FURN AND OPER"
- 10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.
- 11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING WEST BOUND SCIO CHURCH RD DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.

	WEST BOUND	SCIO CH	URCH RD		
	SIGN	NUMBER	QUANTITY		
	WB SCIO CHURCH	D3-1	7		
(1)	DETOUR	M4-9S 30"x24"	7		
	WB SCIO CHURCH	D3-1	2		
(2)	DETOUR	M4-9R 30"x24"	2		
	WB SCIO CHURCH	D3-1	6		
(3)	DETOUR	M4-9L 30"x24"	6		
	WB SCIO CHURCH	D3-1	3		
(4)	DETOUR	M4-9L (MOD) 30"x24"	3		
	WB SCIO CHURCH	D3-1	1		
(5)	DETOUR	M4-9R (MOD) 30"x24"	1		
	WB SCIO CHURCH	D3-1	1		
(6)	DETOUR	M4-8A 24"x18"	1		
7	ROAD CLOSED	R11-2 48"x30"	1		
8	DETOUR	M4-10R 48"x18"	1		
	WB SCIO CHURCH	D3-1	3		
9	DETOUR AHEAD	W20-2 36"x36"	3		
	WB SCIO CHURCH	D3-1	3		
10	ROAD WORK AHEAD	W20-1 36"x36"	3		
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED – 2 EACH				
	SIGN, PORTAE MESSAGE, NTO 2	FACH	I		
	VERIFY EXAC LOCATION PRIOR T	T QUANTI WITH ENG O ORDERI	IY AND INEER NG		



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

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

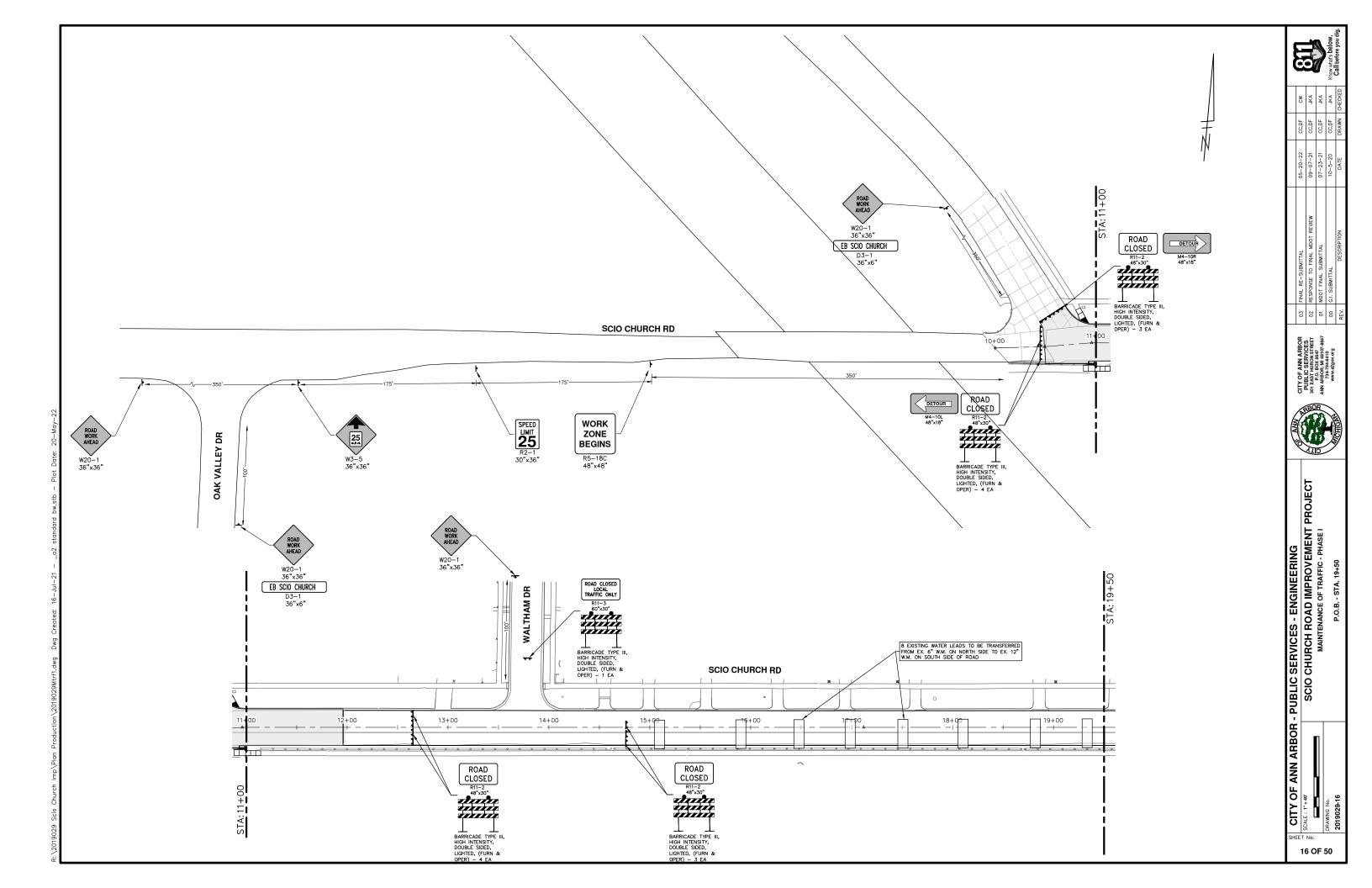


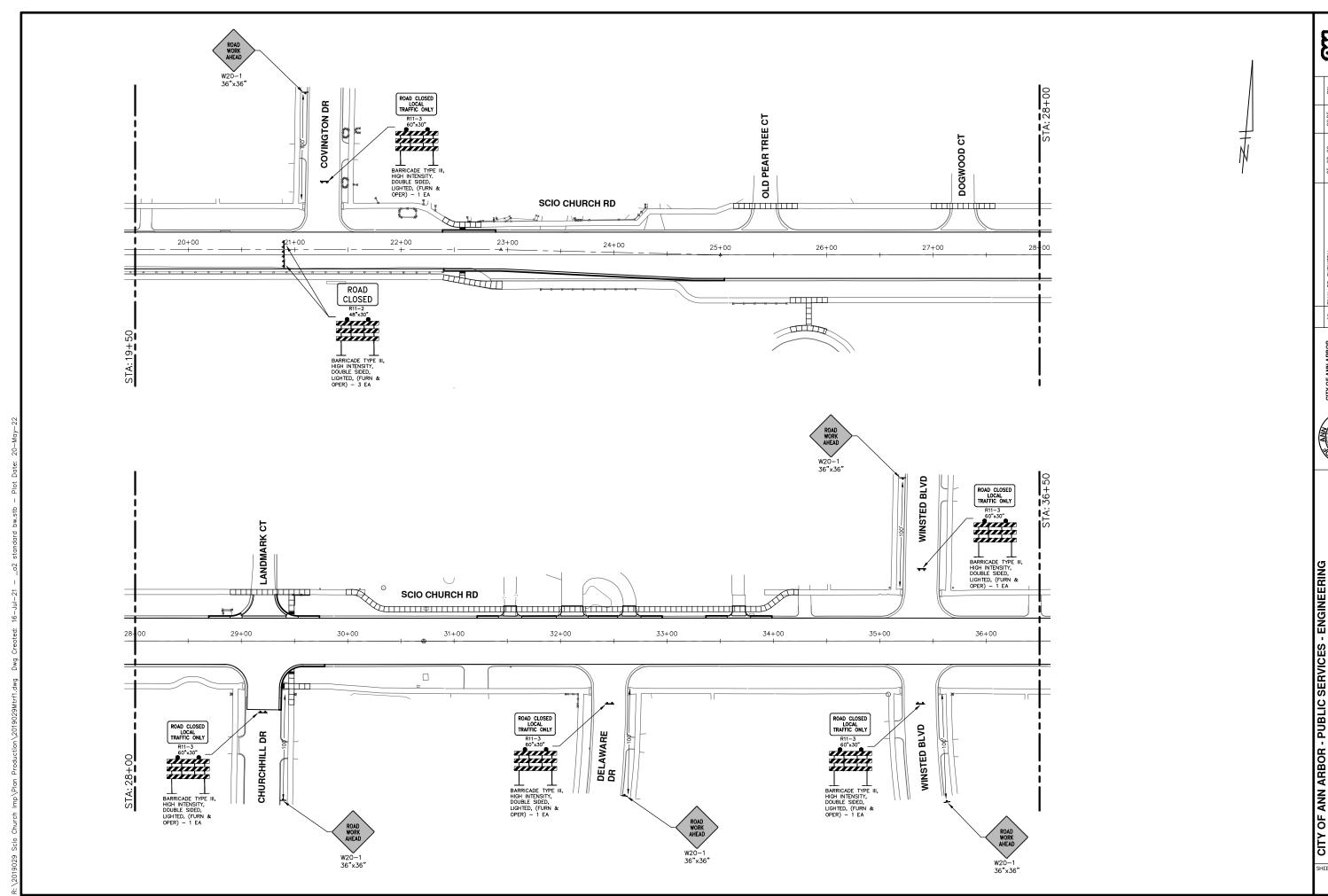
8 g	03	03 FINAL RE-SUBMITTAL	05-20-22	CC,DF	MO	
2 <u>H</u>	02	02 RESPONSE TO FINAL MDOT REVIEW	09-07-21	CC,DF	JKA	
8647	10	01 MDOT FINAL SUBMITTAL	07-23-21	CC,DF	JKA	
	00	00 G.I. SUBMITTAL	10-5-20	CC,DF	JKA	ž,
	REV.	DESCRIPTION	DATE	DRAWN	CHECKED	ر

SERVICES - ENGINEERING
CHURCH ROAD IMPROVEMENT PROJECT
DETOUR ROUTE

OF ANN ARBOR - PUBLIC

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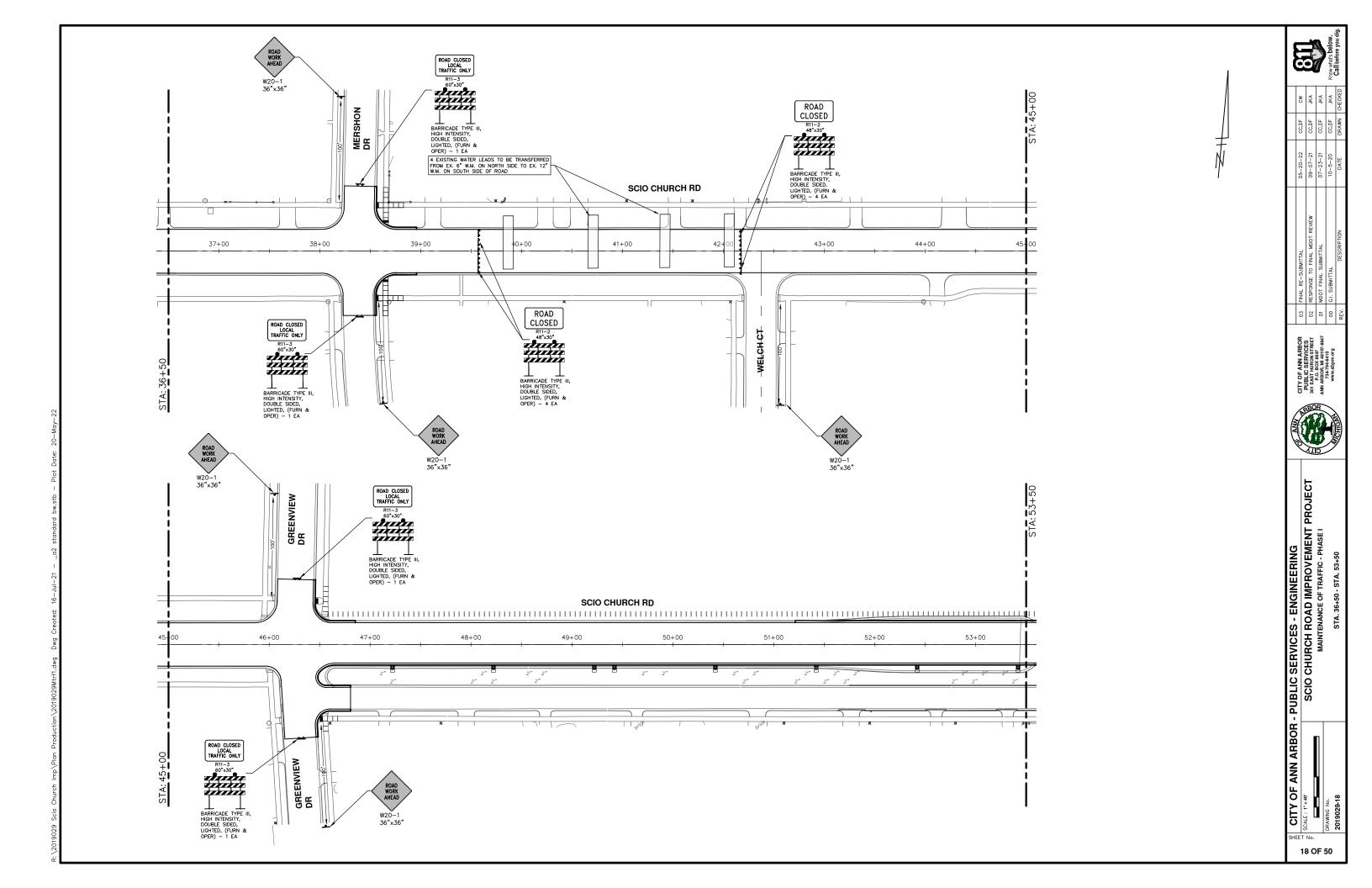


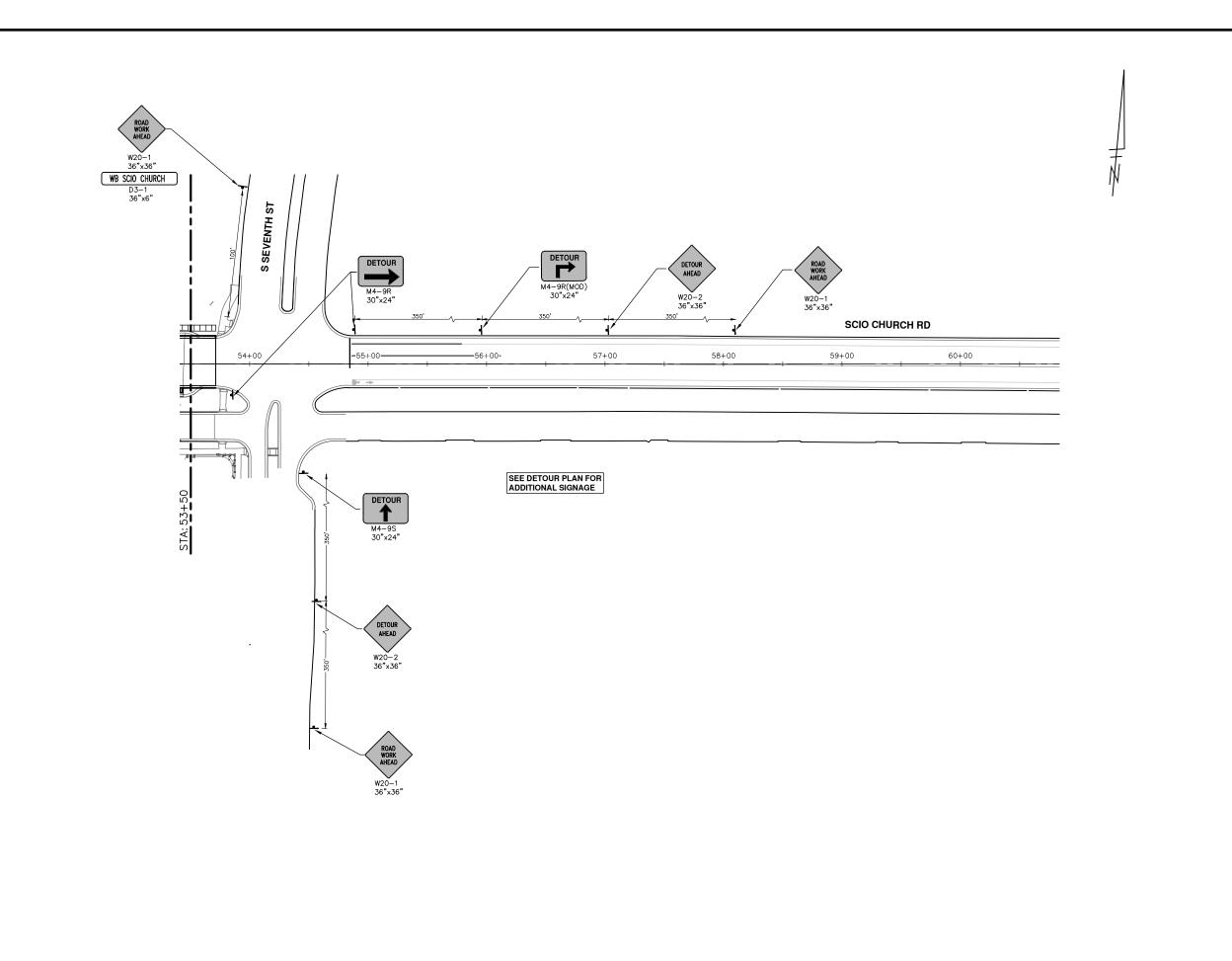
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCIO CHURCH ROAD IMPROVEMENT PROJECT

MAINTENANCE OF TRAFFIC - PHASE I

MAINTENANCE NO.

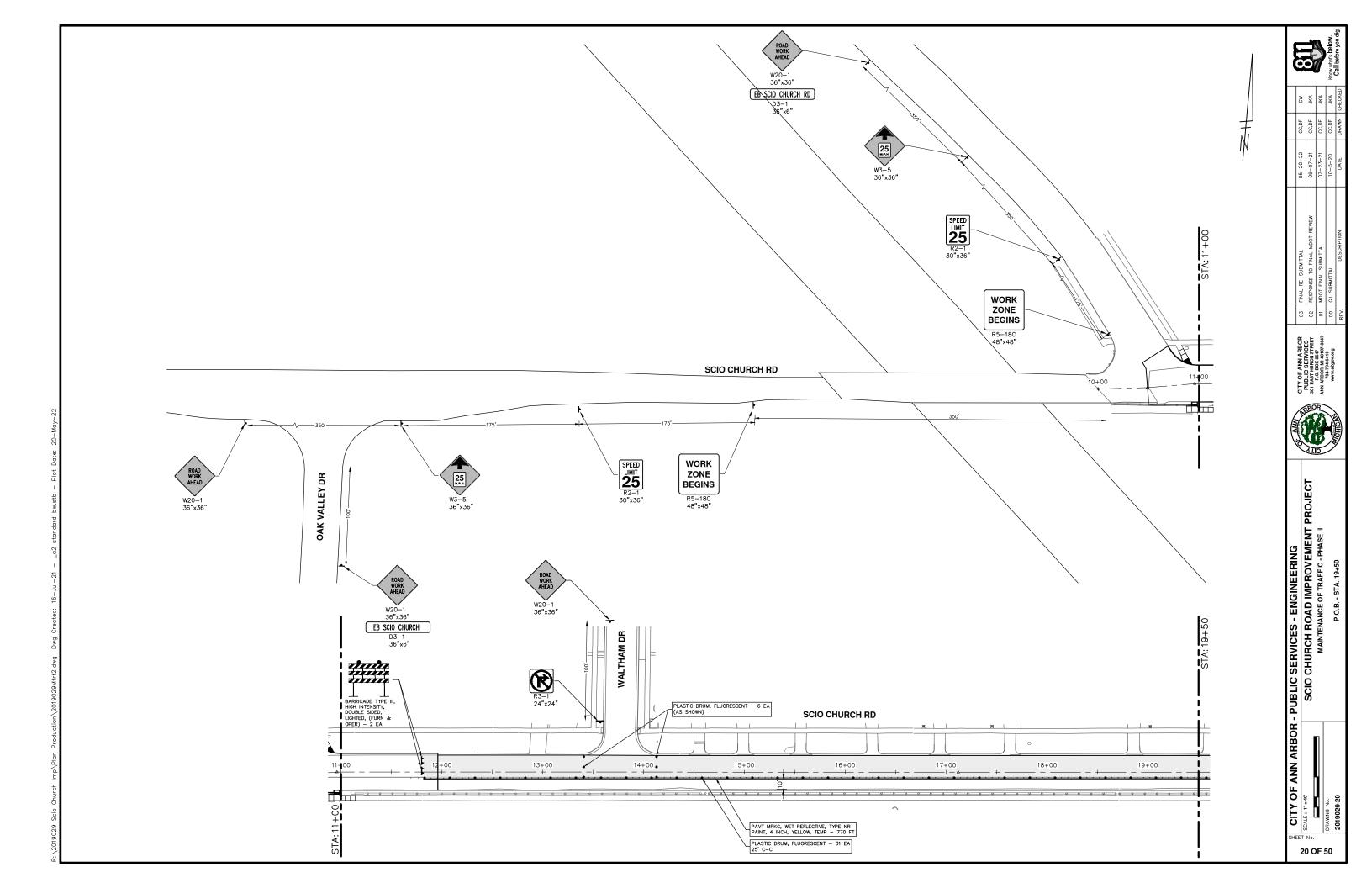


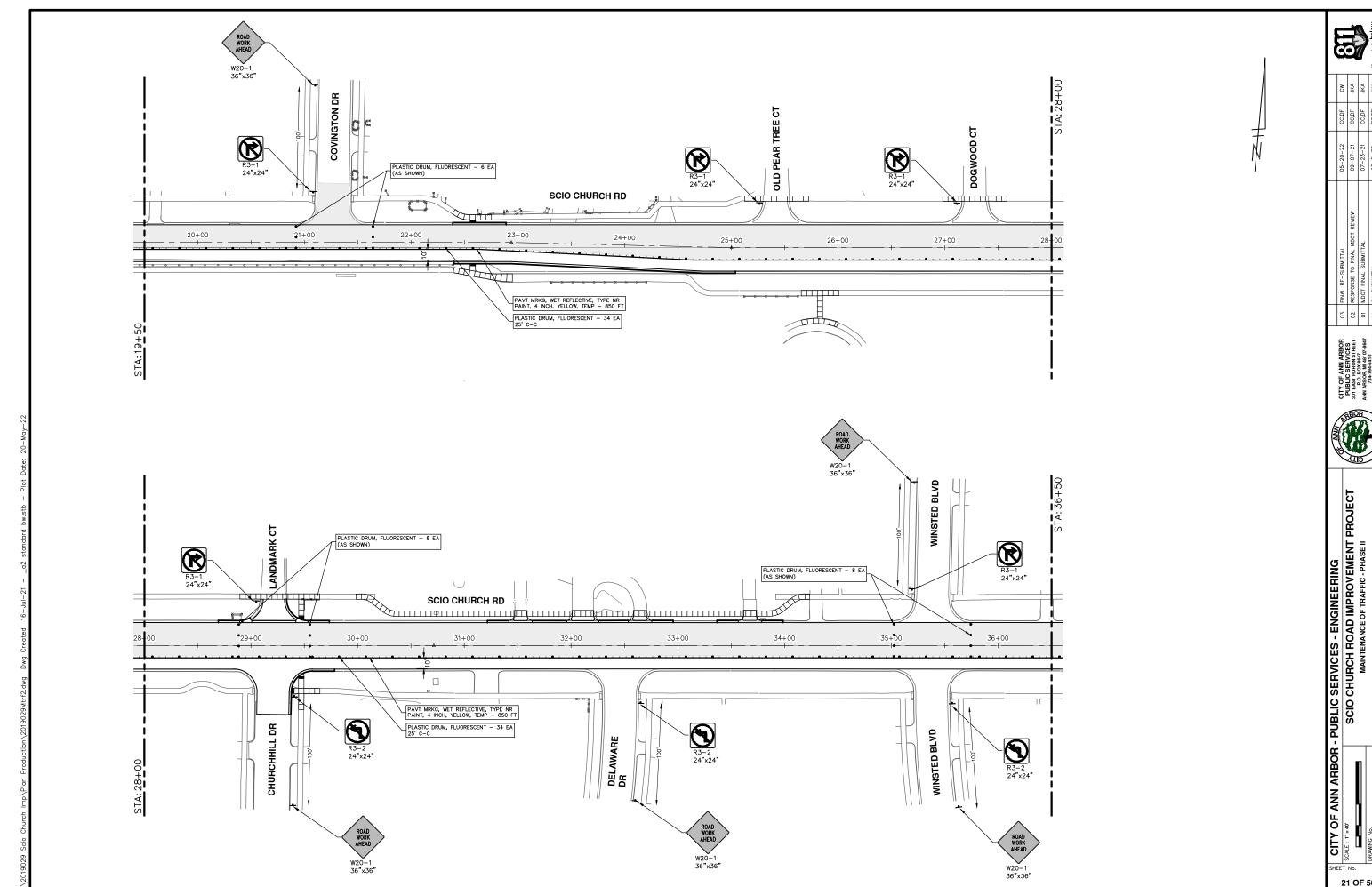


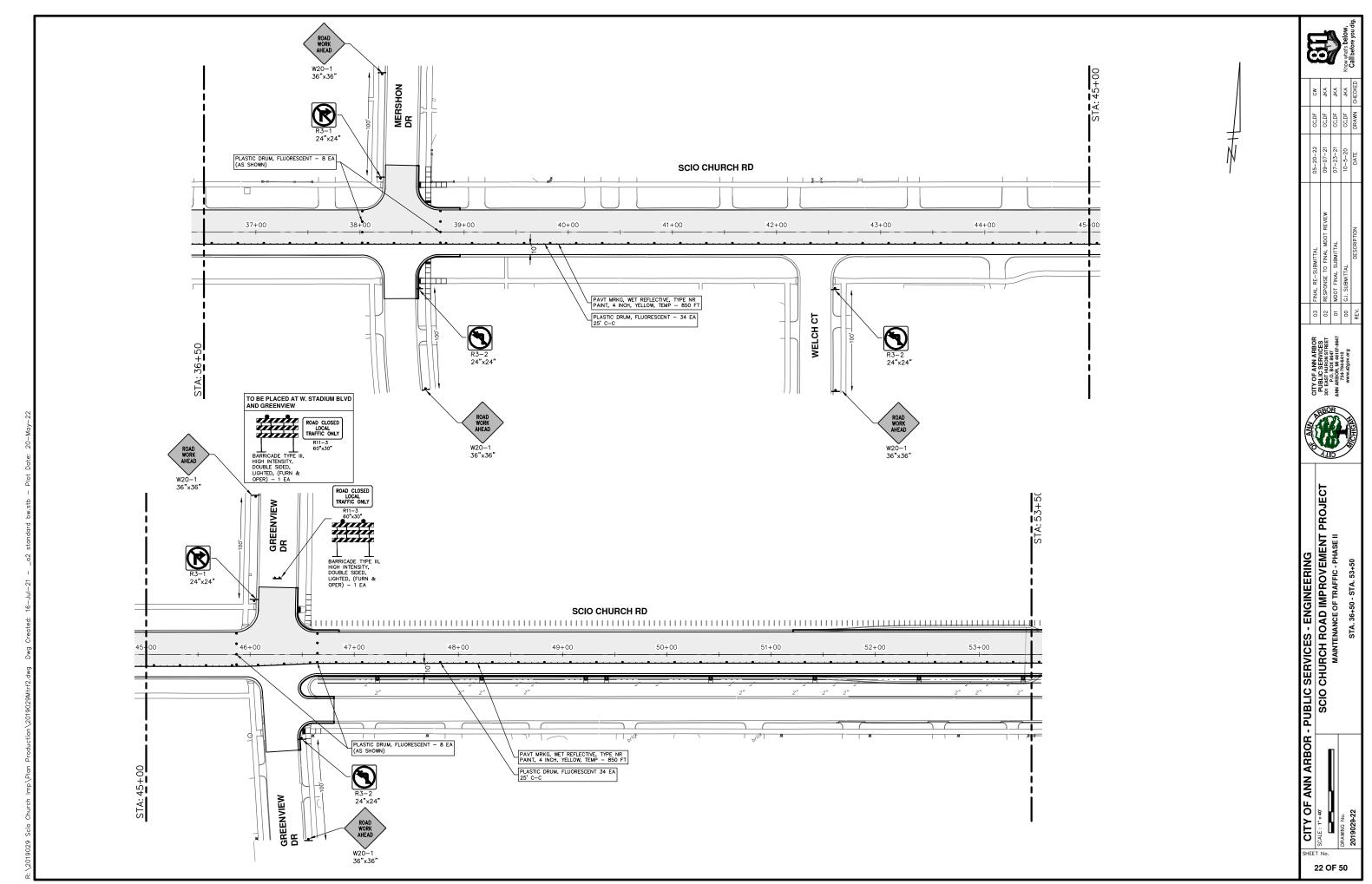
CITY OF ANN ARBOR	03	03 FINAL RE-SUBMITTAL	05-20-22	CC,DF	CW
301 EAST HURON STREET	05	02 RESPONSE TO FINAL MDOT REVIEW	09-07-21	CC,DF	ΑX
P.O. BOX 8647 ANN ARBOR, MI 48107-8647	10	01 MDOT FINAL SUBMITTAL	07-23-21	CC,DF	JKA
734-794-6410 www.a2gov.org	8	00 G.I. SUBMITTAL	10-5-20	CC,DF	УКА
	REV.	DESCRIPTION	DATE	DRAWN	DRAWN CHECKED

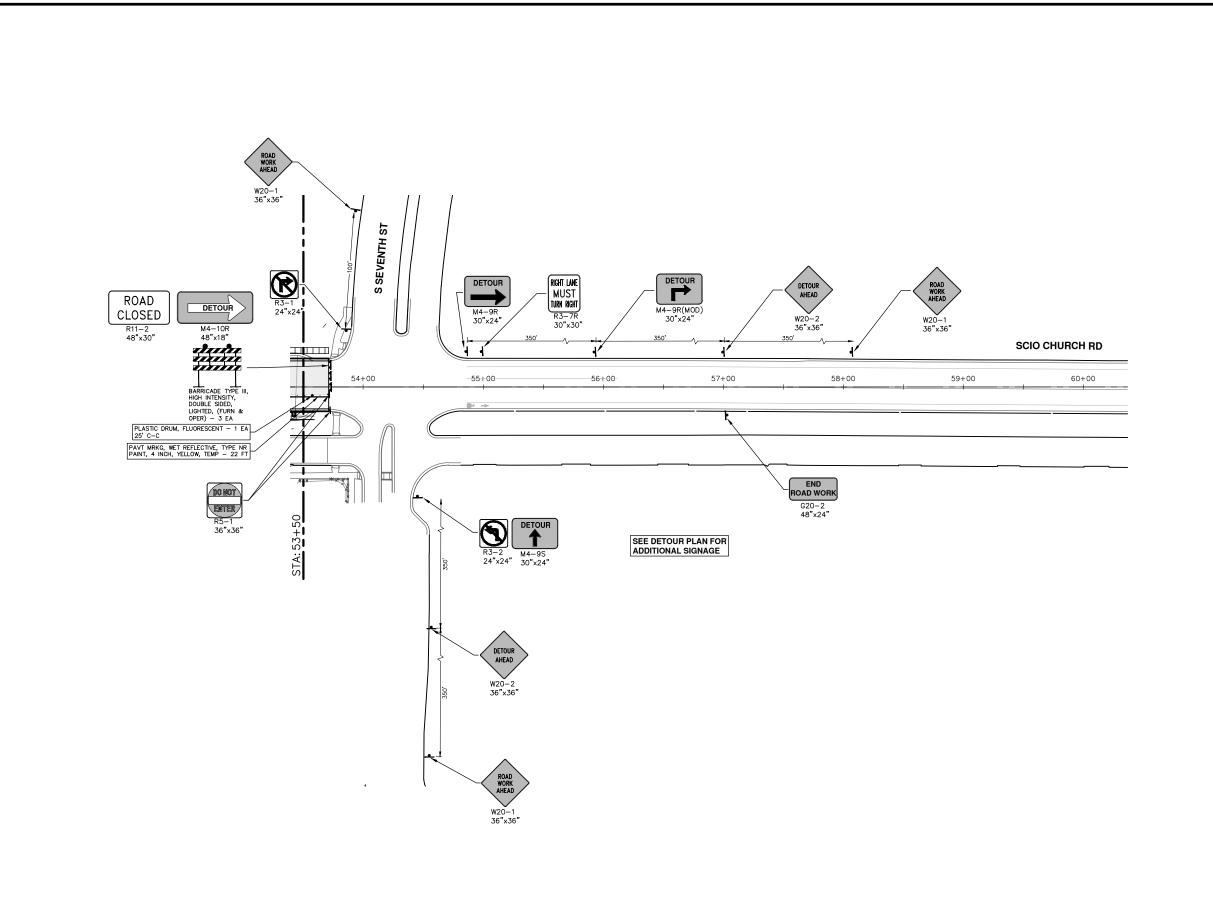
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CITY OF ANN ARBOR PUBLIC SERVICES	301 EAST HURON STREET	ANN ARBOR, MI 48107-8647	www.a2gov.org
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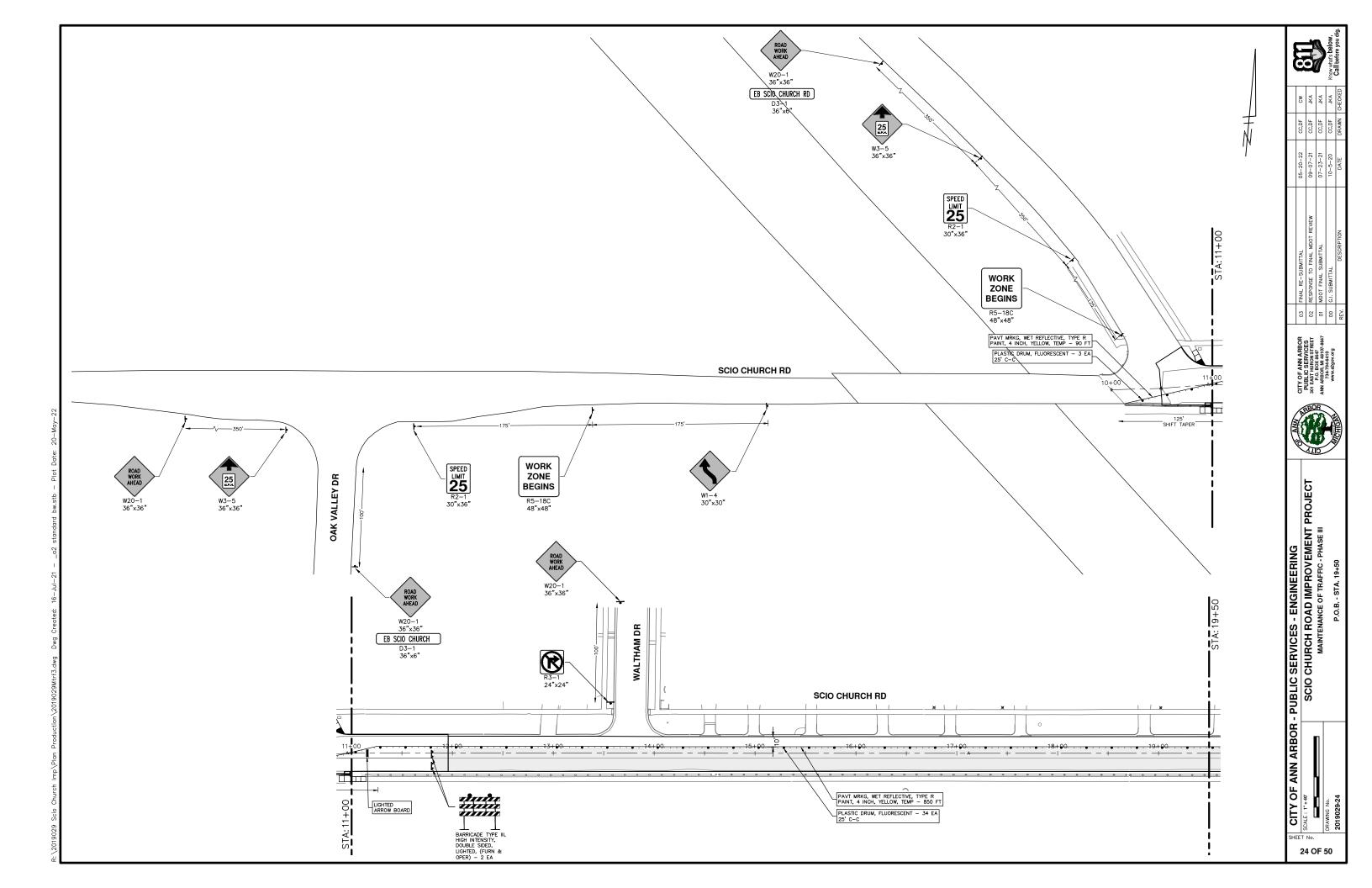


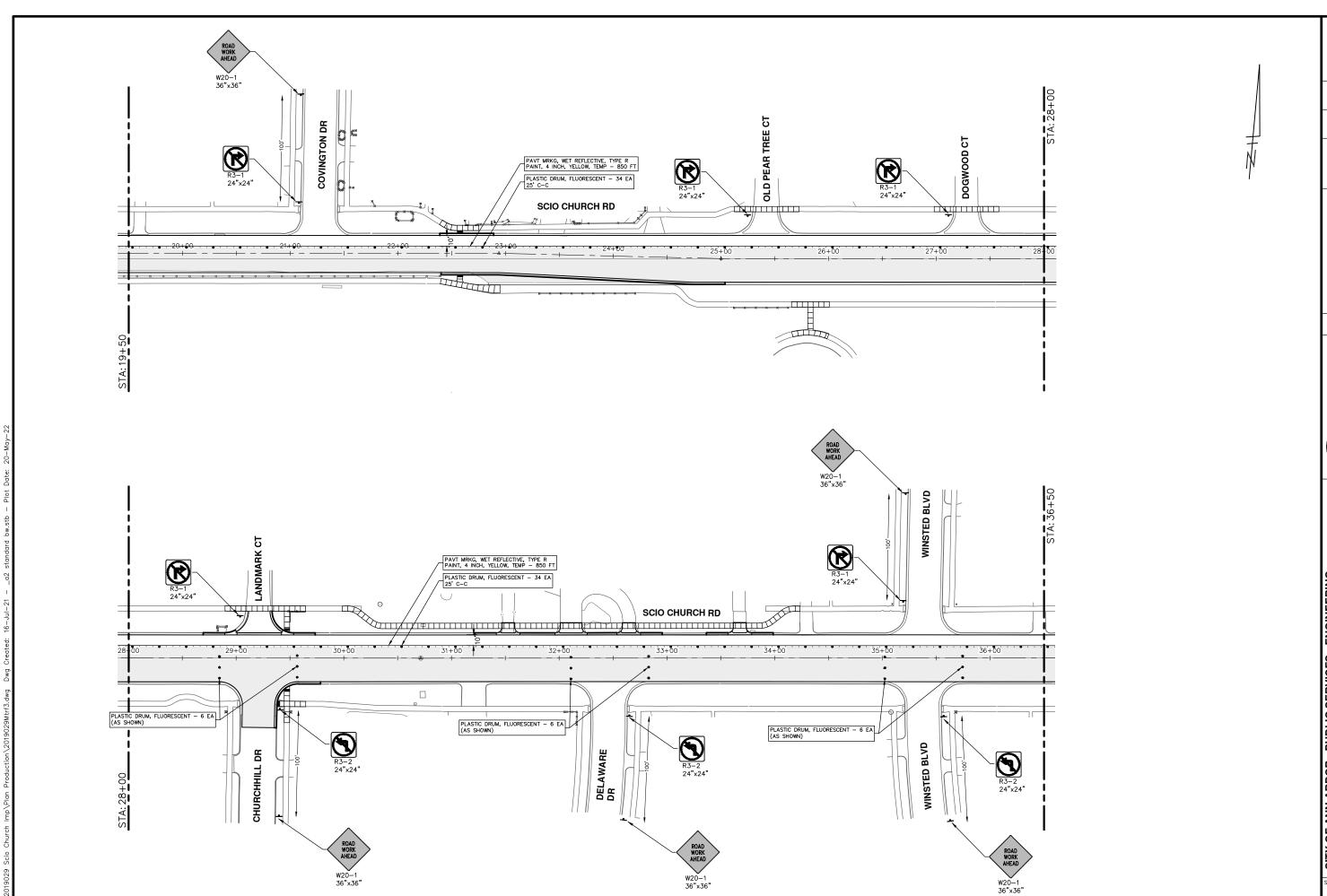
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCIO CHURCH ROAD IMPROVEMENT PROJECT

MAINTENANCE OF TRAFFIC - PHASE II



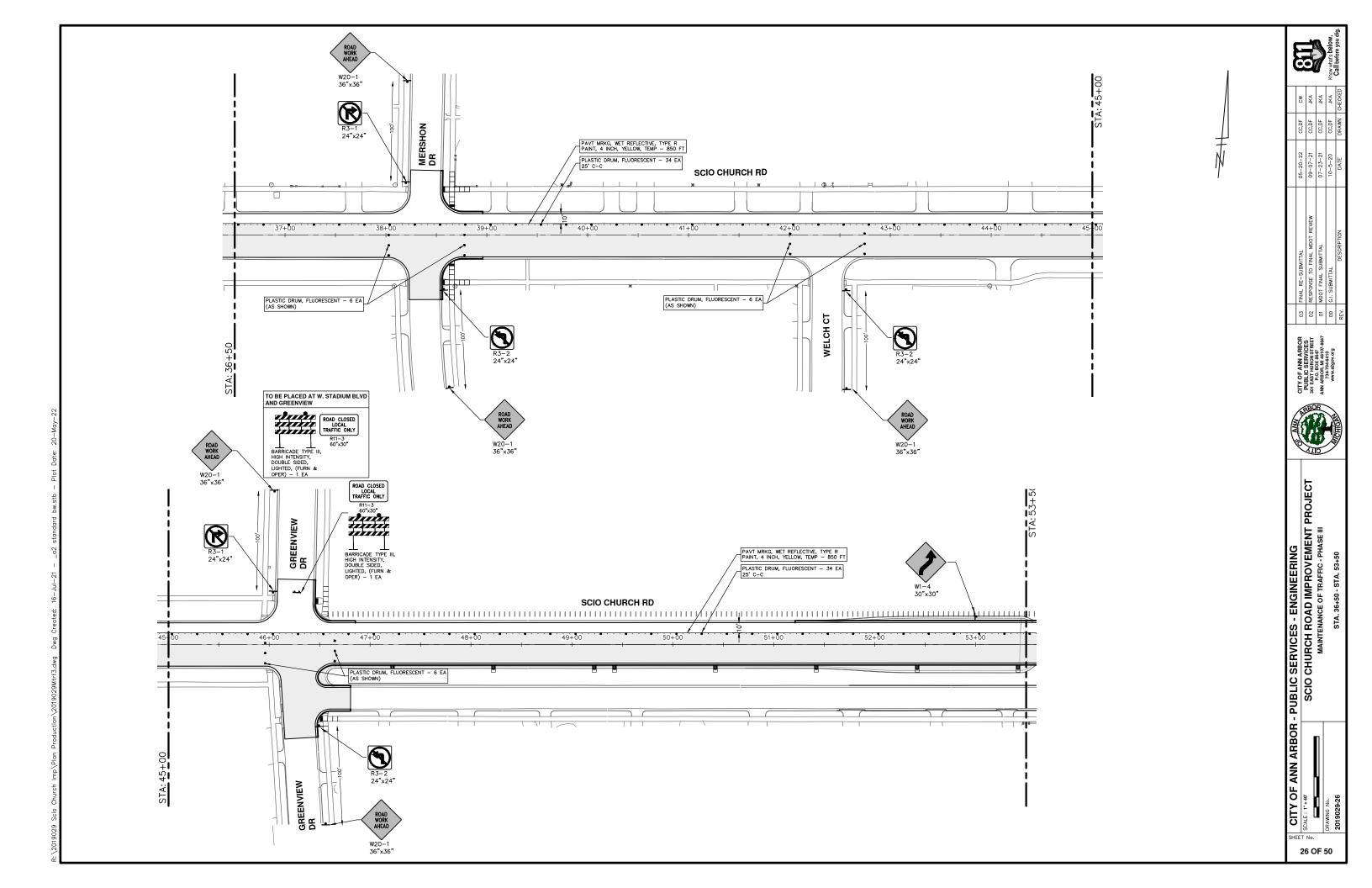


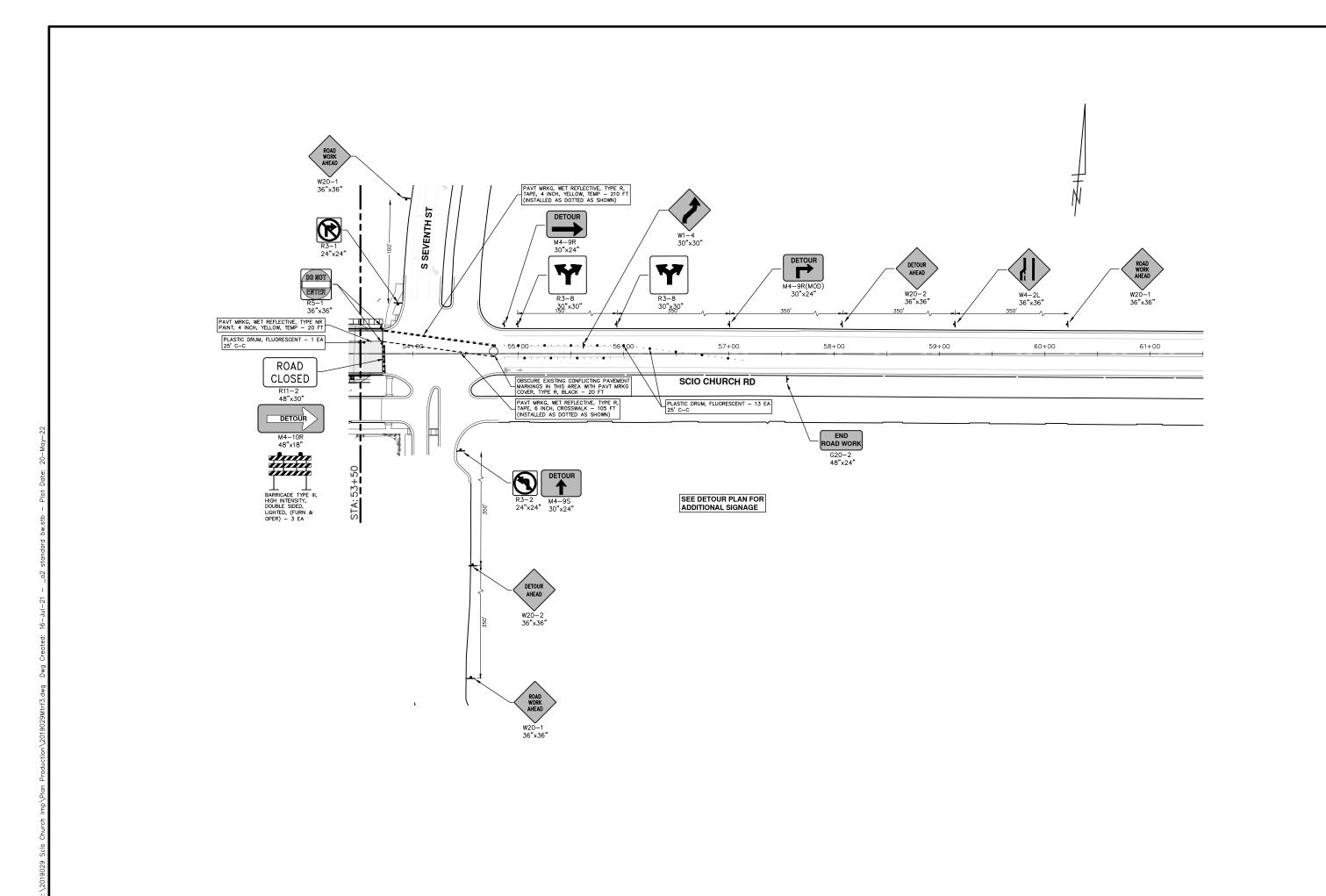
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCIO CHURCH ROAD IMPROVEMENT PROJECT

MAINTENANCE OF TRAFFIC - PHASE III

MAINTENANCE NO.



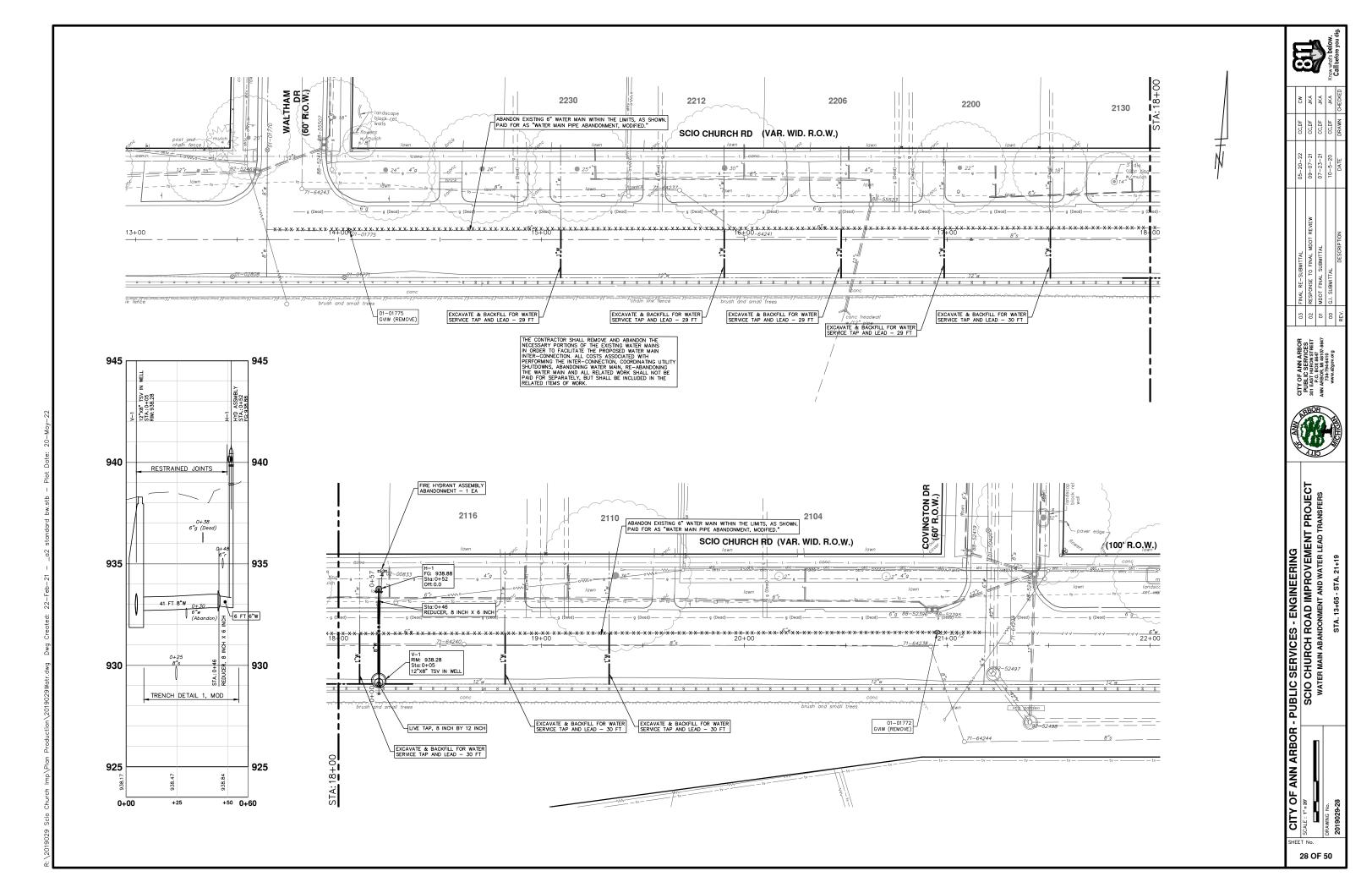


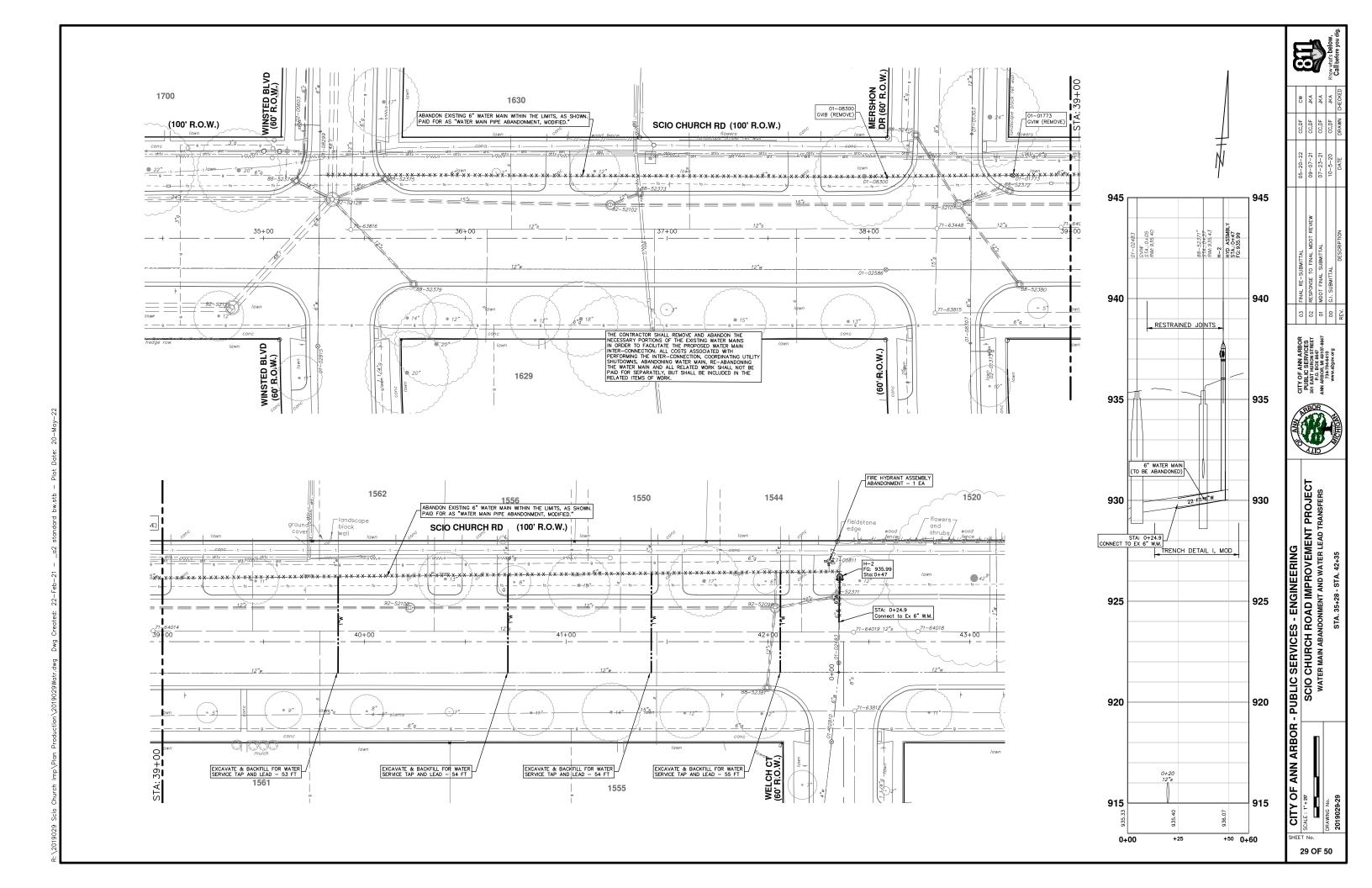
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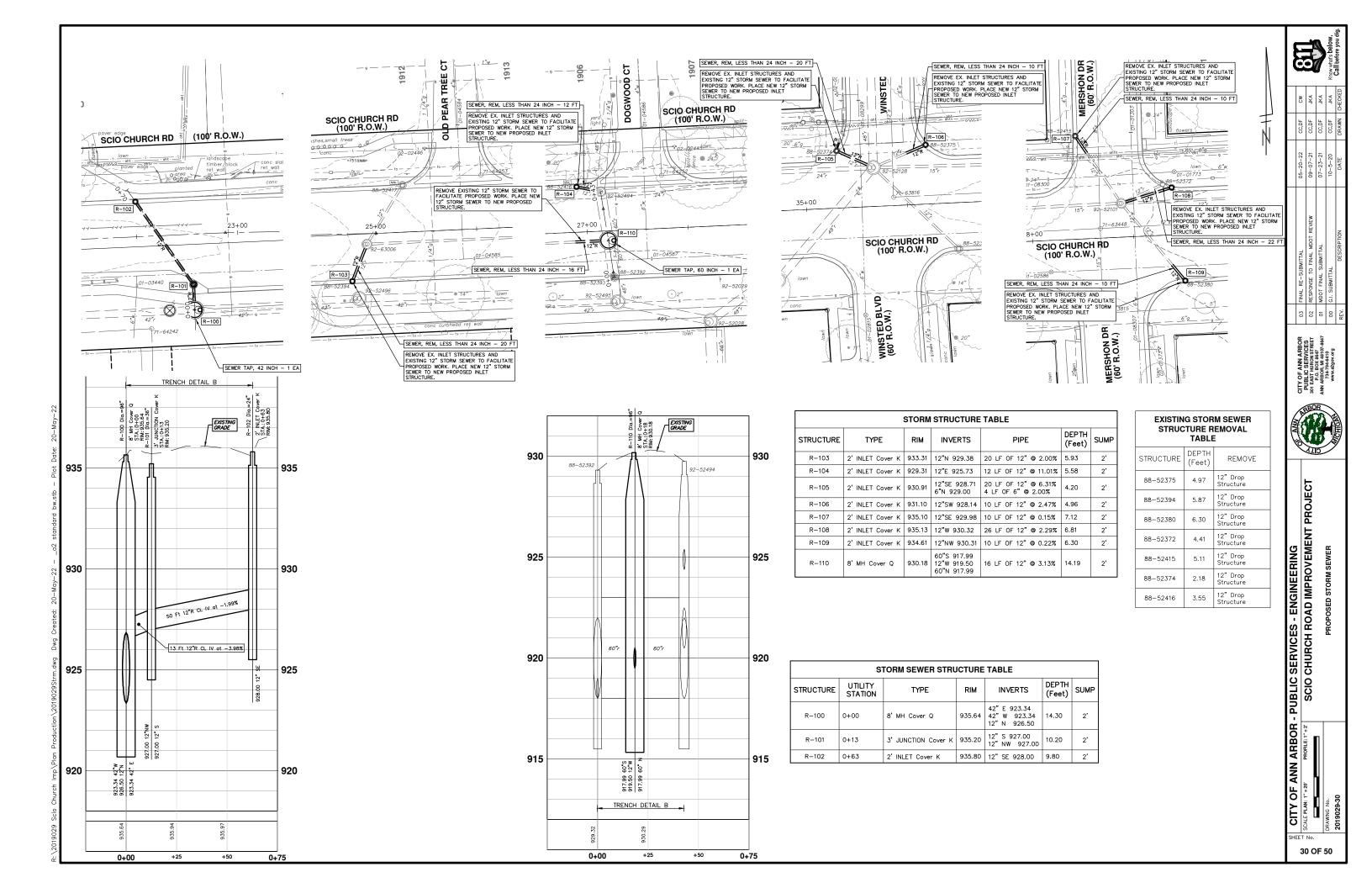
SCIO CHURCH ROAD IMPROVEMENT PROJECT

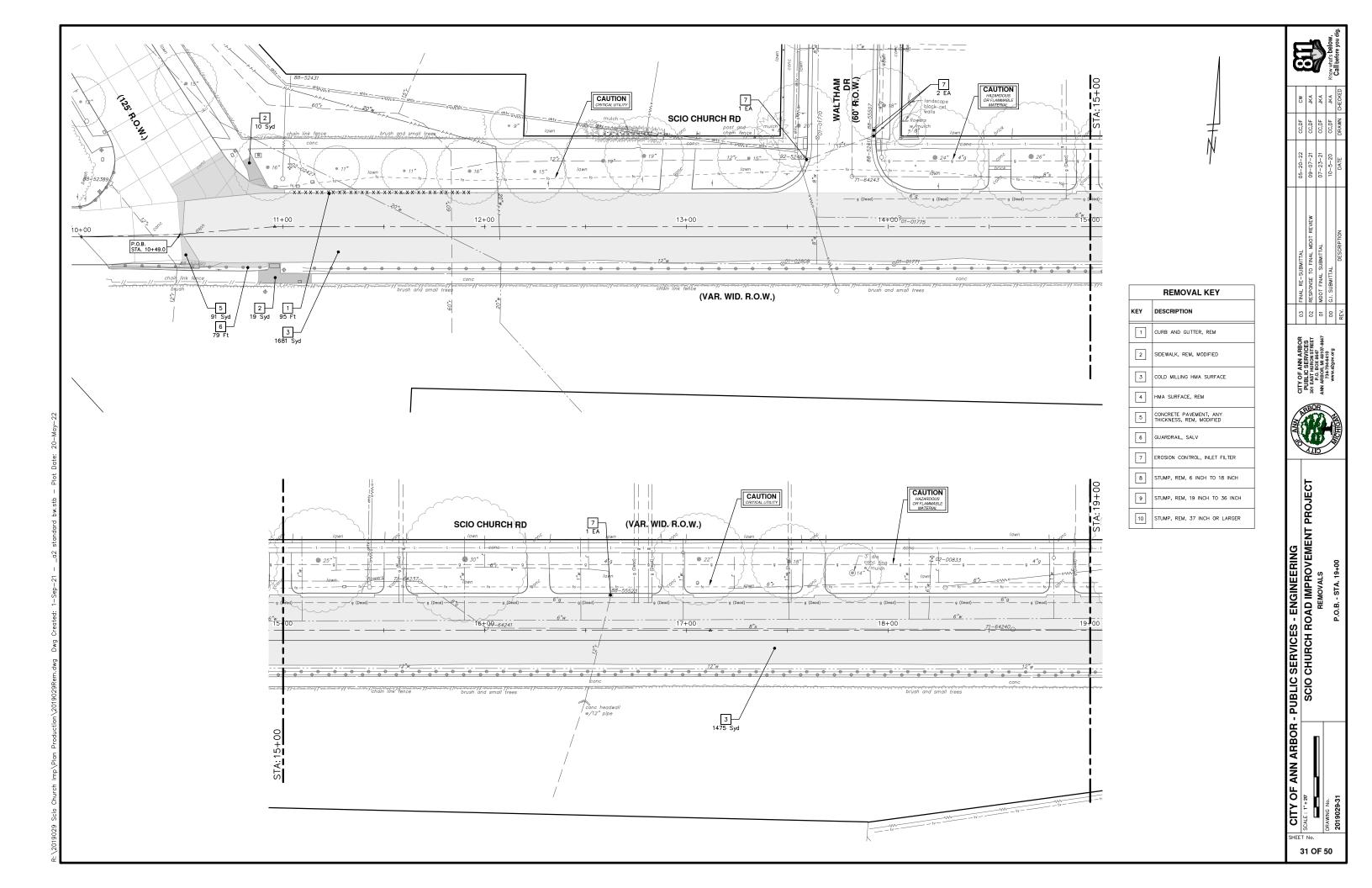
MAINTENANCE OF TRAFFIC - PHASE III

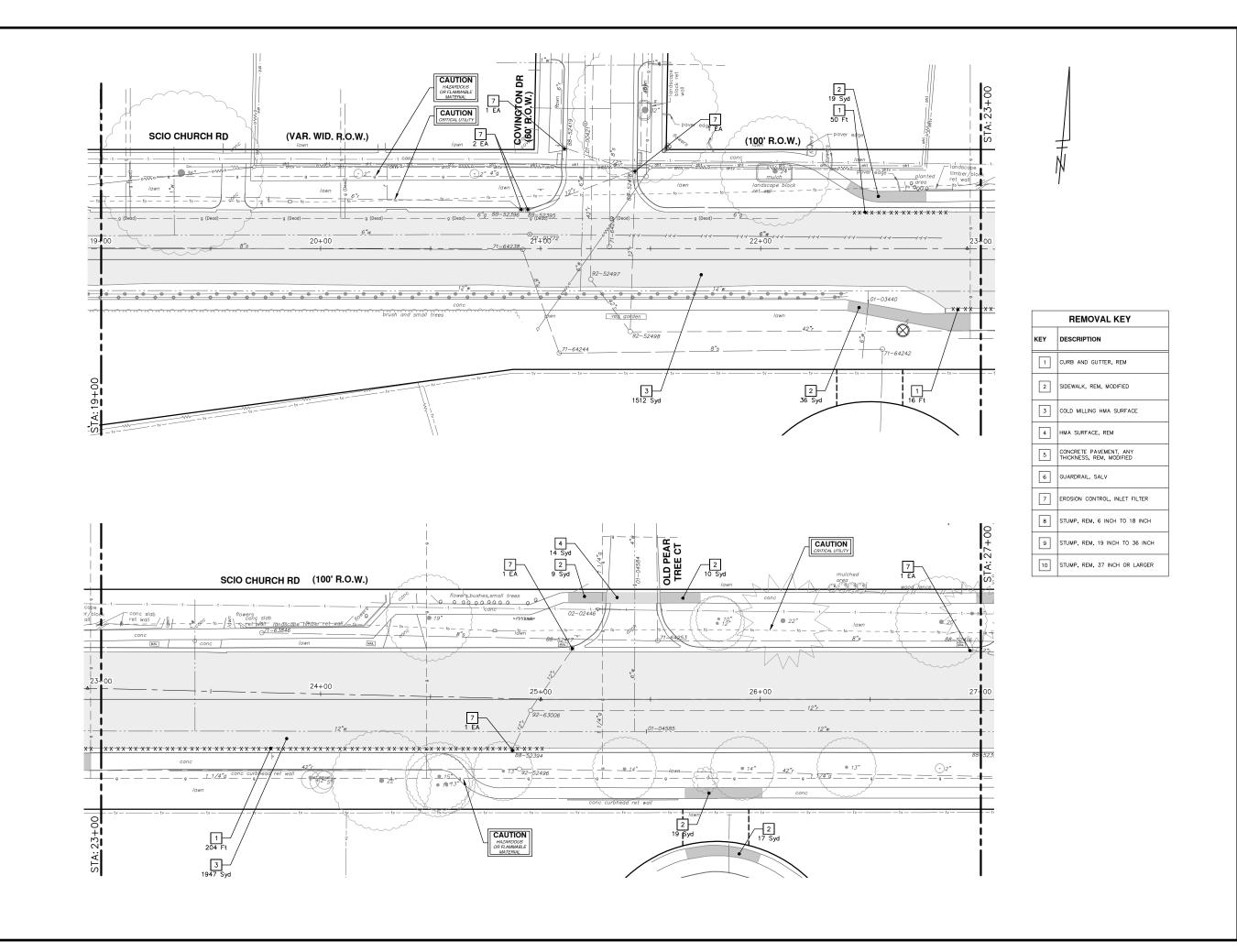
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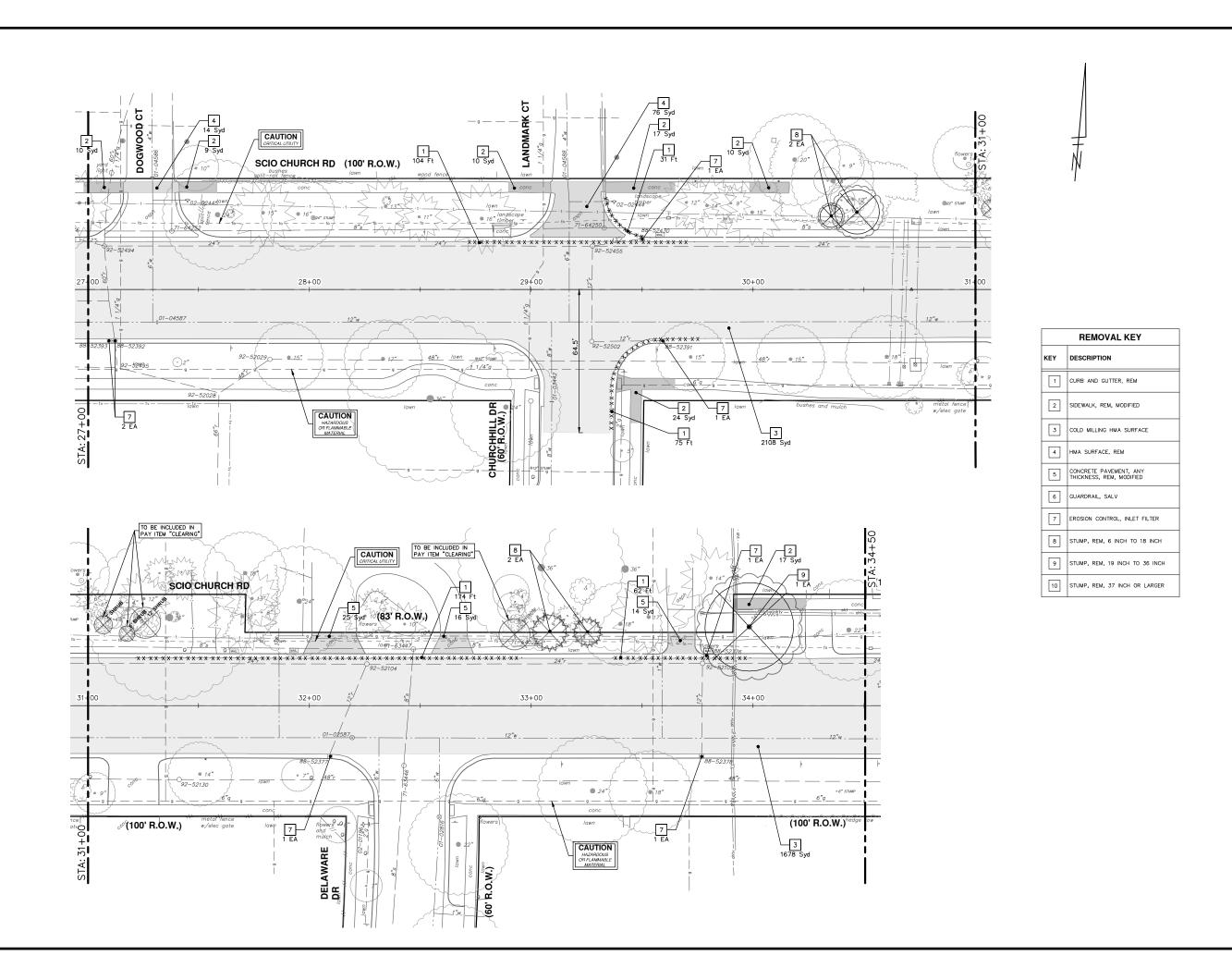




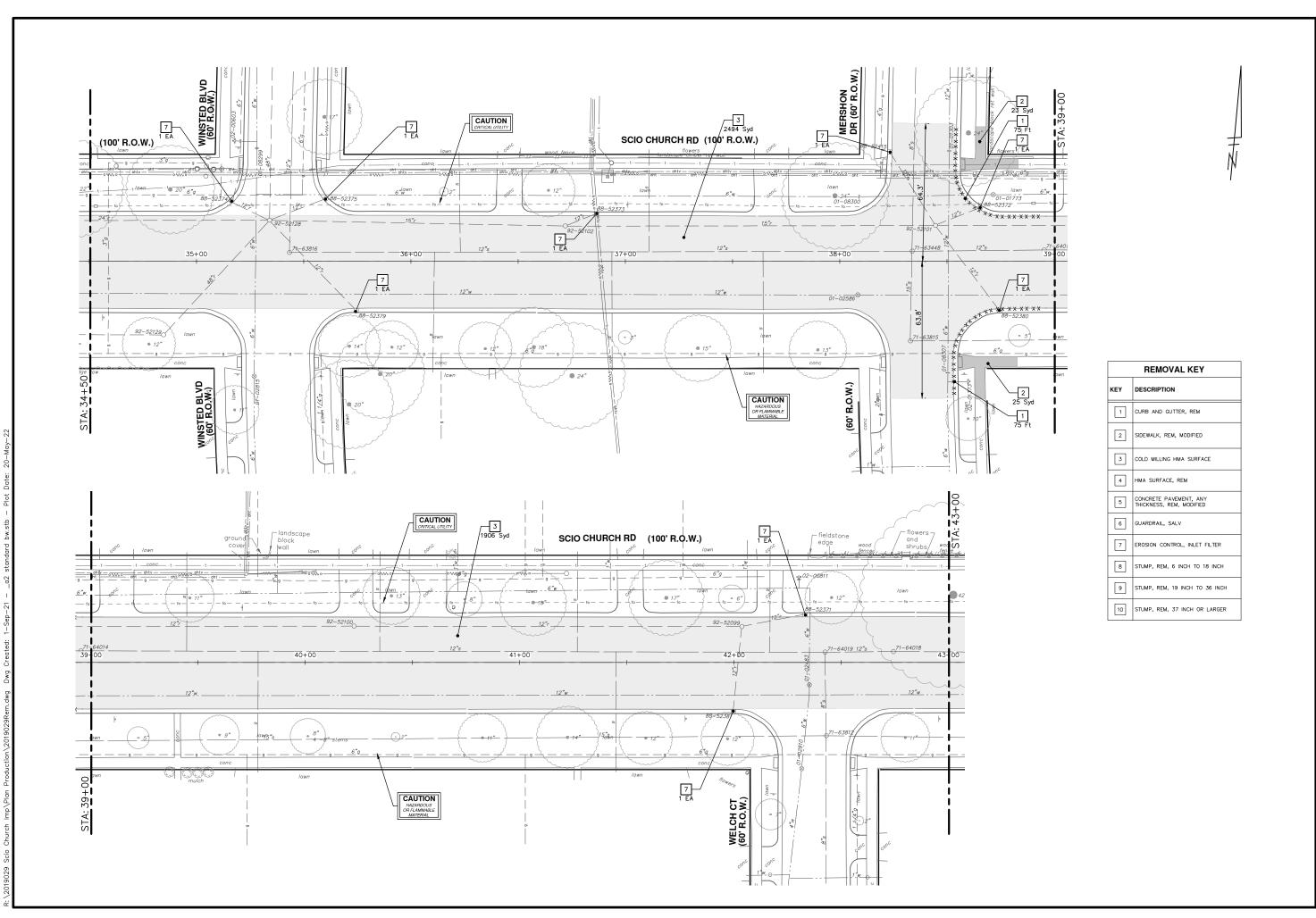




CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
SCALE: T\*= 20"
SCIO CHURCH ROAD IMPROVEMENT PROJECT
REMOVALS



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SCHETT SCHORCH ROAD IMPROVEMENT PROJECT
REMOVALS

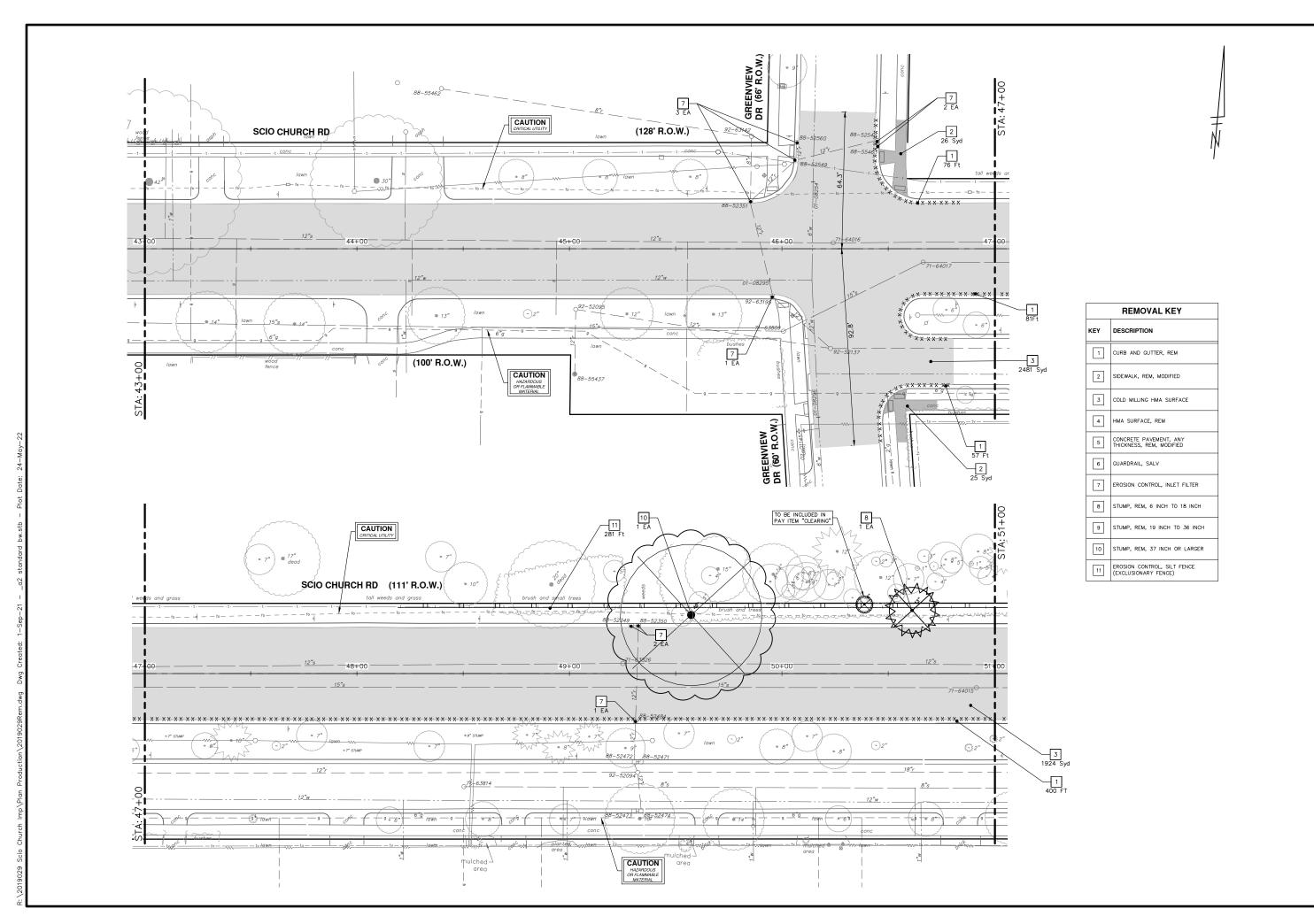


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCIO CHURCH ROAD IMPROVEMENT PROJECT

REMOVALS

REMOVALS

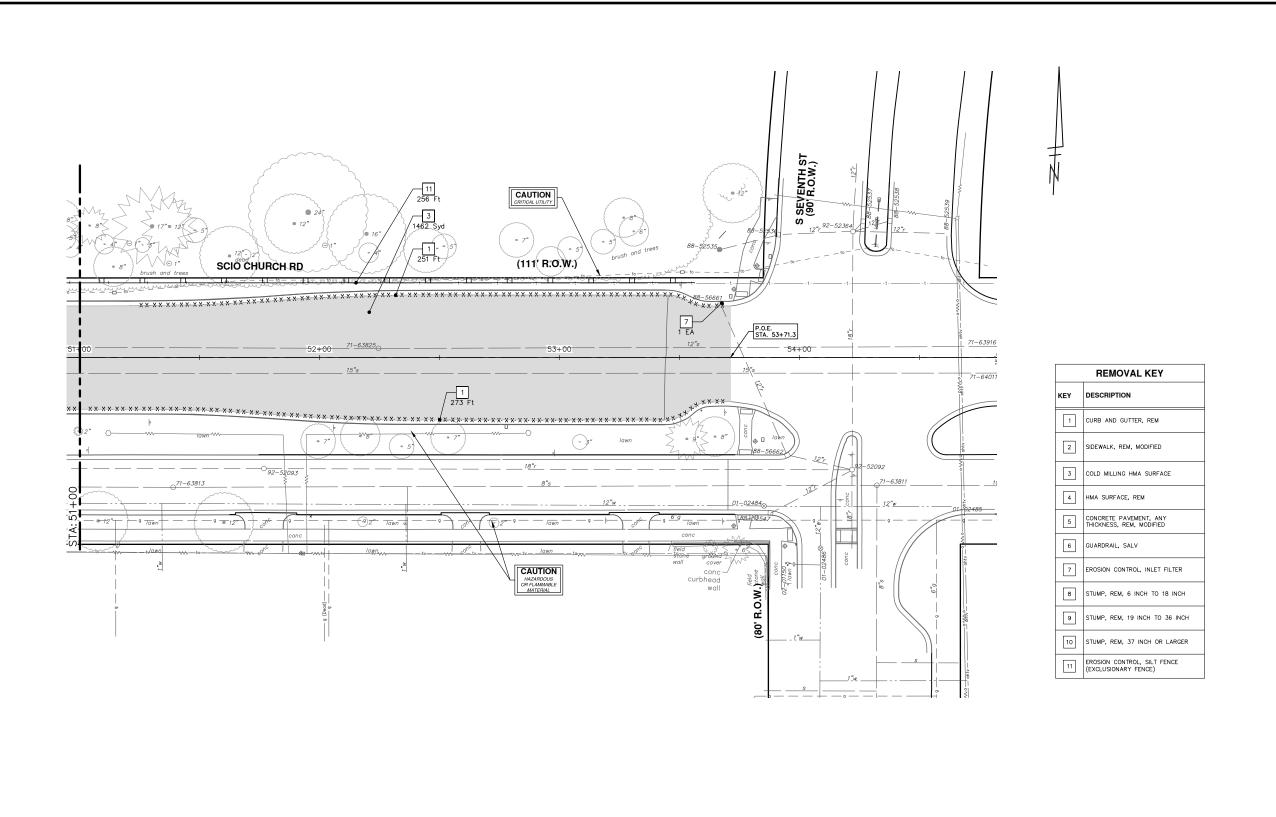


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCIO CHURCH ROAD IMPROVEMENT PROJECT

REMOVALS

REMOVALS

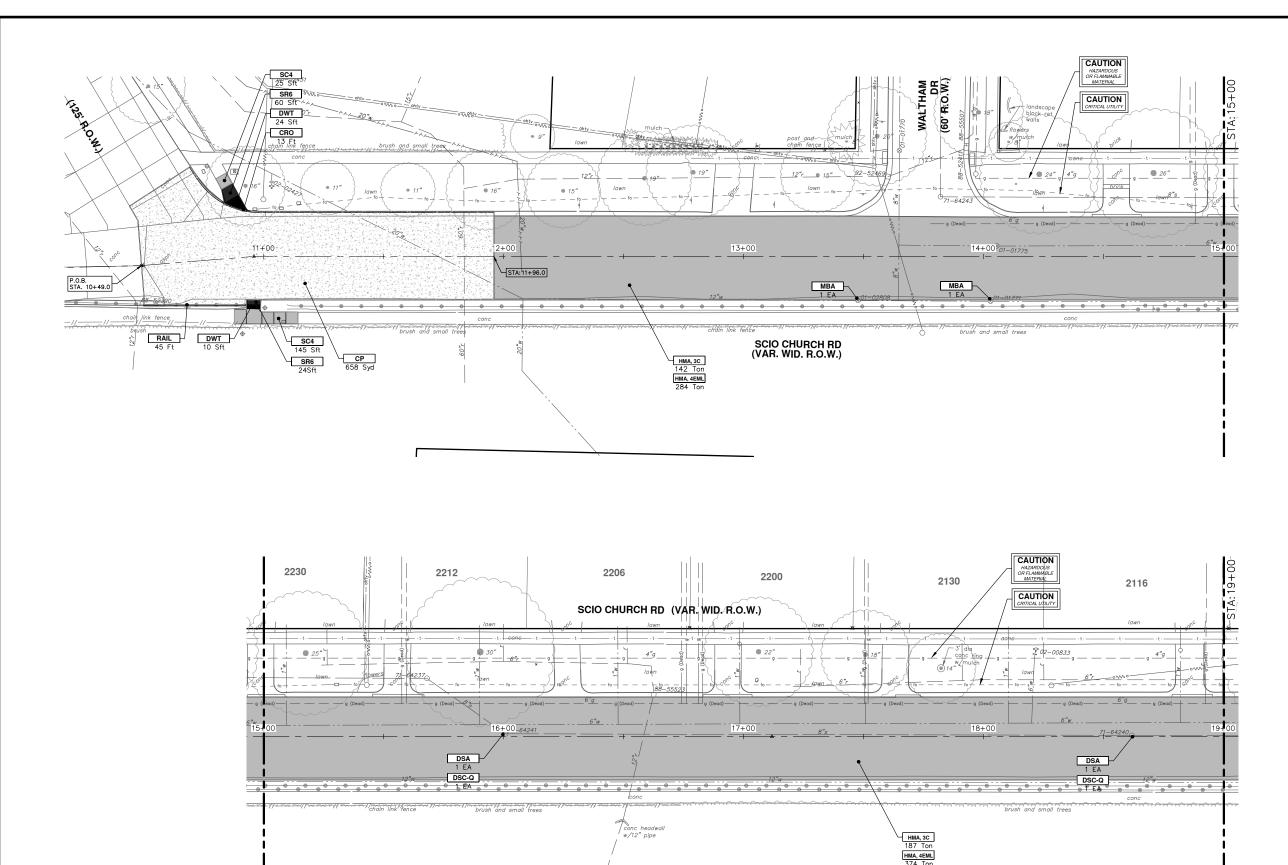


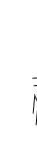
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE: 1"= 20

SCIO CHURCH ROAD IMPROVEMENT PROJECT

REMOVALS



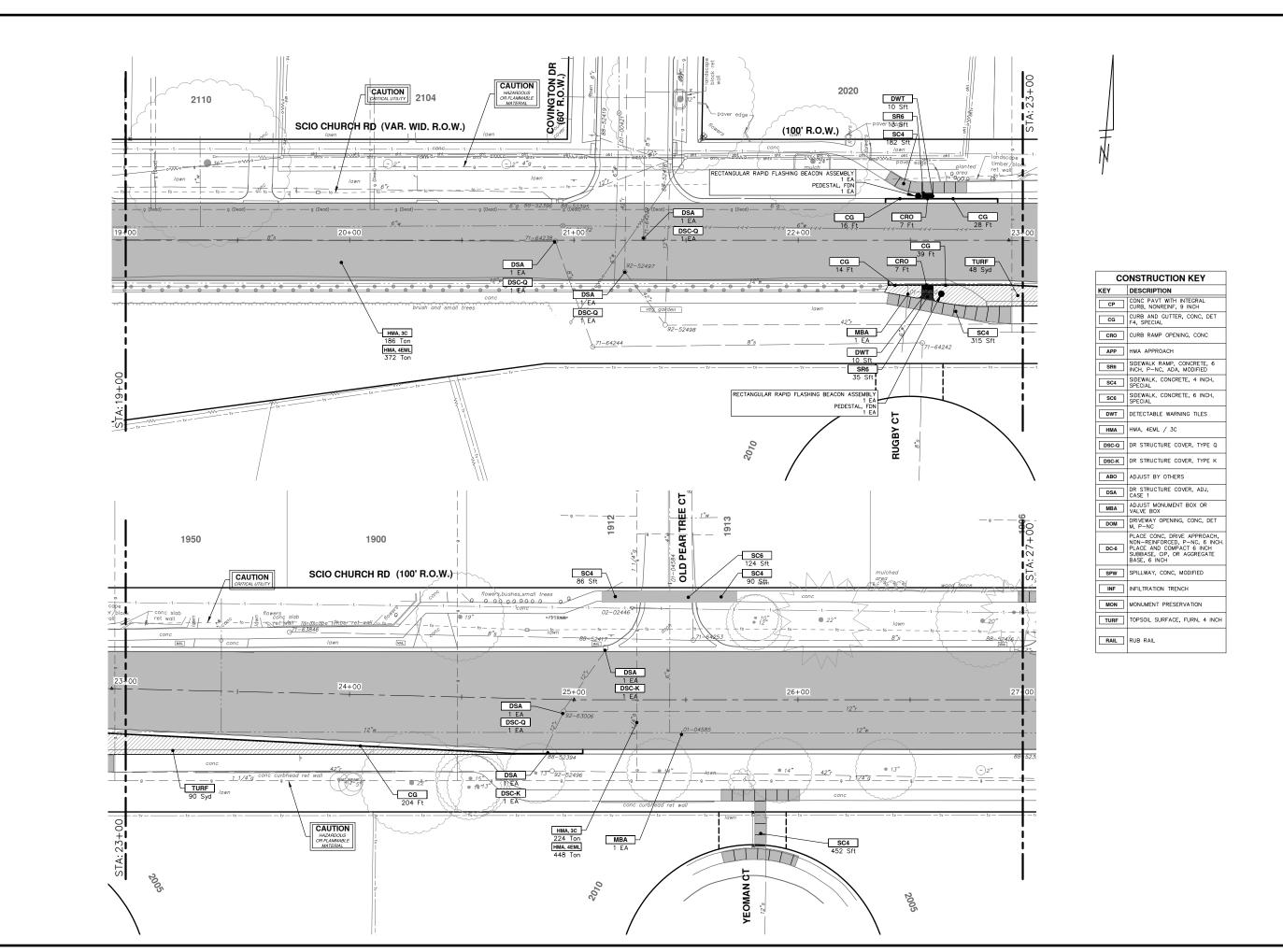


	INSTRUCTION KEY
KEY	DESCRIPTION
СР	CONC PAVT WITH INTEGRAL CURB, NONREINF, 9 INCH
CG	CURB AND GUTTER, CONC, DET F4, SPECIAL
CRO	CURB RAMP OPENING, CONC
APP	HMA APPROACH
SR6	SIDEWALK RAMP, CONCRETE, 6 INCH, P-NC, ADA, MODIFIED
SC4	SIDEWALK, CONCRETE, 4 INCH, SPECIAL
SC6	SIDEWALK, CONCRETE, 6 INCH, SPECIAL
DWT	DETECTABLE WARNING TILES
HMA	HMA, 4EML / 3C
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-K	DR STRUCTURE COVER, TYPE K
ABO	ADJUST BY OTHERS
DSA	DR STRUCTURE COVER, ADJ, CASE 1
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DOM	DRIVEWAY OPENING, CONC, DET M, P-NC
DC-6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, OR AGGREGATE BASE, 6 INCH
SPW	SPILLWAY, CONC, MODIFIED
INF	INFILTRATION TRENCH
MON	MONUMENT PRESERVATION
TURF	TOPSOIL SURFACE, FURN, 4 INCH
RAIL	RUB RAIL

CONSTRUCTION KEY



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
SOLE: r=20
SCIO CHURCH ROAD IMPROVEMENT PROJECT
ROAD PLANS
ROAD PLANS

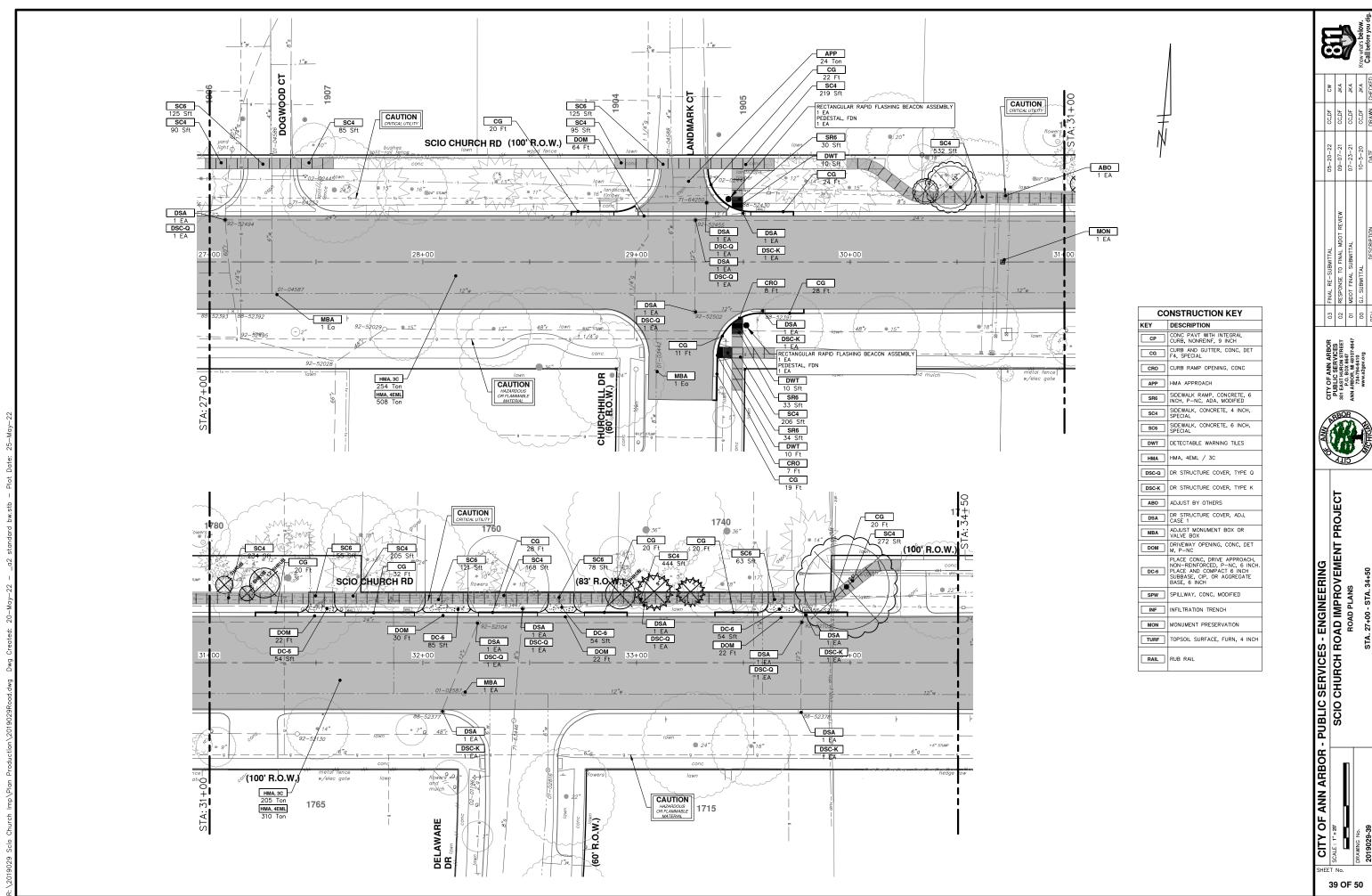




CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

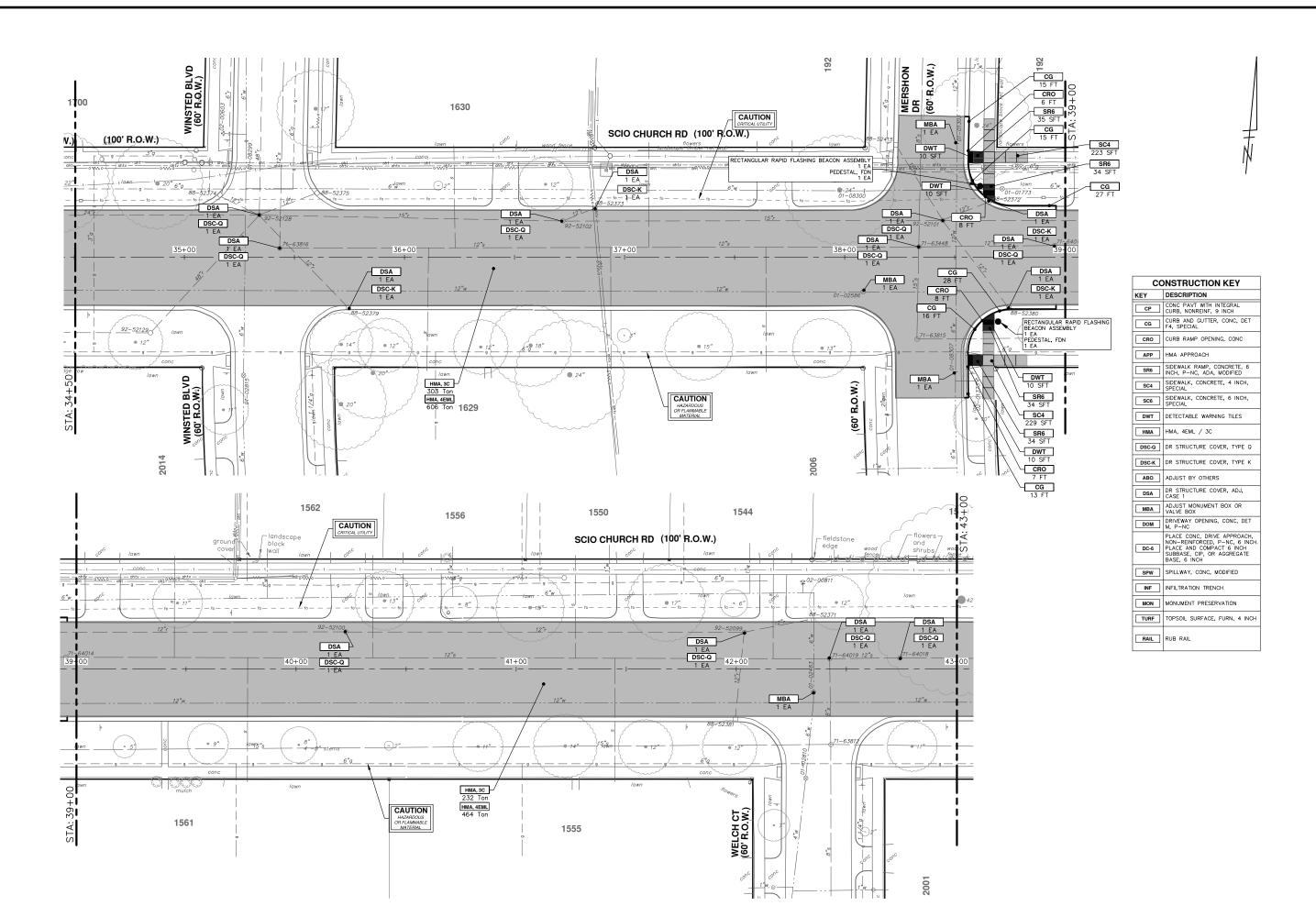
SCIO CHURCH ROAD IMPROVEMENT PROJECT

ROAD PLANS



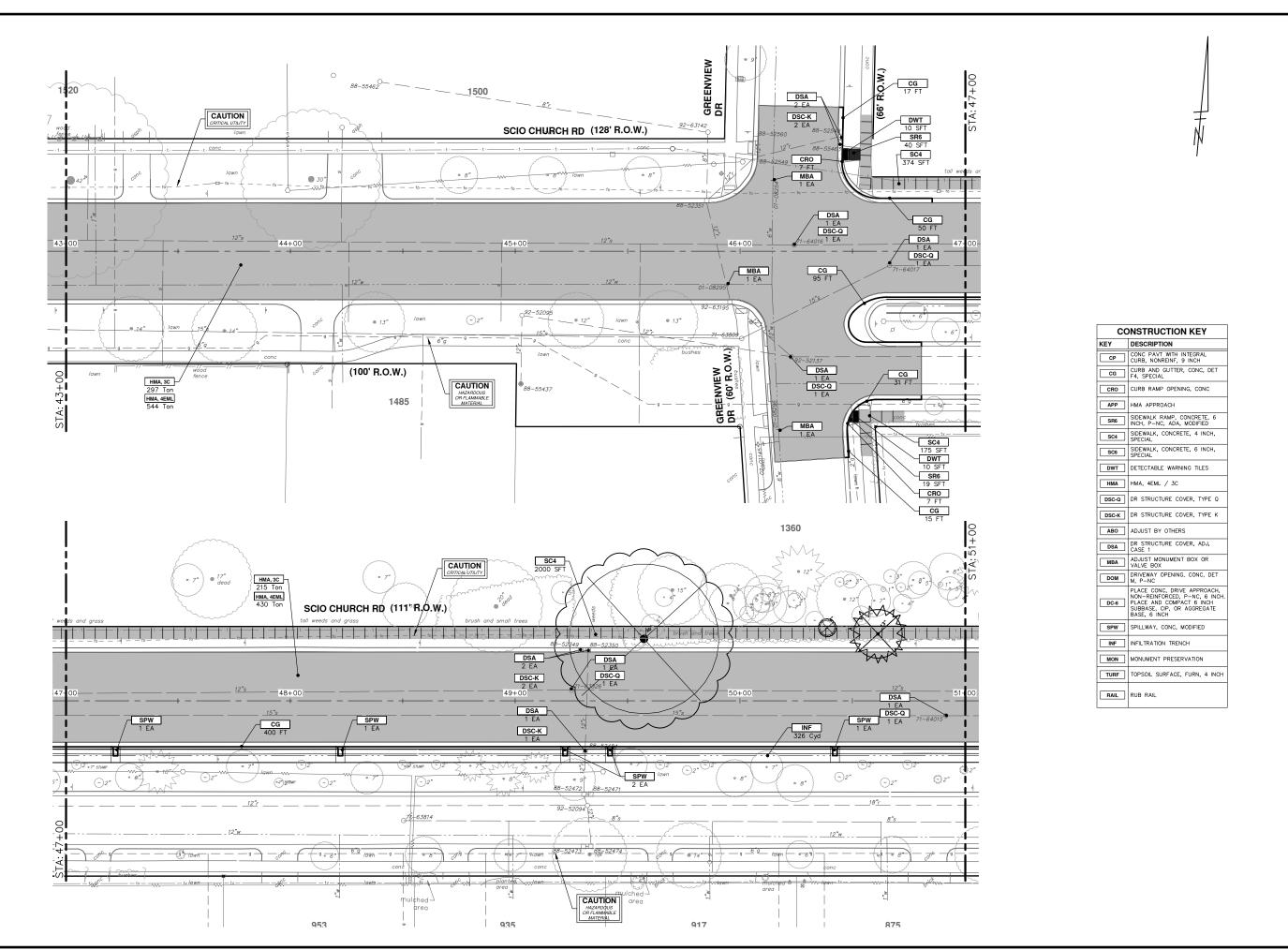
CITY OF ANN ARBOR PUBLIC SERVICES 301 AST HURON STREET P.O. BOX 8647 ANN ARBOR, M 48107-8647 7347-84-4610 WWW.a2gov.org



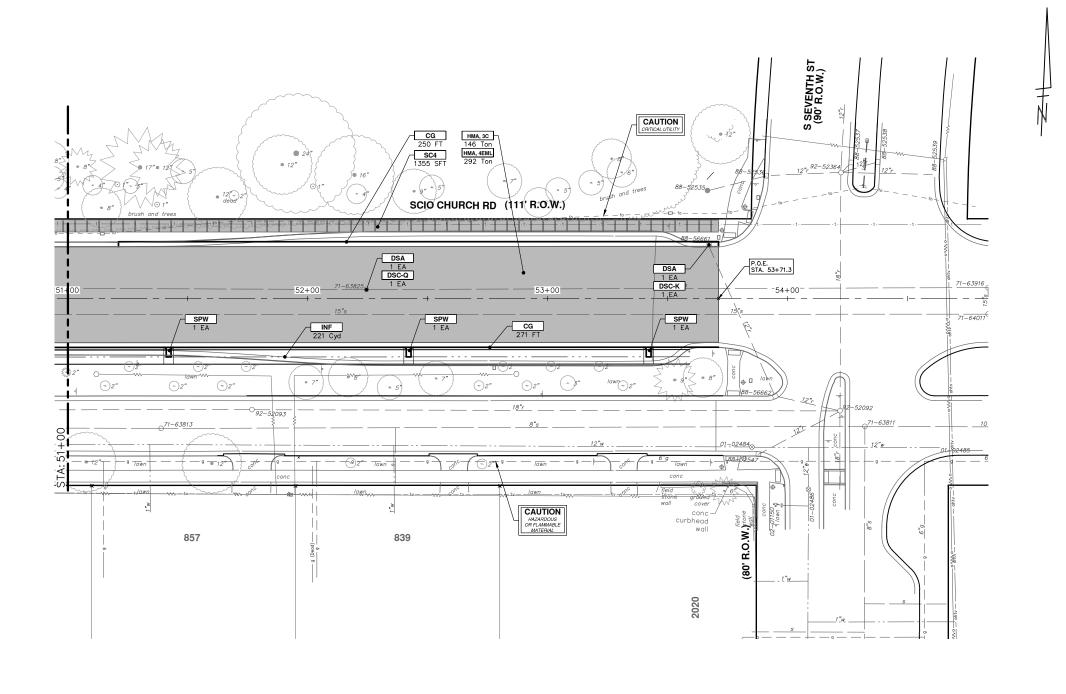




CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
SCALE: T\*= 200
SCALE T



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
SCALE: 1"-2"
SCIO CHURCH ROAD IMPROVEMENT PROJECT
ROAD PLANS



CC	NSTRUCTION KEY
KEY	DESCRIPTION
СР	CONC PAVT WITH INTEGRAL CURB, NONREINF, 9 INCH
CG	CURB AND GUTTER, CONC, DET F4, SPECIAL
CRO	CURB RAMP OPENING, CONC
APP	HMA APPROACH
SR6	SIDEWALK RAMP, CONCRETE, 6 INCH, P-NC, ADA, MODIFIED
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SPW	SPILLWAY, CONC, MODIFIED
INF	INFILTRATION TRENCH
MON	MONUMENT PRESERVATION
TURF	TOPSOIL SURFACE, FURN, 4 INCH
RAIL	RUB RAIL

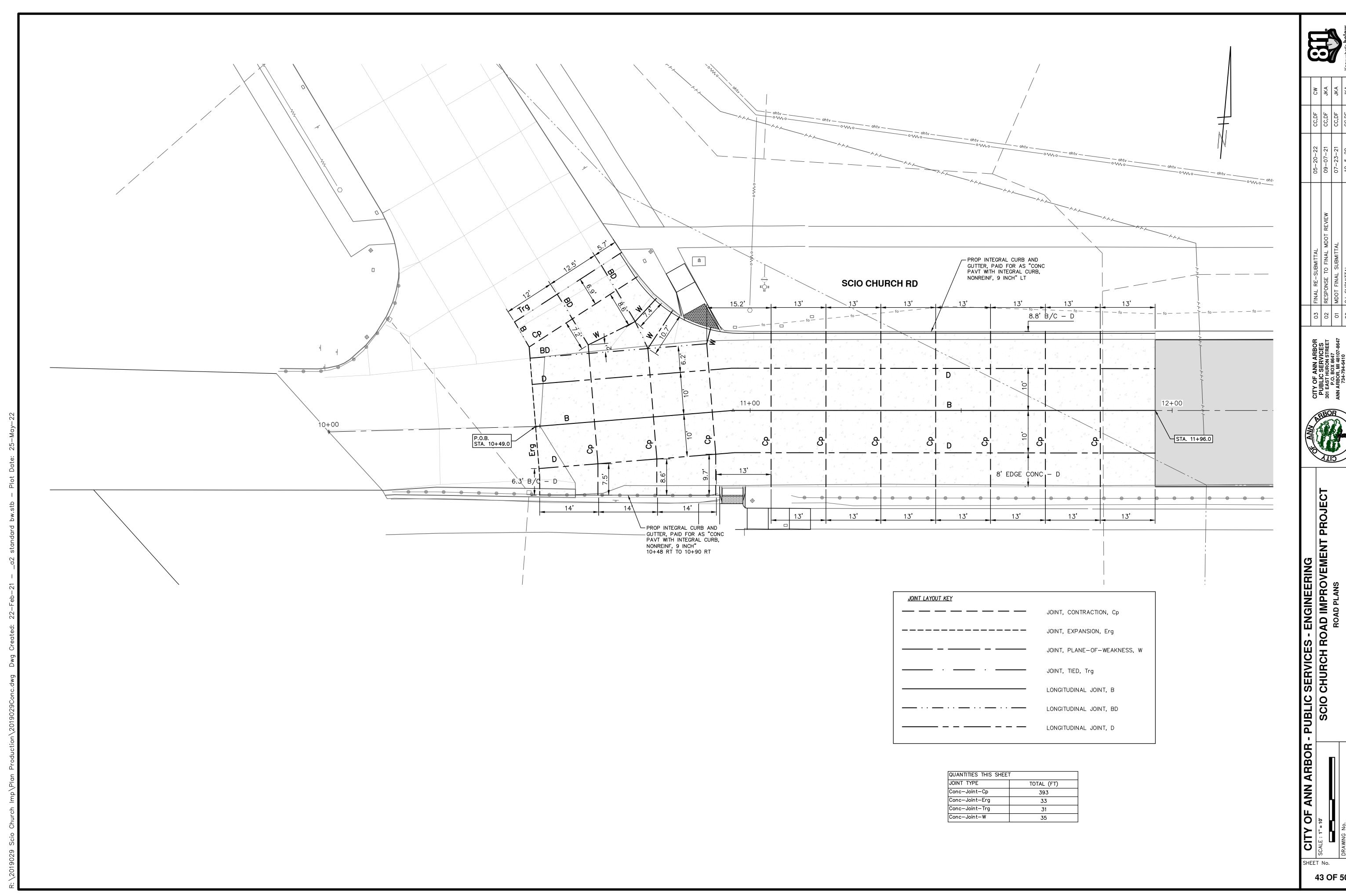
03	03 FINAL RE-SUBMITTAL	05-20-22	CC,DF	CW
70	RESPONSE TO FINAL MDOT REVIEW	09-07-21	CC,DF	JKA
10	01 MDOT FINAL SUBMITTAL	07-23-21	CC,DF	JKA
00	00 G.I. SUBMITTAL	10-5-20	CC,DF	JKA
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

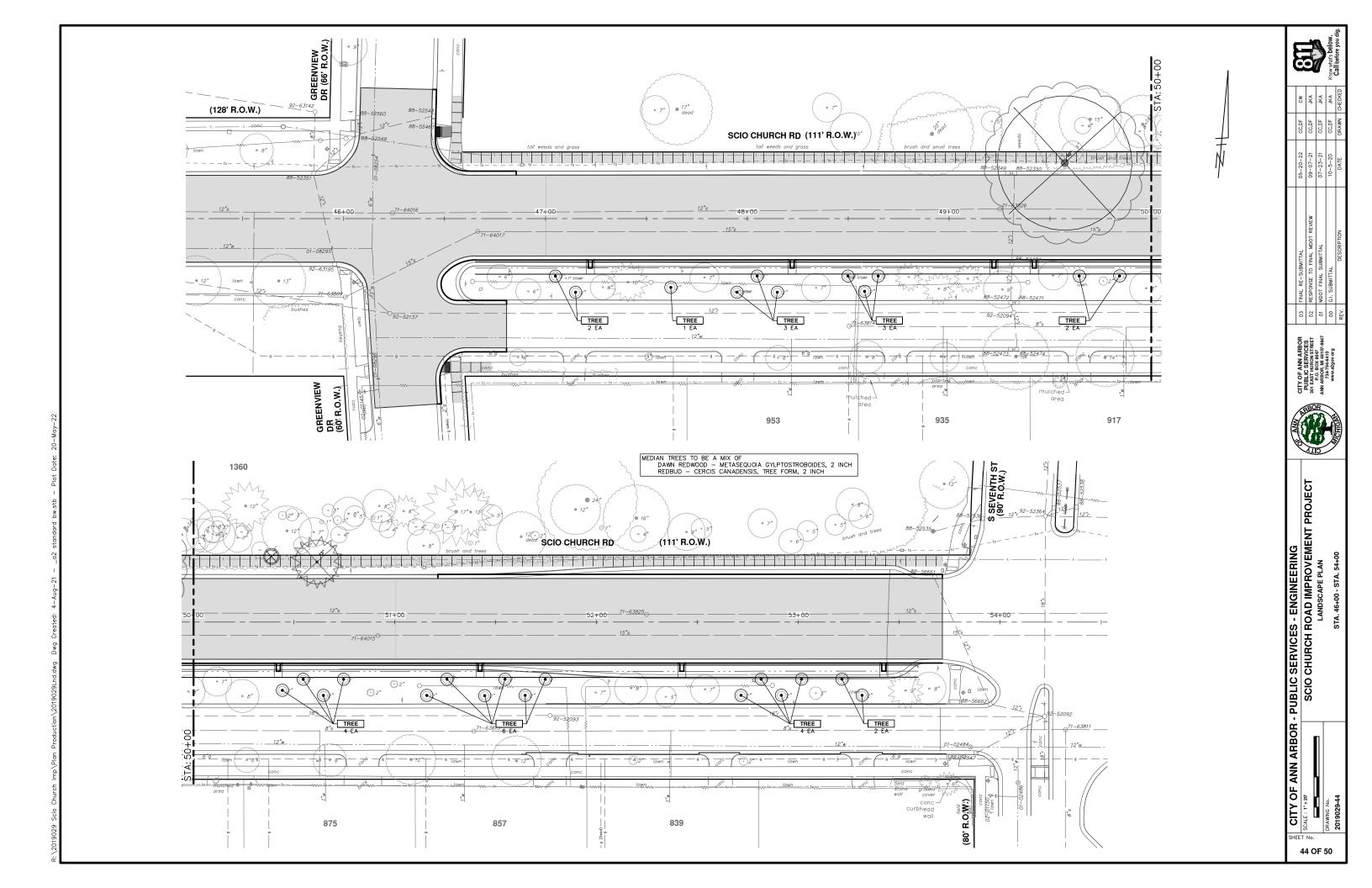
SCIO CHURCH ROAD IMPROVEMENT PROJECT

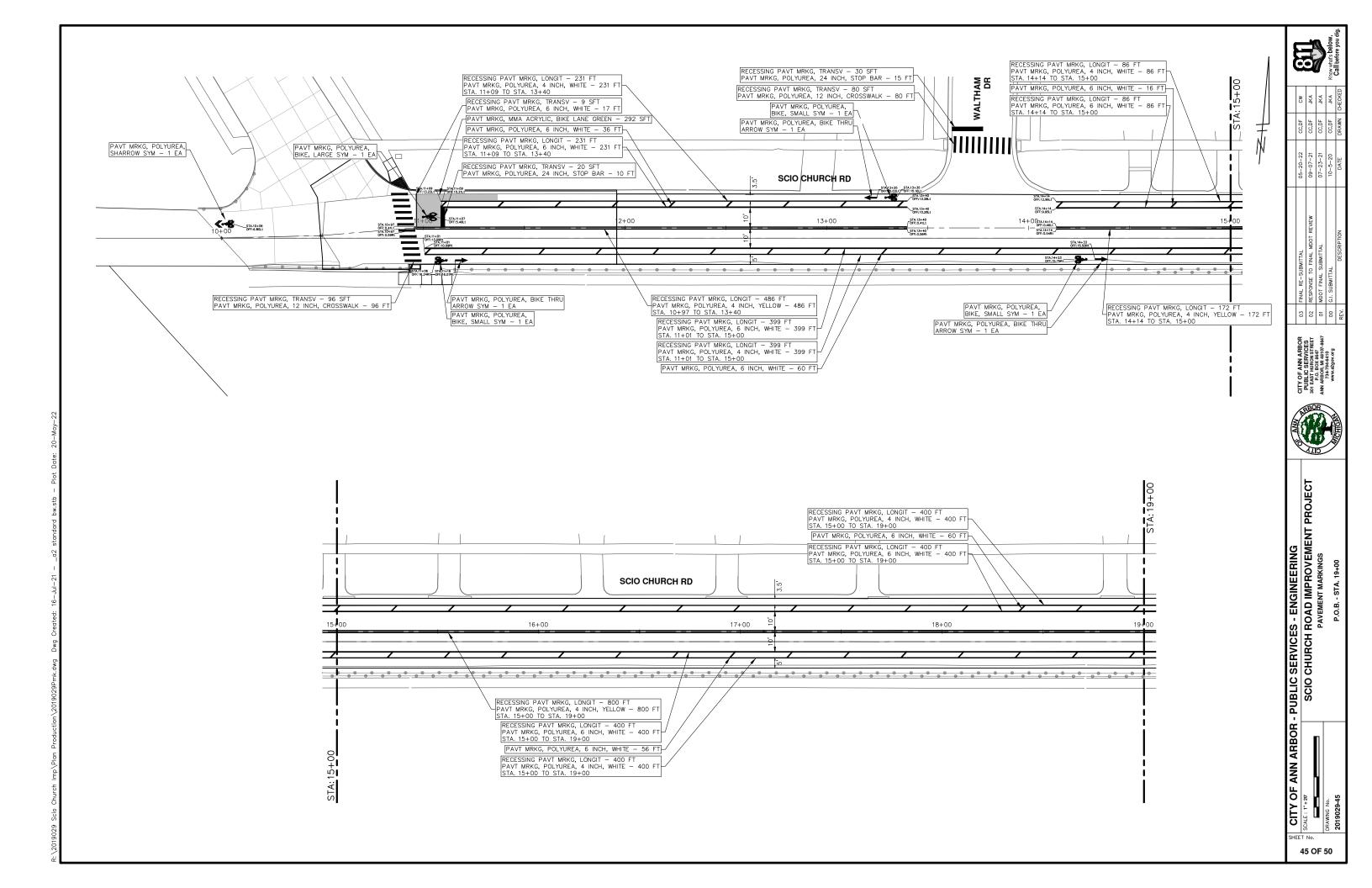
ROAD PLANS

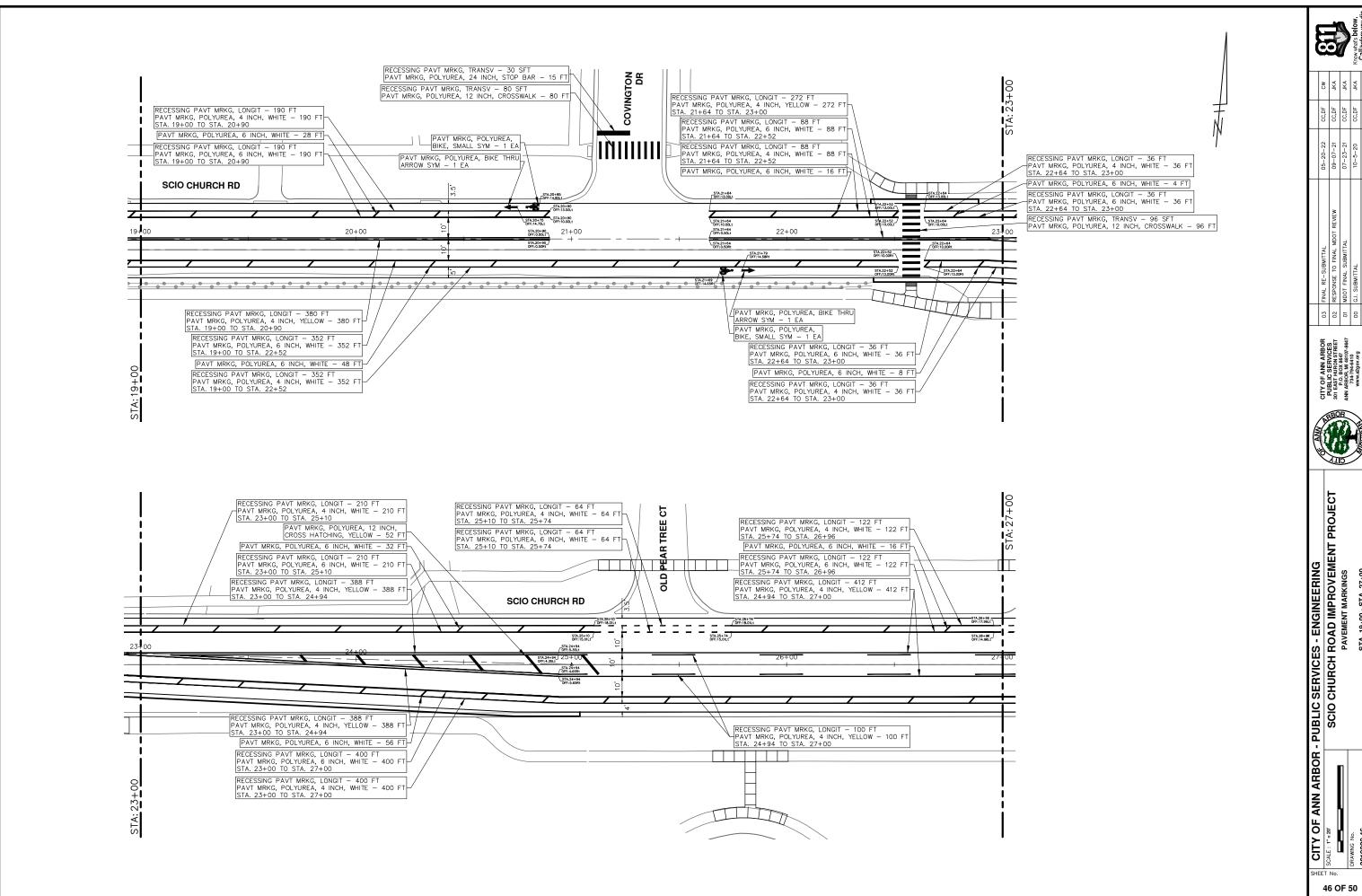
ROAD PLANS



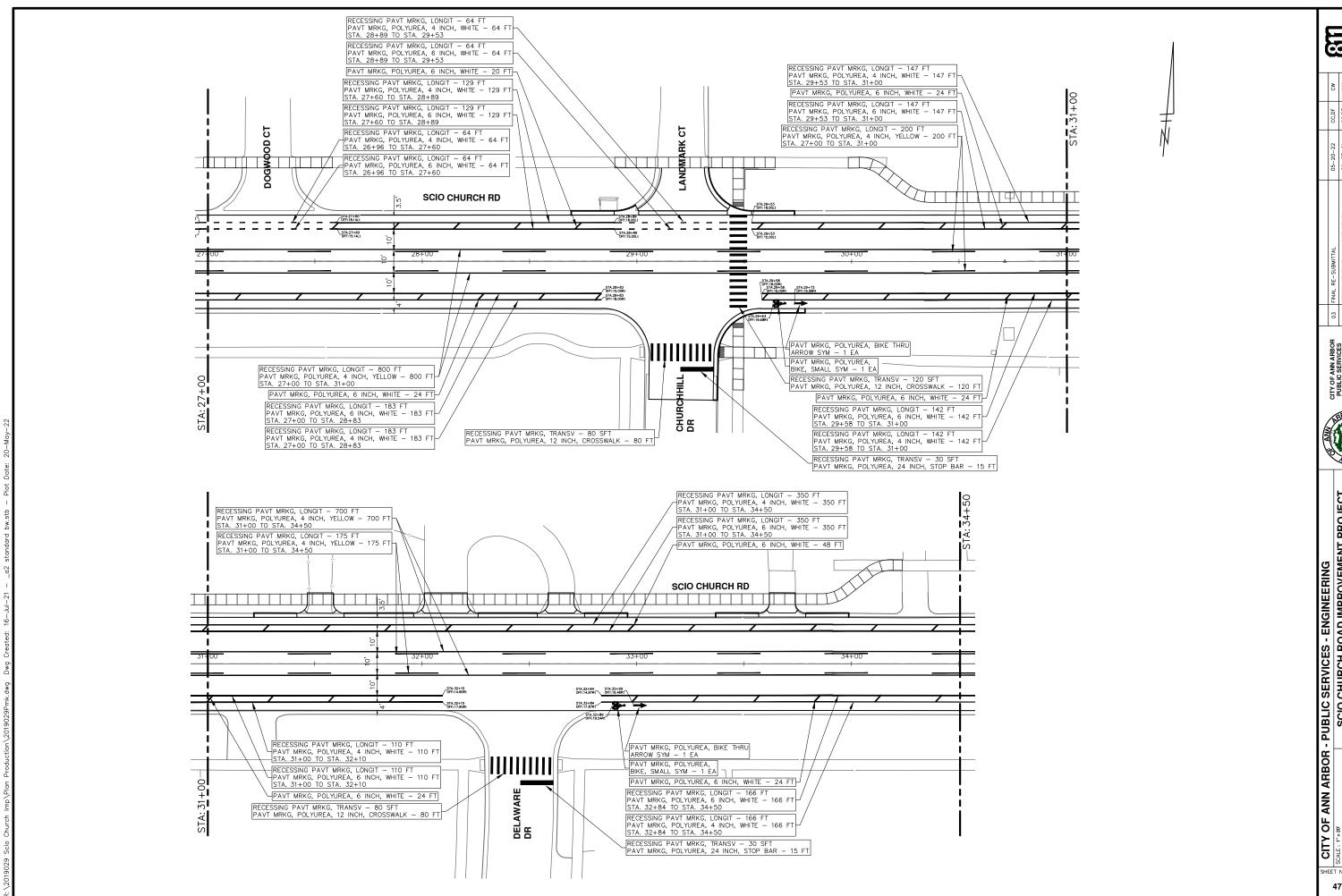








00 03 ES - ENGINEERING 1 ROAD IMPROVEMENT P PAVEMENT MARKINGS SERVICES -CHURCH RO - PUBLIC

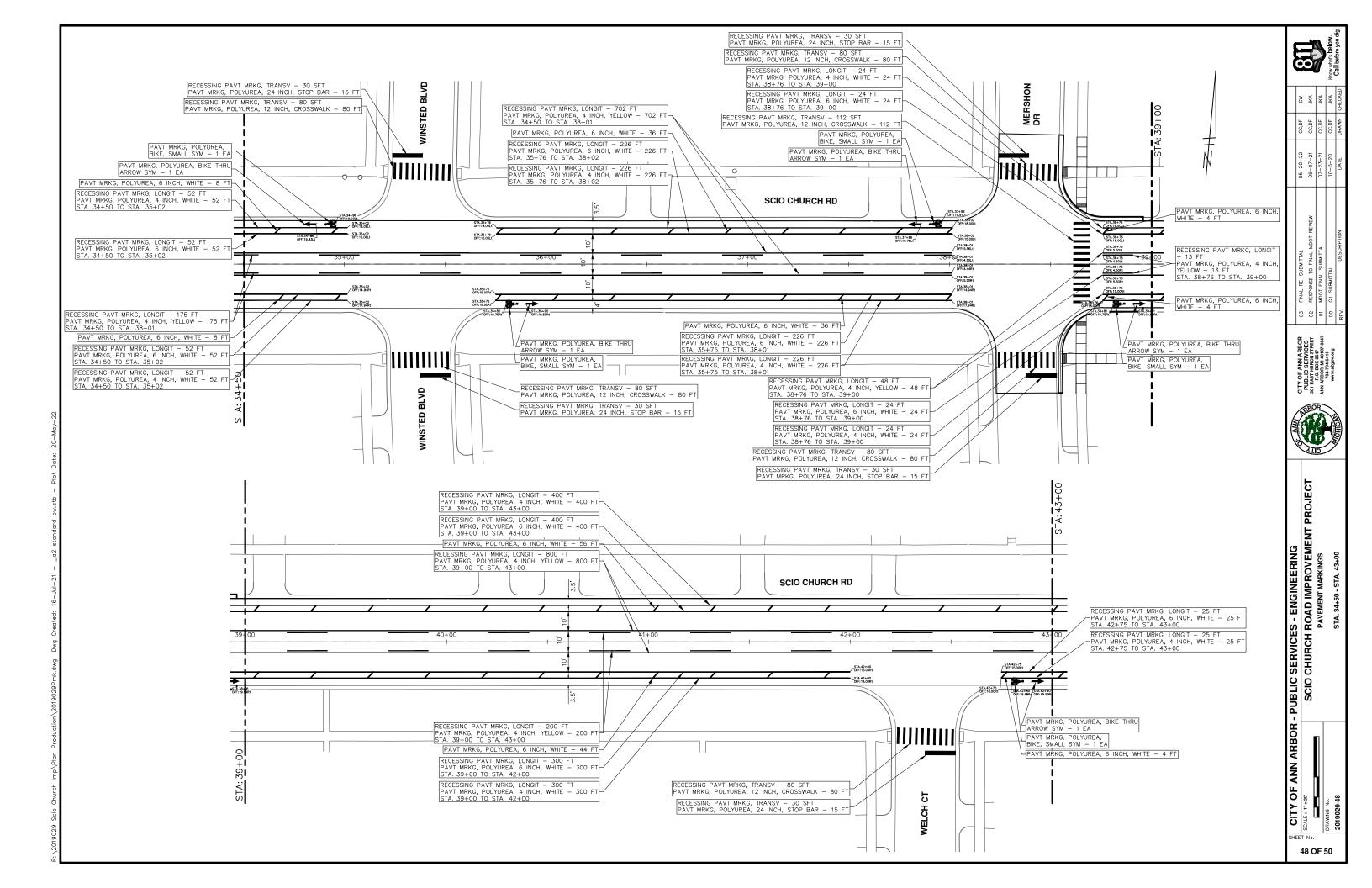


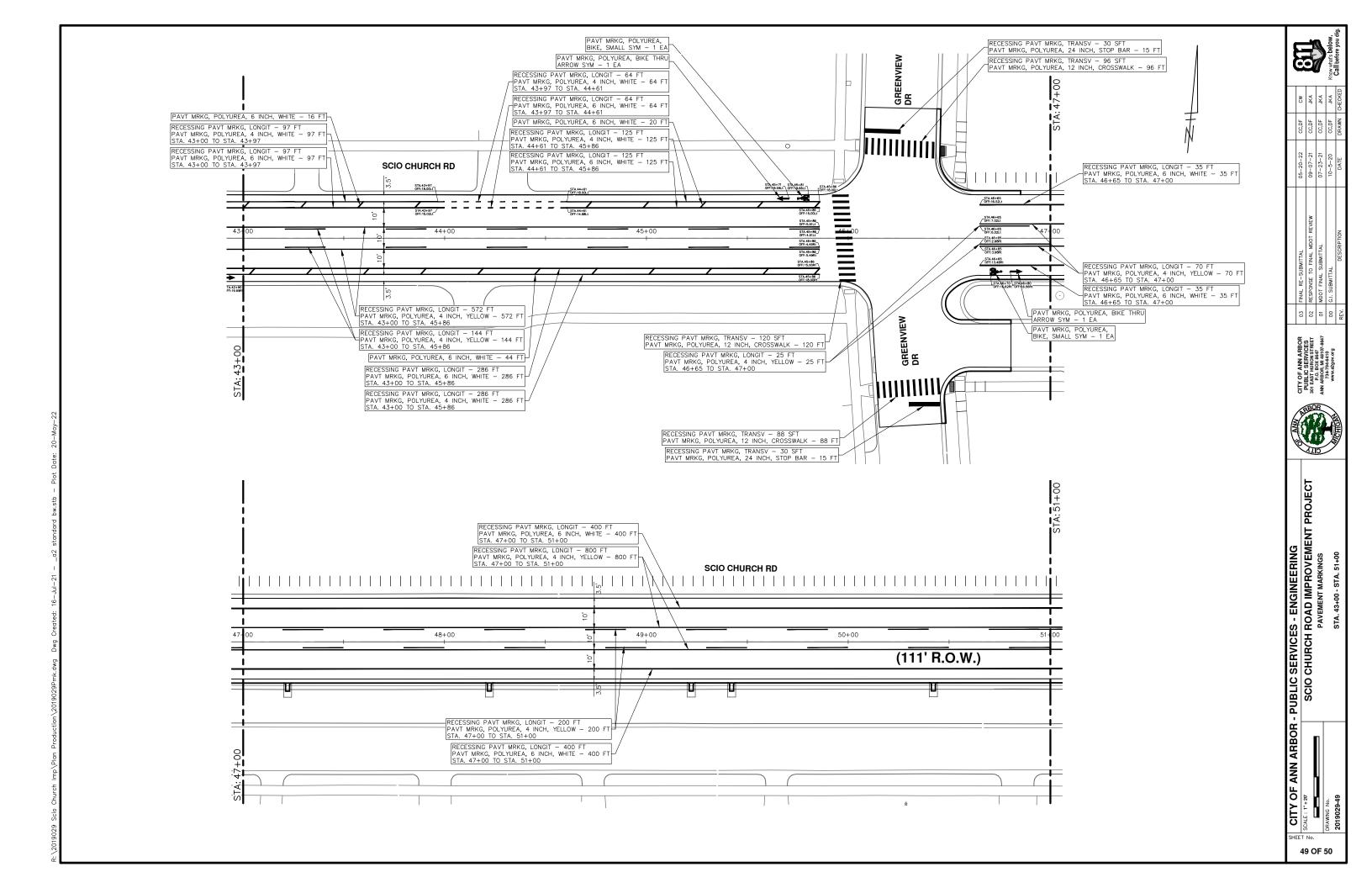
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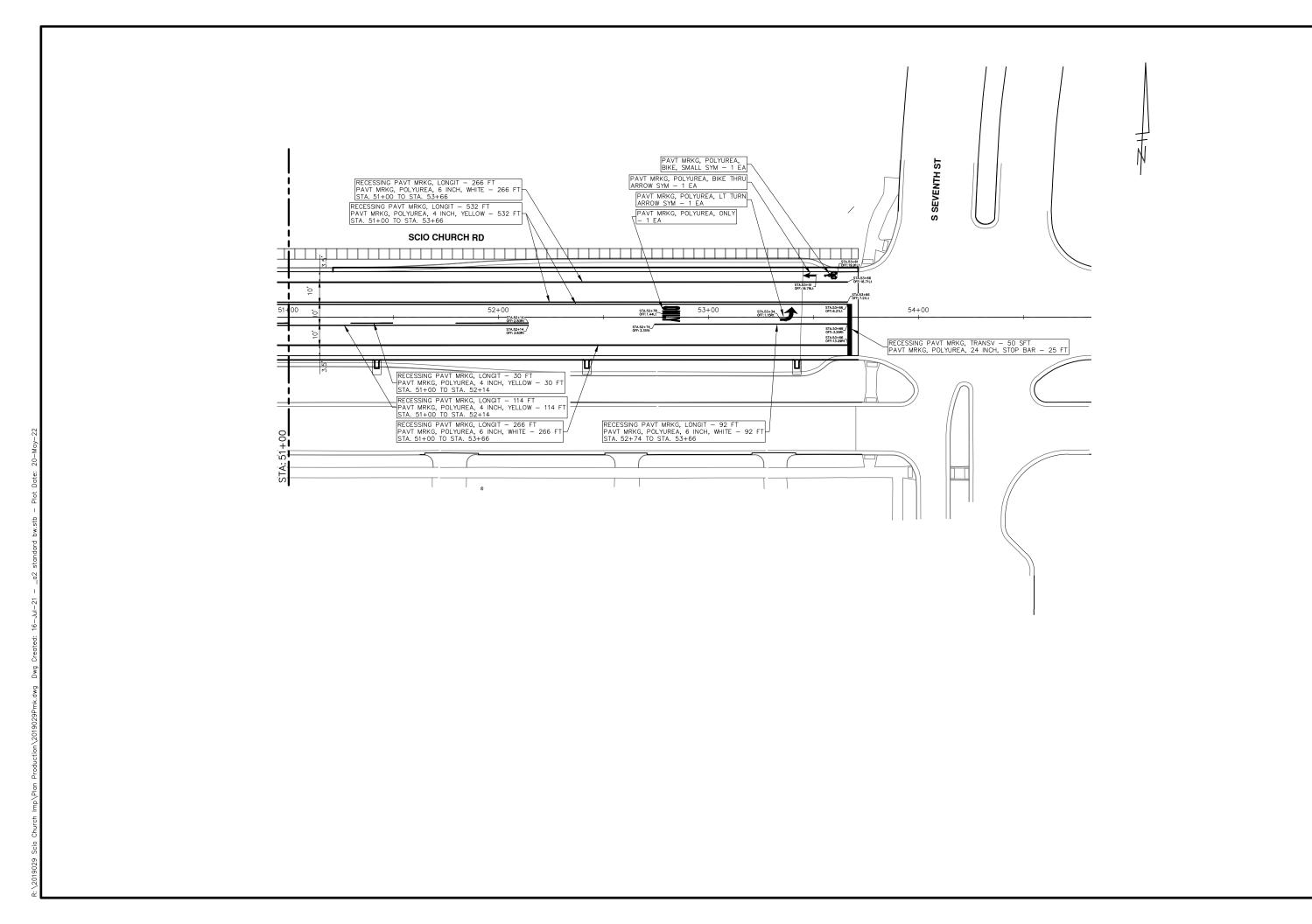












CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCIO CHURCH ROAD IMPROVEMENT PROJECT

PAVEMENT MARKINGS

PRAWING NO.