DIVISION 10

- 446 Employees
- 11,085 Lane Miles
- 2,728 Bridges and Culverts
- Maintenance-Operations: 11 independent work units, manages a $30-$40 mil annual operating budget, $38 mil resurfacing budget, and a $7-$8 mil bridge replacement program.

$5-6 mil annual Pavement Preservation funding
Beginning of FDR - Division 10

- Union County- Waxhaw Creek Road – Approx. 2.0 miles in 1997
- Road tore up by bridge replacement project hauling in fill material
- Reclaimed with addition of some lime and retreated
- Cabarrus County- Crisco Road- Was part of alignment of Kannapolis Parkway (TIP Project)
Pavement Preservation Legislative Guidance
August 11, 2017

In 2014, the NCGA re-established a Pavement Preservation Program for NCDOT. Modifications were made to the legislation in the 2015, 2016, and 2017 NCGA sessions. Below serves as guidance for pavement preservation activities.

What are the Eligible Pavement Preservation Activities? (Section 34.11(f))

- Chip Seals, Slurry Seals, Fog Seals, Sand Seals, Scrub Seals and Cape Seals
- Microsurfacing
- Profile milling not covered by resurfacing
- Asphalt rejuvenators
- Open graded asphalt friction course
- Overlays less than 1000 feet in length
- Diamond grinding
- Dowel bar retrofits
- Partial depth or full-depth repairs and reclamations
- Ultra-thin whitetopping
- Thin lift and sand asphalt overlays
- Asphalt crack sealing
- Pavement markers and markings

What is a “thin lift” overlay?

- A thin lift is 1” or less
- A thin lift may be defined as sand asphalt (SA1) or S4.75A
- Pavement Preservation funds should not be used for S9.5A or SF9.5A

What is meant by “pavement markers and markings”?

- This includes placement of any paint, thermo, or polyurea lines, words or symbols, markers and vertical delineators or removal thereof that are not done in conjunction with another preservation treatment. Any pavement markers or markings placed on top of another treatment are considered incidental to that other treatment and do not need to be tracked separately.
- Markers and markings are eligible preservation activities on both primary and secondary road systems regardless of ADT.
- Tracking of markers and markings is not currently set up in HMIP, more guidance to follow.
Fiscal Year 2015 – Pavement Preservation Funding Includes Reclamation as Scope of Work

- Dedicated Funding mandates 80% contract work by 2018
- Contractor does chip seal and overlay
- We have transitioned from reclaiming the roads, applying the double seal and waiting to the next paving season to place plant mix to paving the same season.
- Some roads may remain with AST
- Currently State Forces widen prior to reclamation
Total Pavement Preservation Allocations 2017 = $5,624,309.00
Total Pavement Preservation Allocations 2018 = $6,218,700.00
Total Pavement Preservation Allocations 2019 = $5,803,778.00
Division 10 FDR Maps – 2011 to Present

- Anson Co. 74 miles
- Cabarrus Co. 33 miles
- Mecklenburg Co. 4 miles
- Stanly Co. 11 miles
- Union Co. 64 miles
Site Selection

• Numerous roads especially in Union, Mecklenburg and Cabarrus Counties that range in width from 16’ to 18’ that have been outdated by commercial and residential development

• In Anson County the logging industry can decimate roads quicker than maintenance can repair
Site Selection

• These roads typically suffer from fatigued, potholed and cracked pavements, low shoulders and typical sections that are out of shape

• FDR has been a cost effective tool to address the lack of structural support while at the same time achieving a more acceptable width to accommodate current ADT’s and improves safety for all end users
Site Selection

• Geographic location is also considered in assembling contracts to reduce mobilization and achieve the best possible unit prices

• Routes tested in advance by Geotech for cement rates
Twelve Mile Creek Road
Channel for Widening
Widening Machine Placing ABC Aggregate
Jetton Avenue Lake Norman 2015
• Peninsula Yacht Club

• Lake Norman

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Construction Sequence

• 1 ½ -3” milling was done due to curb and gutter throughout project
• Contractor reclaimed two of the four lanes at a time starting just west of West Catawba Ave.
• Traffic was reduced to one lane each direction during construction
• Required to seal reclaimed base with chip seal the following day.
• 2” overlay of 9.5B was placed after all work was completed.
The following traffic data was used during our pavement evaluation:
• 8100 ADT with 5% Duals and 1% TTST and a 10 yr. Design Life

• **NEW 10 Year Design Life Pavement (for design comparison purposes only)**
  • 2” Asphalt Surface Course
  • 2.5” Asphalt Binder/Intermediate Course
  • 8 inches of Aggregate Base Course

• **PROPOSED Alternate Pavement Section**
  • 2” Asphalt Surface Course
  • 12” FDR Course (61 lbs. Cement /SY)
3” Milling done prior to FDR due to Curb and Gutter
Final grading complete
Contractor placing Chip Seal for curing process
Jetton Rd Unit Prices

- 3” Asphalt Milling/sq. yd  $3.50
- 12” Reclamation/sq. yd: $3.50
- Cement/ton @ 61lbs/sq. yd: $150/ton
- S9.5B @ 1.5”: $60/ton
- AST Double Seal: $3.00 sq. yd
- Engineers Estimate  $1,439,733.00
- Bid Price $1,460,929.00
Utility Conflicts
Fiber Optical Lines
Bury

The minimum depth of bury for cased and uncased construction shall be as follows:

a. Crossings under all roadways (including shoulders) of electric power and communication lines ............... 3'

b. Crossings under ditches (paved and unpaved) and sidewalks of electric power and communication lines .......... 2'

c. Longitudinal electric power primary .................. 3'

d. Longitudinal electric power secondary, and trenched communication lines. ......................... 2'

e. Plowed-in communication lines ..................... 18"
Cement Dust from Unloading Operation
ABC stone placed on shoulders ahead of FDR
Staking Centerline of Road

• Once reclaimed it is not obvious where the centerline used to be so need a reference point is needed to re-establish
• Important to have reclaimed base extend beyond edge of pavement
Reference Stakes
Aggregate for Asphalt Surface Treatment

- Important to use aggregate that works well with chip seal especially if road will remain with chip seal over the winter.
- Some contractors may not be proficient with chip seals.
- This particular year using a light colored granite out of South Carolina.
- We have had some issues with this particular aggregate raveling off the road.
# 78M Aggregate Raveling
Questions