### Project Title:
**Structural Evaluation of Slab Rehabilitation by the Method of Hydrodemolition and Latex Modified Overlay**

<table>
<thead>
<tr>
<th>PennDOT Technical Advisor:</th>
<th>Project Duration:</th>
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<tbody>
<tr>
<td>Lou Ruzzi</td>
<td>Dec 2012 – Dec 2013</td>
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**Project Purposes:**

Project purposes are to:

- Provide laboratory-based experimental verification and assessment of the performance of reinforced concrete deck slabs, rehabilitated by hydrodemolition (HD) and a latex modified concrete (LMC) overlay.
- Determine whether the latex modified overlay may be considered composite with the residual deck, and under what conditions composite behavior may be assumed in eventual load rating of the rehabilitated deck.

If it is determined that the overlay does not behave in a composite manner, a method of rating these decks will be developed.

In support of PennDOT's Strategic Goals:

- Leverage resources to maximize effectiveness
- Continually increase efficiency
- Promote continuous improvement and innovation

**Anticipated Outcomes:**

Anticipated project outcomes include:

- Determine that the existing deck and new latex overlay act as one homogeneous unit (similar to the original deck).
- If confirmed, this outcome would give PennDOT the assurance to use this type of repair on more bridge decks, which could extend the life of these decks by 15-20 years, potentially saving thousands of dollars per bridge over the life of the structure.

**Implementation Plan:**

**Report Distribution:** This report will be shared with PennDOT personnel and the consultant community who deal with the design, construction and maintenance of bridge decks.

**WebEx Meeting:** A webinar will be conducted by the principal investigator to share results of the study with those who deal with the design, construction and maintenance of bridge decks.

**Update PennDOT Publications:** In consultation with the Bridge Design and Technology Division of the Bureau of Project Delivery, project results may be incorporated into a standard or Design Manual 4.

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<th>Research Partner:</th>
<th>Principal Investigator:</th>
<th>Project Cost:</th>
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<tr>
<td>University of Pittsburgh</td>
<td>Kent Harries</td>
<td>$322,334.00</td>
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