Agenda

- Safety Planning Approach
- Safety Data and Analysis
- Targeted and Prioritized Countermeasures
- Virtual Outreach and Engagement
  - Dashboards and Decision-Making Tools
- Implementation and Action Plans
Safety Planning

- Comprehensive
- Data-driven
- Network-wide

- Multidisciplinary
- Proactive

Analysis to understand existing safety challenges
Framework to address the current condition of the transportation network
Blueprint for a safe transportation system for all users

THE LRSP DEVELOPMENT PROCESS

1. Establish Leadership
2. Analyze Safety Data
3. Determine Emphasis Areas
4. Identify Strategies
5. Prioritize and Incorporate Strategies
6. Evaluate and Update
Plan Approach

1. Data Gathering
   - Data collection
   - Database development

2. Data Analysis
   - General trends
   - Crash types
   - Contributing factors
   - Trend analysis
   - Candidate priority locations

3. Vision, Objectives, Priorities
   - Plan vision, mission, and emphasis areas
   - Develop objectives
   - Finalize priority locations

4. Develop strategies to improve safety
   - Identify countermeasures (i.e., programs and projects)
   - Develop criteria for prioritizing countermeasures
   - Gain public approval

5. Implementation Plan
   - Toolkit of best practices
   - Prioritized projects
   - Resolution(s)
Safety Data and Analysis
Trends Analysis and Mapping

Fatalities Per 100,000 Population

<table>
<thead>
<tr>
<th>Year</th>
<th>El Paso</th>
<th>Colorado</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>7.1</td>
<td>10.0</td>
<td>11.1</td>
</tr>
<tr>
<td>2016</td>
<td>7.0</td>
<td>11.0</td>
<td>11.7</td>
</tr>
<tr>
<td>2017</td>
<td>11.0</td>
<td>11.6</td>
<td>11.5</td>
</tr>
<tr>
<td>2018</td>
<td>11.4</td>
<td>11.1</td>
<td>11.3</td>
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<tr>
<td>2019</td>
<td>9.2</td>
<td>10.4</td>
<td>11.0</td>
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</table>
Crash Data Analysis

- What collision types are overrepresented in severe crashes?
- What factors or behaviors are contributing to severe crashes?
- Who is involved in those severe crashes?
- What contexts and road types are overrepresented?
- When and where are severe crashes predominantly occurring?
Data Collection

Crash Data
- Best crash data sources and access
- Up to 10 years
- Severity
- Collision type
- Contributing circumstance
- Location
- Driver Age/Gender
- Date/Time
- Vehicle type

Roadway Data
- No. of lanes
- Speed
- Maintaining authority, jurisdiction, and functional class
- Urban/rural
- Lane and roadway width
- Intersection and signal type

Traffic Data
- AADT
- Vehicle Miles Traveled by Roadway Type and Jurisdiction

Other
- Project Data
- Demographics
- Environmental Justice Data
Network Screening Analysis

• Identifies network (intersections, segments) that would benefit from safety improvements
  • Identify Network
    • Most common performance measures used are crash frequency, crash severity & crash rate
    • Crash severity weighting (i.e. EPDO) is also common
    • Predictive methods being implemented more & more

• Prioritize Sites within Network

• Field Investigations & Recommended Countermeasures
  • Road Safety Audits
Systemic Analysis

- Supplements the traditional site analysis (i.e. “hot-spot”) approach
- Identifies high risk roadway features, correlated with severe crash types (cross-median, pedestrian, curve)
  - Low Cost Safety Improvements
- Particularly applicable when a significant number of severe crashes happen over a wide area
  - Rural roadways
  - Local roadways
Targeted and Prioritized Countermeasures
Countermeasure-Driven Approach

- Draws upon body of known effective countermeasures
- Encourages sponsors of all types of transportation projects to integrate effective safety countermeasures as appropriate
Road Safety Audits

- Utilizes multi-disciplinary team
- Considers all potential road users
- Accounts for road user capabilities and limitations
- Generates a formal RSA report
Virtual Outreach and Engagement
Role of Project Stakeholders

- **Shape Planning**
  Help set a course for the next 5+ years of safety planning

- **Leverage Resources**
  Build plan from existing safety initiatives, projects, data and programs

- **Look Forward**
  A forum to address challenges and seize opportunities

- **Share the Story**
  With partners to build awareness and facilitate input
Public Participation

Website: EPCSaferroads.com
Location Prioritization

El Paso County Safety Map

Instructions
Please select locations and complete the survey to provide feedback on safety improvements.

Step 1: Use the Location Detail tab above to click through the list of locations. You can also zoom to a specific area. More information becomes visible as you zoom.
Step 2: Select a location in map by clicking on it.
Step 3: Complete survey to the right and submit.
Step 4: Repeat for as many locations as desired.

For questions or additional comments, please

Is this location a priority?*
- Yes
- No

What are the main safety issues in this location?
- Access Management or Driveway Issue
- Aggressive Driving Issue
- Aggressive Motorcycle Driver Issue
- Animal Crossing Needed
Safety Data Dashboards
Implementation and Action Plans
Implementation and Action Plans

- Encouraging Implementation to Reach Project Goals
- Identifying Performance Metrics to Track Progress
- Providing Specific Recommendations and Action Steps
## Action Plans and Prioritized Projects

### Prioritized Countermeasures

- **Timeline**
- **Costs**
- **5 E’s**

<table>
<thead>
<tr>
<th>DESIGN AND OPERATE SAFER INFRASTRUCTURE</th>
<th>TIME FRAME</th>
<th>COST</th>
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<tbody>
<tr>
<td>Install pedestrian hybrid beacon and advanced yield signs, stop markings and signs, high visibility crosswalk markings.</td>
<td>Mid-term</td>
<td>$</td>
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<tr>
<td>Conduct pedestrian road safety audits in areas with a higher than average pedestrian crashes.</td>
<td>Ongoing</td>
<td>$</td>
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<tr>
<td>Reduce motor vehicle speeds by using data driven, effective, and equitable enforcement methods that utilize available technology, such as automated speed cameras.</td>
<td>Long-Term</td>
<td>$$$</td>
</tr>
<tr>
<td>Reduce motor vehicle speeds by utilizing other traffic calming strategies such as narrower lanes, adding roundabouts, reducing the number of traffic lanes, planting trees, and implementing road diets.</td>
<td>Ongoing and Long-Term</td>
<td>$$$</td>
</tr>
<tr>
<td>Install pedestrian countdown signals and evaluate and include where prudent different options for pedestrian signal countdown technology (touchless, audible, etc.).</td>
<td>Ongoing and Long-Term</td>
<td>$</td>
</tr>
<tr>
<td>Improve geometry of pedestrian and bicycle facilities at signalized intersections with high frequencies of pedestrian and/or bicycle crashes and on routes serving schools or other generators of pedestrian and bicycle traffic; this can include installing pedestrian refuges.</td>
<td>Ongoing and Mid-Term</td>
<td>$</td>
</tr>
<tr>
<td>Replace intersections that have high numbers of fatalities and serious injuries with roundabouts, a circular intersection configuration with channelized approaches and a center island that results in lower speeds and fewer conflict points, wherever feasible.</td>
<td>Ongoing Long-Term</td>
<td>$</td>
</tr>
<tr>
<td>Utilize a protected left, improving the sight distance, positive offset, or multiphase signal operation at signalized intersections with a high frequency of angle crashes involving left turning and opposing through vehicles as well as rear-end and side swipe crashes.</td>
<td>Mid-Term</td>
<td>$$$</td>
</tr>
<tr>
<td>Evaluate uncontrolled intersections and recommend improvements based on evaluation results.</td>
<td>Short-Term/Ongoing</td>
<td>$</td>
</tr>
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### 5 E’s

- **Engineering**
- **Education**
- **Encouragement**
- **Evaluation**
- **Enforcement**
Best Practice and Resource Toolkit

Proven Resources and Countermeasures
Tailored Guidance by Emphasis Area
Related Tools and Methods for Analysis
Contacts

Cory Hopwood
Cambridge Systematics
CHopwood@camsys.com

Laura Richards
Cambridge Systematics
LRichards@camsys.com