

From: [Keyes, Elliot \(DOT\)](#)
To: [Joe Korzilius](#)
Subject: RE: Preventive Maintenance Team Long Term Research Project; Maintaining Poor Pavements
Date: Tuesday, September 18, 2018 2:51:01 PM
Attachments: [image001.png](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.jpg](#)
[image005.png](#)
[image006.png](#)
[Maintaining Poor Pavements Questionnaire.docx](#)
[Roadway Data for Questionnaire.xlsx](#)

Joe,

Please see attached. Let me know if you need clarification.

All data is from MnDOT's HPMA system. The Excel attachment has two tabs – the first tab contains a variety of roads and treatments. The second tabs seemed like an interesting situation where the roadway received a Thick M/O in 1996 and has only had thin surface treatments since.

Elliot Keyes

Pavement Preservation Engineer

MNDOT Office of Materials and Road Research

1400 Gervais Ave

Maplewood, MN 55109

Office: 651-366-5432

Cell: 612-400-3815

Email: elliot.keyes@state.mn.us

mndot-email-signature[1]



From: Joe Korzilius [mailto:JKorzilius@srfconsulting.com]

Sent: Thursday, September 06, 2018 10:25 AM

To: Jason.Blomberg@modot.mo.gov; Mark Gawedzinski (IL) <Mark.Gawedzinski@illinois.gov>; Ned.grady@dot.wi.gov; Robert Green (MI) <GreenR6@michigan.gov>; Pete Kemp (Wisc) <Peter.kemp@dot.wi.gov>; Keyes, Elliot (DOT) <elliot.keyes@state.mn.us>; leo.mahserelli@dot.ca.gov; Doug Mason (CalTrans) <douglas.mason@dot.ca.gov>; Mike Shea (Missouri) <mike.shea@modot.mo.gov>

Cc: Geib, Gerard (DOT) <jerry.geib@state.mn.us>; Worel, Benjamin (DOT) <ben.worel@state.mn.us>; Renae Kuehl <rkuehl@srfconsulting.com>; Brand, Cody (DOT) <cody.brand@state.mn.us>; Andrew Hanz (Mathy) <andrew.hanz@mteservices.com>; Johnson, Eddie N (DOT) <eddie.johnson@state.mn.us>; Bittmann, James (DOT) <jim.bittmann@state.mn.us>; Andersen, Timothy (DOT) <timothy.lee.andersen@state.mn.us>; timo.saarenketo@roadscanners.com; Dan Wegman (Braun Intertec) <dwegman@braunintertec.com>; kevin.kliethermes@dot.gov; Renae Kuehl <rkuehl@srfconsulting.com>

Subject: RE: Preventive Maintenance Team Long Term Research Project; Maintaining Poor Pavements

NRRA Team Participating States,

Today the NRRA Tap for Preventive Maintenance discussed the ongoing Long Term Research Project; Maintaining Poor Pavements

We are waiting to hear back from states responses to the questions below.

The TAP discussed today putting a delivery date on this request for responses, therefore please complete and return responses by October 1st, 2018.

This will allow the Long Term Research Project; Maintaining Poor Pavements, to continue.

Questions below in original email from May.

Joe

Joseph Korzilius, PE (MN, WI)
Senior Associate

Direct: 763.251.4043 | email: jkorzilius@srfconsulting.com
Main: 763.475.0010 | Mobile: 612.685.6585 | www.srfconsulting.com
One Carlson Parkway North, Suite 150, Minneapolis, MN 55447-4443



CONFIDENTIALITY NOTICE: The contents of this email message and any attachments are confidential and are intended solely for addressee. The information may also be legally privileged. This transmission is sent in trust, for the sole purpose of delivery to the intended recipient.

From: Joe Korzilius

Sent: Friday, May 25, 2018 8:39 AM

To: 'Jason.Blomberg@modot.mo.gov' <Jason.Blomberg@modot.mo.gov>; Mark Gawedzinski (IL) <Mark.Gawedzinski@illinois.gov>; 'Ned.grady@dot.wi.gov' <Ned.grady@dot.wi.gov>; Robert Green (MI) <GreenR6@michigan.gov>; Pete Kemp (Wisc) <Peter.kemp@dot.wi.gov>; Elliot Keyes (MN) <elliott.keyes@state.mn.us>; 'leo.mahserelli@dot.ca.gov' <leo.mahserelli@dot.ca.gov>; Doug Mason (CalTrans) <douglas.mason@dot.ca.gov>; Mike Shea (Missouri) <mike.shea@modot.mo.gov>

Cc: Jerry Geib (MN.) (Chair) <Jerry.Geib@state.mn.us>; Worel, Benjamin (DOT) <ben.worel@state.mn.us>; Renae Kuehl <rkuehl@srfconsulting.com>

Subject: Preventive Maintenance Team

Long Term Research Development

Maintaining Poor Pavements

As presented at yesterday's pavement workshop below are questions related to Task 2; Gathering data for this long term research study.

If we can get a response from each State by June 29, 2018 it will help to keep this study moving along on schedule.

If you can not identify a response for all questions please respond with what you can obtain.

A draft literature review, Task 1, has been posted to the project website.

Please contact me with any comments or questions.

1. Name of State agency:
2. Does your State perform network roughness measurements ?
3. What measurement does your State use to collect roughness measurements (inches per mile) ?

4. How does your State perform and collect pavement distress data (patching, longitudinal or transverse cracking, rutting, etc. ...)?

5. What are the pavement distress measures your State uses for reporting?

6. How does your pavement management system define a "Poor Pavement"?

If you do not have a pavement management system what defines a pavement in poor condition for your State?

7. Please provide a listing of pavement segments in poor condition that received a "Thin" surface treatment.

8. What is the approximate traffic volume in AADT?

9. What thin surface treatment(s) was applied.

At the bottom of this email are a listing of treatments, if the treatment applied does not fit please describe.

10. What were the reported pavement performance measures prior to application of a thin surface treatment?

11. IRI (or other used by your State)

a. Before application of thin surface treatment.

b. Are there any before and after photographs?

c. After application of thin surface treatment

d. After year one and successive years where data is available

12. SR (or other used by your State)

a. Before application of thin surface treatment.

b. Are there any before and after photographs?

c. After application of thin surface treatment

d. After year one and successive years where data is available

13. Cost of surface treatment

a. Total Project Cost

i. Material

ii. Installation

b. Area covered

c. Cost per lane mile

14. When was next rehabilitation performed ?

15. What is the basic pavement structure of the roadway segment ?

Not required but if you have the following information:

16. Please describe the most significant distress(s) being addressed.

17. Please describe the methodology or decision making process followed to select the rehabilitation application.

- Applied treatments may be combined but should be limited to those that are considered "Thin" = less than a 2" depth.

A description of general treatments being considered in the study are on the attached definitions sheet and include:

- Thin Overlay (with or without milling)
- Thinlay (with or without milling):
- Hot in-place recycling (HIR)
- Open Graded Friction Courses (OGFC), also known as Plant Mix Seal Courses
- Texas Under Seal
- Ultra Thin Bonded Wearing Course / Paver Placed Surface Seal / Nova Chip:
- Microsurfacing
- Slurry Seal
- Chip Seal
- Fibermat Chip Seal
- Scrub Seal
- Cape Seal
- Fog Seal:
- Rejuvenating Fog Seal:
- Bio Fog Seal:
- Otta Seal
- Scratch Course
- Mastic Surface or crack Treatment

Joseph Korzilius, PE (MN, WI)
Senior Associate

Direct: 763.251.4043 | email: jkorzilius@srfconsulting.com
Main: 763.475.0010 | Mobile: 612.685.6585 | www.srfconsulting.com
One Carlson Parkway North, Suite 150, Minneapolis, MN 55447-4443



CONFIDENTIALITY NOTICE: The contents of this email message and any attachments are confidential and are intended solely for addressee. The information may also be legally privileged. This transmission is sent in trust, for the sole purpose of delivery to the intended recipient.
