**ESCINC Subcontract # 15-31**

**Task Order # 9**

**Improved Infrastructure Assessment through the Integration of Nondestructive Evaluation and Structural Health Monitoring Paradigms**

**PROGRESS REPORT NO. 4**

**Report Period: June 01, 2019 – Aug 31, 2019**

Prepared For:

**Engineering & Software Consultants, Inc.**

**Federal Highway Administration**

Prepared By:



September 10, 2019

**A. Account of work performed in this period**

**1. Coordination and Meetings between the Contractor and ESC/FHWA Group**

The monthly conference calls have been conducted for the months of June-August 2019.

**2. Subtask 2 - Development of Evaluation Strategies**

The Rutgers team accomplished the following tasks for this period:

* Software was developed that constructs fiber models of bridge girders, including composite sections.
* 17 bridges were designed using LRFD specifications to be used in sensitivity studies.
* Finite element models of two median bridges were constructed.
* Software was developed for performing sensitivity studies with fiber models.

**Subtask 6 – Quarterly Progress Report**

The current report is the electronic version of the quarterly progress report for the period of June-August 2019 as the deliverable of Subtask 6.

**B. Work to be accomplished during the next period**

**1. Coordination and Meetings between the Contractor and ESC/FHWA Group**

The Rutgers team will continue monthly conference calls with ESC/FHWA for the months of September-November 2019.

**2. Subtask 1 - Development of Integration Strategies**

The Rutgers team is already completed the subtask and delivered the required report.

**Subtask 2 - Development of Evaluation Strategy**

For the next period, the Rutgers team will continue to examine integration strategies by performing sensitivity studies to quantify the effect of defects and degradation on demands and capacity.

For the quarterly period of September-November 2019, the entire task will be completed, and the corresponding Subtask 2 report will be delivered.

**Subtask 6 – Quarterly Progress Report**

The Rutgers team will prepare the electronic version of the quarterly progress report for the months of September-November 2019 and submit it to ESC/FHWA.

**C. A description of any problem encountered or anticipated that will affect the completion of the work within the time and fiscal constraints as set forth in the contract, together with recommended solutions to such problems; or, a statement that no problems were encountered.**

In order to be able to make use of data from the BEAST we are requesting a no-cost extension of the project end date to December 31, 2019. Otherwise, no problems have been encountered.