Guidelines for Conducting Nighttime Visual Inspections of Sign Retroreflectivity
Visual Inspection Method
Overview

• With this method, a model year 2000 or newer sport utility vehicle (SUV) or pick-up truck has to be used and the inspector needs to be at least 60 years old.
• The inspection occurs at night at highway speeds.
• This method simulates the conditions of the research which FHWA used as a foundation for the minimum retroreflectivity levels.
Field Technique

- Preferable to use a two person crew.
- Must have a model year 2000 or newer SUV, pick-up, or similar vehicle.
- Driver can be any age but inspector needs to be at least 60 years old.
- Inspection occurs at highway speeds with low-beams only.
- Inspector concentrates on judging sign retroreflectivity.
  - Example: adequate, marginal, poor (replace)
- Driver concentrates on driving safely.
Checklist

• Inspector and driver need to be well rested
• Have model year 2000 or newer SUV or truck vehicle with low-beam headlamps properly aimed
• Have routes selected
• Prepare inspection forms
• Have a list of the signs in driving order (if available)
• Clip board, pen lights, dash cam, tape recorder, laptop,
• Be fueled up
• Cannot start in earnest until complete darkness
• Remember to evaluate both colors of signs with two retroreflective colors (white on green, white on red, etc.)
Common Visual Inspection Features

- Aim inspection vehicle headlamps (take to certified auto mechanic)
- Two-person crew works best
- Having an inventory is preferred
- Use low-beam headlamps
- Have evaluation form and criteria
  - Example: good or bad (replace)
- Conduct evaluations at roadway speed
Visual Inspection Tips

• It is preferred to have a list of the signs along the inspection route.
  – Adds consistency to the inspections
  – Reduced need for writing during inspection
    • Only need a score for each sign such as: good, marginal, replace.
  – Provides documentation that the inspections were conducted --- just in case!
  – Allows identification of missing signs
# Sign List Example

## Sign Retroreflectivity Inspection Form

<table>
<thead>
<tr>
<th>Date:</th>
<th>Route start point:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspector:</td>
<td>Route end point:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sign Description</th>
<th>Sign Color</th>
<th>Odom. Reading</th>
<th>RETROREFLECTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>Red</td>
<td>0.1</td>
<td>✅</td>
</tr>
<tr>
<td>Route Mkr</td>
<td>Wht</td>
<td>0.2</td>
<td>✅</td>
</tr>
<tr>
<td>Spd Lmt</td>
<td>Wht</td>
<td>0.5</td>
<td>✅</td>
</tr>
</tbody>
</table>
Your job is the most important part of making this new regulation successful.

- Increase safety
- Increase nighttime visibility