HAZARDOUS MATERIALS TECHNICAL MEMORANDUM

Summary

The purpose of this technical memorandum is to identify sites of concern with potential hazardous materials in the Interstate 405 (I-405), Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) area. Identifying sites of concern with potential hazardous materials prior to construction is important, because it decreases the possibility of exposing the public and the environment to these substances. Further, this information can minimize liability to the Washington State Department of Transportation (WSDOT) with respect to cleanup costs and environmental effects.

Hazardous materials include any material that may pose a threat to human health and the environment because of its quantity, concentration, or physical or chemical characteristics. Identifying and evaluating possible effects during project planning allows WSDOT to identify measures that avoid or reduce environmental effects. Such measures may include changes in alignment, identifying areas that require supplemental investigation before right-of-way acquisition, and measures to contain or reduce exposure of hazardous materials.

The project area is defined as the potential area of impact. The project area contains 31 sites of concern with the potential for hazardous material effects, as identified in Exhibit 1. The sites of concern include known and suspected current and historic contaminated sites, sites that have underground storage tanks (USTs), and sites that have leaking underground storage tanks (LUSTs).

This technical memorandum identifies hazardous material sites both in and adjacent to the project area and right-of-way. Identifying and evaluating possible effects during project planning allows WSDOT to identify mitigation measures. Possible measures include changes in alignment (avoidance), identifying areas requiring additional investigation before right-of-way acquisition, protective measures, and measures that reduce environmental liability and associated costs.

The hazardous material contamination that could potentially be encountered at the sites of concern during project construction primarily consists of petroleum-contaminated soil and groundwater. Other contaminants, such as metals and volatile and semivolatile organic compounds, also could potentially be encountered. Contaminants may be released to the environment by ground-disturbing or dewatering activities during project construction. Human health and the environment could potentially be affected if contamination is not managed properly and in accordance with existing regulations. However, WSDOT will follow all appropriate local, state and federal rules and regulations that will mitigate the affects of hazardous materials. Further investigation is recommended for any parcels identified in this memorandum that are to be acquired for this project.

Project Description

WSDOT is proposing to construct the I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2), referred to as the Tukwila to Renton Project, to relieve congestion. Relieving congestion will benefit the public by:

- Lowering the number of accidents, thus improving safety.
- Increasing overall speeds through this section of freeway.
- Improving response times for emergency service vehicles using I-405.
- Improving access to and from I-405 and local circulation.

The Tukwila to Renton Project extends approximately four and one-half miles along I-405, from I-5 to SR 169, and approximately two miles along SR 167, from I-405 to SW 43rd Street. The project adds

capacity to both I-405 and SR 167; improves the SR 181 and SR 169 interchanges; reconstructs the SR 167 interchange consisting of general-purpose direct-connector ramp from southbound I-405 to southbound SR 167, HOV direct-connector ramps from northbound SR 167 to northbound I-405 and from southbound I-405 to southbound SR 167, and a split-diamond interchange at Lind Avenue and Talbot Road with connecting frontage roads. These improvements represent the second phase of the I-405 Corridor Program for this portion of I-405. The first phase consists of improvements in the Renton Nickel Improvement Project, which is considered as the baseline condition for the Tukwila to Renton Project.

The analysis in this technical memorandum describes the baseline conditions, how the project may affect those conditions, and what measures will be taken to mitigate effects. To understand what improvements are being proposed as part of this project, the following presents the main features of the Build Alternative followed by a brief explanation of the No Build Alternative.

Build Alternative

The Tukwila to Renton Project improvements from west to east (northbound) along the study area are as follows:

I-405 from I-5 to SR 181 Interchange

- Remove the existing northbound I-405 Tukwila Parkway on-ramp.
- Realign I-405 mainline slightly to the south beginning just west of the existing northbound I-405 Tukwila Parkway on-ramp to the SR 181 interchange.
- Improve the SR 181 interchange:
  - Remove the existing SR 181 on-ramp to northbound I-405.
  - Extend Tukwila Parkway from the intersection with 66th Avenue east over the Green River to SR 181.
  - Construct new northbound I-405 on-ramp from Tukwila Parkway just east of the new crossing over the Green River (replaces the two existing on-ramps).
  - Reconstruct the 66th Avenue S bridge over I-405 on a new alignment to the west and reconstruct the intersections with Southcenter Boulevard and Tukwila Parkway.
  - Reconstruct the off-ramp from northbound I-405 to SR 181.
  - Improve local arterials within the interchange area such as Southcenter Boulevard and Interurban Avenue.
- Reconstruct five bridges and build one new bridge over the Green River.
- Lower the Duwamish-Green River Trail.
- Reconstruct the I-405 structures over SR 181.
- Realign the Interurban Trail.

I-405 from East of SR 181 to SR 167 Interchange

- Realign I-405 to provide a smooth transition onto the new Springbrook Creek/Oakesdale Avenue bridge that was constructed under the Renton Nickel Improvement Project.
- Construct one additional general-purpose lane in each direction on I-405 from SR 181 through SR 167.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along I-405.

- Reconstruct the I-405 structures over the Burlington Northern Santa Fe (BNSF) and Union Pacific railroads.
- Stripe the bridges over Springbrook Creek/Oakesdale Avenue for five lanes in both directions.

SR 167 from I-405 to SW 43rd Street On-ramp

- Construct an auxiliary lane on northbound SR 167 from SW 43rd Street to I-405.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along SR 167.
- Reconstruct SR 167 between SW 27th Street and I-405 to accommodate the reconstructed SR 167 interchange.
- Reconstruct East Valley Road to the west of its current alignment between SW 23rd Street and SW 16th Street to accommodate the reconstructed SR 167 interchange.

I-405 Interchange with SR 167

The interchange improvements affect both freeway to freeway access and local access.

Freeway to Freeway Access

- Construct a general-purpose direct-connector ramp from southbound I-405 to southbound SR 167, replacing the existing loop ramp.
- Reconstruct exterior ramps from northbound I-405 to southbound SR 167 and from northbound SR 167 to northbound I-405, replacing the existing ramps. This project will also add a general-purpose lane to both ramps.
- Construct HOV direct-connector ramps from southbound I-405 to southbound SR 167 and from northbound SR 167 to northbound I-405.
- Maintain existing loop ramp from northbound SR 167 to southbound I-405.

Local Access

Shift local access between I-405 and Renton from SR 167 to the Lind Avenue/Talbot Road split diamond interchange. WSDOT will:

- Construct a new half-diamond interchange at Lind Avenue.
- Construct a new half-diamond interchange at SR 515 (Talbot Road).
- Construct southbound and northbound frontage roads connecting Lind Avenue to Talbot Road.
- Remove exterior ramps to/from SR 167 north of I-405 and loop ramps south of I-405.
- Reconstruct the Lind Avenue bridge over I-405.
- Reconstruct I-405 structures over Talbot Road.
- Improve local street intersections.
- Provide new connection to Grady Way from S Renton Village Place.

I-405 from East of SR 167 Interchange to North of SR 169

- Construct two additional general-purpose lanes in each direction on I-405 from SR 167 through SR 169.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along I-405.
- Reconstruct S 14th Street south of its existing location.

- Cantilever the I-405 structures over Main Avenue.
- Reconstruct three bridges over the Cedar River: southbound and northbound I-405 and a pedestrian bridge.
- Relocate the BNSF railroad bridge over the Cedar River west of its current alignment.
- Close off Houser Way as a cul-de-sac just south of the Cedar River and remove the bridge over the river. Northbound traffic will be rerouted via Bronson Way, which will be striped to accommodate the new traffic pattern. Two options are being considered for northbound traffic between Houser Way and Bronson Way. The first option stripes Mill Avenue as a one-way street to provide two lanes northbound from the intersection of Houser Way and Mill Avenue to Bronson Way. Emergency vehicles will still be allowed to travel southbound on Mill Avenue from 2nd Street to Houser Way. The second option leaves Mill Avenue as a two-way street up to the intersection with 2nd Street where it will be striped for one-way traffic northbound and reconfigures Main Avenue, a one-way street southbound, for two-way traffic. Main Avenue would be widened and striped for two-way traffic to provide access from the south to Bronson Way.
- Reconstruct the two local street accesses to Renton Hill. Two local access points will be maintained by reconstructing the Renton Avenue bridge over I-405 and reconstructing Mill Avenue as a stacked structure that also provides access to Renton Hill. The existing Cedar Avenue bridge will be removed.
- Construct a pedestrian pathway from Renton Hill to City parks and trails.

No Build Alternative

The No Build Alternative assumes that the improvements associated with the Renton Nickel Improvement Project are constructed as does the baseline condition. Only routine activities such as road maintenance, repair, and safety improvements would be expected to take place between 2014 and 2030. This alternative does not include improvements that would increase roadway capacity or reduce congestion beyond baseline conditions. For these reasons, it does not satisfy the project's purpose to reduce congestion on I-405 between I-5 in Tukwila and SR 169 in Renton. The No Build Alternative has been evaluated in this technical memorandum as a comparison for the effects associated with the Build Alternative.

Background

Why are we considering hazardous materials as part of this Environmental Assessment?

Identifying hazardous material sites prior to construction is important to decrease the possibility of exposing the public and the environment to hazardous substances. Hazardous materials include any material that may pose a threat to human health and the environment because of its quantity, concentration, or physical and chemical characteristics. Further, this information can minimize cleanup costs and effects on the environment. The methodology to conduct this analysis is detailed and included as Appendix A.

Baseline Conditions

Are there contaminated sites of concern in the project area?

The project area contains 31 sites of concern with the potential for hazardous material effects as identified in Exhibit 1. The sites of concern include known and suspected current and historic contaminated sites,

sites that have underground storage tanks (USTs), and sites that have leaking underground storage tanks (LUSTs).

For each site of concern identified, the probable contamination was assessed to evaluate whether the site could be "reasonably predictable" or "substantially contaminated" with respect to the presence of hazardous materials. No substantially contaminated sites were identified during this study. See Exhibit 1 for a list of the "reasonably predictable" sites of concern.

What are the properties where hazardous materials are reasonably predictable?

Reasonably predictable sites are sites where recognized environmental conditions are known based on existing data or can be predicted based on site observations, previous experience in similar situations, or by using best professional judgment. These sites are typically small, the contaminants are localized and are relatively non-toxic, and abatement/remediation activities are routine (e.g., asbestos abatement or petroleum hydrocarbon-contaminated soil remediation).

A brief description of each reasonably predictable site is outlined in Exhibit 1. The locations of the properties determined by the I-405 team to be reasonably predictable sites are shown in Exhibits 2 through 10.

Exhibit 1[1]. Summary of Reasonably Predictable Sites

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
1 (79)	The property is located within the project area	Listed as Texaco #632321471 and Texaco, #63-232-0400 (currently vacant property) located at 501 Tukwila Parkway	Six USTs (estimated capacities between 550 gallons and 10,000 gallons) are present on the site based on our review of Washington State Department of Ecology (Ecology) files. Three USTs formerly contained gasoline, one UST formerly contained diesel, one UST formerly contained heating oil and one UST formerly contained waste oil. The USTs are reported as empty and were pumped in April 2004. Petroleum products from a LUST contaminated soil and groundwater at the property. Site cleanup started in 1995 and quarterly groundwater monitoring continues as of May 2005. No additional information was available in the Ecology files. The site apparently is undergoing a SEPA review according to a sign observed during our windshield survey completed in June 2006. Listed on the RCRA-SQG, FINDS, MANIFEST, ICR, LUST, and UST lists. See Exhibit 4 for site location.
2 (80)	East and adjacent to the project area	Tukwila Gull #240 (currently vacant property) located at 15640 West Valley Highway	Three USTs (containing gasoline) were removed from the site in December 1987 based on our review of Ecology files. Petroleum products from a LUST contaminated soil and groundwater at the property. The property is listed as awaiting cleanup since April 1996. An incident occurred in June 1997 when a bulldozer disturbed soil and solvent odors were reported. No other information was available during our Ecology file review. Chemical/oil recovery equipment, several 55-gallon drums and monitoring wells were observed on the property during the windshield survey completed in June 2006. Listed on the LUST and UST lists. See Exhibit 4 for site location.
3 (72)	North and adjacent to the project area	Interior Construction Supply and Charles Moore located at 1520 SW Grady Way	Waste water (water soluble glue) from a sheetrock laminating machine was formerly disposed of at the site based on our review of Ecology files. Regulations for glue disposal were described to the property owner by the Metro Municipality of the Metropolitan Seattle in August 1989. Polyvinyl acetate was released into a storm drain in July 1989. Toluene, acetone, methylene chloride, and xylene were present in soil samples collected north of the site in January 1990. A UST was removed from the property. The UST was installed in December 1964. This site also is listed as a small quantity generator with no violations found. No other information was available during our Ecology file review. Listed on the RCRA-SQG, FINDS, and UST lists. See Exhibit 5 for site location.

[1] The words and acronyms used in this exhibit are set forth and defined in the Acronyms and Abbreviations table and the Glossary list at the end of the memorandum.
[2] The EDR report is a list of databases searched for potential hazardous materials contamination, including selected detailed information from federal and state lists, and maps illustrating the identifiable sites within the indicated search radius. The EDR report is attached as Appendix B.

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
4 (69)	The property is located partially within the project area	Listed as Boeing/Longacres Longacres Race Course/ Boeing/Longacres located at 1621 SW 16th Street	Approximately 40 gallons of mineral oil and polychlorinated biphenyls (PCBs) spilled from a vandalized transformer located on the eastern portion of the site in April 1995 based on our review of Ecology files. The contaminated soil was removed and a final report was submitted to Ecology in June 1995. One gasoline UST and one diesel UST (estimated capacities of 1,000 gallons each) were removed in January 1991 based on our review of Ecology files. The USTs were located near the maintenance building located on the northeast portion of the property. Soil and groundwater were contaminated with petroleum products from a LUST. Soil and groundwater contained total petroleum hydrocarbons (TPH) and/or benzene, toluene, ethylbenzene, and xylene (BTEX) compounds above MTCA cleanup levels. The detectable concentrations of the compounds has decreased during the project monitoring period (between August 1990 and September 1993) and were at concentrations less than MTCA cleanup levels in 1996. Ecology files reported the site cleaned up in October 2002. One waste oil UST (estimated capacity of 500 gallons) located on the eastern portion of the site was removed from the site in 1989 based on our review of Ecology files. Three USTs (estimated capacities of 1,000 gallons each) located southwest of the site were removed in September 1993. The EDR report indicated one UST was also removed in December 1990. However, no information regarding this UST was available in the Ecology files. This site also is listed as a small quantity generator with no violations found. Listed on the ICR, RCRA-SQG, FINDS, MANIFEST, LUST, and UST lists. See Exhibit 5 for site location.
5 (56)	North and adjacent to the project area	Cummins Northwest Inc Renton located at 811 SW Grady Way	One heating oil, one gasoline, one waste oil, and one unidentified UST (estimated capacities between 2,000 and 5,200 gallons) were removed from the site in September 1989. One diesel and one waste oil AST (estimated capacities of 550 gallons) were also installed at the site in October 1989. Soil in the vicinity of a waste oil AST on the northwestern portion of the site and soil in the vicinity of an oil water separator (OWS) on the eastern portion of the site is contaminated by petroleum hydrocarbons based on our review of Ecology files. Petroleum contaminated soil has been removed from the site. However, a limited amount of benzene and gasoline-range hydrocarbons contaminated soil remains in the vicinity of the AST and OWS. Carcinogenic polyaromatic hydrocarbons (CPAHs) were also detected in a groundwater sample at concentrations slightly above MTCA Method A cleanup levels in the vicinity of the AST. Ecology determined the contaminated soil posed no threat to human health or the environment. A NFA was granted for the property in October 2003. This site is also listed as a small quantity generator with no violations found. Listed on the RCRA-SQG, FINDS, UST, CSCSL NFA, and VCP lists. See Exhibit 5 for site location.
6 (No EDR ID)	The property is located within the project area	Shuttle Express located at 800 SW 16th Street	Two ASTs (approximately 300 gallons each) were observed during our windshield survey completed in June 2006. The ASTs were labeled as containing flammable material. Ecology files were not available for this site. See Exhibit 5 for site location.

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
7 (61)	The property is located within the study area	Holmes Electric, Holmes Communications located at 1422 Raymond Avenue SW	Four USTs (estimated capacities between 500 gallons and 4,000 gallons) containing waste oil, gasoline and diesel were removed from the property in 1991. The USTs were installed in December 1964. Two USTs containing waste oil (estimated capacity of 500 gallons) and gasoline (estimated capacity of 12,000 gallons) were also reported as operational at the property. This property is also listed as a small quantity generator with no violations reported. The property was retained based on its location within the study area. No additional information was available in the Ecology files. Listed on the UST, RCRA-SQG, and FINDS lists. See Exhibit 5 for site location.
8 (66)	The property is located within the project area	Seattle Lumber Company located at 500 SW 16th Street	A gasoline UST (estimated capacity of 800 gallons) was removed from the site in October 1991. No additional information was available in the Ecology files. Listed on UST and FINDS lists. See Exhibit 5 for site location.
9 (100)	West and adjacent to the project area	Younker Property located at 3000 East Valley Road	Petroleum contamination was discovered in fill material imported on the site approximately 20 years ago based on our review of Ecology files. Approximately 250 cubic yards of diesel and heavy oil contaminated soil was removed from the northern portion of the site in July 1996. Subsequent soil and groundwater sample analysis indicated all diesel and heavy oil contaminated soil was removed from the northern portion of the site. Ecology received the final of four quarterly groundwater monitoring reports in May 1997. The EDR report indicated the site was granted a NFA status by Ecology; however, we could not verify this information from the Ecology file review. Listed on the CSCSL and ICR list. See Exhibit 6 for site location.
10 (105)	West and adjacent to the project area	Craig Taylor Equipment, Renton located at 3100 East Valley Road	One UST (unidentified contents and capacity) was removed from the site in January 1992. Improper handling of petroleum products and/or equipment led to contamination of soil and groundwater at the property. The property was filled with approximately 4 feet of construction debris and asphalt over the last 10 to 15 years based on our review of Ecology files. The ground surface was also sprayed with oil to limit dust particles. The diesel contaminated soil was removed from the site in June 1993 and April 1994. No petroleum hydrocarbons were detected in groundwater samples collected in April 1994. An interim cleanup report was received by Ecology in November 1995. The property was reportedly granted NFA status by Ecology in September 1996 on the condition that groundwater monitoring continues for five years. Listed on the RCRA-SQG, FINDS, CSCSL NFA, and ICR lists. See Exhibit 6 for site location.

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
11 (106)	West and adjacent to the project area	Kohl Excavation located at 3330 East Valley Road	Six USTs (estimated capacities between 200 gallons and 6,000 gallons) containing diesel, gasoline, and waste oil were removed in March 1991. Petroleum products from a LUST contaminated soil at the site. No groundwater contamination was reported. Cleanup at the site started in July 1991 and continued until November 1991 based on our review of Ecology files. The area around the tanks was overexcavated to eliminate the areas of contamination. Cleanup was in the form of land farming and a water sparging system to reduce total petroleum hydrocarbons and benzene, toluene, ethyl benzene, and xylene (BTEX) contamination in the soil. Analytical results from soil samples collected in November 1991 detected petroleum hydrocarbon at concentrations less than MTCA cleanup levels. The property was reportedly cleaned up on June 1, 1995. Listed on the LUST, UST, and ICR lists. See Exhibit 6, for site location.
12 (106)	West and adjacent to the project area	South End Auto Wrecking Inc. located at 3400 East Valley Road	This property is listed as a small quantity generator with no violations reported. Automotive radiator shop evaporated test tank water is generated on the site based on our review of Ecology files. Radiator test tank waste water may contain high concentrations of heavy metals, solids, oil, and grease. A large amount of salvaged cars were observed on the property during the windshield survey completed in June 2006. Listed on the RCRA-SQG, FINDS and MANIFEST lists. See Exhibit 6 for site location.
13 (106)	West and adjacent to the project area	Wally's Truck Repair and Red & White Construction (NW Landscaping Co.) located at 3412 East Valley Road	Two diesel USTs (estimated capacity of 4,000 gallons each), one heating oil UST (estimated capacity of 2,000 gallons) and one gasoline UST (estimated capacity of 1,000 gallons) were removed from the site in October 1989 based on our review of Ecology files. The City of Renton completed a site inspection; however, no additional information was available in the Ecology files. Listed on the UST and RCRA-SQG lists. See Exhibit 6 for site location.
14 (100)	West and adjacent to the project area	Skyway Towing World Wide Transmission located at 2980 East Valley Highway	A diesel spill (approximately 120 gallons) occurred at the site in 1992 based on our review of Ecology files. On April 27, 1995, the City of Renton reported illegal landfilling of metal shavings, tires, and auto parts at the site. Evidence of oil contamination was also observed along the eastern portion of the site parallel to SR 167. Surficial soil samples were collected and analyzed for heavy oil-range petroleum hydrocarbons and metals in September 1999. Concentrations of metals and heavy oil-range petroleum hydrocarbons were less than MTCA Methods A cleanup levels in all analyzed soil samples. The property was granted a NFA by Ecology in January 2000. Listed on the CSCSL NFA list. See Exhibit 7 for site location.

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
15 (64)	The property is located within the project area	Thrifty Car Rental 16th and Rainer Disposal Co. located at 316 SW 16th Street	One gasoline and two diesel USTs (estimated capacities between 5,000 gallons and 10,000 gallons) were removed from the property in 1996 based on our review of Ecology files. Petroleum products and non-halogenated solvents were reported in soil and groundwater at the property from a LUST in April 1989. Ecology files reported the site cleaned up in September 1995; however, the EDR report also records cleanup started in June 1996. No additional information was available in the Ecology files. An area of distressed vegetation was observed on the northwest and southwest corners of the property during the windshield survey completed in June 2006. Listed on the LUST, UST, and ICR lists. See Exhibit 8 for site location.
16 (63)	The property is located within the project area	Puget Sound Bus and Gary Owen/Lamphere Marine Service Center located at 208 SW 16th Street	Three USTs were removed from the property. The contents, capacities and removal date of the USTs were not reported. The USTs were installed on December 1964. A gasoline station occupied the site from the late 1960s to early 1970s based on our review of Ecology files. The canopy and pump station were removed in 1996. An unidentified quantity of gasoline contaminated soil was encountered and removed from the site in 1996. Further testing and analysis indicated that residual soil and groundwater contamination remained at the site. A bioventing system was installed at the site. Subsequent soil and groundwater analysis indicated that gasoline hydrocarbons and BTEX compounds were not detected in soil and groundwater samples collected at the site. This property entered into the Voluntary Cleanup Program and was reportedly granted a NFA by Ecology in April 2003. Listed on the CSCSL NFA, UST, FINDS, and VCP lists. See Exhibit 8 for site location.
17 (63)	The property is located within the project area	Renton Kia Truck Center and Cascade Coffee Inc. (currently Half Price Pots) located at 234 SW 16th Street	Two gasoline USTs were removed from the property in 1987 based on our review of Ecology files. The USTs were installed on December 1964. This property is also listed as a small quantity generator with no violations reported. No additional information was available in the Ecology files. Listed on the UST, RCRA-SQG, FINDS, and MANIFEST lists. See Exhibit 8 for site location.

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
18 (43,45)	North, east and adjacent to the project area	Sound Renton Ford and Sound Ford located at 750 Rainier Avenue	Three waste oil USTs (estimated capacities of 500 gallons each), one gasoline UST (estimated capacity of 2,000 gallons) and two unidentified USTs (estimated capacities of 500 gallons each) were removed from the property in 1989 based on our review of Ecology files. The USTs were installed in December 1964. Petroleum products were reported in groundwater and soil within the former UST excavation area in July 1989 based on our review of Ecology files. Ecology received the interim cleanup report in October 1989. The property is also a small quantity generator with no reported violations. Ecology files indicate antifreeze, oil and solvents are stored on the site. No additional information was available in the Ecology files. Listed on the RCRA-SQG, FINDS, LUST, UST, ICR, and MANIFEST lists. See Exhibit 8 for site location.
19 (46)	Southwest and adjacent to the project area	Chevron 99114 located at 301 South Grady Way	One waste oil, two gasoline, and three unidentified USTs were removed from the property. Three gasoline USTs were also reported as operational on the property. Unidentified products from a LUST contaminated soil and groundwater at the property. Cleanup was started in April 1991. Ecology files were not available for this site. Listed on the LUST and UST lists. See Exhibit 8 for site location.
20 (41)	North and adjacent to the project area	Puget Power – Sheffield/ Renton Service Center located at 620 South Grady Way	Two USTs (estimated capacities of 10,000 gallons each) were operational at the site in 1998 based on our review of Ecology files. One UST contained diesel and one UST contained gasoline. The USTs were installed in October 1989. A permit to close the USTs was filed in August 1998; however, there is no record the USTs were removed from the site. Petroleum products, polychlorinated biphneyls (PCBs), and PAHs were reportedly released from a UST into soil and groundwater at the property based on our review of Ecology files. Ecology received the final interim cleanup report in February 2000. No additional information was available in the Ecology files. Listed on the ICR and UST lists. See Exhibit 8 for site location.
21 (44)	North and adjacent to the project area	Texaco Station 632320402 and Gull 1201 (currently Renton Village Mall) located at 509 South Grady Way	Four gasoline USTs were removed from the site. The USTs were installed in December 1974. Petroleum products, metals, cyanide and pesticides were reported in soil and groundwater at the property from a LUST. Ecology received the last interim cleanup report in August 2001. The property is also a small quantity generator with no reported violations. Ecology files were not available for this site. Listed on the RCRA-SQG, CSCSL, FINDS, VCP, LUST, UST, and ICR lists. See Exhibit 8 for site location.

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
22 (33)	West and adjacent to the project area	PSE Grady Way Renton Complex Parcels 2 and 3 and Renton Service Center (Puget Western Properties)	Nine USTs (containing diesel, used oil, leaded gasoline, and unleaded gasoline) were reported on the property since 1956. Five USTs were removed, two USTs were closed in place and two USTs were reported as operational as of 1989. Dissolved petroleum hydrocarbons, metals, PCBs, and arsenic were detected at concentrations greater than MTCA cleanup levels in soil and groundwater at the property. The property was granted a NFA status in February 2000. Ecology files were not available for this site. An Initial Site Investigation (ISA) was completed at the Site in December 2006. The ISA recommended soil and groundwater sampling be conducted at the property to evaluate areas of concern identified in the report. The results of the soil and groundwater sampling indicated that CPAH-contaminated soil and arsenic-contaminated groundwater is present at the Site greater than MTCA Method A cleanup levels. Listed on the CSCSL NFA, INST CONTROL, PADS, RCRA-SQG, CSCSL, FINDS, VCP, and UST lists. See Exhibit 9 for site location.
23 (28)	The property is within the project area	Taylors Auto Body Shop located at 330 Main Avenue	Two USTs (estimated capacities of 111 to 1,100 gallons) were closed in place on the property. One UST contained a hazardous substance and the other UST's contents were not identified. Petroleum products were reported in soil from a LUST in October 1990. Ecology received the interim cleanup report in November 1990. The property is also a small quantity generator with no reported violations. Ecology files were not available for this site. Listed on the ICR, RCRA-SQG, FINDS, LUST, UST, and MANIFEST lists. See Exhibit 10 for site location.
24 (23)	East and adjacent of the project area	Moscatel Property located at 233 Main Ave South (address was not verified during our windshield survey)	The soil was contaminated with an unknown product from a LUST. Cleanup was reportedly started and completed in September 1990. A UST (contents and estimated capacity unknown) was reportedly removed the site. Ecology files were not available for this site. Listed on the LUST and UST lists. See Exhibit 10 for site location.
25 (21)	East and adjacent of the project area	City of Renton Fire Department located at 211 Mill Avenue South	Two USTs containing unleaded gasoline and an unknown substance (estimated capacities unknown) were removed from the site. Ecology files were not available for this site. Listed on the UST list. See Exhibit 10 for site location

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
26 (20)	East and adjacent of the project area	Charley's Automotive (currently Jet City Espresso) located at 207 Main Street	Three unleaded gasoline USTs (estimated capacities of 3,000 and 7,000 gallons), one heating oil/waste oil UST (estimated capacity of 550 gallons), and one leaded gasoline UST (estimated capacity of 10,000 gallons) were removed from the property. The soil was contaminated with petroleum products. This site is listed as participating in the voluntary cleanup program (VCP) and was granted NFA in April 2001 after a final independent report was received by Ecology. Listed on the FINDS, VCP, UST, and CSCSL NFA lists. See Exhibit 10 for site location.
27 (20)	The property is within the project area	State Farm located at 1000 2nd Ave South (listed as the DeJong Property in Ecology files).	One waste oil UST (estimated capacity of 750 gallons) was removed from the property in January 1999. Confirmation soil samples were collected and analyzed for diesel- and oil-range hydrocarbons. All soil samples had concentrations of diesel- and oil-range hydrocarbons below current MTCA standards. No groundwater was encountered during the excavation activities. It was determined the soil contamination was removed and that no further excavation was necessary below 8.25 feet. Listed on the UST list. See Exhibit 10 for site location.
28 (18)	The property is within the project area	Bronson Auto Service, (currently MC Complete Auto Service) located 1023 Bronson Way South	This site is listed as a small quantity generator with no violations. Ecology files were not available for this site. Listed on the RCRA-SQG and FINDS lists. See Exhibit 10 for site location.
29 (24)	East and adjacent to the project area	North American Refractories located west of Maple Valley Highway and east of Renton Avenue South	Two gasoline USTs (estimated capacities of 111 to 1,100 gallons) were removed from the property in 1989. The USTs were installed in January 1973. Four ASTs (one containing diesel and three containing fuel oil) were also removed from the property in 1994 based on our review of Ecology files. The soil was impacted with petroleum products from an unknown source in August 2001. Approximately 850 cubic yards of gasoline, diesel, and heavy oil contaminated soil existed near the southeastern portion of the site in the vicinity of the former UST, the former AST area, the former rotary kiln area, and the former oil building based on our review of Ecology files. PCBs, solvents, volatile organics, semivolatile organics, and metals were detected at concentrations less than MTCA cleanup levels in 1993. The EDR report indicated that Ecology received the final cleanup report in August 2001 and the property was granted a NFA in October 2003; however, we were unable to verify the NFA during our review of Ecology files. The property is also a small quantity generator with no reported violations. Listed on the RCRA-SQG, FINDS, UST, CSCSL NFA, VCP, and ICR lists. See Exhibit 10 for site location.

Site ID (EDR Site ID)	Location Relative to the TRIP Project Area	Listed Business and Address Identified by: EDR Report[2] (Windshield Survey)	Site Description
30 (11)	North and adjacent to the project area	Texaco No. 632321451 and Shell Oil Products (currently Big Foot Java and Bronson Mini Mart) located at 1408 Bronson Way North	Residual petroleum contaminated soil was encountered at the base of a UST excavation and along the southern end of two USTs located on the southern portion of the site based on our review of Ecology files. Approximately 380 cubic yards of soil was removed from the site. Analytical results from confirmational soil samples indicated that petroleum hydrocarbons were detected at concentrations less than MTCA Method A cleanup levels. Dissolved petroleum hydrocarbons were detected in one of the City of Renton's production wells in 1987 based on our review of Ecology files. Additional investigations indicated that petroleum hydrocarbons were detected in groundwater and soil from the LUSTs at the site. As a result, interim remedial activities were implemented and compliance monitoring was conducted until the fall of 1989. Compliance monitoring was discontinued after the site was granted a NFA in February 1991. The property owners initiated a voluntary monitoring and sampling program in January 1993. Groundwater results from the September 1993 monitoring event indicated that petroleum hydrocarbons were detected at concentrations greater than MTCA Method A cleanup levels. As a result, a groundwater recovery pump was installed and pumping continued from November 1993 to February 1994 when groundwater sampling results indicated BTEX compounds and gasoline-range petroleum hydrocarbons were detected at concentrations less than MTCA Method A cleanup levels. Ecology files indicate that four gasoline USTs (estimated capacities of 10,000 gallons to 19,999 gallons) were removed from the property in December 2002 and January 2003. The installation date was reported as January 1985. The site was also granted a NFA in August 2003. The property is also a small quantity generator with no reported violations. Listed on UST, ICR, RCRA-SQG, FINDS, CSCSL NFA, VCP, and MANIFEST lists. See Exhibit 10 for site location.
31 (19)	The property is approximately 600 feet south of the project area	Stoneway Concrete/Renton Batch Plant located at 1915 Maple Valley Highway	Six USTs (containing gasoline and diesel) were removed from the site in 1988 and 1989 based on our review of Ecology files. Groundwater and soil were impacted by petroleum products, metals and non-halogenated solvents. A final cleanup report was issued in 2001. No additional information was available in the Ecology files. Listed on the ICR and UST lists. See Exhibit 10 for site location.

Exhibit 2. Project Area with Reasonably Predictable Sites

Note: Site of Concern No. 4 is shown as three parcels because the files reviewed for this project do not clearly identify which of the three parcels owned by Boeing/Longacres is the site of the concern identified in Exhibit 1.

Exhibit 3. Project Overview with Reasonably Predictable Sites, Sheet 1

Exhibit 4. Project Overview with Reasonably Predictable Sites, Sheet 2

Exhibit 5. Project Overview with Reasonably Predictable Sites, Sheet 3

Exhibit 6. Project Overview with Reasonably Predictable Sites, Sheet 4

Exhibit 7. Project Overview with Reasonably Predictable Sites, Sheet 5

Exhibit 8. Project Overview with Reasonably Predictable Sites, Sheet 6

Exhibit 9. Project Overview with Reasonably Predictable Sites, Sheet 7

Exhibit 10. Project Overview with Reasonably Predictable Sites, Sheet 8

Potential Effects

Will the project affect hazardous materials?

Build Alternative

The operation of this project will not affect hazardous materials.

No Build Alternative

The No Build Alternative will not affect hazardous materials.

Will project construction affect hazardous materials?

WSDOT will comply with all applicable environmental rules and regulations, the I-405 Programmatic Commitments, and Record-of-Decision (ROD) during construction of the project. Based on WSDOT's commitment to following these compliance measures, the project's effects on and from hazardous materials will be few, if any. However, despite measures to manage risks associated with hazardous materials, hazardous materials spills could occur and releases of anticipated and unanticipated contaminants could occur during construction. These materials could result in short-term contamination effects to the environment before avoidance actions identified in the I-405 Programmatic Commitments can be taken. As is discussed in further detail below, project construction may affect hazardous materials through spills, during building demolition and utility relocation work, and during trenching, excavation and dewatering activities.

Construction Hazards

A consequence typically encountered during project construction will be the unavoidable release of hazardous substances. For example, hydraulic hoses used on heavy equipment operation may drip hydraulic oil while in use. WSDOT will perform regular inspection and maintenance on machinery to reduce the occurrence of these types of releases; however, unanticipated equipment failure can occur even with the best maintenance program and preventative measures.

Asbestos-Containing Materials/Lead-Based Paint

It is anticipated that structures will need to be demolished for this project. WSDOT will need to acquire 64 properties and partially acquire 91 properties to construct the I-5 to SR 169 – Phase 2 Improvement Project. Eight of the sites identified in Exhibit 1 are identified as requiring relocation and may require demolition of the existing structures. Release of asbestos-containing materials or lead-based paint during the removal of structures could have an effect on human health and the environment. However, WSDOT will conduct lead-based paint and asbestos surveys to determine appropriate handling for debris associated with demolition of any structures. See the Measures to Avoid or Minimize section for additional details regarding measures to avoid or minimize effects and Appendix C for the list of properties that require relocation.

Hazardous Material Sites

Hazardous materials sites have been identified within and adjacent to the project area. The hazardous materials of concern at the sites are petroleum hydrocarbons, volatile and semi-volatile organics, and metals as identified in Exhibit 1. The sites themselves have been cleaned up, are currently being cleaned up, or contain underground storage tanks (USTs), leaking underground storage tanks (LUSTs), or associated tank piping. See Exhibit 1 for additional details.

Construction activities such as trenching, excavation, and dewatering that are performed on or near these sites may disturb or encounter hazardous materials, USTs, LUSTs, and tank piping. Such activities might also disturb or encounter previously unidentified contamination, USTs, LUSTs and piping in the project area. These construction activities could cause the following environmental effects:

- Release of contaminated soil, sediment, surface water, groundwater, and air emissions (including dust and volatile organic compounds) during construction.
- Alteration of contaminated groundwater plume(s) and generation of contaminated water during dewatering activities.
- Creation of preferential pathways for contaminant migration as a result of construction activities, including the creation or alteration of utility trenches.

Utilities

Above-ground electrical utilities that may be relocated might include transformers that contain polychlorinated biphenyls (PCBs). PCBs are persistent, bind strongly to soil particles and can be dispersed long distances in the air. Release of PCBs during the removal of transformers would have an adverse effect on human health and the environment if not responded to appropriately.

What are the indirect effects of the project on hazardous materials?

In addition to project construction effects, an overall beneficial indirect effect to the area will result from the potential cleanup of contaminated properties if discovered during construction by WSDOT.

What are the unavoidable negative effects?

No unavoidable negative effects are anticipated for this project.

Measures to Avoid or Minimize Effects

What will be done to avoid or minimize negative effects from hazardous materials?

WSDOT will follow the I-405 Programmatic Commitments, ROD, and comply with all applicable environmental procedures. WSDOT will manage contaminated media that may be encountered within the project area.

WSDOT will consider entering into pre-purchaser agreement for the purpose of indemnifying WSDOT against acquiring the responsibility for any long-term cleanup and monitoring costs.

WSDOT will notify Ecology and Washington State Patrol in the event of an accidental spill along I-405 and SR 167 during the operational phase. Ecology is the State's Incident Command for emergency spills and as such, responds to spills in highway right-of-way.

The potential to discover unidentified contamination is a risk associated with all construction projects with or without parcel acquisition. If previously unidentified contaminated sites are discovered during construction, WSDOT will follow the SPCC plan and manage construction activities to comply with state and federal environmental regulations.

What are the Policies, Guidance and Laws associated with potential hazardous materials?

The handling of hazardous materials will follow the policies, guidance and laws listed below:

- Clean Air Act (CAA), Chapter 70.94 RCW.
- Clean Air Act (CAA), 42 USC 7401 et seq.
- Clean Water Act (CWA), 33 USC 1251 et seq.
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601 et seq.
- Dangerous Waste Regulation, Chapter 173-303 WAC.
- Federal Highway Administration, Technical Advisory T6640.8A (1987), Supplementary Hazardous Waste Guidance (1997), and Hazardous Wastes in Highway Rights-of-Way (1994).
- Hazardous Waste Management Act, Chapter 70.105 RCW.
- Model Toxics Control Act (MTCA), Chapter 70.105D RCW.
- Occupational Health Standards, WAC 296-62.
- Occupational Safety and Health Act (OSHA), 29 USC 651 et seq.
- Resource Conservation and Recovery Act (RCRA), 42 USC 321 et seq.
- Safe Drinking Water Act, 42 USC 300(f) et seq.
- Small Business Liability Relief and Brownfields Revitalization Act.
- Solid Waste Management Act, Chapter 70.95 RCW.
- Toxic Substances Control Act (TSCA), 15 USC 2601 et seq.
- Underground Storage Tanks (UST), Chapter 90.76 RCW.
- U.S. Department of Transportation, Chapter 49 CFR.
- Washington Industrial Safety and Health Act (WISHA).
- Water Pollution Control Act, Chapter 90.48 RCW.
- WSDOT Environmental Procedures Manual (EPM), Section 447.

What will be done to minimize construction effects?

WSDOT will conduct the following activities to avoid or minimize all effects to human health or the environment:

Known or Suspected Contamination Within the Proposed Project Area

- WSDOT may be responsible for remediating and monitoring contamination found on properties that will be acquired for this project. WSDOT will further evaluate the identified properties before acquisition or construction occurs. Contamination in soils will be evaluated relative to MTCA cleanup levels.
- If WSDOT encounters an unknown UST within the existing right-of-way, WSDOT will assume cleanup liability for the appropriate decommissioning and removal of the UST. If this occurs, WSDOT will follow all applicable rules and regulations associated with UST removal activities.

- WSDOT will meet regulatory conditions imposed at potential contaminated properties, e.g., Consent Decree, associated with construction. These conditions could include ensuring that the surrounding properties and population are not exposed to the contaminants on the site. For example, WSDOT will properly contain the site after construction is completed so contaminants do not migrate off site and the health and safety of all on-site personnel are protected during work at the site.
- WSDOT will meet all appropriate discharge approvals if water affected with hazardous materials is encountered during construction and water needs to be managed.

Known or Suspected Contamination Outside the Project Area

Contaminated groundwater originating from properties located upgradient of the project area could migrate to the project area. In general, WSDOT will not incur liability for groundwater contamination that has migrated into the project footprint as long as it does not acquire the source of the contamination. However, WSDOT will manage the contaminated media within the project footprint in accordance with all applicable rules and regulations.

Worker and Public Health and Safety

WSDOT will comply with the following regulations and agreements to minimize the effects of hazardous materials:

- State Dangerous Waste Regulations, Chapter 173-303 WAC.
- Safety Standards for Construction Work, Chapter 296-155 WAC.
- National Emission Standards for Hazardous Air Pollutants (NESHAP), CFR, Title 40, Volume 5, Parts 61 to 71.
- General Occupational Health Standards, Chapter 296-62 WAC.
- Implementing Agreement between Ecology and WSDOT Concerning Hazardous Waste Management, April 1993.

Hazardous Materials Spills during Construction

Unavoidable releases of hazardous materials are hazards on all construction projects, but they are particularly acute for construction over water or where stormwater runs to nearby lakes and rivers. However, we do not anticipate any of these effects on this project because a Spill Prevention, Control and Countermeasures (SPCC) plan is required by a National Pollutant Discharge Elimination System General Construction permit and WSDOT Standard Specification 1-07.15(1). During the development of a SPCC specific sensitive receptors will be identified.

How will the project mitigate unavoidable negative effects?

No specific mitigation measures or unavoidable negative effects are anticipated for this project.