High Friction Surface Treatment
HFST
National Perspective

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All Highway Fatalities in US

Annual

5-Year Avg
Indiana Highway Fatalities

Yearly vs. 5-Year Ave.

Yearly Fatalities

- 1996: 900
- 1997: 1000
- 1998: 950
- 1999: 800
- 2000: 750
- 2001: 800
- 2002: 850
- 2003: 900
- 2004: 950
- 2005: 1000
- 2006: 950
- 2007: 900
- 2008: 850
- 2009: 800
- 2010: 750
- 2011: 800
- 2012: 850
- 2013: 900
- 2014: 950
- 2015: 1000
- 2016: 950
- 2017: 900
- 2018: 850

5-Year Average Fatalities

- 1996-2000: 875
- 2001-2005: 825
- 2006-2010: 775
- 2011-2015: 725
- 2016-2020: 775

Note: The graph shows a general trend of decreasing fatalities over the years, with some fluctuations.
Focused Approach to Safety

- Three (consistent) Focus Areas
  - Roadway Departure -------------- States
  - Intersection ------------------ States
  - Pedestrian and Bicycle ---------- Cities and associated States
United States Fatalities by FHWA Focus Area

Average 2015-2017

- Roadway Departure Only Crashes: 47%
- Intersection Only Crashes: 13%
- Pedestrian/Bicycle Only Crashes: 11%
- Multiple Focus Areas: 12%
- Intersections and Pedestrians/Bicycles: 18%
- Intersections and Roadway Departures: 5.5%
- Roadway Departures and Pedestrian/Bicycles: 4.2%
- All Focus Areas: 0.2%
- Crashes not involving a Focus Area: 1.4%

NOTE: The totals in the pie charts do not exactly add up to 100% and 11% respectively due to rounding.
43% of these are on curves
HFST

COUNTERMEASURES

1. Keep Vehicles on Roadway
2. Provide for Safe Recovery
3. Reduce Crash Severity
HFST

• HFST – a Proven Safety Countermeasure
• Effectiveness
• National Implementation
FHWA Proven Safety Countermeasures

- Enhanced Delineation and Friction for Horizontal Curves
- USLIMITS2
- Backplates with Retroreflective Borders
- Corridor Access Management
- Dedicated Left- and Right-Turn Lanes at Intersections
- Medians and Pedestrian Crossing Islands in Urban and Suburban Areas
- Pedestrian Hybrid Beacon
- Road Diet
- Walkways
- Road Safety Audit
- Median Barrier
- Safety Edges
- Longitudinal Rumble Strips and Stripes on Two-Lane Roads
- Roundabouts
- Yellow Change Intervals
- Local Road Safety Plan
- Leading Pedestrian Interval
- Systemic Application of Multiple Low Cost Countermeasures at Stop-Controlled Intersections
- Reduced Left-Turn Conflict Intersections
- Roadside Design Improvement at Curves
Enhanced Delineation and Friction for Horizontal Curves

Enhanced Delineation
- Pavement Markings
- Post-mounted delineators
- Brighter/larger signs
- Dynamic curve warning signs

Increased Pavement Friction
- Sharp Curves
- Wet Conditions
- Polished Surfaces
- Excessive Speeds
State DOT HFST Status
★ Active implementation as of 12/1/2017

- No curves
- One curve
- 2 - 10 curves
- 10 - 50 curves
- 50 - 100 curves
- Over 100 curves
- Over 2 million S.Y.
DO NOT BE AFRAID OF WORK THAT HAS NO END

- AVOT DE RABBI NATAAN