

CONTROL OF VIBRATION

Attention is directed to Articles 107-11 and 107-14 of the Standard Specifications and to the Subsurface Plans. The contractor hired to perform the vibration monitoring shall be prequalified for work code 3120 – Vibration and Noise Monitoring. The firm shall perform a Pre-Construction Structure Condition Inspection for the structure listed below and submit three (3) copies at least 5 business days before the preconstruction conference.

Pisgah Covered Bridge, located approximately 100 ft. downstream from project.

Schedule a preconstruction conference to include personnel from the Contractor, the vibration monitoring firm, the Resident Engineer, and representatives from the NCDOT Construction Unit and the Geotechnical Engineering Unit before beginning any construction work. Submit a vibration monitoring plan for the Pisgah Covered Bridge to the Engineer for approval at least 10 business days before beginning pile driving. Furnish and operate vibration monitoring devices (engineering seismographs) for the duration of the installation of driven piles. Calibrate the devices within twelve months before their use on this project. Record vibrations in the three perpendicular axes: vertical, transverse, and longitudinal, and record the full vibration waveform. Use geophones exhibiting linear response in the frequency range of 4-100 Hertz. Install crack gauges where applicable.

Monitoring will be required during the installation of the driven piles.

Vibration will be subject to the following criteria:

Variable	Warning Level	Not-to-Exceed Limit
PPV	1.0 in/sec	2.0 in/sec

Inspect the condition of the structure frequently during construction to assess any potential damage. If the vibration records or visual inspections show any potential for damage to the bridge, the Contractor shall cease work and shall furnish the Engineer with an alternative method of accomplishing the work that was affected.

Throughout the duration of the vibration monitoring on the project, the Department reserves the right to request information associated with this work for review. At the completion of the project, submit to the Engineer three (3) copies of the final report which should include all vibration monitoring records, preconstruction and postconstruction condition assessments of the subject bridge with both photographic and written documentation.

Payment will be made by the Lump Sum bid price for "Vibration Monitoring." Such payment will be full compensation for all work described in this provision including, but not limited to, control of vibration, inspection of the bridge, vibration monitoring, and submission of reports.

Pay Item: Vibration Monitoring ..... Lump Sum

