RP 273 – Field Performance of HES Class SOAF Concrete with Fibers as Field-Cast Connection between Deck Bulb-T Girders in ABC Applications

ACTIVE Projects: RP 273

- **Project Description:**
  This project will evaluate the field performance of an ITD-developed High Early Strength (HES) Concrete mix with Polypropylene fibers. The goal of the project is to determine if the ITD mix is a viable alternative to commercially available Ultra High Performance Concrete (UHPC) for use in Accelerated Bridge Construction (ABC) projects.

- **The objectives of this project are:**
  1. Assess the performance of the optimum closure pour mix identified through previous research (see Research project RP 265) in the field.
  2. Refine the Finite Element (FE) model of the closure pour based on the observed field data.
  3. Analyze the field performance and modeling data to determine if the HES concrete mix is a viable alternative to UHPC for ABC applications in Idaho.

- **Estimated Completion Date:** August 31, 2019
- **Budget:** $73,525
- **Project Manager:** Dan Gorley, P.E. (208) 334-8407 dan.gorley@itd.idaho.gov
- **Principal Investigator:** Arya Ebrahimpour (208) 282-4695 ebraarya@isu.edu and Mustafa Mashal (208) 282-4587 mashmust@isu.edu
- **TAC Members:**
  - Matt Farrar, P.E. (208) 334-8538 matt.farrar@itd.idaho.gov
  - Leonard Ruminski, P.E. (208) 334-8529 leonard.ruminski@itd.idaho.gov
  - Bijan Khaleghi, Ph.D., P.E., S.E. (360) 705-7181 bijan.khaleghi@wsdot.wa.gov
  - Ned Parrish, (208) 334-8296 ned.parrish@itd.idaho.gov
- **FHWA Advisor:** Ed Miltner (208) 334-9180 Ext. 122 ed.miltner@dot.gov