

# Roscommon County Road Commission

Scott Eckstorm, Commissioner  
James Porath, Commissioner  
Clint Stauffer, Commissioner  
Brian Vaughn, Commissioner  
Justin Wykoff, Commissioner

820 E. West Branch Road  
Prudenville, MI 48651

Roger Saxton, Manager  
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## NOTICE TO BIDDERS

The Roscommon County Road Commission will receive sealed bids until 2:00 p.m. on Friday, February 14<sup>th</sup>, 2025. Bids will be opened at 2:00 p.m. for tabulation and review. Bid results and staff recommendations will tentatively be presented to the Board for award at their regular meeting February 27<sup>th</sup>, 2025, beginning at 7:00 p.m. at the Road Commission office located at 820 E. West Branch Road, Prudenville, MI 48651 pending MDOTs review of the bid tabs.

### Old US 27 (South Harrison Rd)

#### Project Description:

1.99 miles of Cold Milling HMA Surface, Culvert Replacements, Concrete Curb and Gutter, HMA Paving, and Permanent Pavement Markings on Old US 27 (South Harrison Rd) from Federal Ave to M-55 in Roscommon Township, Roscommon County.

The Old US 27 project is funded by the Transportation Economic Development Fund (TEDF) grant, except where otherwise indicated on the plans or in the proposal, all materials and workmanship shall be in accordance with Michigan Department of Transportation 2020 Standard Specification for Construction, 2011 Michigan Manual on Uniform Traffic Control Devices for Street and Highways, and Section C (3R) of the Michigan Department of Transportation Local Agency Programs Guidelines for Geometrics, 2017 edition.

Proposal and plans can be obtained by contacting the Roscommon County Road Commission at the above street address, email address, by calling (989) 366-0333, or on the website. Questions and answers as well as any potential addendums will be posted on the website without notification. The deadline for questions will be February 10<sup>th</sup> at 3:30pm. The website should be checked prior to bid submittal for any potential changes. If you have any additional questions please contact Neil Belanger at ext. 1003. Bids must be in a sealed envelope and clearly marked as "Old US 27".

The Board reserves the right to reject any or all bids, to waive informalities in the bids and award the bid deemed to be in the best interest of Roscommon County.

ROSCOMMON COUNTY BOARD  
OF ROAD COMMISSIONERS

James Porath, Chair  
Brian Vaughn, Vice-Chair  
Justin Wykoff, Member  
Clint Stauffer, Member  
Scott Eckstorm, Member

CATEGORY F GRANT #220255 - OLD US 27 (S HARRISON RD) - ROSCOMMON COUNTY ROAD COMMISSION  
 DATE: FEBRUARY 14, 2025  
 SCHEDULE OF BID ITEMS

ITEM CODE	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	PROPOSAL AMOUNT
1100001	Mobilization, Max \$81,600	1	LSUM		
2030001	Culv, Rem, Less than 24 inch	4	Ea		
2030002	Culv, Rem, 24 to 48 inch	4	Ea		
2040050	Pavt, Rem	261	Syd		
3020001	Aggregate Base	32	Ton		
3020050	Aggregate Base, Conditioning	1,184	Syd		
3070001	Approach, C I I	59	Ton		
3070021	Shld, C I I	1,250	Ton		
4010051	Culv End Sect, Conc, 24 inch	2	Ea		
4010094	Culv End Sect, Metal, 12 inch	4	Ea		
4010095	Culv End Sect, Metal, 15 inch	2	Ea		
4010096	Culv End Sect, Metal, 18 inch	2	Ea		
4010098	Culv End Sect, Metal, 24 inch	6	Ea		
4010131	Culv, C I A, 12 inch	100	Ft		
4010132	Culv, C I A, 15 inch	46	Ft		
4010133	Culv, C I A, 18 inch	50	Ft		
4010134	Culv, C I A, 24 inch	188	Ft		
4010168	Culv, C I A, Conc, 24 inch	72	Ft		
5010002	Cold Milling HMA Surface	1,129	Syd		
5010025	Hand Patching	18	Ton		
5010033	HMA, 13A	6,625	Ton		
5010061	HMA, Approach	212	Ton		
8020016	Curb and Gutter, Conc, Det B2	744	Ft		
8110093	Pavt Mrkg, Polyurea, 6 inch, Crosswalk	141	Ft		
8110114	Pavt Mrkg, Polyurea, 24 inch, Stop Bar	38	Ft		
8110231	Pavt Mrkg, Waterborne, 4 inch, White	20,830	Ft		
8110232	Pavt Mrkg, Waterborne, 4 inch, Yellow	9,109	Ft		
8110251	Pavt Mrkg, Waterborne, 2nd Application, 4 inch, White	20,830	Ft		
8110252	Pavt Mrkg, Waterborne, 2nd Application, 4 inch, Yellow	9,109	Ft		
8110405	Pavt Mrkg, Polyurea, Lt Turn Arrow Sym	1	Ea		
8110417	Pavt Mrkg, Polyurea, Thru and Rt Turn Arrow Sym	1	Ea		
8110418	Pavt Mrkg, Polyurea, Thru Arrow Sym	1	Ea		
8120035	Channelizing Device, 42 inch, Fluorescent, Furn	140	Ea		
8120036	Channelizing Device, 42 inch, Fluorescent, Oper	140	Ea		
8120140	Lighted Arrow, Type C, Furn	3	Ea		
8120141	Lighted Arrow, Type C, Oper	3	Ea		
8120170	Minor Traf Devices	1	LSUM		
8120246	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	1,248	Ft		
8120350	Sign, Type B, Temp, Prismatic, Furn	496	Sft		
8120351	Sign, Type B, Temp, Prismatic, Oper	496	Sft		
8120352	Sign, Type B, Temp, Prismatic, Spec, Furn	16	Sft		
8120353	Sign, Type B, Temp, Prismatic, Spec, Oper	16	Sft		
8120370	Traf Regulator Control	1	LSUM		
8167011	_Slope Restoration, Modified	773	Syd		
				Total Bid Amount	

# ROSCOMMON COUNTY ROAD COMMISSION

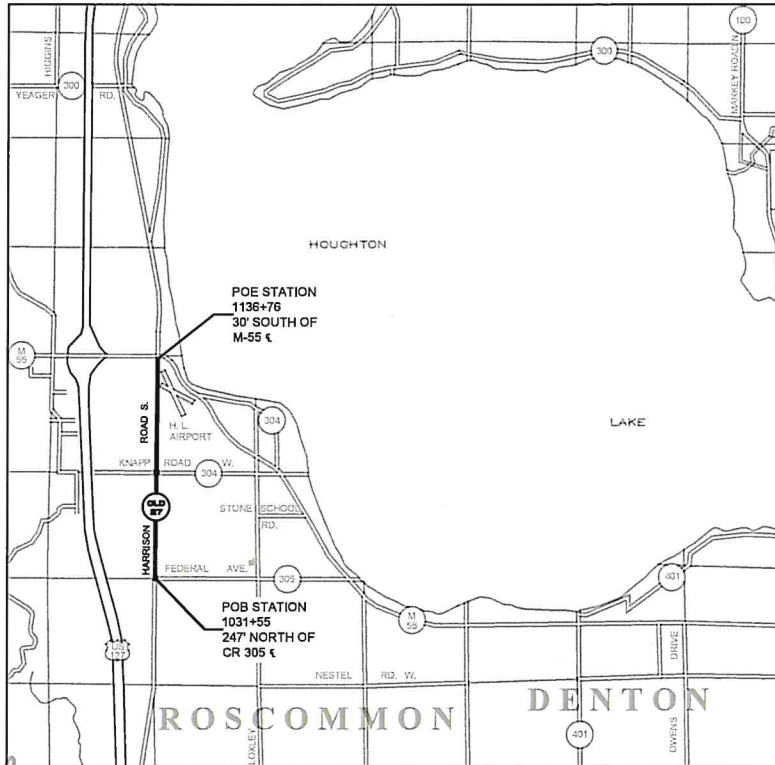
IN COOPERATION WITH

MICHIGAN DEPARTMENT OF TRANSPORTATION

OLD US 27 (SOUTH HARRISON RD)

ROSCOMMON COUNTY

JOB NUMBER: 220255



### TRAFFIC DATA

#### PRESENT AVERAGE DAILY TRAFFIC

2024	2029
1,358	1,637

OLD US 27 (SOUTH HARRISON RD)

#### POSTED SPEED

PRIMA FACIE

#### PERCENT COMMERCIAL

2024	2029
8%	8%

OLD US 27 (SOUTH HARRISON RD)

#### DESIGN SPEED

55 MPH

PROJECT LENGTH: 1.99 MILES

PROJECT DESCRIPTION: COLD MILLING HMA SURFACE, CULVERT REPLACEMENTS, CONCRETE CURB AND GUTTER, HMA PAVING, AND PERMANENT PAVEMENT MARKINGS.

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND SECTION C (3R) OF THE "MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS", 2017 EDITION.

#### TRAFFIC AND SAFETY SPECIAL DETAILS

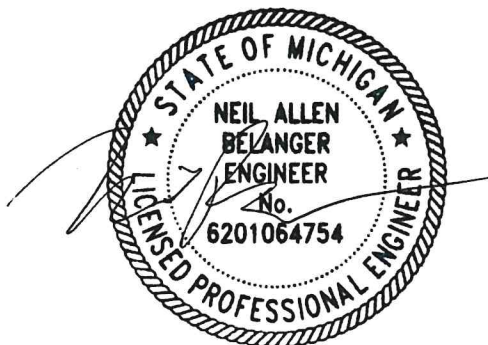
WZD-100-A GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS  
 WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES  
 PAVE904A-TEMPORARY-LONGITUDINAL LINE TYPES AND PLACEMENT

### COUNTY ROAD COMMISSION APPROVAL

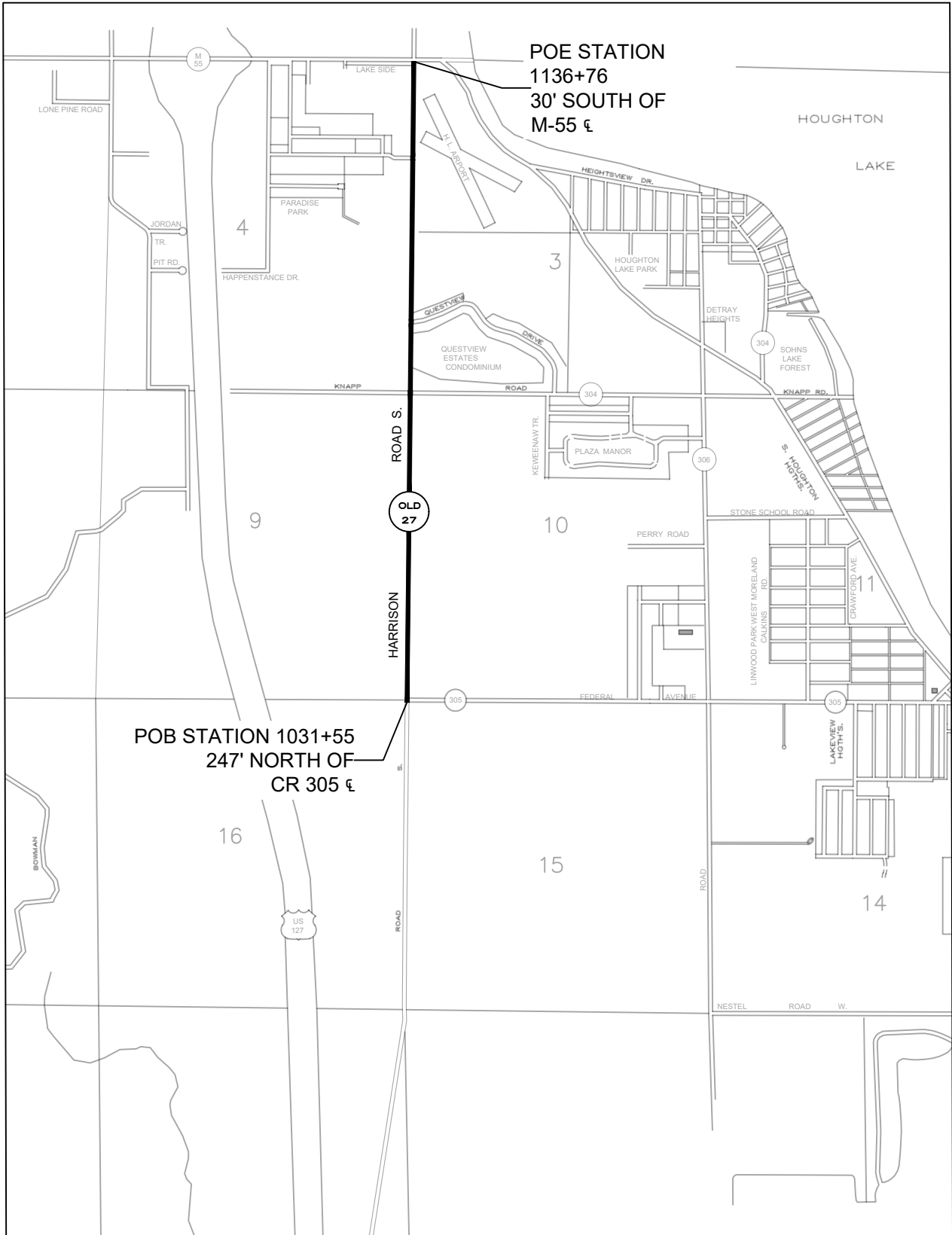
MANAGER

*Roger Saxton*  
 ROGER SAXTON

12/27/2024  
 DATE



PREPARED UNDER THE SUPERVISION OF  
 NEIL A. BELANGER  
 REGISTERED PROFESSIONAL ENGINEER  
 REGISTRATION NO. 64754



OLD US-27

JOB NUMBER: 220255

DESIGN: DAHLSTROM

ROSCOMMON COUNTY ROAD COMMISSION  
DATE: 10-24-2024

SCALE: N/A

## PROGRESS CLAUSE

The Engineer anticipates that construction can begin no earlier than **April 28, 2025**.

In no case shall any work be commenced prior to receipt of formal notice of award by the Department.

The Contractor shall prepare and submit a complete, detailed, signed Progress Schedule to the Engineer.

The entire project must be completed by the final completion date of **June 27, 2025**.

Unless specific pay items are provided in the contract any extra costs incurred by the Contractor due to cold-weather protection and winter grading will not be paid for separately but will be included in the payment of other pay items in the contract.

After award and prior to the start of work, the Contractor must attend a preconstruction meeting with the Engineer. The Engineer will determine the day, time and place for the preconstruction meeting. The meeting will be conducted after project award and may be rescheduled if there are delays in the award of the project.

The named subcontractor(s) for Designated and/or Specialty Items, as shown in the Proposal, should attend the preconstruction meeting if such items materially affect the work schedule.

Work shall be conducted during daylight hours only, with all traffic lanes open at night or whenever work is not in progress. Work on weekends will only be as approved by the Engineer per the maintaining traffic special provision.

Failure by the Contractor to meet interim completion, open to traffic, and/or final completion dates will result in the assessment of liquidated damages in accordance with subsection 108.10 of the Standard Specifications for Construction.

CATEGORY F GRANT #220255 - OLD US 27 (S HARRISON RD) - ROSCOMMON COUNTY ROAD COMMISSION  
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2040050	Pavt, Rem	261	Syd		
3020001	Aggregate Base	32	Ton		
3020050	Aggregate Base, Conditioning	1,184	Syd		
3070001	Approach, C I I	59	Ton		
3070021	Shld, C I I	1,250	Ton		
4010051	Culv End Sect, Conc, 24 inch	2	Ea		
4010094	Culv End Sect, Metal, 12 inch	4	Ea		
4010095	Culv End Sect, Metal, 15 inch	2	Ea		
4010096	Culv End Sect, Metal, 18 inch	2	Ea		
4010098	Culv End Sect, Metal, 24 inch	6	Ea		
4010131	Culv, C I A, 12 inch	100	Ft		
4010132	Culv, C I A, 15 inch	46	Ft		
4010133	Culv, C I A, 18 inch	50	Ft		
4010134	Culv, C I A, 24 inch	188	Ft		
4010168	Culv, C I A, Conc, 24 inch	72	Ft		
5010002	Cold Milling HMA Surface	1,129	Syd		
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8110232	Pavt Mrlkg, Waterborne, 4 inch, Yellow	9,109	Ft		
8110251	Pavt Mrlkg, Waterborne, 2nd Application, 4 inch, White	20,830	Ft		
8110252	Pavt Mrlkg, Waterborne, 2nd Application, 4 inch, Yellow	9,109	Ft		
8110405	Pavt Mrlkg, Polyurea, Lt Turn Arrow Sym	1	Ea		
8110417	Pavt Mrlkg, Polyurea, Thru and Rt Turn Arrow Sym	1	Ea		
8110418	Pavt Mrlkg, Polyurea, Thru Arrow Sym	1	Ea		
8120035	Channelizing Device, 42 inch, Fluorescent, Furn	140	Ea		
8120036	Channelizing Device, 42 inch, Fluorescent, Oper	140	Ea		
8120140	Lighted Arrow, Type C, Furn	3	Ea		
8120141	Lighted Arrow, Type C, Oper	3	Ea		
8120170	Minor Traf Devices	1	LSUM		
8120246	Pavt Mrlkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	1,248	Ft		
8120350	Sign, Type B, Temp, Prismatic, Furn	496	Sft		
8120351	Sign, Type B, Temp, Prismatic, Oper	496	Sft		
8120352	Sign, Type B, Temp, Prismatic, Spec, Furn	16	Sft		
8120353	Sign, Type B, Temp, Prismatic, Spec, Oper	16	Sft		
8120370	Traf Regulator Control	1	LSUM		
8167011	_Slope Restoration, Modified	773	Syd		
				Total Bid Amount	

**Roscommon County Road Commission  
Old US 27 (S Harrison Rd)  
Construction Log**

**Location: JN 220255**

This project consists of work on Old US 27 (S Harrison Rd) in Roscommon County, stationing runs south to north. References to the right and left sides of the roadway correspond to the direction of the stationing. Locations of items shown on the project log were located by the use of an electronic distance-measuring device. Locations shall be considered approximate and final measurement shall determine pay limits.

Job commences on Old US 27 (S Harrison Rd) P.O.B. Station 1031+55 (247' north of the C/L of CR 305 (Federal Ave)) thence north to the P.O.E. Station 1136+76 (30' south of the C/L of M-55 (W Houghton Lake Dr)).

**Description:**

1.99 miles of Cold Milling HMA Surface, Culvert Replacements, Concrete Curb and Gutter, HMA Paving, and Permanent Pavement Markings.

**2030001 Culv, Rem, Less than 24 inch**

Remove existing culverts and end sections less than 24" in diameter.

\*Estimated Length  
(4 Ea)

Station 1113+37 to 1113+78 RT (41 Ft*) (Champion Fortune Corporation)	1 Ea
Station 1125+73 to 1125+97 RT (27 Ft*) (south airport driveway)	1 Ea
Station 1126+87 to 1127+14 RT (27 Ft*) (north airport driveway)	1 Ea
Station 1133+35 to 1133+65 LT (30 Ft*) (north ball field driveway)	1 Ea

**2030002 Culv, Rem, 24 inch to 48 inch**

Remove existing culverts and end sections 24" to 48" in diameter.

\*Estimated Length  
(4 Ea)

Station 1127+93 to 1128+44 LT (51 Ft*) (DNR Field Office Driveway)	1 Ea
Station 1129+75 to 1130+06 LT (31 Ft*) (south Ball Field Driveway)	1 Ea
Station 1133+00 (71 Ft*) (cross culvert)	1 Ea
Station 1134+41 to 1134+79 RT (38 Ft*) (Venture Inn Driveway)	1 Ea

**2040050 Pavt, Rem**

Sawcut and remove HMA pavement from roadway and driveways to replace culverts.  
(261 Syd)

Station 1113+45 to 1113+71, 16' to 35' O/S RT (Champion Fortune Corporation)	66 Syd
Station 1129+70 to 1130+10, 19' to 58' O/S LT (south ball field)	102 Syd
Station 1132+89 to 1133+11 LT/RT (cross culvert)	93 Syd

**3020001 Aggregate Base**

Place and compact aggregate base at 6 inch depth above sand subbase over new culvert to match bottom of existing pavement layer.  
(32 Ton)

Station 1132+89 to 1133+11 LT/RT (cross culvert)	32 Ton
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**3020050 Aggregate Base, Conditioning**

Shape the existing aggregate base surface to allow for an HMA thickness of 220 pounds per square yard below the top of proposed HMA mainline surface.

(1,184 Syd)

Station 1081+40 to 1082+30, 16' to 186' O/S LT (Knapp Rd W)	697 Syd
Station 1113+45 to 1113+71, 16' to 35' O/S RT (Champion Fortune Corporation)	66 Syd
Station 1125+70 to 1126+00, 19' to 42' O/S RT (south airport driveway)	62 Syd
Station 1126+85 to 1127+15, 19' to 36' O/S RT (north airport driveway)	50 Syd
Station 1127+93 to 1128+44, 19' to 36' O/S LT (DNR office driveway)	82 Syd
Station 1129+70 to 1130+10, 19' to 58' O/S LT (south ball field)	102 Syd
Station 1133+35 to 1133+65, 19' to 36' O/S LT (north ball field driveway)	53 Syd
Station 1134+41 to 1134+79, 19' to 35' O/S RT (Venture Inn driveway)	72 Syd

**3070021 Approach, CI II**

Haul, place, and compact aggregate base for approaches for the width of proposed HMA and at a depth sufficient to match into the final HMA surface.

(59 Ton)

Station 1041+50 to 1041+90, 16' to 26' O/S RT (1769 address)	3 Ton
Station 1051+30 to 1051+75, 16' to 26' O/S RT (gravel driveway)	2 Ton
Station 1057+30 to 1057+65, 16' to 26' O/S RT (1475 address)	2 Ton
Station 1064+20 to 1064+55, 16' to 26' O/S RT (1313 address)	2 Ton
Station 1068+60 to 1068+90, 16' to 26' O/S RT (1219 address)	2 Ton
Station 1070+70 to 1071+35, 16' to 26' O/S LT (Sewer Authority driveway)	4 Ton
Station 1081+70 to 1082+30, 186' to 196' O/S LT (Knapp Rd W)	3 Ton
Station 1085+00 to 1085+30, 16' to 26' O/S RT (Quest gravel driveway)	2 Ton
Station 1092+05 to 1093+05, 16' to 26' O/S LT (Porath driveway)	10 Ton
Station 1100+30 to 1100+60, 16' to 26' O/S LT (670 address)	3 Ton
Station 1100+90 to 1101+30, 16' to 26' O/S RT (681 address)	3 Ton
Station 1101+55 to 1101+95, 16' to 26' O/S LT (634 address)	3 Ton
Station 1111+05 to 1111+40, 16' to 26' O/S LT (458 address)	3 Ton
Station 1121+80 to 1122+05, 16' to 26' O/S RT (gravel driveway)	2 Ton
Station 1125+70 to 1126+00, 42' to 52' O/S RT (south airport driveway)	2 Ton
Station 1126+85 to 1127+15, 36' to 46' O/S RT (north airport driveway)	2 Ton
Station 1127+90 to 1128+45, 36' to 46' O/S LT (DNR office driveway)	3 Ton
Station 1129+70 to 1130+10, 58' to 68' O/S LT (south ball field driveway)	2 Ton
Station 1133+30 to 1133+70, 36' to 46' O/S LT (north ball field driveway)	2 Ton
Station 1134+35 to 1134+85, 35' to 45' O/S RT (Venture Inn driveway)	4 Ton

**3070121 Shld, CI II**

Haul, place and compact aggregate base shoulders at the width shown on the Proposed Typical Sections and at a depth sufficient to match into the final HMA surface.

(1,250 Ton)

Station 1031+55 to 1070+70 LT	240 Ton
Station 1031+55 to 1039+10 RT	50 Ton
Station 1039+40 to 1081+00 RT	250 Ton
Station 1071+35 to 1103+45 LT	200 Ton
Station 1082+32 to 1092+30 RT	60 Ton
Station 1093+90 to 1099+85 RT	40 Ton
Station 1100+15 to 1113+35 RT	80 Ton
Station 1103+85 to 1104+80 LT	6 Ton
Station 1105+10 to 1106+30 LT	8 Ton
Station 1106+65 to 1120+10 LT	85 Ton



RCRC: BDD

9-20-24

Station 1113+80 to 1136+15 RT	135 Ton
Station 1120+85 to 1121+20 LT	3 Ton
Station 1121+50 to 1123+30 LT	15 Ton
Station 1123+65 to 1129+70 LT	40 Ton
Station 1130+10 to 1134+40 LT	30 Ton
Station 1134+85 to 1136+15 LT	8 Ton

**4010051 Culv End Sect, Conc, 24 inch**

Place 24" diameter culvert end section, including installation, materials, backfill, and compacting.  
(2 Ea)

Station 1133+00 (cross culvert)	2 Ea
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**4010094 Culv End Sect, Metal, 12 inch**

Place 12" diameter culvert end section, including installation, materials, backfill, and compacting.  
(4 Ea)

Station 1113+32 to 1113+84 RT (Champion Fortune Corporation)	2 Ea
Station 1133+26 to 1133+74 LT (north ball field driveway)	2 Ea

**4010095 Culv End Sect, Metal, 15 inch**

Place 15" diameter culvert end section, including installation, materials, backfill, and compacting.  
(2 Ea)

Station 1125+61 to 1126+09 RT (south airport driveway)	2 Ea
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**4010096 Culv End Sect, Metal, 18 inch**

Place 18" diameter culvert end section, including installation, materials, backfill, and compacting.  
(2 Ea)

Station 1126+75 to 1127+25 RT (north airport driveway)	2 Ea
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**4010098 Culv End Sect, Metal, 24 inch**

Place 24" diameter culvert end section, including installation, materials, backfill, and compacting.  
(6 Ea)

Station 1127+80 to 1128+56 LT (DNR office driveway)	2 Ea
Station 1129+63 to 1130+17 LT (south ball field driveway)	2 Ea
Station 1134+31 to 1134+89 RT (Venture Inn driveway)	2 Ea

**4010131 Culv, CI A, 12 inch**

Place 12" diameter culvert, including installation, materials, backfill, and compacting.  
(100 Ft)

Station 1113+32 to 1113+84 RT (Champion Fortune Corporation)	52 Ft
Station 1133+26 to 1133+74 LT (north ball field driveway)	48 Ft

**4010132 Culv, CI A, 15 inch**

Place 15" diameter culvert, including installation, materials, backfill, and compacting.  
(46 Ft)

Station 1125+61 to 1126+09 RT (south airport driveway)	46 Ft
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**4010133 Culv, CI A, 18 inch**

Place 18" diameter culvert, including installation, materials, backfill, and compacting.  
(50 Ft)

Station 1126+75 to 1127+25 RT (north airport driveway) 50 Ft

**4010134 Culv, CI A, 24 inch**

Place 24" diameter culvert, including installation, materials, backfill, and compacting.  
(188 Ft)

Station 1127+80 to 1128+56 LT (DNR office driveway) 76 Ft

Station 1129+63 to 1130+17 LT (south ball field driveway) 54 Ft

Station 1134+31 to 1134+89 RT (Venture Inn driveway) 58 Ft

**4010168 Culv, CI A, Conc, 24 inch**

Place 24" diameter concrete cross culvert, including installation, materials, backfill, and compacting.  
(72 Ft)

Station 1133+00 (cross culvert) 72 Ft

**5010002 Cold Milling HMA Surface**

Milling the surface 0" to 1 1/2" depth and includes removing, loading, hauling and cleaning the milled surface as shown in the detail drawings.

(1,129 Syd)

Station 1031+55 to 1032+05 LT/RT (POB) 178 Syd

Station 1070+95 to 1071+11, 39' to 47' LT (Sewer Authority) 15 Syd

Station 1081+11 to 1082+15, 22' to 42' RT (Knapp Rd E) 164 Syd

Station 1092+76 to 1093+44, 29' to 37' RT (Questview Dr) 50 Syd

Station 1120+37 to 1120+58, 45' to 53' LT (Welch Rd) 19 Syd

Station 1135+05 to 1136+76 LT/ RT (POE) 703 Syd

**5010025 Hand Patch**

Haul, place, and compact HMA to patch in base due to replacement of culverts and in front of newly constructed curb on existing HMA approaches.

(18 Ton)

Station 1070+70 to 1071+35 LT (Sewer Authority along curb) 3 Ton

Station 1120+10 to 1120+85 LT (Welch Rd along curb) 3 Ton

Station 1132+89 to 1133+11 LT/RT (cross culvert) 12 Ton

**5010033 HMA, 13A**

Haul, place and compact HMA, 13A at the given rate over existing road as shown on the proposed typical section details, HMA Application Table and HMA Application Estimate.

(6,625 Ton)

Yield of 135 pounds per square yard, with RAP – 2,640 Ton

Station 1031+55 to 1118+10 LT 1,050 Ton

Station 1031+55 to 1079+05 RT 570 Ton

Station 1079+05 to 1081+00 RT 30 Ton

Station 1081+00 to 1082+32 RT 25 Ton

Station 1082+32 to 1084+00 RT 25 Ton

Station 1084+00 to 1118+10 RT 410 Ton

Station 1118+10 to 1120+10 LT 30 Ton

Station 1118+10 to 1120+10 RT	30 Ton
Station 1120+10 to 1131+25 LT	160 Ton
Station 1120+10 to 1131+25 RT	160 Ton
Station 1131+25 to 1135+25 LT	70 Ton
Station 1131+25 to 1135+25 RT	65 Ton
Station 1135+25 to 1135+65 LT	8 Ton
Station 1135+25 to 1135+65 RT	7 Ton

Yield of 200 pounds per square yard, no RAP – 3,985 Ton

Station 1031+55 to 1118+10 LT	1,550 Ton
Station 1031+55 to 1079+05 RT	850 Ton
Station 1079+05 to 1081+00 RT	45 Ton
Station 1081+00 to 1082+32 RT	35 Ton
Station 1082+32 to 1084+00 RT	40 Ton
Station 1084+00 to 1118+10 RT	610 Ton
Station 1118+10 to 1120+10 LT	40 Ton
Station 1118+10 to 1120+10 RT	40 Ton
Station 1120+10 to 1131+25 LT	240 Ton
Station 1120+10 to 1131+25 RT	240 Ton
Station 1131+25 to 1135+25 LT	100 Ton
Station 1131+25 to 1135+25 RT	95 Ton
Station 1135+25 to 1136+15 LT	25 Ton
Station 1135+25 to 1136+15 RT	25 Ton
Station 1136+15 to 1136+50 LT	10 Ton
Station 1136+15 to 1136+50 RT	10 Ton
Station 1136+50 to 1136+76 LT	15 Ton
Station 1136+50 to 1136+76 RT	15 Ton

**5010061 HMA Approach:**

Haul, place, and compact HMA, 13A w/ 0% RAP at the rate shown.  
(212 Ton)

Yield of 200 pounds per square yard paving over existing HMA approach:

Station 1070+70 to 1071+35, 16' to 47' O/S LT (Sewer Authority)	13 Ton
Station 1081+11 to 1082+15, 22' to 42' O/S RT (Knapp Rd E)	17 Ton
Station 1092+30 to 1093+90, 16' to 37' O/S RT (Questview Dr)	21 Ton
Station 1120+10 to 1120+85, 19' to 53' O/S LT (Welch Rd)	16 Ton
Station 1134+35 to 1134+85, 19' to 35' O/S RT (Venture Inn driveway)	8 Ton

Yield of 220 pounds per square yard paving over gravel approach:

Station 1081+40 to 1082+30, 16' to 186' O/S LT (Knapp Rd W)	80 Ton
Station 1113+45 to 1113+71, 16' to 35' O/S RT (Champion Fortune Corporation)	8 Ton
Station 1125+70 to 1126+00, 19' to 42' O/S RT (south airport driveway)	7 Ton
Station 1126+85 to 1127+15, 19' to 36' O/S RT (north airport driveway)	6 Ton
Station 1127+93 to 1128+44, 19' to 36' O/S LT (DNR office driveway)	10 Ton
Station 1129+70 to 1130+10, 19' to 58' O/S LT (south ball field)	12 Ton
Station 1133+35 to 1133+65, 19' to 36' O/S LT (north ball field driveway)	6 Ton
Station 1134+41 to 1134+79, 19' to 35' O/S RT (Venture Inn driveway)	8 Ton

**8020016 Curb and Gutter, Conc, Det B2**

Prepare the base, install forms, steel reinforcement bars, concrete and curing compound. Curb will be staked by the Engineer.

(744 Ft)

Station 1070+70 to 1071+35, 16' to 47' O/S LT (Sewer Authority)	96 Ft
Station 1081+40 to 1082+30, 16' to 86' O/S LT (Knapp Rd W)	192 Ft
Station 1113+35 to 1113+80, 16' to 35' O/S RT (Champion Fortune Corporation)	64 Ft
Station 1120+10 to 1120+85, 19' to 53' O/S LT (Welch Rd)	88 Ft
Station 1125+70 to 1126+00, 19' to 42' O/S RT (south airport driveway)	48 Ft
Station 1126+85 to 1127+15, 19 to 36' O/S RT (north airport driveway)	48 Ft
Station 1127+90 to 1128+45, 19' to 36' O/S LT (DNR office driveway)	64 Ft
Station 1129+70 to 1130+10, 19' to 36' O/S LT (south ball field driveway)	48 Ft
Station 1133+30 to 1133+70, 19' to 36' O/S LT (north ball field driveway)	48 Ft
Station 1134+35 to 1134+85, 19' to 35' O/S RT (Venture Inn driveway)	48 Ft

**Pavt Mrkg Items**

Place permanent pavement markings per the applicable Pavement Markings Standard.

**8110093 Pavt Mrkg, Polyurea, 6 inch, Crosswalk**

(141 Ft)

Station 1136+57 to 1136+65 RT 8' wide	141 Ft
---------------------------------------	--------

**8110114 Pavt Mrkg, Polyurea, 24 inch, Stop Bar**

(38 Ft)

Station 1136+50, 12' O/S LT to 26' O/S RT	38 Ft
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**8110231 Pavt Mrkg, Waterborne, 4 inch, White**

(20,830 Ft)

Station 1031+55 to 1081+30 LT Lane Line	4,975 Ft
Station 1031+55 to 1081+05 RT Lane Line	4,950 Ft
Station 1080+71 to 1081+30 RT Turn Lane	59 Ft
Station 1082+32 to 1120+00 LT Lane Line	3,768 Ft
Station 1082+32 to 1092+65 RT Lane Line	1,033 Ft
Station 1093+65 to 1136+15 RT Lane Line	4,250 Ft
Station 1120+70 to 1136+15 LT Lane Line	1,545 Ft
Station 1135+25 to 1136+50, 11' O/S RT Turn Lane	125 Ft
Station 1135+25 to 1136+50 0' O/S Turn Lane	125 Ft

**8110232 Pavt Mrkg, Waterborne, 4 inch, Yellow**

(9,109 Ft)

Station 1031+55 to 1069+90 Skip	963 Ft
Station 1069+90 to 1081+32 LT Skip / RT Barrier	1,430 Ft
Station 1082+05 to 1097+30 Double Barrier	3,050 Ft
Station 1097+30 to 1114+65 LT Barrier / RT Skip	2,173 Ft
Station 1114+65 to 1131+10 Skip	413 Ft
Station 1131+10 to 1136+50 Double Barrier	1,080 Ft

**8110251 Pavt Mrkg, Waterborne, 2nd Application, 4 inch, White**  
(20,830 Ft)

See **8110231 Pavt Mrkg, Waterborne, 4 inch, White** for locations

**8110252 Pavt Mrkg, Waterborne, 2nd Application, 4 inch, Yellow**  
(9,109 Ft)

See **8110232 Pavt Mrkg, Waterborne, 4 inch, Yellow** for locations

**8110405 Pavt Mrkg, Polyurea, LT Turn Arrow Sym**  
(1 Ea)

Station 1136+15, 6' O/S LT 1 Ea

**8110417 Pavt Mrkg, Polyurea, Thru and Rt Turn Arrow Sym**  
(1 Ea)

Station 1136+15, 16.5' O/S RT 1 Ea

**8110418 Pavt Mrkg, Polyurea, Thru Arrow Sym**  
(1 Ea)

Station 1136+15, 5.5' O/S RT 1 Ea

**8120246 Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp**

Place Type R, Tape in accordance with the MDOT Special Detail, PAVE-904-A, Temporary Longitudinal Line Types & Placement.  
(1,248 Ft)

Station 1031+55 to 1069+90 Single	308 Ft
Station 1069+90 to 1114+65 Double	720 Ft
Station 1114+65 to 1131+10 Single	132 Ft
Station 1131+10 to 1136+50 Double	88 Ft

**8167011 Slope Restoration, Modified:**

Place topsoil, seed, fertilizer, and mulch at 4" depth and matching outside edge of Shoulder, CI II per section 816 of the Standard Specifications for Construction, per the Slope Restoration, Modified special provision.  
(773 Syd)

Station 1113+32 to 1113+84 RT (Champion Fortune Corporation)	89 Syd
Station 1133+26 to 1133+74 LT (north ball field driveway)	89 Syd
Station 1125+61 to 1126+09 RT (south airport driveway)	89 Syd
Station 1126+75 to 1127+25 RT (north airport driveway)	89 Syd
Station 1127+80 to 1128+56 LT (DNR office driveway)	89 Syd
Station 1129+63 to 1130+17 LT (south ball field driveway)	89 Syd
Station 1134+31 to 1134+89 RT (Venture Inn driveway)	89 Syd
Station 1133+00 LT/RT (cross culvert)	150 Syd

**Miscellaneous Items****1100001 Mobilization, Max**

(1 LSUM)

**8120035 Channelizing Device, 42 inch, Fluorescent, Furn**

(140 Ea)

**8120036 Channelizing Device, 42 inch, Fluorescent, Oper**

(140 Ea)

**8120140 Lighted Arrow, Type C, Furn**

(3 Ea)

**8120141 Lighted Arrow, Type C, Oper**

(3 Ea)

**8120170 Minor Traf Devices**

(1 LSUM)

**8120350 Sign, Type B, Temp, Prismatic, Furn**

(496 Sft)

**8120351 Sign, Type B, Temp, Prismatic, Oper**

(496 Sft)

**8120352 Sign, Type B, Temp, Prismatic, Spec, Furn**

(16 Sft)

**8120353 Sign, Type B, Temp, Prismatic, Spec, Oper**

(16 Sft)

**8120370 Traffic Regulator Control**

(1 LSUM)

## ROSCOMMON COUNTY ROAD COMMISSION

### GENERAL NOTES

RCRC:BDD

10-24-24

#### **CONTACT NUMBER:**

Contact number to the Roscommon County Road Commission is (989) 366-0333 Monday – Thursday 6:00 a.m. to 4:30 p.m. (summer hours).

#### **STATIONING:**

Stationing used on this project is based on existing right-of-way plans and locations of items of work were determined by electronic distance measuring devices, and are approximate and not necessarily correct. The Contractor shall field verify all dimensions before the start of construction. The Engineer shall immediately be notified of any discrepancies between the log plan and the actual field dimensions.

#### **MISS DIG/UNDERGROUND UTILITY NOTIFICATION:**

For the protection of underground utilities and in conformance with Public Act 174 of 2013, the Contractor shall contact MISS DIG System, Inc. by phone at 811 or 800-482-7171 or via the web at either [elocate.missdig.org](http://elocate.missdig.org) for single address or [rte.missdig.org](http://rte.missdig.org), a minimum of 3 business days prior to excavating, excluding weekends and holidays.

#### **SHOULDERING:**

Shld, CI II shall be placed in its permanent location within 72 hours of final paving of the roadway. Traffic control drums for both LT and RT and low shoulder signs shall be placed per the Maintaining Traffic Special Provision until the final shoulder has been placed.

#### **SOIL EROSION MEASURES:**

Place turf establishment items as soon as possible on potential erodible slopes as directed by the Engineer. Critical grades shall be protected with either sod or seed/mulch or mulch blanket as directed by the Engineer.

#### **PAVEMENT MARKINGS:**

Permanent pavement marking and placement of traffic control devices shall be done in accordance with MDOT Standard Plan:

- MDOT Special Detail, PAVE-904-A, Temporary Longitudinal Line Types & Placement
- MDOT Maintaining Traffic Typicals
- Other MDOT Standard Plan sheets as necessary

#### **MAILBOXES:**

Mailboxes shall be relocated if they hinder proposed work. Obtain the Engineer's approval prior to removing any mailboxes. Prior to relocating, the local post office shall be consulted by the Contractor to determine the best temporary location. All affected residents must be notified 24 hours in advance by the Contractor, prior to relocating their mailbox. All moved mailboxes shall be replaced to their original location by the Contractor prior to completion of the project, and will be paid under the appropriate bid item.

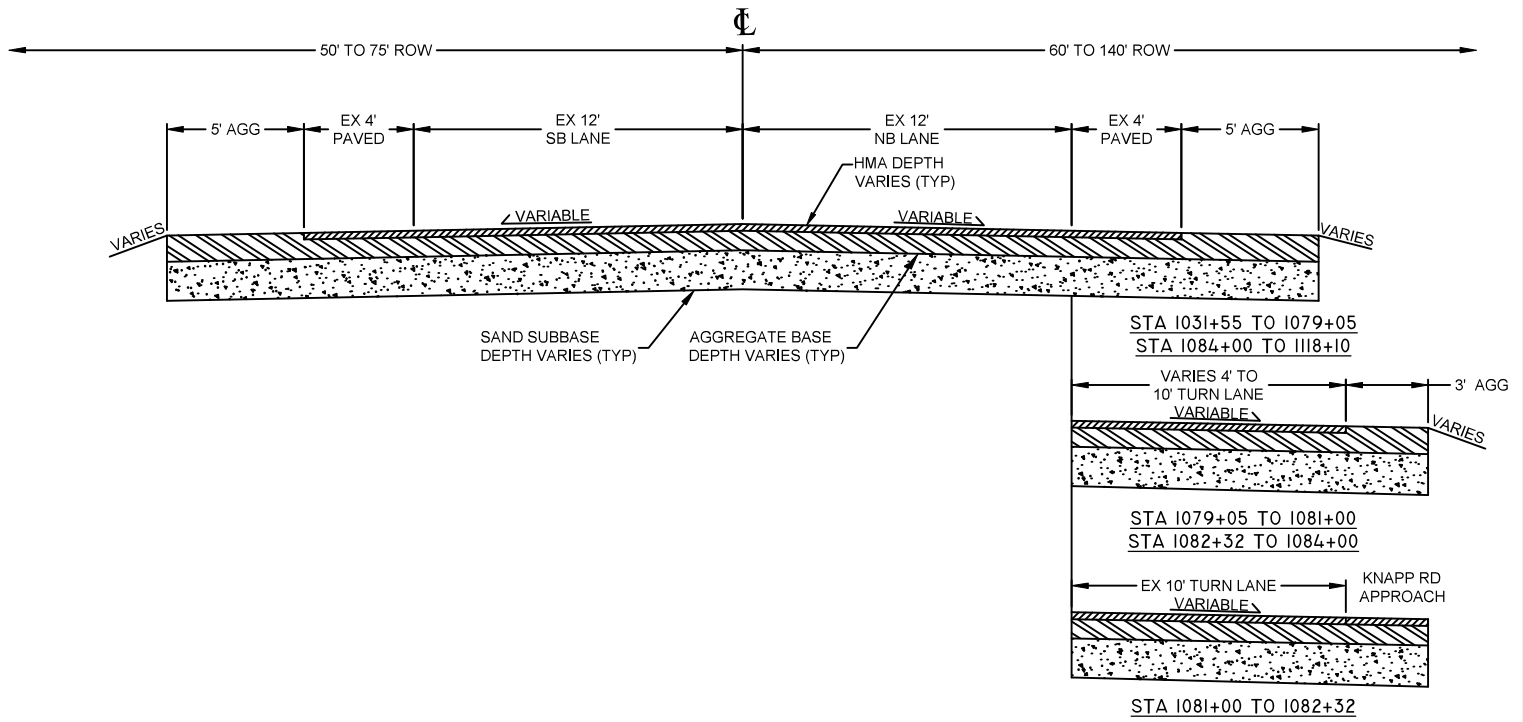
**EXISTING SIGN RELOCATION:**

Any permanent signs requiring relocation due to Contractor operations shall be salvaged and reset by the Contractor at locations approved by the Engineer. The Contractor shall witness the existing sign location and notify the RCRC for approval for reinstallation prior to sign removal. Signs and posts damaged during the removal and storage operations shall be replaced with new signs and posts. All signs shall be installed, removed and/or salvaged, with Engineer's approval, according to the current edition of "Michigan Manual on Uniform Traffic Control Devices" and the current edition of Michigan Department of Transportation (MDOT) "Standard Specifications For Construction." If existing regulator signs (i.e. stop signs) need to be relocated during construction, the Contractor is responsible for removing and immediately re-setting these signs, with the Engineer's approval. Compensation for this work will be considered as included in the pay item for Minor Traf Devices.

**SITE CLEANUP:**

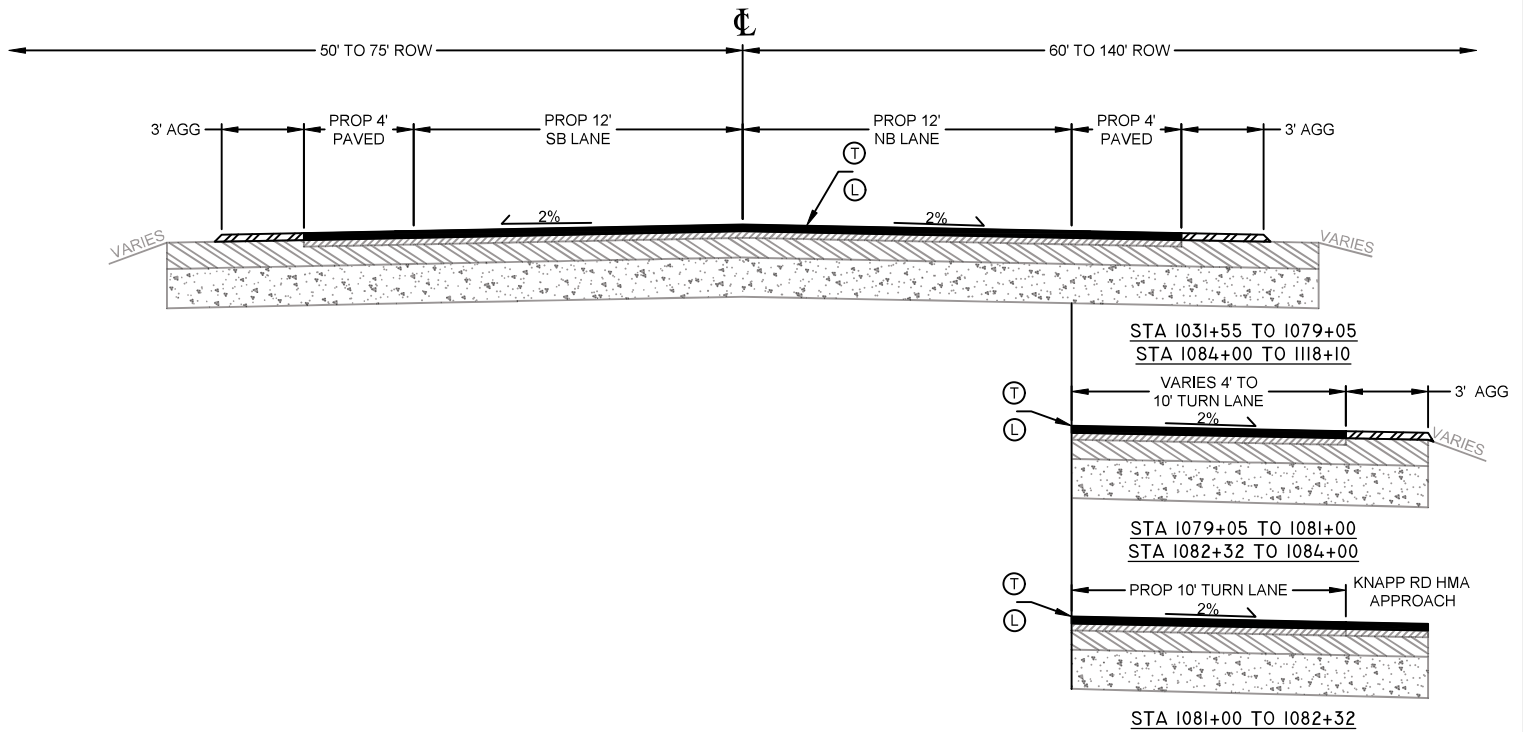
The Contractor shall keep the work site clean per subsection 104.07.D of the Standard Specification for Construction. No additional compensation will be made for this clean up.





**EXISTING TYPICAL SECTION**

STA 1031+55 TO 1118+10



**PROPOSED TYPICAL SECTION**

STA 1031+55 TO 1118+10



OLD US-27 (HARRISON RD)

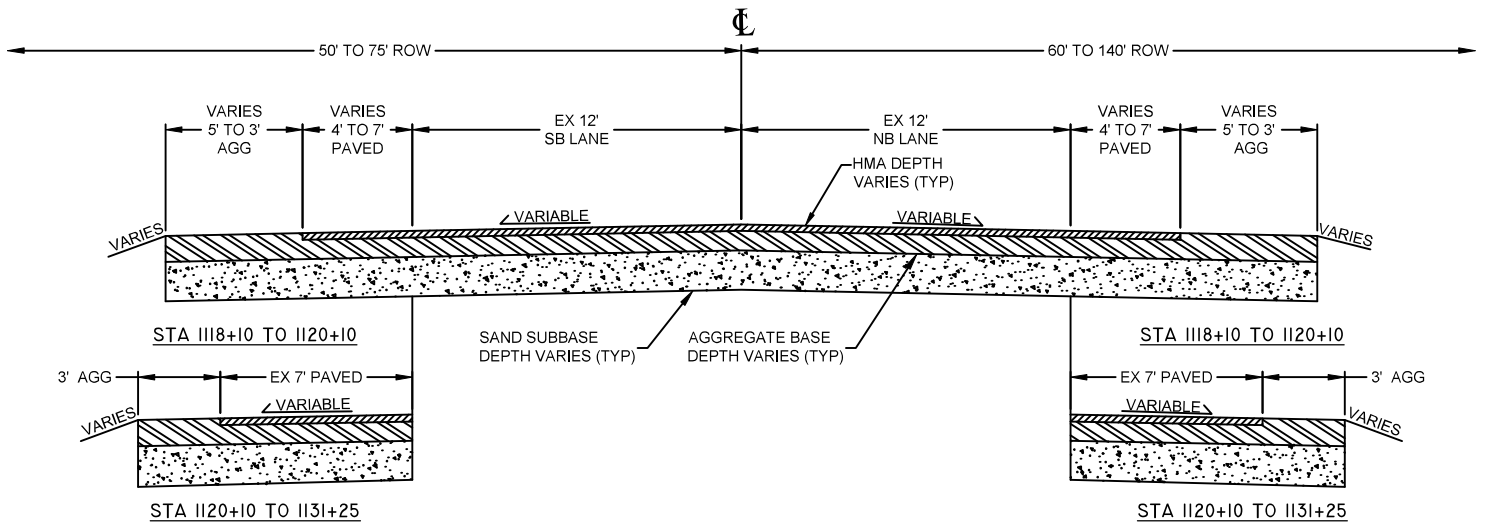
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JOB NUMBER: 220255

DESIGN: DAHLSTROM

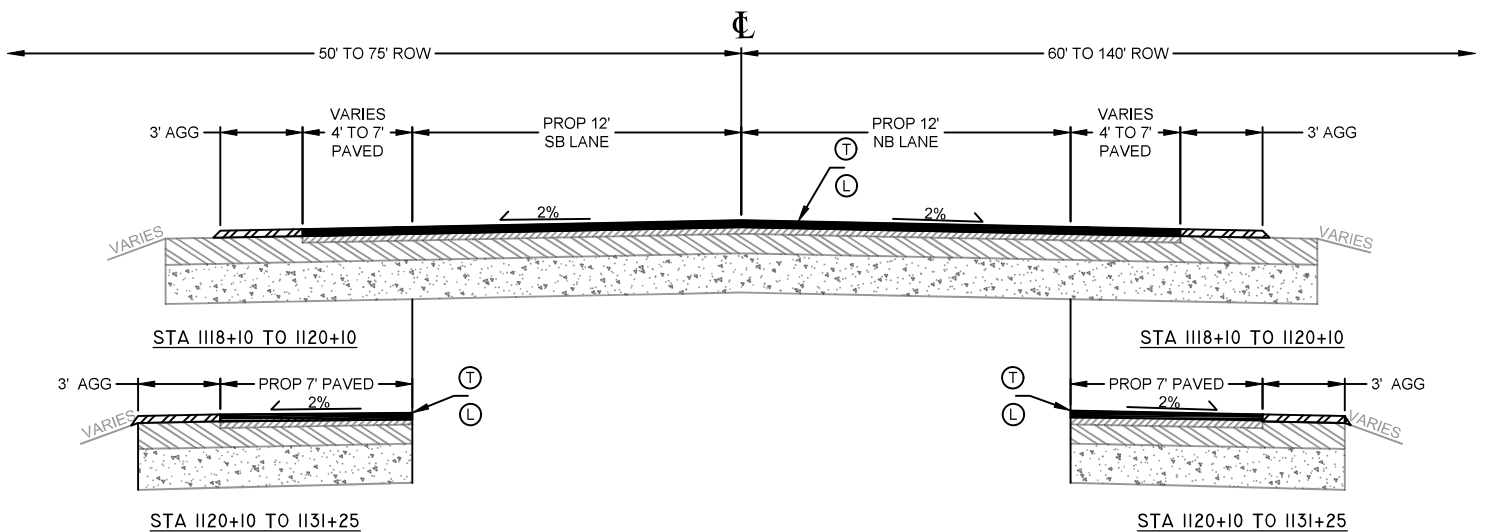
DATE: 8/2/24

SCALE: N/A



### EXISTING TYPICAL SECTION

STA 1118+10 TO 1131+25



### PROPOSED TYPICAL SECTION

STA 1118+10 TO 1131+25



OLD US-27 (HARRISON RD)

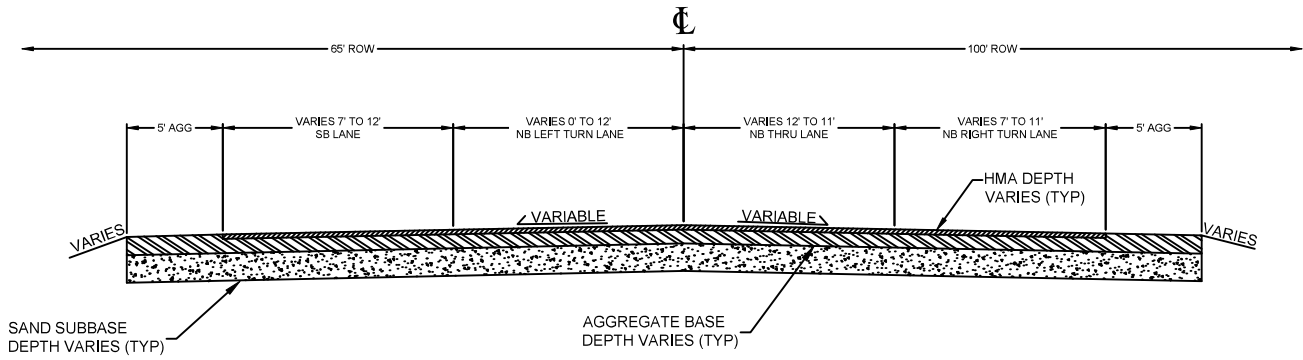
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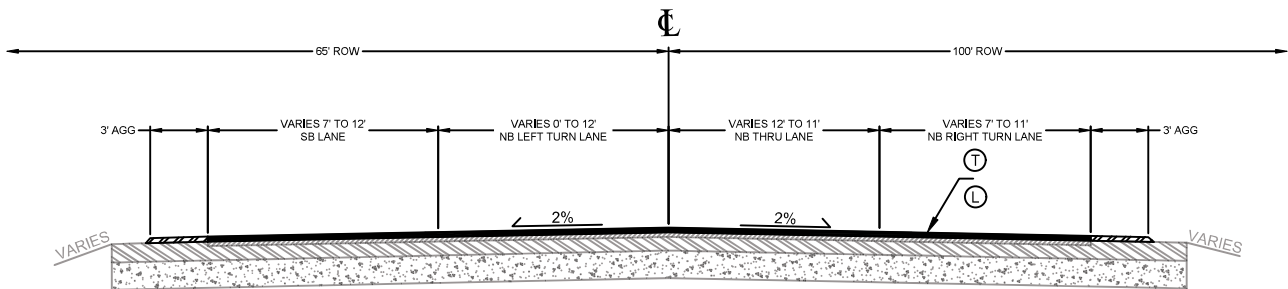
DATE: 8/2/24

SCALE: N/A



### EXISTING TYPICAL SECTION

STA 1131+25 TO 1135+25



### PROPOSED TYPICAL SECTION

STA 1131+25 TO 1135+25



OLD US-27 (HARRISON RD)

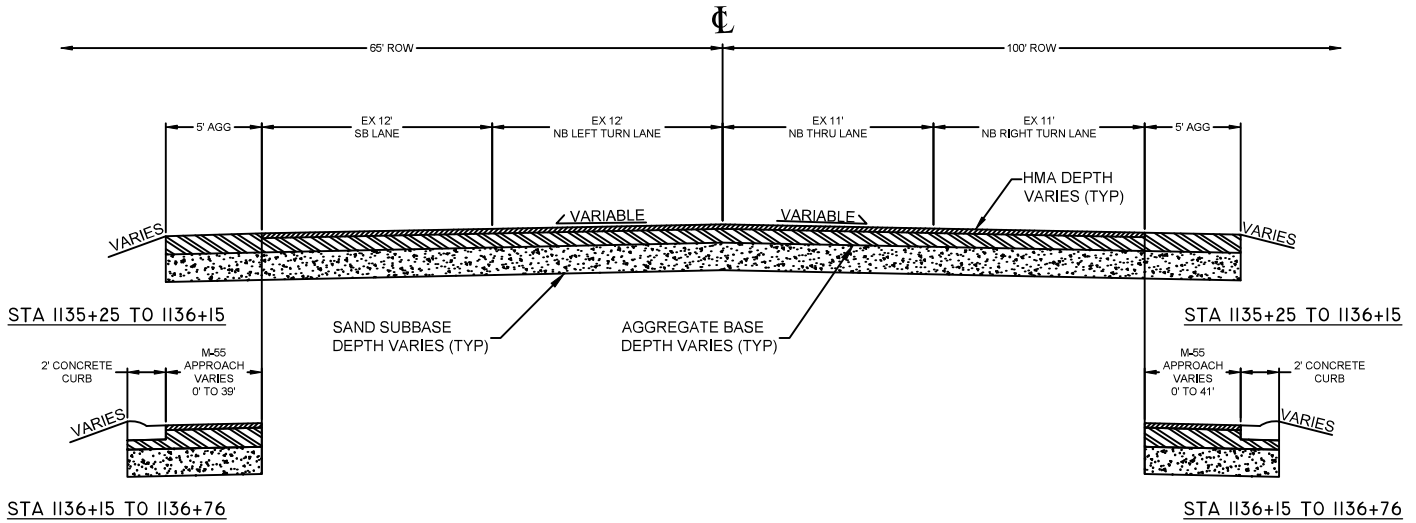
EXISTING/PROPOSED TYPICAL SECTION

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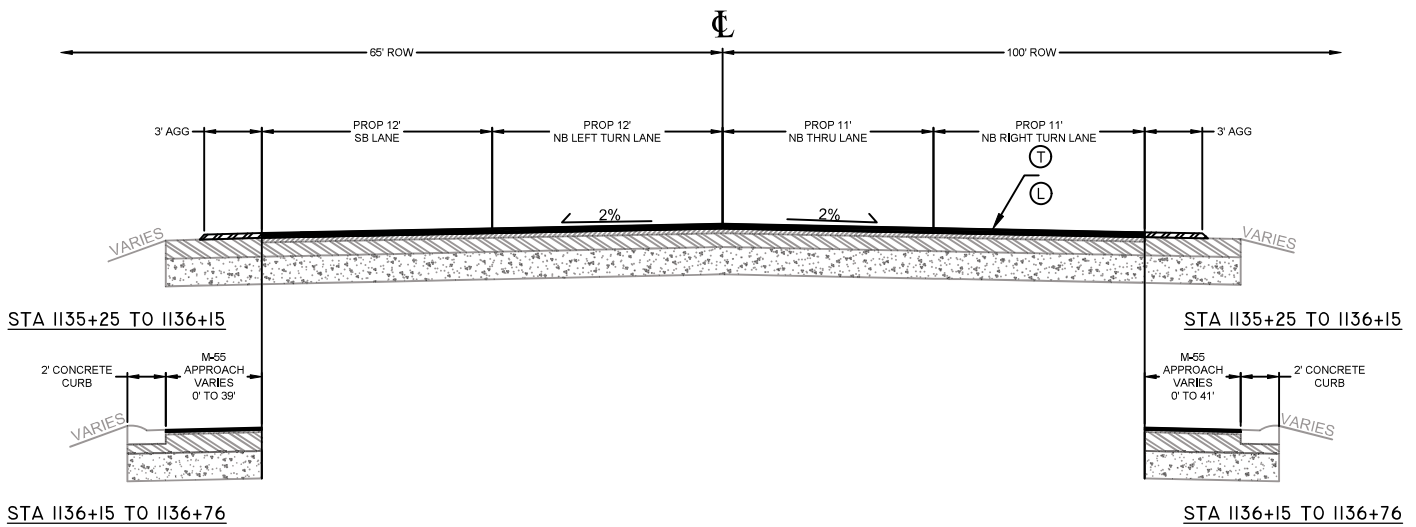
DATE: 8/2/2024

SCALE: N/A



### EXISTING TYPICAL SECTION

STA 1135+25 TO 1136+75



### PROPOSED TYPICAL SECTION

STA 1135+25 TO 1136+75



OLD US-27 (HARRISON RD)

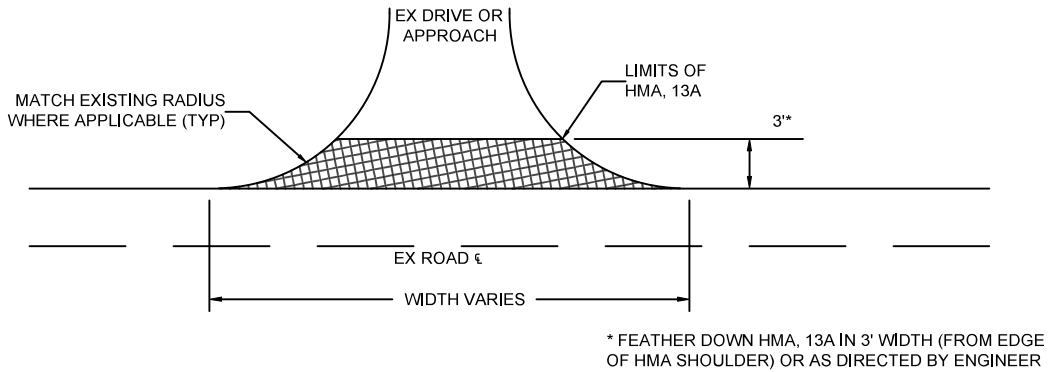
EXISTING/PROPOSED TYPICAL SECTION

JOB NUMBER: 220255

DESIGN: DAHLSTROM

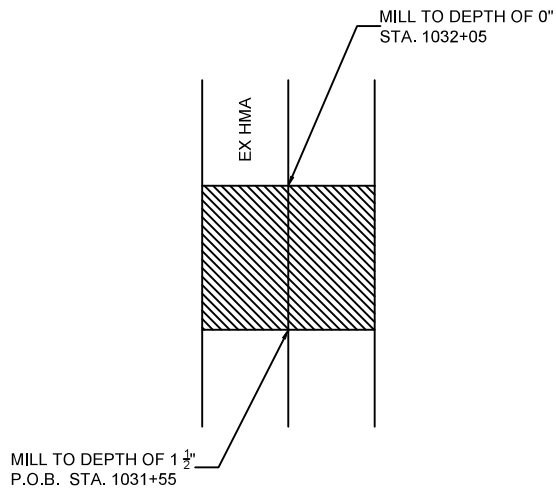
DATE: 8/2/24

SCALE: N/A



### HMA BUMPOUT DETAIL

APPLY TO ALL DRIVE AND  
INTERSECTION APPROACHES  
NOT CALLED OUT IN THE HMA  
APPROACH SECTION OF THE LOG



### P.O.B. BUTT JOINT DETAIL

STATION 1031+55 TO 1032+05



OLD US 27 (HARRISON RD)

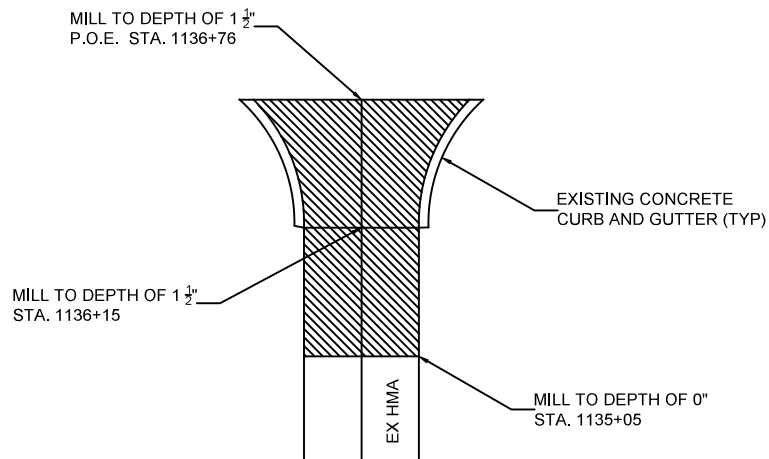
DETAIL DRAWING

JOB NUMBER: 220255

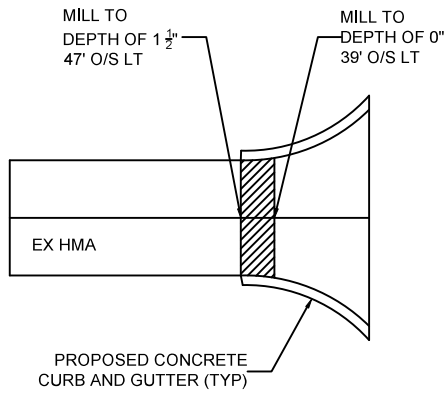
DESIGN: DAHLSTROM

DATE: 10/25/24

SCALE: N/A



**P.O.E. AT M-55 BUTT JOINT DETAIL**  
STATION 1135+05 TO 1136+76



**SEWER AUTHORITY BUTT JOINT DETAIL**  
STATION 1070+95 TO 1071+11 LT



OLD US 27 (HARRISON RD)

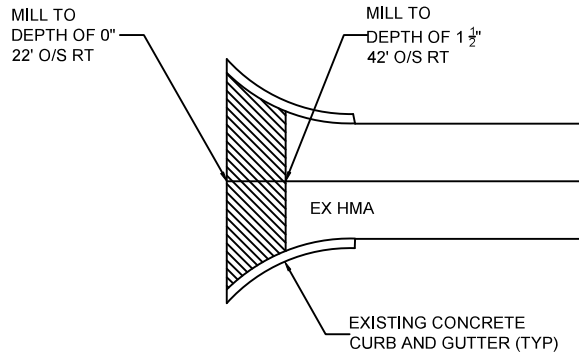
DETAIL DRAWING

JOB NUMBER: 220255

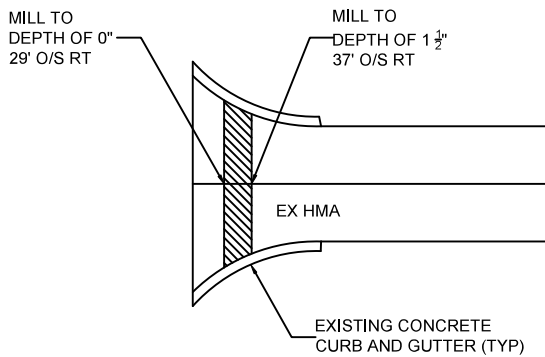
DESIGN: DAHLSTROM

DATE: 10/25/24

SCALE: N/A



**KNAPP RD E BUTT JOINT DETAIL**  
 STATION 1081+11 TO 1082+15 RT



**QUESTVIEW DR BUTT JOINT DETAIL**  
 STATION 1092+76 TO 1093+44 RT



OLD US 27 (HARRISON RD)

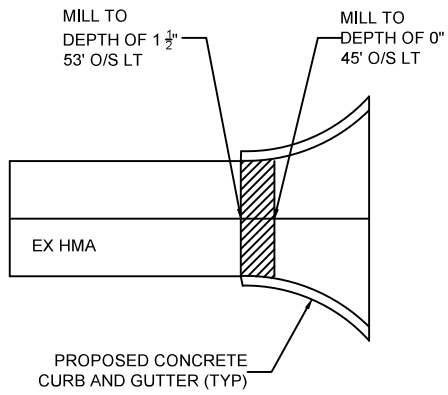
DETAIL DRAWING

JOB NUMBER: 220255

DESIGN: DAHLSTROM

DATE: 10/25/24

SCALE: N/A



**WELCH RD BUTT JOINT DETAIL**  
 STATION 1120+37 TO 1120+58



OLD US 27 (HARRISON RD)

DETAIL DRAWING

JOB NUMBER: 220255

DESIGN: DAHLSTROM

DATE: 10/25/24

SCALE: N/A



ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION  
FOR  
**SLOPE RESTORATION, MODIFIED**

RCRC:BDD

1 of 2

9-23-21

**a. Description.**

This work consists of preparing all areas designated for Slope Restoration, Modified on the plans or by the Engineer, and applying seed and mulch to those areas. Turf establishment shall be in accordance with section 816 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

**b. Materials.**

The materials and application rates specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer.

1. Furnish topsoil at 4" depth for this project.
2. Class A fertilizer shall be used on this project.
3. TDS seeding mixture shall be used on this project.
4. Hydro seeder will be used to place mulch, seed & fertilizer.
5. Watering will be applied after seeding.

**c. Construction.**

Construction methods shall be in accordance to subsection 816.03 of the Standard Specifications for Construction. Begin this work as soon as possible after final grading of the areas designated for Slope Restoration, Modified but no later than the maximum time frames stated in subsection 208.03 of the Standard Specifications for Construction. It may be necessary, as directed by the Engineer, to place materials by hand.

Prior to seeding, shape, compact and assure all areas to be seeded are weed free. If the area being restored requires additional earth to meet finished grade, this additional depth must be filled using embankment. Furnishing and placing this additional material will be paid for as additional work using the Embankment, LM item.

After seeding, water all areas that were seeded no later than one week after the seed is placed. Place additional water one more time if needed, as requested by the Engineer.

If an area washes out after this work has been properly completed and approved by the Engineer, the contractor shall make the required corrections to prevent future washouts and replace the seed and mulch. This replacement will be paid for as additional work using the Embankment, LM and Slope Restoration, Modified items.

If an area washes out for reasons attributable to the Contractor's activity or failure to take proper precautions, replacement shall be at the Contractor's expense.

If weeds are determined by the Engineer to cover more than ten percent of the total area of Slope Restoration, Modified, the Contractor shall provide weed control in accordance to subsection 816.03.I of the Standard Specifications for Construction. Weed control shall be at the Contractor's expense with no additional charges to the project for materials, labor or equipment.

**d. Measurement and Payment.**

The completed work as described will be paid for at the contract unit price for the following contract item (pay item):

<u>Contract Item (Pay Item)</u>	<u>Pay Unit</u>
Slope Restoration, Modified	Square Yard

Payment for **Slope Restoration, Modified** will be measured by area in square yard in place. All materials, labor and equipment required to install **Slope Restoration, Modified** which includes, furnishing topsoil, Class A fertilizer, TDS seeding mixture, hydro seeder and watering will not be paid for separately but shall be included in the contract unit price bid for **Slope Restoration, Modified**.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**SAMPLING ASPHALT BINDER ON LOCAL AGENCY PROJECTS**

CFS:TRC

1 of 1

APPR:JWB:KPK:02-19-20  
FHWA:APPR:02-19-20

**a. Description.** This work consists of the Contractor taking samples of the asphalt binder and delivering the samples to the Engineer prior to incorporation into the hot mix asphalt mixture.

**b. Materials.** For informational purposes, original samples of asphalt binder will be taken by the Contractor and delivered to the Engineer prior to incorporation into the mixture. The frequency of sampling will be determined by the Engineer.

The Contractor must certify in writing that the materials used in the HMA mixture are from the same source as the materials used in developing the HMA mixture design and the bond coat is from an approved supplier as stated in the *Material Quality Assurance Procedures Manual*.

**c. Construction.** None specified.

**d. Measurement and Payment.** The cost of obtaining and delivering the samples to the Engineer will be included in the hot mix asphalt (HMA) pay items in the contract.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**RECYCLED HOT MIX ASPHALT MIXTURE ON LOCAL AGENCY PROJECTS**

CFS:KPK

1 of 2

APPR:JWB:CJB:02-26-20  
FHWA:APPR:03-02-20

**Add the following subsection to subsection 501.02.A.2 of the Standard Specifications for Construction.**

- c. **Reclaimed Asphalt Pavement (RAP) and Binder Grade Selection.** The method for determining the binder grade in HMA mixtures incorporating RAP is divided into three categories designated Tier 1, Tier 2 and Tier 3. Each tier has a range of percentages that represent the contribution of the RAP binder toward the total binder, by weight. The tiers identified below apply to HMA mixtures with the following exception: Superpave mixture types EML, EML High Stress, EMH, EMH High Stress, and EH, EH High Stress used as leveling or top course must be limited to a maximum of 27 percent RAP binder by weight of the total binder in the mixture.

Recycled materials may be used as a substitute for a portion of the new materials required to produce HMA mixtures in accordance with contract.

- **Tier 1 (0% to 17% RAP binder by weight of the total binder in the mixture).** No binder grade adjustment is made to compensate for the stiffness of the asphalt binder in RAP.
- **Tier 2 (18% to 27% RAP binder by weight of the total binder in the mixture).** For all mixtures no binder grade change will occur in Tier 2 for all shoulder and temporary road mixtures.

Ensure the required asphalt binder grade is at least one grade lower for the low temperature than the design binder grade required for the specified project mixture type. Lowering the high temperature of the binder one grade is optional. For example, if the design binder grade for the mixture type is PG 58-22, the required grade for the binder in the HMA mixture containing RAP would be a PG 52-28 or a PG 58-28.

For Marshall Mixes, no binder grade change will be required when Average Daily Traffic (ADT) is above 7000 or Commercial Average Daily Traffic (CADT) is above 700. No binder grade change will occur for EL mixtures used as leveling or top course.

The asphalt binder grade can also be selected using a blending chart for high and low temperatures. Supply the blending chart and the RAP test data used in determining the binder selection according to *AASHTO M323*.

- **Tier 3 ( $\geq 28\%$  RAP binder by weight of the total binder in the mixture).** The binder grade for the asphalt binder is selected using a blending chart for high and low temperatures per *AASHTO M323*. Supply the blending chart and the RAP test data

used in determining the binder selection.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**MARSHALL HOT MIX ASPHALT MIXTURE**

CFS:JWB

1 of 2

APPR:KPK:CJB:03-04-20  
FHWA:APPR:03-13-20

**a. Description.** This work consists of furnishing a hot mix asphalt (HMA) mixture, designed using Marshall Mixture Design Methods, in accordance with the standard specifications except as modified by this special provision.

**b. Mix Design.** Submit the mix design for evaluation in accordance with the Department's *HMA Production Manual*. Use a 50 blow Marshall hammer when compacting mixtures for developing Marshall mix designs.

**c. Recycled Mixtures.** Substituting reclaimed asphalt pavement (RAP) for a portion of the new material required to produce the HMA mixture is allowed provided that the mixture is designed and produced to meet all criteria specified herein, unless otherwise prohibited. Ensure RAP materials are in accordance with the standard specifications.

**d. Materials.** Table 1 provides the mix design criteria and volumetric properties. Table 2 provides the required aggregate properties. Use aggregates of the highest quality available to meet the minimum specifications. Use the mixture designation number shown in the pay item name when determining mix design properties from Tables 1 and 2.

**e. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
HMA, <u>(type)</u> .....	Ton

**Table 1: Mix Design Criteria and Volumetric Properties**

	Mixture No.				
	2C	3C	4C	13A	36A
Target Air Void, % (a)	3.00	4.00	4.00	4.00	4.00
VMA (min) (b)	11.00	13.00	14.00	14.00	15.00
VFA	65-78	65-78	65-78	65-78	65-78
Fines to Binder Ratio (max) (c)	1.2	1.2	1.2	1.2	1.2
Flow (0.01 inch)	8-16	8-16	8-16	8-16	8-16
Stability (min), lbs	1200	1200	1200	900	900

- a. Lower target air voids by 1.00% if used in a separate shoulder paving operation. Consider reducing air void targets to 3.00% for lower traffic volume roadways when designing 13A and 36A mixtures for local agency use.
- b. VMA calculated using Gsb of the combined aggregates.
- c. Ratio of the weight of aggregate passing the No. 200 sieve to total asphalt binder content by weight; including fines and binder contributed by RAP.

**Table 2: Aggregate Properties**

	Mixture No.				
	2C	3C	4C	13A	36A
	Percent Passing Indicated Sieve or Property Limit				
1½ inch	100				
1 inch	91-100	100			
¾ inch	90 max.	91-100	100	100	
½ inch	78 max.	90 max.	91-100	75-95	100
⅜ inch	70 max.	77 max.	90 max.	60-90	92-100
No. 4	52 max.	57 max.	67 max.	45-80	65-90
No. 8	15-40	15-45	15-52	30-65	55-75
No. 16	30 max.	33 max.	37 max.	20-50	
No. 30	22 max.	25 max.	27 max.	15-40	25-45
No. 50	17 max.	19 max.	20 max.	10-25	
No. 100	15 max.	15 max.	15 max.	5-15	
No. 200	3-6	3-6	3-6	3-6	3-10
Crushed (min), % (MTM 117)	90	90	90	25	60
Soft Particle (max), % (a)	12.0	12.0	8.0	8.0	8.0
Angularity Index (min) (b)	4.0	4.0	4.0	2.5	3.0
L.A. Abrasion (max), % loss (c)	40	40	40	40	40
Sand Ratio (max) (d)	-	-	-	50	50
<p>a. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 8.0 percent for aggregates used in top course. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 12.0 percent for aggregates used in base and leveling courses.</p> <p>b. The fine aggregate angularity of blended aggregates, determined by MTM 118, must meet the minimum requirement. In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material. NAA fine aggregate angularity must be reported for information only and must include the fine material contributed by RAP if present in the mixture.</p> <p>c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50</p> <p>d. Sand ratio for 13A and 36A no more than 50% of the material passing the No. 4 sieve is allowed to pass the No. 30 Sieve.</p>					

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**ACCEPTANCE OF HOT MIX ASPHALT MIXTURE ON LOCAL AGENCY PROJECTS**

CFS:KPK

1 of 7

APPR:CJB:JWB:02-26-20  
FHWA:APPR:03-13-20

**a. Description.** This special provision provides sampling and testing requirements for local agency projects using the roller method and the nuclear density gauge testing. Provide the hot mix asphalt (HMA) mixture in accordance with the requirements of the standard specifications, except where modified herein.

**b. Materials.** Provide aggregates, mineral filler (if required), and asphalt binder to produce a mixture proportioned within the master gradation limits shown in the contract, and meeting the uniformity tolerance limits in Table 1.

**Table 1: Uniformity Tolerance Limits for HMA Mixtures**

Parameter		Top and Leveling Course		Base Course		
Number	Description	Range 1 (a)	Range 2	Range 1 (a)	Range 2	
1	% Binder Content	-0.30 to +0.40	±0.50	-0.30 to +0.40	±0.50	
2	% Passing	# 8 and Larger Sieves	±5.0	±8.0	±7.0	±9.0
		# 30 Sieve	±4.0	±6.0	±6.0	±9.0
		# 200 Sieve	±1.0	±2.0	±2.0	±3.0
3	Crushed Particle Content (b)	Below 10%	Below 15%	Below 10%	Below 15%	
a. This range allows for normal mixture and testing variations. The mixture must be proportioned to test as closely as possible to the Job-Mix-Formula (JMF).						
b. Deviation from JMF.						

Parameter number 2 as shown in Table 1 is aggregate gradation. Each sieve will be evaluated on one of the three gradation tolerance categories. If more than one sieve is exceeding Range 1 or Range 2 tolerances, only the one with the largest exceedance will be counted as the gradation parameter.

The master gradation should be maintained throughout production; however, price adjustments will be based on Table 1. Aggregates which are to be used in plant-mixed HMA mixtures must not contain topsoil, clay, or loam.

**c. Construction.** Submit a Mix Design and a JMF to the Engineer. Do not begin production and placement of the HMA until receipt of the Engineer's approval of the JMF. Maintain the binder content, aggregate gradation, and the crushed particle content of the HMA mixture within the Range 1 uniformity tolerance limits in Table 1. For mixtures meeting the definition of top or leveling course, field regress air void content to 3.5 percent with liquid asphalt cement unless specified otherwise on HMA application estimate. For mixtures meeting the definition of base course, field regress air void content to 3.0 percent with liquid asphalt cement unless specified



otherwise on HMA application estimate.

Ensure all persons performing Quality Control (QC) and Quality Assurance (QA) HMA field sampling are "Local Agency HMA Sampling Qualified" samplers. At the pre-production or preconstruction meeting, the Engineer will determine the method of sampling to be used. Ensure all sampling is done in accordance with *MTM 313 (Sampling HMA Paving Mixtures)* or *MTM 324 (Sampling HMA Paving Mixtures Behind the Paver)*. Samples are to be taken from separate hauling loads.

For production/mainline type paving, obtain a minimum of two samples, each being 20,000 grams, each day of production, for each mix type. The Engineer will sample and maintain possession of the sample. Sampling from the paver hopper is prohibited. Each sample will be divided into two 10,000 gram parts with one part being for initial testing and the other part being held for possible dispute resolution testing. Obtain a minimum of three samples for each mix type regardless of the number of days of production.

Obtain samples that are representative of the day's paving. Sample collection is to be spaced throughout the planned tonnage. One sample will be obtained in the first half of the tonnage and the second sample will be obtained in the second half of the tonnage. If planned paving is reduced or suspended, when paving resumes, the remaining sampling must be representative of the original intended sampling timing.

Ensure all persons performing testing are Bit Level One certified or Bit QA/QC Technician certified.

Ensure daily test samples are obtained, except, if the first test results show that the HMA mixture is in specification, the Engineer has the option of not testing additional samples from that day.

At the pre-production or preconstruction meeting, the Engineer and Contractor will collectively determine the test method for measuring asphalt content (AC) using *MTM 319 (Determination of Asphalt Content from Asphalt Paving Mixtures by the Ignition Method)* or *MTM 325 (Quantitative Extraction of Bitumen from HMA Paving Mixtures)*. Back calculation will not be allowed for determining asphalt content.

Ensure all labs performing local agency acceptance testing are qualified labs per the *HMA Production Manual and the Michigan Quality Assurance Procedures Manual*, and participate in the MDOT round robin process, or they must be *AASHTO Materials Reference Laboratory (AMRL)* accredited for *AASHTO T30* or *T27*, and *AASHTO T164* or *T308*. Ensure on non-National Highway System (NHS) routes, Contractor labs are made available, and may be used, but they must be qualified labs as previously stated. Contractor labs may not be used on NHS routes. Material acceptance testing will be completed by the Engineer within 14 calendar days, except holidays and Sundays, for projects with less than 5,000 tons (plan quantity) of HMA and within 7 calendar days, except holidays and Sundays, for projects with 5,000 tons (plan quantity) or more of HMA, after the Engineer has obtained the samples. QA test results will be provided to the Contractor after the Engineer receives the QC test results. Failure on the part of the Engineer or the laboratory to provide QA test results within the specified time frame does not relieve the Contractor of their responsibility to provide an asphalt mix within specifications.

The correlation procedure for ignition oven will be established as follows. Asphalt binder content based on ignition method from *MTM 319*. Gradation (*ASTM D5444*) and Crushed particle content (*MTM 117*) based on aggregate from *MTM 319*. The incineration temperature will be established

at the pre-production meeting. The Contractor will provide a laboratory mixture sample to the acceptance laboratory to establish the correction factor for each mix. Ensure this sample is provided to the Engineer a minimum of 14 calendar days prior to production.

For production/mainline type paving, the mixture may be accepted by visual inspection up to a quantity of 500 tons per mixture type, per project (not per day). For non-production type paving defined as driveways, approaches, and patching, visual inspection may be allowed regardless of the tonnage.

The mixture will be considered out-of-specification, as determined by the acceptance tests, if for any one mixture, two consecutive tests per parameter, (for Parameter 2, two consecutive aggregate gradations on one sieve) are outside Range 1 or Range 2 tolerance limits. If a parameter is outside of Range 1 tolerance limits and the second consecutive test shows that the parameter is outside of Range 2, then it will be considered to be a Range 1 out-of-specification. Consecutive refers to the production order and not necessarily the testing order. Out-of-specification mixtures are subject to a price adjustment per the Measurement and Payment section of this special provision.

Contractor operations will be suspended when the mixture is determined to be out-of-specification, but contract time will continue to run. The Engineer may issue a Notice of Non-Compliance with Contract Requirements (Form 1165), if the Contractor has not suspended operations and taken corrective action. Submit a revised JMF or proposed alterations to the plant and/or materials to achieve the JMF to the Engineer. Effects on the Aggregate Wear Index (AWI) and mix design properties will be taken into consideration. Production and placement cannot resume until receipt of the Engineer's approval to proceed.

Pavement in-place density will be measured using one of two approved methods. The method used for measuring in-place density will be agreed upon at a pre-production or preconstruction meeting.

Pavement in-place density tests will be completed by the Engineer during paving operations and prior to traffic staging changes. Pavement in-place density acceptance testing will be completed by the Engineer prior to paving of subsequent lifts and being open to traffic.

#### Option 1 - Direct Density Method

Use of a nuclear density gauge requires measuring the pavement density using the Gmm from the JMF for the density control target. The required in-place density of the HMA mixture must be 92.0 to 98.0 percent of the density control target. Nuclear density testing and frequency will be in accordance with the *MDOT Density Testing and Inspection Manual*.

#### Option 2 - Roller Method

The Engineer may use the Roller Method with a nuclear or non-nuclear density gauge to document achieving optimal density as discussed below.

Use of the density gauge requires establishing a rolling pattern that will achieve the required in-place density. The Engineer will measure pavement density with a density gauge using the Gmm from the JMF for the density control target.

Use of the Roller Method requires developing and establishing density frequency curves, and

meeting the requirements of Table 2. A density frequency curve is defined as the measurement and documentation of each pass of the finished roller until the in-place density results indicate a decrease in value. The previous recording will be deemed the optimal density. The Contractor is responsible for establishing and documenting an initial or QC rolling pattern that achieves the optimal in-place density. When the density frequency curve is used, the Engineer will run and document the density frequency curve for each half day of production to determine the number of passes to achieve the maximum density. Table 5, located at the end of this special provision, can be used as an aid in developing the density frequency curve. The Engineer will perform density tests using an approved nuclear or non-nuclear gauge per the manufacturer's recommended procedures.

**Table 2: Minimum Number of Rollers Recommended Based on Placement Rate**

Average Laydown Rate, Square Yards per Hour	Number of Rollers Required (a)	
	Compaction	Finish
Less than 600	1	1 (b)
601 - 1200	1	1
1201 - 2400	2	1
2401 - 3600	3	1
3601 and More	4	1

a. Number of rollers may increase based on density frequency curve.  
b. The compaction roller may be used as the finish roller also.

After placement, roll the HMA mixture as soon after placement as the roller is able to bear without undue displacement or cracking. Start rolling longitudinally at the sides of the lanes and proceed toward the center of the pavement, overlapping on successive trips by at least half the width of the drum. Ensure each required roller is 8 tons minimum in weight unless otherwise approved by the Engineer.

Ensure the initial breakdown roller is capable of vibratory compaction and is a maximum of 500 feet behind the paving operations. The maximum allowable speed of each roller is 3 miles per hour (mph) or 4.5 feet per second. Ensure all compaction rollers complete a minimum of two complete rolling cycles prior to the mat temperature cooling to 180 degrees Fahrenheit (F). Continue finish rolling until all roller marks are eliminated and no further compaction is possible. The Engineer will verify and document that the roller pattern has been adhered to. The Engineer can stop production when the roller pattern is not adhered to.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for using applicable pay items as described in subsection 501.04 of the Standard Specifications for Construction, or the contract, except as modified below.

**Base Price.** Price established by the Department to be used in calculating incentives and adjustments to pay items and shown in the contract.

If acceptance tests, as described in section c. of this special provision, show that a Table 1 mixture parameter exceeds the Range 1, but not the Range 2, tolerance limits, that mixture parameter will be subject to a 10 percent penalty. The 10 percent penalty will be assessed based on the acceptance tests only unless the Contractor requests that the 10,000 gram sample part retained for possible dispute resolution testing be tested. The Contractor has 4 calendar days from receipt

of the acceptance test results to notify the Engineer, in writing, that dispute resolution testing is requested. The Contractor's QC test results for the corresponding QA test results must result in an overall payment greater than QA test results otherwise the QA tests will not be allowed to be disputed. The Engineer has 4 calendar days to send the dispute resolution sample to the lab once dispute resolution testing is requested. The dispute resolution sample will be sent to an independent lab selected by the Local Agency, and the resultant dispute test results will be used to determine the penalty per parameter, if any. Ensure the independent lab is a MDOT QA/QC qualified lab or an AMRL HMA qualified lab. The independent lab must not have conflicts of interest with the Contractor or Local Agency. If the dispute testing results show that the mixture parameter is out-of-specification, the Contractor will pay for the cost of the dispute resolution testing and the contract base price for the material will be adjusted, based on all test result parameters from the dispute tests, as shown in Table 3 and Table 4. If the dispute test results do not confirm the mixture parameter is out-of-specification, then the Local Agency will pay for the cost of the dispute resolution testing and no price adjustment is required.

If acceptance tests, as described in section c. of this special provision, show that a Table 1 mixture parameter exceeds the Range 2 tolerance limits, the 10,000 gram sample part retained for possible dispute resolution testing will be sent, within 4 calendar days, to the MDOT Central Laboratory for further testing. The MDOT Central Laboratory's test results will be used to determine the penalty per mixture parameter, if any. If the MDOT Central Laboratory's results do not confirm the mixture parameter is out-of-specification, then no price adjustment is required. If the MDOT Central Laboratory's results show that the mixture is out-of-specification and the Engineer approves leaving the out-of-specification mixture in place, the contract base price for the material will be adjusted, based on all parameters, as shown in Table 3 and Table 4.

In the case that the Contractor disputes the results of the test of the second sample obtained for a particular day of production, the test turn-around time frames given would apply to the second test and there would be no time frame on the first test.

The laboratory (MDOT Central Laboratory or independent lab) will complete all Dispute Resolution testing and return test results to the Engineer, who will provide them to the Contractor, within 13 calendar days upon receiving the Dispute Resolution samples.

In all cases, when penalties are assessed, the penalty applies to each parameter, up to two parameters, that is out of specification.

**Table 3: Penalty Per Parameter**

Mixture Parameter out-of-Specification per Acceptance Tests	Mixture Parameter out-of-Specification per Dispute Resolution Test Lab	Price Adjustment per Parameter
No	N/A	None
Yes	No	None
	Yes	Outside Range 1 but not Range 2: decrease by 10% Outside Range 2: decrease by 25%

The quantity of material receiving a price adjustment is defined as the material produced from the time the first out-of-specification sample was taken until the time the sample leading to the first in-specification test was taken.

Each parameter of Table 1 is evaluated with the total price adjustment applied to the contract base price based on a sum of the two parameter penalties resulting in the highest total price adjustment as per Table 4. For example, if three parameters are out-of-specification, with two parameters outside Range 1 of Table 1 tolerance limits, but within Range 2 of Table 1 limits and one parameter outside of Range 2 of Table 1 tolerance limits and the Engineer approves leaving the mixture in place, the total price adjustment for that quantity of material is 35 percent.

**Table 4: Calculating Total Price Adjustment**

Cost Adjustment as a Sum of the Two Highest Parameter Penalties		
Number of Parameters Out-of-Specification	Range(s) Outside of Tolerance Limits of Table 1 per Parameter	Total Price Adjustment
One	Range 1	10%
	Range 2	25%
Two	Range 1 and Range 1	20%
	Range 1 and Range 2	35%
	Range 2 and Range 2	50%
Three	Range 1, Range 1 and Range 1	20%
	Range 1, Range 1 and Range 2	35%
	Range 1, Range 2 and Range 2	50%
	Range 2, Range 2 and Range 2	50%

**Table 5: Density Frequency Curve Development**

Tested by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Route/Location:		Air Temp:
Control Section/Job Number:		Weather:
Mix Type:	Tonnage:	Gauge:
Producer:	Depth:	Gmm:

Roller #1 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Roller #2 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Roller #3 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Summary: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**BACKFILL FOR CONCRETE CURB, GUTTER, AND DIVIDERS**

CFS:JYG

1 of 1

APPR:DMG:DBP:02-16-23  
FHWA:APPR:02-21-23

**Delete subsection 802.04.H, on page 8-7 of the Standard Specifications for Construction, in its entirety and replace with the following:**

- H. **Backfill.** Unless the contract includes separate pay items for backfill, the unit price for other items of work will include the cost of backfill.

ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION  
FOR  
**HMA APPLICATION ESTIMATE**

RCRC: BDD

1 of 1

10-25-24

**a. Description.**

This work shall be done in accordance with the requirements of section 501 of the Standard Specifications for Construction, except as herein specified.

**b. Construction Methods.**

Acceptance testing will be done according to the Michigan Department of Transportation Special Provision 20SP-501I-01-Acceptance of Hot Mix Asphalt on Local Agency Projects.

The Roller Method shall be used for achieving optimal density.

**c. Materials.**

**HMA, 13A material used in top course or HMA, Approach on this project may not contain Reclaimed Asphalt Pavement (RAP).**

The use of RAP in HMA, 13A for levelling course only shall be limited to Tier 1 (0% to 17%) RAP binder by weight of the total binder in the mixture.

HMA, 13A for levelling course with a yield of 135 pounds per square yard.

HMA, 13A for top course with a yield of 200 pounds per square yard.

HMA Approach shall be HMA, 13A with a yield of 200 pounds per square yard paving over existing HMA.

HMA Approach shall be HMA, 13A with a yield of 220 pounds per square yard paving over gravel.

The performance grade asphalt binder for HMA, 13A shall be PG 58-28.

Aggregate Wear Index (AWI) for the top course shall be a minimum AWI-260.

The target air void percentage shall be 3.0% for all HMA, 13A on this project.

The bond coat material shall be per section 904 of the Standard Specifications for Construction. The uniform rate of application shall be 0.10 to 0.15 gallons per square yard. No separate payment shall be made for the bond coat material.

**d. Measurement and Payment.**

Measurement and Payment shall be at the contract unit price for HMA, 13A. The HMA material for approaches shall be measured and paid for as HMA Approach as called out in the Log Plans.



**PROPOSED HMA MIXTURE APPLICATION RATE TABLE**

NUMBER	HMA MIXTURE	RATE OF LBS PER SYD	PERFORMANCE GRADE	COMMENTS
L	HMA, 13A (TIER 1, 0% TO 17% RAP)	135	58-28	LEVELLING, AWI 260
T	HMA, 13A (0% RAP)	200	58-28	TOP, AWI 260
HMA APPROACH	HMA, 13A (0% RAP)	200	58-28	LEVELING, AWI 260
HMA APPROACH	HMA, 13A (0% RAP)	220	58-28	TOP, AWI 260

NOTE: HMA, 13A MATERIALS USED AS A TOP COURSE IN THIS PROJECT MAY NOT CONTAIN RECLAIMED ASPHALT PAVEMENT.

HMA APPROACH APPLICATION RATE OVER EXISTING HMA SHALL BE 200 LBS PER SYD.

HMA APPROACH APPLICATION RATE OVER GRAVEL SHALL BE 220 LBS PER SYD.

HMA BOND COAT APPLIED AT 0.10 - 0.15 RESIDUAL GAL/SYD AND SHALL BE INCLUDED IN THE UNIT COST OF HMA PAY ITEMS.



OLD US 27 (HARRISON RD)

JOB NUMBER: 220255

HMA APPLICATION TABLE

DESIGN: DAHLSTROM

DATE: 10/25/24

SHEET:

**X**  
**X**

ROSCOMMON COUNTY ROAD COMMISSION

SPECIAL PROVISION  
FOR  
**MAINTAINING TRAFFIC**

RCRC:BDD

1 of 3

10-29-24

**a. Description.** This special provision consists of requirements and restrictions to maintain traffic on Old US 27 (South Harrison Rd) in Roscommon Township, Roscommon County.

**b. General.** Maintain traffic throughout the project in accordance with the standard specifications, typicals, and supplemental specifications in the contract and as described on the plans for this project.

**c. Construction Influence Area (CIA).** The CIA includes the right-of-way of the following roadways, within the approximate limits described below:

1. On Old US 27 (South Harrison Rd) from 0.625 miles in advance of the point of beginning (POB) to 0.625 miles beyond the point of ending (POE).
2. All intersecting roads adjacent to the work zone for approximately 1/4 mile in advance of the work zone or as far as the construction signing extends.

**d. Traffic Restrictions.** Maintain traffic in accordance with the Maintaining Traffic Typicals contained herein, except as noted below. Changes or adjustments to the Maintaining Traffic Typicals may be necessary to fit field conditions, subject to approval of the Engineer or as determined by the Engineer.

1. Utilize the following Maintaining Traffic Typicals:

- A. 101-GEN-SPACING-CHARTS
- B. 102-GEN-NOTES
- C. 107-GEN-SPEED
- D. 110-TR-NFW-2L
- E. 122-NFW-SHL-(R)

2. Work shall be conducted during daylight hours only, with all traffic lanes open at night or whenever work is not in progress. Work on weekends will only be as approved by the Engineer. Do not work, deliver material, or close lanes during the holiday periods as defined in Table 1.

Table 1: 2025 Holiday Periods

Holiday	Start Date and Time	End Date and Time
Memorial Day	3:00 p.m. Friday, May 23 <sup>rd</sup>	6:00 a.m. Tuesday, May 27 <sup>th</sup>
Independence Day	3:00 p.m. Thursday, July 3 <sup>rd</sup>	6:00 a.m. Monday, July 7 <sup>th</sup>
Labor Day	3:00 p.m. Friday, August 29 <sup>th</sup>	6:00 a.m. Tuesday, September 2 <sup>nd</sup>

3. Maintain a minimum of one lane of traffic in each direction at all times on Old US 27 (South Harrison Rd). (And all intersecting roads.)

4. Only one closure is allowed at any time.

A. The maximum closure length is two miles unless otherwise approved by the Engineer.

5. Failure to meet the traffic restrictions described herein will result in the assessment of liquidated damages for other Department costs per subsection 108.10.C.2 of the Standard Specifications for Construction.

6. Maintain access to all driveways as directed by the Engineer unless prior agreements are made with the respective property owners.

**e. Traffic General.**

1. Develop and submit to the Engineer an Internal Traffic Control Plan (ITCP) per subsection 104.11.B of the Standard Specifications for Construction.

2. Protect the work area at the end of each day.

A. Milled paving joints left over night shall have a rag joint constructed and bump signs placed at the joint location, provided at no additional cost.

3. The Engineer will be responsible for notifying emergency services, transit agencies, law enforcement and schools prior to any lane closures, detours or major traffic shifts. In addition, the Contractor will be responsible for working with and complying with any coordination that is necessary with the Department and emergency services, transit agencies, law enforcement and schools. All costs associated with these coordination efforts will be considered included in the pay item "Minor Traf Devices".

4. A speed reduction will not be used.

**f. Traffic Regulator Control.**

1. Maintain two-way traffic at all times on Old US 27 (South Harrison Rd) using traffic regulator control. A traffic regulator sequence is allowed to cover a maximum closure length of two miles. Place the arrow panel, signs and channelizing taper for the traffic regulator operation at locations approved by the Engineer for adequate visibility by oncoming traffic.

2. Do not utilize more than one traffic regulator operation at one time on project.

3. Crossroads must remain open to traffic at all times. Use intermediate traffic regulators at each intersection approach and commercial driveways within the closure limits, as directed by the Engineer. Use traffic regulator control as directed by the Engineer for cross street traffic while paving through intersections.

**g. Pedestrian or Non-Motorized Facilities.**

1. Maintain all facilities in accordance with The Americans with Disability Act (ADA) requirements and the Public Rights-of-Way Accessibility Guidelines (PROWAG). Provide facilities equivalent to or better than the route a person would have encountered prior to construction activities.

**h. Traffic Control Devices.** Ensure all traffic control devices are in accordance with the MMUTCD and must meet the “acceptable” criteria as defined in the ATSSA publication entitled “Quality Guidelines for Temporary Traffic Control Devices and Features” at the time of initial deployment and after each major stage change.

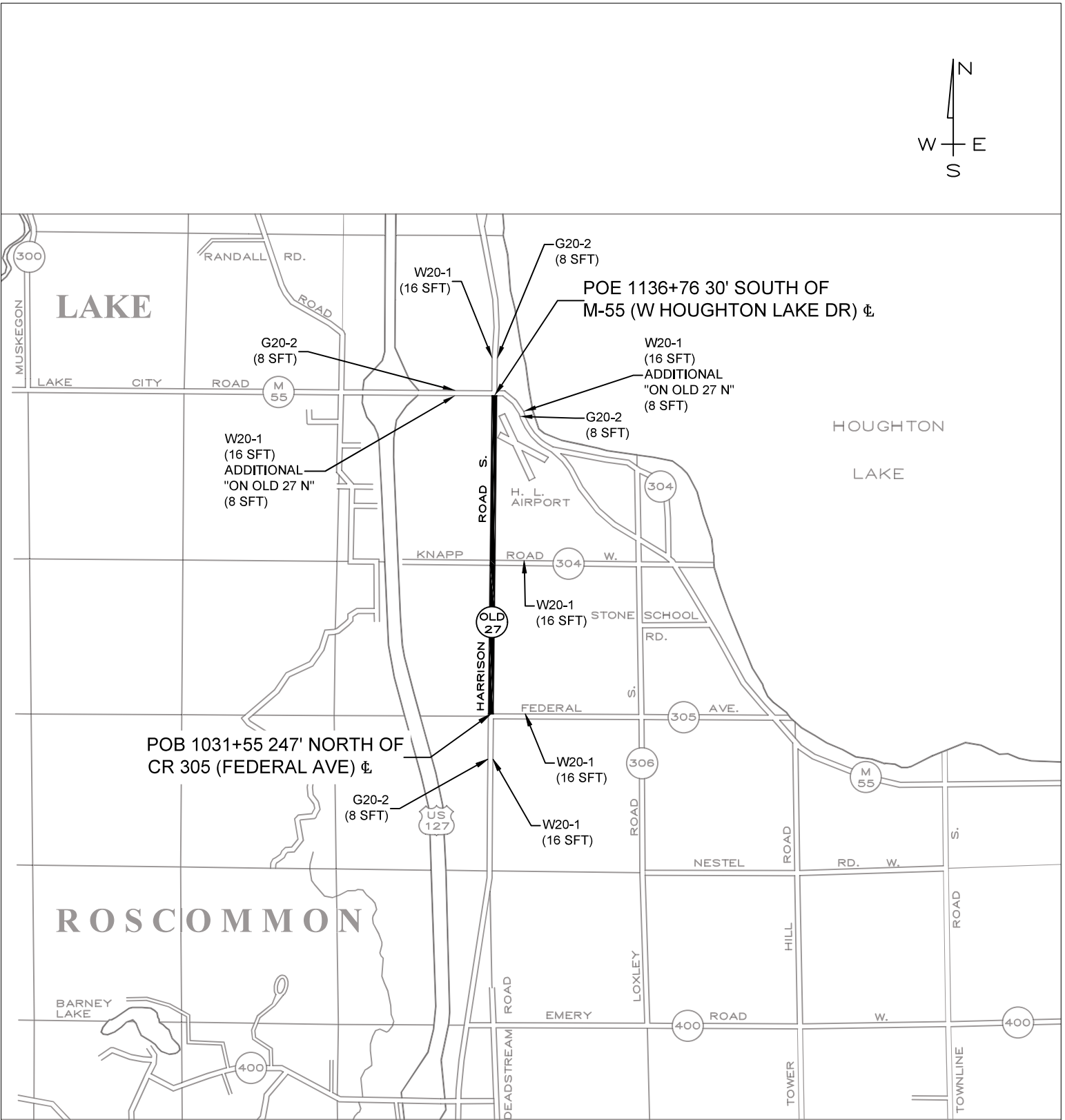
1. During non-working periods, place applicable advance signs and channelizing devices at specific locations, as directed by the Engineer, at no additional cost to the Department.
2. Notify the Engineer 24 hours in advance of when traffic control devices are being delivered to the project site, to allow for initial inspection of devices to take place.
3. Channelizing Devices.
  - A. Ensure all devices have sufficient ballast to prevent moving or tipping. If moving or tipping occurs, place additional ballast, as directed by the Engineer, at no additional cost to the Department. No more than two ballasts are allowed on each channelizing device.
4. Temporary Signs.
  - A. Additional W20-1 (ROAD WORK AHEAD), and G20-2 (END ROAD WORK) are included in the quantities to be placed per the traffic control typical.
  - B. Any segment of road that will have uneven lanes or unfinished shoulders left overnight must have W8-11(UNEVEN LANES) or W8-9(LOW SHOULDER) signs put up every ½ miles, or at locations approved by the Engineer, by the time the Contractor finishes operations that day, payment for these signs will be included in the appropriate contract bid items.

**i. Temporary Pavement Markings.**

1. Quantities for temporary tape to be placed during paving operations are based on the MDOT PAVE 900 Series standard plans.
2. When Type R tape is used, ensure that all temporary pavement markings adhere to the pavement surface until permanent markings are installed.
3. Replace all existing pavement markings that are removed for traffic control or obliterated during construction.

**j. Measurement and Payment.** Payment will be in accordance with the standard specifications unless otherwise specified. No additional payment will be made for the following activities:

1. Transporting traffic control items from site to site.
2. Providing sufficient vehicles and staff to remove or make changes as-needed on site during work.
3. Unused traffic control items.
4. Providing additional traffic control devices required to expedite the construction for the convenience of the Contractor.



**SIGN, TYPE B, TEMP, PRISMATIC, FURN - 128 SFT**  
**SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, FURN - 16 SFT**



OLD US 27 (HARRISON RD)  
 JOB NUMBER: 220255

TRAFFIC CONTROL TYPICAL  
 SCALE: N/A  
 DESIGN: DAHLSTROM  
 ROSCOMMON COUNTY ROAD COMMISSION  
 DATE: 10/24/2024