



VDOT Pavement Award Presentations 2011

October 1st, 2012

Mr. Charlie Kilpatrick – Presiding

Mr. Greg Whirley – Shaking Hands with the Winners

**2011 DISTRICT
CONSTRUCTION AWARD
WINNERS**

STATEWIDE AWARD FINALIST



2011 Asphalt Pavement Award Finalist Culpeper District- Construction

October 1, 2011

Ken Connors, PE

Culpeper District Construction Engineer

Project Information

Location: I-66 WBL in Fauquier County

From: 1.22 Miles West of Route 55 Bridge

To: 1.04 Miles West of Route 245 Bridge

Length of project – 3.35 Miles

Scope: Installation of UD-7 underdrain along the interface between the travel lane and outside shoulder, mill existing pavement and place HMA (base, intermediate and surface mixes), SMA and installation of safety enhancements such as new pavement markings and markers, milled rumble strips and guardrail upgrades.

2011 Culpeper District Construction Site Fauquier Co. I-66 WBL – 3.35 Miles



Major Quantities

SMA-9.5 (76-22) – 4,705 TON

SM-9.5A – 2,592 TON

SM-9.5D – 575 TON

IM-19.0D – 2,897 TON

IM-19.0A – 1,608 TON

BM-25.0D+0.4 – 1,910 TON

BM-25.0D – 9,240 TON

(Combined asphalt concrete total = +/- 23,527 TON)

UD-7 Underdrain – 15,905 L.F. (3 miles)

Testing/Quality Assurance



- Target field density achieved
- No price adjustment on lots
- SMA & HMA volumetrics met specification limits
- Rideability (IRI) testing

Rideability Data

International Roughness Index (IRI)

LANE No.	Before IRI Average	After IRI Average	% Improvement
1	82	46	40
2	80	52	31

Construction Challenges

- Variable depth milling and placing of multiple asphalt concrete mix types and layers to meet cross-sectional grade requirements
- Pavement transitioning for bridges and ramp interchanges.
- Maintaining interstate traffic, including night time operations, (22,000 AADT, 7% Truck Class)

Project Success

- Traffic maintained for a safe work environment.
- Asphalt concrete delivered and placed in a timely manner.
- Pavement materials were within specifications.
- Project completed on schedule.
- Project completed under budget
- Rideability improved significantly (SMA surface mix).

Project Team

VDOT – Culpeper District

Dianna Sheesley, PE

Northern Area Construction Engineer

Wade Smith, CCM

Construction Manager

Richard Gutridge

Lead Project Inspector

Superior Paving Corporation

Todd Atkins

Operations Manager

Bobby Walton

Paving Superintendent

Finished Project Photo



Finished Project Photo



Finished Project Photo



Thank You



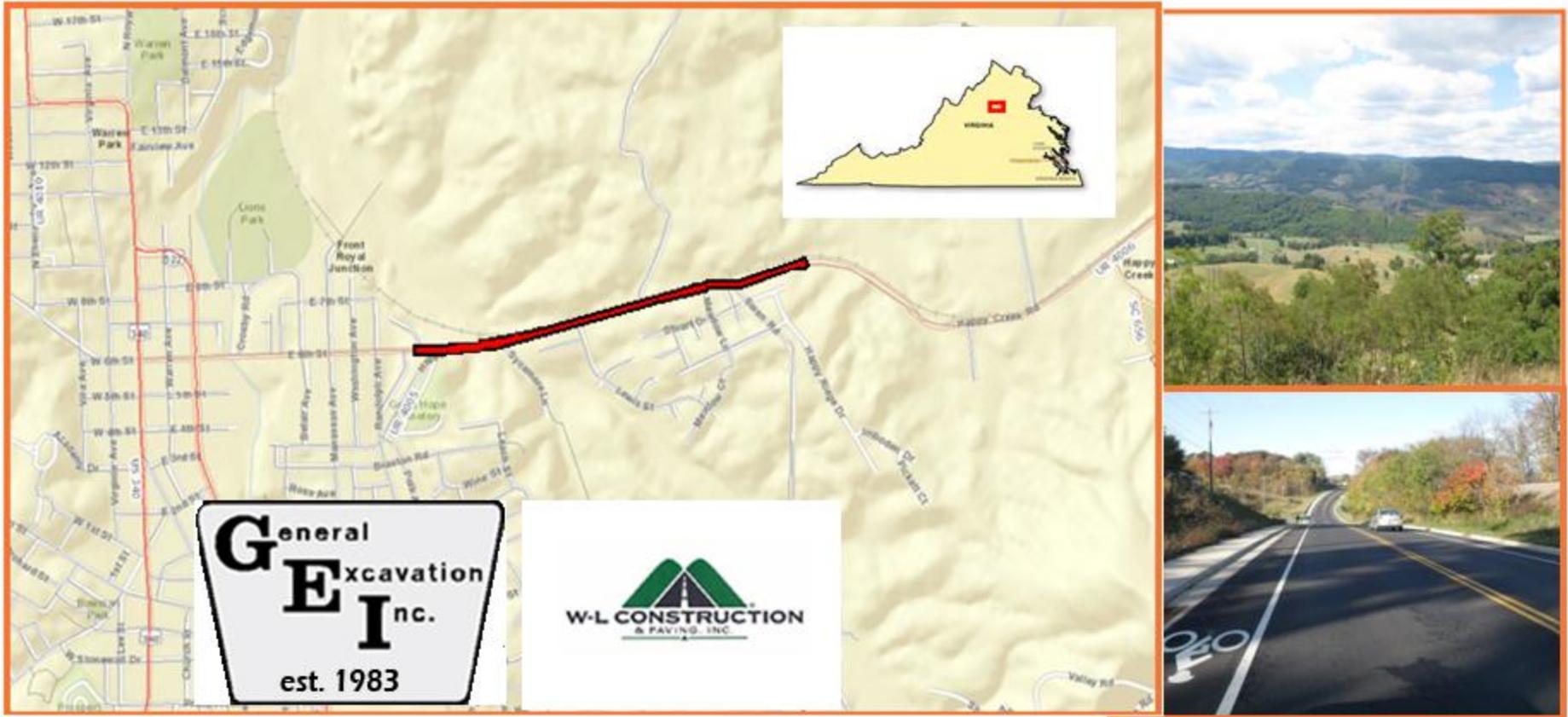
2011 Asphalt Pavement Award State Finalist Staunton District - Construction

October 1, 2012

Kevin Chisnell

Pavement Manager, Staunton District

Happy Creek Rd. Warren County Project U000-112-102,C-501



W-L Construction & Paving, Inc Stephenson, VA
Prime: GEI, Warrenton, VA

Length of Project:

1.71 Km

From: 6th Street and Bradford Dr
To: 0.87 Km West of Rte 606

Total Lane Miles: 4.25 Lane Miles

Types/Quantity of Mix:

BM-25.0	4792 MT
IM-19.0	2392 MT
SM-9.5A	2770 MT

Project Summary



Project included

**Curb and Gutter
Bicycle Lane
Sidewalk
Guardrail
Drainage
Utilities**

Difficulty of Paving

Challenges included: Residential Traffic
Curb and Gutter
Curves, elevations,
Variable widths
Norfolk Southern Railroad
adjacent to road



Aggregate Suppliers

ARR-MAZ

Carmeuse

Vulcan

W-L Const.

Citgo

Chattanooga, TN

Strasburg, VA

Warrenton, VA

Strasburg, VA

Dumfries, VA

Liquid Binder Supplier

Associated Asphalt

Martinsburg, WV

Materials Properties

W-L was able to achieve a very uniform mat



- **Average project density
100% Passed**
- **No lot penalties were
assessed on the project**
- **Mix volumetric
67% Passed**

Asphalt Pavement Awards

**Congratulations to all
involved!**

2011 Statewide Asphalt Construction Project Winner Is...

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2011 DISTRICT MAINTENANCE AWARD WINNERS - DISTRICT WINNERS

Bristol District

Interstate 81 in Wythe County

Contractor: W-L Construction and Paving - Frank Bowman

VDOT Inspector: Craig Jones

Salem District

RTE 100 in Pulaski County

Contractor: Adams Construction - Gary Wright

VDOT Rep: Bernardo Hernandez

Culpeper District

RTE 211 in Rappahannock County

Contractor: Superior Paving Corp - Todd Atkins

VDOT Rep: Chuck Clatterbuck

2011 DISTRICT MAINTENANCE AWARD WINNERS

STATEWIDE AWARD FINALIST



2011 Asphalt Pavement Award Finalist

Fredericksburg District - Maintenance

October 1, 2012

Greg Henion, P.E

District Construction Engineer

Fredericksburg District

Project Information



Location: Spotsylvania County
I-95 NB from MM 121 to MM 122.7

Contractor: Superior Paving

Geometrics:

Vertical and Horizontal curves
Three lanes with paved shoulders
Long. & Transverse Joints

Scope: 2" Mill and Fill

Shoulders: 2855 tons of SM-12.5A

Mainline: 4270 tons of SMA-12.5

Pavement Markings

Snow Plowable Markers

Challenges

- Night work
- Work adjacent to high volume, high speed traffic
- SMA is a challenging asphalt mix to install



Performance



- Very good workmanship
- Required in-place densities met or exceeded
- No lot price adjustments
- All volumetric tests within spec. limits
- Overall ride quality improved by 44%, resulting in an average IRI of 48 inches/mile
- Rideability bonus earned

Keys to Success

- Work Zones properly installed & maintained
- Use of MTV aided rideability
- Consistent & timely delivery of asphalt allowed for uniform placement and compaction
- Good communication in the field



Project Lead Personnel

Superior Paving Corporation

Tom Eckler

Area Operation Superintendent

VDOT

Edward Skotzko

A. Morton Thomas - Consultant Inspector

Material Suppliers

Aggregate: Luck Stone, Bealton, VA

Binder: Associated Asphalt, Martinsburg, WV

Fiber: Hi-Tech Asphalt Solution, Mechanicsville, VA



2011 Asphalt Pavement Award State Finalist Staunton District - Maintenance

October 1, 2012

Kevin Chisnell

Pavement Manager, Staunton District



I-64 EB Augusta County M.P. 16.27 to M.P. 25.51



B&S Contracting, Inc. Staunton, VA

Length of Project:

9.24 Miles

**From: M.M. 87.51
To: M.M. 96.75**

**I-81 Interchange
State Route 715**

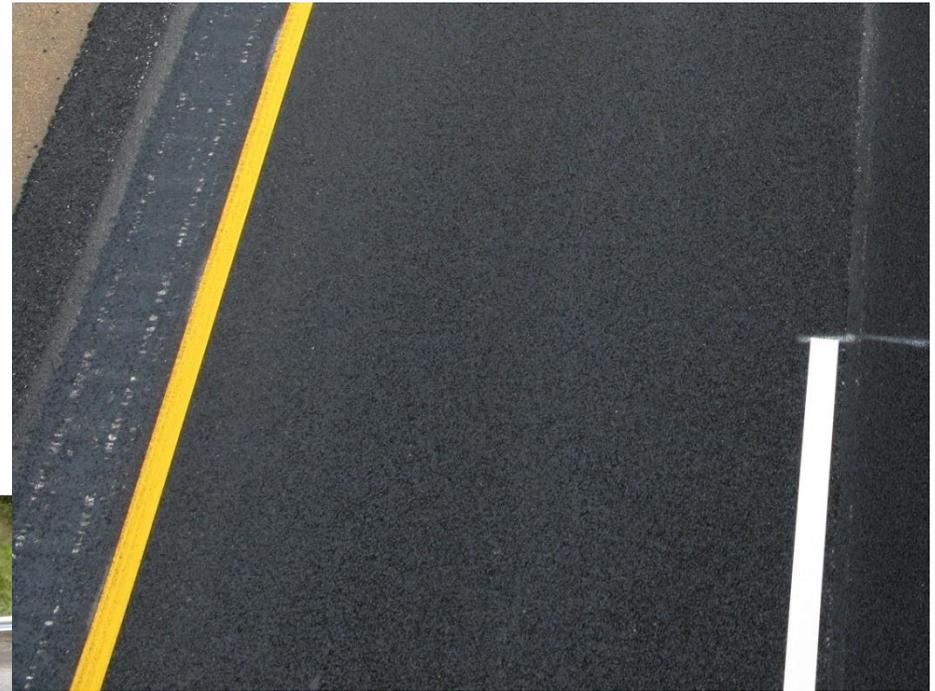
Total Lane Miles: 18.48 Miles

Types/Quantity of Mix:

SMA-12.5 : 17,460 Tons
Scratch/Shoulders/Ramps - approximately 9560T SM-12.5A

Project Summary

Project included
Scratch Leveling
Ramps
2" SM-12.5A
Paved Shoulder



Rumble Strip Installation
Guardrail Installation

Difficulty of Paving

Challenges included:

Night Work – under traffic
Commercial trucks,
bridges and overpasses,
curves, variable widths -
ramps/intersections



Aggregate Suppliers

Boxley Aggregates

Cellulose Fibers

D.M. Conner

Greer Lime Co.

Slurry Pavers

Staunton Lime

Piney River, Va

Mechanicsville, Va

Stuarts Draft, Va

Riverton, WVA

Richmond, Va

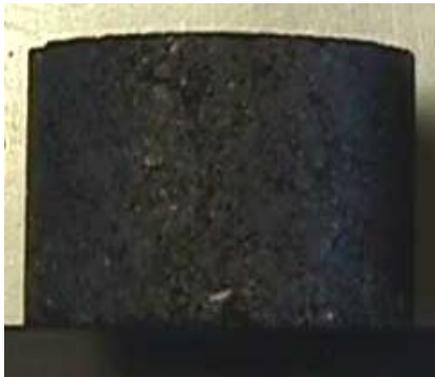
Staunton, Va

Liquid Binder Supplier

Associated Asphalt

Roanoke, VA

Materials Properties



A very uniform mat

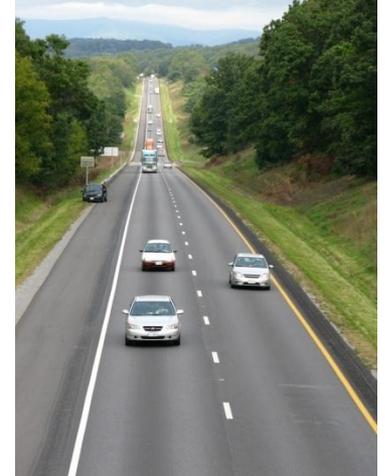


- **Average project density 100% Passed**
- **No lot penalties were assessed on the project**
- **Mix volumetric 96% Passed**

Rideability

Before IRI	73
After IRI	57
% Improvement	22%

\$56,500 Incentive!



Keys to Success

B&S Contracting's compliance, quality and workmanship exceeded all standards

The communication and cooperation between B&S Contracting and Staunton VDOT were first rate.

Asphalt Pavement Awards

**Congratulations to all
involved!**



2011 State Asphalt Pavement Award Finalist

Northern Virginia District- Maintenance

October 1, 2012

Ebbie Attar, P.E.

Northern Virginia District Area Construction Engineer

Quiet Pavement Technology Project Information

- **Contract (NFO)PM9U-053-001, N501 awarded to Superior Paving Corporation - \$4,024,897.73**
- **Geometrics: Moderate vertical grade, moderate curvature, longitudinal joints/transverse joints, multiple turn lanes, ramps, intersections, crown, transitional and superelevated pavement surfaces.**
- **Pavement Structure Materials:**
 - **AR-PFC 9.5 – 2,492 TONS**
 - **PFC 12.5 (70-28) – 4,125 TONS**
 - **PFC 9.5 (70-28) – 2,530 TONS**
 - **IM-19.0D – 12,304 TONS**
 - **BM-25.0A (T) – 7,517 TONS**
 - **BM-25.0D(T) – 3,255 TONS**
 - **SMA-9.5 (76-22) – 6,965 TONS**

Quiet Pavement Technology Project Information

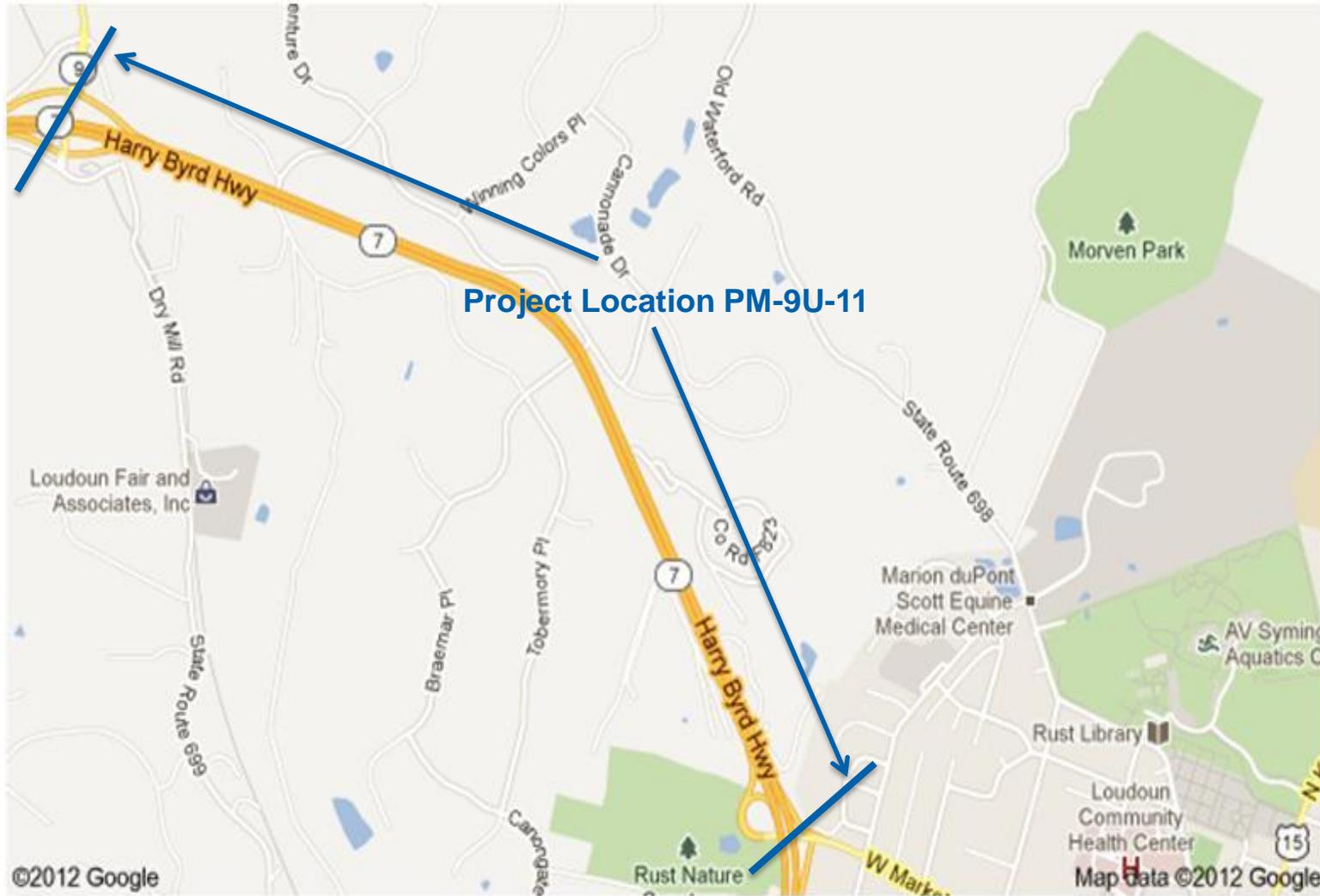
Location: Route 7 EBL and WBL in Loudoun County
From: 0.432 Miles West of Rte. 9 Overpass Bridge (MP 13.02)
To: 0.46 Miles East of Dry Mill Road (MP 17.50)
Length of project – 4.48 Miles (4 lanes divided)

Purpose - Construct 5 test sections to monitor road noise levels for quiet pavement technology research.

Scope:

- **Paving operation consisted of 4.5 miles of variable depth milling, BM-25.0D trenching @ 6' width, SMA-9.5 (76-22), AR-PF 9.5, PFC-12.5 (70-28), PFC-9.5 (70-28), IM-19.0D mixes.**
- **Utilized five different test sections with multiple asphalt applications and variables. Installed pavement marking Type B Class I and Type B Class III as well as snow plowable markers.**

PM-9U-11 PROJECT LOCATION



Testing/Quality Assurance



- **No segregation or flushing experienced in specialty mixes (SMA, PFC or AR-PFC).**
- **No price adjustment on lots**
- **All volumetrics, asphalt content and aggregate gradations met required specification**
- **Trial test sections conducted and monitored prior to production**
- **Rideability Incentive earned**
- **Tire noise average 100.8 dB and average wayside noise reduction of 2.6 dB**

Quality Workmanship

- Uniform asphalt mixes and excellent workmanship produce a smooth even mat
- Straight and uniform joints
- Edges of pavement true curves and tangents
- Excellent rideability



Challenges During Construction



- Pavement trench widening, crack sealing and placing new overlay in tangent, transitional and super-elevated sections.
- Pavement transitions for multiple turn lanes, ramps, median and crossovers.
- Paving while maintaining traffic (30,000- 39,000 VPD)
- Night paving operations
- Multiple specialty asphalt mixes placed at varying depths

Components of Success

- **Partnering with the contractor for success outcomes**
- **Traffic safely maintained for the traveling public which resulted in a safe work environment during the paving operations**
- **Quality asphalt concrete mixes delivered and placed in a timely manner**
- **MTV used to maximize superior rideability**
- **Excellent project communications and public outreach increases customer satisfaction and reduces customer complaints**
- **Quality materials and workmanship yields quality results**
- **Project completed within budget**
- **Project completed on schedule**

Rideability Data

International Roughness Index (IRI) - paid \$106,864.47 in incentives

LANE No.	Before IRI Average	After IRI Average	% Improvement
EBL 1	57	44	23
EBL 2	66	28	56
WBL 1	61	42	31
WBL 2	69	49	29

“I really can’t say enough about how impressed I was with the contractor’s ability to achieve good consistent ride numbers considering he was working with materials with which he had little to no experience, moved from one material to another and, perhaps more importantly, one layer thickness to another.” – Kevin L. McGhee, VCTIR Research Scientist

The Project Team

VDOT

Ebbie Attar, P.E. - Area Construction Engineer
Kevin Davis - Lead Project Inspector Sr.
Richard Kibler - Construction Manager
Kumar Barakam – Consultant OE
Mark Casasanta, Consultant Manager
Kemp Pullin – Consultant Inspector Sr.
Fred Fisher – Consultant Inspector
L.T. Glascoe – Consultant Inspector
David Shiells, P.E. – NOVA District Materials Engr.
John J. Russell – NOVA Materials
Ronald Seale – NOVA Materials
Robert Wilson – NOVA Infrastructure Mgt.
Kevin McGhee, P.E. – Research Scientist
Trenton Clark, P.E. – Virginia Asphalt Association

Superior Paving Corporation

David Helmick - Executive Vice President
David White – General Manager
Tom⁵¹ Cekada – Paving Superintendent

Material Suppliers

Aggregate: Luck Stone – Leesburg
Liquid Asphalt: NuStar
Trackless Tack – Blacklidge Emulsions, Inc

Subcontractors

Pavement Markings – Roadmark Corp.
Crack Sealing – Slurry Pavers, Inc.

2011 Asphalt Pavement Awards

EXCELLENT JOB!
CONGRATULATIONS!



GOOD LUCK!!

2011 Statewide Asphalt Maintenance Project Winner Is...

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