I-85 Project with Intelligent Work Zone Deployment

- I-85 reconstruction from Mile Marker 212 to 233 in Vance/Warren Counties (21.5 Miles of 2 Lane, 2 Way Traffic)
Plan Phasing and Interchange Overview

South Bound

US 158
Parham Rd.
NC 39
Satterwhite Pt. Rd.
US 1
Flemington Rd.
Manson Drewry Rd.
US 1
Oine Rd.
VA Line

Complete
11/2017
11/2018
11/2018
11/2019

North Bound
Project Challenges

• Interstate traffic in 2 lane pattern for **21.5 miles**
• Little to no paved shoulders
• Holiday traffic
• Kerr Lake Recreation Area traffic
Installation of a Real-Time Traffic Information System for “End of Queue Warning and Detours for Incidents”

- Instrumented the entire 21.5 miles with Speed Sensors
- Installed 10 CMS’s in advance of the Project
- Utilizing the Permanent DMS at MM 233 (SB Direction)
Coordination with State Traffic Operations Center (STOC) for existing DMS utilization
The system logic was based on 3 conditions

1. Condition A is for free-flowing conditions (speeds 50 MPH and above. These display travel time and mileage information to major destination locations (Durham, Kerr Lake, Virginia State Line))
2. Condition B messages display travel time and mileage information to end of work zone with traffic slowing messaging (speeds below 40 MPH)
3. Condition C messages display warning messages of major delays and detour route information
Incident Management for Crashes

Incident Management is 2 parts
1) Have approaching traffic detour before the project.

2) Traffic caught inside crash scene detoured inside project limits.
Detours

Very long Detour Routes- *An extra 90 minutes of travel time*

Southbound traffic uses US 58 (**12 miles in advance of the project**) in Virginia over to I-95/US 64/I-540/I-40/NC 147

Northbound traffic uses NC 147 (**40 miles in advance of project**) to I-40/I-540/US 64/I-95
Issues and Constraints of the Device Placement

- All of the CMS’s delivering the information in advance of the work zone
- Very little space to install CMS’s along the shoulders within the Project Limits except at interchanges
Questions?

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