



RESEARCH PROJECT CAPSULE [16-1SA]

August 2016

TECHNOLOGY TRANSFER PROGRAM

Highway Construction Work Zone Safety Performance and Improvement in Louisiana

JUST THE FACTS:

Start Date:
July 1, 2016

Duration:
24 months

End Date:
June 30, 2018

Funding:
SPR: TT-Fed/TT-Reg

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Department of Transportation and
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POINTS OF INTEREST:

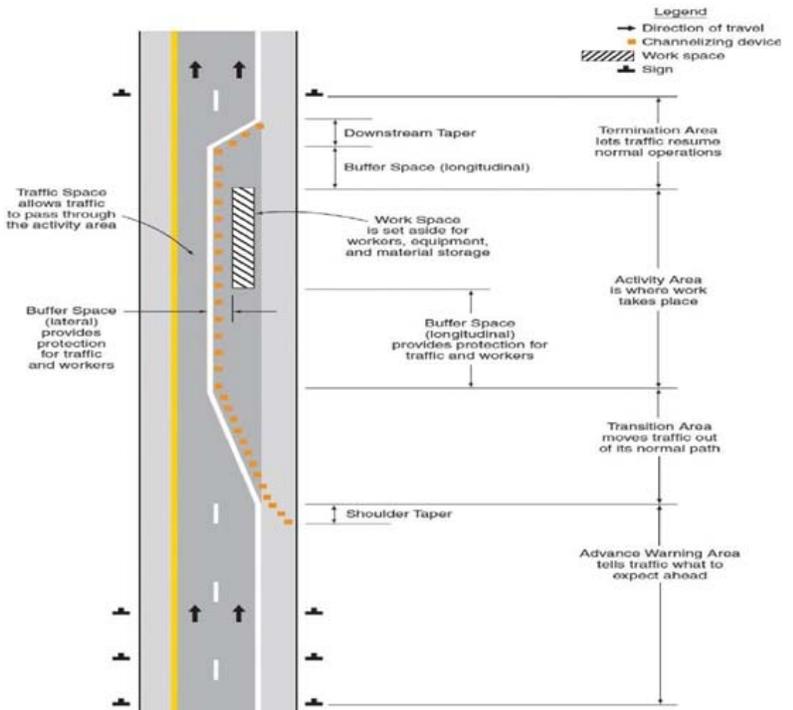
Problem Addressed / Objective of
Research / Methodology Used
Implementation Potential

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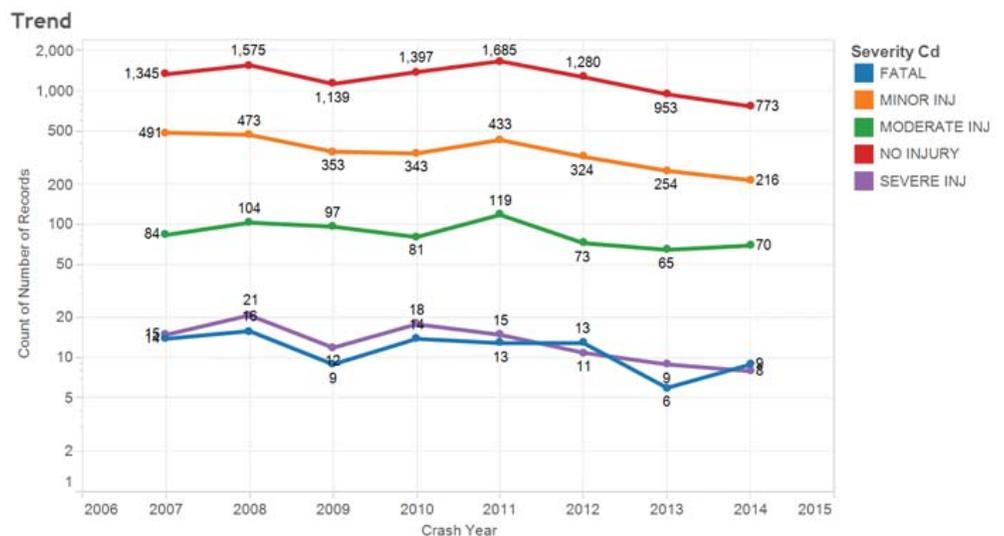
PROBLEM

While the number of crashes in Louisiana construction work zones has decreased in recent years, the total count of work zone crashes is still significant, warranting research into how to reduce crashes. An assessment of risk factors begins with a review of collected data. There are several issues that need to be studied to assure that work zone crashes are accurately and consistently reported.

Work zones are defined by the placement of warning signs. According to crash manual procedures, a crash within a work zone is marked that way on the crash report whether workers are present or not. Since several weeks may occur between the completion of construction work and the removal of warning signs, not all crashes marked as within a work zone may actually be related to work zone activities or hazards.



Components of a temporary traffic control segment in a work zone



Trend in work zone crashes in Louisiana

While all crashes can be reviewed based on coded factors (manner of collision, weather condition, etc.), determination if a crash is truly work zone related often requires review of the crash report narrative. It is also important to consider crashes that occur in the approaches to work zones, as they may be due to traffic queues waiting to proceed through a work zone.

OBJECTIVE

The overall goal of this research is to improve work zone safety management. The specific goal of this research project is to provide information about work zone crashes and how they are reported. The analysis of work zone crashes can be used by the Louisiana Department of Transportation and Development (DOTD) and other agencies for more effective and efficient safety management of work zones.

METHODOLOGY

The primary focus of the literature review for this research will be on how other states define work zones and how work zone crashes are reported. Current practices for work zone crash reporting will be compiled.

Crash reports typically include coded factors for driver and road information, a narrative, and a drawing. Summaries and analyses of coded factors are common, but to better understand causes of work zone crashes, narratives and drawings must be reviewed. Based on detailed analysis of the narratives and drawings, factors may be identified that are not apparent from analysis of coded factors alone.

A sample of work zones will be selected and crashes within these work zones and approaches will be reviewed to identify crash patterns. The researchers will attempt to identify under what circumstances work zone crashes are underreported. The research team will also review documented work zone configurations.

The research team will prepare recommendations for better data collection and identification of key characteristics affecting work zone crashes that can be used to design a program to reduce crashes in work zones.

IMPLEMENTATION POTENTIAL

A guide of detailed best practices will be developed. More detailed knowledge of work zone crash characteristics will benefit DOTD with its targeted approach to work zone safety.