

GDOT MICROMILLING EXPERIENCE

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Georgia DOT





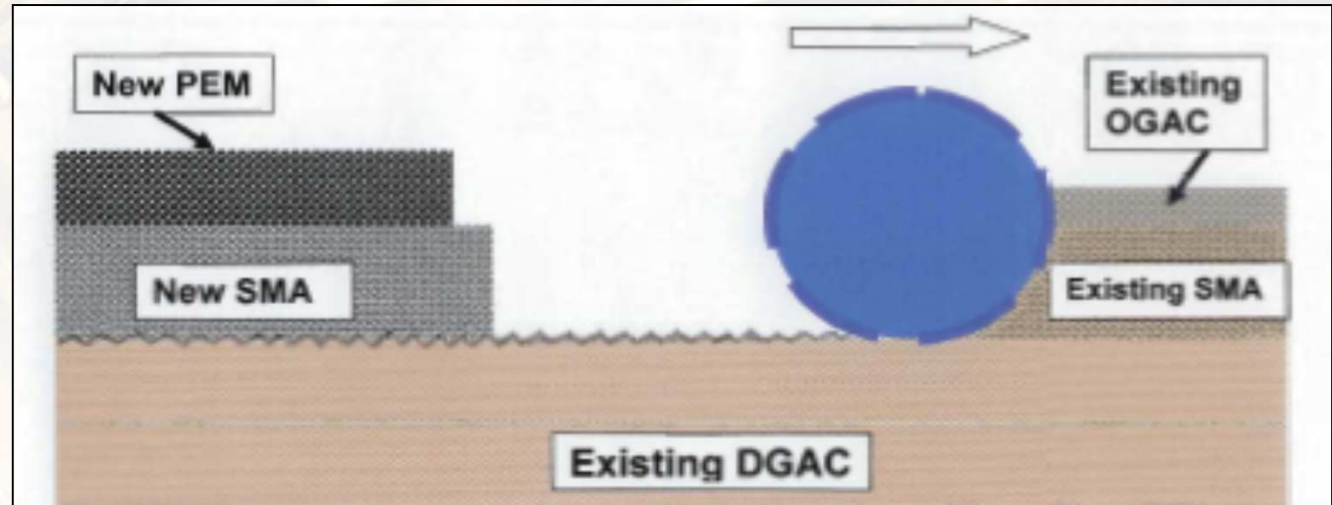
Micro-milling as in-place recycling?

Think of it as:

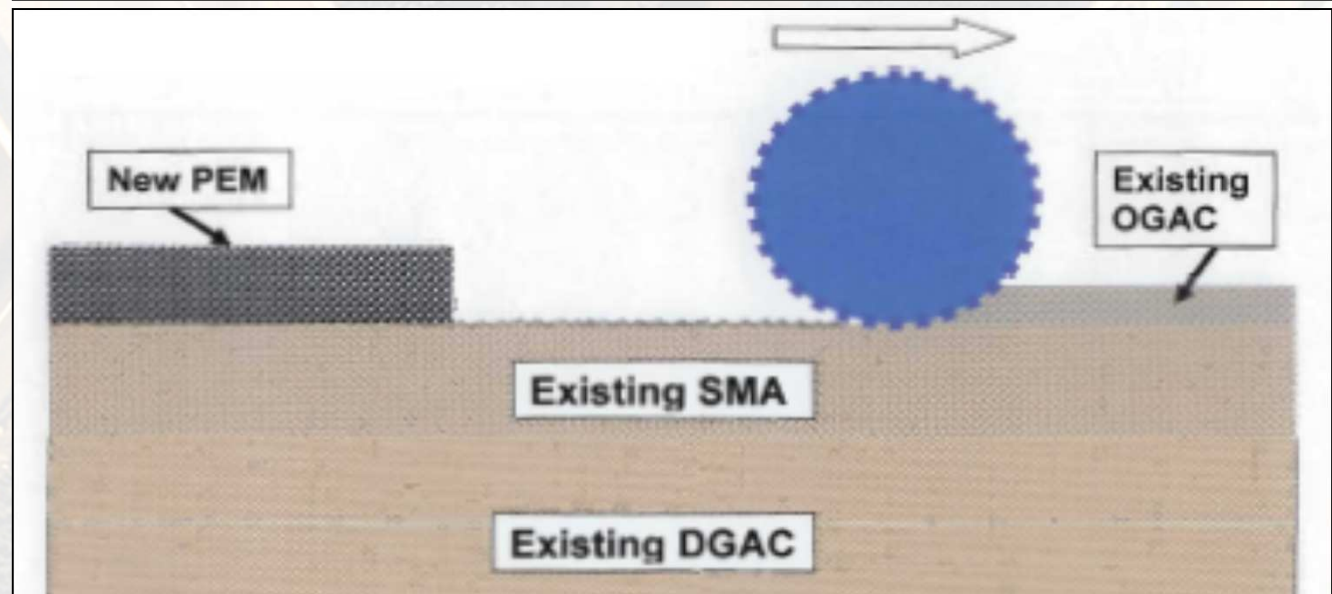
Recycling Stone Matrix Asphalt (SMA) in place

INTERSTATE APPLICATION

Conventional
Milling



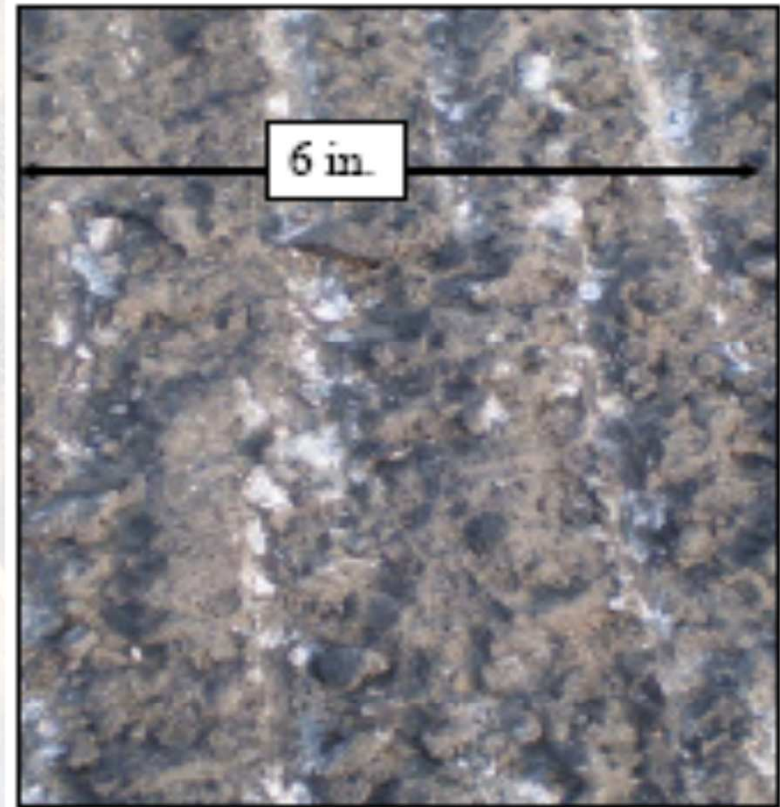
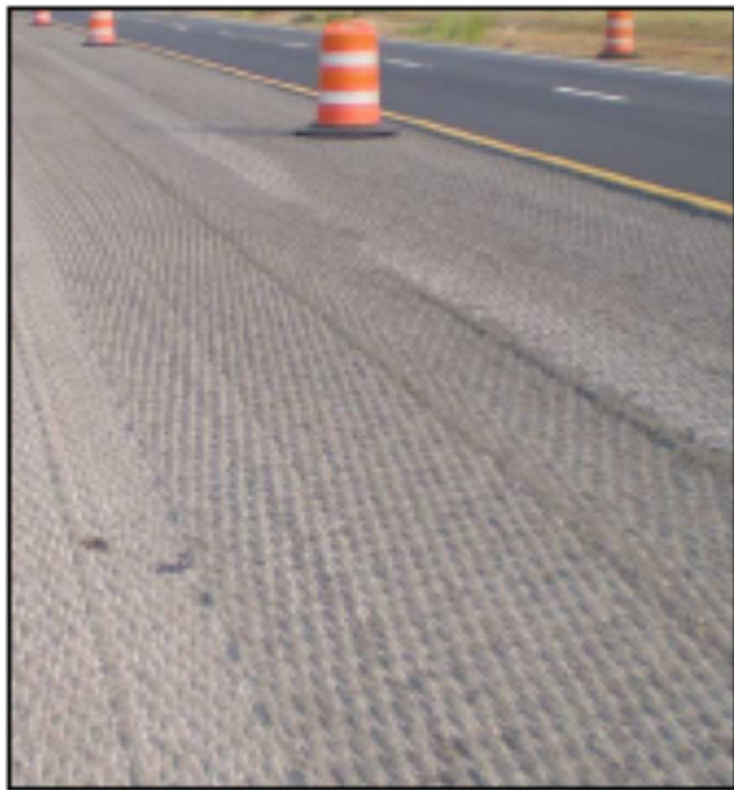
Micro-milling



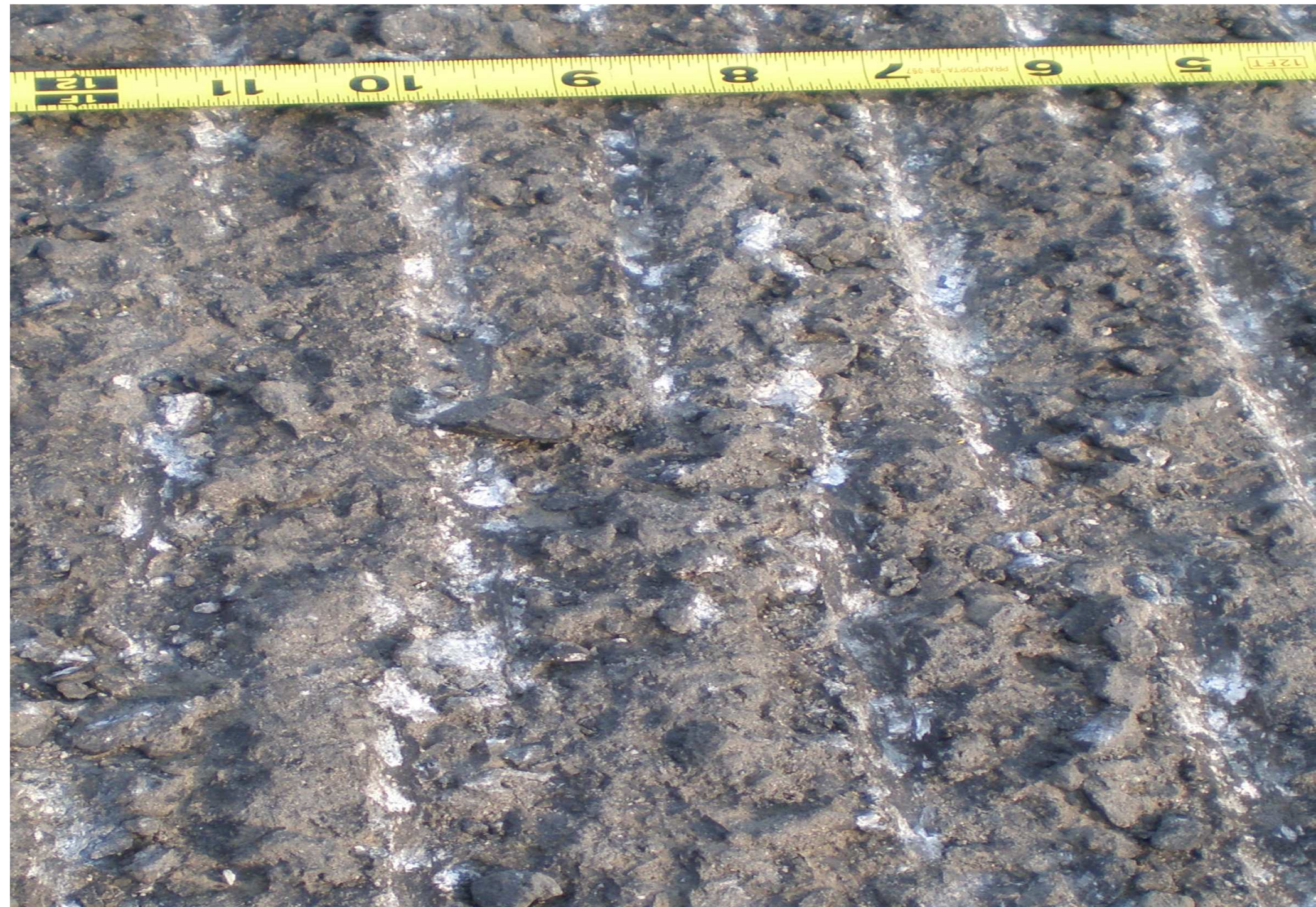
MILLING DRUMS FOR CONVENTIONAL MILLING AND MICROMILLING



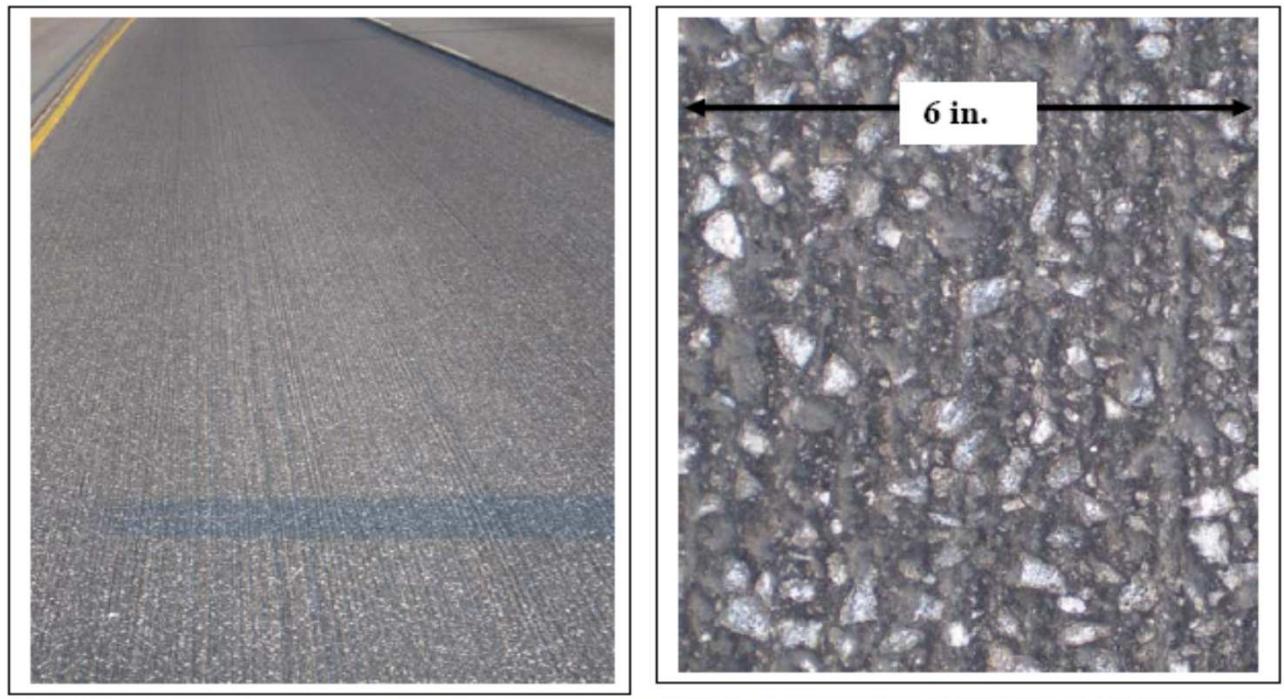
CONVENTIONAL MILLED SURFACE TEXTURE







MICROMILLED SURFACE TEXTURE



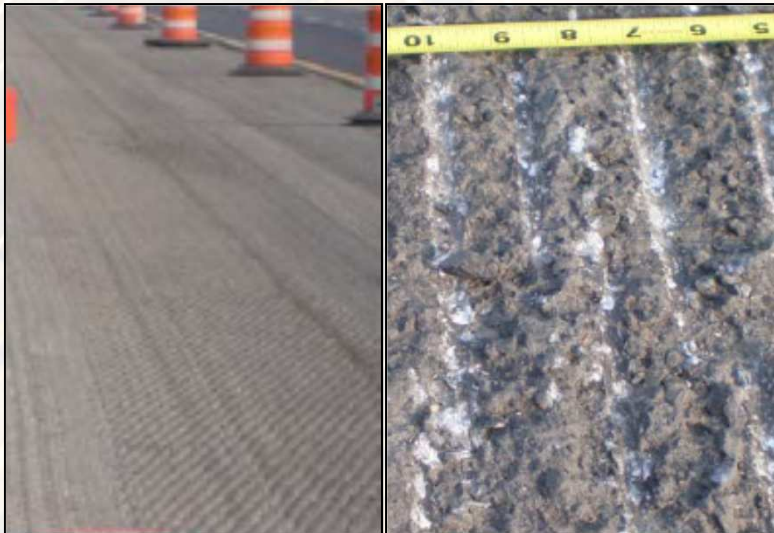




ROUGH MILLING VS MICRO MILLING

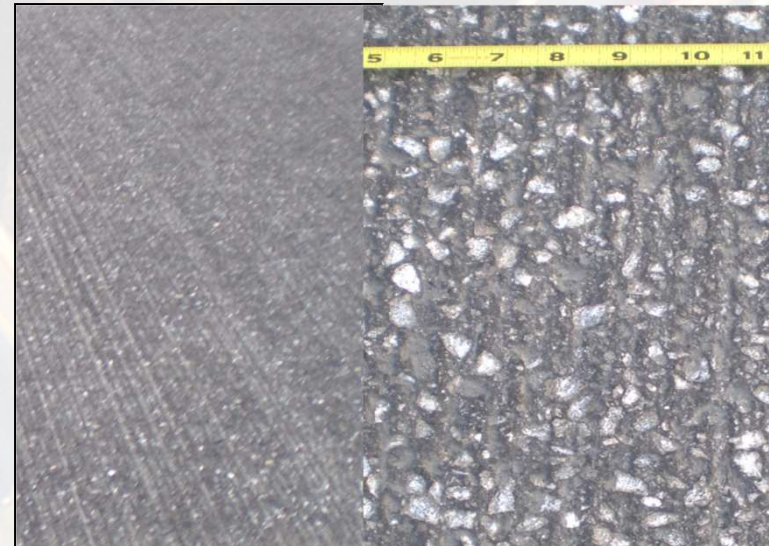
Rough Milling

- ✘ 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

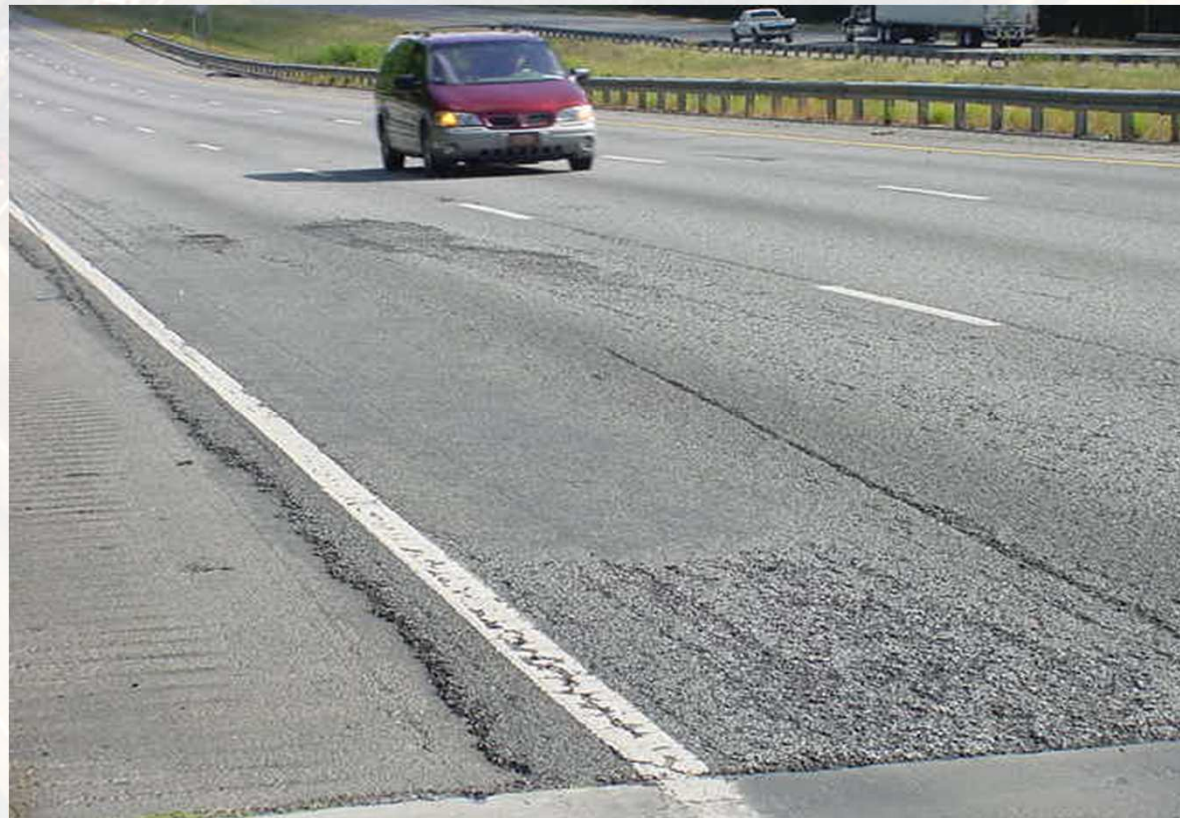


PROJECTS

- ✘ I-75 near Perry, south of Macon- 2007
- ✘ I-95 near Savannah - 2010
- ✘ I-285 top-end in Atlanta - Now

I-75 SOUTH OF MACON - 2007

- ✘ Old pre-Superpave “E” mix under OGFC
- ✘ 1st GDOT micromilling project
- ✘ “Band-aid” project (~5 yrs life anticipated)



Severe Testing Using APA Under Water @ 64° C



I-75 Near Perry now



I-95 NEAR SAVANNAH

DATE COLLECTED: 11/08/2010 TIME COLLECTED: 15:56:16
 FILENAME: D:\D5\BRYAN\NHS-977\SR040500-TEST.P04
 COUNTY: 29 ROUTE: SR
 DIRECTION: North(+) OPERATOR: Keith Waldron
 DRIVER: Keith Waldron VEHICLE:
 EQUIPMENT: 402-0299 WEATHER COND: PC/69
 RUN TYPE: General DISTRICT: 5
 # OF LANES: 5 CONTRACT ID #: B13309-09-S00-0
 CONTRACTOR #: 2PL500 LANE TESTED: 1
 PROJECT #: CSNHSM00300977 UNIT #: 5
 STAGE OF CONSTRUCTION: PROGRESS SURFACE TYPE: MILLING
 TYPE MIX: MICRO-MILLING

RVD
Measurement

Miles		Rough Dist	MM/KM		MM		% Error	MM	MM	Text	Pos
From	To		IRI 1	IRI 2	Hcs IRI	MPD		RVD	95% RVD		
0.000*	0.080	0.07	578	650	423	1.001	1.44	2.527	3.689	1	(R) (S)
0.080	0.214	0.13	556	722	492	0.854	1.465	2.187	3.455	1	(S)



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 $\sim 10^+$ yr cycle
- + SMA replaced on $\sim 20^+$ yr cycle
- ✘ Get fuller life cycle from our High Quality mix (SMA)
- ✘ “Recycle SMA in-place”





QUESTIONS?