

Maintaining the Road

By Cheryl Jones

Locals, vacationers, commuters and even student drivers are all noticing something when they cross the border from Virginia to North Carolina on I-85. Did the radio get louder? Why did the hula girl on my dashboard stop swaying? A couple of moments later and a good look around is all it takes for them to realize the smooth, shiny black surface they are traveling on.



Route I-85, North Carolina DOT – August 2008

The 20 mile section of I-85, both Northbound and Southbound, was in need of serious repair. The concrete underneath the road was in such poor shape but a complete rehab of the road was not an option due to limited resources. The North Carolina Department of Transportation (DOT) needed to find a solution that would protect the road now and last. They determined the best solution for this maintenance project was to use Paver Placed Surface Treatment – a high-tech surface treatment that would protect the road as well as provide many additional benefits.

Paver Placed Surface Treatment is a two-part process consisting of a polymer modified asphalt emulsion membrane (NovaBond™) and a thin open-graded coarse aggregate HMA overlay (hot mix) applied by a specially designed machine. The liquid NovaBond™ is heated and sprayed out of the paver onto the road surface. Within seconds the hot mix is quickly applied over the NovaBond™ application. When the gap graded Paver Placed Surface Treatment hits the highway surface the NovaBond™ glues the hot-mix to the surface and prevents it from lifting. Paver Placed Surface Treatment is one of a few products that has excellent bonding qualities and can adhere to both asphalt and concrete pavements. Lastly, two rollers follow the paver to compact and smooth out the surface. The end result is a 5/8" surface layer that protects and extends the life of the road by many years.

Benefits of Paver Placed Surface Treatment:

- **Economical** – Because the Paver Placed Surface Treatment surface is so thin the ancillary work is minimized or eliminated all together saving time and money. The curb reveal is retained; guardrail and roadway irons do not need to be adjusted, overhead clearances are unaffected and the transition to side streets and driveways is easy. Also the fast and thin application of Paver Placed Surface Treatment saves man-hours and material fees resulting in huge dollar savings.
- **Traffic Congestion** –The cost of redoing a road surface is more far-reaching then just counting dollars. Traffic delays incurred by the public costs businesses and individuals both time and money. The fast application process of Paver Placed Surface Treatment has the surface traffic ready in fifteen minutes.

- **Safe & Sound** – Concrete surfaces become slick after years of heavy traffic. The Paver Placed Surface Treatment coarse aggregate surface is designed for water to penetrate the surface and run off. The results are improved skid resistance which minimizes the threat of hydroplaning and reduced back spray which increases visibility in wet weather. The smooth surface also dramatically reduces the noise heard both inside and outside the vehicle.
- **Paver Placed Surface Treatment is ‘Green’** – Asphalt pavement is the most recycled material in America over aluminum cans, newspapers and plastic and glass bottles. The hot mix in Paver Placed Surface Treatment projects can incorporate recycled materials like broken concrete slabs, asphalt, old roof shingles or rubber tires. Also far fewer natural resources are used in the thin Paver Placed Surface Treatment surface compared to conventional asphalt application that is 3 to 4 times thicker.

Let the Job Begin

A local company, S.T. Wooten out of Wilson, NC won the contract to head the job and began prepping the road back in February of 2007. The prep work was quite substantial due to the poor condition of the road. Over the next year and a half they would repair the shoulders and remove and replace 250 concrete slabs. By August of 2008 the prep work was finished and S.T. Wooten called upon The Gorman Group’s Paver Placed Surface Treatment crew out of Albany, NY to help finish the job. Led by Foreman Jonathan Strain, the Paver Placed Surface Treatment crew consisting of ten specially trained workers, one Vogele 1800SF paver, a couple of rollers and support trucks made their way down to the site to begin their leg of the project.

This was the first time the two crews worked together but it was hard to tell. Both teams worked as a unit to ensure the project kept on track and was finished by the deadline of October 1st. Together they laid down about 6 miles of Paver Placed Surface Treatment a day (45,000 square yards) at a rate of 0.60 miles per hour. The total size of the maintenance project was 600,000 square yards. It took 115,000 gallons of NovaBond™ brought in from Newport News, VA and 22,500 tons of hot mix provided by S.T. Wooten’s local plant in Henderson, NC to complete the 4 lanes of roadway and the 4 ramps at each exit. The location of the asphalt plant was ideal; the furthest point a truck loaded with hot mix had to drive to the paver was only 13 miles ensuring timeliness and a consistently hot product. Also the plant’s location to a nearby shingle manufacturer contributed to the use of recycled roof shingles as an ingredient in the hot mix.

Monitoring the project from the NC DOT was State Inspector Betty Ann. She has been with the state for 25 years and has supervised asphalt projects for 3 different counties. This was her first Paver Placed Surface Treatment project and she was impressed with the process and the results; “I like the way it works and it looks like it will hold up very well from what I’ve seen and heard talking to other people.”

Aside from a couple rain days and the Labor Day Holiday the job was seamless. The truck rotation from the asphalt plant ran like clockwork and every clear day was a work day. The project was finished well ahead of schedule on September 14th. This was the first Paver Placed Surface Treatment job for S.T. Wooten’s Superintendent Donald Hathaway, who was pleasantly surprised by the results of the job for the low cost, “DOT is getting a good product, conventional asphalt wouldn’t have done what this is going to do. One inch of asphalt is going to last them so long.” The Paver Placed Surface Treatment surface on I-85’s busy roadways is estimated to last 7 years. Donald has worked with countless teams in his career from various companies and was working on six other paving jobs at the same time as this Paver Placed Surface Treatment project. He was extremely pleased with the ease of the job and especially with The Gorman Group Paver Placed Surface Treatment Crew, “Most times people are just looking for a paycheck, these guys really care about what they are doing.”

The Paver Placed Surface Treatment surface is ideal for many types of jobs – interstates, state roads, backcountry roads and residential housing developments. To date, Gorman has laid down over 20,000,000 square yards of Paver Placed Surface Treatment all across the East Coast including most of New England, New York, Pennsylvania, Virginia and North Carolina.

