



DETERMINATION OF NONSIGNIFICANCE (DNS)

TITLE OF PROPOSAL: Ballard Siphon Replacement Project

DESCRIPTION OF PROPOSAL: The King County Wastewater Treatment Division proposes to supplement and line the Ballard Siphon. The Ballard Siphon consists of two 36-inch diameter wood stave pipes constructed in 1935. These pipes are buried in the sediment under Salmon Bay in Seattle. The project is needed because of the condition and age of the pipes. A new 7-foot diameter pipe will be placed in a tunnel under the bed of Salmon Bay to supplement the siphon. The tunnel will run between shafts constructed at the existing Ballard Regulator and a parking lot at the intersection of West Commodore Way and 24th Avenue West. In addition, two lining pipes will be inserted (sliplined) into the existing wood-stave pipes. Several structures associated with the three pipes will also be constructed.

LOCATION OF PROPOSAL, INCLUDING STREET ADDRESS, IF ANY: The project will be located in the City of Seattle. The north end of the project is at the site of the existing Ballard Regulator, located at the intersection of Shilshole Avenue NW and 20th Avenue NW (5110 Shilshole Avenue NW). The project will extend southwest from this point, crossing under Salmon Bay to two locations. The new tunnel will terminate at a parking lot at the intersection of West Commodore Way and 24th Avenue West (2329 West Commodore Way). The sliplining of the existing pipes will terminate at a point on the south shore of Salmon Bay that is a short distance north of the intersection of West Commodore Way and 23rd Avenue West.

Responsible Official:

Christie True

Position/Title:

Division Director, King County Wastewater Treatment Division

Address:

201 S. Jackson St., MS KSC-NR-0501
Seattle, WA 98104-3855

Date:

3/14/2008

Signature:

Proponent and Lead Agency:

King County Department of Natural Resources and Parks
Wastewater Treatment Division

Contact Person:

Wesley Sprague, Senior Environmental Planner
King County Wastewater Treatment Division
201 S. Jackson St., MS KSC-NR-0505
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Issue Date:

March 18, 2008

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request. The environmental checklist may be viewed and downloaded at <http://dnr.metrokc.gov/wtd/projects/BallardSiphon/index.htm>.

☒ This DNS is issued under WAC 197-11-340 (2); the lead agency will not act on this proposal for 17 days from the issue date.

Comments must be submitted by April 4, 2008. Submit comments to Erika Peterson, Supervisor Environmental Planning & Community Relations Unit, King County Wastewater Treatment Division, 201 S. Jackson St., MS KSC-NR-0505, Seattle, WA 98104-3855.

☒ The King County Wastewater Treatment Division has submitted permit applications to the U.S. Army Corps of Engineers, the Washington State Department of Ecology and the Washington State Department of Fish and Wildlife; thus there is no administrative appeal to the King County Wastewater Treatment Division, pursuant to RCW 43.21C.075, WAC 197-11-680, KCC 20.44.120 and King County Public Rule 7-4. If you have questions about the procedures for SEPA appeals, please contact Wesley Sprague at (206) 684-1169 or wesley.sprague@kingcounty.gov.

Environmental Checklist
for the
Ballard Siphon Replacement Project

March 2008

Prepared in compliance with the State Environmental Policy Act (SEPA) (RCW 43.21C), the SEPA Rules (WAC 197-11), and Chapter 20.44 King County Code, implementing SEPA in King County procedures.

This information is available in accessible formats upon request at 206-684-1280 (voice) or 711 (TTY).



King County

Department of Natural Resources and Parks

Wastewater Treatment Division

King Street Center, KSC-NR-0505

201 South Jackson Street

Seattle, WA 98104

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

Ballard Siphon Replacement Project

2. Name of applicant:

King County Wastewater Treatment Division

3. Address and phone number of applicant and contact person:

King County Wastewater Treatment Division
201 S. Jackson St., MS KSC-NR-0505
Seattle, WA 98104-3855

CONTACT: Wesley Sprague, Telephone: (206) 684-1169
email: wesley.sprague@kingcounty.gov

4. Date checklist prepared:

March 13, 2008

5. Agency requesting checklist:

King County Wastewater Treatment Division

6. Proposed timing or schedule (including phasing, if applicable):

Project construction is scheduled to begin in mid 2009 and be completed by mid to late 2011.

7. Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal? If yes, explain.

If needed, odor control and chemical injection facilities could be constructed on the south portal site at a later time.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Foundation Investigation, Ballard Regulator. Converse Davis and Associates, Inc., February 20, 1975.

King County Ballard Siphon Area Survey Report. Tetra Tech, March 6, 2006.

Soils and Foundation Investigation for Proposed Building, Marco Main Plant, Seattle, Washington. Letter report, Neil H. Twelker & Associates, Inc., January 11, 1979.

King County Ballard Siphon Area Survey, Survey Report. Tetra Tech, Inc. March 2006.

Basis of Design Report for Ballard Siphon Replacement Project, Seattle, Washington. King County Wastewater Treatment Division, Tetra Tech and Staheli Trenchless Consultants. October 25, 2007; revised January 7, 2008.

Report Phase I Environmental Site Assessment 5106 Shilshole Avenue NW Seattle, Washington. Landau Associates. January 25, 2008

Report Phase II Environmental Site Assessment 5106 Shilshole Avenue NW Seattle, Washington. Landau Associates. January 25, 2008

Draft Report Phase I Environmental Site Assessment 5100 Shilshole Avenue NW Seattle, Washington. Landau Associates. January 29, 2008

Draft Report Phase I Environmental Site Assessment 2331 West Commodore Way, Seattle, Washington. Landau Associates. January 30, 2008

Draft Report Phase II Environmental Site Assessment 2331 West Commodore Way, Seattle, Washington. Landau Associates. January 30, 2008

- 9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

Some applications may be pending for development on the private property near the vault and slipline pulling facilities located at the south end of the existing siphon. This development will not affect the proposed project.

- 10. List any government approvals or permits that will be needed for your proposal, if known.**

State

- Hydraulic Project Approval (HPA)—Washington Department of Fish and Wildlife
- NPDES Construction Stormwater Permit, Coastal Zone Management Certification—Washington Department of Ecology

Local

- Shoreline Substantial Development Permit, Clear and Grade Permit, Building Permit, Street Use Permit, Utility Permit—City of Seattle

- Industrial Waste Discharge Permit for discharge of construction dewatering water to the King County wastewater system—King County

Federal

- United States Army Corps of Engineers Section 10 Permit.
- Endangered Species Act Section 7 Consultation

- 11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description).**

Project Purpose and Background

The purpose of this project is to protect public health and prevent pollution by lining and supplementing the Ballard Siphon, a section of King County's wastewater treatment and conveyance system. An additional benefit of the project will be to increase the capacity of the Ballard Siphon and thereby reduce the number and volume of combined sewer overflows into Salmon Bay and the Lake Washington Ship Canal.

The Ballard Siphon consists of two 36-inch diameter wood stave pipes buried in the sediment under Salmon Bay in Seattle. These pipes were constructed in 1935. The siphon conveys wastewater from northwest Seattle to the wastewater conveyance system south of Salmon Bay. Both ends of the siphon connect to structures on land. At its north end, the siphon connects to the Ballard Regulator, which is a structure that directs wastewater flows from several pipes to the siphon. At its south end, the siphon discharges into an underground concrete structure that directs flows to a 72-inch concrete pipe. This pipe conveys flows south about 450 feet to the North Interceptor, which is located under West Commodore Way. This major interceptor carries wastewater to the West Point Wastewater Treatment Plant.

Sonar and television inspections of the Ballard Siphon have been conducted in the past two years. While these inspections have not revealed any obvious damage to or deterioration of the pipes, they have raised questions about how long some sections of the pipe may last. For this reason and simply due to the age of the pipes (73 years) these pipes need to be lined and supplemented.

Proposed Project

The King County Wastewater Treatment Division proposes to supplement the Ballard Siphon with a separate pipe and to line the existing pipes with new pipes. The separate pipe will be placed in a tunnel deep under the bed of Salmon Bay. The two lining pipes will be inserted into the existing wood-stave pipes. Structures associated with the three pipes will also be constructed. The pipes, structures and their construction are discussed in more detail below.

New Separate Pipe

The separate pipe will be about 7 feet in diameter. It will be placed within an approximately 9 to 12-foot diameter tunnel. The tunnel will be about 2000 feet long. It will be constructed between two vertical shafts that will be sunk on land: one at the north end of the tunnel, next to the Ballard Regulator, and one at the south end at a location south of West Commodore Way. The north shaft will be about 40 feet in diameter and 140 feet deep. The south shaft will be about 70 feet in diameter and 100 feet deep. These depths and the downward slope of the tunnel from the south shaft will place the tunnel well below the bed of Salmon Bay. Consequently no in-water construction will take place. The figures at the end of this checklist show the location and configuration of the project.

A tunnel boring machine (TBM) will bore the tunnel from the south shaft to the north shaft. Tunnel segments will be placed one after the other behind the TBM as it progresses. In this way the tunnel will be complete when the TBM reaches the north shaft. When the boring machine reaches the north shaft it will be disassembled and the pieces will be lifted out of the shaft. The new pipe will be placed in the tunnel and both shafts. From the shafts this pipe will connect to the Ballard Regulator in the north and the North Interceptor in the south. To make the south connection, a short section of pipe (about 130 feet) will be constructed by trenching between the shaft site and the North Interceptor, which runs under West Commodore Way.

The diameter of the south shaft will be larger than that of the north shaft because a larger area is needed inside the TBM launching shaft to assemble and support the boring machine and to remove the material excavated by the machine. As the boring machine progresses, this material will be transported back to the south shaft and then lifted out of the shaft to be trucked away.

Lining Pipes

The two new lining pipes will each be about 30 inches in diameter and will line the full length of both existing pipes. The method by which they will be inserted into the existing pipes is known as “sliplining.” To conduct the sliplining, a pit will be excavated down to the existing pipes next to the Ballard Regulator. Then a segment of the pipes will be removed and sliplining equipment will be placed in the pit. Surface-based equipment on the south end will insert rods through the existing pipes to the pit. The rods will be used to pull the new pipe through the existing pipe. The equipment in the pit will fuse pipe segments together one after the other as the pipe is pulled. One of the existing pipes will be sliplined at a time.

Structures

The new structures will consist of new access and flow regulation structures. An underground addition to the Ballard Regulator will be constructed. This addition will house new flow regulation structures. These structures will control flows to the separate and lined pipes. The addition will occupy about 1000 square feet. A concrete

slab whose upper surface will be at ground level will form the roof of the addition. On the south side, new manholes and a flow regulation structure will be constructed underground at the shaft site to control flows from the separate pipe to the North Interceptor.

For the sliplining, metal tubes and a concrete support structure will be constructed into and on the existing 72-inch pipe to guide the slipline pulling rods. These facilities will be constructed at the north end of the 72-inch pipe next to the existing concrete structure. In addition, a new vault will be constructed to access the 72-inch pipe a few feet further downstream (south) to allow the pipe to be plugged for maintenance and in the event of an emergency.

- 12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The proposal is located in the City of Seattle. The north end of the proposal is at the Ballard Regulator, located at the northeast corner of the intersection of 20th Avenue Northwest and Shilshole Avenue Northwest (5110 Shilshole Ave. NW). The project will extend southwest from this point, crossing under Salmon Bay to two locations. The sliplining will terminate near the south shore of the bay north of the intersection of West Commodore Way and 23rd Avenue West. The tunnel will terminate at the southeast corner of the intersection of West Commodore Way and 24th Avenue West (2329 W Commodore Way). The proposal is located in Township 25 N, Range 3 E, Sections 11 and 14. See attached vicinity and location map, overview map, and detail maps.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (circle one):** ☒ Flat, rolling, hilly, steep slopes, mountainous, other:

- b. What is the steepest slope on the site? (approximate percent slope)?**

The steepest slope on the site is about 6%.

- c. What general types of soils are found on the site? (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

Native soils are Alderwood north of Salmon Bay and Indianola south of Salmon Bay. Artificial fill of varying depths also occurs in parts of the project area. A report on a geotechnical boring made in 1975 at the intersection of 20th Avenue Northwest and Shilshole Avenue Northwest indicates that the soil at this location consists of artificial fill to a depth of up to 20 feet. This fill is mainly sand with some gravel. The soil below 20 feet is glacial till. A report also exists for a geotechnical boring made in 1979 near the shoreline near the south end of the existing Ballard Siphon pipeline. This report indicates that the soil at this location is “loose brown sandy silt with rocks and wood” (artificial fill) to a depth of 8 feet and “a sequence of hard gray silts, silty sands and sand” between 8 and 49 feet.

Geotechnical borings were also conducted for the proposed project. A surficial layer of fill was observed in the upland borings conducted on both sides of Salmon Bay. Below this fill layer different subsurface conditions were found on the two sides of the bay. Near the north shaft location, very dense, silty sand with gravel over hard, silty clay with interbedded sand was generally observed to the maximum depth explored (151.5 ft). At the south shaft location, interbedded silt, clay and sand (very stiff/medium dense to hard/very dense) over very stiff to hard, clay with slickensides and sand-filled fractures was generally observed to the maximum depth explored (179 ft).

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

No such indications are known.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**

About 12,400 cubic yards of fill material will be needed to backfill excavations made for shafts, pipes and structures. Backfill material will be a suitable material such as gravel or controlled density fill. This material will be obtained from local commercial sources.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

Some erosion could occur during excavation and filling for shafts, trenches or structures, but erosion control measures will be used to minimize this potential (see item B.1.h below).

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

Nearly the entire project site will be covered by impervious surfaces. This will only be a slight increase over the existing extent of impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Temporary erosion and sedimentation control measures will be employed throughout project construction. Typical measures that could be used are filter fabric fences, hay bales, covering soil stockpiles and exposed soils, and use of settling tanks or other means to prevent sediment from leaving the site.

Additional Best Management Practices and other measures could include the following:

- Designate personnel to inspect and maintain temporary erosion and sediment control measures;
- Store materials away from surface waters;
- Refuel construction equipment and vehicles away from surface waters whenever practicable;
- Maintain spill containment and clean up material at the construction site;
- Contain equipment, materials and vehicle wash water associated with construction and keep it from draining into surface waters;
- Dispose of spoils at an approved disposal site.
- Use appropriate means to minimize tracking of sediment onto public roadways by construction vehicles;
- Restore disturbed areas by repaving or replanting as soon as practical after construction is completed.

Temporary erosion and sediment control measures will be identified in the project's construction plans and specifications. Appropriate erosion and sediment control measures will be installed prior to clearing, grading or excavation activities.

Vibration generated by construction activities is expected to be minor and not affect nearby structures. However, to protect existing structures, a maximum vibration limit will be specified to ensure that structures are not compromised. Vibration in the immediate area of construction will be monitored during construction to ensure that it does not exceed allowable limits. A pre-construction and post-construction vibration survey will also be used to evaluate construction induced vibration.

The project itself is a measure to minimize potential impacts to Salmon Bay sediments. The existing pipes are aging and thus have the potential to eventually fail and discharge untreated wastewater to Salmon Bay. The proposed project will greatly reduce this potential.

By increasing the capacity of the Ballard Siphon, the project will reduce the number and volume of combined sewer overflows into Salmon Bay and the Lake Washington Ship Canal. This will improve the quality of Salmon Bay sediments.

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile emissions, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**

The proposal will only involve temporary construction-related air emissions. These will include dust generated by construction activities and exhaust from construction equipment. Emissions will consist primarily of soil particles, carbon monoxide and hydrocarbons. Odors could be temporarily emitted where existing sewer pipes or vaults are opened during construction.

A King County Greenhouse Gas Emissions worksheet is attached.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

No.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

During dry weather, construction-related dust emissions from the project will be minimized through dust control measures such as watering construction areas to wet bare soils and cleaning roadways around construction areas.

Construction equipment-related emissions will be reduced by requiring proper maintenance of equipment, using electrically powered equipment where practical, and avoiding prolonged idling of vehicles and equipment.

3. Water

- a. Surface:**

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, or wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

The project will cross under Salmon Bay. Salmon Bay is a freshwater body located between Lake Union and the Government Locks in Seattle. Water from the Cedar River, the Sammamish River and Lake Washington flows through Lake Union, the Lake Washington Ship Canal, Salmon Bay and the locks to Puget Sound.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

Yes, the project will require work within 200 feet of Salmon Bay to excavate shafts and install pipes and structures as described in A.11 above.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No fill or dredge material will be placed in or removed from surface waters or wetlands.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

The project will not require any surface water withdrawals or diversions.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No waste materials will be purposely discharged to surface waters. Small amounts of construction-related materials could be discharged to surface waters (e.g., oils, greases, lubricants, etc. from construction equipment). Construction dewatering water could be discharged to surface waters but if so, it would be monitored and, if necessary, treated to make sure that it met water quality standards.

b. Ground:

- 1) **Will ground water be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

Groundwater will be withdrawn from excavations to allow construction to be carried out in dry conditions. This water will probably be discharged to the storm sewer or sanitary sewer, but could be discharged to surface waters.

It is not possible to accurately predict the quantity of groundwater that could be withdrawn. At times the rate of withdrawal could be on the order of about 500 gallons per minute.

- 2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

Small spills or leaks of motor oil, diesel fuel, hydraulic fluid, lubricants or soil conditioners could occur during construction. See item d. below for measures to minimize the potential for these materials to be discharged into the ground.

c. Water Runoff (including storm water):

- 1) **Describe source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The source of runoff will be storm water, as is currently the case at the site. During construction and operation this runoff will be directed to the local storm water collection system, the sanitary sewer system or Salmon Bay. Salmon Bay flows to Puget Sound through the Government Locks. The storm water collection system conveys storm water to Salmon Bay or the sanitary sewer system. The sanitary sewer system conveys wastewater to the West Point Treatment Plant, which treats the water and discharges it to Puget Sound.

- 2) **Could waste materials enter ground or surface waters? If so, generally describe.**

Runoff from construction sites has the potential to contain small amounts of motor oil, diesel fuel, hydraulic fluid, and other equipment-related

materials, as well as sediment. These substances could enter ground or surface waters. See item d. below for measures to minimize this potential.

d. Proposed measures to reduce or control surface, ground and runoff impacts, if any:

The project will be constructed in accordance with applicable state and local permits, which will specify a range of measures designed to reduce or control potential surface, ground, or runoff water impacts. Potential Best Management Practices and other erosion and sediment control measures are described in item B.1.h. above.

If water is discharged from the project site during construction it will be monitored and, if necessary, treated. Settling tanks and/or other treatment measures will be used if needed to ensure that this water meets water quality standards before it is discharged to the stormwater collection system, the sewer system or surface waters. Contaminants removed during treatment will be properly disposed of. Implementation of applicable measures will be included in project construction contract specifications.

The project itself is a measure to minimize potential impacts to surface waters. The existing pipes are aging and thus have the potential to eventually fail and discharge untreated wastewater to Salmon Bay. The proposed project will greatly reduce this potential.

By increasing the capacity of the Ballard Siphon, the project will reduce the number and volume of combined sewer overflows into Salmon Bay and the Lake Washington Ship Canal. This will improve the quality of these waters.

4. Plants

a. Check or circle types of vegetation found on the site:

- ☐ deciduous tree: alder, maple, aspen, other
- ☐ evergreen tree: fir, cedar, pine, other
- ☒ shrubs
- ☒ grass
- ☐ pasture
- ☐ crop or grain
- ☐ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- ☐ water plants: water lily, eelgrass, milfoil, other
- ☐ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Ornamental shrubs at the Ballard Regulator site and small amounts of grass at that site and other project sites will be removed.

c. List threatened or endangered species known to be on or near the site.

None are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Appropriate landscaping may be planted at the Ballard Regulator site.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: gulls

mammals: deer, bear, elk, beaver, other: rats

fish: bass, salmon, trout, herring, shellfish, other: various game and nongame freshwater native and non-native fish species.

b. List any threatened or endangered species known to be on or near the site.

Chinook Salmon and Steelhead use Salmon Bay during migration. Bull Trout may also occur in the bay.

c. Is the site part of a migration route? If so, explain.

Yes, Salmon Bay is used for migration by salmon and other anadromous fish. The entire Puget Sound area is part of the Pacific Flyway for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:

Best management practices will be used to preserve or enhance wildlife. These and other measures are listed in items B.1.h. and B.3.d above. In addition, the project will comply with conditions of applicable permits, potentially including a state hydraulic project approval (HPA) from the Washington Department of Fish and Wildlife and other regulatory permits and approvals. Through these conditions, applicable regulations will require mitigation of impacts to fish and wildlife resources, including endangered species.

The project itself is a measure to minimize potential impacts to wildlife. The existing pipes are aging and thus have the potential to eventually fail and discharge untreated wastewater to Salmon Bay, thereby adversely affecting fish and other aquatic life. The proposed project will greatly reduce this potential.

By increasing the capacity of the Ballard Siphon, the project will reduce the number and volume of combined sewer overflows into Salmon Bay and the Lake Washington Ship Canal. This will improve the quality of these waters and thereby reduce the adverse impacts of these overflows on fish and other aquatic life.

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, woodstove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

During construction, fossil fuels and electricity will power construction vehicles, equipment and haul trucks. During operation, the project will use fossil fuels for vehicles used by maintenance staff during periodic site visits. The completed project will also use electricity to power flow control equipment, instruments and lighting.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

No.

- c. What kind of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

None.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

Petroleum products, including fossil fuels, lubricants and solvents, will be used during construction. It is possible that spills of these substances could result in health hazards, however the potential for adversely affecting the environmental health of workers and nearby residents is very low.

Some contaminants exist in the soil on the property adjoining the Ballard Regulator. King County recently acquired this property for the project. Contaminants with concentrations that exceed the minimum applicable regulatory cleanup levels are lube oil-range petroleum hydrocarbons, lead, and cPAHs. The contaminants were found in only a few areas and are shallow (i.e., above the groundwater surface). As a result they do not represent area-wide contamination. Due to the lack of impact to groundwater, the impacted soil is not considered to represent a potential threat to human health and the environment under current conditions at the property.

Some contaminants exist in soil and groundwater at the south shaft site. Arsenic was the only substance found in concentrations that exceed the minimum applicable regulatory cleanup level. Arsenic was found in these concentrations at two locations on the site. Based on the findings of the Environmental Site Assessment Phase II investigation and the analytical results from groundwater samples throughout the property, the impact to the groundwater appears to be localized and is not considered to represent area-wide contamination.

Low concentrations of gasoline-range petroleum hydrocarbons and metals were detected above the laboratory reporting limits in several soil samples collected at the south shaft site; however, no results were above applicable regulatory cleanup levels.

1) Describe special emergency services that might be required.

None will be needed.

2) Proposed measures to reduce or control environmental health hazards, if any:

As described in items B.1.h. and B.3.d. above, best management practices and other measures will be used to avoid or contain/control any spills or other releases of hazardous materials during project construction.

The contractor will prepare a health and safety plan as part of the contract for the proposed project. This plan will comply with all applicable health regulations and will detail measures to control environmental health hazards.

Contaminated soil will be removed from the Ballard Regulator site and properly handled and disposed of. Contaminants encountered at other project sites will be also be properly handled and, if necessary, disposed of. Implementation of applicable measures will be included in project construction contract specifications.

The project itself is a measure to reduce a possible environmental health hazard. The existing pipes are aging and thus have the potential to

eventually fail and discharge untreated wastewater to Salmon Bay, which could adversely affecting the health of humans who come into contact with contaminated water or eat contaminated fish. The proposed project will greatly reduce this potential health hazard.

By increasing the capacity of the Ballard Siphon, the project will reduce the number and volume of combined sewer overflows into Salmon Bay and the Lake Washington Ship Canal. This will improve the quality of Salmon Bay, thereby reducing potential health hazards in these waters.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Urban traffic noise exists in the project area, but it will not affect the project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction noise will typically consist of engine noise, reverse gear warning systems, and mechanical and scraping noises associated with the use of heavy construction equipment such as bulldozers, graders, scrapers and loaders. Construction noise levels will vary depending on the specific equipment used for particular activities. Based on previous construction projects, typical noise levels can be expected to range from about 70 to 90 dBA measured at a distance of 50 feet from the source. At the slipline insertion pit, use of a vibratory pile driver in combination with other equipment could temporarily increase noise levels to as much as 97 dBA.

Materials hauling activities and workers' vehicles will add slightly to traffic noise on roads used to access the site during project construction.

Project construction will mainly occur during normal weekday working hours. Weekend or overtime work is expected to occur at times.

The project will have no long-term noise impacts.

3) Proposed measures to reduce or control noise impacts, if any:

Measures to reduce or control noise impacts during construction could include the following:

- Mufflers on all gas powered equipment;

- Provide electricity from the power grid and encourage the use of electric or hydraulic tools whenever practicable;
- Notify residents and businesses near active construction areas of upcoming noisy construction activities;
- 24-hour construction hotline to promptly respond to questions and complaints.
- Noise barriers if needed.

In addition, all construction activities will comply with applicable noise regulations.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The project area is in urban industrial and commercial uses.

b. Has the site been used for agriculture? If so, describe.

No

c. Describe any structures on the site.

King County's Ballard Regulator station is located at the north end of the project. This is a small, one-story concrete building. A one-story wood frame building is located near the Ballard Regulator on property that King County is acquiring for the project. This property is located on the north side of Northwest Dock Place at the corner of that street and Shilshole Avenue Northwest.

The site of the south shaft is currently a private parking lot. The pipe connecting the shaft to the North Interceptor will cross this parking lot and part of Commodore Way.

At the south end of the sliplining operation, the site of the pulling operation is near the shoreline on private property. The only above-ground structure on the site itself is paving. Nearby, the property owner is currently constructing new buildings that will house vessel maintenance and repair facilities and associated activities. Docks extend a short distance out into Salmon Bay near the site.

d. Will any structures be demolished? If so, what?

The wood frame building at the corner of Shilshole Avenue Northwest and Northwest Dock Place (on the north side of Dock Place) will be demolished.

e. What is the current zoning classification of the site?

Zoning at the north end of the site is Industrial General 1 or 2. Zoning at the south end of the site is Industrial General 1.

f. What is the current comprehensive plan designation of the site?

The site's comprehensive plan designation is "industrial area."

g. If applicable, what is the current shoreline master program designation of the site?

Along the northern shore of Salmon Bay the shoreline designation near the project site is Urban Industrial. From a short distance off the north shore of Salmon Bay to the southern shoreline, the shoreline designation is Conservancy Navigation.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

One or two workers will continue to make one or two visits to the site per week.

j. Approximately how many people would the completed project displace?

The project will displace about five people who presently work or have storage on the properties acquired or proposed to be acquired next to the Ballard Regulator.

k. Proposed measures to avoid or reduce displacement impacts, if any:

King County, following Federal and State relocation guidelines, will provide relocation assistance to the displaced people.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

During the permit approval process, the City of Seattle will be consulted to ensure that the proposal is compatible with existing and projected land uses and plans.

9. Housing

- a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

None

- b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

None

- c. **Proposed measures to reduce or control housing impacts, if any:**

None needed.

10. Aesthetics

- a. **What is the tallest height of any proposed structure(s), not including antennae; what is the principal exterior building material(s) proposed?**

New screen walls at the Ballard Regulator site will be the project's tallest structures. The tallest height of these walls will be about 11 feet. The principal exterior building materials will be concrete and wood.

- b. **What views in the immediate vicinity would be altered or blocked?**

None

- c. **Proposed measures to reduce or control aesthetic impacts, if any:**

None needed.

11. Light and Glare

- a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

Project construction will use operational and safety lighting at the beginning and end of work days during seasons of the year when it is dark at those times of day. These types of lighting will also be used during overtime construction work that takes place during hours of darkness.

The completed project will use nighttime security lighting.

- b. **Could light and glare from the finished project be a safety hazard or interfere with views?**

No.

- c. What existing off-site sources of light or glare may affect your proposal?**

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:**

None.

12. Recreation/Tribal Fishing

- a. What designated and informal recreational opportunities are in the immediate vicinity?**

Recreational boating and fishing occur in Salmon Bay. Tribal fishing also takes place in the bay.

- b. Would the proposed project displace any existing recreational uses? If so, describe.**

The project will not displace any recreational or Tribal uses.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

The project itself is a measure to reduce potential impacts on recreational and Tribal fishing. The existing pipes are aging and thus have the potential to eventually fail and discharge untreated wastewater to Salmon Bay. This could adversely affect fish and other aquatic life. The proposed project will greatly reduce this potential. The project will also reduce the adverse effects of combined sewer overflows on fish and other aquatic life by reducing the number of these overflows.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state or local preservation registers known to be on or next to the site? If so, generally describe.**

The Ballard Regulator site abuts, but is not within, the Ballard Avenue Historic District. This district is listed on the National Register of Historic Places and the Washington Heritage Register. It is also a City of Seattle Landmark District. The project is adjacent to the rear of a building in the Historic District and is not visible from the District. The project will not affect this district.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific or cultural importance known to be on or next to the site.**

Aside from the Ballard Avenue Historic District noted above, no such landmarks or evidence are known to be on or next to the site.

- c. Proposed measures to reduce or control impacts, if any:**

Because historic fill and previously undisturbed shoreline soils may be encountered, excavation will be monitored by a professional archaeologist. If artifacts are uncovered during excavation, work will be stopped pending notification of and consultation with the Washington Department of Archaeology and Historic Preservation, the City of Seattle Historic Preservation Program, the King County Historic Preservation Program and, if Native American archaeological resources are encountered, concerned Tribes.

Construction-related vibration is not expected to affect any structures located near project sites. However item B.1.h above identifies measures to protect structures from potential vibration impacts during construction.

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

Streets serving the north end of the site are Shilshole Avenue Northwest, 20th Avenue Northwest and Northwest Dock Place. Streets serving the south end of the site are West Commodore Way and 24th Avenue West.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**

No. On the north end of the project the nearest transit stop is about a quarter mile away. On the south end of the project the nearest transit stop is about a half mile away.

- c. How many parking spaces would the completed project have? How many would the project eliminate?**

The completed project will have space for parking a few more vehicles than the current 2 to 3-vehicle space at the Ballard Regulator and will have 2 or 3 parking spaces at the south shaft site.

On the north end, project construction will temporarily displace about 8 to 12 parking spaces along Shilshole Avenue.

On the south end, the project will temporarily displace up to about 60 parking spaces in the parking lot at the south shaft site. About half of these sites will be permanently eliminated. In addition, project construction will temporarily displace about 15 parking spaces on Commodore Way next to the parking lot.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**

The proposal will not require any new roads or streets. Construction activities on the north end of the project will temporarily occupy the westbound lanes of Shilshole Avenue Northwest at the Ballard Regulator. Pipe installation on the south end will require excavation of a trench across the eastbound lanes into the center of West Commodore Way. After construction is complete, these streets will be repaved in accordance with City of Seattle requirements. All affected streets are public.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

Project construction at the Ballard Regulator site will take place near three railroad tracks that run along the southern edge of Shilshole Avenue Northwest. Construction will temporarily divert Shilshole Avenue Northwest vehicle traffic onto two of the tracks. A local railroad uses the tracks several times per week.

Part of the project will occur near Salmon Bay, which is used for water transportation. Neither construction nor operation of the project will affect water transportation in the bay.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

The completed project will generate one or two vehicle trips per week.

It is estimated that over the course of the approximately two-year construction period, construction could generate a total of about 2700 one-way vehicle trips on the north side of the project and about 9500 one-way vehicle trips on the south side.

- g. Proposed measures to reduce or control transportation impacts, if any:**

Transportation impact mitigation could include the following during construction.

- Use flaggers if necessary to manage traffic during construction

- Develop a traffic control plan describing detour routes, lane closures, sidewalk closures, signage, flagging, hauling routes, etc. for approval by the City of Seattle prior to start of construction.
- To the extent practicable, schedule construction traffic to avoid peak commuter hours. Try to minimize weekday truck traffic during rush hours.
- Require construction vehicles to follow major arterial routes to the maximum extent practicable.
- Work with the railroad company to minimize disruption of rail service along Shilshole Avenue NW.
- Provide on-site parking for construction workers.

15. Public Services

- a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

No

- b. **Proposed measures to reduce or control direct impacts on public services, if any:**

None needed.


16. Utilities

- a. **Circle the utilities currently available at the site:** electricity, natural gas,
water, refuse service, telephone, sanitary sewer, septic system, other.
- b. **Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

The project is a utility project. See description at item A.11 above. Excavation for structures and pipes could require relocation of some utilities.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:  _____

Date Submitted: 3/13/08 _____

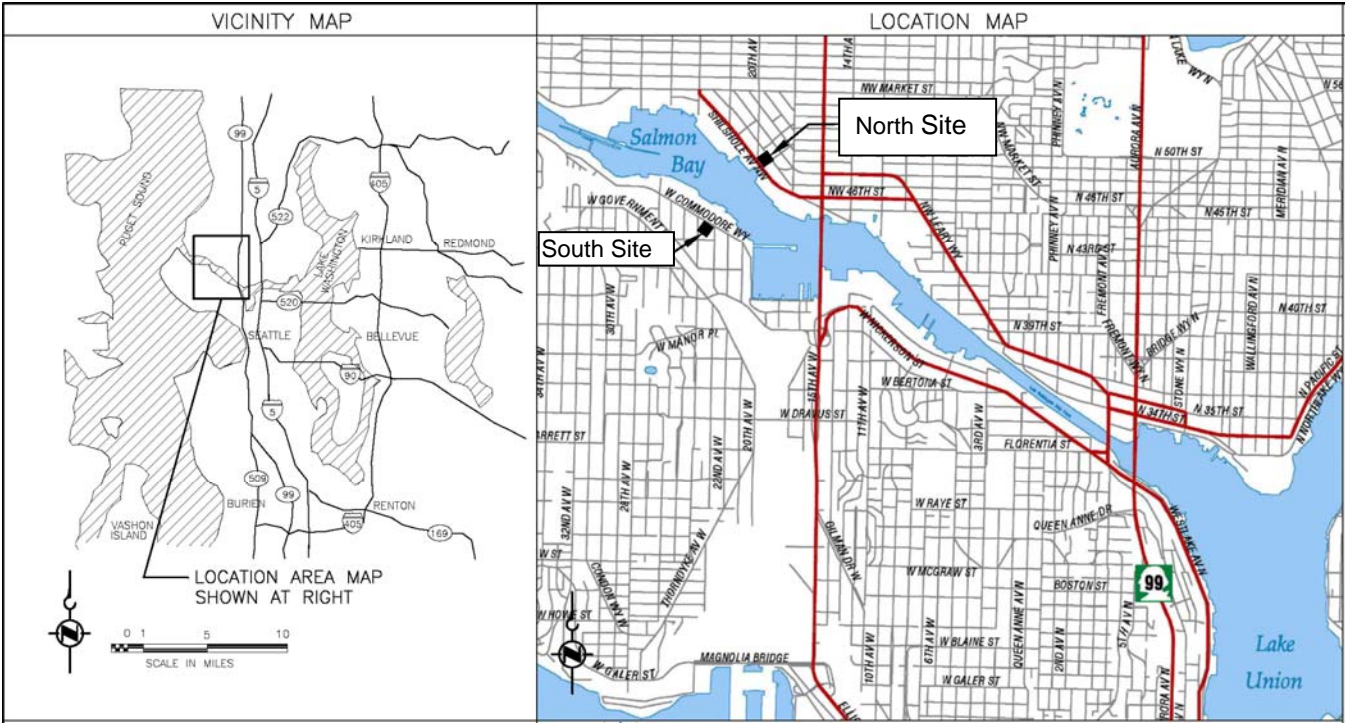


Figure 1. Vicinity and Location Maps

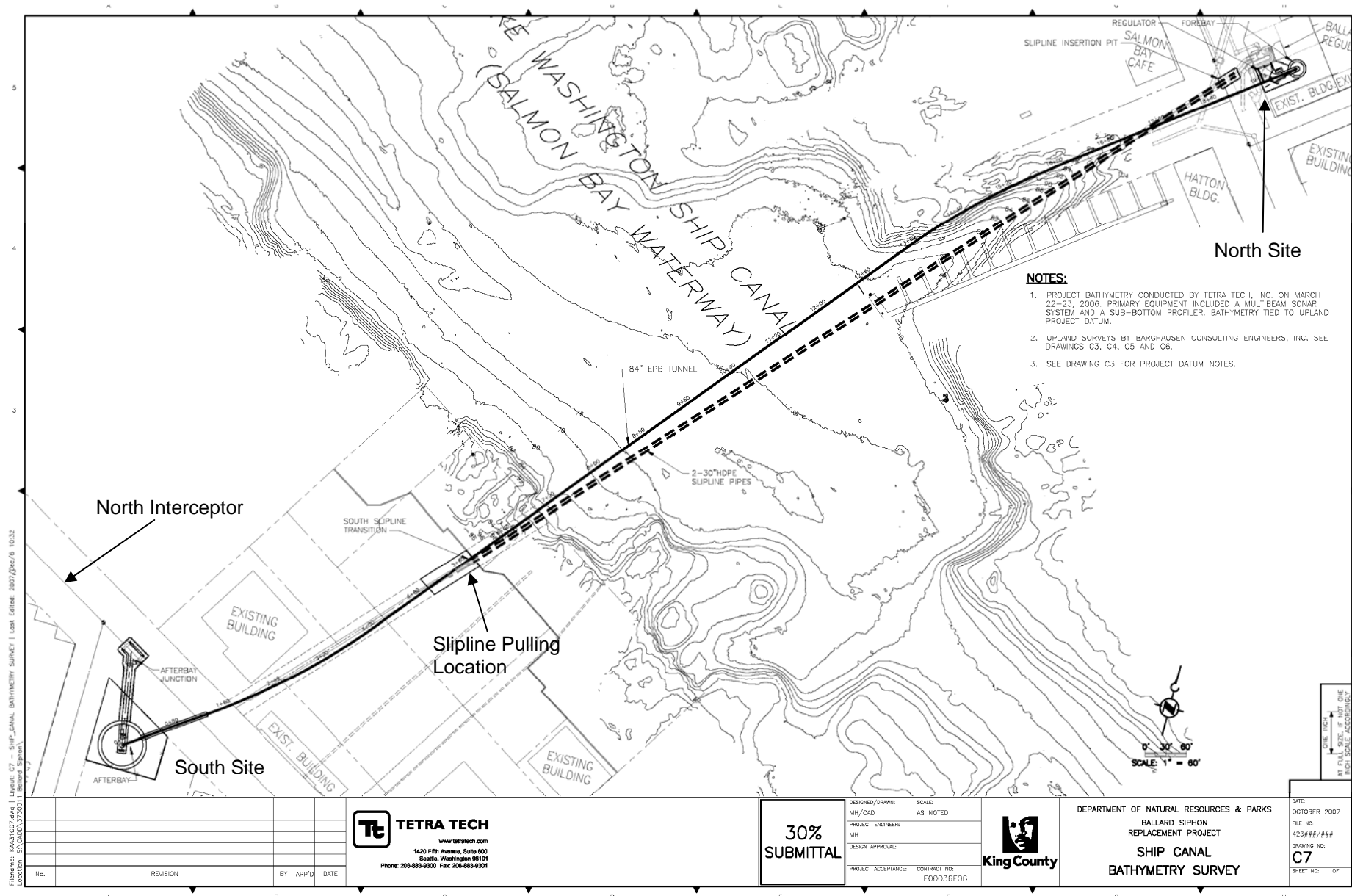


Figure 2. Project Overview

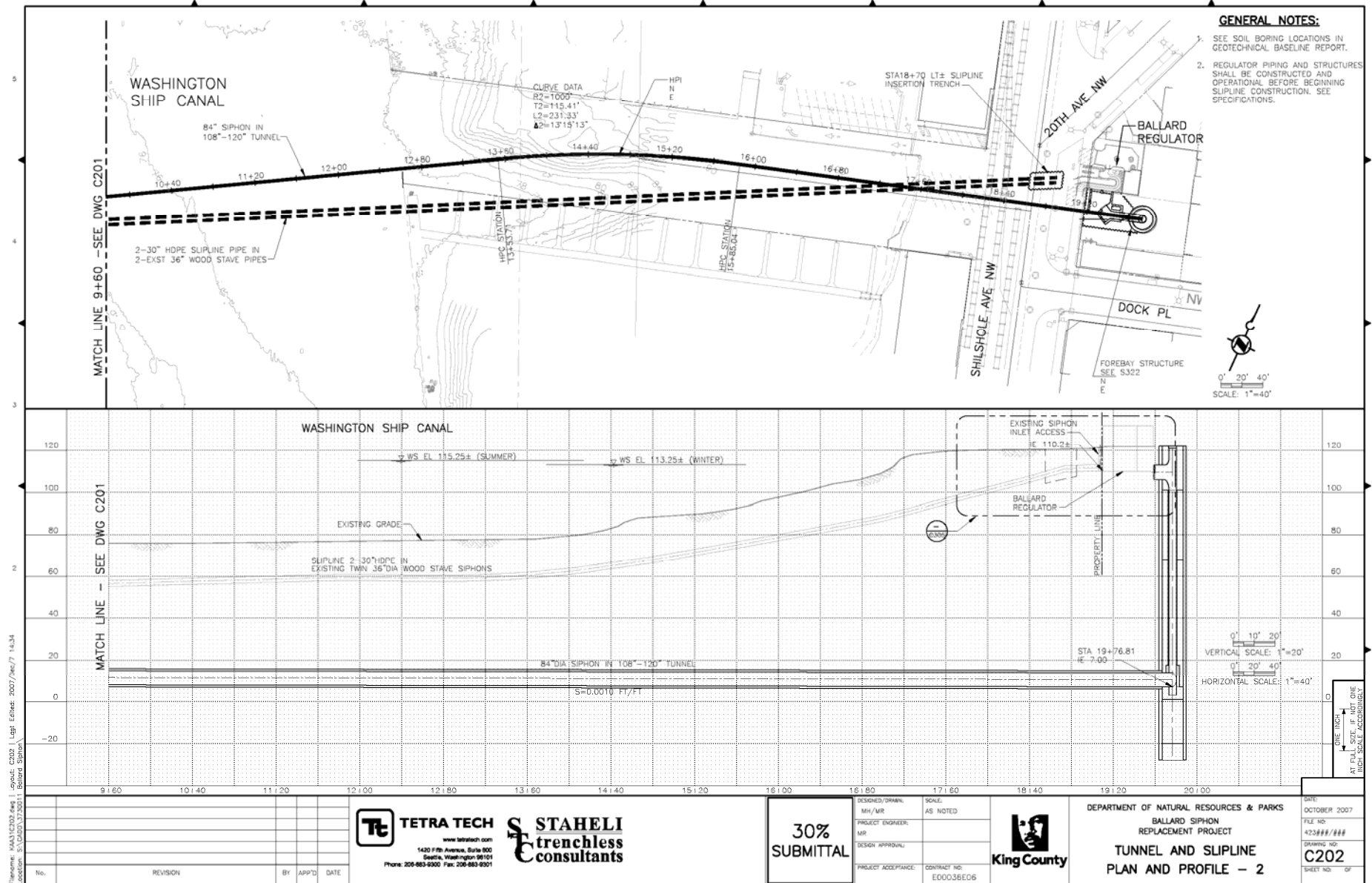


Figure 3. North Site Detail Map

Ballard Siphon Replacement Project SEPA Checklist

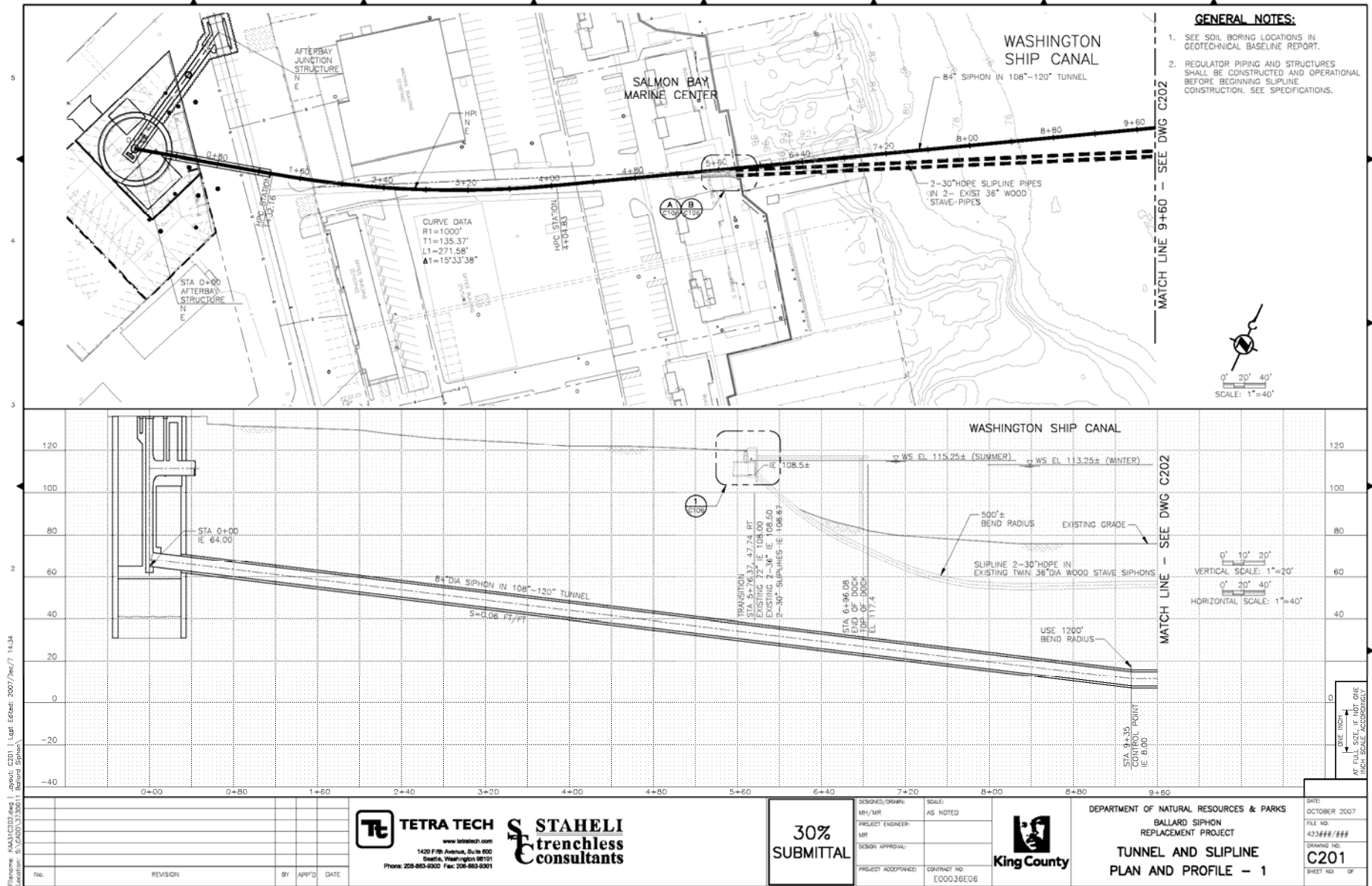


Figure 4. South Site Detail Map

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO ₂ e)			Lifespan Emissions (MTCO ₂ e)
			Embodied	Energy	Transportation	
Single-Family Home.....	0		98	672	792	0
Multi-Family Unit in Large Building	0		33	357	766	0
Multi-Family Unit in Small Building	0		54	681	766	0
Mobile Home.....	0		41	475	709	0
Education		0.0	39	646	361	0
Food Sales		0.0	39	1,541	282	0
Food Service		0.0	39	1,994	561	0
Health Care Inpatient		0.0	39	1,938	582	0
Health Care Outpatient		0.0	39	737	571	0
Lodging		0.0	39	777	117	0
Retail (Other Than Mall).....		0.0	39	577	247	0
Office		0.0	39	723	588	0
Public Assembly		0.0	39	733	150	0
Public Order and Safety		0.0	39	899	374	0
Religious Worship		0.0	39	339	129	0
Service		0.0	39	599	266	0
Warehouse and Storage		0.0	39	352	181	0
Other		20.0	39	1,278	257	31484
Vacant		0.0	39	162	47	0

Section II: Pavement.....

Pavement.....		12.00				600
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Total Project Emissions:

32084