GDOT MICROMILLING EXPERIENCE

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Georgia DOT
Micro-milling as in-place recycling?

Think of it as:

Recycling Stone Matrix Asphalt (SMA) in place
INTERSTATE APPLICATION

Conventional Milling

Micro-milling
MILLING DRUMS FOR
CONVENTIONAL MILLING AND MICROMILLING
CONVENTIONAL MILLED SURFACE TEXTURE
MICROMILLED SURFACE TEXTURE
ROUGH MILLING VS MICRO MILLING

Rough Milling
- Ridge-to-ridge pitch ~ 25 mm
- Ridge-to-valley Depth ~ 10 mm

Micro Milling
- Ridge-to-ridge pitch ~ 9 mm
- Ridge-to-valley Depth ~ 3 mm
Projects

- I-75 near Perry, south of Macon - 2007
- I-95 near Savannah - 2010
- I-285 top-end in Atlanta - Now
Old pre-Superpave “E” mix under OGFC

1st GDOT micromilling project

“Band-aid” project (~5 yrs life anticipated)
Severe Testing Using APA Under Water @ 64º C

Existing OGFC Removed and Testing Performed on Underlying Dense-Graded Surface Mix
I-75 Near Perry now
I-95 NEAR SAVANNAH

RVD Measurement

<table>
<thead>
<tr>
<th>Miles</th>
<th>From</th>
<th>To</th>
<th>Rough</th>
<th>IRI 1</th>
<th>IRI 2</th>
<th>Hca</th>
<th>MPD</th>
<th>% Error</th>
<th>RVD</th>
<th>95% RVD</th>
<th>Test Pos</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.080</td>
<td>0.214</td>
<td>0.13</td>
<td>556</td>
<td>722</td>
<td>423</td>
<td>1.001</td>
<td>1.440</td>
<td>2.527</td>
<td>3.689</td>
<td>1 (R) (S)</td>
</tr>
</tbody>
</table>

DATE COLLECTED: 11/08/2010
FILENAME: D:\D5\BRAY\NHS-977\SR040500-TEST.P04
COUNTY: 29
DIRECTION: North(+)
DRIVER: Keith Waldron
EQUIPMENT: General
RUN TYPE: SR
# OF LANE(S): 5
CONTRACTOR #: 2F5500
PROJECT #: CNHRSMO300977
STAGE OF CONSTRUCTION: PROGRESS
TYPE MTK: MILLING
WEATHER COND: PC/69
DISTRICT: 5
CONTRACT ID #: B13309-09-S00-0
LANE TESTED: 1
UNIT #: 5
SURFACE TYPE: MILLING
TIME COLLECTED: 15:56:16

RVD Measurement

Georgia Department of Transportation
I-285 Atlanta Top End
GDOT SPECIAL PROVISION SECTION 432-MILL ASPHALT CONCRETE PAVEMENT (MICRO MILL)

- 1/16 in. (1.6 mm) depth accuracy of equipment
- 1/8 in. (3.2 mm) average ridge to valley (RVD)
- Smoothness (IRI) of the milled surface:
  - target value of 825 mm/km (53 in/mile)
  - correction index of 900 mm/km (57 in/mile)
FUTURE STRATEGY

- INTERSTATES
  - Friction course replaced on ~10+ yr cycle
  - SMA replaced on ~20+ yr cycle
- Get fuller life cycle from our High Quality mix (SMA)
- “Recycle SMA in-place”
QUESTIONS?