MaineDOT HMA Paving Alert E-mail Notification System



What is it?

What is it?

- MaineDOT E-mail based project notification program developed to inform Agency and Contractor personnel of issues concerning paving equipment, HMA mixtures, or about general HMA construction activities or methods.
- A means to more efficiently track HMA construction issues across the State of Maine.
- Allows for widespread notification of construction issues that may impact other projects within a geographic area.
- Originally intended to inform field personnel of HMA paving equipment issues, but has quickly grown to include notifications of HMA mix performance concerns, testing issues with certain mixes, and other paving project problems.

History

- Not a new concept at MaineDOT.
- Process was informally started in the 1970's. Word passed by word of mouth and via telephone.
 Close relationships with Industry minimized issues.
- Somewhat refined in the 1980's with the development of dedicated HMA paving inspection staff. MaineDOT had more control over the production and paving operations, and experienced inspectors identified placement and compaction issues and addressed them onsite. Information regarding equipment, mixes, or crews was shared verbally with other projects in the area.

History

- The late 1980's-early 1990's introduction of variable width power extendible screeds, advances in grade and slope control automation systems, and the increased rate in which paving equipment was shuffled from project to project helped drive the development of a more formal oversight program. MaineDOT Area Engineers reported issues to area Paving Supervisors, who would either work to correct the issues, or assign experienced paving technicians to do so.
- The development and implementation of QA specifications in the late 1990's as well as further reductions in staffing levels contributed to construction quality issues.
 - Some Agency and Industry personnel seemed to believe that quality was the responsibility of "someone else", and that random sampling could account for all quality aspects....
- In the late 90's to current....cell phones help, as do e-mails....when they work.

History

- Agency and Industry personnel retirements, and downsizing has resulted in the loss of experienced paving crew personnel and inspection staff. Less experienced personnel, when available, fill the need. A means to address project paving issues on a broader scale was needed.
- A program similar to the MaineDOT Dispute Resolution e-mail process seemed to be a solution to addressing project issues in a timely manner.

Why was this process created?

- Incidents of equipment moves to other projects / areas / States without having deficiencies repaired.
- Some equipment functioned well utilizing particular mixes, or at differing lift depths, but did not function well at thinner lifts.
 (ie: paver places 3" 19.0mm without issues, but cannot produce acceptable mat at 3/4" 11/4" depths using a 9.5mm)
- Incidents of HMA mixes continuing to be utilized on other MaineDOT projects when current JMF payfactors are below "cease production" or in reject status.
- Lack of direct communication with Industry quality control managers concerning equipment, mixtures, or overall project quality. (issues remained on project, managers not informed)

How Does It Work?

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- Construction issue notices are sent to an e-mail address account (<u>PavingAlert.MaineDOT@maine.gov</u>) managed by the MaineDOT QA Supervisors, and Paving Support group.
- Notices may include HMA mixture problems, poor ride, compaction, or mat problems, mechanical or electrical failure on equipment, or testing/sampling issues.
- E-mails are sorted by subject content, project location,
 Prime Contractor, and paving sub-contractor, if required.

How Does It Work?

- E-mails are archived in original format, then edited for content.
 Support staff will typically contact the sender for clarification of the issue, and determine if further distribution is warranted.
- Messages are then distributed to the MaineDOT construction field staff, the MaineDOT area managers, and the Contractor's QC management.
- MaineDOT personnel, and Contractors, are encouraged to respond to the notice through the e-mail account to dispute the issue, or to notify all recipients that the issue has been resolved.
- Project issues can be addressed quickly, reducing the need for expensive remedial action.

Example

The paver that was sent away on Wednesday was Paver ID # 62 5047 Blaw Knox 5510. The issues were hydraulic leaks out of the ram on the left side extension. and also a hydraulic from the right side extension.

The paver that was stopped today from paving any further was 62 5040 Blaw Knox paver. The Agtec Automatics were not running at all. also the paver was built up to pull 17'. The 2' extension that was put on was dragging hard because it was diving down in the front. When the paver was stopped they were unable to fix the problem because, and I quote "the plate is worn out" "This paver won't be back" I was told by the super. and that the Paver ID # 62 5047 Blaw Knox 5510 will be back out on Monday, after repairs are made.

Example

From:

Sent: Friday, 2007 5:53 AM

To: Luce, Brian

Cc: Subject: 5510 Paver

Importance: High

To All:

We have been using a Paver PF 5510 Serial # 551028-84 Paver # 17646 and the mat is highly segregated. They have changed the screed and made adjustments, but the mat still is no good. There is a shadow just right of center. Densities are low and it looks worse after rolling. This paver has been removed from ----- and will not be allowed to return under any circumstances. If you take a chance, put the tack truck on a leash. We paved 1/2 mile because crew and superintendent didn't listen.

Resident

Example

From: Sent:

Cc: Luce, Brian; Hall, Kyle; Andrews, Jamie;

Subject: Rejected Paver due to gearbox streak

ID# 17171 Blaw Knox PF-3200 Ulti-mat screed

After receiving a call from the Project at about 2 pm in regards to visual mat uniformity issues located in the center of the paver. I asked for the crown measurements in the paver and was told that there was more tail crown than lead crown. The Superintendent made an adjustment to the crown linkage so both lead and tail crown were equal, and hoped this would improve the uniformity in the gearbox area. Onsite observations we made were as follows:

The screed extensions, augers and screed in general were all in excellent shape and properly adjusted.

The flight extension plates were bent or possibly warped on the right side of the machine.

The augers next to the gearbox were not reversing or kickback paddles type used to tuck material under the gearbox.

The Superintendent asked to place material with the paver since they had made several adjustments since the prior days paving. Project personnel warned him that if the uniformity issues were still present he would be forced to reject the paver. The Superintendent placed 4 truckloads of mix and it was apparent that the issue was not corrected. I advised project personnel to notify the Superintendent that we would not accept anymore pavement placed with this paver until corrections/repairs were made.

Please issue an e-mail out to all field people notifying them of the issues with this paver.

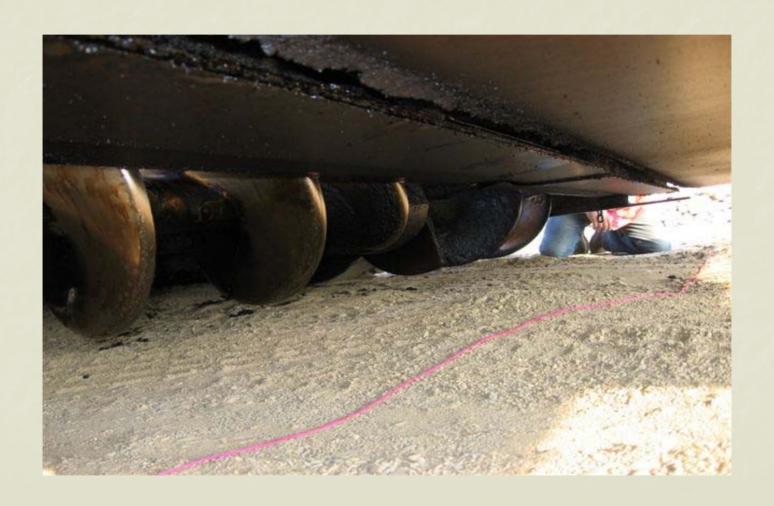
Issues

- Inexperienced personnel may escalate issues prematurely, requiring the support staff to investigate further before sending out an area wide notification.
- Each notification needs a resolution
 e-mail, otherwise personnel won't be aware whether the issue has been resolved or not.

The types of problems we are trying to avoid using this system...







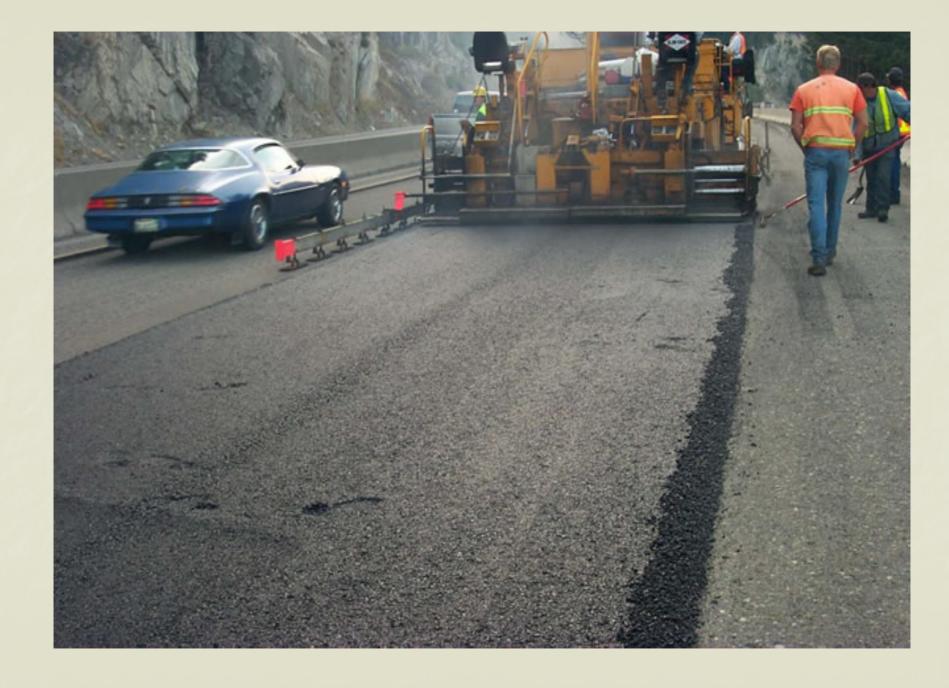




















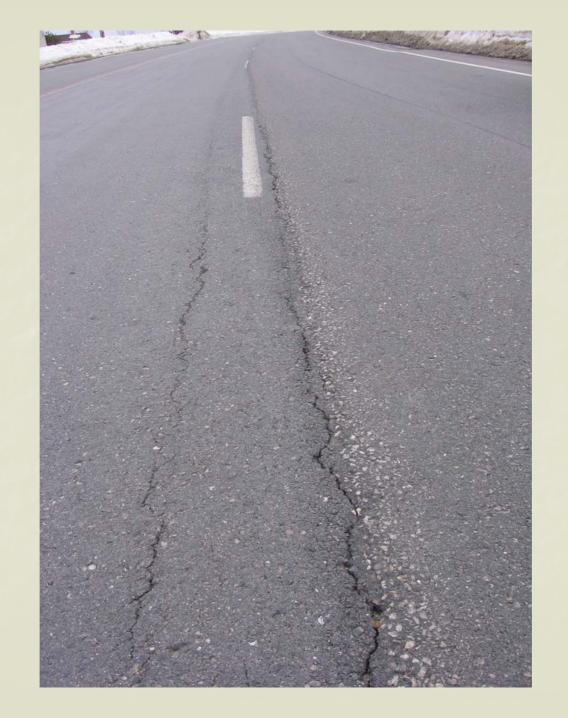
























So we can avoid this type of action later....





Questions?

