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***):**
3/31/2022

F. **ANTICIPATED COMPLETION DATE:**
G. 3/31/2022

If different from the END DATE in paragraph E., the reason must be given. It is the responsibility of the Principal Investigator to ensure 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.***

H. 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.

I. REPORT PERIOD:
Quarter 3 2020 (July – September)

J. ACCOMPLISHMENTS THIS PERIOD:

Task 1:

Completed:

- Submitted first submittal to the NETC focusing on literature and testing
- Developed survey that has been sent to Alex Bardow for distribution through contacts (such as AASHTO COBS) to gather data on various states uses and concerns for integral structures (curved and straight)

Work in Progress:

- Revisions to first submittal to address committee comments.

- 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

Task 2:

Completed:

- Confirmed the sequence of models and model organization.
- Calculated (and checked) the various loading information that will be needed for model runs (including DC, DW, LL, BR, TU, etc)
- Calculated (and checked) backfill spring stiffnesses and compared them with MassDOT and Caltrans Procedures.

Work in Progress:

- Initial Base Model
- Checking of the six base superstructure wizards
- Coding and master sheet for iterative model substructure command text
- Development of construction stage sequencing code

K. PROBLEMS ENCOUNTERED (If any):
None

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

M. 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	95%
2	Finite Element Studies	6%
3	Design Guidelines	0%
4	Draft Final Report/Presentation	0%
5	Final Report	0%

N. PERCENT COMPLETION OF TOTAL PROJECT: 10%

O. ACTIVITIES PLANNED FOR NEXT QUARTER:
Finalization and checking of Base Finite Element Model, wizards, and coding sheets
Begin mass production of iterative models
Submit revision to the Literature Review

P. FINANCIAL STATUS:
As of: *10/07/2020*
Total Project Budget: $151,315.47
Total Expenditures : approx. $18,000

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.