



# Big Book of Ideas Engineering Safety Strategies

October 2018

**VISION ZERO**   
Zero fatalities. Zero excuses.



# Rural Segments

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# 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



# Safety Edge

## Crash Reduction Factor

- 5% to 10%

## Typical Installation Costs

- \$10,000 to \$20,000 per mile





# 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

