



Work Type Definition: Vibration Analysis and Monitoring

I. Description

Vibration analysis and monitoring includes testing/monitoring and analysis in the following areas: Susceptibility of buildings to vibration damage, pre-construction building condition surveys, vibration monitoring, and compliance to vibration specifications. Analysis/monitoring includes deployment of equipment/personnel and the collection of data through field investigations. Analysis includes recommendations and conclusions, drawn from the data acquired, in relation to the specific needs of the project.

II. Standards and Specifications

Standards and specifications required for a project under this work type may include the following:

- A. All tasks will be performed in accordance with current ASTM, AASHTO, and MnDOT specification.

III. Provided by Hennepin County

Information to be supplied by Hennepin County for a project may include the following:

- A. American Society for Testing and Materials (ASTM), American Association of State Highway & Transportation Officials (AASHTO), and MnDOT Standard Specifications.
- B. Plans showing existing topography, proposed alignments, proposed areas of vibration producing activities, and locations potentially affecting buildings/structures.
- C. Elevation of existing benchmarks to determine testing elevation.

IV. Provided by Consultant

Deliverables to be supplied by the consultant for a project may include the following:

- A. Reports of vibration data as well as final reports on susceptibility of specific buildings/structures to vibration damage, and pre-construction condition of buildings.
 - a. Establishment of susceptibility of specific buildings/structures to vibration damage from project sources.
 - b. Establishment of criteria for allowable vibration limits.
 - c. Determination of extent of pre-construction building condition surveys.
 - d. Reports that detail building conditions, including photography, videotape and drawings
 - e. Cyclic (after each event, daily, or weekly, depending on project requirements) reports of vibration levels and relationship to established limits