Roadway Departure Safety Basics

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

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

Source: FARS 2010-2013

5,285
28%
Rollover

Rural Areas, 76%

≥ 50 MPH, 72%

Curves, 43%

Source: FARS 2010-2013
Opposite Direction Crashes

Reported that only 4.2% of head-ons involved a passing vehicle.

NCHRP Report 500, Volume 6

Source: FARS 2010-2013
Fixed Object Fatal Crashes

- Trees, Shrubs: 3,508
- Signs, Poles, Signals: 1,180
- Other Fixed Object: 967
- Barriers: 876
- Roadside Topography: 748

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%
- ≥ 50 MPH, 51%
- ≤ 45 MPH, 49%
- Curves, 46%
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.