

MEMORANDUM

Date: Aug. 20, 2022

To: Dan Goodman, Mechanical Inspections/Noise Abatement Manager, Seattle
Department of Construction and Inspection

Written By: Alexander Wiggins, Project Independent Noise Monitor, SR 520 Montlake
Project

On Behalf Of: Margaret Kucharski, Environmental Services Office, Megaprograms Environmental
Manager, WSDOT

Re: MPPCNV Annual Report for August 16, 2021, through August 14, 2022
MPPCNV Permit Number: 3030792
SR 520 Montlake Project
WSDOT Contract No. 009015

INTRODUCTION

This annual report summarizes and evaluates the project's performance under the Major Public Project Construction Noise Variance (MPPCNV) #3030792 issued for the SR 520 Montlake Project, WSDOT contract number 009015. As required by the Director's Rule 3-2009 and the MPPCNV decision, WSDOT is providing this annual report. The report includes noise data collected Aug. 16, 2021 through Aug. 14, 2022 and addresses the overall Design-Builder noise mitigation performance and its various issues and resolutions.

SUMMARY OF PERFORMANCE

WSDOT is committed to ongoing coordination with the City of Seattle Department of Construction and Inspections (SDCI). Coordination includes documentation of nighttime noise levels and complaints, as well as management of compliance issues, using best management practices (BMPs). The following is a performance summary for the period between Aug. 16, 2021 and Aug. 14, 2022 (2021 – 2022):

- The majority of noise levels that exceeded the MPPCNV noise limits were not related to project work. (See Table B on pg 7).
- During the period of performance covered in this report, the Montlake Project worked 227 nights. Of these work nights: (See Table 1.0 on pg 2).
 - 137 were performed under the MPPCNV.
 - 20 were performed under a Temporary Noise Variance (TNV) when specific work operations could not be performed within the MPPCNV limitations. An example of this is demolition of roadways where road closures are limited to nighttime only.
 - 70 were performed under both the MPPCNV and TNV when the work included both work that could and could not be performed within the limitations of the MPPCNV. (See Appendix C for nights worked).
- During this time, the project experienced:
 - 1004 occurrences of non-project related noise exceedances.

- 177 occurrences where project-related noise exceeded the MPPCNV noise limits. Of these, 172 exceedances occurred during work where a TNV was in place, leaving 5 MPPCNV noncompliance events related to noise levels. (See Table B on pg 7).
- 21 occurrences where crews were found to be out of compliance with MPPCNV noise levels or MPPCNV/TNV mitigation measures. (See Tables B and C on pg 7 for a summary and Appendix D for a detailed event log).
- The project experienced 69 distinct complaints related to a total 28 nights of work. (See Table E on pg 10 and Appendix E for a detailed log).
- The project is on its third year and below are tables with cumulative totals for working nights, non-compliances, public complaints and TNVs.

Table 1.0 Working nights	2019-2020	2020-2021	2021-2022	Cumulative Total
Total MPPCNV days	367	364	364	1095
Total nights worked	91	244	227	562
Nights worked under MPPCNV only	77	202	137	416
Nights worked under a TNV only	9	27	20	56
Nights worked under both	5	15	70	90

Table 1.1 Non-compliances	2019-2020	2020-2021	2021-2022	Cumulative Total
Total project-related non-compliance	31	37	21	89
MPPCNV noise level exceedances	9	8	5	22
MPPCNV other non-compliance	11	12	9	32
TNV non-compliance	10	15	7	32
MPPCNV/TNV non-compliance	0	2	0	2
SCL exceedances	0	14	0	14
SCL non-compliance	0	14	0	14

Table 1.2 Public complaints	2019-2020	2020-2021	2021-2022	Cumulative total
Number of complaints	38	56	69	163
Project-related	33	32	60	125
Not project-related	5	24	9	38
Related to non-compliance events	12	3	1	16

Table 1.3 TNV's	2019-2020	2020-2021	2021-2022	Cumulative Total
Number of TNVs	6	17	25	48

PROJECT AND MPPCNV BACKGROUND

- **Project Description**

The Montlake Project is the first of the remaining State Route 520 improvements between Lake Washington and Interstate 5, known as “the Rest of the West.” The Montlake Project includes construction of an improved Montlake Boulevard interchange, a landscaped lid over SR 520, a bicycle and pedestrian land bridge east of the lid and a three-lane West Approach Bridge South for eastbound traffic over Union Bay. Major construction of the Montlake Project began in summer 2019.

- **MPPCNV Application and Decision Process**

In March 2017, WSDOT applied for a Major Public Project Construction Noise Variance (MPPCNV) from the City of Seattle (COS) Department of Construction and Inspections (SDCI). The application was revised in July 2017 and again in January 2018 in response to comments by SDCI. WSDOT requested a five-year nighttime noise variance for the duration of Montlake Project construction to allow necessary work activities to occur during nighttime hours. As part of the MPPCNV, the application proposed nighttime construction noise limits for noise-sensitive receivers near the construction site. WSDOT made this request with the understanding that completing all planned activities during only daytime hours would be unreasonable considering public and worker safety. Additionally, using only daytime hours would require multiple closures of SR 520, Montlake Boulevard and Lake Washington Boulevard during peak traffic periods, leading to:

- Extensive travel delays to the public.
- Increased traffic volumes on city streets and nearby highways.
- A potential increase in the number of accidents in the project work zone.

In April 2018, SDCI issued WSDOT the MPPCNV decision for construction of the Montlake Project.

- **Key Decision Elements**

- Allows for nighttime work and variance to the city noise ordinance.
- Limits allowable nighttime noise levels at key locations around the project site.
- Restricts nighttime noise and work to specific work activities and practices.

- **Design-Builder’s Noise Management and Mitigation Plan**

The Design-Build contractor, Graham Contracting Ltd., provided a draft Noise Management and Mitigation Plan to WSDOT in April 2019. Through the review and comment resolution process with WSDOT, SDCI and Graham, a final plan for managing nighttime noise was completed in July 2019.

- **The Design-Builder Attained Temporary Noise Variances (TNV)**

In addition to the MPPCNV, the Design-Builder obtained TNVs from SDCI for specific activities that would not meet the provisions of the MPPCNV.

COMMUNICATION: INM, GRAHAM, SDCI AND WSDOT

As required by the MPPCNV decision, the Independent Noise Monitor (INM) oversaw the independent monitoring and reporting of nighttime noise levels from project construction covered by the MPPCNV and reported back to Graham, WSDOT, and the SDCI coordinator for noise abatement. The INM's responsibilities, organizational reporting chart, and communications protocol are found in Appendix A. The protocol was developed and reviewed with SDCI prior to the start of construction. The purpose of the protocol is to outline the communication chain for reporting exceedances, noncompliance, and complaints.

The INM had regular coordination with Graham's nighttime crews and phone and email contact with Graham Environmental Compliance Manager (ECM) Gary Stensland, WSDOT Megaprograms Environmental Manager Margaret Kucharski, and Seattle Department of Construction & Inspections personnel, including:

- A direct telephone number to the Graham ECM and/or Graham nighttime superintendent in the event nighttime measurements exceed, or have the potential to exceed, established noise-level limits, and to report any noncompliant activity.
- Coordinating with the Graham communications team on any updates or concerns from the neighborhood and residents.
- Coordinating with SDCI on any questions or concerns from the city regarding project noise.
- Providing weekly noise reports to WSDOT, SDCI and Graham.

The INM compiled noise levels, noncompliance events and public complaints into a weekly report and provided them to SDCI by the Wednesday of the following week. An example of these reports can be found in Appendix B. In June of 2022, a change was approved to the recording trigger levels of the NMMP, and an update was sent to SDCI to document the changes. Details of the changes are listed in the changes to the MPPCNV section of this report.

CONSTRUCTION AREA AND EXTERIOR NIGHTTIME CONSTRUCTION NOISE-LEVEL LIMITS

The MPPCNV established noise limits for nighttime noise-sensitive receivers in proximity to the project area. In general, nighttime noise monitors are placed at or near residences where people should expect quiet hours. Table A below identifies the noise monitoring terminal locations and the associated MPPCNV noise-level limits used to monitor compliance of the MPPCNV. On June 9, 2022 monitor #4 was removed from the project when the property it was located on sold. On June 22, 2022 monitor #4a was installed at 2110 E Hamlin St. Details on this change are covered below in the changes to the MPPCNV section of this report. No other changes were made to monitor locations.

Site #	Address	Sound-Level Limits (Leq) dBA
1	2449 E Lake Washington Blvd	67
2	2015 E Roanoke St	78
3a	Canterbury Shores	62
4	2800 Montlake Blvd E	66
4a	2110 E Hamlin St	66
5	2565 22nd Ave E	65
6	2160 E Hamlin St	63
7	2209 E Lake Washington Blvd	66
8	Portable monitor between sites 4 and 6	63
9	Portable monitor between sites 1 and 7	66
10	Portable monitor between sites 1 and 7	66

Mitigation Measures Used During Nighttime Work

The following mitigation measures are required by the project's MPPCNV to minimize construction noise, except in case of emergency, as defined by Seattle Municipal Code (SMC) 25.08.110.

Mitigation measures

- The contractor will meet the noise-level 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 Administrative Code (WAC), 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 Saturdays, Sundays, and legal holidays. No pure-tone backup warning devices will be used after 10 p.m. or before 7 a.m. on weekdays and 9 a.m. on weekends and legal holidays.
- The contractor will use mufflers and will reduce the point source noise emission by 10 dBA for equipment to reduce noise levels to meet the sound-level limits established in the MPPCNV when needed.
- The contractor will securely fasten truck tailgates.
- The contractor will not use compression brakes.
- The contractor will not leave equipment to idle for longer than 5 minutes.

Additional noise mitigation

- Equip nighttime surface equipment with high-grade engine exhaust silencers and engine-casing sound insulation.
- Use electric welders, powered from utility main lines, instead of gas, diesel or internal combustion generators or welders.
- Use critical or double mufflers where practicable on machinery for off-road use, such as cranes.
- Use noise blankets, skirts, or other available means for mobile equipment to mitigate noise that does not unreasonably interfere with the operation of the engine.
- Use temporary mobile noise barriers in the immediate vicinity of loud activities near residences.
- Use temporary noise barriers.
- Provide earplugs and white noise machines to residents near the project area.
- Install temporary sound-dampening drapes for residents.
- Provide hotel rooms for residents during high-impact or extremely noisy operations.

Noncompliance Events

Tables B and C on page 7 tabulate the occurrences where the project was out of compliance with the MPPCNV. During this time, the project can account for 5 occurrences where the MPPCNV noise limits were exceeded and 16 occurrences where project crews were found to be out of compliance with MPPCNV/TNV noise mitigation measures.

See Tables B and C on page 7 and Appendix D for a detailed accounting.

Site	Non project-related exceedance*	Project-related construction under TNV ***	Project-related MPPCNV exceedance	Total
1	0	2	0	2
2	0	0	0	0
3a	0	0	0	0
4	521**	5	0	526
4a	0	0	0	0
5	38	63	3	104
6	3	8	0	11
7	1	3	0	4
8	5	5	0	10
9	171**	59	0	230
10	265**	27	2	294
Total	1004	172	5	1,181

*Non Project-related noise exceedances were primarily caused by public traffic adjacent to the noise monitoring site and are not further tabulated or addressed in this report.

** Site #4 is located adjacent to Montlake Boulevard, and sites #9 and #10 are located adjacent to Lake Washington Boulevard. These sites pick up a substantial amount of public traffic noise, as indicated by the high number of exceedances. Site #4 was evaluated for a change in the allowable noise level but was felt that a change significant enough to reduce exceedance caused by public traffic would also reduce exceedances triggered by Project related work and so no change has been made.

*** Occurrence where the MPPCNV noise level was exceeded, but a TNV was in place, so the exceedance is not considered a noncompliance event.

Project-related noise level exceedances not covered by a TNV	5
Use of pure-tone alarms	11
Bed liners not used	1
Unsecured tailgates	0
Unshielded noise	1
Compression brakes	0
Not permitted equipment	3
Total MPPCNV/TNV noncompliance events	21

WSDOT Environmental Compliance Assurance Procedure (ECAP) Addressing Noncompliance

The ECAP is a WSDOT internal procedure designed to elevate and report noncompliance issues. This may include notifications to regulatory agencies, organization of cleanup activities, or further enforcement of the contract, up to and including, suspension of part or all of the work causing the noncompliance.

An ECAP was issued to document the incidence and resolution of noncompliance events when, in the opinion of WSDOT, the event could have been anticipated and prevented instead of resolved from previous events of a similar nature, lack of training, care or caution. Examples include:

- Loading concrete debris into unlined truck beds.
- Continued use of pure-tone alarms by the same equipment or contractor and failure to turn them off.
- Noise exceedance with no mitigation, such as noise shielding or offering residences hotel rooms.

An ECAP was not issued when, in the opinion of WSDOT, the event could not have been anticipated, caused no exceedance or a complaint was immediately remedied. Examples include:

- Pure-tone alarms on equipment with operators unfamiliar with the project requirements, such as material delivery, and alarms were immediately disabled with no exceedance or complaints.
- Not using bed liners when loading materials that are soft and do not make noise when being loaded, such as vegetation with no exceedance or complaints.
- Noise level exceedance that was immediately addressed and there no complaints.

During this time, there were 21 noncompliance occurrences with 3 ECAPS issued. As noted above, ECAPS were not issued for the remaining noncompliance events when, in the opinion of WSDOT, the event could not have been anticipated, caused no exceedances or complaints were immediately remedied.

Table D – WSDOT ECAP reports. Full reports are included in Appendix G.	
Date	Noncompliance
8/18/2021	Noise exceedances for project nighttime construction for Noise Monitoring Site #5. Graham was working on remediation on the former Montlake Market using excavators and bull dozers to remove contaminated soil.
11/23/2021	Noise exceedances for project nighttime construction for Noise Monitoring Site #9 & #10. Graham’s subcontractor Penhall was cleaning up and loading demo debris from the 24th Avenue Bridge work area
7/10/2022	At 12:12am Graham was found to be operating a scissor lift with a pure tone backup alarm on WB SR 520

MPPCNV Noncompliance events and how they were addressed

For all cases in which work is out of compliance with the MPPCNV, the INM has stop-work authority. The INM actively worked with the Design-Build contractor staff to identify the work and make changes or stop the work altogether.

The Design-Build contractor also employed a project noise monitor that was on site during all nighttime work. The Design-Build contractor’s noise monitor worked actively with crews to check compliance and make changes before noncompliance occurred. The Design-Build contractor’s noise monitor also worked closely with the WSDOT INM to manage MPPCNV compliance.

- Project-related noise level exceedances not covered by a TNV
 - There were 5 project-related events that exceeded the allowable noise levels stipulated in the MPPCNV. There were 3 nights where these exceedances occurred.
 - 2 ECAPS were issued for noise exceedance where better planning and mitigation could have been used to reduce or eliminate the exceedance, these ECAPS account for 3 of the

- project-related events and 2 of the nights where uncovered project related exceedances occurred.
- The remaining 2 project-related events were the result of equipment working directly next to a monitor and had no public complaints.
- Pure-tone alarms
 - The project INM documented 11 occurrences where the Design-Builder used pure-tone alarms during the nighttime work.
 - WSDOT determined that 8 of these 11 occurrences could have been prevented if the Design-Builder provided better education for equipment operators, equipment rental companies, or had been more proactive in checking and deactivating alarms prior to nighttime work. These occurrences were noted in the MPPCNV weekly report.
 - The remaining 3 occurrences were times where typical material or equipment delivery vehicles were new to the project and unaware of the backup alarm requirements.
 - All occurrences were noted in the MPPCNV weekly report but only 1 occurrence was documented as a WSDOT ECAP.
 - In all but 1 case, the alarm was either immediately shut off, not allowed to continue, or the equipment was removed from the project. The INM informed SDCI, the issue was discussed at the weekly Environmental Task Force meeting, and additional training and reminders were sent to crews, subcontractors and suppliers.
 - In 1 case the equipment was muffled but remained in service. WSDOT determined that muffling was not sufficient and the non-compliance resulted in an ECAP. Moving forward, Graham has committed to either deactivate the pure tone alarm or remove the equipment from the project.
 - Bed liners
 - The project documented 1 occurrence of material loading without the use of bed liners.
 - WSDOT determined the Design-Builder could have prevented this occurrence by ensuring that crews and subcontractors was aware of the requirement. This occurrence was noted in the MPPCNV weekly report but not documented as a WSDOT ECAP, because it was resolved quickly and with no complaints.
 - The Design-Builder used mitigation measures to reduce the noise caused by loading material. Examples of these mitigation measures include lining truck beds with sand or gravel before loading and placing materials in the bed instead of dropping them.
 - In this case, the work was halted until changes in work operations could be made. The INM informed SDCI, the issue was discussed at the weekly Environmental Task Force meeting and additional training and reminders were sent to crews, subcontractors and suppliers.
 - Unshielded loud noise
 - The project INM documented 1 occurrences of the Design-Builder not providing required shielding during work adjacent to residences.
 - One occurrence was not documented with a WSDOT ECAP as the duration was limited in time and there was no apparent impact to the residences.

- The Design-Builder has committed to the following:
 - Review work as part of pre-activity planning and the need for shielding.
 - Have shielding in place before work starts.
 - Have additional acoustic paneling on hand for all night work to be used as needed.
- WSDOT discussed this with SDCI and has agreed with the Design-Builder to:
 - This condition is about protecting the residences from excessive noise and some reasonableness needs to be applied.
 - The Design-Builder needs to use temporary noise shields when the equipment causes noise at the property line that exceeds the MPPCNV Limits, even under a TNV. If there is a light plant running on the lid and noise readings on the Lake Washington Boulevard sidewalk are under the MPPCNV limit, then no noise panel is required. On the other hand, if the light plant is on Lake Washington Boulevard and the noise levels at the property line are above the MPPCNV limits, noise panels are needed.
 - Noise panels have been needed along Lake Washington Blvd between the homes and the work. If there is also a generator or light plant etc., a second panel would not be needed.
 - If WSDOT receives complaints, then additional noise mitigation like temporary panels should be implemented.
- Unpermitted equipment
 - The project INM documented 3 occurrences of the Design-Builder using equipment which was not permitted either under TNV or MPPCNV.
 - The Design-Builder now lists sweepers (and other equipment) they plan to use in their TNV applications and to avoid using equipment prohibited by the MPPCNV.

Public Complaints

Public complaints can come to the project through a variety of channels:

- Project 24-hour phone hotline; if received at night, these hotline calls are immediately relayed to the field for resolution.
- Project email: these emails are relayed to the Design-Builder and resolution on the following business day.
- Call to project staff or project Ombudsman.
- Call to City staff or other agency representative.

In all cases, complaints are documented in a public correspondence log, and a response and follow-up are made, as needed, to resolve the issue as soon as possible. Below is a summary of complaints. A full detailed list can be found in Appendix E.

Table E – Complaints related to the project	Number
Public complaints for project-related noise associated with noncompliance events	1
Public complaints for project-related noise not associated with noncompliance events	59
Public complaints for noise not project-related	9
Total	69

Changes in MPPCNV

There were 2 changes made to the MPPCNV during this year. The contractor requested a change to the recording levels of NMMP to help ease the process of collecting noise data and getting updates in a timely fashion. Originally the MPPCNV called for recording all sounds 5dB under the monitors alert and below. For example, site #4's limit is 66dB and under the MPPCNV all sounds 61dB and higher would have been recorded. The change to the recording trigger levels changed the trigger level definition to the 1-second Leq that was set to 5 dBA over the 1-hour Leq nighttime limit for each site, except Site 2, where it was set to the 1-hour limit. This change was discussed with WSDOT and SDCI. This change to the MPPCNV was sent to SDCI in June of 2022.

The other change in the MPPCNV during this year was the location of site #4. The property where monitor #4 was located was sold and it was requested that monitor #4 be removed from the property. The monitor was removed on June 9 and was placed in its new location on June 22. Due to the change in site, the monitor's name changed to #4a. The new location is at 2110 E Hamlin St, approximately 80ft from the original site #4. This new location is estimated to minimally impact the capacity to monitor construction. For example, the Montlake Boulevard on-ramp to westbound SR 520 is located approximately 270ft from the #4 location and 290ft from the #4a monitor. This would lead to a less than 1 dBA difference in the sound level between the sites for work on the ramp. The closer the work is to the original monitor #4 site, the larger the expected difference. The largest difference being in the detection of morning traffic by the original monitor #4 as action alerts which the new location is less likely to do.

Temporary Noise Variance (TNV)

Because not all necessary nighttime activities could be completed within the limits of the MPPCNV, the Design-Builder sought TNVs on 25 occasions for 90 nights of work. WSDOT worked closely with the Design-Builder to ascertain whether the TNV was unavoidable and on several occasions determined that a TNV was not necessary. During weekends when the TNVs were issued, Graham and WSDOT worked to concentrate the noisiest activities into one night, rather than disrupt neighbors for multiple nights. Examples of work where a TNV was necessary include street and structure demolition requiring lane closures allowed only at night.

To be good neighbors, the Design-Builder performs as much of the noisier work as possible during the day and reserves TNVs for work that can only be completed at night, primarily driven by the need to maintain normal traffic during the day. Work has been rescheduled to weekends where traffic restrictions are less stringent in order to keep from performing work at night. It should also be noted that the Design-Builder is motivated to perform work during daytime hours as is more cost effective to work during the days with their normal day to day crews and not have to bring in separate crews, supervision, equipment etc. to perform work at night. Also, working at night has meant more outreach to neighborhoods prior to, and sometimes during, the work.

Below is a list of TNVs approved for the project. Refer to Appendix D for noncompliance events related to TNVs issued to the project.

Table F – Temporary Noise Variances		
Date (first night)	TNV #	Purpose and scope of work
8/27/2021	6854045-NV	Graham will be relocating Montlake Boulevard into a new configuration. This work will be done during a weekend closure of Montlake Blvd and the associated ramps. Work will include pavement and structure demo, traffic signal removal and installation, luminaire removal and installation, drainage and utility work, grading, paving, striping, barrier removal and installation and anchoring.
9/27/2021	6860186-NV	SCL has new 26kV Duct Bank installed across Lake Washington Boulevard at 24th St. Intersection. This work requires a full Lake Washington Blvd closure, which can only be done at night.
10/8/2021	6861736-NV	Graham has multiple utilities in the road that require full street closures. These road closures can only happen at night and during weekends. The amount of work requires continuing work during nighttime hours.
10/22/2021	6863027-NV	Graham will demolish the old Montlake overpass across SR 520 during the course of a weekend highway closure. Graham will also be doing some drainage work while the road is closed.
10/29/2021	6865282-NV	Graham is going to be relocating the westbound off-ramp from SR 520 to Montlake Blvd and Lake Washington Blvd. Graham will also be completing the paving on Montlake Blvd and on the EB ramps.
11/1/2021	6863153-NV	There are 2 piers on the WABS bridge that require the drilled shaft installation work to occur at night so that concrete placement can happen to coincide with nighttime full highway closures.
11/17/2021	6866778-NV	Graham needs to install solid mails over the eastbound on-ramp to SR 520 as part of the temporary shoring necessary to build pier 1. This work requires the closure on the eastbound on-ramp.
11/19/2021	6867591-NV	Graham will be demolishing the 24th Street overpass across SR 520 over the course of a weekend closure. Other demolition, excavation and paving activities will also be occurring on SR 520 simultaneously while the highway is closed.
12/2/2021	6869990-NV	Graham needs to continue installing soil nails over the eastbound on-ramp to SR 520 as part of the temporary shoring necessary to build Pier 1. This requires the closure of the EB On Ramp.
1/3/2022	6874090-NV	Graham needs to continue installing soil nails for temporary shoring. This work requires the full closure of the eastbound on-ramp to SR 520. This ramp can only be closed during nighttime hours.

1/13/2022	6875677-NV	Graham needs to demolish the old north abutment of Montlake Boulevard overpass. This work will require a full westbound closure of SR 520, which can only be accomplished at night. This will be a two-night operation.
3/14/2022	6882384-NV	Graham needs to complete utility work on eastbound SR 520 on-ramp from Montlake Boulevard. (DXEI Ramp) and eastbound SR 520 on-ramp from Lake Washington Boulevard. (FXEI Ramp). This will require the full closure of the ramp for trenching, which can only be done at night. Ramp locations will not be closed at the same time.
3/14/2022	6884991-NV	Pier 2 east pile installation will require nightly lane closures of SR 520 for installation of 24" still piles
3/28/2022	6889621-NV	Continuation of work under TNV #6884991-NV. Additional equipment included.
3/28/2022	6889593-NV	Continuation of work under TNV #6882384-NV.
4/8/2022	6888254-NV	Graham needs to complete utility work located near Pier 4 work zone. This will require the full closure of WDX/WPX Ramp (Westbound off-ramp to Montlake/24th) for trenching, which can only be done at night.
4/30/2022	6892813-NV	Activities require closure of ramp requiring night work to occur.
6/7/2022	6903390-NV	Concrete pour at Pier 3 East from top of lid on the northeast corner beginning at 4 a.m.
6/15/2022	6903446-NV	Pin barrier on westbound mainline northeast corner of lid structure. Pinning will require 1 night activity within this date range.
6/20/2022	6903401-NV	Lake Washington Boulevard at Roanoke intersection. Intersection to be closed to complete drainage activities, day and nighttime work to be performed.
7/4/2022	6903459-NV	Drainage work to be completed at Pier 3 east of lid at night work, requires lane closure of westbound mainline.
7/3/2022	6903443-NV	Lake Washington Boulevard at Roanoke intersection. Intersection to be closed to complete drainage activities, day and nighttime work to be performed.
7/11/2022	6908797-NV	Girder placement over SR 520 to east end of lid structure. Drainage activities on FXEI, WDX/WPX and DEXI ramps, barrier pinning on mainline, installation of speed reader cameras on WABS.
7/21/2022	6911878-NV	Sawing cutting across DXEI Ramp, single night, ramp closure required.
8/8/2022	6915324-NV	Grinding DXEI ramp (August 8-10), Installing Overhangs and false deck at Girders 91-92 (August 15-19)

List of Appendices

Appendix A	INM Responsibilities, Organizational Chart and Protocol for Construction Noise
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Appendix C	Table of Nights Worked
Appendix D	Table of Noncompliance Events and Resolutions
Appendix E	Table of Public Complaints and Resolutions
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