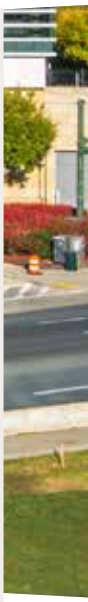
Eco-Approach and Departure at Signalized Intersections



TRANSPORTATION NEEDS ADDRESSED

ENVIRONMENT

V2I

HOW COULD THIS HELP?

- Increases vehicle efficiency

HOW DOES THIS WORK?

- A V2I application where intersection traffic signals broadcast the current state of signal phasing (red, yellow, or green) and time remaining in that phase.
- These data are used by connected vehicles to support eco-friendly speed trajectories as vehicles approach and depart from a signalized intersection.

SOLUTION IMPROVEMENTS

- Increased vehicle efficiency when approaching/departing from signaled intersection

SOLUTION PITFALLS

- Infrastructure and vehicle must be V2I equipped

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

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.

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
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