

B.I. – Sound & Vibration Recording Analysis w/ Acoustical Engineer & Specialized Equipment  
Thu, May 28, 2026

#### Summary:

The meeting reviewed monitored noise and vibration from a recent south-courtyard demo, and discussed timing, scope, and impacts of an upcoming basement/B2 demolition phase. Participants confirmed Thermo Fisher vibration and noise criteria as the baseline for evaluation.

Monitoring results: Noise monitors on level 1, basement (B108, B131B), and sub-basement (WICP 217C, B42) showed the largest sound increase directly below the demo in B131B, where ambient levels rose from about 50 dB to peaks near 80 dB between roughly 9:00–11:00 a.m. Vibration increases were concentrated beneath the core courtyard (notably B131B and 217C); perimeter/corner monitors showed minimal responses. Compared to Thermo Fisher/manufacture criteria, measured vibration remained below the most stringent threshold (~125 micro-inches/sec) though localized peaks warrant attention.

Schedule, scope, and impacts: The planned next construction phase is one full week of heavy demolition followed by moderate construction. Heavy demolition days are targeted for June 8–10 and June 15–16 with 7:00–17:00 work windows (non-heavy days shorter, typically 7:00–15:30). Heavy jackhammering, saw cutting, and use of equipment (including mini loaders during excavate/haul-off) were expected to produce noise and vibration that will prevent sensitive microscopy work in affected areas during those heavy days. The group discussed accelerating mobilization to move heavy demo earlier in the week to avoid campus commencement events on June 11–12.

Decisions and outstanding items: Thermo Fisher guidelines will remain the evaluation baseline; monitoring recordings and analysis will be distributed. Stakeholders will be notified so microscope users are warned. Contract and scheduling items remain open, including a change order with the general contractor and finalizing mobilization dates and the revised schedule.

#### Chapters & Topics:

##### Attendance and Recording

The meeting began with greetings and a short wait for late arrivals while the organizer confirmed the session was being recorded for distribution to absent participants [1–7,13–15].

##### Thermo Fisher Guidelines and Intended Baseline

Participants confirmed receipt and relevance of Thermo Fisher's vibration and noise guidelines and agreed those documents would be

used as the baseline for interpreting measurements [8–10,19–23].

\* Thermo Fisher's vibration and noise guidelines will be used as the baseline for assessing impacts.

\* The meeting will be recorded and the recording will be distributed to attendees who were absent.

#### Reports of On-Site Impact

Lab personnel reported that the demo produced strong vibrations and loud noise that made working impossible in labs directly below the demo and was perceptible up to the fourth floor.

\* Occupants reported intolerable vibration and loud noise near the demo, including work disruption directly beneath the demo and perceptible vibration up to the fourth floor.

#### Immediate Project Schedule

The group reviewed next-step scheduling: one full week of heavy demolition followed by a transition to a moderate construction schedule, and noted the PP service announcement would be adjusted after reviewing Sean's analysis [31–39,34–36].

\* The team will implement one week of heavy demo followed by a moderate schedule for the remainder of the project.

#### Monitoring Locations and Data Scope

Sean summarized sensor placements on level 1 (suite 110), two basement locations (B108, B131B), and two sub-basement locations (WICP 217C, B42), and said analysis focused on data collected during May 11–24 with emphasis on the south demo date (May 20) [40–57,55–56].

#### Measurement Results and Criteria Comparison

Analysis showed notable noise increases between 9:00–11:00 a.m., with the largest sound-level rise in B131B to ~80 dB and vibration increases concentrated beneath the core courtyard (B131B and 217C); measured vibration remained below the stringent criterion (~125 micro-inches/sec) though localized peaks were recorded [58–79,80–88,94–106,105–112].

\* Monitoring showed the largest sound increase at 9:00–11:00 a.m. on May 20 directly below the south demo in B131B, with peaks near 80 dB compared with ~50 dB ambient.

\* Measured vibration peaks remained below the strictest manufacturer criterion (~125 micro-inches/sec) but localized peaks were observed and should be addressed.

\* Vibration increased most at locations beneath the core courtyard (B131B and 217C), while perimeter/corner locations saw little change.

#### Next Steps and Contract Questions

The conversation closed with questions about mitigation options, a prompt about whether the change order had been submitted, and recognition that the general contractor was not present to respond.

#### On-site observations and vibration concerns

Participants reported who was present during different parts of the demo and noted where noise and vibration were observed, particularly jackhammering on the first basement level and limited saw-cutting detection. Concerns were raised about how office users perceive vibration versus equipment sensitivity, and whether construction noise would be acceptable for morning hours.

- \* The demolition will include heavy jackhammering and saw cutting on basement levels and B2, which will generate vibrations that affect microscope users.

#### Timing constraints and ordinance limits

The group confirmed a 7:00 a.m. start time driven by city ordinance and discussed duration per day and specific heavy-demo dates (8–10 and 15–16), with non-heavy activities and shorter hours on subsequent days. Marianne asked about microscope impact and duration each day.

- \* City ordinance requires a 7:00 a.m. start, so earlier start times were constrained unless mobilization is advanced and approved.

- \* Heavy demo days are planned for June 8–10 and June 15–16, running approximately 7:00 a.m. to 5:00 p.m., with non-heavy work on other days and shortened hours thereafter.

#### Impact on microscope users and workarounds

Discussion focused on how heavy demo days would prevent sensitive work and the expectation that affected users would shift work to evenings or pause experiments; participants asked for clarity on noise levels and whether the heavy noise would persist beyond the five-day window.

- \* Sensitive experiments cannot be run during the five heavy-demo days and users must be notified to avoid using microscopes then.

#### Options to accelerate mobilization and schedule flexibility

Lauvai offered to attempt earlier mobilization and discussed pushing start dates to avoid commencement conflicts; James cautioned that the five-day plan is optimistic and may require extension, and Lauvai committed to notifying TJ and the general contractor if dates must change.

- \* Lauvai will coordinate the schedule with the general contractor and TJ and will distribute a PP service announcement and supporting documents to stakeholders.

- \* The five-day heavy-demo timeline is a best-case estimate; demolition may take longer and noisy activity like excavate/haul-off will persist for additional days.

#### Detailed work sequence and noise sources

Lauvai and James outlined the demolition and follow-on construction steps, estimating five to six days for major demo, three days for excavation and haul-off, and noting noisy equipment such as mini loaders; inspections, compaction, rebar, and backfill were listed as subsequent activities.

- \* Sean will compile vibration data and analysis throughout June and share the deliverable with the team, with a likely final meeting

around June 29 if needed.

#### Agreement to proceed and meeting close

The group confirmed next steps to finalize dates and communications, Lauvai expressed appreciation and readiness to proceed with coordination, and the meeting concluded with thanks and verbal sign-offs.

#### Notifications, data collection, and deliverables

Lauvai requested Sean send the data-analysis document for distribution, agreed to draft and send a PP service announcement and the updated schedule immediately after the meeting, and planned to have Sean compile vibration data through June with a potential final meeting around June 29 to review results.

#### Action Items:

- \* Lauvai Tufele will distribute the meeting recording to attendees who were not present
- \* Project team will update the PP service announcement based on Sean's data analysis after the meeting
- \* Lauvai Tufele will notify TJ and ensure the contractor is briefed that noisy work must not extend beyond agreed windows without prior approval
- \* Lauvai Tufele will call the general contractor immediately after the meeting to explore earlier mobilization and to request materials delivery timing so work can start as soon as next week if approved
- \* Lauvai Tufele will send a draft PP service announcement to stakeholders for review and distribution immediately after the meeting
- \* Lauvai Tufele will have the general contractor modify and finalize the full project schedule post-demo and circulate the updated schedule to attendees
- \* Sean will compile the vibration data analysis during June and send the document to Lauvai Tufele for distribution to the team

#### Key Questions:

- \* Was the increase in transmitted sound and vibration during the demo within tolerable range?
- \* Has the change order been submitted to address these impacts?
- \* Is the demolition vibration damaging the microscopes?
- \* What time was the demolition scheduled to start?
- \* Does "heavy demo from seven to five" mean the same level of noise and vibration will occur those hours on the five heavy days?
- \* Will the demolition be completed within the five-day heavy-demo window?