Indiana’s Perspective on Traffic Safety

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Indiana Department of Transportation (INDOT)
Indiana Traffic Fatalities

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatalities</th>
<th>Fatality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>938</td>
<td>1.3</td>
</tr>
<tr>
<td>2006</td>
<td>842</td>
<td>1.0</td>
</tr>
<tr>
<td>2007</td>
<td>798</td>
<td>0.9</td>
</tr>
<tr>
<td>2008</td>
<td>693</td>
<td>0.9</td>
</tr>
<tr>
<td>2009</td>
<td>607</td>
<td>0.8</td>
</tr>
<tr>
<td>2010</td>
<td>576</td>
<td>0.7</td>
</tr>
<tr>
<td>2011</td>
<td>482</td>
<td>0.7</td>
</tr>
<tr>
<td>2012</td>
<td>470</td>
<td>0.7</td>
</tr>
<tr>
<td>2013</td>
<td>440</td>
<td>0.7</td>
</tr>
<tr>
<td>2014</td>
<td>440</td>
<td>0.7</td>
</tr>
<tr>
<td>2015</td>
<td>440</td>
<td>0.7</td>
</tr>
<tr>
<td>2016</td>
<td>440</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Note: The fatality rates are per 100 million vehicle miles traveled (vmt).
Indiana Fatalities & Serious Injuries
why? w
The Economy (for one)
Elkhart County, Indiana

![Graph showing the relationship between unemployment rate and fatal + injury crashes from 2005 to 2016. The graph indicates that there is a peak in fatal + injury crashes in 2009 at 808 cases, which corresponds to a peak in the unemployment rate at 18%. There is a general decrease in both metrics from 2009 onwards.]
WHAT'S GOING ON?
Traffic Safety Capital Program

Share of Construction $ by Project Type

Fiscal Year

Systemic Investments
Hot Spot Investments

2018  2019  2020  2021  2022

28%  56%
0%  10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
Crash Patterns

3 Decimal Rounding
At a given site, why is one crash severe and the next not?

- User (driver/passenger, pedestrian, bicyclist)
- Seat-belt use
- Speed
- Conflict type & impact point
- Vehicle (air bags, stability, crash-worthiness)
- Person’s age, health
- Emergency response
- Chance
At a given site, why does one vehicle crash and the next not?

- Presence of a conflict
- Vehicle (brakes, steering, automation, etc.)
- Driver’s ability (training, experience, recognition/reaction, distractions, impairment)
- Speed
- Compliance
- Environment (weather, visibility)
- Chance
Precisely where a severe crash occurs is a little...
Certain types of severe crashes over large areas are somewhat predictable.
Median Cable Barrier
Rumble StripE
Intersection Decision Guide: Indiana’s Version of an ICE Policy

Intersection Decision Guide

Prepared by Technical Working Group:

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Indiana Department of Transportation (INDOT)

January 14, 2014 (version 1.1)
IDG Process Overview

• Start with universe of options; end with identification of best choice
• Each decision tree a step-wise sequence of 4 questions
• Stage 1 screens, a quick feasibility test – no comparison
• Stage 2 yields performance stats – direct comparison
• Mix of quantitative and qualitative measurement
• Record Sheet for each stage/tree
What Does the Method Produce?

- Greater awareness of alternative/innovative intersections – their characteristics & applications
- More extensive statewide use of alternative forms
- Better choices in selection of intersection improvements and new intersection designs
- More cost-effective intersection investments toward improving traffic safety and congestion
- Agreement on an agency decision-making process for this purpose, as a matter of policy
Research in Indiana

T-Scan

Speed
Automated & Autonomous Vehicles

![Graph Showing Transition Period and Full Implementation]
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