

# A Safety Analysis of Cross-Over-the-Median Crashes on Wisconsin Highways



THE UNIVERSITY  
of  
**WISCONSIN**  
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**TOPS**



# Objectives

- Determine characteristics of crossover crashes
- Establish a relationship between crossover crashes, median width, and ADT
- Establish a cost for crossover crashes (CODES)
- Conduct a Benefit/Cost analysis of findings
- Consider new median treatment ideas

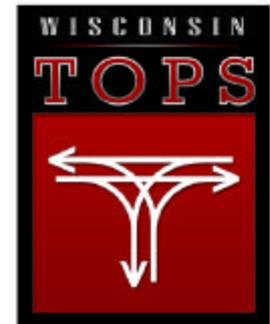
# Data Gathering Process

- Review of 15,194 crash reports
  - 2001-2003
    - Interstates 39, 43, 90, 94
    - USH 10, 12, 14, 18, 41, 51, 53, 141, 151
    - STH 23, 29, 30, 35, 54, 57, 172, 441
  - Districts 1, 3-8
    - District 2 gathered earlier by WisDOT



# Initial Results

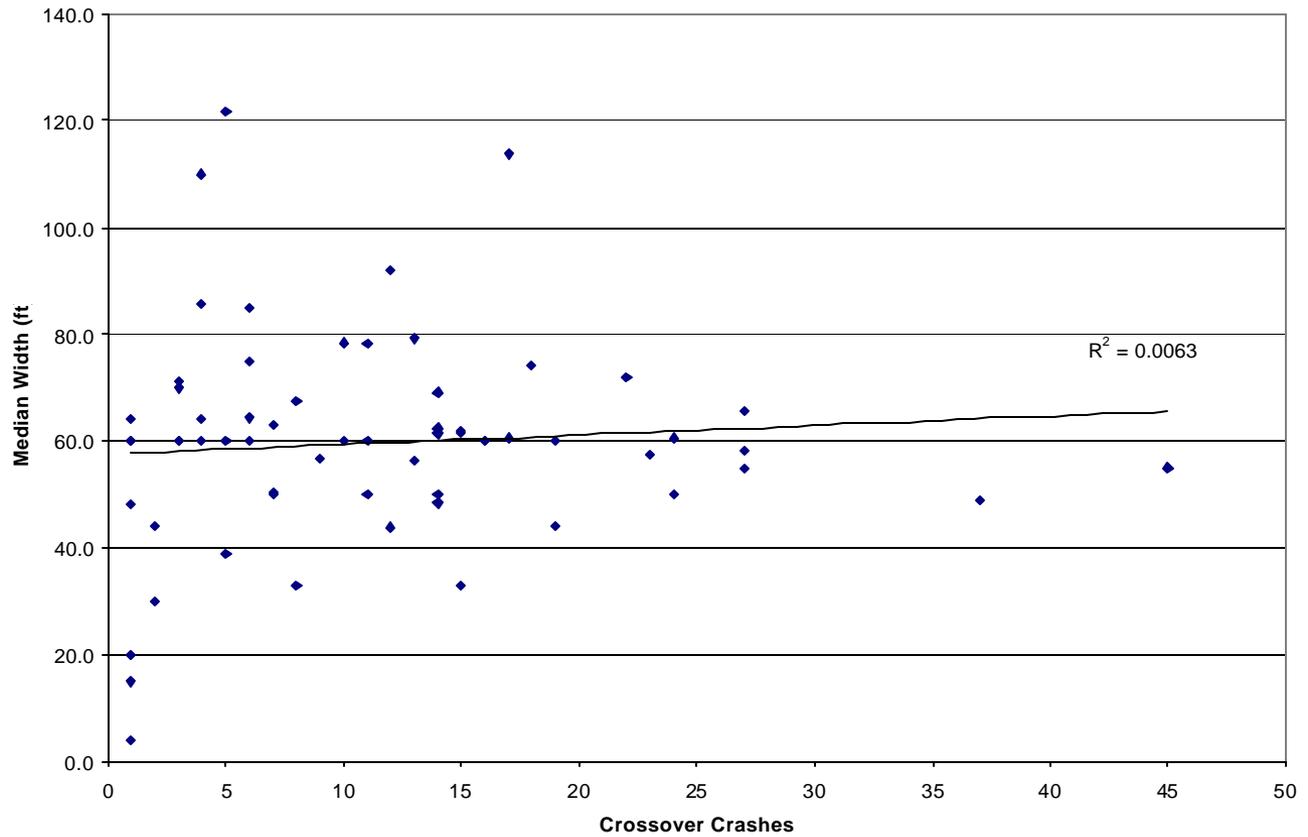
- Districts 1, 3-8; 2001-2003
  - 3,839 median entry crashes
  - **673** cross-over-the-median crashes
    - 17% of the median entry crashes crossed over
- District 2; 2001-2003
  - **68** cross-over-the-median crashes
  - No data on median entry only
- **741** total cross-over-the-median crashes evaluated



# Relationships

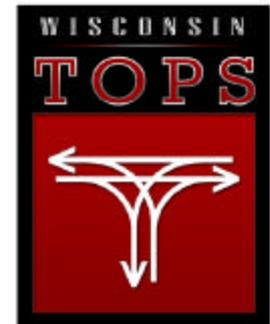


Crossover Crashes vs. Median Width  
(Median Width < 150 ft)  
(Each Data Point Represents One Highway-County Segment)



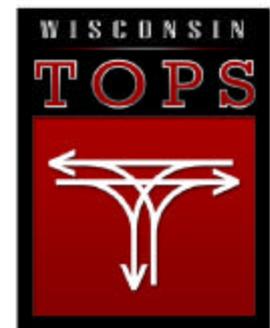
# Preliminary Results: Severity

- 741 crossover crashes
  - Property damage = 324 (44%)
  - Personal injury = 373 (50%)
  - Fatal = 44 (6%)



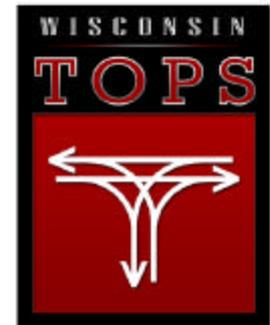
# Preliminary Results: Number of Vehicles

- 741 crossover crashes
  - Single vehicle = 436 (59%)
  - Two vehicles = 251 (34%)
  - Three or more vehicles = 54 (7%)
- 32 of 44 fatal crashes (73%) involved two or more vehicles
  - 11% of multi-vehicle crossover crashes were fatal
    - 3% of single vehicle crossover crashes were fatal



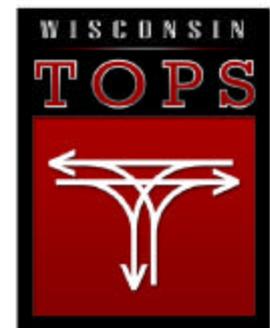
# Preliminary Results: Age of Driver (District 2 omitted)

Age	Crossover Crashes	Fatal Crossover Crashes
15-19	84 (12%)	5 (14%)
20-24	150 (22%)	11 (30%)
25-34	123 (18%)	5 (14%)
35-44	117 (17%)	6 (16%)
45-54	101 (15%)	6 (16%)
55-64	55 (9%)	3 (8%)
65-74	19 (3%)	1 (3%)
75+	17 (3%)	0
Unknown	7 (1%)	0



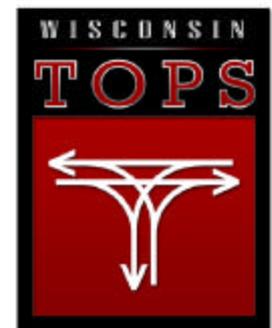
# Preliminary Results: Time & Alcohol

- 741 crossover crashes
  - Time of day:
    - 322 (43%) crashes during the workday (6AM-7PM, M-F)
    - 288 (39%) crashes during the weekend (F 7PM – M 6AM)
    - 98 (13%) are late night crashes (12AM-4AM)
      - 34% are alcohol related
  - Alcohol related:
    - 76 (11%) crashes
      - 18% of fatal crashes



# Preliminary Results: Weather (District 2 omitted)

- 673 crossover crashes
  - 441 (66%) of crashes occurred under non-adverse (clear or cloudy) conditions
    - 70% of fatal crashes
  - 126 (19%) of crashes occurred while snowing
    - 16% of fatal crashes



# Summary

- 741 Crossover crashes in 3 year period
  - 373 Personal injury crashes
  - 44 Fatal crashes
    - 57 Fatalities
- Next steps
  - 'Clean' existing data
  - Apply CODES data
  - Detailed data analysis

