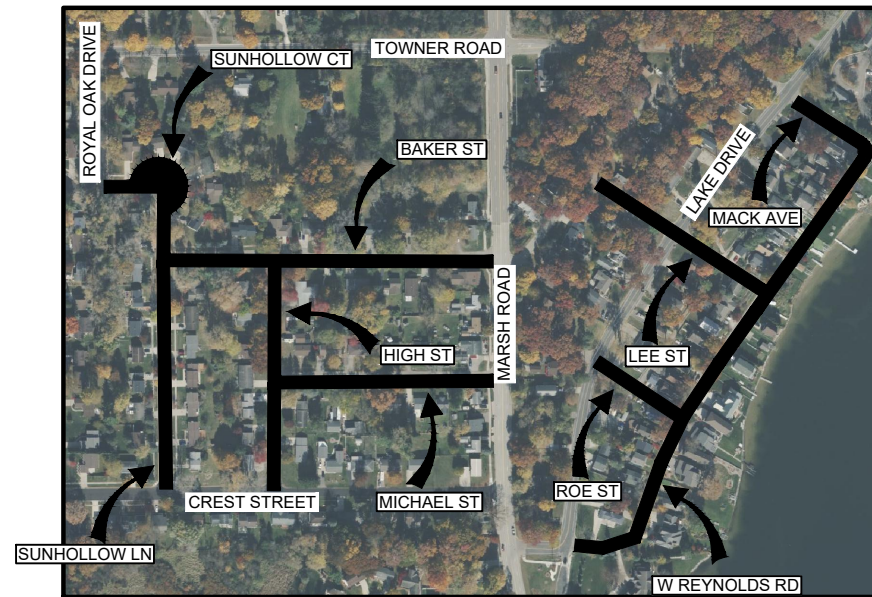
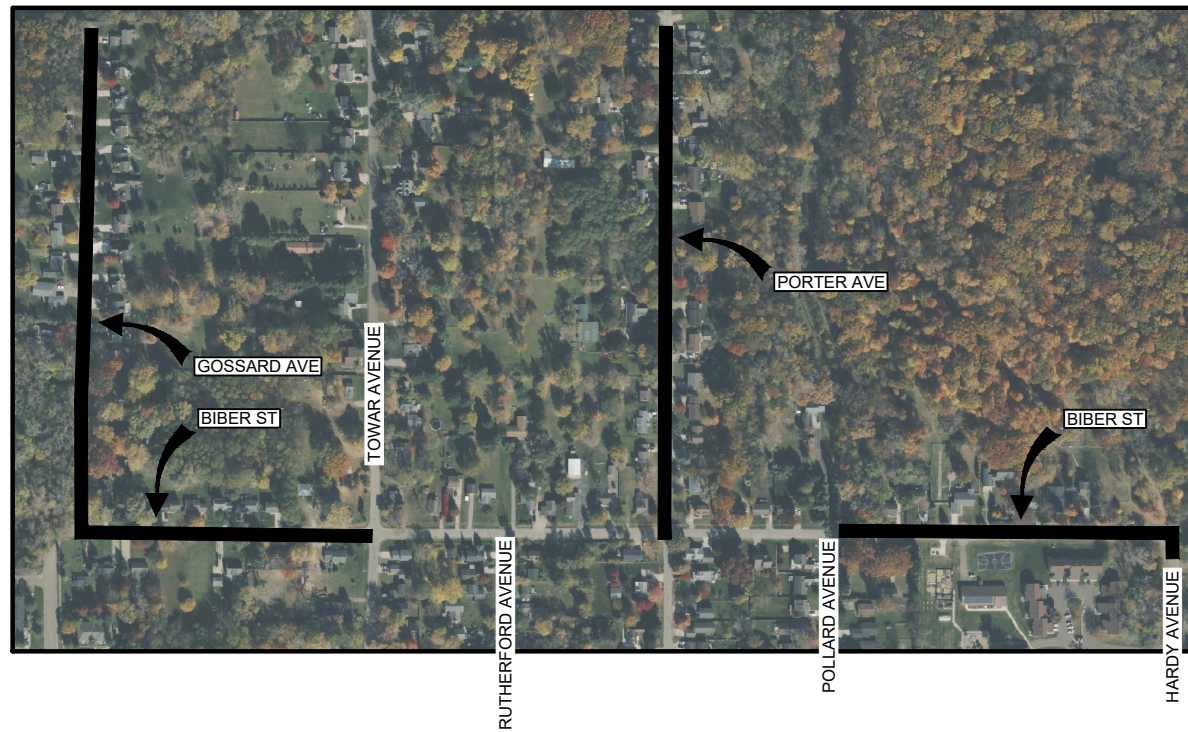


MERIDIAN CHARTER TOWNSHIP

IN COOPERATION WITH THE INGHAM COUNTY ROAD DEPARTMENT

2024 LOCAL STREET CRUSHING AND RESURFACING

SDA JOB No. MD23001



INGHAM COUNTY ROAD DEPARTMENT
APPROVAL

KELLY JONES, PE - MANAGING DIRECTOR

DATE

MERIDIAN CHARTER TOWNSHIP
APPROVAL

YOUNES ISHRAIDI, PE - CHIEF ENGINEER

DATE

PREPARED UNDER THE SUPERVISION OF:

DANIEL J TROIA, PE - MUNICIPAL ENGINEER

DATE



313 N. Capitol Ave, Suite 100
Lansing, MI 48933
Phone: (517) 679-4400
Fax: (248) 844-5440

www.sda-eng.com
(800) 598-1600

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ASPHALT BASE CRUSHING AND SHAPING NOTES:

- TREE TRIMMING WILL BE DONE BY OTHERS PRIOR TO CONSTRUCTION WHERE NEEDED
- CONSTRUCT A NEW AGGREGATE BASE FROM EXISTING PULVERIZED ASPHALT PAVEMENT.
- PROVIDE A SELF PROPELLED ROTARY REDUCTION CRUSHING MACHINE THAT CAN CRUSH THE PAVEMENT TO THE REQUIRED SIZE AND MIX THE CRUSHED MATERIAL WITH THE UNDERLYING AGGREGATE BASE AND ANY ADDED MATERIAL TO THE REQUIRED DEPTH.
- USE AN APPROVED WATER SPRINKLING SYSTEM TO SUPPRESS DUST GENERATED FROM THE PAVEMENT CRUSHING OPERATION.
- REFERENCE THE CRUSHED GRADE FROM THE NEW ASPHALT PAVEMENT SURFACE.
- UNIFORMLY CRUSH NINETY-FIVE PERCENT OF THE CRUSHED MATERIAL AND HAVE A MAXIMUM PARTICLE SIZE OF 1-1/2, WITH NO PARTICLE SIZE EXCEEDING 3 INCHES.
- UNIFORMLY SPREAD AND COMPACT THE CRUSHED MATERIAL TO THE DIMENSIONS SHOWN ON THE PLANS. WHEN ADDITIONAL MATERIAL IS NEEDED TO ATTAIN THE PLAN GRADE, USE EXCESS SALVAGED CRUSHED MATERIAL WHEN AVAILABLE OR AGGREGATE. SPREAD ADDED AGGREGATE UNIFORMLY BEFORE CRUSHING OR PLACE AGGREGATE ON THE CRUSHED SURFACE AND REMIX TO THE FULL CRUSHED DEPTH TO OBTAIN A UNIFORM MIXTURE.
- COMPACT THE CRUSHED MATERIAL, AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- IF SOFT AREAS DEVELOP, THE AGGREGATE AND PAVEMENT SHALL BE CHEMICALLY STABILIZED PER SPECIAL PROVISION AS DIRECTED.
- EXCESS CRUSHED MATERIAL MAY BE USED, IF SUITABLE, AS BASE AGGREGATE, AGGREGATE APPROACH OR SHOULDERS.
- ALL EXISTING STRUCTURES AND UTILITIES SUCH AS SEWERS, CATCH BASINS, INLETS, MANHOLES, WATER WELLS, PUBLIC AND PRIVATE UTILITIES, POLES, MAILBOXES AND THE LIKE SHALL BE LOCATED AND PROTECTED. IF SUCH STRUCTURES AND UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPAIR THE DAMAGE AT NO EXPENSE TO THE OWNER.
- DO NOT PULVERIZE ASPHALT PAVEMENT WHEN ANTICIPATED PRECIPITATION MAY MAKE THE BASE UNSTABLE. DO NOT PULVERIZE ANY EXISTING PAVEMENT THAT CANNOT BE REPAIRED PRIOR TO INCLIMATE WEATHER.
- THE ENGINEER WILL ACCEPT THE CRUSH AND SHAPE WORK IF CRUSHED MATERIAL MEETS PARTICLE SIZE REQUIREMENTS AND REQUIRED DENSITY HAS BEEN MAINTAINED UNTIL ASPHALT SURFACE MATERIAL IS APPLIED.
- ANY UNSTABLE BASE CAUSED BY OVER WATERING, THE NON-UNIFORM APPLICATION OF WATER, OR NOT PAVING PRIOR TO INCLIMATE WEATHER SHALL BE REPAIRED AS APPROVED AT THE CONTRACTOR'S EXPENSE.

SOIL EROSION/SEDIMENTATION CONTROL NOTES

- DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL DEVICES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION; SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY DEVICES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED AND APPROVED BY THE TOWNSHIP AND/OR COUNTY.
- DEBRIS FROM PROJECT WILL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME LESS EFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXIT.
- DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTORS. SPRINKLING TANK TRUCKS WILL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.
- IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDING AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY. SPREAD UNIFORMLY AT A RATE OF 1 1/2 TO 2 TONS PER ACRE OR 0.10 POUNDS PER SQUARE FEET. ANCHOR MULCH WITH DISC TYPE MULCH ANCHORING TOOL.
- ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- PERMANENT SOIL EROSION CONTROL DEVICES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE IMPLEMENTED WITHIN 30 CALENDAR DAYS. ALL TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION DEVICES ARE IMPLEMENTED AND/OR ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL DEVICES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF INSURANCE IS ISSUED.
- ALL CONTRACTORS ARE TO KEEP EXCAVATED MATERIAL ON SITE. PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL THE WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
- THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE CONTRACTOR.

UTILITY CONTACT INFORMATION

PUBLIC

INGHAM COUNTY DRAIN COMMISSION - STORM
ERIC DALDOS
PH: 517-719-4914
EDALDOS@INGHAM.ORG

MERIDIAN TOWNSHIP - SANITARY AND WATER
PH: 517-853-4440
DPW@MERIDIAN.MI.US

ENGINEERING - MERIDIAN TOWNSHIP
YOUNES ISHRAIDI, CHIEF ENGINEER
PH: 517-853-4460
ISHRAIDI@MERIDIAN.MI.US

NYAL NUNN, PROJECT ENGINEER
PH: 517-853-4468
NUNN@MERIDIAN.MI.US

PRIVATE

CONSUMERS ENERGY - GAS
ADAM BERTRAM
PH: 517-614-8570
ADAM.BERTRAM@CSEENERGY.COM

CONSUMERS ENERGY - ELECTRIC
JACOB CHALUT
PH: 517-580-2049
JACOB.CHALUT@CSEENERGY.COM

ATT - COMMUNICATION
CHRISTOPHER WAY
PH: 517-708-9589
CW2638@ATT.COM

ADVANCED COMMUNICATIONS & DATA - FIBER
EVAN UNVERFERTH
PH: 517-999-3276
UNVERFERTH.EVAN@ACD.NET

COMCAST - CABLE
JEFF DOBIES
PH: 734-359-1689
NAME@COMCAST.COM

METRONET - FIBER
LORI KEMPER
PH: 812-213-1050
LORI.KEMPER@METRONET.COM

WOLVERINE PIPE LINE COMPANY - OIL
DOUG MELLINGER
PH: 269-377-3828
DOUG.MELLINGER@WPLCO.COM

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

PRIOR TO THE PLANNED IMPROVEMENTS, AND/OR CONSTRUCTION, THE RESPECTIVE UTILITY COMPANIES MUST BE NOTIFIED TO STAKE THE PRECISE LOCATION OF THEIR UTILITIES.

IF THERE IS A CONFLICT WITH THE PROPOSED SEWER OR MANHOLE LOCATION THE CONTRACTOR SHALL NOTIFY THE ENGINEER. RELOCATION OF THE PROPOSED SEWER OR EXISTING UTILITY WILL BE EVALUATED AFTER CONSULTATION WITH TWP., COUNTY AND RESPECTIVE UTILITY COMPANIES.

TEMPORARILY LOWER ALL MANHOLE COVERS WHERE THEY ARE SHOWN ON THE PLANS DURING CONSTRUCTION.

THE CONTRACTOR SHALL COORDINATE WORK WITH PRIVATE UTILITY CONTRACTORS PERFORMING SANITARY SEWER SERVICE LEAD REPLACEMENTS ON BEHALF OF MERIDIAN TOWNSHIP AND THE HOMEOWNER.

PAVING CONSTRUCTION NOTES

- PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 MDT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE FOLLOWING ITEMS.
- CONTRACTOR SHALL PROTECT EXISTING CURB, GUTTER, SIDEWALK, WALLS, FENCES AND ALL OTHER EXISTING SITE FEATURES NOT INDICATED FOR REMOVAL OR REHABILITATION.
- THE AGGREGATE BASE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91). THE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVED EDGE.
- ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY NO LESS THAN 94 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MARSHALL METHOD.
- A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN THE LEVELING COURSE AND THE WEARING COURSE WHEN EITHER 24 HOURS HAVE ELAPSED BETWEEN PLACEMENT OF THE BITUMINOUS COURSES OR THE SURFACE OF THE PAVEMENT HAS BEEN CONTAMINATED WITH DIRT, DUST, OR FOREIGN MATERIAL. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.1 GALLONS/S.Y. IN THE EVENT A BOND COAT IS NOT REQUIRED, THE LEVELING COURSE MAY REQUIRE LOCALIZED BROOM CLEANING.
- PERFORMANCE GRADE PG58-28 ASPHALT CEMENT SHALL BE USED IN THE PRODUCTION OF ALL BITUMINOUS MIXTURES. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL BE LIMITED TO TIER 1 AS SPECIFIED BY THE CURRENT MDT SPECIAL PROVISION, UNLESS NOTED ON THE PROJECT DETAILS.
- CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE PLACEMENT OF THE FINAL LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO ANY DAMAGED SECTION RESULTING FROM CONSTRUCTION ACTIVITY.

M.D.O.T. STANDARD PLANS

- R-7-F COVER B
- R-10-D COVER E
- R-11-E MONUMENT BOXES
- R-12-E COVER G
- R-18-F COVER Q
- R-80-F* GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS
- R-82-D BEDDING AND FILLING AROUND PIPE CULVERTS
- R-83-C UTILITY TRENCHES
- R-86-F PRECAST CONCRETE END SECTION FOR PIPE CULVERT
- R-88-E* STEEL END SECTION
- R-96-E SOIL EROSION & SEDIMENTATION CONTROL MEASURES
- R-100-I* SEEDING AND TREE PLANTING
- R-105-D GRADING CROSS-SECTIONS
- R-107-H SUPERELEVATION AND PAVEMENT CROWNS

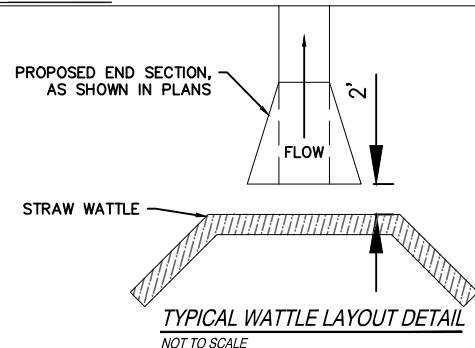
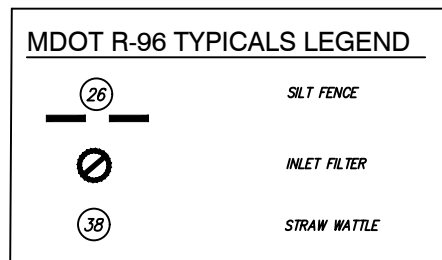
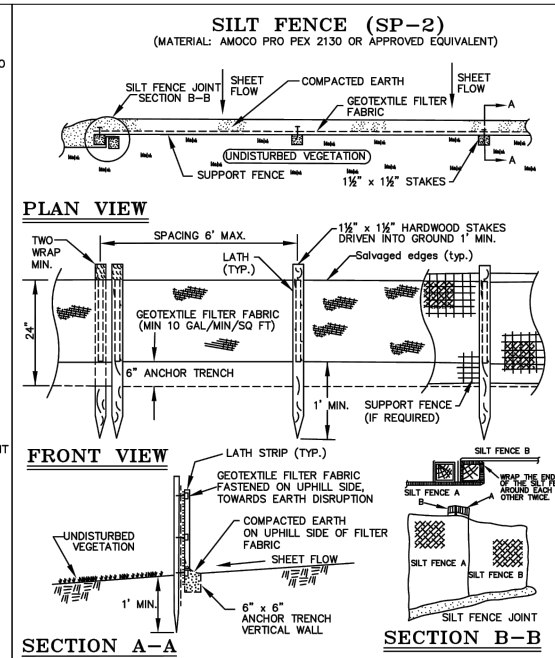
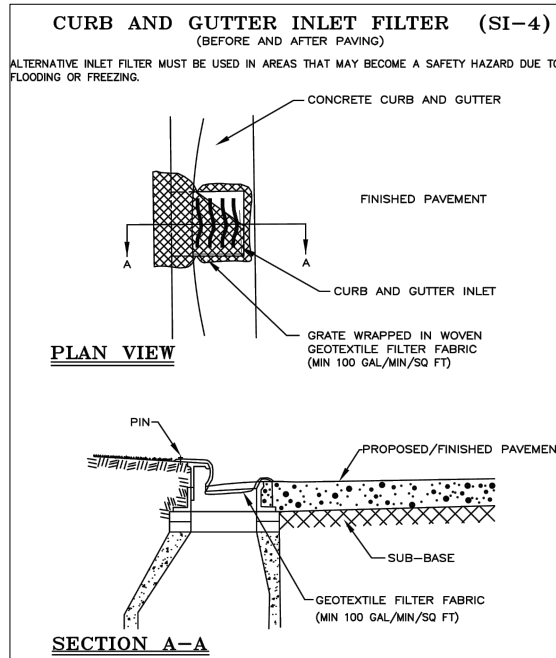
* DENOTES SPECIAL DETAIL

M.D.O.T. TRAFFIC & SAFETY STANDARD PLANS

- WZD-125E* TEMPORARY TRAFFIC CONTROL DEVICES
- 100-GEN-KEY GENERAL KEY
- 101-GEN-SPACING-CHARTS "B", "D", AND "L" TABLES, CHANNELIZING DEVICE SPACING, SIGN BORDER KEY, AND ROLL-AHEAD SPACING
- 102-GEN-NOTES TRAFFIC CONTROL TYPICALS NOTES SHEET
- 103-GEN-SIGN MAINTAINING TRAFFIC TYPICALS SIGN SHEET
- 110-TR-NFW-2L LANE CLOSURE UTILIZING TRAFFIC REGULATORS ON A 2-LANE UNDIVIDED ROADWAY
- 122-NFW-SHL-(R) SHOULDER CLOSURE ON A 2-LANE, UNDIVIDED ROADWAY

* DENOTES SPECIAL DETAIL

NOTE: ALL OTHER MDT STANDARD PLANS LISTED ABOVE ARE INCORPORATED BY REFERENCE AND NOT INCLUDED IN THE PROPOSAL.



SURVEY NOTES

- THIS PARTIAL TOPOGRAPHICAL MAP IS BASED UPON A FIELD SURVEY PERFORMED BY SPALDING DEDECKER DURING SEPTEMBER, 2023. THE OVERALL PROJECT WILL BE A LOG JOB FOR PAVEMENT CRUSH AND SHAPE, AND THEREFORE A LIMITED SURVEY SCOPE WAS REQUESTED. FIELD MAPPING INCLUDED LOCATING ABOVE GROUND MANIFESTATIONS OF UNDERGROUND UTILITIES AND SHOWING CONNECTIVITY FOR UTILITIES, WITH INVERT ELEVATIONS MEASURED FOR CULVERTS AND STORM SEWER ONLY. MAPPING FOR CURBED ROADS INCLUDES UTILITIES ONLY. FOR UNCURBED ROADS, FOUR ELEVATIONS WERE MEASURED AT EACH DRIVEWAY AND A CENTERLINE ELEVATION WAS MEASURED. THIS DATA WAS COMPILED IN THE TPG DRAWING. WE UNDERSTAND THAT INTERNALLY OUR MUNICIPAL ENGINEERING GROUP WILL USE THIS DATA TO CREATE THE FINAL STP DRAWING AND WILL DRAW IN ANY OTHER FEATURES THAT ARE NEEDED SUCH AS ROAD EDGES, UTILITY POLES, OVERHEAD WIRES, MAILBOXES, TREES, OR OTHER FEATURES IF NEEDED.
- THE PROPERTY LINES/RIGHT-OF-WAY LINES SHOWN ON THIS TOPOGRAPHICAL SURVEY ARE INTENDED TO BE AN APPROXIMATE GRAPHICAL REPRESENTATION OF THE PROPERTY LINES. SPALDING DEDECKER HAS BASED THE PROPERTY LINES AND RIGHT OF WAY LINES UPON THE GIS INFORMATION ONLY. VARIATIONS MAY EXIST BETWEEN THE EXISTING PROPERTY DESCRIPTIONS AND THE GRAPHICAL LINES SHOWN FROM GIS IN THE DRAWING. A COMPLETE PROPERTY LINE ANALYSIS IS NOT PART OF THE SCOPE OF SERVICES AND PROPERTY CORNERS HAVE NOT BEEN SET IN THE FIELD PER THE AGREED TO SCOPE OF SERVICES.
- THIS SURVEY HAS BEEN PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE SEARCH THAT WOULD IDENTIFY ANY RECORDED EASEMENTS THAT ENCUMBER THIS PROPERTY. THEREFORE, THIS PROPERTY MAY BE SUBJECT TO EASEMENTS, RIGHT-OF-WAY TAKINGS AND RESTRICTIVE COVENANTS THAT ARE NOT SHOWN.
- THE BASIS OF BEARINGS IS THE STATE PLANE GRID.
- THE COORDINATE SYSTEM FOR THIS SURVEY IS THE STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH ZONE (2113), BASED ON NAD83 (NSRS2011). UNITS ARE INTERNATIONAL FEET. COORDINATES WERE ESTABLISHED USING A DATA LINK TO THE MDT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS).
- THE VERTICAL DATUM OF THIS SURVEY IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88) AS ESTABLISHED WITH RTK GPS MEASUREMENTS USING A DATA LINK TO THE MDT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS). ELEVATIONS ON CONTROL POINTS ARE SHOWN BASED ON GPS RTK MEASUREMENTS ONLY, AND DIFFERENTIAL LEVELLING HAS NOT BEEN PERFORMED.

DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

SPALDING DeDECKER
Engineers | Planners | Surveyors
313 N. CAPITOL AVE, SUITE 100 Phone: (517) 679-4400
LANSING, MI 48933 Fax: (248) 844-5440
www.sda-eng.com

NOTES AND DETAILS
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

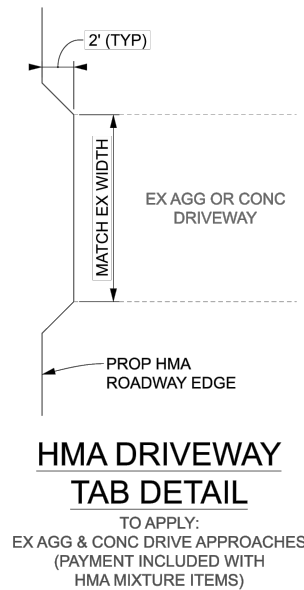
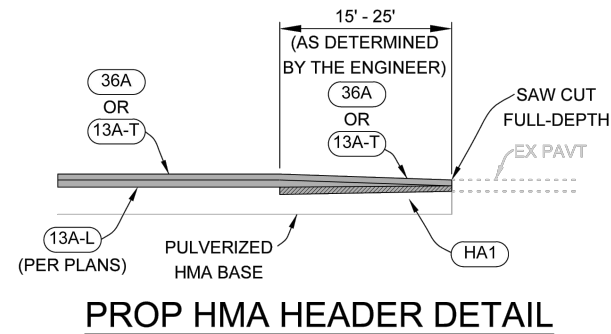
JOB No. MD23001	DRAWING No. MD23001NOT
SCALE: NO SCALE	SHEET 2 OF 21

PROJECT QUANTITIES

Item Code	Item Description	Unit	Total Quantity	Miscellaneous Quantity
1100001	Mobilization, Max 10%	LSUM	1	1
2030001	Culv, Rem, Less than 24 Inch	Ea	4	
2040050	Pavt, Rem	Syd	500	120
2050006	Ditch Cleanout	Sta	10	0.5
2050030	Machine Grading	Sta	183	
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	32	
2080026	Erosion Control, Maintenance, Sediment Rem	Cyd	10	10
2080036	Erosion Control, Silt Fence	Ft	1000	64
2087001	Erosion Control, Straw Wattle, 9 Inch	Ft	100	50
3027011	Aggregate Base, Recycled, 4 inch	Syd	3500	3003
3050002	HMA Base Crushing and Shaping	Syd	26754	
3057011	Base Stabilization, Chemical	Syd	6188	
3057012	Stabilization Chemical, Manufactured	Ton	187	
3057021	Material, Surplus and Unsuitable, Rem, LM	Cyd	250	250
3060021	Maintenance Gravel, LM	Cyd	150	150
3070046	Approach, CI III, 4 inch	Syd	750	569
3070048	Approach, CI III, 6 inch	Syd	194	
3070146	Shld, CI III, 4 inch	Syd	2623	
4010607	Culv, CI F, 12 inch	Ft	210	70
4030390	Dr Structure, Temp Lowering	Ea	43	
4037050	Dr Structure Cover, Adj, Case 1, Modified	Ea	8	
4040061	Underdrain, Subbase, 4 inch	Ft	1000	1000
5010005	HMA Surface, Rem	Syd	600	426
5010025	Hand Patching	Ton	40	40
5010033	HMA, 13A	Ton	4000	433
5010034	HMA, 36A	Ton	2000	201
5010061	HMA Approach	Ton	400	204
5017031	HMA Additive, RTR	Ton	2882	2882
8010005	Driveway, Nonrein Conc, 6 inch	Syd	400	400
8050010	Curb Slp, HMA	Ft	748	
8070095	Post, Mailbox	Ea	50	50
8127051	Temporary Traffic Control Devices	LSUM	1	1
8167011	Slope Restoration, Type II	Syd	8000	304
8230421	Water Shutoff, Adj, Case 1	Ea	2	
8230431	Gate Box, Adj, Case 1	Ea	3	
8252144	Sanitary Structure, Adj, Add Depth	Ft	20	20
8257010	Sanitary Structure, Chimney Seal, External	Sft	600	600
8257050	Sanitary Structure Cover	Ea	2	2
8257050	Sanitary Structure Cover, Adj, Case 1, Modified	Ea	32	
8507040	Recycled Aggregate Delivery	Hr	40	40

LEGEND

	HMA CRUSH AND SHAPE
	PAVT, REM
	HMA SURFACE REM
	HMA APPROACH
	APPROACH, CI III, 6 INCH
	PROPERTY ADDRESS
	EXISTING SANITARY SEWER (SAN)
	EXISTING STORM SEWER (STM)
	EXISTING WATERMAIN (WM)
	ADJUST - TYPE
	PROPOSED EDGE OF ROADWAY
	PROPOSED SHOULDER



HMA APPLICATION ESTIMATE

IDENT NO.	ITEM	RATE LBS PER SYD	PERFORMANCE GRADE	REMARKS
36A	HMA, 36A	165	PG 58-28 ^{1,3}	TOP COURSE, AWI=260; SEE NOTE 2 BELOW
13A-T	HMA, 13A	250	PG 58-28 ^{1,3}	TOP COURSE, AWI=260; SEE NOTE 2 BELOW
13A-L	HMA, 13A	275	PG 58-28	LEVELING COURSE; SEE NOTE 1 BELOW
HA1	HMA APPROACH	275	PG 58-28	BASE COURSE AT END HEADER (SEE DETAIL)
HA2	HMA APPROACH	330 - 440	PG 58-28	DRIVEWAY APPROACHES (2 EQUAL LIFTS)
HP	HAND PATCHING	AS DIRECTED	PG 58-28	MAINTAINING TRAFFIC
	* BOND COAT	0.05-0.15 GAL		

* FOR INFORMATION ONLY

ASPHALT NOTES:

- FURNISH ASPHALT CEMENT (AC) BINDER NOT EXCEEDING 17% RAP BINDER BY WEIGHT OF TOTAL BINDER (TIER 1) PER APPLICABLE SPECIAL PROVISION(S).
- REGRESS TOP COURSE MIXTURE AIR VOIDS TO 3%.
- DEVULCANIZED RECYCLED TIRE RUBBER MODIFIED ASPHALT CEMENT (AC) BINDER WILL BE SPECIFIED AS AN "ADD ON" TO THE HMA ITEM(S) FOR TOP COURSE MIXTURES TO ENHANCE THE PG GRADE OF THE AC BINDER AND TO INCREASE THE SERVICE LIFE OF THE HMA MIXTURE(S). THIS ITEM WILL BE USED ONLY AS DIRECTED BY THE ENGINEER FOR TOP COURSE MIXTURES. SEE SPECIAL PROVISION.

USDA/NRCS SOIL SURVEY

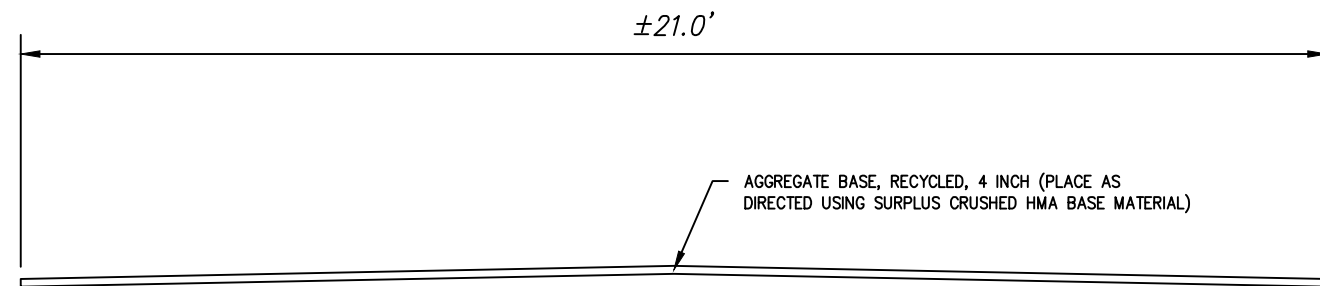
Map Unit Legend

Map Unit Symbol	Map Unit Name
KbA	Kibbie loam, 0 to 3 percent slopes
Na	Napoleon muck
Ud	Udorhents and Udipsamments
Co	Colwood-Brookston loams
Hn	Houghton muck, 0 to 1 percent slopes
SpC	Spinks loamy sand, 6 to 12 percent slopes
UeB	Urban land-Boyer-Spinks complex, 0 to 10 percent slopes
UpA	Urban land-Capac-Colwood complex, 0 to 4 percent slopes
UIB	Urban land-Marlette complex, 2 to 12 percent slopes
W	Water

APPROACH LEGEND

	SURFACE TYPE	PLAN SYMBOL	APPLICATION RATE (INCH)	APPROACH, CL III (INCH)
COMMERCIAL	HMA		4	6
	CONC		7	6
RESIDENTIAL	HMA		3	4
	CONC		6	4
	AGG			4

- COMMERCIAL HMA DRIVE, THREE EQUAL LIFTS
- COMMERCIAL CONCRETE DRIVE. 7" NON-REINFORCED
- RESIDENTIAL HMA DRIVE. TWO EQUAL LIFTS
- RESIDENTIAL CONCRETE DRIVE. 6" NON-REINFORCED
- AGGREGATE DRIVE. 4" AGGREGATE APPROACH ONLY

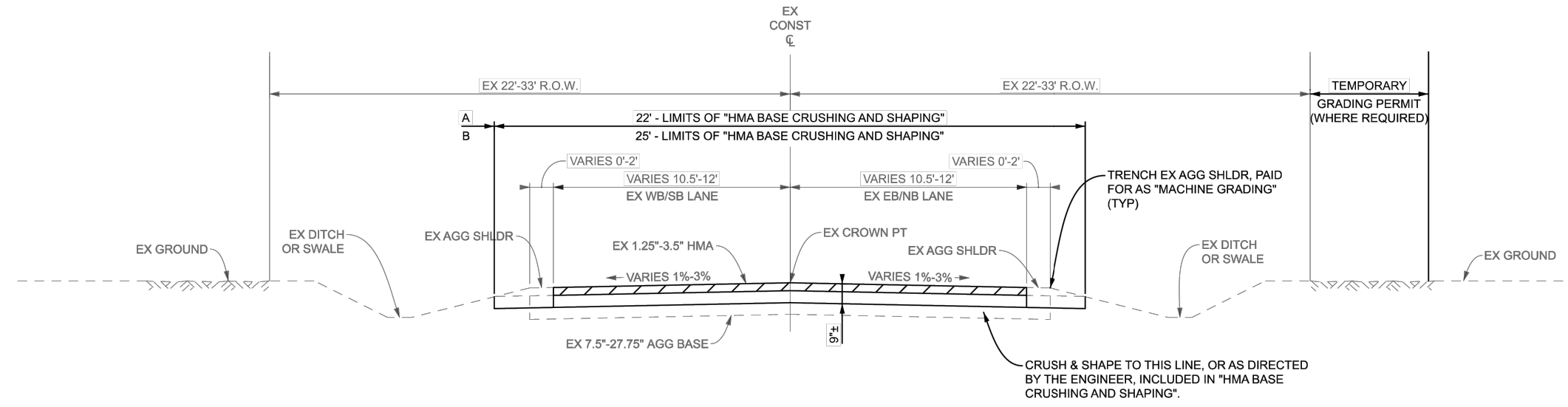


DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

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NOTES AND DETAILS
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001NOT
SCALE: NO SCALE	SHEET 3 OF 21

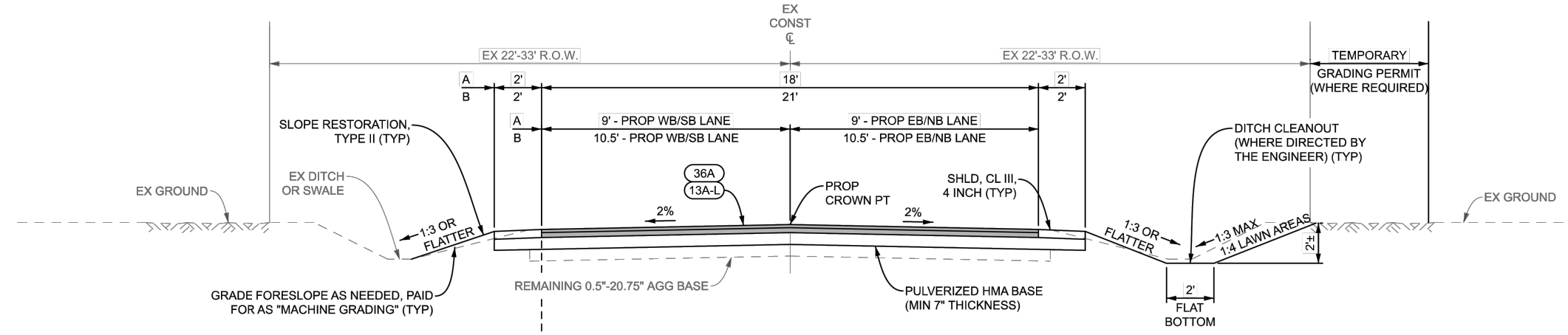


EX TYPICAL CROSS-SECTION

CRUSH & SHAPE TO THIS LINE, OR AS DIRECTED BY THE ENGINEER, INCLUDED IN "HMA BASE CRUSHING AND SHAPING".
 SURPLUS PULVERIZED MATERIAL MAY BE WINDROWED OR OTHERWISE STOCKPILED FOR USE AS "SHLD, CL III" AND "APPROACH, CL III"

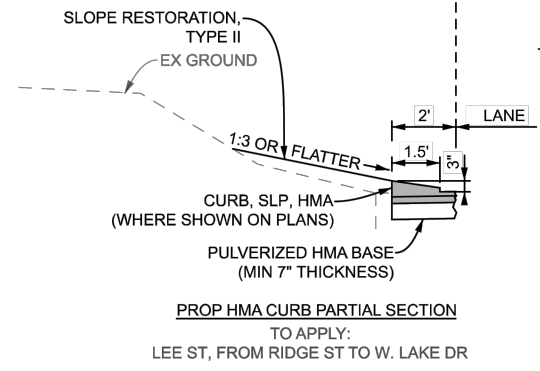
NOTES:
 GRADE AND COMPACT CRUSHED HMA BASE MATERIAL THE FULL WIDTH BETWEEN SHOULDER HINGE POINTS.
 WINDROW SURPLUS CRUSHED MATERIAL BEYOND THE HMA PAVING LIMITS FOR USE AS "SHLD, CL III, 4 INCH" MATERIAL TO MODERATE THE INCREASE IN FINISHED GRADE FOLLOWING HMA PAVING.

- TO APPLY:
- B: GOSSARD AVE, FROM BIBER ST TO N. END
 - B: PORTER AVE, FROM BIBER ST TO N. END
 - B: BIBER ST, FROM GOSSARD AVE TO TOWAR AVE
 - B: BIBER ST, FROM POLLARD AVE TO HARDY AVE
 - B: BAKER ST, FROM HIGH ST TO MARSH RD
 - B: HIGH ST, FROM CREST ST TO BAKER ST
 - B: MICHAEL ST, FROM HIGH ST TO MARSH RD
 - B: MACK AVE, FROM W. LAKE DR TO W. REYNOLDS RD
 - A: LEE ST, FROM RIDGE ST TO W. LAKE DR
 - A: CARLTON ST, FROM E. LAKE DR TO STA 173+75



PROP TYPICAL CROSS-SECTION

- TO APPLY:
- B: GOSSARD AVE, FROM BIBER ST TO N. END
 - B: PORTER AVE, FROM BIBER ST TO N. END
 - B: BIBER ST, FROM GOSSARD AVE TO TOWAR AVE
 - B: BIBER ST, FROM POLLARD AVE TO HARDY AVE
 - B: BAKER ST, FROM HIGH ST TO MARSH RD
 - B: HIGH ST, FROM CREST ST TO BAKER ST
 - B: MICHAEL ST, FROM HIGH ST TO MARSH RD
 - B: MACK AVE, FROM W. LAKE DR TO W. REYNOLDS RD
 - A: LEE ST, FROM RIDGE ST TO W. LAKE DR
 - A: CARLTON ST, FROM E. LAKE DR TO STA 173+75



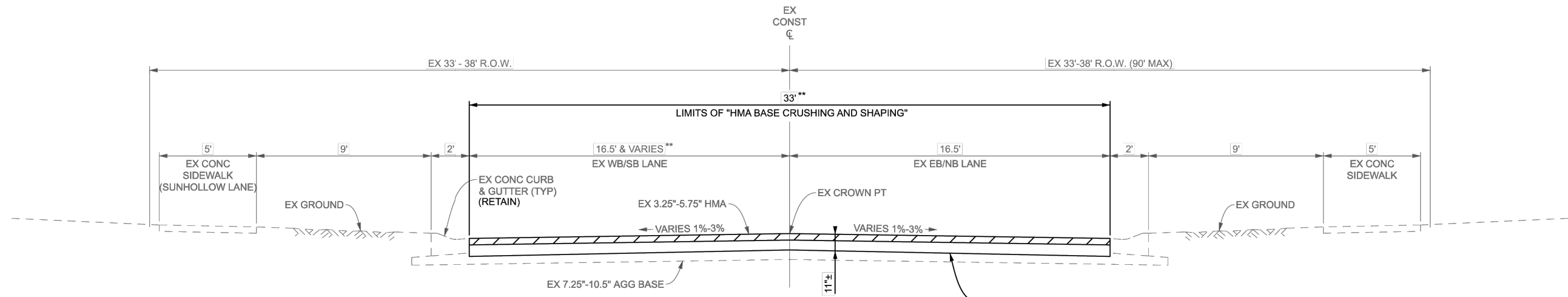
PROP HMA CURB PARTIAL SECTION
 TO APPLY:
 LEE ST, FROM RIDGE ST TO W. LAKE DR

DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

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EX & PROP TYPICAL 1
 2024 LOCAL STREET CRUSHING AND RESURFACING
 MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001TYP
SCALE: NTS	SHEET 4 OF 21



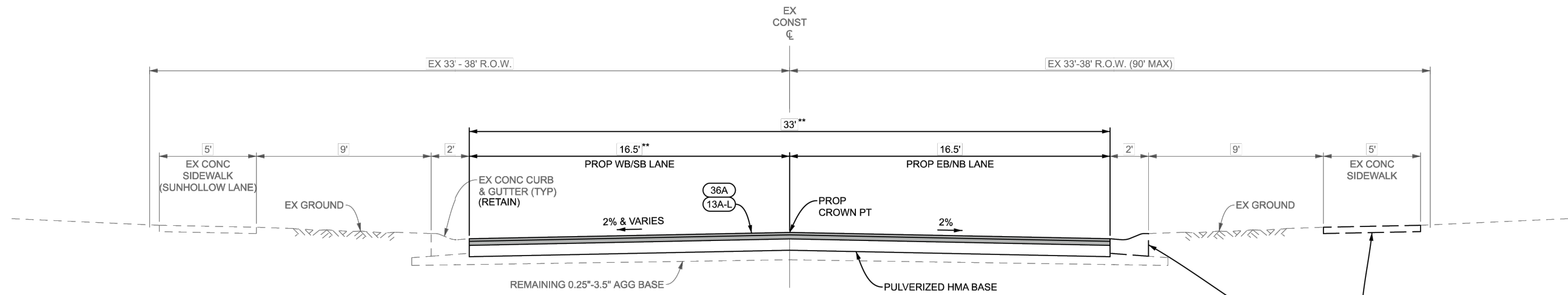
CRUSH & SHAPE TO THIS DEPTH, OR AS DIRECTED BY THE ENGINEER, INCLUDED IN "HMA BASE CRUSHING AND SHAPING".

REMOVE EXCESS CRUSHED BASE MATERIAL AND DELIVER TO THE SPECIFIED LOCATION(S), PAID FOR AS "RECYCLED AGGREGATE DELIVERY".

** VARIES 16.5' - 55' IN SUNHOLLOW CT EYEBROW AREA

EX TYPICAL CROSS-SECTION

TO APPLY:
 SUNHOLLOW LANE, FROM CREST ST TO SUNHOLLOW CT
 SUNHOLLOW CT, FROM ROYAL OAK DR TO SUNHOLLOW LANE
 BAKER ST, FROM SUNHOLLOW LANE TO HIGH ST



** VARIES 16.5' - 55' IN SUNHOLLOW CT EYEBROW AREA

PROP TYPICAL CROSS-SECTION

TO APPLY:
 SUNHOLLOW LANE, FROM CREST ST TO SUNHOLLOW CT
 SUNHOLLOW CT, FROM ROYAL OAK DR TO SUNHOLLOW LANE
 BAKER ST, FROM SUNHOLLOW LANE TO HIGH ST

CURB RAMP OPENING AND CURB RAMP REMOVAL & REPLACEMENT BY OTHERS (NOT PART OF THIS CONTRACT). SEE COORDINATION CLAUSE FOR ADDITIONAL INFORMATION.

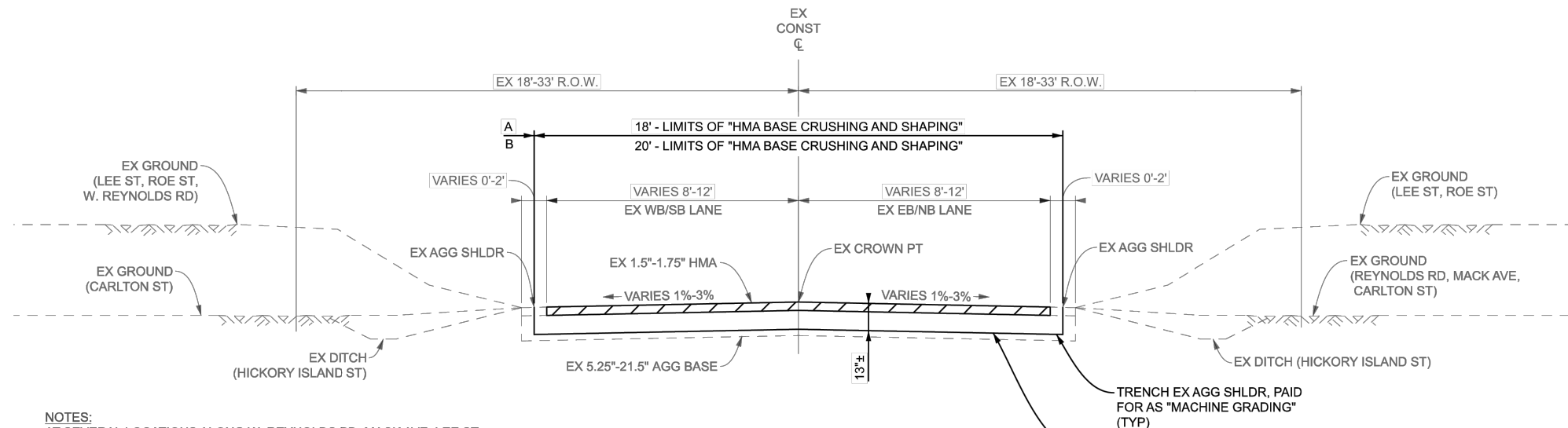
DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

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EX & PROP TYPICAL 2

2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001TYP
SCALE: NTS	SHEET 5 OF 21



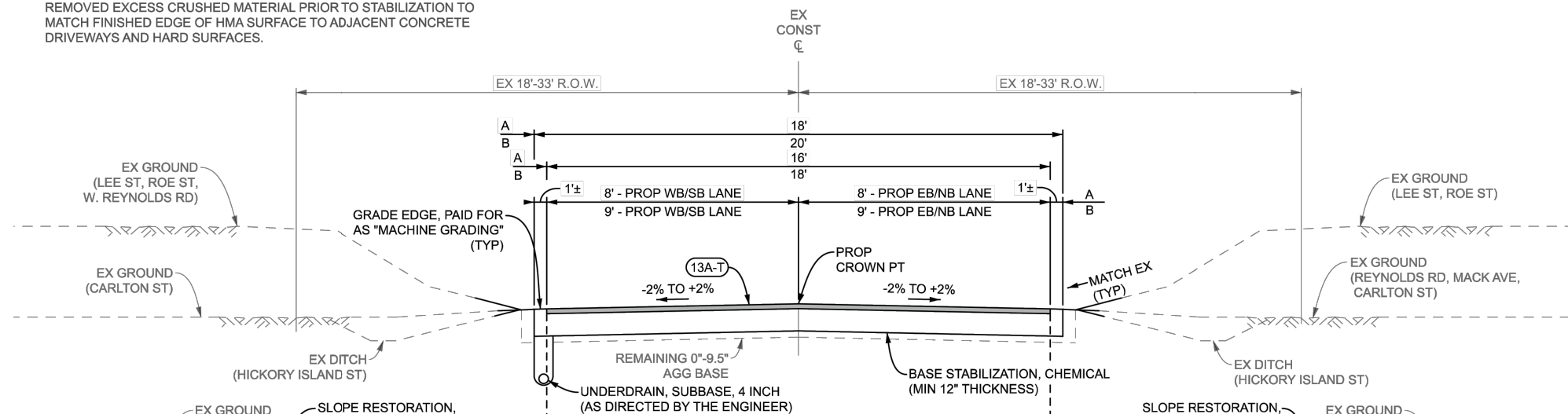
EX TYPICAL CROSS-SECTION

TO APPLY:
 A: W. REYNOLDS RD, FROM W. LAKE DR TO MACK AVE
 B: LEE ST, FROM W. LAKE DR TO W. REYNOLDS RD
 A: ROE ST, FROM W. LAKE DR TO W. REYNOLDS RD
 B: CARLTON ST, FROM STA 173+75 TO HICKORY ISLAND ST
 B: HICKORY ISLAND ST, FROM END TO E. LAKE DR

NOTES:
 AT SEVERAL LOCATIONS ALONG W. REYNOLDS RD, MACK AVE, LEE ST, AND ROE ST, THERE ARE EXISTING STRUCTURES, RETAINING WALLS, FENCES, BOULDERS, AND OTHER LANDSCAPING FEATURES IN CLOSE PROXIMITY TO THE ROADWAY. THE CONTRACTOR SHALL AVOID ANY DISTURBANCES TO ABOVE-MENTIONED ITEMS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

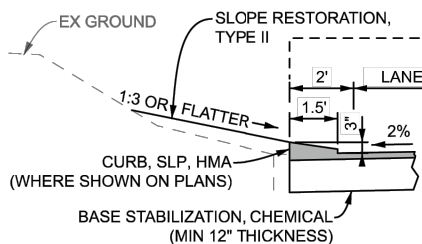
WINDROW CRUSHED MATERIAL BEYOND HMA PAVING LIMITS TO GRADE FINISHED EDGE OF FRONT SLOPE FLUSH WITH HMA SURFACE.

REMOVED EXCESS CRUSHED MATERIAL PRIOR TO STABILIZATION TO MATCH FINISHED EDGE OF HMA SURFACE TO ADJACENT CONCRETE DRIVEWAYS AND HARD SURFACES.



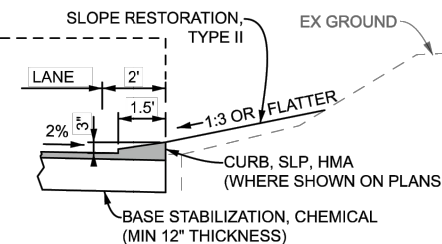
PROP TYPICAL CROSS-SECTION

TO APPLY:
 B: W. REYNOLDS RD, FROM W. LAKE DR TO MACK AVE
 B: LEE ST, FROM W. LAKE DR TO W. REYNOLDS RD
 A: ROE ST, FROM W. LAKE DR TO W. REYNOLDS RD
 B: CARLTON ST, FROM STA 173+75 TO HICKORY ISLAND ST
 B: HICKORY ISLAND ST, FROM END TO E. LAKE DR



PROP HMA CURB PARTIAL SECTION

TO APPLY:
 ROE ST, FROM W. LAKE DR TO W. REYNOLDS RD



PROP HMA CURB PARTIAL SECTION

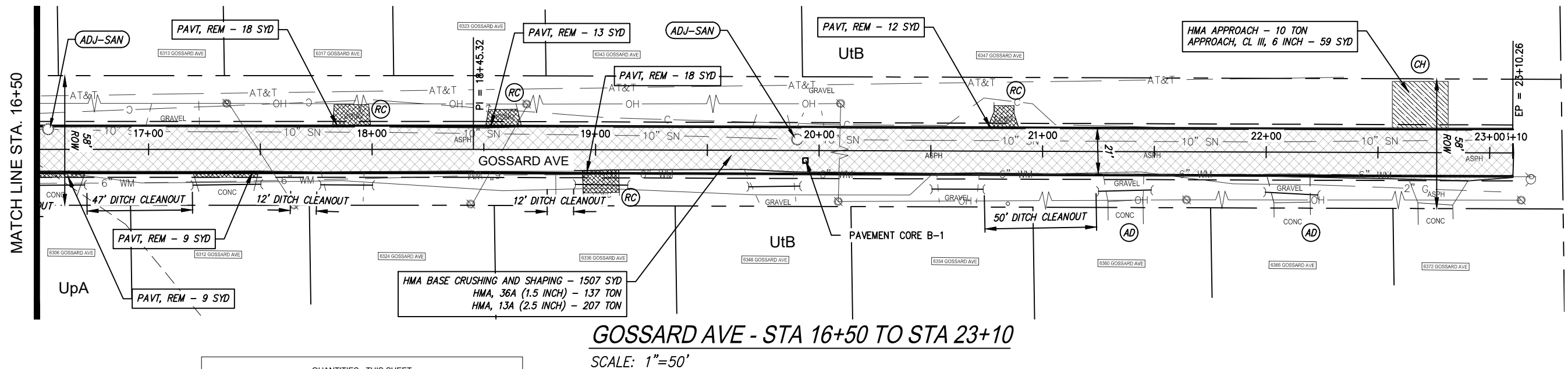
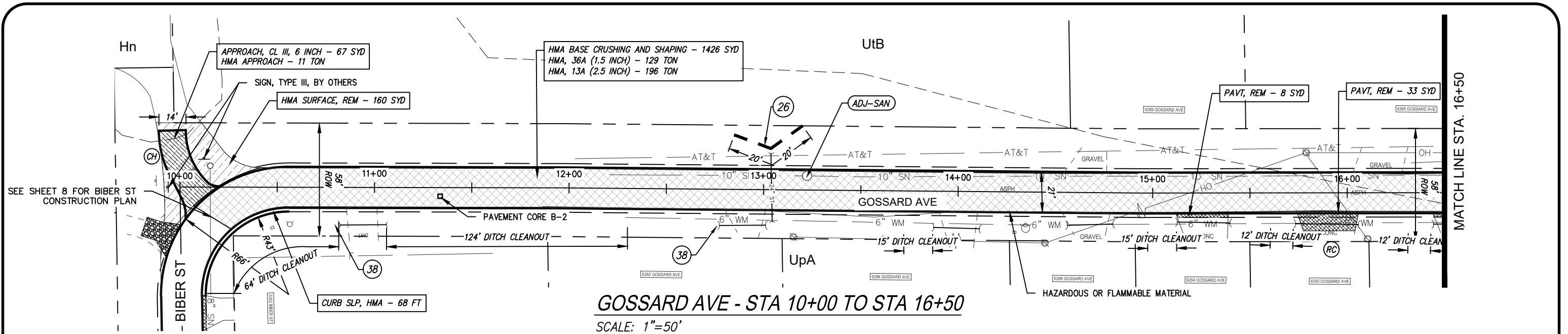
TO APPLY:
 ROE ST, FROM W. LAKE DR TO W. REYNOLDS RD

DRAWN BY: SL & NS	DATE: 10-24-23
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EX & PROP TYPICAL 3
 2024 LOCAL STREET CRUSHING AND RESURFACING
 MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001TYP
SCALE: NTS	SHEET 6 OF 21



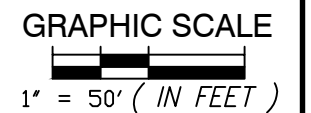
QUANTITIES - THIS SHEET

Item	Quantity	Unit
Pavt, Rem	120	Syd
Ditch Cleanout	3.5	Sta
Machine Grading	26	Sta
Erosion Control, Silt Fence	40	Ft
Erosion Control, Straw Wattle, 9 Inch	10	Ft
HMA Base Crushing and Shaping	2933	Syd
HMA Surface, Rem	160	Syd
Approach, CI III, 6 inch	126	Syd
Shld, CI III, 4 inch	578	Syd
Dr Structure, Temp Lowering	3	Ea
HMA, 13A	403	Ton
HMA, 36A	266	Ton
HMA Approach	24	Ton
Curb Slp, HMA	68	Ft
Slope Restoration, Type II	2809	Syd
Sanitary Structure Cover, Adj, Case 1, Modified	3	Ea

DRIVEWAY TABLE

MATERIAL	STA	RT/LT	Ex Slope	Prop Slope	Length
HMA	22+75	RT	-0.9%	-9.2%	2
AGG/CONC	22+11	RT	2.2%	0.1%	8
AGG/CONC	21+35	RT	2.8%	0.0%	6
CONC	20+82	LT	1.6%	-0.1%	10
AGG	20+61	RT	1.2%	-2.1%	5
CONC	19+01	RT	1.4%	-0.3%	10
CONC	18+58	LT	4.2%	2.1%	8
CONC	17+91	LT	6.9%	5.2%	10
CONC	17+34	RT	0.2%	-8.2%	2
CONC	16+57	RT	0.9%	-7.4%	2
CONC	15+87	RT	1.9%	0.3%	10
CONC	15+26	RT	10.0%	1.7%	2

*MEASURED TO EXISTING ROAD EDGE



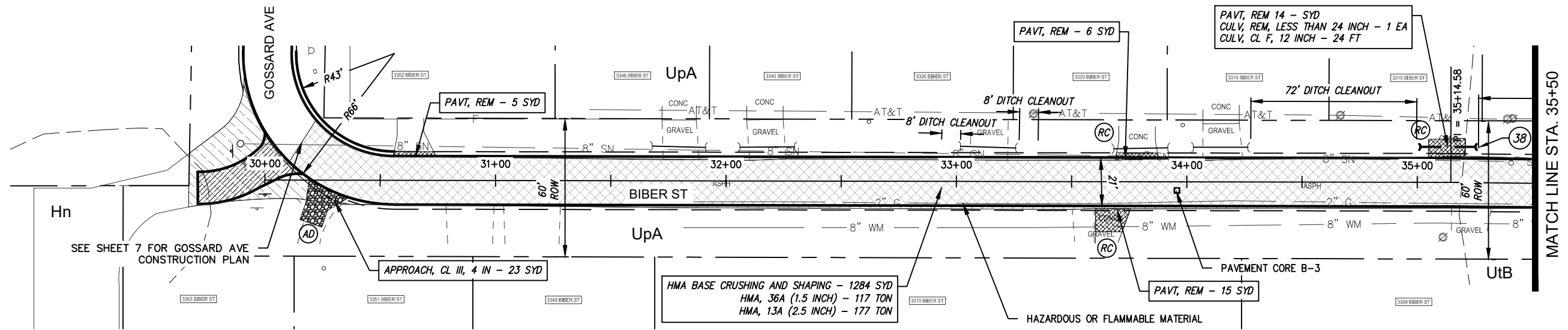
DRAWN BY: SL & NS	DATE: 10-24-23
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PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

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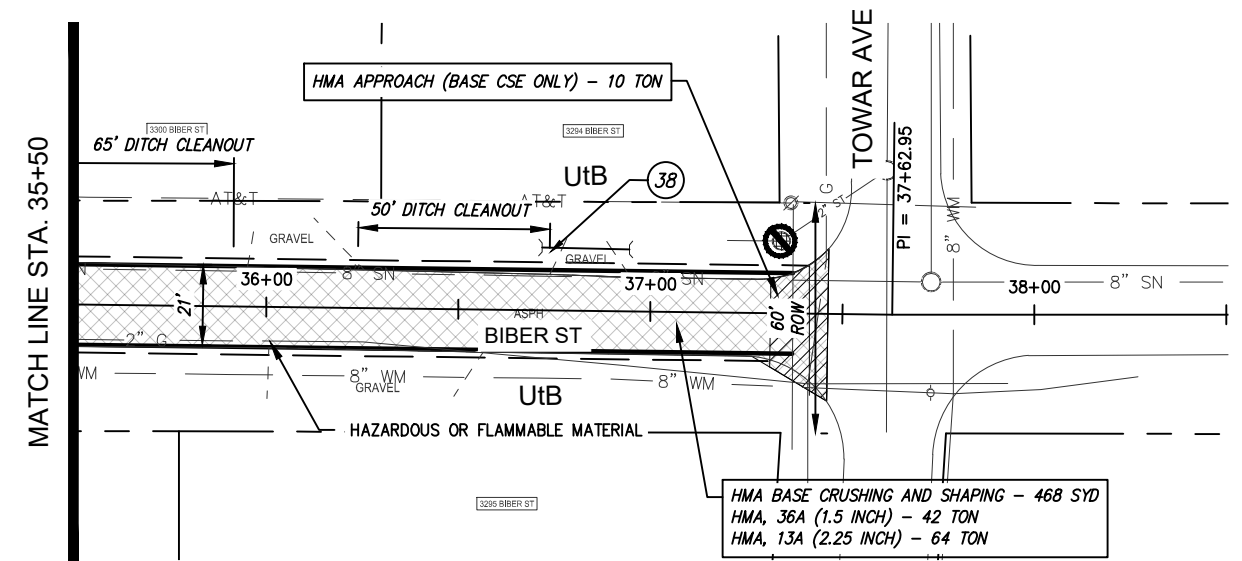
PAVING AND REMOVALS - GOSSARD AVE
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON
SCALE: 1" = 50'	SHEET 7 OF 21



BIBER ST - STA 30+00 TO STA 35+50

SCALE: 1"=50'



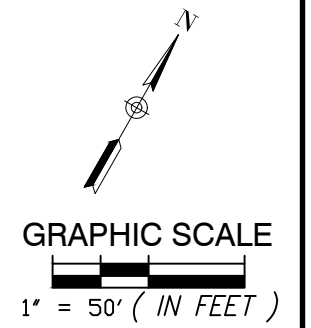
BIBER ST - STA 35+50 TO STA 37+47

SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Culv, Rem, Less than 24 Inch	1	Ea
Pavt, Rem	40	Syd
Ditch Cleanout	2	Sta
Machine Grading	14	Sta
Erosion Control, Inlet Protection, Fabric Drop	1	Ea
Erosion Control, Straw Wattle, 9 Inch	20	Ft
HMA Base Crushing and Shaping	1748	Syd
Approach, Cl III, 4 inch	49	Syd
Shld, Cl III, 4 inch	311	Syd
Dr Structure, Temp Lowering	1	Ea
Culv, Cl F, 12 inch	24	Ft
HMA, 13A	229	Ton
HMA, 36A	151	Ton
HMA Approach	12	Ton
Slope Restoration, Type II	1475	Syd
Sanitary Structure Cover, Adj, Case 1, Modified	1	Ea

DRIVEWAY TABLE					
MATERIAL	Sta	RT/LT	Ex Slope	Prop Slope	Length
CONC	33+65	RT	1.6%	0.0%	10
CONC	33+79	LT	0.5%	-7.9%	2
CONC	35+12	LT	1.9%	0.2%	10
CONC	51+94	LT	1.2%	-0.5%	10

*MEASURED TO EXISTING ROAD EDGE

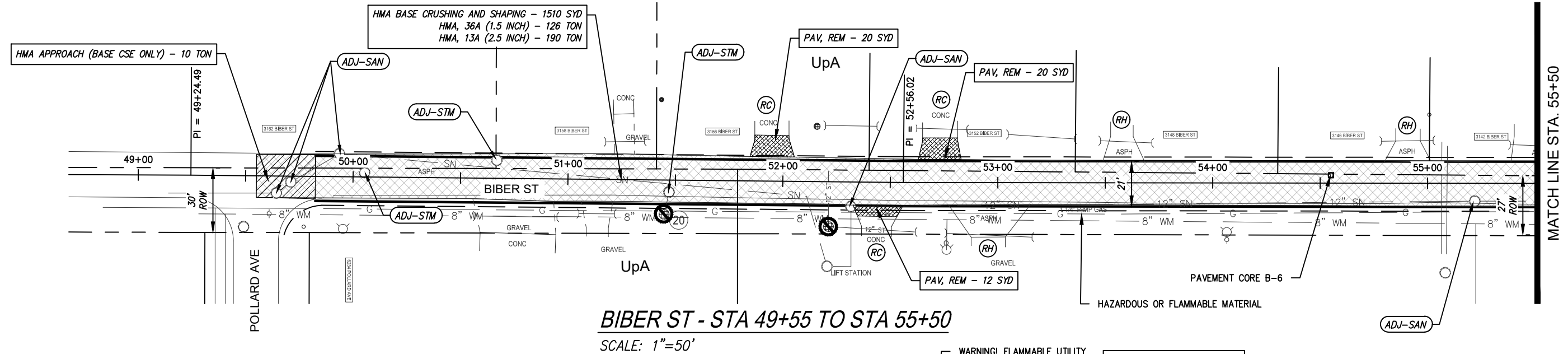


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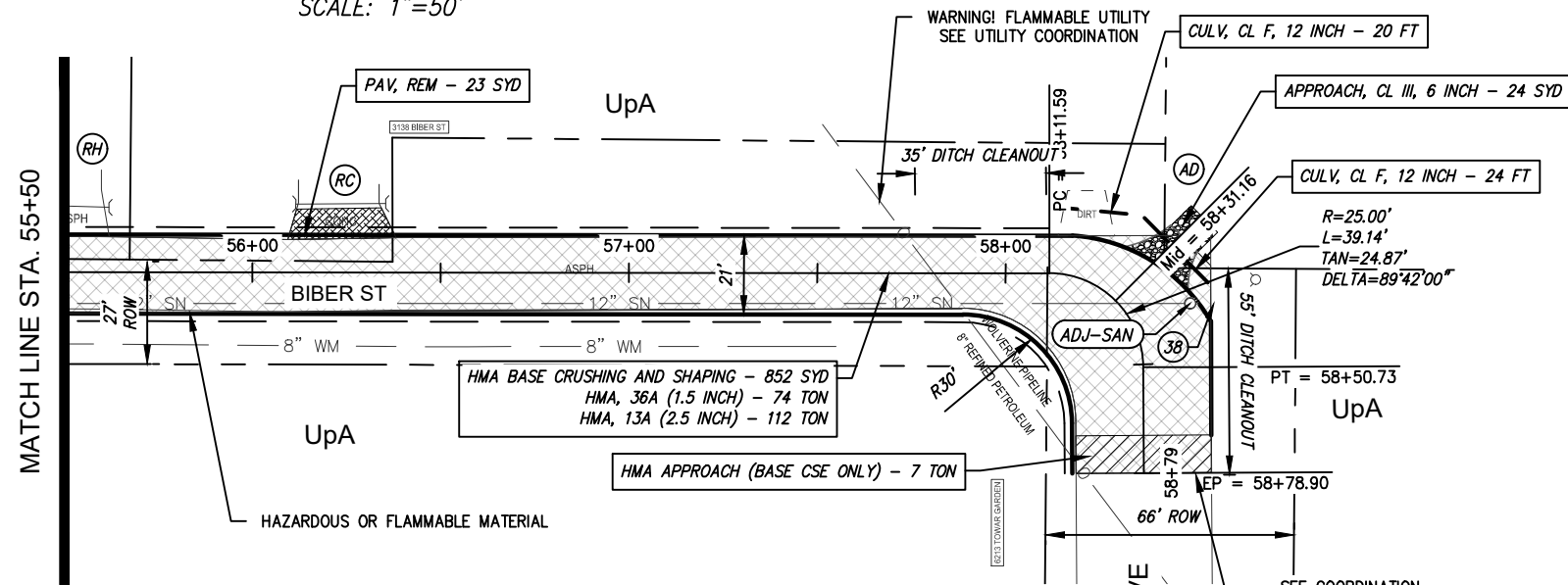
PAVING AND REMOVALS - BIBER ST
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON
SCALE: 1" = 50'	SHEET 8 OF 21



BIBER ST - STA 49+55 TO STA 55+50

SCALE: 1"=50'

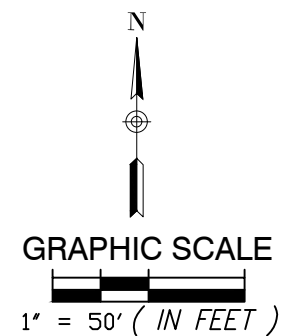


BIBER ST & HARDY AVE- STA 55+50 TO STA 58+79

SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Pavt, Rem	75	Syd
Ditch Cleanout	1	Sta
Machine Grading	17	Sta
Erosion Control, Inlet Protection, Fabric Drop	2	Ea
Erosion Control, Straw Wattle, 9 Inch	10	Ft
HMA Base Crushing and Shaping	2362	Syd
Approach, CI III, 6 inch	28	Syd
Shld, CI III, 4 inch	378	Syd
Culv, CI F, 12 inch	44	Ft
Dr Structure, Temp Lowering	9	Ea
Dr Structure Cover, Adj, Case 1, Modified	3	Ea
HMA, 13A	302	Ton
HMA, 36A	199	Ton
HMA Approach	20	Ton
Slope Restoration, Type II	1478	Syd
Sanitary Structure Cover, Adj, Case 1, Modified	6	Ea

DRIVEWAY TABLE					
MATERIAL	Sta	RT/LT	Ex Slope	Prop Slope	Length
CONC	52+44	RT	6.3%	3.0%	5
CONC	52+73	LT	2.4%	0.7%	10
HMA	52+95	RT	1.0%	-0.1%	15
HMA	53+57	LT	0.6%	-0.5%	15
HMA	54+91	LT	0.3%	-1.4%	10
HMA	55+50	LT	3.8%	0.5%	5
CONC	56+22	LT	2.4%	0.3%	8

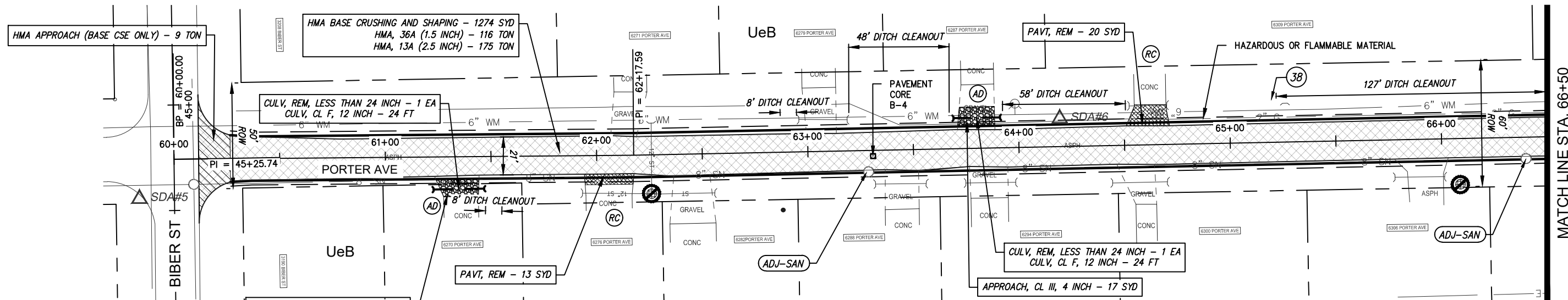


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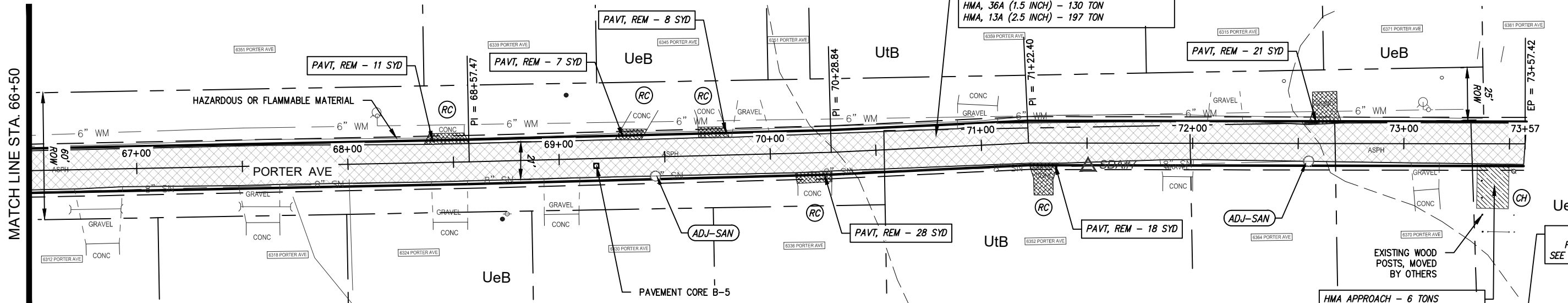
PAVING AND REMOVALS - BIBER ST & HARDY AVE
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON
SCALE: 1" = 50'	SHEET 9 OF 21



PORTER AVE - STA 60+13 TO STA 66+50

SCALE: 1"=50'



PORTER AVE - STA 66+50 TO STA 73+57

SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Culv, Rem, Less than 24 Inch	2	Ea
Pavt, Rem	108	Syd
Ditch Cleanout	2.5	Sta
Machine Grading	26	Sta
Erosion Control, Inlet Protection, Fabric Drop	2	Ea
Erosion Control, Straw Wattle, 9 Inch	10	Ft
HMA Base Crushing and Shaping	2760	Syd
Approach, Cl III, 4 inch	39	Syd
Approach, Cl III, 6 inch	40	Syd
Shld, Cl III, 4 inch	578	Syd
Culv, Cl F, 12 inch	48	Ft
Dr Structure, Temp Lowering	4	Ea
HMA, 13A	372	Ton
HMA, 36A	246	Ton
HMA Approach	17	Ton
Slope Restoration, Type II	1934	Ton
Sanitary Structure Cover, Adj, Case 1, Modified	4	Ea

DRIVEWAY TABLE					
MATERIAL	Sta	RT/LT	Ex Slope	Prop Slope	Length
CONC	62+04	RT	-1.3%	-4.6%	5
CONC	64+61	LT	-6.0%	-7.6%	10
CONC	68+47	LT	-0.8%	-4.1%	5
CONC	69+32	LT	4.0%	0.7%	5
CONC	69+71	LT	1.3%	-2.1%	5
CONC	70+20	RT	-0.9%	-4.3%	5
CONC	71+29	RT	1.6%	0.5%	15
CONC	72+61	LT	1.0%	-0.1%	15

WARNING!
FLAMMABLE UTILITY
SEE UTILITY COORDINATION

WOLVERINE PIPELINE
OF REFINED PETROLEUM



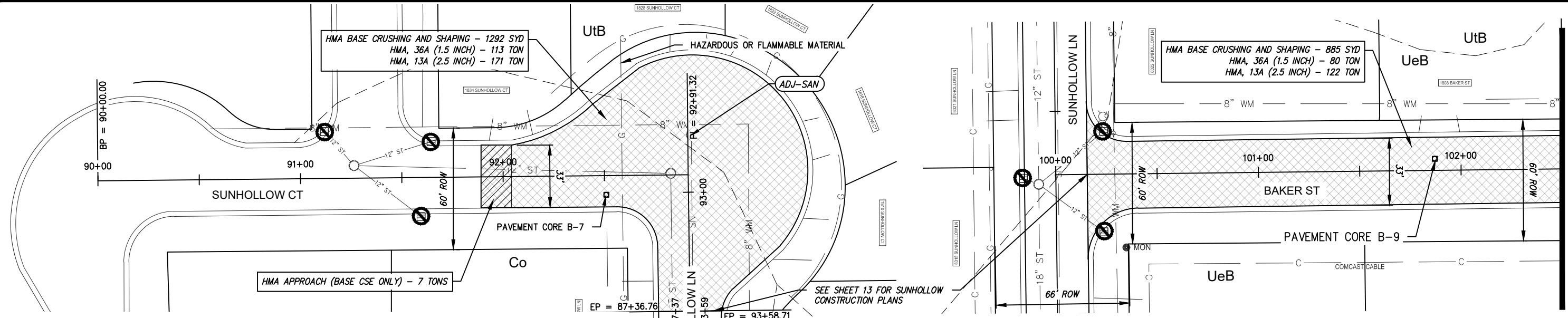
GRAPHIC SCALE
1' = 50' (IN FEET)

DRAWN BY: SL & NS	DATE: 10-24-23
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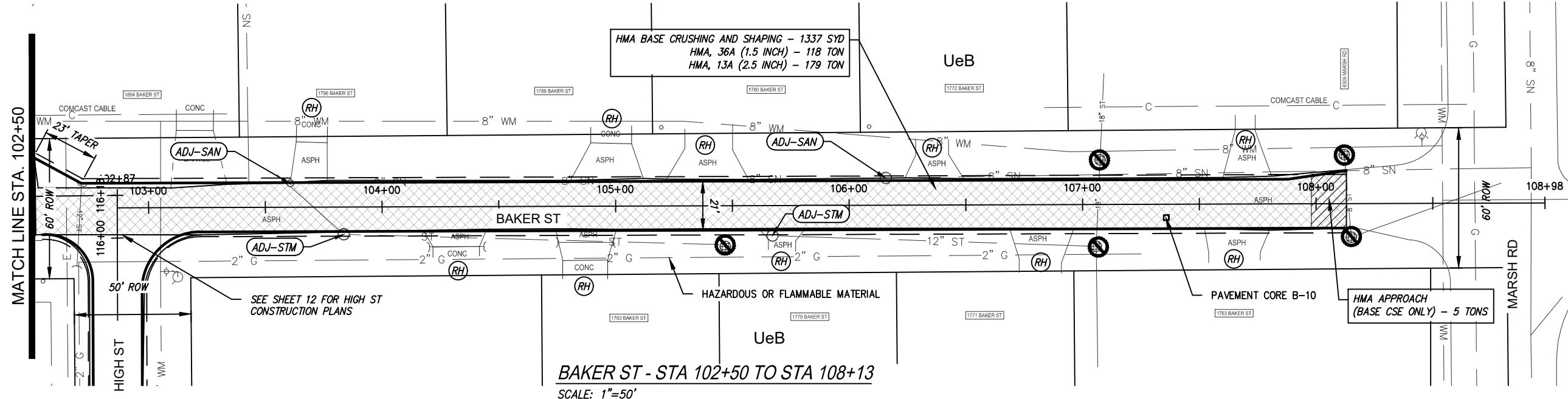
PAVING AND REMOVALS - PORTER AVE
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON
SCALE: 1" = 50'	SHEET 10 OF 21



SUNHOLLOW CT - STA 91+89 TO STA 93+59
SCALE: 1"=50'

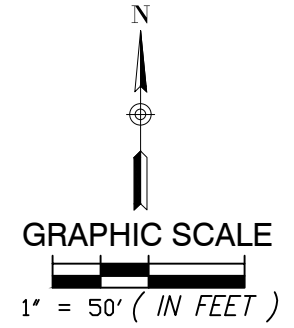
BAKER ST - STA 100+36 TO STA 102+50
SCALE: 1"=50'



BAKER ST - STA 102+50 TO STA 108+13
SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Machine Grading	12	Sta
Erosion Control, Inlet Protection, Fabric Drop	11	Ea
HMA Base Crushing and Shaping	3514	Syd
Shld, CI III, 4 inch	267	Syd
Dr Structure, Temp Lowering	5	Ea
Dr Structure Cover, Adj, Case 1, Modified	2	Ea
HMA, 13A	471	Ton
HMA, 36A	311	Ton
HMA Approach	14	Ton
Sanitary Structure Cover, Adj, Case 1, Modified	3	Ea

DRIVEWAY TABLE					
MATERIAL	Sta	RT/LT	Ex Slope	Prop Slope	Length
HMA	103+69	LT	-1.1%	-5.3%	4
HMA	104+30	RT	-2.2%	-4.1%	9
HMA	104+86	RT	6.6%	1.0%	3
HMA	104+98	LT	-4.4%	-7.7%	5
HMA	105+39	LT	-4.2%	-7.0%	6
HMA	105+75	RT	-7.1%	-8.2%	15
HMA	106+35	LT	-3.6%	-6.9%	5
HMA	106+81	RT	-3.6%	-6.9%	5
HMA	107+64	RT	-5.6%	-8.0%	7
HMA	107+71	LT	-2.6%	-6.7%	4

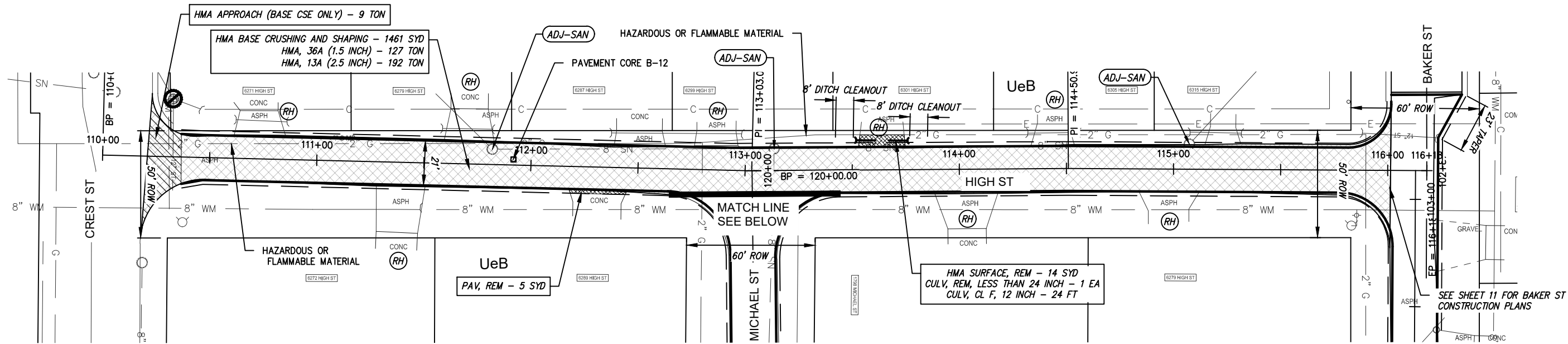


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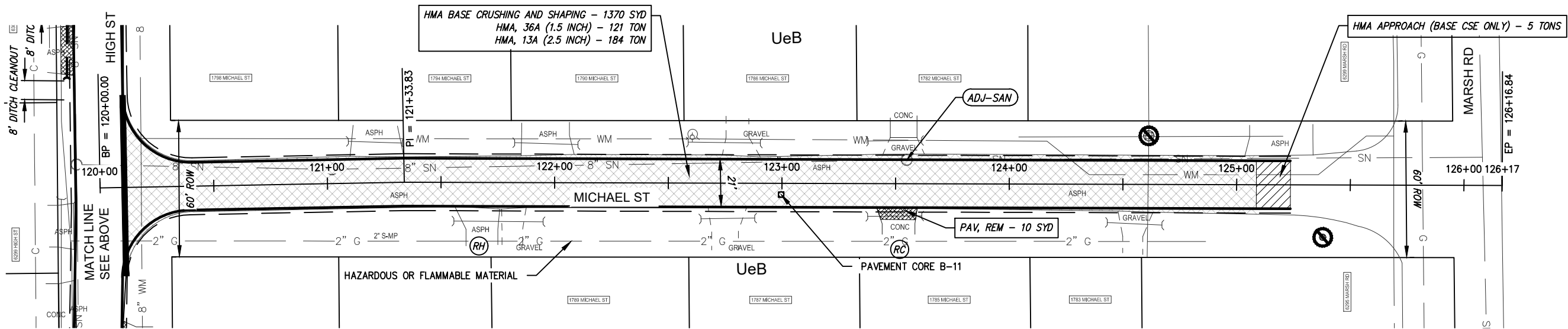
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PAVING AND REMOVALS - SUNHOLLOW CT & BAKER ST
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON-2
SCALE: 1" = 50'	SHEET 11 OF 21



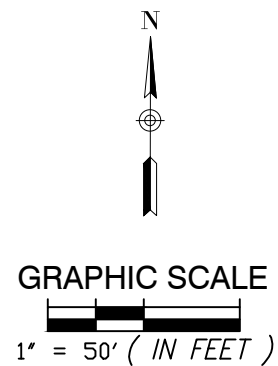
HIGH ST - STA 110+20 TO STA 116+01
SCALE: 1"=50'



MICHAEL ST - STA 120+11 TO STA 125+24
SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Culv, Rem, Less than 24 Inch	1	Ea
Pavt, Rem	9	Syd
Ditch Cleanout	0.5	Sta
Machine Grading	23	Sta
Erosion Control, Inlet Protection, Fabric Drop	3	Ea
HMA Base Crushing and Shaping	2831	Syd
Shld, Cl III, 4 inch	511	Syd
Culv, Cl F, 12 inch	24	Ft
Dr Structure, Temp Lowering	4	Ea
HMA Surface, Rem	14	Syd
HMA, 13A	376	Ton
HMA, 36A	248	Ton
HMA Approach	16	Ton
Sanitary Structure Cover, Adj, Case 1, Modified	4	Ea

DRIVEWAY TABLE					
MATERIAL	Sta	RT/LT	Ex Slope	Prop Slope	Length
HMA	110+73	LT	-8.3%	-9.7%	12
HMA	111+39	RT	2.3%	0.6%	10
HMA	111+72	LT	-3.4%	-6.7%	5
HMA	112+86	LT	-1.6%	-7.2%	3
HMA	114+02	RT	-3.2%	-7.4%	4
HMA	114+44	LT	-4.6%	-7.0%	7
HMA	114+96	RT	-3.3%	-7.5%	4
HMA	115+13	LT	-3.8%	-7.1%	5
HMA	121+67	RT	1.1%	-0.6%	10
CONC	123+51	RT	-2.9%	-6.2%	5

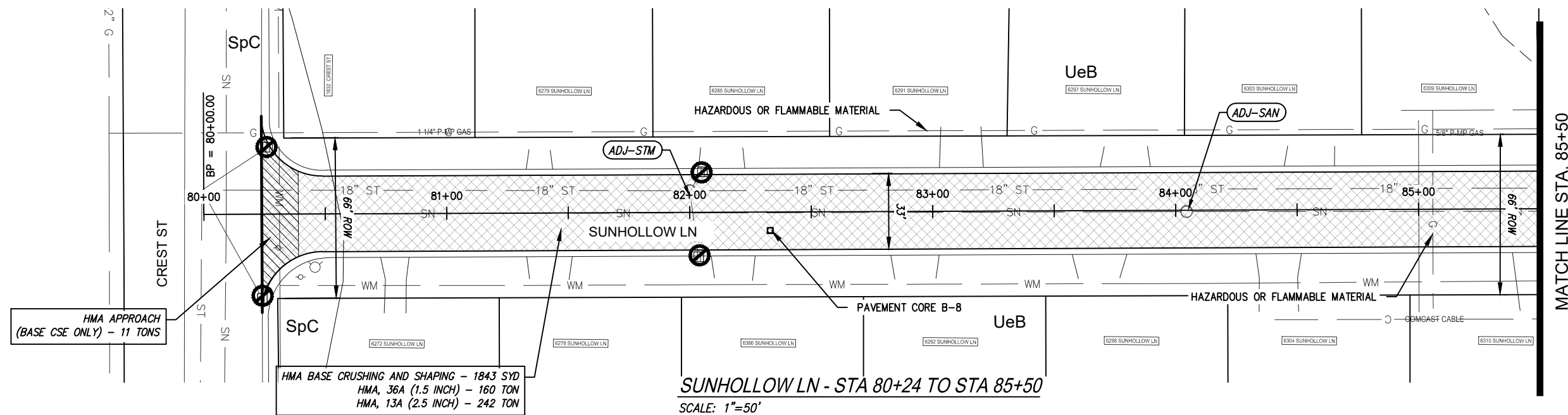


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CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

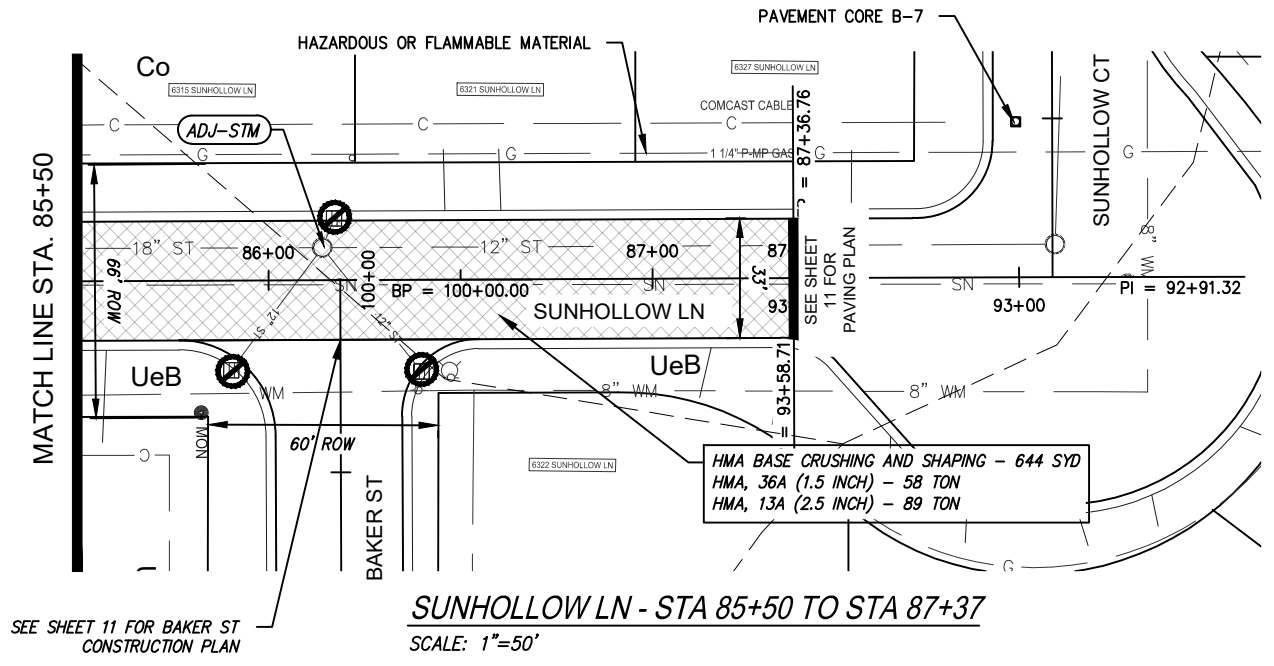

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PAVING AND REMOVALS - HIGH ST & MICHAEL ST
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON-2
SCALE: 1" = 50'	SHEET 12 OF 21

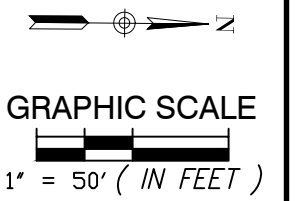


SUNHOLLOW LN - STA 80+24 TO STA 85+50
SCALE: 1"=50'



SUNHOLLOW LN - STA 85+50 TO STA 87+37
SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Erosion Control, Inlet Protection, Fabric Drop	7	Ea
HMA Base Crushing and Shaping	2487	Syd
Dr Structure, Temp Lowering	3	Ea
Dr Structure Cover, Adj, Case 1, Modified	2	Ea
HMA, 13A	331	Ton
HMA, 36A	218	Ton
HMA Approach	13	Ton
Sanitary Structure Cover, Adj, Case 1, Modified	1	Ea

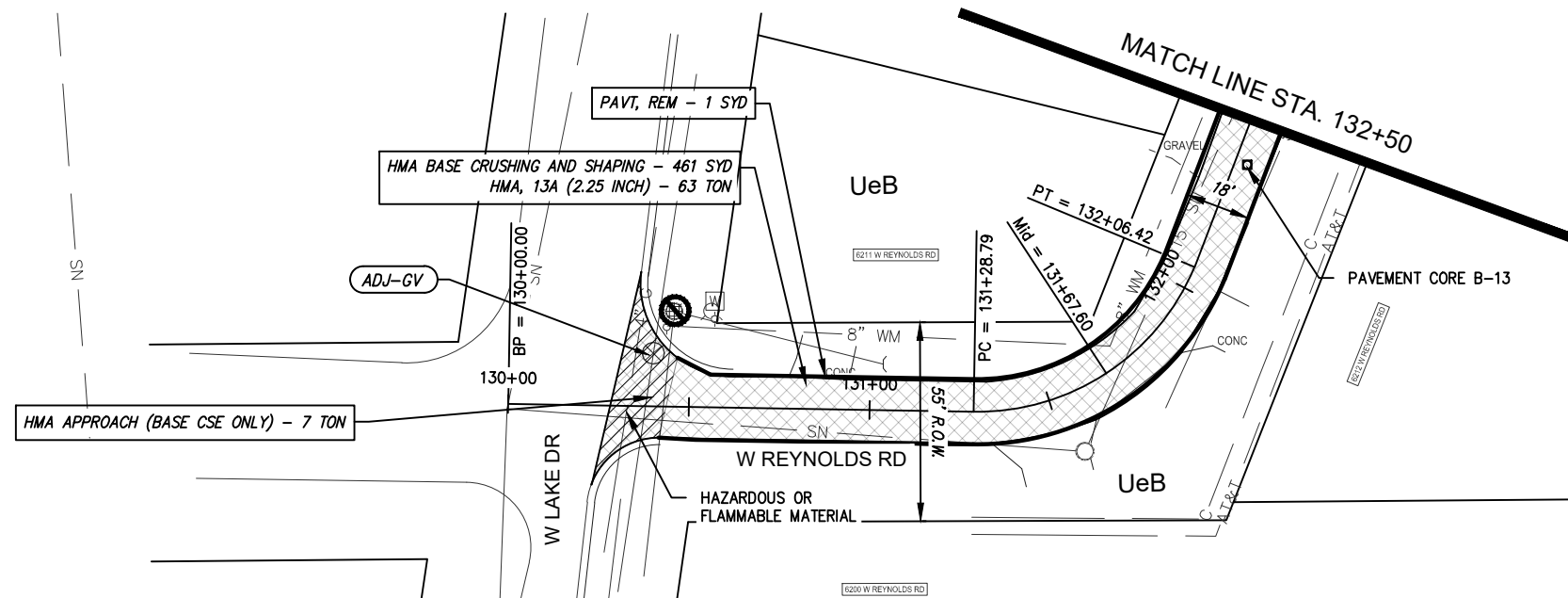


DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

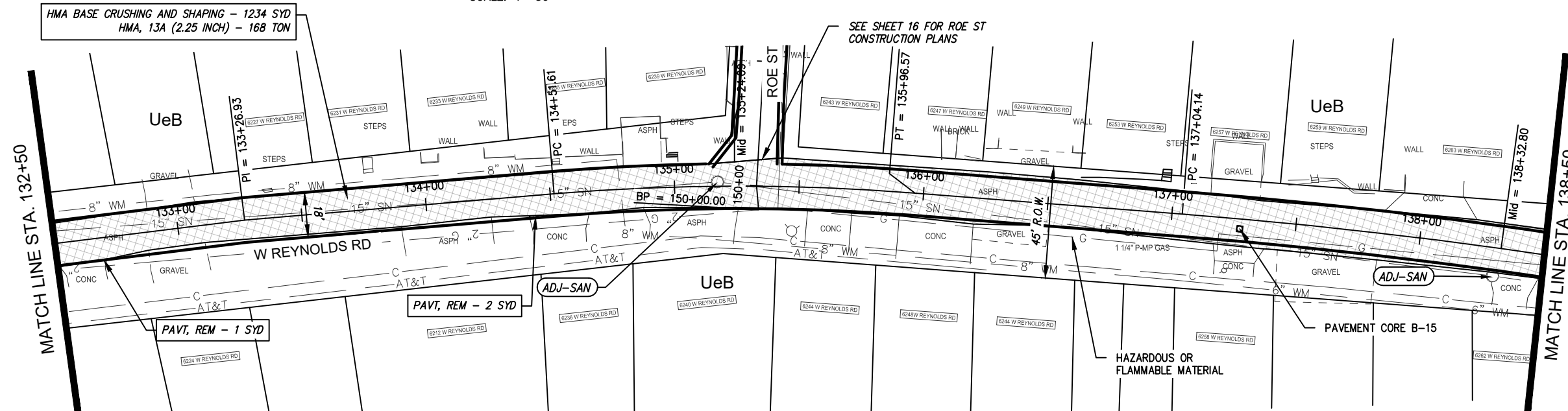
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PAVING AND REMOVALS - SUNHOLLOW LN
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON-2
SCALE: 1" = 50'	SHEET 13 OF 21

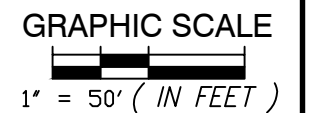
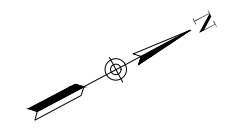
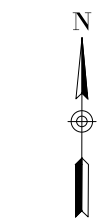


W REYNOLDS RD - STA 130+28 TO STA 132+50
SCALE: 1"=50'



W REYNOLDS RD - STA 132+50 TO STA 138+50
SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Pavt, Rem	4	Syd
Machine Grading	15	Sta
Erosion Control, Inlet Protection, Fabric Drop	1	Ea
HMA Base Crushing and Shaping	1695	Syd
Base Stabilization, Chemical	1695	Syd
Stabilization Chemical, Manufactured	50	Ton
Dr Structure, Temp Lowering	3	Ea
HMA, 13A	231	Ton
HMA Approach	8	Ton
Gate Box, Adj, Case 1	1	Ea
Sanitary Structure Cover, Adj, Case 1, Modified	2	Ea

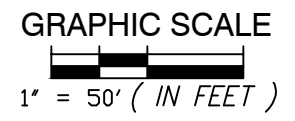
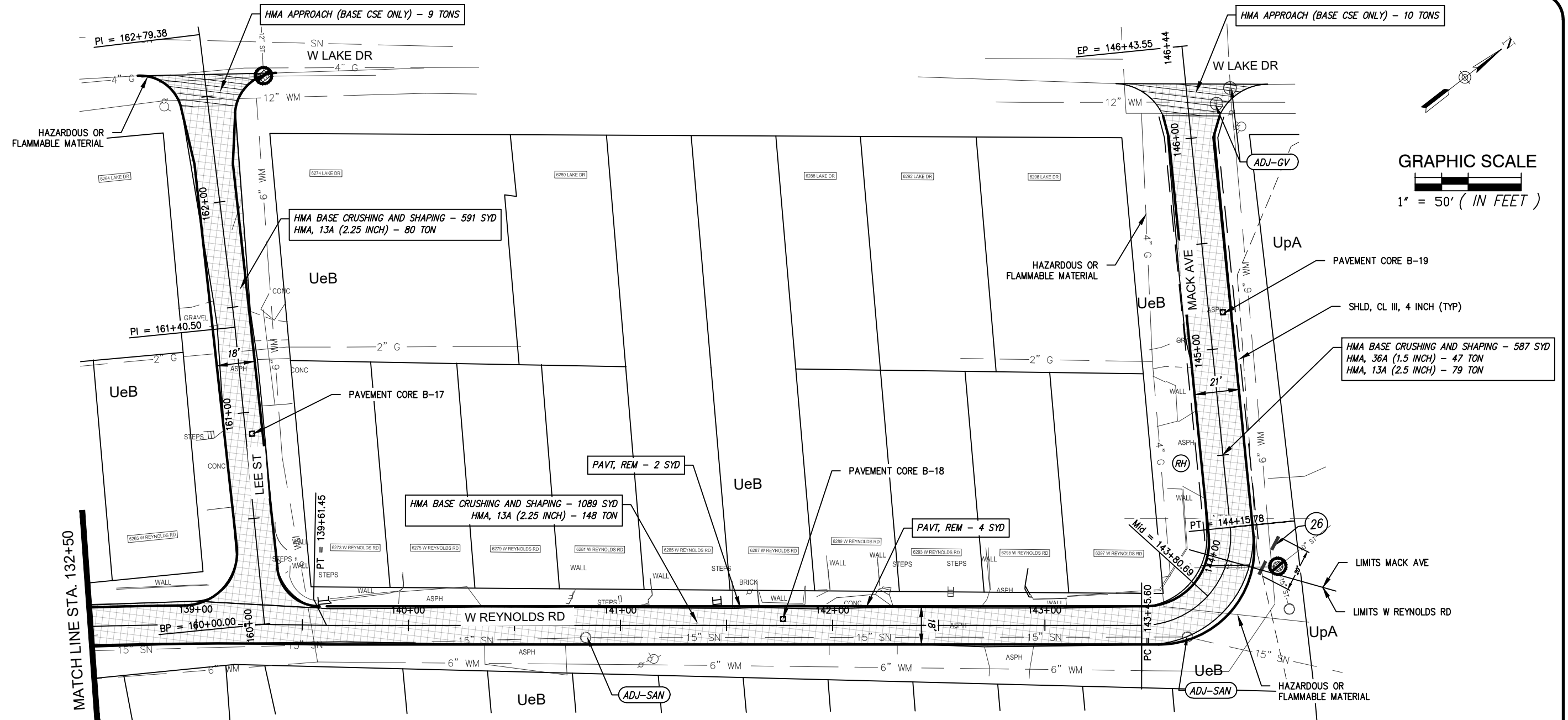


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CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24


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PAVING AND REMOVALS - W REYNOLDS RD
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON-2
SCALE: 1" = 50'	SHEET 14 OF 21



QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Pavt, Rem	6	Syd
Machine Grading	20	Sta
Erosion Control, Inlet Protection, Fabric Drop	2	Ea
HMA Base Crushing and Shaping	2267	Syd
Base Stabilization, Chemical	1680	Syd
Stabilization Chemical, Manufactured	51	Ton
Dr Structure, Temp Lowering	4	Ea
HMA, 13A	307	Ton
HMA, 36A	47	Ton
HMA Approach	22	Ton
Gate Box, Adj, Case 1	2	Ea
Sanitary Structure Cover, Adj, Case 1, Modified	2	Ea

W REYNOLDS RD & MACK AVE STA 132+50 TO 146+26
LEE ST STA 160+09 TO STA 162+60
 SCALE: 1"=50'

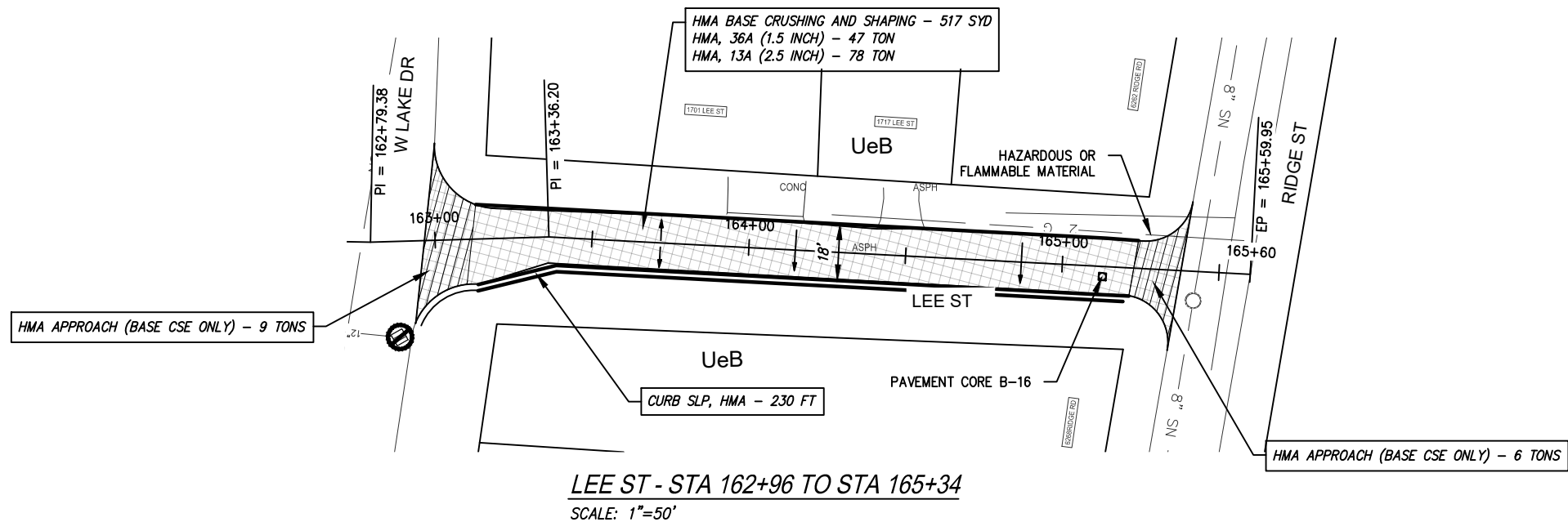
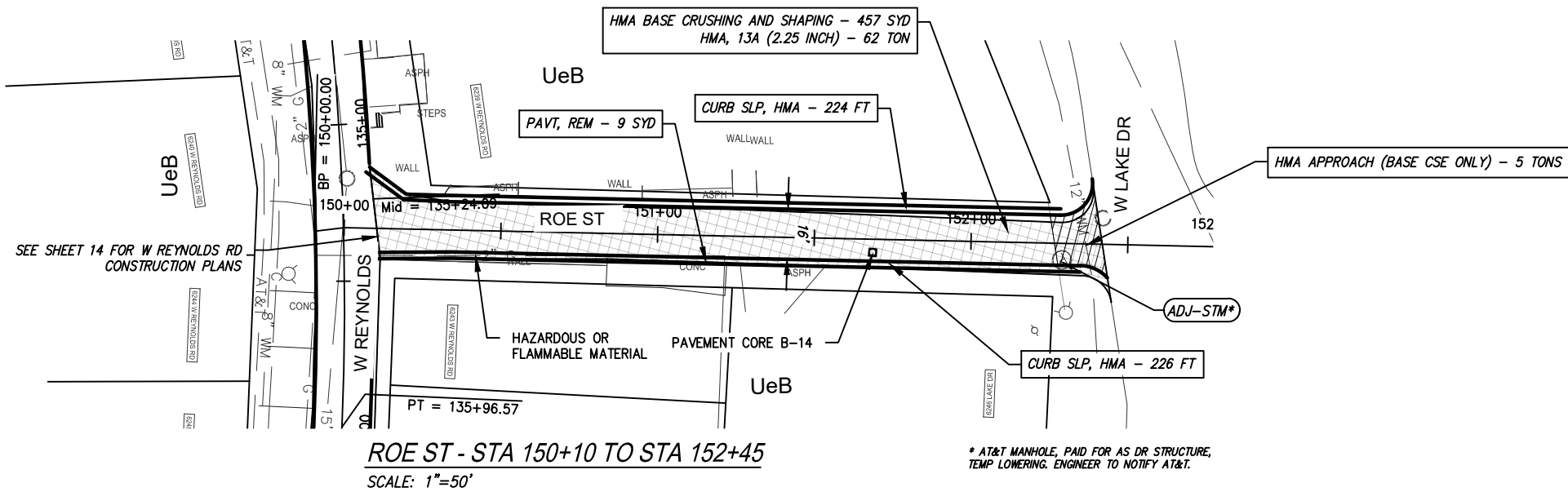
DRIVEWAY TABLE					
MATERIAL	Sta	RT/LT	Ex Slope	Prop Slope	Length
HMA	144+52	LT	9.4%	7.8%	10

DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

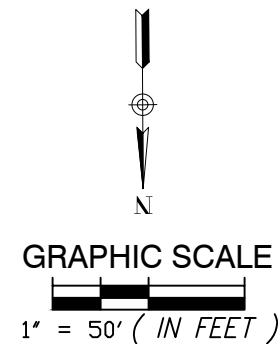
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PAVING AND REMOVALS - W REYNOLDS RD, LEE ST & MACK AVE
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON-2
SCALE: 1" = 50'	SHEET 15 OF 21



QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Pavt, Rem	9	Syd
Machine Grading	2	Sta
Erosion Control, Inlet Protection, Fabric Drop	1	Ea
HMA Base Crushing and Shaping	1073	Syd
Base Stabilization, Chemical	457	Syd
Stabilization Chemical, Manufactured	14	Ton
Dr Structure, Temp Lowering	1	Ea
Dr Structure Cover, Adj, Case 1, Modified	1	Ea
HMA, 13A	140	Ton
HMA, 36A	47	Ton
HMA Approach	23	Ton
Curb Slp, HMA	680	Ft

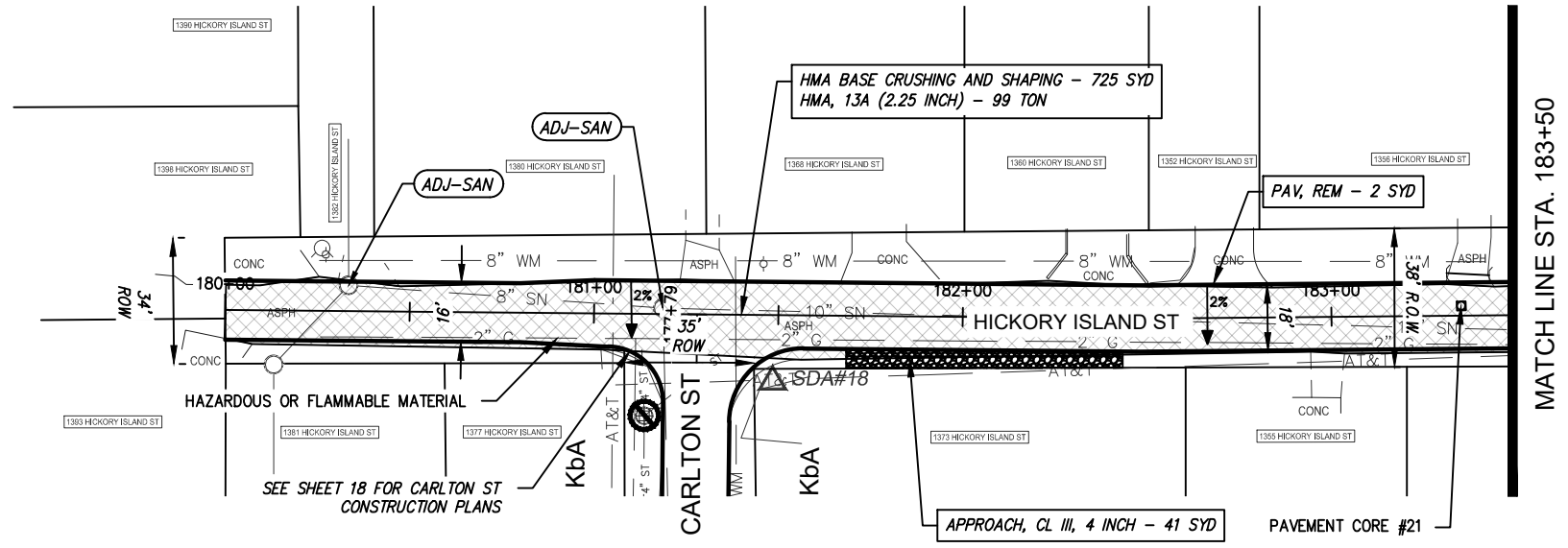


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CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

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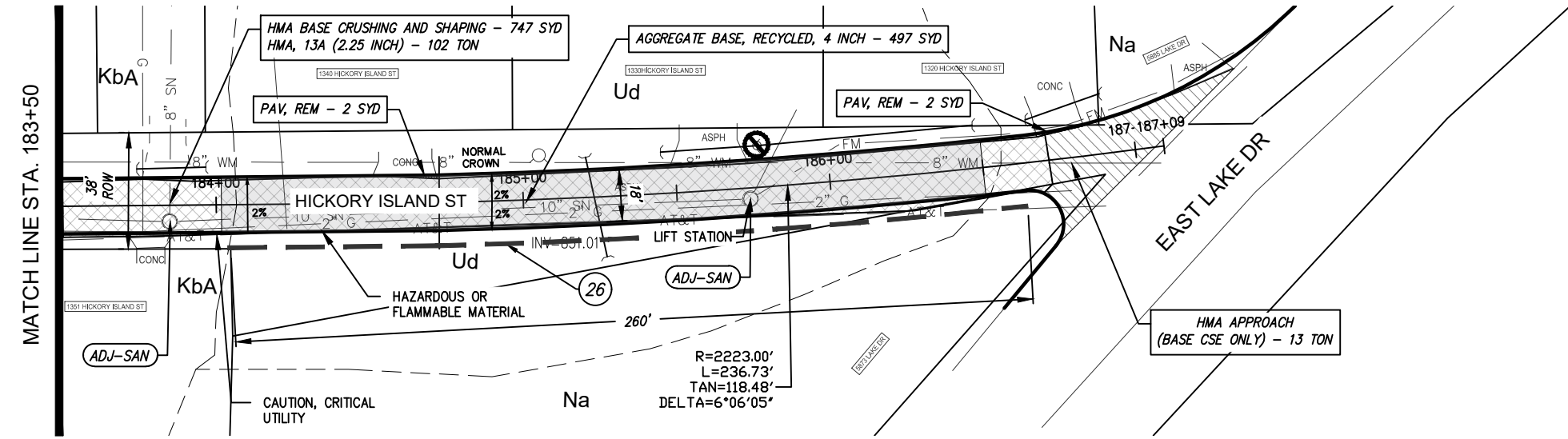
PAVING AND REMOVALS - LEE ST & ROE ST
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON-2
SCALE: 1" = 50'	SHEET 16 OF 21



HICKORY ISLAND ST - STA 180+00 TO STA 183+50

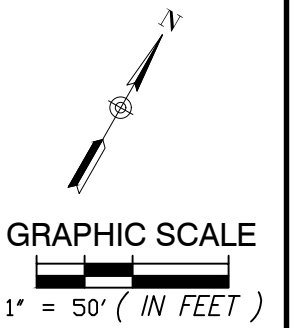
SCALE: 1"=50'



HICKORY ISLAND ST - STA 183+50 TO STA 187+09

SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Pavt, Rem	6	Syd
Machine Grading	14	Sta
Erosion Control, Inlet Protection, Fabric Drop	1	Ea
Erosion Control, Silt Fence	260	Ft
Aggregate Base, Recycled, 4 inch	497	Syd
HMA Base Crushing and Shaping	1472	Syd
Base Stabilization, Chemical	1472	Syd
Stabilization Chemical, Manufactured	45	Ton
Approach, Cl III, 4 inch	47	Syd
Dr Structure, Temp Lowering	4	Ea
HMA, 13A	175	Ton
HMA Approach	15	Ton
Sanitary Structure Cover, Adj, Case 1, Modified	4	Ea

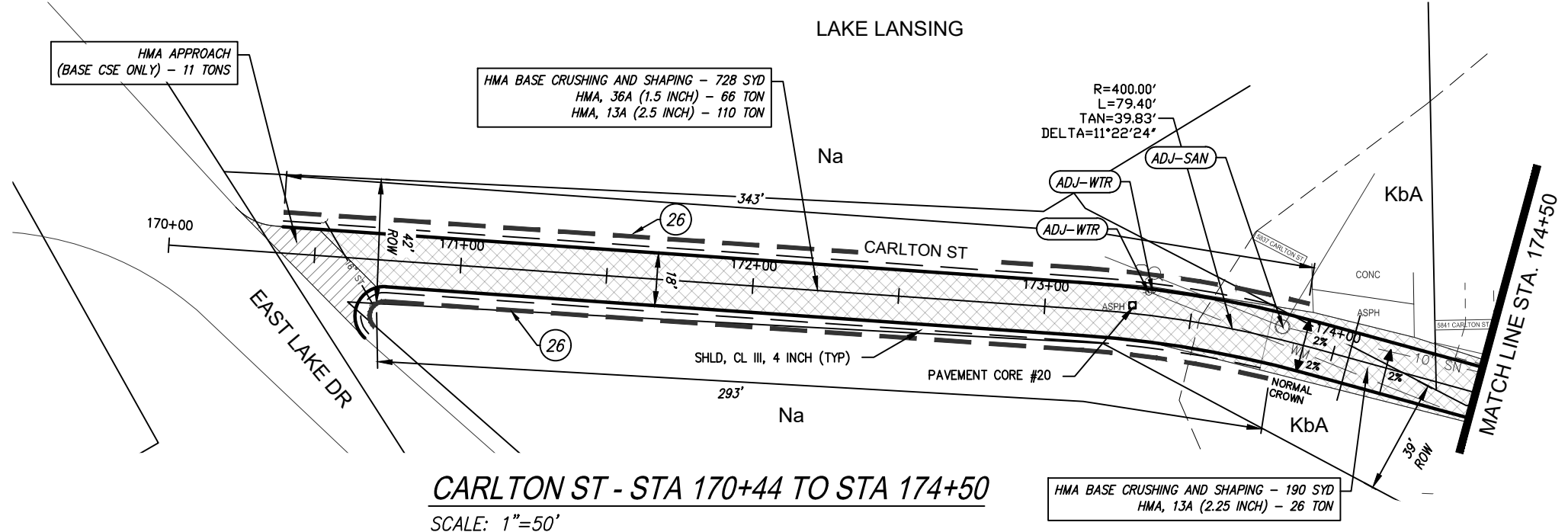


DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24


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PAVING AND REMOVALS - HICKORY ISLAND ST
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

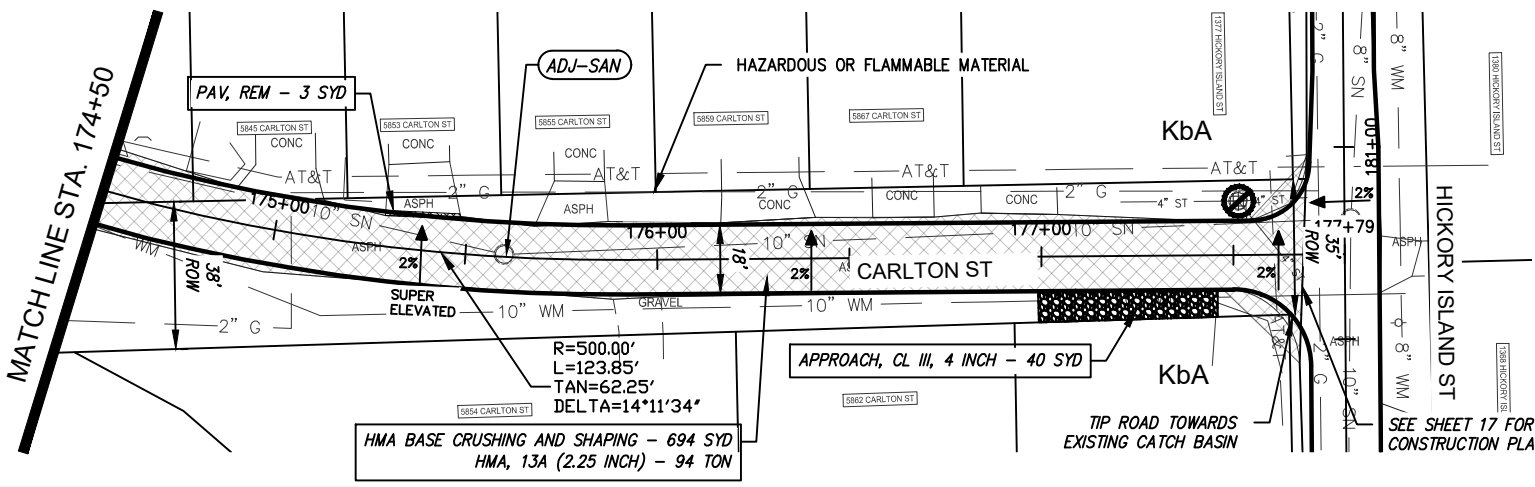
JOB No. MD23001	DRAWING No. MD23001CON-3
SCALE: 1" = 50'	SHEET 17 OF 21



CARLTON ST - STA 170+44 TO STA 174+50
SCALE: 1"=50'

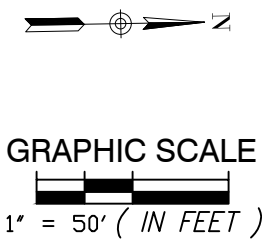


PLACE SURPLUS CRUSHED MATERIAL ON THE MERIDIAN TOWNSHIP TRASH AND RECYCLING CENTER'S EXISTING GRAVEL DRIVEWAY AS DIRECTED; PAID FOR AS AGGREGATE BASE, RECYCLED, 4 INCH. SEE TYPICAL SHEET ON PAGE 3 FOR DIMENSIONS AND THE MAP ABOVE FOR THE LOCATION.



CARLTON ST - STA 174+50 TO STA 177+68
SCALE: 1"=50'

QUANTITIES - THIS SHEET		
Item	Quantity	Unit
Pavt, Rem	3	Syd
Machine Grading	14	Sta
Erosion Control, Inlet Protection, Fabric Drop	1	Ea
Erosion Control, Silt Fence	636	Ft
HMA Base Crushing and Shaping	1612	Syd
Base Stabilization, Chemical	884	Syd
Stabilization Chemical, Manufactured	27	Ton
Approach, CI III, 4 inch	46	Syd
Dr Structure, Temp Lowering	2	Ea
HMA, 13A	230	Ton
HMA, 36A	66	Ton
HMA Approach	13	Ton
Water Shutoff, Adj, Case 1	2	Ea
Sanitary Structure Cover, Adj, Case 1, Modified	2	Ea



DRAWN BY: SL & NS	DATE: 10-24-23
CHECKED BY: EK	DATE: 11-01-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

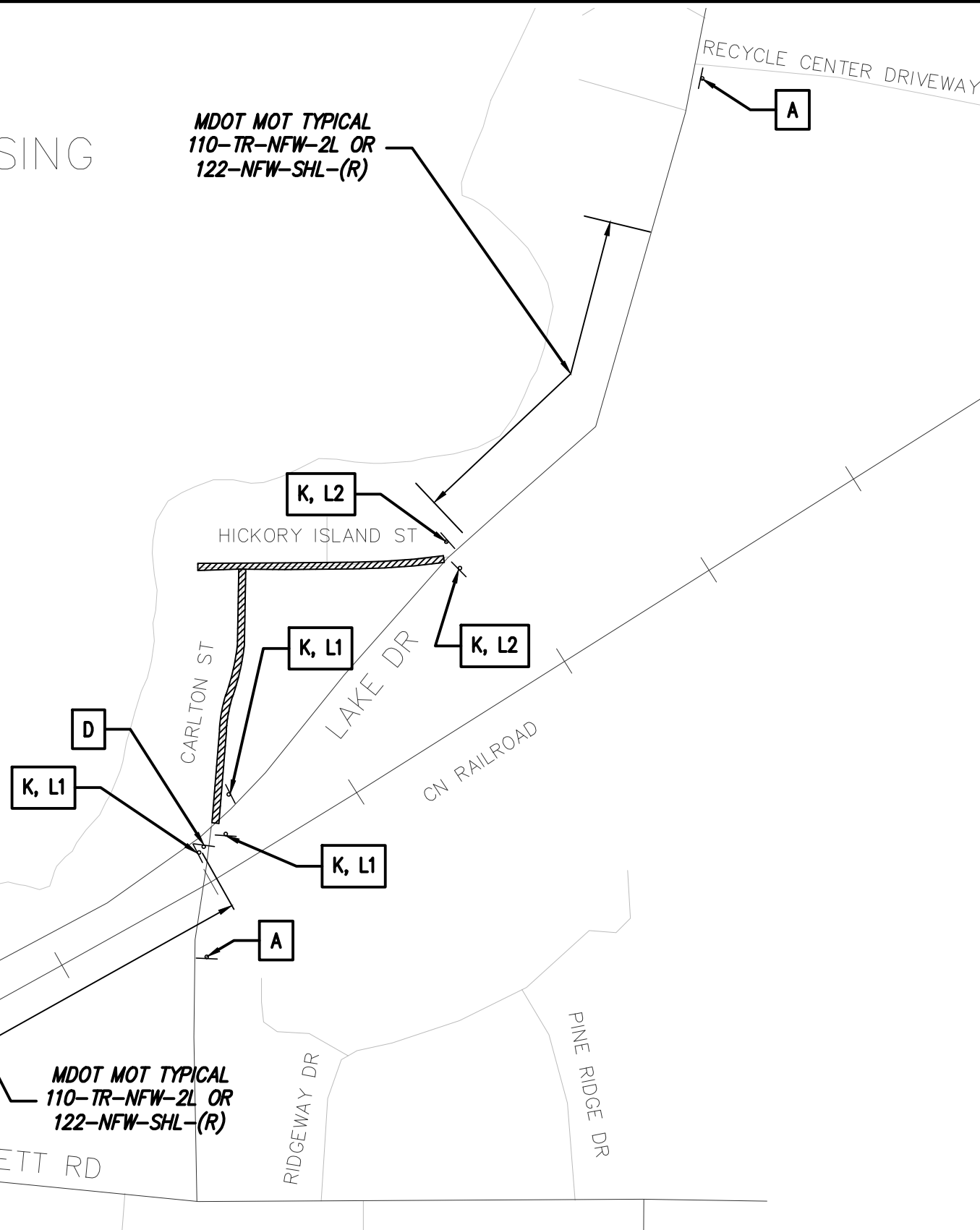
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PAVING AND REMOVALS - CARLTON ST
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001CON-3
SCALE: 1" = 50'	SHEET 18 OF 21

LAKE LANSING

MDOT MOT TYPICAL
110-TR-NFW-2L OR
122-NFW-SHL-(R)



MDOT MOT TYPICAL
110-TR-NFW-2L OR
122-NFW-SHL-(R)

TRAFFIC SIGNAGE AND CONTROL DEVICES KEY – THIS SHEET

SYMBOL	DESCRIPTION	MMUTCD DESIGNATION	LENGTH (IN)	HEIGHT (IN)	AREA (SFT)	QUANTITY	TOTAL AREA (SFT)	
A	ROAD WORK AHEAD	W20-1	36	36	9	4	36	
B	WORK ZONE BEGINS	R5-18c	48	48	16	2	32	
C	SPEED LIMIT 30 MPH	R2-1	36	48	12	1	12	
D	END ROAD WORK	G20-2	48	24	8	3	24	
E	RIGHT SHOULDER CLOSED AHEAD	W21-5bR	36	36	9	1	9	
F	ONE LANE ROAD AHEAD	W20-4	36	36	9	2	18	
G	REDUCE SPEED ZONE AHEAD	W3-5b	36	36	9	2	18	
H	FLAGGER AHEAD	W20-7a	36	36	9	2	18	
I	BE PREPARED TO STOP	W3-4	36	36	9	2	18	
J	SPEED LIMIT 35 MPH	R2-1	36	48	12	0	0	
K	BUMP	W8-1	36	36	9	5	45	
L1	CARLTON ST	D3-1	36	12	3	3	9	
L2	HICKORY ISLAND ST	D3-1	36	12	3	2	6	
L3	W REYNOLDS RD	D3-1	36	12	3		##	
L4	ROE ST	D3-1	36	12	3		##	
L5	LEE ST	D3-1	36	12	3		##	
L6	MACK AVE	D3-1	36	12	3		##	
L7	MICHAEL ST	D3-1	36	12	3		##	
L8	BAKER ST	D3-1	36	12	3		##	
L9	HIGH ST	D3-1	36	12	3		##	
L10	SUNHOLLOW LN	D3-1	36	12	3		##	
L11	SUNHOLLOW CT	D3-1	36	12	3		##	
L12	GOSSARD AVE	D3-1	36	12	3		##	
L13	BIBER ST	D3-1	36	12	3		##	
L14	PORTER AVE	D3-1	36	12	3		##	
L15	HARDY AVE	D3-1	36	12	3		##	
M	CHANNELIZING DEVICE					22		
N	LIGHTED ARROW PANEL					1		
							TOTAL AREA FOR ALL SIGNS (SFT)	245

LEGEND

WORK ZONE

DRAWN BY: NS	DATE: 11-28-23
CHECKED BY: EK	DATE: 12-04-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

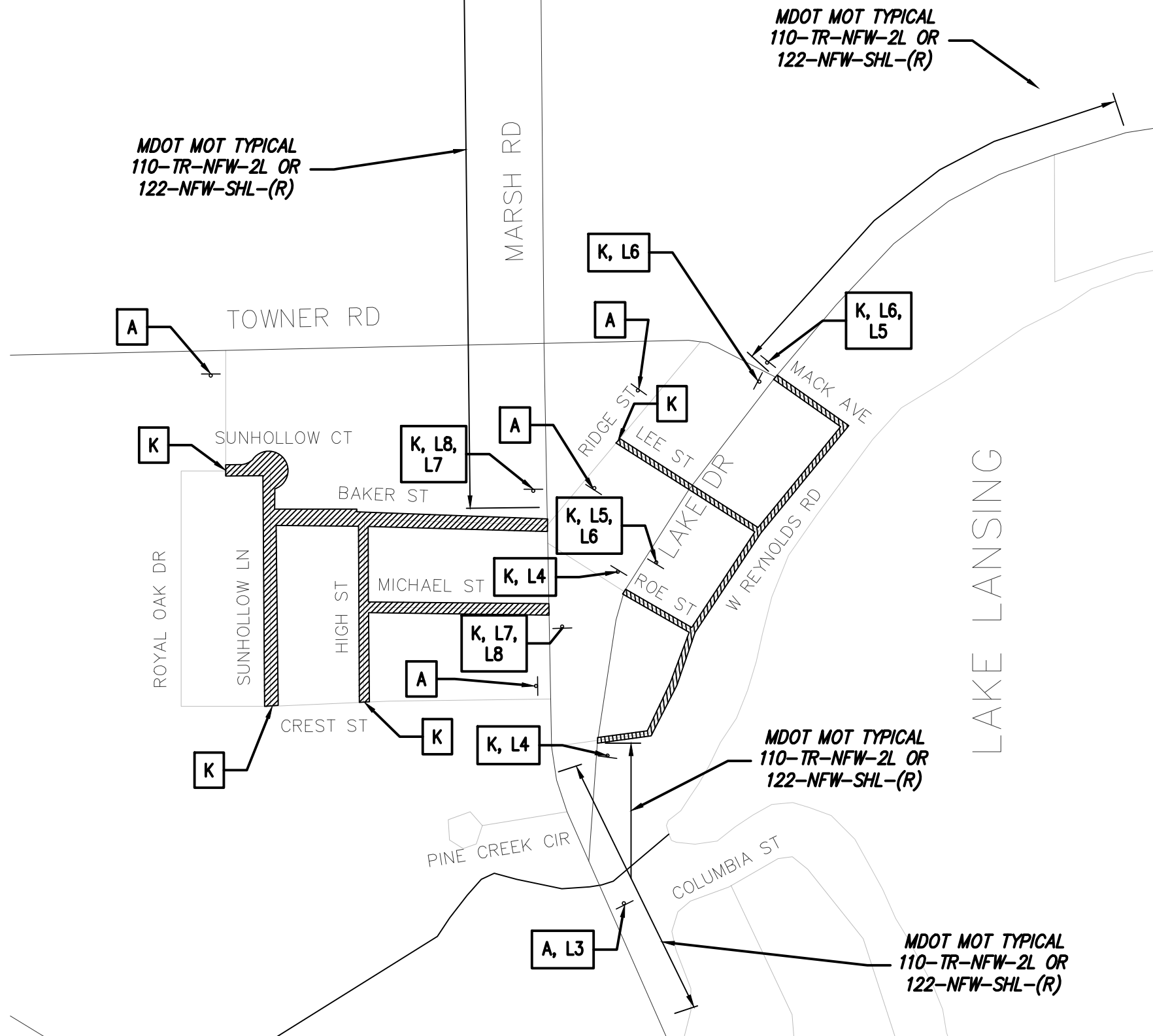
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MAINTAINING TRAFFIC - CARLTON ST TO
HICKORY ISLAND ST
2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001MOT
SCALE: NO SCALE	SHEET 19 OF 21

CLINTON COUNTY

INGHAM COUNTY



TRAFFIC SIGNAGE AND CONTROL DEVICES KEY - THIS SHEET

SYMBOL	DESCRIPTION	MMUTCD DESIGNATION	LENGTH (IN)	HEIGHT (IN)	AREA (SFT)	QUANTITY	TOTAL AREA (SFT)	
A	ROAD WORK AHEAD	W20-1	36	36	9	8	72	
B	WORK ZONE BEGINS	R5-18c	48	48	16	4	64	
C	SPEED LIMIT 30 MPH	R2-1	36	48	12	2	24	
D	END ROAD WORK	G20-2	48	24	8	4	32	
E	RIGHT SHOULDER CLOSED AHEAD	W21-5bR	36	36	9	1	9	
F	ONE LANE ROAD AHEAD	W20-4	36	36	9	4	36	
G	REDUCE SPEED ZONE AHEAD	W3-5b	36	36	9	4	36	
H	FLAGGER AHEAD	W20-7c	36	36	9	4	36	
I	BE PREPARED TO STOP	W3-4	36	36	9	4	36	
J	SPEED LIMIT 35 MPH	R2-1	36	48	12	2	24	
K	BUMP	W8-1	36	36	9	11	99	
L1	CARLTON ST	D3-1	36	12	3		#	
L2	HICKORY ISLAND ST	D3-1	36	12	3		#	
L3	W REYNOLDS RD	D3-1	36	12	3	1	3	
L4	ROE ST	D3-1	36	12	3	2	6	
L5	LEE ST	D3-1	36	12	3	2	6	
L6	MACK AVE	D3-1	36	12	3	3	9	
L7	MICHAEL ST	D3-1	36	12	3	2	6	
L8	BAKER ST	D3-1	36	12	3	2	6	
L9	HIGH ST	D3-1	36	12	3		#	
L10	SUNHOLLOW LN	D3-1	36	12	3		#	
L11	SUNHOLLOW CT	D3-1	36	12	3		#	
L12	GOSSARD AVE	D3-1	36	12	3		##	
L13	BIBER ST	D3-1	36	12	3		##	
L14	PORTER AVE	D3-1	36	12	3		##	
L15	HARDY AVE	D3-1	36	12	3		##	
M	CHANNELIZING DEVICE					50		
N	LIGHTED ARROW PANEL					2		
							TOTAL AREA FOR ALL SIGNS (SFT)	504

LEGEND



DRAWN BY: NS	DATE: 11-28-23
CHECKED BY: EK	DATE: 12-04-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

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MAINTAINING TRAFFIC - SUNHOLLOW CT/LN, BAKER ST,
 HIGH ST, W REYNOLDS RD, ROE ST, LEE ST, AND MACK AVE
 2024 LOCAL STREET CRUSHING AND RESURFACING
 MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001MOT
SCALE: NO SCALE	SHEET 20 OF 21

GOSSARD AVE

PORTER AVE

TOWAR AVE

RUTHERFORD AVE

POLLARD AVE

HARDY AVE

BIBER ST

L13 (WITH A)

MDOT MOT TYPICAL
110-TR-NFW-2L OR
122-NFW-SHL-(R)

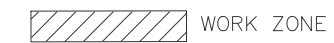
BIRCH ROW DR

E LAKE LANSING RD

TRAFFIC SIGNAGE AND CONTROL DEVICES KEY - THIS SHEET

SYMBOL	DESCRIPTION	MMUTCD DESIGNATION	LENGTH (IN)	HEIGHT (IN)	AREA (SFT)	QUANTITY	TOTAL AREA (SFT)
A	ROAD WORK AHEAD	W20-1	36	36	9	6	54
B	WORK ZONE BEGINS	R5-18c	48	48	16	2	32
C	SPEED LIMIT 30 MPH	R2-1	36	48	12	0	0
D	END ROAD WORK	G20-2	48	24	8	5	40
E	RIGHT SHOULDER CLOSED AHEAD	W21-5bR	36	36	9	1	9
F	ONE LANE ROAD AHEAD	W20-4	36	36	9	2	18
G	REDUCE SPEED ZONE AHEAD	W3-5b	36	36	9	2	18
H	FLAGGER AHEAD	W20-7c	36	36	9	2	18
I	BE PREPARED TO STOP	W3-4	36	36	9	2	18
J	SPEED LIMIT 35 MPH	R2-1	36	48	12	2	24
K	BUMP	W8-1	36	36	9	4	36
L1	CARLTON ST	D3-1	36	12	3		#
L2	HICKORY ISLAND ST	D3-1	36	12	3		#
L3	W REYNOLDS RD	D3-1	36	12	3		#
L4	ROE ST	D3-1	36	12	3		#
L5	LEE ST	D3-1	36	12	3		#
L6	MACK AVE	D3-1	36	12	3		#
L7	MICHAEL ST	D3-1	36	12	3		#
L8	BAKER ST	D3-1	36	12	3		#
L9	HIGH ST	D3-1	36	12	3		#
L10	SUNHOLLOW LN	D3-1	36	12	3		#
L11	SUNHOLLOW CT	D3-1	36	12	3		#
L12	GOSSARD AVE	D3-1	36	12	3	1	3
L13	BIBER ST	D3-1	36	12	3		#
L14	PORTER AVE	D3-1	36	12	3		#
L15	HARDY AVE	D3-1	36	12	3		#
M	CHANNELIZING DEVICE					22	
N	LIGHTED ARROW PANEL					1	
						TOTAL AREA FOR ALL SIGNS (SFT)	270

LEGEND



DRAWN BY: NS	DATE: 11-28-23
CHECKED BY: EK	DATE: 12-04-23
PROJECT MANAGER: DT	BID PLAN DATE: 01-01-24

SPALDING DeDECKER
Engineers | Planners | Surveyors
313 N. CAPITOL AVE, SUITE 100 Phone: (517) 679-4400
LANSING, MI 48933 Fax: (248) 844-5440
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2024 LOCAL STREET CRUSHING AND RESURFACING
MERIDIAN TOWNSHIP

JOB No. MD23001	DRAWING No. MD23001MOT
SCALE: NO SCALE	SHEET 21 OF 21