



**ENGINEERING OPERATIONS COMMITTEE  
MEETING MINUTES  
June 25, 2020, 9:00 A.M. – 11:00 A.M.  
VIA TEAMS**

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Present: Carol Aldrich                      Mark Geib                      Will Thompson  
Mark Bott                                      Jason Gutting                      Brad Wieferich  
Gregg Brunner                                Tony Kratofil                      Gorette Yung  
Matt Chynoweth                               Ryan Mitchell                      Hal Zweng  
Mark Dionise                                 Kristin Schuster

Absent: Rebecca Curtis                      Brandy Solak

Guests: Curtis Bleech                        Ben Krom                        Dina Tarazi  
Matt Block                                      Valerie Napier                      Dharmesh Valsadia  
Michael Eacker                                Cynthia Robinson  
Matthew Filcek                                 Justin Schenkel

**OLD BUSINESS**

1. Approval of the May 28, 2020 Meeting Minutes – Tony Kratofil

*ACTION: Approved*

2. Michigan Department of Transportation (MDOT) New Materials and Products – Jason Gutting

- a. New Material Monthly Report of Data

- ❖ Number of Submittals Received
- ❖ Number of Submittals Under Review by Subject Matter Expert (documentation and/or product review, dialogue with manufacturer, etc.)
- ❖ Number of Submittals Being Field Reviewed, Tested, or Engaged with a Pilot Effort
- ❖ Number of Submittals Accepted for Use
- ❖ Number of Submittals Not Accepted for Use

*ACTION: For information only.*

NEW BUSINESS

## 1. Safety Topic: Ticks – Kristen Schuster

*ACTION: Information Only*

## 2. MDOT Structural Fabrication Quality Manual – Matthew Filcek

Issue Statement – As part of a consolidation process, MDOT's Materials Unit requested the Structural Fabrication Unit to pull the Quality Assurance (QA) fabrication inspection procedures out of the MDOT Materials Quality Assurance Program (MQAP) manual and develop our own QA manual. The Structural Fabrication Unit would like to briefly present our new MDOT Structural Fabrication Quality Manual that will house our previous QA Guidance Document, fabrication inspection procedures from the MQAP manual, new Inspection & Test Plans, new Supplier Qualification Standard for Prestress Concrete Beams, and new Approved Supplier List for Prestressed Concrete Beams.

Major Issue(s) – This is a contract document and needs to coincide with revisions to the MQAP manual for the October 2020 letting. It is also specified in the front pages of the 2020 specifications book.

Background/History – This is a new manual that will contain previous QA inspection procedures and house other pertinent new QA initiatives.

Recommendation(s) – Recommend for approval by Pete Jansson and Matt Filcek.

Status – Final draft to be submitted by end of first week of June 2020.

*ACTION: Tabled. To be brought back to a future EOC meeting after Federal Highway Administration (FHWA) and other approvals are received.*

## 3. Expansion of Fixes that are Life-cycled – Michael Eacker

Issue Statement – The Pavement Management Section has developed performance curves based on MDOT data for pavement fix types that are not currently life-cycled. These fixes are: Asphalt stabilized crack relief layer (ASCRL); hot mixed asphalt (HMA) multi-course overlays/resurfacing crush & shape; and thin concrete overlays.

Major Issue(s) – Including these fixes into the department's life-cycle program will allow us to comply with the state life-cycle law more fully.

Background – The Michigan life-cycle law states:

“The department shall develop and implement a life-cycle cost analysis for each project for which the estimated total pavement costs exceed \$1,500,000.00 funded in whole or in part with state funds.”

Since this law was originally enacted in 1998, we have included four fix types in our life-cycle program: HMA reconstruct, concrete reconstruct, rubblization with HMA resurfacing, and unbonded concrete overlays. Many of the other fix types in the Reconstruction and Rehabilitation program have not been life-cycled because we did not have performance curves for them. In 2016, the Pavement Management Section embarked on a massive data gathering task to gather the necessary information to be able to develop the needed performance history, maintenance history, and maintenance costs to be able to develop performance curves for the fixes listed above that were not being life-cycled.

Once these curves were finally established, an implementation plan was developed to lay out what fixes would be the two alternatives to be compared in a life-cycle cost analysis in different situations, and the design methodology that would be used to create equivalent designs. This plan was first reviewed by the life-cycle stakeholders within Region staff. After Region comments were incorporated, the plan was then sent to the paving industry associations for their review and comment. The final version is included with this submittal.

Implementation would include any projects, of these new fix types, that are being let after January 1, 2023 to be life-cycled. This implementation would not affect our current life-cycle process involving reconstructs, rubblize, and unbonded concrete overlay projects.

Recommendation(s) – The EOC approve thin concrete overlays as a standard fix type. Also, that the EOC approve that the ASCRL, HMA multi-course overlay/resurfacing, crush and shape, and thin concrete overlay fix types be included in MDOT’s life-cycle program as presented.

*ACTION: Approved*

#### 4. Proprietary Products – Kristin Schuster

Major Issue(s) – The FHWA has rescinded federal rules restricting the use of federal funds to purchase patented and proprietary products. MDOT must define and self-regulate its own policy that will encourage innovation, evaluate new products, and ensure fair and open competition.

Background/History – For more than a century federal regulation prohibited the purchase of patented or proprietary products for federal aid projects. Over time, the rule was refined to allow exceptions under certain circumstances. Federal funds could be used for these products if either they are purchased through competitive bidding, are documented as a

public interest finding, are essential for synchronization by public interest certification or are used for experimental purposes.

On October 28, 2019, a revised final rule became effective rescinding these regulations. In the interest of encouraging innovation in transportation technology, federal participation is no longer restricted when,

- Proprietary products are specified in federal-aid contracts.
- Single trade name materials are referenced in plans and specifications.
- Proprietary products are specified in a Qualified Products List.
- American Association of State Highway and Transportation Officials or the American Society for Testing and Materials specifications are used that can be met by only one manufacturer.
- Proprietary products are specified in design-build request for proposal documents.

Rather than revise the rules, the FHWA chose to rescind them and leave it to the state transportation agencies to develop their own policies and procedures. The goal is to allow proprietary products in a manner that promotes innovation while at the same time assuring fair market competition.

MDOT developed a formal policy and procedure eight (8) years ago that complied with the federal regulation at that time. It provided a fair, competitive process to allow the use of proprietary products while maintaining a method of evaluation. Its framework is still based on the four categories of consideration: competitive bidding, public interest finding, synchronization, and experimental use. This vetting and approval procedure provides a knowledge-based decision process. Without it, MDOT staff at various levels could be compelled by vendors to independently accept new products, materials and methods without technical support or organizational consensus.

Additionally, MDOT has an established evaluation of new materials procedure that utilizes subject matter experts to ensure that we are only considering and evaluating products with legitimate positive potential outcomes.

Our current policy and procedures accomplish the spirit of the new final rule and should be maintained, except for the FHWA approval step, which is no longer provided to us under the new rule.

Recommendation(s) – Approve the continued application of the current MDOT policy and procedures for the use of proprietary products. Approve revisions to the MDOT Road Design Manual presented that retain current policy and practice (except for FHWA approvals) and integrates the evaluation of new materials procedures.

*ACTION: Approved.*

5. I-69 Design-Bid-Build Reconstruction Project in Flint – Ryan Mitchell/Trevor Block

Project Information: I-69 Design-Bid-Build reconstruction project in the city of Flint, Genesee County, Bay Region

Route/Location: I-69 from Fenton Road to M-54

Job Number: 132026, 201632, 204861

Control Section: 25084, 25085, 25132

Letting Date: February 2021

Est. Const. Cost: \$54.2M (Road) / \$28.2M (Bridge CPM)

Issue(s) – Use of Alternate Pavement Bidding (APB) on the I-69 Design-Bid-Build project.

Construction Field Services coordinated with the project office and calculated a preliminary life cycle costs analysis on this project and determined that the difference between the pavement options was 3.56%. HMA was the low-cost alternative.

Both pavement alternates are expected to have similar environmental, right of way, drainage, and utility impacts along with similar maintaining traffic concepts. Paving is the controlling operation for the construction schedule.

Background – The project appears to meet the criteria for the use of APB.

Recommendation(s) – The Innovative Contracting Committee recommends approval for the use of APB on this Design-Bid-Build project.

*ACTION: Approved*

6. Alternate Technical Concepts (ATCs) for Maintenance of Traffic (MOT) on US-31 and M-104 in Ottawa County – Ryan Mitchell/Dharmesh Valsadia

Issue Statement – Request approval for the use of Alternate Technical Concepts (ATCs) for Maintenance of Traffic (MOT) on upcoming US-31 and M-104 structure work in Grand Haven, Ferrysburg and Spring Lake, Ottawa County. Due to the complexity of the project, rehabilitation on 5 structures including the Grand River lift bridge with restricted access due to river and/or channel crossings, combined with consecutive interchange impacts, industry input and innovation is being sought for the purpose of improving MOT for the project.

Project Location:

JN 200107: US-31 over Grand River (B02 of 70014)

JN 201288: US-31 over GTW Railroad & M-104 (R01 of 70016)

US-31 NB/SB over South Channel of the Grand River (B01-1 & 2 of 70014)

US-31 over 3rd Street (S01 of 70016)

JN 201289: M-104 over Spring Lake Channel (B01 of 70081)

**Work Description:**

JN 200107: B02 of 70014 – Full paint, Steel repairs, grid deck replacement, thin epoxy overlay, mechanical and electrical work

**JN 201288:**

R01 of 70016 – Deep Overlay, substructure patching, railing replacement, zone painting

B01-1 of 70014 – Deck patching, epoxy overlay, substructure patching, joint and approach replacement, scour countermeasures

B01-2 of 70014 – Deep overlay, beam repair, substructure patching, railing repair, approach replacement, zone painting, scour countermeasures

S01 of 70016 – Polyester polymer concrete overlay, joint replacement, substructure patching, approach replacement

JN 201289: B01 of 70081 – Deep overlay, approach reconstruction

Est. Const Cost:	200107: \$19,942,089
	201288: \$ 4,592,436
	201289: \$ 1,650,099
<b>TOTAL:</b>	<b>\$26,184,624</b>

**Key Dates:**

08/07/2020 – Plan Completion

11/09/2020 – Plan Turn-in

01/08/2021 – Letting

Major Issue(s) - US-31 and M-104 are relatively high-volume trunkline roadways and intersect within the project limits. The work consists of structural rehabilitation on five (5) structures within the US-31 and M-104 corridors that include bridge deck overlays, joint replacements, new bridge approaches, settlement repairs and replacement of the grating on the bascule bridge over Grand River carrying three (3) lanes in each direction. The work may include coordination with US Coast Guard and the Army Corps of Engineers as there are seasonal restrictions for closures that will constrain the construction schedule. This is a one and a half-year project and summer tourist mobility is a top concern.

Background/History – In the past traffic has been maintained on US-31 by crossing traffic over to one bound at a time across the bascule bridge, then returning traffic back to its designated bound outside of the bridge construction influence, while maintaining access to M-104 ramps. One consideration on the package of jobs is that there is a significant amount of adjacent bridge work packaged together with impacts to adjoining interchange ramps and non-motorized paths adjacent to US-31, M-104, and below the M-104 structure. The Muskegon Transportation Service Center is hopeful that through the ATC process, innovative alternative concepts for efficient MOT will be developed for MDOT consideration, that may be preferred to the base MOT concept.

Recommendation(s) – The Innovative Contracting Committee has recommended the use of ATCs for MOT on this project considering work type and a need for innovative traffic management options. Contractor means and methods could improve MOT staging which

may result in expedited delivery of the project. ATC for MOT is expected to deliver efficiency and continuity of traffic control throughout the duration of construction activities.

Status – New

*ACTION: Approved*

7. I-75 Northbound Unbonded Concrete Overlay Pavement Demonstration Program Report – Justin Schenkel

Issue(s) – To approve the MDOT Pavement Demonstration Program report, “Pavement Demonstration Program Project Finalization I-75 Northbound Unbonded Concrete Overlay (MDOT Job Number 73873)”.

Background – This is an MDOT supplementary technical report to the Pavement Demonstration Program Status Report, the latter of which summarizes annual performance of active demonstration projects as required per Public Act 457 of 2016, MCL 247.651i. All demonstration projects are continually being evaluated to determine if there is enough information to create appropriate performance curves and/or make a final determination as to their applicability in MDOT standard practice. This report summarizes one of those projects for which final determination can be made to finalize and close it out as a demonstration project. This is a final comprehensive report on the I-75 Northbound Unbonded Concrete Overlay in Ogemaw County from Ski Park Road to the Roscommon County line, MDOT job number 73873. This demonstration project was constructed in 2003 as a six-inch unbonded, non-reinforced concrete overlay with a 20-year design life. While this is already a standard fix for MDOT, the intent of this demonstration project was to evaluate the following features:

- 10- and 12-foot transverse joint spacing.
- Sections without dowel bars at transverse joints.
- Transverse joints cut to 1/8” width and left unsealed or 1/4” and sealed with hot-pour rubber.
- Longitudinal joints cut to 1/8” width and left unsealed or the 1/4” and sealed with hot-pour rubber.
- Open-graded HMA separator layer.

Recommendation(s) – Recommend approval of the proposed report, “Pavement Demonstration Program Project Finalization I-75 Northbound Unbonded Concrete Overlay (MDOT Job Number 73873),” including the following report recommendations:

Since an adequate amount of time has passed and enough data is available to fully evaluate this project and its experimental aspects (unsealed joints, no dowel bars, reduced joint spacing), MDOT recommends that monitoring of this demonstration project end and be considered complete. Per the findings and conclusions of this report, unbonded concrete overlays should have sealed transverse and longitudinal joints.

Additionally, transverse joints should be doweled along with longitudinal joints being tied. Finally, 12-foot joint spacing should be maintained for 6-inch (or more) concrete pavement with adequate provisions to ensure proper drainage of the HMA open graded interlayer.

*ACTION: Acceptable to publish. Will be added to the Research Administration reports on the Research website.*

8. Manual for Michigan Test Methods (MTM) 723-20 and 326-20 – Curtis Bleech

Issue Statement – Request approval of the Manual for Michigan Test Methods (MTM):

- MTM 723-20: Water tightness testing of Culvert and Sewer Joints up to 24 inches (600 mm) in diameter
- MTM 326-20: Quantitative measurement of HMA pavements

Major Issue(s) – Each new or revised (major change) test method is reviewed by the Construction Field Services Division prior to submittal to the EOC for final approval.

Background/History:

- MTM 723-20: Change in test specimen length and photos required
- MTM 326-20: New MTM for measuring HMA segregation

Recommendation(s) – Approve MTM 723-20, MTM 326-20

Status – New Submittal

*ACTION: Approved*

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Carol Aldrich, Secretary  
Engineering Operations Committee



RA:lrp

cc: EOC Members	C. Libiran (MDOT)	R. Brenke (ACEC)
Meeting Guests	R. Lippert (MDOT)	G. Bukoski (MITA)
Region Engineers (MDOT)	L. Mester (MDOT)	D. DeGraaf (MCA)
Assoc. Region Engineers (MDOT)	C. Newell (MDOT)	C. Mills (APAM)
TSC Managers (MDOT)	T. Schafer (MDOT)	D. Needham (MAA)
L. Doyle (MDOT)	R. Jorgenson (FHWA)	M. Ackerson-Ware (MRPA)