



Meeting Agenda

Wednesday, November 4, 2020 @ 1:00 PM

*In accordance with [Executive Order 2020-154 \(COVID-19\)](#), this will be an online Microsoft Teams meeting. Persons needing accommodations for participating in this meeting should contact Roger Belknap- Coordinator, Transportation Asset Management Council, at least 24 hours prior to the start of this meeting:
belknapr@michigan.gov Telephone: (517) 230-8192*

Meeting Telephone Conference Line: +1 248-509-0316 Access Code: 361 628 582#

Web Meeting Access Link: [Join Microsoft Teams Meeting](#)

1. **Welcome - Call to Order – Introductions**
2. **Changes or Additions to the Agenda (Action Item as needed)** *Any items under the Consent Agenda may be moved to the regular agenda upon request of any Council member, member of the public or staff member.*
3. **Public Comments on Non-Agenda Item**
4. **Consent Agenda (Action Item)**
 - 4.1. Approval of the Sept. 16, 2020 Meeting Minutes (*Attachment 1*)
 - 4.2. TAMC Financial Report (*Attachment 2*)
5. **Correspondence & Announcements**
 - 5.1. State Transportation Commission Meeting – Nov. 12, 2020
 - 5.2. 2021 TAMC Meeting Schedule Draft (*Attachment 3*)
6. **Michigan Infrastructure Council (MIC) Update – Moy/Hicks**
 - 6.1. Next meeting Dec. 10, 2020
 - 6.2. Budget Update
 - 6.3. Glossary Update
7. **Old Business**
 - 7.1. Attorney General response to MDOT request for Act 51 Interpretation for aspects of PA 325
 - 7.2. 2021 Training & Data Collection Procedures (*Memo & Attachment 4*)
8. **Committee Review & Discussion Items**
 - 8.1. **Bridge Committee Update – Curtis/Bolt/Wieferich**
 - 8.1.1. TAMC Perspectives on Culvert Data Collection Policy (*Memo & Attachment 5*) (*Action*)
 - 8.2. **ACE Committee Update – Start**
 - 8.2.1. Fall TAMC Conference 2020
 - 8.2.2. Transportation Asset Management Plans (*Memo*) (*Action*)
 - 8.3. **Data Committee Update – McEntee**
 - 8.3.1. TAMC Dashboard Schedule & Updates
 - 8.4. **Michigan Center for Shared Solutions Update – Surber/Holmes/Granger**
 - 8.4.1. Activities & Priorities Updates
 - 8.4.2. Training Feedback and Updates
 - 8.5. **Michigan Technological University/Technical Assistance Updates – Colling**
 - 8.5.1. Monthly Activities Report (July – Sept) (*Attachment 6*)
 - 8.5.2. Monthly Training Report (July - Sept) (*Attachment 7*)
 - 8.5.3. FY21 MTU-CTT Activities Program Proposal (*Memo & Attachment 8*) (*Action*)
 - 8.5.4. FY21 MTU-CTT Education & Training Program Proposal (*Attachment 9*) (*Action*)

9. Public Comments

10. Member Comments

11. Adjournment *Next meeting: December 2, 2020 1 PM*

TRANSPORTATION ASSET MANAGEMENT COUNCIL

September 16, 2020 at 10:00 a.m.

Meeting was held via Teleconference per Governor Gretchen Whitmer's Executive Order
Discontinuing In-Person/Large Meetings Due to the Coronavirus 19 Pandemic

MINUTES

**** Frequently Used Acronyms List attached**

Members Present:

Christopher Bolt, MAC
Bill McEntee, CRA – Vice-Chair
Robert Slattery, MML
Rob Surber, DTMB/CSS
Todd White, MDOT

Joanna Johnson, CRA/RCKC – Chair
Gary Mekjian, MML
Jonathan Start, MTPA
Jennifer Tubbs, MTA

Support Staff Present:

Niles Annelin, MDOT
Tim Colling, MTU/LTAP
Cheryl Granger, DTMB/CSS
Dave Jennett, MDOT

Roger Belknap, MDOT
Jesus Esparza, MDOT
Mark Holmes, DTMB/CSS
Gloria Strong, MDOT

Public Present:

JingJing Chang, MDOT
Lance Malburg, CRA
Jessica Moy, MIC
Roger Safford, HNTB Corporation

Laura Loomis, MDOT
Doug Mills, Baraga County Road Commission
Ed Noyola, CRA
Dave Wearsch, MDOT

Members Absent:

Derek Bradshaw, MAR/GLS Region V
Brad Wieferich, MDOT

1. Welcome – Call-To-Order:

The meeting was called-to-order at 10:00 a.m. Everyone was introduced and welcomed to the meeting. Attendance was verified by roll call by G. Strong. J. Johnson explained that this special meeting was called due to the County Road Associations August 28, 2020 email request to the Transportation Asset Management Council to consider an extension for the 2020 asset management plan submittals as required by Public Act 325.

2. Changes or Additions to the Agenda (Action Item):

None

Motion: J. Tubbs made a motion to approve the agenda; J. Start seconded the motion. The motion was approved by all members present.

3. Public Comments on Non-Agenda Items:

None

4. Consent Agenda (Action Item):

4.1. – Approval of the August 5, 2020 Meeting Minutes (Attachment 1)

4.2. – TAMC Financial Report (Attachment 2)

R. Belknap provided an updated copy of the TAMC Budget Financial Report – FY 2018 - FY 2020.

Motion: J. Tubbs made a motion to approve the Consent Agenda; B. McEntee seconded the motion. The motion was approved by all members present.

5. Correspondence & Announcements:

5.1. – 2020 TAMC Fall Virtual Asset Management Conference Save-the-Date (Attachment 3) – R. Belknap

The 2020 TAMC Fall Conference will be held free of charge and virtually on October 28, 2020 (9:00 a.m. - 12:00 p.m.) and October 29, 2020 (9:00 a.m. - 12:00 p.m.). A copy of the recently distributed Save-the-Date was provided.

6. County Road Association (CRA) Request of Time Extensions for Due Dates of Transportation Asset Management Plans (TAMPs) – J. Johnson (Memo and Attachment 4)

6.1. - Public Act 51 and Public Act 325 of 2018

The main subject for today's meeting is to discuss the September 14, 2020 email from the County Road Association (CRA) requesting an extension of the TAMPs submittal deadline required under Public Act 325. Ed Noyola, representing CRA, stated that CRA surveyed 24 members about where they stood on their submissions of their required TAMP through the TAMC IRT. Of those 24, 75% (18 counties) want the deadline to be extended. Six (25%) indicate they will not be turning the plan in on time. Many have a limited staff and having to do the plan is burdensome at this time. CRA did not survey municipalities. CRA is requesting an eight-month extension from October 1, 2020 to June 1, 2021. L. Malburg feels an eight months extension is not enough since agencies are not able to collect data this season due to COVID 19 safety precautions. If agencies are going to be required to adhere to the current schedule, it is felt that the quality of the submitted reports will not be good.

E. Noyola highlighted that in Section 12 of Public Act 325, the intent of the wording "shall *begin* to submit" their TAMPs on October 1, 2020 is unclear. Does this mean the agencies start submitting their TAMPs on that date and not as TAMC has it meaning their TAMPs are *due* on October 1, 2020? The TAMP is to cover three years. Many agencies have expressed that if they had to submit a TAMP by the October 1, 2020 due date for Group A, their TAMP would not be complete, not of good quality, and there is not enough time to get their board to approve the plan. Some agencies have put in many hours in trying to complete their TAMP and due to the lack of staffing and COVID 19 it has been difficult to complete. The agencies have expressed concern over the inability to collect data during this year's data collection season because of COVID 19. They feel they need the data from this year to complete their TAMP. Currently, none of the agencies interviewed are collecting local and gravel road data. They would like to know if TAMC is requiring this data for the TAMP. TAMC should let them know what roads are optional for the report.

J. Moy wanted to note just for reference that WAMC also heard similar concerns regarding the due date for WAMC plans. WAMC gave an automatic one-year extension for all of their plans due this year. Although WAMC did not use the Michigan Attorney General as their legal council to make this decision, in the past, they have used them. J. Start noted that everyone must keep in mind that COVID 19 may possibly still be here next year. He feels if the agencies want to include local road data, the agency should include that data in their TAMP. He is not opposed to an extension however it is important that TAMC adheres to what is in Public 325. J. Tubbs expressed concern as to why the agencies waited until close to the due date to submit their concerns and not sooner during possibly the regional coordinator's calls or through CRA. MTU has provided a very useful, easy to use template however it has been revised slightly but would still provide an agency with an almost complete plan. She is also not opposed to an extension, however based upon the TAMC interpretation of Public Act 325, TAMC does not have the authority to grant an extension. She reminded everyone that there is no punishment or penalty if an agency does not submit a TAMP until 2024. She would be in favor of agencies submitting what they have for their TAMP.

B. McEntee submitted in writing to the Council his suggestion that TAMC pass a motion that all agencies be allowed to request an extension of the due date of their TAMP. He feels part of the

problem is that the agency board must adopt the plan and many agencies do not want their board to adopt their plan as it is now. He feels the legislation does not show one way or the other as to whether or not TAMC can provide an extension. C. Bolt proposed that the request for an eight-month extension be extended to a year as agencies do not feel eight months is enough time to complete the steps necessary to complete their TAMP. He also feels the legislation does not state that TAMC can or cannot grant an extension and that the Council should grant an extension due to the COVID 19 pandemic. The extension would also give the agencies an opportunity to create a good quality TAMP to submit to the Council. However, TAMC would need to be sure that they are not stepping over their statutory authority. J. Tubbs feels the Council does not have the authority to provide an extension. J. Start also feels that TAMC does not have the authority to provide an extension and feels the Council may hear these same issues and problems with the agencies completing their TAMPs even if an extension were possible. G. Mekjian is concerned that TAMC may not have the legal right to grant an extension or have the ability to have a flexible schedule. He agrees with B. McEntee stating there is no prohibited language in Public Act 325 that prohibits TAMC from granting an extension. He does not see why the agencies cannot bring in a consultant to assist with collecting the data and completing their plan. He would like more clarity on what TAMC can and cannot do. T. White empathizes with the agencies but does not feel TAMC has the authority to make a change to the schedule and provide an extension. R. Surber had no comments. L. Loomis stated she has read through the legislation and her interpretation is that the non-compliance comes into effect after the TAMP is submitted and the Council has 180 days to notify them that they are not in compliance. She feels it might be prudent for the Council to give an extension until October 2024. J. Johnson struggled with legislation (Public Act 325) verbiage and what TAMC was tasked to do. There has been a lot of discussions about the size of agencies and lack of staffing. She understands the time it takes and what is required of each agency to put together a TAMP. It was suggested that agencies reach out to other agencies and offer their help, if possible. It is felt that some agencies in Group A are still able to meet the October 1, 2020 deadline. If an extension is granted at this time it could show as a disservice to these agencies that did the work to complete their TAMP by the required October 1, 2020 deadline.

Due to the many concerns and different interpretations of the legislation, it was suggested that TAMC seek the Michigan Attorney General for their interpretation of the law. T. White and J. Moy feels the request should go through MDOT. B. Slattery requested that, if possible, due to the close October 1, 2020 due date, that MDOT request the Attorney General expedite the request and request a quick turn-around from the Attorney General. The largest concern for TAMC is that they do not over-step their statutory authority as mandated in the legislation and therefore, breaking the law. E. Noyola requested that whoever speaks with the Attorney General's Office also suggest to them that they review how others are approving extensions and could possible use one of them as an example to do an extension.

L. Malburg stated that he understands TAMC's concern with going against the law and even if TAMC goes against the law, he feels they will not be penalized as TAMC was given the authority to make the schedule.

Motion: B. McEntee submitted a motion to allow agencies to request an extension of the due date of their TAMP. The stipulations included, that the agency request an extension in writing to the TAMC coordinator and it must be received by October 1, 2020, and the request must include reasons that an extension is necessary; the agency may request an extension up to 180 days, and the request must include a commitment to submit the TAMP by a date included in the request; the motion was seconded by C. Bolt. The motion did not pass with five (5) no's against the motion and two (2) yes' for the motion. (NOTE: Council Member R. Slattery arrived after this vote was taken and did not vote on this motion.)

Motion: A second motion was proposed by J. Tubbs for TAMC to postpone the request from CRA pending legal review and interpretation of the legislation by the Michigan Attorney General’s Office through a request from MDOT; G. Mekjian seconded the motion. The motion was approved by a majority vote of seven (7) yes’ and one (1) no.

Action Item: It is requested that TAMC inform the agencies if it is required for them to include local and gravel roads in their TAMPs. Agencies want a clear listing of everything that is required to be in the TAMP.

Action Item: TAMC will go through an MDOT request to the Michigan Attorney General’s Office requesting their interpretation and legal review of Public Act 325, if TAMC has the ability to grant agencies required to submit TAMPs to TAMC through the IRT a one year extension.

6.2. – Communications of Compliance, Acceptance, Approval and Non-Compliance – R. Belknap

R. Belknap would like the ACE Committee to review, if the request for an extension is in compliance with Public Act 325, what TAMC would need to do if the extension is approved. Since TAMC has not gone through the first round of TAMPs yet, he suggests the next step should be for ACE to provide the language for and create letters of non-compliance and approval for TAMPs, and if the plans will be made available to the public on the TAMC website. Some agencies have placed their plans on their individual websites. E. Noyola stated that there are plenty of reporting practices and hopes the Attorney General reviews those prior to making their decision. D. Mills stated for the reason of transparency and to possibly help other agencies in preparing their TAMP, the TAMPs should be placed on the TAMC website and available for everyone’s review.

7. Public Comments:

None

8. Member Comments:

Everyone was thanked for talking through this difficult topic.

9. Adjournment:

J. Tubbs made a motion to adjourn the meeting; T. White seconded the motion. The motion was approved by all members present. The meeting adjourned at 11:19 a.m. The next full Council meeting is scheduled for November 4, 2020, at 1:00 p.m., via Microsoft Teams Meeting.

| TAMC FREQUENTLY USED ACRONYMS: | | |
|---------------------------------------|--|--|
| AASHTO | AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS | |
| ACE | ADMINISTRATION, COMMUNICATION, AND EDUCATION (TAMC COMMITTEE) | |
| ACT-51 | PUBLIC ACT 51 OF 1951-DEFINITION: A CLASSIFICATION SYTEM DESIGNED TO DISTRIBUTE MICHIGAN’S ACT 51 FUNDS. A ROADWAY MUST BE CLASSIFIED ON THE ACT 51 LIST TO RECEIVE STATE MONEY. | |
| ADA | AMERICANS WITH DISABILITIES ACT | |
| ADARS | ACT 51 DISTRIBUTION AND REPORTING SYSTEM | |
| BTP | BUREAU OF TRANSPORTATION PLANNING (MDOT) | |
| CFM | COUNCIL ON FUTURE MOBILITY | |

| | | |
|---------------------|--|--|
| CPM | CAPITAL PREVENTATIVE MAINTENANCE | |
| CRA | COUNTY ROAD ASSOCIATION (OF MICHIGAN) | |
| CSD | CONTRACT SERVICES DIVISION (MDOT) | |
| CSS | CENTER FOR SHARED SOLUTIONS | |
| DI | DISTRESS INDEX | |
| ESC | EXTENDED SERVICE CONTRACT | |
| ETL | Exchange, Transfer, and Load | |
| FAST | FIXING AMERICA'S SURFACE TRANSPORTATION ACT | |
| FHWA | FEDERAL HIGHWAY ADMINISTRATION | |
| FOD | FINANCIAL OPERATIONS DIVISION (MDOT) | |
| FY | FISCAL YEAR | |
| GLS REGION V | GENESEE-LAPEER-SHIAWASSEE REGION V PLANNING AND DEVELOPMENT COMMISSION | |
| GVMC | GRAND VALLEY METRO COUNCIL | |
| HPMS | HIGHWAY PERFORMANCE MONITORING SYSTEM | |
| IBR | INVENTORY BASED RATING | |
| IRI | INTERNATIONAL ROUGHNESS INDEX | |
| IRT | INVESTMENT REPORTING TOOL | |
| KATS | KALAMAZOO AREA TRANSPORTATION STUDY | |
| KCRC | KENT COUNTY ROAD COMMISSION | |
| LDC | LAPTOP DATA COLLECTORS | |
| LTAP | LOCAL TECHNICAL ASSISTANCE PROGRAM | |
| MAC | MICHIGAN ASSOCIATION OF COUNTIES | |
| MAP-21 | MOVING AHEAD FOR PROGRESS IN THE 21 ST CENTURY (ACT) | |
| MAR | MICHIGAN ASSOCIATION OF REGIONS | |
| MDOT | MICHIGAN DEPARTMENT OF TRANSPORTATION | |
| MDTMB | MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET | |
| MIC | MICHIGAN INFRASTRUCTURE COMMISSION | |
| MITA | MICHIGAN INFRASTRUCTURE AND TRANSPORTATION ASSOCIATION | |
| MML | MICHIGAN MUNICIPAL LEAGUE | |
| MPO | METROPOLITAN PLANNING ORGANIZATION | |
| MTA | MICHIGAN TOWNSHIPS ASSOCIATION | |
| MTF | MICHIGAN TRANSPORTATION FUNDS | |
| MTPA | MICHIGAN TRANSPORTATION PLANNING ASSOCIATION | |
| MTU | MICHIGAN TECHNOLOGICAL UNIVERSITY | |
| NBI | NATIONAL BRIDGE INVENTORY | |
| NBIS | NATIONAL BRIDGE INSPECTION STANDARDS | |
| NFA | NON-FEDERAL AID | |
| NFC | NATIONAL FUNCTIONAL CLASSIFICATION | |
| NHS | NATIONAL HIGHWAY SYSTEM | |
| PASER | PAVEMENT SURFACE EVALUATION AND RATING | |
| PNFA | PAVED NON-FEDERAL AID | |
| PWA | PUBLIC WORKS ASSOCIATION | |
| QA/QC | QUALITY ASSURANCE/QUALITY CONTROL | |
| RBI | ROAD BASED INVENTORY | |
| RCKC | ROAD COMMISSION OF KALAMAZOO COUNTY | |
| ROW | RIGHT-OF-WAY | |
| RPA | REGIONAL PLANNING AGENCY | |

| | | |
|---------------|--|--|
| RPO | REGIONAL PLANNING ORGANIZATION | |
| SEMCOG | SOUTHEAST MICHIGAN COUNCIL OF GOVERNMENTS | |
| STC | STATE TRANSPORTATION COMMISSION | |
| STP | STATE TRANSPORTATION PROGRAM | |
| TAMC | TRANSPORTATION ASSET MANAGEMENT COUNCIL | |
| TAMCSD | TRANSPORTATION ASSET MANAGEMENT COUNCIL SUPPORT DIVISION | |
| TAMP | TRANSPORTATION ASSET MANAGEMENT PLAN | |
| TPM | TRANSPORTATION PERFORMANCE MEASURES | |
| UWP | UNIFIED WORK PROGRAM | |

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Michigan
Transportation Asset
Management Council

2021 TAMC Meeting Dates

Transportation Asset Management Council Meeting

Meeting Time: 1:00 PM

Meetings are generally held on the first Wednesday of every month at MDOT Aeronautics Building – 2nd Floor Commission Room, 2700 Port Lansing Rd., Lansing, unless otherwise noted.

DATES:

January 6th

February 3rd

March 3rd

April 7th

May 5th

June 2nd

July 7th

August 4th

September 1st

October 6th

November 3rd

December 1st



Michigan
Transportation Asset
Management Council

Memo

To: TAMC & ACE Committee Members
From: Roger Belknap
Date: November 1, 2020
Re: 2021 Data Collection and Training Procedures

Recommendations

Provide guidance to Michigan Technological University's Center for Technology and Training (MTU-CTT) for 2021 Training and Education program for data collection procedures.

Background

TAMC contracts with MTU-CTT to provide training guidance for pavement condition data collection ahead of the field collection season. Executive orders and partnering agency procedures has limited the program from performing data collection as outlined in the TAMC Policy for the Collection of Roadway Condition Data. TAMC will need to provide direction to MTU-CTT on chosen methods to administer collection and training procedures for 2021 so MTU-CTT can respond with a formal Training and Education Program proposal to be presented to TAMC at the December 2, 2020 meeting. MTU-CTT has performed outreach activities across Michigan to obtain perspectives from local and regional agencies that are involved in this process. MTU-CTT will provide background of their findings including survey results.

Attachments

Attachment 4 contains a slide presentation of tentative options that will be presented at the meeting.

2021 TAMC Data Collection Options

November 4, 2020 TAMC Full Council Meeting

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2020 Situation

- Discontinued training after first round (182 Trained), waived training if rater was trained last year.
- Maintained existing protocol for fed aid collection teams and collection mechanics (3 people, 3 agencies on all ratings)
- Did not collect federal aid system, expectation that local system would be collected or 100% fed aid next year

Guidance From Strategic Plan Meeting

- 1) Must collect federal aid data in 2021 (skipping is not an option)
- 2) TAMC open to different teams as long as data is consistent
- 3) 2 person teams ok with both road agencies in vehicle during rating
- 4) Single agency rating (2 people from same agency) requires concurrence checks by road agency peers.
- 5) The collection can't cost significantly more than a normal year

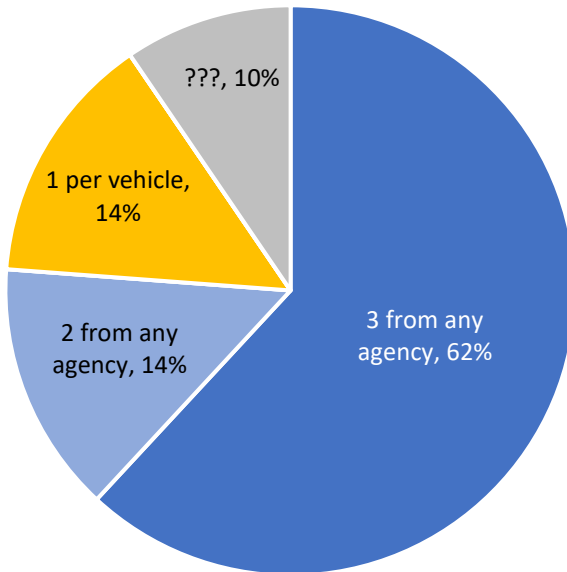
Travel Policy Ad-hock Survey

- Not a formal survey
- Ideally need more data from cities
- Have good feedback from RPO's and MPO's

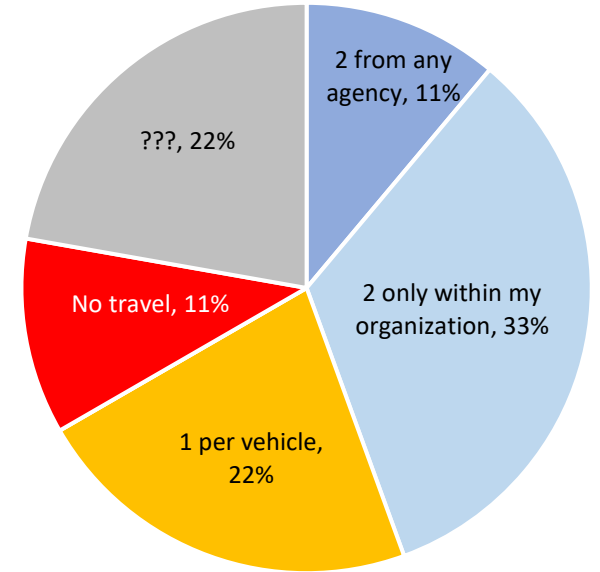


| | 3 From Any | 2 From Any | 2 From My Organization | 1 Per Vehicle | Employee Decide | No Travel | No Response | Grand Total |
|--------|------------|------------|------------------------|---------------|-----------------|-----------|-------------|-------------|
| County | 62% | 14% | 0% | 14% | 0% | 0% | 10% | 100% |
| Metro | 0% | 11% | 33% | 22% | 0% | 11% | 22% | 100% |
| Region | 31% | 0% | 0% | 31% | 8% | 15% | 15% | 100% |
| Top 40 | 17% | 0% | 0% | 0% | 0% | 17% | 67% | 100% |
| Total | 37% | 8% | 6% | 18% | 2% | 8% | 20% | 100% |

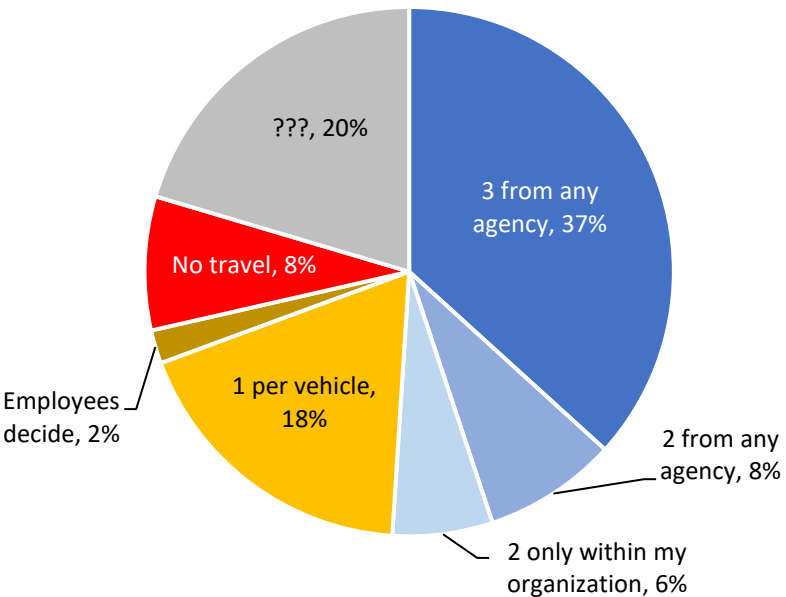
County - 21 Surveyed



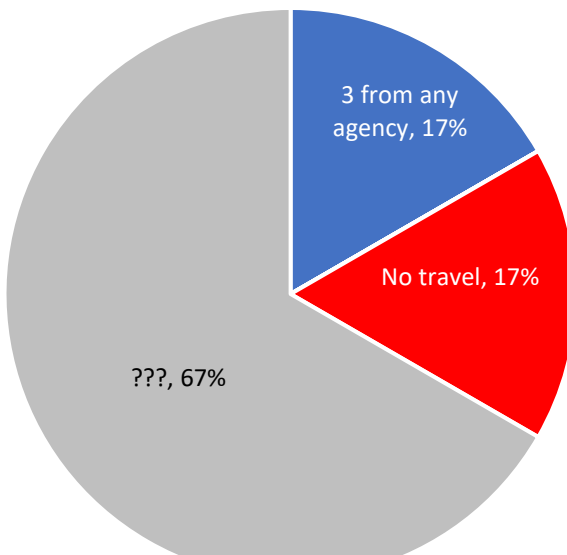
Metro - 9 Surveyed



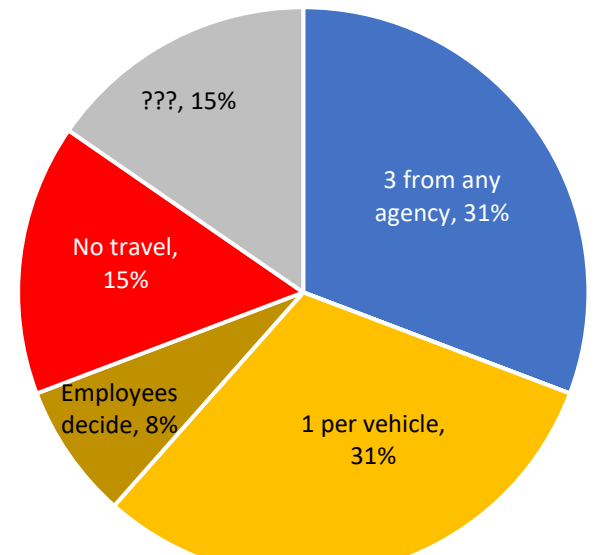
Grand Total - 49 Surveyed



Top 40 - 6 Surveyed



Region - 13 Surveyed



Options

- 1) Stay with current policy (3 agency teams) and require partners to provide staff or contractors that can travel with 2 others.
- 2) 2 Person, 2 road agency teams. MDOT and Local agency rate roads together. RPO / MPO joins if possible for collection and managers process.
- 3) 2 Person, 1 road agency teams. Road agency rates their own roads, one of other 2 partners does concurrence checks on rated roads.
- 4) 2 Person, 1 road agency teams. Road agency rates their own roads, no concurrence checks, use only normal quality review process

Comments On Option 1

- 1) Stay with current policy (3 agency teams) and require partners to provide staff or contractors that can travel with 2 others.
 - Consistent with current process
 - May not have enough contractors or designees that can meet conditions
 - May cut out agencies that want and could participate in a 2 person set up.
 - Does not provide several benefits if many agencies can not participate


Comments On Option 2

2) 2 Person, 2 road agency teams. MDOT and Local agency rate roads together. RPO / MPO joins if possible for collection and managers process.

- Increases local agency participation over option 1
- Not entirely different from current process, just less productive
- Lower need for outside contractors than in option 1

Comments On Option 3

3) 2 Person, 1 road agency teams. Road agency rates their own roads, one of other 2 partners does concurrence checks on rated roads.

- Different from current process, so need to train and give guidance on concurrence process
 - Lower need for outside contractors than in option 1 or 2
 - Concurrence checks require new software tools and business processes
 - Higher burden on RPO/MPO to coordinate more teams and more data
- 

Comments On Option 4

4) 2 Person, 1 road agency teams. Road agency rates their own roads, with no concurrence checks.

- Similar to current process with less people
- Lower need for outside contractors than in option 1, 2 or 3
- No timely check on data quality until after collection.
- No peer review from outside agency





Michigan
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Memo

To: TAMC & ACE Committee Members
From: Roger Belknap
Date: November 1, 2020
Re: TAMC Perspectives on Culvert Data Collection Policy

Recommendations

- TAMC Bridge Committee seeking TAMC direction on future of culvert asset management program activities considering TAMC's policies for roadway and bridge data collection.
- TAMC Support Staff also recommends providing Michigan Technological University's Center for Technology and Training (MTU-CTT) \$15,000 for completing the FY20 Culvert Activities program with an additional activity of incorporating the latest AASHTO guidance on culverts with balance of unspent funds from MTU-CTT's TAMC Education and Training contract, which was \$92,467.17 as of September 17, 2020 and expires on December 31, 2020.

Background

After completion of the FY18 Local Agency Culvert Data Collection Pilot program, the summary of activities for TAMC to consider is the future of data collection for culverts. There are two directions TAMC could take:

1. TAMC Funds Local Agency Collection with a policy that provides direction to the various roles and procedures by which funds flow from program budget to local agencies (similar to [TAMC Policy for the Collection of Roadway Condition Data](#)).
2. TAMC provides recommendation for culvert data elements and assessment standards for agencies that collect culvert data from their own resources (similar to [TAMC Bridge Data Collection Policy](#)).

The FY20 MTU-CTT contract for Culvert Activities includes reporting of the tasks and findings. MTU-CTT submitted a draft of this report on August, 21, 2020 ahead of the August 27 TAMC Bridge Committee meeting. On August 13, 2020 the AASHTO Culvert & Storm Drain System Inspection Guide was released. TAMC Bridge Committee recommended that the MTU-CTT culvert activities report contain a review of this latest guidance for use by agencies in Michigan and therefore has

requested additional work for MTU-CTT to complete this additional task. However, the FY20 MTU-CTT Culvert Activities contract expired on September 30, 2020 therefore, the only opportunity to complete these tasks under FY20 contracts is through adding these tasks to the FY20 MTU-CTT TAMC Education and Training Contract. MTU-CTT has advised there will be sufficient funds balance of this contract for these added tasks due to not administering several on-site PASER training events this year due.

Attachments

Attachment 5 is a memorandum on additional culvert activities work from MTU-CTT.

To: Roger Belknap & Beckie Curtis
From: Chris Gilbertson
Date: October 23, 2020
Re: TAMC Culvert Condition Evaluation – Additional Work

The Center for Technology & Training (CTT) at Michigan Technological University has been working with TAMC and the Bridge Committee to provide training and resources to local agencies in an effort to inventory and inspect their culvert assets. The current effort was an extension of the 2018 TAMC Local Agency Culvert Pilot. The work plan for the 2020 TAMC Culvert Initiative consisted of the following three tasks which were to be completed by September 30, 2020:

- **Task 1: Conduct Culvert Condition Assessment Training**
 - Provided five total offerings of two webinars designed to train participants in the use of Roadsoft for culvert data collection and the process of condition evaluation of culverts using a method based on the 1986 FHWA Culvert Inspection Guidelines.

- **Task 2: Evaluate Culvert Data from Combined Sources**
 - The primary focus of this task was to consider culvert data from multiple sources (MDOT, MDNR, and TAMC) and review this dataset for conflicts, specifically in the form of duplicate data. This task was the first step in developing a state level shared map for culverts. It is expected that this task will help establish a protocol for sharing culvert data amongst multiple agencies while maintaining individual agency needs, each agency's standards for data collection, and the ability of an agency to update and manage their data with respect to shared data.

- **Task 3: Culvert Condition Assessment System Translation**
 - There are currently two culvert condition assessment systems in use in Michigan. Most local agencies use the modified FHWA Culvert Inspection System used in Roadsoft. MDOT has its own condition assessment system that was developed in-house for its own purposes. This task compared the two methods for condition evaluation and established that while the process was different, the two systems could generally be compared at a good/fair/poor/severe level in a dashboard format.

- In addition to these three tasks the Bridge Committee asked and the CTT was able to accommodate the inclusion of a review of other agencies who either collect their own culvert data or benefit from the use of culvert data and conduct interviews with these agencies to better understand the value and interest in a combined culvert database.
- The CTT also assisted the effort of the bridge committee to establish policy guidance by reaching out to the 2018 pilot participants to collect feedback on their use of culvert data a year or more after their original participation in the pilot study.

The final report for these task was submitted in draft form on August 21, 2020. AASHTO announced the availability of their Culvert & Storm Drain System Inspection Guide on August 13th, 2020. This guide is intended to replace the 1986 FHWA Culvert Inspection Manual, however its release date precluded its inclusion into the final report.

During the August 27th meeting the Bridge Committee asked that the CTT revise Task 3 to include the AASHTO method of culvert evaluation. After review of the comparison, should the TAMC Bridge Committee choose to accept AASHTO as the preferred means of evaluating culverts, the CTT will outline changes required in the training material to reflect adoption of the AASHTO method.

WORK PLAN FOR ADDITIONAL WORK

The AASHTO Culvert & Storm Drain System Inspection Guide, in principal covers the evaluation of similar culvert elements as the TAMC and MDOT pilot methods. However, the organizational structure of how these elements are considered differs. The TAMC pilot method was based on categorizing first by culvert material type. Applicable elements were then evaluated and the controlling rating was recorded. The AASHTO method categorizes culvert elements by system components which contain one or more characteristics. The controlling rating of these characteristics is recorded for the system.

Some of the AASHTO characteristics correspond directly with elements from the TAMC and MDOT pilot systems, however, additional characteristics not included in the TAMC or MDOT pilot systems may be considered when determining the controlling rating for the system component. While some elements may compare directly to either a system component or a characteristic within the new AASHTO system it is not expected that a direct comparison (translation) will be possible between the three methods. The focus of this task will be to compare the general magnitude of good/fair/poor/severe descriptions between the three systems recognizing that an individual culvert may rate differently between the three systems but an understanding of the general comparison would provide guidance for dashboard level display of the three data sets.

The CTT proposes to split the additional work into three tasks. The tentative completion dates are based on CTT being given the go ahead to start the work on November 5, 2020:

- **Task A1: Compare AASHTO, TAMC, and MDOT TAMS Culvert Evaluation Methods – November 18th**
 - Compare and contrast the similarities and differences between the AASHTO, TAMC, and MDOT TAMS methods of culvert condition evaluation for the purpose of determining the appropriateness of comparing the good/fair/poor/severe ratings in dashboards. Revise draft final report from the 2020 TAMC Culvert Condition Assessment project to include evaluation of the AASHTO method. Submit revised draft final report to TAMC bridge committee to allow one week of review prior to their November meeting. Submit final report, addressing committee comments, at the December meeting of the TAMC Bridge Committee.
- **Task A2: Present Findings to TAMC Bridge Committee – November 25th**
 - Present overview of systems and results of Task A1 to the TAMC Bridge Committee at their November meeting for their consideration in setting TAMC policy on culverts. Presentation to be delivered virtually.
- **Task A3: TAMC Culvert Evaluation Training Revisions – December 23rd**
 - The CTT currently provides two training webinars created for the pilot; Culvert Data Collection using Roadsoft and Culvert Condition Evaluation. These trainings are in need of an update to include more specific examples of distress and deterioration along with a few organizational changes based on presenter and participant feedback.
 - Photographs used for the pilot training were limited to those available at the time of the pilot. The CTT would like to collect photographs that better describe the condition of a culvert being evaluated in the training either through selection of photos collected and shared during the pilot effort or collected through on-site field visits.
 - A revised training outline will be created to serve as a basis for revisions to take place as part of next year's training program. This is proposed to allow for adoption of the new AASHTO method. Should the committee choose to support this method for future efforts there would not be enough time during the extended contract to fully update the training however, the ground work could be laid out for completion with next year's training contract.

The CTT estimates the cost of additional work to not exceed \$15,000 based on schedule and available time to perform the work.



Memo

To: TAMC & ACE Committee Members

From: Gloria M. Strong, TAMC Departmental Technician

Date: November 1, 2020

Re: TAMC Group A – Due October 1, 2020 - Status and Recommendations

TAMC has been tasked by Public Act 32512 to receive and review Transportation Asset Management Plans from local road agencies responsible for 100 or more certified miles of road. There are 41 local agencies in Group A that are required to submit their TAMPs by October 1, 2020. As of October 30, 2020, TAMC has received 29 City and Local Agency TAMPs uploaded into the IRT for TAMC review. TAMC support staff has reviewed each of the TAMPs submitted for the seven required elements as mandated by Public Act 325: 1) Pavement, Bridge, Culvert, & Traffic Signal Assets Inventory, 2) Performance Goals 3) Performance Outcomes 4) Revenues and Expenses 5) Project Coordination with Other Entities 6) Risk of Failure, and 7) Proof of Acceptance by the Local Agency's Governing Board.

Recommendation for TAMP Approval:

Below are agencies that have submitted a TAMP meeting all of the requirements per Public Act 325 and are recommended approval of their TAMP:

| | |
|-------------------------------------|------------------------------------|
| 1. Ottawa County | 10. City of Walker |
| 2. Iosco County Road Commission | 11. City of Lansing |
| 3. Oceana County Road Commission | 12. Muskegon County |
| 4. Cheboygan County Road Commission | 13. City of Livonia |
| 5. Alger County Road Commission | 14. Osceola County Road Commission |

| | |
|--------------------------------------|---------------------------------------|
| 6. Wayne County Road Commission | 15. Monroe County Road Commission |
| 7. Macomb County Department of Roads | 16. St. Joseph County Road Commission |
| 8. Genesee County Road Commission | 17. Calhoun County |
| 9. Berrien County Road Department | |

Agency TAMPs Requiring Additional Information

The following agency TAMPs require additional information as noted. TAMC support staff will work with each agency to assist them with meeting the Act requirements.

1. City of Romulus – Agency only submitted a one-page project table. Agency has been contacted by email 10/28/2020 and agency responded that they will upload their complete TAMP into the IRT ASAP.
2. City of Troy - No meeting minutes/resolution; only a signed certification for Proof.
3. Huron County Road Commission - No meeting minutes/resolution; only a signed certification for Proof.
4. Lenawee County Road Commission - No meeting minutes/resolution; only a signed certification for Proof.
5. City of Wyoming – Missing Bridges, Culverts and Traffic Signal Asset Inventories and Agency Proof of TAMP Approval. Agency has been contacted by email 10/29/2020.
6. Road Commission of Kalamazoo County – Needs Agency Proof of TAMP Approval. Agency has been contacted by email 10/29/2020.
7. City of Grand Rapids – Submitted document is an older document modified from 2011 and 2017. Additional review and contact with the agency is needed.
8. Sanilac County – TAMC Support is unable to open the submitted document. TAMC support staff will contact the agency to resolve.
9. Clinton County Road Commission – No signed certificate/meeting minutes accepting the TAMP.
10. City of Royal Oak – Missing Bridge and Culvert assets and Meeting Minutes or Resolution showing approval of TAMP.
11. City of Ann Arbor – Still under review. Agency submitted in a PowerPoint presentation which does not meet the requirements of Public Act 325. Additional review and contact with agency is needed.
12. Dickinson County Road Commission – Needs Traffic Signal Assets; TAMC support staff will contact agency.

Reporting Period: July 1 – 31, 2020

Monthly Project Progress Report

TAMC Activities 2020

August 26, 2020

Project Manager: Roger Belknap

MDOT Contract 2018-0057 Authorization Z8

Contract Dates: 10/01/2019 – 9/30/2020

Contract Amount: \$115,012



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

| Task | % of Budgeted Dollars Spent | Notes |
|---|------------------------------------|--------------|
| Task 1: Maintain Roadsoft-IRT Data Submission Protocols | 62% | |
| Task 2: Maintenance of PASER Training Cert. Testing Instruments & Records | 9% | |
| Task 3: Signal Study | 88% | |
| Task 4: Develop Treatment Cost Query Process | 71% | |
| Task 5: Undefined Technical Assistance | 3% | |
| Task 6: Attend and Participate in TAMC Council Meeting | 14% | |
| Task 7: Attend and Participate in TAMC Committee Meeting | 85% | |
| Task 8: Project Management & Monthly Reporting | 33% | |

Current Tasks Completed

Signal study work - analyzed several jurisdictions to find a process that best finds accurate traffic signal counts in those areas. used the crash data to find traffic signals and compared them to data gathered by the jurisdictions themselves; followed up on the treatment cost query process, reviewed plan and final report; prepared for and attended the ACE committee meeting and full council meeting; attended the data committee meeting and TAMC coordinator call; general project management and June reporting.

Project’s Financial Summary

| | |
|--------------------------------------|----------|
| July Expense Reimbursement Submitted | \$4,011 |
| Total Project Expenses to Date | \$61,241 |
| Contract Balance Available | \$53,771 |

Reporting Period: August 1 – 31, 2020

Monthly Project Progress Report

TAMC Activities 2020

September 15, 2020

Project Manager: Roger Belknap

MDOT Contract 2018-0057 Authorization Z8

Contract Dates: 10/01/2019 – 9/30/2020

Contract Amount: \$115,012



**Michigan
Technological
University**



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

| Task | % of Budgeted Dollars Spent | Notes |
|---|------------------------------------|--------------|
| Task 1: Maintain Roadsoft-IRT Data Submission Protocols | 71% | |
| Task 2: Maintenance of PASER Training Cert. Testing Instruments & Records | 9% | |
| Task 3: Signal Study | 122% | |
| Task 4: Develop Treatment Cost Query Process | 71% | |
| Task 5: Undefined Technical Assistance | 3% | |
| Task 6: Attend and Participate in TAMC Council Meeting | 17% | |
| Task 7: Attend and Participate in TAMC Committee Meeting | 99% | |
| Task 8: Project Management & Monthly Reporting | 42% | |

Current Tasks Completed

Set up data set for testing TAMC IRT submissions and worked with CSS on culvert submittal issues; researched using satellite and ground imagery from Google Earth to determine signal locations at various cities, installed new database for the entire state then created formula to find certain cities, worked on writing outline then worked on the signal study report; prepared for and attended full council meeting and ACE meeting; participated in the regional coordinator call and the TAMC data committee pre-meeting with MDOT, then attended the Data committee meeting; general project management and July reporting.

Project’s Financial Summary

| | |
|--|----------|
| August Expense Reimbursement Submitted | \$7,316 |
| Total Project Expenses to Date | \$68,557 |
| Contract Balance Available | \$46,455 |

Reporting Period: August 1 – 31, 2020

Reporting Period: Sept. 1 – 30, 2020

Monthly Project Progress Report

TAMC Activities 2020

October 27, 2020

Project Manager: Roger Belknap

MDOT Contract 2018-0057 Authorization Z8

Contract Dates: 10/01/2019 – 9/30/2020

Contract Amount: \$115,012



**Michigan
Technological
University**



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

| Task | % of Budgeted Dollars Spent | Notes |
|---|------------------------------------|--------------|
| Task 1: Maintain Roadsoft-IRT Data Submission Protocols | 71% | |
| Task 2: Maintenance of PASER Training Cert. Testing Instruments & Records | 9% | |
| Task 3: Signal Study | 150% | |
| Task 4: Develop Treatment Cost Query Process | 75% | |
| Task 5: Undefined Technical Assistance | 36% | |
| Task 6: Attend and Participate in TAMC Council Meeting | 25% | |
| Task 7: Attend and Participate in TAMC Committee Meeting | 108% | |
| Task 8: Project Management & Monthly Reporting | 48% | |

Current Tasks Completed

Continued researching using satellite and ground imagery from Google Earth to determine signal locations at various cities, worked on evaluating these data sets and writing the signal study report; outlined report for treatment cost query process completed to date; assisted TAMC Bridge committee with policy questions on new AASHTO Culvert Condition Evaluation guide; worked on developing data collection alternatives, meeting to brainstorm ideas for TAMC collection policy; prepared for and attended the TAMC strategic planning meeting, the Data committee meeting and the Bridge Committee meeting; August reporting and general project management.

Project’s Financial Summary

| | |
|---|----------|
| September Expense Reimbursement Submitted | \$12,240 |
| Total Project Expenses to Date | \$80,797 |
| Contract Balance Available | \$34,215 |

Reporting Period: Sept. 1 – 30, 2020

Reporting Period: July 1 – 31, 2020

Monthly Project Progress Report

TAMC Training 2020

August 26, 2020

Project Manager: Roger Belknap

MDOT Contract 2018-0057 Authorization Z11

Contract Dates: 01/01/2020 – 12/31/2020

Contract Amount: \$224,281



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

Reporting Period: July 1 – 31, 2020

| Task | % of Budgeted Dollars Spent | Notes |
|--|-----------------------------|--|
| Assist Coordinating the MI Transportation Asset Management Conferences | 10% | Spring Conference Cancelled |
| Conduct MI Transportation AM Workshops | 15% | |
| Conduct Introduction to Transportation Asset Management for Local Officials Training or Gravel Road Basics for Local Officials | 132% | Task Completed: <ul style="list-style-type: none"> • <u>2</u> - TAM for LO sessions (On-site) • <u>1</u> - Gravel Road Basics (On-site) • <u>1</u> - Gravel Rd Basics webinar • <u>1</u> -TAM for LO webinar |
| Conduct TAMC PASER Training | 47% | Task Completed: <ul style="list-style-type: none"> • <u>3</u> - PASER Trainings • <u>4</u> -PASER Webinars *NOTE-COVID Restrictions Prevented Remaining Trainings |
| Conduct Inventory Based Rating Training | 37% | Task Completed: <ul style="list-style-type: none"> • <u>3</u> -IBR Webinars |
| Conduct Michigan Bridge Asset Management Workshop | 56% | Completed: <ul style="list-style-type: none"> • <u>1</u> - Bridge AM Workshop • <u>2</u> - each Part 1 & Part 2 BAM webinars. • <u>4 – 2 hour</u> Bridge AM Remote Workshops |
| Conduct Workshop on Creating Pavement Asset Management Plans | 93% | Completed: <ul style="list-style-type: none"> • <u>2</u> - Compliance Plan Training webinars • <u>1</u> - Pavement AM Plan Training webinar • <u>5</u> - Pavement AM Plan Remote Workshops |
| Project Management and Reporting | 55% | |

Reporting Period: July 1 – 31, 2020

Tasks Completed

Reviewed chip seal installation and applications plus other preventive maintenance treatments for content to add to the training slides for Intro to AM classes; review and update PASER slides and photos; final IBR presentation review and presented the online training; worked out the final decision to have the August Bridge AM class in person or online, updated flyer, advertised and opened registration for the online training; worked out the final decision to have the August Pavement AM training in-person or online, decided on the online version, updated the flyer, advertised and opened registration, reviewed the changes needed to the PAMPT template and worked on updates; general project management.

Project's Financial Summary

| | |
|--------------------------------------|-----------|
| July Expense Reimbursement Submitted | \$9,313 |
| Total Project Expenses to Date | \$122,938 |
| Contract Balance Available | \$101,343 |

Reporting Period: August 1 – 31, 2020

Monthly Project Progress Report

TAMC Training 2020

September 15, 2020

Project Manager: Roger Belknap

MDOT Contract 2018-0057 Authorization Z11

Contract Dates: 01/01/2020 – 12/31/2020

Contract Amount: \$224,281



**Michigan
Technological
University**



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

Reporting Period: August 1 – 31, 2020

| Task | % of Budgeted Dollars Spent | Notes |
|--|-----------------------------|--|
| Assist Coordinating the MI Transportation Asset Management Conferences | 36% | Spring Conference Cancelled |
| Conduct MI Transportation AM Workshops | 17% | |
| Conduct Introduction to Transportation Asset Management for Local Officials Training or Gravel Road Basics for Local Officials | 135% | Task Completed: <ul style="list-style-type: none"> • <u>2</u> - TAM for LO sessions (On-site) • <u>1</u> - Gravel Road Basics (On-site) • <u>1</u> - Gravel Rd Basics webinar • <u>1</u> -TAM for LO webinar |
| Conduct TAMC PASER Training | 49% | Task Completed: <ul style="list-style-type: none"> • <u>3</u> - PASER Trainings • <u>4</u> -PASER Webinars *NOTE-COVID Restrictions Prevented Remaining Trainings |
| Conduct Inventory Based Rating Training | 37% | Task Completed: <ul style="list-style-type: none"> • <u>3</u> -IBR Webinars |
| Conduct Michigan Bridge Asset Management Workshop | 71% | Task Completed: <ul style="list-style-type: none"> • <u>2</u> - Bridge AM Workshop • <u>2</u> - each Part 1 & Part 2 BAM webinars. • <u>8 – 2 hour</u> Bridge AM Remote Workshops |
| Conduct Workshop on Creating Pavement Asset Management Plans | 136% | Completed: <ul style="list-style-type: none"> • <u>2</u> - Compliance Plan Training webinars • <u>1</u> - Pavement AM Plan Training webinar • <u>6</u> - Pavement AM Plan Remote Workshops |
| Project Management and Reporting | 61% | |

Reporting Period: August 1 – 31, 2020

Tasks Completed

Participated in three AM conference meetings, developed trivia questions for the conference, worked on the virtual conference template and worked on the presentations slides; researched gravel road ratings and worked on re-creating the gravel LCCC spreadsheet for the Gravel Basics class; organized and cleaned out files for PASER training and searched for possible on-line content; final preparations for the Bridge AM remote workshops and delivered all four 2- hour sessions; final preparations for the upcoming compliance plan training webinar and worked on updates to the compliance plan template; completed July reporting and general project management.

Project's Financial Summary

| | |
|--|-----------|
| August Expense Reimbursement Submitted | \$8,875 |
| Total Project Expenses to Date | \$131,814 |
| Contract Balance Available | \$92,467 |

Reporting Period: Sept. 1 – 30, 2020

Monthly Project Progress Report

TAMC Training 2020

October 27, 2020

Project Manager: Roger Belknap

MDOT Contract 2018-0057 Authorization Z11

Contract Dates: 01/01/2020 – 12/31/2020

Contract Amount: \$224,281



**Michigan
Technological
University**



Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

Reporting Period: Sept. 1 – 30, 2020

| Task | % of Budgeted Dollars Spent | Notes |
|--|-----------------------------|--|
| Assist Coordinating the MI Transportation Asset Management Conferences | 41% | Spring Conference Cancelled |
| Conduct MI Transportation AM Workshops | 17% | |
| Conduct Introduction to Transportation Asset Management for Local Officials Training or Gravel Road Basics for Local Officials | 138% | <p><u>Task Completed:</u></p> <ul style="list-style-type: none"> • <u>2</u> - TAM for LO sessions (On-site) • <u>1</u> - Gravel Road Basics (On-site) • <u>1</u> - Gravel Rd Basics webinar • <u>1</u> -TAM for LO webinar |
| Conduct TAMC PASER Training | 50% | <p><u>Task Completed:</u></p> <ul style="list-style-type: none"> • <u>3</u> - PASER Trainings • <u>4</u> -PASER Webinars <p>*NOTE-COVID Restrictions Prevented Remaining Trainings</p> |
| Conduct Inventory Based Rating Training | 37% | <p><u>Task Completed:</u></p> <ul style="list-style-type: none"> • <u>3</u> -IBR Webinars |
| Conduct Michigan Bridge Asset Management Workshop | 75% | <p><u>Task Completed:</u></p> <ul style="list-style-type: none"> • <u>2</u> - Bridge AM Workshop • <u>2</u> - each Part 1 & Part 2 BAM webinars. • <u>8 – 2 hour</u> Bridge AM Remote Workshops |
| Conduct Workshop on Creating Pavement Asset Management Plans | 157% | <p><u>Task Completed:</u></p> <ul style="list-style-type: none"> • <u>3</u> - Compliance Plan Training webinars • <u>1</u> - Pavement AM Plan Training webinar • <u>6</u> - Pavement AM Plan Remote Workshops |
| Project Management and Reporting | 80% | |

Reporting Period: Sept. 1 – 30, 2020

Tasks Completed

Participated in AM conference meetings, contacted people to present at the conference, posted the save the date flyer to our website then emailed the announcement, mailed a USB video camera to B Slattery and included a pre-paid return box, compiled the bios and started on the conference handout; researched road millages passed in August 2020 and updated spreadsheet, reviewed how road commissions communicate with townships to be able to add content to the Intro to TAM for LO trainings and reviewed gravel road stabilization trainings for incorporating into the Gravel Basics training; worked on gathering data for the training report; prepared for and presented the final compliance plan training, worked on updates and edits with the compliance plan; complete August reporting, invoicing and general project management.

Project's Financial Summary

| | |
|---|-----------|
| September Expense Reimbursement Submitted | \$18,547 |
| Total Project Expenses to Date | \$150,361 |
| Contract Balance Available | \$73,920 |



Michigan
Transportation Asset
Management Council

Memo

To: TAMC Members
From: Roger Belknap
Date: November 2, 2020
Re: FY 2021 Activities and Education and Training Work Programs

Recommendations

TAMC to provide guidance for Michigan Technological University's Center for Technology & Training (MTU-CTT) proposals and contractual adoption of the FY21 Activities and FY21 Education and Training Work Programs. Formal adoption of these 2 proposals by TAMC is an obligation to commence contracts.

Background

MTU-CTT presented aspects of these two annual work programs as part of the 2020 TAMC Strategic Session in September. There are still elements of these that TAMC will need to provide some direction for MTU-CTT to establish its final details of their work program.

Attachments

Attachment 8 is the FY21 MTU-CTT Activities proposal; Attachment 9 is the FY21 MTU-CTT Education and Training proposal.

Proposal Title:

**DRAFT 2021 Transportation
Asset Management Council
Technical Assistance Activities
Program Work Plan**

Submitted To:

Roger Belknap
Bureau of Transportation Planning
Michigan Department of Transportation
belknapr@michigan.gov

Principal Investigator:

Tim Colling, PhD, PE
Director – Center for Technology & Training
1400 Townsend Drive - 309 Dillman Hall
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Date Submitted:

September 28, 2020



Michigan Technological University
**Civil and Environmental
Engineering**

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1.0 INTRODUCTION

The Michigan Transportation Asset Management Council (TAMC) began delivering its education program and providing technical services in 2004. Since that time, the Center for Technology & Training (CTT) has assisted the TAMC with its education programs and technical assistance services. The CTT is a logical choice for this program because, in addition to the TAMC Education Program, the CTT houses other programs funded by the Michigan Department of Transportation (MDOT) including the Michigan Local Technical Assistance Program (LTAP), Roadsoft, Michigan Engineer's Resource Library (MERL), and the Bridge Load Rating Program. This array of programs economizes upon professional, development, and support staff to make project delivery cost effective. The CTT focuses its efforts specifically on projects related to local government agencies and transportation. The CTT is part of the Civil and Environmental Engineering (CEE) department on Michigan Technological University's campus.

2.0 TAMC WORK PLAN GUIDELINES

The tasks for this proposal were identified from educational priorities outlined by TAMC in the *Draft TAMC Strategic Work Program for 2020-2022* (See Appendix A). Tasks are referenced to the appropriate items in the *TAMC Strategic Work Program*.

3.0 WORK PLAN

This draft work plan is for discussion purposes only to assist TAMC in budgetary planning. It does not represent a firm quote, and it does not commit University personnel, facilities, or funds. Final terms and conditions of this sponsored activity are subject to University review and authorization of a formal proposal or agreement.

This work plan and budget is for the period beginning October 1, 2020 and ending September 30, 2021. The project is approximately \$130,000. A more precise and detailed cost estimate will be provided with the final proposal should TAMC accept this scope of work at the budgetary level in Appendix B.

The work plan consists of the following major tasks in accordance with the *Draft TAMC Strategic Work Program for 2020-2022*:

- Task 1: Maintain Roadsoft –IRT Data Submission Protocols
- Task 2: TAMC Data Collection Process Changes

- Task 3: Data Collection State of Practice Study
- Task 4: Undefined Staff Support
- Task 5: Attend and Participate in TAMC Council Meetings
- Task 6: Attend and Participate in TAMC Committee Meetings
- Task 7: Project Management and Monthly Reporting

3.1 Task 1: Maintain Roadsoft – IRT Data Submission Protocols

Draft TAMC Strategic Work Program for 2020-2022 Item: TAMC Goal 1, Objective 1: Surveying and reporting the condition of roads and bridges. (see Appendix A).

TAMC dedicates a significant portion of its efforts to collecting the pavement data and construction history information (completed and planned investments) necessary for driving asset management processes at the local, regional, and state levels of government. TAMC data collection activities require sharing of data between these three levels of government in a meaningful format for each stakeholder. To facilitate this data collection, sharing, and reporting, the TAMC relies on interfaces between Roadsoft (asset management software) developed by the Center for Technology & Training and the Investment Reporting Tool (IRT) developed by the Center for Shared Solutions (CSS). Development for both of these tools is ongoing as user requirements change, software interfaces and underlying data systems are maintained, and data collection policies are modified.

The data transfer protocols and interactivity between Roadsoft and the IRT need to be updated and tested annually to ensure that quality data are passed between the two systems and that changes or updates during the prior year have not resulted in data transfer irregularities. This task should be completed close to the start of data collection activities in April, but the development cycle and project load for CSS will dictate. This task will include annual testing and verification of the Roadsoft export of PASER data to the IRT, and import and export of planned and completed treatments (investment reporting) from Roadsoft to the IRT and from the IRT to Roadsoft. Currently with the recent rewrite of the IRT, the functionality does not exist in the IRT to support planned and completed data transfers, however when the IRT allows this functionality the CTT team will actively implement any changes necessary to make Roadsoft compatible with the new IRT transfer. The task also includes a budget for making small changes to the import and export protocols should they be necessary; however, at the time of the submission of this proposal, it is not clear what the extent the changes will be.

3.2 Task 2: TAMC Data Collection Process Changes

Draft TAMC Strategic Work Program for 2020-2022 Item: TAMC Goal 3: Coordination of asset management with partner organizations. (see Appendix A).

The Covid -19 crisis has forced many around the world to adapt to new ways of doing things. TAMC is no different. The annual TAMC pavement condition data collection brings together over 400 people from MDOT, Local Agencies, Regional and Metro planning organizations. Travel policy at each of these partner agencies caused the cancellation of data collection in 2020, and risks cancellation of the 2021 data collection task if adaptations are not made to the collection program. Currently TAMC is considering changes in the number of raters, the composition of the rating teams, and co-rate or quality control check collected data. A change in collection policy is the first step of this process, but there are significant behind the scenes tasks that result from these potential changes.

This task provides a budget to address the logistics of changing the data collection process for PASER and IBR ratings in 2021. While the full extent of the changes necessary are not currently known it is likely that the following subtasks will be necessary:

Alterations to Roadsoft / LDC: It will likely be necessary for teams to co-rate (repeated measure) of a percentage of their roads as team composition changes. In order to speed this collection and reduce errors, Roadsoft will need to be able to identify a variable percentage of roads that were recently collected by a team for co-rating by a co-rating team using a random sampling method with geographical and segment property constraints. This functionality will likely be completed in the RPO / MPO version of Roadsoft. Once co-rating samples are identified Roadsoft will create a co-rating collection network for export to the LDC. Co-rating team data will be compared to initial ratings for local level concurrence. Tools in Roadsoft will be created for the comparison of co-rating data which allow the identification of any ratings more than plus or minus 1 rating point away from the initial collection. The tool will also allow team members to indicate acceptance of the data set.

Changes to the data collection manual: Significant changes will likely be needed to the TAMC data collection manual to overview the procedures outlined in the co-rating methods above. These include step by step instructions and shortened fact sheets for raters that do not attend PASER training next year, but who will participate in collection.

At the time of this proposal the scope of this task has not been determined. It may be necessary to cancel other tasks and reallocate budget to complete this task depending on scope.

3.3 Task 3: Pavement Data Collection State of Practice Study

Draft TAMC Strategic Work Program for 2020-2022 Item: TAMC Goal 1, Objective 3: Supporting the development of appropriate asset management methodologies. (see Appendix A).

Data collection is a large component of what TAMC does, and is a large cost for any asset management program. While the current methods of collection used for TAMC sponsored data collection have a low price point and are accessible to transportation agencies without significant specialized equipment, there are many new innovations in transportation asset data collection that may provide either enhancements to current data collection, or may provide more efficient methods, or more detailed data that is worth considering for future efforts. This task will investigate new, market ready technologies for collecting asset data that could be used on a statewide scale to accomplish TAMC's goals for data collection, specifically:

- Provide low cost, high quality data at a state level scale on a yearly cycle
- Accessible to local agencies to do their own collection outside of TAMC's efforts
- Provide a network level metric for the state to sense overall condition trends
- Provide project level planning guidance at a road owner level
- Provide condition modeling opportunities at a state and local level
- Relatable to historical data

This task will primarily evaluate pavement data collection tools, but will also consider technologies that can collect inventory information on other ancillary roadway assets. Bridge data collection will not be considered since it is required to be collected under federal guidelines which are not under the purview of TAMC to modify. The focus of the study effort will be to identify:

1. The type and quality of data collected
2. The cost of data collection and associated post processing
3. Technology or equipment needed for collection and its associated load on collection costs
4. The number of providers of the data collection method
5. The ability of data collected to be integrated and enhanced with historic data for state and local processes

The findings from this study will be presented in a summary report which will include proposed next steps for TAMC to consider for addressing signal data.

3.4 Task 4: Undefined Staff Support

This task will support any item in the *Draft TAMC Strategic Work Program for 2020-2022* but the individual goal or objective cannot be defined at this time since this work item is on an as needed basis.

This task provides support to the TAMC for items that cannot be identified at this time but are deemed critical to be completed in a short timeframe. Historically, this task has covered data management or critical changes to programs. This task allocates approximately 150 hours of

staff time to tasks as requested by the Council or its sub-committees. Specific work activities are determined through discussion with the sponsor’s project manager, the TAMC staff coordinator, or the TAMC chairperson.

3.6 Task 6: Attend and Participate in TAMC Council Meetings

Draft TAMC Strategic Work Program for 2020-2022 Item: TAMC Goal 3: Coordination of asset management with partner organizations. (see Appendix A).

This task includes attendance at TAMC Council Meetings to brief members on activity to date, to participate in on-site work, and to take direction from council members and staff. This task also includes time and expenses for CTT staff to attend four on-site ‘person-meetings’¹ and six conference-call meetings². Discussion with the sponsor’s project manager and the TAMC staff coordinator will determine which meetings will be attended and which personnel will attend. The budget for travel costs will be allocated to attending additional meetings if in person meetings are not convened due to travel restrictions. It is anticipated that several additional virtual meetings may be necessary if in person meetings do not occur.

3.7 Task 7: Attend and Participate in TAMC Committee Meetings

Draft TAMC Strategic Work Program for 2020-2022 Item: TAMC Goal 3: Coordination of asset management with partner organizations. (see Appendix A).

This task includes attendance at TAMC Committee Meetings (including monthly meetings with RPO and MPO staff to brief members on activity to date), participation in on-site work, and taking direction from TAMC members and staff. This task also includes time and expenses for the CTT staff to attend four on-site ‘person-meetings’¹ and eight conference-call meetings². Discussion with the sponsor’s project manager and the TAMC staff coordinator will determine which meetings will be attended and which personnel will attend.

The budget for travel costs will be allocated to attending additional meetings if in person meetings are not convened due to travel restrictions. It is anticipated that several additional virtual meetings may be necessary if in person meetings do not occur.

3.8 Task 8: Project Management and Monthly Reporting

Draft TAMC Strategic Work Program for 2020-2022 Item: TAMC Goal 2: Provide fiscal and budgetary accountability for TAMC. (see Appendix A).

¹ A “person-meeting” is one person attending one meeting

² As a cost saving measure, the number of on-site meetings and associated travel cost have been reduced, with the assumption that teleconference meetings will meet the TAMC’s needs as they have over the last several years.

This task covers all management of the project, project reporting, and project-specific interaction with Michigan Technological University administration and relations with the sponsor.

Monthly progress reports will include a list of activities conducted and an estimate of percent completion by task. Estimates of percent complete are based on aggregate hours worked, not based on budget expended; so, these estimates are not intended to be used for auditing invoices by the sponsor.

4.0 KEY PERSONNEL

Tim Colling, PhD, PE, Director – PI

Luke Peterson, Principle Programmer – Co-PI

Names of Employees and Positions for this Service

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Peter Torola, PE, Research Engineer II

**Appendix A: Draft TAMC Strategic Work Program for
2020-2022**

Appendix B: Budget and Cost Derivation MDOT Form 5101A-1

Will be included in final proposal

Appendix C: Payroll Verification

Will be included in final proposal

Proposal Title:

**DRAFT 2021 Transportation
Asset Management Council
Education Program Work Plan**

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Michigan Technological University
**Civil and Environmental
Engineering**

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1.0 INTRODUCTION

The Michigan Transportation Asset Management Council (TAMC) began delivering its education program and providing technical services in 2004. Since that time, Michigan Technological University has assisted with the TAMC Education Program and continues to be a logical choice for assisting with this program because of its Center for Technology & Training (CTT). The CTT is part of the Department of Civil and Environmental Engineering (CEE) and is located on Michigan Technological University's campus, which offers a wide array of resources for this project. The CTT houses various state- and federal-funded programs. For example, CTT projects funded by the Michigan Department of Transportation (MDOT) include the Michigan Local Technical Assistance Program (LTAP), Roadsoft, Michigan Engineer's Resource Library (MERL), and Bridge Load Rating technical support program. Additionally, the CTT houses the federally-funded Environmental Protection Agency's Region 5 environmental finance center—the Great Lake Environmental Infrastructure Center (GLEIC). This array of programs economizes upon professional, development, and support staff to make project delivery cost effective and time efficient. The CTT focuses its efforts specifically on projects related to local government agencies and transportation.

In 2014, the State of Michigan required continuing education hours (CEH) for professional engineers to maintain their licenses. As an education institution, the Michigan LTAP is in the position to provide CEH for professional engineers. Alongside this ability, the Michigan LTAP can encourage the appropriate TAMC classes as a means for maintaining licensure.

One of the prime challenges of effectively working with the over 600 local agencies in Michigan is keeping accurate contact information. The ability of the Michigan LTAP to contact local agency staff through e-mail, phone, and direct mail can provide a major benefit to programs that are targeted at Michigan's local agencies, like TAMC's training efforts. The Michigan LTAP maintains a state-of-the-art contact and event management database, which makes advertising and participant registration for local agency training events a very simple, cost-effective process. In addition, because LTAP is a nationally recognized program working to educate local agencies, events advertised through the Michigan LTAP can take advantage of state and national agreements between partner organizations—such as County Road Association (CRA) of Michigan, National Association of County Engineers (NACE), National Association of Counties (NACO), Michigan Township Association (MTA), American Council of Engineering Companies (ACEC), and Michigan Municipal League (MML)—for access to their contact databases. These agreements allow the Michigan LTAP access to these partner organization mail lists at no cost. Access to these same mail lists outside of LTAP partner organization agreements can have a substantial cost, sometimes as high as \$0.10 to \$0.20 per contact.

Events that are co-sponsored with the Michigan LTAP benefit by utilizing the wealth of local agency contact information that is stored in the Michigan LTAP contact and event management system and from the no-cost access to Michigan LTAP partner organization mail lists. They also benefit by taking advantage of the infrastructure that the Michigan LTAP has for registering and invoicing participants, event tracking, and training records retention. By not duplicating these efforts, the arrangement results in an economy of scale through cooperation among programs that educate local agency transportation staff.

Since its inception, the TAMC training program has been and continues to be coordinated as a co-sponsored training event with the Michigan LTAP.

2.0 TAMC WORK PLAN GUIDELINES

The tasks for this proposal were identified from educational priorities outlined by TAMC in the *Draft TAMC Strategic Work Program for 2020-2022* (See Appendix A). Tasks are referenced to the appropriate items in the *TAMC Strategic Work Program*.

The current training plan is proposed as primarily in person events, however should Covid-19 restrictions preclude in person training, the events will be converted to the appropriate web based format and offered in that format. Conversion to a web format takes effort, however it is believed that the savings from not traveling as well as the potential to do fewer sessions (geographic coverage and class size are less of an issue online) will balance the budget for these tasks.

3.0 WORK PLAN

This draft work plan is for discussion purposes only to assist TAMC in budgetary planning. It does not represent a firm quote, and it does not commit University personnel, facilities, or funds. Final terms and conditions of this sponsored activity are subject to University review and authorization of a formal proposal or agreement.

This work plan and budget is for the period beginning January 1, 2021 and ending December 31, 2021. The project is approximately \$214,000. A more precise and detailed cost estimate will be provided with the final proposal should TAMC accept this scope of work at the budgetary level in Appendix B.

The work plan consists of the following major tasks in accordance with the *Draft TAMC Strategic Work Program for 2020-2022*:

- Task 1: Assist in Coordinating the Michigan Transportation Asset Management Conferences
- Task 2: Conduct Michigan Compliance Plan Webinar and Associate Technical Support
- Task 3: Conduct Introduction to Transportation Asset Management for Local Officials Training
- Task 4: Conduct Michigan Transportation Asset Management Council PASER Training
- Task 5: Conduct Inventory Based Rating™ Training
- Task 6: Conduct Workshop on Creating Bridge Asset Management Plans
- Task 7: Conduct Workshop on Creating Pavement Asset Management Plans
- Task 8: Project Management and Reporting

A nominal registration fee will be assessed to participants for attending training events delivered under this program consistent with Michigan LTAP policy. Registering and failing to show at an event per Michigan LTAP cancellation policy will result in a fee for participants. Registration fees are calculated to break even for on-site expenses, which include consumables that participants use or take with them (such as facility rental, webinar and phone line expenses, food and refreshments, handouts, and rental of audio visual equipment). Registration fees help to offset the load on the program for on-site activities. The absence of a registration fee (i.e., free training) has been shown to increase no-shows and decrease attendance at training programs because it is assumed that “free” training has some other profit motive and requires no commitment on the part of the participant.

Participants in training events offered under this program will be issued certificates of completion for continuing education hours (CEH) required for maintaining a Michigan professional engineer license where applicable. Every attempt will be made to ensure that trainings provided in this program are eligible for CEH credit for attendees.

3.1 Task 1– Assist in Coordinating the Michigan Transportation Asset Management Conferences

Draft TAMC Strategic Work Program for 2020-2022 Item: ACE Committee Goal 3, Objective 3: Annual Educational Conference (see Appendix A).

CTT staff will participate in organizing both conferences, including participation in organization meetings, distribution of promotional material, handling of participant registration, printing of folder handouts, active facilitation of the conferences, and provision of on-site audiovisual and logistical support. CTT staff will also record audio and screen captures of presentations, which will be built into a Flash or video format that can be streamed over the web.

CTT staff will collect the registration fee set by TAMC, mail invoices, and return collected fees back to TAMC to defray on-site and facility expenses.

3.2 Task 2– Conduct Michigan Compliance Plan Webinar and Associate Technical Support

Draft TAMC Strategic Work Program for 2020-2022 for the Full Council Goal 1, Objective 3: Supporting the development of asset management methodologies (see Appendix A).

This task consists of presenting four webinar sessions on the Michigan Asset Management Compliance plan. This webinar assists local agencies with completing their statutorily required asset management plans using TAMC’s templates. Following the webinars CTT will plan to provide technical assistance to local agencies in completing their plan. Priority will be given to local agencies with the earliest plan due dates.

The currently planned events are:

Conduct two, three hour webinars spring/summer 2021

Conduct two, three hour webinars September 2021

3.3 Task 3– Conduct Introduction to Transportation Asset Management for Local Officials and Gravel Road Basics for Elected Officials Training

Draft TAMC Strategic Work Program for 2020-2022 for the Full Council Goal 1, Objective 3: Supporting the development of asset management methodologies (see Appendix A).

This task includes presentation of five sessions of either Asset Management for Local Officials which has been offered for several years running and focuses on management of paved roads, or Gravel Roads Basics for Elected Officials, which was developed and piloted in 2018 and focuses on unpaved roads. The five sessions will be offered in any combination of these two classes that local agencies request.

Historically TAMC local elected officials training have been offered at a local agency office, with that agency offering to “host” the event. Hosted training events typically target the elected officials in the immediate jurisdictions. Hosted training events will be delivered during morning, afternoon, or evening as the site’s host agency expresses interest. In addition to hosted sessions, several “open enrollment” sessions will be planned that are not associated with a host agency. Open enrollment events will be advertised to all elected officials statewide.

This budget includes facility costs (if any), handouts, participant registration, CTT instructor time, and travel costs. This budget does not include any reimbursement for participants, RPO coordinators, TAMC members, or TAMC staff. Host agencies are responsible for break refreshments.

The currently planned events are:

Conduct five workshop sessions at approximately three-hours each.

3.4 Task 4 – Conduct TAMC PASER Training

Draft TAMC Strategic Work Program for 2020-2022 for the Full Council Goal 1, Objective 1: Surveying and reporting the condition of roads and bridges (see Appendix A).

The presentation material will be updated to reflect data collected in 2019, quality-control results, and any changes in legislation and TAMC policies. Training will also be further adapted to the use of audience response systems (I-Clickers) based on the continued success of the usage of this technology. This technology was found to engage attendees, provide instant and accurate feedback, and produce data that can be used to further assess training techniques.

Training dates will be coordinated with TAMC's data collection start date. TAMC needs to notify the CTT of any changes in its collection training requirements and policy by December 1, 2019. It is otherwise assumed that start dates and training policy will remain the same as the last approved start dates and policy.

This task includes facility costs (if any), printing of handouts, purchase of PASER Manuals, participant registration, CTT instructor time, and travel costs. This task does not include any reimbursement for participants, RPO coordinators, TAMC members, or TAMC staff.

This task includes the distribution of the Local Agency Asset Management Survey, which will be delivered in its current format to all local agency participants at the on-site PASER training sessions.

The currently planned events are:

Conduct four, three-hour distress identification webinars; conduct ten half-day on-site PASER training sessions; conduct one full-day combined PASER and distress identification workshop for newly hired staff; conduct one, two-hour webinar for RPO's and MPO's on using the Roadsoft data process.

3.5 Task 5 – Conduct Inventory Based Rating™ Training

Draft TAMC Strategic Work Program for 2020-2022 for the Full Council Goal 1, Objective 1: Surveying and reporting the condition of roads and bridges (see Appendix A).

The Inventory Based Rating™ (IBR) system for unpaved roads was developed in 2015 at the request of the TAMC. In 2016, the tools in Roadsoft were released to allow agencies to collect and analyze unpaved road condition data efficiently. In 2017, the TAMC adopted a data collection policy, which included mandatory collection of the IBR data for unpaved roads on the federal aid eligible road system that took effect in 2018. In order to collect this data, it will be necessary to train raters who are part of a collection effort that consists of gravel roads.

This task will update and deliver training that will allow local agencies to make consistent use of the tools and systems that TAMC has developed over the years for unpaved roads and will allow them to collect data for their own use and for reporting to TAMC.

The currently planned events are:

Update and conduct three, one-hour webinars on use of the IBR system for rating unpaved roads.

3.6 Task 6 – Conduct Michigan Bridge Asset Management Workshop

Draft TAMC Strategic Work Program for 2020-2022 for the Full Council Goal 3, Objective 2: Provide training for asset management template (see Appendix A).

The Bridge Asset Management Workshop was modified during the 2016 TAMC Education work plan and was presented for the first time as part of the 2017 TAMC Education work plan. The new workshop includes two two-hour webinars that present bridge asset management principles and one five-hour on-site workshop that provides participants with a hands-on how-to session for developing an agency's bridge asset management plan. The details for the requirements of the revised workshop were outlined by the Bridge Committee.

This task will provide time and expenses for a CTT instructor to present the webinar on two occasions and workshop series on four occasions. This task does not include a budget for reimbursement for participants, RPO coordinators, TAMC members, or TAMC staff, or for any revision, editing, or enhancements to handouts or presentation material. The locations of the workshop will be distributed statewide to minimize participant drive time and to maximize attendance.

The currently planned events are:

Conduct two sets of two-hour webinars and four five-hour on-site sessions

3.7 Task 7: Conduct Workshop on Creating Pavement Asset Management Plans

Draft TAMC Strategic Work Program for 2020-2022 for the Full Council Goal 3, Objective 2: Provide training for asset management template (see Appendix A).

This task consists of presenting four full-day sessions of the Pavement Asset Management Plan Workshop and two, two-hour webinars on how to define their network in preparation for the Pavement Asset Management Plan Workshop. The Pavement Asset Management Plan Workshop was developed and piloted in 2017. Public Act 325 of 2018 makes asset management plans compulsory. Asset management plans are positive signs of implementation of asset management principles at an agency level and are considered a best practice.

This task will provide time and expenses for CTT instructors to present the webinars and workshops and update the training materials from feedback received by participants. This task also provides technical support for local agencies that have completed the workshop while working with the data-parsing tools developed for this workshop.

The currently planned events are:

Present two, two-hour webinars and four, one-day sessions

3.8 Task 8: Project Management & Reporting

Draft TAMC Strategic Work Program for 2020-2022 Item: TAMC Goal 2: Provide fiscal and budgetary accountability for TAMC. (see Appendix A).

This effort covers all management of the project, project reporting, project-specific interaction with Michigan Tech administration, and relations with the sponsor.

Monthly Reports

Monthly progress reports will include a list of trainings conducted (date, location) and an estimate of percent completion by task. Estimates of percent complete are based on aggregate hours worked—not based on budget expended—so these estimates are not intended to be used for auditing invoices by the sponsor.

Quarterly Reports

Quarterly progress reports will include trainings conducted (date, location), a cumulative list of training participants, and an estimate of percent completion by task (these estimates will not be used for auditing invoices). Quarterly reports will be submitted in place of a monthly report by the last day of the month following the end of the calendar quarter.

Annual Training Report

At the end of each calendar year, CTT staff will compile a comprehensive report that will summarize the performance of all TAMC training events. The report will include historical attendance figures as compared to the current year, spatial summary maps of attendees for the TAM conferences, and feedback received from participant evaluations.

Annual Survey of Local Agency Asset Management Implementation Report

Following the completion of PASER training, CTT staff will compile a comprehensive training report that will summarize the results of the Local Agency Asset Management Survey collected during the annual PASER collection and will compare current and historical results.

4.0 KEY PERSONNEL

Tim Colling, PhD, PE, Director – PI

Pete Torola, PE, Research Engineer II – Co-PI

Chris Gilbertson, PhD, PE, Associate Director – Co-PI

Names of Employees and Positions for this Service

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Tim Colling, PhD, PE, Director – PI

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Appendix A: Draft TAMC Strategic Work Program for 2020-2022

Will be included in final proposal

Appendix B: Budget and Cost Derivation MDOT Form 5101A-1

Will be included in final proposal

Appendix C: Payroll Verification

Will be included in final proposal