

## Problem

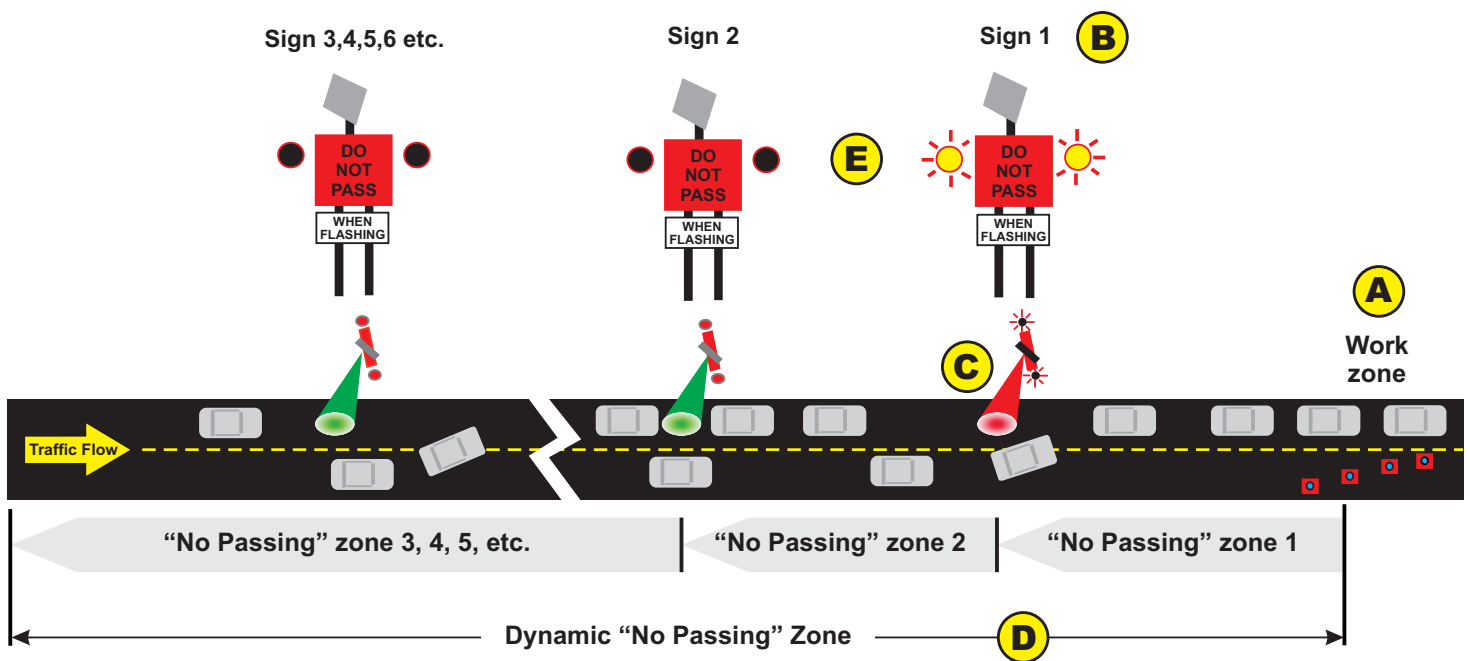
The Dynamic Work Zone Safety System is a traffic control product for construction work zones. This Intelligent Transportation System (ITS) assists in the prevention of dangerous merging which occurs on the tapered approaches to work zones.

Frequently, aggressive drivers pass other motorists in the lane merge area, invading the traffic stream near the taper

in order to gain a slight time advantage. This dangerous practice has become quite common and is considered to be a significant cause of work zone accidents, even deaths.

The Dynamic Work Zone Safety System assists in the prevention of these types of incidents by establishing a dynamic no-passing zone based on vehicle queue lengths.

## Solution



**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 Work Zone Safety System

## Operation

- Traffic sensors detect long vehicle queues
- Dynamic “no passing” zone created using trailer-mounted signs
- System utilizes standard off-the-shelf technologies
- Infractions can be enforced with traffic citations

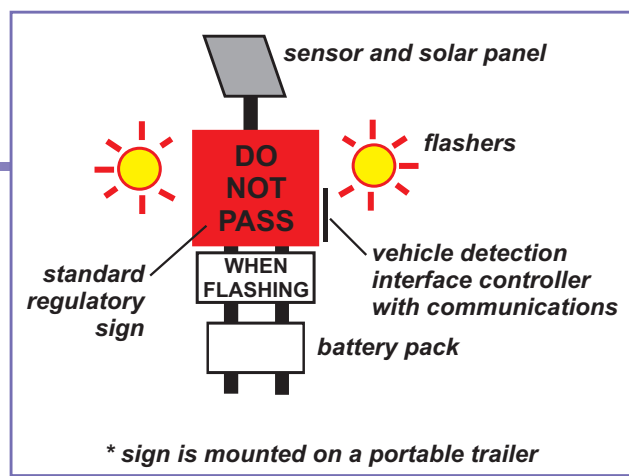
## Benefits

- Safer work zones
- Assists in the prevention of dangerous merging
- Reduces accidents
- Reduces “driver rage”
- Smooths the traffic flow and reduces congestion

## Components

- Non-intrusive traffic sensors
- Interface controllers
- Software license
- Communication devices \*
- Regulatory signboard with flashers and trailer
- Solar power equipment and batteries

\* Note: Line of sight is a requirement of the communications devices (i.e. each communications antenna needs to be within view of the other)



*International Road Dynamics, Inc. (IRD) is a highway traffic management products and systems technology company operating in the worldwide Intelligent Transportation Systems (ITS) industry.*

*IRD's engineers are experts in the design and supply of traffic control systems, Weigh-in-Motion (WIM) systems, automated truck weigh station systems, toll road systems, advanced traffic data collection systems, and freeway management systems. IRD is registered with the ISO 9001 Quality Control program and is committed to "Total Quality" in all areas of expertise, from design and development to manufacturing and installation to long-term service. IRD services range from equipment supply to provision of fully integrated turnkey systems and long term operation, management and service support.*



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