

Pedestrian Fatalities in Work Zones

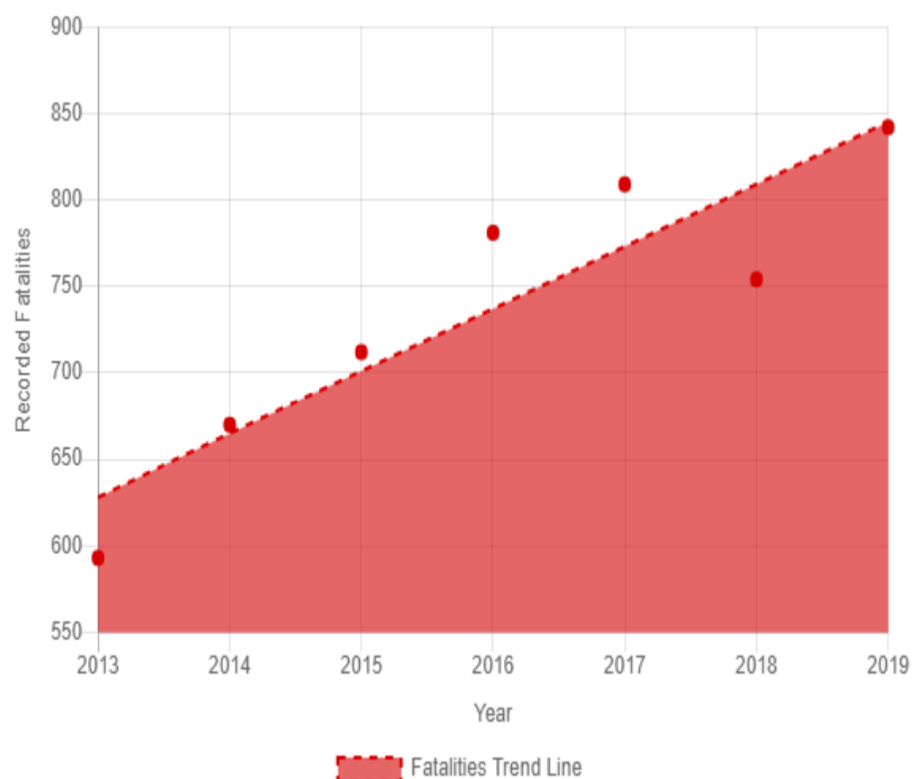
The statistic for work zone pedestrian fatalities has often been assumed to include only members of the public walking a route. However, in 2018, 38% of pedestrian fatalities in work zones were found to be working. A review of news articles, OSHA case records, and the NHTSA's FARS database offer new insights to help save lives.

Between 2013 and 2019, overall fatalities resulting from Work Zone Crashes increased 42%. ⁹ Of the 754 fatalities that resulted from a work zone crash in 2018, 122 were classified in the NHTSA FARS database as a pedestrian fatality in a work zone. ⁹ Based on a review of each pedestrian fatality, it is found that

- **Activity:** Many Pedestrian Fatalities in Work Zones occurred while working (38%, 46 of 122).
- **Location:** Few Pedestrian Fatalities in Work Zones occurred at/near intersections (15%, 18 of 122).
- **Work Activity:** The majority of Working Pedestrian Fatalities in Work Zones were engaged in road work, utility work, planning/surveying (87%, 40 of 46 Working Pedestrians).
- **Work Hazard:** The majority of Working Pedestrian Fatalities in Work Zones were killed by motorist incursions (80%, 37 of 46 Working Pedestrians)

Fatalities Resulting from Work Zone Crashes ⁹

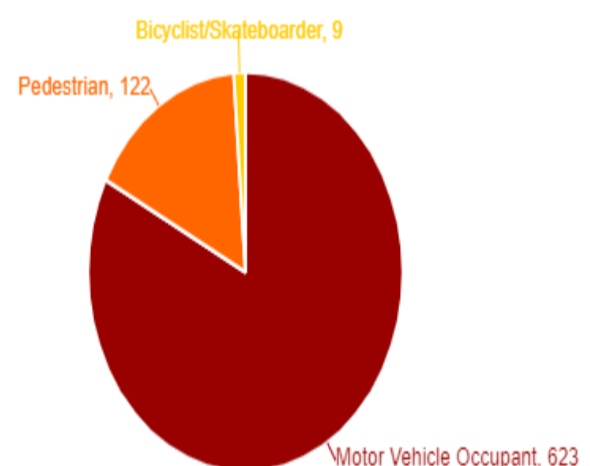
(Mouseover data points for details.)



2018 Work Zone Crash Fatalities by Person Type

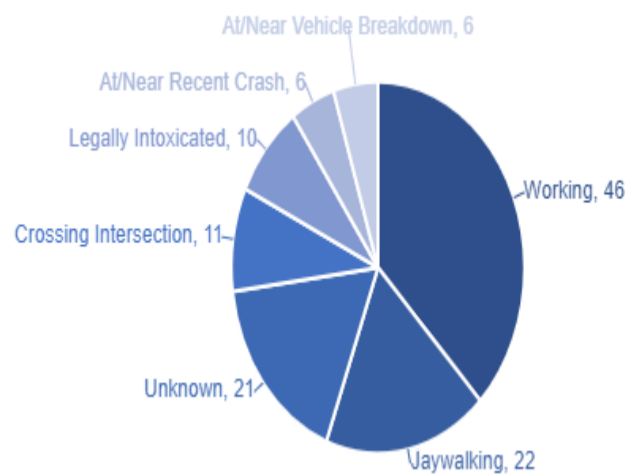
(Total: 754) ⁹

(Mouseover data points for details.)



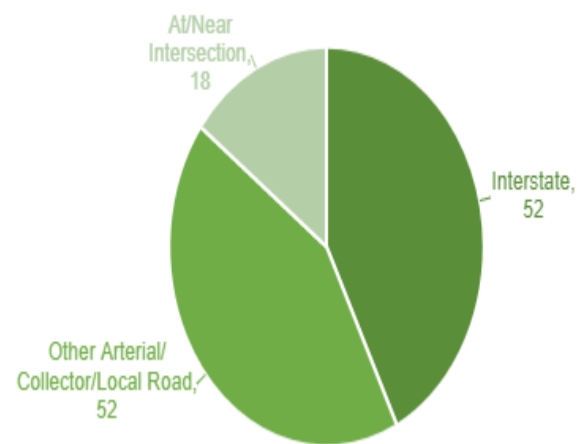
38% of Pedestrian Work Zone Fatalities occurred while working.

Primary Activity of the 122 Pedestrian Work Zone Fatalities (2018)



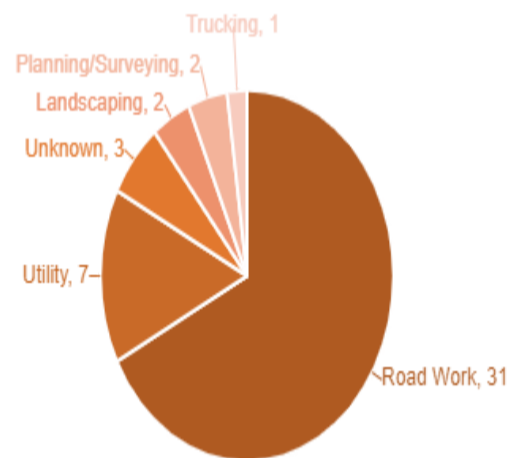
Few Pedestrian Work Zone Fatalities occurred at/near an intersection.

Location of the 122 Pedestrian Work Zone Fatalities (2018)



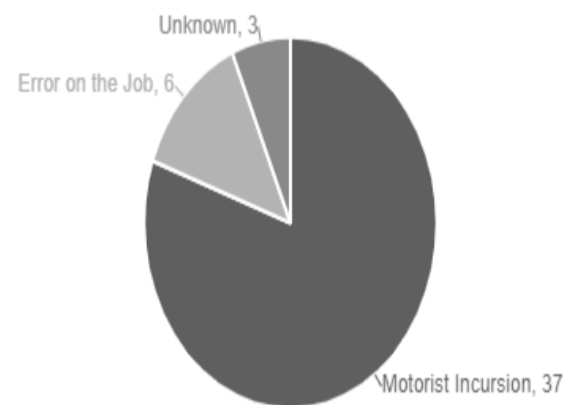
87% of Working Pedestrians were engaged in Road Work, Utility Work, or Planning/Surveying.

Work Activity of the 46 Working Pedestrians in Work Zones (2018)



80% of Working Pedestrians were killed by a motorist incursion into the work zone.

Hazard Contributing to the Death of the 46 Working Pedestrians in Work Zones (2018)



Road Work activities at the time of death include activities such as installing traffic signs, reopening a lane, flagging, picking up debris, replacing damaged concrete, paving operations, exiting a work vehicle, utility work, construction labor, DOT electrical work, DOT maintenance work, fence contracting, repairing guardrail, stringing cable guard rail, and repairing a bridge.

Methodology

Fatality data was obtained from the 2018 NHTSA FARS dataset ⁹. Accident and Person datafiles were joined on 'ST_CASE' and filtered by 'WRK_ZONE'>=1 (ACCIDENT file records a work zone), 'INJ_SEV'==4 (PERSON file records a fatality for that person), and 'PER_TYP'==5 (Person type recorded as Pedestrian). Each fatality was then categorized by Activity, Location, Work Type, and Work Hazard based on [FARS, News Article, & OSHA case record information](#).

Footnotes

¹ [Temporary Traffic Control Devices, 23 U.S.C. § 112\(g\).](#)

² [Definitions, Subpart K - Temporary Traffic Control Devices, 23 C.F.R. § 630.1104.](#)

³ [Positive Protection Measures Defined, 23 U.S.C. 112\(g\)\(4\).](#)

⁴ [2019 Associated General Contractors of America \(AGC\) Highway Workzone Safety Study.](#)

⁵ [2018 Associated General Contractors of America \(AGC\) Highway Workzone Safety Study.](#)

⁶ [2017 Associated General Contractors of America \(AGC\) Highway Workzone Safety Study.](#)

⁷ [2016 Associated General Contractors of America \(AGC\) Highway Workzone Safety Study.](#)

⁸ Estimated Total Crashes & Injuries Data: 2013-2015 data from NHTSA National Automotive Sampling General Estimates System (NASS/GES). NHTSA retired NASS/GES at the end of 2015. 2016-2019 data from NHTSA's replacement Crash Report Sampling System (CRSS).

⁹ Fatalities Data: NHTSA Fatality Analysis Reporting System (FARS) Encyclopedia. 2019 is the last year with available data.

¹⁰ [Positive Protection Devices, Subpart K - Temporary Traffic Control Devices, 23 C.F.R. § 630.1108\(a\)\(1-5\).](#)

¹¹ [Payment for Traffic Control, Subpart K - Temporary Traffic Control Devices, 23 C.F.R. § 630.1108\(f\)\(2\).](#)

¹² ["Portable Positive Protection: A Guide for Short Duration and Short Term Work Zones", Updated by Mobile Barriers LLC, Based on Material Developed by ATSSA for the FHWA Work Zone Safety Grant Program \(June 2016\).](#)

¹³ [U.S. Department of Transportation, "Guidance on Treatment of the Economic Value of a Statistical Life in U.S. Department of Transportation Analyses - 2016 Adjustment," \(August 8, 2016\).](#)

¹⁴ UC Davis/AHMCT, "A Risk Assessment and Cost Benefit Analysis for [Highly Mobile Barriers]," Technical Report Number UCD-ARR-08-09-30-01, (2008). Ibid, Attachment 3.

¹⁵ Mobile Barriers LLC internal crash analysis for Washington D.C. located highly mobile barrier.

¹⁶ Former Deputy Executive Director of the Texas Department of Transportation (TxDOT).

¹⁷ [2013 Associated General Contractors of America \(AGC\) Highway Workzone Safety Study.](#)

¹⁸ [2014 Associated General Contractors of America \(AGC\) Highway Workzone Safety Study.](#)

¹⁹ [2015 Associated General Contractors of America \(AGC\) Highway Workzone Safety Study.](#)

²⁰ [Work Zone Crashes Climb During Pandemic, Even as Traffic Ebbs, PEW Charitable Trusts, October 6, 2020.](#)

²¹ [Missouri work zone crashes double despite half the traffic, Better Roads, September 1, 2020.](#)

²² [Ohio DOT reports string of work-zone crashes despite less traffic, Better Roads,, June 8, 2020.](#)

²³ [CDOT and CSP warn that not all workplaces are meant to zoom: Fatal crashes in work zones on the rise Journal Advocate, November 27, 2020.](#)

²⁴ [An Optimization Methodology to Improve Work Zone Safety within a Limited Budget in a Roadway Network, Promotes Saha, Ph.D., International Conference on Transportation and Development 2020 : Transportation Safety.](#)

Work Zone Barriers

- [Defining Positive Protection](#)
- [Examples & Types of Positive Protection](#)
- [Benefits of Positive Protection](#)

Work Zone Crash Data

- [Contractor Reported Crashes & Outcomes](#)
- [Workzone Total Crashes & Injuries](#)
- [Work Zone Crash Fatalities](#)
- [Work Zone Pedestrian Fatalities](#)

Implementation

- [When are Positive Protection Barriers Appropriate?](#)
- [What Federal Funding is Available for Positive Protection Barriers?](#)
- [How Can Contractors Obtain & Use Positive Protection Barriers?](#)
- [FHWA Repeals Proprietary Product Rule](#)