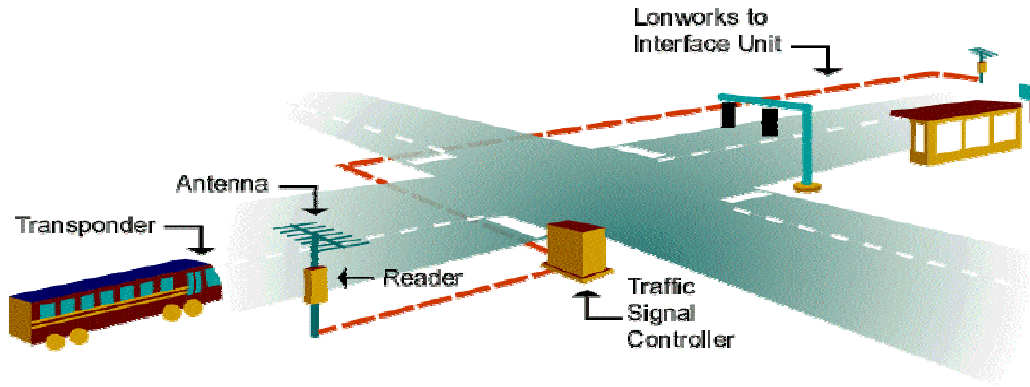

NYCDOT ITS/Traffic Engineering On-Call **GPI**

Staten Island-Brooklyn Mobility Enhancement Traffic Signal Control for Transit Vehicles at Victory Boulevard



Client/Owner: New York City Dept. of Transportation

Project Location: Staten Island, NY

GPI is presently involved in evaluating an “out of the box” solution to address the transportation and traffic issues currently facing Victory Boulevard and Bay Street in Staten Island. The approach is to study, investigate, design and deploy a Transit Signal Priority (TSP) system for buses on a 2.3-mile segment along Victory Boulevard between Forest Avenue and Bay Street, and along Bay Street from Victory Boulevard to the Saint George Ferry Terminal. This project includes not only the planning and design phases of work, but also furnishing the field equipment and installing field components. At the completion of this project, an anticipated total of 300 city buses, and the traffic signals within the entire 2.3-mile segment of Victory Boulevard/Bay Street, will be installed with the Transit Signal Priority Control System. An after study will also be conducted to confirm the anticipated benefits of this pilot project so, if found applicable, the TSP system can be installed in other parts of New York City.

The intent of this project is to:

1. Improve overall mobility by reducing bus transit travel time.
2. Improve the reliability of bus service and on-time performance.
3. Improve the overall intersection traffic operations (delays, speed, air quality, etc.), specifically during peak weekday commuter hours.
4. Ultimately, encourage use of the transit mode.

Tasks involved in this project include:

- Extensive traffic and transit data collection, and an analysis of existing traffic conditions as part of a before study
- Application of traffic simulation technology (from the typical *Synchro* analysis to the more complex Wide Area Traffic Simulation Model (WATSim)) to evaluate various TSP scenarios
- Evaluation of hardware and software issues associated with the compatibility of the TSP equipment to the existing NYCDOT traffic signal controllers
- Evaluation of signal coordination issues
- Field installation of TSP system equipment including bus optical emitters, infrared detectors, preemption software and other required interface equipment
- Completion of an after-study to confirm the anticipated benefits of this pilot project