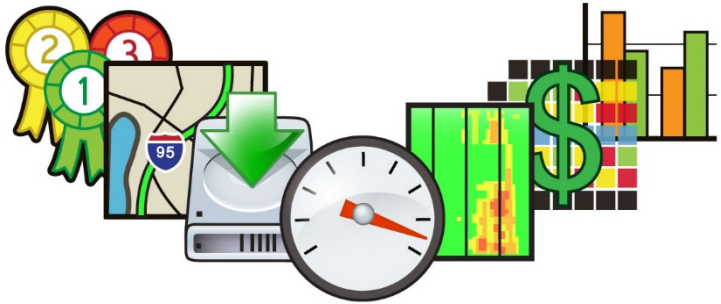
VPP Suite User Group



January 20, 2016

Dial 1-719-867-1571
& enter 725437# at the prompt

I-95 CORRIDOR COALITION

Housekeeping Items

- Please call Emily at 917-974-4810 for difficulties with the web or audio application
- This is a **virtual meeting experience**
  - **Please keep your phone muted until asking a question or speaking (press *6 to mute/unmute individual phone lines)**
  - **Please do not place call “on hold” as your hold music will be heard by the group**
- All materials & contact information will be available to participants after the webcast

Welcome & Introductions

Joanna Reagle
For the I-95 Corridor Coalition

Kelly Wells
North Carolina DOT

Meeting Participants

#	Agency	Name(s)	#	Agency	Name(s)
1	Baltimore Metropolitan Council	Ed Stylc, Victor Henry	9	Pennsylvania DOT	Scott Benedict
2	DVRPC	Jesse Buerk, Paul Carafides	10	Richmond Regional MPO	Tiffany Dubinsky
3	Florida DOT	Russell Allen	11	South Carolina DOT	Paul Thebo
4	MWCOG/NCRTPB	Wenjing Pu	12	South Jersey TPO	Andrew Tracy, William Schiavi
5	New Jersey DOT	Sudhir Joshi, Amir Ibrahim, Ira Levinton	13	Virginia DOT	Sanhita Lahiri, Ram Venkatanarayana
6	North Jersey TPA	Solomon Caviness, Keith Miller, Sutapa Bhattacharjee	14	UMD CATT Lab	John Allen, Michael VanDaniker
7	New Jersey Turnpike	Henry Eibel	15	KMJ Consulting (Coalition Support)	Joanna Reagle, Emily White
8	North Carolina DOT	Kelly Wells, Mike Bruff			

Please confirm that your line is muted *6

Thank you!

Agenda

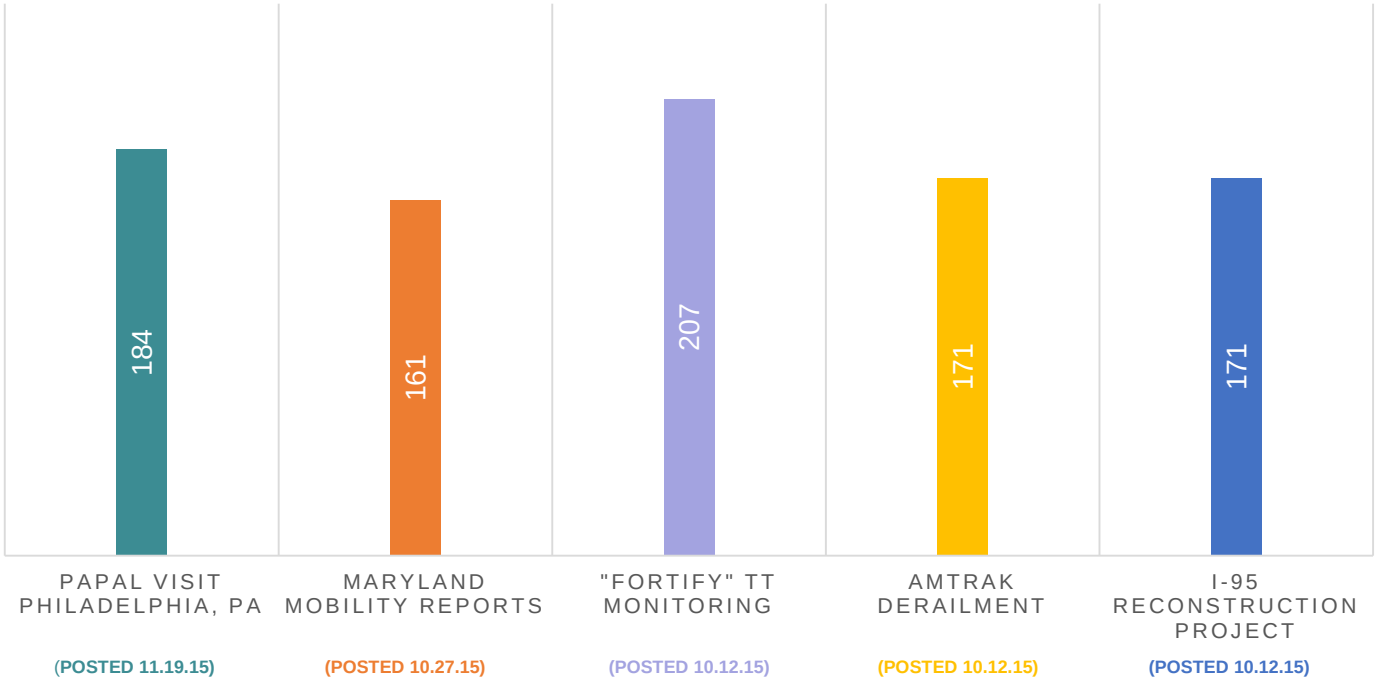
Time	Topic	Speaker
10:30am - 10:35am	Welcome & Introductions Agenda	Joanna Reagle, For the I-95 Corridor Coalition Kelly Wells, NCDOT
10:35am - 10:45am	VPP Suite Probe Data Analytics Forum Update	John Allen, UMD CATT Lab
10:45am - 11:00am	VPP Suite Features: • Requests/Issues/Follow-up • Recently Released & Upcoming Improvements	John Allen, UMD CATT Lab
11:00am - 11:20am	User Group Member Spotlight: ***Use of the VPP Suite for the Papal Visit to the DC Area***	Wenjing Pu, MWCOG
11:20am – 11:30am	MAP-21: NPRM Status Update	Rich Taylor, FHWA
11:30am - 11:35am	Focus Group updates	John Allen, UMD CATT Lab
11:35am - 11:40am	Other Activities: • TRB • Outreach	John Allen, UMD CATT Lab
11:40am - 11:55am	Agency Input Session to learn about what is working & what needs some attention	All Facilitated by John Allen
11:55am - noon	Meeting Wrap Up	Joanna Reagle, For the I-95 Corridor Coalition

VPP Suite
Probe Data Analytics Forum Update

John Allen
UMD CATT Laboratory

Probe Data Analytics Forum

5 AGENCY USE CASES-NUMBER OF VIEWS



BY THE NUMBERS…

VIEWING PERIOD
Oct 12th through Jan 15th

TOTAL NUMBER OF VIEWS
894

MOST VIEWED
"FORTIFY" Travel Time Monitoring-207 views

IN THE WORKS…

- Link the Forum to VPP Suite
- Post Focus Group work for comment/feedback
- Consider using polling feature to gauge new ideas or suggestions
- Better functionality (attachment type/upload sequence)
- ✓ Post "Feature Guides" (under VPP Suite Tutorials)

VPP Suite Features
New & Upcoming

John Allen
UMD CATT Laboratory

Requests/Issues/Follow-up

(From previous User Group meetings and Co-chair coordination calls)

- **New Feature**
  - › Enhanced Feedback – user feedback option in submit box
    - – Share feedback/agency with all users
  - › Add a link in VPP Suite to the I95 CC Probe Data Analytics Forum homepage

- **Improved Function**
  - › History Dropdown
  - › "Remember Me" checkbox added to the sign-in screen
  - › Save color settings for Delay by TMC (UDC)
  - › Locking multiple tooltips/Tooltip Summary
    - – Bottleneck Ranking/Congestion Scan

- **Misc.**
  - › Ira Levinton (NJDOT) to provide a list of questions to the Lab
  - › Improve the posting of attachments in the Probe Data Analytics Forum
    - – Add pdf file type; fix page upload sequencing

CATT Lab - Recent ticketed item for delivery and deploy

Deployment Status Table

In the Works (VPP Suite features, functions and fixes)

Tool/Process	Description	Deployment Status
Recent Deploys		
Multi-Road Congestion Scan	Stitch together multiple roads to define travel routes and corridors for more comprehensive analyses	✓ Deployed 11.30.2015
Massive Data Downloader (Download by Quality)	Choose to filter out data that does not match your agency's criteria for quality (can also significantly reduce the size of a data export)	✓ Deployed 10.15.2015
New Features		
MAP-21 widgets	Dashboard style widgets that provide graphical and mapping results of MAP-21 performance measure queries	Pending release of NPRM/Final Rule
Massive Data Downloader (Enhanced Feedback)	Integrated survey feature that allows instant user feedback to the I95 right from the tools	In development/TBD
VPP Suite	Add a link in VPP Suite to the I95 CC Probe Data Analytics Forum homepage	In development/TBD
Improved Functions		
Backend Architecture	Greatly improved storage and tool processing speeds, allowing for faster results, longer date ranges, and larger geographies	1st Q 2016
Bottleneck Algorithm/Ranking Tool	An updated algorithm and additional graphing features will significantly improve the usability of the Bottleneck Ranking tool	1st Q 2016
Advanced Time Selection (Date Range Summary)	A summary of user-specified time selection criteria will be provided in the results page for each tool	In development/TBD
User Delay Cost (Report Display Options)	Change the color-coding of each cost by using slider bars (and choose your own color palate); display multiple roads (by direction), and; choose what display tabs to be exported to Excel	In development/TBD
Bug Fixes/Misc.		
Congestion Scan	Incorrect label on Congestion Scan output	In development/TBD

Conceptual
Subject to Change

VPP Suite – Recently Deployed Features

Deployed (11.30.15)

- **Multi-road Congestion Scan**
  - Define travel routes (commuter, recreational, goods movement)
  - Compare alternate route performance (speeds, travel times, etc.)
  - Locate “hotspots”, bottlenecks
  - Better develop projects/strategies (ITS, ICM, etc.)
  - New Feature Guide helps you get up and running fast!
    - See “New Features” tab on the I-95 Corridor Coalition’s VPP Suite home page
    - Also available in the Forum under “VPP Suite Tutorials”

Multi-Road Congestion Scan Feature Guide

(Step-by step instructions & example Use Case)

VPP Suite – BIG Function Improvement on the Way

Coming Soon (Deploy ETC Q1 2016)

- **Backend Framework (Raptor)**
  - › Will substantially improve tool performance:
    - – Greater speed
    - – Longer date ranges
    - – Larger geographies
  - › In testing

Source: Fanpop

Example: To generate a User Delay Cost Report for ALL of North Carolina and for ALL of 2014 would take **6 weeks**.

Now it will take ONLY 2 HOURS!

User Group Member Spotlight

Use of the VPP Suite for the Papal Visit to the DC Area

Wenjing Pu

MWCOG

Papal Visit Transportation Impacts in the Washington Region

Vehicle Probe Project (VPP) Suite User Group

National Capital Region
Transportation Planning Board

Metropolitan Washington
Council of Governments

Wenjing Pu
wpu@mwcog.org

January 20, 2016

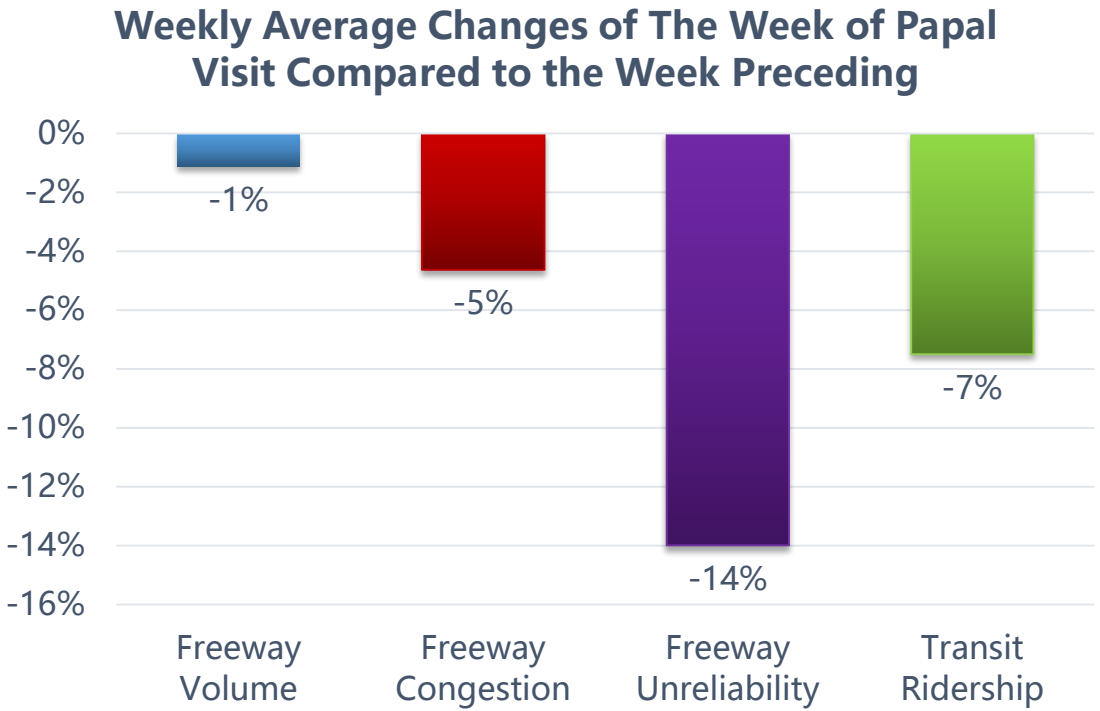
Introduction

- Pope Francis visited Washington, DC
  - September 22, Tuesday, 4pm: Arrival in DC
  - September 23, Wednesday, Full day stay in DC
  - September 24, Thursday, 4 pm: Departure for New York
- Different travel conditions
  - Highways, and
  - Major transit systems
- This analysis quantified the differences between the week of the Papal visit vs. week preceding
  - Weekly: 9/21-9/25 vs. 9/14-9/18
  - Daily: e.g., Wednesdays: 9/23 vs. 9/16
  - Hourly: 8 am on 9/23 vs. 8 am on 9/16 (only for freeway volume & congestion)
- Utilized data immediately available after the Papal visit, caveats exist.

Data Sources

- Freeway Volume
  - The FHWA's Transportation Technology Innovation and Demonstration (TTID) Program
  - New stakeholder application: https://trafficsensors.ext.here.com
- Freeway Speed
  - INRIX data provided by the I-95 Vehicle Probe Project (VPP)
  - VPP Suite developed by the CATT Lab of the University of Maryland
- Transit Ridership
  - Metrorail
  - Metrobus
  - RideOn, TheBus, ART, DASH, Fairfax Connector, PRTC

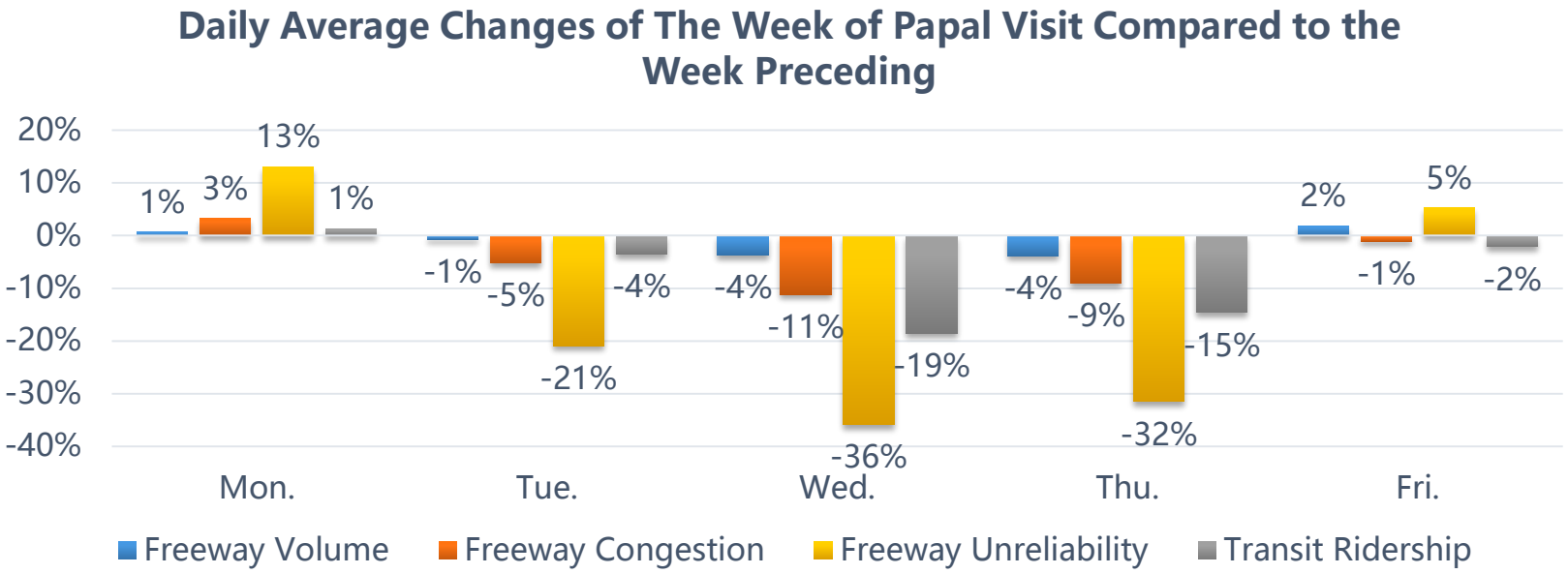
Weekly Changes



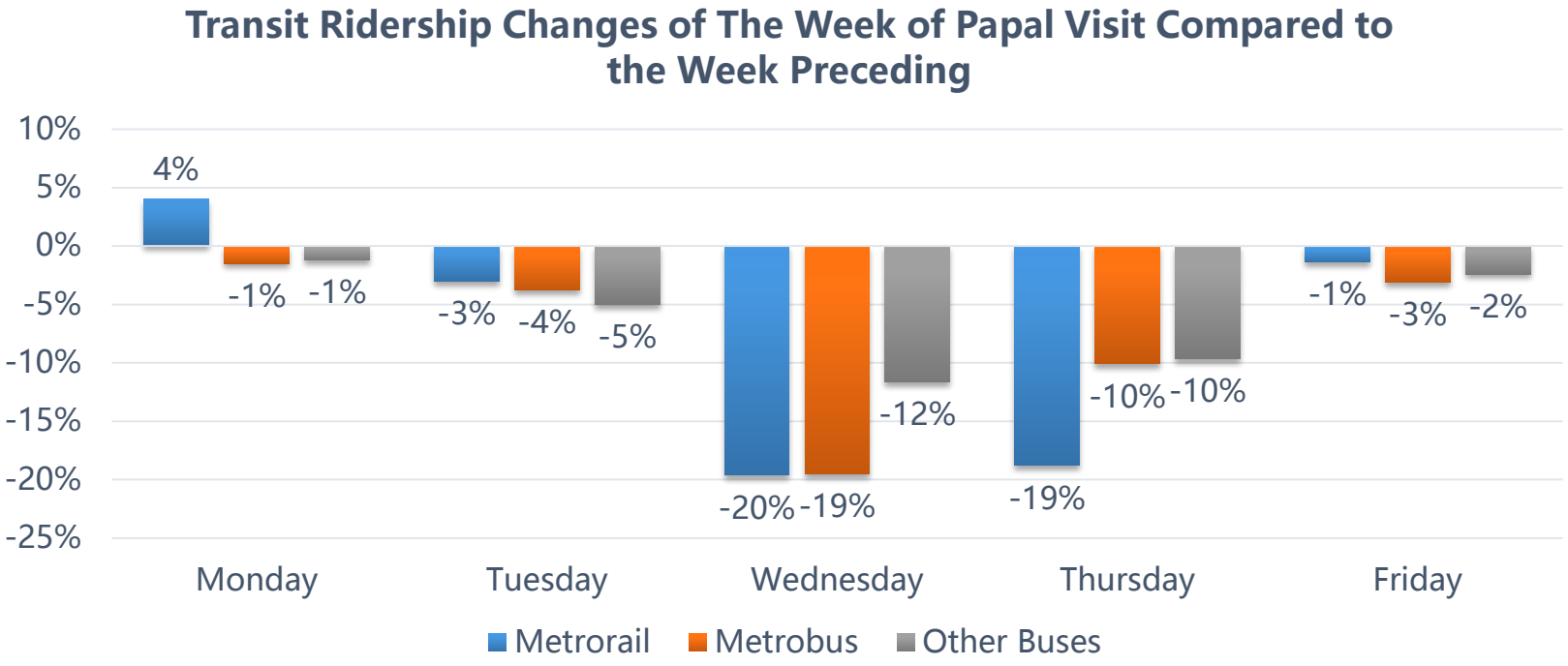
Freeway Congestion is measured by Travel Time Index (= Actual Travel Time / Free flow TT).

Freeway Unreliability is measured by Planning Time Index (= 95th percentile TT / Free flow TT).

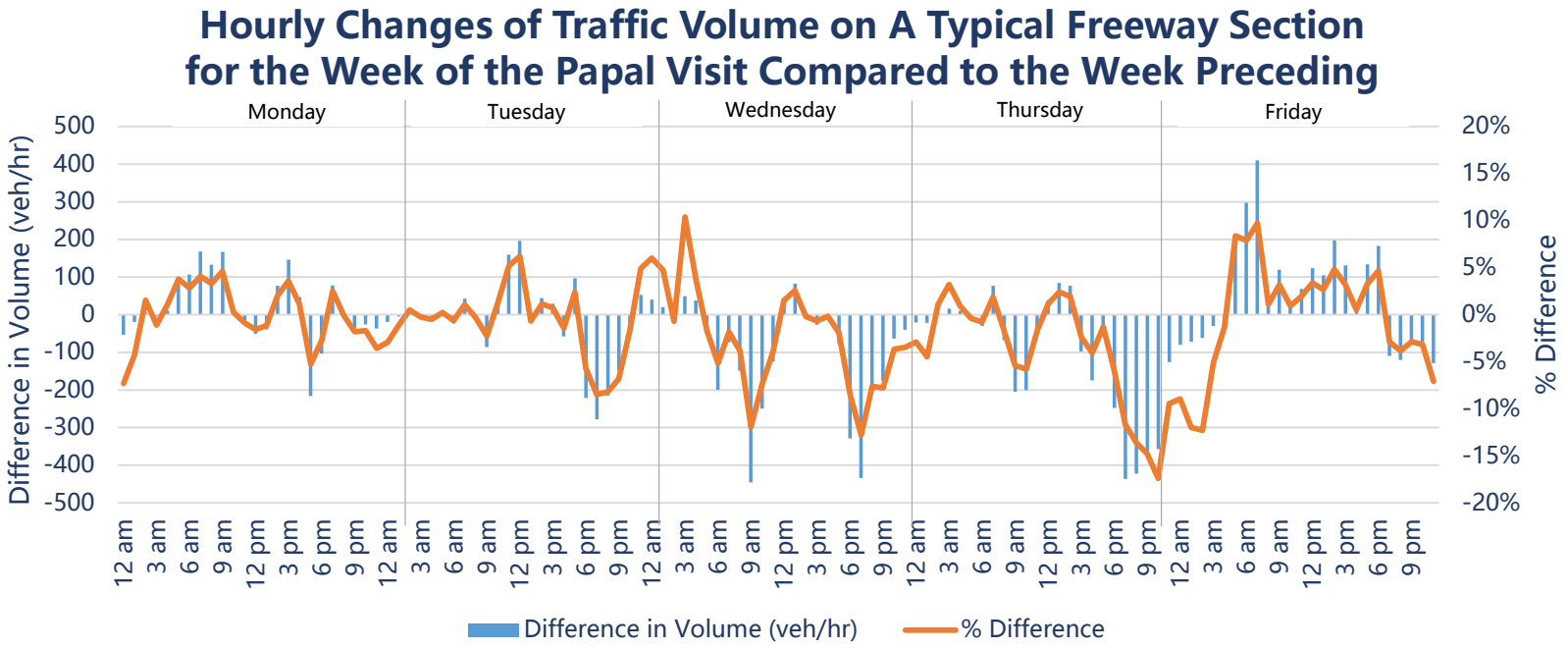
Daily Changes



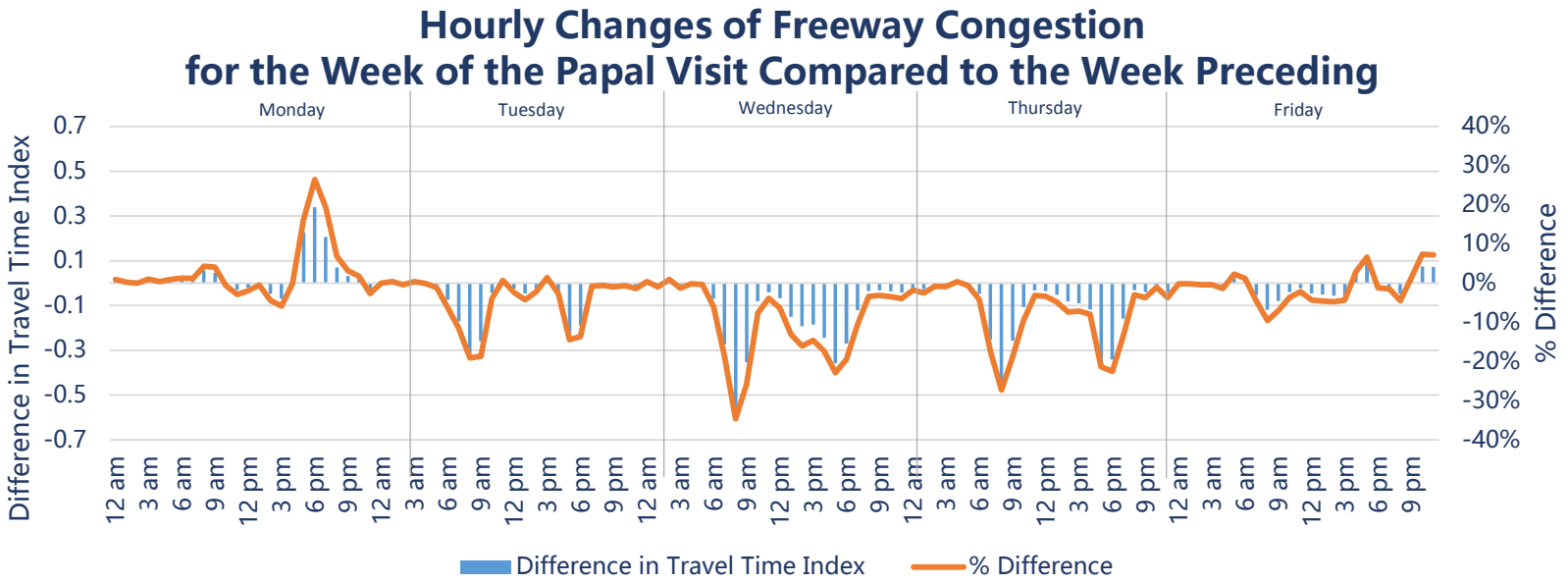
Daily Changes – A Closer Look at Transit



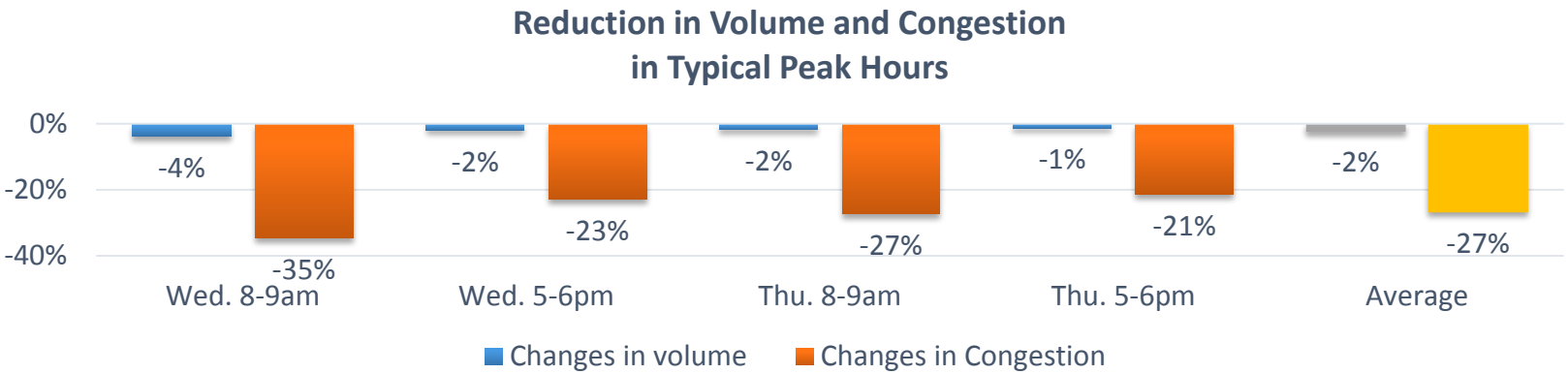
Hourly Changes – Freeway Volume



Hourly Changes – Freeway Congestion

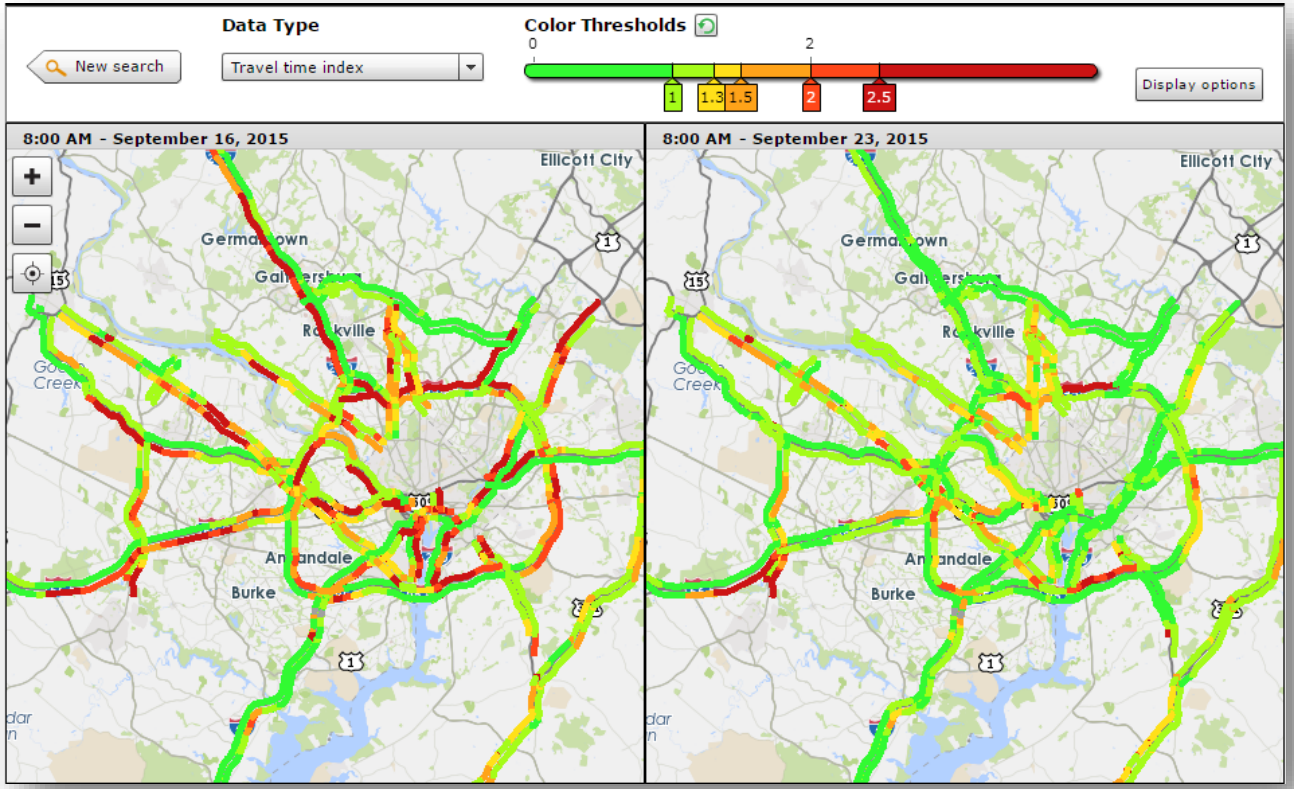


2% Volume Reduction, 27% Congestion Decline

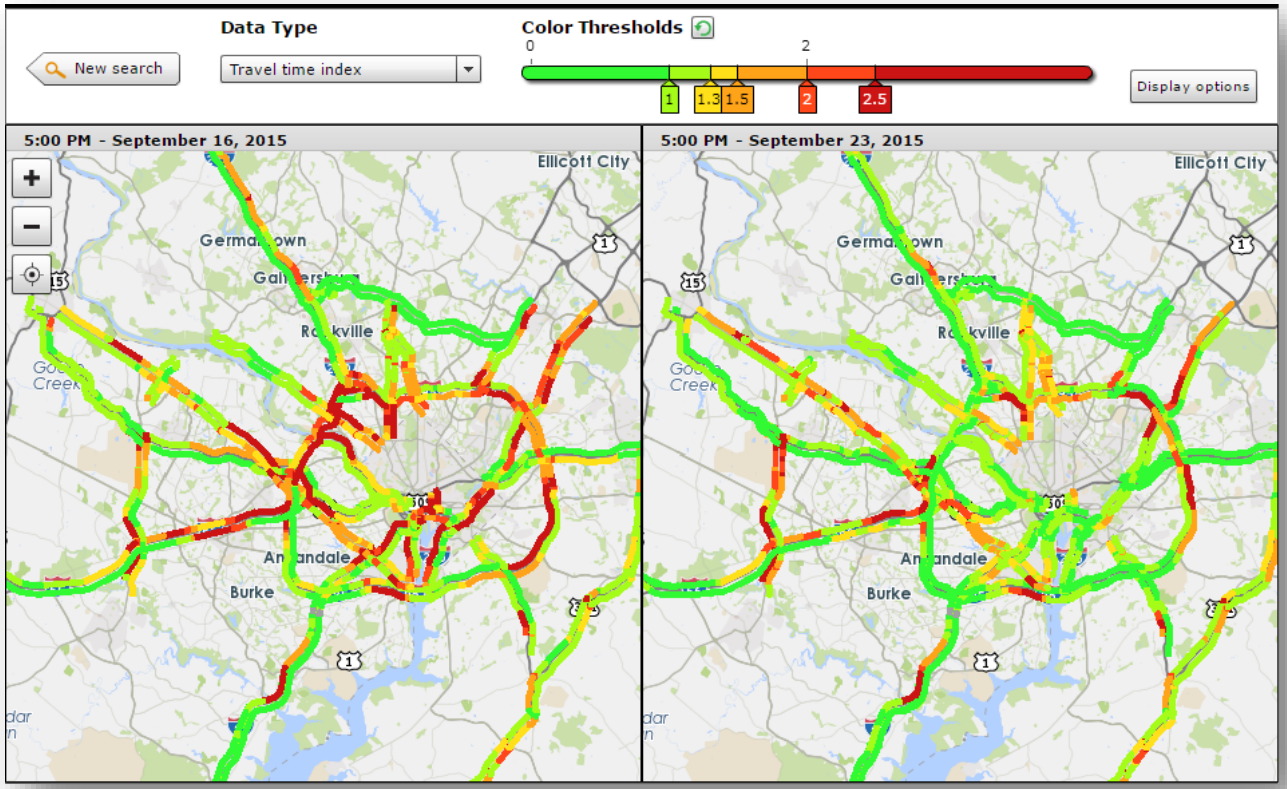


This volume – congestion relationship shows the effectiveness that travel demand management can have in combating congestion.

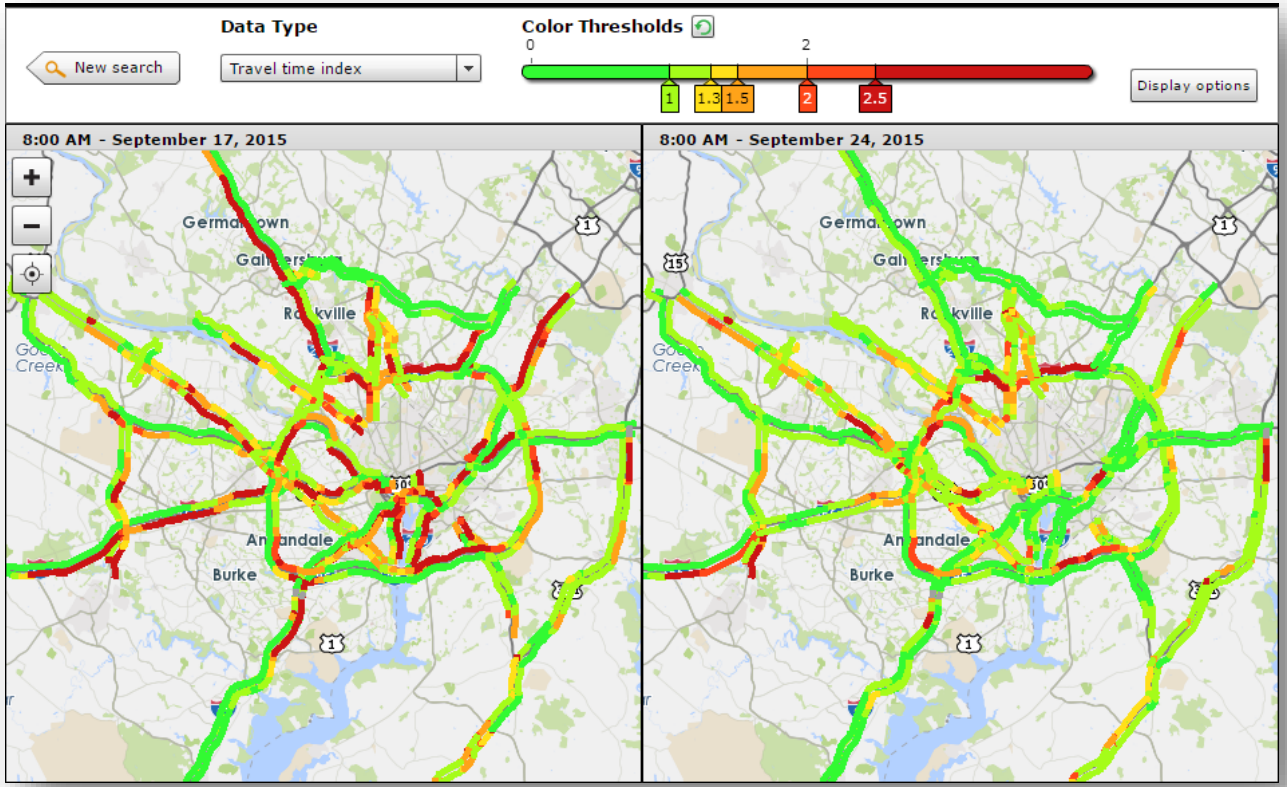
Congestion Maps – Wednesday 8:00-9:00 am



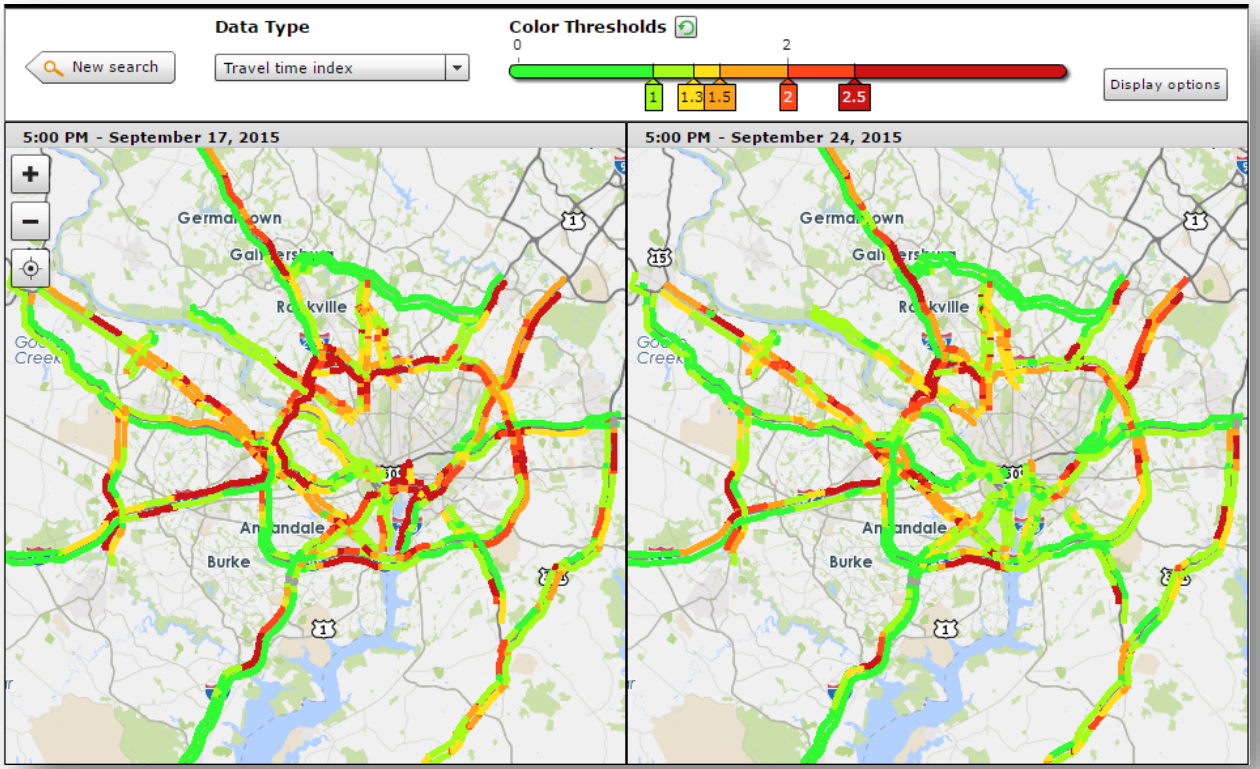
Congestion Maps – Wednesday 5:00-6:00 pm



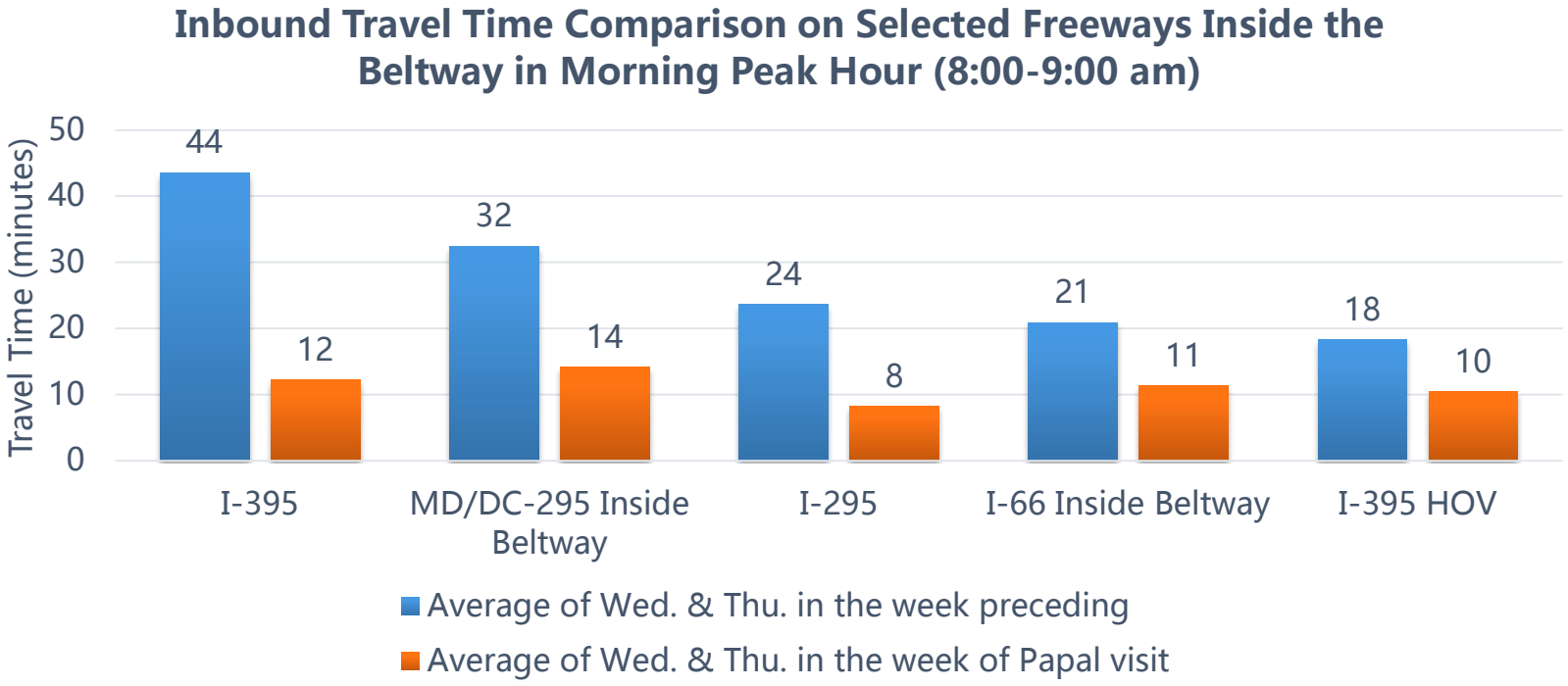
Congestion Maps – Thursday 8:00-9:00 am



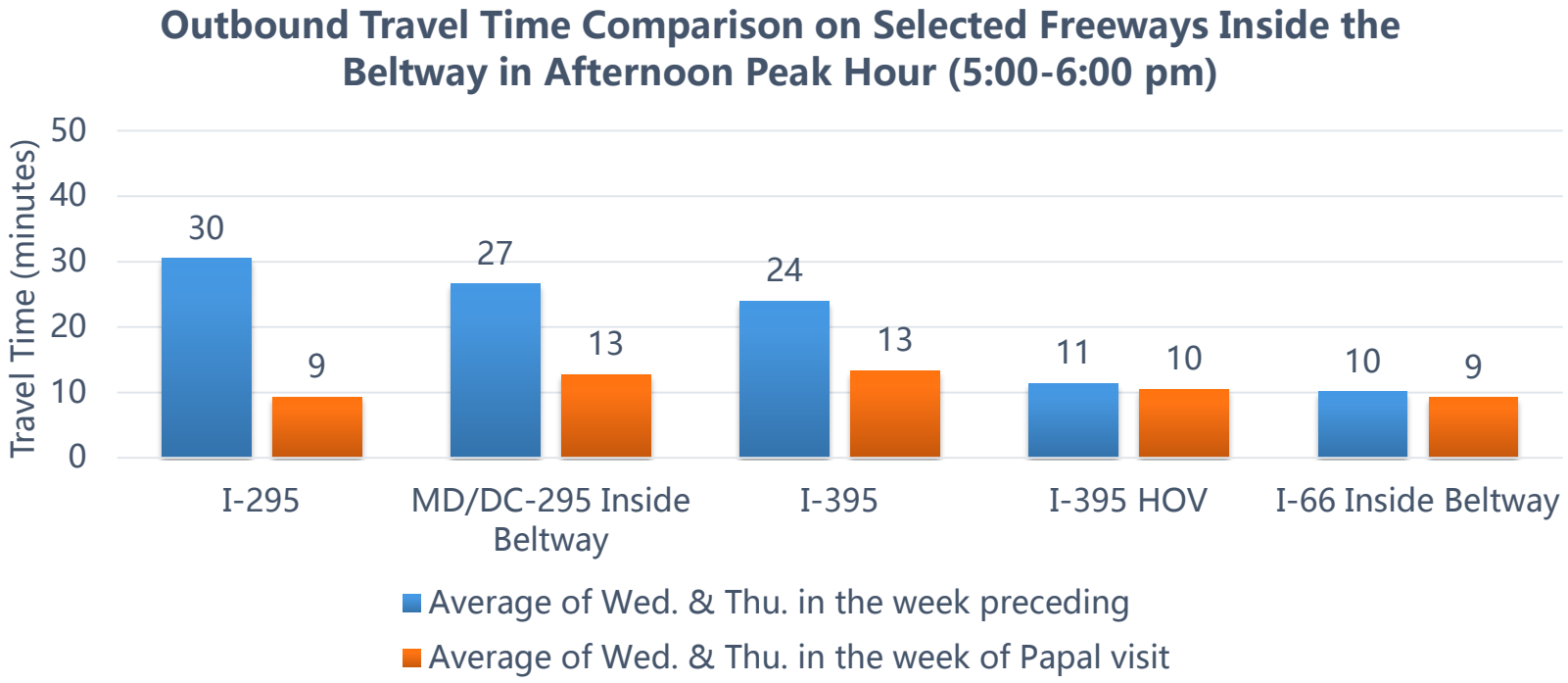
Congestion Maps – Thursday 5:00-6:00 pm



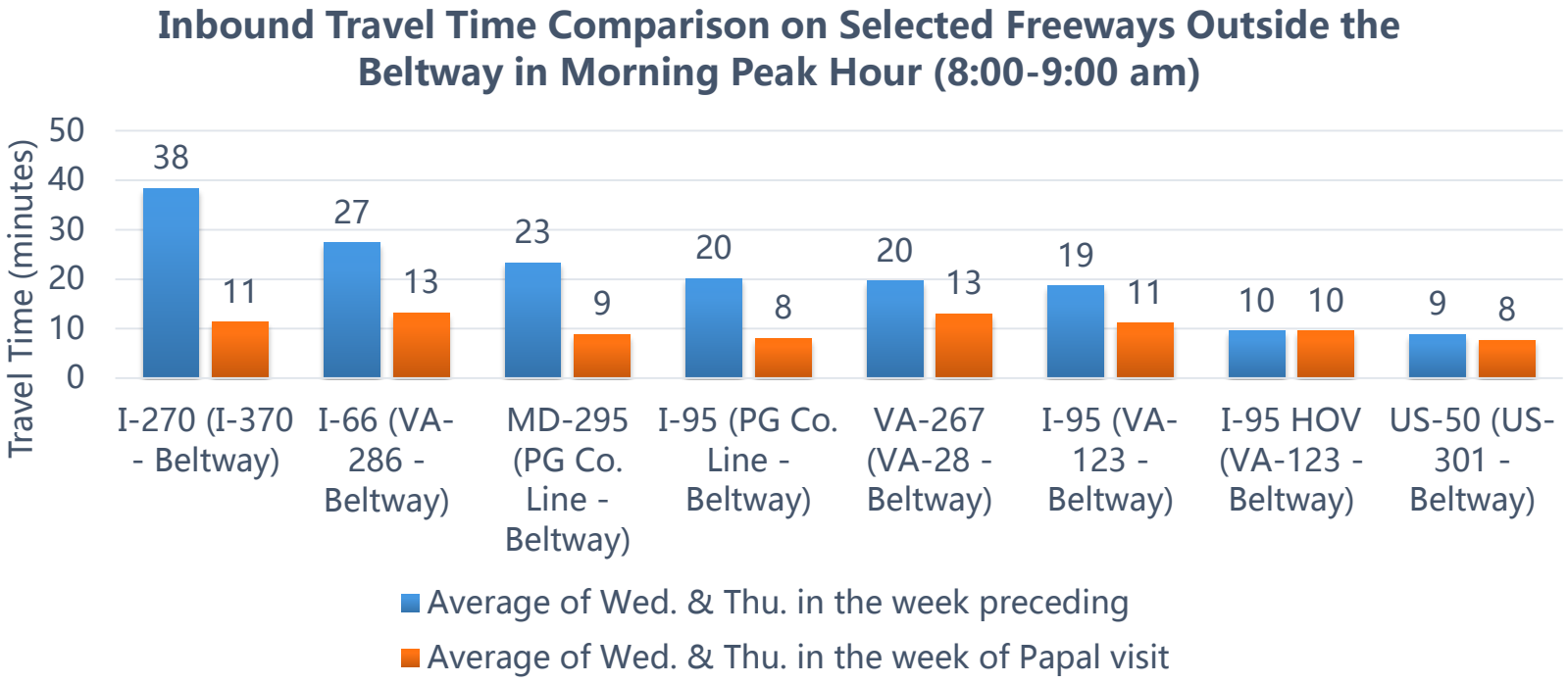
Travel Times – Inbound, AM Peak Hour, Inside Beltway



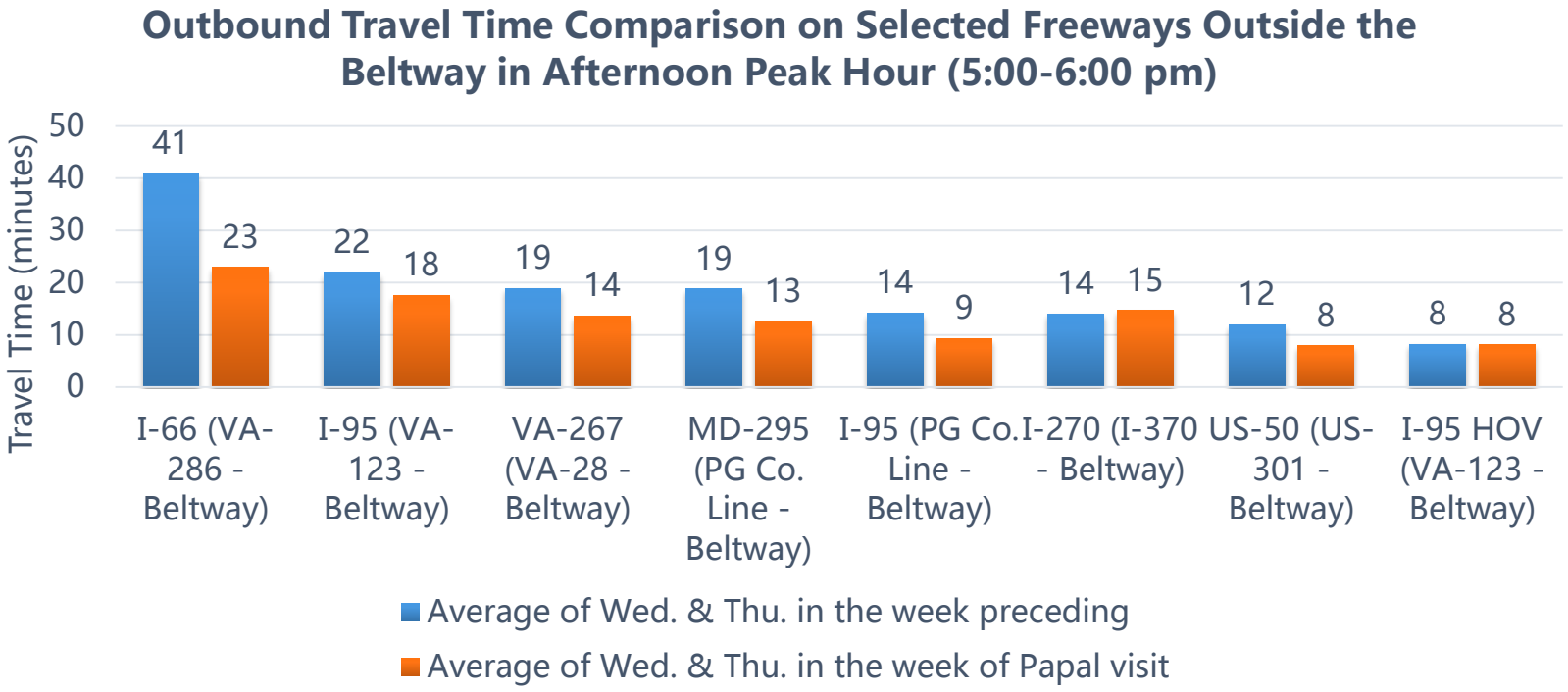
Travel Times – Outbound, PM Peak Hour, Inside Beltway



Travel Times – Inbound, AM Peak Hour, Outside Beltway



Travel Times – Outbound, PM Peak Hour, Outside Beltway



Conclusions

- Traffic volume on freeways for the five days of the week of the Papal visit was only 1 percent down compared to the week preceding, but traffic congestion was relieved by 5 percent, and travel time reliability improved by 14 percent.
- On Wednesday and Thursday, September 23-24, the days of the Pope's public events in Washington, freeway volume declined 4 percent compared to the same time one week earlier, freeway congestion decreased 10 percent and travel time reliability improved more than 30 percent.
- **During peak hours on September 23-24, a 2 percent reduction in freeway volume generally led to a 27 percent decline in freeway congestion, showing the effectiveness of that travel demand management can have in combating congestion.**
- Transit ridership declined 7 percent in the week of Papal visit and an average of 17 percent during September 23-24.

MAP-21

Moving Ahead for Progress in the 21st Century

- **System Performance NPRM Update**
  Rich Taylor, FHWA

Focus Group Updates

John Allen
UMD CATT Laboratory

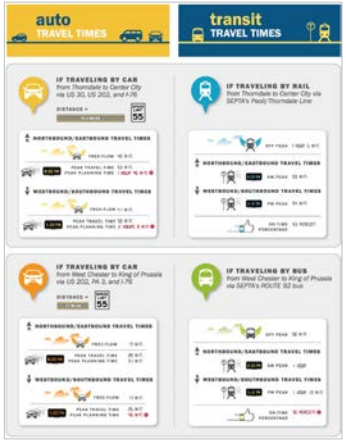
VPP Suite – Focus Groups Status

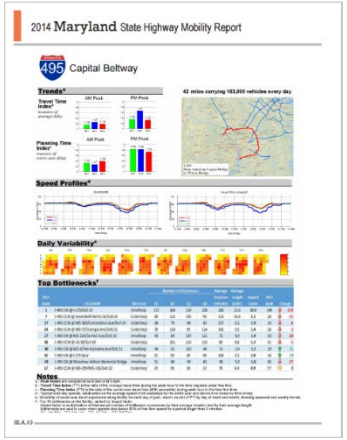
- **Performance Measures Summary Focus Group**
  - Kick-off meeting held **Tuesday, January 19, 2016**, via webcast
- **Bottleneck Working Group**
  - To test the updated Bottleneck Ranking algorithm and tool features and functions when released

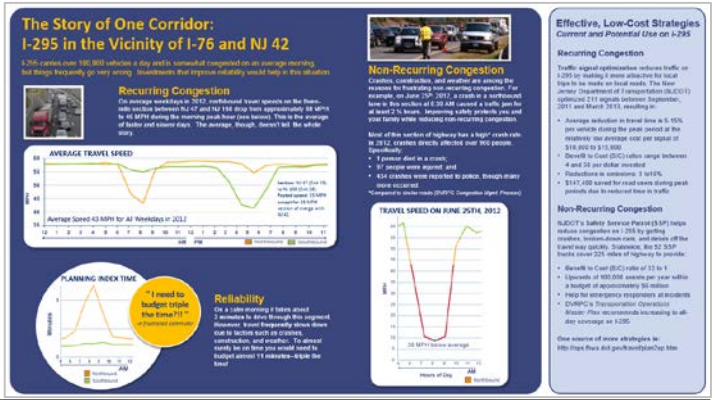
Focus Group Meeting Highlights

Performance Summary Report Templates

- **Kick-off meeting held 01.19.16**
- **Discussed:**
  - The Goal
  - The Team
  - Guidance
  - Logistics
  - User Group Interaction
  - Deliverables (product)
- **Developed a Plan of Action**
- **Will provide you with more info soon**



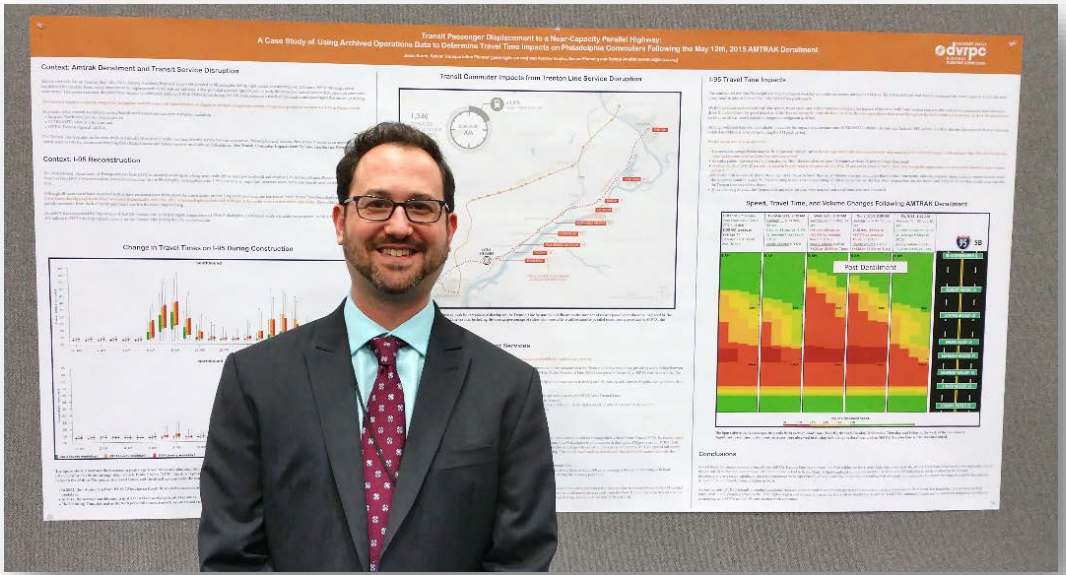




Other Activities

John Allen
UMD CATT Laboratory

TRB 2016



Jesse Buerk's Poster Session

(Using the Suite to determine travel time impacts caused by the Amtrak Derailment in Philadelphia)

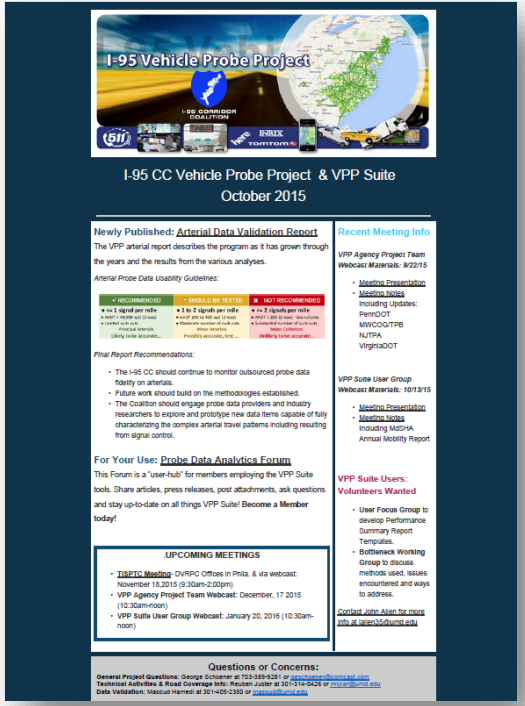
Way to go, Jesse!

CATT Lab/TTI Session 802:

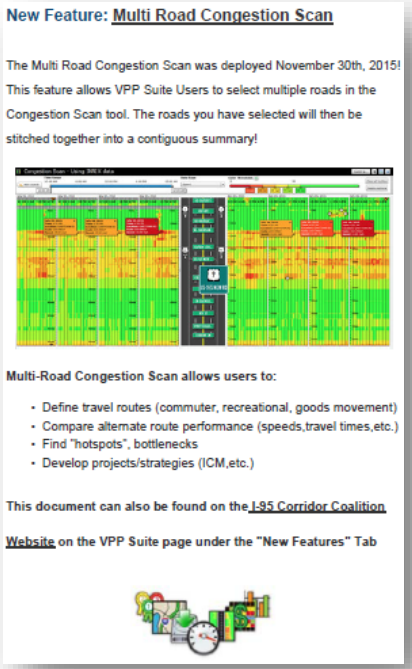
New Tools and Ideas for Visualizing, Exploring and Communicating Performance at National, State and Local Levels

VPP Suite – Outreach

- **VPP/VPP Suite Newsletter**
  - Distributed November 3, 2015



- **I-95 CC VPP Update email**
  - How-to Guide for recently deployed Multi-road Congestion Scan December 22, 2015



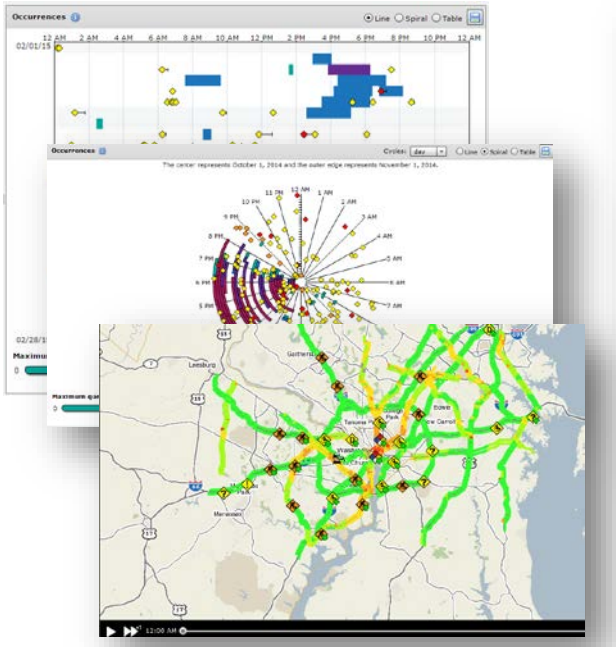
Agency Input Session

Facilitated by
John Allen, UMD CATT Laboratory

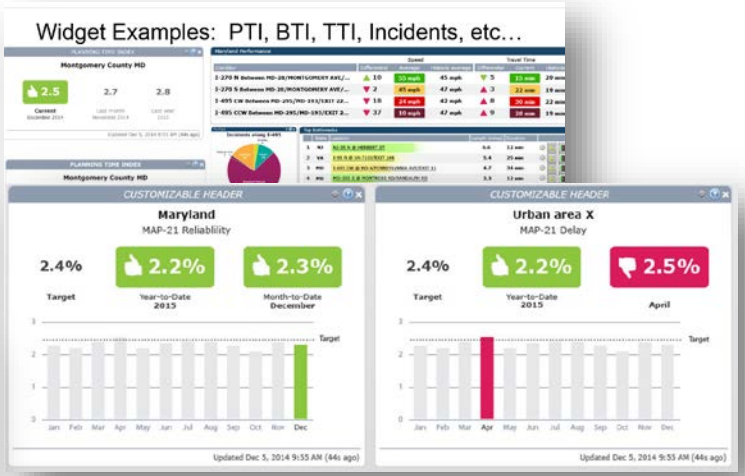
Agency Input Session

Focus on New Features

Event Data Integration



Dashboard Functionality



MAP-21 Working Group

Committed to ★MAP-21★ Coming Soon

Any Other Topics of Interest?

Next Steps & Meeting Wrap-up

Joanna Reagle
For the I-95 Corridor Coalition

Next User Group Meeting:

Thursday, April 21, 2016

10:30am to noon

Contact Information

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215.666.3057
jallen35@umd.edu

Joanna Reagle
I-95 Corridor Coalition Support
610.228.0760
jreagle@kmjinc.com

VPP Suite questions/feedback

vpp-support@ritis.org

Thank you!