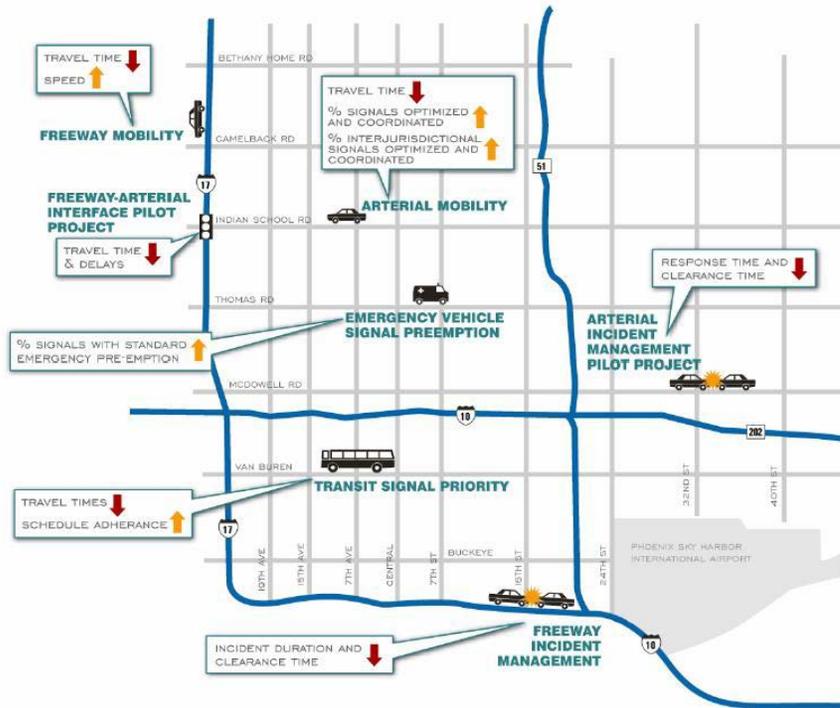




Performance Measures



Our mission is to improve transportation through innovative applied research, education and development of future transportation leaders, and practical, relevant, career-building training for transportation professionals.

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“Making highways safer, smarter,
and greener.”



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Intelligent Transportation Systems

Research in the area of intelligent transportation systems (ITS) occurs at the state-of-the-art Smart Travel Lab facility. We use the latest information technologies and analysis and modeling techniques to develop prototype systems and applications that promise to improve the effectiveness of ITS. An example of the type of work we do can be found with the project, “Evaluation of Advanced Traffic Signal Controllers using Hardware in the Loop Simulation.” Modern traffic controllers are equipped with many advanced features, such as built in logics that allow lane-by-lane gap out, traffic responsive control, and preemption. We have developed a much needed tool which allows traffic engineers to evaluate such advanced features under varying traffic and geometric conditions. In summary, our work focuses on applied ITS research and development.

Connected Vehicles

Connected Vehicles, by enabling vehicles to communicate with nearby vehicles as well as the infrastructure, will make entirely new applications and services feasible. In spite of huge potential benefits anticipated from Connected Vehicles applications, there is a strong need to properly evaluate these applications in order to transform this potential into factual evidence. We have developed a simulation and evaluation environment that allows more realistic evaluation of Connected Vehicles.

Sustainable Transportation Systems

The MATS UTC serves as the focal point in the mid-Atlantic region to accelerate adoption of sustainable practices in the provision of transportation services. Agencies and firms in the region recognize that the standard environmental practice in transportation has focused on “compliance” with regulations, as opposed to a focus on sustainability.

RECENT RESEARCH DEVELOPMENTS

- Development and evaluation of connected vehicles-enabled ramp management systems
- Development of sophisticated sampling methodology to support probe-based traffic monitoring
- Development of connected vehicle applications to support infrastructure operators.

RECENT GRANTS

- US DOT – Mid-Atlantic Transportation Sustainability University Transportation Center (MATS UTC - with Virginia Tech, Morgan State, Marshall, Old Dominion, and the University of Delaware)
- Connected Vehicles Pooled Fund Study – international consortium of federal, state, and local agencies

SEAS Research Information

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