VDOT Highway Safety Update

Virginia Statewide Bicycle and Pedestrian Advisory Committee
Spring Meeting
April 27, 2016

Mark A. Cole, PE
Assistant State Traffic Engineer
Highway Safety Programs
Rumble Strip(e) Revision Update

• Presentation at Fall 2015 BPAC Meeting
• Draft revisions delayed but underway
• Stakeholder group currently reviewing draft changes
• Next stakeholder meeting in mid May
• Anticipate finalizing changes to I&IM and Standards by Summer
• Goal of revisions is to offer more roadway departure safety countermeasures for deployment while also planning for and balancing the needs of bicyclists
Virginia Highway Crash Types 2010-2014

**Total Crashes (%):**
- Rear End: 33%
- Sideswipe: 19%
- Overturned: 25%
- Angle: 8%
- Animal: 5%
- Ped/Bike: 2%
- Others: 3%

**Fatal Crashes (%):**
- Fixed Object Off Road: 44%
- Head On: 18%
- Others: 6%
- Ped/Bike: 9%
- Animal: 5%
- Overturned: 14%
- Sideswipe: 1%
Roadway Departure Crashes (2010-2014) By Maintenance and System

% of Crashes:
- VDOT Interstate: 24%
- VDOT Primaries: 21%
- VDOT Secondaries: 30%
- Other Locally-Maintained Roads: 5%
- VDOT Primaries Maintained By Locality: 20%

% of Fatalities:
- VDOT Interstate: 5%
- VDOT Primaries: 16%
- VDOT Secondaries: 34%
- Other Locally-Maintained Roads: 12%
- VDOT Primaries Maintained By Locality: 33%

% of Injuries:
- VDOT Interstate: 6%
- VDOT Primaries: 20%
- VDOT Secondaries: 32%
- Other Locally-Maintained Roads: 19%
- VDOT Primaries Maintained By Locality: 23%
Road Departure Crashes

• Non-Interstate Routes
  ➢ 79% of Crashes
  ➢ 81% of Injuries
  ➢ 84% of Fatalities

• Serious Injuries & Fatalities are randomly dispersed across network

• Limited toolbox of roadway departure countermeasures that can be widely deployed
Six Year Plan Roadway Departure Prevention

- 30-50% crash reduction

However,
- VDOT rumble strip options limited
- Very few rumble strips other than interstate
- Primary and Secondary routes need more rumble strip design options
DRAFT Rumble Strip(e) Revisions
Shoulder Less Than 4 ft wide

- Would include intermittent gaps
- 8-9-inch wide rumble stripe placed in last foot of asphalt
- 3/8’ deep rumble
- Not recommended in urban area
DRAFT Rumble Strip(e) Revisions
Shoulders Greater Than 4 ft wide

- Would include intermittent gaps
- 8 to 9-inch wide rumble stripe placed between travel lane and shoulder
- 3/8’ deep rumble
- Not recommended in urban area
Current Vs. Proposed – Narrow Shoulders

<4 ft
Changes That Affect Cyclists

• Works from premise that cyclists should be anticipated on all non-controlled access facilities

• Makes all shoulder rumble strips/stripes intermittent except for those installed on controlled-access facilities (45 ft rumble/15 ft gap)

• When less than four feet of usable shoulder is available, places shoulder rumble strips on outside edge of pavement to maximize available pavement space for cyclists

• When more than four feet of usable shoulder is available, places rumble stripe between vehicular travel lane and shoulder

• Reduces the depth of the rumble grooves from 0.5 inch (current) to 0.375 inch deep on all roads except controlled-access facilities
Questions?

Contact Information:

Mark A. Cole, PE
(804) 786-4196
Mark.Cole@VDOT.Virginia.gov