

West Virginia's Experience with SAMI

Stress Absorbing Membrane Interlayer



2022 Annual Meeting – Raleigh, North Carolina

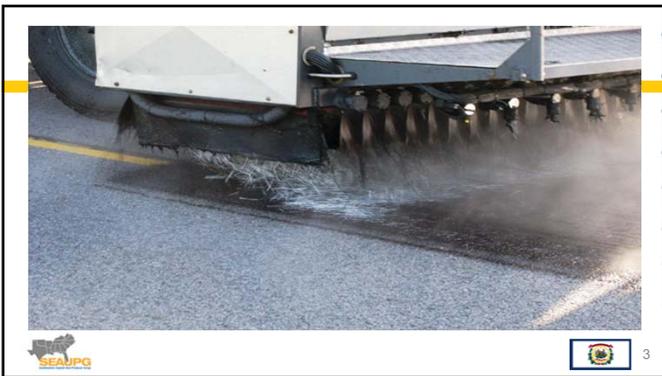
1

What is SAMI

- Chip Seal with fibers
- Meant to help w/ reflective cracking
- WV requires overlay (INTERlayer)



2



3



4



5

In West Virginia

- 19 projects
- ADT between 300-25,000
- AASHTO No. 8's
- Polymer Modified Emulsion (e.g. CRS-2P) @ 0.35 - 0.45 gal/SY
- 2 + 4 projects
- trends



6

**2016:
Rural route**

- ADT 800+
- 1.25" Wearing I
- Emulsion: CRS-2P @ 0.37 Gal/SY
- Milling: none
- Tack coat: NOT used





7

2019 (paved in 2016)

- Rutting: Good
- Cracking: Good
- IRI: Fair (159)





8

**2018:
Multi-Lane**

- ADT 10,000+
- 1.5" 12.5mm SP
- Emulsion: CRS-2P @ 0.37 Gal/SY
- Concrete Road
- Tack coat: NOT used





9

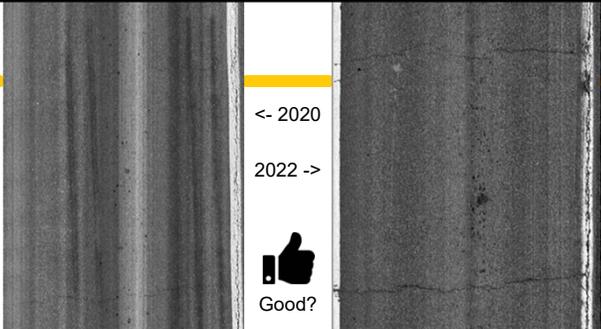
**2018:
Multi-Lane**

- 2022
- Rutting: Good
- Cracking: Good
- IRI: Fair (127)





10



<- 2020

2022 ->



Good?




11

Newer SAMI Jobs




12

2021: Through Town

- ADT 2900+
- 2" 12.5mm SuperPave
- Emulsion: CRS-2P @ 0.39 Gal/SY
- Milling: Fine
- Tack coat: Yes, SS-1H





13

2021: Through Town

- Density results 92.7 - 94
- IRI after completion - 164 (from 294)





14

2020: Multi-Lane

- ADT 19,000+
- 2" 12.5mm SuperPave
- Emulsion: CRS-2P
- Milling: Fine
- Tack coat: Yes, SS-1H

- Issues with Density results. Shoving.
- 2 days btwn





15





16

2020: Multi-Lane

2022

- Did not do SAMI on some parts
- Bonuses paid for smoothness
- Density results 89 - 96 (mainline)

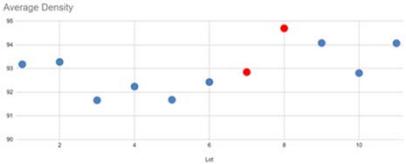




17

Average Density w/ SAMI: 92.8

Average Density w/out SAMI: 93.8



IRI	Average Density (w/ SAMI)	Average Density (w/out SAMI)
2	93.5	
3	92.5	
4	92.0	
5	92.5	
6	93.0	
7		93.5
8		94.5
9	94.0	
10	93.5	




18

2021:
Multi-Lane

- ADT 9,000+
- 2.5" 19mm SP, 1.5" 9.5mm SP
- Emulsion: CRS-2P @0.4 Gal/SY
- Concrete Road
- Tack coat: No

- Project included joint membrane
- Asphalt shoving and humping up at joints...scratch on SAMI

Too hot?





19

2021:
Multi-Lane

- Avg IRI 48
- Avg Densities (19mm):
 - prior to scratch: 91.8
 - after scratch: 93.30 - 96.26





20

2022:
Interstate

- ADT 24000+
- 2.5" 19mm SP, 1.5" 9.5mm SP
- Emulsion: CRS-2P @0.4 Gal/SY
- Concrete Road
- Tack coat: No





21

- SAMI layer down for one week
- Still issues with compaction due to asphalt shoving...not hot





22

Paver and Roller





23





24

• 0.5" scratch again
\$124 / TN, total
\$772,000

Densities
92-94



25

Summary

- Multiple contractors, mixed results
- Slipping on both milled asphalt and concrete
- Cooling does not seem to help
- 0.5" scratch course helps
- Future jobs w/ scratch from the start (yest.)
- Cost of that? Thicker overlay?

Questions?



26