Eco-Traffic Signal Priority

HOW COULD THIS HELP?

- Keeps freight/transit operations on schedule
- Reduces emissions by keeping large freight/transit vehicles moving

HOW DOES THIS WORK?

- An application allows transit or freight vehicles approaching a signalized intersection to request signal priority, thereby adjusting the signal timing dynamically to improve service for the vehicle.
- Priority decisions are optimized for the environment by considering vehicle type, passenger count, or adherence to schedule.

INVESTMENT

+ V2X ROADSIDE UNIT COST PER MILE-FREeways
  N/A

+ V2X ROADSIDE UNIT COST PER INTERSECTION-SIGNALIZED CORRIDORS
  $26,000

+ V2X SIGNAL CONTROLLER COST PER INTERSECTION-SIGNALIZED CORRIDORS
  $10,000

+ FIBER OPTICS COST PER MILE
  $158,000

TRANSPORTATION NEEDS ADDRESSED

ENVIRONMENT

V2I

SOLUTION IMPROVEMENTS

- Unoptimized traffic signal priority efficiency
- Excessive emissions
- Excessive fuel consumption

SOLUTION PITFALLS

- Infrastructure and vehicle must be V2I equipped

Disclaimer: all content is for planning purposes only and published as of Summer 2020. Contact the author at shacav@mdot.maryland.gov with any questions or comments.