

# **Vehicle Probe Project – *What's New, What's Next***

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**Transportation Research Board**

**January 2010**

**Session 703**

# Agenda

- The I-95 Corridor Coalition
- Vehicle Probe Project
  - What's now
- What's Next

# The I-95 Corridor Coalition is....

- An alliance of transportation agencies, toll authorities and related organizations, including public safety from Maine to Florida with affiliates in Canada
- A successful model for interagency cooperation and coordination since the early 1990's

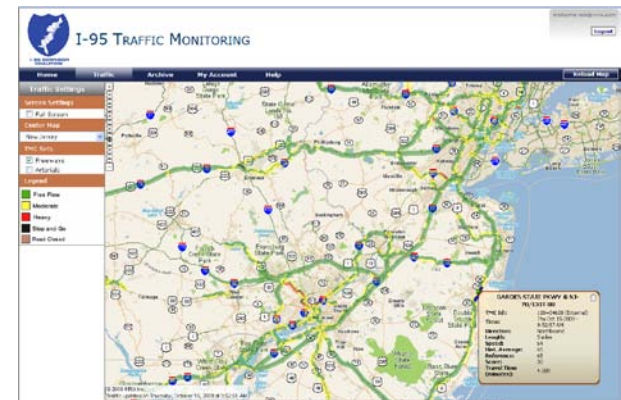
# Coalition 2040 Strategic Vision

Develop an architecture for state-of-the-art regional operations and management, including real-time information

# Vehicle Probe Project –

*This is not a test...*

- This is a *groundbreaking* initiative among public, private and academia.
- 18+ months of real-time data to seven contiguous states – New Jersey to South Carolina
- *Continuous, comprehensive data validation*, improving access to information, and expanding project limits.



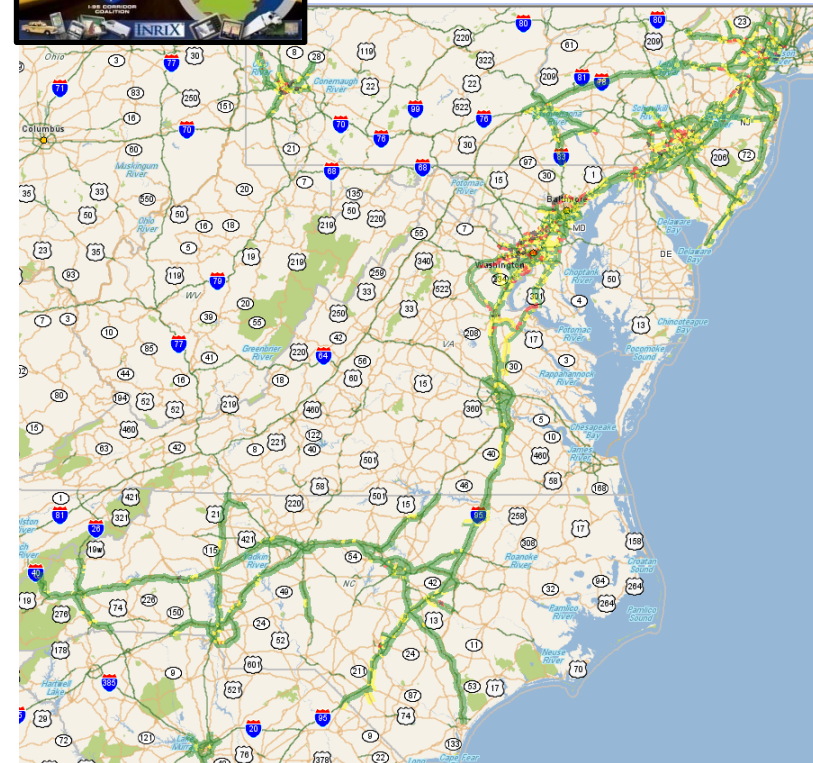
# Project Highlights

## Contract

- 3 years – options to 10 years
- Task Order contract with U of Md
- Member agencies can:
  - Expand coverage, Add source data
  - Access consulting services, Extend project duration

## Core Task

- Traffic data feed
- Monitoring web site
- Data archive
- Coverage
  - ~1500 freeway miles
  - ~1000 arterial miles (donated)



# Project Requirements

## RFP Requirements

### **What**

- Avg Error 10 MPH
- Avg Bias: 5 mph
- For 4 Bins: <30, 30-45, 45-60, >60 MPH
- Latency: ≤ 8 minutes
- Update Rate: ≤ 5 minutes
- Data Reliability: ≥ 95%
- Data Availability: ≥ 99%

### **When**

- Flow > 500 VPH on a segment

### **Where**

- Core Freeways, Expansions
- Not Core Arterials

## Validation

### **Through September 2009**

Speed Range	Avg Absolute Error (MPH)	Avg Bias (MPH)	Hours of Data
Requirement	< 10 MPH	< +/-5 MPH	
0 – 30 MPH	4.8	2.7	233
30 – 45 MPH	6.0	2.1	288
45 – 60 MPH	2.1	0.0	1911
> 60 MPH	2.0	-1.9	9249
TOTAL	2.2	-1.4	11681

# Project Status

## Current Coverage

- Freeways: ~ 4700 Centerline miles
- Arterials: ~ 900 Centerline miles
- From NJ to SC
- ~ 11,000 Road Segments

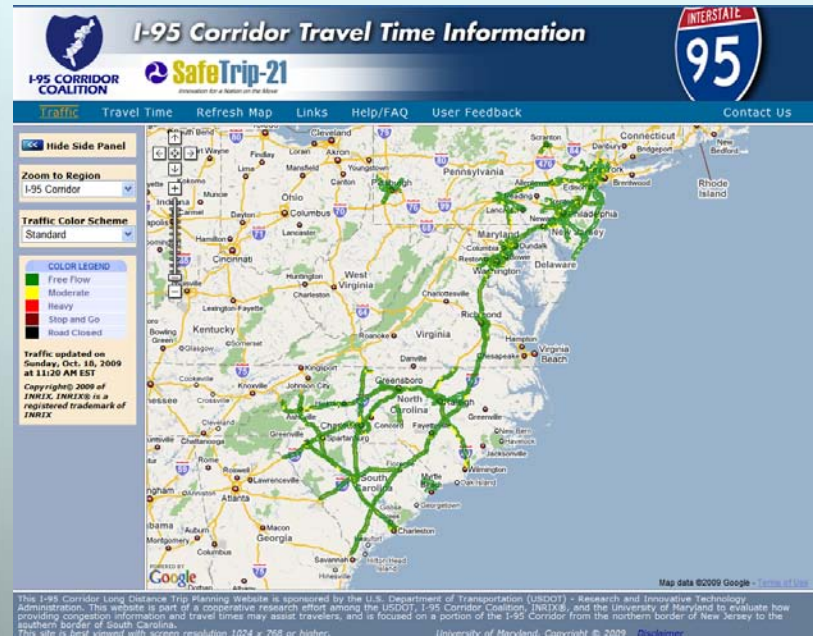
## Data Access (through 12/7)

- 15 agencies executed DUA
- >300 monitoring site users
- >30 data feed users

## Availability since July 1, 2008

- Monitoring Site: 99.90%+
- Data Feed: 99.93%+

## New...Traffic Tile Overlays/SAFETRIP



[www.i95travelinfo.net](http://www.i95travelinfo.net)



# Milestones

- Initial Task Order: February 2008
- ***NJ Expansion Task Order: June 2008***
- ***Service Operational: July 1, 2008***
- Initial Validation: July – October 2008
- ***NC Expansion Task Order: November 2008***
- SAFETRIP Task Order: January 2009
- Initial Validation Results Published: January 2009
- ***SC Expansion Task Order: August 2009***



# Vehicle Probe Project – Agency & Coalition Applications

- Web applications
- VP monitoring site to monitor freeways and detect issues
- Combining VPP data with other sensor data
- 511 operations
- Planning
- Performance measures
- SafeTrip 21



# Summary to Date

- Breakthroughs/Models for Others
  - Data and Performance Requirements
  - Proves Technology Approach – GPS Probe data viable
  - Multi-agency procurement – near corridor-wide coverage
  - Broad coverage – using consistent location referencing
  - Data Use Terms/Data Use Agreement
  - Validation Approach

# Focus Going Forward

- Ongoing validation – improvements based on findings
- Applications/Uses of Data
- Project Expansion - Going deeper in coverage area

# Travel Time on Message Signs

- Goal – Use VP data to calculate & post TTs on message signs
  - Raw data may need to be processed, aggregated smoothed and/or filtered
  - What is the best segment length?
  - How frequently should data be updated
- These issues will be explored and guidance given in the context of VP data

# Data Use and Application Guidelines

- Use of the data feed in applications
  - Travel Time predictions
  - Measure the impact of incidents on travel in the roadway network
- Ability to capture and draw trends
  - (VP data vs. point source data to capture trends)
- Data Filtering
- Methods to average and/or smooth data including outlier detection and rejection.

# Express/HOV/Local Lanes Issue

- handbook is to identify the extent of special use lanes and major ramps in the Corridor (specifically the I95 Vehicle Probe core system), review evidence of the effectiveness of the current probe project on such facilities, and develop guidance for members of critical issues for to consider.

# Thank You



I-95 CORRIDOR  
COALITION

[www.I95Coalition.org](http://www.I95Coalition.org)