Enhanced Durability Through Increased In-Place Pavement Density

FHWA Asphalt Mixture Expert Task Group (ETG)
September 15, 2016

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FEDERAL HIGHWAY ADMINISTRATION
Enhanced Durability of Asphalt Pavements through Increased In-Place Pavement Density

Demonstration projects (10)
Compaction Workshops

- All 10 workshops now completed
  - From May 12 to July 21, 2016
  - 452 attendees

- Feedback positive:
  - Back to the basics approach
  - Thorough coverage of topics

- May will have a few more workshops in January-March 2017
  - Budget dependent
ENHANCED DURABILITY THROUGH INCREASED IN-PLACE PAVEMENT DENSITY WORKSHOP

Available Dates: Jan - March 2017
LENGTH: 1-Day
CEU: Potentially Offered
FEE: FREE
CLASS SIZE: Minimum: 20; Maximum: Room Dependent

DESCRIPTION
The Federal Highway Administration (FHWA) and Asphalt Institute present an Enhanced Durability through Increased In-Place Pavement Density Workshop. This one-day workshop offers owners and contractors the opportunity to learn about the dramatic durability increases that can be realized from relatively small increases in in-place densities. This workshop provides the most current information on how to achieve consistently high densities and the resulting economic benefits.

OUTCOMES
At the conclusion of the workshop, participants will be able to:

- Understand the benefits from increasing in-place density.
- Recognize strategies that could be employed by contractors to improve their achievement of density.
- Understand the economic benefits of higher in-place density.

Who Can Benefit?
- Specification writers
- Project inspectors
- Contractors
- The driving public

The successful adoption of these improvements will need to be a team effort; therefore both agencies and contractors are the target audience.

TOPICS INCLUDE:
- The Importance of Density
- Influencers on Durability
- Construction Best Practices
- Newer Technologies
  - Intelligent Compaction
  - Pave IR
  - Warm Mix Asphalt
- Tack Coat Best Practices
- Longitudinal Joint Best Practices

For more information about the workshop in your area, please contact:

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## Construction Projects Completed

<table>
<thead>
<tr>
<th>State</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota #1</td>
<td>May 25, 2016</td>
</tr>
<tr>
<td>Florida</td>
<td>June 1, 2016</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>June 8, 2016</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>July 25, 2016</td>
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## Construction Projects Scheduled

<table>
<thead>
<tr>
<th>State</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>Mid September</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>Mid September</td>
</tr>
<tr>
<td>Virginia</td>
<td>Mid September</td>
</tr>
<tr>
<td>Indiana</td>
<td>Mid October</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>End of October</td>
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</tbody>
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Lessons to Date
5 Projects

• 4 of 5 projects had significant increases
  • 1.0 to .3.0% increase over control

• 1 of 5 projects had slight increase
  • 0.5% increase over control

• Successful approaches
  • 3 projects – additional roller and/or increased passes
  • 1 project - mix design change
Next Steps

• Summary report on 10 projects’ construction
  • Potential follow-up on field performance

• Best practices communication
  • Summary document
  • Additional training workshops (funding dependent)
  • Tech Brief

• Potential to extend experiment with more states
  • Dependent on state interest
Overall Objective
Ultimately achieving the in-place asphalt pavement density that results in the highest asphalt pavement performance.

Thank You