NEW ENGLAND TRANSPORTATION CONSORTIUM
QUARTERLY PROJECT PROGRESS REPORT

A. PROJECT NUMBER AND TITLE:
NETC 19-1: Curved Integral Abutment Bridge Design Study

B. PRINCIPAL INVESTIGATOR(s) & UNIVERSITY(s):
WSP USA Inc. & University of New Hampshire

C. WEB SITE ADDRESS (*If one exists***):**
NA

D. START DATE (*Per NETC Agreement***):**
2/12/2020

E. END DATE (*Per NETC Agreement***):**
6/30/2021

F. **ANTICIPATED COMPLETION DATE:**
6/30/2021

If different from the END DATE in paragraph E., the reason must be given. It is the responsibility of the Principal Investigator to insure that the project, including review of the draft report by the Project Technical Committee and the printing of the Final Report, is completed prior to the Agreement End Date. Costs incurred after the Agreement End Date cannot be reimbursed. ***Requests for extensions of the Agreement End Date must contain the reasons for the request and be submitted so as to arrive in the Coordinator's office at least 90 days prior to the Agreement End Date.***

G. PROJECT OBJECTIVES:
This project's objective is to develop guidelines for the designing of Curved Integral Abutment Bridges. These guidelines should provide recommendations for span length, total bridge length, and degree of curvature and skew, with modeling recommendations for designs that are consistent with current AASHTO LRFD Bridge Design Specifications.

H. REPORT PERIOD:
Quarter 2 2020 (April – June)

I. ACCOMPLISHMENTS THIS PERIOD:

Task 1:

Completed:

- Review and compilation of applicable NETC state guidelines for CIAB's
- Review of relevant CIAB reports completed by the UMass Department of Transportation and the Iowa State University Bridge Engineering Center
- Developed outline and Draft for first submittal to the NETC focusing on literature and testing

Work in Progress:

- Working with Midas Civil to become familiar with the software

- Developing a Midas FE model of the River Road Bridge in New Haven, VT to validate results through comparison to WSP's existing model for design
- Practice with bridge instrumentation including digital image correlation in preparation for live load tests of Vermont bridges

Task 2:

Completed:

- Established the sequence of models and model organization.
- Calculated (and checked) the appropriate superstructure girder sizes, diaphragm sizes/configurations and substructure depths for all span lengths / iterations

Work in Progress:

- Initial Base Model

The committee is reviewing the proposal and will decide in May whether to approve the additional work.

J. PROBLEMS ENCOUNTERED (If any):
None

K. TECHNOLOGY TRANSFER ACTIVITIES: *List any reports, papers, presentations published/presented during the report period or anticipated for the next quarter.*
Nothing at this time.

L. STATUS BY TASK: *Show Work Task Number, description and % complete for each task including those completed, those underway, and those not started.*

0	Project Management	5%
1	Review of Existing Structures	55%
2	Finite Element Studies	5%
3	Design Guidelines	0%
4	Draft Final Report/Presentation	0%
5	Final Report	0%

M. PERCENT COMPLETION OF TOTAL PROJECT: 7%

N. ACTIVITIES PLANNED FOR NEXT QUARTER:
Submit a draft report based on the Investigative Research
Continued development of Finite Element Models
If approved, performing load test on an existing CIAB.

O. FINANCIAL STATUS:
As of: *7/30/2020*
Total Project Budget: $151,315.47
Total Expenditures : $10,000

Note: This report should not require more than 2-3 pages & should be e-mailed to the NETC Coordinator so as to arrive no later than ten (10) working days after the end of each calendar quarter.