As of March 31st, 2020, PACTS and GPCOG are holding all committee meetings via Zoom conferencing technology. We remain committed to full public access and participation in our meetings through remote access during the COVID-19 crisis. Remote meetings will be held in accordance with the requirements of LD 2167, Public Law Chapter 618.

Both the chat and Q&A features will be turned off during PACTS and GPCOG meetings to ensure full public access to telephone participants and to avoid the confusion of side conversations.

Public comment will be taken verbally during the public comment period. Members of the public who wish to speak should “raise their hands.” Participants joining by computer or mobile app can click on the “Raise Hand” button. Participants joining by telephone can dial *9.

1. Welcome – Elizabeth Roberts, GPCOG

2. Public Comments

   The public will have an open comment period with a 3-minute limit per individual to comment on any issue, including items on the agenda.

3. Review of 10/21/20 Notes (Attachment A)

4. Collector Road Paving Program Purpose (Attachment B) – 30 min.

   Currently PACTS provides federal funding for the maintenance of 228 centerline miles of collector roads in the PACTS region. Several studies commissioned by PACTS in recent years show that the current level of funding for collector paving is not enough to keep the roadways in a good state of repair. The working group is asked to consider the following:
Should PACTS continue to provide a Collector Paving Program or should these funds be repurposed for complex projects (as recommended by a Collector Paving representative at the 10/21/20 meeting)?

Should PACTS MPI funds or part of PACTS MPI be used for collector paving projects?

Should the focus of the program shift to more preventive maintenance such as crack sealing and ultrathin overlays, and less mill and fills?

Staff have researched pavement maintenance strategies considering alternative treatments, timing, and selection processes. Staff will present some of their findings to the working group for consideration.

**Proposed Action:** Discuss and consider alternative pavement maintenance strategies including the existence of PACTS Collector Paving Program. Choose to continue with the current collector pavement maintenance strategy or endorse staff to explore alternative maintenance strategies for future.

5. **Pavement Project Requirements (Attachment C) – 30 min.**

PACTS staff has provided a summary of MaineDOT’s policies and procedures regarding the requirements of paving projects that use federal dollars. With this in mind, the working group is being asked to consider which elements of collector paving projects should be covered with collector paving funds and which elements should be the responsibility of the municipality.

- ADA improvements
- Guardrail improvements
- Drainage improvements
- Other?

**Recommended Action:** Discuss and consider project elements that should and should not be included for reimbursement of PACTS funds.

6. **Other Opportunities to Improve Cost Effectiveness of Projects (Attachment D) – 30 min.**

The working group is being asked to consider specific details regarding paving projects, including MPI crack sealing.

- Minimum project length – currently set at 1,200 feet
- Built vs. unbuilt roads
- Ability to remove a paving candidate if after a review by MaineDOT it is determined that the road is an unsuitable candidate.

**Recommended Action:** Discuss and consider project elements that should and should not be included for reimbursement of PACTS funds.
7. Other Business

8. Adjourn.
PACTS Collector Paving Working Group Meeting Minutes

Wednesday, October 21st, 2020
1:00 PM -3:00 PM
Remote Meeting

In Attendance:

<table>
<thead>
<tr>
<th>Committee Members</th>
<th>Affiliation</th>
<th>Attendance</th>
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<tbody>
<tr>
<td>Adam Bliss</td>
<td>Technical Committee</td>
<td>Y</td>
</tr>
<tr>
<td>Bill Shane</td>
<td>Northern Subregion</td>
<td>N</td>
</tr>
<tr>
<td>Chris Branch</td>
<td>Central Subregion</td>
<td>Y</td>
</tr>
<tr>
<td>Eric Dudley</td>
<td>Western Subregion</td>
<td>Y</td>
</tr>
<tr>
<td>Angela Blanchette</td>
<td>Southern Subregion</td>
<td>Y</td>
</tr>
<tr>
<td>Erin Courtney</td>
<td>Executive Committee (MTA)</td>
<td>Y</td>
</tr>
<tr>
<td>Jennifer Brickett</td>
<td>Executive Committee (MaineDOT)</td>
<td>N</td>
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<tr>
<td>LaRay Hamilton</td>
<td>MaineDOT</td>
<td>Y</td>
</tr>
<tr>
<td>Darryl Belz</td>
<td>MaineDOT</td>
<td>Y</td>
</tr>
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<table>
<thead>
<tr>
<th>Guests</th>
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<tbody>
<tr>
<td>Tim Kelley</td>
<td>MaineDOT</td>
<td></td>
</tr>
<tr>
<td>Brian Luce</td>
<td>MaineDOT</td>
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<table>
<thead>
<tr>
<th>For GPCOG</th>
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<tbody>
<tr>
<td>Elizabeth Roberts, Harold Spetla, Chris Chop</td>
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</table>

1. **Welcome**

   Elizabeth Roberts opened the meeting shortly after 1:00 PM.

2. **Public Comments**

   There were no public comments.

3. **Collector Paving Working Group Charge and Schedule**

   Elizabeth Roberts put forth the attached Collector Paving Working Group Charge and Schedule. Erin Courtney moved to approve the charge and schedule. LaRay Hamilton provided a second to the motion. All in attendance voted in favor of approving the charge and schedule.

4. **MaineDOT Pavement Management**

   Tim Kelley and Brian Luce, both from MaineDOT, presented on pavement treatment strategies and pavement management.
MaineDOT uses ARAN (automatic road analyzer) vans to gather data and dTIMS asset management software to process the information—including rutting and cracking. If a segment “triggers” action needed, then MaineDOT staff will field verify segments that have triggered an action.

- Sometimes staff will adjust prioritization based on field review.
- LiDAR is a newer technology starting to supplement ARAN.
  - LiDAR is used at the “project-level,” while ARAN is used at “network-level.”
  - LiDAR is replacing “ASAP”

MaineDOT uses ultrathin overlays for preventative maintenance.

MaineDOT recently adjusted specs for aggregate for cost saving purposes.

Chris Branch noted that PACTS doesn’t have the resources to stay on track with paving.

- Great idea to have MaineDOT involved in reviewing paving projects before they get approved for funding.
- Biggest problem is lack of funding to maintain collector network. Hoping for new direction in how to spread the money.
  - How do we meet the requirements to fix the roads, but make our dollars stretch further?
  - ADA requirements add substantial cost to projects. As a group we need to decide how to fund those upgrades—100% from municipality or should PACTS contribute?

- Did not think ARAN was as accurate as MicroPaver or StreetScan

MaineDOT noted that they separate ADA components from paving jobs. ADA components are bundled to achieve cost savings. PACTS might want to consider this, similar to the separate Crack Sealing WIN.

Adam Bliss supported Chris Branch’s statements and noted that the separate ADA WIN sounds like a promising idea.

Elizabeth Roberts asked MaineDOT how they test the pavement substructure.

- MaineDOT mentioned that they use a deflectometer to check pavement candidates. They also use ground penetrating radar and cut 12” exploratory augers.

MaineDOT plans heavy treatments 3 years out and light treatments 1 year out.

5. Municipal Pavement Management

Elizabeth opened the discussion to working group members to discuss the successes and challenges they have encountered at the municipal level.

- Eric Dudley noted satisfaction with the MaineDOT MPI Program. He felt they met the needs with the least funding.
- Angela Blanchette added that Scarborough has encountered high cost issues as well.
  - Most large projects that have been completed were MPI projects. Ability to implement stormwater enhancements too.
- Adam Bliss noted the challenge of timing collector paving projects using PACTS funds. The current selection process is not predictable.

Proposed ideas that came from the communities for topics of discussion for future meetings.

- Change MPI to collector road paving
- Shifting Collector Paving to Complex Funding pot and putting collector paving responsibility on municipalities
• Light Capital Paving (LCP) instead of heavy pavement treatments.

6. Other Business

• Adam Bliss requested to receive a clear list of federal and state requirements for collector paving projects, as opposed to discretionary measures.
• Adam Bliss asked if PACTS will be considering renewing an RFP/RFQ for pavement assessment.
  o Elizabeth Roberts noted that the proposal prices are not known until the consultant is selected, and then the price is negotiated.
  o Elizabeth also noted that we are not bound to having the same type of contract in the future. A new RFP could have consultants only assessing paving quality and not drafting reports and attending meetings.
  o Several municipalities mentioned that they use StreetScan to evaluate their pavements.
  o Darryl noted MaineDOT had provided data to PACTS in the past.
• StreetScan quoted $250 per centerlane mile to Freeport, Portland was quoted lower. This could mean approximately $50,000 for a regional assessment.

7. Adjourn.

Adam Bliss moved to adjourn; Eric Dudley seconded; all were in favor.
A Summary of the Findings from NCHRP Synthesis 223 Cost-Effective Preventive Pavement Maintenance

A dollar invested in preventive maintenance at the appropriate time in the life of a pavement will save $3 to $4 in future rehabilitation costs.

The most cost-effective pavement management strategy is to perform preventive maintenance activities on the better-rated pavements first and then fund the rehabilitation of the poorer-rated pavements.

The funding strategy that addresses the worst pavements first is the least cost-effective.

The following are a few of the examples given in the report:

<table>
<thead>
<tr>
<th>Comparison of three alternatives from a study in Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 in. HMA overlay</td>
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<tr>
<td>------------------</td>
</tr>
<tr>
<td>Alternative 1</td>
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<td>Alternative 2</td>
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<tr>
<td>Alternative 3</td>
</tr>
</tbody>
</table>

New York State Department of Transportation (NYSDOT) had observed an approximate 4 year increase in pavement service life when the cracks were filled on a 4 year cycle, extending the service life of a 1 ½ in. HMA overlay from about 8 years to about 12 years.

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A Summary of Possible Pavement Maintenance Expenditures

PACTS Annual Collector Paving Funding: $2,198,192

Assuming an average roadway width of 33 feet, miles of roadway that can be paved at 2019 construction costs with the different pavement maintenance treatments:

- 3.3 miles of 2-inch mill and fill
- 3.8 miles of 1.25-inch shim and overlay (12.1% more)
- 4.8 miles of ultrathin overlay (43.8% more)
A Summary of MaineDOT Policies and Guidelines

This document is a summary of the applicable MaineDOT policies and guidelines that pertain to PACTS Collector Paving Projects. The intent of this document is to highlight construction items that could have cost implications as a result of the policies and guidelines. For further information on MaineDOT’s policies and guidelines see https://www.maine.gov/mdot/edi/

All the guidelines listed below are for roadways that are classified as Highway Corridor Priority (HCP) 2, 3, and 4. Most of PACTS Collector Paving Projects are on HCP 3 and 4 roadways.

Guardrail
Existing guardrail in good condition may remain in place, unless it is determined that the guardrail systems are impacted by the nature of the work and the roadway is HCP 2.

If the guardrail is impacted and HCP 2 then, guardrail shall be adjusted to meet NCHRP 350 compliance requirements, which can be found at the following website: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_350-a.pdf

Guardrail Terminals
Existing NCHRP 350 compliant guardrail terminals in good condition may remain in place. All other terminals shall be replaced with a system listed on MaineDOT’s Qualified Products List (QPL) which can be found here https://www.maine.gov/mdot/research/products/. See the following exceptions:

- Corridor Priority 3-4: MELTs in good condition may remain in place if there are no crashes recorded at that location.

Crosswalks and curb ramps
Curb ramps shall be upgraded where pavement treatment crosses or impacts existing pedestrian elements or routes within the project limits. If a crosswalk is altered at an intersection, all corners will be upgraded even if outside the project limits. See the following exceptions:

- If it is technically infeasible or physically impractical to meet all current ADA standards, the standards will be met to the maximum extent possible.
- Federal regulations allow that existing accessibility elements constructed or altered prior to March 15, 2012 that comply with 1991 ADA Accessibility Guidelines do not have to be modified to comply with the 2010 standards. If this exception is utilized and detectable warnings are not present, detectable warnings will be added at locations determined appropriate.

Construction Maintenance of Traffic
Most projects with AADT’s less than 10,000 will most likely not need to undergo MaineDOT’s TAMEing process. If the project roadway has an AADT greater than 10,000, or AADT greatly fluctuates in the summer season or has extreme differences in directional distribution of traffic the project will need to undergo MaineDOT’s TAMEing process and will likely result in construction work restrictions.
TAMEing is an acronym for Traffic Analysis Management and Evaluation. This process reviews traffic at the project site and makes determinations regarding work restrictions to ensure that traffic delays are kept to 5 minutes or less.

**Cross Slope Guidance**
The roadway section cross slope guidance for paving projects is shown in the following table:

<table>
<thead>
<tr>
<th></th>
<th>Travelway Cross Slope</th>
<th>Shoulder Cross Slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>1.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Desirable</td>
<td>As-Built Design</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>4.0%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

* When considering the range and desirable cross slopes for preservation projects on Corridor Priority 3 and 4 roadways, the associated impacts and costs to attain the values shown shall be considered. When impacts and costs to attain the cross slope values in this Engineering Instruction are significant, Program Managers should be consulted to evaluate the characteristics and accident history of the roadway and to determine whether a Design Exception to this instruction will be pursued. Note: Shoulder cross-slope shall not be flatter than the adjacent travel way. Desired superelevation shall be +/- 1.5% from as-built.

**Superelevation Guidance**
For collector paving projects, MaineDOT relies heavily on the as-builts of the corridor. If as-builts cannot be located, then super elevations transitions cannot exceed a 2% change in 50 feet to a max slope of 6%. If transitions or max slope exceed the guidance, the project goes through the Design Exception process where the conditions are reviewed by Highway Program Management to determine whether to correct or if the in-situ conditions are acceptable. This is determined by crash data, traffic speed, volumes, etc.
PACTS MPI Crack Sealing

The 2020 PACTS MPI Policy included a new crack sealing set aside for $50,000 (Maximum) with a 50/50 municipal match. On Tuesday, February 25th, 2020, PACTS Staff and PACTS Technical Committee Chairperson, Patrick Fox, met with Marty Rooney (MaineDOT) to discuss potential options for allocating the crack sealing funds. The result from that meeting was a suggestion to create a PACTS Crack Sealing Pilot Project. This would allow the funds to be transferred and administered by the MaineDOT Region 1 office to crack seal a prioritized list of roadways in the collector paving program and include it in their crack sealing program, thus reducing paperwork and the administrative task burden for the communities, as well as eliminating the 50/50 municipal match requirement.

On March 2, 2020, the Technical Committee recommend the following items to the Executive Committee.

- A policy change to remove the match for crack sealing
- Allow the PACTS Technical Committee to create a pilot project with MaineDOT and approve a prioritized list of roadways to receive crack sealing.
- To allow the transfer of funds from the PACTS MPI to a WIN set up for the crack sealing funds that can be used by Region 1

PACTS staff reached out to the collector paving consultant for guidance on how to prioritize road segments for crack sealing selection. The consultant advised starting at roads with a 76 PCI and working up the list toward the roads with an 85 PCI. This would provide a crack sealing treatment to roads prior to those roads falling into the next treatment alternative category. Based on this information, a list of 23 crack sealing candidates was given to MaineDOT.

In October 2020, MaineDOT staff provided some of the following summarized recommendations: (1) the quantities were not enough to fulfill the complete list, (2) some of the road segments may have been too short to be considered an efficient use of resources; and, (3) the list of segments was sorted by road condition, not town, and so the treatment crew often returned to municipalities for second and third segment treatments—another inefficient use of time and resources. Additionally, there were expressed concerns that some segments may have surpassed the useful crack sealing window.