### Improved Performance of Jointed Plain Concrete Pavements (JPCP) through a Better Awareness of Drying Shrinkage

#### Project Title:
**Project Title:** Improved Performance of Jointed Plain Concrete Pavements (JPCP) through a Better Awareness of Drying Shrinkage

#### PennDOT Technical Advisor:
Steve Marsinko

#### Project Duration:
Apr 2013 – Dec 2013

#### Project Purposes:
Project purposes are to:

- Determine the early-age and long-term effects of drying shrinkage, construction and curing practices on the performance of Jointed Plain Concrete Pavement (JPCP) for Pennsylvania mixture designs.

- Recommend revisions to specifications so that optimal JPCP performance can be achieved.

An assessment will determine if all data loggers are functioning properly. Early-age drying shrinkage issues will be evaluated through site visits to local construction projects. Cost savings may be achievable with improved specifications by (a) increasing the durability of the concrete through reduced early-age shrinkage cracking, and (b) reducing pavement stresses through reduced long-term shrinkage.

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:

- Recommended best practices and revised specifications for reducing the potential for early-age drying shrinkage cracking and long-term drying shrinkage.

#### Implementation Plan:
If this study provides sufficient evidence that current PennDOT specifications could be improved to yield more durable and longer lasting concrete pavements, the Department will propose a specification change through the Clearance Transmittal process.

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<tr>
<th>Research Partner:</th>
<th>Principal Investigator:</th>
<th>Project Cost:</th>
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<tbody>
<tr>
<td>University of Pittsburgh</td>
<td>Julie Vandenbossche</td>
<td>$97,765.00</td>
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