Safety Countermeasures

"Safety is a good thing."

Updated!!!!

Safety Countermeasures

- Proven Safety Countermeasures
- Other Countermeasures

Final Thoughts
Safety Countermeasures

“Safety is a good thing.”

Updated!!!!

Safety Countermeasures

- Proven Safety Countermeasures
- Other Countermeasures

Final Thoughts
“Highway Safety is a good thing.”

- Rick O. Drumm, P.E.
Indiana Highway Fatalities

- Fatalities
- 5-year Average

Graph showing the number of highway fatalities in Indiana from 1996 to 2011, with two lines representing fatalities and 5-year average.
Highway Fatality Rate
National vs. Indiana
(fatalities per 100 MVMT)
Motor Vehicle Crashes is the leading cause of death for the following age groups:

- 4-7
- 8-15
- 16-20
- 21-24
- 25-34
Indiana: 2009

**Injury Crashes**
- Local/City: 48%
- County: 14%
- Interstate: 6%
- State: 17%
- US Route: 11%
- Unknown: 4%

**Fatality Crashes**
- Local/City: 24%
- County: 25%
- Interstate: 9%
- State: 24%
- US Route: 17%
- Unknown: 1%

Indiana: 2009
Systems Approach: Contributing Factors to Crashes

- Roadway: 34%
  - 3%
  - 27%
  - 6%
  - 2%
- Driver: 57%
  - 57%
- Vehicle: 12%
  - 12%
“Highway Safety is a good thing.”

- Rick O. Drumm, P.E.
Safety Countermeasures

“Highway Safety is a good thing.”

Safety Countermeasures

Proven Safety Countermeasures

Other Countermeasures

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. Pedestrian Hybrid Beacon
9. Road Diets
1. Safety Edge
2. Roundabouts
Valparaiso
Noblesville
4. Backplates with Retroreflective Borders
Westfield
Bedford
5. Longitudinal Rumble Strips and Stripes on 2-Lane Roads

- Centerline Rumble Strips
- Edgeline Rumble Strips (Rumble Stripes)
CLRS in Indiana

- SR 38, from SR 39 to US 421, Clinton County
- US 35, from US 24 to SR 16, Cass County
- SR 120, from SR 13 to SR 5, Elkhart and LaGrange Counties
- US 231, from I-65 to US 24, White County (let, not built)
1. Place Milled Centerline Corrugations in accordance with the table below:

<table>
<thead>
<tr>
<th>Roadway Description</th>
<th>Typical Drawing Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway with 11 feet or greater lane width and minimum of 3 feet of paved shoulder.</td>
<td>Detail #1</td>
</tr>
<tr>
<td>Roadway with 11 feet lane width and less than 3 feet of paved shoulder.</td>
<td>Detail #2</td>
</tr>
</tbody>
</table>

2. See Sheet 2 of 2 for corrugation placement at intersections and driveways.

Note:
Center MCC about the Roadway Centerline.
Cass County
6. Enhanced Delineation and Friction for Horizontal Curves
8. Pedestrian Hybrid Beacon

HAWK - High intensity Activated crossWalK

2009 MUTCD Chapter 4F.
Pedestrian Hybrid Beacons
9. “Road Diets”
(Roadway Reconfiguration)
Safety Countermeasures

“Highway Safety is a good thing.”

Safety Countermeasures

- Proven Safety Countermeasures
- Other Countermeasures

Final Thoughts
Cable Guardrail for Interstate Medians
Alternative Intersections
Four Intersection Concepts

DISPLACED LEFT-TURN

MEDIAN U-TURN

RESTRICTED CROSSING U-TURN

QUADRANT ROADWAY
RRFB

Rectangular Rapid Flash Beacon
Para cruzar la calle, por favor presione el botón rojo por dos segundos

1. Push Button To Alert Motorist
2. Wait For Vehicles To Stop
3. Cross Carefully
4. Thank The Driver

R.D. Jones’ Stop Experts, Incorporated
Safety Countermeasures

“Highway Safety is a good thing.”

Safety Countermeasures

- Proven Safety Countermeasures
- Other Countermeasures

Final Thoughts
Let me explain. No, there is too much. Let me sum up...

- “Safety is a good thing.”
Let me explain. No, there is too much. Let me sum up...

- “Safety is a good thing.”
  “Highway Safety is a good thing.”

- Consider Proven Safety Countermeasures

- Consider Other Safety Countermeasures
Cause Safety