



NCDOT Pavement Preservation Bulletin Materials and Tests Unit

Project Spotlight DJ00519: Division 10 Micro Surfacing

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Details of the Project

Cost: \$4,945,555.34

Centerline Miles: 32.20

Resident Engineer: Bradley Eagle

Contractor: Slurry Pavers Inc.

Treatments Utilized: Micro Surfacing, Crack Seal, Chip Seal

Routes: US 74, NC 24 (Harris Blvd.), NC 109, SR routes



Rut Fill and Double Micro on US 74

Westbound US 74 in Monroe exhibited **high severity rutting of 1-2 inches*** across all 3 travel lanes. Severe rutting is a serious traffic safety concern, especially pooling water during rain events. To mitigate this issue, Micro Surfacing Type III was applied in the ruts (pictured left), using a half-lane, triangular, spreader box. This was followed by full width courses of Micro Surfacing Type III and Type II. Post-construction data revealed that a vast majority of these 1-2 inch ruts were removed: **average rut depths across the 3 lanes were between 0.15 and 0.26 inches**. Post construction data was collected by KPR Engineering, at the request of the Materials and Tests Unit.

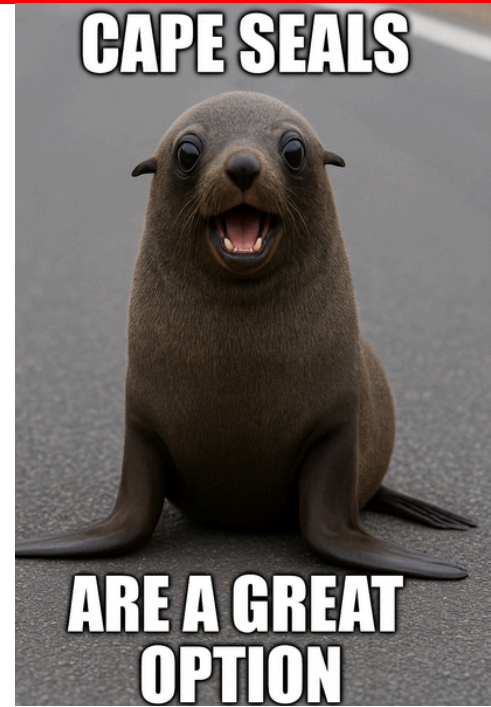
*As defined by the NCDOT Digital Imagery Distress Evaluation Handbook

OCTOBER 2025

Pictured above: Rut fill course applied in right wheel path of US 74 WB in Monroe.

Cape Seal on Secrest Shortcut Road

A Cape Seal (a Chip Seal followed by Micro Surfacing) was applied on Secrest Shortcut Road in Union County outside of Monroe. The road was in good to fair condition with oxidation, light to moderate block cracking, and other minor distresses. **PCR values ranged from 70-85 and it carries just under 10,000 AADT.** The Chip Seal was an ideal remedy for the cracking and the Micro Surfacing provided a dark, smooth riding surface that the public will appreciate. While a Cape Seal is a slight cost increase over a Double Chip Seal or single Micro Surfacing, the multi-faceted benefits it provides make it a worthwhile Pavement Preservation option. Historical data in North Carolina shows **Cape Seals can last 10-15 years, and sometimes even longer!**



Pictured above: First course of Micro Surfacing on NC 109 in Wadesboro.

Double Micro on Division 10 Primary Routes

- A Crack Seal treatment followed by Double Micro Surfacing of Type III then Type II was placed on **NC 109 in Anson County**. This section south of Wadesboro averages **2400 AADT**, **26%** of which is trucks.
- A Crack Seal treatment followed by Double Micro Surfacing of Type III then Type II was placed on **NC 24 (Harris Blvd) in Mecklenburg County**. This section in East Charlotte averages **35000 AADT**, **3%** of which is trucks.
- A Double Micro Surfacing Type III followed by Type II was paved on **US 74 in Union County**. This section in Marshville averages **20000 ADT**, **14%** of which is trucks.

Double Micro Surfacing is a great Pavement Preservation solution on routes with higher traffic volumes.

A cost of \$6-10 per square yard should be expected.

Pavement Preservation Team Contact Info



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