Rails-Next-to-Trails
A Methodology for Selecting Appropriate Safety Treatments at Complex Multi-Modal Intersections

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1. Stop for pedestrian → Stop on tracks

2. Do not stop on tracks → Do not stop for pedestrian
How do we create a guidebook to evaluate and improve this type of intersection?
Field Observations & Video Surveillance

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Evaluation Criteria

- Unintentional Non-Compliance
- Cost
- Average Delay
- Sight Distance
- Illegal Behavior
Treatment Catalog
Identify Primary Issues

- The Built Environment
- Lack of Path User Information
- Lack of Driver Information
The Guidebook  A Pragmatic, User-Friendly Tool for Selecting Appropriate Treatments
Examine Existing Crossing and Path Data

8.01 - Query by Location

Location: Alabama

- County/City:
  - ALL
  - Autauga
  - Baldwin
  - Barbour

Crossing Type:
- Public Only
- All (Includes Private and Pedestrian)

Crossing Position:
- At-Grade Only
- All (Includes Grade Separated)

Crossing Status:
- Open
- All (Includes Closed)

Street:
The Built Environment

Lack of Driver Information

Lack of Path User Information

Basic Crossing Information
Primary Issues
Stakeholder
Budget
Treatments
Evaluation Criteria
Application
Determine Treatments

Start

Heavy Rail
- Near School
  - Primary
  - Secondary
- Not Near School
  - Primary
  - Secondary

Light Rail
- Near School
  - Primary
  - Secondary
- Not Near School
  - Primary
  - Secondary
Sample Application
SE Spokane St
Portland, OR
<table>
<thead>
<tr>
<th></th>
<th>2016/07/07 8am-9am</th>
<th>2016/07/06 5.15pm-6.15pm</th>
<th>2016/07/06 3.23pm-4.38pm</th>
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</thead>
<tbody>
<tr>
<td>Vehicles</td>
<td>136</td>
<td>281</td>
<td>439</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>55</td>
<td>68</td>
<td>54</td>
</tr>
<tr>
<td>Bikes</td>
<td>154</td>
<td>305</td>
<td>250</td>
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<tr>
<td>Trains</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>
Identify Primary Issues

1. Location of the Stop Line
2. Path User Speed
3. Non-Compliance
4. Negotiation
## CROSSINGS NOT NEAR SCHOOLS

<table>
<thead>
<tr>
<th>Primary Issue</th>
<th>Primary Recommendation</th>
<th>Secondary Recommendation(s)</th>
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</thead>
<tbody>
<tr>
<td>The Built Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☒ Stop Line</td>
<td>☒ Move Stop Line Closer to Railroad Tracks</td>
<td>☒ Raised Crosswalk</td>
</tr>
<tr>
<td>Lack of Path User Information</td>
<td></td>
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<tr>
<td>☒ Speed</td>
<td>☒ Speed Treatment</td>
<td>☐ Add Signage</td>
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<tr>
<td>☒ Non-Compliance</td>
<td>☒ Obstructions</td>
<td>Refer to Insufficient Crossing Infrastructure</td>
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<tr>
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<td>or</td>
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<td></td>
<td>☐ Variable Signs</td>
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<tr>
<td>Lack of Driver Information</td>
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<tr>
<td>☒ Negotiation</td>
<td>☒ Dynamic Enveloping</td>
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<td></td>
<td>and</td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>☒ Conflict Paint</td>
<td>☐ Traffic Lights</td>
</tr>
</tbody>
</table>
Questions?
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This research was funded by Oregon Department of Transportation’s Research Section. The project was furthermore supported by the FHWA and by the Valle Scholarship and Scandinavian Exchange Program.