

City of Seattle

Department of Planning and Development

Diane M. Sugimura, Director

CITY OF SEATTLE

ANALYSIS AND DECISION OF THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND DEVELOPMENT

Major Public Project Construction Variance

Application: Request for a Major Public Project Construction Variance ("MPPCV") from the maximum permissible sound level requirements of the Noise Control Code, Seattle Municipal Code ("SMC") Chapter 25.08, during construction of the Northgate Link Extension (formerly known as North Link) Light Rail Tunnel at the U District Station site. This variance application pertains only to construction activities that need to take place during nighttime hours, as those hours are defined in SMC 25.08.

Project No.: 3013261

Site Address: 4300 Brooklyn Avenue NE

Applicant: Central Puget Sound Regional Transit Authority (Sound Transit)

SUMMARY OF PROPOSED ACTION

The proposed action is related to Sound Transit's Northgate Link Extension Light Rail Project, which consists of 4.3 miles of new light rail track extending from the UW Station to Northgate. The Project's alignment is routed underground, elevated, and with surface configurations, with three stations: the U District Station (formerly known as the Brooklyn Station) in the University District, the Roosevelt Station in the Roosevelt commercial district, and the Northgate Station adjacent to the Northgate Park and Ride lot and Shopping Mall. The tunnel portion consists of 3.3 miles of twin-bored tunnels, which will extend from the UW Station through the proposed U District and Roosevelt Stations to the Maple Leaf Portal (formerly known as the North Portal), which would be located on the east side of the Interstate 5 (I-5) right-of-way. At the Maple Leaf Portal the light rail track alignment will transition from underground to a combination of approximately 1.0 mile of at-grade, retained cut and fill, and elevated structures within portions of the I-5 and City of Seattle rights-of-way, until it crosses over 1st Avenue NE near NE 100th Street. The alignment will continue in an elevated guideway along the western boundary of the King County Transit Center. The guideway would then cross over NE 103rd Street to its terminus at the above-ground Northgate Station located to the southwest of the Northgate Shopping Mall.

The proposed work at the U District Station Site (UDS) would be accomplished in six phases:

- Phase 1: Site establishment, grading, utility work, and contractor facilities and trailers;
- Phase 2: Support of excavation: soldier piles and secant piles, temporary bridge construction over station footprint at south end;
- Phase 3: Dewatering, box excavation, and muck handling;
- Phase 4: Tunnel boring machine reception, maintenance and launch, twin-bored tunnel mining, cross passage excavation and support, tunnel invert and duct banks;
- Phase 5: Floating slab construction, delivery and staging for floating slab construction in the tunnel;
- Phase 6: Station build up and site restoration.

Nighttime activity is not anticipated for Phases 1, 2, 3 and 6; any nighttime work during these phases will need to comply with Noise Ordinance standards. The Major Public Project Construction Variance covers activities scheduled for Phases 4 and 5. The contractor may seek approval from DPD to perform nighttime work associated with a continuous mass concrete pour required for the invert slab at this site several months after completion of tunneling operations; this action is not part of this Variance application and would require separate permit approval from DPD.

On July 26, 2012, the applicant submitted a complete application for this MPPCV to DPD; a revised application was submitted on November 5. This MPPCV is requested pursuant to SMC 25.08.590 and 25.08.655 to allow construction noise generated on-site to exceed the maximum permissible sound level during nighttime hours (between 10:00 p.m. and 7:00 a.m. on weekdays and between 10:00 p.m. and 9:00 a.m. on weekends and legal holidays) as specified in SMC 25.08.410 - 25.08.425. These provisions of the Code limit nighttime project sound levels (hourly L_{eq}) generated in Commercial districts to 47 dBA in Residential receiving districts and 60 dBA in Commercial receiving districts.

Based on the current anticipated construction schedule, the duration of Phase 4 and 5 construction activities is expected to be approximately 28 months, starting roughly in September 2015. Sound Transit is requesting a 30-month variance starting from the date that nighttime construction activities commence on the site to allow for potential schedule delays.

BACKGROUND

It is the express intent of the City as stated in the Noise Control Code to "control the level of noise in a manner that promotes commerce; the use, value, and enjoyment of property; sleep and repose; and the quality of the environment." SMC 25.08.010. The standards for issuing a noise variance are stated in SMC 25.08.590, and the specific standards for issuing a MPPCV are stated in SMC 25.08.655. DPD's rules governing the issuance of noise variances are set forth in DR 3-2009.

The application materials submitted for this MPPCV identify the following activities that may occur during nighttime hours and may exceed the allowable nighttime construction noise limits:

- Support and staging areas for the construction of the running tunnels from the Roosevelt Station to the UW Station, including activities supporting tunnel boring machine (TBM) operations, staging of precast tunnel liner segments, excavation and support of cross-passages within the tunnel, and construction of tunnel invert and duct banks; the tunnel invert consists of cast-in-place slabs that serve as the foundation for the trackwork, while the duct bank consists of cast-in-place concrete on each side of the invert slab to house electrical conduits for the various systems that service the tunnel. Tunnel construction activities include related above-ground activities such as material handling and hoisting, truck deliveries of material, and operation of equipment to provide ventilation in the tunnel.
- Support and staging areas for the construction of the floating slab trackwork within the tunnel between the UW Station and the U District Station and between the U District Station and the Roosevelt Station, including material deliveries and material handling and hoisting operations.

In the application materials submitted for this MPPCV, the applicant identified the closest residential uses likely to be affected by the nighttime noise, presented data on existing sound levels and projected construction sound levels, provided documentation of sound levels for specific activities and equipment, and outlined required noise mitigation proposals to be followed by the contractor.

Operating the TBM on a continuous basis is the most efficient and safest way to excavate a tunnel. Stopping the TBM increases the risk of ground movements around the TBM and concrete tunnel lining. This could lead to additional settlement and/or convergence of ground onto the TBM, jeopardizing worker safety and potentially causing damage to surface structures.

The application materials note that noise-producing, above ground construction activities and equipment are required to support around-the-clock operation of the TBM. Ventilation fans and power generators are needed at the surface to provide fresh air to the workers in the tunnel and a reliable power source for the underground equipment. Most of the work will occur at the bottom of the excavation and within the tunnel, reducing noise and activity at the ground surface. The aboveground loading and unloading of required tunnel construction materials, such as tunnel liners, are necessary to efficiently maintain continuous tunnel operations. However, tunnel spoils from the TBM operation will not be handled at the U District Station; rather, they will be transported back to the Roosevelt Station site for disposal to an off-site location.

The site has unique physical constraints and size limitations that make it impractical for all construction activities to occur during daytime hours. The site is relatively long and narrow at both the north and the south ends with a deep excavation running lengthwise through it that limits areas for access, truck mobility, and storage of equipment and materials. Ingress and egress to the site will be limited to one way in and one way out. The site is located in an area with traffic congestion during weekday morning and afternoon commute hours; the City is apt to restrict trucking activities during these peak traffic hours, or the contractor may determine it needs to do so in order to lessen conflicts between trucks and high volumes of vehicles, pedestrians, and bicycles at these times.

Installation of the floating slab in a timely manner is an integral part of the critical path for completion of the project. The floating slab system has a very low production rate and needs to be performed on a double shift to avoid delaying the start of construction for the U District Station. Construction of the

floating slab cannot be staged concurrently with other site construction activities during the day due to the severely constricted site.

A shorter construction period has clear effects on costs: reduced administrative expenses, reduced length of construction time needed for equipment and personnel, and savings on the inflation that would otherwise compound the cost of construction in later years. Additionally, the variance to allow nighttime construction activities will result in a construction schedule that will lessen the duration of construction impacts such as traffic, dust, and noise in and around the project site area. Overall, scheduling construction activities during nighttime hours will allow the proposed project to be completed in a more timely, safe, and cost-effective manner.

Sound Transit's application includes the Noise Management and Mitigation Plan ("NMMP") required by SMC 25.08.590D. The NMMP includes a description of the type of construction activities and equipment that will generate noise during nighttime hours. It also describes the expected exterior sound levels at each of the receiving sites, and compares these to the nighttime hourly L_{eq} that would be established through the variance process.

The NMMP includes prescriptive specifications for noise control at the construction sites that require the applicant's contractor to implement measures to establish compliance with the nighttime noise limits established in the variance application. Mitigation measures include prohibiting the use of compression brakes and tonal backup alarms, generating no impact sounds after 5 p.m., using radios for all long-range communication, not allowing equipment to idle unused for longer than five minutes, and requiring the Contractor to use the quietest equipment available based on industry standard practice. Potential additional mitigation measures include lining or covering storage bins, conveyors, tailgates and chutes with sound deadening material; placing acoustic shields or shrouds on equipment; enclosing electrical generators, ventilation fans, pumps, concrete batch plants, and air compressors; and using moveable noise barriers at the source of the construction activity. The applicant's proposal also includes procedures and programs for effectively monitoring, evaluating and resolving public complaints by taking appropriate corrective measures. A 24-hour construction hotline will be maintained by the applicant. A Nighttime Noise Monitor will act as an independent third party and provide oversight on nighttime work to ensure that the public's interest is represented and that the contractor strictly adheres to the Noise Control Code and permit conditions.

DPD held a public meeting on October 10, 2012, to take public comment on the variance application. As required by DPD Director's Rule 3-2009, Section D.2, notice of the October 10 public meeting was published in the Seattle Times on September 17, more than 21 days prior to the meeting. Notice of the meeting also was published in DPD's Land Use Information Bulletin on September 6, 2012. At that time notice was mailed to residents within the immediate vicinity of the sound sources covered by the application.

Public comments and letters from citizens were received and considered during the preparation of this Analysis and Decision. Copies of all written public comments received by DPD are contained in the DPD file. Public comments on the variance application proposed by the applicant regarding nighttime construction activities were considered only in relation to the noise impacts of the proposed activities.

DPD retained the services of BRC Acoustics and Technology Consulting ("BRC") to assist in reviewing and analyzing the variance application. BRC reviewed the MPPCV application and the written public comments, and provided comments and recommendations to DPD.

Sound Transit is the lead agency for purposes of SEPA compliance. A Final Supplemental Environmental Impact Statement (FSEIS) was issued by Sound Transit in April 2006 for the North Link Light Rail Transit proposal which includes the U District Station site. The actions proposed in this application (i.e., nighttime project sound levels during the construction phase) were disclosed and evaluated in the FSEIS. The Federal Transit Administration, acting as lead agency under the National Environmental Policy Act, issued its Record of Decision in June 2006.

FINDINGS

In accordance with DPD Director's Rule 3-2009, Section E, the following standards for a MPPCV were considered in reviewing the application.

1. Whether the applicant's information and analysis is accurate and complete (i.e., does it contain all of the elements required by the code).

The information submitted by the applicant has been reviewed by DPD and BRC and has been determined to be accurate and complete.

2. The physical characteristics of the sound proposed to be emitted pursuant to the variance.

As noted above, Phases 4 and 5 of the construction activities planned at the U District Station site would generate nighttime noise above the limits specified in the City's Noise Ordinance, and are the subject of the proposed variance. The Technical Noise Analysis developed by the Greenbusch Group identified the following construction equipment as likely to be used at night in each phase: compressors, crane, delivery and haul trucks, generators, loader, pumps, transformer, and ventilation fans. The MPPCV application lists the anticipated sound levels produced by the nighttime equipment that will be used on the site, as well as predicted nighttime project sound levels at nearby residential and commercial receiving sites and the pre-construction ambient sound levels at these sites. The existing nighttime ambient conditions and the predicted project sound levels are described below.

During June and October 2011, the applicant took measurements of existing ambient sound levels at the following three sites identified as representative of nighttime noise – sensitive land uses close to each construction area. These sites are located in commercial zones.

- Apartments above the Neptune Theater, 1303 NE 45th Street
- University Manor Apartments, 1305 NE 43rd Street
- Felch House (4245 Brooklyn Avenue NE), representing ambient sound levels at the Varsity Arms building immediately to the south (in a residential zone)

The results of these measurements are set forth in the MPPCV application and summarized in Table 1 below.

Table 1. Average Measured Existing Nighttime Noise Levels – 1-Hour Leq (dBA)

<i>Location</i>	<i>Average Nighttime Noise Level (10:00 p.m. - 7:00 a.m.) Leq</i>	<i>Average Late Nighttime Noise Level (midnight – 5:00 a.m.) Leq</i>
<i>Apartments above Neptune Theater, 6 feet above rooftop</i>	56	53
<i>University Manor Apartments, 5 feet above rooftop</i>	58	56
<i>Felch House, 4 feet above a second floor balcony</i>	58	57

The nighttime code limit on construction noise in commercial receiving districts is an hourly Leq of 60 dBA, and the limit in residential receiving districts is an hourly Leq of 47 dBA. The three sites listed above are in commercial districts; however, the last is intended to represent ambient sound levels in an immediately adjacent residential district.

The Technical Noise Analysis modeled sound levels that would be produced by the equipment that is anticipated for use during Phases 4 and 5 of the U District construction. This modeling assumed solid construction walls 12' to 16' in height around most of the perimeter of the project site. The noise modeling determined that higher walls, and walls with sound-absorptive surfaces, would not produce significant additional mitigation of project sound levels below the levels produced by these proposed walls. The results of this modeling are shown in the tables below:

Table 2: Existing and Projected Phase 4 Nighttime Sound Levels, Hourly Leq

Receiving Property	Existing Ambient Levels	Predicted Level with Mitigation	Code Limit
Apartments above Neptune Theater	53	49	60
University Manor Apartments	56	63	60
Felch House/Varsity Arms Condos	57	62	47

Table 3: Existing and Projected Phase 5 Nighttime Sound Levels, Hourly L_{eq}

Receiving Property	Existing Ambient Levels	Predicted Level with Mitigation	Code Limit
Apartments above Neptune Theater	53	49	60
University Manor Apartments	56	63	60
Felch House/Varsity Arms Condos	57	62	47

As shown in the tables, code limits would be exceeded at two of the three receiving sites during both Phase 4 and Phase 5 construction. To accommodate these construction activities, Sound Transit proposes that the variance allow the one-hour equivalent nighttime noise-level limit (L_{eq}) to exceed the Code limit at identified receiving sites in commercial districts by no more than 6 dBA, and to exceed the late-nighttime ambient noise levels in residential receiving districts by no more than 6 dBA. In addition, the nighttime allowable noise limit would be 10 dBA above the one-hour equivalent nighttime noise-level limit (L_{eq}) to account for potential short-term noises. Therefore, the proposed variance limits would be 66 dBA (L_{eq}) and 76 dBA (L_{01}) for all commercial properties and 63 dBA (L_{eq}) and 73 dBA (L_{01}) for all residential properties. Table 4 compares the proposed variance limits with the predicted nighttime sound levels.

Table 4: Proposed Variance Sound Level Limits and Predicted Mitigated Nighttime Sound Levels, Hourly L_{eq}

Receiving Property	Predicted Levels, Phase 4	Predicted Levels, Phase 5	Variance Limits
Apartments above Neptune Theater	49	49	66
University Manor Apartments	63	63	66
Felch House/Varsity Arms Condos	62	62	63

Table 4 indicates that the variance limits would be met at all three sites during both Phase 4 and Phase 5.

Sound level compliance monitoring for prior noise variances has revealed challenges with monitoring L_{eq} , as well as L_{max} , to assess compliance with variance limits. L_{eq} has been found to be easily influenced by changes in ambient conditions from non-project noise sources. L_{max} measures the loudest single event in an hour, which may have nothing to do with construction noise or may represent an accident, such as the dropping of equipment, that only lasts for a second or two and is unlikely to be repeated. At the UW Station site, Sound Transit, in coordination with DPD, shifted to tracking hourly L_{01} sound levels to assess compliance under the nighttime noise variance limits. L_{01} measures the sound level that is exceeded one percent of the time, or 36 seconds each hour. After moving to the L_{01} metric, compliance assessment at the UW Station site became much more efficient, and the occurrences of potential but unverified site exceedences were greatly reduced. It is anticipated that both L_{eq} and L_{01} will be used to ensure compliance with variance limits at the U District Station site.

3. The proposed times and proposed duration of the sound to be emitted.

Sound Transit is requesting a variance for construction-related noise producing activities from 10 p.m. to 7 a.m. on weekdays and from 10 p.m. to 9 a.m. on weekends and legal holidays for work supporting tunneling operations at the U District Station. The construction work is anticipated to be completed over a 28-month period; the variance application covers 30 months to account for unanticipated delays. The work currently is expected to begin in September 2015. As required by SMC 25.08.665 D, the MPPCV will be subject to review by DPD following one year of operation, with an opportunity for public comment.

4. The topography and population density of the area in which the sound is proposed to be emitted.

The topography of the project area slopes from south (lowest) to north (highest), with an approximate 20' grade change over the site. Zoning on the site is a mixture of NC3P-65 (east of Brooklyn), NC3-85 (west of Brooklyn and north of NE 43rd Street), and NC3-65 (west of Brooklyn, south of 43rd). Properties north and east of the site are zoned NC3P-65, with NC3-85 to the west and northwest of the site. West of Brooklyn, a strip of NC3-65 fronts the south side of 43rd; properties south of the NC3-65 zone are zoned MR. On the east side of Brooklyn, properties south of the site are a mix of NC3-65 and NC3P-65 zoning.

There is a mixture of commercial and residential development surrounding the UDS; the University of Washington campus is located two blocks to the east. As noted above, several residential uses are close to the project site, including:

- University Manor Apartments (79 units), located at the southeast corner of Brooklyn Avenue NE and NE 43rd Street immediately adjacent to the southeast portion of the UDS;
- Varsity Arms condominiums (20 units), located on the west side of Brooklyn Avenue NE, south of NE 43rd Street, immediately adjacent to the southwest portion of the UDS;
- A three-story rooming house on the east side of 12th Avenue NE, south of NE 43rd Street, immediately adjacent to the southwest portion of the UDS;
- Ten apartment units on the top (third) floor of the Neptune Theater building, located at the southeast corner of Brooklyn Avenue NE and NE 45th Street, immediately adjacent to the north portion of the UDS.

5. Whether the public health and safety is endangered.

It is generally accepted that very high levels of noise have adverse physical impacts on humans including, but not limited to, hearing damage. Many standards apply to occupational exposures at high levels for prolonged periods of time. For example, the Occupational Safety and Health Act mandates a hearing conservation program by employers if sound levels exceed 85 dBA continuously over an 8-hour workday. If sound levels exceed 90 dBA continuously over an 8-hour workday, hearing protection is required. The project sound level limits anticipated by this Variance Application, as shown in Tables 2 – 4, would maintain sound levels well below these identified levels.

The Federal Transit Authority's (FTA) guidelines recommend that a nighttime 8-hour L_{eq} of 70 dBA not be exceeded. Because this federal guideline is stated in terms of 8-hour L_{eq} , it would allow the sounds in any given hour to be louder than 70 dBA so long as the sounds during other hours were quieter, to bring the 8-hour average down to 70 dBA. The proposed variance limit is 66 dBA in commercial receiving districts and 63 dBA in residential receiving districts, both below the 70 dBA recommended limit. The variance limit also would be stricter than the FTA limit, as it would not allow louder hours to be averaged down by quieter hours.

The increases from on-site nighttime project sound levels that are sought by the applicant and the resulting noise levels will likely affect some people but are not expected to cause a danger to public health or safety.

6. Relative interests of the applicant, other owners or possessors of property likely to be affected by the noise, and the general public.

The interests of the applicant in the construction of this proposed essential public facility are described in the application. Permitting construction 24 hours a day would allow construction of the tunnel in the safest practical manner and minimize ground movements and potential resulting risks to worker safety and damage to the built environment. Continuous tunneling operations also would permit earlier completion of the proposed project and result in substantial cost savings for the public due to reduced administrative expenses, reduced length of construction time needed for equipment and personnel, and savings on the inflation that would otherwise compound the cost of construction in later years. The condensed construction schedule would lessen the duration of construction impacts, including traffic, dust, and noise.

While the conditions imposed on this variance will require additional cost, effort and flexibility on the part of the applicant, they are not expected to cause undue hardship. The applicant appropriately identifies several affected receiving properties. Mitigation described elsewhere in this analysis, including prohibiting the use of compression brakes and tonal backup alarms, generating no impact sounds after 5 p.m., using radios for all long-range communication, not allowing equipment to idle unused for longer than five minutes, and requiring the Contractor to use the quietest equipment available based on industry standard practice, are expected to substantially reduce impacts to these and other affected properties. The noise reduction provided by the solid construction walls around the site will reduce off-site noise impacts during the day as well as at night.

The interests of the general public also will be served by the earlier completion of this transportation project and by the shorter overall construction period that nighttime construction will make possible, as a shortened construction schedule will result in both cost savings and in reduced construction-related impacts.

7. Whether the proposed noise mitigation approaches are likely to be effective.

The applicant's NMMP includes mitigation that will be implemented during the proposed nighttime construction activities. Sound Transit will comply with DR 3-2009 by providing an Independent Noise Monitor who is independent from Sound Transit control. The applicant will also implement and maintain the public outreach and community involvement provisions described in the NMMP, including a 24-hour construction hotline to be answered by a live person.

DPD's noise consultant, BRC, concurs that the applicant's proposed solid construction walls around the perimeter of the construction, as well as other mitigation described in the MPPCV application, will be effective in reducing project sound levels such that impacts to the surrounding residential uses will be substantially reduced.

In addition to the requirements of DR 3-2009 that are discussed above; an applicant for a MPPCV must demonstrate that the standards in SMC 25.08.655A are met:

A. The Administrator may grant a major public project construction variance to provide relief from the exterior sound level limits established by this chapter during the construction periods of major public projects. A major public project construction variance shall provide relief from the exterior sound level limits during the construction or reconstruction of a major public project only to the extent the applicant demonstrates that compliance with the levels would:

1. Be unreasonable in light of public or worker safety or cause the applicant to violate other applicable regulations, including but not limited to regulations that reduce impacts on transportation infrastructure or natural resources; or

2. Render the project economically or functionally unreasonable due to factors such as the financial cost of compliance or the impact of complying for the duration of the construction or reconstruction of the major public project.

With regard to subsection 1, the applicant has demonstrated that it is not possible to operate the equipment necessary to support nighttime construction activities without violating the nighttime noise limits in SMC 25.08.410 and 420. Nighttime work would allow construction of the Northgate Link Extension Tunnel in the safest way practical and minimize surface settlements and potential resulting damage to the built environment and risks to worker safety. Additionally, limiting nighttime work would extend the project duration, increasing traffic, dust, and noise impacts. With regard to subsection 2, the applicant has demonstrated that delay in construction of the Northgate Link Extension Light Rail Project and associated increased costs will result without nighttime construction.

CONCLUSIONS

1. Findings numbers 1 through 7 above are adopted as Conclusion number 1.
2. Proper notice was given of the proposed variance and the required public meeting took place.
3. Requiring Sound Transit to comply with the nighttime noise limits in SMC 25.08.410 and 420 would be unreasonable in light of the increased risks to both worker safety and public safety that would result from not allowing nighttime construction at the U District Station Site. The delay and increased cost that would result from compliance with SMC 25.08.410 and 420 would render the construction of the Northgate Link Extension Tunnel economically and functionally unreasonable.
4. Practical known and available mitigation measures for reducing the nighttime project sound levels and their effects on nearby residents are described in the application and will be incorporated into the project.

5. Chapter 25.08 provides adequate authority to mitigate the impacts of nighttime construction activity at the subject site and, pursuant to the SEPA Overview Policy in SMC 25.05.665, no additional mitigation is required pursuant to SEPA.
6. Based upon the written information submitted by the applicant and interested citizens, statements made at the public meeting, federal guidelines and the current body of scientific knowledge, there is no known danger to public health and safety if mitigating measures are put in place and followed, as provided in this Decision and Order.

DECISION AND ORDER

This variance is GRANTED for the noise related to the nighttime construction activities described in this Analysis and Decision and the applicant's submittal of July 26, 2012, as revised in the submittal of November 5, 2012, subject to the following:

1. This variance is subject to the conditions set forth below and to all requirements, specifications, standards, limits, and other mitigation measures identified by the applicant in its original application submitted on July 26, 2012, as revised in its submittal dated November 5, 2012, collectively "the application". Specifically, the applicant, the primary contractor, and any subcontractors are required to fully follow and execute all of the mandatory noise control measures identified in the application and its appendices and attachments in addition to the provisions set forth in this Decision and Order. If there is a conflict between the noise mitigation and control requirements or specifications of the application and this Decision and Order, the requirements of this Decision and Order shall be followed.
2. Nighttime project sound levels shall not exceed the proposed variance limits specified in Table 4 of this Analysis and Decision. These sound level limits are intended to ensure that nighttime project sound levels will not exceed the Code limit at identified receiving sites in commercial districts by more than 6 dBA (L_{eq}), and will not exceed late-nighttime ambient noise levels at identified receiving sites in residential districts by more than 6 dBA (L_{eq}). In addition, the nighttime allowable noise limit (L_1 based on a slow-response A-weighted level) would be 10 dBA above the one-hour equivalent nighttime noise-level limit (L_{eq}) to account for potential short-term noises. These limits will apply during the following schedule:
 - Weekdays 10:00 p.m. to 7:00 a.m.
 - Weekends (including legal holidays) 10:00 p.m. to 9:00 a.m.
3. As noted in Section 3.5 of the November 5, 2012 application, Sound Transit shall require the Contractor to use its equipment and trucks in a manner that minimizes the sound that is generated. Specific measures are identified as "Controls For Nighttime Trucking" and "Controls For Construction Site Equipment". Measures listed under these headings are incorporated by reference into this decision.
4. Section 3.5 of the November 5, 2012 application identifies the heights and configurations of solid construction walls recommended by the Greenbusch Report to be installed at various locations on the perimeter of the UDS. The locations and heights of these walls are shown in Figure 2 of the July 26 application, and are as follows:

* a solid 16-foot high wall along the southern boundary of the UDS, extending northward from the southwest corner of the site to the north side of NE 43rd Street;

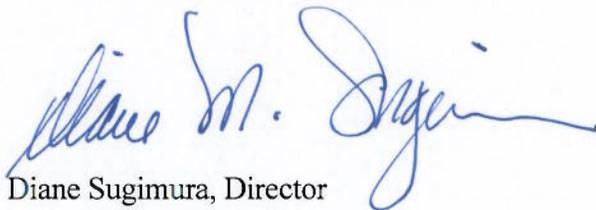
* a solid 12-foot high wall along the remaining portions of the western, eastern, and northern boundaries of the site, except along the southern and eastern facades of the UW South Annex building located at the northwest corner of NE 43rd Street and Brooklyn Avenue NE. Along these facades, a chain link fence atop a jersey barrier will be installed in lieu of a solid construction wall to allow light and air into the lower floor of the UW South Annex building, at the request of the University of Washington.

The walls shall be constructed to the specifications identified in this application, or as modified by the contractor's supplemental NMMP. All noise barriers proposed by the applicant shall be installed per Sound Transit's Noise Management and Mitigation Plan (dated November 5, 2012) prior to commencement of nighttime noise-producing construction activities as necessary to meet the sound levels permitted by this variance.

5. Section 4.0 and subsections 4.1 – 4.4 of the November 5, 2012 application identify Sound Transit's proposed contractor requirements for noise mitigation. Mitigation requirements identified in subsections 4.1 – 4.4 are incorporated by reference into this decision.
6. Public notification and communication will occur as described in the NMMP dated November 5, 2012.
7. DPD will provide oversight of the nighttime work to ensure that the public interest is protected and that the contractor strictly adheres to the Noise Control Code and the conditions imposed by this Analysis and Decision. DPD will assign a Noise Control Program Specialist who will serve as the City's primary contact for noise-related issues at this site. Representatives of the applicant with authority to stop work will be present on the project site during all work hours to ensure that mitigation measures are being followed. Periodic noise monitoring will occur consistent with Director's Rule 3-2009. Specifically, monitoring for this project will occur as described in the November 5, 2012 Variance Application and the accompanying Noise Management & Mitigation Plan (November 5, 2012).
8. Fourteen (14) days prior to the commencement of the construction that is subject to this variance, the applicant shall provide notice of such commencement to the Administrator and to those community members who were notified of the original application. The form and content of the notification must be approved by the Administrator.
9. The applicant or its Contractor shall be responsible for the implementation of the Noise Management and Mitigation Plan. Implementation of this plan includes adherence to the NMMP by all contractor and sub-contractor work affiliated with this application. The applicant or its Contractor shall be responsible for all equipment being used on site whether being used by the Contractor or sub-contractor. If barriers are used to mitigate sound, the Contractor shall be responsible for the provision of such barriers.
10. This variance shall expire thirty (30) months from the commencement of nighttime construction.

11. Violation of any condition of this variance will result in a review of the conditions imposed by this variance, and possible imposition of new conditions or revocation of this variance.
12. Pursuant to SMC 25.08.655 D, the Administrator shall conduct a one-year review and may modify the terms and conditions of the variance or the NMMP as needed if it is determined that the current variance, the conditions of the variance, or the NMMP are not adequately protecting the public health and safety or reasonably controlling or mitigating the construction noise, or that there are more reasonable methods of doing so.

Dated the 17th of December, 2012



Diane Sugimura, Director

Department of Planning and Development

& Administrator, Chapter 25.08 of the Seattle Municipal Code

APPEAL

The Noise Control Code SMC 25.08 provides that any person aggrieved by the denial, approval, or the terms and conditions imposed on a variance or by the extension of a variance by the Administrator, may appeal such decision to the City of Seattle. Hearing Examiner pursuant to the provisions of the Seattle Municipal Code Section 25.08.610.

Appeals of this decision must be received by the Hearing Examiner no later than ten days following the date of the decision and be accompanied by a check for \$85 made payable to the City of Seattle.

