Guide Manual for Bridge Element Inspection

2012 Status Update

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California Department of Transportation
SCOBS Annual Meeting
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Implementation Components

- Software capable of handling the new elements
- Need to convert legacy element inspection data
- Develop software training
- Guidelines for agency element creation
- Evaluation of manual comments
- Inspector Training
- Management System Modeling
- Impacts to Performance Measures
Software for New Elements

- Pontis 5.1.2 released by AASHTO in May 2012.
  - Full support for the Bridge Element Inspection Manual
  - Supports read only view of legacy elements
Software for New Elements
Software for New Elements

PONTIS BRIDGE MANAGEMENT SYSTEM

**Condition Ratings**
- Deck (058): 3 Serious
- Superstructure (059): 8 Very Good
- Substructure (060): 7 Good
- Channel (061): N/A (NBI)
- Culvert (062): N/A (NBI)
- Waterway (071): N Not applicable

**Element Conditions**

<table>
<thead>
<tr>
<th>Elem</th>
<th>Str. Unit</th>
<th>Env.</th>
<th>Description</th>
<th>Quantity Units</th>
<th>Qty. 1</th>
<th>Qty. 2</th>
<th>Qty. 3</th>
<th>Qty. 4</th>
<th>Qty. 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>E11 Frame / Type = E (101) Mod. (3) (CoRe) Bare Concrete Deck (ea)</td>
<td></td>
<td></td>
<td>6673.624 (SF)</td>
<td>0</td>
<td>6674</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>104</td>
<td>E11 Frame / Type = E (101) Mod. (3) (CoRe) PIG Conc Box Girder</td>
<td></td>
<td></td>
<td>127.663 (LF)</td>
<td>128</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>215</td>
<td>E11 Frame / Type = E (101) Mod. (3) (CoRe) R/Conc Abutment</td>
<td></td>
<td></td>
<td>108.286 (LF)</td>
<td>108</td>
<td>0</td>
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<tr>
<td>223</td>
<td>E11 Frame / Type = E (101) Mod. (3) (CoRe) Timb Submerged Pier</td>
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<td></td>
<td>1.000 (EA)</td>
<td>1</td>
<td>0</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>301</td>
<td>E11 Frame / Type = E (101) Mod. (3) (CoRe) Pourable Joint Seal</td>
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<td>13.123 (LF)</td>
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<td>302</td>
<td>E11 Frame / Type = E (101) Mod. (3) (CoRe) Compress. Joint Seal</td>
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<td></td>
<td>91.864 (LF)</td>
<td>69</td>
<td>13</td>
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<td>10</td>
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<tr>
<td>321</td>
<td>E11 Frame / Type = E (101) Mod. (3) (CoRe) R/Conc Approach Slab</td>
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<td></td>
<td>6.000 (EA)</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Status: S (FIX PARAM)  Review Needed  Approved By: Tim Campbell
Save  Save & Close  Cancel  Delete Inspection
Software for New Elements
Need to Convert Legacy Elements

- Facilitated the development of Element Migrator.
  - AASHTO funded software that “migrates” legacy elements to the new AASHTO Bridge Elements.
  - Fully developed migration rules for all legacy elements
    - Will completely replace Appendix D in the Element Manual
  - Fully tested the migration software
  - Recommended agency element enhancements that have been incorporated.
Software Training

- Hosted a series of free web training sessions on the use of Pontis 5.1.2
  - Videos covered the following topics:
    - Downloading and installing Pontis 5.1.2
    - Beginning Inspection Module
    - Advanced Inspection Module
    - Creating Agency elements in Pontis 5.1.2
    - Customizing the Pontis interface, agency pages and reports
Software Training

- Upcoming webinar training sessions
  - The AASHTO Element Migrator
  - A series of Inspector Training Sessions on Element Inspection using the new manual.
- Q&A sessions
- All recorded webinars can be found on the Pontis support web site:
  - [www.pontis.inspecttech.com](http://www.pontis.inspecttech.com)
Software Training

**Pontis Home**

Pontis is part of AASHTOware's BRIDGEware software. Pontis serves as the software solution for Bridge Management. It has been developed and improved over many years and is in use throughout the United States and world.

The next generation of Pontis with new improved bridge deterioration models is currently being developed by InspectTech. This website has information on obtaining support and further product information.

**News & Updates**

- The Advanced Inspection Webinar (5G1U12) is now available on YouTube.
- The latest Pontis Webinar on basic usage and features is available for download here (17MiB).
- The recorded version of the Pontis Installation Webinar is now available on YouTube; available here. The actual downloadable video file is available in .mp4 (49MiB) format.

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[AASHTO's proven Bridge Management Software](#)
Software Training

PONTIS 5.1.2 Advanced Inspection

Presented by: Michael B. Johnson - Caltrans
Christopher Meredith - InspectTech
Evaluation of Manual Comments

- Comments on the Bridge Element Inspection Manual have been consolidated.
- Approximately 95 comments have been received.
- Comments fall into several basic categories:
  - Consistency from one element to another (26)
  - Typographical errors (22)
  - Recommended language changes (19)
  - Requested clarifications (15)
  - General comments (8)
  - Requested new elements (5)
Inspector Training

- Training Efforts Underway or Complete
  - Updated NHI 80 hour course material for new elements
  - Updated the Bridge Inspector Reference Manual
  - Element Inspection Training offered by Resource Center
  - Free Webinars
  - Numerous presentations at conferences
Management System Modeling

- Pontis 5.2 being designed and developed around new elements.
  - Models utilize the multi-defect path condition assessments.
    - Defect flags allow for improved deterioration and action cost estimates.
  - Bridge risks (scour, seismic, etc) considered along with condition.
  - Vastly improved performance measures (bridge Health index)
  - Consistent with MAP-21, risk based performance management concepts.
Summary

- The software necessary to implement the new AASHTO Bridge Element Inspection Manual is now in place.
- FHWA/NHI reference manuals and related training courses have been updated.
- Training is available in several forms with more planned.
- Manual comments are being evaluated with a draft ballot item scheduled for October 2012.
- Management system modeling is marching in lock step with the new manual.