

# I-5 Variable Speed Limits and Lane Control

Washington State

TSM&O Category: [Active Traffic Management](#)

Project Team: Washington State DOT

**Problem:** Growth in travel in congested freeway corridors exceeds transportation agencies ability to provide sufficient roadway capacity.

**Solution:** Variable speed limit and lane control signs dynamically adapt to changing highway conditions to smooth traffic flow, manage demand and reduce congestion-related crashes.

**Project Description:** The project covers a 7-mile long section of I-5 northbound in Seattle and was activated August 10, 2010.

- 15 overhead gantries, spaced approximately ½ mile apart through the 7-mile project area.
- Gantries display dynamic speed limits, lane closures, merge arrows, warning information and variable messages.
- Speed adjustments are automated and based on measured changes from imbedded sensors.
- Lane control changes are human-initiated, but software automates the process of updating the signage and messages.
- Variable speed limits sign show a minimum of 40 mph, even if traffic is moving slower.
- Project has potential to improve congestion and safety

## Results:

- Positive public perception of the project.
- Well-covered on local news.
- A project performance report expected to be released within the next couple of months.

**Cost:** \$23.8 million for preliminary engineering and construction costs.

## What's in it for me?

- Lane control and speed harmonization may reduce fatality and injury crashes by 30 percent
- Speed harmonization effects may increase roadway capacities by approximately 5 percent.
- Information displayed on roadway gantries can reduce corridor travel times up to 20 percent

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**Keywords:** active traffic management, variable speed limits, congestion, safety, capacity

**Quote:** "Paying attention and responding to the signs makes the road safer for drivers and emergency responders. We are seeing drivers move out of the closed lanes, and that creates a safer buffer."

- Washington State Patrol Capt. Steve Burns

## Multimedia:

[Smarter Highways Video Simulation](#)

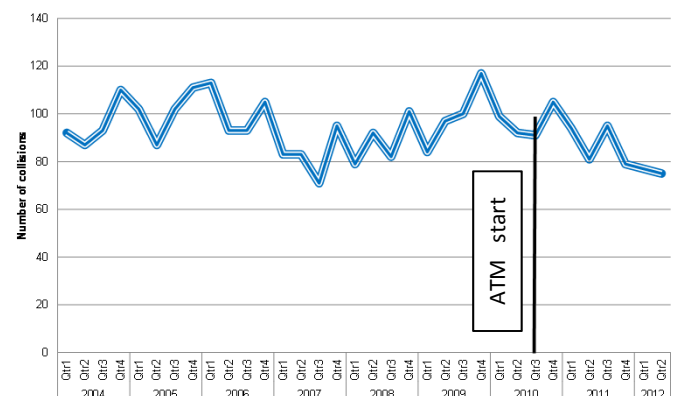
[I-5 Smarter Highways in Use with Disabled Semi-trailer](#)

[WSDOT Blog: Smarter Highways](#)



Source: Washington State Department of Transportation

## I-5 Smarter Highways: Preliminary Collision Data



Source: Washington State Department of Transportation