# Smart Work Zone Systems

WSDOT

**TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS TOOLS**

**Transportation Systems Management & Operations, or TSMO, focuses on cost-effective strategies that prioritize the safety, access, and reliability of the multimodal transportation system.**

PLANNING AND POLICY DEVELOPMENT

**TRANSPORTATION OPERATIONS**

COOPERATIVE AUTOMATED TRANSPORTATION & TECHNOLOGY

**INTELLIGENT TRANSPORTATION SYSTEMS (ITS)**

TRANSPORTATION DEMAND MANAGEMENT

**Transportation Operations** focuses on moving people and goods safely and efficiently. Proactive signal timing is a key operations strategy for corridor traffic management.

**ITS** refers to the integration of advanced communications technology into the transportation infrastructure, like proactive signal timing, that enhances mobility and safety across all modes.

## What is a Smart Work Zone System?

To address anticipated work zone-related queuing and associated delay and safety risks, adopting a smart work zone system can be used to mitigate the effects of temporary traffic closures. Examples of elements can include one or more of the following:

- Basic Work Zone Presence
- Travel Time Delay Monitoring
- Travel Time Delay and Alternate Route Information
- Traffic Queue Detection
- Traffic Queue Warning
- Variable Speed Limits
- Zipper Merge (Late Merge) with Messaging

**BENEFITS:**

- Reduce queueing due to work zone activity
- Travel time savings
- Congestion management
- Safety improvements
- Extended closure allowed work to be completed in one season



## Case Study

# I-5 Southbound: Woodland Smart Work Zone System

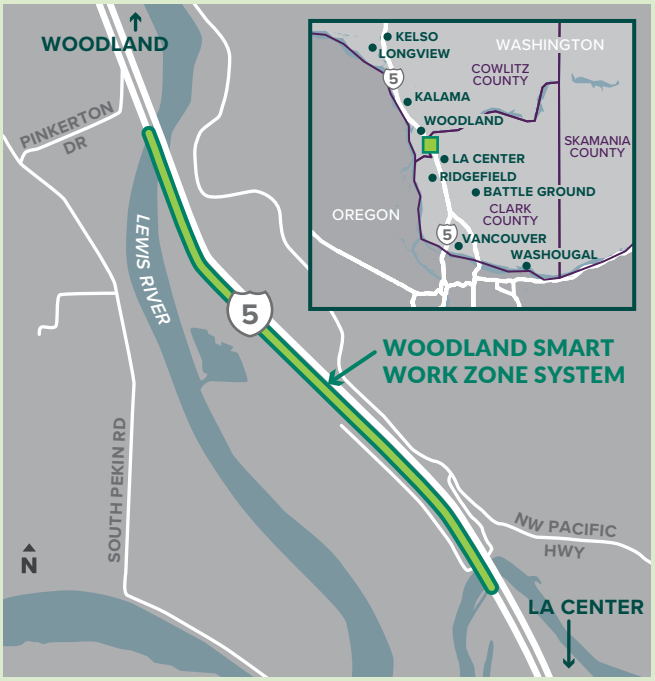
*Clark County, Washington*

### THE PROBLEM:

Project staging required southbound traffic to be reduced to two lanes during daytime hours and to one lane during nighttime operations, for 21 days.

This long-term, stationary lane closure included this Work Zone System:

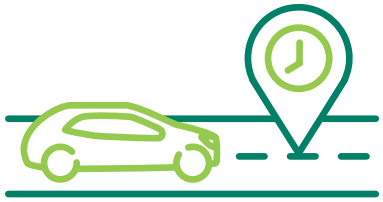
- **Travel Delay Information** provided motorists with the most accurate real-time delay available.
- **Traffic Queue Warning** to alert motorists upcoming traffic backups – especially in the case of sight distance restrictions.
- **Zipper Merge (Late Merge)** was encouraged through messaging in advance of the merge and at the merge point.




### TRENDS:

**$5.5M+ SAVED**

**EARLY COMPLETION: FINISHED THE PROJECT 6 DAYS EARLY (15 DAYS INSTEAD OF 21), SAVING $928,000 PER DAY**



**KEEPING 'EM ROLLING: TRAVEL TIMES WERE BETTER THAN EXPECTED, BOLSTERED BY THE ROLLING QUEUE.**

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**SAFETY IS KEY: ZERO INJURIES—WORKERS OR ROAD USERS—DURING THE PROJECT.**

**QUESTIONS? CONTACT:**

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**TO LEARN MORE ABOUT TSMO VISIT:** https://tsmowa.org