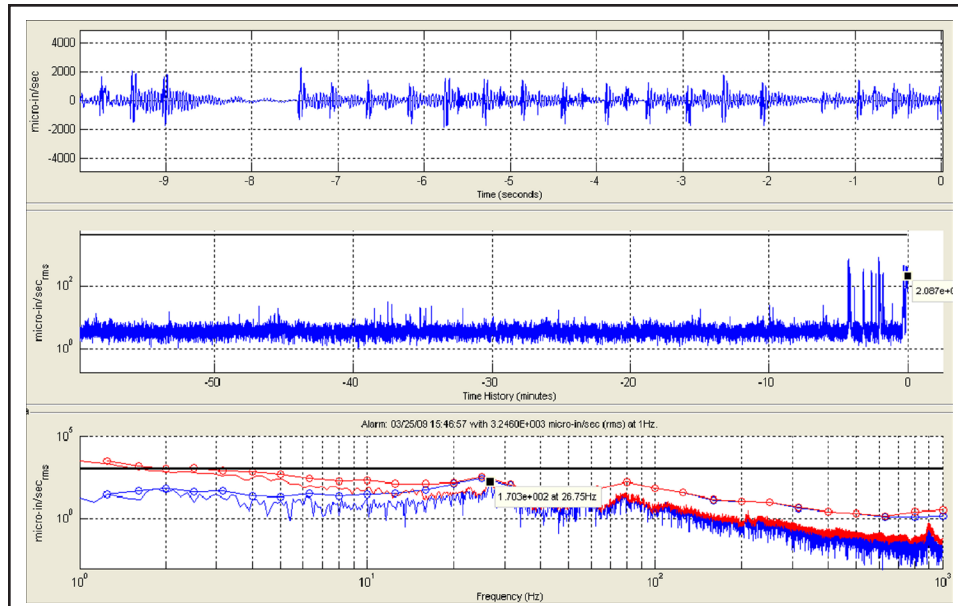


BOSTON MEDICAL CENTER - AMBULATORY CARE CENTER CONSTRUCTION

Boston, MA

Acentech



Screenshot of laptop display showing real time vibration data at the construction site.

PROJECT DESCRIPTION

With plans for construction of a new 245,000-square foot, nine-story Ambulatory Care Center next to the existing hospital, Boston Medical Center needed to ensure that construction-related vibrations would be compatible with ongoing hospital activities. Of particular concern were vibrations associated with demolition, soil excavation and pile driving.

Prior to construction, Acentech conducted vibration measurements in sensitive areas of the hospital during a series of tests of representative construction activities. The measured vibrations were compared to specific instrument criteria (MRI, CT scan) and to generic criteria for operating rooms, in order to help determine potential impacts. Prior to the tests, a 1-week sample of ambient vibrations was recorded in the sensitive spaces.

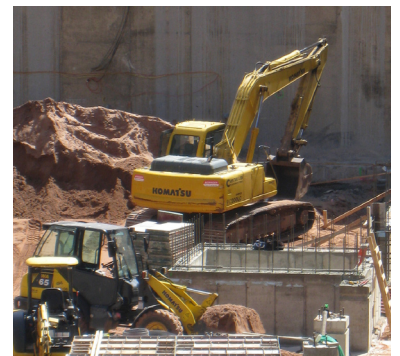
During construction, Acentech then utilized real-time, vibration monitoring systems to measure the construction-related vibrations continuously. The hospital provided internet connections to the monitors which enabled remote monitoring, control and data downloading capabilities. This was especially important in areas where personnel access was extremely limited. The internet connection also provided a conduit to send email and text alarm messages to hospital personnel if any pre-set vibration limits were exceeded. This allowed the hospital personnel to anticipate complaints from staff, and to mitigate the construction activity, if necessary.

CONSULTING SERVICES

- Vibration measurements
- Real-time monitoring

REFERENCE

Jeanne LeFebvre, P.E.
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801
(781) 721-4000



Bulldozer and excavator activity contribute to construction site vibration levels.