

2017 Research Symposium

Implementation of Dedicated Short Range Communication (DSRC) and Automated Traffic Signal Performance Measures (ATSPMs) along an Urban Traffic Signal Corridor: Real Time Traffic Information through DSRC Deployment (Pending Award)

& STIC Annual Meeting

STIC PROJECT TITLE

Implementation of Dedicated Short Range Communication (DSRC) and Automated Traffic Signal Performance Measures (ATSPMs) along an Urban Traffic Signal Corridor: Real Time Traffic Information through DSRC Deployment (Pending Award)

STUDY TIMELINE

April 2018- October 2021

PRINCIPAL CHAMPION

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VTTRANS CONTACT(S)

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MORE INFORMATION

This fact sheet was prepared for the 2017 VTTrans Research Symposium & STIC Annual Meeting held on **September 28, 2017** at National Life in Montpelier, VT. 8:00 am- 12:00 pm.

Fact sheets can be found for additional projects featured at the 2017 Symposium at <http://vtrans.vermont.gov/planning/research/2017symposium>

Additional information about the **VTTrans STIC Program** can be found at <http://vtrans.vermont.gov/boards-councils/stic>

Introduction to the Proposal.

VTrans in partnership with the CCRPC would like to present and innovative proposal to improve the traffic flow on our most congested corridor in the State, Shelburne Road. Our proposal includes the installation of remote communications along the corridor to support dedicated short-range communication, DSRC implementation to prepare us for connected vehicle and AASHTO's SpaT (Signal Phasing and Timing) challenge.

Methodology or What was done?

Along with the DSRC, we are also proposing some minor Traffic Signal improvements to allow us to send vehicle to Infrastructure, V2I messages to improve the flow of traffic through the corridor while measuring the performance of the traffic signals utilizing the automated traffic signal performance measures, ATSPMs. The ATSPM's are an EDC4 initiative that VTrans Traffic Signal Operations is actively pursuing and are currently beta testing intersections.

Conclusion or What are the next steps?

VTrans has submitted an Accelerated Innovation Deployment, AID grant application for this proposal and are awaiting notification. If awarded, this will be the Agency's first corridor deployment of DSRC, our first step toward Connected Vehicle. The agency will partner with the CCRPC to solicit proposals for design and implementation of the technology.

What are potential impacts? What is the benefit to VTTrans?

If awarded, this will establish vehicle to infrastructure communications and real-time traffic systems management information which will be utilized by the VTTrans ATMS, TIS, and Traffic Signal Management Software. The performance goals are to reduce congestion and crashes along the corridor. The Traffic Signal Performance Measure reports will include the Purdue Coordination Diagram, Flow Rate, Cycle Length, Green Times, Split Failures, arrivals on red, and others.