

## FHWA'S ROADWAY DEPARTURE PROGRAM

- **Focus: Improve safety through more effective program delivery, technical assistance and support, data analysis, research, and training for State DOT's and local agencies in order to keep vehicles on the roadway, alert drivers to conditions, and reduce crashes, the severity of crashes, fatalities and injuries.**

**Roadway departure (RD) crashes are the largest U.S. highway safety problem, accounting for 58% of all roadway fatalities and the 2 million serious injuries per year.** Single vehicle RD crashes include run-off-the-road (ROR) crashes. Multiple vehicle RD crashes include opposite direction front-to-side crashes, head-on crashes, and opposite direction sideswipe crashes.

- 40-% of all fatalities are single vehicle, ROR crashes
- Many fatalities involve hitting fixed objects, including utility poles, sign and light supports, shrubbery and trees. (Shielding or removing fixed objects provides protection from some driver errors.)
- Nearly 70% of RD crashes are single vehicle ROR crashes **Most are 2-lane rural !**

**FHWA's Roadway Departure program** emphasizes the development of technical and briefing information for all levels of Federal, State DOT and local agency personnel, from top management to maintenance operations. Cross-cutting marketing, outreach & education are underway, including efforts to reach and educate non-Safety audiences such as resource agencies and others who impact transportation decisions. The RD Team is FHWA's contact point for the AASHTO Technical Committee on Roadside Safety and its revision of the Roadside Design Guide and for the AASHTO/FHWA Implementation Plan for new crash testing guidance (update to NCHRP 350): the Manual for Assessing Safety Hardware (MASH 08).

FHWA has identified 17 **Roadway Departure Focus States** to receive additional technical assistance and support for accomplishing positive results in reducing crashes on 2-lane rural roads. These 17 States are those that each had at least 240 2-lane rural RD fatalities and a rural 2-lane RD fatality rate above the national average of 2.68/100M VMT: Alabama, Arizona, Arkansas, California, Florida, Illinois, Iowa, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, and Washington State.

This focused approach includes multi-level management and technical site visits, quarterly web conferences, and an increase in technical products in a variety of forms (report summaries, CD's, DVD's, brochures, fact sheets, etc.) on the most critical, high-risk areas (e.g., horizontal curves, pavement safety and roadside hardware). This information will be online and in the form of technical products available to all States and local agencies.

### Technical Efforts and Products

#### **Currently Available:**

##### **New: The Safety Edge (Brochure)**

This revised brochure on the Safety Edge pavement treatment incorporates current research related to the recommended tapered wedge that mitigates pavement edge drop-off effects along the edges of both new asphalt lanes and subsequent maintenance overlays. The increased use of the Safety Edge can reduce the number of run-off-the-road crashes and decrease tort liability for the owner. (Publication # FHWA-SA-07-023)

##### **New: Rumble Strips: A Sound Investment (DVD)**

This 14-minute informational DVD introduces the viewer to shoulder, edge and centerline Rumble Strips and Rumble Stripes. These cost-effective treatments have been proven to save lives by reducing the number of RD crashes attributable to distracted or inattentive drivers. The DVD addresses issues associated with Rumble Strip's effectiveness, design, noise, motorcycles and bicycles. (Publication # FHWA-SA-07-024)

**New: Final Rule on Sign Traffic Sign Retroreflectivity**, effective 1-22-08, revises the Manual on Uniform Traffic Control Devices (MUTCD) with a new standard for an assessment or management method to maintain a minimum level of sign Retroreflectivity by 2012.

##### **Low-Cost Treatments for Horizontal Curve Safety (Report and **New Brochure**)**

Approximately 25% of highway fatalities occur at or near horizontal curves. This well-received report is a practical reference for treatments that transportation agencies can apply to keep vehicles on the roadway along horizontal curves and improve safety. The companion brochure highlights the information in and promotes the full report. (Publication # FHWA-SA-07-025 for the brochure and # FHWA-SA-07-002 for the report.)

### **Roadway Safety for Motorcycles: Tips for Designing, Constructing, and Maintaining Roadways for Increased Motorcycle Safety (Brochure)**

Designed to raise awareness on actions by State and local agencies and others in design, construction, and maintenance to reduce increasing motorcycle fatalities and injuries. (Publication # FHWA-SA-07-012).

### **Highway Safety and Trees: The Delicate Balance (DVD and Brochure)**

Designed to educate on the hazards of trees adjacent to roadways (and options). Stresses communication with the public and using design solutions for highway projects that fully and objectively consider safety as well as other community concerns. (DVD product # FHWA-SA-06-13. Brochure product # FHWA-SA-06-12.)

### **Safer Sign Supports: Are Yours Breakaway Yet? (Brochure)**

Advocates replacing rigid sign poles with breakaway supports. Signs on highways posted 50 mph or more must be upgraded by 2013. Others can be upgraded when sign sheeting is replaced. (Product # FHWA-SA-06-14.)

### **Guidelines for the Selection of W-Beam Barrier Terminals (CD)**

Shows the crash performance characteristics of the 3 major categories of W-beam terminals. "Must" viewing for those responsible for selecting, locating, installing, or repairing guardrail terminals. (Product # FHWA-SA-06-19.)

### **Good Practices: Incorporating Safety into Resurfacing and Restoration Projects (Report and CD)**

Results of a domestic scan cosponsored by FHWA, AASHTO, and NACE in 6 states. The report identifies common issues, success factors and good institutional practices, including commitments to integrating safety in pavement preservation projects, making selective geometric improvements, identifying targeted safety countermeasures, traffic control devices, and improving roadsides. (Publication # FHWA-SA-07-001.)

### **Future efforts and Products include:**

- **Visibility and Retroreflectivity:**
  - **Maintaining Minimum Pavement Marking Retroreflectivity.** FHWA is currently gathering input and conducting research in advance of proposed rulemaking on pavement marking.
  - **Documents to Support Sign Retroreflectivity Rulemaking** prepared to assist and guide practitioners, including a 4-page Maintaining Sign Retroreflectivity brochure, a research report on Methods for Maintaining Traffic Sign Retroreflectivity, newsletter articles, and updated FHWA and MUTCD websites.
- **Landscaping Guidance.** Based in part on a review of State landscaping policies and practices (e.g., for walls, rocks, signs, lighting, and trees), guidance will be issued that supports innovative accommodation of trees and other landscaping features to improve safety and avoid harm to the highway environment.
- **Cross-Median Treatments (DVD).** To reduce cross-median crashes, this DVD will address cable barriers, other barrier treatments, and minimum median width for which a barrier should be considered. Intended for all State DOT's at the District level and county and city highway engineers and decision-makers.
- **The Safety Edge (DVD).** A presentation and demonstration of the Safety Edge pavement treatment, which can reduce the number of run-off-the-road crashes and decrease tort liability for the owner.
- **Ready-to-use technical training and briefing PowerPoint presentations, information sheets, and brochures** on critical areas (e.g., pavement safety) for FHWA Division, State DOT and local agencies' use, such as technical presentations on: An Overview of Roadside Safety, A Strategic Approach to Reducing RD Crashes, and Low Cost Solutions for Rural 2-Lane Roads. Each will be in 2 formats: a 1-hour technical presentation and a 20 to 30-minute Executive Summary presentation.

Publications are or will be available at <http://safety.fhwa.dot.gov>. For copies of publications/CD's/DVD's (at no charge), contact the FHWA Report Distribution Center at (301) 577-0906, at [report.center@fhwa.dot.gov](mailto:report.center@fhwa.dot.gov), or via Fax: 301-577-1421, specifying the title and product/publication number.

For more assistance, information, and to make recommendations for future efforts and products, contact one of the FHWA's Division Office Safety Specialists or the FHWA Office of Safety Design's Roadway Departure Team Leader, Mary McDonough, at [mary.mcdonough@dot.gov](mailto:mary.mcdonough@dot.gov) or (202) 366-2175.

