

Work Zone Crashes: Some Additional Insights



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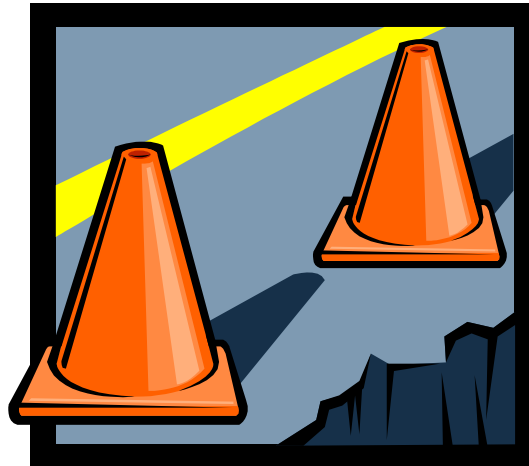
**2004 Roadway Work Zone Safety
Conference and Exposition**

Baltimore, MD

November 4, 2004

Topics

- Data Inconsistency Between Jurisdictions
- “Influences” of Work Zone Crashes
- Effects of Night Work on Crashes



Work Zone Identification on Police Crash Report Forms - Explicit

Constr. Yes Speed
Zone No Limit _____

Constr. Yes Speed
Zone No Limit _____

TEXAS PEACE OFFICER'S ACCIDENT REPORT ST-3 (REV. 1/17/96) MAIL TO: ACCIDENT RECORDS, TEXAS DEPARTMENT OF PUBLIC SAFETY, PO BOX 4067, AUSTIN TX 78773-0067

PLACE WHERE ACCIDENT OCCURRED
 COUNTY _____ CITY OR TOWN _____ HOW MANY MILES CITY LIMIT
 IF ACCIDENT WAS OUTSIDE CITY LIMITS, INDICATE DISTANCE FROM NEAREST TOWN. MILES NORTH S E W OF CITY OR TOWN

ROAD ON WHICH ACCIDENT OCCURRED
 INTERSECTING STREET OR HWY X'ING NUMBER
 NOT AT INTERSECTION YES NO OTHER OTHER

CONSTR. YES SPEED ZONE NO LIMIT
 CONSTR. YES SPEED ZONE NO LIMIT

DATE OF ACCIDENT: _____ TO _____ DAY OF WEEK _____ HOUR _____ A.M. IF EXACTLY HOUR OR P.M. OR MINUTES, 20 STATE

UNIT 1: MOTOR VEHICLE VEH IDENT NO _____ IF BODY STYLE = VAN OR BUS, INDICATE SEATING CAPACITY

YEAR _____ COLOR _____ MODEL _____ BODY _____ LICENSE _____
 DRIVER'S NAME _____ SEX _____ OCCUPATION _____
 DRIVER'S LICENSE _____ RACE _____ SEX _____ OCCUPATION _____
 SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSIS) ALCOHOL/DRUG ANALYSIS RESULT _____ PEACE OFFICER, EMS DRIVER, FIRE FIGHTER OR EMERGENCY? YES NO

LIABILITY YES NO INSURANCE COMPANY NAME _____ POLICY NUMBER _____ VEHICLE DAMAGE RATING _____

UNIT 2: MOTOR VEHICLE TRAIN PEDESTRIAN OTHER VEH IDENT NO _____ IF BODY STYLE = VAN OR BUS, INDICATE SEATING CAPACITY

YEAR _____ COLOR _____ MODEL _____ BODY _____ LICENSE _____
 DRIVER'S NAME _____ SEX _____ OCCUPATION _____
 DRIVER'S LICENSE _____ RACE _____ SEX _____ OCCUPATION _____
 SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSIS) ALCOHOL/DRUG ANALYSIS RESULT _____ PEACE OFFICER, EMS DRIVER, FIRE FIGHTER OR EMERGENCY? YES NO

LIABILITY YES NO INSURANCE COMPANY NAME _____ POLICY NUMBER _____ VEHICLE DAMAGE RATING _____

SAMAGE TO PROPERTY OTHER THAN VEHICLES

WEATHER _____ SURFACE CONDITION _____ TYPE ROAD SURFACE _____ DESCRIBE ROAD CONDITIONS (INVESTIGATOR'S OPINION)

LIGHT CONDITION _____

IN YOUR OPINION, DID THIS ACCIDENT RESULT IN AT LEAST \$500.00 DAMAGE TO ANY ONE PERSON'S PROPERTY? YES NO

CHARGES FILED

NAME _____ CHARGE _____ CITATION NUMBER _____
 NAME _____ CHARGE _____ CITATION NUMBER _____

TIME NOTIFIED OF ACCIDENT _____ M HOW _____ TIME ARRIVED AT SCENE OF ACCIDENT _____ M

TYPED OR PRINTED NAME OF INVESTIGATOR _____ DATE REPORT MADE _____ IS REPORT COMPLETE? YES NO

SIGNATURE OF INVESTIGATOR _____ ID NO _____ DEPARTMENT _____ DIST / AREA _____

Work Zone Identification – Indirectly by Road Condition

- 01 No Defects
- 02 Obstruction With/Without Warning
- 03 Road Under Repair/Construction
- 04 Loose Surface Materials
- 05 Shoulders – Soft/Low/High
- 06 Holes/Ruts/Unsafe Paved Edge
- 07 Standing Water
- 08 Worn/Polished Road Surface
- 77 All Other (Explain)

Work Zone Fatalities by Type of Crash Report Form Used (FARS)

Type of Crash Report Form Used	% Fatalities Occurring in a Work Zone
Explicit Work Zone Field on Form (21 states)	2.7 %
Road Repair/Construction Code in a Road Condition Field(24 states)	2.3%
Work Zone Identified by Officer in Narrative (5 states)	2.2%

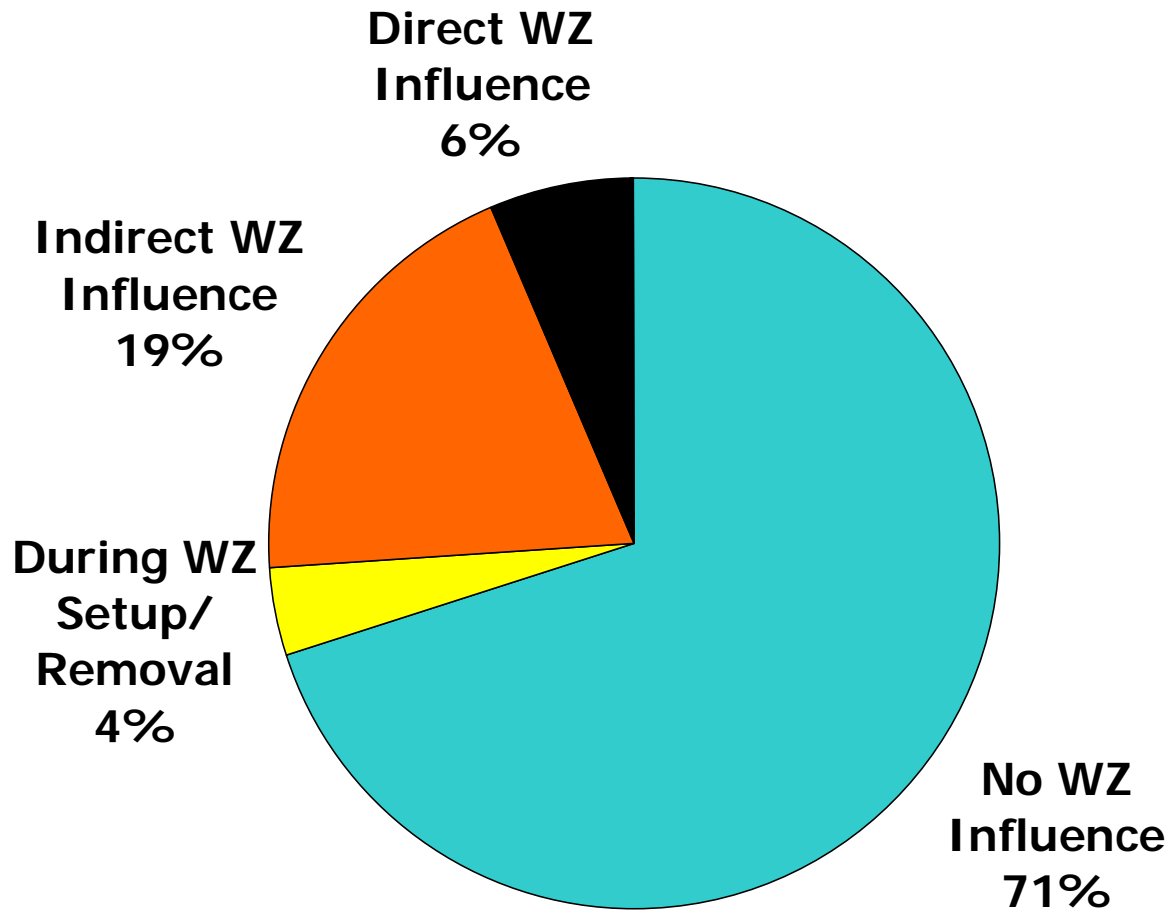
Implications upon Fatal Work Zone Crash Statistics

- 10 percent underreporting per year
- \approx 100 additional work zone fatalities annually not being reported

Work Zone Crash “Influences”

- Work zone features that are in the crash chain-of-events
- Not the same as causation
- Requires work zone details to be collected and collated with crash data

Influence Categories



Direct WZ Influences

- Pavement edge drop-offs
- Signing and channelizing device deficiencies
 - Missing or misaligned
 - Confusing

Indirect WZ Influences

- Elimination of shoulders
- Converting divided roadways to two-lane, two-way operations
- Loss of edge line guidance during resurfacing
- Creation of dust clouds or other distractions

Working at Night

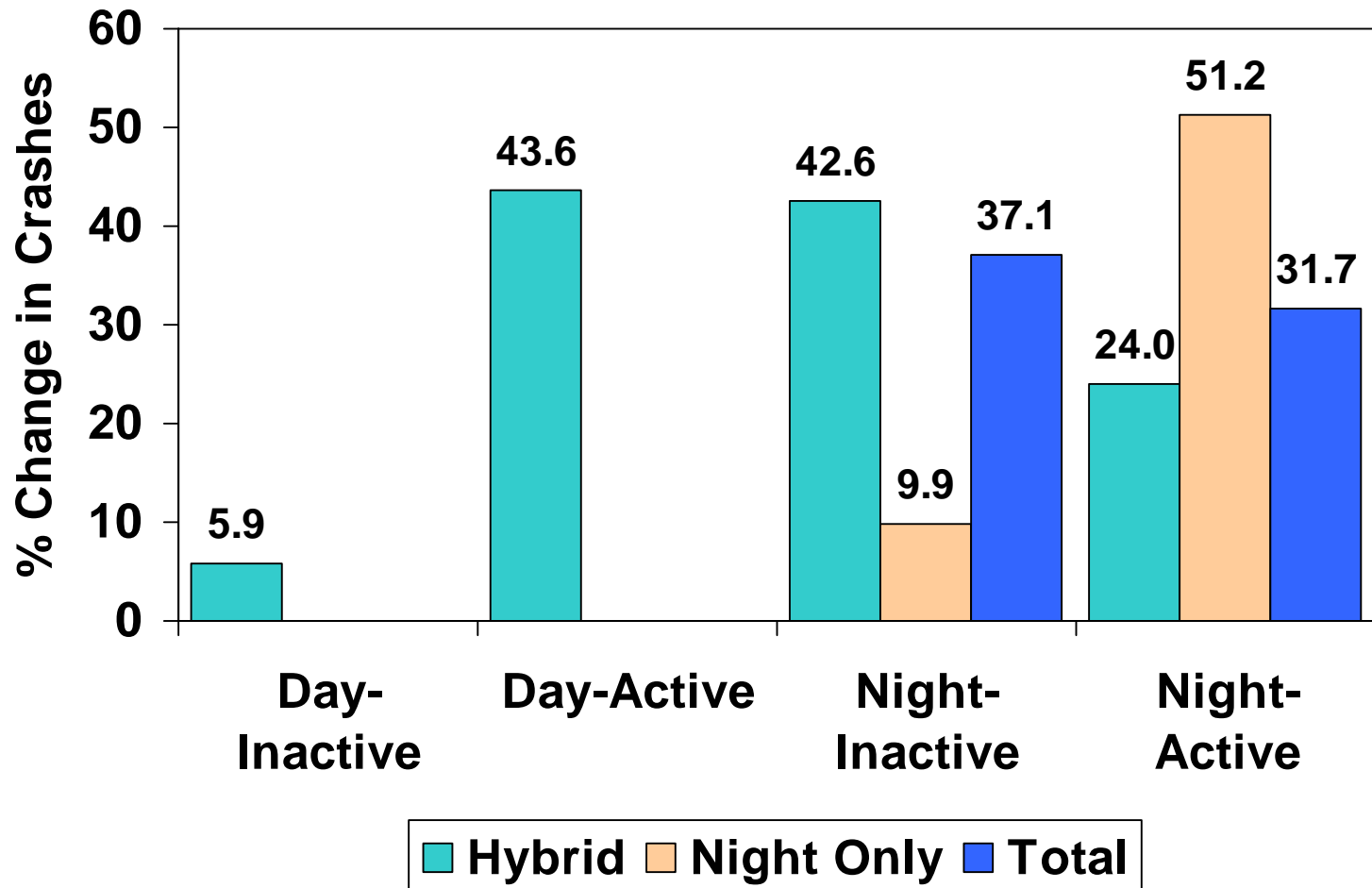
- Is it more or less dangerous to work at night than during the day?



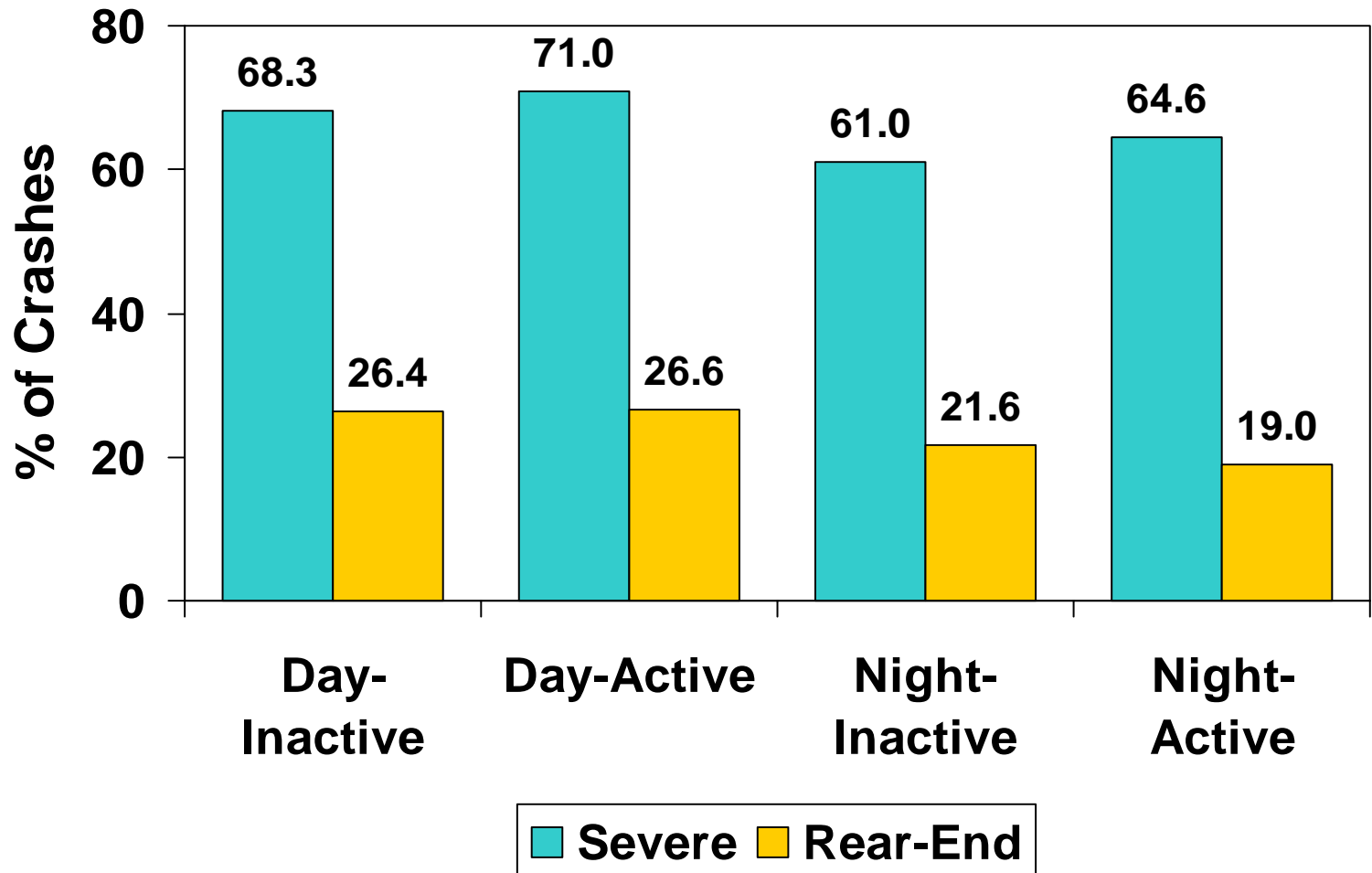
Work Zone Project Crash Analysis

- 8 projects
 - 6 “hybrid” projects
 - 2 “night only” projects
- Before-During Crash Comparison
 - Daytime – Inactive
 - Daytime – Active
 - Nighttime – Inactive
 - Nighttime – Active

Change in Total Crashes



Other Work Zone Crash Trends



Questions

