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J. Michael Ruane Judicial Center  
Salem, Massachusetts

### Construction Activity Communiqué

Moving the Church to its new foundation location was completed on January 3. The Church is now officially the Law Library for the new Judicial Center. The construction management Team is now preparing the site for the main courthouse building. In the sequence of construction activities, the Site Contractor is excavating the site to the proper elevation. The concrete contractor is installing forms in preparation of constructing the foundation walls for the Law library. When the Law Library is sitting on its new foundation, the Moving Contractor will return and remove the steel beams from under the building.

Installation of Pressure Injected Footings (PIF), a most important activity, started in January and will continue for approximately 30 to 45 days. The contractor will begin with one "Rig" and add another "Rig" January 22. Installation will begin on the south side of the site nearest to Federal Street and move northward to Bridge Street. There are 245 PIF's in total, 54 of which are in the south wing closest to Federal Street. The balance of the PIF's are located in the main wing of the building that is situated closer to Bridge Street.

This type of foundation installation causes ground vibrations. We are cognizant and concerned about the potential harm vibrations can cause to structures near the construction site and have hired a Consultant who installed seismographs at several locations on East Federal Street, North Street and West Federal Street. For instance, one seismograph was installed at 76 West Federal Street. The maximum vibration on Saturday, November 22 was 0.018 inches per second (ips). This is near the threshold vibration that humans can "feel". The ambient/background readings that day were 0.005 ips. On November 24 the contractor was driving PIF's and the maximum reading that day was 0.128 ips. This is an annoying vibration but is unlikely to have caused any damage.

In construction, many projects use a 0.5 ips as a threshold for perhaps stopping and re-evaluating structures nearby. Given the distance to 76 West Federal Street and with North Street in between, as well as the relatively low vibration readings, it is highly unlikely that the house at 76 West Federal Street would experience any damage caused by construction-related PIF installation. Further more, vibrations are attenuated as you get further away from the source.

Seimograph monitoring will continue through out the installation of PIF's. That data will be available for review when it becomes available. The seimograph data from earlier monitoring is available for review at the Construction Office in the Probate & Family Courthouse. I am at the construction office on Tuesdays from 1:00 to 2:00 PM.

I have receive a number of calls asking for house inspections. I have decided not do any further house inspections other that the houses in the initial survey. I suggest that home owners who can feel the vibrations and are concerned, to do a house self inspection with a digital camera that puts a date on the photograph. I realize the PIF installation has begun already but the survey should be done as soon as possible.

As construction progresses, I will keep you informed on contractor's activities.

Sincerely,

*James Tanin*

James Tanin, PE  
Project Manager