Sign Inventories
Lessons Learned

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**Sign Inventories: Lessons Learned**

- Planning for the inventory
- Conducting the inventory
- Replacing signs

Over a dozen completed inventories
Over a dozen completed inventories

Trivia!

• What’s wrong with this sign assembly?
Planning for the Sign Inventory
Planning for the Sign Inventory

Keep up with funding opportunities
• Indiana and HSIP
• Next round of funding?

Eligibility requirements and maximum awards have changed over the years.
Planning for the Sign Inventory

2A.08 “Public agencies...shall use an assessment or management method...”

Minimum Info
- Sign types (MUTCD)
- Locations
- Replace what/when/how

Not enough info

<table>
<thead>
<tr>
<th>Number of Signs</th>
<th>Text of Sign(s) (or description of diagram)</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>STOP</td>
</tr>
<tr>
<td>2</td>
<td>Stop Ahead</td>
</tr>
<tr>
<td>3</td>
<td>NOT A THRU STREET</td>
</tr>
<tr>
<td>1</td>
<td>Deer Crossing</td>
</tr>
<tr>
<td>23</td>
<td>No Parking Anytime</td>
</tr>
<tr>
<td></td>
<td>Weight Limit</td>
</tr>
<tr>
<td></td>
<td>10 M.P.H</td>
</tr>
<tr>
<td></td>
<td>20 M.P.H</td>
</tr>
<tr>
<td>23</td>
<td>20 M.P.H When Flashing</td>
</tr>
<tr>
<td></td>
<td>20 M.P.H School with 8am-8am, 3pm-4pm</td>
</tr>
<tr>
<td>23</td>
<td>30 M.P.H</td>
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<tr>
<td>1</td>
<td>40 M.P.H</td>
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<tr>
<td>2</td>
<td>45 M.P.H</td>
</tr>
<tr>
<td>1</td>
<td>Diagram - Right Curve</td>
</tr>
<tr>
<td>1</td>
<td>Diagram - Left Curve</td>
</tr>
<tr>
<td>1</td>
<td>Diagram - Sharp Right (90 degree)</td>
</tr>
<tr>
<td>1</td>
<td>Diagram - Sharp Left (90 degree)</td>
</tr>
<tr>
<td>1</td>
<td>Diagram - Double Headed Arrow (approaching Tee)</td>
</tr>
<tr>
<td>1</td>
<td>Diagram - Jog Right</td>
</tr>
<tr>
<td>1</td>
<td>Diagram - Railroad Crossing Tee Intersection</td>
</tr>
</tbody>
</table>
Planning for the Sign Inventory

Use GIS

- GIS-based inventory is more powerful
  - Input: controlled field form reduces human error
  - Output: reports in map format
  - GIS in-house is helpful

To inventory first and add GIS later is much more time-consuming
GIS produces useful exhibits

Council presentation, “we need more money for signs” vs. this exhibit
Planning for the Sign Inventory

Customize the inventory
• No one-size-fits-all
• What is the current condition of signs?
• What maintenance plan will be used?
  – Short-term, initial compliance
  – Long-term maintenance
• Who will be responsible for upkeep?
Trivia!

• What’s wrong with this sign assembly?

Over a dozen completed inventories
Conducting the Sign Inventory
Conducting the Sign Inventory

Safety
- Vehicle: crash, stuck, roadside parking
- Environment: heat, snow/ice, bees, ticks, mosquitos, stray dogs, local residents
Conducting the Sign Inventory

Safety
1) Sign backing material – who cares?
2) Focus on identifying and pass/fail info

Conducting the Sign Inventory

**Perspective: Does this sign need to be replaced?**
- Don’t collect information that isn’t useful to the data owner
- Don’t collect excessive detail if most/all signs will be replaced
Conducting the Sign Inventory

Cost vs. Value
• GPS Equipment
• Software
• Retroreflectometer
• Mobile LiDAR

Inefficient field forms allow more error
Ineffective software doesn’t have the tools needed
Old hardware crashes and runs slow
Top-of-the-line equip + software $9,000
Conducting the Sign Inventory

Mobile LiDAR inventory

☑ Safety
☑ Comfort
☑ Fast collection
☑ Good for blanket replacement
☑ Data for other uses

☒ Sign recognition?
☒ Retroreflectivity?
☒ Sheeting type, condition
☒ Date sticker
☒ Processing time
Invisible signs: Hidden Driveways, Church, Cemetery, School Bus
Franklin saved over $30,000 removing excess speed limit signs (195 out of 462)
Conducting the Sign Inventory

Source: Juli Paini, City of Indianapolis Office of Disability Affairs
Trivia!

• What’s wrong with this sign assembly?

Over a dozen completed inventories
Replacing Signs
Replacing Signs

Process using federal funds
< $100,000 can use force labor
> $100,000 must bid out to contractor
  – Developing plans
  – INDOT submittal process
  – Construction Engineering
Replacing Signs

MUTCD Compliance
- Retroreflectivity, size, shape, color, message, symbol, font
- Breakaway supports
- Eliminate unnecessary signs
- Sheeting: life-cycle cost analysis

Sign manufacturer will sell you anything!
Over a dozen completed inventories
Questions?

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