**Update on Local Road Safety Plan Initiative**

**Agenda**
- Eliminating Transportation-Related Fatalities
- What is an LRSP?
- LRSPs in Alabama
- Plan Development
- Multi-Disciplinary Approach to Solving Crashes
- LRSP Resources

**Towards Zero Deaths and Zero Fatalities**
- AL Strategic Highway Safety Plan (SHSP), Third Edition
- **Vision:** Toward Zero Deaths (TZD)
- **Goal:** By **2035**, reduce fatal and serious injuries by **50%** for ALL transportation system users.

**Forecasted Fatality Projections to Achieve 50 Percent Reduction by 2035**

**Forecasted Serious Injury Projections to Achieve 50 Percent Reduction by 2035**
Update on Local Road Safety Plan Initiative

ALDOT SHSP Emphasis Areas

- High Risk Behavior
- At-Risk Road Users
- Infrastructure and Operations
- Decision and Performance Improvement

ALDOT SHSP - 14 Focus Areas

- High Risk Behavior
  - Speeding and Aggressive Driving
  - Distracted/Drowsy Driving
  - Impaired Driving
  - Occupant Protection
  - Safety Culture
- Infrastructure and Operations
  - Roadway Departure Crashes
  - Intersection Crashes
- At-Risk Road Users
  - Young Drivers
  - Older Drivers
  - Pedestrians and Bicyclists
  - Motorcyclists
- Decision and Performance Improvement
  - Data Systems
  - Safety Culture
  - Workforce Development

State vs Locally Maintained Roads, 2006-2015

- Percent of Serious Injury Crashes
  - State Maintained Roads: 51%
  - Locally Maintained Roads: 49%
- Percent of Fatal Crashes
  - State Maintained Roads: 55%
  - Locally Maintained Roads: 45%

Source: AL SHSP, Third Edition

What is a LRSP?

- Proactive safety improvements based on risk factor assessment
- Define a focused plan for practitioners to make informed, prioritized safety decisions
- Use results of the analysis to leverage and apply for funding

- Goal – Proactive safety improvement projects that can be implemented
- Added to FHWA Proven Safety Countermeasure list in 2017
LRSPs per the FHWA

“The systemic approach to safety involves widely implemented improvements based on high-risk roadway features correlated with specific severe crash types.

The approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional site analysis.

It helps agencies broaden their traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.”

FHWA – Office of Traffic Safety

Why Systemic Analysis?

- Crashes are random
- Proactive approach
- Evaluates risk across the entire system

2014

2015

2016

2017
Update on Local Road Safety Plan Initiative

2018

LRSPs in Alabama

- Elmore County – completed 2019
- FHWA Pilot / Phase 1 (10 counties) – nearly completed
  - Autauga
  - Chambers
  - Cleburne
  - Perry
  - Sumter
  - Wilcox

2014-2018

- Reactive: acting in response to a situation rather than creating or controlling it.
- Proactive: creating or controlling a situation by causing something to happen rather than responding to it after it has happened.

LRSPs in Alabama

- Elmore County – completed 2019
- FHWA Pilot / Phase 1 (10 counties) – nearly completed
- ALDOT Phase 2 (15 counties) – planned to kick-off in 2022
  - Baldwin
  - Blount
  - Butler
  - Coffee
  - Colbert
  - Geneva
  - Jackson
  - Jefferson
  - Limestone
  - Montgomery
  - Morgan
  - Pickens
  - Russell
  - Shelby
  - St. Clair
LRSPs in Alabama

- Elmore County – completed 2019
- FHWA Pilot / Phase 1 (10 counties) – nearly completed
- ALDOT Phase 2 (15 counties) – planned to kick-off in 2022
- ALDOT Phase 3 – to be determined

K and A Crashes on County Roads in Alabama

LRSP Focus = Segments

- Not Intersection Related
- Intersection Related

K and A Crashes on County Roads in Alabama

Over-Represented Crash Types

<table>
<thead>
<tr>
<th>Emphasis Area</th>
<th>Focus Area</th>
<th>Statewide Totals*</th>
<th>County*</th>
<th>Change in Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Risk Behavior</td>
<td>Speeding and Aggressive Driving</td>
<td>8</td>
<td>6</td>
<td>-5</td>
</tr>
<tr>
<td></td>
<td>Distracted/Drowsy Driving</td>
<td>5</td>
<td>4</td>
<td>+1</td>
</tr>
<tr>
<td></td>
<td>Impaired Driving</td>
<td>7</td>
<td>5</td>
<td>+2</td>
</tr>
<tr>
<td></td>
<td>Occupant Protection</td>
<td>5</td>
<td>4</td>
<td>+1</td>
</tr>
<tr>
<td>Infrastructure and Operations</td>
<td>Roadway Departure</td>
<td>2</td>
<td>1</td>
<td>+1</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>3</td>
<td>2</td>
<td>+1</td>
</tr>
<tr>
<td>At-Risk Road Users</td>
<td>Bicycles</td>
<td>15</td>
<td>11</td>
<td>-</td>
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<tr>
<td></td>
<td>Pedestrians</td>
<td>10</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Motorcycles</td>
<td>8</td>
<td>9</td>
<td>-1</td>
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</table>

* Statewide total crashes are based on years 2019-2021 (excluding 2022 County focusing). County rankings are based on crash level per year study area focus segment.
Top Contributing Crash Factors

### County Fatal and Serious Injury Crashes by Focus Area

<table>
<thead>
<tr>
<th>Emphasis Area</th>
<th>Focus Area</th>
<th>Fatal Crash</th>
<th>Serious Injury Crash</th>
<th>K&amp;A % of Total</th>
<th>Rank</th>
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<tbody>
<tr>
<td>High-Risk Behavior</td>
<td>Speeding and Aggressive Driving</td>
<td>13</td>
<td>30</td>
<td>43</td>
<td>15%</td>
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<tr>
<td></td>
<td>Distracted/Drowsy Driving</td>
<td>7</td>
<td>28</td>
<td>35</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Impaired Driving</td>
<td>15</td>
<td>29</td>
<td>44</td>
<td>16%</td>
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<tr>
<td></td>
<td>Occupant Protection</td>
<td>26</td>
<td>46</td>
<td>72</td>
<td>26%</td>
</tr>
<tr>
<td>Infrastructure and Operations</td>
<td>Roadway Departure</td>
<td>43</td>
<td>102</td>
<td>143</td>
<td>51%</td>
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<tr>
<td>At-Risk Road Users</td>
<td>Intersection</td>
<td>7</td>
<td>95</td>
<td>102</td>
<td>37%</td>
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<tr>
<td></td>
<td>Young Drivers (&lt;25)</td>
<td>10</td>
<td>65</td>
<td>75</td>
<td>27%</td>
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<td></td>
<td>Older Drivers (65+)</td>
<td>12</td>
<td>30</td>
<td>42</td>
<td>15%</td>
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<tr>
<td></td>
<td>Bicycles</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>2%</td>
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<tr>
<td></td>
<td>Pedestrians</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>4%</td>
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<tr>
<td></td>
<td>Motorcyclists</td>
<td>3</td>
<td>19</td>
<td>22</td>
<td>8%</td>
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</tbody>
</table>

**Requested County Data**
- Roadway centerline file
- Shoulder width
- Shoulder type
- Sloped pavement edge
- Rumble strips
- Curve chevrons
- Unpaved roadways
-Posted speed
- Pavement width

**Development Process**

1. County Information
2. Code & GIS
3. Risk Factor Ranking
4. County Input
5. Route/Fit Sheets
6. Project Sheets
7. Project Selection
### Risk Factors and Ranking

<table>
<thead>
<tr>
<th>Segment</th>
<th>Traffic Volume</th>
<th>Access Density</th>
<th>Roadway Width</th>
<th>Shoulder Width</th>
<th>Rumble Strips</th>
<th>K and A Crash Rate</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>13</td>
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<tr>
<td>#2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
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<tr>
<td>#3</td>
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<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>#5</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>#6</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>18</td>
</tr>
</tbody>
</table>

### Countermeasure Selection Thresholds

- Retroreflective Pavement Markings
- Edgeline Rumble Strips
- Centerline Rumble Strips
- Shoulders (Paved or Unpaved)
- Sloped pavement edge
- Clear and Grub within the ROW
- Upgrading curve signage
- Road Safety Review/Assessment

### Project Location Cost Summary

<table>
<thead>
<tr>
<th>Segment</th>
<th>Segment Length (mi)</th>
<th>Risk Factor Points</th>
<th>Estimated Project Cost</th>
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<tr>
<td>Location #1</td>
<td>2.6</td>
<td>15</td>
<td>$ 460,000</td>
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<tr>
<td>Location #2</td>
<td>4.2</td>
<td>14</td>
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<td>Location #3</td>
<td>6.0</td>
<td>13</td>
<td>$ 1,025,000</td>
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<td>Location #4</td>
<td>0.9</td>
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<tr>
<td>Location #5</td>
<td>2.1</td>
<td>12</td>
<td>$ 370,000</td>
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<td>Location #6</td>
<td>1.5</td>
<td>12</td>
<td>$ 250,000</td>
</tr>
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<td>Location #7</td>
<td>0.8</td>
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<tr>
<td>Location #8</td>
<td>1.2</td>
<td>11</td>
<td>$ 200,000</td>
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<tr>
<td>Location #9</td>
<td>0.6</td>
<td>11</td>
<td>$ 122,000</td>
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<tr>
<td>Location #10</td>
<td>0.6</td>
<td>11</td>
<td>$ 110,000</td>
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<tr>
<td>Total (10 Segments)</td>
<td></td>
<td></td>
<td>$3,643,000</td>
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</table>
Who can improve rural road safety?

Engineering • Comprised of Federal, State, and local civil government agencies, as well as consultant firms.
• Primary focus is to establish and maintain the roadway infrastructure.
• Identify areas of concern, rehab areas in need of improvements, and ensure changes will be beneficial.

Education • Public education and outreach to inform the general public on proper roadway behavior and risks.
• Frequently involve media advertisements, brochures, posters, and presentations.
• Intertwined with enforcement to generate "high-visibility enforcement" to increase the perception of a particular law (i.e. Click it or Ticket).

Enforcement • State and local law enforcement agencies.
• Enforce the law to stop and discourage drivers from traffic related violations
  • Speeding
  • Driving under the influence
  • Reckless driving
  • Pedestrian and bicyclist safety

Emergency Medical Services • Emergency Medical Services includes paramedics, EMTs, and firefighters.
• Emergency services provide medical response at the scene of a crash.
• Typically, are the first to arrive.
• Primary focus is to treat and transport the injured as quickly as possible.

Your Plan!
Update on Local Road Safety Plan Initiative

LRSP Resources

- ALDOT Traffic and Safety Operations Section
- FHWA LRSP website: https://safety.fhwa.dot.gov/LRSPDIY/

Image Source: FHWA

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