Washington State Department of Transportation

SR 520 BRIDGE REPLACEMENT AND HOV PROGRAM

Major Public Project Construction Noise Variance Questions and Answers

Updated: 8/24/17

Introduction

On August, 21, 2017, the Seattle Department of Construction and Inspections (SDCI) granted WSDOT a construction nighttime noise variance for the SR 520 Montlake Phase. WSDOT conducted public outreach in advance of receiving this noise variance, which included:

- Hosting a public meeting on February 28, 2017 to share information, answer questions, and collect public feedback on WSDOT's application.
- Attending the SDCI-led public meeting on April 6, 2017 to provide information and answer questions from the public.
- Ongoing public updates regarding the status of WSDOT's noise variance application.

WSDOT has since updated the questions and answers below to provide updated information regarding the SDCI decision. More detailed information regarding the noise variance process can be found on SDCI's Land Use and Information Bulletin (project # 3027364) in the August 21, 2017 "Notice of Noise Variance Decision & Parties" document.

1. **Question: What is an MPPCNV?**
   Answer: The Major Public Project Construction Noise Variance is a noise variance granted by the city of Seattle that defines the allowable nighttime noise limits for a construction project. It is tailored specifically for major public construction projects, such as the SR 520 Montlake Phase, and is administered by the Seattle Department of Construction and Inspections (SDCI). The variance defines the noise limits and regulations that nighttime construction work must adhere to throughout the Montlake Phase construction project. WSDOT has received a MPPCNV for the Montlake Phase project which includes construction of the West Approach Bridge South, Montlake lid and interchange, and a bicycle/pedestrian land bridge over the highway.

2. **Question: Why did WSDOT apply for an MPPCNV?**
   Answer: WSDOT applied for this variance because construction crews will work at night within the city of Seattle limits during the Montlake Phase. Nighttime construction work is necessary to avoid disrupting weekday traffic and to provide a safe environment for construction crews and the traveling public. Since nighttime work will be required, WSDOT received this variance from the city to set limits on the noise levels for nighttime construction activities.

   Additionally, WSDOT applied for an MPPCNV in order to comply with city of Seattle noise code for major public projects. The city of Seattle defines a "major public project" as a project for a public facility that has a substantial impact on the public safety, health and welfare and the provision of public services, including transportation services.

3. **Question: Why did WSDOT apply for an MPPCNV now?**
   Answer: The Montlake Phase is a design-build project, meaning that once hired, the selected design-build contractor will finalize the design and identify the specific construction means and methods for the project. WSDOT has received the variance in advance of publishing Montlake Phase contracting documents so that a future design-build contractor is aware of the requirements they must comply with while developing their proposed construction means and methods.

4. **Question: What is included in WSDOT's MPPCNV application?**
Answer: The Major Public Project Construction Nosie Variance application, which is now the variance, includes the following information:
    - **Project description and proposed construction activities:** This section includes a description of how WSDOT anticipates a design-build contractor may construct the Montlake Phase project. The specific construction activities may change once a contractor is hired and they finalize the project design and their construction plans. However, final construction plans must comply with the requirements identified in the noise variance, once granted.
    - **Updated: WSDOT's baseline noise measurements and proposed nighttime noise limits:** The variance includes WSDOT's proposed nighttime noise limits, which were developed based on existing nighttime noise conditions.
        - The MPPCNV contains two types of nighttime construction noise limits, which are based on pre-construction conditions of specific areas in the vicinity. These nighttime noise limits include both nighttime noise hourly averages in addition to nighttime sound maximums that can occur over short durations (less than a minute). The inclusion of two types of nighttime construction noise limits allows for a clearer, more effective way to monitor nighttime noise variance compliance.
        - See pages 15 – 16 of the July 6, 2017 revised application, which is now the variance, (available on SDCI's Land Use and Information Bulletin, project # 3027364) for a graphic that shows the seven sites where existing nighttime noise levels were measured, existing nighttime noise conditions and WSDOT's proposed nighttime sound limits. Data on current nighttime sound levels was collected from midnight to 5 a.m. at periods when no nearby nighttime construction activities were underway. WSDOT's proposed hourly average for the Montlake Phase is six decibels higher than existing conditions, with a proposed maximum sound limit that is within the range of current nighttime noise.
    - **Noise Management and Mitigation Plan:** The variance provides a framework for the Noise Management and Mitigation Plan to be completed by the design-build contractor, once hired. The plan will identify how a contractor will keep noise below the limits approved in the variance, and identifies measures needed to meet the any conditions set in the variance that will be granted by the city. Once hired, a design-build contractor will complete this plan, based on their selected construction means and methods and the variance requirements. The design-build contractor will be required to revise and update the Noise Management and Mitigation Plan to the city of Seattle to demonstrate how they can construct the project within the noise limits set by the MPPCNV.
    - **Public outreach and process to resolve noise complaints:** The variance also describes how WSDOT and the contractor will maintain communication with the public during construction, and the process for a neighbor to make a noise complaint.

5. **Question: How will nighttime construction noise in the Montlake Phase differ from nighttime noise experienced during the current West Approach Bridge North construction?**
Answer: Similar nighttime construction activities that occurred during the WABN project will also likely occur during the Montlake Phase project, except in different locations, as construction moves to the west. The main difference between WABN nighttime construction work and Montlake Phase nighttime construction work is the type of variance granted by the city of Seattle that allows this work to occur. See Question 6 below for more information on the difference between the types of variances.

6. **Question: What is the difference between the nighttime noise variance used for the WABN project and the nighttime noise variance that WSDOT applied for on the Montlake Phase?**
Answer: The current WABN construction project has used temporary noise variances (TNVs), rather than an MPPCNV. TNVs are short-term variances, applicable for up to 14 days, that allow the contractor to perform certain construction activities, such as paving, at night. TNVs typically do not set specific noise level limits that must be met while conducting the activities permitted under the TNV. However, TNVs do come with conditions that a contractor must comply with while conducting the activities allowed under the TNV, and these conditions could include noise level limits. If a contractor is not meeting TNV conditions, SDCI can revoke the TNV at any time. Current city of Seattle practice is to limit the issuance of consecutive TNVs.

In order to comply with current city of Seattle noise code, WSDOT applied for an MPPCNV for Montlake Phase construction. MPPCNVs are tailored specifically for major public construction projects, such as the Montlake Phase. A MPPCNV differs from a TNV in that it sets limits for nighttime construction noise levels for the duration of the project. The goal of obtaining an MPPCNV is to provide a clear, longer-term set of limits and requirements for nighttime work and noise levels during construction of the Montlake Phase.

7. **Question: How will nighttime noise limits for the Montlake Phase be monitored and enforced?**
   Answer:
   - Nighttime noise monitoring is a variance requirement and will be performed throughout the entirety of Montlake Phase construction. Noise monitors will be used 24 hours a day to verify that nighttime noise activities remain within the approved limits set in the variance. Noise monitors will also detect if any exceedances occur. Weekly and annual noise monitoring reports will be provided to SDCI to demonstrate compliance. These reports will be made available to the public as well.
   - An Independent Noise Monitor (INM) will also be hired by WSDOT to oversee noise monitoring and reporting of the contractor's work at night, and will report on compliance directly to SDCI. The INM will be on-site during all periods of scheduled nighttime work and will be notified of any noise complaints received. If the INM receives a complaint during nighttime work hours, the INM will notify the contractor, perform a site inspection, and conduct additional noise measurements while on-site. If noise exceedances occur, WSDOT will work with the Montlake Phase contractor and SDCI to assess if the associated construction activity should be halted or modified. SDCI retains the authority to suspend or cancel the noise variance if the requirements of the variance are not met.
   - If members of the public wish to submit a noise complaint, they can continue to utilize the SR 520 24-hour construction hotline.
   - WSDOT is also evaluating opportunities to incorporate incentives and/or disincentives into the Montlake Phase construction contract with the goal of promoting compliance with the noise variance.

8. **Updated: Question: How many years will the MPPCNV be in effect?**
   Answer: WSDOT received a five-year nighttime noise variance for the Montlake Phase to allow necessary construction work activities to occur during nighttime hours (between 10 p.m. and 7 a.m. on weekdays and between 10 p.m. and. 9 a.m. on weekends and legal holidays. Only nighttime construction activities related to the Montlake Phase project are covered by the Montlake Phase MPPCNV. After the one-year review of the variance, subsequent annual evaluations shall be performed of the track record on noise compliance and effectiveness of construction noise mitigating conditions in place. If necessary, new or modified conditions may be imposed to improve compliance results.

9. **NEW: Question: What noise-mitigation measures will WSDOT implement to reduce construction noise impacts during construction?**
   Answer: The Montlake Phase nighttime noise variance documents the measures WSDOT will implement to reduce construction noise impacts to residents during construction. The following are requirements of the noise variance and must be in place for all Montlake Phase construction activities occurring between 10 p.m. and 7 a.m. Monday through Friday, or between 10 p.m. and 9 a.m. Saturday through Sunday and legal holidays:
   - The contractor will meet the noise levels limits established in the noise variance.
   - The contractor will use broadband or strobe backup warning devices, or use backup observers in lieu of backup warning devices for all equipment, in compliance with Washington Administration Code, Sections 296-155-610 and 296-155-615. For dump trucks, if the surrounding noise level is so loud that broadband or strobe backup warning devices are not effective, then an observer must be used (WAC 296-155-610). This condition will apply to activity conducted between 10 p.m. and 7 a.m., Monday through Friday, and between 10 p.m. and 9 a.m. on Saturday, Sunday, and legal holidays. No pure-tone backup warning devices will be used after 10 p.m. and before 7 a.m. weekdays or 9 a.m. weekends and legal holidays.
   - The contractor will not conduct impact work, such as auger shaking, jack hammering and impact pile driving, during nighttime hours from 10 p.m. to 7 a.m. on weekdays and 10 p.m. to 9 a.m. on weekends and legal holidays.

- The contractor will use compressors with a measured noise levels of 71 dBA at 50 feet or less for areas where modeling showed mitigation for compressors was needed to reduce noise levels below the noise level limit. The contractor will have an option to propose alternative mitigation methods providing equivalent sound attenuation, such as surrounding the compressor with a temporary noise wall or baffle system to meet the noise level limits.
- The contractor will pave construction access roads and haul routes near residences where possible to reduce dust and noise.
- The contractor will securely fasten truck tailgates.
- The contractor will use sand, rubber or plastic lined truck beds for all haul-trucks to reduce noise, unless an exception is approved by WSDOT.
- The contractor will not use compression brakes.
- The contractor will not leave equipment to idle for longer than five minutes,
- The contractor will use temporary noise mitigation shields, enclose, or use low noise-generating stationary equipment, such as light plants, generators, pumps, and air compressors near residences where practical.

Once hired, the contractor for the Montlake Phase project may choose to implement additional measures, such as such as temporary mobile noise barriers and noise shielding equipment, and/or hotel accommodation for frontline neighbors, to reduce construction impacts during construction. SDCI and WSDOT will review the contractor's selected noise mitigation measures to verify compliance with the limits set in the variance