

Noise Task Force- Appendix

Pile Driving Discussion 10.29.15

Proposal

Restrict the use of Pile Driving in construction in Portland due to the high impact on human health because of the jarring noise involved in the impact hammer style of pile driving, constituting a noise disturbance as defined in Title 18.

Proposed Action #1: Eliminate pile driving from the list of exempt equipment in the Noise Code, and replace it with the Continuous Flight Auger (CFA). Any equipment that exceeds the decibel level of the auger method would require a noise variance.

Questions for the Task Force:

- Is the auger method a reasonable baseline?
- Should the noise office be responsible for setting the maximum decibel level for augering?
- What is a reasonable level of monitoring (spot-checking) by City staff to see that the activity is in compliance with maximum decibel level standards?

Task Force Comments:

- Putting restrictions on driven pile may affect the structural integrity of the structure/building as alluded to by the geotech engineer at the last meeting.
- Unrealistically restrictive.
- Auger method is not a reasonable baseline. It seems as if it's subjectively not that much less than driven pile. Keep in mind "noise" is subjective. Also, there are pearl residents who do not have any problems with this at all. There are also some residents who feel it should just get done fast, like ripping off a band-aid quickly, even if it means louder levels. Construction is aesthetically displeasing to the eye.
- Auger method is a reasonable baseline as the sound blends in with other construction. Just removing "pile driving" from the list of exemptions makes sense. The CFA is not the only quieter method used to place foundation piles.

- 80 db is the level of a conversation in a restaurant. I don't think it's actually that quiet. Also, 110dB is at the site of the construction site. We live in our apartments further away. As you double the distance, you have a 6dB in reduction. This is physics.
- Noise Office does not need to set a maximum decibel level for augering as long as the auger is not louder than 85dBA.
- Pile driver should not be allowed unless there is proof that there is no other process.
- No pile driving on Saturday or Sunday and only 8-6 Mon-Fri; no exceptions.
- Use generally acceptable equipment noise guidelines
- Impact hammer is not the only method that exceeds 85dbA; the vibrating method is also very loud.
- Based on the experience with the auger used on 5 projects last summer, the auger would not need monitoring
- If a variance is granted for the impact hammer, and noise mitigation devices required, then a noise meter should be installed at the site for the duration of the pile driving.
- Notification would work best if city updated their website to allow more than alphanumeric option but instead separated variance apps by construction or event apps; then by neighborhood; then chronologically – one place for everyone to look!
- City staff should not be responsible for compliance [monitoring], even with additional staff

Public Comment:

- Decibel level of impact hammer is dramatically greater than auger drill. Decibels of impact hammer can be 110 decibels or more. Auger is less than 80 and blends in with usual construction noise. Use the CFA and "other quiet methods" as a baseline

- Yes to auger as baseline, but should not preclude other methods with sound levels similar to auger.
- Noise office should be responsible for monitoring; spot-checking should occur at commencement of process and reasonably thereafter (perhaps weekly)

Proposed Action #2: If auger method is not used, require applicants to demonstrate that there is no alternative to impact pile driving on a project – starting with the permit process.

Questions for the Task Force:

- Would Bureau of Development Services conduct an initial review, transferring the application to the Noise Office to trigger the variance process?
- What are methods of demonstrating that there are no reasonable alternatives to impact pile driving to complete a project? Expert testimony?
- What lead time would the construction/development industry need to apply for a noise variance before the first day they need to utilize pile driving?

Task Force Comments:

- BDS currently reviews building permits; this could be included in geotechnical review. Independent geotech is important for client but should be verified/balanced. Could peer review work?
- Geotechnical information [would demonstrate no reasonable alternatives]
- Since developers would hire a geotechnical engineer, would their findings be adequate? Should a second, independent geotechnical report be required?
- Developers hire a Geo-technical engineer early in the planning stages to determine what type of foundation the project will require. Wouldn't this be when they would determine if the impact hammer is the only viable method and apply for a variance?
- Noise board should handle review of pile driving variances

- A geotech expert is already familiar with the project and would simply sign off.
- Expert testimony may be an abuse of resources – time, money, etc. It seems as if scientific evidence already guides decisions, so to have someone to confirm, just to check off the box, is wasteful of time away from the project.
- Industry would need 30-60 days lead time
- Depending on driven vs. drill, leadtime needed would be approximately 1 month; 3 weeks for material procurement and 2 weeks for submittals
- A number of “scheduled projects” in the Pearl have made their decisions with quite a bit of lead time.

Public Comment:

- Yes, BDS should conduct initial review and transfer to Noise Office/Board
- Geotechnical expert certification necessary

Proposed Action #3: Noise Review Board should be the body to review noise variance applications for impact pile driving.

Questions for the Task Force:

- What is the appropriate criteria to be applied when evaluating a variance application for impact pile driving?
- How much time should be allowed for review of pile driving variances?
- Should longer-duration projects require additional mitigation strategies, periodic updates or greater public outreach?
- Should variance applications for pile driving allow time for public comment?

Task Force Comments:

- Confirm that all foundation options have been given unbiased review

- (Comment on above point): So would you propose having construction companies testify against each other?
- 35-day notice for hearing on variance
- NRB review/recommend variance with appeal of decision to Hearings Officer
- Mitigation strategies should be defined and established prior to implementation of variance
- Appropriate criteria: the estimated timeline of pile driving vs. CFA. For example, 3 months x 5 days a week x 8 hours a day for pile driving versus 5 months of that same level of activity for CFA . The total noise dose (which also calculates dB levels of pile driving vs. CFA) should be used as an objective measure to a subjective problem. It's very possible that the total noise dose may be larger than pile driving.
- Geotech engineer reports should be indisputable regarding soil condition requirements.
- Criteria should include: is there sound geotechnical evidence that the impact hammer is the only viable method? Proximity of buildings and duration of pile driving should also be taken into consideration.
- Notification should be as close to 45 days as possible.
- In order to allow for appeals, 35 days should be the time frame for reviewing pile driving variances.
- Overlapping projects create more stress than has so far been acknowledged or considered. Mitigation in any case should be encouraged. Maybe by reducing variance application fees.
- Public comment is always necessary.
- An appeal process should allow for modifications to the conditions of the variance, such as further restrictions to hours, days, noise mitigation devices, etc.

Public Comment:

- Criteria should include duration and number of entities impacted
- Review period: no more than 30 days seems reasonable
- Yes to public comment within the 30-day review period. Public comment should not become a prolonged process that would hinder projects from moving forward.

Public Comment:

- 3 months and 5 months are unreasonable for both (per comment above on CFA vs. impact pile driving timelines) – doesn't make sense

Proposed Action #4: Adjust fee schedule to allow for additional staff support of variance processing and on-site monitoring.

Questions for the Task Force:

- Should variance application fees be increased to cover costs, or should approved variances require an “impact fee” that would be applied on a per-day basis (i.e. fees only incurred on days where impact pile driving is used)
- What are primary community and industry needs around staff consultation and compliance enforcement?

Task Force Comments:

- Costs = staff time
- Fees should reflect costs of inspection and enforcement, similar to BDS model
- If an independent geotechnical engineering report is required, the geo-tech fee should either be paid by the developer or the variance fee should be increased to cover the cost.

- An impact fee would probably be more effective.
- Enforcement needs more qualified staff and involvement of police for verification of citizen complaints [several check-marks supporting this point]
- Additional staff need should be based on measured performance
- If the impact hammer is used, a noise monitor should be installed at the site in order to monitor compliance.
- On-site visits by the noise inspector should take place once a week for the duration of the pile driving. This could require additional staff, but since most projects last 4-6 weeks, it would mean only 4-6 site visit. The need for additional staff to monitor compliance would depend on the number of variances issued.

Public Comment:

- Establish a reasonable fixed fee. Should not be overburdening to construction/development industry.

Large Group Discussion Feedback:

- Lift the exemption of impact pile driving to require a variance, but do not ban pile driving altogether
- Consider this approach for all foundational equipment (outside of 85 decibels) – don't single out pile driving.
- Concern that a job site could be shut down for up to a month if, for example, a variance is required mid-stream to drive pile. Additionally, there are some safety concerns with the Continuous Flight Auger (CFA).
- There has been positive change in the Pearl where developers have shifted to auger and away from the impact hammer in response to community pressures [this statement was disputed by another member of the task force]

- Too soon to make any decision about this issue; we need more time
[additional TF member agreed with this statement]
- Is this approach really going to help the community in the end, i.e. will a variance fee or the process actually stop the noise that people are concerned about? Will a variance ultimately discourage pile driving from occurring?