



**ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
NOVEMBER 8, 2019, 9:00 A.M. – 11:00 A.M.
MULTI-MODAL CONFERENCE ROOMS**

Present:	Carol Aldrich	Jason Gutting	Hal Zweng
	Mark Bott	Tony Kratofil	
	Gregg Brunner (phone)	Ryan Mitchell	
	Matt Chynoweth	Will Thompson	
	Mark Dionise	Gorette Yung (phone)	
Absent:	Matt Chynoweth	Mark Geib	Brandy Solak
	Rebecca Curtis	Kristin Schuster	Brad Wieferich
Guests:	Imad Gedaoun	Brad Peterson	Carlos Torres
	Dave Morena	Jonathon Stratz	Brad Wagner

OLD BUSINESS

1. Approval of the October 3, 2019, Meeting Minutes – Tony Kratofil - *Approved*
2. Michigan Department of Transportation (MDOT) New Materials and Products – Jason Gutting - *Information only*

NEW BUSINESS

1. Safety Topic – Tony Kratofil

The Kevin White incident was discussed. It was emphasized that everyone needs to be aware and alert and give space as drivers.

ACTION: Information only

2. Road Safety Audit Guidance Document Revisions – Mark Bott

Issue Statement – Revision to Road Safety (RSA) Audit Guidance Document (10241).

Major Issue(s) – The RSA guidelines were updated to reflect changes in funding templates, clarify the process and to eliminate outdated language. Mini RSAs were changed to ‘Informal RSAs’ to reduce confusion as to their meaning and use. Safety Programs role in the process was clarified as coordinating in the process of the RSA (as project owners are at the region/TSC level). The most significant change in the document was removing the ‘CMAQ’

language and replacing it with the new 'Non-Freeway/Freeway Operations' label and the projects agreed upon in that category (including better defining geometric terminology and financial thresholds). Finally, the RSA funding section was updated to remove language that is no longer applicable as the dates are past where funding outside of the project was applied.

Background/History – The guidance document was developed in 2016 to provide guidance when to utilize an RSA and revised later that year to add an exemption process.

Recommendation(s) – Approve the RSA Audit Guidance Document (10241)

ACTION: Approved

3. Addition to the Roundabout Design Aid – Mark Bott/Jason Ealy

Subject/Issue

Issue Statement – Approval of addition of Compact (Mini) Roundabouts to the Roundabout Design Aid.

Major Issue(s) – Based on a FHWA sponsored Compact (Mini) Roundabout workshop given to MDOT staff the Geometric Design Unit developed application and design considerations as a starting point for this roundabout type on state trunk line. With further experience the document will be updated as needed.

Background/History – The existing Roundabout Design Aid was created to provide to assist designers in the design of roundabouts by providing clarification and preferences used by MDOT of elements found in NCHRP Report 672. The use of the design parameter spreadsheet on page 1 has streamlined the review process conducted by the Geometric Design Unit.

The Compact (Mini) Roundabouts section was based on research in NCHRP reports and comments from the regions on TSSAT and SDAT and the local agency area.

Recommendation(s) – Approve addition to Roundabout Design Aid

ACTION: Approved

4. Amendment to MDOT Action Plan for Impact Attenuators after December 31, 2018 – Carlos Torres

Subject/Issue – Amendment to MDOT Action Plan for Impact Attenuators after December 31, 2018 (dated October 9, 2018).

Major Issue(s)/Potential Complication(s) – The current MDOT Action Plan for Impact Attenuators after December 31, 2018, dated October 9, 2018, states that MASH-compliant attenuators will be specified when there is at least one MDOT-approved, MASH-compliant deemed suitable for installation at the proposed installation site. Since permanent impact attenuators are proprietary, sole sourcing would be required if only one attenuator option is available.

On October 9, 2019, AASHTO ratified Policy Resolution PR-12-19. An article in this document indicates that state transportation agencies may use a single MASH-compliant device that meets the agency's needs. This implies that state transportation agencies are not obligated to use a MASH-compliant device if only one MASH-compliant option is available.

Background – Refer to the current MDOT Action Plan for Impact Attenuators after December 31, 2018, dated October 9, 2018, and AASHTO Policy Resolution PR-12-19.

Recommendation(s) – Proceed with approving Amendment Number 1 to MDOT Action Plan for Impact Attenuators, dated October 23, 2019. The amendment states that MASH-compliant attenuators will be specified when there are at least two MDOT-approved, MASH-compliant attenuators deemed suitable for installation at each proposed installation site. Otherwise, NCHRP 350 compliant attenuators will be specified. This will eliminate the need to sole source when only one MASH-compliant option is available.

ACTION: Approved

5. Implementation of Type 6 and 7 Bridge Railings for Non-NHS Routes – Brad Wagner/Carlos Torres

Subject/Issue – Implementation of adhesive-anchored Type 6 and Type 7 bridge railings for Non-NHS Routes

Major Issue(s) – The current AASHTO LRFD Bridge Design Specifications do not contain MASH design impact loads for bridge railings, which are needed for evaluating barrier modifications such as adhesive anchored railings to existing bridge decks. The Texas A&M Transportation Institute (TTI) provided MASH design load recommendations as part of their evaluation of various bridge railings under NCHRP 20-07, Task 395. However, analyses have shown that Type 6 and 7 bridge railings with adhesive anchored connections to an existing bridge deck do not have adequate strength to withstand TTI's recommended design impact loads. As a result, MDOT has no option at this time for replacing existing barriers on bridges with adhesive anchored railings capable of withstanding TTI's recommended MASH design impact loads.

Background/History - When implementing Type 6 and Type 7 bridge railings, the structural investigation determined that the use of adhesive anchored bridge railings would not meet the loading required in accordance with MASH Test Level 4 (TL-4). As a result, no adhesive anchored details have been developed for these railings. Although the proposed Type 6 and

Type 7 railings adhesive anchored to bridge decks will not meet MASH TL-4 loading requirements, they do they do meet the requirements of NCHRP 350, TL-4.

In the absence of a barrier replacement option, a poor condition railing must be removed and replaced, along with the deck overhang, resulting in significant additional cost, construction duration, and traffic impacts, especially for bridges over other roadways.

The AASHTO/FHWA Joint Implementation Agreement for MASH dated January 7, 2016 establishes requirements for implementing MASH on National Highway System (NHS) contracts. No revised requirements were established for non-NHS routes.

Recommendation(s) – Allow adhesive anchored Type 6 and Type 7 bridge barrier railings, with connections that are designed using NCHRP 350, TL-4 design impact loads, for barrier replacement projects on Non-NHS structures. This includes trunk line route bridges that are Non-NHS as well as bridges on Non-NHS routes that carry traffic over NHS routes.

ACTION: Approved

6. M2D2 Guidebook – Bradley Peterson

Issue Statement – M2D2 Guidebook.

Major Issue(s) – The goal of this document is to provide a guidebook and examples of best practices to be used for planning and designing smart transportation networks that support sustainable and livable communities. The plan identifies multi-modal design options, transportation analysis tools, best practice case studies, and resources to support the implementation of the M2D2 initiative. It will also inform access to and sharing of geospatial data associated with existing and proposed land use and environmental information.

Work performed in this document consisted of:

- Preparation of an M2D2 process framework to be integrated with current MDOT project development processes.
- Guidance for local communities, non-profits, and other State agencies to use to collaborate with MDOT on future transportation projects.
- Identification of best practices related Complete Streets, Transit, and Autonomous Vehicle Readiness.
- Identification of relevant, available geospatial datasets (land use, socio-economic, environmental, and natural resource data).
- Identification of future technologies and data sources that may assist MDOT in planning and constructing safer, more efficient roadways.
- Description of principles for MDOT to follow for creating multi-modal roadways.
- Prioritization of design elements for urban, suburban, rural, and corridor settings.

Background/History - MDOT was awarded State Transportation Innovation Council (STIC) Incentive funds for the development of an M2D2 Guidebook to support implementation of

the Multi-Modal Development and Delivery (M2D2) process. The M2D2 Guidebook will help provide MDOT with analysis tools and resources to effectively consider performance management approaches for planning, designing, and building transportation projects that promote modal choice, connectivity, revitalize communities, and improve public health and safety.

The M2D2 Guidebook will also help serve as a resource to local communities, non-profits, and other State agencies to ensure planned transportation projects meet MDOT's goals for multi-modal travel.

MDOT will use the recommendations from this guidebook to better tie the State's project scoping to local and regional planning processes by setting design standards for all agencies to consider. The M2D2 Guidebook brings attention to multimodal transportation options through regional and national best practices that support and enhance collaboration on local and regional transportation plans for all uses of the public right of way.

Recommendation(s) – The research STIC grant deliverable has been reviewed internally by the M2D2 Sponsor and Implementation Teams and approved and presented to FHWA Michigan Division staff. We are seeking approval from EOC at this time to allow the document to be officially used by department staff in project planning and development, and as a resource to our public partners as we engage on multimodal issues with them and the public.

ACTION: Approved

7. Fixed Price/Variable Scope Contracting Method on I-75 from Oakland/Genesee County Line to US-23 – Ryan Mitchell/Trevor Block

Subject/Issue – Request approval for the use of the Fixed Price/Variable Scope (FPVS) contracting method on a Mill and one course overlay on I-75 from Oakland/Genesee County Line to US-23, Genesee County in Bay Region, Davison TSC.

Major Issue(s) – The goal of the FPVS project will be to maximize the amount of work that can be completed using a fixed dollar amount. We will be using a Type 3 contracting method, where bids will be received through a traditional low bid process. If the bids come in below the engineer's estimate the construction limits will be extended to meet the project budget.

Background – Based on the limited budget it is anticipated that only 12 lane miles of milling and one course overlay can be completed, and the Region has identified 48 lane miles of work that need this type of fix. FPVS is intended to maximize the amount of work within the established budget.

Job Number: 208836

Control Section: 25131

Construction Cost: \$6,500,014 (Cost to complete entire scope of work \$26,000,000)
Letting Date: January 2021

Recommendation(s) – The Innovative Contracting Committee (ICC) has approved the use of the FPVS contracting method for this project.

How the Region/TSC intends to incorporate work that wasn't included in the Contractor's bid into the five-year plan – only applies to Rehab/Recon projects.

The entire length will be completed in 3 years – 25% this year, but the remaining 75% will be prioritized for our region budgets in the following years.

ACTION: Approved

8. Fixed Price/Variable Scope (FPVS) Type 3 on Local Agency Project – Ryan Mitchell/Brent Schriener

Project Information (if applicable): Request approval for the use of the Fixed Price/Variable Scope (FPVS) Type 3 contracting method on a Local Agency Project (LAP).

Route/Location: Eastman Road, Larkin Charter Township, Midland County

- Priority A: Commerce Drive to south of Monroe Road – Widen roadway to three lanes with 4-foot width paved shoulder, proposed enclosure of existing open ditches, and cold mill and pave existing HMA surface with geosynthetic paving interlayer.
- Priority B: South of Monroe Road to Blackhurst Road – Cold mill and pave existing HMA surface with geosynthetic paving interlayer, widen existing shoulders to meet 3R standards with 4-foot paved, and drainage improvements.

Job Number: 129775

Control Section: STUL 56000

Construction Cost: \$1,263,862 (Priority A) and \$2,036,138 (Priority B)

Letting Date: February 2020

Issue(s) – FPVS is proposed to maximize the number of lane miles than can be milled, receive placement of geosynthetic paving interlayer, receive widened shoulders, and be resurfaced within the established budget. It is anticipated that the eventual approved MATS TIP funding amount will be insufficient to complete the intended work for the entire length of the above roadway segments. The FPVS method will be used to the extend the POE to reflect actual bid unit prices, to the further extent possible.

Background – The estimated construction cost currently exceeds what is approved on the Midland Area Transportation Study 2017-2020 Project List. Eastman Road from Commerce

Drive to Monroe Road is an approved project while Eastman Road from Monroe Road to Blackhurst Road was previously on the TIP but removed due to fiscal constraint. Based on limited funding and the limited number of lane miles the Midland County Road Commission is able to rehabilitate during each construction season, the fixed price variable scope procurement method will allow for maximizing the amount of work that can be completed using 2020 funding. Federal share of the project construction cost will be pro rata.

Recommendation(s) – The Innovative Contracting Committee (ICC) has approved the use of the FPVS contracting method for this LAP project.

How the Region/TSC intends to incorporate work that wasn't included in the Contractor's bid into the 5-year plan – only applies to Rehab/Recon projects.

Road commission will complete remaining portion of work using MCRC Funds within 3 years.

ACTION: Approved

Carol Aldrich, Secretary
Engineering Operations Committee

RA:lrb

cc: EOC Members	M. DeLong	J. Becsey (APAM)
Meeting Guests	D. Jones	D. Needham (MAA)
P. Ajegba	C. Libiran	M. Ackerson-Ware (MRPA)
L. Mester	R. Jorgenson (FHWA)	
Region Engineers	R. Brenke (ACEC Michigan)	
Assoc. Region Engineers	G. Bukoski (MITA)	
TSC Managers	D. DeGraaf (MCA)	