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Pennsylvania Planning for the Future

**I-95 Corridor Coalition Connected and
Automated Vehicle Conference**

June 21, 2016 – Linthicum, MD

Initial Steps

of

Planning for Connected & Automated Vehicles

National
Working Groups



Pittsburgh
Test Beds



CV/AV
2040 Vision



National Groups



V2I Deployment Coalition



AASHTO – STMSO TWG5



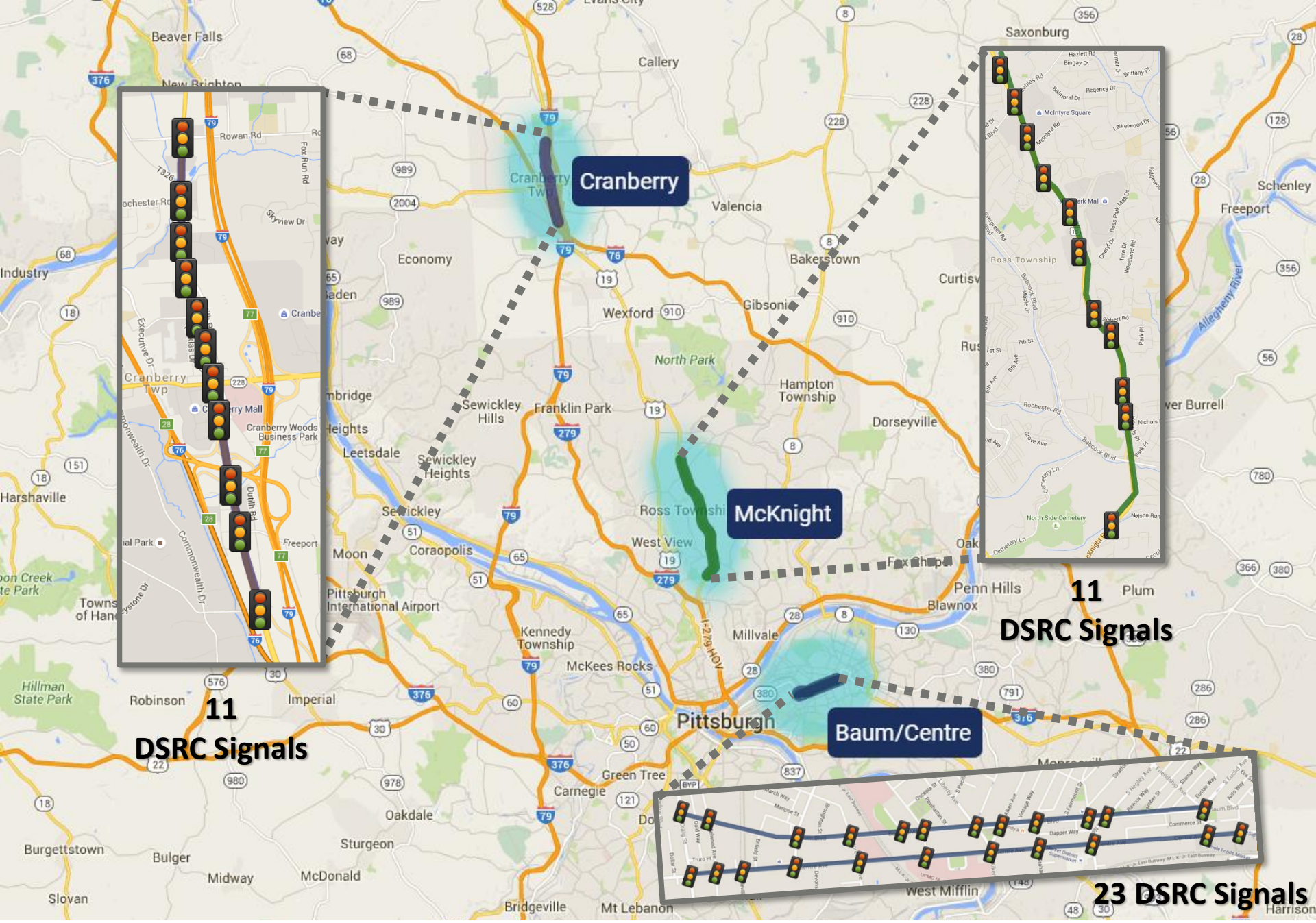
AAMVA – AV Best Practices



Pooled Fund Studies



TRB & NCHRP



11 DSRC Signals

11 DSRC Signals

23 DSRC Signals

CV/AV 2040 Vision Pittsburgh

Present - 2040

Implications of CV/AV

Design & Investment Decisions

Real-Time Data Usage

Impacts on Existing Infrastructure

Workforce Training Needs

Impacts on Freight Flow

Completed: July 2014



Next Steps

Planning for Connected & Automated Vehicles

**Autonomous
Legislation**



Smart Cities



**Statewide
Planning**



Legislation

Preparing for the Future

Senate Bill 1268

Amending Title 75 (Vehicles) of the Pennsylvania Consolidated Statutes, providing for autonomous and connected vehicles.

Introduced: May 18, 2016



Rafferty



Reschenthaler



Vulakovich



Ward



Wozniak



Brewster



Costa



Fontana



Leach



Schwank



Tartaglione

Senate Bill 1268

Testing Only

Manned and Remote Testing

Platooning

Flexible

AV Policy Task Force



AV Policy Task Force



- Government -

- PennDOT • PTC
- DCED • PSP
- Insurance • FHWA
- City of Pittsburgh



- Advocacy -

- AAA
- ATA
- PMTA



- Academia -

- CMU
- U Penn



- Industry -

- Uber
- SAE

Smart City Challenge Pittsburgh

Mobility Optimization

Connected Adaptive Signals

Pedestrian Detection (V2X)

Transit Prioritization (V2I)

Connected Fleet

Transit, City, and Bicycles

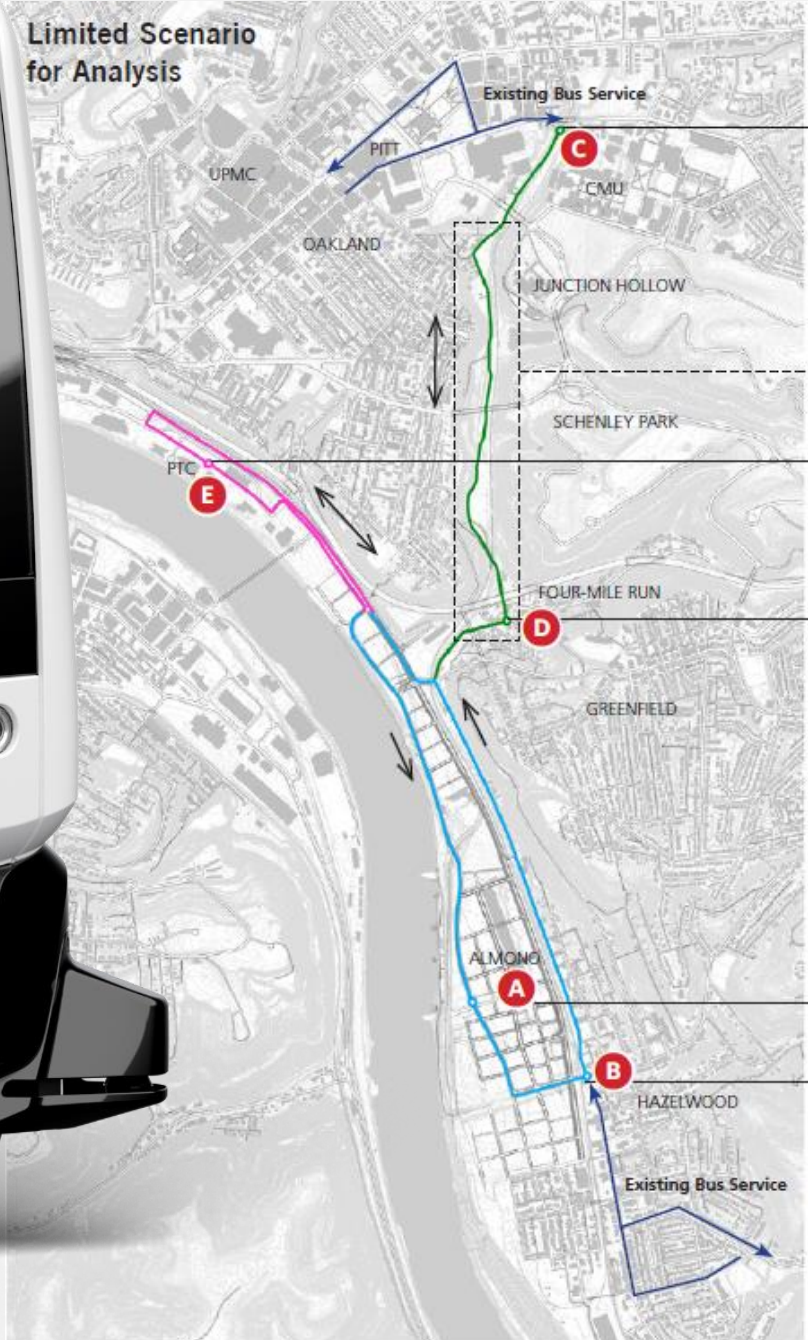
Access On-Demand Pilot

Autonomous Shuttle





Limited Scenario for Analysis



Oakland: Carnegie Mellon

Junction Hollow segment requiring new limited access transit cartway

Pittsburgh Technology Center: Stop locations are flexible

Lower Greenfield: Boundary at Saline

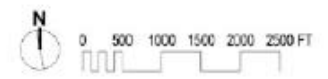
ALMONO: Vicinity of Phase 1A

Hazelwood: Second Avenue at Hazelwood

Shuttle Route & Stop Location **Average Time (Minutes)**

Shuttle Route Travel Time ¹	
Junction Hollow Loop	8
PTC Loop	7
ALMONO Loop	12
Total Shuttle Route Travel Time: ALMONO-Junction Hollow-PTC	27

Conceptual Transit Route



PA Turnpike CV/AV Road Map

Refine Operational Vision

Identify Short-Term Projects

Develop Implementation Schedule

Completion By Summer 2016

PENN

TUR

PIK

Statewide Planning



CV/AV Working Group

PennDOT

Turnpike

Academia

MPOs

FHWA

Municipalities

Joint Statewide Strategic Plan

Expand Upon Existing Work

Recommendations

Living Document



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