



## **State of Michigan**

**Department of Technology, Management and Budget  
State Facilities Administration  
Design and Construction Division**

**DCSPEC  
Bidding and Contract Document  
Minor Projects**

**File No. 751/26110.KMM  
Department of Technology, Management and Budget**

**Maybury State Park Entrance Drive Reconstruction**

**Maybury State Park, Northville, MI**

**July 22, 2026**

## BID SUMMARY

**DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET  
STATE FACILITIES ADMINISTRATION  
DESIGN AND CONSTRUCTION DIVISION  
3111 W. St. Joseph Street  
Lansing, Michigan 48917**

**Bids must be submitted electronically at: [SIGMA VSS](#)**

FILE NUMBER 751/26110.KMM	DEPARTMENT/AGENCY Department of Natural Resources		
CONTRACT TIME(S) Construction complete by September 25, 2026	PROJECT NAME Maybury State Park Entrance Drive Reconstruction	LOCATION Maybury State Park 49601 8 Mile Road, Northville	
BID OPENING DATE  July 22, 2026 at 2:00 pm ET		FOR AN EXAMINATION OF THE SITE CONTACT: <b>N/A</b>	
SEE SECTION 00100 INSTRUCTIONS TO BIDDERS AND SECTION 00700 GENERAL CONDITIONS PROVIDED WITH THE BIDDING DOCUMENTS. <b>BID: WE PROPOSE TO FURNISH, PERFORM AND COMPLETE THE ENTIRE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS IN CONSIDERATION OF THE BID PRICE (S) STATED BELOW.</b>			
FIRM NAME AND COMPLETE ADDRESS		TELEPHONE NUMBER and E-MAIL ADDRESS	
<input type="checkbox"/> Qualified Disabled Veteran BIDDER'S SIGNATURE AND TITLE _____ DATE _____		<b><u>SIGMA VENDOR NUMBER</u></b>	
		<small>(protected information required for processing payments)</small>	
		WITNESS' SIGNATURE _____	DATE _____

By signing this bid above, bidder certifies their enclosed Qualified Disabled Veteran and Michigan-Based Business Certifications.

**BASE BID FROM BID SCHEDULE** (Include specified Allowances):

(use words)	Dollars \$	(in figures)
Alternate 1: (Add/Subtract) _____	Dollars \$	(in figures)
(use words)		
Alternate 2: (Add/Subtract) _____	Dollars \$	(in figures)
(use words)		
Alternate 3: (Add/Subtract) _____	Dollars \$	(in figures)
(use words)		

A PERFORMANCE BOND AND A PAYMENT BOND ARE REQUIRED FOR ALL BIDS OVER \$50,000.00. EACH BID MUST BE ACCOMPANIED BY A FIVE (5) PERCENT BID GUARANTEE. BUILDERS RISK INSURANCE IS REQUIRED TO BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE INDICATED IN THE BID DOCUMENTS.

BIDDERS ARE ALSO CAUTIONED TO FAMILIARIZE THEMSELVES WITH ALL OF THE OTHER CONDITIONS OF THE CONTRACT.

Project Scope of Work:

Asphalt pavement crush and shape, shoulder trenching, HMA resurfacing, aggregate shoulders, pavement markings, maintenance of traffic, and project related restoration along the Maybury State Park Drive Entrance from 8 Mile Road. Project extends in to the park to the "T" intersection past the MVP booth and park headquarters office. Total length is approximately 0.31 miles.

The Bidder must figure its Base Bid on the specified, or Addendum-approved, materials and equipment **only**. No "or equal" or substitution proposals will be permitted after Bid opening, except as provided in the General Conditions.

**Addenda:** Bidder acknowledges receipt of Addenda: No. \_\_\_ dated: \_\_\_\_\_, No. \_\_\_ dated: \_\_\_\_\_ No. \_\_\_ dated: \_\_\_\_\_

**BID SCHEDULE**

**Base Bid Schedule** - The Bidder will complete the Work and accept as full payment, for the Work items listed, the following Unit Prices and/or Item Bid Prices, as applicable:

Base Bid Item No.	Bid Quantity	Description	Unit Price	Item Bid Price
1	1	Lump Sum for All Work	LSUM	
2	1	Provisional Allowance – Construction Contingency	DOL	20,000
<b>TOTAL (This amount should equal the Base Bid amount on the Bid Summary Form)</b>				<b>\$</b>

**Base Bid** (Sum of Item Bid Prices for all Base Bid Items):

\_\_\_\_\_ Dollars \$ \_\_\_\_\_  
 (use words) (in figures)

Name of Bidder \_\_\_\_\_ Agency No. \_\_\_\_\_ Funding Code \_\_\_\_\_ File No. \_\_\_\_\_

Date \_\_\_\_\_

**SIGMA VENDOR NUMBER** \_\_\_\_\_

Telephone No. \_\_\_\_\_

**DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET  
State Facilities Administration  
Design & Construction Division**

**Qualified Disabled Veteran (QDV)  
Business Representation**

'Qualified Disabled Veteran,' means a business entity that is 51% or more owned by one or more veterans with a service-connected disability.

'Qualified Disabled,' means a business entity that is 51% or more owned by one or more with a service-connected disability.

The vendor represents that it IS \_\_\_\_\_, a qualified disabled veteran.

The contractor represents and warrants that the company meets the above (when checked) and has attached supporting documentation per the following:

Each bid requesting the Qualified Disabled Veterans (QDV) preference, in accordance with Public Act 22 of 2010, MCL 18.1241.3 shall include a DD214 Proof of Service and Discharge, a Veterans Administration rating decision letter, proof of disability (if the disability is not indicated on the DD214), and appropriate legal documents setting forth the 51% natural persons QDV ownership.

**Fraudulent Certification as a Qualified Disabled Veteran may result in debarment under MCL 18.264.**

**Certification of a Michigan Based Business**

(Information Required Prior to Contract Award for Application of State Reciprocity Provisions)

To qualify as a Michigan Based Business:

Vendor must have, during the 12 months immediately preceding this bid deadline:

or

If the business is newly established, for the period the business has been in existence, it has:

(Check all that apply):

- Filed a Michigan single business tax return showing a portion, or all the income tax base allocated or apportioned to the State of Michigan pursuant to the Michigan Single Business Tax Act, 1975 PA 228, MCL 208.1 – 208.145: or
- Filed a Michigan income tax return showing income generated in or attributed to the State of Michigan; or
- Withheld Michigan income tax from compensation paid to the bidder's owners and remitted the tax to the Department of Treasury; or

I certify that **I have personal knowledge** of such filing or withholding, that it was more than a nominal filing for the purpose of gaining the status of a Michigan business, and that it indicates a significant business presence in the state, considering the size of the business and the nature of its activities.

I authorize the Michigan Department of Treasury to verify that the business has or has not met the criteria for a Michigan business indicated above and to disclose the verifying information to the procuring agency.

Bidder shall also indicate one of the following:

- Bidder qualifies as a Michigan business (provide zip code: \_\_\_\_\_)
- Bidder does not qualify as a Michigan business (provide name of State: \_\_\_\_\_).
- Principal place of business is outside the State of Michigan, however service/commodity provided by a location within the State of Michigan (provide zip code: (\_\_\_\_\_)).

Fraudulent Certification as a Michigan business is prohibited by MCL 18.1268 § 268. A BUSINESS THAT PURPOSELY OR WILLFULLY SUBMITS A FALSE CERTIFICATION THAT IT IS A MICHIGAN BUSINESS OR FALSELY INDICATES THE STATE IN WHICH IT HAS ITS PRINCIPAL PLACE OF BUSINESS IS GUILTY OF A FELONY, PUNISHABLE BY A FINE OF NOT LESS THAN \$25,000 and subject to debarment under MCL 18.264.

### NON-COLLUSION AFFIDAVIT

### SUBMISSION REQUIRED WITH ALL BIDS

PROFESSIONAL -

WORK -

FILE No. \_\_\_\_\_

Affiant, \_\_\_\_\_, being first duly sworn, deposes and says that:

(1) Affiant is (enter title) \_\_\_\_\_ of \_\_\_\_\_, "the Bidder." Affiant has personal knowledge of the matters set forth in this Affidavit and is competent to testify about them.

(2) The Bidder has submitted to the **Owner** a "Bid" to enter into the above referenced Contract, also referred to in this Affidavit as "the Work."

(3) This Section 00320 Non-collusion Affidavit is executed by Affiant for inclusion with the submission to the **Owner** of the Bid and may be relied upon by the **Owner** in considering the Bid.

(4) Affiant is fully informed about the preparation and contents of the Bid and of all pertinent circumstances surrounding the Bid, has not entered into any contract, combination, conspiracy, or other act prohibited by federal, State or any other local Law. The Bid is genuine and is not a collusive or sham Bid.

(5) Neither the Bidder nor any of the Bidder's owners, officers, partners, directors, agents, representatives, employees or parties in interest, including this Affiant, have in any way entered or proposed to enter into any combination to prevent the making of any Bid, or to fix any prices (including overhead, profit or other costs) for the Bid; or have made any agreement, or given or promised any consideration to induce any other person not to Bid for the Work, or to Bid at a specified price; or have secured, proposed or intended to secure through any agreement an unlawful advantage against the **Owner** or any other person interested in the Work.

(6) No officer or employee of the State of Michigan is personally or financially interested, directly or indirectly, in the Bid, or any Contract which may be under it, or in the purchase or sale of any materials, equipment or supplies for the Work to which it relates, or any portion of any expected profits thereto.

(7) The Bid is not intended to secure an unfair advantage or benefit from the **Owner** or in favor of any person interested in the proposed Contract.

(8) The prices bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any other of the Bidder's owners, officers, partners, directors, agents, representatives, employees or parties in interest, including this Affiant; and neither the Bidder nor any of its owners, officers, partners, directors, agents, representatives, employees or parties in interest, including this Affiant, have divulged any information regarding the Bid or any data about the Bid to any other person.

By: \_\_\_\_\_

SIGMA VENDOR NUMBER \_\_\_\_\_

Title: \_\_\_\_\_

Telephone No. \_\_\_\_\_



## ASBESTOS ABATEMENT ATTESTATION

### SUBMISSION REQUIRED WITH ALL BIDS

Pursuant to the Public Entity Asbestos Removal Verification Act, PA 59 of 2024, MCL 338.3371 et seq. ("the Act"), the Owner will conduct the background investigation as required of any asbestos abatement contractor, or a general contractor that contracts with an asbestos abatement contractor, for the abatement of asbestos. Under the Act, an "Asbestos abatement contractor" means a business entity that is licensed under the asbestos abatement contractors licensing act, 1986 PA 135, MCL 338.3101 to 338.3319, and that carries on the business of asbestos abatement on the premises of another business entity and not on the asbestos abatement contractor's premises. Asbestos abatement contractor includes an individual or person with an ownership interest in a business entity described in MCL 338.3373(b).

**(INSTRUCTIONS: Professional to select one of these two statements, then *delete* the not selected statement and instructions.)**

**THE SCOPE OF WORK TO BE COVERED UNDER THIS CONTRACT CONTAINS ASBESTOS ABATEMENT AND THIS ATTESTATION MUST BE COMPLETED.**

**THE SCOPE OF WORK TO BE COVERED UNDER THIS CONTRACT DOES NOT CONTAINS ASBESTOS ABATEMENT AND THIS ATTESTATION IS TO BE LEFT BANK.**

**Contractor attests that:** *(check one:)*

- The Contractor will self-perform all asbestos abatement project work and attests that Contractor has not been issued 5 or more notices of violation of environmental regulations (State and/or Federal), nor has been subject to an administrative consent order or a consent judgment involving environmental regulations.
- The Contractor will self-perform all asbestos abatement project work; however, Contractor has been issued 5 or more notices of violation of environmental regulations (State and/or Federal), or has been subject to an administrative consent order or a consent judgment involving environmental regulations, requiring Owner to conduct a background investigation and a public hearing pursuant to PA 59 of 2024, MCL 338.3371 et seq.
- The Contractor nominates the following Sub-contractor for all asbestos abatement project work and attests that the nominated Sub-contractor has not been issued 5 or more notices of violation of environmental regulations (State and/or Federal), nor has been subject to an administrative consent order or a consent judgment involving environmental regulations:

Nominated Sub-contractor: \_\_\_\_\_

- The Contractor nominates the following Sub-contractor for all asbestos abatement project work; however, the nominated Sub-contractor has been issued 5 or more notices of violation of environmental regulations (State and/or Federal), or has been subject to an administrative consent order or a consent judgment involving environmental regulations, requiring Owner to conduct a background investigation and a public hearing pursuant to PA 59 of 2024, MCL 338.3371 et seq.

Nominated Sub-contractor: \_\_\_\_\_



# POST-BID SUBMITTALS

The PSC will request this submittal after bid opening. Complete and submit these items within two business days after the request.

**BIDDER'S EXPERIENCE MODIFICATION RATING (EMR)** \_\_\_\_\_

Attach letter of explanation if the Bidder does not have an EMR.

**PROPOSED PROJECT SUPERINTENDENT** \_\_\_\_\_

Attach brief resume or list of similar successful projects.

**LIST OF SIMILAR PROJECTS COMPLETED BY THE BIDDER**

Please list at least three completed projects of similar size and complexity to the project being bid, with reference contact information

**REFERENCE #** \_\_\_\_\_

Owner: \_\_\_\_\_

Project/Contract Name: \_\_\_\_\_

Location of Project/Contract: \_\_\_\_\_

Contract Price: \_\_\_\_\_ Project/Contract Started: \_\_\_\_\_ Completed: \_\_\_\_\_

Owner's Representative (Name and Telephone): \_\_\_\_\_

Scope of Project/Contract: \_\_\_\_\_

**REFERENCE #** \_\_\_\_\_

Owner: \_\_\_\_\_

Project/Contract Name: \_\_\_\_\_

Location of Project/Contract: \_\_\_\_\_

Contract Price: \_\_\_\_\_ Project/Contract Started: \_\_\_\_\_ Completed: \_\_\_\_\_

Owner's Representative (Name and Telephone): \_\_\_\_\_

Scope of Project/Contract: \_\_\_\_\_

**REFERENCE #** \_\_\_\_\_

Owner: \_\_\_\_\_

Project/Contract Name: \_\_\_\_\_

Location of Project/Contract: \_\_\_\_\_

Contract Price: \_\_\_\_\_ Project/Contract Started: \_\_\_\_\_ Completed: \_\_\_\_\_

Owner's Representative (Name and Telephone): \_\_\_\_\_

Scope of Project/Contract: \_\_\_\_\_

**POST BID SUBMITTALS: LIST OF SUBCONTRACTORS**

The Apparent Low Bidder shall nominate for each Division of Specification and/or trade category, the Subcontractor to be awarded Sub-agreements, including the apparent Low Bidder if work is to be self-performed. The Apparent Low Bidder will ensure that all Subcontractors have a current State Project Registration in compliance with PA10 of 2023, as amended in PA110 of 2024. Nominated subcontractors shall not be removed, replaced, or added to except by written request for good reason, subject to Owner acceptance. Notwithstanding anything to the contrary, the Owner has the right to object, regardless of cause, to any asbestos abatement Subcontractor nominated by the Contractor to be awarded a Sub-agreement that has 5 or more notices of violation of environmental regulations, or has been subject to an administrative consent order or a consent judgment involving environmental regulations, within the immediately preceding 5 years.

Division, Specification Section and/or Trade	Nominated Subcontractor(s)	Amount of Subcontract
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____
11. _____	_____	_____
12. _____	_____	_____
13. _____	_____	_____
14. _____	_____	_____

The undersigned Apparent Low Bidder \_\_\_\_\_ certifies that all the information and data furnished in this List of Subcontractors are current, accurate and complete as of the date stated below.

Signed by: \_\_\_\_\_ Name \_\_\_\_\_ Title \_\_\_\_\_

on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**PERFORMANCE BOND**  
**SURETY COMPANY REFERENCE No. \_\_\_\_\_**

That "the **Contractor**," \_\_\_\_\_, a corporation \_\_\_\_, individual \_\_\_\_, partnership \_\_\_\_, joint venture \_\_ of the State of \_\_\_\_\_, qualified to do business in the State of Michigan, as Principal, and "the Surety," \_\_\_\_\_, of the State of \_\_\_\_\_, as surety, are held and bound unto the State of Michigan, "the **Owner**," as Obligee, in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), for the payment of which the **Contractor** and Surety bind themselves, their respective heirs, successors, legal representatives and assigns, jointly and severally, in compliance with 1963 PA 213, as amended, MCL 129.201 et seq.

The **Contractor** has entered into "the Contract" with the **Owner** for \_\_\_\_\_, "the Work," covered by the Contract Documents, which are incorporated into this Performance Bond by this reference.

If the **Contractor** faithfully performs and fulfills all the undertakings, covenants, terms, conditions, warranties, indemnifications and agreements of the Contract Documents within the Contract Time (including any authorized changes, with or without notice to the Surety) and during the Correction Period, and if the **Contractor** also performs and fulfills all the undertakings, covenants, terms, conditions, warranties, indemnifications and agreements of any and all duly authorized modifications of the Contract Documents, then THIS OBLIGATION IS VOID, OTHERWISE TO REMAIN IN FULL FORCE AND EFFECT.

A. No change in Contract Price or Contract Time, "or equal" or substitution or modification of the Contract Documents (including addition, deletion, or other revision) releases the Surety of its obligations under this Section 00610 Performance Bond. The Surety expressly waives notice of any such change in Contract Price or Contract Time, "or equal" or substitution or

modification of the Contract Documents (including addition, deletion, or other revision).

B. This Performance Bond must be solely for the protection of the **Owner** and its successors, legal representatives or assigns.

C. It is the intention of the **Contractor** and Surety that they must be bound by all terms and conditions of the Contract Documents (including, but not limited to General Conditions and this Performance Bond). However, this Performance Bond is executed pursuant to 1963 PA 213, as amended, MCL 129.201 et seq., and if any provision(s) of this Performance Bond is/are illegal, invalid, or unenforceable, all other provisions of this Performance Bond must nevertheless remain in full force and effect, and the **Owner** must be protected to the full extent provided by 1963 PA 213, as amended, MCL 129.201 et seq.

**IMPORTANT:** The Surety must be authorized to do business in the State of Michigan by the Department of Licensing and Regulatory Affairs, must be listed on the current U.S. Department of the Treasury Circular 570, and, unless otherwise authorized by the **Owner** in writing, must have at least an A- Best's rating and a Class VII or better financial size category per current A. M. Best Company ratings.

Name, Address and Telephone of the Surety:

Address and Telephone of Agent, who is either a resident of, or whose principal office is maintained in, the State of Michigan

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

THE **CONTRACTOR**: (Print Full Name and Sign) By: \_\_\_\_\_

WITNESS \_\_\_\_\_ Name & Title: \_\_\_\_\_  
 Telephone No. \_\_\_\_\_

THE SURETY: (Print Full Name and Sign) Agent: \_\_\_\_\_

WITNESS \_\_\_\_\_ Attorney-in-Fact: \_\_\_\_\_  
 Telephone No. \_\_\_\_\_

Email: \_\_\_\_\_

**PAYMENT BOND**  
**SURETY COMPANY REFERENCE No.** \_\_\_\_\_

"the **Contractor**," \_\_\_\_\_, a corporation \_\_\_\_, individual \_\_\_\_, partnership \_\_\_\_, joint venture \_\_\_\_ of the State of \_\_\_\_\_, qualified to do business in the State of Michigan, as Principal, and "the **Surety**," \_\_\_\_\_, of the State of \_\_\_\_\_, as surety, are held and bound unto the State of Michigan, "the **Owner**," as Obligee, in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), for the payment of which the **Contractor** and Surety bind themselves, their respective heirs, successors, legal representatives and assigns, jointly and severally, in compliance with 1963 PA 213, as amended, MCL 129.201 et seq.

The **Contractor** has entered into "the Contract" with the **Owner** for \_\_\_\_\_, "the Work," covered by the Contract Documents, which are incorporated into this Payment Bond by this reference.

If the **Contractor** promptly pays all claimants supplying labor or materials to the **Contractor** or to the **Contractor's** Subcontractors in the prosecution of the Work, then THIS OBLIGATION IS VOID, OTHERWISE TO REMAIN IN FULL FORCE AND EFFECT.

hereby expressly waives notice of any such change in Contract Price or Contract Time, "or equal" or substitution or modification of the Contract Documents (including addition, deletion, or other revision).

A. All rights and remedies on this Payment Bond are solely for the protection of all claimants supplying labor and materials to the **Contractor** or the **Contractor's** Subcontractors in the prosecution of the Work and must be determined in accordance with Michigan Law.

C. It is the intention of the **Contractor** and Surety that they must be bound by all terms and conditions of the Contract Documents (including, but not limited to this Payment Bond). However, this Payment Bond is executed pursuant to 1963 PA 213, as amended, MCL 129.201 et seq., and if any provision(s) of this Payment Bond is/are illegal, invalid, or unenforceable, all other provisions of this Payment Bond must nevertheless remain in full force and effect, and the **Owner** must be protected to the full extent provided by 1963 PA 213, as amended, MCL 129.201 et seq.

B. No change in Contract Price or Contract Time, "or equal" or substitution or modification of the Contract Documents (including addition, deletion, or other revision) must release the Surety of its obligations under this Payment Bond. The Surety

**IMPORTANT:** The Surety must be authorized to do business in the State of Michigan by the Department of Licensing and Regulatory Affairs, must be listed on the current U.S. Department of the Treasury Circular 570, and, unless otherwise authorized by the **Owner** in writing, must have at least an A- Best's rating and a Class VII or better financial size category per current A. M. Best Company ratings.

Name, Address and Telephone of the Surety:

Address and Telephone of Agent, who is either a resident of, or whose principal office is maintained in, the State of Michigan

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

THE **CONTRACTOR**: (Print Full Name and Sign) By: \_\_\_\_\_

WITNESS \_\_\_\_\_ Name & Title: \_\_\_\_\_

Telephone No. \_\_\_\_\_

THE **SURETY**: (Print Full Name and Sign) Agent: \_\_\_\_\_

WITNESS \_\_\_\_\_ Attorney-in-Fact: \_\_\_\_\_

Telephone No. \_\_\_\_\_

Email: \_\_\_\_\_

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## **DIVISION 00**

# **BIDDING REQUIREMENTS AND CONTRACT CONDITIONS**

## SECTION 00010 PRE-BID INFORMATION

- 1. Invitation to Bid (ITB)** – Your firm is invited to submit a Bid. The State of Michigan as the Owner will receive **bids electronically through the SIGMA VSS website at [SIGMA VSS](#)**, for Maybury State Park Drive Entrance Reconstruction until 2:00 p.m., ET, on July 22, 2026. The State reserves the right to cancel this Invitation to Bid (ITB) or change the date and time for submitting Bids by announcing same at any time before the established date and time for Bid opening. Bids must remain open for acceptance by the Owner for no less than the Bid hold period. Contractor may agree to extend the Bid hold period. However, any such extension must be based upon no increase in the Bid Price and/or Contract Time.
- 2. Work Description** – The Work, Maybury State Park Drive Entrance Reconstruction, DTMB File No. 751/26110.KMM includes, but is not necessarily limited to Asphalt pavement crush and shape, shoulder trenching, HMA resurfacing, aggregate shoulders, pavement markings, maintenance of traffic, and project related restoration along the Maybury State Park Drive Entrance from 8 Mile Road. Project extends in to the park to the “T” intersection past the MVP booth and park headquarters office.

The site is located at 49601 8 Mile Road, Northville, MI 48167, as shown on the Drawings.

- 3. Bidding Documents** – Sets of Bidding Documents may be obtained at [SIGMA VSS](#).
- 4. Bid Security** – Each Bid must enclose a duly executed Bid Security, in the amount of five percent (5%) of the Bidder's Base Bid, paid to the “State of Michigan” in the form of a certified or cashier's check or money order drawn upon a bank insured by an agency of the Federal Government, or a bid bond signed by both the Contractor and authorized surety company. *If Bid Security is by check or money order, such certified or cashier's check or money order must be delivered in original copy before the Bid Due Time to:*

State Facilities Administration  
Design & Construction Division  
3111 W. St. Joseph Street  
Lansing, Michigan 48917

All other Bid information must be submitted via SIGMA as per standard bidding procedure

- 5. Pre-Bid Conference** – A mandatory X pre-bid conference will be held at the Maybury State Park Headquarters Building at 49601 8 Mile Road, Northville, MI on July 1, 2026, at 10:00 am ET. A tour of the project limits will not X be held on the same day. All prospective Bidders are required X to attend the tour, if held. Other parties interested in the Work are encouraged to attend the tour. Addenda may be issued, in response to issues raised at the pre-bid conference and tour, or as the Owner and/or Professional may otherwise consider necessary. An individual is only permitted to represent one bidder at a mandatory Pre-Bid Conference.

The purpose of the pre-bid conference and inspection is to answer questions and provide an inspection tour of the Project site at the scheduled time on the day of the meeting. A representative will be available to assist the Contractors. Other inspection visits may be allowed if needed. Individuals needing special services to fully participate in the meeting due to a disability may contact Kale Leftwich, Maybury State Park Manager at 248-349-8390 .

FOR CORRECTIONAL FACILITIES ONLY: All contractor/vendor representatives attending a Pre-Bid Walk Through Meeting must submit a Vender/Contractor LEIN Request five business days prior to the meeting date, (LEIN Request For CAJ-1037 attached to Bid posting). Send the LEIN Request form, filled out and signed, by email to [SmithD76@michigan.gov](mailto:SmithD76@michigan.gov) & [FrostS1@michigan.gov](mailto:FrostS1@michigan.gov) . The email “Subject” must include (Facility Name, Project Name, Date & Time of Pre-Bid Walk Through Meeting).

- 6. SIGMA VENDOR NUMBER:** If you are bidding a State job for the first time, visit the State of Michigan SIGMA website, [SIGMA VSS](#), and follow the “SOM VSS User Guide for New Vendors” instructions, located under Forms and Reference Documents. Registration is required for bid submission. **Do not wait until the last minute to submit a proposal**, as the SIGMA system requires the creation of an account and entry of certain information, in addition to uploading and submitting the materials. The SIGMA system **will not** allow a proposal to be submitted after the proposal deadline, even if a portion of the proposal has been updated.

Questions on how to submit information or how to navigate in the SIGMA VSS system can be answered by calling **(517) 373-4111 or (888) 734-9749**.

- 7. Equal Employment Opportunity** – Covenants to not discriminate in employment by Contractors, Subcontractors and Suppliers required by Law are contained in Instructions to Bidders and General Conditions and are applicable to the Work and any Sub-agreement under the Contract.
- 8. Contract Times** – The Contract Times and the associated liquidated damages are specified in the Contract.

- 9. **Contact Person** – All requests or inquiries concerning the Bidding Documents, or the Work must be addressed to: Susan Tebbe, PE, The Mannik & Smith Group, Inc by email to: [stebbe@manniksmithgroup.com](mailto:stebbe@manniksmithgroup.com). Questions will be accepted until July 15, 2026 at 2 pm ET.
- 10. **Award** – Subject to any agreed extension of the period for holding Bids, Bids must remain valid for acceptance by the Owner for 60 Calendar Days after the date of Bid opening. In addition, the Owner expressly reserves the right, within the Owner's sole discretion, to reject any or all Bids, to waive any irregularities, to issue post-Bid Addenda and re-bid the Work without re-advertising, to re-advertise for Bids, to withhold the award for any reason the Owner determines and/or to take any other appropriate action.
- 11. **Performance and Payment Bonds** – A performance bond and a payment bond are required for all contracts over \$50,000.00 for the contract award amount.

**END OF SECTION 00010**

**SECTION 00100 INSTRUCTIONS TO BIDDERS**

- 1. **PREPARATION OF BID:** Execute Bid fully and properly. Bid Summary Form (DTMB -0401D) and Bid Form Attachments must be used and completely filled out for the Bid to be considered responsive and meeting the requirements of the contract solicitation. All Bid prices must be printed or typed in both words and figures.
- 2. **BID CHECKLIST:** Submit Bid Summary Form with original signatures plus Bid Form Attachments in accordance with the electronic bidding procedures on the SIGMA VSS website.

A complete Bid will consist of the following forms, which are included immediately following the Bid Summary Form:

**Bids                      SUBMIT THESE Bid Forms and Bid Form Attachments**

- All Bids            **Signed** and completed Bid Summary Form (DTMB-0401D).
- Bid Schedule.
- Qualified Disabled Veteran (QDV) Business Representation.
- Bid Security in the amount of 5% of Base Bid Price.

*If Bid Security is by check or money order, such certified or cashier's check or money order must be delivered in original copy before the Bid Due Time to:*

State Facilities Administration  
 Design & Construction Division  
 3111 W. St. Joseph Street  
 Lansing, Michigan 48917

*All other Bid information must be submitted via SIGMA as per standard bidding procedure*

- Signature Authorization or copy of the partnership agreement if signed by all partners.
  - Byrd Anti-Lobbying Certification (Only when Federal Provisions Addendum is included)
  - Asbestos Abatement Attestation
  - Non-Collusion Affidavit
  - State Project Registration (SPR) for the Contractor and subcontractors (if applicable pursuant to 2023 PA 10, as amended, MCL 408.1101 et seq.)
  - Signed Certification Regarding Debarment; Suspension, and Other Responsibility Matters Form for the Contractor and any subcontractors
- Over \$50K            Forms listed under All Bids.
  - Payment and Performance Bond (upon issuing the Notice of Award).
- Over \$100K         Forms listed under All Bids.
  - Certification of a Michigan Based Business.
  - Payment and Performance Bond (upon issuing the Notice of Award).

- Over \$250K  Forms listed under All Bids.
- Certification of a Michigan Based Business.
- Payment and Performance Bond (upon issuing the Notice of Award).

**Apparent Low Bidders ONLY (upon request from the Professional)**

- Experience Modification Rating (EMR), or a letter stating why the Bidder does not have one.
- Identification of the proposed project superintendent, with a resume or list of similar projects handled by that individual.
- A list of at least three (3) projects completed by the Bidder, within the last three (3) years of similar size and complexity, with contact information for references for each.
- A list of nominated sub-contractors, including proposed self-performed categories, for each Division/Trade/etc.

**3. BID SUBMISSION: Bids must be submitted electronically through the SIGMA VSS website at [SIGMA VSS](#).****4. BID GUARANTEE:** Each proposal must be accompanied by either a bank certified or cashier's check on an open, solvent bank or a bid bond with an authorized surety company (the surety must be listed on the current U.S. Department of the Treasury Circular 570) in the amount of five percent of the base bid payable to the State of Michigan, as a guarantee of good faith. If the successful Bidder fails to furnish satisfactory bonds and insurance within fifteen Calendar Days after Notice of Award, such guarantee must be forfeited to the State as liquidated damages. *If Bid Security is by check or money order, such certified or cashier's check or money order must be delivered in original copy before the Bid Due Time to the Issuing Office.* The bid security, exclusive of bid bonds, of all unsuccessful Bidders will be returned when an award is made or upon substitution of a bid bond. The bid security of the successful Bidder will be returned when the performance bond and labor and material bond are approved.**5. Left Blank Intentionally.****6. MICHIGAN BASED BUSINESS CERTIFICATION:** All Bidders submitting Bids in excess of \$100,000.00 must complete the Certification of Michigan Based Business. This information will determine if a Bidder qualifies as a "Michigan" business for purposes of application of reciprocity where applicable.**7. POST-BID SUBMITTAL: For all projects, the Professional may request a Post-Bid Submittal from the Apparent Low Bidders.** The Apparent Low Bidders must submit to the Professional, within **two** Business Days after receipt of the Professional's request,

- Experience Modification Rating (EMR), or a letter stating why the Bidder does not have one.
- Identification of the proposed project superintendent with a resume or list of similar projects managed by that individual.
- A list of at least three (3) projects completed by the Bidder, within the last three (3) years of similar size and complexity, with contact information for references for each.

**Failure to provide the submittals may disqualify the Bid.**

**8. SIGNATURES:** All Bids, notifications, claims, and statements must be signed as follows:

- (a) **Corporations:** Signature of official must be accompanied by a certified copy of the Resolution of the Board of Directors authorizing the individual signing to bind the corporation.
- (b) **Partnerships:** Signature of one partner must be accompanied by a signed copy of the legal document (e.g., Power of Attorney or partnering agreement) authorizing the individual signing to bind all partners. If Bid is signed by all partners, no authorization is required.
- (c) **Individual:** No authorization is needed. Each signature must be witnessed.

**9. BID PRICES:** The Bidder's Base Bid and Alternate Bid prices must include, and payment for completed Work will compensate in full for: all services, obligations, responsibilities, management, supervision, labor, materials, commodities (including all fuel, gas, or other consumables necessary to operate any equipment), devices, equipment, construction equipment, general conditions, permits, patent fees and royalties, testing, inspection and approval responsibilities, warranties, temporary facilities, small tools, supplies, Bonds, insurance, taxes, Tariffs, mobilization, close-out, overhead and profit and all connections, appurtenances and any other incidental items of any kind or nature, as are necessary to complete the Work, in a neat, first quality, workmanlike and satisfactory manner in accordance with the Drawings and Specifications and as otherwise required to fulfill the requirements of the Bidding Documents. For each Cash Allowance item, the Bidder must include, within the Bid, all labor costs, construction equipment costs, insurance and Bond premiums and other general conditions costs and Fees (Bidder's and Subcontractors') to complete Work associated with the material, equipment, or other designated item to be furnished under the Cash Allowance. For

each Provisionary Allowance, the Bidder must include, within the Bid, insurance, premiums (not recoverable as labor burden) and Bond premiums required to complete Work that may be ordered under a Provisionary Allowance. Except as otherwise provided in the Contract, the Bidder assumes all risk of increases in prices for all services, obligations, responsibilities, management, supervision, labor, materials, commodities (including all fuel, gas, or other consumables necessary to operate any equipment), devices, equipment, construction equipment, general conditions, permits, patent fees and royalties, testing, inspection and approval responsibilities, warranties, temporary facilities, small tools, supplies, Bonds, insurance, taxes, Tariffs, mobilization, close-out, overhead and profit and all connections, appurtenances and any other incidental items of any kind or nature, as are necessary to complete the Work. Unless otherwise provided for under the Contract, no adjustment to the Contract Price, and no claim for additional compensation, reimbursement, or relief of any kind, shall be allowed on account of any such price increases, market fluctuations, supply chain impacts, or other cost escalations occurring before or during performance of the Work.

- 10. INSPECTION OF BIDDING DOCUMENTS AND SITE CONDITIONS:** The Bidder must carefully review and inspect all documents referenced and made part of this ITB, site conditions, all applicable statutes, regulations, ordinances, and resolutions addressing or relating to the goods and services under this contract. Failure to do so or failure to acquire clarifications and answers to any discovered conflicts, ambiguities, errors, or omissions in the Bidding Documents will be at the Bidder's sole risk.
- 11. SAFETY REQUIREMENTS AND LAWS:** The Bidder awarded the Contract must comply with all applicable federal, state, and local Laws including health and safety regulations, environmental protection, permits and licensing.
- 12. INTERPRETATIONS AND ALTERATIONS TO THE BID AND BIDDING DOCUMENTS:** All requests for clarification or interpretation of the Bidding Documents, all proposals for any modifications to the Bidding Documents, all requests for information and all other questions or inquiries about the Bidding Documents and/or the Work shall be submitted in writing to the Contact Person identified in the Bid Documents. Requests or inquiries received less than seven Calendar Days before the date of Bid opening will be answered only if (a) the response can be given through an Addendum made available at least seventy-two hours before Bid opening (counting Business Days only), (b) the Bid opening is postponed by Addendum, or (c) the Work is rebid without readvertising following the issuance of post-Bid Addenda.
- Bidders must not rely upon any oral statements or conversations regarding interpretations, clarifications, corrections, additions, deletions or other revisions or information to the Bidding Documents. Any addition, limitation or provision made with or attached to the Bid may render it non-responsive and/or irregular and be a cause for rejection. The Owner reserves the right to issue a post-Bid Addendum after opening the Bids and set a new date for the receipt and opening of sealed Bids. The Bidder acknowledges that any quantities of Unit Price Work given in this ITB are approximate only and payments will be made only for actual quantities of Unit Price Work completed in accordance with the Contract Documents.
- 13. MODIFICATION OF BID:** The entire bid must be resubmitted on the SIGMA VSS website.
- 14. BID WITHDRAWAL:** Except for timely filed claims of mathematical or clerical errors granted by the State, no Bid may be withdrawn within sixty Calendar Days after the Bid Opening time and date or before the Bid expiration date without forfeiting Bid security. The request to withdraw a Bid due to error must be submitted in writing along with the supporting documents within two Business Days after the date of Bid Opening. The claim must describe in detail the error(s), include a signed affidavit stating the facts of the alleged error(s) and request that the Bidder be released from its Bid. The review of the claim and its supporting documents by the State is only for the purpose of evaluating the Bidder's request and must not create duty or liability on the State to discover any other Bid error or mistake. The sole liability of any Bid error or mistake rests with Bidder.
- 15. OBJECTION TO THE AWARD:** A Bidder may file a written protest with the Director-DCD to object to the Apparent Low Bidder. This objection must be filed within seven Calendar Days after the date of Bid opening and must describe in detail the basis for the protest and request a determination. The Director-DCD will either dismiss or uphold the protest and notify the protestor within ten Calendar Days after receipt of the written protest.
- 16. BID IRREGULARITIES:** The following irregularities on any Bid Form or Bid Form Attachment must be resolved as follows:
- between SIGMA entry and signed Bid Summary attachment, the signed Bid Summary attachment will be used.
  - between words and figures, the words must be used.
  - between any sum, computed by the Bidder, and the correct sum, the sum computed by the Bidder must be used.
  - between the product, computed by the Bidder, of any quantity and Bid Unit Price and the correct product of the Unit Price and the quantity of Unit Price Work, the product extended by the Bidder must be used.
  - between a stipulated Allowance and the amount entered, the Allowance must be used.
  - any mobilization pay item exceeding the maximum specified must be ignored and the Bid must remain unchanged.
  - if any Bidder fails or neglects to bid a Unit Price for an item of Unit Price Work but shows a "Bid Price" for that item, the missing unit price must be computed from the respective quantity and the Item Bid Price shown.
  - if any Bidder fails or neglects to show a "Bid Price" for an item of Unit Price Work but bids a unit price, the missing Bid Price must remain as "zero"; and
  - if any Bidder fails or neglects to enter a Bid Price in both words and figures, the Bid Price printed or typed, whether in words or figures, must be used.

- 17. CERTIFICATION:** The bidder certifies to the best of its knowledge and belief that, within the past three (3) years, the bidder, an officer of the bidder, or an owner of a 25% or greater interest in the bidder:
- (a) Has not been convicted of a criminal offense incident to the application for or performance of a contract or subcontract with the State of Michigan or any of its agencies, authorities, boards, commissions, or departments.
  - (b) Has not had a felony conviction in any state (including the State of Michigan).
  - (c) Has not been convicted of a criminal offense which negatively reflects on the bidder's business integrity, including but not limited to, embezzlement, theft, forgery, bribery, falsification, or destruction of records, receiving stolen property, negligent misrepresentation, price-fixing, bid rigging, or a violation of state or federal anti-trust statutes.
  - (d) Has not had a loss or suspension of a license or the right to do business or practice a profession, the loss or suspension of which indicates dishonesty, a lack of integrity, or a failure or refusal to perform in accordance with the ethical standards of the business or profession in question.
  - (e) Has not been terminated for cause by the Owner.
  - (f) Has not failed to pay any federal, state, or local taxes.
  - (g) Has not failed to comply with all requirements for foreign corporations.
  - (h) Has not been debarred from participation in the bid process pursuant to Section 264 of 1984 PA 431, as amended, MCL 18.1264, or debarred or suspended from consideration for award of contracts by any other State or any federal Agency.
  - (i) Has not been convicted of a criminal offense or other violation of other state or federal law, as determined by a court of competent jurisdiction or an administrative proceeding, that in the opinion of DTMB indicates that the bidder is unable to perform responsibly or which reflects a lack of integrity that could negatively impact or reflect upon the State of Michigan, including but not limited to, any of the following offenses under or violations of:
    - 1. The Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.101 to 324.90106.
    - 2. A persistent and knowing violation of the Michigan Consumer Protection Act, 1976 PA 331, MCL 445.901 to 445.922.
    - 3. A finding that the bidder failed to pay the wages and/or fringe benefits as required by applicable law.
    - 4. Repeated or flagrant violations of 1978 PA 390 MCL 408.471 to 408.490 (law relating to payment of wages and fringe benefits).
    - 5. A willful or persistent violation of the Michigan Occupational Health and Safety Act, 1974, PA 154, MCL 408.10001 to 408.1094, including: a criminal conviction, repeated willful violations that are final orders, repeated violations that are final orders, and failure to abate notices that are final orders.
    - 6. A violation of federal or state civil rights, equal rights, or non-discrimination laws, rules, or regulations.
    - 7. Been found in contempt of court by a Federal Court of Appeals for failure to correct an unfair labor practice as prohibited by Section 8 of Chapter 372 of the National Labor Relations Act, 29 U. s. C. 158 (1980 PA 278, as amended, MCL 423.321 et seq).
  - (j) Is not an Iran-Linked Business as defined in MCL 129.312.

A false statement, misrepresentation, or concealment of material facts on this certification may be grounds for rejection of this proposal or termination of the award and may be grounds for debarment.

- 18. REJECTION OF BID:** The Bidder acknowledges the right of the Owner to reject any Bids and to waive any informality, defects or irregularity in any Bid received. In addition, the Bidder recognizes the right of the Owner to reject a Bid if:
- (a) the Bid is in any way incomplete or irregular.
  - (b) the Bidder, Subcontractor or Supplier is not responsible as determined by the Owner.
  - (c) the Bidder's performance as a Contractor was unsatisfactory under a prior Contract with the Owner for the construction, repair, modification, or demolition of a facility with the Owner, or under any other Contract, which was funded, directly or indirectly, by the Owner.
  - (d) there are reasonable grounds for believing that collusion or unlawful agreements exists between any Bidders, that a Bidder is interested in more than one Bid, or that the Bid is not genuine.
  - (e) the Bid exceeds the funds available.
- 19. MATERIALS AND EQUIPMENT SUBSTITUTION:** Any Bidder wishing to use manufacturers or materials other than those specified must submit a written request to the Professional not later than seven days before due date for Bids. Request must be accompanied by product data to permit evaluation and comparison with specified products or materials. The Person submitting the request will be responsible for its prompt delivery. The Professional and the Owner will examine and evaluate the product data and if found acceptable, an Addendum will be issued and mailed or delivered to each Person who has received a set of Drawings and Specifications. All Addenda issued must be made a part of the Contract requirements. Contractor will be responsible for any extra work and expense incurred to satisfactorily and completely incorporating each substitute product into the Project.
- 20. MICHIGAN PRODUCTS AND RECYCLED PRODUCTS:** All Contractors and Suppliers are encouraged to provide Michigan-made products and/or recycled products and/or green products and/or environmentally friendly products whenever possible where price, quality, and performance are equal to, or superior to, non-Michigan products and the requirements of the Contract Documents. The Contractor will be required to use alternatives to landfills for waste disposal such as reuse or recycle of asphalt, bricks, concrete, masonry, plastics, paint, glass, carpet, metals, wood, drywall, insulation, and any other waste materials to the extent practical.

- 21. PRE-AWARD PRODUCT SUBMITTALS:** If requested, the Apparent Low Bidders must submit a summary of preliminary technical data on each product listed in N/A. The Apparent Low Bidders will furnish this summary data to the Professional within forty-eight hours of the Bid Opening. These submittals will be used to evaluate the Bid before the award. Failure to provide the submittals may disqualify the Bid.
- 22. CONTRACT AND CONTRACT AWARD:** The Owner intends to award a Contract to the responsive and responsible best value bidder, except as provided below relative to veteran's preference.
- 22.1 Determination of the lowest three Bidders shall be based on the sum of the Base Bid and any additive and deductive Alternates the Owner accepts, in the order in which they are listed only. The Owner will accept an Alternate only if all other previously listed Alternates are also accepted unless acceptance by the Owner of Alternates in a different order does not affect determination of the lowest three bidders in any way.
- 22.2 The bids will be evaluated for best value based on price and qualitative components by comparing the qualitative components of the three lowest responsive and responsible Bidders. The comparison may also include other Bidders whose bids are within 10% of the lowest responsive and responsible Bidder.
- 22.3 If a Qualified Disabled Veteran meets the requirements of the contract solicitation, provides acceptable responses to both Part One and Part Two of the Best Value Construction Bidder Evaluation to achieve a Best Value recommendation and with the veteran's preference is the lowest responsive, responsible, best value Bidder, the Owner will award the contract to the Qualified Disabled Veteran bidder. A determination as to whether the requirements of the bid solicitation have been met will be based solely on the Owner's and Professional's evaluation of the Bid Summary, Bid Attachments, Bidder-provided documents, and interview.
- 22.4 For the purpose of evaluating and determining the low responsive bid, 10% of the lowest responsive bid (the bid that would otherwise receive the contract award if the preference were not being considered) will be deducted from all QDV bids. If the low responsive QDV bid, less the 10% preference, is less than the lowest responsive bid, then the QDV bid will be declared the official low responsive bid. The original QDV bid amount will be the basis of the contract award.

**Example:**

Lowest Responsive Bid	\$100,000
Lowest Responsive QDV Bid	\$109,000
Preference (10% of the Lowest Responsive Bid)	\$ 10,000
Lowest Responsive QDV Bid Less Preference	\$ 99,000 (\$109,000 - \$10,000)
<b>Official Low Responsive Bid</b>	<b>\$109,000</b>

- 22.5 The Apparent Low Bidders will be evaluated for responsiveness and responsibility based on the following:
- Compliance with the bid specifications and requirements.
  - The Bidder's financial resources.
  - The Bidder's technical capabilities.
  - The Bidder's technical experience.
  - The Bidder's past performance.
  - The Bidder's insurance and bonding capacity.
  - The Bidder's business integrity.

Some qualitative components that may be evaluated are:

- Technical approach.
- Quality of proposed personnel.
- Management plans.
- Past performance of any nominated asbestos abatement subcontractor(s).
- Progress Schedule detailing start, completion, and all major items of work, including critical path items.

22.6 For contracts under \$250,000, best value will primarily be based on the lowest responsive and responsible bid.

**23. CONTRACT TIME; LIQUIDATED DAMAGES:** Work of all trades as specified in the Contract Documents must be completed in 30 calendar days from the date of Notice-to-Proceed or by September 25 2026 based on Notice-to-Proceed except for minor replacement, correction, or adjustment items which do not interfere with the complete operation and utilization of all parts of the Contract Work. This Contract Time is of the essence and liquidated damages for each Calendar Day that expires after this Substantial Completion of the entire Work must be in the amount of Eight Hundred Dollars and No Cents (\$800.00). Liquidated

damages are not a penalty, are cumulative and represent a reasonable estimate of the Owner's extra costs and damages, which are difficult to estimate with accuracy in advance.

- 24. MOBILIZATION:** If used in the Specifications/Bid schedule, all the up-front costs incurred by the Contractor must be covered by the mobilization. The costs to establish temporary site offices, to obtain required permits for commencing the Work and for bonds and insurance premiums are examples of costs to the Contractor that are covered by mobilization pay item. This cost must not exceed four percent (4%) of the Base Bid, unless otherwise expressly provided in the Bidding Documents.
- 25. SOIL EROSION AND SEDIMENTATION CONTROL:** All Work under this Contract must meet the storm water management requirements of the Project and comply with the applicable Soil Erosion and Sedimentation Control (SESC) rules and regulations and specific provisions for same within the Contract Documents. SESC measures will be monitored and enforced by the State Facilities Administration, or another authorized enforcing agency if so delegated, through the review of the Contractor's implementation plans and site inspections. State Facilities Administration or the Professional will notify the Contractor in writing of any violation(s) of the applicable SESC statutes and/or the corrective action(s) undertaken by the Owner and may issue stop work orders. State Facilities Administration has the right to assess a fine to the Contractor for noncompliance with the provisions of the Contract Documents and/or SESC regulations applicable to this Work and fines must be in addition to any other remediation costs or liquidated damages applicable to the Project and may exceed the value of the Contract.
- 26. PREVAILING WAGE:** The Bidding Documents include either the attached Appendix V of prevailing rates of wages and fringe benefits for all classes of Construction Mechanics called for in the Bid and resulting Contract, if any, or the attached current prevailing wage determination issued by the U.S. Department of Labor, as applicable depending on the funding source(s).

To the extent 2023 PA 10, as amended, MCL 408.1101 et seq. is applicable, the bid response for a state project must include a copy of the state project registration for the Contractor and for each Subcontractor of the Contractor that has been selected at the time the Contractor submits the Bid.

## END OF SECTION 00100

## SECTION 00120 SUPPLEMENTARY INSTRUCTIONS

The provisions of this Section amend or supplement Section 00100 Instructions to Bidders and those other provisions of the Bidding Requirements that are indicated below. All other Bidding Requirements that are not so amended or supplemented remain in full force and effect.

## END OF SECTION 00120

## SECTION 00200 INFORMATION FOR BIDDERS

### 1. UNDERGROUND UTILITIES

Information or data about physical conditions of existing Underground Utilities, which have been used by the Professional in preparing the Bidding Documents, is shown, or indicated in the Drawings and technical Specifications and those Underground Utility drawings itemized immediately below.

Underground communications and electrical facilities that were identified by MISSDIG location markings. Approximate locations from these MISSDIG markings are shown in the plans. Depth of all underground facilities is unknown. An existing utility pedestal is located along the east side of the entrance drive at approx. Sta. 7+50.

Underground electric facilities to the MVP booth and self registration station are present, but location is unknown.

Utility contact information is included in the plans.

### 2. PERMITS, APPROVALS, LICENSES AND FEES

- 2.1 If the Owner has secured or will secure any permits, approvals and licenses and has paid or will pay any associated charges and fees, any such permits, approvals and licenses are itemized in this paragraph:

An Oakland County construction permit has been secured for the construction signing/shoulder and drive entrance closure within the Right-of-Way along 8 Mile Road. The Contractor is to adhere to the requirements of the permit, including any advanced notice of work within the Right-of-Way as noted in the approved permit.

- 2.2 If any permits, approvals, and licenses itemized above have been obtained by the Owner and the fees have been paid, copies of those permits, approvals, licenses, and corresponding fee receipts, are attached to this Section 00200 Information for Bidders.

Except for any permits, approvals, licenses, and fees identified above, the Contractor shall be responsible for all permits, approvals, licenses, and fees applicable to Work.

### 3. SEQUENCING REQUIREMENTS

Refer to the technical Specifications, including, but not limited to the General Requirements, for information, data, and criteria on sequences of Work restraints, construction, and maintenance of service to existing facilities, which, if provided, must govern the selection of Work sequences. Each Bidder must be responsible for any conclusions or interpretations the Bidder makes related to the selection of sequences and Means and Methods, based on the technical data made available, and/or those additional investigations or studies made or obtained by that Bidder.

### 4. SUBSURFACE CONDITIONS

In preparing the bidding documents, the PSC used the reports of explorations and tests of subsurface conditions itemized immediately below. No subsurface reports are available.

### 5. OTHER PHYSICAL CONDITIONS

- 5.1 The Drawings and technical Specifications and those drawings itemized immediately below contain information or data that have been used in the preparation of the Bidding Documents, and that may be properly considered Authorized Technical Data concerning physical conditions of existing surface and subsurface facilities. N/A
- 5.2 The reference documents itemized immediately below have not been used in the preparation of the Bidding Documents and are available for review or purchase. Information and data contained in those reference documents, including, but not limited to dimensions, locations and conditions of existing surface and subsurface structures, roadways, piping, raceways, equipment, etc. may not accurately or reliably reflect actual conditions. Neither the Owner nor Professional warrants that this list identifies all existing relevant documents. N/A

## END OF SECTION 00200

## SECTION 00700 GENERAL CONDITIONS

1. **Interpretations:** Any requests for clarifications or interpretations of the Contract Documents must be in writing to the Professional, who will issue written clarifications or interpretations as appropriate. If the Contractor believes that such clarification or interpretation justifies an adjustment to the Contract Price/Time, the Contractor must promptly notify the Professional in writing before proceeding with the Work Involved.
- 1.1 **Standards:** The Contract Documents describe the entire Work. The provisions of the Contract Documents must govern over any standard specifications, manual or code of any technical society, organization, or association but, if lower than the standards set by any Law applicable to the Work or the Project, the higher standards must govern. The Contractor's responsibilities extend to cover Subcontractors and Suppliers if liable as a result of their actions or obligations.
- 1.2 **Contract Time Computation:** The time to complete the Work must be made in Calendar Days and must include both the first and last day. The first day is established by the Notice-to-Proceed.
- 1.3 **Technical Specifications and Priority:** The following applies whenever priority is called for in Contract Documents: specifications must govern Drawings; figured dimensions must govern scaled dimensions; detail drawings must govern general drawings; Drawings must govern Submittals.
- 1.4 **Indemnification:** The Contractor is required to defend, indemnify and hold harmless the Owner and the Professional, their employees, agents, servants, and representatives from and against all claims, suits, demands, actions of whatever type and nature and all judgments, costs, losses and damages, whether direct, indirect or consequential including, but not limited to, charges of architects, engineers, attorneys and others and all court, hearing and any other dispute resolution costs arising from:
- any patent or copyright infringement by the Contractor.
  - any damage to the premises or adjacent lands, areas, properties, facilities, rights-of-way, and easements, including loss of use to the business and property of others as a result of Contractor's operations.
  - any bodily injury, sickness, disease or death, or injury to or destruction of property, including loss of use due to or related to the Work and caused in whole or in part by the Contractor or Subcontractor or Supplier's negligence, omissions, or failure to maintain the required insurance and coverage and,

- (d) a failure by the Contractor to appropriately handle Hazardous Materials for the Work or the Contractor's operations in compliance with the Owner requirements and/or applicable Laws and regulations.

The indemnification obligations are not affected by the limitation on the amount and types of damages, compensation or benefits payable by or for the Contractor or Subcontractor or Supplier under worker's or workman's compensation acts, disability benefit acts or other employee benefit acts.

- 1.5 **Contract Documents Ownership:** The State is the owner of the Contract Documents. The Contractor, Subcontractor or Supplier must not reuse any of the documents on any other Project without prior consent of the State and Professional. The Professional will furnish on behalf of the Owner at no cost to the Contractor, one (1) electronic copy of the Drawings and Project Manual. If the **Contractor**, or the Contractor's Subcontractors or Suppliers request hard copy sets, reproduction of these documents will be the responsibility of the **Contractor**.

## 2. GENERAL PROVISIONS

- 2.1 **Owner:** The Project Director and/or Owner Field Representative will represent the Owner. Neither the Project Director nor the Owner Field Representative has the authority to interpret the requirements of the Contract Documents or to authorize any changes in the Work or any adjustment in Contract Price/Time. The State will provide the necessary easements for permanent structure and permanent changes in existing lands, areas, properties, and facilities. However, the Contractor must obtain, at no increase in Contract Price/Time, permits for any other lands, areas, properties, facilities, rights-of-way, and easements required by the Contractor for temporary facilities, storage, disposal of soil or waste material or any other purpose. The Contractor must submit copies of the permits and written agreements to the Owner. The Contractor must engage a registered land surveyor to establish the necessary reference points and/or base lines for construction and must be responsible for protecting them including benchmarks and Project elevations.

- 2.2 **Professional:** Acting as the Owner's representative during the Contract Time period, the Professional will endeavor to guard the Owner from Defective work and to keep the Owner informed of the progress of the Work. Unless delegated by specific written notice from the Owner, the Professional and the Professional's representatives do not have the authority to authorize any changes in the Work or any adjustment in Contract Price/Time. The On-site Inspections by the Owner Field Representative and/or the Professional do not relieve the Contractor from its obligation to provide the Work in accordance with the Contract Documents or represent acceptance of Defective Work.

- 2.3 **Contractor:** The Contractor must manage, supervise, and direct the Work competently, applying the management, supervision, skills, expertise, scheduling, coordination, and attention necessary to provide the Work in accordance with the Contract Documents with a minimum disturbance to or interference to the business operations on site or adjacent properties. The Contractor must assign and maintain a competent full-time **superintendent** on the Work, as its representative, at all times while Work is being done on site and must not be replaced without the Owner's consent. The DTMB Superintendent Designation [form](#) must be completed by the Contractor and submitted before beginning any work. The Contractor shall enforce good order among its employees and shall not employ on the work any disorderly, intemperate, or unfit persons, or not skilled in the work assigned to them. The Contractor is solely responsible for his Means and Methods, safety precautions and programs related to safety, the Contractor's failure to execute the Work in accordance with the Contract Documents and any act of omissions by the Contractor, Subcontractor or Supplier. The Contractor must **compare Contract Documents for conflicts**, unworkable or unsafe specified Means and Methods and verify against manufacturer's recommendations for installations and handling and must notify the Professional in writing of the discovery of any such conflicts or errors. The Contractor is required to furnish certifications that lines and grades for all concrete work were checked before and after placing concrete, and that final grades are as required by the Contractor Documents. Wherever required, the Contractor must be responsible for all cutting, fitting, drilling, fixing-up, and patching of concrete, masonry, gypsum board, piping and other materials that may be necessary to make in-place Work and dependent Work fit together properly. The Contractor must restore to pre-existing conditions all walks, roadways, paved or landscaped areas and other real and personal property not designated for alteration by the Contract Documents. The Contractor must maintain at the site one copy of safety data sheets (SDS) and one copy of all **as built/Record Documents** in good order and annotated in a neat and legible manner to show:

- (a) all revisions made,  
(b) dimensions noted during the furnishing and performance of the Work, and  
(c) all deviations between the as-built installation and the Contract Documents, all approved Submittals and all clarifications and interpretations.

The Contractor must maintain and furnish promptly to the Owner and the Professional upon their request **daily field reports and photos** recording the on-site labor force and equipment (Contractor and Subcontractors); materials/equipment received; visits by Suppliers; significant in-progress and completed trade Work within major areas; and other pertinent information. The Contractor is obligated to act to prevent threatened damage, death, injury, or loss without any special instruction in **emergencies** and must give the Owner prompt written notice of any changes in Work resulting from the action taken for review and approval.

- 2.4 Subcontractors and Suppliers:** The Owner assumes no contractual obligations to anyone other than the Contractor. All trade construction Drawings must be field coordinated before fabrication and/or installation. The Owner reserves the right to reject or revoke, for its convenience, any approved Subcontractor/Supplier. For any projects with asbestos abatement, Contractor must comply with MCL 338.3375(4) and complete the Asbestos Abatement Attestation. Work performed by any Subcontractor or Supplier must be through an appropriate written agreement that:
- (a) expressly binds the Subcontractor/Supplier to the requirements of the Contract Documents,
  - (b) requires such Subcontractor or Supplier to assume toward the Contractor all the obligations that the Contractor assumes toward the Owner and the Professional, and
  - (c) contains the waiver of rights and dispute resolution provisions.

**2.5 Prevailing Wages and Access to Payroll Records:**

**2.5.1 Prevailing Wages:**

**State Prevailing Wages** -The following provisions apply when 2023 PA 10, as amended, MCL 408.1101 et seq. applies.

**Prevailing Wage and Fringe Benefits**--The rates of wages and fringe benefits to be paid to each class of Construction Mechanic by DB Entity and Subcontractors must not be less than the wage and fringe benefit rates prevailing in the locality in which the work is performed.

**Nondiscrimination, Nonretaliation**- Contractor or a Subcontractor shall not discharge, discipline, retaliate against, or otherwise discriminate against a Construction Mechanic, or threaten to do any of these things, because the Construction Mechanic reported or was about to report a violation or suspected violation of the act.

Construction Mechanics under this Contract are intended beneficiaries of the contractual prevailing wage, fringe benefit, and nondiscrimination nonretaliation requirements of the Contract. Any such Construction Mechanic aggrieved by failure of a contractor or subcontractor to pay prevailing wages or benefits as specified in the Contract, or by violation of section 7 of 2023 PA 10, in addition to any other remedies provided by law, may bring an action in a court of competent jurisdiction against such contractor or subcontractor for damages or injunctive relief and may be awarded reinstatement or other appropriate relief, and all damages sustained, together with actual costs and attorney fees at trial and on appeal.

Contractor and Subcontractors shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in this Contract and shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each Construction Mechanic employed by it in connection with the Contract. This record shall be available for reasonable inspection by the State.

Contractor must immediately notify the Owner if Contractor's state project registration or a Subcontractor's state project registration is no longer valid (i.e. suspended, revoked or not renewed) at any time during the term of the Contract.

Contractor is to submit certified payrolls, including contractor and subcontractor, not later than 10-days after the end of a pay period to the Department of Labor and Economic Opportunity database via the internet through the Online Certified Payroll Submission process the Contractor signed up for to receive their State Project Registration, 2023 PA 10 as amended, MCL 408.1122. State certified payroll is not to be submitted to DTMB at any time.

- 2.5.2 Access to Payroll Records:** The Contractor and its Subcontractors must maintain and keep, in accordance with generally accepted accounting principles, records pertaining to the bidding, award and performance of the Work, including, but not limited to certified payroll, employment records and all data used in estimating the Contractor's prices for the Bid, Change Order, proposal or claim. The Owner or its representative must have access to those records, must have the right to interview the Contractor's employees and must be provided with appropriate facilities for the purpose of inspection, audit/review and copying for five years after final payment, termination, or date of final resolution of any dispute, litigation, audit exception or appeal. The certified payroll and other employment records of workers assigned to the site must contain the name and address of each worker, correct wage classification, rate of pay, daily and weekly number of hours worked, deduction made, and actual wages paid. The Contractor must maintain records that show: (a) the anticipated costs or actual costs incurred in providing such benefits, (b) that commitment to provide such benefits is enforceable, and (c) that the plan or program is financially responsible and has been communicated in writing to the workers affected.

- 2.6 Asbestos Abatement Projects:** For projects with Asbestos Abatement, the Contractor must comply with PA 59 of 2024, MCL 338.3371 et seq. as applicable and with APPENDIX III – ASBESTOS ABATEMENT PROJECT PROCEDURES as part of and in conjunction with all other contract requirements.

**3. Bonds and Insurance:**

- 3.1 Both the Performance Bond and Payment Bond must remain in effect from the date of Contract Award until final completion of the Work or the end of Correction Period, whichever comes later. The surety bonds required for a Construction Contract will not be accepted by SFA unless the surety bonding company is listed in the current United States Government, Department of Treasury's, Listing of approved sureties (bonding/insurance companies), Department Circular 570. Copies of the current Circular listing may be obtained through the internet web site <https://www.fiscal.treasury.gov/fsreports/ref/suretyBnd/c570.htm>.

Insurers must have an "A-" A.M. Best Company Rating and a Class VII or better financial size category as shown in the most current A.M. Best Company ratings. Insurance must be provided by insurers authorized by the Department of Insurance and Financial Services (DIFS) to do business as an insurer in Michigan. The insurance company and must attach evidence of the authorization. These certificates must specify the Project File No., Project Title, and a description of the Project. The Contractor agrees that insurance coverage afforded under the policies as such coverage relate to the State under this Contract as determined by the Contractor will not be modified or canceled without at least thirty calendar days prior written notice to the State. The latest A.M. Best's Key Ratings Guide and the A.M. Best's Company Reports (which include the A.M. Best's Ratings) are found at: <http://www.ambest.com>. The Contractor must not perform any part of the Work unless the Contractor has all the required insurance in full force and effect.

- 3.2 The Contractor is required to provide proof of the minimum levels of insurance coverage as indicated below. The purpose of this coverage must be to protect the State from claims which may arise out of or result from the Contractor's performance of services under the terms of this Contract, whether such services are performed by the Contractor, or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

The Contractor waives all rights against the State for recovery of damages to the extent these damages are covered by the insurance policies the Contractor is required to maintain pursuant to this Contract. The Contractor also agrees to provide evidence that all applicable insurance policies contain a waiver of subrogation by the insurance company.

All insurance coverages provided relative to this Contract is PRIMARY and NON-CONTRIBUTING to any comparable liability insurance (including self-insurances) carried by the State.

The Insurance must be written for not less than any minimum coverage herein specified or required by law, whichever is greater. All deductible amounts for any of the required policies are subject to approval by the State.

The State reserves the right to reject insurance written by an insurer the State deems unacceptable.

BEFORE THE CONTRACT IS SIGNED BY BOTH PARTIES, THE CONTRACTOR MUST FURNISH TO THE DIRECTOR-DCD CERTIFICATE(S) OF INSURANCE VERIFYING INSURANCE COVERAGE. THE CERTIFICATE MUST BE ON THE STANDARD "ACCORD" FORM. THE CONTRACT NUMBER MUST BE SHOWN ON THE CERTIFICATE OF INSURANCE TO ASSURE CORRECT FILING. All such Certificate(s) are to be prepared by the Insurance Provider and not by the Contractor. All such Certificate(s) must contain a provision indicating that coverages afforded under the policies WILL NOT BE CANCELLED, MATERIALLY CHANGED, OR NOT RENEWED without THIRTY days prior written notice, except for 10 days for non-payment of premium, having been given to the Director-DCD. Such NOTICE must include the CONTRACT NUMBER affected and be mailed to the Project Director.

The Contractor is required to provide the type and amount of insurance below:

- (a) Commercial General Liability Insurance with a limit of not less than \$1,000,000 each occurrence. If such CGL insurance contains a general aggregate limit, it must apply separately to this project.

The Contractor must list the State, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as ADDITIONAL INSUREDS on the Commercial General Liability policy.

- (b) Vehicle Liability Insurance for bodily injury and property damage as required by law on any auto including owned, hired, and non-owned vehicles used in the Contractor's business.

The Contractor must list the State, its departments, divisions, agencies, offices, commissions, officers, employers, and agents as ADDITIONAL INSUREDS on the vehicle liability policy.

- (c) Worker's disability compensation, disability benefit or other similar employee benefit act with minimum statutory limits.

NOTE:

- (i) If coverage is provided by a State fund or if Contractor has qualified as a self-insurer, separate certification must be furnished that coverage is in the state fund or that Contractor has approval to be a self-insurer.
- (ii) Any citing of a policy of insurance must include a listing of the States where that policy's coverage is applicable; and
- (iii) This provision must not be applicable where prohibited or limited by Michigan law.

(d) Employer's Liability Insurance with the following minimum limits:

\$1,000,000 each accident  
\$1,000,000 each employee by disease  
\$1,000,000 aggregate disease

(e) Pollution Liability Insurance in the amounts of not less than \$1,000,000 per occurrence is required.

- 3.3 **Liability Insurance:** Liability insurance must be endorsed to list as additional insureds the Professional's consultants and agents. Worker's Compensation, Employer's Liability Insurance and all other liability insurance policies must be endorsed to include a waiver of rights to recover from the Owner, Professional and the other additional insureds. The Contractor's liability insurance must remain in effect through the Correction Period and through any special correction periods. For any employee of the Contractor who is resident of and hired in Michigan, the Contractor must have insurance for benefits payable under Michigan's Worker's Compensation Law. For any other employee protected by Worker's Compensation Laws of any other state, the Contractor must have insurance or participate in a mandatory state fund, where applicable, to cover the benefits payable to any such employee. These requirements must not be construed to limit the liability of the Contractor or its insurers. The Owner does not represent that the specified coverage or limits of insurance are sufficient to protect the Contractor's interests or liabilities.
- 3.4 **Builder's Risk Insurance:** Unless indicated otherwise in the bid document, the Contractor must purchase and maintain property insurance for 100% of the replacement cost value of the insurable Work (minimum amount to be the contract award amount) while in the course of construction, including foundations, additions, attachments, and all fixtures, machinery and equipment belonging to and constituting a permanent part of the building structures. The property insurance must cover temporary structures, materials and supplies to be used in completing the Work, whether stored offsite, in-transit, or on the building site premises. The property insurance insures the interests of the Owner, Contractor and all Subcontractors and Suppliers at any tier as their interest may appear and name the Owner as Loss Payee. The property insurance insures against "all risk" of physical loss or damage to the extent usually provided in policy forms of insurers authorized to transact this insurance in Michigan. A copy of the master insurance policy must be available for review by the State, upon request. The deductible amount and the payment of any deductible is the responsibility of the **Contractor**.
- 3.5 The Owner and Contractor intend that the required policies of property insurance must protect all the parties insured and provide primary coverage for all losses and damages caused by the perils covered. Accordingly, to the extent that the insurance company pays claims, the Owner and the Contractor and its Subcontractors/Suppliers waive all rights against each other for any such losses and damages and waive all such rights against the Professional and all other persons named as insureds or additional insureds.
- 4. Prosecutions; Substantial Completion:**
- 4.1 The Contractor must not start the Work at the site before the first day established by the Notice to Proceed and/or before all insurance is in effect. A pre-construction conference will be held with the Contractor to review its Progress Schedule, qualifications of its key personnel, its proposed access to the site, traffic and parking, procedures for submittal, change orders, etc., and to exchange emergency contact information. The Contractor must use its accepted Progress Schedule when making proposals or claims for adjustment in Contract Time/Price.
- 4.2 Except in an Emergency, all Work at the site must take place during normal working hours; 6:00 AM to 6:00 PM, during Business Days and in accordance with the special working conditions for the Agency. If the Contract Documents allow work outside the normal hours, the Contractor must provide a written notice to the Owner twenty-four hours before performing such Work and must reimburse the Owner any related increase in the costs incurred by the Owner such as overtime charges of the Professional and payments for custodial and security personnel.
- 4.3 If, upon inspection and completion of all pre-requisite testing of the Work, the Contractor considers that a portion of the work or all the Work is substantially completed, it must provide a list of items to be corrected or completed to the Owner and the Professional for joint inspection. Within ten Calendar Days of this joint inspection, the Professional will deliver to the Owner and Contractor a list of incomplete/Defective work or a Certificate of Substantial Completion with a Punch List. The certificate must:
- fix a reasonable date of Substantial Completion,
  - fix a date for completion of the Punch List, and
  - recommend the division of responsibilities between the Owner and Contractor for utilities, security, safety, insurance, maintenance, etc.

Upon issuing the Certificate of Substantial Completion, the Owner will pay for the completed Work subject to (a) withholding of two hundred percent of the value of any uncompleted Work, as determined by the Professional, and (b) any other deductions as the Professional may recommend or may withhold to cover Defective work, liquidated damages and the fair value of any other items entitling the Owner to a withholding. Prerequisites for Substantial Completion, over and above the extent of Work completion required, include (a) receipt by the **Owner** of operating and maintenance documentation, (b) all systems have been

successfully tested and demonstrated by the **Contractor** for their intended use, and (c) the **Owner** having received all required certifications and/or occupancy approvals from the State and those Political Subdivisions having jurisdiction over the Work. Receipt of all certifications and/or occupancy approvals from those Political Subdivisions with jurisdiction in and of itself does not necessarily connote Substantial Completion. The Contractor must provide all related operating and maintenance (O&M) documentation to the Owner before training if training is required and not later than Substantial Completion otherwise. The Contractor must give the Owner the final O&M documentation (with revisions made after Substantial Completion) before the request for final payment.

- 4.4 The Owner may decide to use, at its sole option, any functioning portion of the Work and will inform the Contractor in writing of the decision. The portion of Work to be used must be jointly inspected to determine the extent of completion if it has not undergone the inspection for Substantial Completion. The Professional must prepare a list of items to be corrected/completed and the Owner will allow the Contractor reasonable access to correct/complete the listed items and finish other work.

## 5. Warranty; Tests, Inspections and Approvals; Corrections of Work:

- 5.1 **Warranty:** The Contractor must furnish the State with a written guarantee to remedy any defects due to faulty materials or labor which appear in the Work within one year from the date of final acceptance by the State. This warranty excludes defect or damage caused by (a) abuse, modification by others, insufficient or improper operation or maintenance, or (b) normal wear and tear under normal usage. Manufacturer warranties for materials and equipment received by the Contractor must be assigned and promptly delivered to the Owner at Substantial Completion. The warranties period starts from the date of the substantial completion and must be in full force and effect for the entire duration of the Correction Period.

**Roof Warranty:** For roofing systems, the following warranties are required as minimum:

- (a) A two-year contractor's warranty against any defects due to faulty materials or labor.
- (b) A fifteen-year manufacturer's total system warranty; and
- (c) A twenty-year membrane/shingles/tiles warranty.

- 5.2 **Tests, Inspections and Approvals:** The Owner will perform or retain a professional/agency to perform inspections, tests or approvals for those materials required to meet quality control standards specified in the Contract Documents except for those inspections, tests or approvals specifically designated to the Contractor in the Contract Documents. However, the Contractor must assume full responsibility for any testing, inspection, or approval.

- (a) required to meet code requirements, as promulgated by code inspecting authorities.
- (b) required by Law.
- (c) indicated or required by the Contract Documents as designated to the Contractor.
- (d) required for the Professional's acceptance of a Supplier, materials or equipment or mix designs submitted for prior approval by the Contractor; or
- (e) Defective work, including an appropriate portion of the Delay and costs occasioned by discovery of Defective work. The Contractor must (a) pay all related costs; (b) schedule related activities; and (c) secure and furnish to the Professional the required certificates of inspection, testing or approval. The Contractor must provide proper and safe access to the site for inspection, testing or approval. The Contractor must provide the Professional a timely notice whenever any Work is ready for inspection, testing or approval. If the Contractor covers any Work without proper approval by the Professional as required by the Contract Documents, the Contractor must, at its own expense, uncover, expose, or otherwise make available, when requested by the Professional or Owner, for testing, inspection, or approval of the covered Work.

- 5.3 **Correction of Work:** If any testing, inspection, or approval reveals Defective Work and the Work is rejected by the Professional, the Contractor, at its sole expense, must promptly, as directed, correct, or remove the Defective Work from the site and replace it with non-Defective Work within the Correction Period. The Contractor must bear responsibility for its proportionate share of the Delay and costs resulting from the correction and/or removal and replacement of Defective Work. If the Contractor, within reasonable and agreed upon time after receipt of written notice, (a) fails to correct Defective Work or remove and replace rejected Work, or (b) fails to correct or complete items on any Punch List, or (c) fails to perform Work in accordance with the Contract Documents, or (d) fails to comply with any other provision of the Contract Documents, the Owner, directly or through others, after seven Calendar Days from the date of the written notice to the Contractor, may correct and remedy the Defective Work. To the extent necessary to correct and remedy such Defective Work, the Owner must be allowed to exclude the Contractor from all or part of the site; take possession of all or part of the Work and stop related operations of the Contractor; take possession of the Contractor's tools, plant and office and construction equipment at the site; and incorporate into the Work materials and equipment for which the Owner has paid the Contractor. The Contractor must allow the Owner and the Professional easy access to the site to correct such Defective Work. The Owner must be entitled to an appropriate decrease in Contract Price for all claims, costs, losses, damages, and Delay incurred or sustained by the Owner which are attributable to the Contractor. Such costs may include, but not limited to, costs of correction or removal and replacement of Defective Work, costs of repair and replacement of other work destroyed or damaged by the action and related charges of the Professional. If the discovery of the Defective Work takes place after final payment and the Contractor fails to correct and pay the Owner any of these costs, the Owner must demand due performance under the Performance Bond. Until the period of limitation provided by Michigan Law, the Contractor must promptly,

and upon receipt of written notice from the Owner, correct Defective Work. In the event of an Emergency or unacceptable risk of loss or damage or if appropriate under the circumstances, the Owner, directly or through others under contract with the Owner, may correct or remove and replace the Defective Work. The specified correction of Work requirements has no limitation on the rights of the Owner to have Defective Work corrected or removed and replaced, if rejected, except as otherwise provided by the Michigan Law.

**5.4 Special Correction Period Requirements:** Whenever the Owner undertakes any portion of the Work because the Contractor's act or omission Delays completion of the Work or it is eligible for Partial Use, the warranties for all materials and equipment incorporated into that portion of the Work must remain in full force and effect between the start of such Partial Use and the date when the Correction Period starts. The Correction Period for any Defective Work that is corrected or rejected and replaced within the last three months of the Correction Period must be extended by an additional six months, starting on the date such Work was made non-Defective.

**5.5 Special Maintenance Requirements:** If the Contract Documents specify that the entire Work, or a portion of the Work, upon reaching Substantial Completion, must not be placed in use by the Owner, the Contractor must maintain the Work, or specified part of the Work, in good order and proper working condition and must take all other actions necessary for its protection between the certified date of Substantial Completion and the date when the Work, or designated part of the Work, is placed in use. If no separate price for such special maintenance period was requested and made part of the Contract Documents, the Owner will amend the Contract Documents to appropriately increase the Contract Price.

## **6. Changes:**

**6.1 Changes in the Work:** The Owner may, at any time, without notice to sureties, make any changes bilaterally or unilaterally, by a written Change Order, in the Work within the general scope of the Contract, including but not limited to changes in the Specifications, materials, or Contract Time. In a bilateral change order, the Owner may direct the Professional to prepare a Bulletin describing the change being considered. Upon receiving the Bulletin, the Contractor establishes the cost and returns it to the Professional for review within 15 calendar days. The Contractor's proposal must be irrevocable for 60 Calendar Days after it is submitted to the Professional. If the Professional recommends acceptance of the Bulletin and the Owner agrees with the changes, the Owner issues a written bilateral Contract Change Order to amend the Contract Documents. However, the Owner may issue a unilateral Change Order if the Owner and Contractor are unable to agree on the adjustment in Contract Price or Time. If the Contractor disagrees with such unilateral Contract Change Order, the Contractor must complete the Work and may deliver notice of a claim in accordance with the claim submittal process. Changes in trade or customs laws or government action affecting Tariffs or other import related federal assessments will not constitute a Change in the Work and will not entitle the Contractor to an adjustment of the Contract Price or Contract Time.

**6.2 Differing Site Condition:** The Owner does not warrant that any technical data, including the Project reference points, provided by the Owner is necessarily sufficient and complete for the purpose of selecting Means and Methods, initiating, maintaining, and supervising safety precautions and programs or discharging any other obligation assumed by the Contractor under the Contract Documents. If different or unknown site conditions are discovered, the Contractor must notify the Owner in writing before the conditions are disturbed or before proceeding with the affected Work. Upon review, if the Owner decides to agree with the differing site conditions, with the Professional's advice, the Owner may issue a written Contract Change Order to amend the Contract Price or Time through the Bulletin authorization process. If the Owner decides to disagree with the Contractor and the Contractor disagrees with the Owner's decision, the Contractor must complete the Work and may deliver notice of a claim in accordance with the claim submittal process. No proposal or claim by the Contractor due to differing site conditions will be allowed (a) if the Contractor knew of their existence before submitting its Bid or if those conditions could have been discovered by any reasonable examinations for which the Contractor, as Bidder, was made responsible under the Bidding Requirements and/or (b) unless the Contractor's written notice is provided within not more than 21 days after the contractor first recognizes the condition giving rise to the proposal or claim and gives the Owner adequate opportunity to investigate the asserted differing site conditions. A full and detailed breakdown of cost and time requested, with supporting documentation, if not provided with the initial notice shall be delivered to the Professional and Owner within 15 days of the notice, unless otherwise agreed in writing, by the Owner prior to expiration of such time.

**6.3 Responsibilities for Underground Utilities:** The Contractor must comply with the 2013 PA 174, as amended, MCL 460.721 et seq., and all other Laws concerning Underground Utilities. Before performing site Work, all Underground Utilities, lines, and cables (public and private) must be located and marked. The Contractor must notify MISS DIG to locate and mark utilities on properties that are not State properties. In addition, the Contractor must be responsible for immediately notifying the Owner of any contact with or damage to Underground Utilities, and for the safety, protection of and repairing any damage done to any Work, surface, and subsurface facilities. If the Contractor encounters Underground Utilities that inaccurately located by the Contract Documents or not previously located/marked, which could not be reasonably have been seen, the Owner may issue a written Contract Change Order to amend the Contract Price or Time through the Bulletin authorization process.

**6.4 Hazardous Material Conditions:** If the Contractor encounters material reasonably believed to be Hazardous Material, which was not described in the Drawings and/or Specifications and was not generated or brought to the site by the Contractor, the Contractor shall immediately stop all affected work, give written notice to the Owner of the conditions encountered, and take

appropriate health and safety precautions in accordance with all federal, state, and local laws. Upon receipt of the notice, the Owner will investigate the conditions and (a) may stop the Work and terminate the affected Work or the Contract for convenience; (b) may contract others to have the Hazardous Material removed or rendered harmless or (c) issue a written Contract Change Order to amend the Contract Price/Time through the Bulletin authorization process. If the Hazardous Material is brought to site by the Contractor or as a result in whole or in part from any of its violation of any Law covering the use, handling, storage, disposal of, processing, transport and transfer or from any other act or omission within its control, the Contractor is responsible for the Delay and costs to clean up the site, remove and render harmless the Hazardous Material to the satisfaction of the Owner, State and all Political Subdivisions with jurisdiction.

**6.5 Incidents with Archaeological Features:** The Contractor must immediately notify the Owner in writing of any Archeological Feature deposits encountered at the site and must protect the deposits in a satisfactory manner. If the Contractor encounters such features, which result in an anticipated change to the Contract Price/Time, the Owner may issue a written Contract Change Order through the Bulletin authorization process.

**6.6 Unit Price Work:** Quantities as listed have been carefully estimated but are not guaranteed. The Owner reserves the right to increase or decrease the quantities of the Work to be performed at the Unit Price by amounts up to 20 percent of the listed estimated quantities. For Unit Price Work, the Contractor must promptly inform the Professional in writing if actual quantities differ from the estimated quantities for any item. For quantities over 120% or below 80% of the estimated quantity, the Owner may negotiate a Unit Price with the Contractor, or direct a unilateral change, or bid that Work under separate contract. Any adjusted Unit Price agreed upon by the Owner will only apply to the actual quantities above 120% or below 80% of the estimated quantity. No adjustment due to quantity variations must be allowed (a) unless the Contractor met the notice requirements, or (b) if any Unit Price increase results in whole or in part from any act or omission within the control of the Contractor (errors in the Contractor's Bid, unbalanced Unit Prices, etc.). If a dispute arises between the Owner and the Contractor on the adjusted Unit Price, the Contractor must carry on the Work with due diligence during the disputes/disagreements.

**6.7 Cash Allowances; Provisionary Allowances:** The Contractor must obtain the Professional's and Project Director's written acceptance before providing materials, equipment, or other items covered by Cash Allowance. Work authorized under any Provisionary Allowance may consist of (a) changes required by actual conditions, as determined by the **Professional**, and (b) any other Work authorized and completed under the pertinent provisions of the Contract Documents.

#### **6.8 Changes in Contract Price:**

- 6.8.1 The Contractor's proposals or claims for Work Involved must detail all affected items of Work, whether increased, revised, added, or deleted, and must be fully documented and itemized as to (a) individual adds and deducts in Work quantities and labor man-hours; (b) corresponding itemized cost of Work Involved; (c) materials and equipment cost including transportation, storage, and suppliers' field services; and (d) Fee.
- 6.8.1.1 No proposal or claim by the Contractor on account of any asserted change not issued as a Bulletin by the PSC or Owner, shall be allowed unless initiated by written notice of such proposal or claim to the Professional and Owner within 21 days after the occurrence of the event giving rise to the proposal or claim. A full and detailed breakdown of cost and time requested, with supporting documentation, if not provided with the initial notice shall be delivered to the Professional and Owner within 15 days of the notice, unless otherwise agreed in writing, by the Owner prior to expiration of such time.
- 6.8.2 For Contractor's proposals or claims for adjustments in Contract Price arising from Delays, the Contractor's estimates must be as comprehensive and detailed as may be appropriate to support the proposal or claim. Examples of related information include labor manpower levels, production data and Progress Schedule revision.
- 6.8.3 If the Contract Documents use lump sum or Unit Prices for the Work Involved, those prices must be used in estimating the price change. Otherwise, the Owner may direct the Contractor to proceed (a) on a negotiated lump sum; or (b) on an actual cost basis with or without a guaranteed maximum; or (c) through a unilateral Change Order on a lump sum basis or a not-to-exceed basis, based on the Professional's estimate of the anticipated Cost of the Work Involved and a fee. Items making-up the Cost of the Work Involved must be allowable to the extent (a) consistent with those prevailing in the Project locality, (b) necessary, reasonable, and clearly allocable to the Work Involved, and (c) limited to labor costs, subcontract costs, material and equipment costs, construction equipment costs and general conditions costs.
- 6.8.4 In estimating any additional cost by the Contractor or its Subcontractor, the rates for the craft labor man-hour used in estimating changes in Contract Price must not exceed the rates in Means Cost Data (Means) or other cost guide acceptable to the Owner. If the rates exceed the acceptable cost guides, the Contractor must provide proper justifications acceptable to the Professional and the Owner. The payroll costs may be used to quote a Bulletin. However, the payroll costs must include wages, labor burdens and a factor for field supplies and purchase costs (less market values if not consumed) of tools not owned by the workers. Labor burdens must be certified by an authorized financial representative of the Contractor and may include social security, unemployment, taxes, workers' compensation, health and retirement benefits, vacation, and holiday pay. The factor for field supplies and tools (individually valued at less than \$1,000.00) must not exceed 4% of the wages without burdens, unless detailed data, which supports higher costs, is provided. Rates for owned, rented, or leased construction equipment must be in accordance

with the contract price rates. Otherwise, the appropriate hourly, daily, weekly, or monthly rates listed in Means must be used. However, if the total rental or lease cost of an item to the Project exceeds the reasonable purchase price of the rented or leased item, the Owner reserves the right to pay only the purchase price of the item and take title to the item. Operating cost must not exceed the hourly operating rate in Means and for multiple shifts, rates must not exceed the shift work adjustments recommended in the cost guide.

- 6.8.5 The cost of any Work Involved may include necessary general conditions costs to the extent those costs increase or decrease on account of, or are directly attributable to, the performance of the furnishing and/or performance of the additional Work Involved or are required due to an extension in Contract Times or Delays. Such costs may include payroll costs of personnel, temporary facilities at the site, liability insurance and bond premiums, Subcontractors, royalty payments and fees for permits and licenses and taxes on the Work Involved.
- 6.8.6 A contractor or subcontractor who performs the Work may charge a fee of up to 15% of the cost of Work involved for overhead and profit. Contractor may charge a mark-up fee of up to 5% of its Subcontractor's cost excluding fees if the Work is performed by the Subcontractor. If Work is to be performed by lower tier subcontractor(s), intermediate subcontractors and the Contractor must share a fee of up to 5% of the lowest tier subcontractor's cost excluding fees. The total mark-up fees for the Work must not exceed 20% of the lowest tier subcontractor's cost excluding fees. If the adjustment to the Contract Price incorporates a contractor reservation of rights to claim additional adjustments, the fees must be reduced by one-third. Contractor's administrative costs and home office overhead must be non-reimbursable expenses covered by the Fee for the Work.

## 6.9 Changes in Contract Time:

- 6.9.1 If a justified extension beyond the Contract Time is not reasonably anticipatable under the circumstances, the Owner may approve an extension to the Contract Time through the Bulletin authorization process at no additional cost to the Owner. Examples of events that may justify an extension in the Contract Time include acts of God; acts of the public enemy; fires; floods; and strikes.
- 6.9.2 If, at any time during the life of this Contract, the Contractor finds that for reasons beyond its control, it will be impossible to complete the Work on or before the Contract completion date, a written request for a change to the Contract extending the time of completion must be submitted. Such a request must set forth in precise detail the reasons believed to justify an extension and must be in such format as the State may require.
- 6.9.3 When submitting a quotation for a Contract change authorization for extra work or change in plans, the Contractor must include as part of the quotation, a statement requesting any extra time necessary to complete the related Work. Lack of such a statement will serve as notification that the extra time will not be required to complete the Contract work and will waive the right to a later claim. The Owner will not pay additional compensation to the Contractor for performing Contract Work during any extension period granted.
- 6.9.4 If the Progress Schedule and the funding allow for an early completion date, the Contractor may submit to the Owner for approval, a request to shorten the Contract Time. If approved by the Owner, the new Contract Time applies to the Project and liquidated damages, if any, will be assessed for any delays after the new completion date.

**6.10 Price Reduction for Defective Cost or Pricing Data:** Whenever the Contractor signs a proposal for a change in the Contract or claim settlement, the Contractor will be deemed to have certified on behalf of itself, Subcontractors and Suppliers, to its best knowledge and belief that the proposal and its contents (a) were made in good faith and are consistent with the facts and the provisions of the Contract; and (b) are current, complete, and accurate. If the Contract Price/Time is increased by any Change Order, claim or dispute settlement because the Contractor, Subcontractor or Supplier, at any tier, represented or furnished cost or pricing data of any kind that were false, contained math errors or were incomplete, the Contract Price must be correspondingly reduced by Change Order. If there is a good cause to doubt the Contractor's compliance with the Defective cost and pricing data requirements, the Owner must be entitled to make an appropriate withholding from any payment otherwise owed to the Contractor.

## 7. Payments:

- 7.1 **Schedule of Values:** The Schedule of Values must be approved by the Professional and accepted by the Owner and must divide the Work into pay items for significant Sections and areas, facilities, or structures, with subtotals for first tier Subcontractors. As required or as noted in Division 1, the accepted Schedule of Values must be supported by a more detailed breakdown allocating the pay items to the Progress Schedule Activities. It must tabulate labor costs, Subcontract costs and material and equipment costs. Labor costs must include appropriate sums for construction equipment costs, general conditions costs, administrative costs, and profit, unless separate pay items are itemized for those costs. The Schedule of Values must include two percent of the Contract Price for each of the following close-out pay items: (a) fire safety inspection, certificate of occupancy and other code approvals, as specified in the Contract Documents, (b) manufacturer warranties, finalized operating and maintenance documentation, Owner training documentation, and test and balance reports, and (c) finalized as built/Record Documents.

- 7.2 **Requests for Payment:** Not more than once every thirty Calendar Days, the Contractor may submit to the Professional a Request for Payment on the Owner's form signed by the Contractor certifying Work completed and enclosing all supporting documentation. A draft copy of the payment request must be submitted to the Owner Field Representative for review and comments. For projects under \$50,000, the Contractor may not submit more than two requests in addition to the final payment request. Each Request for Payment must certify that all monies owed by the Contractor to Subcontractors and Suppliers for which payment previously has been sought has been paid from payments received and include a sworn statement. No Request for Payment must include amounts for a Subcontractor or Supplier if the Contractor does not intend to use the payments requested, when received, to reduce the Contractor's outstanding obligations on the Work. The Owner will pay the Contractor within thirty Calendar Days after the Owner receives and approves a certified Request for Payment from the Professional. The Contractor will provide a certification in writing that the payment request submittal is true and accurate. If payment is requested based on materials and equipment stored at the site or at another location agreed to in writing, the Request for Payment also must be accompanied by (a) consent of surety, (b) a bill of sale, invoice or other documentation warranting that the Owner has received the materials and equipment free and clear of all liens, and (c) evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect them and the Owner's interests. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Request for Payment, whether incorporated in the Work or not, will pass to the Owner free and clear of all liens no later than at the time of payment by the Owner to the Contractor.
- 7.2.1 **Electronic Funds Transfer:** The State will only disburse payments under this Contract through Electronic Funds Transfer (EFT). Contractor must register with the State at [SIGMA VSS](#) to receive electronic fund transfer payments. If Contractor does not register, the State is not liable for failure to provide payment. Without prejudice to any other right or remedy it may have, the State reserves the right to set off at any time any amount then due and owing to it by Contractor against any amount payable by the State to Contractor under this Contract.
- 7.3 **Review of Request for Payment; Intent of Review:** Within ten Calendar Days after receipt of a Request for Payment, the Professional must certify to the Owner the amount the Professional determines to be due or must return the Request for Payment to the Contractor indicating the reasons for withholding certification. The Professional's certification of any Request for Payment constitutes a representation to the Owner that the Work has progressed to the point indicated; that to the best of the Professional's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents; and that the Contractor is entitled to payment in the amount certified. In the case of final payment, the Professional's certification of final payment and recommendation that the Work is acceptable must be a further representation that conditions governing final payment to the Contractor have been met.
- 7.4 **Refusal to Make or to Recommend Payment:** The Owner may withhold from any payment an amount based on the (a) Professional's refusal to recommend payment or (b) Owner's estimate of the fair value of items included in the payment request. The Owner will give the Contractor reasonably prompt written notice supporting such action. The Professional may refuse to recommend any part of any payment, or because of subsequently discovered evidence, inspections or tests or the value of the Punch List, nullify all or any portion of any payment previously recommended, as the Professional may consider necessary to protect the Owner from loss because:
- (a) the Work is Defective or completed Work has been damaged requiring correction or replacement,
  - (b) a defective work/non-compliance notice has not been acknowledged by the Contractor,
  - (c) the Contract Price has been reduced by Change Order,
  - (d) it has been necessary that the Owner correct Defective Work or complete Work,
  - (e) reasonable evidence exists that all or a part of the Work will not be completed within the corresponding Contract Time,
  - (f) the Contractor failed to comply with any material requirements of the Contract, including, but not limited to the failure to submit Progress Schedule Submittals or as built/Record Documents when due,
  - (g) stored materials for which payment has been made or is sought has been determined by the Professional or the Owner Field Representative to be damaged or missing, or
  - (h) the Professional reasonably believes or knows of the occurrence of an event justifying termination for cause.
- 7.5 **Request for Final Inspection:** The Contractor must complete the Substantial Completion Punch List within the Contract Time and date. The Contractor must assemble all required documentation before requesting final inspection in writing. The Contractor may request final inspection of the entire Work, or the part of the Work for which final payment is specified in the Contract Documents. Upon this written notice, and if deemed appropriate by the professional, the Professional will make a final completion inspection with the Owner and Contractor and notify the Contractor of all incomplete or Defective Work revealed by the Final Inspection. The Contractor must immediately correct and complete the Work.
- 7.6 **Close-out Documents:** The Contractor must prepare and submit the following documentation before requesting final inspection or final payment: final operating and maintenance documentation (with revisions made after Substantial Completion), warranties, inspection certificates, as built/Record Documents, release of payment claim forms, and all other required documents.

- 7.7 **Request for Final Payment:** The Contractor may request final payment after correcting or completing the Work to the satisfaction of the Professional and delivering close-out documentation (7.6). The Contractor's request for final payment must also enclose:
- (a) evidence of completed operations insurance and an affidavit certifying that the insurance coverage will not be canceled, materially changed, or renewal refused,
  - (b) an affidavit certifying that the surety agrees that final payment does not relieve the surety of any of its obligations under the Performance Bond and Payment Bond,
  - (c) a completed DTMB-0460 Form close out checklist,
  - (d) a list of all pending insurance claims arising out of or resulting from the Work being handled by the Contractor and/or its insurer
  - (e) Contractor's 'Guarantee and Statement' (DTMB-0437) containing a statement of guaranteed indebtedness acceptable to the Owner in the full amount of the Contract Price, or a release of payment claims in the form of a release of liens, or a Bond or other security acceptable to the Owner to indemnify the Owner against any payment claim.
- 7.8 **Final Payment and Acceptance:** If the Professional is satisfied that the entire Work, or the part of the Work for which final payment is specified in the Contract Documents, is complete and the Contractor's other obligations under the Contract Documents has been fulfilled, the Professional will furnish to the Owner and Contractor the Professional's certification of final payment and acceptance within thirty Calendar Days after receipt of the final payment request. If the Professional is not satisfied, the Professional will return the request to the Contractor indicating in writing the reasons for not certifying final payment. If the final payment request is returned, the Contractor must correct the deficiencies and re-request final payment. If the Owner concurs with the Professional's certification of final payment the Owner will, within thirty Calendar Days after receipt of the Professional's certification of final payment, pay the balance of the Contract Price subject to those provisions governing final payment specified in the Contract Documents. If the Owner does not concur with the Professional's determination, the Owner will return the request for final payment to the Contractor with written reasons for refusing final payment and acceptance.
- 7.9 **Contractor's Continuing Obligation:** The following does not constitute acceptance of the Work in the event the Work or any Work is not in accordance with the Contract Documents, and therefore does not release the Contractor from its obligation to perform and furnish the Work in accordance with the Contract Documents:
- (a) a certification by the Professional of any Request for Payment or final payment.
  - (b) the issuance of a Substantial Completion certificate.
  - (c) any payment by the Owner to the Contractor.
  - (d) any Partial Use.
  - (e) any act of acceptance by the Owner or any failure to do so.
  - (f) any review and approval of a Shop Drawing, sample, test procedure or other Submittal.
  - (g) any review of a Progress Schedule.
  - (h) any On-Site Inspection.
  - (i) any inspection, test, or approval.
  - (j) any issuance of a notice of acceptability by the Professional; or
  - (k) any correction of Defective Work or any completion of Work by the Owner.
- 7.10 **Waiver of Claims:** The making of final payment does not constitute a waiver by the Owner of any rights as to the Contractor's continuing obligations under the Contract Documents, nor will it constitute a waiver of any claims by the Owner against the Contractor still unsettled, or arising from unsettled payment claims, Defective Work appearing after final inspection or failure by the Contractor to comply with the Contract Documents or the terms of any special warranties provided by the Contract Documents or by Law. The acceptance of final payment will constitute a waiver of all claims by the Contractor against the Owner, other than those claims previously made in writing, on a timely basis.
8. **Other Work:** During the Contract Time, the Owner may self-perform or Contract for other work at the site. By doing so, the Owner or its representative will coordinate the operations of the Contractor and the other work. Whenever the other work interfaces with the Contractor's Work on site, the Contractor must coordinate its activities with the interfacing work, inspect the other work and promptly report to the Professional in writing if the other work is unavailable or unsuitable. The Contractor's failure to do so will constitute an acceptance of such other work as fit and proper for integration with the Work except for latent or non-apparent defects and deficiencies in the other work. The Contractor must provide proper and safe access to the site for handling, unloading and storage of their materials and equipment and for the execution of the other work. The Contractor must do all cutting, fitting, patching, and interfacing of the Work that may be required to make any part of the Work come together properly and integrate with other work. If the Contractor becomes party to a dispute or claim due to damages caused to its Work/property or other work/their property, the Contractor must promptly attempt, without involving the Owner or the Professional or their agents, to settle with the other party by agreement or otherwise resolve the claim. If the Owner determines that the other work resulted in a delay to the Work to be performed by the Contractor and such delay justifies a Change Order, the Owner will authorize the necessary adjustment in Contract Price and/or Time.

- 9. Stop Work Orders and Suspension of Work:** The Owner may order the Contractor in writing to defer, stop, suspend, or interrupt all or part of the Work, in the event any of the following situations:
- (a) any Work is Defective,
  - (b) any Work, when completed, will not conform to the Contract Documents,
  - (c) any materials or equipment are unsuitable,
  - (d) any workers are insufficiently skilled,
  - (e) failure of the Contractor to implement appropriate measures for the SESC, or
  - (f) as the Owner may determine appropriate for its convenience. The Contractor is responsible for the Delays and any additional costs if at fault. Any justified increase in Contract Price/Time due to suspension of Work must be submitted within twenty-one Calendar Days of knowing the extent of Delays and before submitting the final payment.

**10. Termination:**

**10.1 Termination for Breach:** The Owner may elect to terminate all or any part of the Work if:

- (a) the Contractor fails to complete the Work, or a specified part of the Work, within the corresponding Contract Time; fails or refuses to supply sufficient management, supervision, workers, materials, or equipment; or otherwise fails to prosecute the Work, or any specified part of the Work, with the diligence required to comply with the Contract Time(s).
- (b) the Contractor persistently disregards the authority of the Professional or violates or disregards a provision of the Contract Documents or the Laws of any Political Subdivision with jurisdiction.
- (c) the Contractor admits in writing, or the Owner otherwise establishes, the Contractor's inability or refusal to pay the Contractor's debts generally as they become due.
- (d) in response to the Owner's demand, the Contractor fails to provide adequate, written assurance that the Contractor has the financial resources necessary to complete the Work within the Contract Time.
- (e) the Contractor fails to comply with the Michigan Residency requirements (1984 PA 431, as amended, MCL 18.1241a); or is found to be in violation of Section 4 of 1980 PA 278 concerning unfair labor practices, or any nondiscrimination requirements imposed by Law.
- (f) at any time, the Contractor, Subcontractor or Supplier is in violation of unfair labor practices prohibited by Section 8 of Chapter 327 of the National Labor Relations Act, 29 U.S.C. 158; or
- (g) the Contractor violates or breaches any material provision of the Contract Documents, which provides contractually for cause termination or rescission of the Contract or of the Contractor's right to complete the Work.

Within seven Calendar Days after the Contractor receives a notice requiring assurance of due performance for any of the above occurring non-conformances, the Contractor must meet with the Owner and present the Contractor's plan to correct the problems. If the Owner determines that the Contractor's plan provides adequate assurance of correction, that determination does not waive the Owner's right to subsequently default the Contractor or affect any rights or remedies of the Owner against the Contractor and/or surety then existing or that may accrue in the future. The Owner, after giving the Contractor and surety seven Calendar Days' written notice of intent to default, may declare the Contractor in default and terminate the services of the Contractor for cause. Unless otherwise agreed between the Owner and Contractor, at the expiration of the Seven-Calendar Day (intent to default) period, the Contractor must immediately stop all Work and proceed in accordance with the Owner's instructions. Following the expiration of the Seven-Calendar Day (intent to default) notice, the Contractor will be sent a default letter – notice of termination for cause. The Owner will issue a Contract Change Order to revise the name of the contract party to the name of the surety company. The surety company must undertake to perform and complete the Work, in accordance with the Contract Documents, in place of the Contractor, either through the surety's agents or by executing agreements with qualified contractors (excluding the Contractor and any of the Contractor's affiliates), or both.

The Owner may issue a fifteen-Calendar Day notice of intent to default the surety company if they fail to execute in a timely manner the completion of the Contract Work. Without an adequate plan of correction, the Owner may issue a notice of termination for cause letter to the surety. If a termination of the contract with the surety occurs, the Owner reserves the right to complete the Work.

If the Owner has terminated the Contractor, any such termination will not affect any rights or remedies of the Owner against the Contractor or surety, or both, then existing or that may accrue after termination. All provisions of the Contract Documents that, by their nature, survive final acceptance of the Work must remain in full force and effect after a termination for cause of the Contractor or default of the surety, or both. The Owner may, in its sole discretion, permit the Contractor to continue to perform Work when the Contractor is in default or has been defaulted. Such decision by the Owner in no way operates as a waiver of any of the Owner's rights under the Contract Documents or Performance Bond, nor in the event of a subsequent default, entitle the Contractor or surety to continue to perform or prosecute the Work to completion.

- 10.2 Termination on Non-Bonded Project:** For non-bonded projects, the Owner will follow the termination protocol in Paragraph 10.1 without involving a surety.

- 10.3 Termination for Convenience of the Owner:** Upon fifteen Calendar Days' written notice to the Contractor and surety, or sooner if reasonable under the circumstances, the Owner may, without cause and without prejudice to any other right or remedy it may have, elect to terminate any part of the Work, or the Contract in whole or in part, as the Owner may deem appropriate for its convenience. Upon receipt of any such termination notice, the Contractor must immediately proceed in accordance with any specific instructions, protect and maintain the Work, and make reasonable and diligent efforts to mitigate costs associated with the termination. In such termination, the Contractor must be paid in accordance with the terms of this Contract for only services rendered before the effective date of termination. Upon termination for convenience, the Contractor must be released from any obligation to provide further services and the Owner must have full power and authority to take possession of the Work, assume any agreements with Subcontractors and Suppliers that the Owner selects, and prosecute the Work to completion by Contract or as the Owner may deem expedient.
- 10.4 Termination for Lack of Funding:** If expected or actual funding is withdrawn, reduced, or limited in any way before the completion date set forth in this Contract or in any amendment, the State may, upon written notice to the Contractor, terminate this Contract in whole or in part in accordance with Paragraph 10.3.
- 11. Disputes:** All claims, counterclaims, disputes, and other matters in question between the Owner and Contractor arising out of or relating to the Contract Documents must be submitted in writing to the Professional and otherwise processed and resolved as provided in this Article. *Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker (Professional/PSC). Claims by either party must be initiated within twenty-one Calendar Days after the occurrence of the event giving rise to such Claim or within twenty-one Calendar Days after the claimant first recognized the condition giving rise to the claim. Provided such timely notice is delivered, a full and detailed breakdown of cost and time requested, with supporting documentation, if not provided with initial notice shall be delivered to Professional and Owner within fifteen Calendar Days of the notice, unless otherwise agreed in writing, by the Owner prior to expiration of such time.* The Contractor must carry on the Work with due diligence during all disputes or disagreements. Work must not be delayed or postponed pending resolution of any disputes or disagreements. The Contractor must exercise reasonable precautions, efforts, and measures to avoid situations that would cause delay.
- 11.1 Notice of Claim:** Except for Owner claims for liquidated damages, no claim is valid unless it is based upon written notice delivered by the claimant to the other party and the Professional/PSC within twenty-one Calendar Days of the event giving rise to the claim. The notice must state the nature of the dispute, the amount involved, if any, and the remedy sought. The claim submittal with all supporting data must be delivered within fifteen Calendar Days after the initial notice unless the Professional allows an extension by written approval. A claim by the Contractor must be submitted to the Professional and Project Director for a recommendation or decision from the Professional. A claim by the Owner must be submitted to the Contractor and the Professional for a written recommendation or decision by the Professional. The Owner reserves the right to audit any Contractor claim (or claim package) that the Contractor values at more than \$50,000.00. Pending final resolution of any claim under this Article, the Contractor must proceed diligently with the Work and comply with any decision of the Owner and/or Professional. For all Contractor claims seeking an increase in Contract Price or Contract Time, the Contractor must submit an affidavit, certifying that the amount claimed accurately reflects any Delay and all costs that the Contractor is entitled from the occurrence of the claimed event and that supporting cost and pricing data are current, accurate, complete and represent the Contractor's best knowledge and belief.
- 11.2 Recommendations or Decisions from the Professional:** For claims under \$100,000.00, if requested in writing by the Contractor, the Professional will render a recommendation or decision within thirty Calendar Days after the request and the Owner will issue, if necessary, a determination within thirty Calendar Days after the Professional's recommendation or decision. For claims exceeding \$100,000.00, the Professional will issue its recommendation or decision and the Owner, if necessary, will issue its determination, within sixty Calendar Days.

If the Professional denies a Contractor claim or agrees with an Owner claim, that decision must be final and binding on the Contractor, without any determination by the Owner, unless the Contractor files a request for a presentation with the Director-DCD within thirty Calendar Days. To the extent that any recommendation from the Professional is partly or wholly adverse to a claim from the Owner, that determination must be final and binding on both the Owner and Contractor unless either party files a request for a presentation with the Director-DCD within thirty Calendar Days. If the Professional recommends payment of any Contractor claim which increases the Contract Price, that recommendation is subject to the Owner's written approval. In the event any such determination from the Owner is partly or wholly adverse to the preceding recommendation from the Professional, that determination must be final and binding on the Contractor unless the Contractor files suit in the Michigan Court of Claims within thirty Calendar Days after receipt of such determination. The claim is waived if not made in accordance with these requirements.

If either the Contractor or Owner is not satisfied with any decision of the Professional on a claim, that party must, within thirty Calendar Days of receiving that decision, file a written appeal with complete supporting documentation with the Director-DCD. The Director-DCD has discretion concerning the allowability of evidence submitted and is not bound to any rules of evidence. If the right to a presentation is waived or if a presentation is conducted and the dispute remains unresolved, the Director-DCD, at the Director-DCD's sole option, must specify in which forum the dispute must be conducted by issuing a written determination to the Contractor that the dispute if the Contractor so elects, be submitted in writing to the Michigan Court of Claims. The

Director-DCD's determination on the dispute is final and binding on the Contractor unless the Contractor files a lawful action in the Michigan Court of Claims within thirty Calendar Days after receiving the Director-DCD's determination. After settlement or final adjudication of any claim, if payment by the Contractor is not made to the Owner, the Owner may offset the appropriate amounts against (a) payments due to the Contractor under any other Contract between the Owner and the Contractor, or (b) any amounts for which the Owner may be obligated to the Contractor in any capacity. The Director-DCD may designate someone to fulfill the Director-DCD's duties under these terms and conditions.

#### **END OF SECTION 00700**

#### **SECTION 00750 SPECIAL WORKING CONDITIONS**

1. The Work is for the Department of Natural Resources and their special working conditions are included in Appendix II. Contractor must comply with all security regulations. Access to and egress from the buildings and State Agency grounds must be via routes specifically designated by the State Agency. Whenever the Contractor has caused an operating security or fire system to go out of service or left unsecured openings in existing facilities or security fences, the Contractor must furnish a security guard or fire watch acceptable to the Owner to maintain security of the facility outside of normal working hours and will be held responsible for any losses from the facility.
2. The Contractor must maintain, at all times, dust control measures to the satisfaction of the Owner.

#### **END OF SECTION 00750**

#### **SECTION 00800 SUPPLEMENTARY CONDITIONS**

1. The following conditions must supplement the general conditions: N/A

#### **END OF SECTION 00800**

#### **SECTION 00900 ADDENDA**

1. Each Bid submittal must include acknowledgement of receipt and review of all Addenda issued during the Bidding period.

#### **END OF SECTION 00900**

**DIVISION 01**

**GENERAL REQUIREMENTS**

## SECTION 01010 SUMMARY OF WORK

### 1. General

1.1 General information covering the "Scope of Work" is specified on the Invitation to Bid. Additional information is as follows:

- (a) Work must be substantially complete by September 24, 2026. Work included must be Mobilization, Removals, Earth Excavation/Trenching, aggregate base conditioning, aggregate base, resurfacing, aggregate shoulder construction, slope restoration, and maintaining traffic.

### 1.2 MAINTENANCE OF TRAFFIC

- (a) Closure of the entrance drive to the public is permitted from 6:00 a.m. Monday through 7:00 p.m. Thursday. The Contractor shall allow park staff access during the closure window(s). Multiple closure windows are permitted as detailed in the Contractor's approved progress schedule to complete all work by the required substantially complete date noted herein.
- (b) The entrance drive must be graded, open, and accessible to vehicular and pedestrian traffic outside this closure window. The drive must be open to traffic Friday through Sunday with full access to the State Park. Prior approval for work on Fridays, Saturdays, or Sundays to complete any construction operations that will not impact vehicular or pedestrian access to the park must be requested a minimum of 48 hours in advance of the proposed work.
- (c) No work can be completed during the Labor Day holiday period from 7:00 p.m. Thursday, September 3, 2026, to 6:00 a.m. Tuesday, September 7, 2026.
- (d) Only closure of the shoulder and right turn lane from 8 Mile Road to the park entrance is permitted during construction.
- (e) Maintenance of traffic must be set up in accordance with the approved permit from Oakland County.

1.3 The Agency will provide the following Work:

- (a) State Salvage: The State reserves the right to salvage certain items and equipment and those salvaged items will be identified to the Bidder at the time of their inspection of the proposed Work. The State will remove salvaged items before commencement of the Work.

### END OF SECTION 01010

## SECTION 01020 ALLOWANCES

### 1. Allowances

#### 1.1 Provisional/Contingency Allowances:

- (a) Bidders must include in their Base Proposal Sum a contingency allowance of \$20,000. The base bid shall include bonds and insurance on the value of the allowance.
- (b) Monies will be used in the contingency allowance only if directed in writing by the Project Director and Professional.
- (c) Payments under a Provisionary Allowance will include not only the purchase/furnished cost of the materials and equipment involved, but also all related labor costs, subcontract costs, construction equipment costs, general conditions costs and Fee, provided they are calculated in accordance with the requirements of the contract documents.
- (c) Unused allowances will be deducted from the contract amount through contract change order.

### END OF SECTION 01020

## SECTION 01025 MEASUREMENT AND PAYMENT

1. **Schedule of Values:** Unless noted otherwise, before mobilization and start of construction, the Contractor must submit a Schedule of Values to the Professional for review and approval, of the various tasks that must be performed to complete all the Work. The schedule must show each task and the corresponding value of the task, including separate monies allocated for General Condition items and Project close-out. The aggregate total value for all tasks must be equal to the total Contract sum.
2. **APPLICATIONS FOR PAYMENT:** Use AIA Document G702 and AIA Document G703 as forms for applications for payment or other forms as agreed to between the Owner and Contractor. Applications for payment will be reviewed and processed on a bi-weekly basis.
  - (a) Entries on the application for payment shall match data on the schedule of values and Contractor's construction schedule.
  - (b) Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.

- (c) Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - a) List of subcontractors.
  - b) Schedule of values.
  - c) Contractor's construction schedule.
  
- (d) Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
  - a) Evidence of completion of Project closeout requirements.
  - b) Updated final statement, accounting for final changes to the Contract Sum.

## END OF SECTION 01025

## SECTION 01030 ALTERNATES

1. **Use of Alternates:** Determination of the lowest three Bidders shall be based on the sum of the Base Bid and any additive and deductive Alternates the Owner accepts, in the order in which they are listed only. The Owner will accept an Alternate only if all other previously listed Alternates are also accepted unless acceptance by the Owner of Alternates in a different order does not affect determination of the lowest three bidders in any way.

### 2. Submittals

- (a) Substitution Requests: Submit a written request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - a) Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - i. Statement indicating why specified product or fabrication or installation method cannot be provided.
    - ii. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
    - iii. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - iv. Samples, where applicable or requested.
    - v. Certificates and qualification data, where applicable or requested.
    - vi. Plant or aggregate pit certification/test result documentation in accordance with MDOT Standard Specifications for Construction and Material Source Guide.
    - vii. List of similar installations for completed projects, with project names and addresses as well as names and addresses of Engineers and owners.
    - viii. Material test reports from supplier or manufacturer, indicating and interpreting test results for compliance with requirements indicated.
    - ix. Cost information, including a proposal of change, if any, in the Contract Sum.
    - x. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
    - xi. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
  - b) Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or

documentation, whichever is later.

- i. Forms of Acceptance: Change Order, Construction Change Directive, or Engineer's Supplemental Instructions for minor changes in the Work.

3. **Execution:** (a) Coordinate pertinent related Work and modify surrounding work as required to complete the Project for each alternate.

### END OF SECTION 01030

## SECTION 01040 COORDINATION

### 1. Project Coordination:

- (a) Before beginning Work the Contractor must coordinate with the State Agency representative to implement the schedule for the Project. Once the Project is started, it must be carried to completion without delay.(b)Any building utility service interruptions or outages including security required by the Contractor in performing the Work must be prearranged with the staff of the State Agency and must occur only during those scheduled times.(c) The Contractor is not responsible for removing room furnishings unless is required by the Contract Documents.

### 2. Cutting and Patching:

- (a) The Contractor must do all cutting, fitting, or patching of the Work that may be required to make its several parts fit together properly or make new Work join with the existing structure. The Contractor must take proper precautions so as not to endanger any existing Work. The Contractor must not cut or alter existing structural members or foundations unless specifically required by the Contract Documents.
- (b) Holes or openings cut in exterior walls and roofs for installation of materials or equipment must be waterproofed by appropriate, approved materials and methods.
- (c) All adjacent finished surfaces that are damaged by the new Work must be patched with materials matching existing surfaces. Joints between patched and existing material must be straight, smooth, and flush. Workers skilled in its installation must apply all patching material.

### END OF SECTION 01040

## SECTION 01050 FIELD ENGINEERING

1. When applicable, the Contractor must employ a surveyor who must establish and maintain all lines and levels required for laying out and constructing the Work. The Contractor agrees to assume all responsibility due to inaccuracy of any Work of the surveyor, and including incorrect benchmarks, their loss or disturbance. Upon completion of the Project, the Contractor must submit two copies of site layout Drawings prepared for the Project and certified by the surveyor.

### END OF SECTION 01050

## SECTION 01060 REGULATORY REQUIREMENTS

1. **Laws:** The Contractor and its Subcontractors/Suppliers must comply with all Federal, State, and local Laws applicable to the Work and site.
2. **Codes:** All Works must be provided in accordance with the State Construction Code Act, 1972 PA 230, as amended, MCL 125.1501 et seq. International Building and Residential Codes and all applicable Michigan construction codes and fire safety including but not limited to: Michigan Building Code, Michigan Residential Code, Michigan Uniform Energy Code, Michigan Electrical Code, Michigan Rehabilitation Code for Existing Buildings, Michigan Mechanical Code, Michigan Elevator Code and Michigan Plumbing Code. If the Contractor observes that any Contract Document conflicts with any Laws or the State Construction Code or any permits in any respect, the Contractor must promptly notify the Professional in writing. If the Contractor provides any Work knowing or having to reason to know of such conflict, the Contractor must be responsible for that performance.
3. **Permits:** All required construction permits must be secured and their fees including inspection costs must be paid by the Contractor. The time incurred by the Contractor in obtaining construction permits must constitute time required to complete the Work and does not justify any increases to the Contract Time or Price, except when revisions to the Drawings and/or Specifications required by the permitting authority cause the Delays. The Contractor must pay all charges of Public Utilities for connections to the Work, unless otherwise provided by Cash Allowances specific to those connections. The following permit fees will be paid by the Owner:
  - a. Oakland County Construction Permit
  - b. Soil Erosion and Sedimentation Permit – Contractor is responsible for applying for this permit from the Department of Technology, Management, and Budget Design & Construction Division (DTMB DCD). No permit fee is required for this permit.

4. **Taxes:** The Contractor must pay all sales and use taxes and any other similar taxes, including Tariffs covering the Work. If the Contractor is not required to pay or bear the burden or obtains a refund of any taxes deemed to have been included in the Bid and Contract Price, the Contract Price must be reduced by a like amount and that amount, whether as a refund or otherwise, must ensure solely to the benefit of the State of Michigan.
5. **Safety and Protection:** The Contractor and its Subcontractors/Suppliers must comply with all applicable Federal, State, and local Laws governing the safety and protection of persons or property, including, but not limited to the Michigan Occupational Safety and Health Act (MIOSHA), 1974 PA 154, as amended, MCL 408.1001 et seq., and all rules promulgated under the Act. The Contractor is responsible for all damages, injury or loss to the Work, materials, equipment, fines, penalties as a result of any violation of such Laws, except when it's due to the fault of the Drawings or Specifications or to the Act, error, or omission of the Owner or Professional. The Contractor is solely responsible for initiating, maintaining, and supervising all safety precautions and programs and such responsibility must continue until such time as the Professional is satisfied that the Work, or Work inspected, is completed and ready for final payment. In doing the Work and/or in the event of using explosives, the Contractor must take all necessary precautions for the safety of, and must erect and maintain all necessary safeguards and provide the necessary protection to prevent damage, injury or loss to: (a) all employees on the Work and other persons who may be affected by the Work, (b) all the Work and materials and equipment to be incorporated into the Work, whether stored on or off the site, and (c) other property at or adjacent to the site, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Utilities not designated for removal, relocation or replacement. In the event of severe weather, the Contractor must inspect the Work and the site and take all reasonably necessary actions and precautions to protect the Work and ensure that public access and safety are maintained.
6. **Fire Hazard Conditions:**
- (a). The fire hazard classification of finish materials where used in the specification must be in accordance with the current Michigan Building Code.
- (b) Classification must be determined by tunnel test in accordance with National Fire Protection Association (NFPA-255), American Society for Testing Materials (ASTM E-84) or Underwriters' Laboratories, Inc. (UL-723).
7. **Michigan Right-To-Know Law:** The Contractor and its Subcontractors/Suppliers must comply with MIOSHA, Michigan Right-to-Know Law (Public Act 80 of 1986) and the rules promulgated under it. The Act places certain requirements on employers to develop a communication program designed to safeguard the handling of hazardous chemicals through labeling of chemical containers and development and availability of Safety Data Sheets (SDS), and to provide training for employees who work with these chemicals and develop a written hazard communications program. The Act also provides for specific employee rights, including the right to be notified of the location of SDS and to be notified at the site of new or revised SDS within five Business Days after receipt and to request SDS copies from their employers. The Contractor, employer or Subcontractor must post and update these notices at the site.
8. **Environmental Requirements:** The Contractor and its Subcontractors/Suppliers must comply with all applicable Federal, State and local environmental Laws, standards, orders or requirements including but not limited to the National Environmental Policy Act of 1969, as amended, Michigan Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended, the Clean Air Act, as amended, the Clean Water Act, as amended, the Safe Drinking Water Act, as amended, Pollution Prevention Act, as amended, Resource Conservation and Recovery Act, as amended, National Historic Preservation Act, as amended and Energy Policy and Conservation Act and Energy Standards for Buildings Except Low-Rise Residential Buildings, ANSI/ASHRAE/IESNA Standard 90.1.
9. **Nondiscrimination:** For all State Contracts for goods or services in amount of \$5,000 or more, or for Contracts entered into with parties employing three or more employees; in connection with the performance of Work under this Contract, the Contractor and its Subcontractors and Suppliers must comply with the following requirements:
- 9.1 Not to discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, sex, sexual orientation, gender identity or expression, height, weight or marital status, partisan considerations, any mental or physical disability, or genetic information and take affirmative action to ensure that applicants are employed, and the employees are not subject to such discrimination. Such action must include, but is not limited to, the following: employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 9.2 To state in all solicitations or advertisements for employees that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, sex, sexual orientation, gender identity or expression, height, weight, or marital status, partisan considerations, any mental or physical disability, or genetic information.
- 9.3 To send, or have its collective bargaining representative send, each labor union or representative of workers with which there is a collective bargaining agreement or other contract or understanding, a notice advising the labor unions or workers' representative of the commitments under this provision.

- 9.4 To comply with the Elliot-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2201 et seq.; the Michigan Persons with Disability Civil Rights Act, 1976 PA 220, as amended, MCL 37.1101 et Seq.; *Executive Directive 2019-09*; and all published rules, regulations, directives, and orders of the Michigan Civil Rights Commission (MCRC) which may be in effect on or before the date of Bid opening.
- 9.5 The Contractor must furnish and file compliance reports within the times, and using the forms prescribed by the MCRC. Compliance report forms may also elicit information as to the practices, policies, programs, and employment statistics of the Contractor and Subcontractors. The Contractor must permit access to Records by the MCRC and its agent for purposes of ascertaining compliance with the Contract and with rules, regulations, and orders of the MCRC.
- 9.6 If, after a hearing held under its rules, the MCRC finds that the Contractor has not complied with the Elliott-Larsen requirements of the Contract Documents, MCRC may, as part of its order, certify its findings to the Administrative Board of the State of Michigan, which may order the cancellation of the Contract and/or declare the Contractor ineligible for future contracts with the State until the Contractor complies with the MCRC's order.
- 10. **Michigan Residency for Employees:** Fifty percent of the persons employed on the Work by the Contractor must have been residents of the State of Michigan for not less than one year before beginning employment on the Work. This residency requirement may be reduced or waived to the extent that Michigan residents are not available or to the extent necessary to comply with the federal funds used for the Project. This requirement does not apply to employers who are signatories to collective bargaining agreements that allow for the portability of employees on an interstate basis.

**END OF SECTION 01060**

**SECTION 01090 REFERENCES**

- 1. References will be made in an abbreviated alpha numeric form to specific standard specifications, reference publications and building codes of federal or state agencies, manufacturers, associations, or trade organizations. Such references will be identified by the alphabetic abbreviation which identifies the government agency, the association or organization followed by the rule, section or detail number that are to form a part of these specifications, the same as if fully set forth herein, and must be of latest issued date in effect three months before the Bid opening date shown on the Proposal and Contract. The abbreviations used are referred to as follows:

<u>Abbreviation</u>	<u>Agency, Association or Organization</u>
ACI	American Concrete Institute
AASHTO	American Association of State Highway and Transportation Officials
AISC	American Institute of Steel Construction, Inc.
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute, Inc.
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society of Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
BOCA	Building Officials and Code
CDA	Copper Development Assn., Inc.
CLFMI	Chain Link Fence Manufacturer's Institute
CISPI	Cast Iron Soil Pipe Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard
F/M	Factory Mutual Research Corporation
FS	Federal Specifications
HEW	United States Department of Health Education and Welfare
MDOT	Michigan Department of Transportation
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation Testing Laboratory, Inc
NSWMA	National Solid Waste Management Association
PCA	Portland Cement Association
PDI	Plumbing and Drainage Institute
SMACNA	Sheet Metal & Air Conditioning Contractors
UL	Underwriters Laboratories, Inc.
USBM	United States Bureau of Mines
USDC	United States Department of Commerce

**END OF SECTION 01090**

## SECTION 01100 PROJECT PROCEDURES

1. **Signage and Safety:** The Contractor must post appropriate construction signs to advise the occupants and visitors of occupied facilities of the limits of construction work areas, hardhat areas, excavations, construction parking and staging areas, etc. Advertising signage by contractors, subcontractors, or suppliers is not allowed. The Contractor must maintain safe and adequate pedestrian and vehicular access to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, hospitals, fire, and police stations and like establishments. The Contractor must obtain written approval from the Owner ten Calendar Days before connecting to existing facilities or interrupting the services on site.
2. **Barrier and Enclosures:**
  - (a) The Contractor must furnish, install, and maintain as long as necessary and remove when no longer required adequate barriers, warning signs or lights at all dangerous points throughout the Work for protection of property, workers, and the public. The Contractor must hold the State of Michigan harmless from damage or claims arising out of any injury or damage that may be sustained by any person or persons as a result of the Work under the Contract.
  - (b). **Street Barricades:** The Contractor must erect and maintain all street barricades, signal lights and lane change markers during the periods that a traffic lane is closed for their operations. There must be full compliance with rules and ordinances respecting such street barricading and devices must be removed when hazard is no longer present.
3. **Construction Aids:**
  - (a) N/A

### END OF SECTION 01100

## SECTION 01200 PROJECT MEETINGS

1. **Pre-Construction Conferences:** The Project Director will schedule a pre-construction conference to be attended by the Professional, State Agency staff, and the Contractors. A project procedure as outlined in Form DTMB-0460, will be established for the Work during the pre-construction meeting. When no organizational meeting is called, the Contractor, before beginning any Work, must meet with the staff of the Agency and arrange a Work schedule for the Project. Once the Project has been started, the Contractor must carry it to completion without delay.
2. **Progress Meetings:** The Professional will schedule progress meetings to be held on the job site whenever needed to supply information necessary to prevent job interruptions, to observe the Work or to inspect completed Work. The Contractor must be represented at each progress meeting by persons with full authority to act for the Contractor in regard to all portions of the Work.

### END OF SECTION 01200

## SECTION 01300 SUBMITTALS

### 1. Shop Drawings, Samples and Technical Submittals: .

#### 1.1 Contractor's Review: Before each submission, the Contractor must:

- (a) determine and verify all field measurements, quantities, dimensions, instructions for installation and handling of equipment and systems, installation requirements (including location, dimensions, access, fit, completeness, etc.), materials, color, catalog numbers and other similar data as to correctness and completeness, and
- (b) have reviewed and coordinated that technical Submittal with other technical submittals and the requirements of the Contract Documents.

#### 1.2 Notice of Variation: The Contractor must give the Professional specific written notice of any variation from the requirements of the Contract Documents.

#### 1.3 Contractor's Approval: The Contractor shall not submit unapproved submittals. Each submittal shall be stamped/certified to indicate that the submittal satisfies the requirements of the Contract Documents before submission to the Professional.

#### 1.4 Responsibility and Authority: Neither the Owner's authority to review any of the Submittals by the Contractor, nor the Owner's decision to raise or not to raise any objections about the Submittals, creates or imposes any duty or responsibility on the Owner to exercise any such authority or decision for the benefit of the Contractor/Subcontractor/Supplier, any surety to any of them or any other third party. The Contractor is not relieved of responsibility for errors or omissions in shop drawings, product data, samples, or similar submittals just because the Professional approved them for general design intent.

#### 1.5 Final As-Built/Record Documents and Submittals: The approved Submittals are a part of the final As-Built/Record Documents required for processing final payment to the Contractor.

#### 1.6 Submissions: Contractor must submit to the Professional:

- (a) all technical submittals (test, results, test and safety procedures, material source information and certifications, material data sheets, O&M manuals, etc.) that are required by the Contract Documents.
  - a. All material submittals must list the appropriate approved supplier/manufacturer (including plant number, pit number, etc.), basis of acceptance, and approximately quantity, and be submitted utilizing MDOT Materials Source List (MSL) form 0501
  - b. MSL must be signed by the contractor at the time of submittal.

#### 1.7 Professional's Review and Return: Professional's Review and Return: Submittals will be returned to the Contractor within fifteen Calendar Days. The Contractor is responsible for any time Delay and any cost incurred by the Professional, Contractor or Subcontractors/Suppliers as a result of resubmissions and re-reviews of a particular Submittal. The Contractor shall revise, and correct submittals returned for revision and resubmittal until approval by the Professional is achieved. All time consumed by the resubmissions and re-reviews of a particular Submittal shall constitute time required to furnish that Submittal or shall represent Delays not justifying any increase in Contract Time or Contract Price, or both.

- (a) The Professional will review all submittals for conformance with MDOT material specifications and construction/installation procedures.

### 2. Progress Schedule:

#### 2.1 SUMMARY

A. The **Contractor** will submit CPM Progress Schedules to the **Owner** depicting its approach to prosecution of the Work. This includes but is not limited to the **Contractor's** approach to recovering schedule and managing the effect of changes, substitutions, and Delays on Work sequencing.

B. The Progress Schedule will include the Rev. 0 Submittal (par. 2.14), Update Submittals (par. 2.15) and Revision Submittals (par. 2.16). Each Submittal will be assigned a unique number. For a resubmission, the initial number will be modified by the letter A, B, C, etc., as appropriate.

C. Through the Progress Schedule, the **Owner** will seek to stay current on progress, updated Activity and Milestone Dates, and the **Contractor's** approach to Work remaining.

D. References to the Critical Path Method (CPM) are to CPM construction industry standards that are consistent with the requirements of this Section.

#### 2.2 RELATED SECTIONS

A. Section 00700 General Conditions; and Section 00800 Supplementary Conditions.

#### 2.3 GLOSSARY OF TERMS

A. Capitalized terms not already defined in any Division 0 Specification have the following intent and meanings:

1. Milestone – A key point of progress, designating interim targets toward the Contract Times. They may pinpoint critical path foundations, key deliveries, building framing, start of MEP rough-in, building enclosure, partitions, interior finishes, conditioned space, commissioning stages, Substantial Completion, and other events of like import.
2. Official Schedule – The most recent Revision Submittal returned to the **Contractor** as Resubmittal Not Required. The Rev. 0 Official Schedule is the *As-Planned* Schedule.
3. Revision 0 Submittal – Progress Schedule submitted by the **Contractor** depicting the entire Work as awarded.

## 2.4 QUALITY ASSURANCE

A. The **Contractor** will obtain a written interpretation from the **Professional**, if the **Contractor** believes the selection of Activities, logic ties or restraints requires an interpretation of the Contract Documents. With each submission, the **Contractor** will point out by specific, written notation, any Progress Schedule feature that may reflect variations from any requirements of the Contract Documents.

B. The **Contractor** is responsible to obtain information from each Subcontractor and Supplier when scoping their respective Activities, Values, logic ties and restraints

C. No review of any Progress Schedule by or on behalf of the **Owner** will relieve the **Contractor** from complying with the Contract Times and any required sequence of Work or from completing Work omitted from the Progress Schedule. No review will imply approval of any variation from or interpretation of the Contract Documents, unless approved by the **Professional** through a written interpretation or by means of a separate, written notation.

## 2.5 ALLOWANCES

A. To the extent reasonable and consistent with the **Contractor's** plan, Work authorized by provisional contingency allowances will be completed within the Contract Times. The Progress Schedule will incorporate the **Contractor's** best estimate of the Activities, logic and restraints required, using the information in the Contract Documents, or as indicated by the **Professional** in writing.

## 2.6 "OR EQUALS" AND SUBSTITUTIONS

A. Activities in the Rev. 0 Progress Schedule will be based on materials and equipment required by the Contract Documents and will not reflect any "or equal" or substitute materials or equipment, even if the **Contractor** intends to pursue "or equal" and substitution proposals. This limitation also applies to any Means and Methods indicated in or required by the Contract Documents.

## 2.7 MEASUREMENT AND PAYMENT

A. The Schedule of Values will include a Progress Schedule *pay item*. Fifteen percent (15%) of this *pay item* will be eligible for payment upon delivery of the *complete* Rev. 0 Submittal. The balance of this *pay item* will be eligible for payment, on a prorated basis, with each Request for Payment attaching an Update Submittal.

## 2.8 PROGRESS SCHEDULE SUBMITTALS

A. Each Progress Schedule Submittal will consist of an electronic copy the **Contractor's file**, a narrative and a PDF file of the project schedule report and plots, each file appropriately titled for the schedule version and date of publishing.

B. The CPM scheduling software will be Primavera Project Planner®, SureTrak® or Microsoft Project®.

C. **Contractor** shall provide prior to each Progress Meeting, a 2-week look ahead schedule extracted from the current overall schedule and providing sufficient additional activity detail to appropriately define the expected activity during the upcoming 2-week period.

## 2.9 PRINTOUTS

A. Schedule Reports will include Activity (ID) code and description, duration, calendar, Early Dates, Late Dates and Total Float, all of which will be based on proceeding with all or part of the Work exactly on the date when the corresponding Contract Time commences to run. Late Dates shall be based on completing all or part of the Work exactly on the corresponding Contract Time, regardless of whether the **Contractor** anticipates early completion or not. If sequences of Work are indicated in or required by the Contract Documents, the Progress Schedule shall show in sufficient detail the **Contractor's** approach to conforming with those sequences.

1. Late Finish Date for an Activity pinpointing a Contract Time will equal that Contract Time. Early Start Date for an Activity designating a Contract restraint will equal the proper Notice to Proceed date. Schedule Reports may or may not append CPM Plots (time-scaled Activity/logic).

2. For Precedence Diagram Method, separate Schedule Reports will tabulate, for each Activity, all preceding and succeeding logic types and lead times, whether CPM Plots displaying vertical logic ties are appended or not.

B. CPM Schedule Plots will be plotted on a suitable time scale and identify the Contract Times, Critical Paths, and sub-Critical Paths. Activities will be shown on the Early Dates with Total Floats noted by Late Date flags.

c. Line of Balance Plots will reflect industry practice for repetitive construction and will segregate the production lines for all trades within the hammock Activities.

## 2.10 NARRATIVE REQUIREMENTS

A. In general, a narrative will describe the **Contractor's** approach to prosecution of the Work, subject to the requirements of the Contract Documents. Further, each narrative will list the Critical Path Activities and compare Early and Late Dates with Contract Times and Milestone Dates. The basis for restraint dates will be explained.

B. For each Update Submittal, the narrative will compare current Dates to the respective Milestone Dates, describe changes in crewing and construction equipment and identify new Delays. For each Revision Submittal, the narrative also will itemize changes in Activities, logic ties and restraint dates made necessary by each change, Delay, schedule recovery, substitution and **Contractor**-initiated revision occurring since the previous Submittal.

## 2.12 ACTIVITY REQUIREMENTS

A. The Progress Schedule will detail Work sequencing only to the extent necessary to allow the **Owner** to correlate percent complete, compare actual dates with Milestones and Contract Times and the data in Requests for Payment.

B. Separate Activities will designate permits, construction, Submittal preparation/review (and resubmission and re-review, for same); deliveries; commissioning; and Punch List. Separate Activities will designate **Owner**-furnished items, interface with other work and the **Owner** and **Professional's** responsibilities.

C. Activities will be detailed only to the extent required to show the transition of trade Work. Activities will detail the progression through removal/excavation, grading, resurfacing, restoration, clean up, and commissioning.

1. Submittal Activities will segregate long-lead items and other procurements that, in the **Contractor's** judgment, may bear on the rate of progress. Beyond these requirements, it is not necessary to burden the Progress Schedule with Activities for less significant Submittals and deliveries.

2. Activities will not combine separate or non-concurrent items of Unit Price or lump sum Work,

D. Activity durations will equal the Business Days required to sufficiently complete the Work designated by the Activity (i.e., when finish-to-start successors may start, even if the Activity is not quite 100% complete). Installation Activities will last from twenty (20) to forty (40) Days.

E. Activities will be assigned consistent descriptions and identification codes. Sort codes will group Activities by building or structure, floor or area, Change Order and Change Authorization and other meaningful schemes.

2.13 FLOAT TOLERANCES

A. Any Progress Schedule with Early Dates after a Contract Time will yield negative Total and Contract Floats, whether shown/calculated or not. Any Revision Submittal with less than negative twenty (20) Days of Float will be returned as "Revise and Resubmit," unless a time extension is requested, or the **Owner** withholds liquidated damages or asserts intent to do so in the event schedule is not recovered.

B. Floats calculated from the definitions given in Appendix I - Glossary supersede any conflicting Float values calculated within any early completion Progress Schedule.

2.14 REVISION 0 (Rev. 0) SUBMITTAL

A. The complete Revision 0 Submittal will be due with the first Request for Payment. The Rev. 0 Submittal will show the Work as awarded, without Delays, "or equal" or substitutions, Change Orders or Change Authorizations.

1. The Rev. 0 narrative will detail the **Contractor's** management of the site (lay down, parking, etc.). Further, the Rev. 0 narrative will identify shifts, weekend Work, Activity calendars, Delays since award and all pending and anticipated "or equal" and substitution proposals.

B. Once endorsed by the **Owner** and returned as "Resubmittal Not Required," the Rev. 0 Progress Schedule (or Rev. 0A, etc.) will be the As-Planned Schedule and the basis for Update Submittals until the Rev. 1 Official Schedule is established. Once the As-Planned Schedule is established, the **Owner** will select Milestones and note Milestone Early and Late Dates. As the Official Schedule evolves, Milestone Dates will be revised accordingly.

D. If the **Owner** refuses to endorse the Rev. 0 Submittal (or Rev. 0A, for a resubmission) as "Resubmittal Not Required," the As-Planned Schedule will not be established. In that event, the **Contractor** will continue to submit Update and Revision Submittals reflecting progress and the **Contractor's** approach to remaining Work. The **Owner** will rely on the available Update and Revision Submittals, subject to whatever adjustments it determines appropriate.

2.15 UPDATE SUBMITTALS

A. Update Submittals with progress up to the closing date and updated Early and Late Dates for progress and remaining Activities will be due with each Request for Payment. As-built data will consist of actual start dates, percent complete, actual finish dates, changes, Delays, and other significant events occurring before the closing date.

2.16 REVISION SUBMITTALS

A. Progress Schedule Revisions will be submitted with the third Request for Payment and every two (2) months after that, or more often, if necessary due to schedule recovery or other Progress Schedule revisions. Revisions will revise the Update Submittal attached to the prior Request for Payment.

B. Progress Schedule revisions will detail all impacts on pre-existing Activity scope, logic ties and restraint dates and reflect the Contractor's current approach to Work remaining. Revisions may be required because of changes in the Work, substitutions, schedule recovery and Delays.

C. Once endorsed by the **Owner** and returned as "Resubmittal Not Required," a Revision Submittal becomes the Rev. 1, Rev. 2, etc. Official Schedule and the basis for subsequent Update Submittals until a more current Official Schedule is established. If the **Owner** refuses to endorse a Revision Submittal as "Resubmittal Not Required," the **Contractor** will continue to submit Update and Revision Submittals when and as required in this Section.

2.17 RETROSPECTIVE DELAY ANALYSIS

A. If the **Owner** refuses to endorse any Revision Submittal as "Resubmittal Not Required," the **Contractor** and **Owner** will use the latest Official Schedule when evaluating the effect of Delays on Contract Time and/or Contract Price. The procedure will consist of progressively revising the latest Official Schedule at key Revision Submittal closing dates. For each Progress Schedule iteration, slippage between actual Milestone Dates and Rev. 0 Milestone Dates will be correlated to Delays occurring solely in that iteration. Revisions affecting Work after any iteration will be included only to the extent consented by the **Owner** at that time and/or if confirmed by as-built progress.

- 3. **Shop Drawings:** The Contractor shall deliver shop drawings of products, materials, assemblies, or equipment to the Professional.

<u>Item of Work</u>	<u>Section Number</u>
N/A	N/A

- 4. **Samples:** The Contractor must deliver all samples of material or equipment to the job site for examination by the State Agency and the Professional. Samples will be examined by the Professional for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents.

The Contractor must furnish all Work in accordance with approved samples. The following general classifications of material and equipment require submission of samples. Samples of other items may be requested by the Professional at any time.

<u>Item of Work</u>	<u>Type of Sample</u>	<u>Section Number</u>
N/A	N/A	N/A

**END OF SECTION 01300**

**SECTION 01400 QUALITY CONTROL**

1. **Testing Laboratory Services:** All tests required by the Owner must fulfill MDOT, ASTM, ANSI, Commercial and other Standards for testing. The Contractor must submit a minimum of three copies of each test report to the Professional for evaluation and subsequent distribution. The following general classifications of Work require submission of test reports and/or certificates of inspection. Additional submissions may be requested by the Professional at any time.

<u>Item of Work</u>	<u>Test Type</u>	<u>Section Number</u>
Earthwork	Compaction and Density	31 2000
Asphaltic Concrete Paving	Core Analysis	32 1216

2. **Tests:**

- (a) Paid by Owner: Density Testing for aggregate base; QA Testing for Asphaltic Concrete Paving
- (b) Paid by Contractor: QC Testing for Asphaltic Concrete Paving

3. **Asphalt Materials:** For asphalt paving, the Contractor must submit the data and testing reports in accordance with submittal requirements of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction and include information on mix, supplier, location, etc. on the MDOT Materials Source List form (MSL) 0501. The mix must have the appropriate percent of asphalt cement by weight for both the binder course and surface course in accordance with Asphalt Institute Manual MS-4, MS-13, and the current Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

- (a) Field tests and inspections that are performed by an MDOT certified technician for density testing.
- (b) The Professional may require the Contractor to core drill questionable cast-in-place asphalt for laboratory testing. Should the laboratory analysis indicate the asphalt fails to meet specification requirements, the Contractor must pay all costs for core drilling and testing in the laboratory and replace the concrete/asphalt found to fail meeting the specification requirements.

Should the laboratory analysis confirm that the asphalt meets specification requirements, the Owner will pay the Contractor for their costs for core drilling, asphalt patching and the laboratory fee for testing of the concrete/asphalt core samples.

**END OF SECTION 01400**

**SECTION 01500 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

1. The Contractor must furnish and install all temporary facilities and controls required by the Work, must remove them from State property upon completion of the Work, and the grounds and existing facilities must be restored to their original condition.
2. If water or electricity is available in the area where Work will be performed, the Contractor will not be charged for reasonable use of these services for construction operation. The Contractor must pay costs for installation and removal of any temporary connections including necessary safety devices and controls. Use of services must not disrupt or interfere with operations of the State Agency.
3. **Temporary Sanitary Facilities:**
  - (a) **Portable Toilets:** The Contractor must provide and maintain a sufficient number of portable temporary toilets in locations approved by the State Agency. They must comply with all Federal, State, and local code requirements. The Contractor must maintain the temporary toilets in a sanitary condition at all times and must remove them when the Work under this Contract is complete. The Contractor's employees are not allowed to use any existing State toilet facility.

**4. Field Office:**

- (a) **On Site Trailer:** At the beginning of the Work, the Contractor may provide a field office and storage building at the site in a location acceptable to the Owner. The building may be a trailer. The Contractor may provide such other temporary buildings as he may require for the use of workers and safe storage for tools and materials. Job signs with the Contractor's name, logos, specialty, ... etc., are not allowed.

**5. Storage of Materials and Staging:**

- (a) Use the existing drive entrance, gravel areas, and/or designated areas within existing parking lots as approved by the DNR for storage and staging needs.

**6. Security and Protection Facilities Installation**

- (a) **Protection of Existing Facilities:** Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- (b) **Temporary Erosion and Sedimentation Control:** Comply with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Section 311000 "Site Clearing."
- (c) **Stormwater Control:** Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- (d) **Barricades, Warning Signs, and Lights:** Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

**END OF SECTION 01500****SECTION 01600 MATERIAL AND EQUIPMENT**

1. The Contractor must furnish and be responsible for all materials, equipment, facilities, tools, supplies and utilities necessary for completing the Work. All materials and equipment must be provided as described in the Contract Documents and of good quality, free of defect and new and must be applied, installed, connected, erected, used, cleaned and conditioned following the manufacturer's and Suppliers' instructions.
- (a) Materials must meet requirements of the plans and specifications, including all MDOT material specifications.
2. **Delivery, Storage, and Handling:** All materials and equipment delivered to and used in the Work must be suitably stored and protected from the elements. The areas used for storage must only be those approved by the State Agency. The Owner assumes no responsibility for stored material. The ownership and title to materials will not be vested in the Owner before materials are incorporated in the Work unless payment is made by the Owner for stored materials and equipment. After delivery, before and after installation, the Contractor must protect materials and equipment against theft, injury, or damage from all causes. For all materials and equipment, the Contractor must provide complete information on installation, operation, and preventive maintenance.
- (a) The Contractor must cover and protect bulk materials while in storage which are subject to deterioration because of dampness, the weather or contamination. The Contractor must keep materials in their original sealed containers, unopened, with labels plainly indicating manufacturer's name, brand, type, and grade of material and must immediately remove from the Work site containers which are broken, opened, watermarked and/or contain caked, lumpy, or otherwise damaged materials.
- (b) The Contractor must keep equipment stored outdoors from contact with the ground, away from areas subject to flooding and covered with weatherproof plastic sheeting or tarpaulins. The Contractor must certify that any materials stored off-site are:
- a) Stored on property owned or leased by the Contractor or owned by the agency.
  - b) Insured against loss by fire, theft, flood, or other hazards.
  - c) Properly stored and protected against loss or damage.
  - d) In compliance with the plans and specifications.
  - e) Specifically allotted, identified, and reserved for the project.
  - f) Itemized for tracking and payment.
  - g) Subject to these conditions until the items are delivered to the project site.

**END OF SECTION 01600**

## SECTION 01700 CONTRACT CLOSE-OUT

1. **Substantial Completion:** The Contractor must notify the Professional, the Project Director and the Agency, in writing, when the Work will be substantially complete. If the Professional, Owner, and Agency agree that the project is Substantially Complete, the Professional and Project Director will inspect the Work. The Professional, upon determining that the Work, or a portion of the Work inspected, is substantially complete, will prepare a Punch List and will attach it to the respective Certificate of Substantial Completion. The Contractor must be represented on the job site at the time this inspection is made and thereafter must complete all Work by the date set for final acceptance by the Owner.
2. **Cleaning:**
  - (a) **Regular Cleaning:** The Contractor must remove all scrap or removed material, debris, or rubbish from the Project work site at the end of each working day and more frequently whenever the Owner Field Representative deems such material to be a hazard. The Contractor cannot discard materials on the grounds of the State Agency without the express permission of the Project Director. No salvage or surplus material may be sold on the premises of the State Agency. No burning of debris or rubbish is allowed. Any recyclable materials must be recycled, and the Contractor will be required to provide recycling plan.
  - (b) **Final Cleaning:** Before final acceptance by the State, the Contractor must clean all Work and existing surfaces, building elements and contents that were soiled by their operations and make repairs for any damage or blemish that was caused by the Work.
3. **PROJECT RECORD DOCUMENTS**
  - (a) Comply requirements for electronic project documentation found in Section 01 78 39 – Electronic Project Record Documentation.
  - (b) Maintain one set of the following record documents on-site during installation and until completion of construction; record actual revisions to the Work:
    - i. Drawings.
    - ii. Specifications.
    - iii. Addenda.
    - iv. Change Orders and other modifications to the Contract.
    - v. Reviewed product data.
  - (c) Ensure that entries are complete and accurate, enabling future reference by Owner.
  - (d) Store record documents separate from documents used for construction.
  - (e) Record information concurrent with construction progress, not less than weekly.
  - (f) Specifications: Legibly mark and record, at each product Section, description of actual products installed, including the following:
    - (g) Manufacturer's name and product model and number.
    - (h) Product substitutions or alternates used.
    - (i) Changes made by Addenda and modifications.
      - i. Record Drawings: Legibly mark each item to record actual construction as follows:
    - (j) Field changes of dimension and detail.
    - (k) Details not on original Drawings.
      - i. Submit electronic files of legible marked-up documents using PDF or CAD software to the Engineer on completion of the Work and prior to final payment by DWSD.

**END OF SECTION 01700**

## SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

## PART 1 - GENERAL

## 1.1 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Work Change Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.
  2. Within the time outlined in standard specs after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
    - e. Quotation Form: Use forms acceptable to Engineer.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Engineer.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  4. Include costs of labor and supervision directly attributable to the change.
  5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and

finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

## 1.2 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. RFIs.
  - 4. Digital project management procedures.
  - 5. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements: None

1.3 DEFINITIONS

- A. RFI: Request for Information. Request from Owner, Engineer, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.

2. Number and title of related Specification Section(s) covered by subcontract.

### 1.1 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
  1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its own operations with operations included in different Sections that depend on each other for proper installation, connection, and operation.
  1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
- C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and scheduled activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  1. Preparation of Contractor's construction schedule.
  2. Preparation of the schedule of values.
  3. Installation and removal of temporary facilities and controls.
  4. Delivery and processing of submittals.
  5. Progress meetings.

6. Pre-production meeting for HMA surfacing.
7. Project closeout activities.

## 1.2 REQUEST FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Engineer will return without response those RFIs submitted to Engineer by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Engineer.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, and other information necessary to fully describe items needing interpretation.
  - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Engineer.

1. Attachments shall be electronic files in PDF format.

D. Engineer's Action: Engineer will review each RFI, determine action required, and respond. Allow seven working days for Engineer's response for each RFI. RFIs received by Engineer after 1:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:
  - a. Requests for approval of submittals.
  - b. Requests for approval of substitutions.

- c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Engineer's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Engineer's action may include a request for additional information, in which case Engineer's time for response will date from time of receipt by Engineer of additional information.
  3. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log **at each progress meeting**.
  1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Engineer.
  4. RFI number including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Engineer's response was received.
  8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
  9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.

PART 2 - PRODUCTS (Not Used) PART 3 - EXECUTION

(Not Used) END OF SECTION 013100

## SECTION 31 1000 - SITE CLEARING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Temporary erosion and sedimentation control.

- B. Related Requirements:

1. Section 01500 "Construction Facilities and Temporary Controls" for temporary erosion- and sedimentation-control measures.

#### 1.3 DEFINITIONS

- A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in- place surface soil; the zone where plant roots grow.
- D. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and indicated on Drawings.
- E. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction.
- F. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

#### 1.4 MATERIAL OWNERSHIP

- A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
- B. Topsoil stripping and stockpiling program.

### 1.6 QUALITY ASSURANCE

- A. Topsoil Stripping and Stockpiling Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work. Include dimensioned diagrams for placement and protection of stockpiles.

### 1.7 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed trafficways if shown in the plans and required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: The Contractor is responsible for contacting MISSDIG for utility markings for the area where Project is located a minimum of 5 business days before site clearing or any other work is started.
- C. Do not commence site clearing operations until temporary erosion- and sedimentation- control and plant-protection measures are in place.
- D. Soil Stripping, Handling, and Stockpiling: Perform only when the soil is dry or slightly moist.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 31 2000 "Earth Moving."
  - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

## PART 3 – EXECUTION

### 3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.

- B. All trees, shrubs, and other vegetation are to remain. Verify that any necessary protection zones have been identified and established prior to beginning work.
- C. Protect existing site improvements to remain from damage during construction.
  - 1. Restore damaged improvements to their original condition, as acceptable to Owner, at no additional cost.

### 3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent, according to erosion- and sedimentation-control requirements of the 2020 MDOT Standard Specifications for Construction, Section 208 and the plans, specifications, and MDOT Standard Plan R-96-Series herein.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

### 3.3 TREE AND PLANT PROTECTION

- A. Protect trees and plants remaining on-site.

### 3.4 EXISTING UTILITIES

- A. No work on existing utilities is included in this contract.
- B. The Contractor shall take care to not disturb existing underground utilities. Any damage to utilities as a result of the Contractor's operations will be repaired at no additional cost to the contract.

### 3.5 CLEARING AND GRUBBING

- A. Remove obstructions and vegetation, other than utilities, trees, or shrubs, to permit installation of new construction.
  - 1. Do not remove trees, shrubs, and other vegetation outside the proposed aggregate shoulders and areas of slope restoration without prior approval from the Owner.
  - 2. Remove roots larger than 2 inches in diameter if encountered within the limits of proposed HMA pavement and aggregate shoulders.
  - 3. Use only hand methods or air spade for grubbing within protection zones.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 6 inches and compact each layer to a density equal to adjacent original ground.

### 3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to depth in a manner to prevent intermingling with underlying subsoil or other waste materials.
  1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
  1. Stockpile topsoil at a location approved by the Owner.
  2. Do not stockpile topsoil within protection zones.
  3. Stockpile surplus topsoil to allow for respreading deeper topsoil.

### 3.7 SITE IMPROVEMENTS

- A. Remove pavement, shoulders, and topsoil as indicated in the plans to facilitate the rehabilitation of the entrance drive.
  1. Neatly saw-cut along line of existing pavement to remain before performing crush and shape operations. Saw-cut faces vertically.
  2. Cold mill existing HMA pavement at drive entrance immediately adjacent to 8 Mile Road along the existing pavement joints and between concrete curb and gutters, as directed by the Engineer. Do not cold mill HMA pavement within the existing turn lane or shoulder material along 8 Mile Road.

### 3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Burning tree, shrub, vegetation waste, and other waste and debris on site is prohibited.

END OF SECTION 31 1000

## SECTION 31 2000 - EARTH MOVING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

1. Excavating and filling for rough grading the Site.
2. Preparing subgrades for HMA pavement, turf, and grasses.
3. Aggregate base course for HMA pavement.
4. Excavating and backfilling trenches aggregate shoulders.

- B. Related Requirements:

1. Section 311000 "Site Clearing" for site stripping, grubbing, and stripping and stockpiling topsoil.
2. Section 329200 "Turf and Grasses" for finish grading in turf and grass areas, including preparing and placing planting soil for turf areas.

#### 1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

- C. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

- D. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by the Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
3. Unauthorized Excavation: Excavation below subgrade elevations or beyond

indicated lines and dimensions without direction by the Engineer. Unauthorized excavation, as well as remedial work directed by the Engineer, shall be without additional compensation.

- E. Fill: Soil materials used to raise existing grades.
- F. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- G. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- H. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
  - 1. Aggregate Base, 21AA material for shoulders and in areas of aggregate base conditioning, as needed.
  - 2. Topsoil.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency for density testing.
- B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:
  - 1. Classification according to MDOT 2020 Standard Specifications for Construction.
  - 2. Topsoil testing results in accordance with Section 917 of the MDOT 2020 Standard Specifications for Construction.
- C. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by earth-moving operations. Submit before earth moving begins.

#### 1.6 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.

#### 1.7 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth-moving operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  2. Provide alternate routes around closed or obstructed traffic ways if shown in the plans and required by Owner or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
1. No earth moving activities on adjoining Owner's property is required for this project.
- C. Utility Locator Service: Notify MISSDIG for area where Project is located before beginning earth-moving operations.
- D. Do not commence earth-moving operations until temporary site fencing and erosion- and sedimentation-control measures specified in Section 311000 "Site Clearing" are in place.
- E. Do not commence earth-moving operations until plant-protection measures are in place, if required by the plans or specifications.
- F. The following practices are prohibited within designated protection zones:
1. Storage of construction materials, debris, or excavated material.
  2. Parking vehicles or equipment.
  3. Foot traffic.
  4. Erection of sheds or structures.
  5. Impoundment of water.
  6. Excavation or other digging unless otherwise indicated.
  7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- G. Do not direct vehicle or equipment exhaust towards protection zones.
- H. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

## PART 2 - PRODUCTS

### 2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. All soil materials shall meet material and compaction requirements in accordance with the MDOT 2020 Standard Specifications for Construction and shall be supplied by an MDOT approved source.
  1. Provide documentation for all borrow soils delivered to the project location detailing source/supplier name, aggregate pit, MDOT approval and test data in

- accordance with MDOT's Materials Source Guide.
2. Complete MDOT's Materials Source List (MSL) form with all required information for materials provided for the project.
- C. Subbase Material: Graded mixture consisting of Granular Material Class II in accordance with requirements of Sections 301 and 902 of the MDOT 2020 Standard Specifications for Construction for material testing, gradation, and placement.
- D. Aggregate Base Course and Aggregate Shoulder: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, natural or crushed sand, or mixture of crush and shape material consisting of HMA and aggregate in accordance with requirements of Sections 302 and 902 of the MDOT 2020 Standard Specifications for Construction for material testing, gradation, and placement.
1. Aggregate base must meet requirements for MDOT Aggregate Base, 21AA material and gradation requirements in accordance with Section 305 of the MDOT 2020 Standard Specifications for Construction.
- E. Topsoil: Stockpiled material from site or borrow material meeting the requirements of Sections 816 and 917 of the MDOT 2020 Standard Specifications for Construction and Section 329200 "Turf and Grasses".

## 2.2 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored as follows:
1. Red: Electric.
  2. Yellow: Gas, oil, steam, and dangerous materials.
  3. Orange: Telephone and other communications.
  4. Blue: Water systems.
  5. Green: Sewer systems.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect structures, utilities, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth-moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

### 3.2 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate/trench to subgrade elevations, as shown in the plans, regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
  - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

### 3.3 EXCAVATION FOR PAVEMENTS AND SHOULDERS

- A. Excavate surfaces under pavements and shoulders to indicated lines, cross sections, elevations, and subgrades.

### 3.4 EXCAVATION FOR UTILITY TRENCHES

- A. N/A

### 3.5 SUBGRADE INSPECTION

- A. Notify the Engineer when excavations for shoulder trenches and topsoil stripping have reached required subgrade elevations.
- B. If the Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Compact shoulder subgrade material and pavement subbase in accordance with the MDOT 2020 Standard Specifications for Construction. Do not proof-roll or compact wet or saturated subgrades.
  - 1. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Engineer, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by the Engineer, without additional compensation.

### 3.6 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

2. Stockpile soil materials in areas approved by the Owner.

### 3.7 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
  1. Under grass and planted areas, use satisfactory soil material.
  2. Under pavements, use satisfactory soil material.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

### 3.8 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
  1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
  2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified density.

### 3.9 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Compact soil materials to not less than the percentages of maximum density as required by the appropriate sections of the MDOT 2020 Standard Specifications for Construction

### 3.10 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  1. Provide a smooth transition between adjacent existing grades and new grades.
  2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to prevent ponding. Finish subgrades to elevations required to achieve indicated finish elevations, within the following subgrade tolerances:

1. Turf or Unpaved Areas: Plus or minus 1 inch.
2. Pavements: Plus or minus 1/4 inch.

### 3.11 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND SHOULDERS

- A. Place aggregate base course or complete crushing and shaping on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place base course under pavements and shoulders as follows:
  1. Shape subbase course and base course to required cross-slope grades.
  2. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
  3. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
  4. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness in accordance with the MDOT 2020 Standard Specifications for Construction.

### 3.12 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified engineering testing agency to perform tests and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

### 3.13 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
  1. Scarify or remove and replace soil material to depth as directed by the Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
  1. Restore appearance, quality, and condition of finished surfacing to match adjacent

work, and eliminate evidence of restoration to greatest extent possible.

3.14 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.
  - 1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 31 2000

## SECTION 32 1216 - ASPHALT PAVING PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

#### A. Section Includes:

1. Hot-mix asphalt paving.
2. Hit-mix asphalt overlay.
3. Cold milling of existing asphalt pavement.

#### B. Related Requirements:

1. Crush and shaping existing HMA surface and aggregate base in accordance with the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction, Section 305.
2. Section 31 2000 "Earth Moving" for subgrade preparation, fill material, unbound-aggregate subbase and base courses, and aggregate pavement shoulders.

### 1.3 PREPRODUCTION MEETINGS

- A. A Preproduction meeting will be held on site at the Maybury State Park at 49601 8 Mile Road, Northville, MI a minimum of 24 hours prior to placement of any hot-mix asphalt materials.

### 1.4 ACTION SUBMITTALS

#### A. Hot-Mix Asphalt Designs:

1. Certification, by authorities having jurisdiction, of approval of each hot-mix asphalt design proposed for the Work.
2. For each hot-mix asphalt design proposed for the Work, submit a Job Mix Formula (MDOT Form 1911) for review and approval prior to beginning resurfacing operations.
3. All material documentation must be in accordance with MDOT requirements, including:
  - a) Contractor's HMA Quality Control Plan
  - b) Job Mix Formula detailed on MDOT Form 1911 for each hot-mix asphalt material to be used on the project.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For hot-mix asphalt manufacturer/supplier and material tester.
- B. Material Certificates:[ Include statement that mixes containing recycled materials will perform equal to mixes produced from all new materials.]
  - 1. Aggregates.
  - 2. Asphalt binder.
  - 3. Asphalt cement.
  - 4. Bond (tack) coat.
  - 5. Daily Report of Contractor's Quality Control Tests (MDOT Form 1903C)

#### 1.6 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of MDOT for asphalt paving work.
  - 1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

#### 1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
  - 1. Prime Coat: Minimum surface temperature must be in accordance with MDOT requirements.
  - 2. Tack Coat: Minimum surface temperature must be in accordance with MDOT requirements .
  - 3. Asphalt Base Course and Binder Course: Minimum surface temperature must be in accordance with MDOT requirements at time of placement.
  - 4. Asphalt Surface Course: Minimum surface temperature must be in accordance with MDOT requirements at time of placement.

### PART 2 - PRODUCTS

#### 2.1 AGGREGATES

- A. General: Use aggregate materials meeting the requirements of Tables 902-5 and 902-6 of the 2020 MDOT Standard Specifications for Construction for the HMA mix number and type required, respectively.
- B. Coarse Aggregate: For HMA mixtures, use natural aggregate, iron blast-furnace slag, reverberatory furnace slag, steel furnace slag, or crushed concrete as coarse aggregate. in accordance with the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction.
- C. Fine Aggregate: For HMA mixtures, use natural aggregate, iron blast-furnace slag, reverberatory furnace slag, steel furnace slag, manufactured fine aggregate, or a uniformly graded blend as fine aggregate. Fine aggregates must be clean, hard,

durable, uncoated, and free of clay lumps, organic matter, soft or flakey material, and other foreign matter. All fine aggregate must be in accordance with the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction.

1. For hot-mix asphalt, limit natural sand to the maximum percent by weight of the total aggregate mass as required by MDOT and as specified in the Job Mix Formula (JMF) for the approved mix design.
- D. Mineral Filler: 3MF mineral filler consisting of limestone dust, dolomite dust, fly ash collected by an electrostatic precipitation method, slag, or hydrated lime with gradation in accordance with Section 902.11 of the 2020 MDOT Standard Specifications for Construction. Mineral filler must be from an approved source.

## 2.2 ASPHALT MATERIALS

- A. Asphalt Binder: PG 64-28 in accordance with the requirements of Section 904 of the 2020 MDOT Standard Specifications for Construction.
- B. Asphalt Cement: Supply material in accordance with the requirements of Section 904 of the 2020 MDOT Standard Specifications for Construction and as specified in the Job Mix Formula (JMF) for the approved mix design.
- C. Bond (Tack) Coat: SS-1h or approved equal; Supply bond coat material in accordance with the requirements of Section 904 of the 2020 MDOT Standard Specifications for Construction and as specified in the Job Mix Formula (JMF) for the approved mix design.
- D. Water: Potable.

## 2.3 MIXES

- A. Hot-Mix Asphalt: Dense-graded, hot-laid, hot-mix asphalt plant mixes supplied by an MDOT certified hot-mix asphalt plant and complying with the following requirements:
  1. Provide mixes in accordance with the requirements of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction, Sections 501, 902, and 904 and as specified in the Job Mix Formula (JMF) for the approved mix design.
  2. Leveling Course: 5EML in accordance with MDOT approved mix design and supplied by and MDOT certified hot-mix asphalt plant.
  3. Top Course: 5EML in accordance with MDOT approved mix design and supplied by and MDOT certified hot-mix asphalt plant.
- B. Emulsified-Asphalt Slurry: must be in accordance with 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction, Sections 501 and 902.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to begin paving.
- B. Proceed with paving only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protection: Provide protective materials, procedures, and worker training to prevent asphalt materials from spilling, coating, or building up on curbs, driveway aprons, manholes, and other surfaces adjacent to the Work.
- B. Compact aggregate base under pavement in accordance with Sections 302 and 305 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- C. Compact subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding if undercutting below existing aggregate base is required. Do not proof-roll wet or saturated subgrades.
  - 1. Completely proof-roll subgrade in one direction. Limit vehicle speed to 3 mph.
  - 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
  - 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Engineer, and replace with compacted backfill or fill as directed.

### 3.3 COLD MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
  - 1. Mill to a depth of 1-1/2 inches at the drive entrance as shown in the plans.
  - 2. Mill to a uniform finished surface free of excessive gouges, grooves, and ridges.
  - 3. Control rate of milling to prevent tearing of existing asphalt course.
  - 4. Repair or replace curbs, driveway aprons, manholes, and other construction damaged during cold milling at no additional cost to the contract.
  - 5. Excavate and trim unbound-aggregate base course, if encountered, and keep material separate from milled hot-mix asphalt.
  - 6. Patch surface depressions deeper than 1 inch after milling, before wearing course is laid.
  - 7. Handle and dispose of milled asphalt material in accordance with Section 501 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
  - 8. Keep milled pavement surface free of loose material and dust.
  - 9. Do not allow milled materials to accumulate on-site.

### 3.4 SURFACE PREPARATION

- A. Ensure that prepared aggregate base material has been compacted and is ready to receive paving. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces.

- B. Bond (Tack) Coat: Apply uniformly over surface of compacted unbound-aggregate base course or hot-mix asphalt leveling course, at a rate of 0.05 to 0.15 gal./sq. yd. Apply enough material to penetrate and seal, but not flood, surface. Allow bond coat to cure.
  - 1. If bond coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
  - 2. Protect primed substrate from damage until ready to receive paving.
  - 3. Apply bond coat in accordance with the requirements of Section 501 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

### 3.5 HOT-MIX ASPHALT PLACEMENT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
  - 1. Place hot-mix asphalt base course and binder course in number of lifts and thicknesses indicated.
  - 2. Place hot-mix asphalt surface course in two lifts.
  - 3. Spread mix at a minimum temperature 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
  - 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
  - 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than half the driveway width unless infill edge strips of a lesser width are required.
  - 1. Construct transverse pavement joints per Section 501.03.F.2 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
  - 2. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Construct vertical or tapered overlapping longitudinal joints per Section 501.03.F.2 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
  - 3. Complete a section of asphalt leveling course before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

### 3.6 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections.

Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.

1. Clean contact surfaces and apply bond coat to joints.
2. Construct transverse pavement joints per Section 501.03.F.2 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
3. Construct vertical or tapered overlapping longitudinal joints per Section 501.03.F.2 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
4. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement and in accordance with Section 501 the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

### 3.7 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
  1. Complete compaction before mix temperature cools in accordance with Section 501 the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
  2. Complete rolling in accordance with Section 501 the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- B. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- C. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- D. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- E. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- F. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

### 3.8 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce thickness indicated within the following tolerances:

1. Base Course: Plus or minus 3/4 inch.
  2. Leveling Course: Plus or minus 1/4 inch.
  3. Surface Course: Plus 1/8 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally, in accordance with Michigan Test Method (MTM) 722, to paved areas:
1. Base Course: 3/4 inch.
  2. Leveling Course: 1/4 inch.
  3. Surface Course: 1/8 inch.
  4. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

### 3.9 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined in accordance with MDOT standards.
- C. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- D. In-Place Density: In-place density of compacted pavement will be determined by nuclear method in accordance with required MDOT testing procedures and documentation and as approved in the HMA Quality Control and Quality Assurance Plans provided by the Contractor and Engineer.
1. Testers for both the Contractor and Owners Representative / Engineer must be certified in accordance with MDOT requirements for on-site testing. Certification documentation must be provided as part of the respective QA and QC plans for approval prior to placing HMA.
- E. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION 32 1216

## SECTION 32 1723 - PAVEMENT MARKINGS PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section Includes:
  - 1. Painted markings applied to asphalt paving.
  - 2. Painted markings applied to concrete surfaces.

### 1.3 ACTION SUBMITTALS

- A. Product Data: Include technical data and tested physical and performance properties.
  - 1. Pavement marking source, color, material specifications and certifications in accordance with MDOT Materials Acceptance and documentation requirements, including, but not limited to MDOT form 501, Materials Source List (MSL).

### 1.4 FIELD CONDITIONS

- A. Environmental Limitations: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 deg F for polyurea-based materials, and not exceeding 95 deg F.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Source Limitations: Obtain pavement-marking paints from single source from single manufacturer.

### 2.2 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design" and MDOT standards for pavement markings for accessible parking spaces.

### 2.3 PAVEMENT-MARKING PAINT

- A. Pavement-Marking Paint: Polyuera in accordance with the requirements of Sections 811 and 920 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
  - 1. Color: White for standard markings and Blue for ADA markings .
  - 2. General Packaging and Labeling. Material containers or packages must be marked on the tops and sides using a durable, weather-resistant marking. Include the following information:
    - (a) Manufacturer's name and address;
    - (b) Description of the material;
    - (c) Product identification number;
    - (d) Lot or batch number;
    - (e) Date of manufacture;
    - (f) Volume; and
    - (g) Weight.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that pavement-marking substrate is dry and in suitable condition to begin pavement marking in accordance with manufacturer's written instructions.
- B. Proceed with pavement marking only after unsatisfactory conditions have been corrected.

### 3.2 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with the Engineer.
- B. Allow asphalt paving or concrete surfaces to age as recommended by the manufacturer before starting pavement marking unless approved otherwise by the Engineer and Owner.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at the application rates for specified materials in accordance with Table 811-1 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction or manufacturer's recommendations.
  - 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils, firmly secured to asphalt paving or concrete surface. Mask an extended area beyond edges of each stencil to prevent paint application beyond stencil. Apply paint so

that it cannot run beneath stencil.

### 3.3 PROTECTING AND CLEANING

- A. Protect pavement markings from damage and wear during remainder of construction period.
- B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 32 1723

## SECTION 32 9200 - TURF AND GRASSES PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section Includes:
  - 1. Topsoil.
  - 2. Seeding.
  - 3. Hydroseeding.
  - 4. Erosion-control materials.

### 1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- D. Top Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Topsoil material, whether from salvaged material within the project limits or from off-site sources must meet the requirements of Section 917.06 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- B. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- C. Bulk Materials:
  - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.

2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

## 1.5 FIELD CONDITIONS

- A. Planting Restrictions: Planting and all slope restoration items are to be completed prior to the designated substantial completion date as noted in the specifications.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

## PART 2 - PRODUCTS

### 2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species:
  1. Quality, State Certified: State-certified seed of grass species as listed below for solar exposure.
  2. MDOT approved seed mixture THV: Proportioned by weight as follows:
    - a. 15 percent Kentucky bluegrass (*Poa pratensis*).
    - b. 45 percent Creeping Red fescue (*Festuca rubra* variety).
    - c. 30 percent perennial ryegrass (*Lolium perenne*).
    - d. 10 percent Fults Salt Grass (*Puccinellia distans*).

### 2.2 FERTILIZERS

- A. Commercial Fertilizer: Class A fertilizer in accordance with Sections 816 and 917 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

### 2.3 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley in accordance with Sections 816 and 917 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

### 2.4 EROSION-CONTROL MATERIALS

- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches long.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
  - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
  - 2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
  - 3. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by the Engineer and replace with new planting soil.

#### 3.2 PREPARATION

- A. Protect structures; utilities; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
  - 1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
  - 2. Protect grade stakes set by others until directed to remove them.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

#### 3.3 TURF AREA PREPARATION

- A. Placing Planting Soil: Place and mix screened topsoil in place over exposed subgrade. Topsoil thickness to be placed at a minimum of 4 inches.
- B. Moistening prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- C. Before planting, obtain the Engineer's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

### 3.4 PREPARATION FOR EROSION-CONTROL MATERIALS

- A. For erosion-control mats, install planting soil in two lifts, with second lift equal to thickness of erosion-control mats. Install erosion-control mat and fasten as recommended by material manufacturer.
- B. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.
- C. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

### 3.5 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
  - 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
  - 2. Do not use wet seed or seed that is moldy or otherwise damaged.
  - 3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Sow seed at a total rate as specified by the seed mixture requirements in accordance with Sections 816 and 917 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- B. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- C. Protect seeded areas with slopes exceeding 1:4 with erosion-control blankets and install and staple according to manufacturer's written instructions.
- D. Protect seeded areas from hot, dry weather or drying winds by applying planting soil within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.

### 3.6 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, commercial fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
  - 1. Mix slurry with nonasphaltic tackifier.
  - 2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than the application rate lb/acre dry weight in accordance with Sections 816 and 917 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction or per manufacturer's recommendations; and ensure seed component is deposited at not less than the specified seed-sowing

rate.

### 3.7 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
  - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
  - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
  - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.
  - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
  - 2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

### 3.8 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by the Engineer:
  - 1. Satisfactory Seeded Turf: Maintenance period will extend 30 days from date of original slope restoration/restoration of disturbed areas. Turf will be accepted when there is sufficient growth across 90% of the restored area to establish the turf bed and prevent soil erosion.
- B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory or the maintenance period ends.

### 3.9 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- D. Remove nondegradable erosion-control measures after grass establishment period.

END OF SECTION 32 9200

# **APPENDIX I**

# **GLOSSARY**

## GLOSSARY

**Activity**– An element in the Progress Schedule establishing a requisite step, or the time and resources required, for completing the part of the Work associated with that Activity.

**Addenda**– Written instruments that are used by the Owner and/or Professional to incorporate interpretations or clarifications, modifications, and other information into the Bidding Documents. An Addendum issued after Bid opening to those Bidders who submitted a Bid, for the purpose of re-bidding the Work without re-advertising, is referred to as a **post-Bid** Addendum.

**Agency**– Any unit, section, division, department, or other instrumentality of the State that benefits from the Work.

**Alternate**– Refers to work specified in the Bidding Documents for which the Bidder must bid a Bid Price.

**Apparent Low Bidders**: Those Bidders whose Base Bid, when added to those specific Alternates the Owner intends to accept, yields the three lowest sums of Bid and Alternates. Additional Bidders may be considered Apparent Low Bidders if their Bid, when added to those specific Alternates the Owner intends to accept, yields a sum within 10% of the lowest of the Apparent Low Bidder's sum. If a qualified disabled veteran meets the requirements of the contract solicitation, provides acceptable responses to both Part One and Part Two of the Best Value Construction Bidder Evaluation to achieve a Best Value recommendation and with the veteran's preference is the lowest responsive, responsible, best value Bidder it is considered the Apparent Low Bidder.

**Archaeological Feature**– Any prehistoric or historic deposit of archaeological value, as determined by a representative of a State Agency that is duly authorized to evaluate such findings and render such judgments. An Archaeological Feature deposit may include, but is not limited to Indian habitations, ceremonial sites, abandoned settlements, treasure trove, artifacts, or other objects with intrinsic archaeological value and that relate to the history and culture of the State of Michigan.

**Authorized Technical Data**– Information and data contained in a report of exploration and tests of subsurface conditions. Also, any physical data (dimension, location, conditions, etc.) contained in those Drawings of physical conditions of existing surface and subsurface facilities.

**Best Value**– The bids will be evaluated for best value based on price and qualitative components that may include but are not limited to technical design, technical approach, quality of proposed personnel, and management plans, per PA 430 of 2012.

**Bid**– Written offer by a Bidder for the Work, as specified, which designates the Bidder's Base Bid and Bid Prices for all Alternates. The term *Bid* includes a *re-bid*.

**Bidder**– The Person acting directly, or through an authorized representative, who submits a Bid directly to the **Owner**.

**Bidding Documents**– The proposed Contract Documents as advertised, and all Addenda issued before execution of the Contract.

**Bid Price**– The Bidder's price for a lump sum item of work, or the product of the Bidder's unit price for an item of Unit Price Work times the quantity given on the Bid Form for that item.

**Bid Security**– A security serving as a guarantee that the Bidder will conform to all conditions.

**Bidding Requirements**– The Advertisement, Instructions to Bidders, Supplementary Instructions, Information for Bidders, Bid Form, Bid Form Attachments, and qualification submittals, as advertised and as modified by Addenda, and any other Section included within Division 0 of the Bidding Documents for the purpose of governing bidding and award of the Contract.

**Board**– The Administrative Board of the State of Michigan.

**Bond**– Security furnished by the **Contractor**, as required by the Contract Documents.

**Business Day**– Any Day except Saturdays, Sundays and holidays observed by the **Owner**.

**Bulletin**– A request used by the **Owner** to describe a change in the Work under consideration by the **Owner** and to request the **Contractor** to submit a proposal for the corresponding adjustment in Contract Price and/or Contract Time, if any.

**Calendar Day**– Every day shown on the calendar, Saturdays, Sundays, and holidays included.

**Cash Allowance**– An **Owner**-specified sum included within the Contract Price to reimburse the **Contractor** for the actual purchase/furnished cost of materials and/or equipment or other designated items, as specifically provided in the Contract Documents. Although the scope (e.g., the required quantity) of any Work covered by a Cash Allowance is sufficiently detailed in the Contract Documents for the purposes of bidding the required labor costs, Subcontract costs, construction equipment costs and general conditions costs and Fee, it is understood that the required materials, equipment or other designated items are of uncertain purchase cost at the time of Bid or are yet to be specified in more detail by the **Professional** as to quality, appearance, durability, finish and such other necessary features affecting purchase price.

**Change Order**– A written order issued and signed by the **Owner**, which amends the Contract Documents for changes in the Work or an adjustment in Contract Price and/or Contract Time, or both.

**Construction Mechanic**– A skilled or unskilled mechanic, laborer, worker, helper, assistant, or apprentice working on a state project but shall not include executive, administrative, professional, office, or custodial employees.

**Contract Award**– The official action of the **Board**, the **Director-SFA** or the **Director-DCD** awarding the Contract to the **Contractor**.

**Contract Documents**– Written and graphic documents that form the legal agreement between the **Owner** and the **Contractor**, consisting of this document, completed Bid and Contract forms, terms and conditions of the contract, specifications, drawings, addenda, Notice of Award, Notice-to-Proceed and contract change orders.

**Contract Float**– Calendar Days between the **Contractor's** anticipated date for early completion of the Work, or of a specified portion of the Work, if any, and the corresponding Contract Time.

**Contract Price**– The total compensation, including authorized adjustments, payable by the **Owner** to the **Contractor** (subject to provisions for Unit Price Work).

**Contract Times**– The Contract Times for the entire Work are the periods allowed, including authorized adjustments, for Substantial Completion and final completion of the Work. The Contract Times for a designated portion of the Work are the periods allowed for Substantial Completion and final completion of any such portion of the Work, as specified in the Contract Documents.

**Contractor**– Business enterprise with which the **Owner** has entered into the Contract.

**Correction Period**– A period during which the **Contractor** must, in accordance with the Contract Documents, (a) correct or, if rejected, remove, and replace Defective Work, and (b) maintain warranties for materials and equipment in full force and effect.

**Cost of the Work Involved**– The sum of all costs that would be, or were, necessarily incurred by the **Contractor** in providing any Work Involved with the related change, less the costs that would be, or would have been, incurred by the **Contractor** to provide such Work without the related change.

**Defective**– As determined by the Professional, an adjective which when referring to or when applied to the term “Work” refers to (a) Work not conforming to the Contract Documents or not meeting the requirements of an inspection, test, or approval, or (b) Work itemized in a Punch List which the **Contractor** fails to complete or correct within a reasonable time after issuance of the Punch List by the **Professional**.

**Delay**– Any act or omission or other event that in any manner adversely affects or alters the schedule, progress or completion of all or any part of the Work. Delay is a generic term intended to include deferral, stoppage, slow down, interruption and extended performance, and all related hindrance, rescheduling, disruption, interference, inefficiency and productivity and production losses. Tariffs, trade restrictions, or governmental pricing measures do not constitute a Delay and shall not excuse performance or entitle the **Contractor** to additional compensation or time.

**Department (DTMB)**– Department of Technology, Management and Budget of the State of Michigan.

**Director**- The Director of the **Department**.

**Director-SFA**- The Director of **DTMB** State Facilities Administration.

**Director-DCD**- The Director of **DTMB** State Facilities Administration, Design and Construction Division.

**Division**– Each of the numbered, distinct parts (starting with Division 0) into which the Specifications are divided.

**Drawings**– Part of the Contract Documents showing the Work. Drawings must neither serve nor be used as Shop Drawings.

**Emergency**– A condition affecting the safety or protection of persons, or the Work, or property at or adjacent to the site.

**State Facilities Administration (SFA)**-Entity in the **Department** responsible for design, construction, and operations and maintenance of facilities.

**Fee for the Work Involved (Fee)**– An established, percentage mark-up on the Cost of the Work Involved which is allowed to the **Contractor** for (a) reasonable administrative costs, and (b) negotiated, reasonable profit on the Cost of the Work Involved.

**Hazardous Material**– Asbestos containing materials (ACMs), Polychlorinated biphenyls (PCBs), petroleum products, such construction materials as paint thinners, solvents, gasoline, oil, etc., and any other like material the manufacture, use, treatment, storage, transportation, or disposal of which is regulated by federal, state, or local Laws governing the protection of public health, natural resources, or the environment.

**Invitation To Bid (ITB)** - The solicitation document presenting the terms and conditions that will become part of the Contract when the Bid is accepted.

**Law(s)**– Means federal, state, and local statutes, ordinances, orders, rules and/or regulations.

**MCL**– The Michigan Compiled Laws of the State of Michigan.

**Means and Methods**– Includes means, methods, techniques, sequences and/or procedures applicable to the Work.

**Notice of Award**– Written notice accepting the Bid to the lowest responsive, responsible Bidder and designating the Contract Price (and establishing the Alternates accepted by the **Owner**).

**Notice-to-Proceed**– Written notice issued by the Project Director directing the Contractor to commence the construction activities and establishing the start date of the Contract Time.

**On-Site Inspection**– The **Professional's** on-site examination of the **Contractor's** completed or in progress Work to determine and verify to the Project Director that the quantity and quality of all Work complies with the requirements of the Contract Documents.

**Owner**– The State of Michigan, with whom the **Contractor** has entered into the Contract and for whom the Work is to be provided.

**Owner Field Representative**– A State employee or consultant, acting collaboratively with the Project Director, providing on-site, periodic observation and documentation of the Work for compliance with the Contract Documents.

**Partial Use**– The use, by the **Owner**, of a designated portion of the Work before accomplishing Substantial Completion of the entire Work. Partial Use does not mean Substantial Completion of the portion of the Work placed in use by the **Owner**.

**Person**– Individuals, partnerships, corporations, receivers, trustees, joint ventures or any other legal entity and any combinations of any of them.

**Political Subdivision**– Any county, city, village, or other local unit of the State, including any agency, department, or instrumentality of any such county, city, village, or other local unit.

**Post-Bid Submittal**– A Qualification Submittal required of the Bidder selected under Section 00100 - 22 before Contract Award, and which is used by the Owner in the evaluation of the Bid of the selected Bidder.

**Professional Services Contractor (PSC or Professional)**– The individual or business entity who has the authority to practice the design disciplines required by the Contract Documents. An Agency with appropriate licensing may replace the PSC in their role if a consultant is not used.

**Project**– The total construction, which includes the Work and possibly other work completed by others, as indicated in the Contract Documents.

**Project Director**- Designated State employee(s) (a) Responsible for directing and supervising the **Professional's** services during the period allowed for completion of the Work; and/or (b) Acting as representative for the **Owner** and for the enforcement of the Contract Documents, approving payment to the **Contractor** and coordinating the activities of the State, **Owner, Professional** and **Contractor**.

**Project Schedule**– Work Schedule that shows the **Contractor's** approach to planning, scheduling, and execution of the Work and that accurately portrays completed Work as to sequencing and timing, as provided in the Contract Documents.

**Project Specifications**– The Contract Documents organized into Divisions. "Technical Specifications" means Divisions of the Specifications consisting of technical descriptions of materials, equipment, construction systems, standards, and workmanship.

**Provisionary Allowance**– An amount included within the Contract Price to reimburse the **Contractor** for the cost to furnish and perform Work that is uncertain because, for example, it is indeterminate in scope and may not be shown or detailed in the Contract Documents.

**Punch List**– A list of minor items to be completed or corrected by the **Contractor**, any one of which do not materially impair the use of the Work for its intended purpose.

**Qualified Disabled Veteran (QDV)**- QDV as defined by Public Act 22 of 2010, MCL 18.1241.3 and supported by a DD214 Proof of Service and Discharge, a Veterans Administration rating decision letter, proof of disability (if the disability is not indicated on the DD214), and appropriate legal documents setting forth the 51% natural persons QDV ownership.

**Record Documents**– Drawings, Specifications, Addenda, Change Orders, Change Authorizations, Bulletins, inspection, test and approval reports, photographs, written clarifications and interpretations and all other documents recording, or annotated to show, all revisions and deviations between the as-built installation and the Contract Documents, all approved Submittals and all clarifications and interpretations.

**Records**– Books, reports, documents, electronic data, and other evidence relating to the bidding, award and furnishing and performance of the Work.

**Recycled Material**– Recycled paper products, structural materials made from recycled plastics, re-refined lubricating oils, reclaimed solvents, recycled asphalt and concrete, recycled glass products, re-treaded tires, ferrous metals containing recycled scrap metals and all other materials that contain (a) waste materials generated by a business or consumer, (b) materials that have served their intended purpose, and/or (c) materials that have been separated from solid waste for collection, recycling and disposition in the percentage determined by the State as provided by Law.

**Request for Payment**– The form provided by the **Owner** (Payment Request DTMB-0440) to be used by the **Contractor** in requesting payment for Work completed, which must enclose all supporting information required by the Contract Documents.

**Schedule of Values**– A schedule of pay items, which subdivides the Work into its various parts and which details, for each itemized part, cost and pricing information required for making payments for Work performed. The sum of all pay item costs in the Schedule of Values must equal the Contract Price for the Work.

**Shop Drawings**– Includes drawings, diagrams, illustrations, standard schedules, performance charts, instructions and other data prepared by or for the **Contractor** to illustrate some part of the Work, or by a Supplier and submitted by the **Contractor** to illustrate items of material or equipment.

**Soil Erosion and Sedimentation Control**– The planning, design and installation of appropriate Best Management Practices designed and engineered specifically to reduce or eliminate the off-site migration of soils via water runoff, wind, vehicle tracking, etc. Soil erosion and sedimentation control in the State of Michigan is regulated under The Natural Resources Environmental Protection Act; Soil Erosion and Sedimentation Control, 1994 PA 451, Part 91, as amended, MCL 324.9101 et seq. Soil erosion and sedimentation control associated with this Contract is monitored and enforced by the DTMB-SFA.

**State**– The State of Michigan in its governmental capacity, including its departments, divisions, agencies, boards, offices, commissions, officers, employees, and agents. Non-capitalized references to a state refer to a state other than the State of Michigan.

**State Construction Code**– The Michigan State Construction Code Act, 1972 PA 230, as amended, MCL 125.1501 et seq.

**Subcontractor**– A Person having an agreement with the Contractor to provide labor at the site and furnishing materials and/or equipment for incorporation into the Work.

**Submittals**– Includes technical Submittals, Progress Schedules and those other documents required for submission by the Contract Documents. The term "technical Submittal" includes Shop Drawings, brochures, samples, Operation and Maintenance (O&M) Manuals, test procedures and any other Submittal the Contract Documents require the **Contractor** to submit to demonstrate how the items covered, after installation or incorporation into the Work, will conform to the information given in the Contract Documents and be compatible with the design of the completed Work as a functioning whole as indicated in the Contract Documents.

**Substantial Completion**– The Work, or a portion of the Work designated in the Contract Documents as eligible for separate Substantial Completion, has been completed in accordance with the Contract Documents as determined by the PSC, to the extent that the **Owner** can use or occupy the entire Work, or the designated portion of the Work, for the use intended without any outstanding, concurrent Work at the site, except as may be required to complete or correct Punch List items.

**Supplier**– A manufacturer or fabricator, or a distributor, material man or vendor representing a manufacturer or fabricator, who has an agreement with the Contractor to furnish materials and/or equipment.

**Tariffs**– means any duties, taxes, fees, charges, or other assessments of any kind imposed by any federal authority on the importation of goods, products or materials, including but not limited to customs duties; Section 201, 232, and 301 tariffs; antidumping and countervailing duties; import surcharges; merchandise processing fees; harbor maintenance fees; and any comparable or successor governmental assessments applicable to imported goods, products or materials.

**Total Float**– Number of Calendar Days by which the Work or any part of the Work may be delayed from its Early Dates without necessarily causing an overrun in a pertinent Contract Time. Total Float is by definition at least equal to Contract Float.

**Underground Utilities** –Pipelines, piping, conduit, duct, cables, wells, tanks, tunnels and appurtenances, or other similar facilities, installed underground to convey or support conveyance of potable water, sprinkler or irrigation water, fire protection systems, electricity, gases, steam, petroleum products, sewerage and drainage removal, telephone, communications, cable TV, traffic, or control systems.

**Unit Price Work**– The work involving specified quantities (i.e., related Work quantities) which, when performed, is measured by the **Professional** and paid using the measured quantities and unit prices contained in the Contract Documents. Performance of Unit Price Work for undefined quantities is contingent upon conditions encountered at the site, as determined, and authorized by the **Professional**.

**Unit Price Work, Specific**– Work of specified and defined quantities (i.e., quantities are detailed in, and can be taken-off from, the Contract Documents) that when performed is measured by the **Professional** and paid based on the measured quantities and unit prices contained in the Contract Documents.

**Work**- (as in “the Work,” “the entire Work”)- The entire *completed Construction* required by the Contract Documents. The Work results from furnishing and performing all services, obligations, responsibilities, management, supervision, labor, materials, equipment, construction equipment, general conditions, permits, taxes, Tariffs, patent fees and royalties, testing, inspection and approval responsibilities, warranties, temporary facilities, small tools, field supplies, Bonds, insurance, mobilization, close-out, overhead and all connections, devices and incidental items of any kind or nature required and/or made necessary by the Contract Documents.

**Work Involved, any Work Involved**– Existing or prospective Work (a) reflected in any notice, proposal, or claim, or (b) reflected in changes ordered or in process, or (c) affected by Delay.

**APPENDIX II**  
**SPECIAL WORKING CONDITIONS**

## DEPARTMENT OF NATURAL RESOURCES

The Work comprising this Project will be performed at a site of the Department of Natural Resources. The Contractor must comply with all rules and regulations pertaining to such sites and must conform to the following rules:

1. The Contractor must always provide a competent Superintendent satisfactory to the Department of Natural Resources on the work site during working hours with full authority to act for him. It must be the Contractor's responsibility to furnish the Department of Natural Resources with the name, address, and telephone number of the responsible person to contact for Emergency during after hour, weekend, and holiday periods.
2. Access to and egress from the site must be via routes specifically designated by the Department of Natural Resources authorized representative.
3. All work will be coordinated to minimally interfere with the normal function of the boating access site which will be open and operational between the spring opening and fall closing. Specifically,
  - 3.1 No Work must be performed at the site on Saturdays, Sundays, holidays or during night hours without the written permission from the Department of Natural Resources; and
4. Areas on the site for employee parking, toolboxes, material lay down, etc., must be assigned by the Department of Natural Resources. All firearms, weapons, alcoholic beverages, or explosives must be removed from vehicles before entering the site.
5. Heavy equipment such as bulldozers and power shovels must be locked or immobilized in an acceptable manner when not in use. No tools, small pipe, copper, or wire must remain on the site overnight, unless acceptably locked inside shanties or tool chests. There will be no exchange, loaning or borrowing of tools, equipment or manpower between the Department of Natural Resources and the Contractor.
6. The Contractor must comply with the special condition requirements of the Department of Natural Resources and the United States Army Corps of Engineers Permit Sections appended to these specifications.
7. Work Schedule:
  - 7.1 Work must be substantially complete by September 24, 2026. Work included must be Mobilization, Removals, Earth Excavation/Trenching, aggregate base conditioning, aggregate base, resurfacing, aggregate shoulder construction, slope restoration, and maintaining traffic.
  - 7.2 Closure of the entrance drive to the public is permitted from 6:00 a.m. Monday through 7:00 p.m. Thursday. The Contractor shall allow park staff access during the closure window(s). Multiple closure windows are permitted as detailed in the approved progress schedule to complete all work by the required substantially complete date noted herein.
    - a. The entrance drive must be graded, open, and accessible to vehicular and pedestrian traffic outside this closure window. The drive must be open to traffic Friday through Sunday with full access to the State Park. Prior approval for work on Fridays, Saturdays, or Sundays to complete any construction operations that will not impact vehicular or pedestrian access to the park must be requested a minimum of 48 hours in advance of the proposed work.
  - 7.3 No work can be completed during the holiday periods listed below:
    - a. Labor Day Holiday: 7:00 p.m. Thursday, September 3, 2026, to 6:00 a.m. Tuesday, September 7, 2026

**APPENDIX III**  
**SPECIAL PROJECT PROCEDURES**

## SOIL EROSION AND SEDIMENTATION CONTROL PROJECT PROCEDURES FOR CONTRACTORS ON DTMB OWNED AND MANAGED PROPERTIES

1. Comply with Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act 1994 PA 451, as amended.
2. Contact the DTMB, SFA, Design and Construction Division to discuss the implementation of soil erosion and sedimentation control (SESC) on the Project with DTMB SESC Officer. Phone **(517) 388-3045** or Email [DTMB-SESC@michigan.gov](mailto:DTMB-SESC@michigan.gov).
3. Following the award of a contract, the Contractor will be required to prepare and issue for approval an SESC Implementation Plan, which indicates the Contractor's intended implementation of SESC on the project including a schedule and sequence. The Environmental Health and Safety Section, upon approval of the implementation plan, will issue to the Contractor an "Authorization to Proceed with Earth Change" document, which is to be posted at the job site. This document is issued in lieu of a permit from the county. Earthwork shall not begin prior to the issuance of this Authorization. Upon receipt of the Authorization document, the Contractor may begin earth change activities.
4. See below the "Checklist for Contractor's SESC Implementation Plan" for details of the required information necessary for the Contractor to create the SESC Implementation Plan. The intent of this plan is to ensure that the Contractor has reviewed and understands the SESC provisions within the plans and specifications.
5. CHECKLIST FOR CONTRACTOR'S SOIL EROSION AND SEDIMENTATION CONTROL IMPLEMENTATION PLAN  
(For projects that include earth changes or disturb existing vegetation):

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET  
STATE FACILITIES ADMINISTRATION, DESIGN AND CONSTRUCTION DIVISION  
SOIL EROSION AND SEDIMENTATION CONTROL PROGRAM  
P.O. Box 30026, Lansing, Michigan 48909

**PROJECT TITLE:**  
**PROJECT LOCATION:**  
**PROJECT FILE NUMBER:**  
**INDEX NUMBER:**

Prior to the start of earthwork, the Contractor must submit a Soil Erosion and Sedimentation Control (SESC) Implementation Plan to the Michigan Department of Technology, Management and Budget, Soil Erosion and Sedimentation Control Program. The intent of this plan is to ensure that the Contractor has reviewed and understands the SESC provisions within the plans and specifications. The following checklist will provide Contractors with assistance in creating the SESC Implementation Plan.

The SESC Implementation Plan must include:

1.  A written plan or letter demonstrating:
  - The Contractor's means and methods for the implementation of SESC provisions included within the plans and specifications and compliance with the provisions of Part 91 of PA 451 of 1994, as amended.
  - The Contractor's plan for dust control.
  - The Contractor's plan for inspection and maintenance of temporary SESC's.
2.  A map, location plan, drawing, or amended copy of the Project SESC or grading plan showing:
  - The locations of any stockpiles of soil associated with the Project
  - The temporary SESC controls associated with stockpiles of soil
  - The Contractor's suggested or proposed additions or relocations of any temporary or permanent SESC's associated with the Project plans and specifications (subject to approval by Engineer and DTMB)
  - Location of site entrances, exits and vehicle routes
  - Location of site superintendent's/project manager's site trailer or office (for SESC Inspector check-in)
3.  A schedule for the installation and removal of temporary controls and the installation of permanent soil erosion and sedimentation controls in relation to the overall construction schedule.

Submit the above items to the above address.

Upon approval of the Contractor's plan, an "Authorization to Proceed with Earth Change" will be issued by DTMB, Design and Construction Division.

## DEMOLITION/REMODELING PROJECT PROCEDURES

Furnish all equipment, materials, labor, and services necessary to complete all building demolition required in connection with the existing building, in order to permit the installation of new Work. The goal of the Owner is to generate the least amount of

waste or debris possible. However, inevitable waste and debris that are generated shall be reused, salvaged, or recycled, and disposal in landfills shall be minimized to the extent economically feasible. The Contractor will be required to prepare waste management plan for the collection, handling, storage, transportation, and disposal of the waste generated at the construction site for the Owner's review and approval. The Contractor will be required to produce waste management progress reports.

1. Locations: Notations are made in various places on the Drawings to call attention to building demolition which is required; however, these Drawings are not intended to show every item to be removed. The Contractor and the Subcontractors for the various trades must remove the materials related to their respective trades as required to permit the construction of the new Work as shown.
2. Permits: The Contractor must secure from the appropriate agencies all required permits necessary for proper execution of the work before starting work on the project site. All fees for securing the permits must be paid by the Contractor, including all inspection costs which may be legally assessed by the Bureau of Construction Codes in accordance with the authority granted under the Public Act 1980 PA 371, as amended.
3. Enclosures: Where it is necessary to make alterations to walls, floors or roof of the existing building, the Contractor must provide and maintain dustproof partitions to separate the parts where Work is being done from the adjoining parts occupied by the State Agency. Where any parts are opened and exposed to the elements, the Contractor must provide weather tight enclosures to fully protect the structure and its contents.
4. Waste Management Plan: The management plan must address waste source identification and separation, returns, reuse and salvage, recycling, landfill options, alternatives to landfilling, materials handling procedures and transportation.
5. Preparation: Protect all existing Work that is to remain and restore in an approved manner any such Work that becomes damaged.
  - 5.1 Rubbish and debris resulting from the Work must be removed immediately from the site by the Contractor. However, any recyclable materials must be recycled; the Contractor will be required to use alternatives to landfills for waste disposal such as reuse or recycle of asphalt, bricks, concrete, masonry, plastics, paint, glass, carpet, metals, wood, drywall, insulation, and any other waste materials to the extent practical.
  - 5.2 Unless otherwise specified, the Agency will remove existing furniture, drapery tracks, draperies, window blinds, and other equipment items, which might interfere with the new construction.
6. Coordination: Demolition work, in connection with any new unit of Work, must not be commenced until all new materials required for completion of that new item of Work are at hand.
7. Waste Management Plan Progress Reports: Submit an updated report with the payment requests. The progress reports shall include:
  - a. The amount of waste sent to a landfill, tipping fees paid and the total disposal cost. Include supporting documents such as manifests, weight tickets, receipts and/or invoices.
  - b. Records for each material recycled/reused/salvaged from the project including the amount, date removed from the job site, destination, transportation cost, recycled materials, and the net cost/ savings.
  - c. Breakdown of waste by type generated to date.
  - d. Recycling/salvage/landfill rates.
  - e. Percent of waste recycled/salvaged to date.

## HAZARDOUS MATERIALS PROJECT PROCEDURES

1. The Contractor must use, handle, store, dispose of, process, transport and transfer any material considered a Hazardous Material in accordance with all federal, state, and local Laws. If the Contractor encounters material reasonably believed to be a Hazardous Material and which may present a substantial danger, the Contractor must immediately stop all affected work, give written notice to the Owner of the conditions encountered, and take appropriate health and safety precautions.
2. This project has been identified by the DTMB-SFA as having a possibility of containing Hazardous Waste materials to be legally removed from the Project job site to complete the Work as described in the Proposal and Contract. If removal of friable asbestos material is required, the Contractor must contact the Air Quality Division, Department of Environment, Great Lakes, and Energy, at **(517) 284-6773**, for a permit and furnish all training, labor, materials, services, insurance, and equipment necessary to carry out the removal operations of all Hazardous Materials from the Project job site, as identified by the Scope of Work, or encountered on the Project job site, in accordance with State and Federal Hazardous Waste Codes. A Contract Change Order will be written to modify the existing Contract to pay for the additional cost.
3. Environmental Hazards (air, water, land and liquid industrial) are handled by the Waste and Hazardous Materials Division, Michigan Department of Environment, Great Lakes, and Energy (EGLE) in carrying out the requirements of the Federal Environmental Protection Agency (EPA). For general information and/or a copy of the latest regulations and publications call (517) 335-2690.
4. The Michigan Occupational Safety and Health Administration (MIOSHA) provides protection and regulations for the safety and health of workers. The Department of Licensing and Regulatory Affairs provides for the safety of workers. The Department of Community Health provides for the health of workers (517/373-3740) (TDD 517/373-3573).
  - 4.1 Contractor must post any applicable State and/or Federal government regulations at the job site in a prominent location.
  - 4.2 Contractor must be responsible for training their workers in safe work practices and in proper removal methods when encountering hazardous chemicals.
5. Applicable Regulations:
  - 5.1 Natural Resources and Environmental Protection Act – PA 451 of 1994, as amended, including Part 111 – Hazardous Waste Management, Part 121 – Liquid Industrial Waste and Part 147 – PCB compounds.
  - 5.2 RCRA, 1976 - Resource Conservation and Recovery Act: This federal statute regulates generation, transportation, treatment, storage, or disposal of hazardous wastes nationally.
  - 5.3 TSCA, 1979 – Toxic Substances Control Act: This statute regulates the generation, transportation, storage, and disposal of industrial chemicals such as PCBs.
6. Definitions: Hazardous substances are ignitable, corrosive, reactive, and/or toxic, based on their chemical characteristics.
  - 6.1 Under Federal and Michigan Law, a Small Quantity Generator of hazardous waste provides from 220 to less than 2,000 lbs./month or never accumulates 2,200 lbs. or more.
  - 6.2 A Generator size provider of hazardous waste provides 2,200 lbs. or more/month or accumulates above 2,200 lbs.
7. Disposals: To use an off-site hazardous waste disposal facility, the Contractor must use the Uniform Hazardous Waste Manifest (shipping paper). Small quantities of hazardous waste may not be disposed of in sanitary landfills used for solid waste.
8. Federal, state, and local Laws and regulations may apply to the storage, handling and disposal of Hazardous Materials and wastes at each State Agency. Contact the **Environmental Assistance Center** of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) at **1-800-662-9278**, Fax to: 517-241-0673 or e-mail to: [DEQ-EAD-env-assist@michigan.gov](mailto:DEQ-EAD-env-assist@michigan.gov) for general EGLE information including direct and referral assistance on air, water and wetlands permits; contaminated site clean-ups; underground storage tank removals and remediation; hazardous and solid waste disposal; pollution prevention and recycling; and compliance-related assistance. The Center provides businesses, municipalities, and the public with a single point of access to EGLE's environmental programs.

**APPENDIX V**  
**PREVAILING WAGE RATE SCHEDULES**

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>3.1 Power Equip. Operator - Highway &amp; Heavy</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$71.46	\$94.57	\$117.67
Apprentice: Level 1 0 - 6 Months	\$57.61	\$73.79	\$89.97
Apprentice: Level 2 7 -12 Months	\$59.93	\$77.28	\$94.61
Apprentice: Level 3 13 - 18 Months	\$62.23	\$80.73	\$99.21
Apprentice: Level 4 19 - 24 Months	\$64.54	\$84.19	\$103.83
Apprentice: Level 5 25 - 30 Months	\$66.85	\$87.66	\$108.45
Apprentice: Level 6 31 - 36 Months	\$69.15	\$91.10	\$113.05

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>3.2 Power Equip. Operator - Highway &amp; Heavy</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$70.31	\$92.84	\$115.37
Apprentice: Level 1 0 - 6 Months	\$56.81	\$72.59	\$88.37
Apprentice: Level 2 7 -12 Months	\$59.06	\$75.97	\$92.87
Apprentice: Level 3 13 - 18 Months	\$61.31	\$79.35	\$97.37
Apprentice: Level 4 19 - 24 Months	\$63.56	\$82.72	\$101.87
Apprentice: Level 5 25 - 30 Months	\$65.81	\$86.09	\$106.37
Apprentice: Level 6 31 - 36 Months	\$68.06	\$89.47	\$110.87

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>3.3 Power Equip. Operator - Highway &amp; Heavy</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.58	\$82.75	\$101.91
Apprentice: Level 1 0 - 6 Months	\$52.10	\$65.53	\$78.95
Apprentice: Level 2 7 -12 Months	\$54.02	\$68.41	\$82.79
Apprentice: Level 3 13 - 18 Months	\$55.92	\$71.26	\$86.59
Apprentice: Level 4 19 - 24 Months	\$57.84	\$74.14	\$90.43
Apprentice: Level 5 25 - 30 Months	\$59.75	\$77.00	\$94.25
Apprentice: Level 6 31 - 36 Months	\$61.67	\$79.89	\$98.09

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>3.4 Power Equip. Operator - Highway &amp; Heavy</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.02	\$81.91	\$100.79
Apprentice: Level 1 0 - 6 Months	\$51.70	\$64.93	\$78.15
Apprentice: Level 2 7 -12 Months	\$53.59	\$67.76	\$81.93
Apprentice: Level 3 13 - 18 Months	\$55.48	\$70.60	\$85.71
Apprentice: Level 4	\$57.36	\$73.42	\$89.47
Apprentice: Level 5 25 - 30 Months	\$59.25	\$76.25	\$93.25
Apprentice: Level 6 31 - 36 Months	\$61.13	\$79.07	\$97.01

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>3.5 Power Equip. Operator - Highway &amp; Heavy</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$44.80	\$60.98	\$77.15
Apprentice: Level 1 0 - 6 Months	\$35.09	\$46.42	\$57.73
Apprentice: Level 2 7 -12 Months	\$36.71	\$48.84	\$60.97
Apprentice: Level 3 13 - 18 Months	\$38.33	\$51.27	\$64.21
Apprentice: Level 4 19 - 24 Months	\$39.95	\$53.71	\$67.45
Apprentice: Level 5 25 - 30 Months	\$41.57	\$56.13	\$70.69
Apprentice: Level 6 31 - 36 Months	\$43.18	\$58.55	\$73.91

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.1 Power Equip. Operator - Commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$73.64	\$97.79	\$121.93
Apprentice: Level 1 0 - 6 Months	\$59.15	\$76.06	\$92.95
Apprentice: Level 2 7 -12 Months	\$61.56	\$79.67	\$97.77
Apprentice: Level 3 13 - 18 Months	\$63.98	\$83.30	\$102.61
Apprentice: Level 4 19 - 24 Months	\$66.39	\$86.92	\$107.43
Apprentice: Level 5 25 - 30 Months	\$68.81	\$90.55	\$112.27
Apprentice: Level 6 25 - 30 Months	\$71.22	\$94.16	\$117.09

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.2 Power Equip. Operator - Commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$73.34	\$97.33	\$121.33
Apprentice: Level 1 0 - 6 Months	\$58.94	\$75.74	\$92.53
Apprentice: Level 2 7 -12 Months	\$61.34	\$79.34	\$97.33
Apprentice: Level 3 13 - 18 Months	\$63.74	\$82.94	\$102.13
Apprentice: Level 4 19 - 24 Months	\$66.14	\$86.54	\$106.93
Apprentice: Level 5 25 - 30 Months	\$68.54	\$90.14	\$111.73
Apprentice: Level 6 31 - 36 Months	\$70.94	\$93.74	\$116.53

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.3 Power Equip. Operator - Commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$72.52	\$96.11	\$119.69
Apprentice: Level 1 0 - 6 Months	\$58.37	\$74.88	\$91.39
Apprentice: Level 2 7 -12 Months	\$60.74	\$78.44	\$96.13
Apprentice: Level 3 13 - 18 Months	\$63.09	\$81.96	\$100.83
Apprentice: Level 4 19 - 24 Months	\$65.45	\$85.51	\$105.55
Apprentice: Level 5 25 - 30 Months	\$67.81	\$89.04	\$110.27
Apprentice: Level 6 31 - 36 Months	\$70.17	\$92.59	\$114.99

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.4 Power Equip. Operator - Commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$71.66	\$94.82	\$117.97
Apprentice: Level 1 0 - 6 Months	\$57.77	\$73.99	\$90.19
Apprentice: Level 2 7 - 12 Months	\$60.08	\$77.45	\$94.81
Apprentice: Level 3 13 - 18 Months	\$62.40	\$80.93	\$99.45
Apprentice: Level 4 19 - 24 Months	\$64.71	\$84.39	\$104.07
Apprentice: Level 5 25 - 30 Months	\$67.03	\$87.87	\$108.71
Apprentice: Level 6 31 - 36 Months	\$69.35	\$91.35	\$113.35

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.5 Power Equip. Operator - Commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$70.69	\$93.37	\$116.03
Apprentice: Level 1 0 - 6 Months	\$57.09	\$72.96	\$88.83
Apprentice: Level 2 7 - 12 Months	\$59.36	\$76.37	\$93.37
Apprentice: Level 3 13 - 18 Months	\$61.62	\$79.76	\$97.89
Apprentice: Level 4 19 - 24 Months	\$63.90	\$83.18	\$102.45
Apprentice: Level 5 25 - 30 Months	\$66.16	\$86.57	\$106.97
Apprentice: Level 6 31 - 36 Months	\$68.43	\$89.97	\$111.51

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.6 Power Equip. Operator - Commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$68.98	\$90.80	\$112.61
Apprentice: Level 1 0 - 6 Months	\$55.89	\$71.16	\$86.43
Apprentice: Level 2 7 -12 Months	\$58.07	\$74.43	\$90.79
Apprentice: Level 3 13 - 18 Monhs	\$60.25	\$77.71	\$95.15
Apprentice: Level 4 19 - 24 Months	\$62.44	\$80.99	\$99.53
Apprentice: Level 5 25 - 30 Months	\$64.62	\$84.26	\$103.89
Apprentice: Level 6 31 - 36 Months	\$66.80	\$87.53	\$108.25

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.7 Power Equip. Operator - Commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$61.67	\$79.83	\$97.99
Apprentice: Level 1 0 - 6 Months	\$50.78	\$63.50	\$76.21
Apprentice: Level 2 7 -12 Months	\$52.58	\$66.20	\$79.81
Apprentice: Level 3 13 - 18 Months	\$54.40	\$68.93	\$83.45
Apprentice: Level 4 19 - 24 Months	\$56.22	\$71.66	\$87.09
Apprentice: Level 5 25 - 30 Months	\$58.03	\$74.37	\$90.71
Apprentice: Level 6 31 - 36 Months	\$59.85	\$77.10	\$94.35

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>4.8 Power Equip. Operator - commercial</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$60.64	\$71.39	\$86.73
Apprentice: Level 1 0 - 6 Months	\$50.05	\$62.40	\$74.75
Apprentice: Level 2 7 -12 Months	\$51.82	\$65.06	\$78.29
Apprentice: Level 3 13 - 18 Months	\$53.58	\$67.70	\$81.81
Apprentice: Level 4 19 - 24 Months	\$55.35	\$70.36	\$85.35
Apprentice: Level 5 25 - 30 Months	\$57.11	\$72.99	\$88.87
Apprentice: Level 6 31 - 36 Months	\$58.88	\$75.65	\$92.41

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>5.1 Truck Driver Class</b>	<b>01/05/2026</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$54.10	\$70.52	\$86.94

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Articulated Hauler</b>	<b>10/28/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.02	\$81.91	\$100.79
Apprentice: Apprentice Level 1	\$51.70	\$64.93	\$78.15
Apprentice: Apprentice Level 2	\$53.59	\$67.76	\$81.93
Apprentice: Apprentice Level 3	\$55.48	\$70.60	\$85.71
Apprentice: Apprentice Level 4	\$57.36	\$73.42	\$89.47
Apprentice: Apprentice Level 5	\$59.25	\$76.25	\$93.25
Apprentice: Apprentice Level 6	\$61.13	\$79.07	\$97.01

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Asbestos abatement worker or environmental remediation worker</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$56.20	\$73.24	\$90.28
Apprentice: Trainee 600 hours + 1 year	\$43.12	\$55.01	\$66.90

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Boilermaker</b>	<b>10/29/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$79.64	\$119.12	\$158.58
Apprentice: 1st Period	\$58.07	\$86.78	\$115.44
Apprentice: 2nd Period	\$59.89	\$89.50	\$119.08
Apprentice: 3rd Period	\$61.81	\$92.24	\$122.74
Apprentice: 4th Period	\$63.50	\$94.91	\$126.30
Apprentice: 5th Period	\$65.26	\$97.54	\$129.82
Apprentice: 6th Period	\$68.89	\$103.00	\$137.08
Apprentice: 7th Period	\$72.46	\$108.36	\$144.22
Apprentice: 8th Period	\$76.07	\$113.77	\$151.44

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Boom Truck</b>	<b>10/28/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$70.31	\$92.84	\$115.37
Apprentice: Apprentice Level 1	\$56.81	\$72.59	\$88.37
Apprentice: Apprentice Level 2	\$59.06	\$75.97	\$92.87
Apprentice: Apprentice Level 3	\$61.31	\$79.35	\$97.37
Apprentice: Apprentice Level 4	\$63.56	\$82.72	\$101.87

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Bricklayers</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$67.32	\$87.09	\$106.86
Apprentice: Level 1	\$52.61	\$65.03	\$77.44
Apprentice: Level 2	\$54.79	\$68.30	\$81.80
Apprentice: Level 3	\$56.97	\$71.57	\$86.16
Apprentice: Level 4	\$59.15	\$74.84	\$90.52
Apprentice: Level 5	\$61.33	\$78.11	\$94.88
Apprentice: Level 6	\$63.51	\$81.38	\$99.24
Apprentice: Level 7	\$65.69	\$84.65	\$103.60

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Carpenters</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$74.81	\$96.28	\$117.75
Apprentice: Level 1 1st year	\$48.91	\$61.89	\$74.87
Apprentice: Level 2 2nd Year	\$55.39	\$70.50	\$85.60
Apprentice: Level 3 3rd Year	\$61.86	\$79.09	\$96.31
Apprentice: Level 4 4th Year	\$68.34	\$87.69	\$107.04

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Carpet layers (linoleum)</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$53.72	\$70.77	\$87.81
Apprentice: Level 1	\$43.49	\$55.42	\$67.35
Apprentice: Level 2	\$45.20	\$57.99	\$70.77
Apprentice: Level 3	\$48.61	\$63.10	\$77.59
Apprentice: Level 4	\$52.02	\$68.22	\$84.41

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Cement Mason</b>	<b>10/29/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$64.27	\$96.41	\$128.54
Apprentice: Apprentice Level 1	\$47.90	\$71.25	\$94.59
Apprentice: Apprentice Level 2	\$50.43	\$75.04	\$99.65
Apprentice: Apprentice Level 3	\$52.96	\$78.84	\$104.71
Apprentice: Apprentice Level 4	\$55.49	\$82.63	\$109.77
Apprentice: Apprentice Level 5	\$58.03	\$86.44	\$114.85
Apprentice: Apprentice Level 6	\$60.56	\$90.24	\$119.91

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Electricians</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$83.54	\$114.99	\$142.83
Apprentice: 1st Period	\$52.81	\$68.94	\$81.47
Apprentice: 2nd Period	\$55.60	\$73.13	\$87.05
Apprentice: 3rd Period	\$58.38	\$77.28	\$92.61
Apprentice: 4th Period	\$61.16	\$81.47	\$98.18
Apprentice: 5th Period	\$63.95	\$85.66	\$103.76
Apprentice: 6th Period	\$69.52	\$94.00	\$114.88

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Elevator Constructors</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$98.25	\$130.76	\$163.26
Apprentice: 1st Year Apprentice	\$63.80	\$81.68	\$99.56
Apprentice: 2nd Year Apprentice	\$72.84	\$93.97	\$115.10
Apprentice: 3rd Year Apprentice	\$76.28	\$99.04	\$121.79
Apprentice: 4th Year Apprentice	\$83.17	\$109.18	\$135.18

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Glaziers</b>	<b>10/29/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$67.95	\$86.22	\$107.22
Apprentice: Apprentice Level 1	\$51.15	\$63.75	\$76.35
Apprentice: Apprentice Level 2	\$53.25	\$66.90	\$80.55
Apprentice: Apprentice Level 3	\$55.35	\$70.05	\$84.75
Apprentice: Apprentice Level 4	\$57.45	\$73.20	\$88.95
Apprentice: Apprentice Level 5	\$59.55	\$76.35	\$93.15
Apprentice: Apprentice Level 6	\$61.65	\$79.50	\$97.35
Apprentice: Apprentice Level 7	\$63.75	\$82.65	\$101.55
Apprentice: Apprentice Level 8	\$65.85	\$85.80	\$105.75

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Heating and Frost Insulator</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$75.80	\$96.17	\$116.54
Apprentice: Level 1	\$59.89	\$72.11	\$84.33
Apprentice: Level 2	\$61.93	\$75.17	\$88.41
Apprentice: Level 3	\$63.97	\$78.23	\$92.49
Apprentice: Level 4	\$66.00	\$81.28	\$96.55
Apprentice: Level 5	\$72.70	\$89.61	\$106.51

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Ironworker</b>	<b>10/31/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$75.42	\$93.70	\$111.97
Apprentice: Apprentice Level 1	\$57.42	\$70.40	\$83.37
Apprentice: Apprentice Level 2	\$59.59	\$73.12	\$86.64
Apprentice: Apprentice Level 3	\$61.54	\$75.43	\$89.32
Apprentice: Apprentice Level 4	\$64.59	\$79.40	\$94.20
Apprentice: Apprentice Level 5	\$67.64	\$83.36	\$99.07
Apprentice: Apprentice Level 6	\$75.42	\$93.70	\$111.97

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Laborer, Common - Commercial</b>	<b>11/04/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$56.50	\$73.00	\$89.50
Apprentice: Apprentice Level 1	\$48.25	\$60.63	\$73.00
Apprentice: Apprentice Level 2	\$49.90	\$63.10	\$76.30
Apprentice: Apprentice Level 3	\$51.55	\$65.58	\$79.60
Apprentice: Apprentice Level 4	\$54.85	\$70.53	\$86.20

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Laborer, Common - Highway &amp; Heavy</b>	<b>11/05/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$50.32	\$65.58	\$80.83
Apprentice: Level 1	\$42.69	\$54.13	\$65.57
Apprentice: Level 2	\$44.22	\$56.43	\$68.63
Apprentice: Level 3	\$45.74	\$58.71	\$71.67
Apprentice: Level 4	\$48.79	\$63.28	\$77.77

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Laborer, Landscaping</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$36.87	\$49.23	\$61.58
Apprentice: Apprentice Level 1	\$30.69	\$39.96	\$49.22
Apprentice: Apprentice Level 2	\$31.93	\$41.82	\$51.70
Apprentice: Apprentice Level 3	\$33.16	\$43.66	\$54.16
Apprentice: Apprentice Level 4	\$35.63	\$47.37	\$59.10

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Laborer, Skilled - Highway &amp; Heavy</b>	<b>11/05/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$51.22	\$66.93	\$82.63
Apprentice: Level 1	\$43.37	\$55.15	\$66.93
Apprentice: Level 2	\$44.94	\$57.51	\$70.07
Apprentice: Level 3	\$46.51	\$59.86	\$73.21
Apprentice: Level 4	\$49.65	\$64.57	\$79.49

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Landscaping equipment</b>	<b>10/28/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$39.09	\$52.56	\$66.02

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Low Voltage Tech</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$60.91	\$81.88	\$102.84
Apprentice: Period 1	\$37.26	\$46.40	\$55.54
Apprentice: Period 2	\$38.92	\$48.89	\$58.86
Apprentice: Period 3	\$40.58	\$51.38	\$62.18
Apprentice: Period 4	\$43.34	\$54.97	\$66.60
Apprentice: Period 5	\$43.90	\$56.36	\$68.82
Apprentice: Period 6	\$44.81	\$58.10	\$71.39

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Millwright</b>	<b>11/05/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$82.65	\$126.09	\$165.30
Apprentice: Level 1	\$60.79	\$91.21	\$121.58
Apprentice: Level 2	\$68.09	\$102.15	\$136.18
Apprentice: Level 3	\$75.36	\$113.05	\$150.72
Apprentice: Level 4	\$79.01	\$118.54	\$158.02

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Off-Road Truck</b>	<b>10/29/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.02	\$81.91	\$100.79
Apprentice: Apprentice Level 1	\$51.70	\$64.93	\$78.15
Apprentice: Apprentice Level 2	\$53.59	\$67.76	\$81.93
Apprentice: Apprentice Level 3	\$55.48	\$70.60	\$85.71
Apprentice: Apprentice Level 4	\$57.36	\$73.42	\$89.47
Apprentice: Apprentice Level 5	\$59.25	\$76.25	\$93.25
Apprentice: Apprentice Level 6	\$61.13	\$79.07	\$97.01

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Painters</b>	<b>02/05/2026</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$57.02	\$73.38	\$90.53
Apprentice: Level 1	\$43.30	\$52.80	\$63.09
Apprentice: Level 2	\$46.73	\$58.74	\$70.75
Apprentice: Level 3	\$50.16	\$63.89	\$77.61
Apprentice: Level 4	\$53.59	\$69.03	\$84.47

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Piledriver</b>	<b>11/01/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$74.81	\$96.28	\$117.75
Apprentice: Apprentice Level 1	\$48.71	\$61.59	\$74.47
Apprentice: Apprentice Level 2	\$55.39	\$70.50	\$85.60
Apprentice: Apprentice Level 3	\$61.86	\$79.09	\$96.31
Apprentice: Apprentice Level 4	\$68.34	\$87.69	\$107.04

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Pipefitters—steamfitters</b>	<b>10/31/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$86.36	\$111.31	\$136.27
Apprentice: Apprentice Level 1	\$35.76	\$45.82	\$55.51
Apprentice: Apprentice Level 2	\$36.27	\$46.58	\$56.51
Apprentice: Apprentice Level 3	\$37.41	\$48.29	\$58.79
Apprentice: Apprentice Level 4	\$38.56	\$50.02	\$61.09
Apprentice: Apprentice Level 5	\$39.71	\$51.74	\$63.39
Apprentice: Apprentice Level 6	\$40.86	\$53.47	\$65.69
Apprentice: Apprentice Level 7	\$42.01	\$55.19	\$67.99
Apprentice: Apprentice Level 8	\$43.16	\$56.92	\$70.29

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Pipefitters—Steamfitters</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$79.80	\$103.47	\$127.14
Apprentice: Level 1	\$32.16	\$42.49	\$52.81
Apprentice: Level 2	\$32.91	\$43.61	\$54.31
Apprentice: Level 3	\$36.08	\$47.41	\$58.73
Apprentice: Level 4	\$37.20	\$49.09	\$60.97
Apprentice: Level 5	\$38.38	\$50.83	\$63.28
Apprentice: Level 6	\$39.50	\$52.51	\$65.52
Apprentice: Level 7	\$40.68	\$54.26	\$67.83
Apprentice: Level 8	\$41.78	\$56.16	\$70.53
Apprentice: Level 9	\$44.13	\$59.31	\$74.48

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Plumbers</b>	<b>10/31/2025</b>		
<b>Wage Rates</b>	<b>Straight Time</b>	<b>Time and a Half</b>	<b>Double Time</b>
Journeyman	\$86.36	\$111.31	\$136.27
Apprentice: Level 1	\$35.61	\$45.59	\$55.57

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Plumbers</b>	<b>10/30/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$79.80	\$103.47	\$127.14
Apprentice: Apprentice Level 1	\$32.16	\$42.49	\$52.81
Apprentice: Apprentice Level 2	\$32.91	\$43.61	\$54.31
Apprentice: Apprentice Level 3	\$36.10	\$47.44	\$58.77
Apprentice: Apprentice Level 4	\$37.20	\$49.09	\$60.97
Apprentice: Apprentice Level 5	\$38.38	\$50.83	\$63.28
Apprentice: Apprentice Level 6	\$39.50	\$52.51	\$65.52
Apprentice: Apprentice Level 7	\$40.68	\$54.26	\$67.83
Apprentice: Apprentice Level 8	\$41.78	\$56.16	\$70.53

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Roofer/waterproofer</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$62.82	\$79.68	\$96.53
Apprentice: Apprentice 1	\$48.74	\$58.55	\$68.37
Apprentice: Apprentice 2	\$49.25	\$59.32	\$69.39
Apprentice: Apprentice 3	\$50.76	\$61.59	\$72.41
Apprentice: Apprentice 4	\$52.26	\$63.83	\$75.41
Apprentice: Apprentice 5	\$53.77	\$66.10	\$78.43
Apprentice: Apprentice 6	\$55.18	\$68.21	\$81.25
Apprentice: Apprentice 7	\$56.79	\$70.63	\$84.47
Apprentice: Apprentice 8	\$58.27	\$72.85	\$87.43
Apprentice: new apprentice	\$48.68	\$58.47	\$68.25

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Sheet Metal Worker</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$74.96	\$95.01	\$115.06
Apprentice: 1st & 2nd Periods	\$48.51	\$59.65	\$70.77
Apprentice: 3rd & 4th Periods	\$50.74	\$62.99	\$75.23
Apprentice: 5th & 6th Periods	\$52.96	\$66.32	\$79.67
Apprentice: 7th & 8th Periods	\$55.19	\$69.67	\$84.13

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Spray Foam Insulator</b>	<b>04/24/2026</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$38.17	\$54.00	\$69.82

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Sprinkler Fitters</b>	<b>11/03/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$78.57	\$102.66	\$126.74
Apprentice: 10th Period	\$69.91	\$87.12	\$104.33
Apprentice: 1st Period	\$31.91	\$40.00	\$48.09
Apprentice: 2nd Period	\$51.25	\$60.36	\$69.47
Apprentice: 3rd Period	\$53.58	\$63.71	\$73.83
Apprentice: 4th Period	\$55.91	\$67.04	\$78.17
Apprentice: 5th Period	\$58.25	\$70.40	\$82.55
Apprentice: 6th Period	\$60.58	\$73.73	\$86.89
Apprentice: 7th Period	\$62.91	\$77.08	\$91.24
Apprentice: 8th Period	\$65.25	\$80.44	\$95.62
Apprentice: 9th Period	\$67.58	\$83.78	\$99.98

**Four 10-hour days allowed?** - No

**Make Up Day Allowed?** - No

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Terrazzo Workers</b>	<b>04/17/2026</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.39	\$81.78	\$100.16
Apprentice: Level 1	\$42.67	\$53.70	\$64.73
Apprentice: Level 2	\$44.51	\$56.46	\$68.41
Apprentice: Level 3	\$46.35	\$59.22	\$72.09
Apprentice: Level 4	\$50.03	\$64.74	\$79.45
Apprentice: Level 5	\$51.86	\$67.49	\$83.11
Apprentice: Level 7	\$53.70	\$70.25	\$86.79
Apprentice: Level 8	\$55.54	\$73.01	\$90.47

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Tile Finishers</b>	<b>04/17/2026</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$56.70	\$71.74	\$86.78
Apprentice: Level 1	\$38.39	\$48.17	\$57.94
Apprentice: Level 2	\$39.90	\$50.43	\$60.96
Apprentice: Level 3	\$41.40	\$52.68	\$63.96
Apprentice: Level 4	\$42.90	\$54.93	\$66.96
Apprentice: Level 5	\$44.41	\$57.20	\$69.98
Apprentice: Level 6	\$45.91	\$59.45	\$72.98

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
Tile Setters			
04/17/2026			
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$63.39	\$81.78	\$100.16
Apprentice: Level 1	\$42.67	\$53.70	\$64.73
Apprentice: Level 2	\$44.51	\$56.46	\$68.41
Apprentice: Level 3	\$46.35	\$59.22	\$72.09
Apprentice: Level 4	\$50.03	\$64.74	\$79.45
Apprentice: Level 5	\$51.86	\$67.49	\$83.11
Apprentice: Level 7	\$53.70	\$70.25	\$86.79
Apprentice: Level 8	\$55.54	\$73.01	\$90.47

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Tunnel Miner</b>	<b>11/04/2025</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$53.07	\$68.14	\$83.20
Apprentice: Level 1	\$45.54	\$56.84	\$68.14
Apprentice: Level 2	\$47.04	\$59.09	\$71.14
Apprentice: Level 3	\$48.55	\$61.36	\$74.16
Apprentice: Level 4	\$51.56	\$65.87	\$80.18

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

# Prevailing Wage Rates for State Of Michigan Funded Projects

## Official Rate Schedule

### Wayne

Classification Name	Last Updated		
<b>Underground and Open Cut Laborer</b>	<b>01/06/2026</b>		
Wage Rates	Straight Time	Time and a Half	Double Time
Journeyman	\$52.92	\$67.91	\$82.90
Apprentice: Level 1	\$45.42	\$56.66	\$67.90
Apprentice: Level 2	\$46.92	\$58.91	\$70.90
Apprentice: Level 3	\$48.42	\$61.16	\$73.90
Apprentice: Level 4	\$51.42	\$65.66	\$79.90

**Four 10-hour days allowed?** - Yes

**Make Up Day Allowed?** - Yes

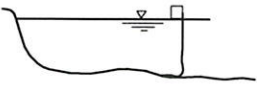
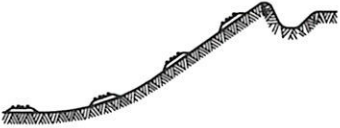




**APPENDIX VI**


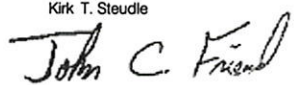

**MDOT STANDARD PLANS AND SPECIAL DETAILS**


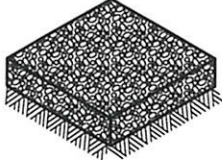


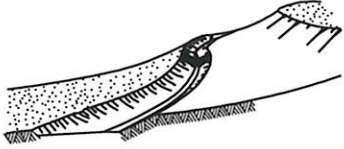
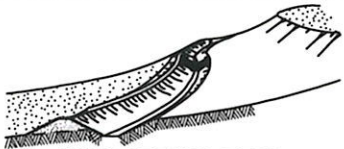


# APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

( COMPREHENSIVE DETAILS ARE LOCATED IN SECTION 6 OF )  
 ( THE SOIL EROSION & SEDIMENTATION CONTROL MANUAL )

- A = SLOPES
- B = STREAMS AND WATERWAYS
- C = SURFACE DRAINAGEWAYS
- D = ENCLOSED DRAINAGE (INLET & OUTFALL CONTROL)
- E = LARGE FLAT SURFACE AREAS
- F = BORROW AND STOCKPILE AREAS
- G = DNRE PERMIT MAY BE REQUIRED

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
1	 TURBIDITY CURTAIN	A Turbidity Curtain is used when slack water area is necessary to isolate construction activities from the watercourse. The still water area contains the sediments within the construction limits.		•					
2	 GRUBBING OMITTED	Retains existing root mat which assists in stabilizing slopes. Assists in the revegetation process by providing sprout growth. Reduces sheet flow velocities preventing rilling and gulying. Discourages off-road vehicle use.	•				•		
3	 PERMANENT/TEMPORARY SEEDING	Inexpensive but effective erosion control measure to stabilize flat areas and mild slopes. Permits runoff to infiltrate soil, reducing runoff volumes. Proper preparation of the seed bed, fertilizing, mulching and watering is critical to its success.	•		•		•	•	
4	 DUST CONTROL	Dust control can be accomplished by watering, and/or applying calcium chloride. The disturbed areas should be kept to a minimum. PERMANENT/TEMPORARY SEEDING (KEY 3) should be applied as soon as possible.	•				•	•	
5	 SODDING	Provides immediate vegetative cover such as at spillways and ditch bottoms. Proper preparation of the topsoil, placement of the sod, and watering is critical to its success.	•				•	•	
6	 VEGETATED BUFFER STRIPS	Reduces sheet flow velocities preventing rilling and gulying. Assists in the collection of sediments by filtering runoff. Assists in the establishment of a permanent vegetative cover.	•				•		

 PREPARED BY DESIGN DIVISION DRAWN BY: B.L.T. CHECKED BY: W.K.P.	DEPARTMENT DIRECTOR Kirk T. Steudle  APPROVED BY: _____ ENGINEER OF DELIVERY	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR <b>SOIL EROSION &amp; SEDIMENTATION CONTROL MEASURES</b>	
	APPROVED BY:  ENGINEER OF DEVELOPMENT	9-10-2010 F.H.W.A. APPROVAL	6-3-2010 PLAN DATE

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
7	 <p>RIPRAP</p>	Used where vegetation cannot be established. Very effective in protecting against high velocity flows. Should be placed over a geotextile liner.	•	•	•	•			•
8	 <p>AGGREGATE COVER</p>	Can be used in any area where a stable condition is needed for construction operations, equipment storage or in heavy traffic areas. Reduces potential soil erosion and fugitive dust by stabilizing raw areas.	•				•	•	
9	 <p>BENCHES</p>	Reduces sheet flow velocities preventing rilling and gulying. Assists in the collection and filtering of sediments. Provides access for stabilizing slopes.	•					•	
10	 <p>DIVERSION DIKE</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying. Collects and diverts runoff to properly stabilized drainage ways. Works well with INTERCEPTING DITCH (KEY 11)	•				•	•	
11	 <p>INTERCEPTING DITCH</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying. Works well with DIVERSION DIKE (KEY 10)	•				•	•	
12	 <p>INTERCEPTING DITCH AND DIVERSION DIKE</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying.	•				•	•	
13	 <p>GRAVEL FILTER BERM</p>	Useful in filtering flow prior to its reentry into a lake, stream or wetland. Works well with SEDIMENT TRAP (KEY 20) and TEMPORARY BYPASS CHANNEL (KEY 35). Not to be used in lieu of a CHECK DAM (KEY 37) in a ditch.	•		•			•	
14	 <p>GRAVEL ACCESS APPROACH</p>	Provides a stable access to roadways minimizing fugitive dust and tracking of materials onto public streets and highways.						•	•

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

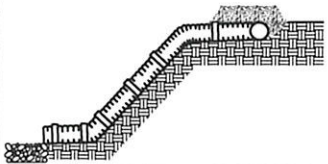


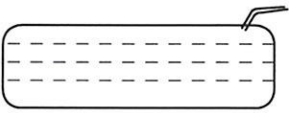

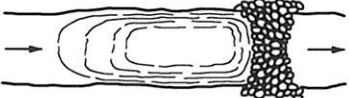
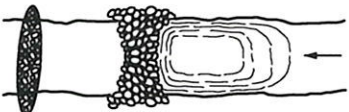

**SOIL EROSION & SEDIMENTATION  
CONTROL MEASURES**

9-10-2010  
F.H.W.A. APPROVAL

6-3-2010  
PLAN DATE

**R-96-E**

SHEET  
2 OF 6

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
15	 <p>SLOPE DRAIN SURFACE</p>	<p>Excellent device for carrying water down slopes without creating an erosive condition.</p> <p>Generally used in conjunction with DIVERSION DIKE (KEY 10), INTERCEPTING DITCH (KEY 11) and INTERCEPTING DITCH AND DIVERSION DIKE (KEY 12) to direct flow to a stable discharge area or SEDIMENT TRAP (KEY 20).</p>		•					
16	 <p>TREES, SHRUBS AND PERENNIALS</p>	<p>Trees, shrubs and perennials can provide low maintenance long term erosion protection. These plants may be particularly useful where site aesthetics are important along the roadside slopes.</p>		•				•	
17	 <p>PIPE DROP</p>	<p>Effective way to allow water to drop in elevation very rapidly without causing an erosive condition.</p> <p>Also works as a sediment collector device.</p> <p>May be left in place as a permanent erosion control device.</p>		•					
18	 <p>DEWATERING WITH FILTER BAG</p>	<p>It may be necessary to dewater from behind a cofferdam or construction dam to create a dry work site.</p> <p>Discharged water must be pumped to a filter bag.</p> <p>A GRAVEL FILTER BERM (KEY 13) may be placed downslope of the filter bag to provide additional filtration prior to entering any stream or wetland.</p>			•				•
19	 <p>ENERGY DISSIPATORS</p>	<p>A device to prevent the erosive force of water from eroding soils.</p> <p>Used at outlets of culverts, drainage pipes or other conduits to reduce the velocity of the water.</p> <p>Prevents structure scouring and undermining.</p>		•	•	•	•		
20	 <p>SEDIMENT TRAP</p>	<p>Used to intercept concentrated flows and prevent sediments from being transported off site or into a watercourse or wetland.</p> <p>The size of a Sediment Trap is 5 cubic yards or less.</p> <p>Works well when used with CHECK DAM (KEY 37).</p>		•			•		
21	 <p>SEDIMENT BASIN</p>	<p>A Sediment Basin is used to trap sediments from an upstream construction site.</p> <p>Requires periodic inspections, repairs, and maintenance.</p> <p>Where practical, sediments should be contained on site.</p> <p>A Sediment Basin should be the last choice of sediment control.</p> <p>The size of a Sediment Basin is greater than 5 cubic yards.</p>			•				•
22	 <p>VEGETATIVE BUFFER AT WATERCOURSE</p>	<p>This practice is used to maintain a vegetative buffer adjacent to a watercourse.</p> <p>When utilized with SILT FENCE (KEY 26) it will, under normal circumstances, prevent sediment from leaving the construction site.</p>		•	•	•		•	•

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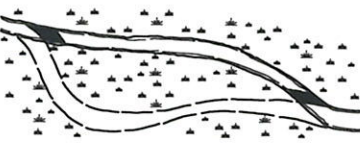
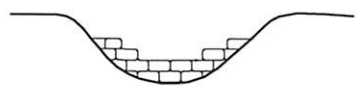



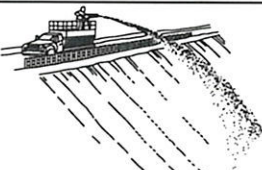
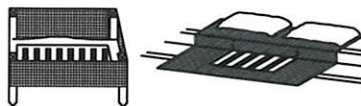
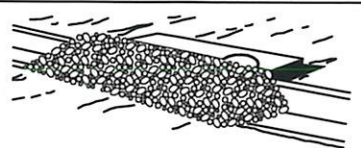
SOIL EROSION & SEDIMENTATION  
CONTROL MEASURES

9-10-2010  
F.H.W.A. APPROVAL

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R-96-E

SHEET  
3 OF 6

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
23	 <p>STREAM RELOCATION</p>	<p>A detail depicting the proper procedures for stream relocation. Maintains same width, depth, and flow velocity as the natural stream. Revegetate banks with PERMANENT/TEMPORARY SEEDING (KEY 3), MULCHING AND MULCH ANCHORING (KEY 28), MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS (KEY 33) and woody plants to shade the stream.</p>		•					•
24	 <p>SAND AND STONE BAGS</p>	<p>Sand and stone bags are a useful tool in the prevention of erosion. Can be used to divert water around a construction site by creating a DIVERSION DIKE (KEY 10). Works well for creating a CONSTRUCTION DAM (KEY 36) and temporary culvert end fill.</p>	•	•	•	•	•	•	•
25	 <p>SAND FENCE AND DUNE STABILIZATION</p>	<p>A Sand Fence traps blowing sand by reducing wind velocities. Can be used to prevent sand from blowing onto roads. Must be maintained until sand source is stabilized.</p>	•				•	•	
26	 <p>SILT FENCE</p>	<p>A permeable barrier erected below disturbed areas to capture sediments from sheet flow. Can be used to divert small volumes of water to stable outlets. Ineffective as a filter and should never be placed across streams or ditches where flow is concentrated.</p>	•				•	•	
27	 <p>PLASTIC SHEETS OR GEOTEXTILE COVER</p>	<p>Plastic Sheets can be used to create a liner in temporary channels. Can also be used to create a temporary cover to prevent erosion of stockpiled materials.</p>	•	•	•			•	
28	 <p>MULCHING AND MULCH ANCHORING</p>	<p>Anchored mulch provides erosion protection against rain and wind. Mulch must be used on seeded areas to promote water retention and growth. Should be inspected after every rainstorm and repaired as necessary until vegetation is well established.</p>	•		•		•	•	
29	 <p>INLET PROTECTION FABRIC DROP</p>	<p>Provides settling and filtering of silt laden water prior to its entry into the drainage system. Can be used in median and side ditches where vegetation will be disturbed. Allows for early use of drainage systems prior to project completion.</p>			•		•		
30	 <p>INLET PROTECTION GEOTEXTILE AND STONE</p>	<p>Provides settling and filtering of silt laden water prior to its entry into the drainage system. Should be used in paved areas where drainage structures are existing or proposed. Allows for early use of drainage systems prior to project completion.</p>			•		•		

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BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

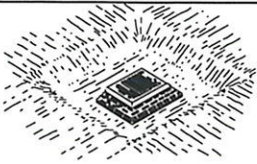


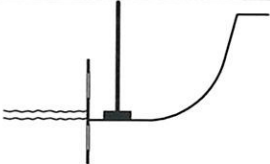



**SOIL EROSION & SEDIMENTATION  
CONTROL MEASURES**

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F.H.W.A. APPROVAL

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KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
31	 <p>INLET PROTECTION SEDIMENT TRAP</p>	<p>An Inlet Protection Sediment Trap is a temporary device that can be used in areas where medium flows are anticipated. Effective in trapping small quantities of sediments prior to water entering the drainage system. Can be used in areas such as median and side ditches.</p>			•		•		
32	 <p>SLOPE ROUGHENING AND SCARIFICATION</p>	<p>A simple and economical way to reduce soil erosion by wind and water. Can be accomplished by harrowing with a disk, back blading, or tracking with a dozer perpendicular to the slope.</p>	•				•	•	
33	 <p>MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS</p>	<p>Mulch blankets provide an immediate and effective cover over raw erodible slopes affording excellent protection against rain and wind erosion. High velocity mulch blankets work well for stabilizing the bottom of ditches in waterways.</p>	•		•		•	•	
34	 <p>COFFERDAM</p>	<p>Used to create a dry construction area and protect the stream from raw erodible areas. Must be pumped dry or dewatered according to DEWATERING WITH FILTER BAG (KEY 18).</p>		•					•
35	 <p>TEMPORARY BYPASS CHANNEL</p>	<p>Utilized when a dry construction area is needed. Isolates stream flows from raw erodible areas minimizing erosion and subsequent siltation. Can incorporate SEDIMENT BASIN (KEY 21), CHECK DAM (KEY 37), and GRAVEL FILTER BERM (KEY 13) to remove sediments from water. Construction sequence of events may be necessary.</p>		•					•
36	 <p>CONSTRUCTION DAM</p>	<p>Used to create a dry or slack water area for construction. Isolates the stream from raw erodible areas. Can be created out of any non-erodible materials such as SAND AND STONE BAGS (KEY 24), a gravel dike with clay core or plastic liner, steel plates or plywood.</p>		•					•
37	 <p>CHECK DAM</p>	<p>Can be constructed across ditches or any area of concentrated flow. Protects vegetation in early stages of growth. A Check Dam is intended to reduce water velocities and capture sediment. A Check Dam is not a filtering device.</p>	•		•			•	

MICHIGAN DEPARTMENT OF TRANSPORTATION  
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F.H.W.A. APPROVAL

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NOTES:

THIS STANDARD PLAN WILL SERVE AS A KEY IN THE SELECTION OF THE APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL DETAILS. THIS PLAN ALSO PROVIDES THE KEY TO THE NUMBERED EROSION CONTROL ITEMS SPECIFIED ON THE CONSTRUCTION PLANS. REFER TO THE MDOT SOIL EROSION & SEDIMENTATION CONTROL MANUAL, SECTION 6 FOR SPECIFIC DETAILS, CONTRACT ITEMS (PAY ITEMS), AND PAY UNITS.

COLLECTED SILT AND SEDIMENT SHALL BE REMOVED PERIODICALLY TO MAINTAIN THE EFFECTIVENESS OF THE SEDIMENT TRAP, SEDIMENT BASIN, AND SILT FENCE. AGGREGATES PLACED IN STREAMS SHOULD CONTAIN A MINIMUM OF FINES.

TEMPORARY EROSION AND SEDIMENTATION CONTROL PROVISIONS SHALL BE COORDINATED WITH THE PERMANENT CONTROL MEASURES TO ASSURE EFFECTIVE CONTROL OF SEDIMENTS DURING CONSTRUCTION OF THE PROJECT.

ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER VEGETATION ESTABLISHMENT OR AT THE DISCRETION OF THE ENGINEER. CARE SHALL BE TAKEN DURING REMOVAL TO MINIMIZE SILTATION IN NEARBY DRAINAGE COURSES.

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

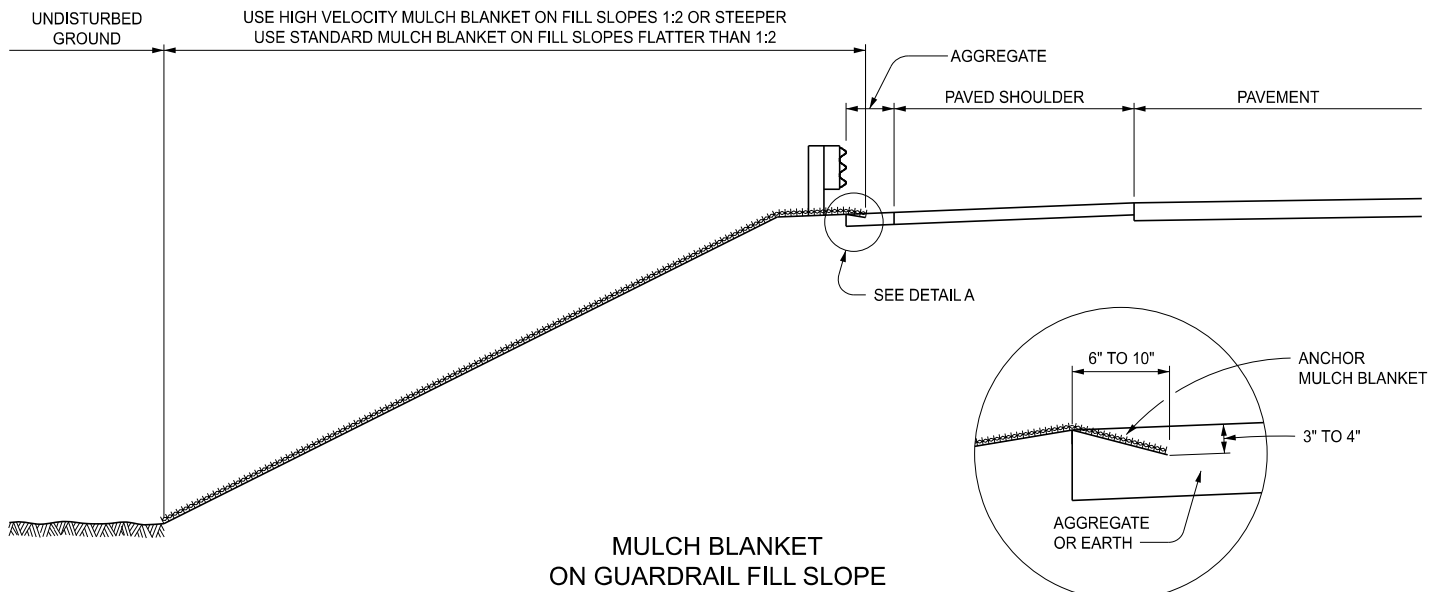
**SOIL EROSION & SEDIMENTATION  
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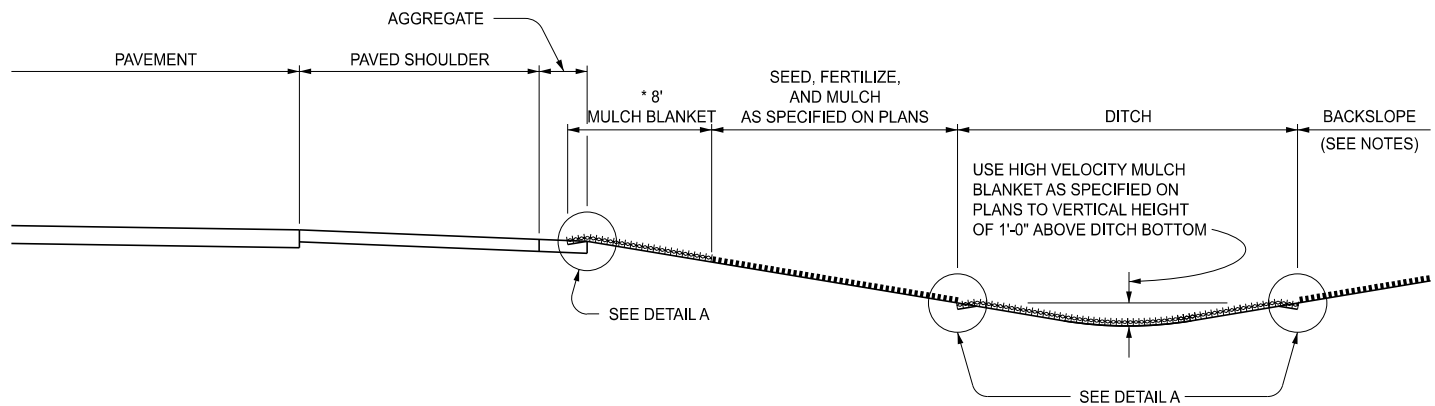
**R-96-E**

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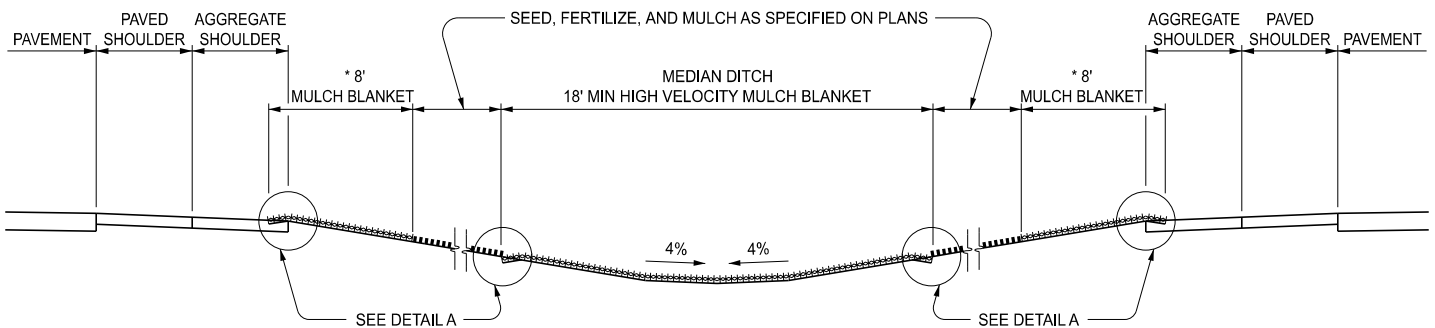


MULCH BLANKET ON GUARDRAIL FILL SLOPE

DETAIL A



TYPICAL SLOPE AND DITCH PROTECTION



MULCH BLANKET SPILLWAY DITCH

\* NOTE:

USE MULCH BLANKET ON BOTH SIDES OF NORMAL SECTIONS, HIGH SIDES OF ALL SUPERELEVATED SECTIONS, AND LOW SIDES OF PAVEMENTS HAVING A SUPERELEVATION OF 5% OR LESS. USE HIGH VELOCITY MULCH BLANKET ON THE LOW SIDE OF PAVEMENTS HAVING A RATE OF SUPERELEVATION GREATER THAN 5%.

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

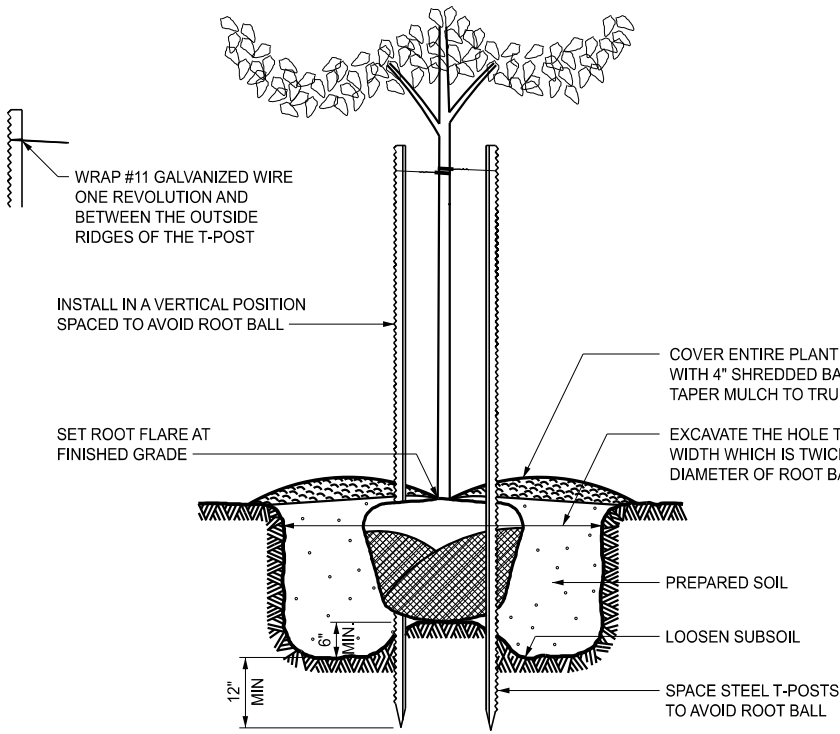
STANDARD PLAN FOR  
SEEDING AND TREE PLANTING

SPECIAL DETAIL  
FHWA APPROVAL

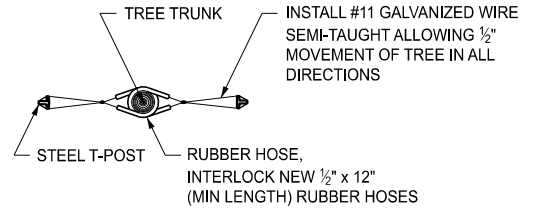
11/01/2024  
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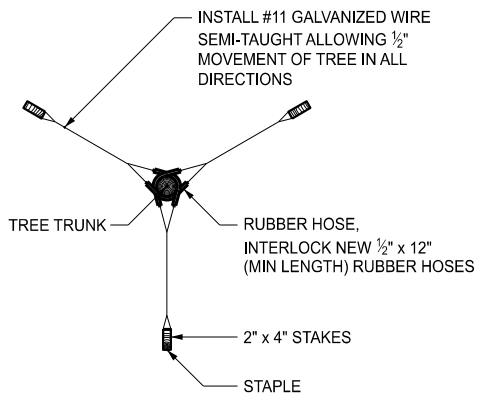
**BRACING - VERTICAL STAKES**



**BRACING DETAIL**

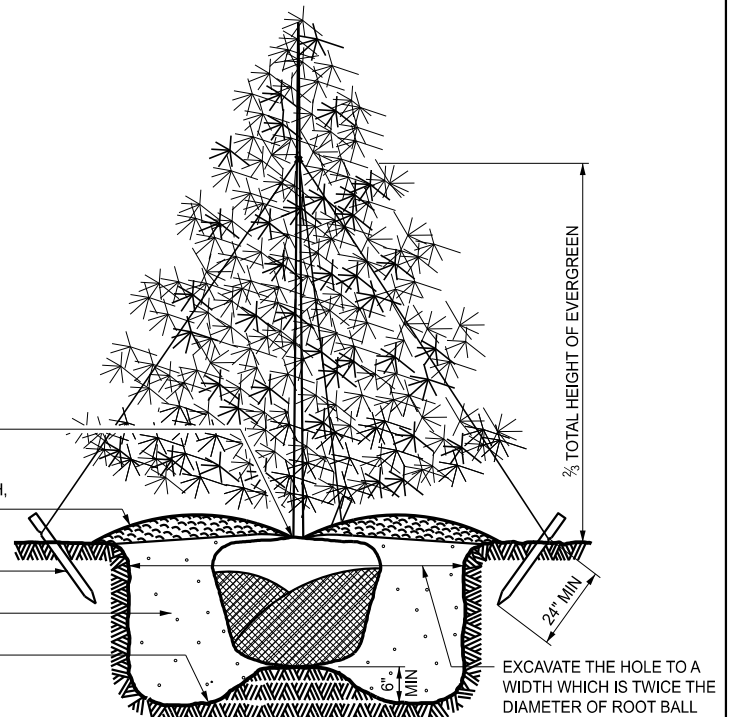
BRACE DECIDUOUS TREES 2" TO 4" IN CALIPER OR 8' OR MORE IN HEIGHT WITH TWO STAKES.

BRACE DECIDUOUS TREES LESS THAN 2" IN CALIPER OR 8' IN HEIGHT WITH ONE STAKE ON THE WESTERLY SIDE OF THE PLANT.

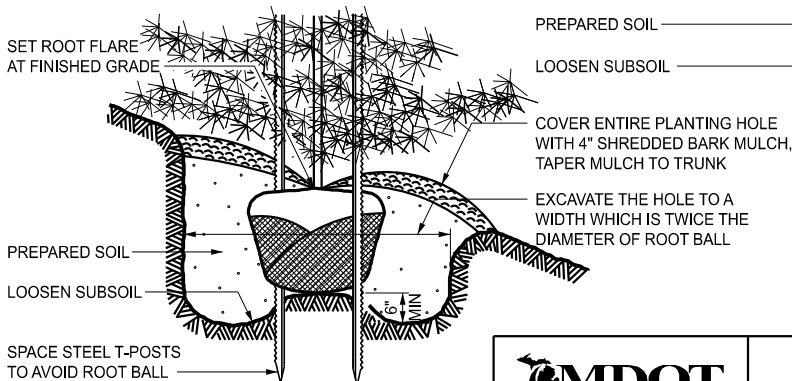


**TRIPOD GUYING DETAIL**

GUY EVERGREENS OVER 4" IN CALIPER OR 6' IN HEIGHT WITH THE TRIPOD METHOD AND UNDER 6' IN HEIGHT WITH TWO STAKES.



**GUYING - TRIPOD METHOD**



**SLOPE PLANTING**



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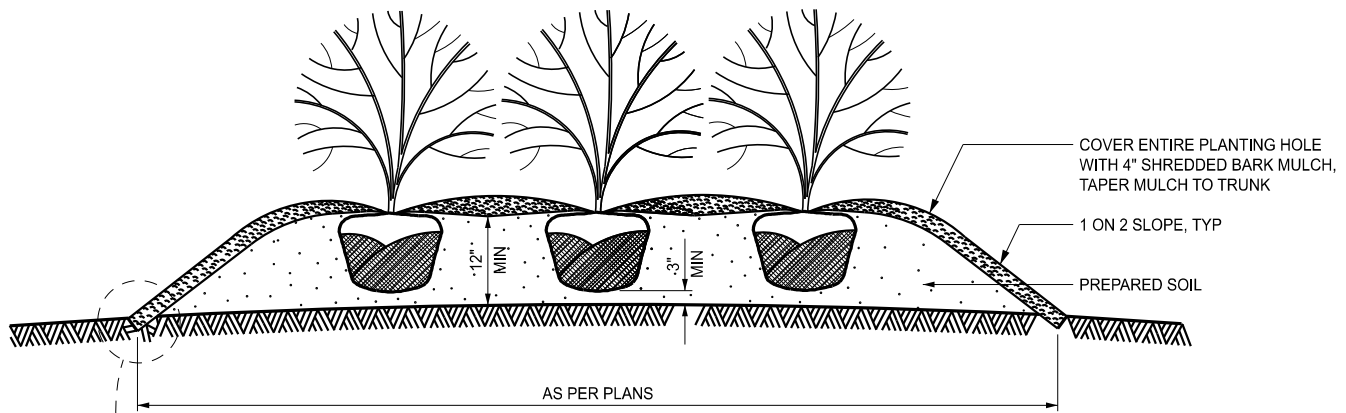
STANDARD PLAN FOR  
SEEDING AND TREE PLANTING

SPECIAL DETAIL  
FHWA APPROVAL

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RAISED SHRUB BED DETAIL

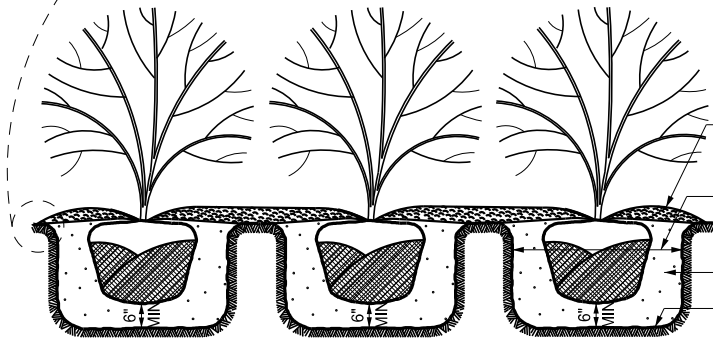
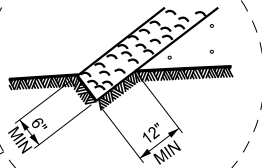
INCLUDE SHRUB BEDS IN THE FIRST AND SECOND WATERING AND CULTIVATION.

CUT 6" x 12" (MIN) EDGING AROUND THE PERIMETER OF ALL SHRUB BEDS SHOWN ON THE PLANS. SPRAY A NON-PERSISTENT GLYPHOSATE HERBICIDE TO ENTIRE SHRUB BEDS PRIOR TO PLANTING AND BARK PLACEMENT.

USE THE PAY ITEM 'SITE PREPARATION, MAX' TO PAY FOR SHRUB BEDS.

SET ALL PLANTS PLUMB AND FACE THE BEST SIDE OF THE PLANT IN THE MAIN DIRECTION OF VIEWING.

SHRUB BED EDGING DETAIL



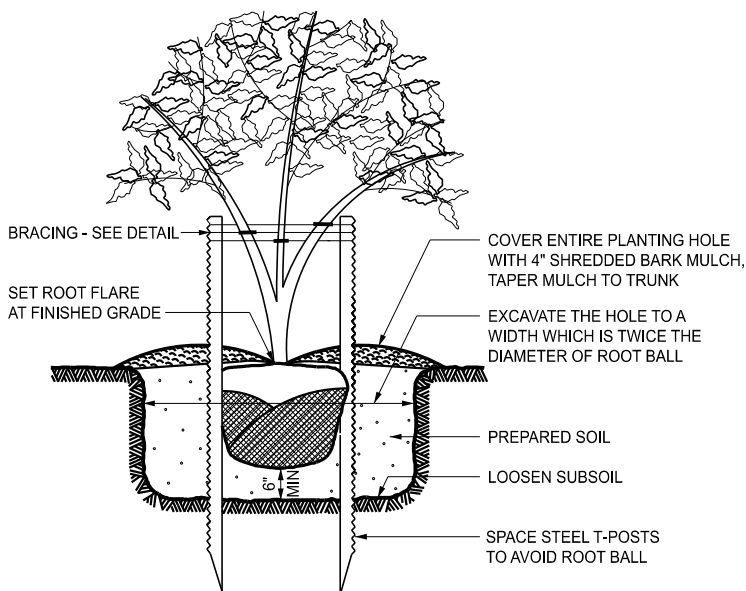
SHRUB BED DETAIL

COVER ENTIRE PLANTING HOLE WITH 4" SHREDDED BARK MULCH, TAPER MULCH TO TRUNK

EXCAVATE THE HOLE TO A WIDTH WHICH IS TWICE THE DIAMETER OF ROOT BALL

PREPARED SOIL

LOOSEN SUBSOIL



MULTIPLE STEM TREES

PLANTING NOTES:

REMOVE ALL EXCAVATED MATERIAL FROM THE SITE IMMEDIATELY.

LOOSEN SUBSOIL TO A DEPTH OF 4". LOOSEN EARTH ON SIDES OF PLANT POCKET TO BREAK ANY GLAZING CAUSED BY DIGGING.

FILL WITH PREPARED SOIL TO 1/2 THE DEPTH OF THE ROOT BALL AND PACK FIRMLY. THEN PUDDLE WITH WATER.

BACKFILL WITH PREPARED SOIL SO THAT AFTER COMPACTION THE AREA IS FLUSH WITH THE SURROUNDING GROUND LEVEL.

COVER ENTIRE PLANT POCKET AREA WITH 4" MULCH. PRUNE, BRACE AND GUY.

COMPLETELY REMOVE ANY CONTAINERS PLANTS ARE FURNISHED IN BEFORE PLANTING.

TREE HEIGHTS ARE SHOWN BEFORE PRUNING. TREE PLANTING DEPTHS ARE SHOWN AFTER SETTLING.



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

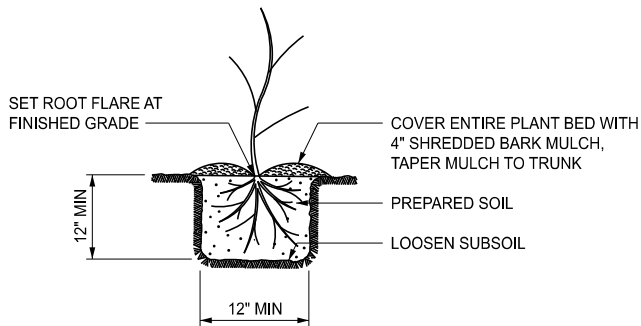
STANDARD PLAN FOR  
SEEDING AND TREE PLANTING

SPECIAL DETAIL  
FHWA APPROVAL

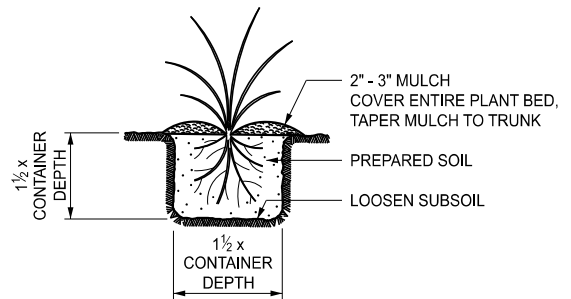
11/01/2024  
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**BARE ROOT PLANTS**



**PERENNIAL PLANTS**

**PLANTING BARE ROOT PLANT MATERIAL**

REFER TO THE "SPECIAL PROVISIONS FOR BARE ROOT PLANTING" FOR SHIPPING, STORAGE AND HANDLING REQUIREMENTS.

KEEP ROOTS IMMERSUED IN WATER PRIOR TO PLANTING TO MAINTAIN ROOT MOISTURE.

PRUNE ROOTS AS NECESSARY (TO REMOVE ALL DAMAGED OR BROKEN ROOTS) AND AS REQUIRED BY THE DISTRICT FORESTER OR RESOURCE SPECIALIST.

DIG PLANTING HOLES AT LEAST 12" WIDE AND 12" DEEP TO ACCOMMODATE ROOT MASS.

SET PLANTS PLUMB WITH THE ROOT SPREAD PUT IN A NATURAL POSITION AT A DEPTH EQUAL TO THE DEPTH AT THE NURSERY.

HOLD PLANT FIRMLY AND PUDDLE (NOT TAMP) THE BACKFILL AROUND THE ROOTS WITH WATER. USE SUFFICIENT WATER TO ENSURE SATURATION OF THE BACKFILL, BUT DO NOT OVERWATER, CAUSING A FLOATING SOIL MASS WHICH PREVENTS COMPACTION AND MAY RESULT IN AIR POCKETS ADJACENT TO THE ROOTS. ENSURE BACKFILL IS FLUSH WITH THE GROUND AFTER COMPACTION.

COVER ENTIRE PLANT POCKET AREA WITH 4" MULCH AS SHOWN.

INCLUDE PERENNIAL BEDS IN THE FIRST AND SECOND WATERING AND CULTIVATION.

USE FULLY DEVELOPED CONTAINER PLANTS FOR PERENNIALS.

EXCAVATE ENTIRE PERENNIAL BED DOWN 12" AND REPLACE WITH 12" OF PREPARED SOIL.

USE THE PAY ITEM 'SITE PREPARATION, MAX' TO PAY FOR PERENNIAL BEDS.

**SEEDING NOTES:**

THIS STANDARD ILLUSTRATES THE TYPICAL USE OF SEEDING WITH MULCH (AS THESE ITEMS RELATE TO ROADWAY CONSTRUCTION). USE THE PLANS AND STANDARD SPECIFICATIONS FOR CONSTRUCTION TO DETERMINE THE ACTUAL DESIGN AND MATERIALS USED TO CONSTRUCT THE COMPLETE SECTION (WHICH INCLUDES SEEDING WITH MULCHING).

ITEMS CALLED FOR ON THIS STANDARD ARE OPTIONAL FOR EROSION CONTROL MEASURES. SEE STANDARD PLAN R-96-SERIES.

USE HIGH VELOCITY MULCH BLANKET ON ALL DITCHES FOR EROSION CONTROL.

SEED, FERTILIZE, AND MULCH WITH MULCH BLANKET THE FIRST 8' BEHIND THE CURB OR SHOULDER IN URBAN MEDIAN AREAS. FOR THE REMAINING AREAS, SEED, FERTILIZE, AND MULCH WITH MULCH BLANKET (OR STANDARD MULCH ANCHORED IN PLACE WITH A MULCH ADHESIVE OR A MULCH NET).

SEED, FERTILIZE, AND TOPSOIL (AS SPECIFIED ON PLANS) ALL AREAS WHERE MULCH BLANKET IS CALLED FOR. NO MULCH OR ANCHORING MULCH IS REQUIRED WHERE MULCH BLANKET IS INSTALLED.

APPLY THE FRONT SLOPE RESTORATION TREATMENT TO THE BACKSLOPE.



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

**STANDARD PLAN FOR  
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SPECIAL DETAIL  
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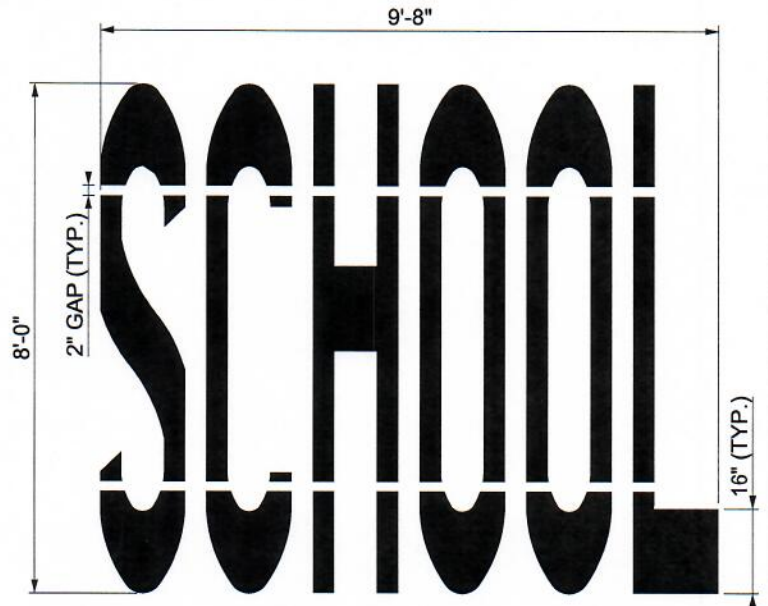
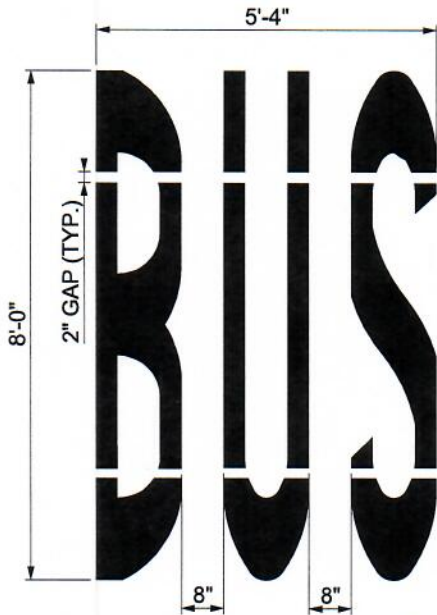
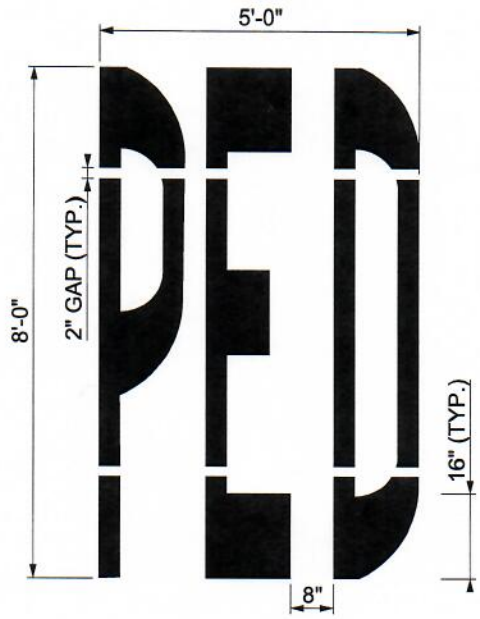
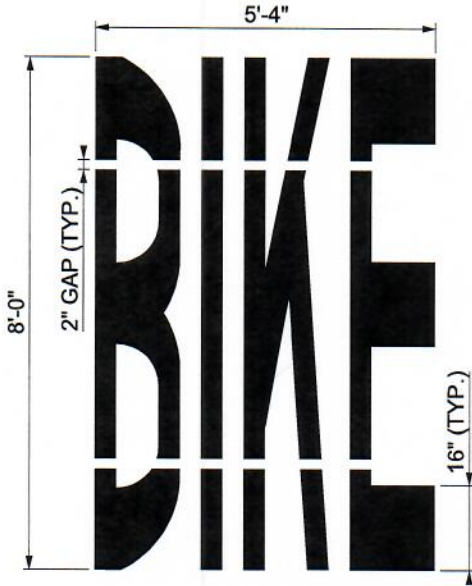
11/01/2024  
PLAN DATE

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**NOTES:**

1. ALL LETTERS ARE 16 INCHES WIDE UNLESS NOTED OTHERWISE.
2. ALL GAPS BETWEEN LETTERS ARE 4 INCHES UNLESS NOTED OTHERWISE.
3. WHEN PLACED ON A SHARED-USE PATH, REDUCE ALL VERTICAL DIMENSIONS (EXCEPT 2" LIQUID TEMPLATE GAPS) BY HALF.
4. 2" GAPS SHOWN ARE FOR LIQUID TEMPLATES ONLY AND ARE NOT ALLOWED IN TAPE APPLICATIONS.



**LEGEND DETAILS**

E-SIGNED by JASON CUTTING  
on 2023-12-11 17:07:36 EST

APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES

E-SIGNED by Demetrius Parker

APPROVED BY: on 2023-12-11 16:11:41 EST  
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
PAVEMENT ARROW &  
MESSAGE DETAILS

11/22/2023  
FHWA APPROVAL

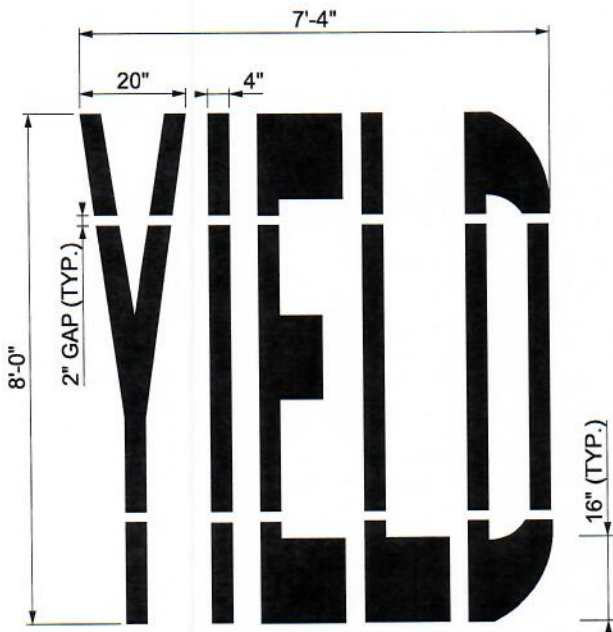
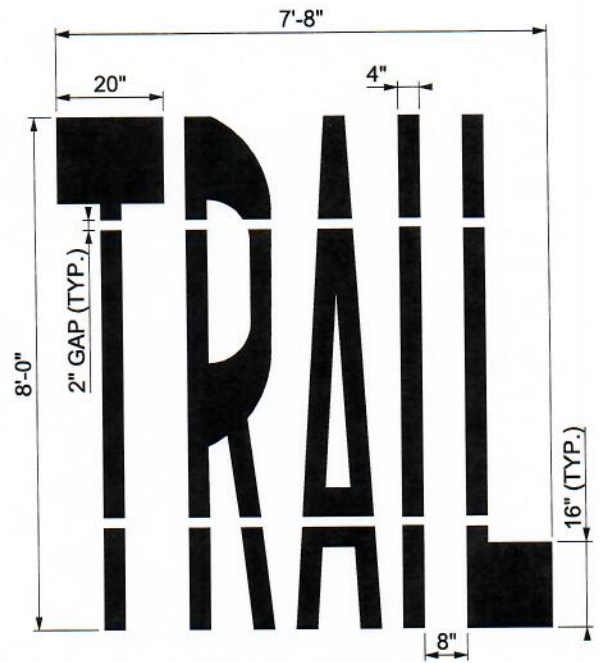
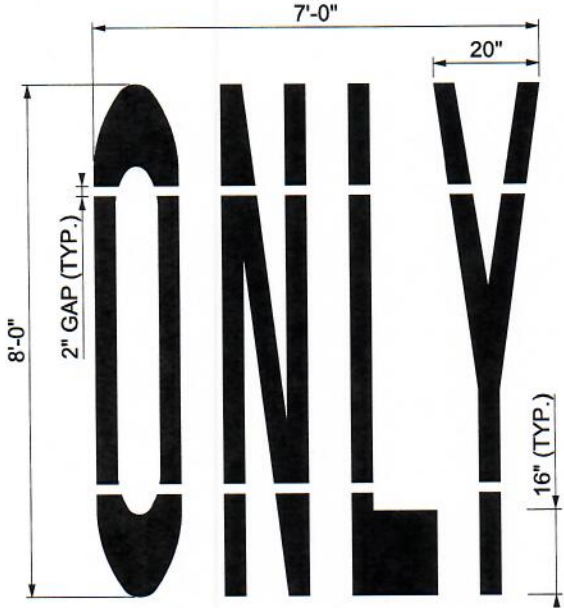
09/13/2023  
PLAN DATE

PAVE-900-H

SHEET  
1 OF 10

**NOTES:**

1. ALL LETTERS ARE 16 INCHES WIDE UNLESS NOTED OTHERWISE.
2. ALL GAPS BETWEEN LETTERS ARE 4 INCHES UNLESS NOTED OTHERWISE.
3. WHEN PLACED ON A SHARED-USE PATH, REDUCE ALL VERTICAL DIMENSIONS (EXCEPT 2" LIQUID TEMPLATE GAPS) BY HALF.
4. 2" GAPS SHOWN ARE FOR LIQUID TEMPLATES ONLY AND ARE NOT ALLOWED IN TAPE APPLICATIONS.

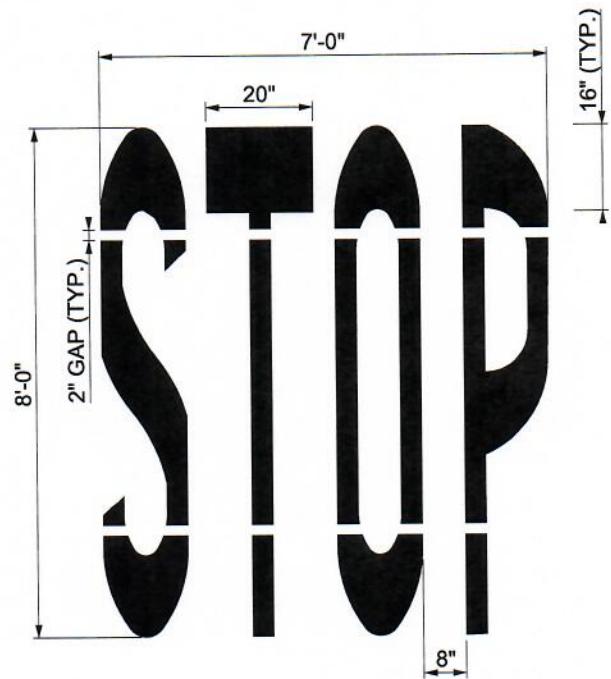
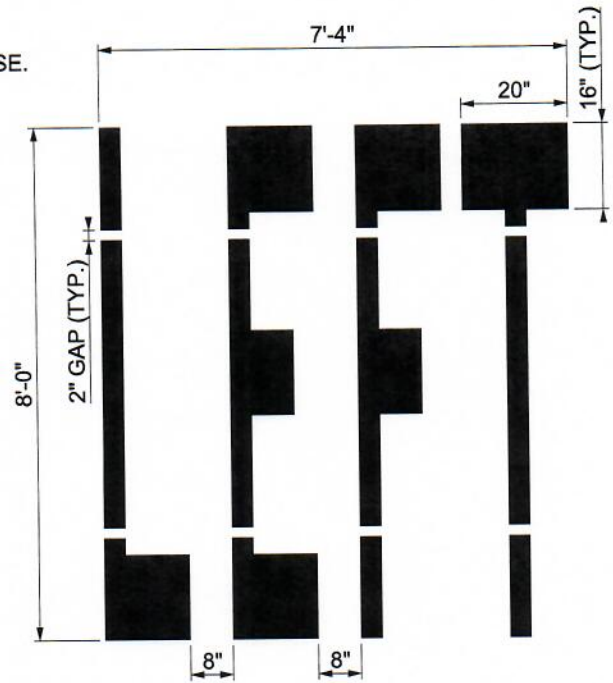
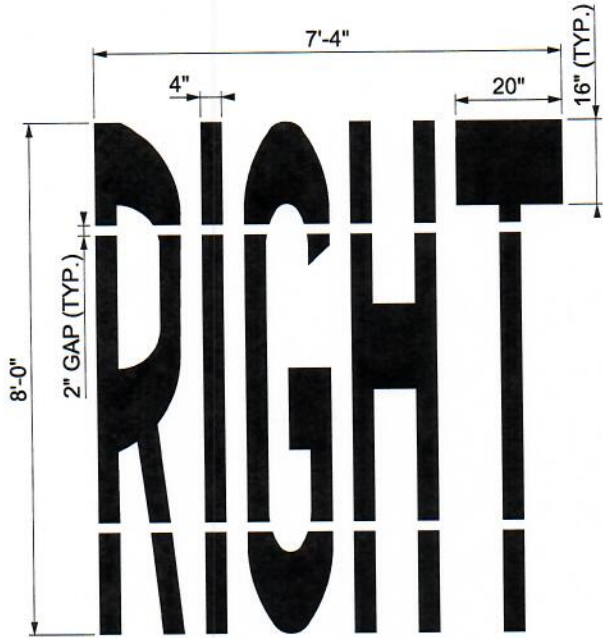


**LEGEND DETAILS**


<p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS		SHEET 2 OF 10
	11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE	

**NOTES:**

1. ALL LETTERS ARE 16 INCHES WIDE UNLESS NOTED OTHERWISE.
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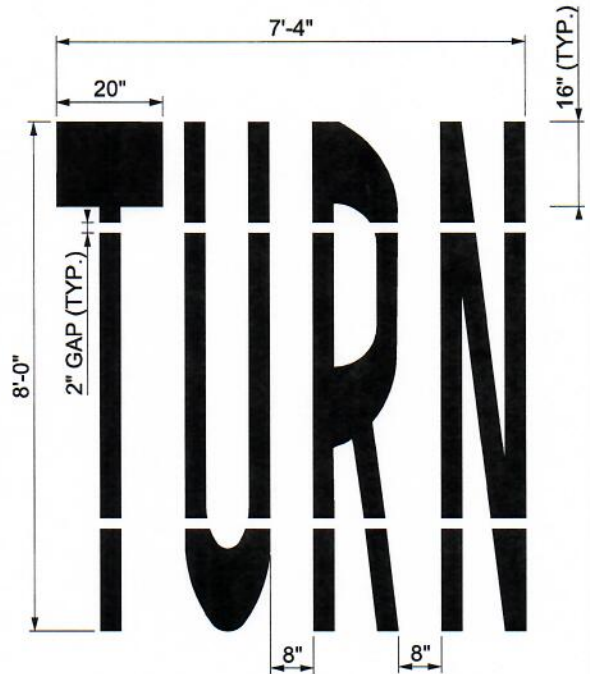
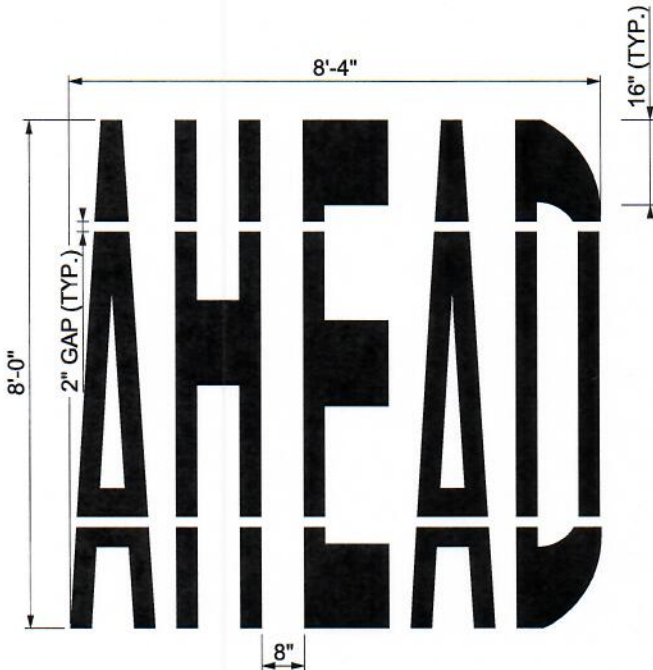
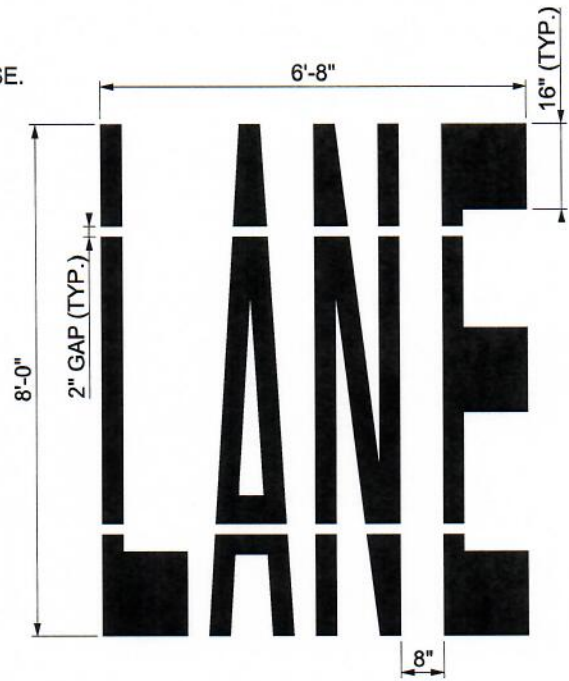
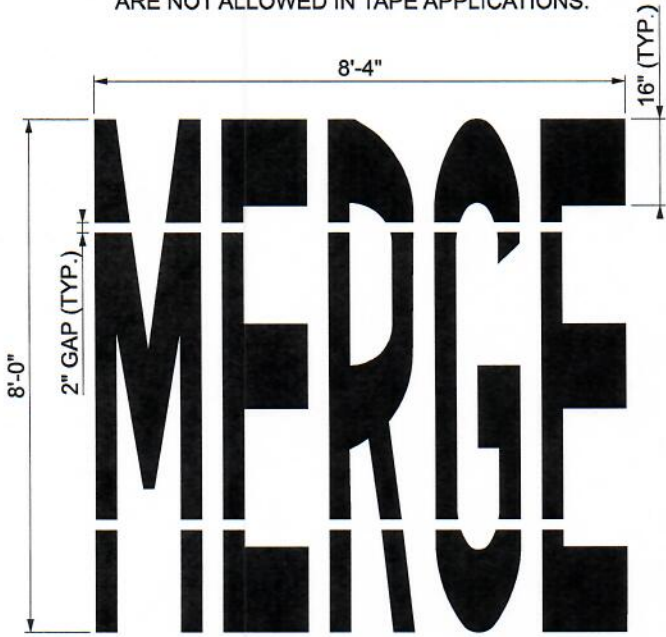


**LEGEND DETAILS**

 DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE	STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS			SHEET 3 OF 10
	11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE	PAVE-900-H	

**NOTES:**

1. ALL LETTERS ARE 16 INCHES WIDE UNLESS NOTED OTHERWISE.
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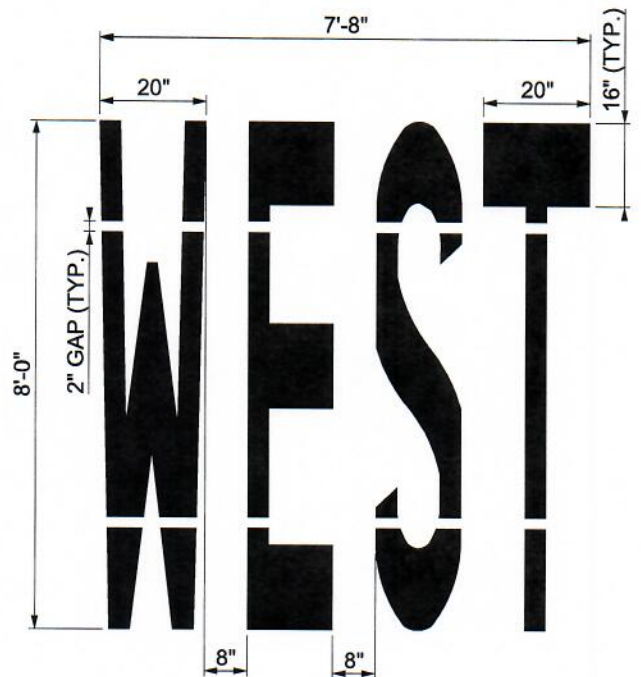
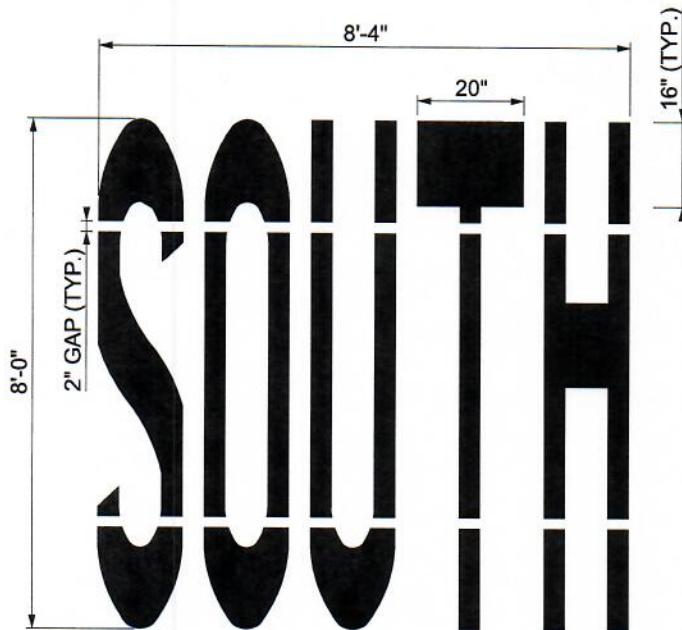
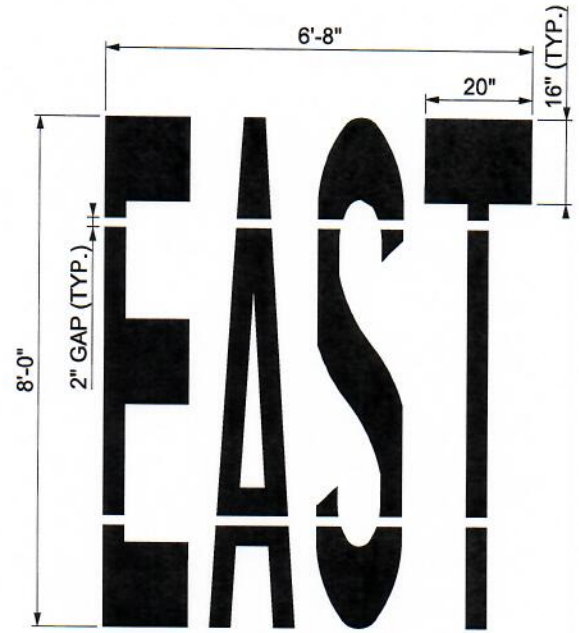
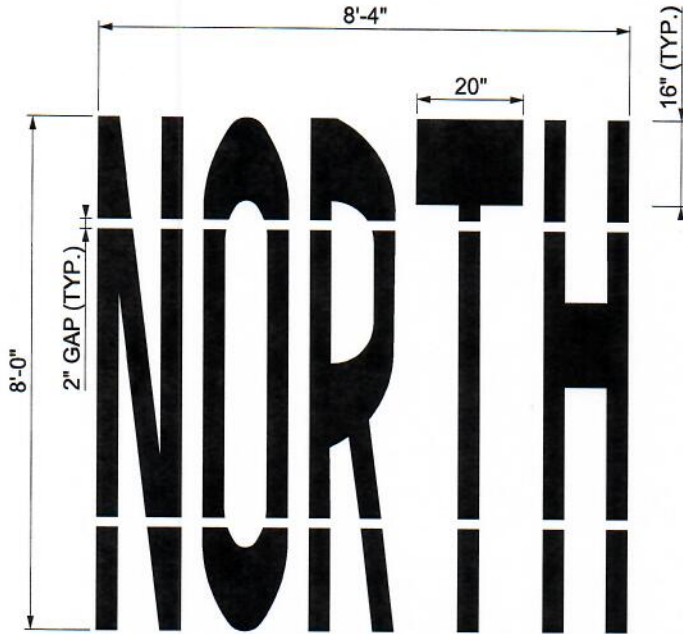


**LEGEND DETAILS**

<p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS		PAVE-900-H	SHEET 4 OF 10
	11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE		

**NOTES:**

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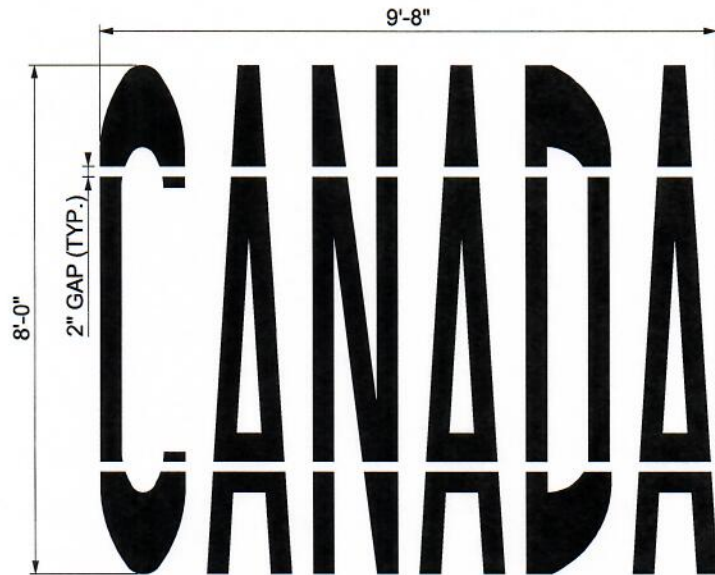
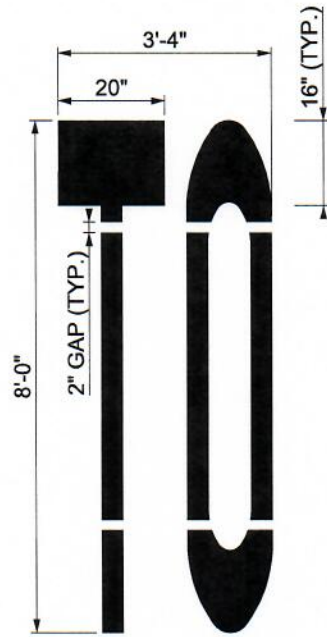
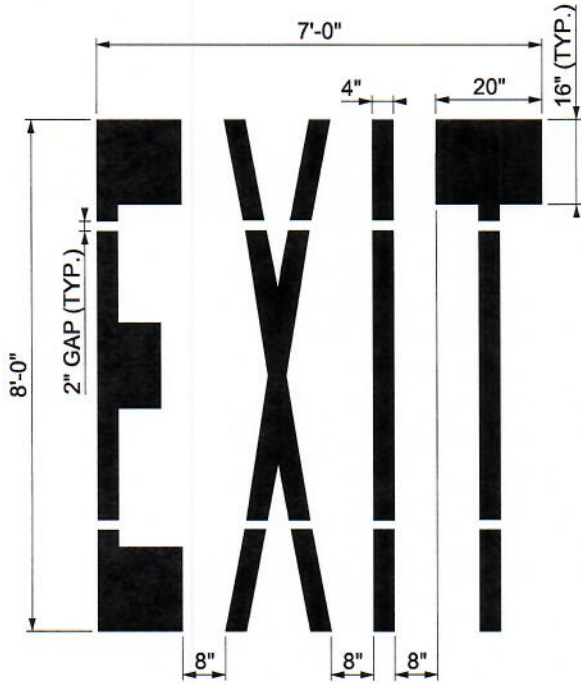


**LEGEND DETAILS**


<p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS		SHEET 5 OF 10
	11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE	

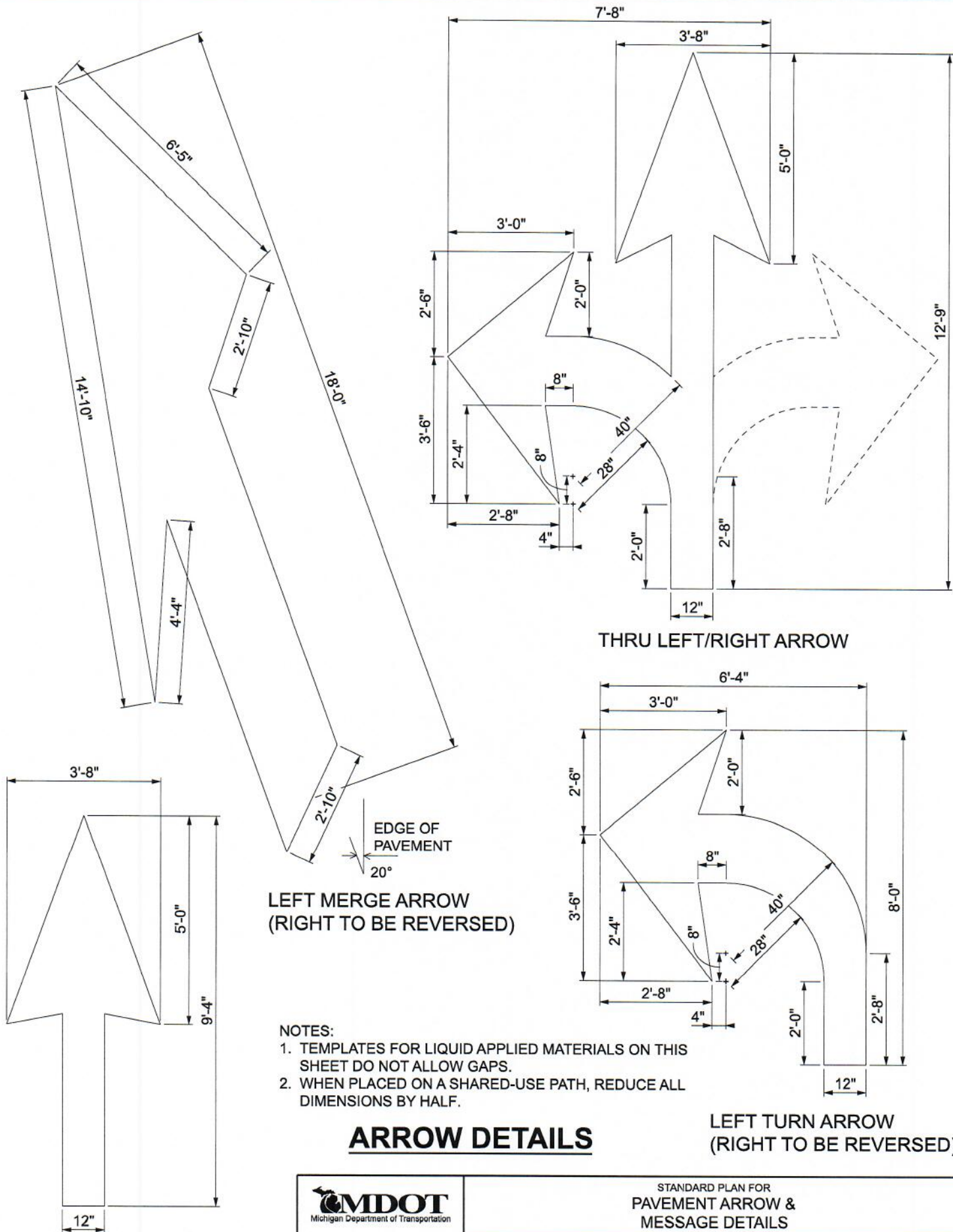
NOTES:

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**LEGEND DETAILS**

 DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE	STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS			SHEET 6 OF 10
	11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE	PAVE-900-H	



LEFT MERGE ARROW  
(RIGHT TO BE REVERSED)

THRU LEFT/RIGHT ARROW

LEFT TURN ARROW  
(RIGHT TO BE REVERSED)

- NOTES:
1. TEMPLATES FOR LIQUID APPLIED MATERIALS ON THIS SHEET DO NOT ALLOW GAPS.
  2. WHEN PLACED ON A SHARED-USE PATH, REDUCE ALL DIMENSIONS BY HALF.

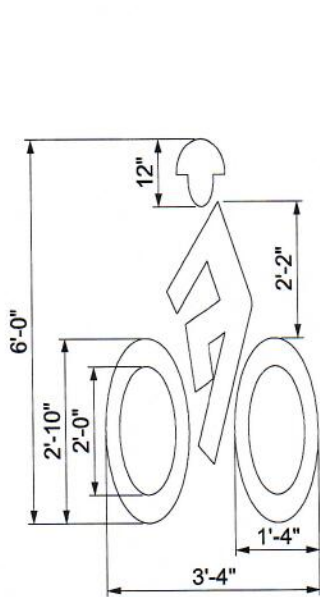
**ARROW DETAILS**

THRU ARROW

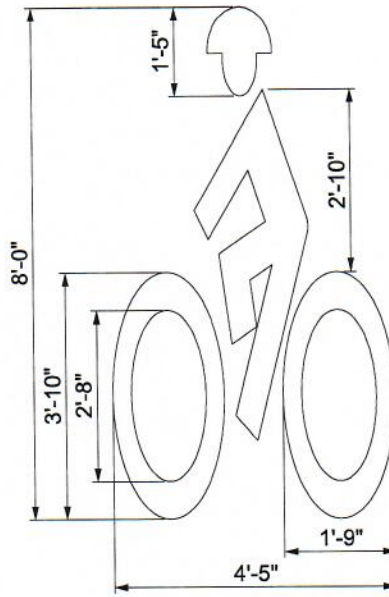
<p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS		<p>PAVE-900-H</p>	<p>SHEET 7 OF 10</p>
	11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE		

**NOTES:**

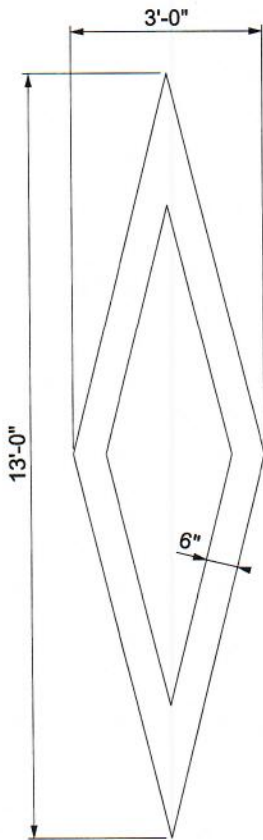
1. TEMPLATES FOR LIQUID APPLIED MATERIALS ON THIS SHEET DO NOT ALLOW GAPS.
2. SMALLER (BIKE LANE/PATH) BICYCLE SYMBOL IS TO BE USED IN BIKE LANES (INCLUDING BIKE LANES ON ROADWAYS), AND ON PATHS/TRAILS.
3. THE LARGER (ROAD) BICYCLE SYMBOL IS INTENDED TO BE USED IN CONJUNCTION WITH THE "XING" LEGEND IN VEHICLE TRAVEL LANES IN ADVANCE OF A BIKE PATH/TRAIL CROSSING THE ROADWAY.



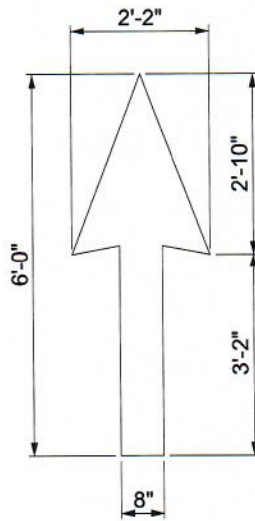
**BIKE LANE/PATH SYMBOL**



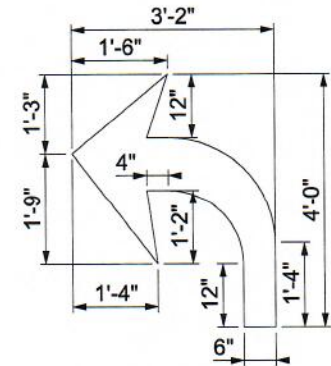
**BIKE ROAD SYMBOL**



**DEDICATED LANE SYMBOL**



**THRU ARROW FOR USE WITH BIKE LANE/PATH BICYCLE SYMBOL**



**LEFT TURN ARROW FOR USE WITH BIKE LANE/PATH BICYCLE SYMBOL (RIGHT TO BE REVERSED)**

**DEDICATED/BIKE LANE SYMBOLS**

**MDOT**  
Michigan Department of Transportation

DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS		<b>PAVE-900-H</b>	SHEET 8 OF 10
11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE		


NOTES:

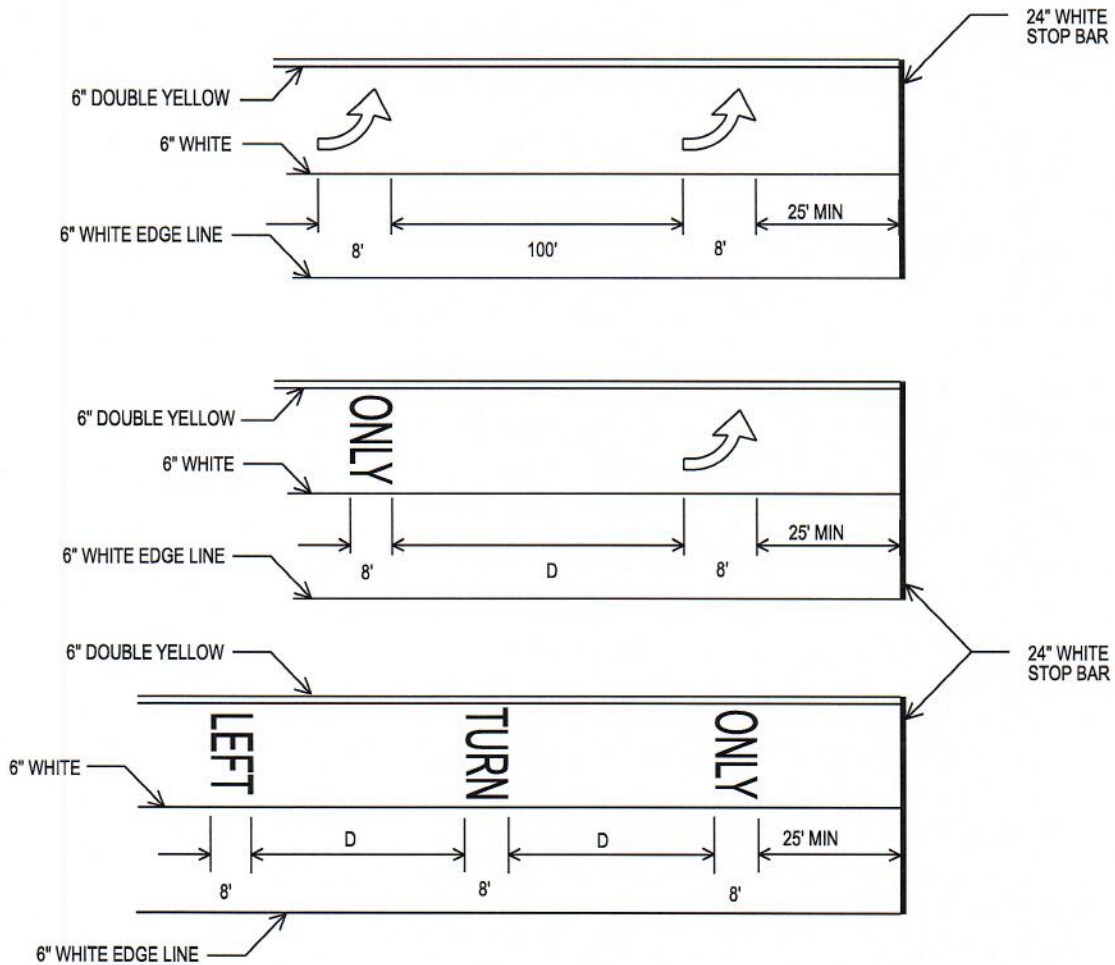
1. MATERIAL PLACEMENT AREAS SHOWN ARE FOR LIQUID-APPLIED SPECIAL MARKINGS, AND REFLECT THE ALLOWABLE TEMPLATE GAPS IN LEGENDS.
2. RAILROAD MARKING AREAS DO NOT INCLUDE THE STOP BAR MARKINGS.

**SPECIAL MARKING AREAS (SFT)**

LEGEND	REMOVAL	RECESSING	MATERIAL	SYMBOL	REMOVAL	RECESSING	MATERIAL
AHEAD	67	70	28.86	ACCESSIBLE	12	13	11.11
BIKE	43	45	22.15	BICYCLE (ROAD)	26	31	10.54
BUS	43	45	18.55	BICYCLE (LANE/PATH)	16	18	5.93
CANADA	78	81	32.87	BIKE TURN ARROW, LT OR RT	4	6	4.11
EAST	54	56	21.71	DEDICATED LANE (HOV)	11	13	10.24
EXIT	56	59	17.76	DIRECT. ARROW (BIKE)	5	7	5.07
LANE	54	56	22.30	LEFT, RIGHT ARROW	29	34	28.99
LEFT	59	62	19.11	LT ROUNDABOUT ARROW	18	23	17.48
MERGE	67	70	33.28	LT, RT, THRU ARROW	41	48	40.26
NO	27	29	12.92	MERGE ARROW	43	47	42.17
NORTH	67	70	29.53	RAILROAD	66	75	60.89
ONLY	56	59	20.90	RAILROAD-ALTERNATE	70	73	59.06
PED	40	43	17.63	RT, LT ROUNDABOUT ARROW	23	29	22.19
RIGHT	59	62	25.10	RT, THRU, LT ROUNDABOUT ARROW	29	38	28.31
SCHOOL	78	81	32.58	SHARROW	21	30	9.26
SOUTH	67	70	27.83	THRU ARROW	13	16	13.16
STOP	56	59	21.50	THRU, LT ROUNDABOUT ARROW	24	31	23.60
TO	27	29	10.43	THRU, LT TURN ARROW	29	34	28.14
TRAIL	62	64	22.10	THRU, RT TURN ARROW	29	34	28.14
TURN	59	62	23.04	TURN ARROW, LT OR RT	17	19	16.42
WEST	62	64	24.42	WRONG WAY ARROW	35	41	34.56
XING	54	56	20.13	YIELD TRIANGLE	3	4	3.00
YIELD	59	61	22.91				

**REMOVAL AND PLACEMENT DETAILS**

 DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE	STANDARD PLAN FOR PAVEMENT ARROW & MESSAGE DETAILS		PAVE-900-H	SHEET 9 OF 10
	11/22/2023 FHWA APPROVAL	09/13/2023 PLAN DATE		



POSTED SPEED (MPH)	DISTANCE "D" (FT)
25 AND BELOW	32
30-35	48
40-45	64
50 AND ABOVE	80

**NOTES:**

1. ALL SPECIAL MARKINGS (ARROW, MESSAGE, AND SYMBOL) SHALL BE WHITE.
2. WHEN ARROW AND PAVEMENT MESSAGE ARE USED TOGETHER, THE ARROW SHOULD BE LOCATED DOWNSTREAM OF THE PAVEMENT MESSAGE AND SEPARATED FROM THE PAVEMENT MESSAGE BY A DISTANCE OF "D" (MEASURED FROM THE TOP OF THE MESSAGE TO THE BASE OF THE ARROW) AS SHOWN ABOVE.
3. WHEN A SERIES OF PAVEMENT MESSAGES ARE USED, THEY SHOULD BE SEPARATED BY A DISTANCE OF "D" RELATED TO THE POSTED SPEED, AS SHOWN IN THE TABLE ABOVE. ALL SYMBOLS AND LEGENDS SHALL BE POSITIONED IN THE CENTER OF THE LANE.

## TYPICAL SPACING OF ARROW AND PAVEMENT MESSAGES



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
PAVEMENT ARROW &  
MESSAGE DETAILS

11/22/2023  
FHWA APPROVAL

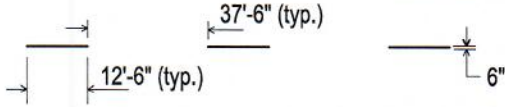
09/13/2023  
PLAN DATE

PAVE-900-H

SHEET  
10 OF 10

# TYPES OF PERMANENT LONGITUDINAL LINES

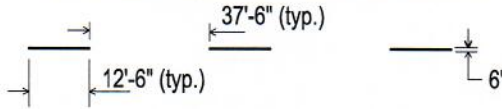
**BROKEN WHITE LANE LINE**



**SOLID WHITE LANE LINE**



**BROKEN YELLOW CENTERLINE**



**SOLID WHITE EDGE LINE**



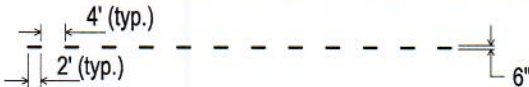
**SOLID YELLOW EDGE LINE**



**SOLID WHITE CHANNELIZING LINE**



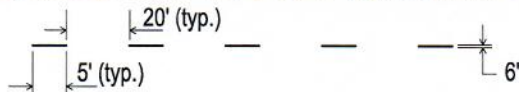
**WHITE OR YELLOW DOTTED LINE  
(GUIDE LINES, LANE LINE EXTENSIONS)**



**WHITE DOTTED LINE  
(LANE DROP, LANE DROP EXIT AND WEAVE LANES)**



**WHITE DOTTED LINE  
(PARALLEL AND TAPERED EXITS AND ENTRANCES)**



**WHITE DASHED LINE  
(ROUNDBOAT LANE LINES)**



**YELLOW DASHED LINE  
(CENTERLINE FOR MULTI-USE PATHS)**



## LINE PATTERNS

**TWO - LANE PASSING PROHIBITED (YELLOW)**



**DOUBLE SOLID YELLOW (OR WHITE)**



E-SIGNED by JASON GUTTING

on 2023-12-11 17:08:13 EST

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES  
E-SIGNED by Demetrius Parker

APPROVED BY: \_\_\_\_\_  
on 2023-12-11 16:11:52 EST  
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
PERMANENT LONGITUDINAL  
LINE TYPES & PLACEMENT

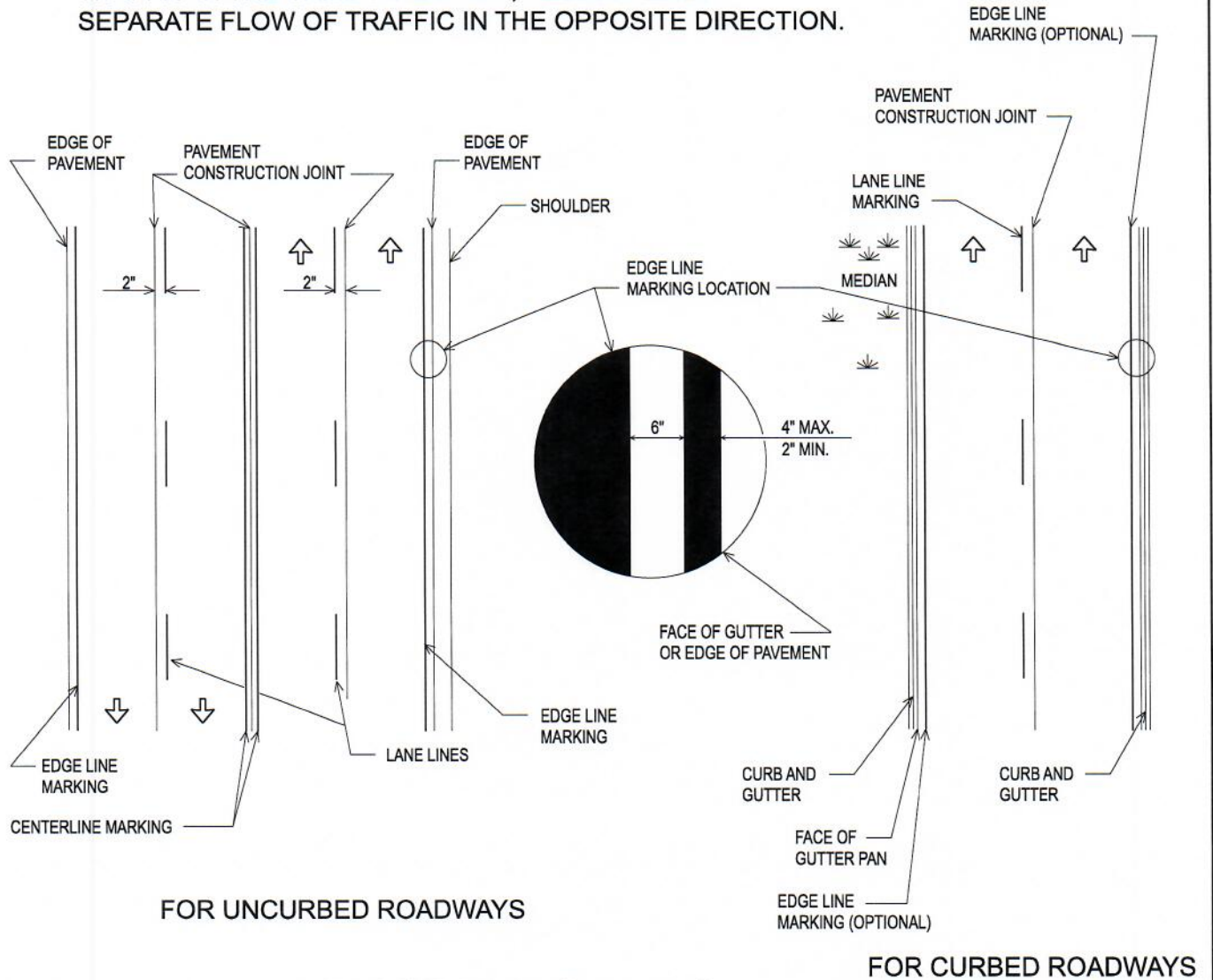
11/22/2023  
FHWA APPROVAL

09/13/2023  
PLAN DATE

**PAVE-905-F**

SHEET  
1 OF 2

**BASIC COLOR RULE:** WHITE LINES SEPARATE FLOW OF TRAFFIC IN THE SAME DIRECTION, YELLOW LINES SEPARATE FLOW OF TRAFFIC IN THE OPPOSITE DIRECTION.



## PLACEMENT OF LINES

**NOTES:**

1. ON ALL DIVIDED HIGHWAYS, LANE LINES SHALL BE OFFSET 2 INCHES FROM PAVEMENT CONSTRUCTION JOINTS TOWARD THE MEDIAN SIDE.
2. ON 2-LANE, 2-WAY NORTH - SOUTH ROADWAYS A BROKEN YELLOW CENTERLINE SHALL BE OFFSET 2 INCHES TO THE LEFT OF PAVEMENT CONSTRUCTION JOINTS WHEN FACING NORTHWARD. DOUBLE SOLID YELLOW OR SOLID AND BROKEN YELLOW CENTERLINE MAY STRADDLE THE CONSTRUCTION JOINT.
3. ON 2-LANE, 2-WAY EAST - WEST ROADWAYS, A BROKEN YELLOW CENTERLINE SHALL BE OFFSET 2 INCHES TO THE LEFT OF PAVEMENT CONSTRUCTION JOINTS WHEN FACING EASTWARD. DOUBLE SOLID YELLOW OR SOLID AND BROKEN YELLOW CENTERLINES MAY STRADDLE THE CONSTRUCTION JOINT.
4. WHEN A CENTERLINE CONSTRUCTION JOINT DOES NOT CORRESPOND TO THE GEOMETRIC CENTERLINE OF THE ROADWAY FOR ROADWAY SEGMENTS OVER 1/2 MILE, PLACE THE CENTERLINE IN THE LOCATION THAT WILL PROVIDE LANES OF EQUAL WIDTH UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
PERMANENT LONGITUDINAL  
LINE TYPES & PLACEMENT

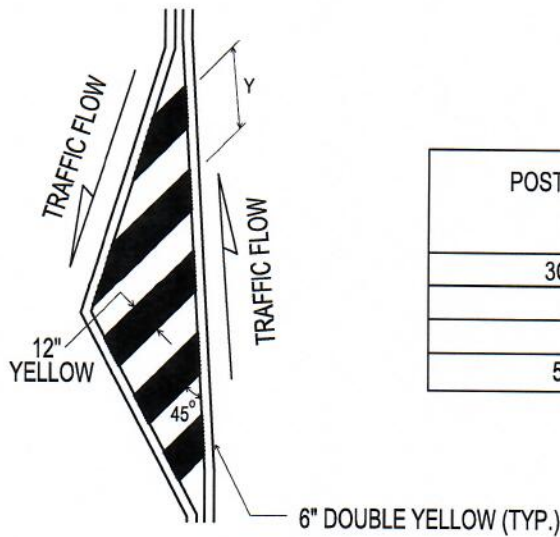
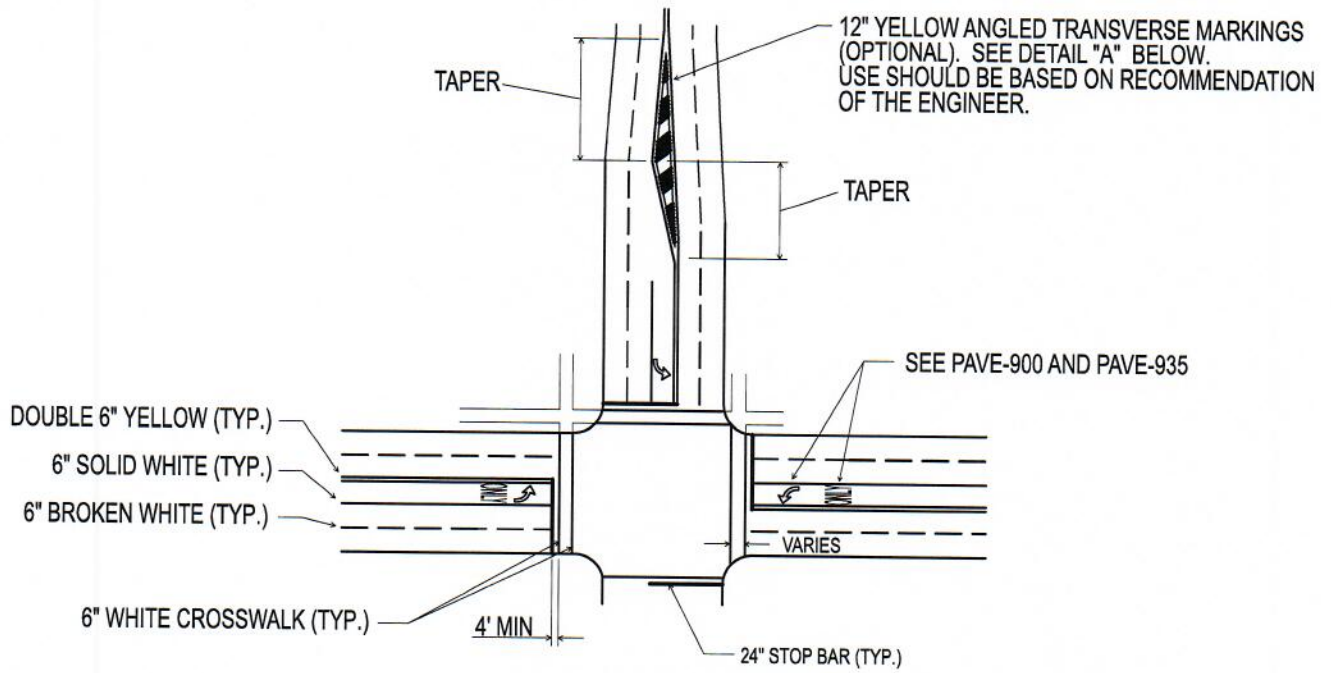
11/22/2023  
FHWA APPROVAL

09/13/2023  
PLAN DATE

PAVE-905-F

SHEET  
2 OF 2

SECT



POSTED SPEED LIMIT (MPH)	"Y" FT
30 OR LESS	10
35-40	20
45	30
50 OR MORE	40

**DETAIL "A" ANGLED TRANSVERSE MARKING**

NOT TO SCALE

E-SIGNED by JASON CUTTING  
on 2023-12-11 17:09:04 EST

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES  
E-SIGNED by Demetrius Parker

APPROVED BY: \_\_\_\_\_  
on 2023-12-11 16:12:24 EST  
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

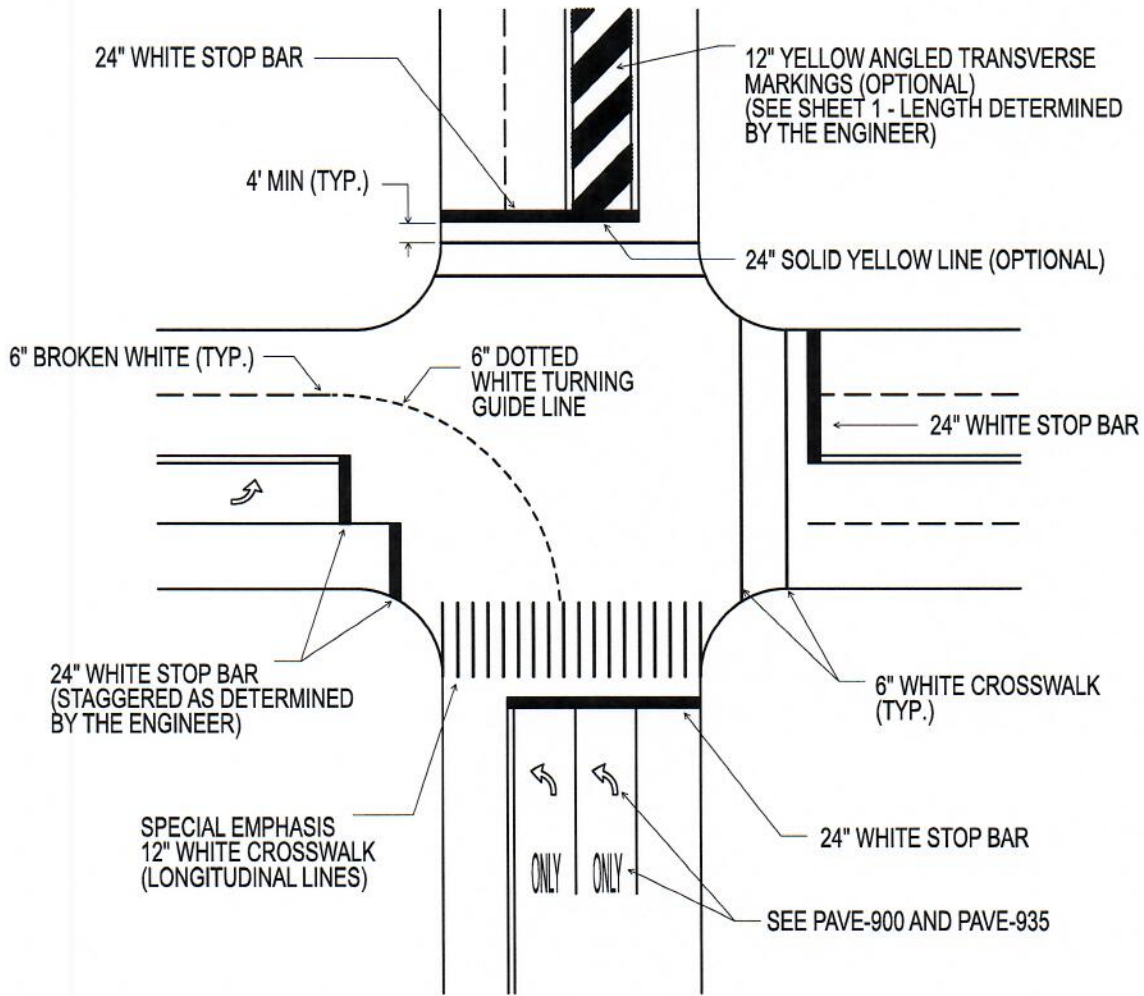
STANDARD PLAN FOR  
INTERSECTION, STOP BAR, &  
CROSSWALK MARKINGS

11/22/2023  
FHWA APPROVAL

09/13/2023  
PLAN DATE

**PAVE-945-E**

SHEET  
1 OF 3



## SIGNALIZED OR STOP SIGN CONTROLLED INTERSECTION

### NOTES:

1. STOP BARS SHOULD BE LOCATED 40-150 FT FROM THE SIGNAL HEAD. OPTIONAL STOP BARS, IF USED AT STOP CONTROLLED INTERSECTIONS, SHOULD BE 4-30 FT FROM THE EDGE OF THE INTERSECTING ROADWAY. EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.
2. STANDARD CROSSWALK IS TWO 6 INCH WHITE TRANSVERSE LINES. SPECIAL EMPHASIS CROSSWALK IS 12 INCH WHITE LONGITUDINAL LINES.
3. INSTALL SPECIAL EMPHASIS CROSSWALKS AT MID-BLOCK CROSSINGS, ESTABLISHED SCHOOL CROSSINGS (AS DEFINED BY THE MMUTCD), WHERE CROSSING UNCONTROLLED TRAFFIC AT AN INTERSECTION OR RAMP, OR WHEN DIRECTED BY THE ENGINEER. SEE SHEET 3 FOR DETAIL OF SPECIAL EMPHASIS CROSSWALK MARKINGS.
4. WIDTH OF CROSSWALK SHOULD EQUAL WIDTH OF THE ADJACENT SIDEWALK, BUT SHALL NOT BE LESS THAN 6 FT (MEASURED INSIDE THE LINES).
5. WHEN PRACTICAL, CROSSWALK LOCATION SHOULD AVOID CONFLICT WITH DRAINAGE INLETS.
6. TURNING GUIDE LINES SHOULD BE PLACED TO DIRECT THE DRIVER INTO THE CLOSEST THROUGH LANE. INCLUDE A DOTTED TURNING GUIDE LINE FOR ALL DOUBLE TURN MOVEMENTS.

NOT TO SCALE



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

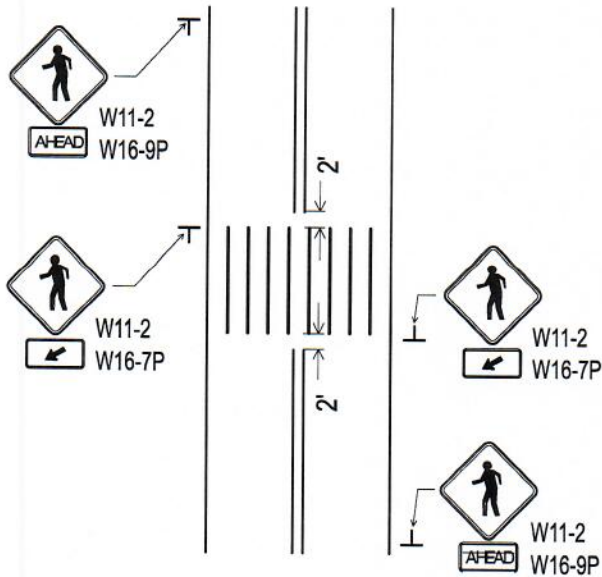
### STANDARD PLAN FOR INTERSECTION, STOP BAR, & CROSSWALK MARKINGS

11/22/2023  
FHWA APPROVAL

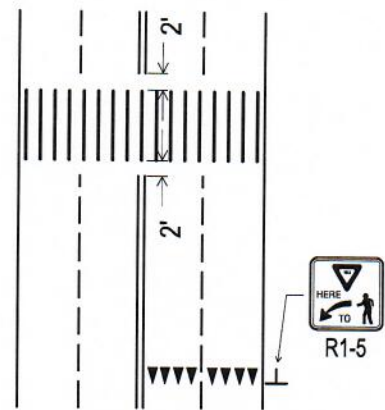
09/13/2023  
PLAN DATE

PAVE-945-E

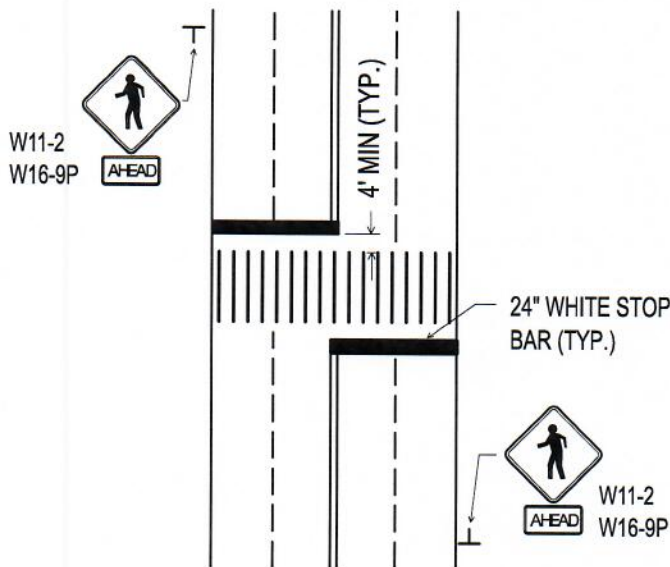
SHEET  
2 OF 3



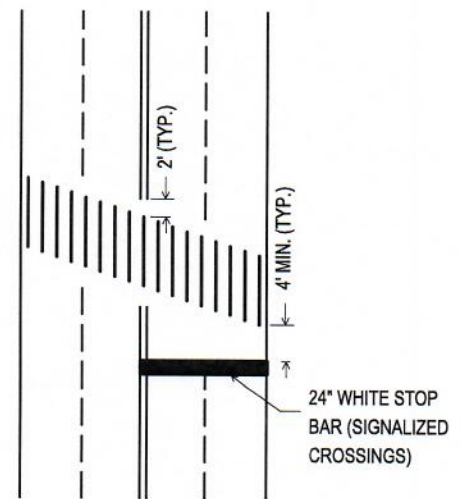
**MID-BLOCK TWO LANE  
NON-SIGNALIZED**



**MID-BLOCK MULTI-LANE  
NON-SIGNALIZED**



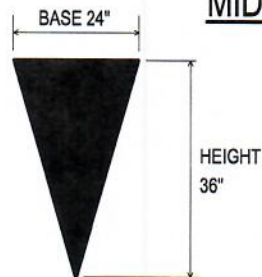
**MID-BLOCK MULTI-LANE  
SIGNALIZED**



**SKewed CROSSINGS**

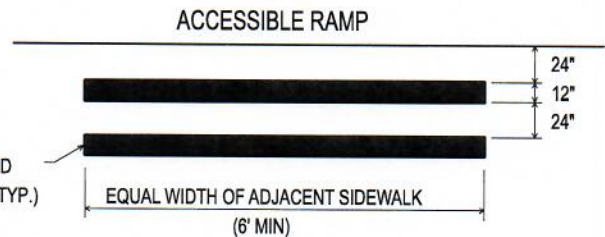
NOTE:

1. INSTALL SPECIAL EMPHASIS CROSSWALK MARKINGS PARALLEL TO TRAFFIC FLOW.



**DETAIL OF YIELD TRIANGLE  
FOR YIELD LINE**

- NOTES:
1. INSTALL FOUR TRIANGLES PER LANE.
  2. ADJUST SPACING (BETWEEN 3 TO 12 INCHES) AS NECESSARY.



**DETAIL OF SPECIAL  
EMPHASIS CROSSWALK MARKING**



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
INTERSECTION, STOP BAR, &  
CROSSWALK MARKINGS

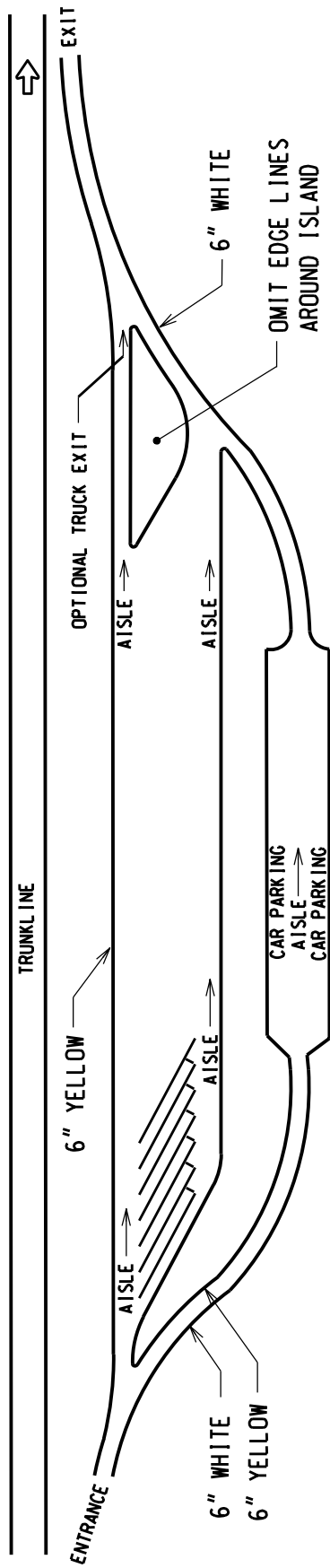
NOT TO SCALE

11/22/2023  
FHWA APPROVAL

09/13/2023  
PLAN DATE

PAVE-945-E

SHEET  
3 OF 3



### TYPICAL REST AREA LAYOUT

#### NOTES:

1. Specifically designated 12 ft wide accessible parking stalls (14 ft for accessible trucks stalls) will be located as close as possible to walkways and entrances. The number of such to the total number of stalls (car and truck) is: 1 for every 25. The accessible parking stalls should include at least 1 accessible van stall for every 6 accessible stalls, with a minimum of 1. See sheet 3 for details and the Michigan Vehicle Code and local ordinances for more information on accessible requirements.
2. To calculate the number of truck stalls (T):  $T = (\text{Length of truck parking area minus } 86 \text{ ft } 8 \text{ inches (end loss) minus allowances needed for accessible stalls}) \text{ divided by } 28 \text{ ft.}$
3. To calculate the number of car stalls (C):  $C = (\text{Length of car parking area minus } 13 \text{ ft } 10 \text{ inches (end loss) minus allowances needed for accessible stalls}) \text{ divided by } 12 \text{ ft } 7 \text{ inches.}$
4. The typical parking stalls are striped with single lines with center to center spacing of 10 ft (12 ft for accessible stalls and 14 ft for trucks).



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Nov 5 2020 5:51 AM

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

## PARKING AREA PAVEMENT MARKINGS

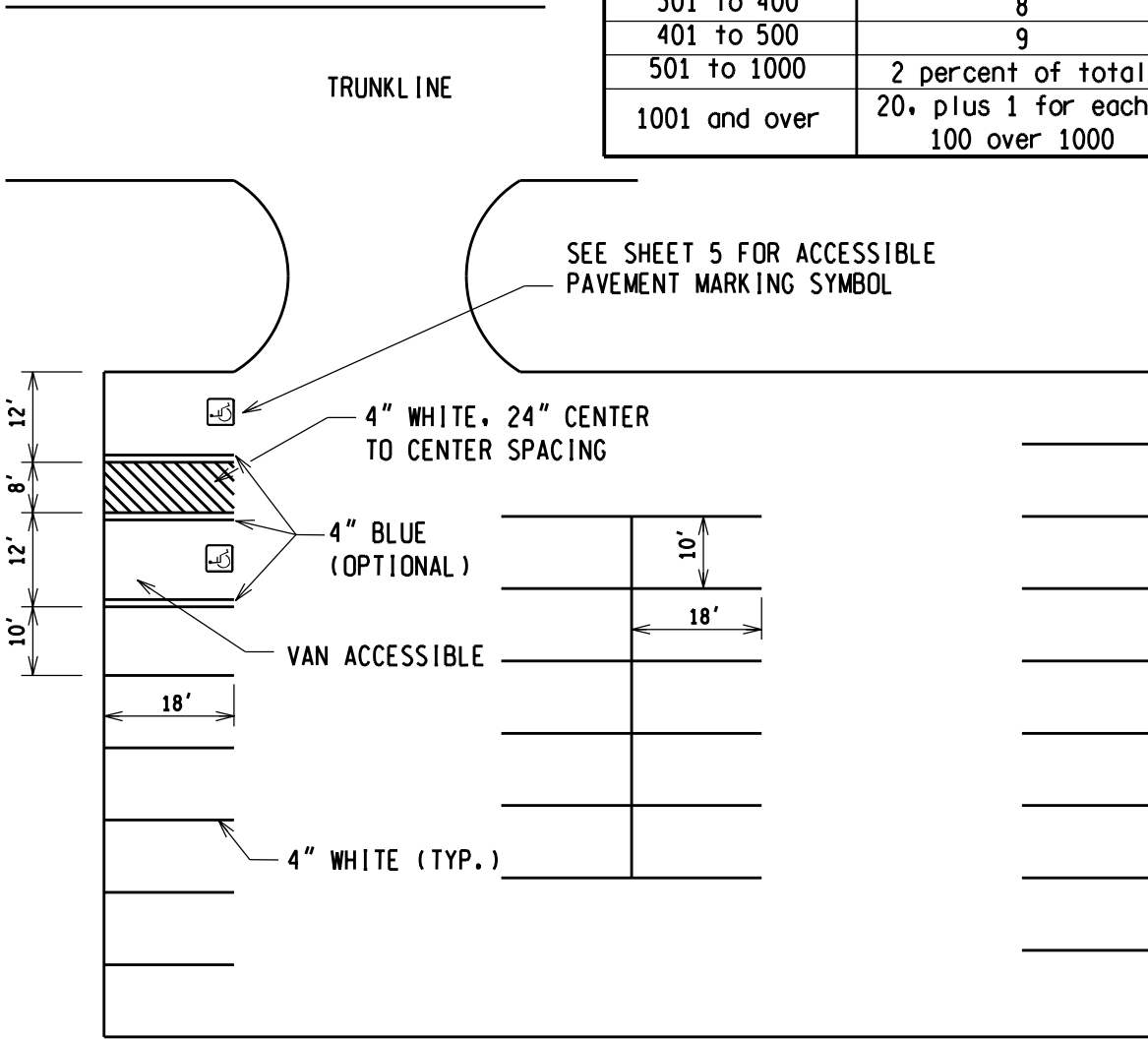
09/21/20  
F.H.W.A. APPROVAL

03/25/20  
PLAN DATE

PAVE-956-D

SHEET  
1 OF 6

Total Parking in Lot	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100 over 1000



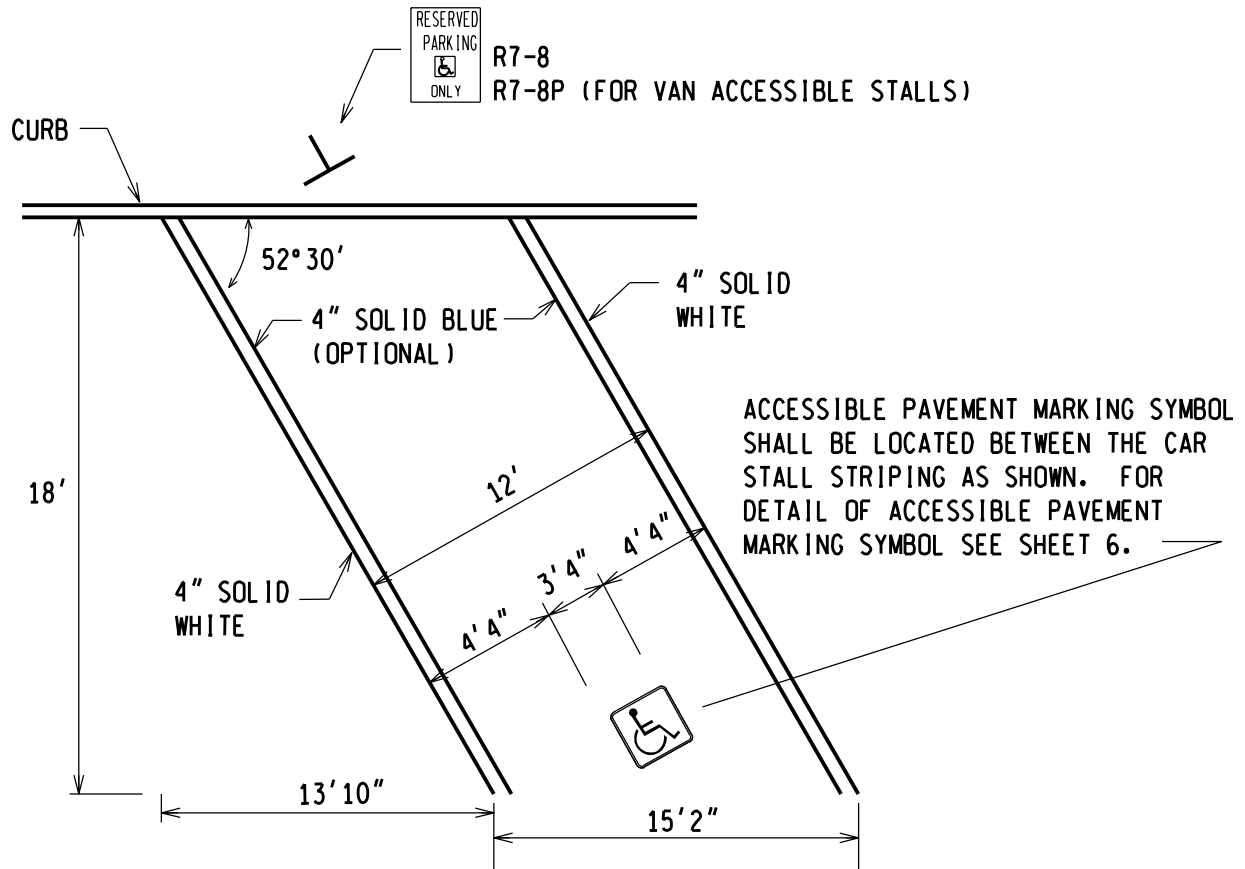
## TYPICAL PARK AND RIDE LOT LAYOUT

**NOTES:**

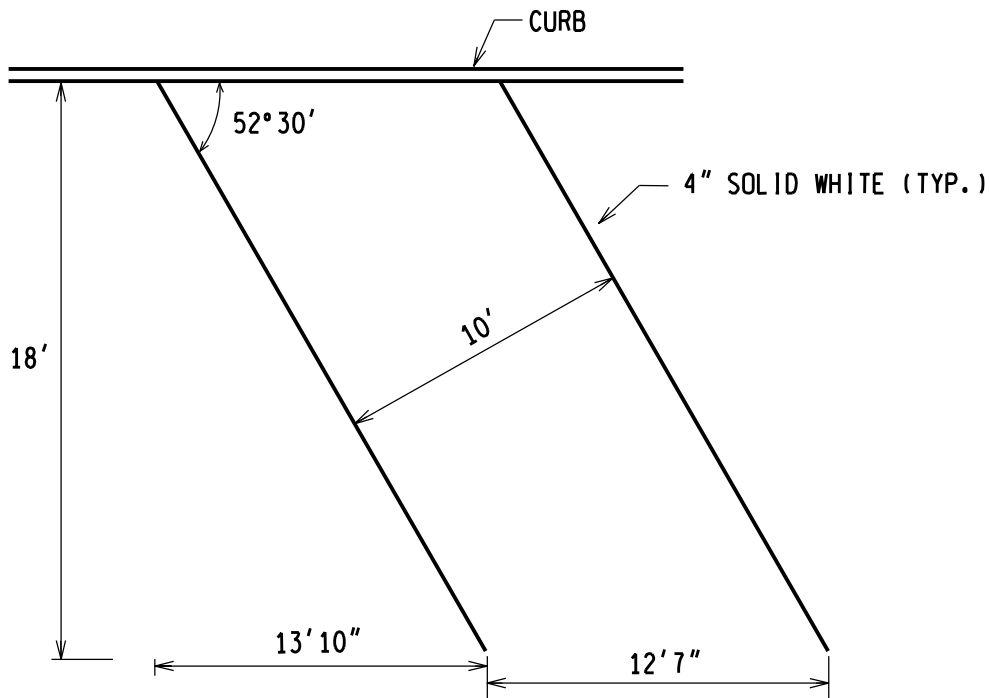
1. Refer to the Road Design Manual for typical parking lot dimensions.
2. Shown for typical stall striping information only.
3. All stall lines are single white lines. White lines may be supplemented with blue in accessible stalls.
4. 1 van accessible stall is required for every 6 accessible stalls, with a minimum of 1.
5. Buffers adjacent to a van accessible stall must be 8 ft wide. Buffers adjacent to other accessible stalls may be 5 ft width. Two accessible stalls may share a buffer. Buffers may be on either side of the stall except for angled van accessible stalls, where the buffer must be on the right (passenger) side.

NOT TO SCALE

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



**TYPICAL ACCESSIBLE PAVEMENT MARKINGS FOR CAR STALL**



**TYPICAL PAVEMENT MARKINGS FOR CAR STALL**

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN

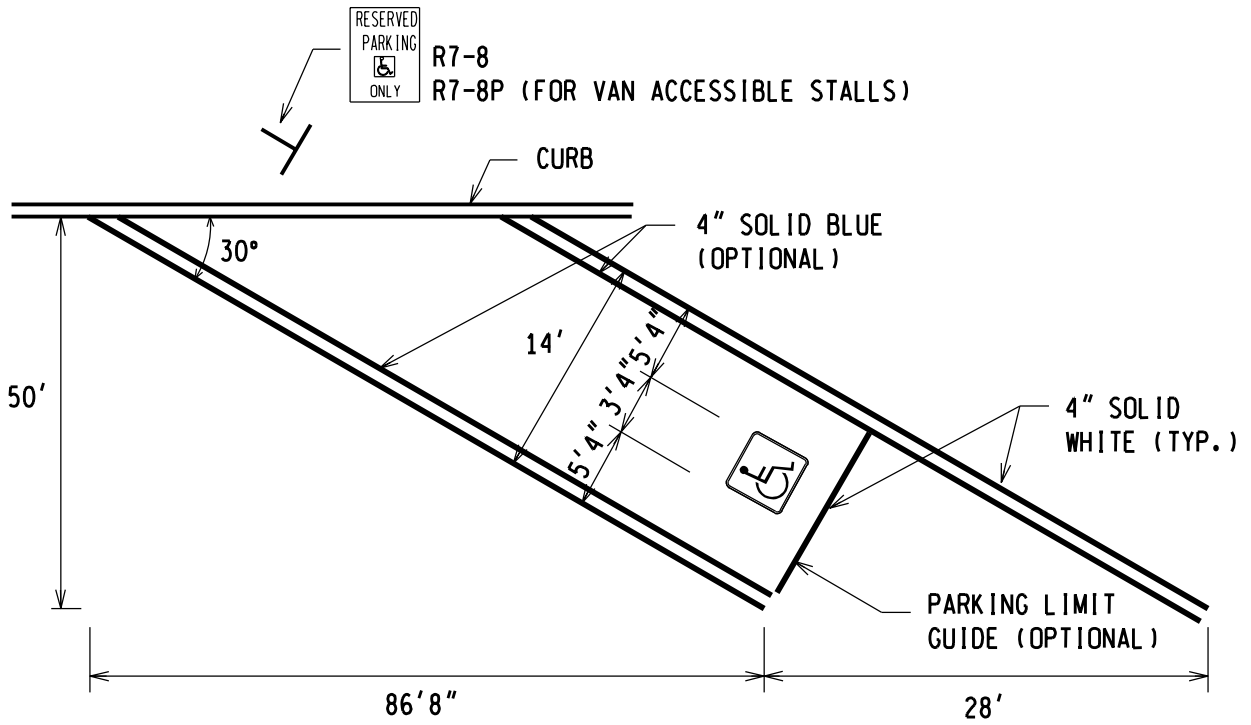
09/21/20  
F.H.W.A. APPROVAL

03/25/20  
PLAN DATE

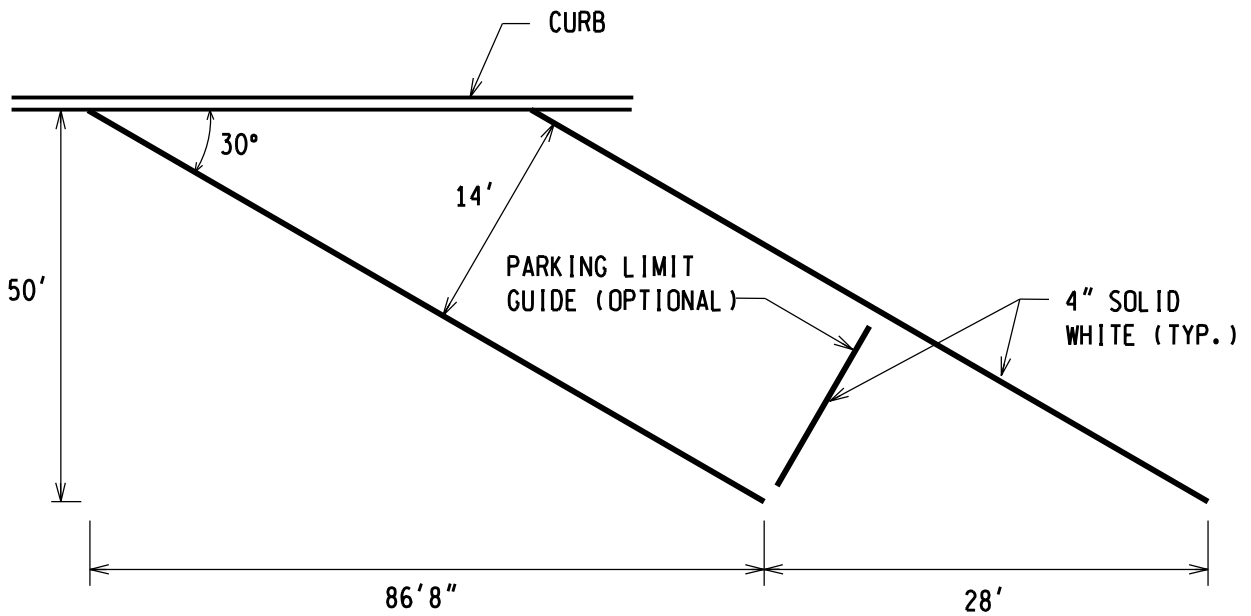
PAVE-956-D

SHEET  
3 OF 6

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



**TYPICAL ACCESSIBLE PAVEMENT MARKINGS FOR TRUCK STALL**



**TYPICAL PAVEMENT MARKINGS FOR TRUCK STALL**

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN

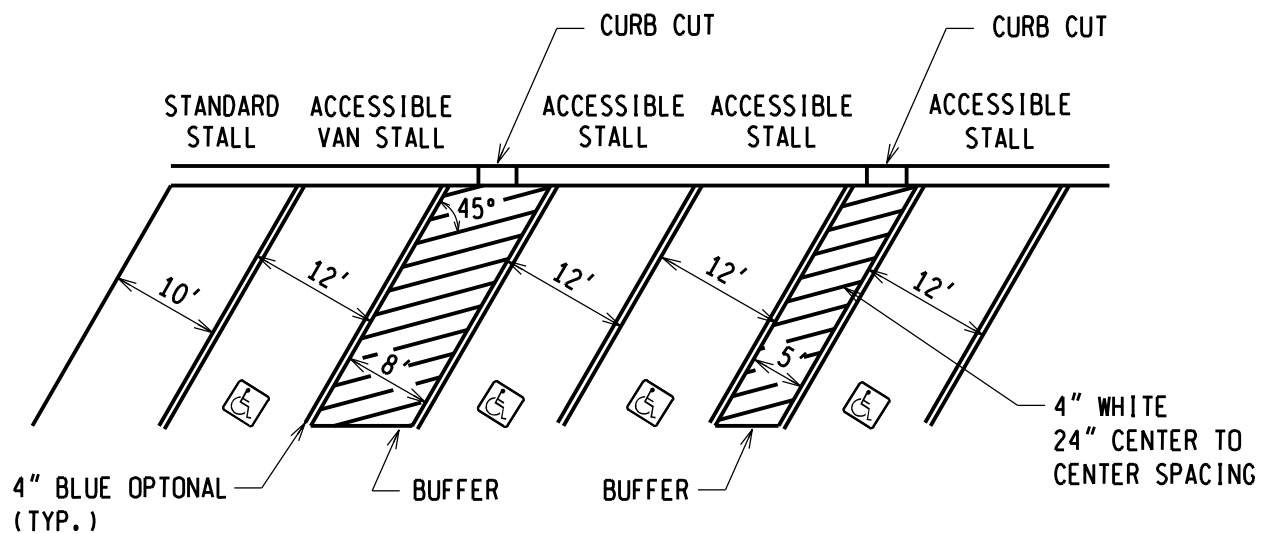
09/21/20  
F.H.W.A. APPROVAL

03/25/20  
PLAN DATE

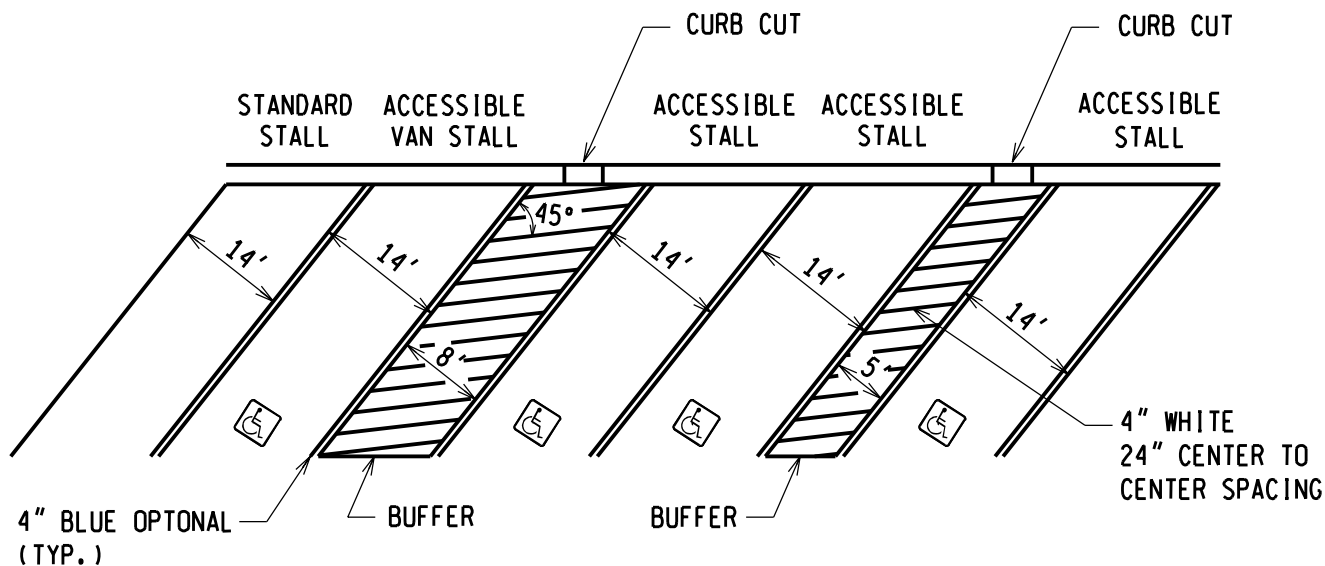
PAVE-956-D

SHEET  
4 OF 6

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



### TYPICAL CAR PARKING STALL ARRANGEMENT



### TYPICAL TRUCK PARKING STALL ARRANGEMENT

**NOTES:**

1. All stall lines are single white lines. White lines may be supplemented with blue in accessible stalls.
2. See sheet 6 for detail of accessible pavement marking symbol.
3. For curb cuts see typical detail on plan sheets.
4. 1 van accessible stall is required for every 6 accessible stalls, with a minimum of 1.
5. Buffers adjacent to a van accessible stall must be 8 ft wide. Buffers adjacent to other accessible stalls may be 5 ft width. Two accessible stalls may share a buffer. Buffers may be on either side of the stall except for angled van accessible stalls, where the buffer must be on the right (passenger) side.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	09/21/20 F.H.W.A. APPROVAL	03/25/20 PLAN DATE	PAVE-956-D	SHEET 5 OF 6
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NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



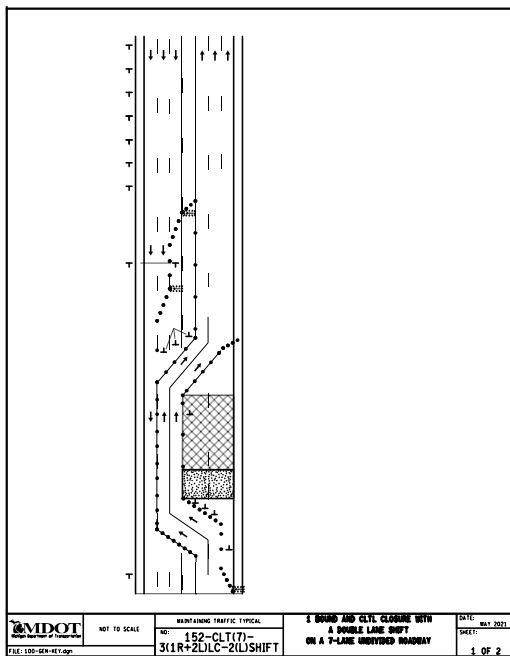
**APPENDIX VII**

**MAINTAINING TRAFFIC DETAILS**

# TYPICAL NUMBER KEY

## CODES

AB = ARROW BOARD AW = ADVANCE WARNING C = CLOSURE CLT = CENTER LEFT TURN LANE CROSS = CROSSOVER CruSha = CRUSH AND SHAPE EM = EARLY MERGE EnR = ENTRANCE RAMP ExR = EXIT RAMP FW = FREEWAY GEN = GENERAL INFORMATION GORE = FREEWAY GORE AREA IN = INSIDE INT = INTERSECTION L = LANE (L) = LEFT LC = LANE CLOSURE LD = LONG DURATION	LO = LANE OPEN O = OUTSIDE (LANE CLOSURE) OUT = OUTSIDE OF SHOULDER MID = MIDDLE OF INTERSECTION OR ROAD NFW = NON-FREEWAY PARK = PARKING LANE PCMS = PORTABLE CHANGEABLE MESSAGE SIGN (R) = RIGHT ROLL = ROLLING ROADBLOCK RUM = RUMBLE STRIP SD = SHORT DURATION SHL = SHOULDER CLOSURE SIGN = SIGN SP = SPECIAL SPEED = SPEED STA = STOPPED TRAFFIC ADVISORY TR = TRAFFIC REGULATOR TS = TEMPORARY SIGNAL ZIP = ZIPPER MERGE
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- 100 - GENERAL NOTES
- 110 - TRAFFIC REGULATORS
- 120 - NON-FREEWAY
- 130 - CENTER LEFT TURN (CLT) LANES
- 140 - PARKING LANES
- 150 - CLT 7 LANE SECTIONS
- 160 - SIGNAL WORK
- 200 - FREEWAY CLOSURES
- 210 - FREEWAY LANE SHIFTS
- 220 - FREEWAY ENTRANCE RAMPS
- 230 - FREEWAY EXIT RAMPS
- 300 - ADVANCE WARNINGS
- 310 - CROSSOVER CLOSURE
- 320 - CRUSH AND SHAPE
- 340 - MERGE SYSTEMS
- 350 - GORE LOCATIONS
- 360 - ROLLING ROADBLOCK
- 4000 - MAINTENANCE
- 5000 - SURVEY

EXAMPLE TYPICAL

CODE: 152-CTL(7)-3(1R+2L)LC-2(L)SHIFT

152 - TYPICAL NUMBER

CTL(7) = CENTER LEFT TURN LANE, 7 LANES TOTAL.

3(1R+2L)LC = 3 LANES CLOSED, (1 RIGHT LANE AND 2 LEFT LANES).

2(L)SHIFT = 2 LANES SHIFTED TO THE LEFT.

NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	TYPICAL NUMBERING KEY	DATE: DECEMBER 2021
		NO: 100-GEN-KEY		SHEET: 1 OF 2

FILE: 100-GEN-KEY.dgn

1 OF 1

**DISTANCE BETWEEN TRAFFIC SIGNS, "D"**

"D" DISTANCES	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
D (FEET)	250	300	350	400	450	500	550	600	650	700	750

**GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE, "B"**

"B" LENGTHS	SPEED*, MPH (PRIOR TO WORK AREA)											
	20	25	30	35	40	45	50	55	60	65	70	75
B (FEET)	33	50	83	132	181	230	279	329	411	476	542	625

\* POSTED SPEED, OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

**MINIMUM MERGING TAPER LENGTH, "L" (FEET)**

OFFSET (FEET)	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
1	11	15	21	27	45	50	55	60	65	70	75
2	21	30	41	54	90	100	110	120	130	140	150
3	32	45	62	80	135	150	165	180	195	210	225
4	42	60	82	107	180	200	220	240	260	280	300
5	53	75	103	134	225	250	275	300	325	350	375
6	63	90	123	160	270	300	330	360	390	420	450
7	73	105	143	187	315	350	385	420	455	490	525
8	84	120	164	214	360	400	440	480	520	560	600
9	94	135	184	240	405	450	495	540	585	630	675
10	105	150	205	267	450	500	550	600	650	700	750
11	115	165	225	294	495	550	605	660	715	770	825
12	125	180	245	320	540	600	660	720	780	840	900
13	136	195	266	347	585	650	715	780	845	910	975
14	146	210	286	374	630	700	770	840	910	980	1050
15	157	225	307	400	675	750	825	900	975	1050	1125

NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	<b>"B", "D" AND "L" TABLES</b> CHANNELIZING DEVICE SPACING, SIGN BORDER KEY, AND ROLL-AHEAD SPACING	DATE: MAY 2021
		NO: 101-GEN-SPACING-CHARTS		SHEET: 1 OF 3

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

"L" =  $\frac{W \times S^2}{60}$  WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 40 MPH OR LESS

"L" = W X S WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER  
 S = POSTED SPEED LIMIT IN MPH PRIOR TO WORK AREA  
 W = WIDTH OF OFFSET

TYPES OF TAPERS

UPSTREAM TAPERS

- MERGING TAPER
- SHIFTING TAPER
- SHOULDER TAPER
- 2 TO 1 LANE ROAD TAPER

TAPER LENGTH

- L - MINIMUM
- 1/2 L - MINIMUM
- 1/3 L - MINIMUM
- 100' - MAXIMUM

DOWNSTREAM TAPERS  
 (USE IS RECOMMENDED)

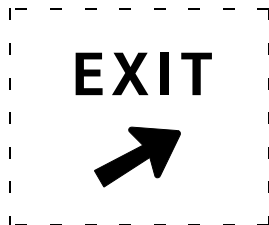
100' (PER LANE)

**MAXIMUM SPACING FOR CHANNELIZING DEVICES**

WORK ZONE SPEED LIMIT	DRUM AND 42" DEVICE SPACING (FT)		NIGHTTIME 42" DEVICE SPACING (FT)	
	TAPER	TANGENT	TAPER	TANGENT
< 45 MPH	1 x SPEED LIMIT	2 x SPEED LIMIT	25 FEET	50 FEET
≥ 45 MPH	50 FEET	100 FEET	25 FEET	50 FEET

**SIGN OUTLINE KEY**

DASHED OUTLINES INDICATE A SIGN THAT EXISTS ON SITE, AND NEEDS TO BE COVERED.



SOLID OUTLINES INDICATE A SIGN THAT IS TO BE PLACED ON THE PROJECT



NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	<b>"B", "D" AND "L" TABLES</b> <b>CHANNELIZING DEVICE SPACING</b> <b>SIGN BORDER KEY AND ROLL-AHEAD SPACING</b>	DATE: MAY 2021
		NO: 101-GEN-SPACING-CHARTS		SHEET: 2 OF 3

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 2

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5.5 TONS (STATIONARY)	40 MPH OR LESS	25 FT

\* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 4,410 POUND IMPACT VEHICLE WEIGHT.

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 3

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5 TONS (MOBILE)	45 MPH	100 FT
	50-55 MPH	150 FT
	60-75 MPH	175 FT
12 TONS (STATIONARY)	45 MPH	25 FT
	50-55 MPH	25 FT
	60-75 MPH	50 FT

\* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 10,000 POUND IMPACT VEHICLE WEIGHT.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 101-GEN-SPACING-CHARTS

"B", "D" AND "L" TABLES  
CHANNELIZING DEVICE SPACING  
SIGN BORDER KEY AND ROLL AHEAD SPACING

DATE: MAY 2021

SHEET:

3 OF 3

**THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL**

**GENERAL NOTES**

- G1: SEE GEN-SPACING-CHARTS FOR COMMON VALUES INCLUDING:  
 D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES  
 L = MINIMUM LENGTH OF TAPER  
 B = LENGTH OF LONGITUDINAL BUFFER  
 ROLL AHEAD DISTANCE
- G2: DISTANCE BETWEEN SIGNS, "D", THE VALUES FOR WHICH ARE SHOWN IN TYPICAL GEN-KEY ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- G3: ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING MUST MEET NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (NCHRP 350) TEST LEVEL 3, OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) TL-3 AS WELL AS THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
- G4: DO NOT STORE EQUIPMENT, MATERIALS OR PERFORM WORK IN ESTABLISHED BUFFER AREAS.
- G5: ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR TRAFFIC PATTERNS FOR WORK LESS THAN THREE DAYS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.

**SIGN NOTES**

- S1: ALL NON-APPLICABLE SIGNING WITHIN THE CIA MUST BE MODIFIED TO FIT CONDITIONS, COVERED, OR REMOVED. FOR GUIDANCE SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, SECTIONS 6.01.09 AND 6.01.10.
- S2: R5-18b SIGNS ARE ONLY REQUIRED ON FREEWAY PROJECTS WITH A DURATION OF 15 DAYS OR LONGER OR NON-FREEWAY PROJECTS WITH A DURATION OF 90 DAYS OR LONGER. TO APPLY THIS TYPICAL WITHOUT R5-18b SIGNS, REMOVE THE SIGNS AND CONSOLIDATE THE SEQUENCE AS APPROPRIATE.
- S3: R5-18c IS ONLY REQUIRED IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. OMIT THIS SIGN IN SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE.
- S4: ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W20-5 SIGNS.
- S5: PLACE ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE WORK ZONE SPEED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK ZONE, OR AFTER EACH ENTRANCE RAMP THAT COMES ONTO THE FREEWAY WHERE THE REDUCED SPEED IS IN EFFECT. PLACE ADDITIONAL SPEED LIMIT SIGNS AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS ARE MORE THAN 2 MILES APART. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, PLACE ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED BEYOND THE LIMITS OF THE WORK AREA AS INDICATED. IF PERMANENT SIGNS DISPLAYING THE CORRECT SPEED LIMIT ARE POSTED, OMIT ALL W3-5b AND R2-1 SIGNS AND REDUCE SPACING ACCORDINGLY.
- S6: FABRICATE SPECIAL SIGNS IN ACCORDANCE WITH CURRENT SIGNING DESIGN STANDARDS.
- S7: PLACE ADDITIONAL R8-3 SIGNS AT A MAXIMUM 500' SPACING THROUGHOUT THE WORK ZONE.
- S8: WHEN SPEED LIMIT SIGNS CANNOT BE PLACED SIDE BY SIDE AS SHOWN, PLACE THEM "D" DISTANCE APART.
- S9: STOP SIGNS NOT REQUIRED IF SIGNALS ARE ON 4-WAY FLASHING RED. STOP AHEAD SIGNS ARE NOT REQUIRED IF THERE IS ADEQUATE VISIBILITY OF THE STOP SIGN OR IF SIGNALS ARE BEING USED TO CONTROL TRAFFIC.
- S10: PLACE REDUCED SPEED ZONE AHEAD SIGN (W3-5b) HERE WHEN USING A SPEED REDUCTION IN THIS DIRECTION.
- S11: THE NUMBER OF W1-6 SHIFT SIGNS TO PLACE FOR A SHIFT IS AS FOLLOWS:  
 SHIFTS 4FT OR LESS, PLACE ONE W1-6(R)(L)  
 SHIFTS 5FT TO 12FT, PLACE TWO W1-6(R)(L)  
 SHIFTS MORE THAN 12FT, PLACE THREE OR MORE W1-6(R)(L) SIGNS DEPENDING UPON LENGTH OF SHIFT AND AS PER THE ENGINEER.
- S12: PLACE R2-1 SIGNS AS DETAILED IN NOTE S5 WHEN THERE IS A SPEED REDUCTION IN THIS DIRECTION

**TRAFFIC REGULATOR NOTES**

- TR1: TRAFFIC REGULATORS MUST FOLLOW ALL THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS, THE CURRENT VERSIONS OF THE TRAFFIC REGULATOR'S INSTRUCTION MANUAL AND THE VIDEO "HOW TO SAFELY REGULATE TRAFFIC IN MICHIGAN". THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS IS DETERMINED BY THE ROADWAY ADT, GEOMETRICS, AND AS DIRECTED BY THE ENGINEER.
- TR2: PROVIDE APPROPRIATE BALLOON LIGHTING TO SUFFICIENTLY ILLUMINATE TRAFFIC REGULATOR'S STATIONS WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS.
- TR3: PROVIDE EITHER A STOP/SLOW AFAD OR A RED/YELLOW LENS AFAD, MEETING THE REQUIREMENTS OF THE MMUTCD

**TEMPORARY TRAFFIC CONTROL DEVICE NOTES**

- TCD1: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD NOT EXCEED 1.0 TIMES THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 50 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TAPERS ARE NOT TO EXCEED 25 FEET AT NIGHT.
- TCD2: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TANGENT SHOULD NOT EXCEED TWICE THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 100 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TANGENTS ARE NOT TO EXCEED 50 FEET AT NIGHT.
- TCD3: TYPE III BARRICADES MUST BE LIGHTED FOR OVERNIGHT CLOSURES.
- TCD4: WHEN THE HAUL ROAD IS NOT IN USE, PLACE LIGHTED TYPE III BARRICADES WITH "ROAD CLOSED" EXTENDING COMPLETELY ACROSS THE HAUL ROAD.
- TCD5: USE OBJECT MARKER SIGNS IN LIEU OF THE TYPE B HIGH INTENSITY LIGHT SHOWN IN THE STANDARD PLAN FOR TEMPORARY CONCRETE BARRIER (R-53, AND R-126) WHEN USED WITH A TEMPORARY SIGNAL SYSTEM. THE OBJECT MARKERS MUST BE A MINIMUM OF 12 INCHES IN WIDTH AND 36 INCHES IN HEIGHT AND HAVE ORANGE AND WHITE RETROREFLECTIVE SHEETING. THE RETROREFLECTIVE SHEETING MUST HAVE ALTERNATING DIAGONAL ORANGE AND WHITE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION VEHICULAR TRAFFIC IS TO PASS.
- TCD6: PLACE LIGHTED ARROW PANELS AS CLOSE TO THE BEGINNING OF TAPERS AS PRACTICAL, BUT NOT IN A MANNER THAT WILL OBSCURE OR CONFUSE APPROACHING MOTORISTS WHEN PHYSICAL LIMITATIONS RESTRICT PLACEMENT. IN CURBED SECTIONS, IF ARROW BOARD CANNOT BE PLACED BEHIND CURB, PLACE ARROW BOARD IN THE CLOSED LANE AS CLOSE TO THE BEGINNING OF TAPER AS POSSIBLE.
- TCD7: ADDITIONAL TYPE III BARRICADES MAY BE REQUIRED TO COMPLETELY CLOSE OFF ROAD FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
- TCD8: WHERE THE SHIFTED SECTION IS SHORTER THAN 600 FEET, A DOUBLE REVERSE CURVE SIGN (W24-1) CAN BE USED INSTEAD OF THE FIRST REVERSE CURVE SIGN, AND THE SECOND REVERSE CURVE SIGN CAN BE OMITTED.
- TCD9: RUMBLE STRIPS ARE TO BE PLACED AS SPECIFIED IN THE CONTRACT. IF NOT SPECIFIED IN THE CONTRACT, PLACE RUMBLE STRIPS AS SHOWN, AND IN ACCORDANCE WITH THE RUMBLE STRIP MANUFACTURER'S RECOMMENDATIONS. AN ARRAY OF RUMBLE STRIPS CONTAINS THREE RUMBLE STRIPS. PLACE THE RUMBLE STRIPS IN THE ARRAY AT A CONSISTENT DISTANCE, BETWEEN 10' AND 20' APART.
- TCD10: SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, PORTABLE CHANGEABLE MESSAGE SIGN GUIDELINES FOR RECOMMENDED AND CORRECT PCMS MESSAGING. STAGGER PCMS THAT ARE ON OPPOSING SIDES OF THE ROAD 1000 FEET FROM EACH OTHER.

**RAMP NOTES**

- RMP1: WHEN CONDITIONS ALLOW, E5-1 SIGNS MUST BE REMOVED OR COVERED AND CHANNELIZING DEVICES MUST BE POSITIONED TO ENABLE RAMP TRAFFIC TO DIVERGE IN A FREE MANNER
- RMP2: STOP AND YIELD CONDITIONS SHOULD BE AVOIDED WHENEVER PRACTICAL. WHEN CONDITIONS WARRANT, R1-1 SIGNS MAY BE USED IN PLACE OF R1-2 SIGNS. WHEN R-1 SIGNS ARE USED, W3-1 SIGNS MUST BE USED IN PLACE OF W3-2 SIGNS. CONSIDERATION SHOULD BE GIVEN TO CLOSING THE RAMP TO COMPLETE WORK TO ALLOW AN ADEQUATE MERGE DISTANCE. WORK SHOULD BE EXPEDITED TO AVOID THE STOP AND/OR YIELD CONDITIONS.

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	<b>TRAFFIC TYPICALS NOTE SHEET</b>	DATE: MAY 2022
		NO: <b>102-GEN-NOTES</b>		SHEET:  1 OF 2
FILE: 102-GEN-NOTES.dgn				

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

**SIGNAL NOTES**

- SIG1: EXISTING SIGNAL MUST BE EITHER 4-WAY FLASHING RED, BAGGED, OR TURNED OFF.
- SIG2: SIGNAL IS IN OPERATION.
- SIG3: DELINEATE THE WORK ZONE AREA WITH 28 INCH CONES FOR DAYTIME WORK, OR 42 INCH CHANNELIZING DEVICES FOR NIGHTTIME WORK.
- SIG4: THE CONTRACTOR MUST HAVE A DESIGNATED SPOTTER IF THE AERIAL BUCKET TRUCK IS LOCATED OVER ACTIVE TRAVEL LANES.
- SIG5: THE LOWEST POINT OF THE BUCKET MAY NOT TRAVEL BELOW 14 FOOT VERTICAL CLEARANCE. THE CONTRACTOR MUST UTILIZE AN ALTERNATE SET UP, OR PLACE THE INTERSECTION IN A 4 WAY STOP IF THE 14 FOOT VERTICAL CLEARANCE IS COMPROMIZED. USE TRAFFIC REGULATORS TO CONTROL TRAFFIC THROUGH THE INTERSECTION WHEN TRAFFIC IS PLACED IN A 4 WAY STOP.
- SIG6: DELINEATE THE TRUCK WITH CHANNELIZING DEVICES. THE POSITION OF THE TRUCK MAY BE MOVED TO FACILITATE WORK.

**MAINTENANCE AND SURVEYING NOTES**

- MS1: WHENEVER STOPPING SIGHT DISTANCE EXISTS TO THE REAR, THE SHADOW VEHICLES SHOULD MAINTAIN THE RECOMENDED DISTANCE FROM THE WORK AREA AND PROCEED AT THE SAME SPEED. THE SHADOW VEHICLE SHOULD SLOW DOWN AND TRAVEL AT A FARTHER DISTANCE TO PROVIDE ADEQUATE SIGHT DISTANCE IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES.
- MS2: WORKERS OUTSIDE OF VEHICLES SHOULD WORK WITHIN 150' OF WORK VEHICLES WITH AN ACTIVATED BEACON, BETWEEN THE "BEGIN WORK CONVOY" SIGN AND THE "END WORK CONVOY" SIGN, OR BETWEEN THE "WORK ZONE BEGINS" AND "END ROAD WORK" SIGN.
- MS3: WORK OR SHADOW VEHICLES WITH OR WITHOUT A TMA MAY BE USED TO SEPARATE THE WORK SPACE FROM TRAFFIC. IF USED, THE VEHICLES SHOULD BE PARKED ACCORDING TO THE ROLL AHEAD DISTANCE TABLES.
- MS4: WORK AND SHADOW VEHICLES SHALL BE APPROPRIATELY EQUIPPED WITH AN ACTIVATED AMBER BEACON.
- MS5: WHEN WORKERS ARE OUTSIDE THEIR VEHICLES IN AN EXISTING LANE WHILE A MOBILE OPERATION IS OCCURRING DURING THE NIGHTTIME HOURS, CHANNELIZING DEVICES TO DELINEATE OPEN OR CLOSED LANES AT 50 FT SPACING MUST BE USED. AN EXAMPLE OF AN OPERATION (BUT NOT LIMITED TO) IS THE LAYOUT OF CONCRETE PATCHES.
- MS6: W21-6 AND W20-1 SIGNS MAY BE SUBSTITUTED AS DETERMINED BY THE TYPE OF WORK TAKING PLACE AS PER THE ENGINEER.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL








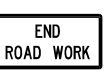
































































NO: 102-GEN-NOTES

TRAFFIC TYPICALS  
NOTE SHEET


DATE: MAY 2022  
SHEET:

2 OF 2

## SIGN NUMBER KEY

 E5-1f 48" x 48" 60" x 48"	 E5-2 48" x 36"	 E5-2a 48" x 36"	 E5-3 48" x 36"	 E13-1P VAR x 24"	 E13-1aP 36" x 24"	 G20-1 60" x 24"	 G20-2 48" x 24"
 G20-4 36" x 18"	 I-6a 18" x 18" 24" x 24" 30" x 30"	 M1-1 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-1 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"	 M1-2 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-2 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"	 M1-3 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-3 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"
 M1-4 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-4 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"	 M1-5 18" x 18" 24" x 24" 30" x 30" 36" x 36"	 M1-5a 18" x 18" 24" x 24"	 M1-6 18" x 18" 24" x 24" 36" x 36"	 M1-6 22.5" x 18" 30" x 24" 45" x 36"	 M3-1 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M3-2 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"
 M3-3 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M3-4 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-1 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-1a 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-2 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-3 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-4 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-5 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"
 M4-6 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-7 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-7a 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-8 12" x 6" 18" x 9" 24" x 12" 30" x 15"	 M4-8a 24" x 18"	 M4-8b 24" x 12"	 M4-9L 30" x 24" 48" x 36" 60" x 48"	 M4-9R 30" x 24" 48" x 36" 60" x 48"
 M4-9j 30" x 24" 48" x 36" 60" x 48"	 M4-9kL 30" x 24" 48" x 36" 60" x 48"	 M4-9kR 30" x 30" 48" x 42" 60" x 54"	 M4-9mL 30" x 30" 48" x 42" 60" x 54"	 M4-9mR 30" x 30" 48" x 42" 60" x 54"	 M4-9dL 12" x 18"	 M4-9dR 12" x 18"	 M4-9e 12" x 18"
 M4-9f 12" x 18"	 M4-9gL 12" x 18"	 M4-9gR 12" x 18"	 M4-9h 12" x 24"	 M4-9i 12" x 18"	 M4-10L 48" x 18"	 M4-10R 48" x 18"	 M4-11a 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"
 M5-1L 12" x 9" 21" x 15" 30" x 21"	 M5-1R 12" x 9" 21" x 15" 30" x 21"	 M5-2L 12" x 9" 21" x 15" 30" x 21"	 M5-2R 12" x 9" 21" x 15" 30" x 21"	 M5-3 12" x 9" 21" x 15" 30" x 21"	 M6-1L 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-1R 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-2L 12" x 9" 18" x 12" 21" x 15" 30" x 21"
 M6-2R 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-3 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-4 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-5 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-6L 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-6R 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-7L 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-7R 12" x 9" 18" x 12" 21" x 15" 30" x 21"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS

	<b>MAINTAINING TRAFFIC TYPICAL</b>	<b>STANDARD HIGHWAY SIGNS</b>	DATE: 10/17/24
	CODE: <b>103-GEN-SIGN</b>		SHEET: 1 OF 5

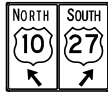
## SIGN NUMBER KEY



M8-1gL  
36" x 66"



M8-1gR  
36" x 66"



M8-2d  
60" x 48"



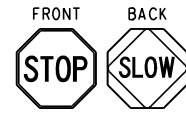
OM-3L  
12" x 36"  
24" x 48"  
36" x 72"



OM-3R  
12" x 36"  
24" x 48"  
36" x 72"



R1-1  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



R1-1a  
18" x 18"  
24" x 24"



R1-2  
18"  
24"  
30"  
36"  
48"  
60"



R1-2aP  
24" x 18"  
36" x 30"  
48" x 36"



R2-1  
18" x 24"  
24" x 30"  
30" x 36"  
36" x 48"  
48" x 60"



R2-1a  
48" x 60"



R3-1  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



R3-2  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



R3-3  
24" x 24"  
36" x 36"  
48" x 48"



R3-4  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



R3-5L  
30" x 36"  
36" x 48"



R3-5R  
30" x 36"  
36" x 48"



R3-5a  
30" x 36"  
36" x 48"



R3-6L  
30" x 36"  
42" x 48"



R3-6R  
30" x 36"  
42" x 48"



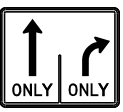
R3-7L  
30" x 30"  
36" x 36"



R3-7R  
30" x 30"  
36" x 36"



R3-8c  
36" x 30"



R3-8d  
36" x 30"



R4-1  
12" x 18"  
18" x 24"  
24" x 30"  
36" x 48"  
48" x 60"



R4-2  
12" x 18"  
18" x 24"  
24" x 30"  
36" x 48"  
48" x 60"



R4-7  
12" x 18"  
18" x 24"  
24" x 30"  
36" x 48"  
48" x 60"



R4-8  
18" x 24"  
24" x 30"  
36" x 48"  
48" x 60"



R4-9  
18" x 24"  
24" x 30"  
36" x 48"  
48" x 60"



R5-1  
30" x 30"  
36" x 36"  
48" x 48"



R5-1a  
30" x 18"  
36" x 24"  
42" x 30"



R5-18b  
48" x 60"



R5-18c  
48" x 48"



R5-18d  
78" x 12"



R5-18e  
72" x 12"



R5-18f  
48" x 60"



R5-18g  
30" x 42"



R5-18h  
48" x 60"



R6-1L  
36" x 12"  
54" x 18"



R6-1R  
36" x 12"  
54" x 18"



R6-2L  
12" x 16"  
18" x 24"  
24" x 30"  
36" x 48"  
48" x 60"



R6-2R  
12" x 16"  
18" x 24"  
24" x 30"  
36" x 48"  
48" x 60"



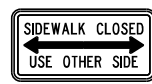
R8-3  
12" x 12"  
18" x 18"  
24" x 24"  
36" x 36"  
48" x 48"



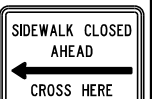
R9-8  
36" x 18"



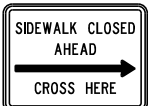
R9-9  
24" x 12"  
30" x 18"



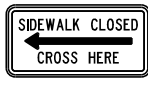
R9-10  
24" x 12"  
48" x 24"



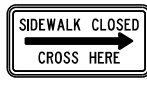
R9-11L  
24" x 12"  
48" x 36"



R9-11R  
24" x 12"  
48" x 36"



R9-11aL  
24" x 12"  
48" x 24"



R9-11aR  
24" x 12"  
48" x 24"



R10-6b  
36" x 54"



R11-2  
48" x 30"



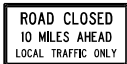
R11-2a  
48" x 30"



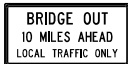
R11-2b  
48" x 30"



R11-2c  
60" x 30"



R11-3a  
60" x 30"



R11-3b  
60" x 30"



R11-4  
60" x 30"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



MAINTAINING TRAFFIC TYPICAL

STANDARD HIGHWAY SIGNS

DATE:  
10/17/24

CODE:

103-GEN-SIGN

SHEET:  
2 OF 5

NO SCALE

SIGN NUMBER KEY



W1-1L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-1R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-2L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-2R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-2bL  
36" x 36"  
48" x 48"



W1-2bR  
36" x 36"  
48" x 48"



W1-3L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-3R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4bL  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4bR  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4cL  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4cR  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W24-1L  
30" x 30"  
36" x 36"  
48" x 48"



W24-1cP  
24" x 18"  
30" x 24"



W24-1R  
30" x 30"  
36" x 36"  
48" x 48"



W24-1aL  
30" x 30"  
36" x 36"  
48" x 48"



W24-1aR  
30" x 30"  
36" x 36"  
48" x 48"



W24-1bL  
30" x 30"  
36" x 36"  
48" x 48"



W24-1bR  
30" x 30"  
36" x 36"  
48" x 48"



W1-6L  
24" x 12"  
36" x 18"  
48" x 24"  
60" x 30"  
96" x 48"



W1-6R  
24" x 12"  
36" x 18"  
48" x 24"  
60" x 30"  
96" x 48"



W1-8L  
12" x 18"  
18" x 24"  
24" x 30"  
30" x 36"  
36" x 48"



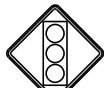
W1-8R  
12" x 18"  
18" x 24"  
24" x 30"  
30" x 36"  
36" x 48"



W3-1  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W3-2  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W3-3  
18" x 18"  
30" x 30"  
36" x 36"  
48" x 48"



W3-4  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W3-4b  
30" x 30"  
36" x 36"  
48" x 48"



W3-5  
36" x 36"  
48" x 48"



W3-5a  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W3-5b  
30" x 30"  
36" x 36"  
48" x 48"



W4-1L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-1R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-2L  
30" x 30"  
36" x 36"  
48" x 48"



W4-2R  
30" x 30"  
36" x 36"  
48" x 48"



W4-3L  
30" x 30"  
36" x 36"  
48" x 48"



W4-3R  
30" x 30"  
36" x 36"  
48" x 48"



W4-5L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-5R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-5P  
18" x 24"  
24" x 30"



W4-6L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-6R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-7L  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W4-7R  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W5-1  
30" x 30"  
36" x 36"  
48" x 48"



W5-2  
18" x 18"  
30" x 30"  
36" x 36"  
48" x 48"



W5-3  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W5-4  
30" x 30"  
36" x 36"  
48" x 48"



W6-1  
30" x 30"  
36" x 36"  
48" x 48"



W6-2  
30" x 30"  
36" x 36"  
48" x 48"



W6-3  
30" x 30"  
36" x 36"  
48" x 48"



W6-4  
12" x 18"



W7-1  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W7-1a  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-1  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



MAINTAINING TRAFFIC TYPICAL

STANDARD HIGHWAY SIGNS

DATE:  
10/17/24






































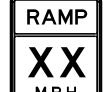




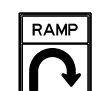













CODE:

103-GEN-SIGN

SHEET:  
3 OF 5

NO SCALE

SIGN NUMBER KEY

 DIP W8-2 18" x 18" 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 PAVEMENT ENDS W8-3 18" x 18" 30" x 30" 36" x 36" 48" x 48"	 SOFT SHOULDER W8-4 18" x 18" 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 W8-5 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 WHEN WET W8-5P 24" x 18" 30" x 24" 36" x 30"	 LOOSE GRAVEL W8-7 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 ROUGH ROAD W8-8 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 LOW SHOULDER W8-9 24" x 24" 30" x 30" 36" x 36" 48" x 48"
 UNEVEN LANES W8-11 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 NO CENTER LINE W8-12 30" x 30" 36" x 36" 48" x 48"	 FALLEN ROCKS W8-14 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 GROOVED PAVEMENT W8-15 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 W8-15P 24" x 18" 30" x 24" 36" x 30"	 W8-17L 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 W8-17R 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 SHOULDER DROP-OFF W8-17P 24" x 18" 30" x 24" 36" x 30"
 ROAD MAY FLOOD W8-18 24" x 24" 36" x 36" 48" x 48"	 NO SHOULDER W8-23 24" x 24" 36" x 36" 48" x 48"	 STEEL PLATE AHEAD W8-24 30" x 30" 36" x 36" 48" x 48"	 SHOULDER ENDS W8-25 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 RUMBLE STRIPS AHEAD W8-26 36" x 36" 48" x 48"	 LEFT LANE ENDS W9-1L 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 RIGHT LANE ENDS W9-1R 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 LANE ENDS MERGE LEFT W9-2L 30" x 30" 36" x 36" 48" x 48"
 LANE ENDS MERGE RIGHT W9-2R 30" x 30" 36" x 36" 48" x 48"	 CENTER LANE CLOSED AHEAD W9-3C 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 LEFT LANE CLOSED AHEAD W9-3L 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 RIGHT LANE CLOSED AHEAD W9-3R 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 CENTER & LEFT LANE CLOSED AHEAD W9-3a 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 CENTER & LEFT 2 LANES CLOSED AHEAD W9-3b 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 W11-10 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 TRUCK CROSSING W11-10a 24" x 24" 30" x 30" 36" x 36" 48" x 48"
 WATCH FOR RAMP TRAFFIC W11-24 36" x 36" 48" x 48"	 W12-1 24" x 24" 30" x 30" 36" x 36" 48" x 48"	 12'-6" W12-2 18" x 18" 30" x 30" 36" x 36" 48" x 48"	 35 M.P.H. W13-1P 18" x 18" 24" x 24" 30" x 30"	 EXIT XX MPH W13-2 24" x 30" 36" x 48" 48" x 60"	 RAMP XX MPH W13-3 24" x 30" 36" x 48" 48" x 60"	 ON RAMP W13-4P 24" x 24" 36" x 36"	 EXIT 25 MPH W13-6 24" x 42" 36" x 60" 48" x 84"
 EXIT 25 MPH W13-6a 24" x 42" 36" x 60" 48" x 84"	 RAMP 25 MPH W13-7 24" x 42" 36" x 60" 48" x 84"	 RAMP 25 MPH W13-7a 24" x 42" 36" x 60" 48" x 84"	 NO PASSING ZONE W14-3 36" x 24" 40" x 30" 48" x 36" 64" x 48"	 500 FEET W16-2P 18" x 12" 24" x 18" 30" x 24"	 NEXT X MILES W16-4aP 18" x 12" 24" x 18" 30" x 24" 36" x 30"	 TRAFFIC CIRCLE W16-12P 24" x 18"	 WHEN FLASHING W16-13P 24" x 18" 30" x 24"
 ROAD WORK AHEAD W20-1 24" x 24" 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 STREET WORK AHEAD W20-1a 24" x 24" 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 RAMP WORK AHEAD W20-1b 24" x 24" 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 SIGNAL WORK AHEAD W20-1c 24" x 24" 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 SURVEY WORK AHEAD W20-1d 24" x 24" 30" x 30" 36" x 36" 48" x 48" 60" x 60"	 DETOUR AHEAD W20-2 30" x 30" 36" x 36" 48" x 48"	 ROAD CLOSED AHEAD W20-3 30" x 30" 36" x 36" 48" x 48"	 STREET CLOSED AHEAD W20-3a 30" x 30" 36" x 36" 48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



MAINTAINING TRAFFIC TYPICAL

STANDARD HIGHWAY SIGNS

DATE:  
10/17/24

CODE:

103-GEN-SIGN

SHEET:  
4 OF 5

NO SCALE

## SIGN NUMBER KEY



W20-3b  
30" x 30"  
36" x 36"  
48" x 48"



W20-4  
30" x 30"  
36" x 36"  
48" x 48"



W20-4c  
36" x 36"  
48" x 48"



W20-5C  
30" x 30"  
36" x 36"  
48" x 48"



W20-5L  
30" x 30"  
36" x 36"  
48" x 48"



W20-5L1  
30" x 30"  
36" x 36"  
48" x 48"



W20-5L2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5R  
30" x 30"  
36" x 36"  
48" x 48"



W20-5R1  
30" x 30"  
36" x 36"  
48" x 48"



W20-5R2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aL2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aL3  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aR2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aR3  
30" x 30"  
36" x 36"  
48" x 48"



W20-7a  
30" x 30"  
36" x 36"  
48" x 48"



W20-8  
24" x 18"



W20-9  
54" x 48"



W20-10  
48" x 24"  
66" x 30"



W20-11  
12" x 18"



W20-12P  
VARIABLE x 12"



W20-13P  
VARIABLE x 12"



W20-14L  
36" x 36"  
48" x 48"



W20-14R  
36" x 36"  
48" x 48"



W20-14aP  
36" x 12"  
48" x 12"



W20-14bP  
36" x 12"  
48" x 12"



W20-15  
36" x 36"  
48" x 48"



W20-16  
36" x 36"  
48" x 48"



W20-17  
36" x 36"  
48" x 48"



W20-18  
48" x 54"



W20-18a  
48" x 54"



W21-1  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-2  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-2  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-3  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-4  
36" x 18"



W21-5  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-5aL  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-5aR  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-5bL  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-5bR  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-6  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-7  
30" x 30"  
36" x 36"  
48" x 48"



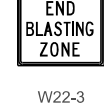
W21-8  
30" x 30"  
36" x 36"  
48" x 48"



W22-1  
30" x 30"  
36" x 36"  
48" x 48"



W22-2  
42" x 36"



W22-3  
36" x 30"  
42" x 36"



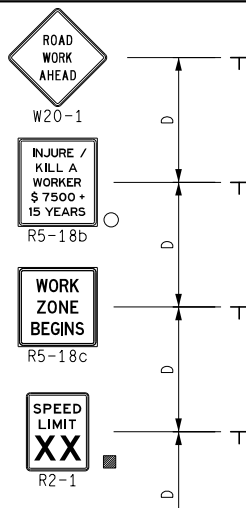
W23-1  
48" x 24"



W23-2  
36" x 36"  
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS

 NO SCALE	MAINTAINING TRAFFIC TYPICAL CODE:	STANDARD HIGHWAY SIGNS	DATE: 10/17/24
	103-GEN-SIGN		SHEET: 5 OF 5



- KEY**
- CHANNELIZING DEVICES
  - ⚡ LIGHTED ARROW PANEL (CAUTION MODE)
  - ← TRAFFIC FLOW
  - REFLECTS EXISTING SPEED LIMIT
  - PLACE SIGN AS INDICATED IN NOTE S2

**STANDARD NOTES**  
 (SEE 102-GEN-NOTES)  
 GENERAL: G1, G2, G3, G4  
 SIGNING: S1, S2, S3, S5  
 DEVICES: TCD1, TCD2, TCD6, TCD7

