

Eastern Region Update - 2010



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Changes/Updates to Specifications

- North Carolina**
 - Increased allowances for RAP usage
 - Continued to increase usage of WMA
 - Now have a draft post-consumer shingle (PRAS) spec
 - At least 4 contractors have placed mix this fall
 - Continuing to look into MSCR
 - Will allow non-nuclear density gauges on surface mixes only in 2011

Changes/Updates to Specifications

- South Carolina**
 - Extended gradation range for some mixes - fine sieves
 - Drafted specification for Sloped Safety Edge – FHWA Safety Initiative
 - No changes to binder gradings

Changes/Updates to Specifications

- Virginia**
 - PG Binders – no specific modifier required but if a PG76-22 or PG70-28 is specified the binder must meet 70% elastic recovery
 - Removed N_{ini} , Density at N_{ini} and N_{max} – values not used to accept or reject mix

Changes/Updates to Specifications

- West Virginia**
 - Modified the gyration levels for Superpave mix designs and increased VMA by 0.5% similar to recommendations of NCHRP Report 573

Number of tons of HMA, Chips Seals, etc. placed in the last year

- North Carolina**
 - HMA
 - In 2009 – 4.2M tons
 - In 2010 – over 4.0M tons
- South Carolina**
 - HMA – about 9.3M tons
 - PMTLSC - about 460,000 SY
 - WMA – about 106,000 tons
 - Single Treatment – about 11M SY
 - Micro Surfacing – about 870,000 SY

Number of tons of HMA, Chips Seals, etc. placed in the last year

- Virginia** • Figures projected for 2011 (before another \$200M will be added)
 - Plant Mix – 2.7M tons
 - Latex – 575 lane miles
 - Slurry Seal – 725 lane miles
 - Chip Seal – 25.3M SY

- West Virginia** • HMAC – 1.6M tons
- Chip Seal – 26,500 tons

Affect funding shortages have had on HMA tonnage

- North Carolina** • Had little affect last year since there was stimulus money
- Unsure about 2011 at this point

- South Carolina** • In years prior, but 2010 has been fairly busy due to ARRA funding

Affect funding shortages have had on HMA tonnage

- Virginia** • For 2010 state funding shortages have been offset by ARRA funds.

- West Virginia** • A combination of materials cost increases and funding shortages have lead moving to lower cost options – more maintenance and preservation work.

Experiences with WMA

- North Carolina** • Started in 2008 and have placed approx. 362,000 tons to date
- Just updated specifications for January 2011 to expand use of WMA on more US and NC routes
- Looking for pilot projects for WMA on interstates
- Will be encouraging divisions to choose WMA for heavily crack-sealed roads

Experiences with WMA

- South Carolina** • Using WMA since last October
- New specification SC-M-408
- Low volume, lower risk roads
- 50 gyrations – require hydrated lime
- Foaming and MWV 3G
- Placed about 106k tons
- Issues with cold loads using foaming process
- Haul distances are not extended with foaming process

Experiences with WMA

- Virginia** • At least 50% of AC tonnage placed in 2010 was through WMA technology
- Primary technology is foaming process
- Production temperature based on time of year and binder in mix
- Have had very positive results with no concerns
- Second year of production for many contractors – some have used foaming 3 years

Experiences with WMA

- West Virginia** • Used the foaming process for WMA on about 15 projects in 2010 (tonnage unknown)
- Only experience is with the foaming process since many contractors added this system to their plants.
- No major problems so far – just the same issues typical with HMA

Is state moving towards or implementing the MEPDG with RAP?

- North Carolina** • Yes – March 2011
- South Carolina** • Not actively
- Virginia** • Most of VDOT's mixes contain some RAP. Implementing the MEPDG and conducting testing for master curve development with RAP.
- West Virginia** • In the very early stages of implementing MEPDG

How has the ARRA of 2009 affected your state (lettings)?

- North Carolina** • ARRA helped to maintain yearly averages on most items, particularly asphalt pavements
- South Carolina** • Increased number of projects let, not sure how this affected the overall cost per ton – many projects to be completed in a short timeframe
- Virginia** • Additional projects were advertised. Construction projects that were on hold due to a lack of funding were advertised.

Methods state has implemented to lower cost for maintenance, preservation or reducing pavement costs

- North Carolina** • Continue the Division surface treatment program
 - Done with 100% state forces
- Continue to look into other things like more usage of 4.75mm mixes and fog seals

Methods state has implemented to lower cost for maintenance, preservation or reducing pavement costs

- South Carolina** • Attempting to do pavement preservation at the right time prior to needing structural or mill/fill operations
- Using more thin lift overlays using RAP – gives structural benefit

Methods state has implemented to lower cost for maintenance, preservation or reducing pavement costs

- Virginia** • Increasing the use of RAS and RAP in mixes
- Moving towards implementation of a 4.75mm NMAS surface mix
- Investigating other preventive maintenance surface treatments

Methods state has implemented to lower cost for maintenance, preservation or reducing pavement costs

- West Virginia** • Placed an emphasis on the use of chip seals
- Used micro-surfacing for the first time
- Used fog seals
- Used latex modified overlay
- Used in-place recycling

Do you have a performance related test for mixtures to use in the design or construction of HMA mixtures?

- North Carolina** • Use the Asphalt Pavement Analyzer in the approval process for all Surface Mix Designs
 - Specification implemented 1/1/2006
- South Carolina** • APA only
 - 64 degrees, 8000 cycles

Do you have a performance related test for mixtures to use in the design or construction of HMA mixtures?

- Virginia** • TSR Test for AC stripping
 - Rut testing performed with APA in situations where DOT has concern with the mix – not routine.
- West Virginia** • Not at this time.

How are you sampling/testing/accepting micros/chips/thin lifts. Etc.?

- North Carolina** • Accept emulsions based on QC/QA program
 - Aggregates sampled and tested at point of delivery
 - Thin-lift HMA falls under the same QC/QA program as all HMA

How are you sampling/testing/accepting micros/chips/thin lifts. Etc.?

- South Carolina** • Pay by the SY for MS, ST and HMA thin overlays (PMTLSC)
- Sampling emulsions (CRS 2P/2L), 5/16" LW aggregates, MS screenings, and HMA bag samples for % binder and gradation (HMA)
- MS – Acceptance based on materials and field results, manuf. to demonstrate compliance
- ST – acceptance based on materials testing
- PMTLSC – Minimum of 3/4" loose pavement thickness checked every 200ft

How are you sampling/testing/accepting micros/chips/thin lifts. Etc.?

- Virginia** • For dense graded AC thin lifts, conducting AC content, gradation and volumetric testing at the plant
 - In the field – minimum of 90% compaction required based on cores
- For micros and chip seals – approve the mix designs and check the AC content against the mix designs at the beginning of production
 - During production – checking is performed when the inspector has concerns

How are you sampling/testing/accepting micros/chips/thin lifts. Etc.?

- West Virginia** • Typically sample, test and accept thin lift HMA mixes the same way all HMA mixes are handled.
- Most chip seal projects are handled by DOH forces
 - Had one contractor chip seal project this year. Preapproved the materials, checked application rates and monitored the process.
 - Placed first MS project. Handled it similar to chip seal project
 - After placement evaluation – required some minor repairs

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