

# WRONG WAY

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## CRASH AVOIDANCE

While incidents resulting from wrong-way driving make up a small percentage of the overall crashes that take place on our highways, they are far more likely to result in fatalities. We are working aggressively to add safety features to reduce the occurrence of wrong-way driving.

### Why was the project created?

- State Police notified RIDOT of increase in Wrong Way Driving incidents
- National Transportation Safety Board (NTSB) also released a Special Report on Wrong Way Driving at the same time (December 2012)
- High amount of crashes – looked at 01/2008 to May 2015
  - 91 wrong-way driving occurrences reported
  - 34 crashes (37%) resulting in 56 injuries
  - 13 fatalities resulting from 10 crashes
- Wrong way crashes have a high likelihood of serious injuries and fatalities
- Worked with State Police to strategize priority locations
  - This was critical because crash data not always descriptive to where driver got on. The field expertise helped target ramps.
- Wrong way incidents are typically related to driver impairment and older drivers
- Alcohol Impaired Driving and Aging Road Users are emphasis areas in RI's Strategic Highway Safety Plan. This project focuses on addressing these populations.

### How many detection systems were installed in this project?

- 24 detection systems. 23 active systems and 1 passive system (not able to get radar at passive)
- This cost about \$600k out of total project cost (\$25k per location)

### How do the detection systems work?

- Radar activated sign flashes when vehicle enters ramp the wrong way
- A camera takes a picture of the wrong way vehicle
- Second radar verifies that driver continued down ramp
- Alert is sent to RIDOT TMC, State Police, and local police with picture of vehicle and location

## CRASHES BEFORE AND AFTER AT RAMPS WITH DETECTION SYSTEMS

### From Jan 2010 to May 2015 (64 months)

- 16 crashes
- 23 injuries
- 8 fatalities (7 fatal crashes)
  - 3 crashes/year average
  - 4.3 injuries/year average
  - 1.5 fatalities/year average

### From May 2015 to July 2022 (85+ months)

- 626 incidents captured
- 1 crash (reported)
- 1 injuries
- 0 fatalities

### What else did the project include?

- Total project construction cost: \$2 million
- Included improvements to every limited access off-ramp in the state
  - Signing – additional bigger/brighter Wrong Way signs. Lowered the mounting height of signs to eye level of driver (7' to 4')
  - Striping – lane use arrows and intersection control to guide vehicles to the proper ramp
  - Bi-directional arrows – reflect red in wrong direction and white in proper direction
  - Signal modification – straight arrows on signals to denote proper direction

### When did contract take place?

- Construction began in summer 2014 – substantially complete May 2015

### How are the detection systems working?

#### Need any improvements?

- The 24 TAPCO systems active since May 2015.
- 6 sites have been added since 2015. 30 active sites.
- Very successful – 626 captured incidents since deployment

### Any crashes in the WWD Detection locations?

- Only one of these incidents have resulted in a reported crash (no fatality)

### Crash data before and after?

- Occurrences include only reports of WWD to state police (does not include TAPCO alerts)
- Statewide data

