Roadway Departure Safety Basics

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Fatalities in the USA
(2013 - 2015 Average)

National Average – 33,576 Fatalities

Data Source: NHTSA FARS
Strategic Objective
Promote highway-related strategies to assist in cutting fatalities by half by 2030 with a vision towards zero fatalities.
Roadway Departure Fatalities Percent
(2013 - 2015 Average)

National Average RwD % = 54%
FHWA Roadway Departure Strategic Plan

Roadway Departure Fatalities by Most Harmful Event (FARS 2012-2014)

Nearly $\frac{3}{4}$ of Roadway Departure Fatal Crashes are from 3 crash types.

- Rollover: 4,947 (27%)
- Trees: 3,504 (19%)
- Head-on: 4,572 (25%)
Overturn Crashes

- Rural Areas, 76%
- ≥ 50 MPH, 72%
- Curves, 43%

Source: FARS 2010-2013
Opposite Direction Crashes

Source: FARS 2010-2013

NCHRP Report 500, Volume 6
Reported that only 4.2% of head-ons involved a passing vehicle.

Source: FARS 2010-2013
Fixed Object Fatal Crashes

Trees are 48% of Fixed Object Fatalities

Source: FARS 2010-2013
Trees are 48% of Fixed Object Fatalities

Source: FARS 2010-2013

- Rural, 67%
- Urban, 33%
- $\geq$ 50 MPH, 51%
- $\leq$ 45 MPH, 49%
- Curves, 46%

Trees: 3,508

19% Trees
So, why do drivers leave the road?

- Roadway Condition
- Collision Avoidance
- Vehicle Component Failure
- Driver Error
Human is weakest link in this system, so we must design around human needs.


Crashes Caused by Various Factors: Systems Approach

- Roadway: 34%
- Driver: 93%
- Vehicle: 12%
- Others: 1%

Human is weakest link in this system, so we must design around human needs.