

CITY OF ANN ARBOR ENGINEERING

ELLSWORTH RD RESURFACING

LIST OF DRAWINGS	
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31	MAINTENANCE OF TRAFFIC - TYPICAL SECTIONS
32	MAINTENANCE OF TRAFFIC - DETOUR PLAN

RFP No. 23-23, FILE No. 2022010

STANDARD PLANS

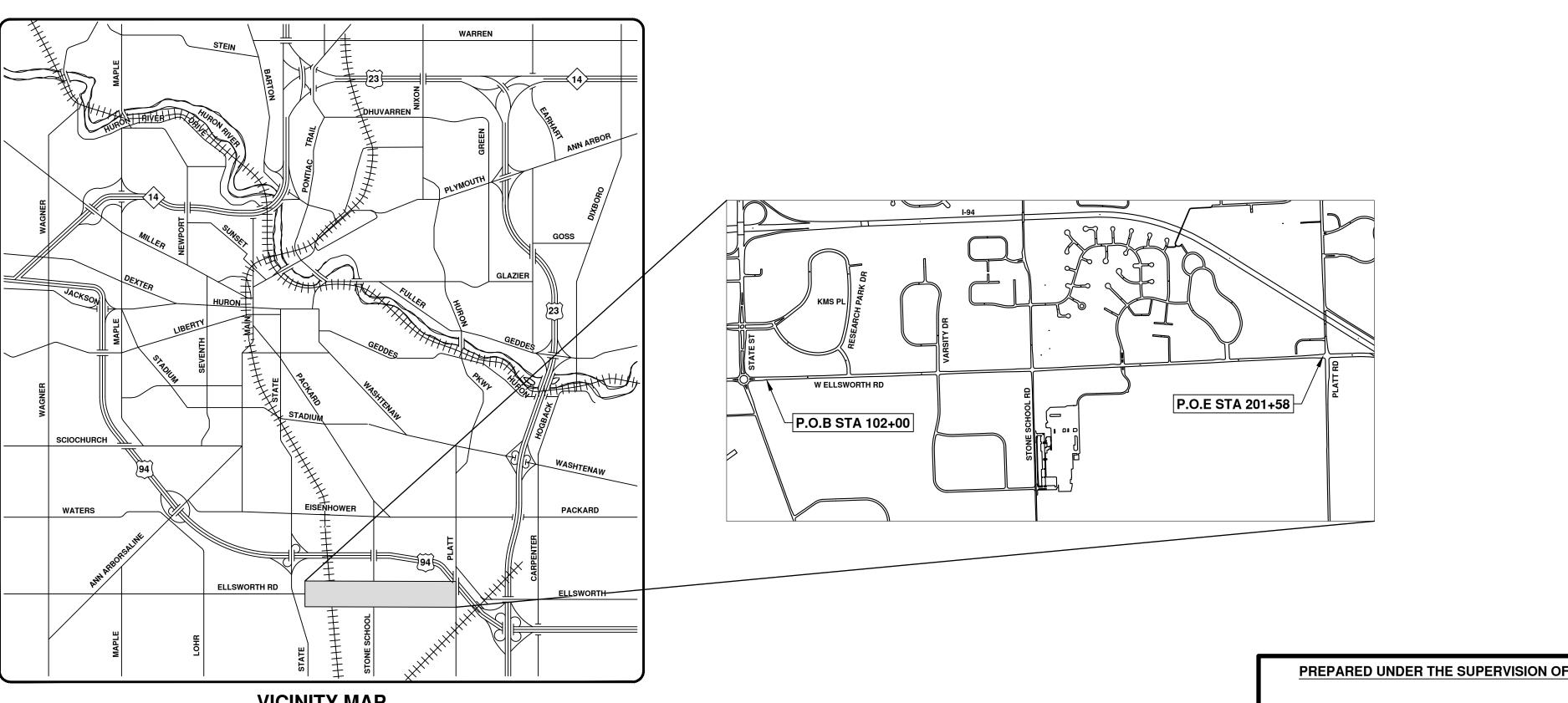
WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MDOT STANDARD PLANS GIVEN BELOW.

TRAFFIC AND SAFETY STANDARD PLANS

WZD-100-A GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS *

WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES *

* = SPECIAL DETAILS LOCATED IN THE PROPOSAL



VICINITY MAP

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

ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST

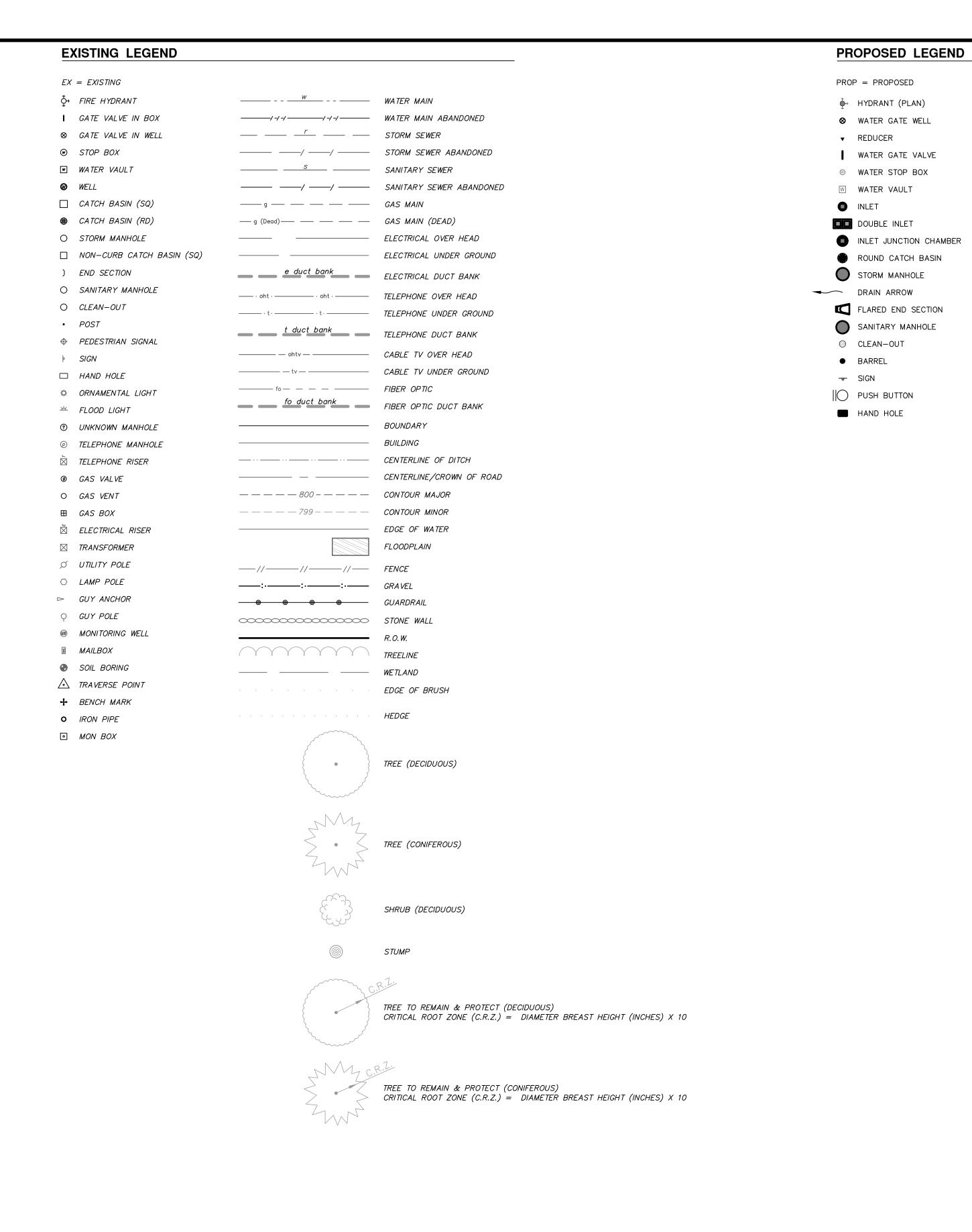
AASHTO, THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE MDOT STANDARD PLANS, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR



/ / 2023

JEREMY SCHROT, P.E.

PROJECT MANAGER



W	
R	WATER MAIN
	STORM SEWER
	SANITARY SEWER
——F0———	FIBER OPTIC
——Е — — — —	ELECTRICAL
	CENTERLINE OF DITCH
	CENTERLINE OF ROAD
////	FENCE
::	GRAVEL
	SILT FENCE
	PROTECTIVE FENCE
. • • • • • • •	GUARDRAIL
	LOT/UNIT
	CURB
	TEMPORARY GRADING PERMIT
800	CONTOUR MAJOR
799	CONTOUR MINOR
	WATER EASMENT
	STORM EASEMENT
	SANITARY EASEMENT
	R.O.W.
	LIMITS OF CONSTRUCTION
	LIMIT OF GRADING
	STONE WALL
	DETECTABLE WARNING
	ASPHALT
	CONCRETE
	SIDEWALK
	TREE (DECIDUOUS)
ZWZ	TREE (CONIFEROUS)
	TREE TO BE REMOVED (DECIDUOUS,
	TREE TO BE REMOVED (CONIFEROUS

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

CALE : NTS

ELLSWORTH RD RESURFA

IMPROVEMENTS PROJECT

SHEET No.

CONSTRUCTION NOTES:

- 1. Driveways and entrances to buildings, real estate property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.
- 2. The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to
- 3. Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.
- 4. The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.
- 5. During non—working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the item of work "General Conditions, Max \$_".
- 6. Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.
- 7. City of Ann Arbor Public Works will install the corporation and copper service lead(s) to transfer the connection(s). If an existing water service is found to be failing or is not copper, the lead will be replaced to the curb box by Public
- 8. For the installation of corporations, or any other related activities, the Contractor shall not receive additional compensation for delays due to the scheduling of or coordination with the City of Ann Arbor Public Works.
- 9. "No Parking" signs shall be installed by the Contractor at locations as approved or directed by the Engineer. All signs shall be installed in accordance with the detailed specifications.
- 10. Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.
- 11. Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
- 12. The Contractor shall be responsible for the continuous maintenance of the temporary road surface and soil erosion control measures within the construction area until the full completion of the project. This work shall be included in the item of work "General Conditions, Max \$_".
- 13. All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
- 14. Sawed sewer pipe connections shall be coupled with a Fernco flexible coupling and a stainless steel shear ring.
- 15. The location of material stock piles and on—site staging areas to be approved by the Engineer.
- 16. For mainline paving, the width of the mat for each pass of the paver shall be not less than 10.5' or greater than 15', as directed by the Engineer. The Engineer will direct the layout of the longitudinal joints during construction.
- 17. 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.
- 18. Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structure sizes and or types.
- 19. Where sewer and water main are to be removed & replaced or added, all pipe shall be installed using Trench Detail detailed in the specifications or shown on Plans. Backfill for sewer and water construction shall be MDOT Granular Material, Class II, Modified.
- 20. Existing street name, guide, and regulatory signs, and mailboxes which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re-set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in "Machine Grading, Modified"
- 21. 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.

MISCELLANEOUS QUANTITIES

Item	Quantity	Unit
_Railroad Protection, at Grade Crossing, Ann Arbor Railroad	2000	Dlr
General Conditions, Max \$	1	LSUM
Project Supervision, Max \$	1	LSUM
_Digital Audio-Visual Coverage	1	LSUM
Project Cleanup	1	LSUM
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	4	Ea
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	4	Ea
Pedestrian Type II Barricade, Temp	4	Ea
Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, White, Temp	10505	Ft
Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp	10505	Ft
Plastic Drum, Fluorescent, Furn	150	Ea
Plastic Drum, Fluorescent, Oper	150	Ea
Pavt Mrkg, Wet Reflective, Type R, Tape, 6 inch, Crosswalk	933	Ft
Pavt Mrkg, Wet Reflective, Type R, Tape, 24 inch, Stop Bar	423	Ft
Sign Cover	5	Ea
Sign, Type B, Temp, Prismatic, Furn	230	Sft
Sign, Type B, Temp, Prismatic, Oper	230	Sft
Traf Regulator Control	1	LSUM
Minor Traffic Control, Max \$	1	LSUM

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR DRIOR TO THE REGINNING 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		
* NO 000T T	O CONTRACTOR		

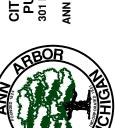
PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY

CONTACT INFORMATION

WATER	CONTACT
SANITARY	
STORM CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD (734) 794-	6350
FORESTRY ANN ARBOR, MI 48108	
SIGNS MARK MORE	
SIGNALS STREET LIGHTS (734) 794-	6361
PRIVATE UTILITIES OWNER (CONTACT
DTE ENERGY 3150 E MICHIGAN AVE YPSILANTI TOWNSHIP, MI 48198 ROBERT CZA (734) 544-	
DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	
ELECTRIC ITC 27175 ENERGY WAY (248) 946-1	
PHONE AT&T 550 S MAPLE ROAD ANN ARBOR, MI 48103 MARC GOOD (313) 405-0	
FIBER WESTERN TELECOM HEATHER SH	
(616) 393–0	



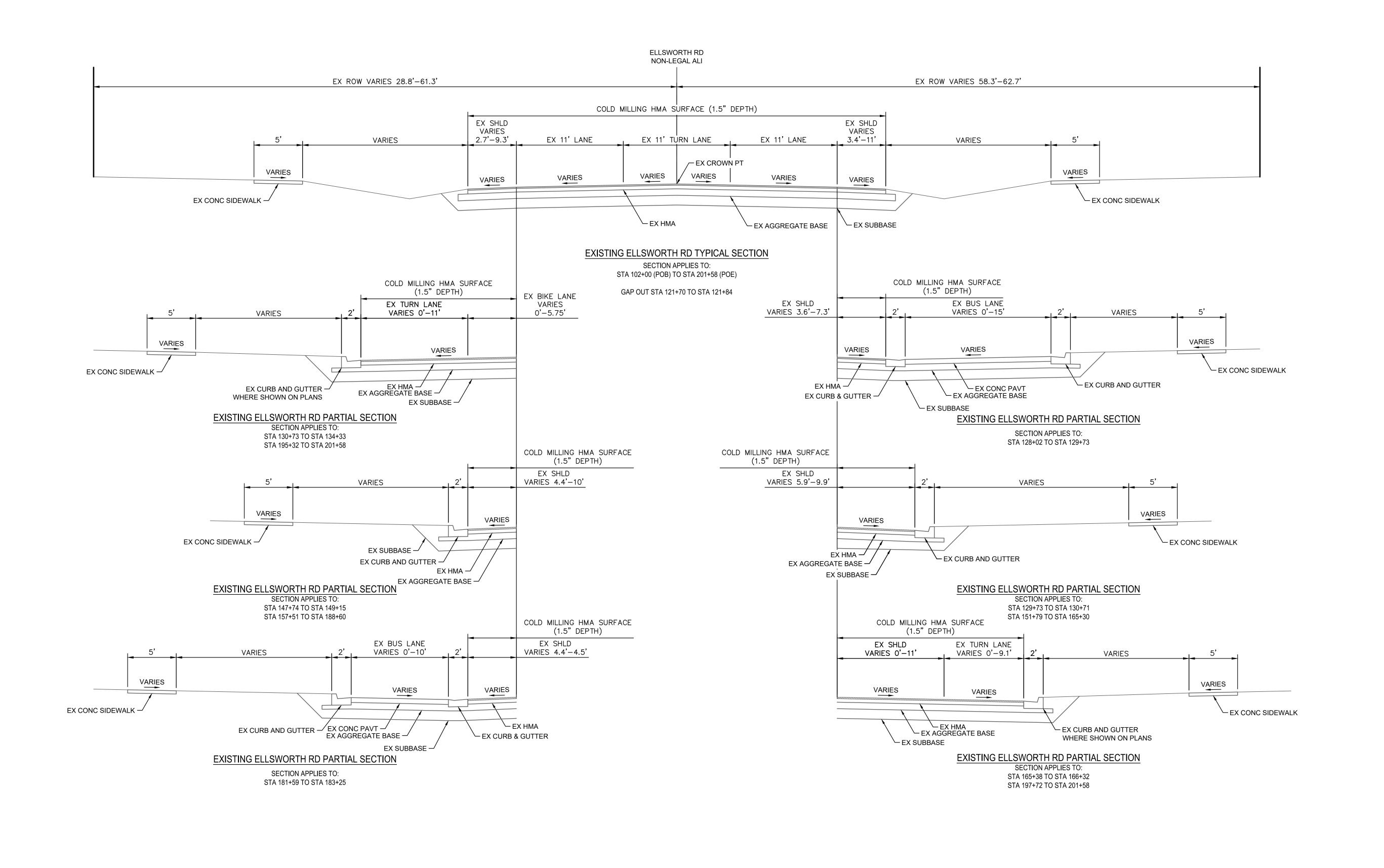




SERVICES - ENGINEERING
ELLSWORTH RD RESURFA
IMPROVEMENTS PROJECT

CITY OF ANN ARBOR

SHEET No.

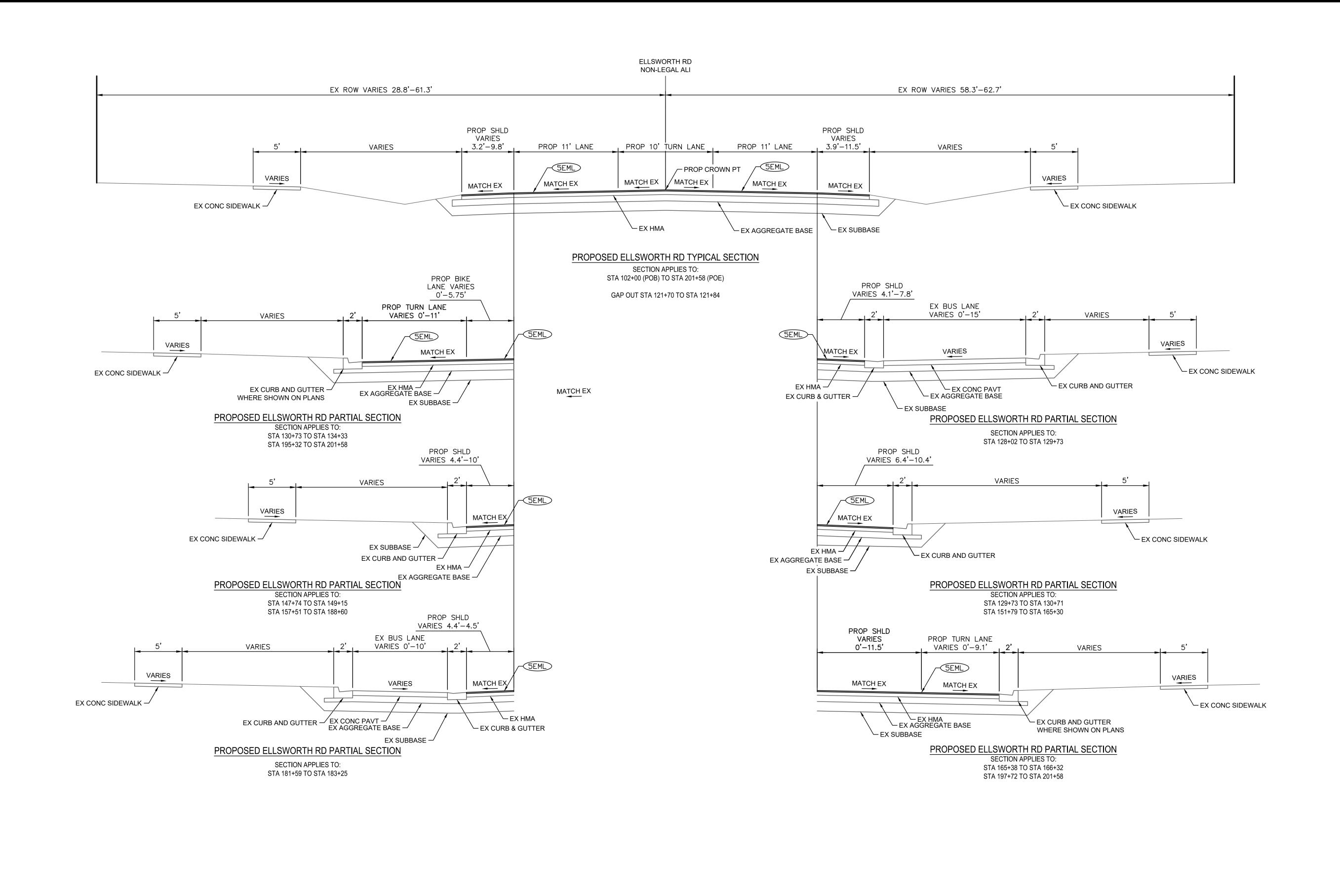


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

ELLSWORTH RD RESURFACIN

IMPROVEMENTS PROJECT

SHEET No.



		HMA APPLICA	ATION ESTIMATE	
IDENT NO.	ITEM	RATE LBS PER SYD	PERFORMANCE GRADE	REMARKS
5EML	HMA, 5EML	165	64-28	MAINLINE TOP COURSE - AWI 260
HA-1	HMA APPROACH	165	64-28	HMA, 5EML; SIDE ROAD TOP COURSE
	* BOND COAT	0.05-0.15 GAL		

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

ELLSWORTH RD RESURFACIN

IMPROVEMENTS PROJECT

SHEET No.

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

- 1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE 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.
- 3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- 4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
- 5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION. SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER. AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- 6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
- 7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
- 8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- 9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF

WATER TRUCKS AND/OR 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:

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

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM

- <u>REQUIREMENTS:</u> 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 REQUIRED.
- 1.3. INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- 1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- 1.5. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- 1.6. COMPLETE ALL FINE GRADING.

- 1.7. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED 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

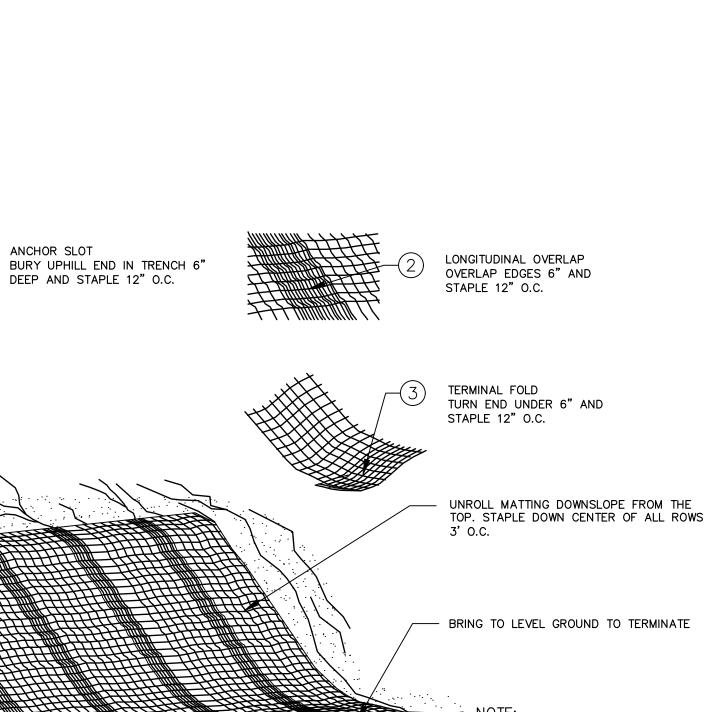
NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT,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

TEMPORARY SEEDING:

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

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

- BbB BLOUNT LOAM 2% TO 6% SLOPES.
- CpA CONOVER BROOKSTON LOAMS 0% TO 2% SLOPES
- Pe PEWAMO CLAY LOAM 0% TO 2% SLOPES StB - ST. CLAIR CLAY LOAM, 2% TO 6% SLOPES
- WaA WAWASEE LAOM, 2% TO 6% SLOPES



WOOD STAPLE

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

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE

FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REQUIRED VALUE

ASTM D-3786

ASTM D-4533

ASTM D-4751

ASTM D-4491

REQUIRED VALUE

ASTM D-4533

ASTM D-4751

ASTM D-4491

TEST METHOD

120 LBS

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

TEST METHOD

45 LBS

20 US SIEVE

200 GAL/MIN/SQ FT 1.5 SEC-1

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

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

REGULAR FLOW SILTSACK

PROPERTIES

GRAB TENSILE STRENGTH GRAB TENSILE ELONGATION

HI-FLOW SILTSACK

PROPERTIES GRAB TENSILE STRENGTH GRAB TENSILE ELONGATION

APPARENT OPENING SIZE

OIL-ABSORBANT SILTSACK

MULLEN BURST

TRAPEZOID TEAR

UV RESISTANCE APPARENT OPENING SIZE

MULLEN BURST TRAPEZOID TEAR

UV RESISTANCE

FLOW RATE

FLOW RATE

PERMITTIVITY

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO

WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.

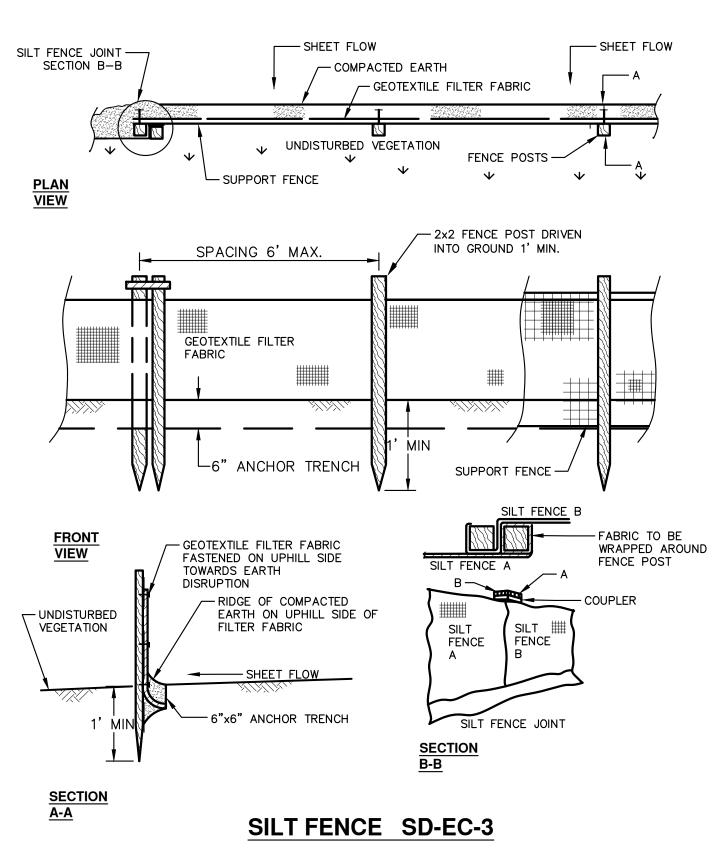
MULCH BLANKET DETAIL

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

PROVIDE EROSION CONTROL

THE ENGINEER.

MATTING ON ALL DISTURBED AREAS AND AS DIRECTED BY



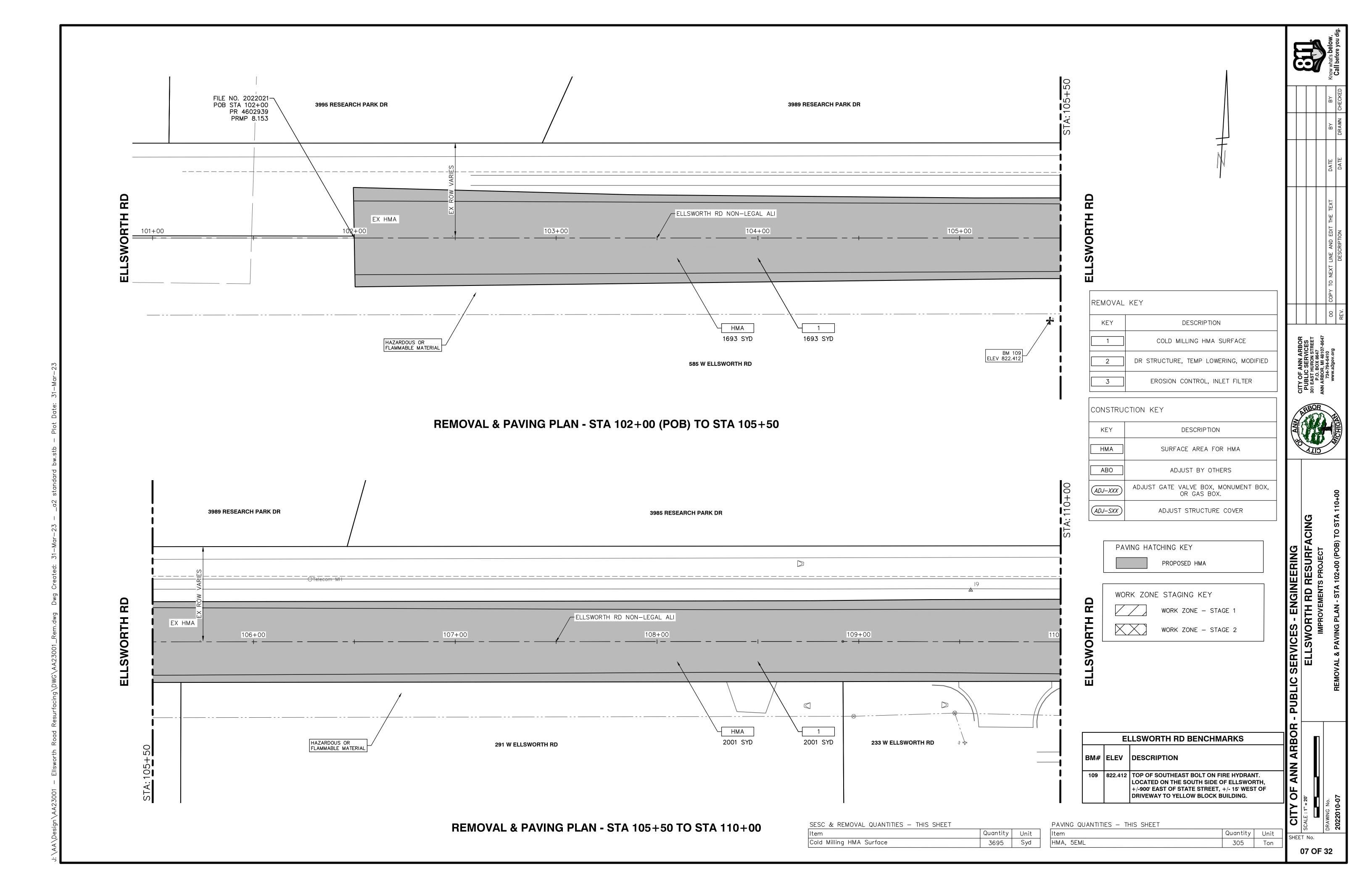
CURB OPENING REMOVAL FROM INLET OPTIONAL OVERFLOW SILTSACK -DUMP LOOPS (REBAR -NOT INCLUDED) SIDE VIEW INSTALLED INSTALLATION DETAIL

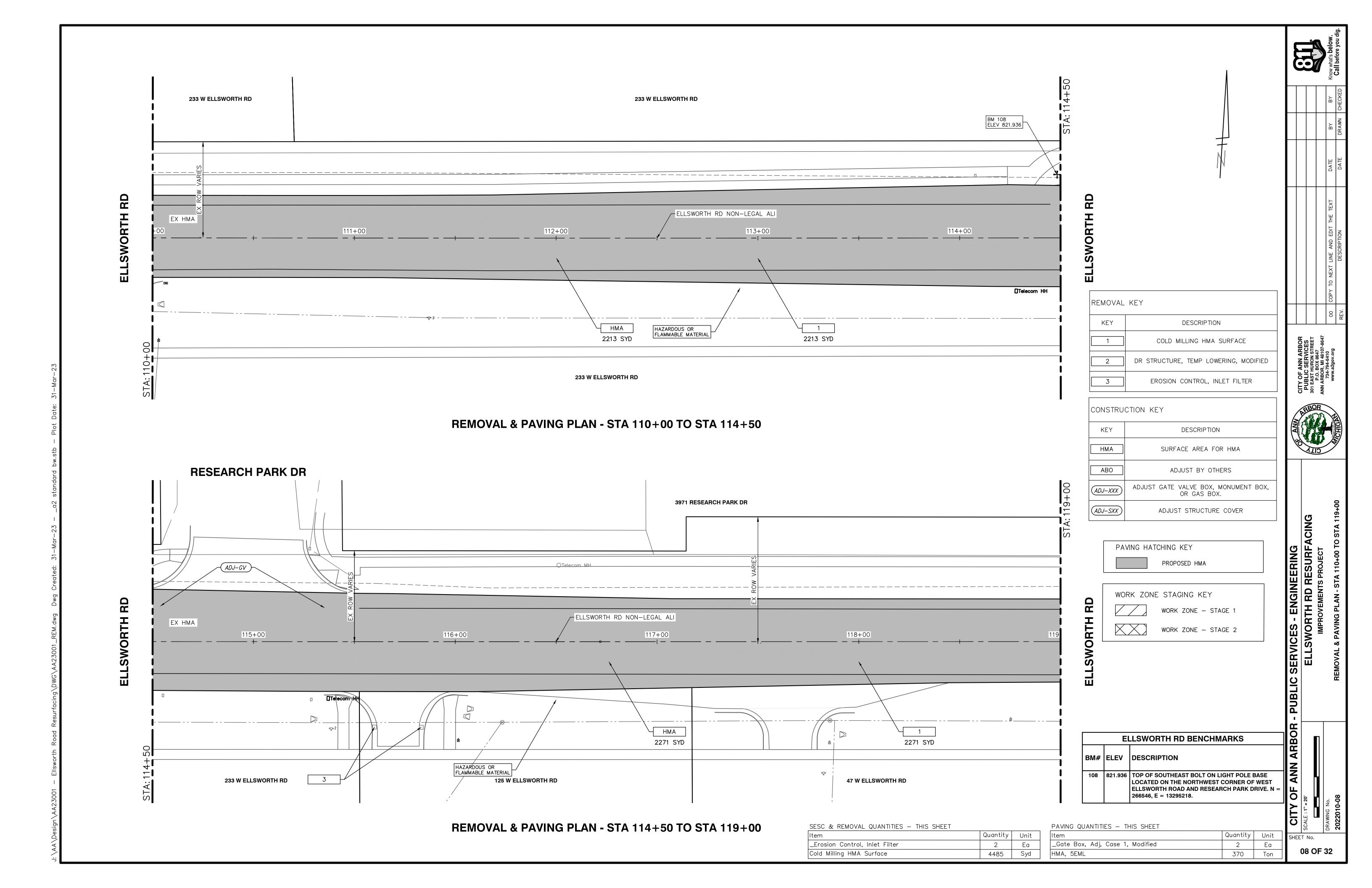
SILTSACK DETAIL

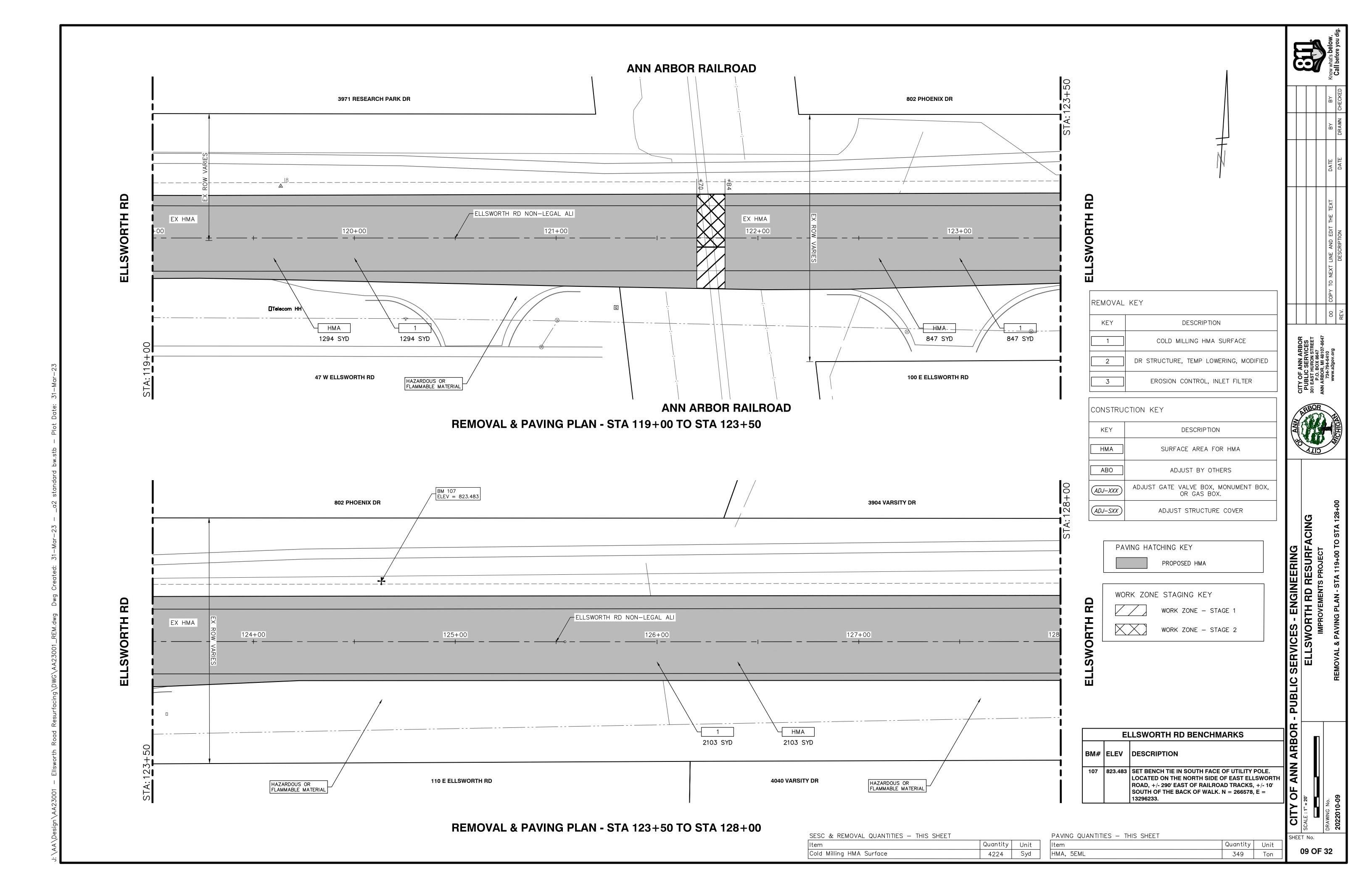


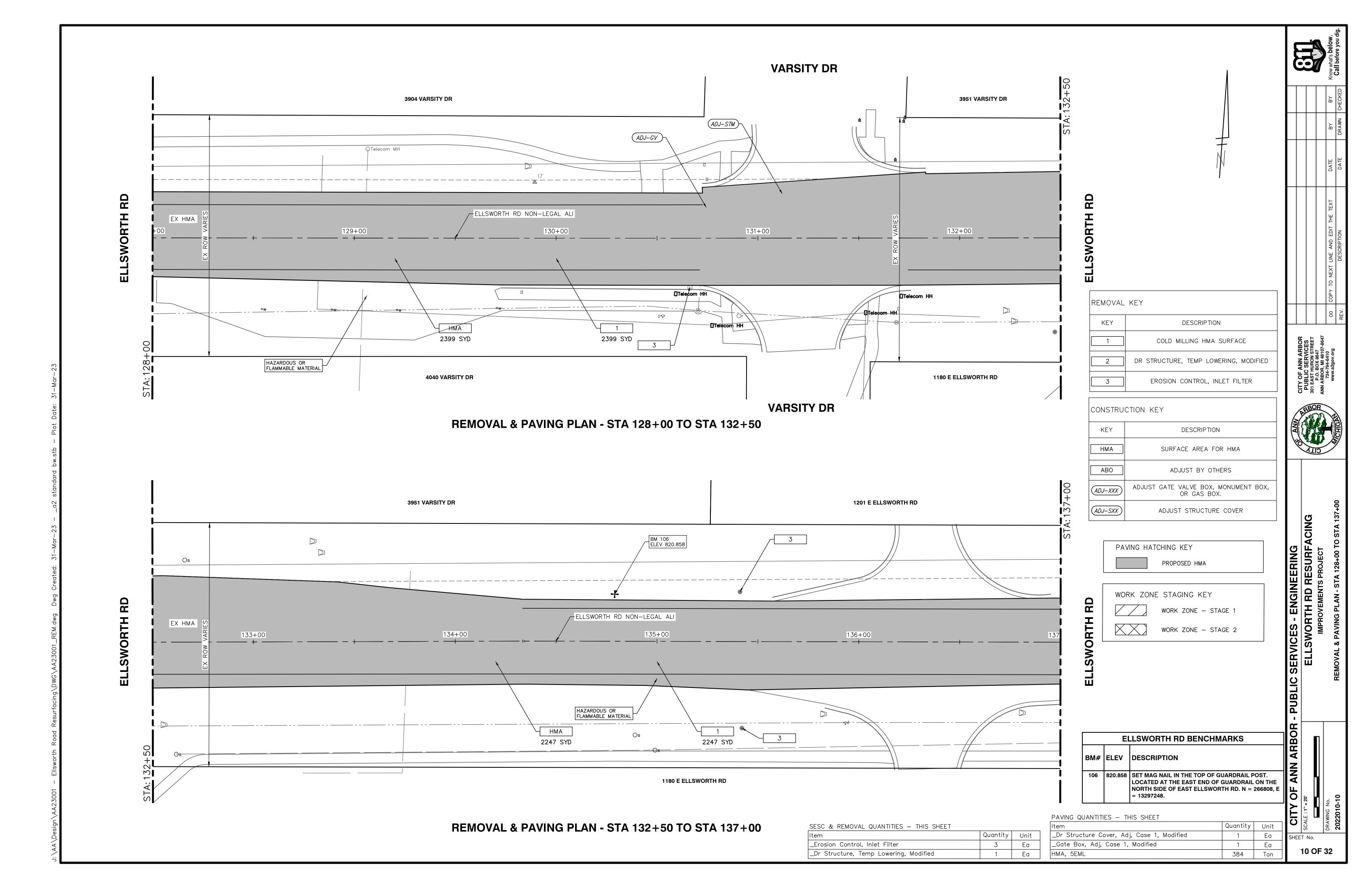
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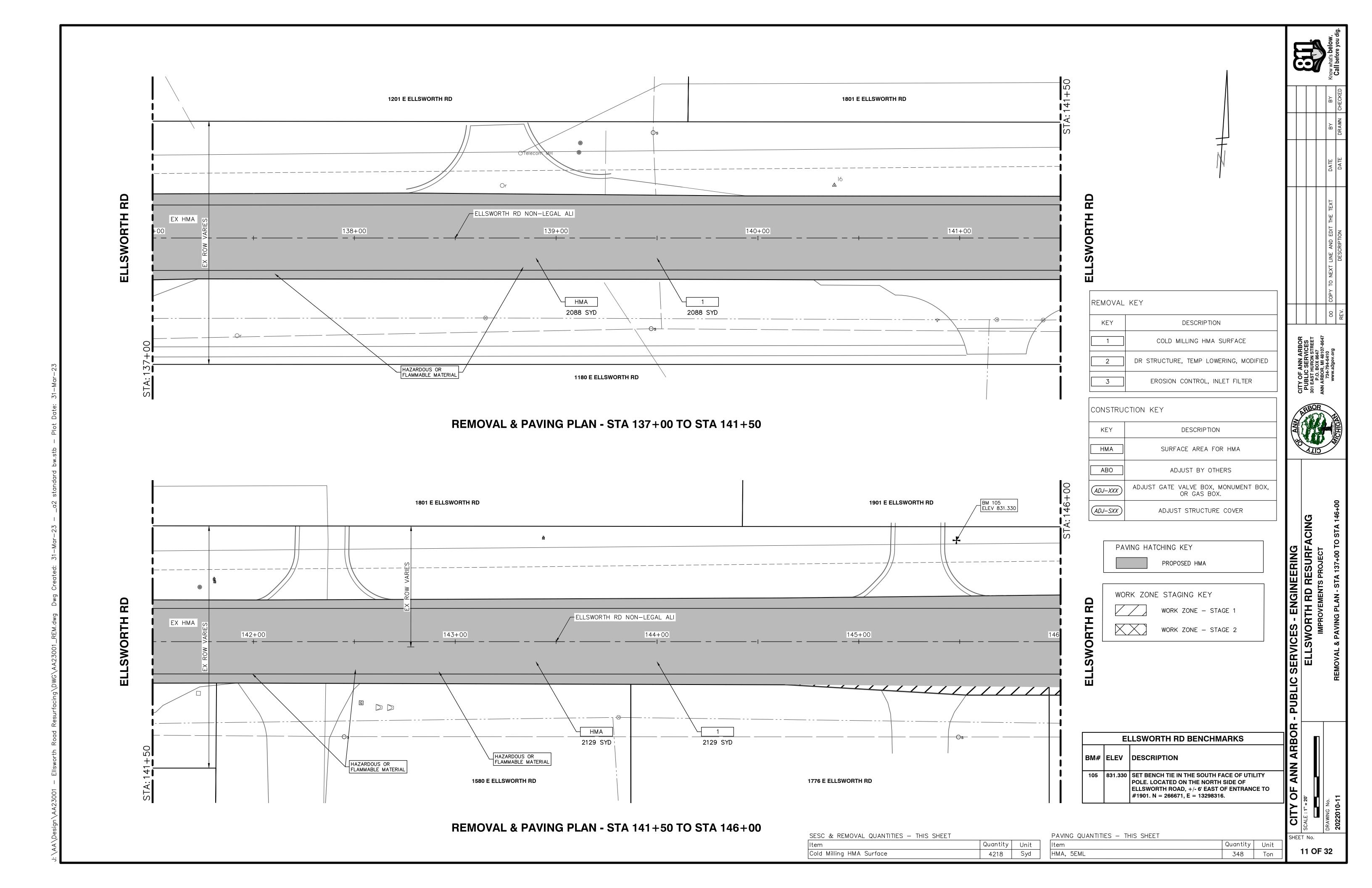
SHEET No. 06 OF 32

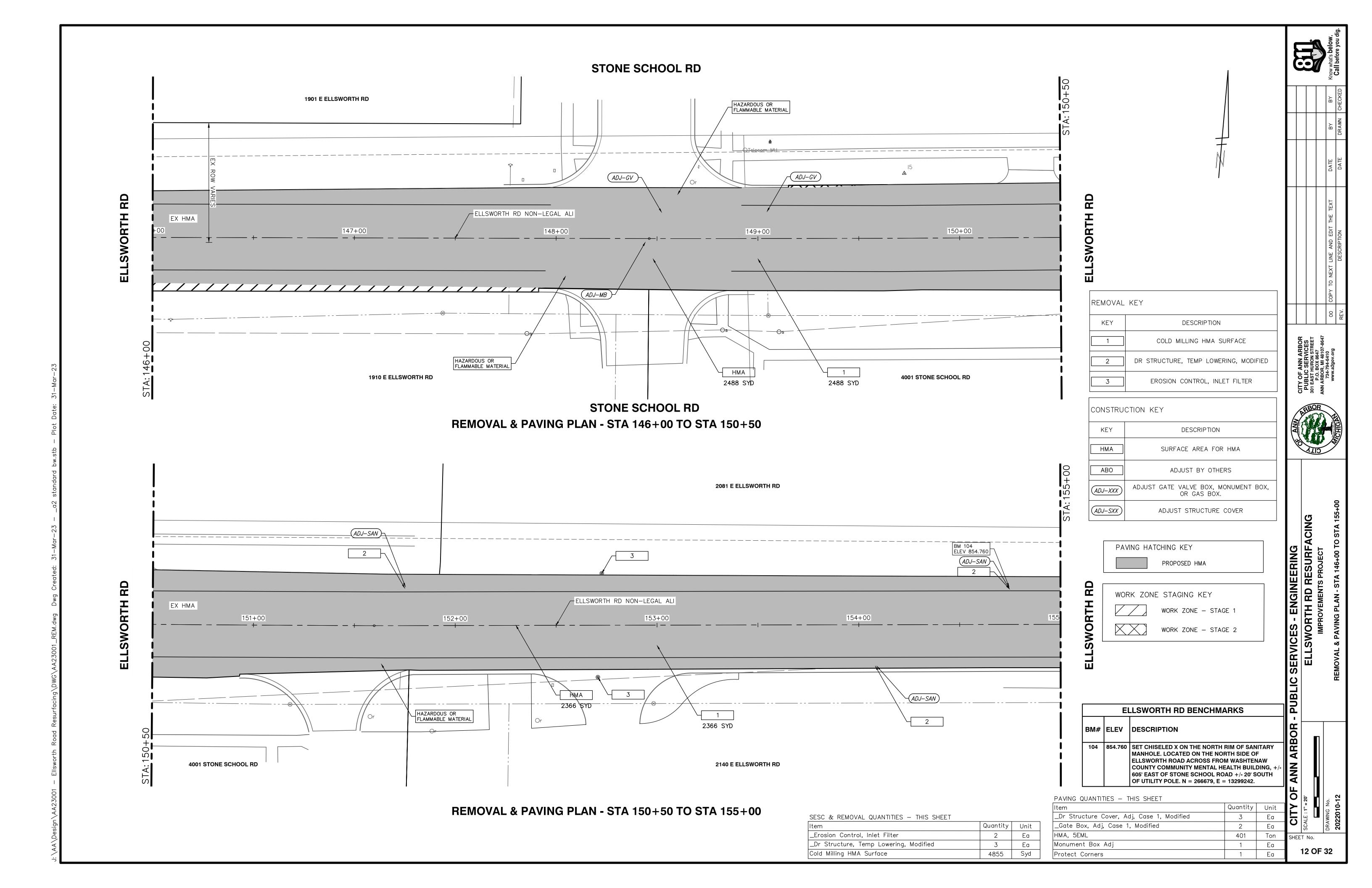


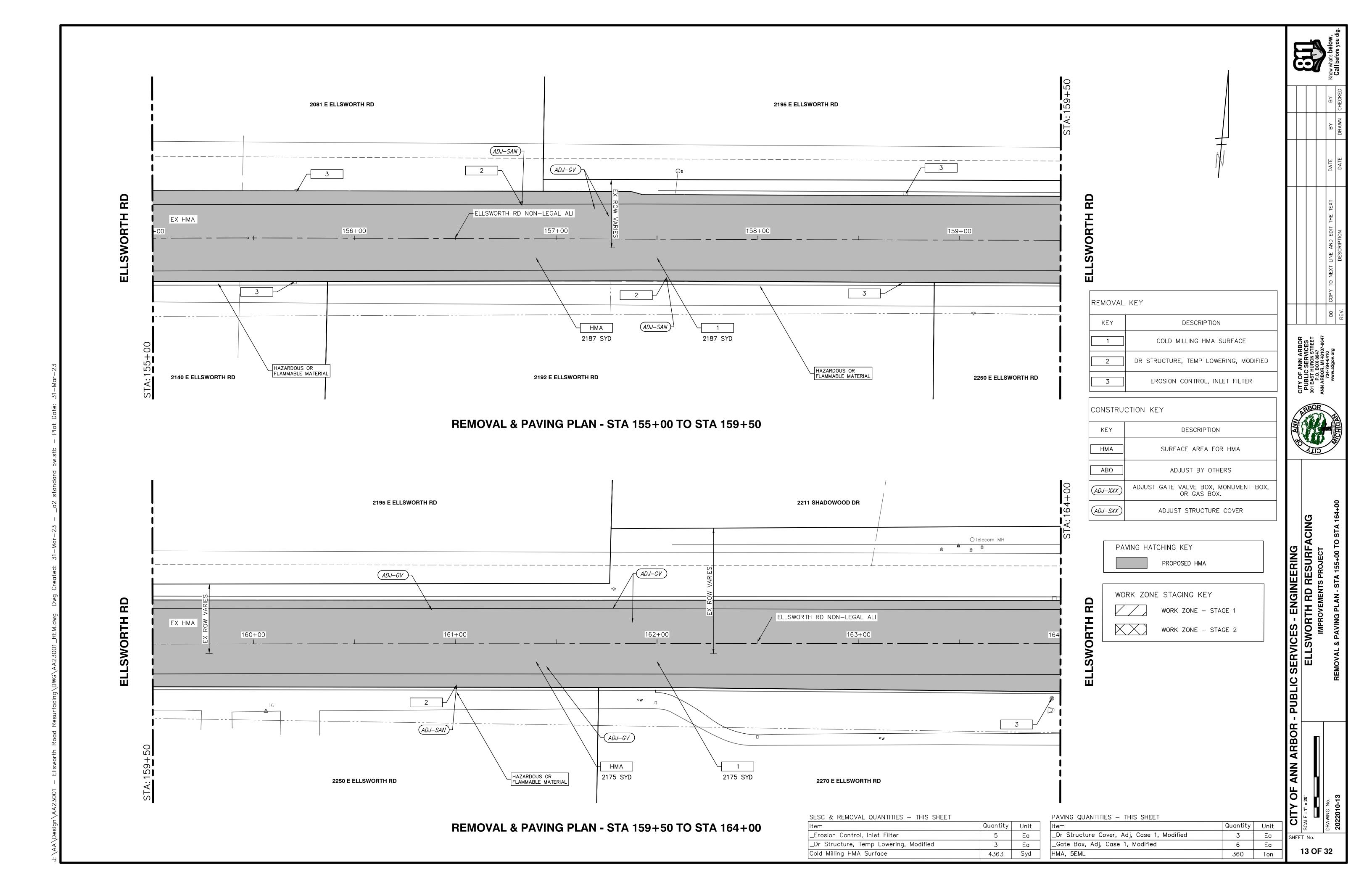


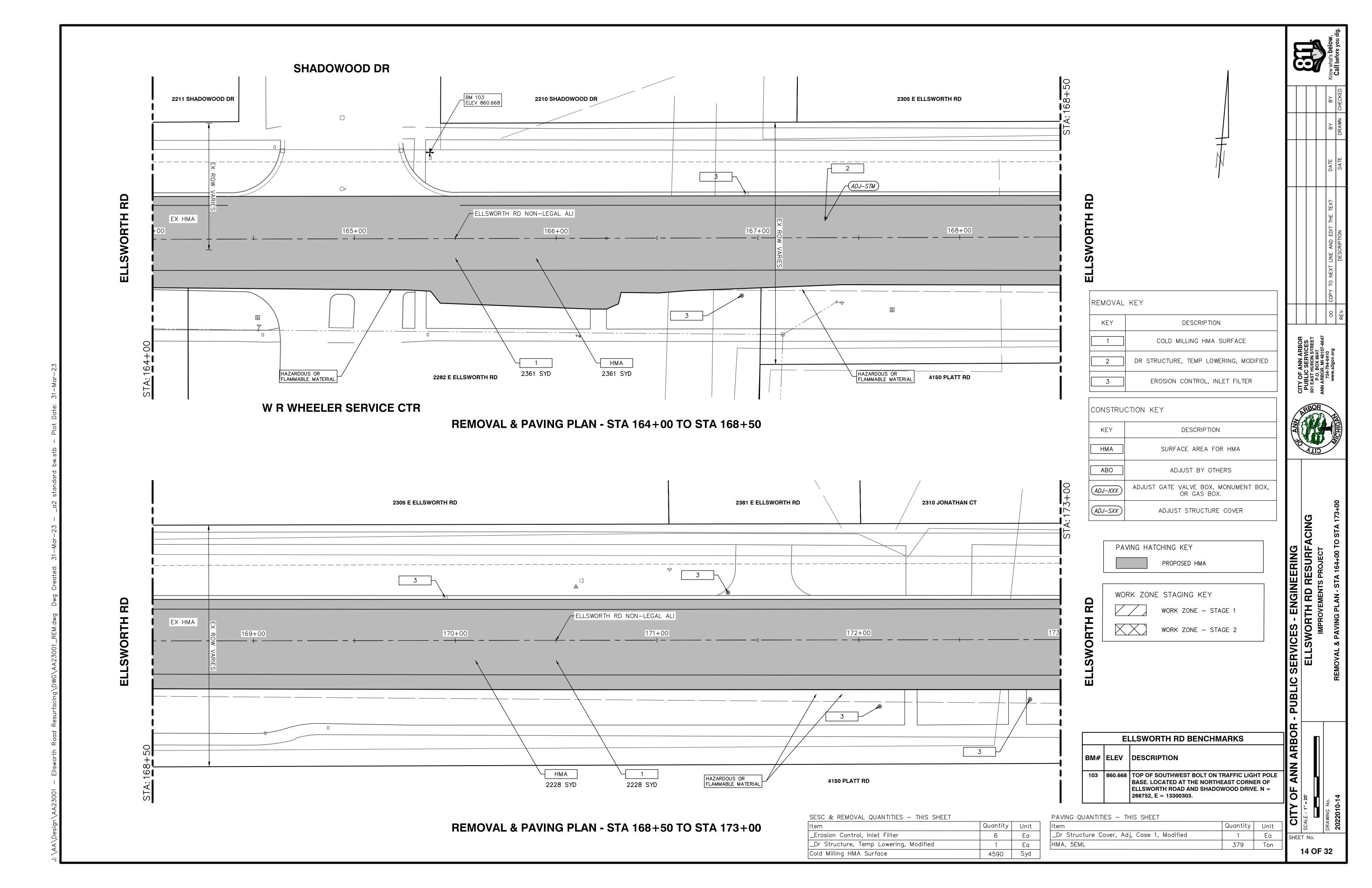


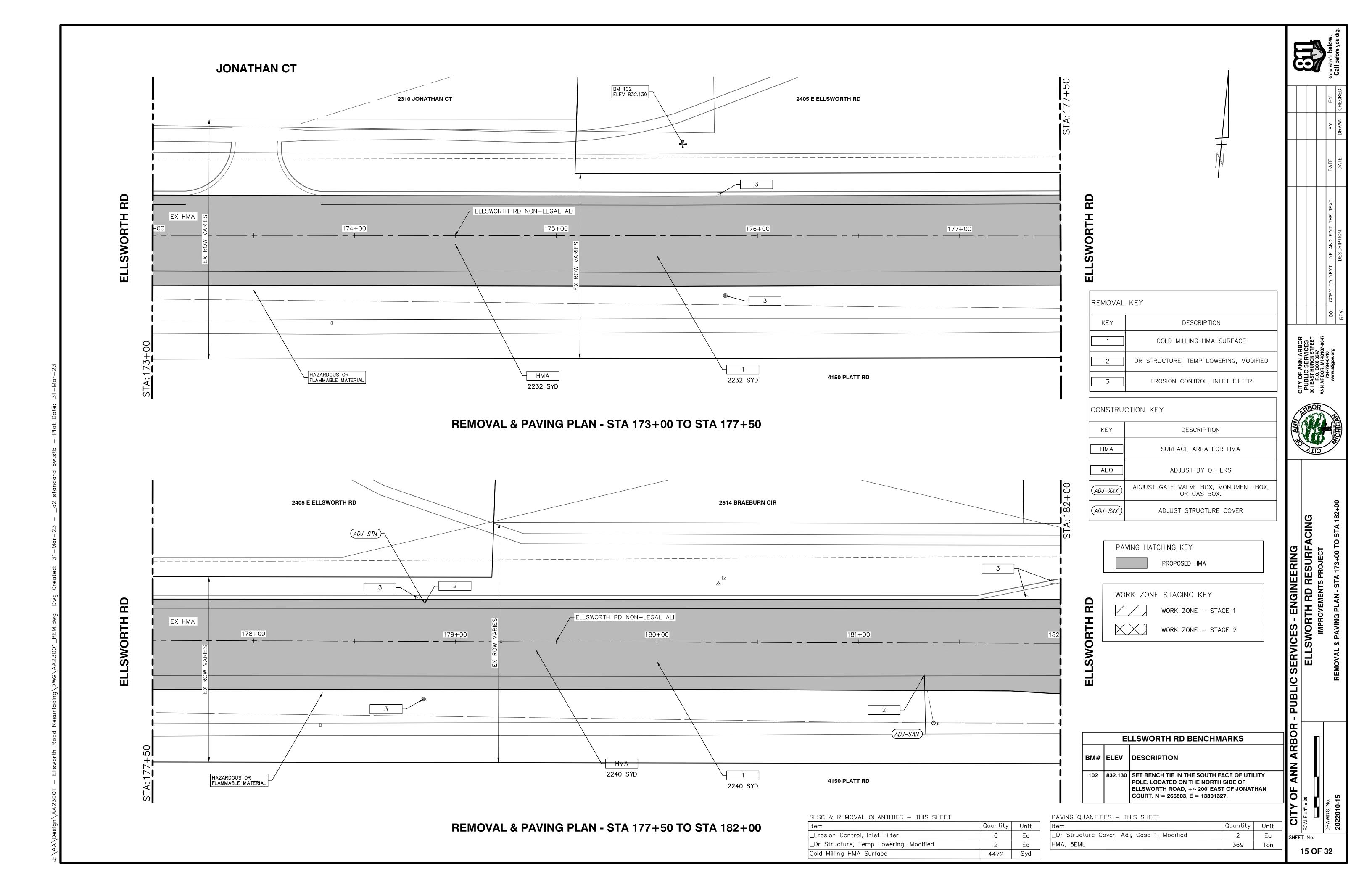


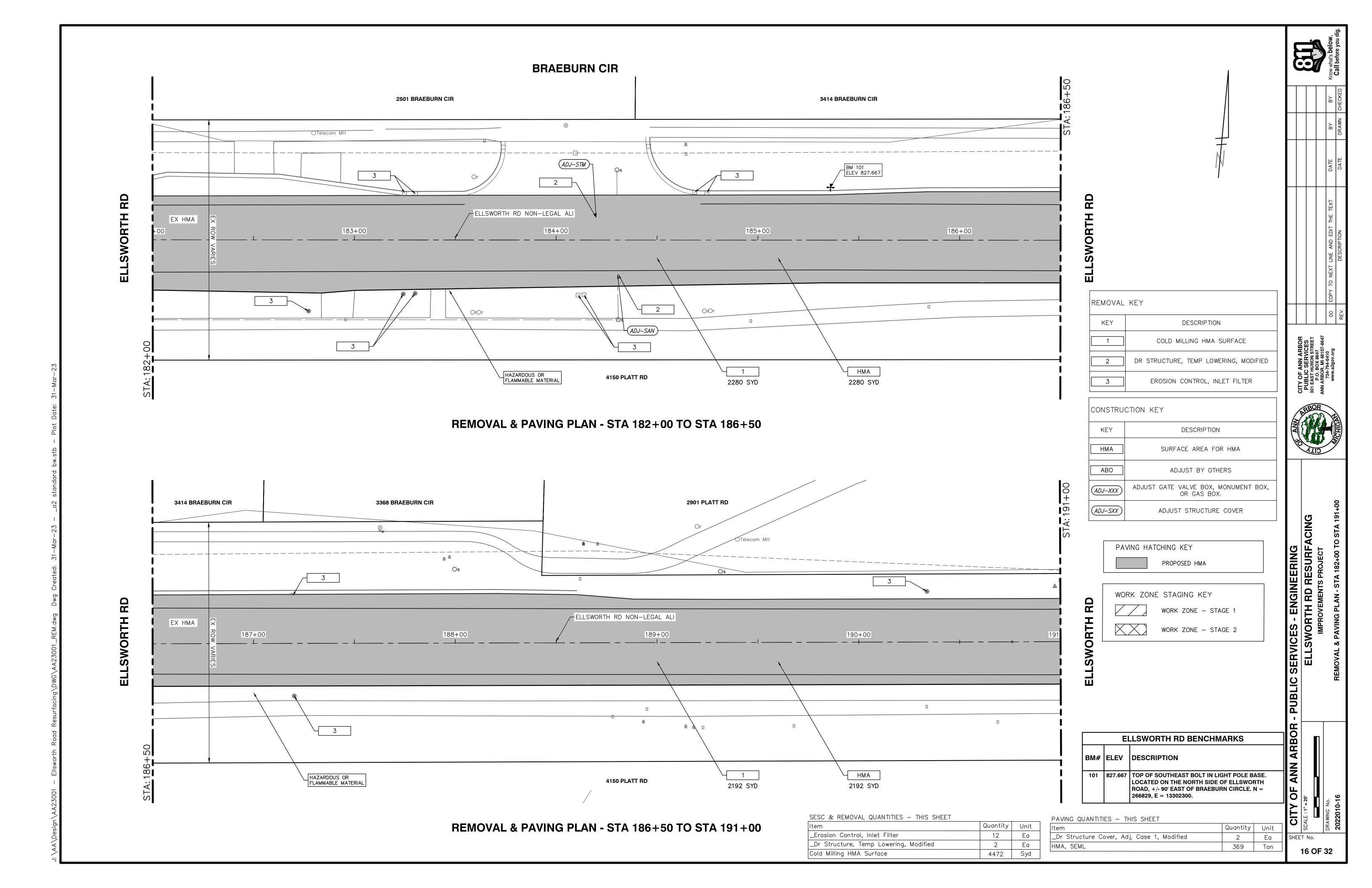


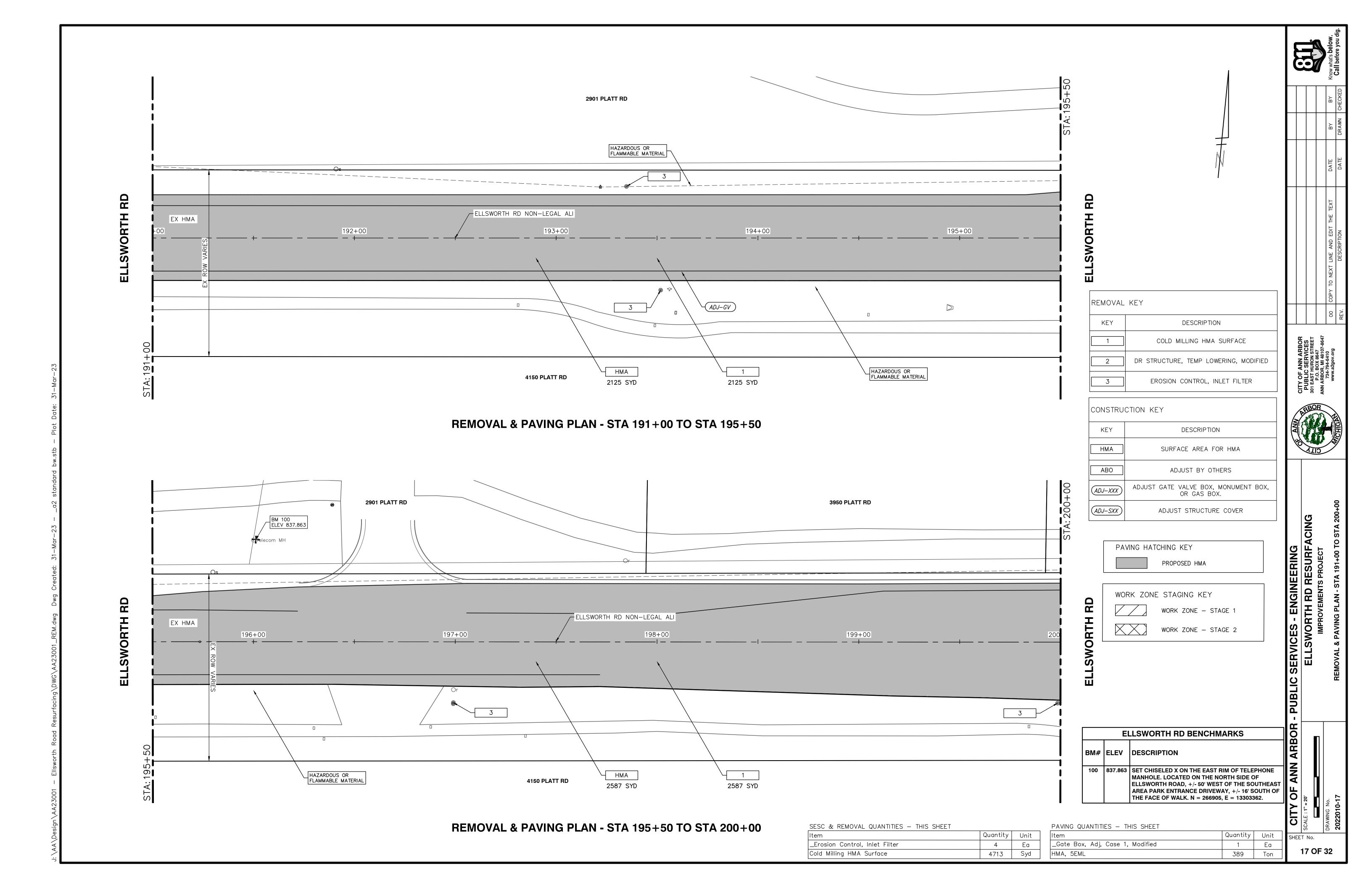


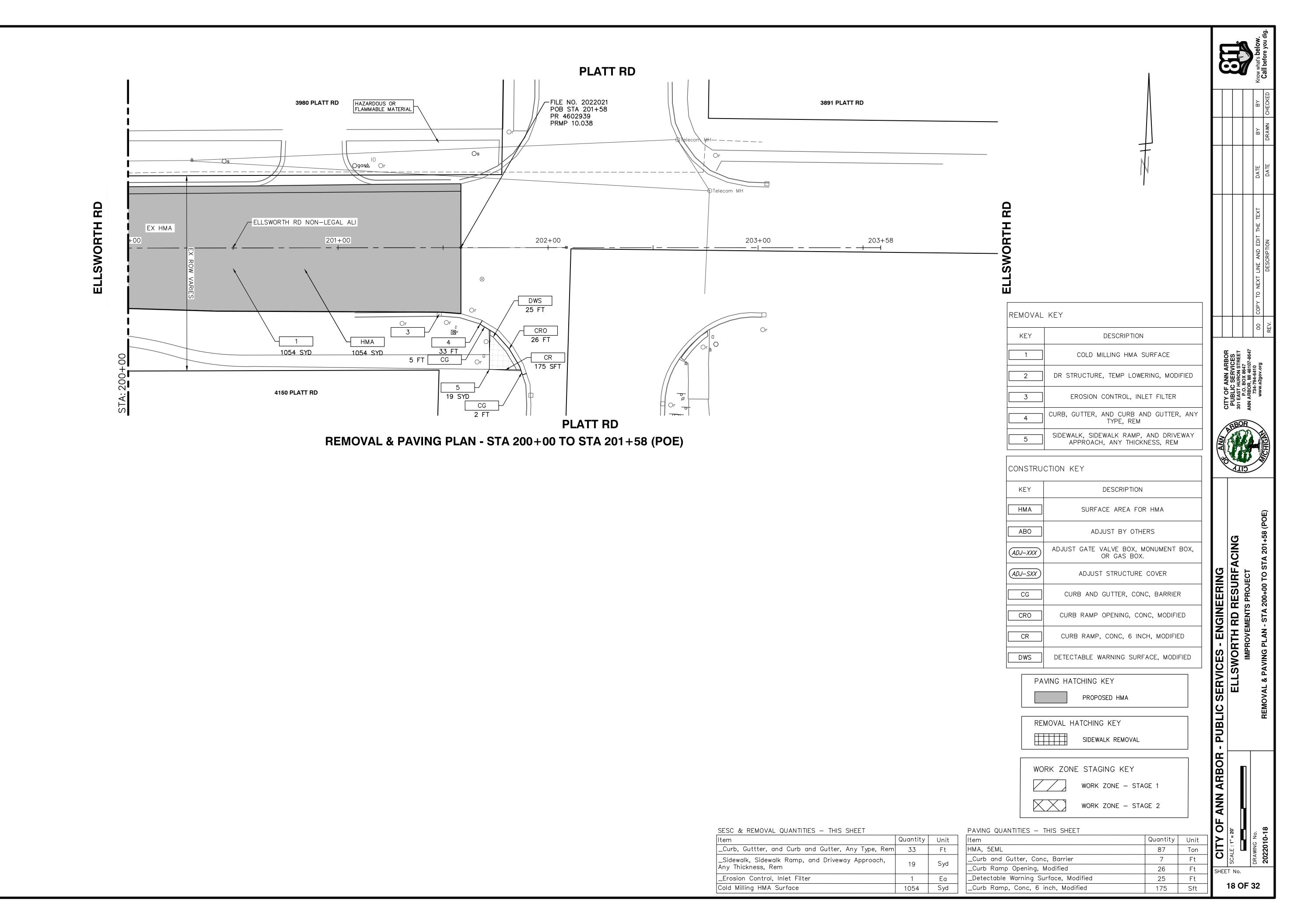




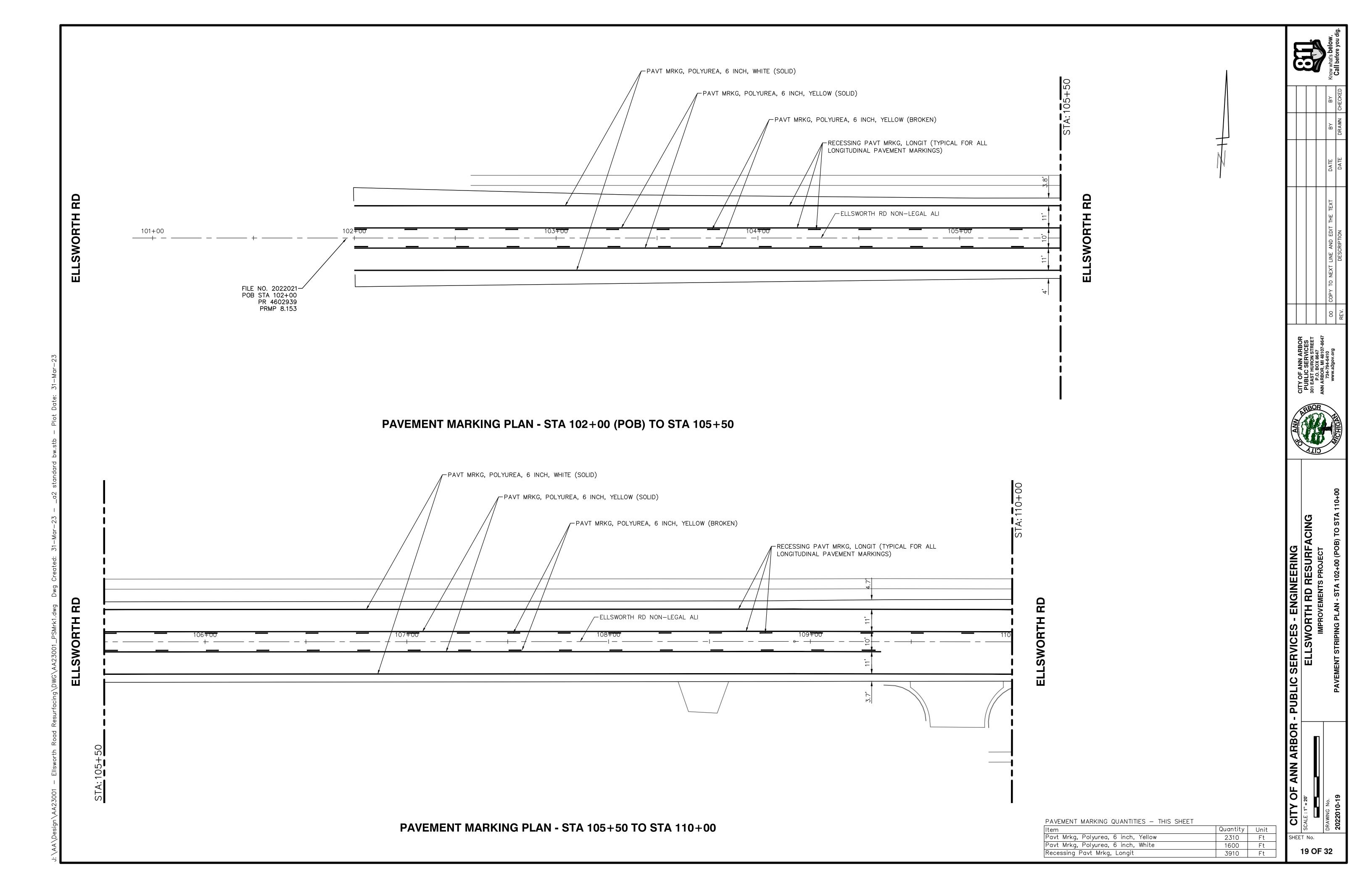


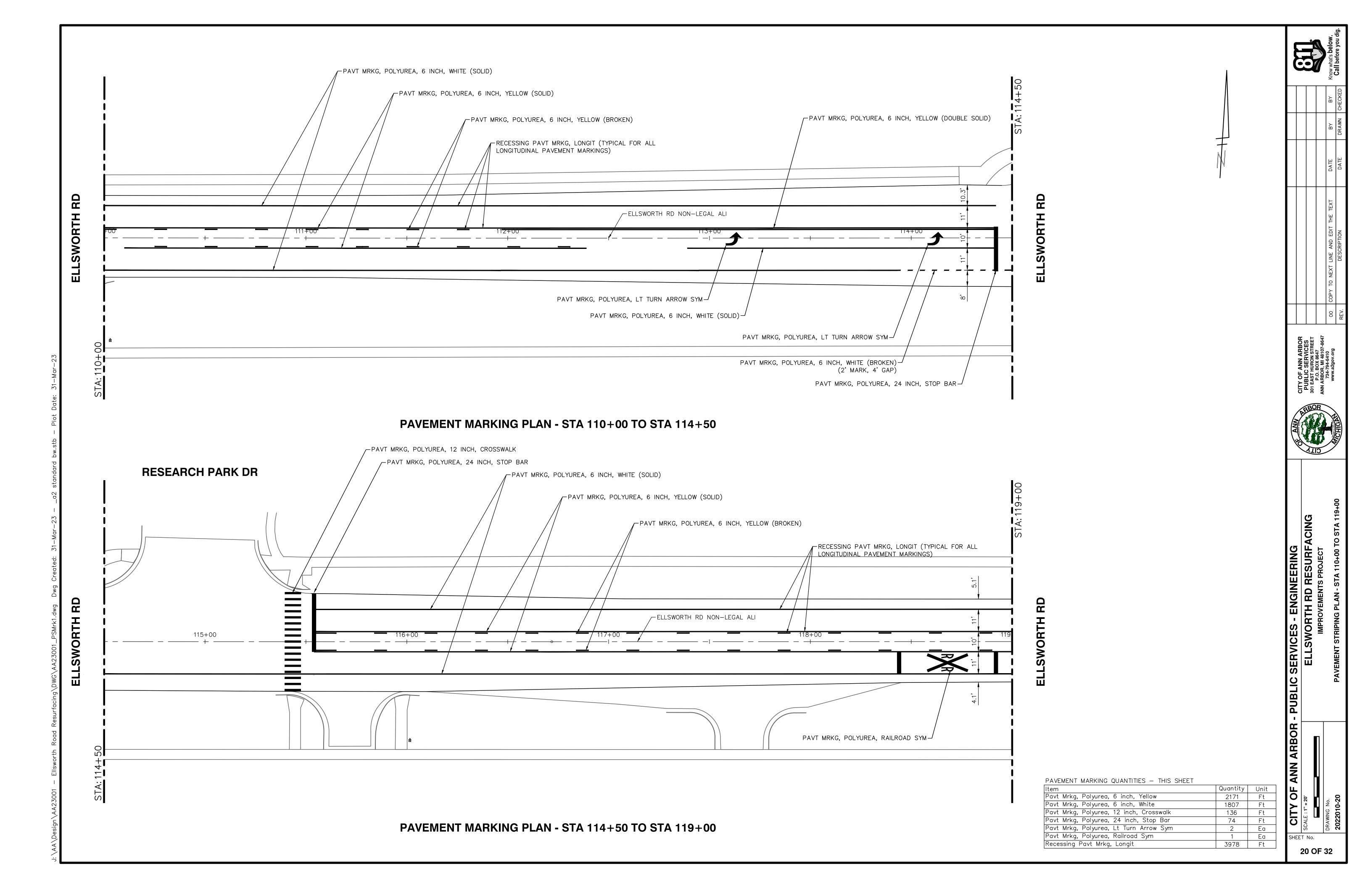


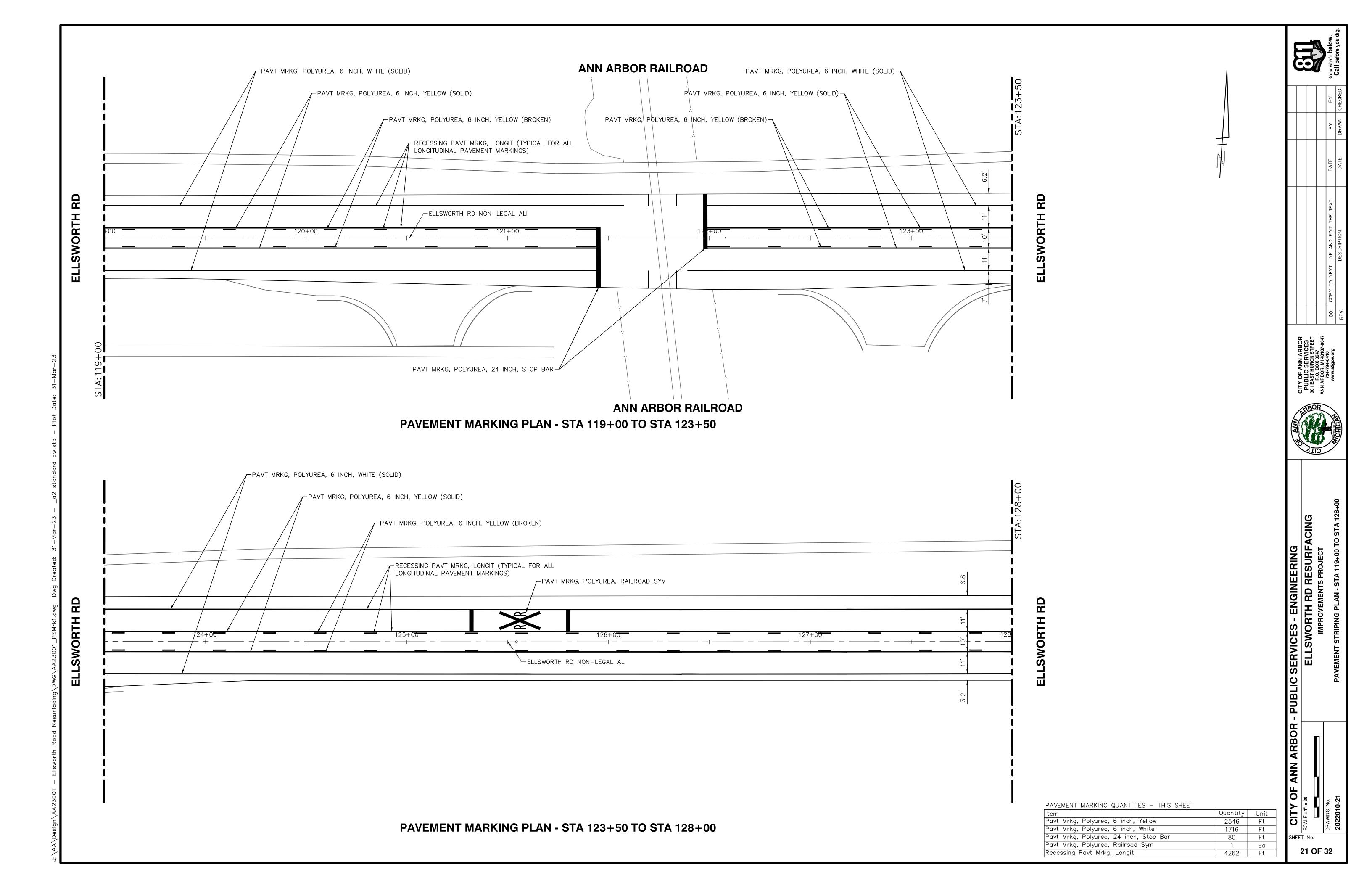


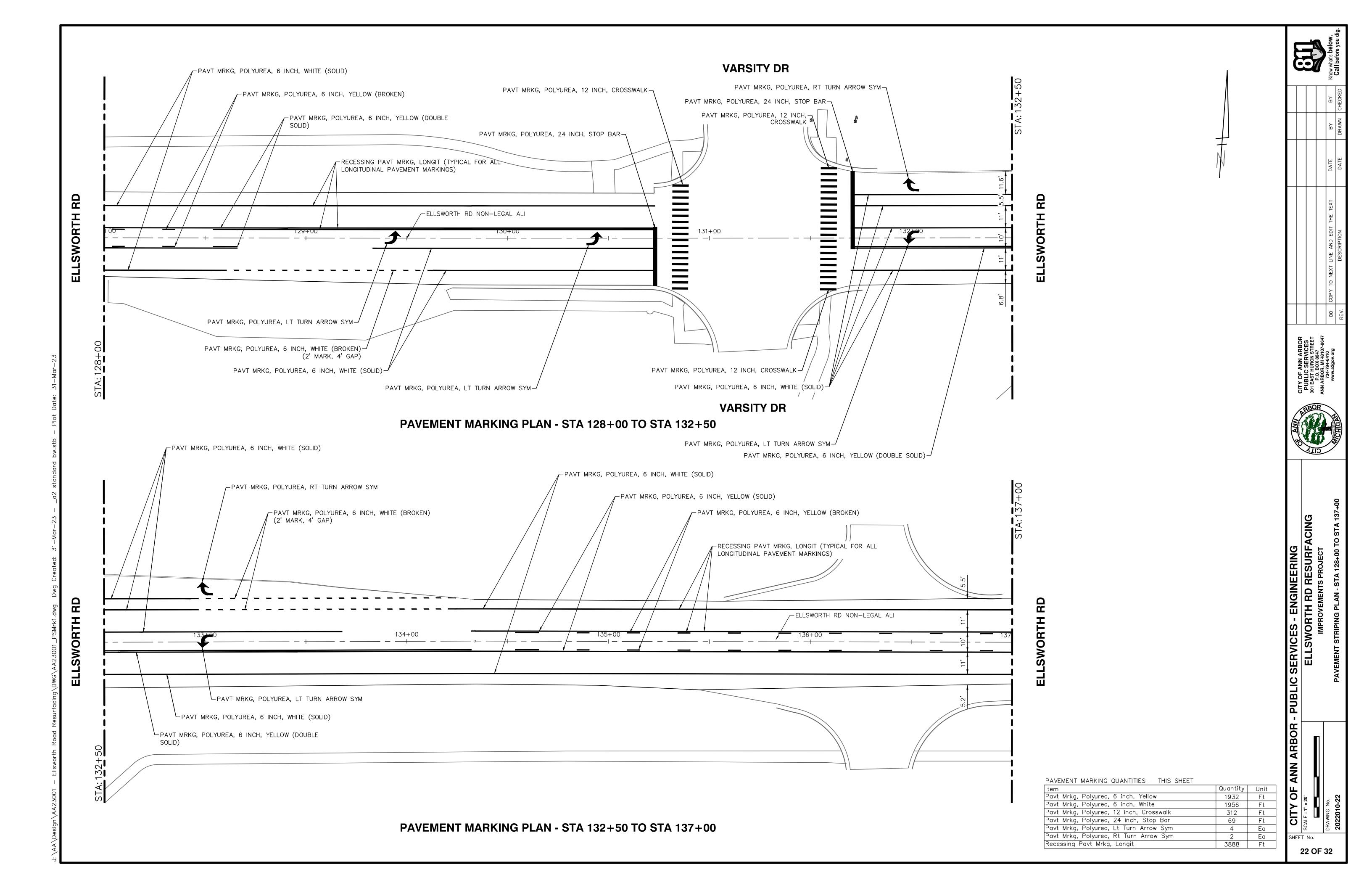


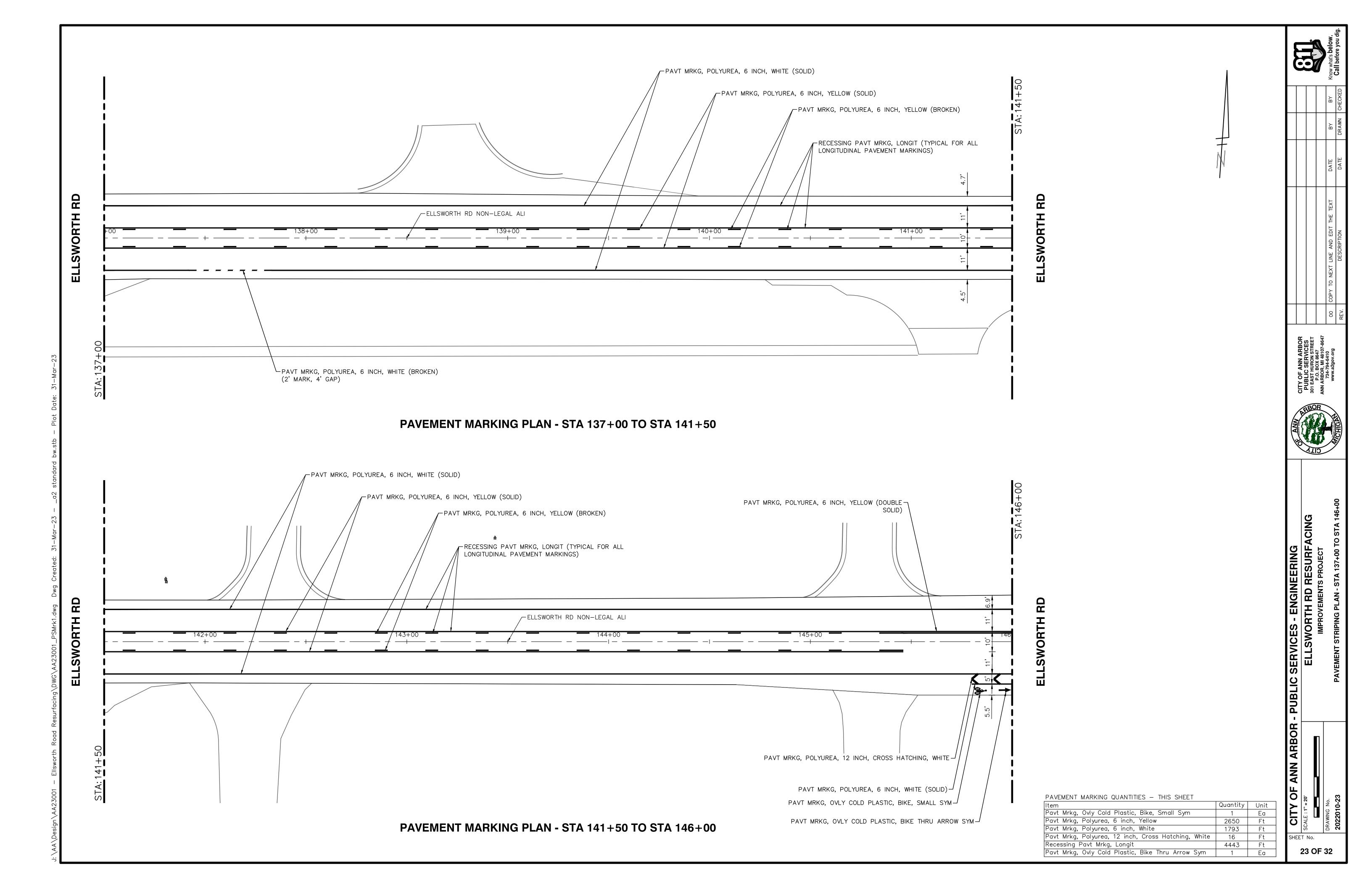
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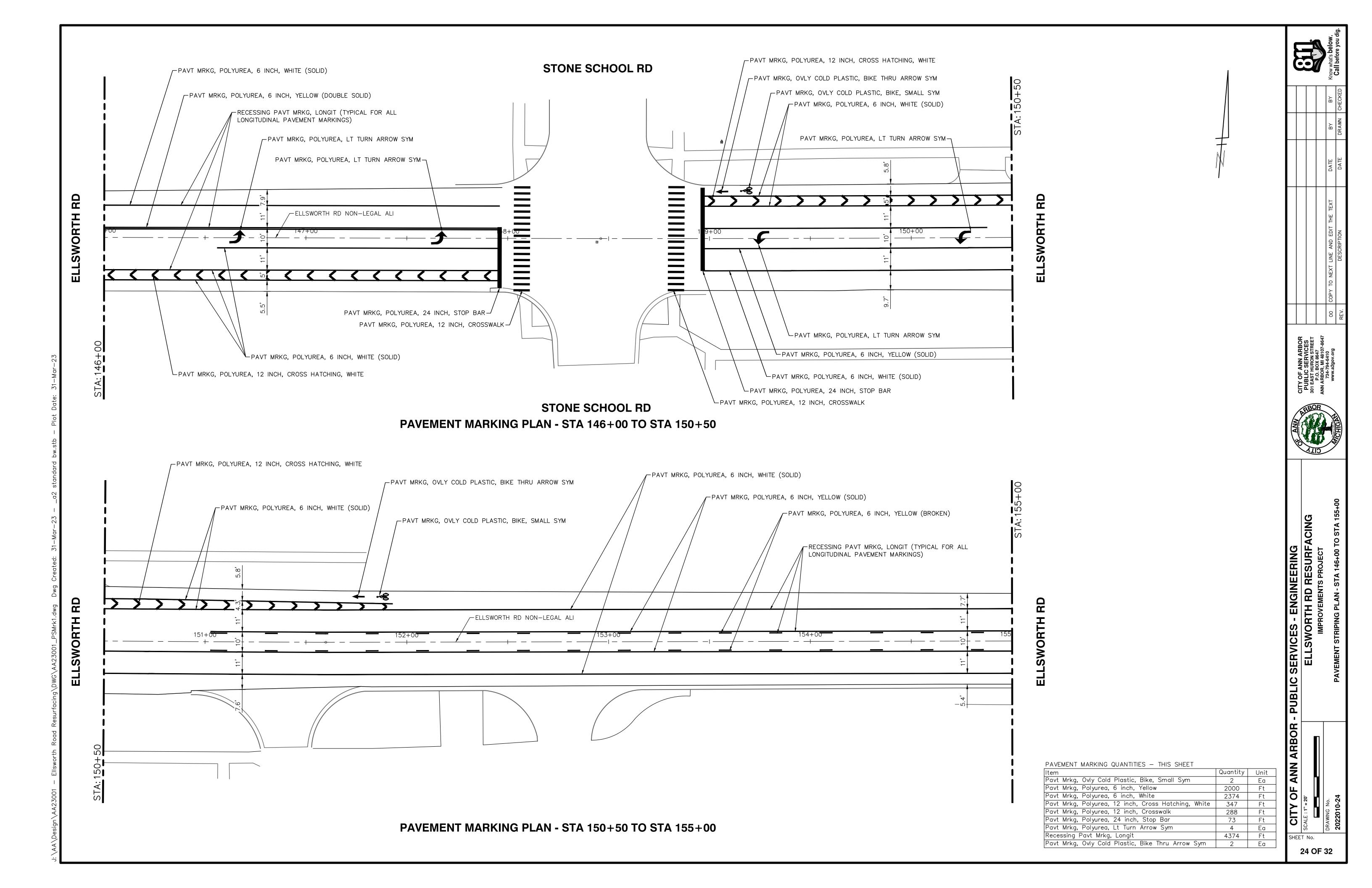


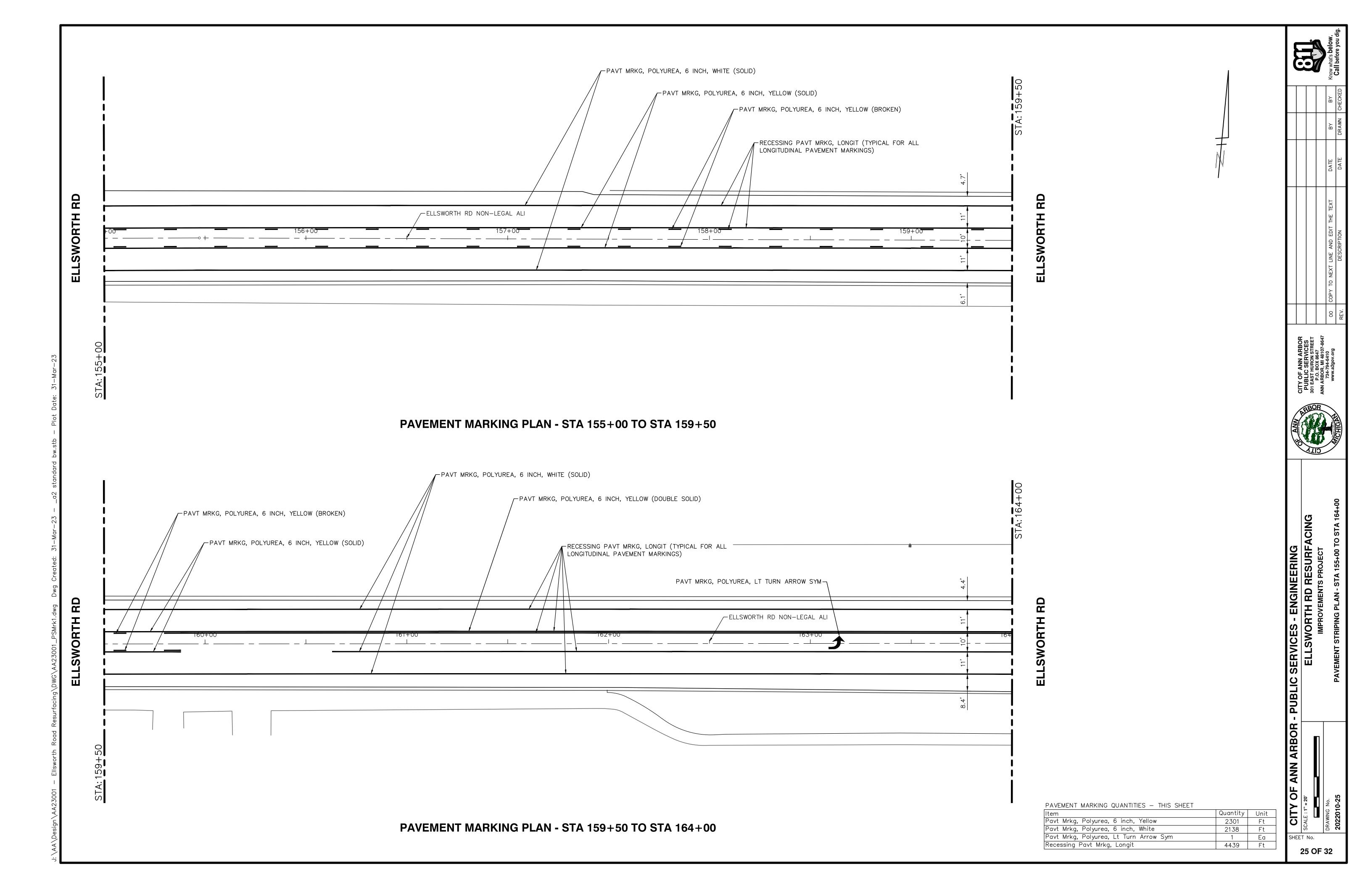


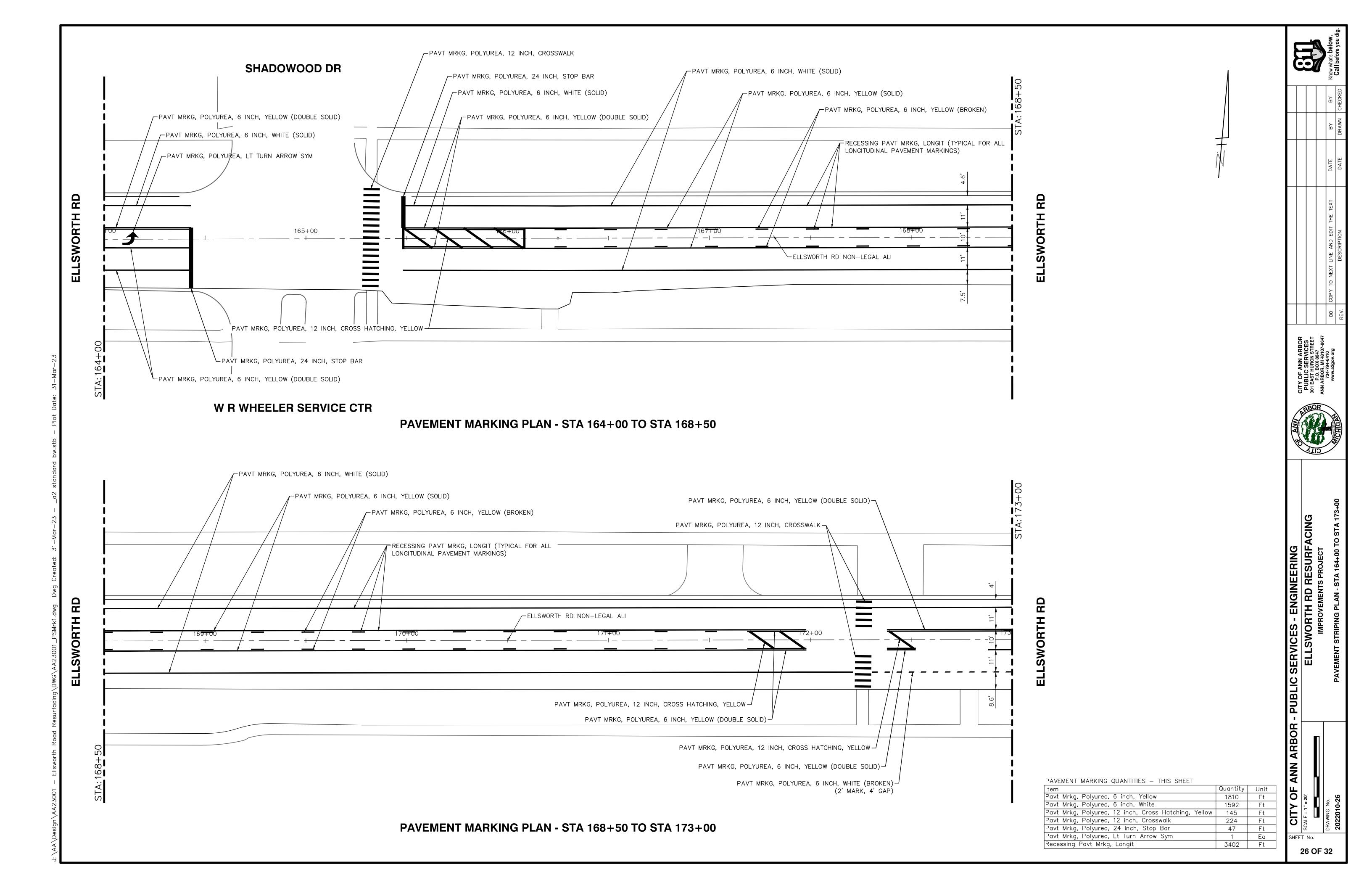


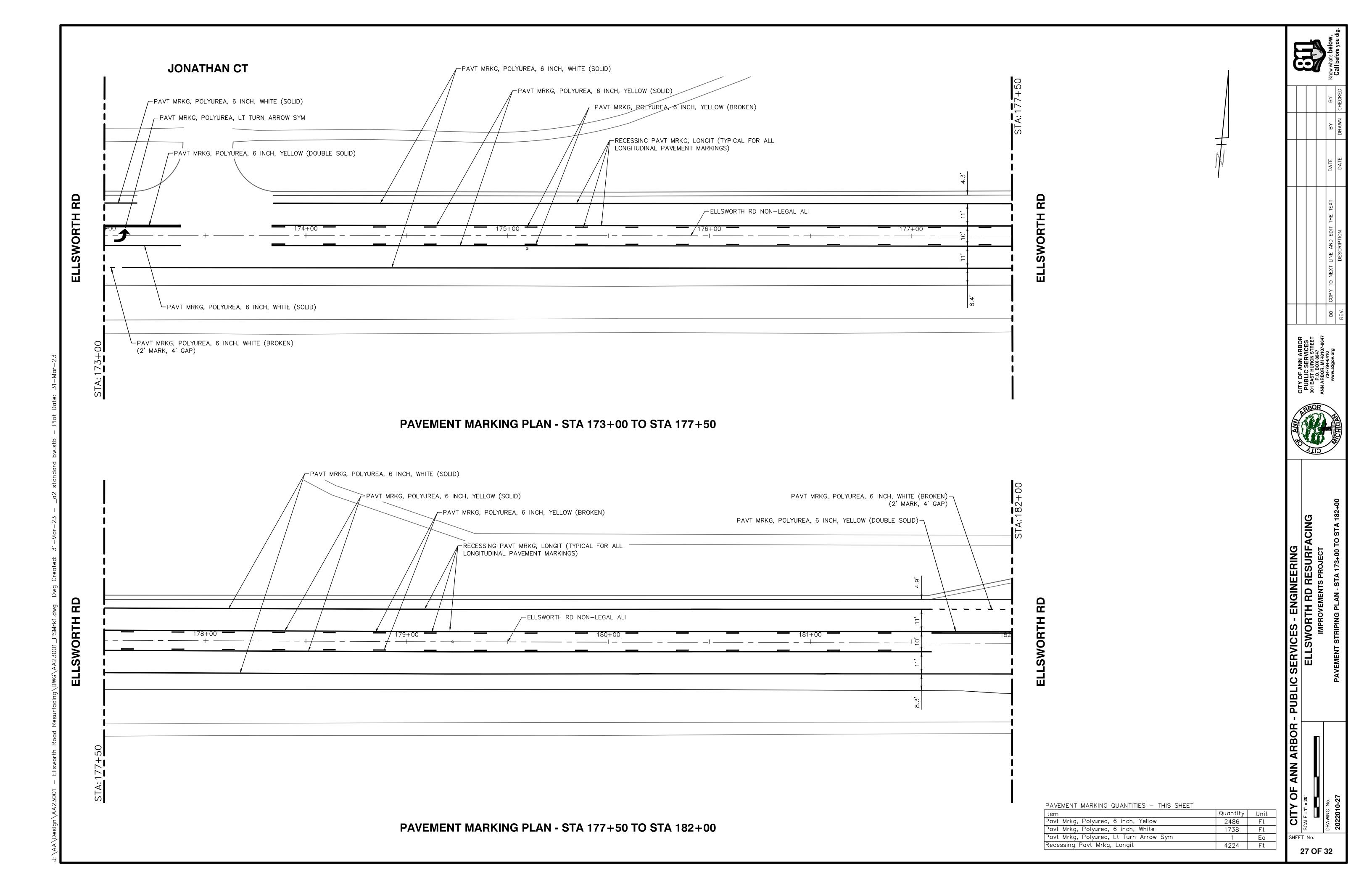


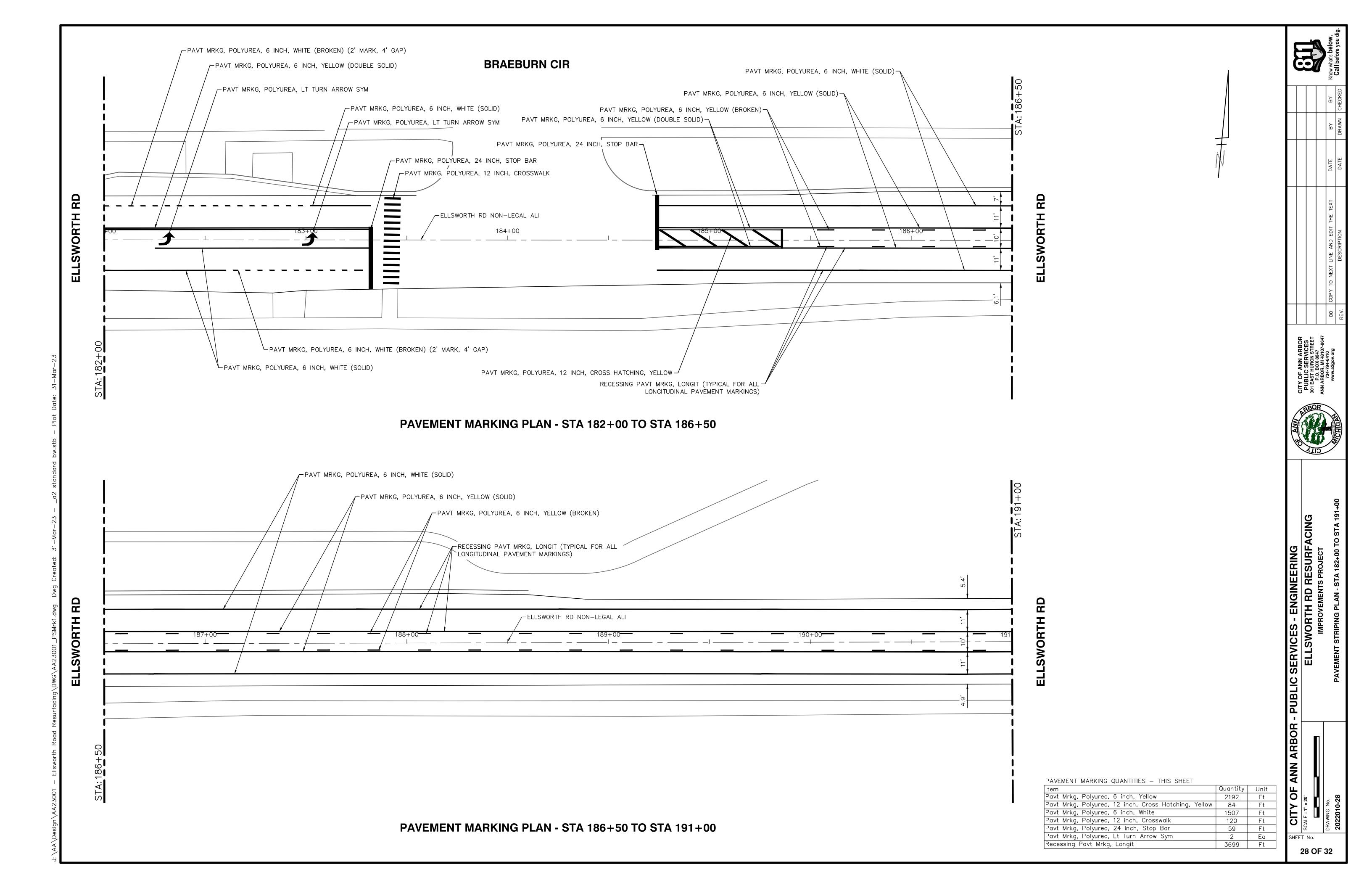


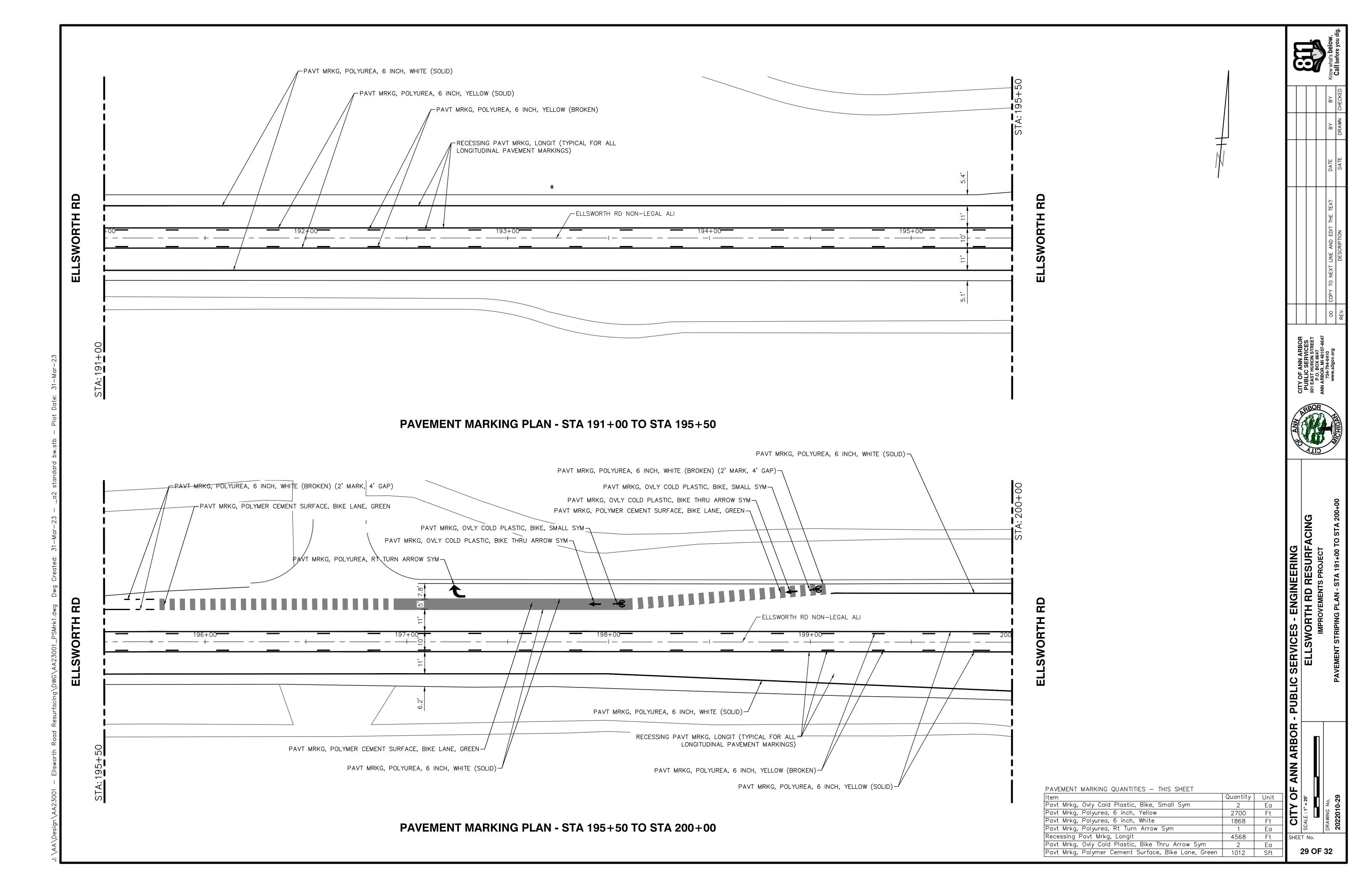


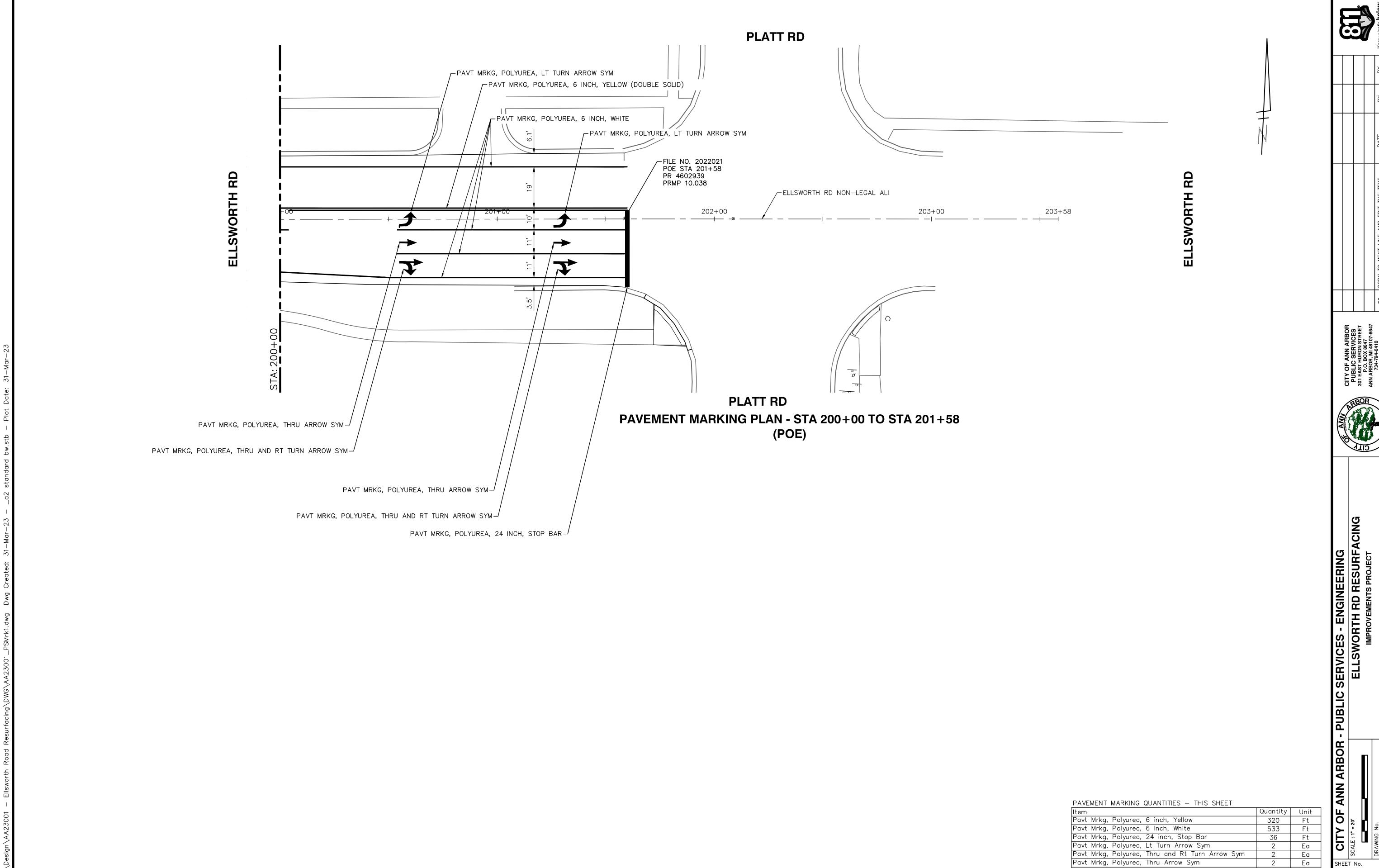












PAVEMENT MARKING QUANTITIES — THIS SHEET		
Item	Quantity	Unit
Pavt Mrkg, Polyurea, 6 inch, Yellow	320	Ft
Pavt Mrkg, Polyurea, 6 inch, White	533	Ft
Pavt Mrkg, Polyurea, 24 inch, Stop Bar	36	Ft
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym	2	Ea
Pavt Mrkg, Polyurea, Thru and Rt Turn Arrow Sym	2	Ea
Pavt Mrkg, Polyurea, Thru Arrow Sym	2	Ea
Recessing Pavt Mrkg, Longit	853	Ft



