2019 PAPA Technical Meeting
Pennsylvania Turnpike Commission
2019 PTC Paving Award - Lindy
Agenda

- HMA results for 2018
- Spec Changes
- HMA Designs for 2019
- Warm Mix project & Fiber Modified HMA project
- Materials Lab update
- Questions
Samples Tested – 590,393 ton

• 575 lots tested

• 90% of Lots receive full payment

• 56 failed Lots
  • 17 Lots were defective (14,760 ton)
    • 3 Lots were at 50% pay
    • 1 Lot at 0% pay
  • 13 Lots were removed and replaced (11,738 ton)
### YEARLY HMA PAYMENT %

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Lots tested</td>
<td>602</td>
<td>779</td>
<td>844</td>
<td>795</td>
<td>575</td>
</tr>
<tr>
<td>Lots @ 100% pay</td>
<td>88%</td>
<td>90%</td>
<td>94%</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>% of Defective lots</td>
<td>4.3%</td>
<td>3.8%</td>
<td>2.6%</td>
<td>3.2%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

### HMA FAILURES

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low AC</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>High AC</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Low #200</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>High #200</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Low Voids</td>
<td>34</td>
<td>33</td>
<td>18</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>High Voids</td>
<td>28</td>
<td>38</td>
<td>37</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Low/High Density</td>
<td>11/0</td>
<td>5/0</td>
<td>10/0</td>
<td>8/0</td>
<td>4/0</td>
</tr>
</tbody>
</table>
HMA (tons) shipped by Size

• 12.5mm – 284,442
• (SMA 12.5mm – 88,734)
• 25mm – 130,552
• 19mm – 115,830
• RB25mm – 48,181
• 9.5mm – 11,388

ATPBC – 46,870
Certified – 74,027

• TOTAL shipped – 711,290 ton
Average Density by Size

- 9.5mm – 94%
- 12.5mm – 94%
- SMA (12.5mm) - 95%
- 19mm – 95%
- 25mm – 95%
- RB25mm – 96%

Avg. Density - 95%
(k) Joints.
1. Longitudinal Joints.

Seal all completed wearing surface transverse joints and all longitudinal joints between adjacent resurfaced lanes, medians and shoulders in the same calendar year in which the joint was completed. Seal all joints with rubberized joint sealing material meeting ASTM D6690-Type I from a manufacturer in Bulletin 15 as specified in Section 705.4(c). The sealing band must be 4” to 6” in width evenly applied by a disk or squeegee across the joint. The sealing band must be 4” to 6” in width evenly applied by a disk or squeegee across the joint.

2.d. Lot Termination. The Contractor may request to terminate a lot if an issue affecting quality of the material is discovered. The request must be made in writing to the Representative, stating the reason for termination and the affected tonnage, which shall be removed and replaced at no cost to the Commission. Before paving resumes, the Contractor must provide written notification to the Representative that corrections have been made to the original cause for the lot termination. When paving resumes, a new lot number will be used. Any samples taken from the terminated lot shall be forwarded to the materials representative.
HMA Designs for 2019

- No Virgin designs required in 2019
- HMA designs samples are verified at our Lab
  - PENNDOT roads need PENNDOT approved designs
- Field Core size has been a problem....
  - 4.c. Density Acceptance Samples. The Inspector will select three different sample locations in each subplot according to PTM No.1. With the Inspector present and in accordance with PTM 729, drill (1) 6-inch diameter core at each random location as soon as possible but no later than 24 hours following placement.
Warm Mix Project

• A-115.00R001-3-02

- 19mm – 27,987 ton
  • 34 Lots / 32 Lots @ 100% payment
  • 1 Lot @ 94% payment for low voids
  • 1 Lot defective for low voids
  • Density avg. was 95%

- 12.5mm – 21,029 ton
  • 21 lots / 20 lots with 100% payment
  • 1 Lot @ 94% payment for low Voids
  • Density avg. was 94%
HMA Fiber Modified 12.5mm

- A-076.00R001-3-02

  - Forta-Fiber was added to 12.5 mm material –
    - 1 # bag per ton
    - Material will be placed on a total of 2.3 miles in each direction and each lane at specific mileposts

  - 4,466 ton required - 2,161 ton was placed in 2018

  - 2 Lots / 2 Lots @ 100% payment

  - Samples lifted for testing at PSU by the Producer/FORTA
FORTA FIBERS (A-076.00R001-3-02)
Locust Ridge Plant - 1 # Bag/ton
Performance Testing...
Permeater Test
PTC Material Managers

- East - (300 - 358 / A-20 – A-130)
  - Steve Havrilla

- Central – (146 - 300)
  - Brian Wible

- West – (0 - 146)
  - Chris Forry

- Materials Lab – (113.8 EB)
  - Brian Paroda
Thank You for your attention...
Have a SAFE Construction season!!

Any Questions?