



VACC Recent Key Projects: University of Washington UW / Sound Transit Light Rail Campus Laboratories Vibration Impact Seattle, Washington

Client
University of Washington

Construction Value
Est. \$1.6B for segment

Completion
Ongoing (restarted 2002)

VACC Work Scopes
Campus-Wide Vibration Testing
Researcher / User Interviews
Determination of Criteria
Representation of University
Review of EIS Methodologies

Stakeholder Departments
College of Arts and Sciences
College of Engineering
College of Ocean/Fishery Sciences

Number of Buildings
65 bldgs. in initial survey
24 bldgs. in intensive studies

As Seattle has grown around the UW campus, so have regional transportation needs. Sound Transit (ST), the local public transit operator, is working to extend the existing light system. The North Link light rail extension will run through the University of Washington campus.

Earlier in the project, it became clear that vibration and electromagnetic interference from the light rail transit system would undermine the high quality research environments enjoyed by groups on campus.

Since the project was revived in 2002, we have been involved in consulting the UW on all aspects of the **vibration impact from light rail on campus laboratory environments**. Early on, we were asked to characterize the existing ambient vibration environment in many buildings. Through this campus-wide measurement effort, we were able to establish a baseline for comparison with predictions generated by ST.

We helped develop the University position that the current vibration environment on campus is best regarded as a **natural resource**. Vibration added to the environment may be seen as a pollutant that creates costs to researchers, limits research activities, and ultimately drives away talented professors.

As the project has progressed, we have supported the University in establishing not only the baseline (existing) vibration environment, but also in providing guidance on current and future needs. We have provided valuable input to key University decision makers by performing critical reviews of the vibration predictions reported by the EIR and formulating a strategy for identifying possible alignments that balanced research and transit needs.

As of 2009, we are deeply involved in design reviews as well as the review of updated vibration impact prediction data and methodologies. Our reviews address both the short-term construction-phase impact as well as the long-term operational impact.

