The Problem:

• Failure of several light poles in public areas
• Safety of the population at risk
• Realization that the city did not have knowledge of all assets

The Need:

• Perform structural assessment of all light poles
• Create inventory of all light pole assets
Project Considerations and Approach

- Staff and Experience with GIS/Field Data Collection
  - Structural Engineer
  - Client Account Manager
  - Project Manager
  - GIS Analyst
Project Considerations and Approach

• Database Design
  – SDE
  – Intuitive schema
  – Attachments for photo documentation
  – Domain: FHWA Standard for sign post inspections

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
<th>Feasible Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Not Applicable</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>Element performs intended function with high</td>
<td>Repair element, increase inspection frequency, do</td>
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<tr>
<td></td>
<td>degree of reliability (Good)</td>
<td>nothing</td>
</tr>
<tr>
<td>2</td>
<td>Element performs intended function with small</td>
<td>Repair or replacement of element within specified</td>
</tr>
<tr>
<td></td>
<td>reduction in reliability (Fair)</td>
<td>time frame</td>
</tr>
<tr>
<td>3</td>
<td>Element performs intended function with</td>
<td>Repair or replacement of element within specified</td>
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<tr>
<td></td>
<td>significant reduction in reliability (Poor)</td>
<td>time frame</td>
</tr>
<tr>
<td>4</td>
<td>Element does not perform intended function with</td>
<td>Immediate repair or replacement of element</td>
</tr>
<tr>
<td></td>
<td>any degree of reliability (Critical)</td>
<td></td>
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</tbody>
</table>
Project Considerations and Approach

• Field Data Collection - Software
  – ArcGIS Server
  – ArcGIS Online
  – Collector for ArcGIS

• Field Data Collection - Hardware
  – iPad
  – Arrow 100 sub-meter GNSS
  – Office Laptop
Project Execution

- Structural Engineer
  - Performed integrity assessments on 861 light poles
  - Documented condition of all assets with photos
  - Communicated critical assessments to CAM
  - Collected sub-meter locations
Project Execution

- Client Account Manager
  - Followed progress in the field from the office in AGO
  - Provided guidance on data capture based on personal knowledge of city infrastructure
  - Communicated critical assessments to client
Project Outcome

• Success!
  – Inventory complete (after change order)
  – Structural inspections/ratings completed
  – GIS data delivery completed

• Take away
  – Know your team
  – Organize for intuitive data capture
  – Test it all first!
  – Out of the box solution
  – Unlimited applications
Questions and Contact

QUESTIONS?

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