

What is TSMO? ODOT uses practical transportation systems management and operations (TSMO) solutions to address immediate safety and congestion problems.

Why Do We Need It? Ohioans expect to get to their destinations safely and on time. They want us to solve congestion problems right now.

## Project: I-90 Lake County

### Goal

Improve safety along a 12-mile stretch of Interstate 90 near Lake Erie which frequently experiences low visibility and white-out conditions due to Lake-effect snow. Adverse weather conditions cause multi-vehicle crashes resulting in closures and long delays.



### ✘ The Traditional Solution

Broadcast winter weather messaging on *OHGO.com* and roadway digital signs to notify motorists and hope that they adhere to safer driving speeds at their discretion.

### ✔ The TSMO Solution

Monitor road and weather conditions via cameras and weather sensor stations. Implement a variable speed limit based on conditions, and then communicate to motorists with dynamic message signs and Road Weather Information System stations.

## Results



# The Pay Off



0 fatalities or major pileups in this corridor



Reduced incident clearance time by 31 min.



Reduced secondary crashes by 25%



Improved safety on adjacent sections of I-90

## Crashes and Clearance Time: *Before and After*

	Before 2014-2016	After 2017-2019	Difference
Total Crashes	296	234	-21%
Crashes While Snowing	138	83	-40%
Incident Clearance Time	112	81	-31 Minutes
Days with Snow	99	114	15%

These positive safety improvements occurred even with an increase of 15% in snow events in 2017-2019.

## Travel Delay Costs: *Before and After*

	Before	After
User Delay Cost	\$2,128,804	\$364,281
Persons Hours of Delay	87,949	14,777

ODOT used TSMO solutions to make an unpredictable commute a safer one, while saving the motoring public time and money.