The background is a solid blue color with a subtle sunburst or lens flare effect emanating from the top center, creating a gradient of light and dark blue tones.

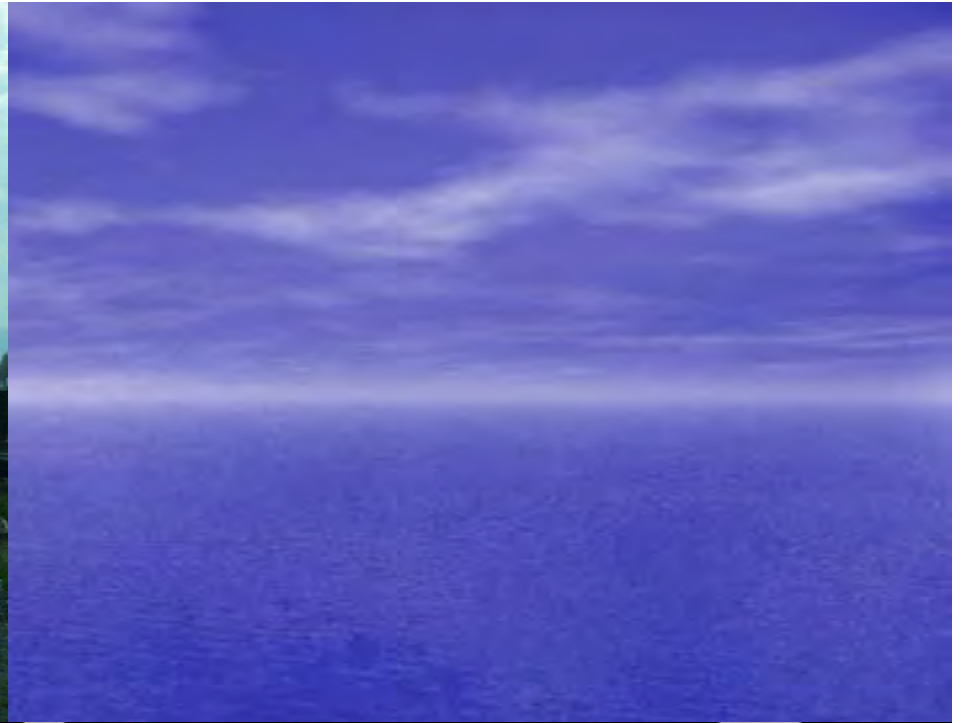
Work Zone ITS Devices The WSDOT Experience



Low-Tech Work Zone Devices

- Portable Changeable Message Signs
- Portable Highway Advisory Radio
- Over height Detection
- Intrusion Alarms
- Portable Signal Systems
- Automated Flagger Assistance Devices



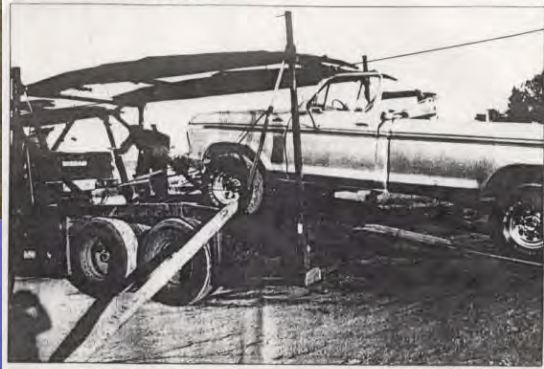


Portable HAR Systems





Trucks' tops popped



Pickup damaged in Interstate 5 accident in Tumwater is reloaded into an auto carrier Tuesday.

High load rams freeway overpass

By Mark Baumgartner
Olympian staff writer

State officials and a husband-and-wife trucking team say they are confused about why a semi truck carrying automobiles destined for Seattle scraped the bottom of a pedestrian overpass in Tumwater after apparently clearing even shorter heights on Interstate 5 between there and Portland, Ore.

Marion Petersen and her husband Steve were hauling the seven load vehicles to a Seattle auction when the top of their load was sheared Tuesday morning by the bottom of the new pedestrian freeway overpass south of Trooper Road. State inspectors measured the Petersen's load after the accident and found it exceeded the legal height limit of 14 feet from top of the load to the road, said Sgt. Charlie Schreck.

The Petersens said this morning that they left Portland without measuring the height of their load.

"We relied on the weigh station at Woodland to tell us if we were over the limit," said Marion Petersen, who lives with her husband in Vancouver, Wash. "We're fully responsible for the load," she said. "But they're supposed to tell us if the load's not safe."

The Petersens said they were baffled about why an overpass with a clearance listed as 14 feet five inches would knock the top off their load when they had passed under numerous other overpasses, some lower than 14 feet high.

See High load/back ne...



11/1/2004

Overheight Vehicle Detection



Intrusion Alarms

Portable Signal System





Automated Flagger Assistance Device (AFAD)



Intelligent Devices

- Smart work zone devices
- Dynamic Lane Merge
- Queue Detection System
- Travel Time Estimation System
- Speed trailers
- Variable Speed Limit
- Work Zone Photo Enforcement

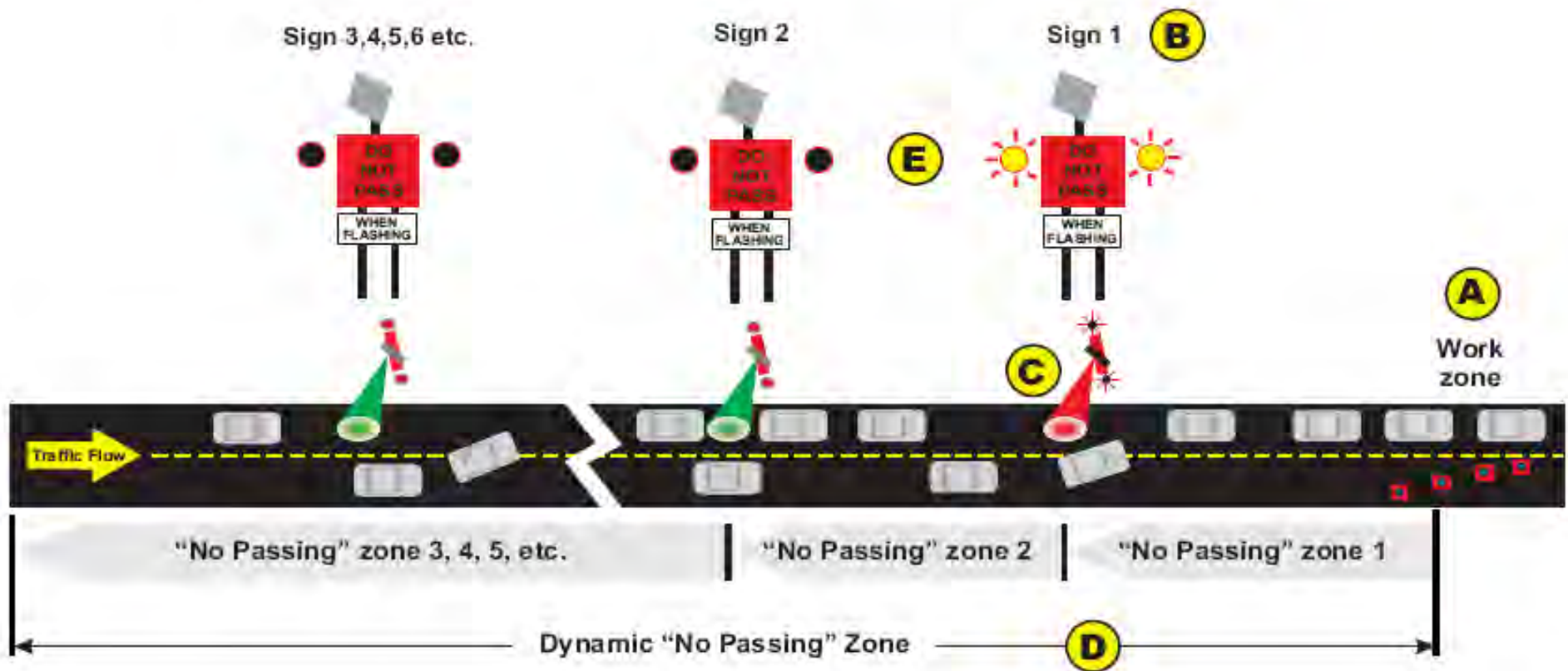


Smart Work Zone – Portable Traffic Management System



Video Trailer





- A** Construction work creates a lane restriction on a two lane, one direction roadway.
- B** The Dynamic Work Zone Safety System creates a dynamic "No Passing Zone" just in advance of the lane restriction. The traffic sensors, which are non-intrusive, are mounted on the sign structure and used to detect traffic queue lengths. Sign #1 is always activated to warn of the lane restriction.
- C** When vehicle congestion is detected at Sign #1, the second warning sign is automatically activated. When vehicle congestion is detected at Sign #2, the third warning sign will be activated, and so on.

- D** The "No Passing Zone" is dynamic. Each "No Passing" sign is automatically activated/deactivated in sequence as changing conditions in vehicle congestion are detected by the traffic sensors.
- E** Activated signs have flashing lights and display a warning message. Non-activated signs remain blank with the lights turned off.

Anyone attempting to pass the waiting traffic queue and then invading the traffic stream near the taper would be subject to a traffic citation, since the "No Passing Zone" sign is an enforceable regulatory sign.

Dynamic Lane Merge System





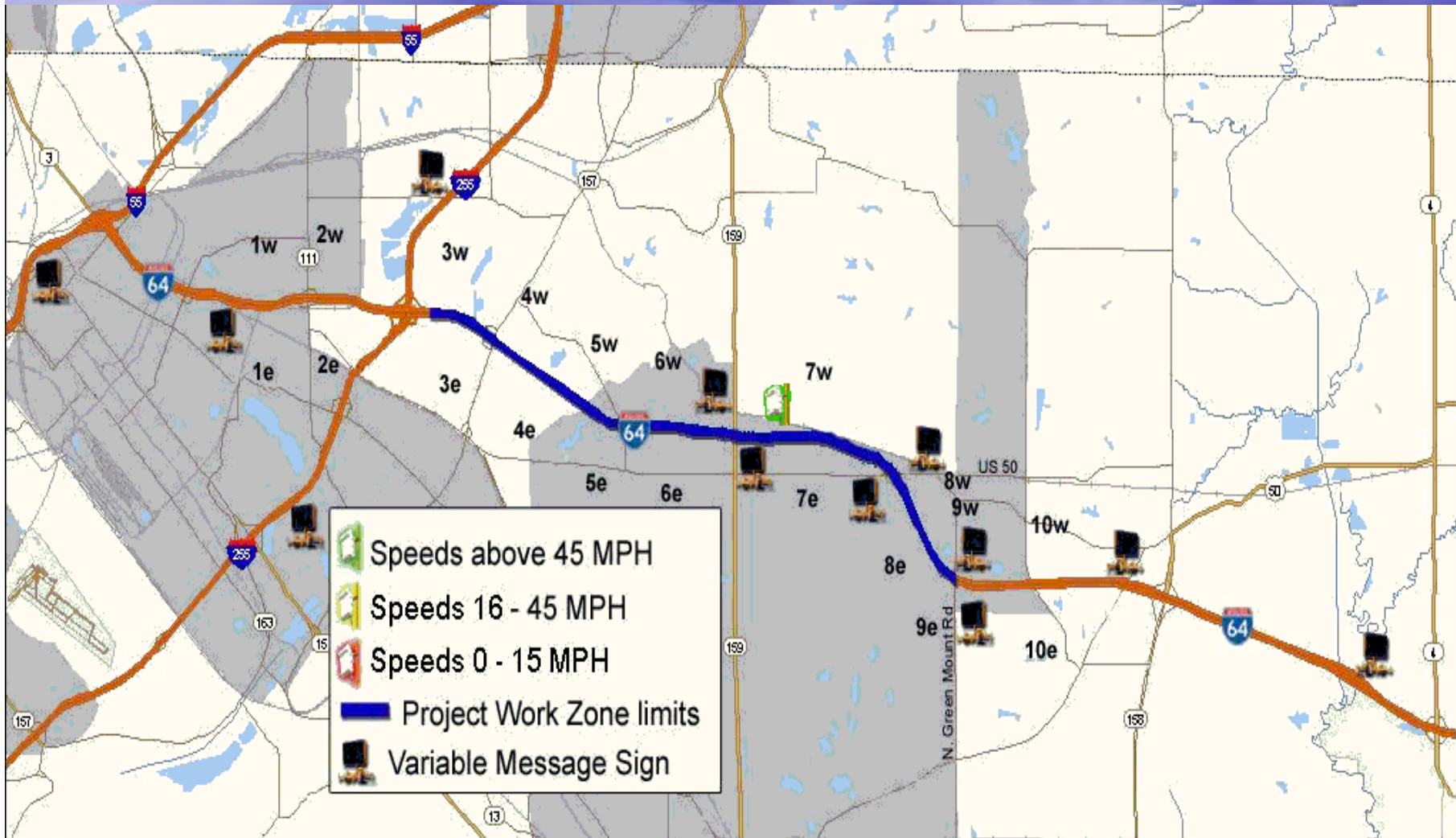
Queue Detection System

Typical Queue

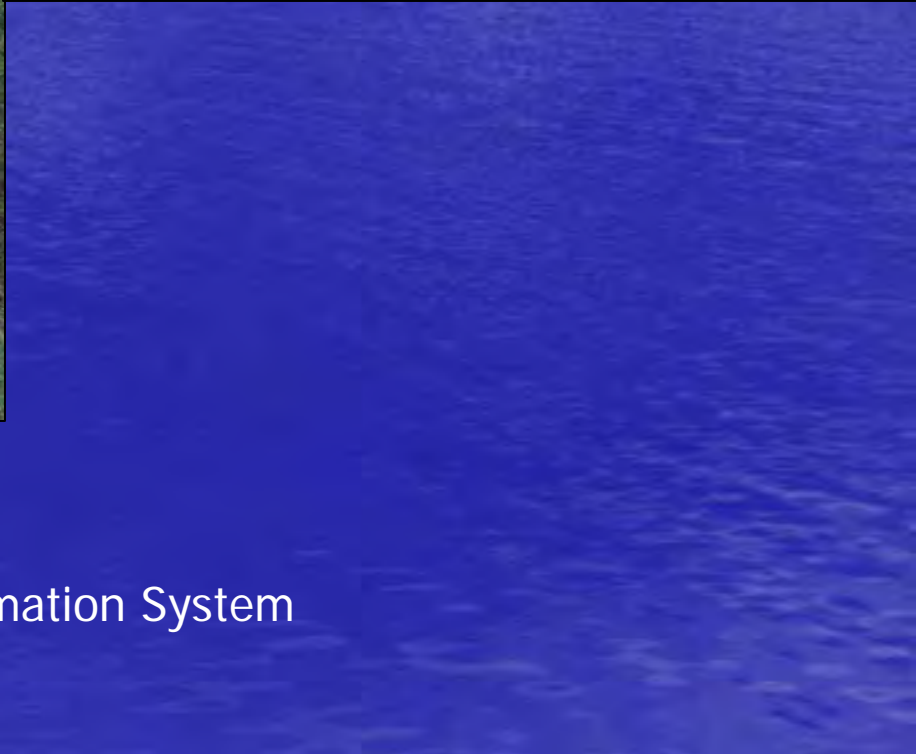


Drivers see this first ...





Illinois DOT – I-64 Add Lane Project – Travel Management System



Travel Time Estimation System



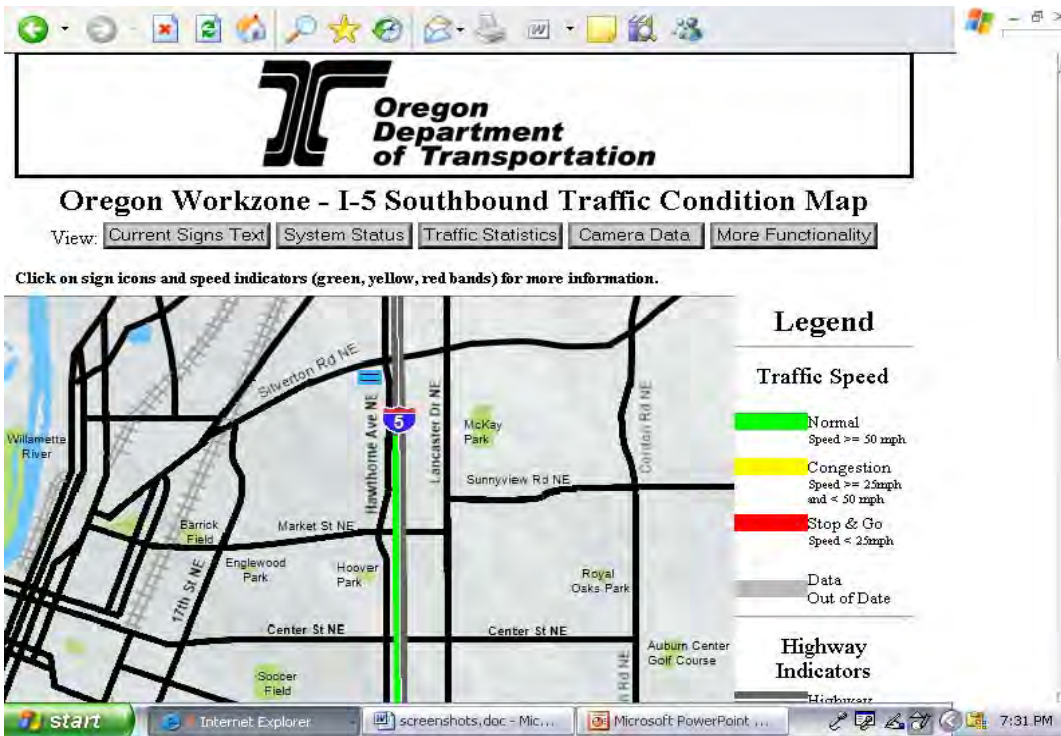
Arizona Route 68 License Plate reader used to measure travel time



Illinois DOT I-55 Bridge Construction
Real Time Work Zone Traffic control system

- 8 Portable traffic sensors
- 17 remotely controlled DMS
- 4 Portable camera systems
- All systems linked to central base

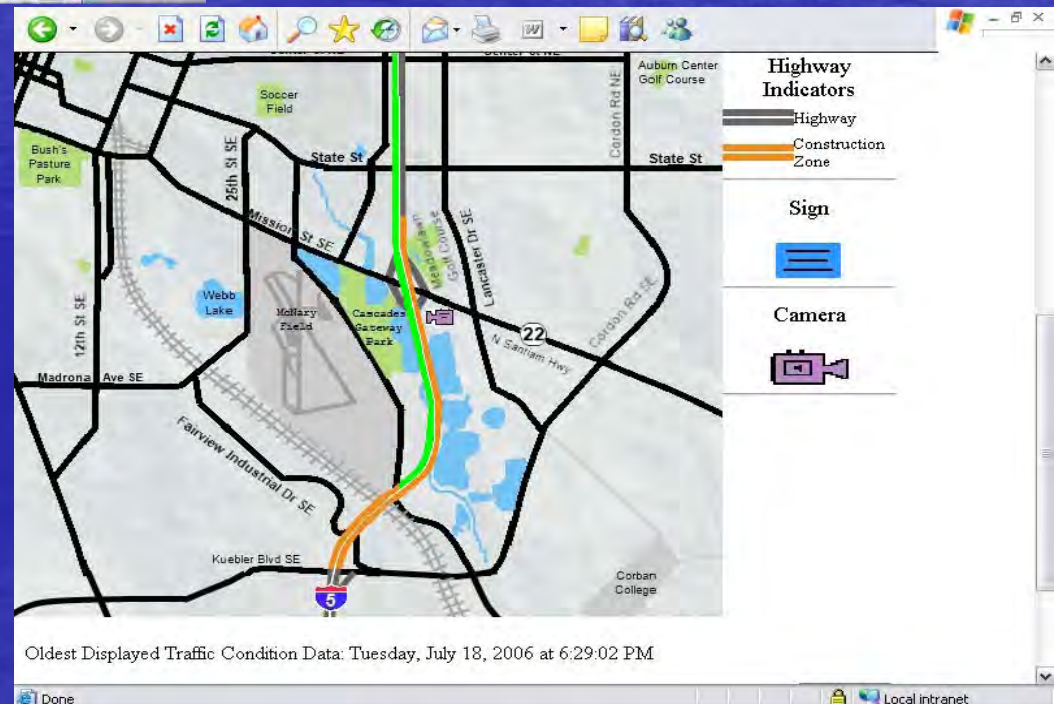




Oregon DOT – Travel Time Monitoring Project

Project Goals

- Monitor travel time through the Work zone using side-fired sensors and AVI transponders
- Measure delay through the work zone
- Measure traffic volumes, speed, roadway occupancy and patterns
- Estimate corridor travel time and provide this information to drivers



Speed Management and Enforcement

Variable speed limits
Automated enforcement



iCone

- Easily deployable and movable
- Provides speed data
- Locates itself using GPS
- Available via the Internet in realtime
- Implications of devices like this:
- Easier to collect WZ performance data
- Can be used in short duration situations
- Still being evaluated by WSDOT





Speed Display Trailer – used on WSDOT/WSP 555 Pilot project



Lewis County District Court
 PO Box 600
 Chehalis, WA 98532-0600
 360-740-1203

NOTICE OF INFRACTION

NOTICE # 116080004609
 PIN # 8812

This infraction will not be a part of your driving record and will be processed as a parking infraction.

Amount Due: \$137.00
 Due Date: 10/27/2008

CASTIO ADRIANA E
7605 MARKET BLVD #33
 CHEHALIS, WA 98532-4139

INFRACTION SPEEDING - RCW 46.61.400					
VIOLATION DATE 10/01/2008		VIOLATION TIME 01:16 PM		FINE AMOUNT \$137.00	
VEHICLE PLATE # 9- 0000				STATE WA	
YEAR 1998	MAKE HONDA	MODEL ACD	STYLE 4D	COLOR PURPLE	
LOCATION NB INTERSTATE 5 BETWEEN MP 75 AND 76, Lewis County, WA			POSTED 60 mph	ACTUAL 71 mph	
REGISTERED OWNER CASTIO ADRIANA E 000000					
DEFENDANT CASTIO ADRIANA E 000000					
STREET ADDRESS 0000 MARKET BLVD #33					
CITY CHEHALIS		STATE WA	ZIP 98532-4139		
I certify as true and correct under penalty of perjury under the laws of the State of Washington that, based upon my review of photographs made by an automated traffic camera, I have probable cause to believe, and do believe, that on the date and at the time and location indicated above, the operator of the vehicle described above was in violation of RCW 46.61.400 (SPEEDING) . The images show the vehicle and its license plate, portray a fair and accurate representation of the location listed above and show that the vehicle operator was driving with a speed over the speed limit posted. The registered owner of the vehicle is named above.					
OFFICER CADET MATT ROGERS		BADGE # 7070	ISSUE DATE: 10/08/2008		



Detach here and return bottom portion with you payment

You must respond no later than midnight of the **DUE DATE** by one of the following methods:

1. PAY THE \$137.00 PENALTY (see back for payment options); OR
2. REQUEST A MITIGATION HEARING TO EXPLAIN THE CIRCUMSTANCES (see back for explanation of hearing); OR
3. REQUEST A HEARING TO CONTEST THE INFRACTION (see back for explanation of hearing); OR
4. SUBMIT A DECLARATION OF NON-RESPONSIBILITY (see back)

This notice represents a determination that a speed limit zone violation has been committed. This determination will be final unless you request a mitigation or contested hearing or submit a declaration of non-responsibility within 15 days.



NAME: **CASTIO ADRIANA E** DUE: 10/27/2008
 NOTICE #: 116080004609 VERSION: 1 ISSUED: 10/08/2008
 PLATE: 943-**0000** STATE: WA TYPE: Regular Passeng

This response must be mailed no later than midnight of the Due Date

Lewis County District Court
 Law & Justice Center, 3rd Floor
 PO Box 600
 Chehalis, WA 98532-0600



WSDOT ITS Application Top 3 Priorities

- Dynamic Lane Merge System - The system is intended to improve work zone capacity and reduce crashes, (studies show minimal improvement) but it's greatest value may be the merge control or direction it provides drivers approaching the lane closure.
- Queue Detection System - a portable device that utilizes a microwave detector that is able to detect changes in traffic flow, and send out an alarm to advance signs to warn motorists if a backup is forming.
- Work Zone Traffic Management - this concept can employ several technologies and is slowly starting to move ahead on some projects, but requires some detailed advance planning and design. A practical example might be to combine temporary work zone ITS with permanent ITS managed through the region TMC.

WORK ZONE SAFETY

WORK ZONE SAFETY

- [Work Zone Home](#)
- [Training Information](#)
- [Drivers Education](#)
- [Resources](#)
- [Work Zone ITS](#)
- [Work Zone Safety Task Force](#)
- [Traffic Control Oversight Committee - TCOC](#)
- [Contacts](#)
- [FAQ](#)

RELATED TOPICS

- ["Give 'em a Brake"](#)
- [Safety Industry Links](#)
- [WSDOT Safety Office](#)
- [Automated Traffic Safety Cameras](#)
- [Flagger Safety Rules](#)

Copyright WSDOT © 2007

[Traffic & Roads](#) | [Search](#) | [Contact WSDOT](#) | [WSDOT Business](#) | [WSDOT Home](#)

What is a Work Zone?

A **work zone** is an area of a highway with construction, maintenance, or utility work activities. A work zone is typically marked by signs, channelizing devices, barriers, pavement markings, and/or work vehicles. It extends from the first warning sign or rotating/strobe lights on a vehicle to the END ROAD WORK SIGN or the last temporary traffic control device.



- [National Work Zone Memorial Wall](#)
- [Roadway Worker Memorial Scholarship Program](#)



Questions?