

ACTIVE TRAFFIC MANAGEMENT

Description

Active traffic management (ATM) uses a combination of congestion management techniques to dynamically manage traffic based on current and near-term expected conditions. Its goal is to maximize the efficiency of a road and the effectiveness of several strategies to delay the onset and intensity of traffic congestion. ATM strategies include:

- Variable Speed Limits.
- Temporary Shoulder Use.
- Queue Warning.
- Dynamic Merge Control.
- Adaptive Ramp Flow Control.
- Dynamic Truck Restrictions.
- Dynamic Rerouting & Traveler Information.

Used widely and successfully in Europe, ATM relies on technology to detect current conditions and automatically deploy these strategies. These strategies have proven to be very effective at delivering the lowest congestion level for the system and can be combined with managed lanes to better optimize performance.

Target Market

- Freeways or roads experiencing frequent daily congestion.
- Areas susceptible to adverse weather conditions, bottlenecks, or crashes.

How Will This Help?

- Improve safety through a reduction in crashes during congestion and adverse weather conditions by adjusting traffic speed and flow and providing drivers with real-time information.
- Delay onset of congestion by increasing capacity allowing traffic to flow smoothly and efficiently and improving travel time reliability.
- Provide environmental benefits through decreased emissions, noise, and fuel consumption.
- Relatively low cost to install and maintain.

Success Story

Several countries in Europe have used ATM for years and reaped the benefits. ATM strategies have been shown to increase overall capacity by up to 22 percent, throughput by up to 7 percent, and reduce crashes and secondary incidents by up to 30 percent and 50 percent, respectively. Onset of traffic congestion is delayed and trip times are more reliable.



Cost:	●●○○○
Time:	Moderate
Impact:	Corridor
Who:	State
Hurdles:	Public Support, Right-of-Way, Operations

Implementation Issues

Since most all ATM techniques are new to the United States, public acceptance and understanding is critical to their success. In some, additional right-of-way may be required for overhead gantries, additional lanes and shoulders, or on-ramps. Acquiring this extra space may be difficult. Many of these strategies must seamlessly work in unison with one another, often requiring automated deployment and vigilance from operators to manually adjust the system when necessary to maximize the benefit for drivers.