FLASHING YELLOW ARROW

John L. Bisnett Jr.
FYA Safety Experience

FYA Retrofits

• Innovative design and construction delivery
• Partnership between engineering, maintenance and operations
• Continued monitoring

Initial pilot at 3 intersections

2010 Stage 1 2013 Stage 2 2014-15 Stage 3

HSIP retrofit of 99 intersections

Continue to install FYA’s at select locations
Stage 2 Projects

- **Total Cost (includes PE and Construction)**
  - $600,000 – Salem
  - $990,000 – Lynchburg
  - $330,000 – Bristol
  - Overall cost per intersection = $19,400
FYA Safety Experience

Post Construction Data

- 36 months available in Lynchburg and Salem
- 28 months available in Bristol
- Projected CRF = 16.2 to 25.3

<table>
<thead>
<tr>
<th>District</th>
<th>Number of Intersections</th>
<th>Crash Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Lynchburg</td>
<td>57</td>
<td>27%</td>
</tr>
<tr>
<td>Salem</td>
<td>31</td>
<td>22%</td>
</tr>
<tr>
<td>Bristol</td>
<td>11</td>
<td>36%</td>
</tr>
</tbody>
</table>
Stage 3

FYA Operational Benefit

- Left turn phasing assessment (2015)
- 28 conversions from Protected Only to FYA
- 12 locations awaiting Maintenance conversion
- 9 locations awaiting funding availability
- 68 locations to be reviewed

<table>
<thead>
<tr>
<th>Conversions</th>
<th>Bristol</th>
<th>Lynchburg</th>
<th>Salem</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed</td>
<td>14</td>
<td>18</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Awaiting Maintenance</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Awaiting Funding</td>
<td>9</td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Pending Review</td>
<td>44</td>
<td>1</td>
<td>23</td>
<td>68</td>
</tr>
</tbody>
</table>
What’s Next

VDOT is continuing to look at ways to improve safety and operations with the FYA

• D4 controller firmware (Currently 7 Intersections)
  • Time of Day (Currently 2 Intersections)
  • Emergency Preemption

What’s Possible

• Pedestrian Intervals Left and Right Turns