

Appendix D
RapidRide Roosevelt Project
Supplemental Hazardous Materials
Technical Memorandum

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RAPIDRIDE ROOSEVELT PROJECT SUPPLEMENTAL HAZARDOUS MATERIALS TECHNICAL MEMORANDUM

Prepared for

Seattle Department of Transportation



Seattle
Department of
Transportation

September 2021

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EXECUTIVE SUMMARY

This technical report presents a hazardous materials study for the RapidRide Roosevelt U District Option being proposed by the Seattle Department of Transportation (SDOT). The RapidRide Roosevelt Project studied in the January 2020 *RapidRide Roosevelt Project Environmental Assessment* ("January 2020 EA") has a southern terminus in Downtown Seattle and a proposed northern terminus at NE 67th St near Sound Transit's Roosevelt Light Rail Station. The U District Option, instead of continuing northward to NE 67th St, has a proposed northern terminus in the University District that would encircle Sound Transit's U District Station, and a southern terminus in Downtown Seattle. Between Downtown Seattle and the University Bridge the U District Option is unchanged from the RapidRide Roosevelt Project as described in the January 2020 EA. The U District Option north of the University Bridge would have different elements to those studied in the January 2020 EA; as such, the preparation of this supplemental technical report is necessary to identify any potentially new hazardous materials impacts associated with the U District Option.

This memorandum provides an overview of hazardous materials impacts associated with the construction and operation of the U District Option near NE 45th St and the U District Link Station. The U District Option is located entirely within existing transportation right-of-way and would not require property acquisition or changes to existing or proposed uses.

One high-risk hazardous material site was identified; this site was also identified as a potential risk site in the *RapidRide Roosevelt Project January 2020 Environmental Assessment* (EA) (SDOT, 2020). Impacts during normal operation are unlikely because most of the RapidRide vehicles would be powered by electricity; the likelihood of impacts (i.e., releases) from operations and maintenance activities would be low.

To avoid or minimize construction-related impacts, the Seattle Department of Transportation (SDOT) would implement best management practices (BMPs) and develop plans to guide the characterization, management, and disposal of contaminated materials. Construction-related BMPs could include minimization of potential impacts on contaminant release and migration using the following strategies:

- Preparing a comprehensive contingency and hazardous substances management plan; a worker health and safety plan; and a spill prevention, control, and countermeasure plan.
- If encountered, managing and disposing of hazardous or contaminated materials in accordance with applicable requirements.
- Preparing a stormwater pollution prevention plan to avoid pollution in stormwater runoff.
- Scheduling specific construction work during the dry season when the groundwater level is low to minimize exposure and handling of potentially contaminated groundwater.

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1. PROJECT OVERVIEW

As shown on Figure 1-1, the U District Option would include all of the RapidRide Roosevelt Project elements south of the University Bridge as presented in the January 2020 EA. The northern turnaround for the U District Option (see inset box on Figure 1-1), would encircle the Sound Transit U District Station along NE 43rd St, 12th Ave NE, NE 45th St, and 15th Ave NE, and would include the following elements north of the University Bridge:

- Up to four new RapidRide stations to support connections to Sound Transit's U District Station and facilitate other transit connections in the vicinity.
- Full-depth concrete paving, protected bicycle lanes (PBLs), and overhead contact system (OCS) along NE 43rd St between Roosevelt Way NE and 12th Ave NE.
- New signal with adaptive signal control technology and/or transit signal priority (TSP) at the Roosevelt Way NE/NE 43rd St intersection.
- Americans with Disabilities Act (ADA)-compliant curb ramp and sidewalk upgrades, signing, and channelization.

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Figure 1-1. U District Option

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2. METHODOLOGY

2.1 Study Area

As was the case for the assessment of hazardous materials in the January 2020 EA (SDOT, 2020), the study area for the identification of potential hazardous material sites for the proposed U District Option includes a 1/8-mile buffer around the corridor (Figure 2-1). The study area was selected because, if contamination is present, being within 1/8 mile of a high-risk site could affect the U District Option. For the hazardous materials assessment, environmental records searches for known and potentially contaminated sites may extend beyond the study area.

2.2 Relevant Regulations, Plans and Policies

Hazardous materials may be classified in several different categories based on laws and regulations that define their characteristics and use. These categories include hazardous waste, hazardous substances, and toxic substances. Although often treated separately from hazardous materials, petroleum products (including crude oil and refined products such as fuels and lubricants), and natural gas are considered in the hazardous materials assessment because they may also pose a potential hazard to human health and the environment, if released.

Applicable laws and regulations include the following:

- Comprehensive Environmental Response Compensation and Liability Act (42 United States Code [U.S.C.] 9601, et seq.)
- Superfund Amendment and Reauthorization Act
- Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.)
- Clean Water Act (33 U.S.C. Section 1 251, et seq.)
- Toxics Substances Control Act (15 U.S.C. 2601-2629)
- Dangerous Waste Regulations (Washington Administrative Code [WAC] 173-303)
- Model Toxics Control Act (MTCA) (WAC 173-340)
- Underground Storage Tanks (USTs) (WAC 173-360)
- Seattle Municipal Code (SMC) 25.05.675(F), Environmental Health

2.3 Analysis Objectives

The hazardous material analysis reviewed the U District Option for the potential to encounter hazardous materials that could pose risks to human health and the environment or that could create control or cleanup requirements. The analysis also considered the potential for the U District Option to introduce new sources of hazardous materials contamination.

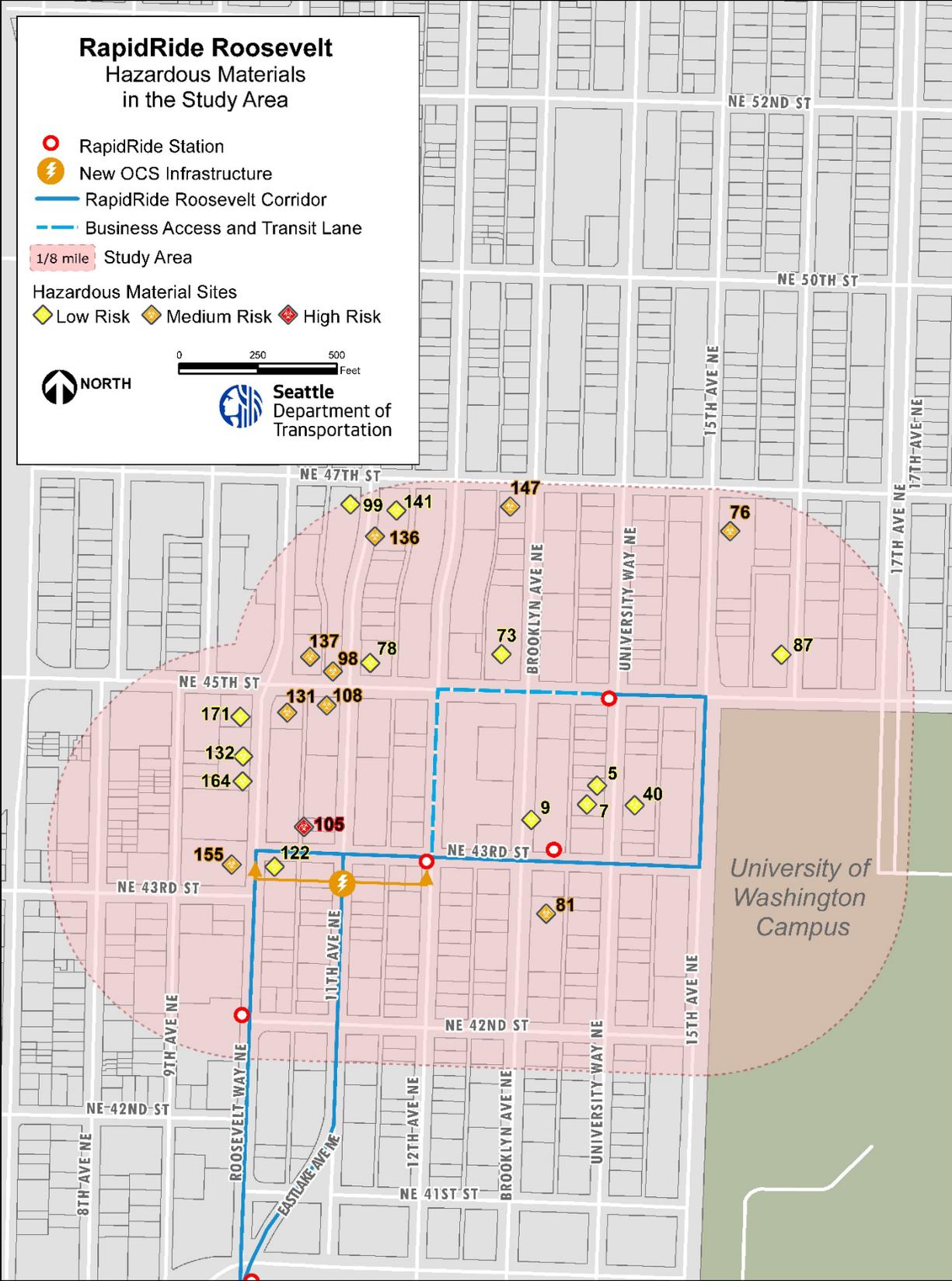


Figure 2-1. Hazardous Materials in the U District Option Study Area

2.4 Data Collection

The U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) maintain databases to track sites with potential or confirmed hazardous material releases to the environment, and they monitor facilities that manage hazardous materials as part of their operations. A search of these databases was generally conducted in accordance with ASTM E1527-13 guidance. For this hazardous materials assessment, site files that are not available online were not reviewed. In addition, no interviews with property owners or tenants were conducted. Using EDR (2020), a data retrieval service, the following databases were searched to identify sites that could affect or be affected by the U District Option:

- Comprehensive Environmental Response, Compensation, and Liability Information System No Further Remedial Action Planned (CERCLIS-NFRAP)
- Confirmed and Suspected Contaminated Sites List (CSCSL)
- Confirmed and Contaminated Sites – No Further Action (CSCSL NFA)
- Voluntary Cleanup Program Sites (VCP)
- Hazardous Sites List (HSL)
- Independent Cleanup Reports (ICR)
- Institutional Control Site List (INST CONTROL)
- Leaking Underground Storage Tanks Site List (LUST)
- Hazardous Waste Manifest Data (MANIFEST)
- Underground Storage Tank Database (UST)

2.5 Hazardous Materials Assessment Approach

For the hazardous materials assessment, sites identified in the database search were prioritized based on potential risk levels to determine the need for avoidance, remediation, and/or mitigation while considering associated costs and liability. For the U District Option, the three risk levels are defined as follows:

- **High.** The high-risk level is assigned to contaminated sites that might create liability for SDOT because of construction activities. High-risk sites include sites that have existing groundwater contamination and are located adjacent to the areas within the right-of-way proposed for utility relocation or repairs, where deeper excavation may be expected.
- **Medium.** Medium-risk sites include sites located within the study area that have existing contamination and have not received a No Further Action determination but are not likely to have an effect on the U District Option because of their location (for example, down gradient from the alignment).
- **Low.** This risk level applies to sites within the study area where there has been no documented release to the environment, and which therefore are not expected to have

noticeable effects on or because of the U District Option. Low-risk sites could also include sites that are located within the study area that have undergone remedial cleanup and have received a No Further Action determination from regulatory agencies such as Ecology.

3. AFFECTED ENVIRONMENT

3.1 Physical Environment

This section discusses the environmental conditions that could influence hazardous materials in the U District Option study area.

3.1.1 Topography

The topography of the U District Option study area ranges between 160 and 200 feet above sea level (USGS, 2014) with a gentle downward slope towards the south southwest down to Portage Bay, the nearest water body approximately $\frac{3}{4}$ mile to the south.

3.1.2 Geology

According to the Geological Map of Seattle, the U District Option study area lies within the Puget Lowland which is bounded by the Cascade Mountains to the east and the Olympic Mountains to the west (Troost et al., 2005). The study area is underlain primarily by glacial recessional outwash and till deposits. Outwash deposits typically consist of stratified sand or sand and gravel with variable amounts of silt and cobbles. They typically exhibit high permeability and are susceptible to erosion especially when exposed on steep slopes.

3.1.3 Hydrogeologic Conditions

Hydrogeological conditions in the study area are influenced by the steep topography of the region. Groundwater depth and flow in the area generally follow local topography. Often, groundwater in the area may be perched above impermeable layers, at relatively shallow depths. In the U District Option study area, groundwater was encountered in the advance outwash or pre-Vashon sand and gravel at elevations from 190 to 130 feet (Sound Transit, 2006). A survey of the soil boring logs available in the Washington Geologic Information Portal maintained by the Washington State Department of Natural Resources (DNR) suggests depths to water in the U District Option study area range between 10 to 35 feet (DNR, 2018).

3.2 Agency Database Review

This hazardous materials assessment included a review of applicable regulatory agency documents and lists of known or potentially hazardous waste sites or landfills, as well as properties or facilities currently under investigation for potential environmental violations.

A total of 23 hazardous material sites were identified in the study area (see Table 1). Of these, 13 are considered low-risk, 9 are considered medium-risk, and 1 is considered as high-risk. Additional information about the sites can be found on Ecology's web page developed for each site (links provided in Table 1, located in Appendix A of this report). The locations of the hazardous material sites with respect to the U District Option are identified on Figure 2-1.

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4. ENVIRONMENTAL CONSEQUENCES

4.1 Impacts During Operation

Impacts during normal operation are unlikely because most of the RapidRide vehicles would be powered by electricity. Fuel spills could occur when diesel buses are in use. Minor impacts during operation could result from using hazardous materials during maintenance activities; however, the likelihood of impacts (i.e., releases) from operations and maintenance activities would be low.

4.2 Impacts During Construction

Potential impacts during excavation activities could result from encountering existing soil or groundwater contamination and containers holding hazardous materials associated with high-risk sites. Soil or groundwater contamination could be found on or adjacent to contaminated sites and in utility corridors, which can be conduits for underground contamination.

Because the U District Option would be constructed mainly within existing right-of-way in areas that have been previously disturbed, encountering hazardous materials containers (such as underground storage tanks) is not likely. Deeper excavation up to 30 feet for utilities relocation has not been identified as part of the U District Option but could be required.

Based on a review of geotechnical bores in the U District Option study area, groundwater depths in the corridor range from 10 to 35 feet and fluctuate seasonally (DNR, 2018). Groundwater would be deeper during the dry summer season. Groundwater is not likely to be encountered during most of the proposed work because of the anticipated maximum depth of construction of 5 feet in most of the U District Option study area. Contaminated groundwater could be encountered during excavation activities related to the installation of OCS poles.

The only identified high-risk hazardous material site in the U District Option study area is the Stoughton Estate Property (EDR Map ID 105) located at 4307 11th Ave NE (see Figure 2-1). Soil samples collected at the Stoughton Estate property in 2001 showed diesel-ranged petroleum products at levels above the MTCA Method A cleanup levels. Groundwater at the site is also suspected to be contaminated (Ecology, 2020). The source of contamination is suspected to have originated from a leaking heating oil tank. No cleanup has been conducted to date (Ecology, 2014). Because this site is located adjacent north of NE 43rd St where OCS poles may be installed between 10 and 15 feet below the surface, there is potential to encounter contaminated groundwater. It should be noted that this site was previously listed as a high-risk site in the January 2020 EA (SDOT, 2020).

A variety of impacts, both beneficial and adverse, would be possible, including the following:

- Construction activities (such as grading) near these materials could release contaminants to soil, groundwater, and surface water.
- Contaminated materials might be uncovered, allowing more direct exposure to the public.
- Contamination might spread as a result of construction.
- Contamination that otherwise would remain in place and potentially migrate might be discovered and addressed.

Potential construction impacts could result from accidental release of hazardous substances (such as lubricants and fuels needed for heavy equipment), a hazard common to all construction projects. Spills of any size, if not contained, could require emergency response.

4.3 Indirect and Cumulative Impacts

No indirect or cumulative hazardous materials impacts have been identified for the operation or construction of the U District Option.

5. MITIGATION MEASURES

To avoid or minimize construction-related impacts, SDOT would implement best management practices (BMPs) and develop plans to guide the characterization, management, and disposal of contaminated materials. Construction-related BMPs could include minimization of potential impacts on contaminant release and migration.

Potential impacts on contaminant release and migration would be minimized to the extent possible using the following strategies:

- Preparing a comprehensive contingency and hazardous substances management plan; a worker health and safety plan; and a spill prevention, control, and countermeasure plan.
- If encountered, managing and disposing of hazardous or contaminated materials in accordance with applicable requirements.
- Preparing a stormwater pollution prevention plan to avoid pollution in stormwater runoff.
- Scheduling specific construction work during the dry season when the groundwater level is low to minimize exposure and handling of potentially contaminated groundwater.

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6. REFERENCES

EDR. 2020. The EDR Radius Map Report with GeoCheck, RapidRide Roosevelt. Inquiry Number 6303295.2s. December 16.

Seattle Department of Transportation (SDOT). 2020. RapidRide Roosevelt Project Environmental Assessment. January.

Seattle Department of Transportation (SDOT). 2021. RapidRide Roosevelt Project Supplemental Environmental Assessment.

Sound Transit, 2006. *North Link Light Rail Transit Project, Final Supplemental Environmental Impact Statement*. March. <https://www.soundtransit.org/Projects-and-Plans/Northgate-Link-Extension/Northgate-Link-Extension-document-archive/Northgate-Link-Extension-documents/Northgate-Link-document-collections/North-Link-Final-Supplemental-Environmental-Impact-Statement-SEIS>

Troost, K.G., Booth, D.B, Wisher, A.P. and Shimel, S.A. 2005. The Geologic Map of Seattle – A Progress Report, U.S. Geological Survey Open-File Report 2005-1252, U.S. Geological Survey, Washington, D.C.

Washington State Department of Ecology (Ecology). 2014. Stoughton Estate Property Site Hazard Assessment. February 1.

Washington State Department of Ecology (Ecology). 2020. Cleanup Site Details, Cleanup Site ID 376. Stoughton Estate. Ecology Toxics Cleanup Site Database Accessed on December 18.

Washington State Department of Natural Resources (DNR). 2018. Geologic Information Portal, Accessed on May 3, 2018. <https://geologyportal.dnr.wa.gov/>.

U.S. Geological Survey (USGS). 2014. 7.5-minute Topographic Map. 6005541 Seattle North Quadrangle, WA.

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Appendix A
Hazardous Materials Sites in the U
District Option Study Area

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TABLE 1. Hazardous Materials Sites in the U District Option Study Area

EDR MAP ID	SITE NAME	ADDRESS	REGULATORY AGENCY DATABASE LISTING	RISK Ranking	Site Status	ECOLOGY LINK
105	STOUGHTON ESTATE PROPERTY	4307 11TH AVE NE	HSL,CSCSL,ALLSITES,FINDS	HIGH	Awaiting Cleanup	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=376
76	UNIVERSITY PRESBYTERIAN CHURCH	4540 15TH AVE NE	CSCSL,LUST,UST,ALLSITES	MEDIUM	Awaiting Cleanup	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=8083
98	UW SURFACE LOT 1	4513-4557 11TH AVE NE	CSCSL,ALLSITES	MEDIUM	Awaiting Cleanup	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=12374
136	UNIVERSITY DISTRICT PCE PLUME	11TH AVE NE S OF NE 47TH ST	CSCSL,ALLSITES,DRYCLEANERS	MEDIUM	Awaiting Cleanup	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=12030
137	SOUND TRANSIT BROOKLYN STATION AREA	1000 NE 45TH ST	CSCSL,ALLSITES,MANIFEST,UIC, RCRA NONGEN / NLR,LUST,UST,VCP	MEDIUM	Cleanup Started	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=12019
147	BP BROOKLYN/ UNIVERSITY SEAFOOD POULTRY	4557 BROOKLYN AVE NE	VCP,EDR HIST AUTO,CSCSL,LUST,UST,ALLSITES,RCRA NONGEN / NLR,FINDS,ECHO,FINANCIAL ASSURANCE,ICR	MEDIUM	Cleanup Started	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=7601
81	UNIVERSITY MANOR PARKING GARAGE	4236 BROOKLYN AVE NE	PTAP,CSCSL,LUST,UST,ALLSITES	MEDIUM	Cleanup Started	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=11193
108	SHELL 120441/SHELL #45475/TEXACO #63 232 0389	1013 NE 45TH ST	CSCSL,ICR,ALLSITES,SPILLS,FINANCIAL ASSURANCE,LUST,UST,VCP,EDR HIST AUTO,ECHO,RCRA NONGEN / NLR,FINDS,MANIFEST	MEDIUM	Cleanup Started	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=6211
131	SIRES 86 RETAIL CENTER	4336 ROOSEVELT WAY NE	CSCSL,LUST,UST,ALLSITES	MEDIUM	Awaiting Cleanup	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=11575
155	TRINITY 43RD AVE LLC	4301 ROOSEVELT WAY NE	CSCSL,ALLSITES,VCP	MEDIUM	Cleanup started	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=4255
73	MEANY TOWER HOTEL	4507 BROOKLYN AVE NE	INST CONTROL,ALLSITES,CSCSL NFA,ASBESTOS,VCP,ICR	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=2321
7	CVS PHARMACY 10957	4313 UNIVERSITY WAY NE	ALLSITES, RCRA-LQG, MANIFEST, FINDS,ECHO	LOW	No Documented Release	
9	SAFECO INSURANCE CO HOME OFFICE	4333 BROOKLYN AVE NE	ALLSITES,RCRA NONGEN / NLR,FINDS,ECHO,ASBESTOS,MANIFEST	LOW	No Documented Release	
40	ALLEY DRUM/VERIZON WIRELESS U DISTRICT (UNIVERSITY)	4326 UNIVERSITY WAY NE	ALLSITES,RCRA NONGEN / NLR,FINDS,ECHO,ASBESTOS,MANIFEST	LOW	No Documented Release	
78	BLUME CO NE 45TH BLDG	1100 NE 45TH ST	VCP,ALLSITES,CSCSL NFA	LOW	Remediated	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=4671
5	TOWER RECORDS BUILDING	4321 UNIVERSITY WAY NE	FINDS,VCP,ALLSITES,CSCSL NFA,RGA LUST,RGA HWS,RGA LUST	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=1667
87	UNIVERSITY CONGREGATIONAL CHURCH	4515 16TH AVE NE	ALLSITES,CSCSL NFA,ASBESTOS	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=1916
99	SEATTLE TEMP FS 17 HOT	4513-4557 11TH AVE NE	CSCSL NFA	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=12564
122	UNIVERSITY FORD NISSAN	4242 ROOSEVELT WAY NE	LUST,UST,EDR HIST AUTO,ALLSITES,CSCSL NFA,FINDS,ALLSITES,CSCSL NFA,FINDS,EDR HIST AUTO,ICR	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=11131
132	ROOSEVELT CREST APTS	4343 & 4349 ROOSEVELT WAY NE	ALLSITES,CSCSL NFA,RCRA NONGEN / NLR,FINDS,ECHO	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=2462
141	AVALON UNIVERSITY DISTRICT	4550 11TH AVE NE	VCP,ALLSITES,CSCSL NFA	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=12970
164	ROOSEVELT CREST APARTMENTS/ROGER TOWING/OSBORNE RADIO/LOUGHEAD WM	4349 ROOSEVELT WAY NE	ICR,ALLSITES,CSCSL NFA/LUST,UST,EDR HIST AUTO,RCRA NONGEN / NLR,FINDS,ECHO	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=10363
171	STADIUM MARKET	4359 ROOSEVELT WAY NE	LUST,UST,VCP,RCRA NONGEN / NLR,FINDS,ECHO,EDR HIST AUTO,ICR,ALLSITES,CSCSL NFA,FINANCIAL ASSURANCE	LOW	No Further Action	https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=5780

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