Wisconsin DOT Pilot Program
Use of High Recycle Mixes

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Fall 2014 AASHTO – SCOH
Wisconsin DOT
Packers Vs. Da Bears
55-14
Pilot Program Activities

- Look at using mixes beyond 25% Asphalt Binder Replacement (ABR) currently allowed
- Using best practices from NCAT research & workshops
- Use performance testing to ensure baseline performance
- Verify blending charts
## Specification Limits

### Maximum Allowable Percent Binder Replacement

<table>
<thead>
<tr>
<th>Recycled Asphaltic Material</th>
<th>Lower Layers</th>
<th>Upper Layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAS if used alone</td>
<td>25</td>
<td>20&lt;sup&gt;[2]&lt;/sup&gt;</td>
</tr>
<tr>
<td>Any blend of RAM&lt;sup&gt;[3]&lt;/sup&gt; (from more than 1 source)</td>
<td>50&lt;sup&gt;[1]&lt;/sup&gt;</td>
<td>40&lt;sup&gt;[1,2]&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>[1]</sup> When used in combination the RAS component cannot exceed 5 percent of the total weight of the aggregate blend.

<sup>[2]</sup> For RAS only and any combination RAM with a percent binder replacement greater than 25%, Virgin binder grades used to produce these mixes will be adjusted as follows:

<table>
<thead>
<tr>
<th>Plan Specified Binder Grade</th>
<th>Supplied Virgin Binder Grade</th>
</tr>
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<tbody>
<tr>
<td>PG 58-28</td>
<td>PG 52-34 or 46-34</td>
</tr>
</tbody>
</table>

This virgin binder grade adjustment may be waived if the contractor furnishes test results indicating that the resultant binder meets the grade of the contract originally specified as referenced in 460.2.7 of this SPV article.
Performance Testing

- Striping Resistance – Hamburg Wheel
- Fatigue Cracking – Semi Circular Bend Test
- Low Temperature Cracking – Disc Shaped Compaction Test
Hamburg Wheel Samples

- Limits based on high temp PG grade
- Less than 0.5” rut depth @ defined # of passes
  - PG 58 – 5,000 passes
  - PG 64 – 10,000 passes
- Stripping & Inflection Point (SIP) for mix stability
SCB Samples

- Following the Louisiana Procedure
- 3 different notch depths
- No set limit, as specification is still in development
DCT Samples

- 400 J/m² the desired minimum
- Run at 10°C above the design required minimum
  - -34°C = -24°C Test temperature
Pilot Projects

- STH 77, Ashland County
- STH 73, Dane County
- USH 141, Marinette County
Leveraging National Support

- FHWA Resource Responsible ME Impacts Research Project with ARA and
- FHWA Mobile Lab – On STH 73
- NCAT RAP/RAS Workshop
STH 77, Ashland County

50% Binder Replacement
STH 73, Dane County

65% Binder Replacement

50% Binder Replacement
USH 141, Marinette County

- Moved to 2015 Construction Season
- Pilot Specs will be updated based on lessons learned from first 2 pilot projects
Next Steps

- Updated Pilot Specification and Procedures with lessons learned
- Look for other pilot projects
- Monitor performance
- Use pilots to update standard specifications
Questions?

Rodgers makes 3-year-old's wish come true before Packers win