Hot Topics and Trends in Highway Safety in Indiana

Rick O. Drumm, P.E.
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FHWA – Indiana Division
Road School 2012
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“Safety is a good thing.”

UPDATEED!!!!

Hot Topics and Trends

- Data
- Analysis
- Approach
- Newer Technologies/Applications

Final Thoughts
Hot Topics and Trends

“Safety is a good thing.”

UPDATED!!!!

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Final Thoughts
“Highway Safety is a good thing.”

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Final Thoughts
ARIES
Automated Reporting
Information Exchange System
ARIES

- Over 99% electronic reports
- Over 85% within 5 days
- Improved Data quality
- Improved location ability, but…
Data Improvements

- Point and Click
- Data Warehouse and Public Access
- Increased linking of Crash Data and Road Data
Use of Digital Natives
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Final Thoughts
Approaches to Analysis and Prioritization

- **Frequency (Number)**
  - All crashes, injury crashes, severe crashes

- **Rate (per vmt or per MEV)**

- **Statistical Variation (Standard deviations from “expected”)**
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Final Thoughts
Traditional Approach

- High Accident Location
- High Crash Location – HCL (preferred)
- Hot Spot
- Black Spot
- Locations of Interest
- High Priority Location
HCL Approach

- Relatively few of the total crashes
- Difficult to identify more than a few locations
- Specific locations “move”
Collisions by most severe injury (mapped/actual)

▲ Fatal (8/8)
■ Incapacitating (11/12)

Whitley County - 2008
Collisions by most severe injury (mapped/actual)

- Fatal (7/7)
- Incapacitating (15/15)

Whitley County - 2009
Reduction of Fatalities and Serious Injuries

- Chasing Fatalities will not work (for most of them)
- Chasing Serious Injuries will not work
- Comprehensive look at crashes
- System-wide countermeasures
System-wide

- Smaller countermeasures
- Far less cost per site
- Wider area
- More locations
- Applied to system – corridor, area, type of location
System-wide

- Programmatic
- Systematic
- Systemic
System-wide Approach

Examples:

- Signs
- Pavement Markings
- Flashers
- Sight Distance
- Lighting
- Shoulders
- Skid-Resistant Surface
- Trees
- Pedestrian Emphasis
- Curves
- Intersections
- Corridors
- Backing Plates
- Cable Guardrail
Approaches to Highway Safety

- Find High Crash Locations (HCLs)
  - Specific locations
  - Relatively low number
  - Generally larger fixes

- System-wide Improvements
  - Wide range of locations
  - Relatively large number
  - Focus on low-cost fixes
Approaches to Highway Safety

HCL

System-wide

Blend
Hot Topics and Trends

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Final Thoughts
9 Proven Safety Countermeasures

1. Safety Edge
2. Roundabouts
3. Corridor Access Management
4. Backplates with Retroreflective Borders
5. Longitudinal Rumble Strip(e)s on 2-Lane Roads
6. Enhanced Delineation and Friction for H-Curves
7. Medians and Ped Xing Islands in Urban/Suburban
8. Pedetrian Hybrid Beacon
9. Road Diets
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Final Thoughts
Let me explain. No, there is too much. Let me sum up...

- “Highway Safety is a good thing.”
- Obtain Crash Data and consider advanced analysis.
- Hire a Digital Native.
- Encourage HCL and System-wide approaches to safety.
- Know about and encourage the new countermeasures in safety.
- Highway Safety is our responsibility – we can make a difference.
Cause Safety