

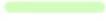
High Tension Cable Barrier in Median

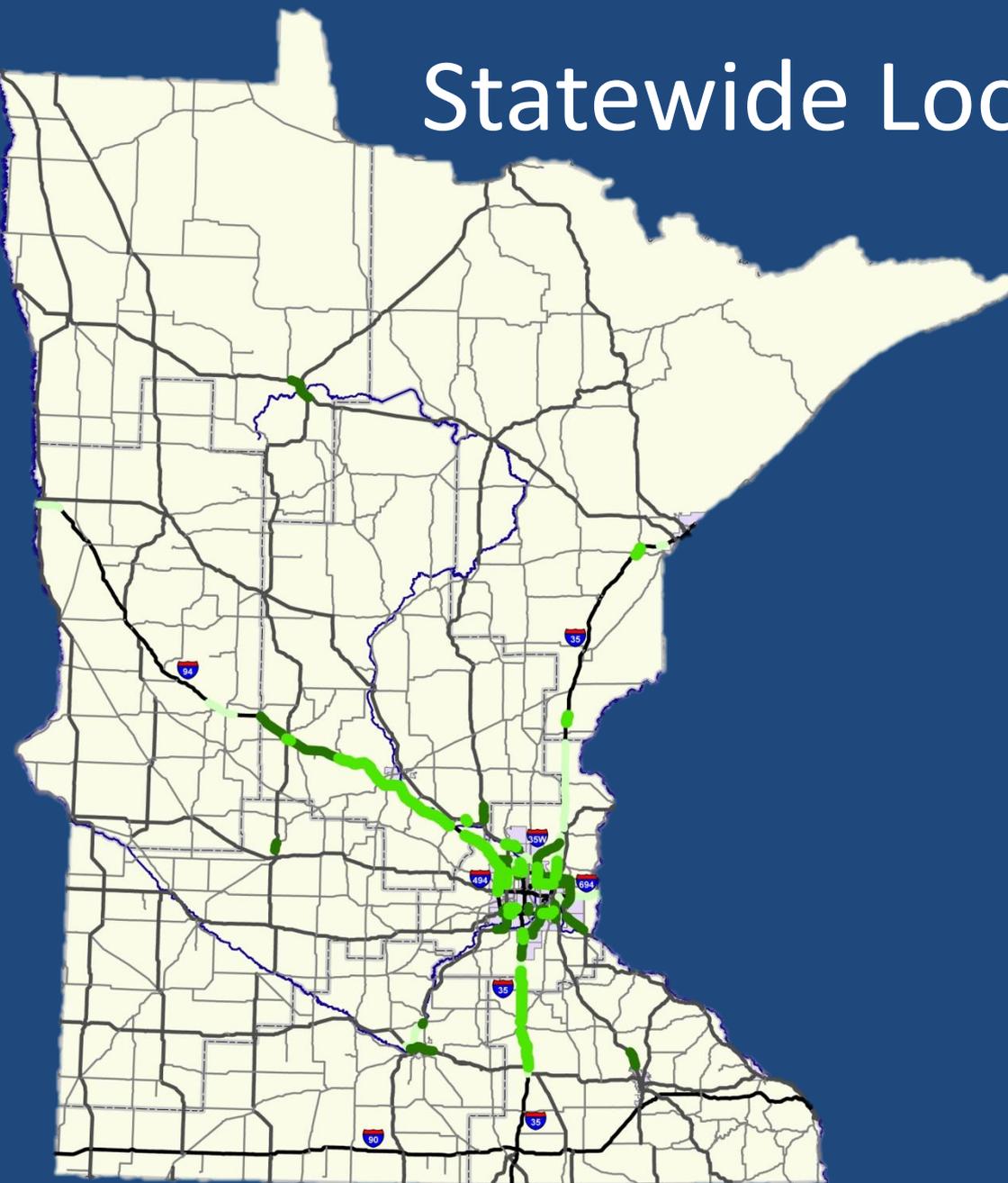
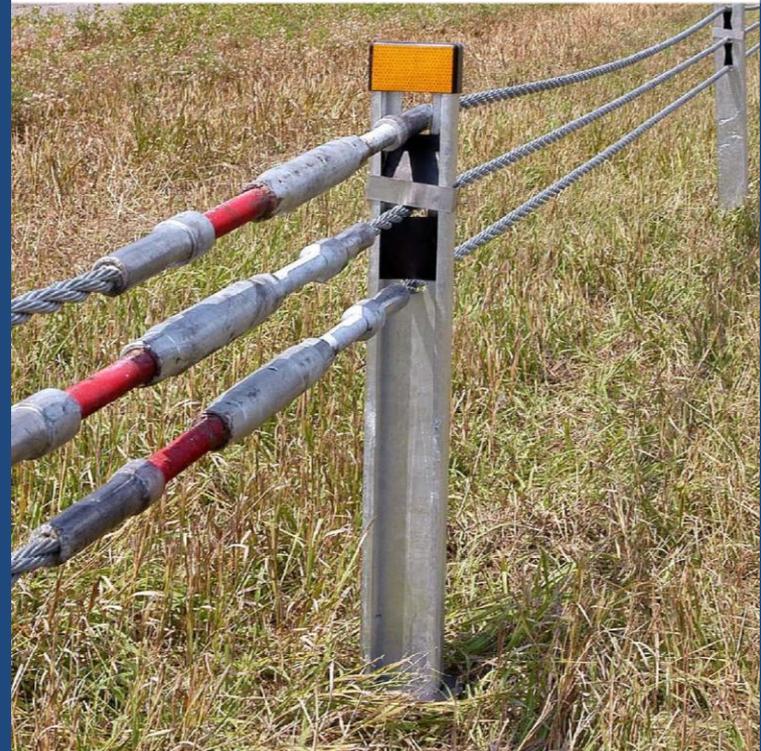
**Change in Fatal and Serious Injury Crashes,
2001-2011**

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Statewide Locations

High Tension Cable Barrier Locations

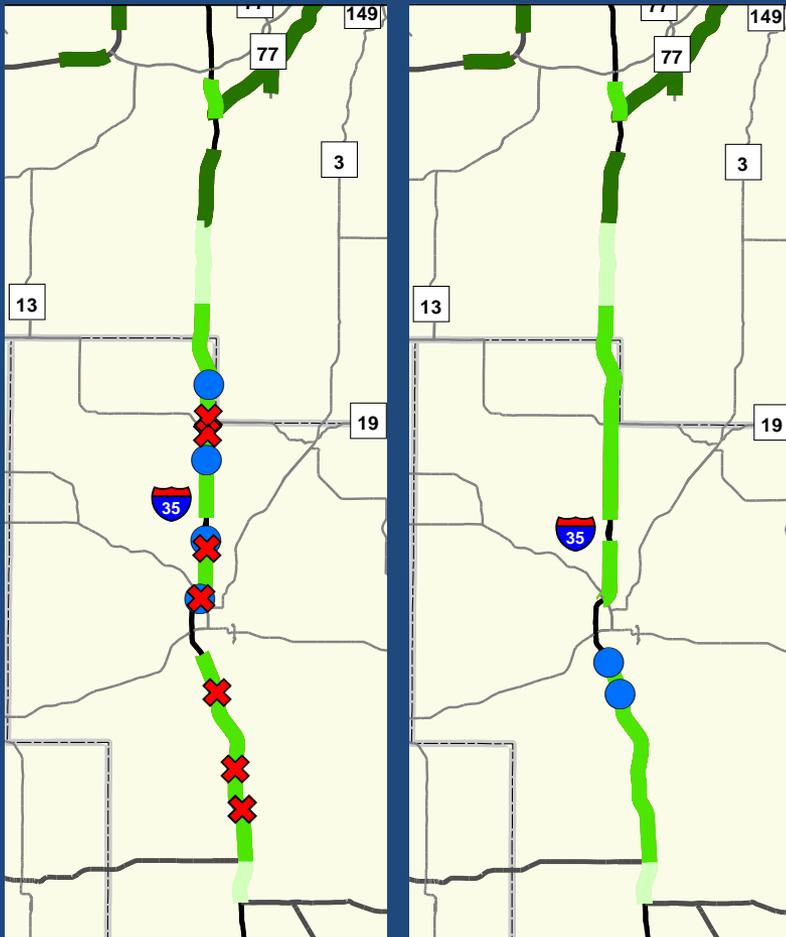
-  Installed 2004 - 2008
-  Installed 2009 - 2012
-  Installation Planned



Selection Criteria

- Segments
 - High Tension Cable Barrier in median
 - Barrier installed 2004-2008
 - 31 segments identified
- Crash Data
 - 3 years before installation
 - 3 years after installation
 - Only cross-median crashes
- Before, All Segments
 - 19 fatal crashes
 - 8 serious injury crashes
 - 57 moderate injury crashes
 - 99 possible injury crashes
 - 281 property damage crashes
- After, All Segments
 - 0 fatal crashes
 - 6 serious injury crashes
 - 58 moderate injury crashes
 - 114 possible injury crashes
 - 1,022 property damage crashes

Sample Segment, I-35



Before

After

- 35E/35W split to US 14
- Before
 - 8 fatal crashes
 - 3 serious injury crashes
- After
 - 0 fatal crashes
 - 2 serious injury crashes



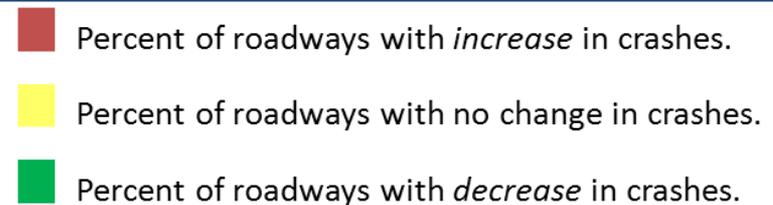
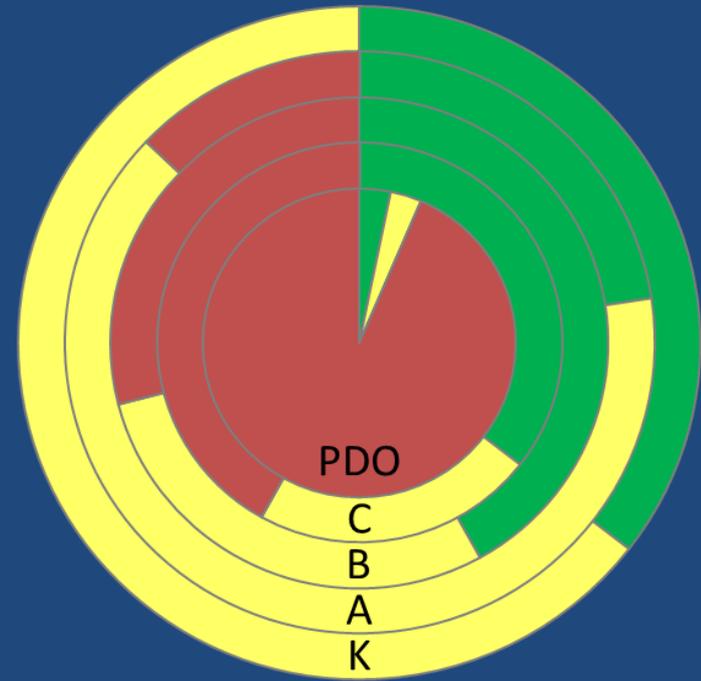
Fatal crashes



Serious Injury crashes

Before and After

- No fatal crashes in after period!
- Severity of cross-median crashes shifted down!
 - Visually, percent of segments with increase in crashes *decreases* as severity *increases*.



Observed Change in Crashes

- **No fatal crashes in after period!**
- High Tension Cable Barrier in the median is intended to reduce severity rather than decrease total crashes
 - Confirmed in analysis.
- Total Crashes + 251%
 - - 100% fatal
 - - 25% serious injury
 - + 2% moderate injury
 - + 15% possible injury
 - + 264% property damage
- Statistically significant change in fatal ($p = .001$) and property damage ($p = .000$) crashes

Crash Savings

- Total Crash Cost:
 - Before = \$ 29,690,400
 - After = \$ 18,344,800
- *Observed 38% reduction in TOTAL crash costs!*
- Calculated with conservative costs:
Fatal = 2 × A Injury.
- Average Crash Cost:
 - Before = \$63,988
 - After = \$15,287
- *Observed 76% reduction in AVERAGE crash costs!*
- Weighted average by prevalence of total crashes.