

Big Book of Ideas Engineering Safety Strategies



October 2018



Rural Segments



Safety Corridor

- US 52 and a couple of other highway corridors with high severe crashes will be identified through review of crash and citation data.
- Concept of designating safety corridors
 - collaborative approach to bring heightened awareness and focus to safety on specific corridors.
 - 4 E's
 - Enforcement, Education, Engineering, EMS





Safety Corridor

- The designated safety corridors may receive:
 - signage identifying them as safety corridors
 - heightened enforcement of all traffic violations occurring within the corridor
 - application of low cost corridor wide infrastructure safety solutions (may include enhanced signing, pavement marking, lighting, turn lanes, etc)
 - public education about the corridors
- Corridors will be monitored for effectiveness in severe crash reduction and may be undesignated after a period of time.



Crash Reduction Factor

Experimental

Typical Installation Costs

• Varies (\$5000 per mile to ?)



Centerline Rumble Strip

Crash Reduction Factor

• 40% head-on/sideswipe crashes

Typical Installation Costs

• \$3,600 per mile





Shoulder/Edgeline Rumble Strips

Crash Reduction Factor

• 20% run off road crashes

Typical Installation Costs

• \$5,850 per mile





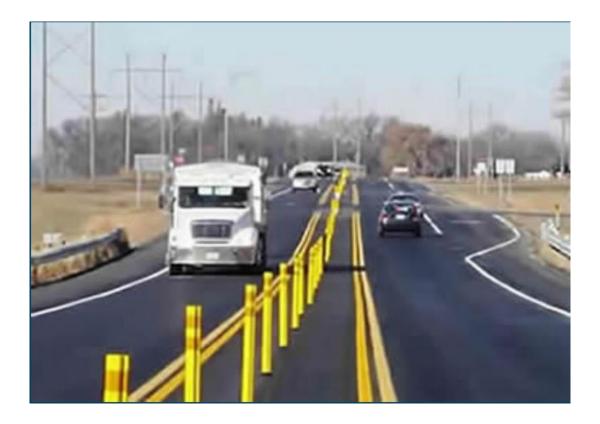
Buffers Between Opposing Lanes

Crash Reduction Factor

 50% for all crashes & 100% for head-on crashes (based on TH 5 in Lake Elmo)

Typical Installation Costs

• \$150,000 to \$500,000 per mile







Crash Reduction Factor

• 5% to 10%

Typical Installation Costs

• \$10,000 to \$20,000 per mile





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Enhanced Edgeline (6" & 8")

Crash Reduction Factor

 10% to 45% all rural serious crashes (6")

Typical Installation Costs

• \$1,500 - \$10,000 per mile







Shoulder Paving (2', 4', 6')

Crash Reduction Factor

 20% to 30% run-off-the-road crashes (with shoulder rumble) (2' only)

Typical Installation Costs

• \$54,000 per mile + \$5,850 per mile (for Edge Rumble)





Clear Zone Maintenance/ Enhancements

Crash Reduction Factor

 Fatal, serious & minor Injury crashes: increase of 28% to decrease of 18%

Typical Installation Costs

• \$50,000 to \$500,000 per mile





Ditch/ Embankment Improvements

Crash Reduction Factor

 32% to 41% (adding new guardrail to embankment- run off road crashes)

Typical Installation Costs

• \$500,000 to \$1M per mile





Bike Paths/Trails

Crash Reduction Factor

• Not Available

Typical Installation Costs

• \$50,000 to \$150,000 per mile



