

# Introduction to Intelligent Transportation Systems (ITS): I-285 Variable Speed Limits

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# VSL System

- Higher traffic volumes on Top End
- Signs change based on downstream speed data
- Posted speeds updated automatically by NaviGator.
- TMC can override VSLs
- Travelling at a slower, more consistent speed can:
  - Decrease congestion
  - Save motorists on gasoline
  - Reduce accidents
  - Less idling improves air quality



# VSL Design-Build Contract

- \$4.9M Design-Build contract Awarded Oct 2012
  - Install 176 VSL signs (88 locations) Clockwise & Counter-clockwise
  - I-285 Top End (I-20 to I-20)
  - Median & outside shoulder
- 8 overhead Changeable Message Signs
  - Revised to 9 through Supplemental Agreement (SA)
- Increase Speed Limit on bottom end (I-20 to I-20) to 65 mph
- Contract completion originally September 2014, revised to January 2015

# Design-Build Scope

- Ensure adequate Closed-Circuit TV coverage
- Solar Power signs allowed
- Ensure proper connection to Navigator II, including system testing
- Install power & fiber infrastructure, including 96 fiber optic cable on both sides of I-285 from SR 400 to I-85



# Special Provisions (SP)

- SP 631: Portable Changeable Message Sign
- SP 682: Electrical Wire, Cable and Conduit
- SP 935: Fiber Optic System
- SP 936: Closed Circuit Television (CCTV)
- SP 937: Video Detection System
- SP 939: Communication and Electrical Equipment
- SP 940: NaviGator Advanced Transportation Management System

# ITS Challenges

- Fiber Verification Report
  - Overestimating existing ITS required a negative SA
- Liquidated Damages
- Contractor & Systems Integrator Coordination
- Hub Building capacity
- Power Source
- System Testing



# Questions?

