Work Zone, Incident Scene and Traffic Safety Alerts

PURPOSE

Leveraging V2X systems and Connected Vehicles provides drivers and emergency response personnel with warnings for work zone and incident scene incursions. Audible warnings to those working at an incident scene can provide notice to take a protective position in order to limit the risk of deaths, injuries, and property damage. Connected Vehicle drivers receive work zone and traffic incident alerts to facilitate a safe and slowed approach where responders and transportation workers are present.

The use of CV technology to alert and direct traffic approaching roadside or roadway incidents will contribute to saving lives, reducing injuries, and protecting property. These compelling traffic safety incident management objectives are detailed in standards such as the Standard for Traffic Control Incident Management Professional Qualifications (NFPA 1091), the Standard on Fire Department Occupational Safety and Health Program (NFPA 1500), 1500), and the USDOT Manual on Uniform Traffic Control Devices (advance warning, transition, activity, and termination areas).

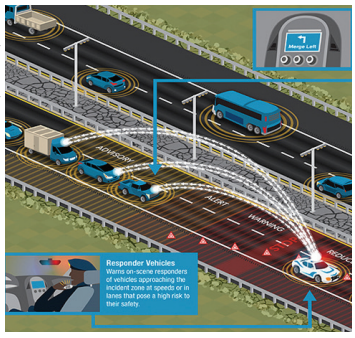
BENEFIT

Work Zone, Incident Scene and Traffic Safety alerts reduce incursions by inattentive drivers which result in deaths, injuries, and property damage, warn emergency personnel and transportation workers who are unprotected when an incursion is eminent, and mitigate the risk of secondary and tertiary incidents that require additional resources to manage and resolve.

> Effective traffic control is one of the most important factors to ensuring the safety of emergency responders on the scene of roadside and roadway incidents.
>
> "Best Practices for Emergency Vehicle and Roadway Operations Safety in the Emergency Services." International Association of Fire Fighters, AFL-CIO, and United States of America. (2010).

USE CASE

A fatal multi-vehicle interstate traffic accident is being worked by a team of Connected Responders (police, fire, EMS, traffic management, and towing/recovery services).



USDOT, ITS JPO, 2016

Approaching vehicles are warned of the incident via Connected Vehicle alerts and messages. An approaching vehicle operated by an impaired driver begins to drift out of the travel lane and onto the shoulder without braking. A collision with Connected Responder vehicles and personnel out of their vehicles is imminent. An audible warning is broadcast to all responders on the scene, allowing them a few seconds to take protective action. The alarms and warnings limit the impact of the collision to property damage with no additional injuries or loss of life.

FOR MORE INFORMATION

Transportation Safety Advancement Group (TSAG): www.tsag-its.org; Intelligent Transportation Systems Joint Program Office: www.its.dot.gov; ITS America: itsamerica.org

Players: All Responders and Public

Priority: High

Integration: Technology could leverage V2X communications to alert other pedestrians and dismounted vehicle operators (and response personnel) through integrated vehicle warning systems (horns, sirens, sensors, etc.).

16%

of law enforcement officers in Iowa report being struck or nearly struck while on the roadside over a three year period.

(Law Enforcement Officer Motor Vehicle Safety Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, November 2014)

According to FBI Law Enforcement Officers Killed and Assaulted reporting, **124 law enforcement officers struck and killed by motor vehicles** from 1998-2007 – **50** during a traffic stop, roadblock, **74** while directing traffic, assisting motorist, etc.

Nearly half of roadside incidents occurred during a traffic stop.

(Law Enforcement Officer Motor Vehicle Safety Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, November 2014)

TSAG
TRANSPORTATION SAFETY ADVANCEMENT GROUP
Promoting Technology for Public Safety

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