Project Title: C-06-06: Open Highway Tolling Testing Facility

PIN: R020.79.881

Responsible Unit: NYS Thruway Authority

Project Manager: Solomon, Barry

Project Goal:

Build a test facility on the NYS Thruway to facilitate the testing of “over the highway” technologies including:

• An open highway E-ZPass toll collection design for a three lane highway with full shoulders configuration. The current design for open highway E-ZPass toll collection can only accommodate a two lane with full shoulder configuration. New software and hardware configurations will need to be developed and tested in true field conditions to assure the high level of reliability required for tolling applications.
• An open highway Automatic Vehicle Classification (AVC) system that will electronically identify the proper toll class for vehicles at highway speeds.
• Next generation open road tolling concept testing, including Dedicated Short Range Communication (DSRC) and License Plate Recognition (LPR).
• Roadside to vehicle communication for non toll applications (e.g. safety, traffic management) as part of the national Vehicle Infrastructure Integration (VII) initiative.
• Non intrusive traffic data sensors and systems.

Actions Proposed:

• Install two gantries over the Thruway adjacent to the Spring Valley Toll Plaza (milepost 24 in the New York Division) with extruded lateral beams over each lane. A picture of a similar installation is shown below.
• Install axle counting and vehicle detection equipment in the pavement underneath the gantry to aid in testing the accuracy of “over the highway” sensors.
• Attach electronic toll collection sensors (for example, E-ZPass antennas, laser based vehicle separators, camera systems, and height sensors) to the gantry.
• Install cabling from all equipment to equipment cabinets located in the Spring Valley toll plaza building.
• Install computer equipment necessary to control the sensors.
• Develop software to operate and control the sensors.

Anticipated Work Products and Accomplishments:

• A fully configured test site that can be used to test “over the highway” equipment.

Proposed Budget: $252,500