

Memorandum

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Subject: **INFORMATION:** Revised Data
Definitions for FHWA Safety Focus
Areas

Date: July 29, 2014

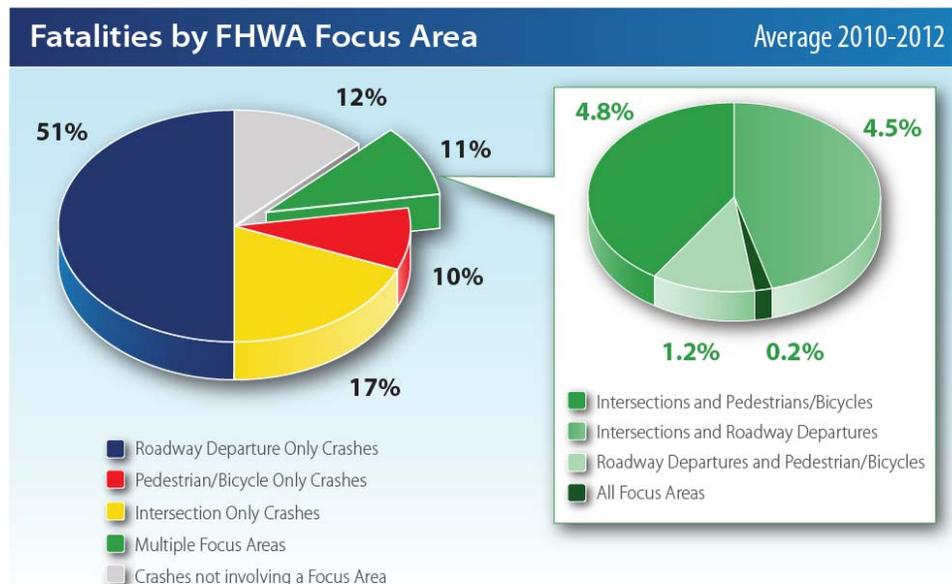
From: Michael S. Griffith
Director, Office of Safety Technologies

In Reply Refer To:
HSST

To: Safety Field

This memorandum supersedes the May 22, 2009 Memorandum that updated the Roadway Departure Definition and Criteria.

Recently, the Office of Safety updated the methods used to make annual calculations of the status of each of the safety focus areas (roadway departure, pedestrian/bicycle, and intersection.) One of the key issues addressed by the new methods is to consider where there is overlap among the three focus areas. This is depicted below, with the larger pie showing total fatalities are made up of 51% that are roadway departures that do not involve an intersection, a pedestrian or bicyclist, 17% that occur at an intersection but do not involve a roadway departure, pedestrian or bicyclist, and 10% pedestrian/bicycle fatalities that do not involve roadway departures or intersections. In addition, 11% of the



NOTE: Totals in the main and secondary pie charts do not add up to 100% and 11%, respectively, due to rounding.

fatalities involve more than one focus area and 12% don't involve any of the three focus areas¹. The smaller pie indicates the makeup of the 11% of fatalities that involve more than one focus area. As the chart shows, the majority of these involve intersections with one of the other focus areas.

Based on the analysis work completed, revised definitions for the focus areas have been developed. They are shown below.

The new **Roadway Departure Data Definition** is: “A crash in which a vehicle crosses an edge line, a center line, or leaves the traveled way.” The vast majority of RWD events are captured in FARS by finding crashes in which the first event for any vehicle involved in the crash is one of the following: (63) Ran Off Road – Right, (64) Ran Off Road – Left, (65) Cross Median, or (68) Cross Center Line. In addition there are a number of fixed object codes included based on the idea that a vehicle must have left the roadway in order to impact that object as a first event. Those fixed object codes include 17, 19-43, 46, 52, 53, 57, and 59. Lastly, three other event codes were deemed to most likely be indicative of a roadway departure, those being (67) Vehicle Went Airborne, (69) Re-entering Roadway, and (71) End Departure. The single change to the coding as a result of the 2014 updates was to remove the intersection filter (i.e., roadway departure crashes include non-intersection and intersection locations.)

The new **Intersection Data Definition** incorporates intersection and intersection-related crashes as well as driveway and alley access or related crashes. All of the aforementioned crashes are included in the new definition regardless of whether these are in an interchange area or not. With the inception of the 2010 FARS changes, the intersection query is relatively simple as one uses the combination of the following “Relation to Junction” elements: (2) Intersection, (3) Intersection-Related, (4) Driveway Access and (8) Driveway Access Related. When using the FARS database from 2009 and earlier years, the new intersection definition requires the following combination of “Relation to Junction” elements: (2) Intersection (Non-Interchange), (3) Intersection Related (Non-Interchange), (4) Driveway, Alley Access, etc. (Non-Interchange), (8) Driveway-Access Related, (10) Intersection (Interchange Area), (11) Intersection Related (Interchange Area) and (12) Driveway Access (Interchange Area). This update is a significant increase in the crash types attributed to this focus area, which previously only included (2) Intersection and (3) Intersection-Related crashes that occurred in non-interchange areas.

The new **Pedestrian and Bicycle Data Definition** includes cases in which at least one person involved in a fatal motor vehicle crash were coded as (5) Pedestrian, (6) Bicyclist, (7) Other Cyclist, or (8) Person on Personal Conveyance. This is the only focus area that had a name change as a result of the 2014 update. The decision was made to expand this focus area to include bicyclists and other related road users, such as those in wheelchairs. Previously, this focus area counted only (5) Pedestrian.

¹ These crashes do not lend themselves to any particular category or categories.

FHWA:HSSP:CSatterfield sf:7/17/14: **Updated by sf 7/29/14**

File: s://directory folder/CSatterfield/Revisions to FHWA Safety Focus Area Data Definitions_Memo_Draft2b.docx

cc: HSA (Reader, HSA; Chron File, HSA;GRousseau, HSST; MGriffith, HSSP), Cathy Satterfield, HSST)

In addition to the individual focus areas, the Office of Safety will place some emphasis on how to best address those crashes **involving more than one of the focus areas**, based upon the characteristics of their location, vehicle events, and involved users.

The attachments contain fatality data by state using the revised data definitions. This data includes all fatalities for each focus area, rather than the mutually exclusive data depicted in the first pie chart for roadway departure only crashes, pedestrian/bicycles only crashes, and intersection only crashes. That data has not yet been produced for each state.

If you have questions, please contact Ms. Cathy Satterfield, Office of Safety, (708) 283-3552 or Ana Maria Eigen, Office of Safety Research and Development, (202) 493-3168.

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