Key quality initiatives in 2016

2017 Asphalt Regional Seminars

Rob Crandol, P.E.
Assistant State Materials Engineer
"Why can't we"?

- Commissioner Kilpatrick
Key quality initiatives in 2016
Noteworthy changes
ALL 2016 contracts

Get more liquid asphalt in our AC (50 gyro mixes)

Get proper/better tack
Chief Engineer focus areas

2016 changes for improving & incentivizing quality
2016 quality initiative items

- Getting better asphalt mix quality (increasing liquid AC)
- Getting better asphalt density in the field

*Where possible – incentive for quality*
2016 quality initiative items

- Milling – quality & required timeframes
- Pavement markings – quality & required timeframes

Where possible – *incentive* for quality
How did we do?
Noteworthy changes
ALL contracts

• Get proper/better tack

• Section 310 - Tack & Bond

• Tack is now a separate pay item (beginning in 2016)

• Field inspection requirements for ensuring proper application rate -&- measuring/paying for actual quantity applied
Calibrating distributors
Plate testing – field quality control
Noteworthy changes
ALL contracts

• Get more liquid asphalt in our mixes

  • Section 211 - 50 gyration experimental mix design procedures

  • Try to improve durability of mixes over time
### Changes from 65 to 50 (averages)

- AC increased except for HR

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<th>50 gy - 65 gy</th>
<th>AC_Contractor</th>
<th>AC_VDOT</th>
<th>Eff AC_Contractor</th>
<th>Eff AC_VDOT</th>
<th>FT_Contractor</th>
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<td><strong>Grand Total</strong></td>
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<td><strong>0.15%</strong></td>
<td><strong>0.04</strong></td>
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Production AC (averages)

- 65 vs 50 gyration: 5.46 vs 5.62
Production Eff. AC (averages)

- 65 vs 50 gyration: 5.29 vs 5.41
Section 211 – Asphalt Mix Design

1. **Minimum AC requirements:**
   - SM-9.5 = 5.5%
   - SM-12.5 = 5.3%
   - NOTE – adjustments for specific gravity may allow lower %AC

2. **Incentive of up to 5% - consistency of AC content**
   - % of unit bid price, per ton, for consistency - *no sieves w/ st. dev. adjustment points to receive bonus.*

3. **Increase of negative adjustment points for being out-of-spec:**
   - from 1% to 3% on process tolerance(s)
   - from 0.5% to 1.0% for standard deviation
   - **Pilot projects only**
Getting better asphalt density in the field
Section 315 – Asphalt Placement

1. **Field compaction requirements:**
   - Slight increase in field density control strip requirements (all Superpave surfaces now 92.5%)
   - QC by contractor – still requires roller pattern, control strips
   - QA / acceptance – now with plugs/cores (similar to SMA)

2. **Incentive of up to 5% - meeting minimum density requirements with consistency**
   - must be 100% pay, and have 80% of plugs from each sub-lot be 92.5 - 96.5 % of TMD to receive bonus

**Pilot projects only**
Density Comparison: Regular vs Pilot

Over 450 cores so far

Limited data – only 27 cores so far

Reduction in low density readings in the field for pilot projects!
Milling – quality & required timeframes
Milled Surface Time

- New limitations and requirements to pave back (regular planing and performance planing)
  - Only the limits that can be paved back in the times specified
  - Maintain positive drainage, warning devices, signing, etc...

- Roadway classifications
  - Interstates and all other Limited Access Roadways including ramps and loops posted at 55 MPH or greater
  - Non-Limited Access roadways with an ADT of 10,000 or greater and posted speed of 45 MPH or greater
  - All other roads

- $5,000 disincentive amount - time to pave back Interstate and other Limited Access
Pavement markings – quality & required timeframes
Bonus 25% for permanent markings within 14 days

- “Bonus” designation is an adjustment of 1.25 to be made to the regular Contract unit bid price for the designated item in accordance with Section 102.05 of the Specifications which is to be paid to the Contractor if the conditions specified herein are met.

- If permanent marking on a logical segment is completed in 14 days or less the contractor will receive compensation at the Bonus rate.
Questions?