



Bus Rapid Transit

I-405 corridor

SEPA Environmental Checklist

September 2020

I-405 Bus Rapid Transit

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Attachment H I-405 BRT Corridor Transportation Technical Report

ACRONYMS AND ABBREVIATIONS

ASL	air space lease
BAT	business access and transit
BMP	best management practice
BRT	bus rapid transit
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CPTED	crime prevention through environmental design
DAHP	Department of Archaeology and Historic Preservation
dBA	A-weighted decibel
DCE	Documented Categorical Exclusion
Ecology	Washington State Department of Ecology
EDNA	Environmental Designations for Noise Abatement
ESA	environmental site assessment
ESO	Environmental Services Office
ETL	express toll lane
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
HGM	hydrogeomorphic
hp	horsepower
KCWD	King County Water District
LOS	level-of-service
LUST	leaking underground storage tanks
MP	mile post
MSAT	Mobile Source Air Toxics
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PHS	Priority Habitat and Species
ppm	parts per million
Project	I-405 Bus Rapid Transit Project
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
SCL	Seattle City Light
SEPA	State Environmental Policy Act
SR	State Route
TCAL	temporary construction air space lease
TIBS	Tukwila International Boulevard light rail station
TMC	Tukwila Municipal Code
TOD	transit-oriented development
TSP	transit signal priority
TVM	ticket vending machine
VMT	vehicle miles traveled
WAC	Washington Administrative Code

WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

PROJECT OVERVIEW

Sound Transit proposes to implement the I-405 Bus Rapid Transit (BRT) Project, providing BRT service for 37 miles between Lynnwood and Burien, along portions of I-5, I-405, State Route (SR) 518, and some local arterial streets. The proposed I-405 BRT project addressed in this SEPA Checklist includes construction and operation of the following components (Figure A-1):

- Burien Transit Center BRT station and roadway improvements
- New Tukwila International Boulevard BRT station and roadway improvements
- New South Renton Transit Center and roadway improvements
- Bellevue Transit Center BRT station and off-site layover
- New Totem Lake/Kingsgate BRT station and new Kingsgate Park-and-Ride garage
- New Brickyard BRT station and roadway improvements
- Lynnwood City Center BRT station and roadway improvements

A variety of bicycle and pedestrian improvements are also associated with some of the parking facilities and station locations. Other elements related to this project have been reviewed in environmental documents prepared by the Washington State Department of Transportation (WSDOT), in partnership with Sound Transit. Construction of all project components is expected to begin in 2022 with BRT service beginning on portions of the line in 2024 and 2025.

Summary of Environmental Elements

As described throughout Section B of the Checklist, the project includes design measures, best management practices (BMPs), and compliance with Sound Transit's policies and requirements. The project is not anticipated to generate significant adverse environmental impacts.

Earth

The project component locations include a range of grades, from flat to steep. The steepest slopes are at the Tukwila International Boulevard BRT Station and Roadway Improvements component (with areas of slopes up to approximately 33 percent) and the Lynnwood City Center Transit Station BRT and Roadway Improvements component (with areas of 15 to 50 percent along the Poplar Way loop ramp). The project corridor includes a wide range of soil types, from deposits of soft organic-rich clayey silt, to dense sand and gravel, and areas of sedimentary rocks. There are no known agricultural lands or soils of long-term commercial significance in the project corridor.

Each project component would include some clearing and grading activities as well as areas of filling and excavation. In most cases the project would increase the percent of the site covered with impervious surfaces; impervious surfaces would be decreased at the South Renton Transit Center site. The project would implement a temporary erosion and sedimentation control plan with BMPs to prevent or minimize erosion and the potential for discharge of silt-laden runoff to nearby bodies of water.

Areas of geologic instability were identified at the Tukwila International Boulevard BRT Station and Roadway Improvements, South Renton Transit Center and Roadway Improvements, and Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage. For the South Renton Transit Center and Roadway Improvements and Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage components, additional geotechnical studies were conducted to identify design measures to address potential liquefiable soils. For the Tukwila International Boulevard BRT Station and Roadway Improvements component, construction procedures would be developed to maintain or enhance slope stability.

Air

Construction-related activities would result in short-term emissions of air pollutants from worker and construction vehicle exhaust; no known off-site sources of emissions or odor would affect the project. If generators are required, the Puget Sound Clean Air Agency (PSCAA) would be consulted for the appropriate permit action. Measures to control dust during construction would also be implemented in compliance with PSCAA and Sound Transit requirements. During project operation, exhaust from buses and from personal vehicles accessing transit facilities would be a source of local air pollutant emissions. However, regionally, the project would increase the number of daily bus trips and reduce vehicle miles traveled.

Water

Surface-water bodies, such as streams and wetlands, were identified in proximity to two locations – near the Tukwila International Boulevard BRT Station and Roadway Improvements and the Brickyard Station and Roadway Improvements components. While construction activities at these locations would occur within 200 feet of surface-water features, no in-water work, temporary or permanent fill of wetlands and streams, or surface-water withdrawals would be required. Further, these project components would not preclude planned fish passage barrier improvements by WSDOT on SR 518 and I-405. At the South Renton Transit Center and Roadway Improvements component, which is located within a mapped 100-year floodplain as well as within the Cedar Valley Sole Source Aquifer, site design would comply with City of Renton's measures specifically aimed at preventing floodplain impacts and protection of the aquifer.

The project would not withdraw groundwater from a well for any purpose and, other than potential stormwater infiltration, would not discharge waste material into the ground. For water runoff, project construction activities would be subject to construction-related stormwater permit requirements of the Clean Water Act's National Pollutant Discharge Elimination System program. For each project component, stormwater management (including drainage patterns, flow control, and treatment) would be designed and implemented consistent with the adopted stormwater management code and manual of the appropriate jurisdiction.

Plants

All of the project components are located in highly developed urban environments; existing plants and trees are primarily limited to street trees and commercial landscaping. Noxious weeds, primarily Himalayan blackberry and knapweed, were observed as occurring at most project components. Except for the Bellevue Transit Center and Off-site Layover component, clearing activities during construction of each project component would remove or alter some existing vegetation. The vegetation to be removed is primarily grasses and shrubs but also includes some trees; no threatened or endangered plant species are known to be on or near

project components. Trees removed within WSDOT right-of-way would be replaced in compliance with WSDOT's *Roadside Policy Manual* (WSDOT 2015). Trees removed within local jurisdictions, such as the City of Kirkland, would be replaced in compliance with local code requirements.

Animals

Wildlife species at all project component locations likely include birds (e.g., American robin, American crow, and common pigeon) and small mammals (e.g., Virginia opossum, eastern cottontail, and eastern gray squirrel) that are well adapted to living in an urban landscape; no fish were observed in streams near the Tukwila International Boulevard BRT Station and Roadway Improvements component. In addition, the project corridor is within the Pacific Flyway, which extends from Alaska to South America, for migrating birds. No listed threatened or endangered species are mapped as occurring on or near any project components. Invasive animal species likely present at each project component include rodents (Old World rats and mice). While impacts to wildlife are not anticipated, prior to construction clearing activities, Sound Transit would perform nest surveys in compliance with the Migratory Bird Treaty Act. Stormwater management measures would also protect waters downstream of project components.

Energy and Natural Resources

Project construction would require the use of energy and fuel. The project is not anticipated to affect the potential use of solar energy by adjacent properties. Specific features to enhance sustainability and maximize energy conservation for the project components would be determined as the design progresses. For long-term operations, all project components would require electricity for lighting and electronic systems. The project is anticipated to increase transit ridership and reduce single-occupancy vehicles in the corridor, which would be expected to reduce petroleum fuel energy consumption.

Environmental Health

Three of the project components (Burien Transit Center and Roadway Improvements, Tukwila International Boulevard BRT Station and Roadway Improvements, and a portion of the South Renton Transit Center and Roadway Improvements) are located in areas mapped by the Washington State Department of Ecology (Ecology) as potentially having arsenic levels in the soil as a result of regional historic contamination from the Tacoma Asarco copper smelter. In addition, on-site contamination is known to exist at the Burien Transit Center and the South Renton Transit Center site. Hazardous materials release sites are located within 0.125 mile from most project components, except for the Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride and the Brickyard Station and Roadway Improvements. There are no transmission pipelines within 0.125 mile of the project components. Prior to and during construction, the project would comply with Ecology's *Tacoma Smelter Plume Model Remedies Guidance* (Ecology 2020c); implement procedures to identify, characterize, manage, handle, store, and dispose of contaminated soil and groundwater; and complete cleanup at the South Renton Transit Center site. This elimination of hazardous or contaminated materials would be a benefit of the project, reducing future potential adverse effects to human health and the environment. After construction, operations at the project components would not include the storage, use, or generation of hazardous materials. Accidental spills that may occur, such as drips from vehicle engines, would be handled with on-site cleanup kits or through Sound Transit's established

program for responding to emergencies at facilities, which includes a spill response contractor on call 24/7.

All of the project components are located in highly developed urban environments, which is reflected in existing noise levels. Construction of the project components would generate temporary and intermittent noise from construction equipment. Construction noise is exempt from local agency noise ordinance noise limits, except at residential land uses during nighttime hours (10 p.m. to 7 a.m.) on weekdays and weekends. If construction is performed during nighttime hours, the contractor must meet the noise-level requirements or obtain a noise variance from the governing jurisdiction. In the long-term, noise levels from transit operations at each of the project components is expected to be below existing noise levels. For proposed BRT stations located within the SR 518 and I-405 roadways, Sound Transit's design would provide passengers with noise shielding as appropriate.

Land and Shoreline Use

Except for the South Renton Transit Center, all of the project components are on land currently used for transportation; these land uses would not change. Further, no agricultural or forest land would be converted and none of the project components are located within a designated shoreline management zone. The land at the South Renton Transit Center has been, and still is, in commercial use. Sound Transit is in the process of completing the purchase of this site, which would convert these approximately 8.3 acres of land from commercial to transportation use and require the demolition of the existing on-site structures. Consistent with agency policy, Sound Transit is in the process of relocating the three existing businesses currently operating at the South Renton Transit Center site; all three business relocations would be complete prior to the start of project construction.

The project components are consistent with the existing and projected land uses, as identified in local jurisdictions' comprehensive plans and zoning designations. All project components are planned to comply with the development standards of each jurisdiction's zoning code (including critical areas, setbacks, height, landscaping, and other dimensional standards). If compliance is not possible, Sound Transit would coordinate with the local jurisdictions, such as to seek variances or development agreements. The project components would not displace any existing residences and would not result in people residing or working at them. Sound Transit maintenance and security staff would conduct regular visits, and bus drivers would stay with their vehicles during layovers at transit centers. Once the project is constructed, land uses adjacent to all of the project components would benefit from access to the BRT service that would provide increased regional mobility and improved transit speed and reliability.

Housing

The project would not provide or eliminate any housing units.

Aesthetics

At each BRT station the tallest feature would be the station pylon/column, which would be approximately 17 feet tall. Station shelters, where proposed, would be approximately 11 feet tall. The park-and-ride garages at the South Renton Transit Center and Kingsgate Park-and-Ride Garage are both proposed to be five-stories, approximately 55 to 60 feet tall.

At all but one location, the project components are expected to be compatible with the existing visual character and are not expected to result in a change in the physical characteristics that would be inconsistent with the existing environment. The addition of a 5-story park-and-ride garage structure in the southern portion of the existing Kingsgate Park-and-Ride lot would contrast in scale and form with existing residential structures along the site's southern boundary. To address this, landscape enhancements would be provided along the southern boundary of the site between the park-and-ride garage and the residences to provide additional visual screening and help to maintain natural visual elements. During construction aesthetic impacts would be minimized by limiting the clearing of vegetation and trees, screening views of construction equipment from pedestrians and residential areas as practical, and restoring disturbed areas after completion of work.

Light and Glare

For all project components, potential construction during evening/nighttime hours would require lighting. Lights used for nighttime construction would be shielded and directed inward toward the sites and away from adjacent uses, including residential areas. This lighting would be temporary and would be required for the safety of construction workers and the traveling public. Once constructed, the project components would include features that would be lit during hours of lower natural light and in the evening/nighttime. Because all of the project components are located in highly developed urban environments with many existing sources of light, the project is not expected to increase visible or artificial light or glare. Off-site sources of light or glare would not affect the project. Within the park-and-ride garage structures, screening would be provided to reduce headlight glare that could be perceived from offsite.

Recreation

While there are designated recreational resources in the vicinity of most project components, the project would not displace any existing recreational uses. At the Brickyard Station and Roadway Improvements component, a temporary detour of a short segment of the Tolt Pipeline Trail along NE 155th Street may be required during construction of the pedestrian bridge connection to the neighborhood on the east side of I-405. If required, this temporary detour would provide appropriate signage and access for trail traffic. Once construction is complete, the trail would be returned to its existing condition or improved as needed.

Historic and Cultural Preservation

A wide variety of sources were reviewed to identify potential historic and cultural resources at project component locations, including the Washington State Department of Archaeology and Historic Preservation's (DAHP's) Statewide Predictive Model, the Washington Information System for Architectural and Archaeological Records Data maintained by DAHP, previously conducted cultural resources surveys, geotechnical reports, historic maps, aerial photographs, published ethnographies and local histories, and geological maps. Other than at the proposed South Renton Transit Center site, the project would not impact historic-aged built environment resources or have the potential to impact buried archaeological resources. On the South Renton Transit Center site, the project would demolish two commercial historic-aged resources; both are recommended not eligible for listing in the National Register of Historic Places. The Statewide Predictive Model classifies the location of the South Renton Transit Center as High to Very High Risk of encountering precontact-era sites. Prior to construction Sound Transit proposes to conduct subsurface surveys, via a drilling rig, to further identify the potential for encountering precontact-era sites.

Transportation

The project proposes to construct BRT stations and roadway improvements in support of a new BRT service that would provide transit service within the I-5, I-405, and SR 518 corridors, and improve inter-connections to other regional transit modes (e.g., light rail). The project has been designed to minimize changes to general-purpose traffic while optimizing transit speed and reliability on local streets and freeway on-and-off-ramps. No adverse impacts to traffic safety, nonmotorized facilities, parking, or site access for other facilities are anticipated as a result of the project. At the South Renton Transit Center and Roadway Improvements component, the traffic analysis indicates that in the 2042 forecast year additional trips from BRT vehicles would contribute to expected delay at three intersections. The analysis indicates that optimizing the signal phasing and timing at these intersections would address the expected impacts. Should the City of Renton and WSDOT determine that they would implement improvements other than optimized signal phasing at these locations, Sound Transit would coordinate with the city and WSDOT to identify an appropriate and proportionate contribution to those improvements.

Public Services

The project would provide increased and improved public transit service and connections within the I-5, I-405, and SR 518 corridors and in the Puget Sound Region. None of the project components are expected to increase the need for fire, police, health care, or schools because the project would not result in any unplanned or induced increases in population. During construction of all project components, traffic rerouting, lane closures, and construction traffic may affect emergency response times and the travel times or routes for public service vehicles. Sound Transit would work with contractors, service providers, and the appropriate jurisdiction to minimize disruption and ensure that appropriate access through or around construction areas is retained. Once constructed, the South Renton Transit Center and Kingsgate Park-and-Ride Garage structures would comply with local building and fire codes to alleviate pressure on emergency services in case of an emergency. During operations, Sound Transit would contract with local law enforcement and security contractors to provide security services at facilities.

Utilities

The project is located in a highly urbanized area with many existing utilities on or near project component locations. Sound Transit would work with local jurisdictions and utility providers to obtain utility service as needed for the facilities and to ensure utility lines and services are protected and/or relocated as needed.

The project's components and their expected impacts on various elements of the environment are described in more detail below. The project is not anticipated to generate significant adverse environmental impacts.

A BACKGROUND

1. Name of proposed project, if applicable:

I-405 Bus Rapid Transit Project (Project)

2. Name of applicant:

Sound Transit (Central Puget Sound Regional Transit Authority) is the project proponent and the State Environmental Policy Act (SEPA) lead agency.

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

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4. Date checklist prepared:

September 2020

5. Agency requesting checklist:

Sound Transit

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

The Sound Transit Board of Directors will make a decision about whether to advance the project into final design after completion of the environmental review process. Project components will likely be delivered through a mixture of design-bid-build and design-build methods. For project components that would be delivered through the design-build delivery method, Sound Transit would select a design-build contractor in 2021/2022. Following selection, the design-build contractor would develop a detailed construction schedule for those project components. Construction of all project components is expected to begin in 2022. Construction of improvements in the south corridor (from Burien to Bellevue) is expected to be complete and bus rapid transit (BRT) service is scheduled to begin in 2024. Construction of improvements in the north corridor (from Bellevue to Lynnwood) is expected to be complete and BRT service is expected to begin in 2025.

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

The I-405 BRT Project corridor and all project components are shown in Attachment A, **Figure A-1**. Sound Transit has no plans for future additions or expansion of this proposed project.

The project is related to a new maintenance and operations base that Sound Transit plans to construct (Bus Base North), which would store and service the BRT buses used along the I-405 BRT corridor, along with other buses. The Bus Base North facility is proposed to be located on property in the Canyon Park area of Bothell. Sound Transit has recently completed a separate SEPA environmental review for the Bus Base North Project. Construction of the Bus Base North Project is anticipated to be completed in 2023 prior to the start of BRT service.

The project is also related to Sound Transit's proposed SR 522/NE 145th BRT Project, which would construct improvements along State Route (SR) 522 and NE 145th Street and operate BRT service between Shoreline/Seattle and Bothell. The SR 522/NE 145th BRT Project would be implemented on a similar timeline. Service on the two BRT lines would interconnect with each other in Bothell and would connect to Sound Transit's Link light rail and other bus service consistent with Sound Transit's *Regional Transit Long-Range Plan* (Sound Transit, 2014).

Other public agency projects are related to this project, as follows.

Washington State Department of Transportation

The Washington State Department of Transportation (WSDOT) is undertaking a number of projects throughout the I-405 corridor to implement improvements identified in the I-405 Master Plan. Those improvements were previously evaluated programmatically, along with I-405 BRT service, in an environmental impact statement (EIS) (WSDOT, 2002). These projects involve or support public transit facilities that would be used by the I-405 BRT service as part of the I-405 Master Plan:

- *I-405 Renton to Bellevue Widening and Express Toll Lanes* – This WSDOT project, which began construction in 2020, will implement two express toll lanes (ETLs) in each direction from SR 167 to NE 6th Street in Bellevue. The project will also rebuild the I-405/NE 44th Street interchange with new direct access ramps and an in-line¹ transit station, all of which would be used by the I-405 BRT service. A design-build contractor has been selected by WSDOT for this project and construction began in 2020, with anticipated completion in 2024. (Note that Sound Transit will construct a park-and-ride lot for BRT service in the vicinity of the NE 44th Street interchange, as addressed through WSDOT's *2018 I-405 Tukwila to I-90 Vicinity Express Toll Lanes*

¹ An in-line transit station is a station where buses do not have to exit the highway mainline (in this case the I-405 highway) to pick up and drop off passengers; instead the transit station is located within the highway right-of-way.

Project Environmental Assessment and the project's 2019 Finding of No Significant Impact and Errata.)

- *I-405/NE 85th Street Interchange and In-line BRT Station Project* – This WSDOT project will rebuild the I-405/NE 85th Street interchange, including new direct access ramps and an in-line BRT station for use by the I-405 BRT service, with construction anticipated to begin in 2021.
- *I-405-SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project* – With this project, WSDOT proposes to extend the dual I-405 ETL system between SR 522 and SR 527 (building one new lane in each direction), build a partial direct access ramp at SR 527 providing connections to the Canyon Park Park-and-Ride and a BRT station that would be used by the I-405 BRT service, and build a direct access ramp to a transit hub at SR 522/I-405 that would be used by the I-405 BRT service and Sound Transit's SR 522/NE 145th BRT service mentioned above. Construction of the project is anticipated to begin in 2021 (WSDOT 2020a).
- In addition to implementing projects evaluated through the I-405 Master Plan and EIS, WSDOT continues to address fish passage barriers along the corridor. Sound Transit is coordinating closely with WSDOT to ensure that the I-405 BRT project components do not preclude WSDOT's ability to correct identified fish passage barriers along SR 518 and I-405 in the future. Examples of fish barriers in the vicinity of this project are the following:
 - *Juanita Creek Fish Barrier Correction* – As part of their program to replace existing culverts that have been identified as fish passage barriers, WSDOT would replace the culvert for the crossing of Juanita Creek beneath I-405, which occurs at mile post (MP) 21.94, south of the proposed Brickyard Park-and-Ride lot. This existing culvert under I-405 has been identified as a fish barrier by the Washington Department of Fish and Wildlife (WDFW) and the WSDOT Environmental Services Office (ESO) (WDFW Site ID 998602) due to a water surface drop and velocity. WSDOT would replace the existing 48-inch-diameter corrugated steel pipe with a structure that would be designed according to the 2013 WDFW Water Crossing Design Guidelines. The work is anticipated to begin in 2021/2022, likely along with WSDOT's construction of Sound Transit's Brickyard Station and Roadway Improvements component of the I-405 BRT Project.
 - *Everest Creek Fish Passage Barriers* – WSDOT has identified fish passage barriers to be corrected along unnamed tributaries leading to Everest Creek located at MPs 17.53 and 17.54 along I-405. Currently, correcting these fish passage barriers to Everest Creek is not included in WSDOT's list of Stand-alone Fish Passage Projects planned for Design and/or Construction in the 2019-2021 period (WSDOT 2020b).
 - *Gilliam Creek Fish Passage Barriers* – WSDOT has identified fish passage barriers to be corrected along Gilliam Creek located at milepost 2.82 along SR 518 and at mileposts 0.42 and 0.61 along I-405, near the proposed Tukwila International Boulevard BRT Station and Roadway Improvements. WSDOT will replace these fish passage barriers as part of their fish passage improvement

program. Currently, correcting these fish passage barriers along Gilliam Creek is not included in WSDOT's list of Stand-alone Fish Passage Projects planned for Design and/or Construction in the 2019-2021 period (WSDOT 2020b).

- WSDOT is also evaluating the feasibility of transit-oriented development (TOD), along with a park-and-ride garage, on the existing Kingsgate Park-and-Ride site. This potential TOD and garage would be on the same site as Sound Transit's proposed Kingsgate Park-and-Ride Garage component of the I-405 BRT Project described in Section A.11 below. It is currently anticipated that WSDOT's potential TOD-related park-and-ride garage would be structurally interconnected to Sound Transit's garage. Sound Transit has coordinated with WSDOT to ensure that the future potential for TOD and the park-and-ride garage addition on the Kingsgate site would not be precluded by this I-405 BRT Project.

Renton

- Sound Transit, in partnership with the City of Renton, has evaluated the potential development of TOD on surplus property that may result adjacent to the South Renton Transit Center component of this project (described in Section A.11 below). Sound Transit has coordinated with Renton to ensure that future potential TOD would not be precluded by this project.

Kirkland

The City of Kirkland will implement the following improvements to NE 85th Street: a queue jump at 6th Street to improve local transit connections to the BRT station at the interchange of I-405 and NE 85th Street, a nonmotorized connection between 6th Street and the BRT station at the NE 85th Street interchange to improve bicycle and pedestrian access to the BRT station, and an additional eastbound lane between 120th Avenue NE and 122nd Avenue NE, which will improve existing traffic congestion along NE 85th Street, thereby also improving the connection of transit to the BRT station.

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

These previously prepared documents relate to the proposal:

- I-405 Master Plan EIS (WSDOT, 2002)
- Final Supplemental Environmental Impact Statement for the Regional Transit Long-Range Plan Update (Sound Transit, 2014)
- I-405 – Renton to Bellevue Widening and Express Toll Lanes – Tukwila to I-90 – Environmental Assessment (WSDOT, 2018)*
- South Renton Transit Center Phase I Environmental Site Assessment (Shannon & Wilson 2017)
- South Renton Transit Center Phase II Environmental Site Assessment (Shannon & Wilson 2018)

- I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project Environmental Assessment (WSDOT 2020a)*
- I-405, 85th/132nd Documented Categorical Exclusion*

WSDOT, in partnership with Sound Transit, has completed the environmental review for four of the BRT stations that would be used by the BRT service on I-405. These stations (part of the WSDOT-related projects described in Section A.7 above) are: NE 44th Street Station and Park-and-Ride; NE 85th Street Station; SR 522/I-405 Transit Hub; and Canyon Park Station. Sound Transit is relying on the environmental findings of the documents denoted by an asterisk (*) above in completing this environmental review of the I-405 BRT Project. Copies of these documents are available from WSDOT or at Sound Transit. See the contact information in Section A.3 above.

Documentation that has been prepared in support of this expanded checklist is attached and listed following the table of contents.

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.

The Lynnwood City Center transit center is currently undergoing a transformation as part of Sound Transit's Lynnwood Link Light Rail Extension Project. Work related to the Lynnwood Link Extension at the Lynnwood City Center transit center includes construction of a bus layover area, parking structure, and Link light rail station. Construction permits for this work are in process, with issuance anticipated in 2020.

No other applications are known for approvals of other proposals directly affecting the property covered by the I-405 BRT project components.

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

For each project component, **Table 1** provides a list of the currently anticipated approvals and permits needed from local, state, and federal agencies prior to construction.

Table 1 I-405 BRT project components – Potential approvals and permits prior to construction

Project component	Agency	Approvals or permit
All project components	Puget Sound Clean Air Agency	<ul style="list-style-type: none"> • Notice of Intent to Operate Nonroad Engines (generators greater than 500 horsepower) • Notice of Construction (generators with cumulative horsepower greater than 2,000 horsepower)
Burien Transit Center and Roadway Improvements	City of Burien	<ul style="list-style-type: none"> • Building Permit, including mechanical, electrical, plumbing, and clearing and grading for construction of the shelter structure and amenities • Sign Permit • Right-of-Way Permit
	King County Metro	<ul style="list-style-type: none"> • Construction and use agreements for work and improvements within the Burien Transit Center
	WSDOT	<ul style="list-style-type: none"> • Temporary Construction Air Space Lease (TCAL) for work on SR 518 • Air Space Lease (ASL), including an operations and maintenance agreement, for exclusive transit improvements on SR 518 • Construction Oversight Agreements • Utility Franchise • Design and Project Development approval • General Permits, including for survey work • Limited Access Break
Tukwila International Boulevard BRT Station and Roadway Improvements	City of Tukwila	<ul style="list-style-type: none"> • Unclassified Use Permit • Building Permit, including mechanical, electrical, and plumbing for the pedestrian bridge and the connection to the mezzanine of the Link light rail station
	City of SeaTac	<ul style="list-style-type: none"> • Site Permit for grading, paving, and drainage activities within City of SeaTac public right-of-way • Building Permit for stormwater retaining wall within City of SeaTac public right-of-way • Right-of-Way Permit for use and hauling within City of SeaTac public right-of-way
	WSDOT	<ul style="list-style-type: none"> • TCAL for work on SR 518 • ASL, including an operations and maintenance agreement, for exclusive transit improvements on SR 518 • Construction Oversight Agreements • Utility Franchise • Design and Project Development approval • Tree Replacement approval • General Permits, including for survey work • Limited Access Break

Project component	Agency	Approvals or permit
	Washington State Department of Ecology	<ul style="list-style-type: none"> National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit
South Renton Transit Center and Roadway Improvements	City of Renton	<ul style="list-style-type: none"> Type III Conditional Use Permit and Site Plan Review Right-of-Way Permit Civil Construction Permit Building Permit, including mechanical, electrical, and plumbing Sign Permit Grading Permit Demolition Permit Utility Easement Vacation approval
	King County Wastewater Division	<ul style="list-style-type: none"> Construction Dewatering approval (if dewatering is needed)
	WSDOT	<ul style="list-style-type: none"> TCAL for work on SR 167 and within the I-405 limited access right-of-way ASL, including operations and maintenance agreement, for exclusive transit improvements on SR 167 Construction Oversight Agreements Utility Franchise Design and Project Development approval General Permits, including for survey work Limited Access Break
	Washington State Department of Ecology	<ul style="list-style-type: none"> Underground storage tank removal 30-day notice NPDES Construction Stormwater General Permit
	Puget Sound Clean Air Agency	<ul style="list-style-type: none"> Asbestos/Demolition Notification Form
	Federal Transit Administration (FTA)	<ul style="list-style-type: none"> National Environmental Policy Act (NEPA) Documented Categorical Exclusion (DCE), including related approvals such as NHPA Section 106. Also see Federal Highway Administration item below.
	Federal Highway Administration (FHWA)	<ul style="list-style-type: none"> NEPA DCE (FHWA has noted intent to serve as a cooperating agency with FTA, relying on FTA's NEPA findings for this project component)
	U.S. Environmental Protection Agency	<ul style="list-style-type: none"> Sole Source Aquifer Consultation

Project component	Agency	Approvals or permit
Bellevue Transit Center and Off-site Layover	City of Bellevue	<ul style="list-style-type: none"> Land use exemption approval (for minor changes to an existing land use permit) Building Permit – Commercial, Minor Project including mechanical, electrical, and plumbing for construction of the shelter structure and amenities Clearing and grading permit Sign Permit Type D Right-of-Way Use Permit
	King County Metro	<ul style="list-style-type: none"> Construction and use agreements for work and improvements within the Bellevue Transit Center
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	City of Kirkland	<ul style="list-style-type: none"> Process I Zoning Permit and Administrative Design Review approval (for Kingsgate Park-and-Ride Garage) Building Permit (which will include approval of clearing and grading) Right-of-Way Permit Electrical Permit Mechanical Permit Sign Permit
	King County Metro	<ul style="list-style-type: none"> Operations agreements at Kingsgate Park-and-Ride and Totem Lake/Kingsgate Station
	WSDOT	<ul style="list-style-type: none"> NEPA DCE, including related approvals except for National Historic Preservation Act (NHPA) Section 106. See FHWA item below TCAL for work within the I-405 limited access right-of-way Lease, purchase, or easement of land for the Kingsgate Park-and-Ride Garage Tree Replacement approval Construction Oversight Agreements Utility Franchise Design and Project Development approval General Permits, including for survey work Limited Access Break
	Washington State Department of Ecology	<ul style="list-style-type: none"> NPDES Construction Stormwater General Permit
	FHWA	<ul style="list-style-type: none"> NHPA Section 106 compliance/approval. Although WSDOT is delegated NEPA authority, FHWA retains responsibility for Section 106 compliance/approvals for non-WSDOT projects on the federal interstate system.
Brickyard Station and Roadway Improvements (construction by	City of Bothell (for work outside of WSDOT right-of-way)	<ul style="list-style-type: none"> Right-of-Way Permit Grading Permit

Project component	Agency	Approvals or permit
WSDOT/all permits to be obtained by WSDOT)	Washington State Department of Ecology	<ul style="list-style-type: none"> NPDES Construction Stormwater General Permit
	WSDOT	<ul style="list-style-type: none"> NEPA Compliance/Approval
Lynnwood City Center Transit Station BRT and Roadway Improvements	City of Lynnwood	<ul style="list-style-type: none"> Building Permit (includes mechanical, electrical, and plumbing) Grading Permit Sign Permit exemption Right-of-Way Use Permit
	WSDOT	<ul style="list-style-type: none"> NEPA DCE, including related approvals, except NHPA Section 106. See FHWA item below TCAL for work within the I-405 and I-5 limited access right-of-way ASL, including operations and maintenance agreement, for exclusive transit improvements on I-405 and I-5 Construction Oversight Agreements Utility Franchise Design and Project Development approval Tree Replacement approval General Permits, including for survey work Limited Access Break
	Washington State Department of Ecology	<ul style="list-style-type: none"> NPDES Construction Stormwater General Permit
	FHWA	<ul style="list-style-type: none"> NHPA Section 106 compliance/approval. Although WSDOT is delegated NEPA authority, FHWA retains responsibility for Section 106 compliance/approval for non-WSDOT projects on the federal interstate system.

SOURCE: Sound Transit 2020

- 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.)**

Sound Transit proposes to implement BRT service, operating along portions of I-5, I-405, SR 518, and some local arterial streets. The new BRT service is planned to operate as two high-capacity transit lines, inter-connecting at the Bellevue Transit Center near the future Bellevue Downtown Link light rail station. The north BRT line would operate between the Bellevue Transit Center and the Lynnwood City Center transit center, and the south BRT line would operate between the Bellevue Transit Center and the Burien Transit Center. Together, the I-405 BRT lines (north and south) would serve

11 stations², including one new transit center in Renton and one new park-and-ride garage in Kirkland. In addition, a park-and-ride lot would be constructed to increase park-and-ride capacity in the I-405 corridor (NE 44th Street, Renton).

As discussed in Section A.7, WSDOT, in partnership with Sound Transit, has completed environmental review for four of the BRT stations that would be used by the BRT service on I-405. Since environmental review for these components has been completed, they are not discussed further in this document. The following provides a more detailed description of the specific project components that are evaluated with this environmental review. See Attachment A, Figure A-2 through Figure A-9 for site plans showing detail for each project component. See Attachment B for the project's Conceptual Engineering plans. As noted in Section A.6, construction of all project components is expected to begin in 2022 with BRT service beginning in the south (between Burien and Bellevue) in 2024 and beginning in the north (between Bellevue and Lynnwood) in 2025.

The I-405 BRT service would have 10-minute headways³ during peak periods and 15-minute headways the remainder of the day and on weekends. Together, the two routes would provide direct connectivity and access to Sound Transit's Link light rail service at: 1) the Lynnwood City Center Station; 2) the Tukwila International Boulevard Station; and 3) the Bellevue Downtown Link Light Rail Station near the Bellevue Transit Center. The route would also interconnect with Sound Transit's proposed SR 522/NE 145th BRT route to provide further transit flexibility in the region and connectivity into the light rail system. Peak periods would likely be from 6 a.m. to 9 a.m. and from 3 p.m. to 6 p.m. on weekdays. Service would cover 19 hours per day on weekdays and Saturdays and up to 17 hours on Sundays.

In large part, the BRT service would operate in ETLs along I-405, including segments of existing ETLs and segments of ETLs that WSDOT will construct between Bellevue and Tukwila (WSDOT 2018) and between Canyon Park and Brickyard, as noted in Section A.7. Along SR 518, the BRT service would primarily operate in general-purpose lanes, with bus-only lanes approaching and departing from the BRT station (described further below). BRT buses would operate along local arterial roads to access BRT stations in Burien, Renton, Bellevue, and Lynnwood. In these cities, along local arterial roads, transit signal priority⁴ (TSP) would be added to all existing traffic signals and would be included with new traffic signals.

All project components would include a proposed BRT-branded (Stride) uniquely identifiable pylon (decorative column) at the transit station to alert BRT riders to the service access point. The pylon may be internally illuminated to be identifiable in the evening and during hours of less light. In addition, all project components would likely

² Where transit stations would stand alone (not at a proposed transit center), the term "station" refers to a station pair involving bus stop locations on opposite sides of a roadway, ramp, or highway median, serving the opposite directions of bus travel through the corridor.

³ Headway refers to the amount of time between transit vehicle arrivals at a stop.

⁴ TSP is a general term for a set of operational improvements that use technology to reduce dwell time at traffic signals for transit vehicles by holding green lights longer or shortening red lights. TSP may be implemented at individual intersections or across corridors or entire street systems.

include ticket vending machines (TVMs), security cameras and real-time bus information signs at stations for passengers. These are considered to be standard elements for all project components.

Burien Transit Center and Roadway Improvements

See Attachment A, Figure A-2, for a figure of this project component. To access the Burien Transit Center, westbound vehicles would turn left into the existing transit center driveway access, circulate south around the main transit center island and then west to the west transit center island. Within the Burien Transit Center, the existing main transit center island would be extended approximately 20 feet south to provide additional bus bay capacity; the height of the transit platform here would remain at 6 inches. The west transit center island would be reconstructed to provide 9-inch-high platforms and would be lengthened to the south approximately 60 feet and to the north approximately 50 feet; the northern portion would also be shifted slightly to be angled to the east. The BRT service would use the northern portion of the west transit center island. The station would include a BRT-branded shelter and benches, in addition to the amenities at all project component stations.

New crosswalks may be added at the northern end of the west transit center island, one connecting the pedestrian path from the sidewalk on SW 148th Street to the west transit center island and a second extending east to connect to the main transit center island. The BRT vehicles would use the layover area in the Burien Transit Center. This project component may add one layover space to the southwest portion of the existing layover area. To exit the Burien Transit Center, BRT vehicles would circulate around the transit center islands to the existing driveway access and then turn right to travel eastbound on SW 148th Street.

To improve transit speed and reliability, a bus-only lane would be added east of the transit center entrance for eastbound buses along SW 148th Street that would extend east across the SR 509/SR 518 interchange and along SR 518 for approximately 400 feet. For westbound buses, a new bus-only left-turn pocket would be added beginning approximately 240 feet east of the transit center driveway access. Between 1st Avenue S and the Burien Transit Center, the bus-only lane and the bus-only left-turn pocket on SW 148th Street would be accommodated by converting the center two-way turn lane and, in the southeast section, slightly widening the existing roadway. Between the Burien Transit Center and 1st Avenue S, driveways would become right-in/right-out only. To accommodate the eastbound bus-only lane on the SR 518 bridge over SR 509, the existing lane striping would be rechannelized. TSP would be added to the existing traffic signals at the intersection of SW 148th Street and 1st Avenue S, at the intersection of SW 148th Street and the SR 509 southbound on- and off-ramps, and at the intersection of SR 518.

It is anticipated that the contractor would stage the necessary construction equipment and materials within the Burien Transit Center, including potentially using adjacent parking areas also owned by King County Metro.

Tukwila International Boulevard BRT Station and Roadway Improvements

See Attachment A, **Figure A-3**, for a figure of this project component. Sound Transit continues to work with WSDOT on the final layout for this component. Sound Transit understands that the design described below would require the following design analyses or deviations from WSDOT roadway standards:

- Lane widths through curves (WSDOT DM Exhibit 1240-2a)
- Bus-only lane widths (WSDOT DM Exhibit 1410-1)
- Shoulder widths in a few areas with existing constraints, such as bridge piers (WSDOT DM Exhibit 1232-2)
- Auxiliary lane length for two-lane off-ramp (WSDOT DM Exhibit 1360-14d)

Nevertheless, this is the design currently proposed in order to minimize critical area impacts and impacts to existing infrastructure.

The proposed BRT station would be accessed by a new pedestrian bridge that would be constructed from the mezzanine level of the Tukwila International Boulevard Link light rail station and extended south across SR 518, connecting to the eastbound and westbound BRT station platforms. The walking surface of the pedestrian bridge would be level with the mezzanine floor level of the Link station and roughly level with the existing Tukwila International Boulevard bridge over SR 518. From the pedestrian bridge, access down to each BRT station platform would be provided by stairs and an elevator. Sound Transit is also working to determine if funding is available to provide the southern extension of the pedestrian bridge to the south, review of which is included in this checklist. That extension would connect at grade to the eastbound on-ramp to SR 518, where a new sidewalk would be constructed to meet existing sidewalks on Tukwila International Boulevard.

The proposed BRT station (eastbound and westbound station platforms) would be located at-grade within the SR 518 right-of-way in an existing area between the SR 518 travel lanes and the on- and off-ramps to SR 518. In addition to the standard elements, the BRT station would include a branded shelter, benches, and raised platforms (approximately 9 inches) for level or near-level passenger boarding. Approaching both the east and westbound BRT station platforms, bus-only lanes would be added (for a total length of approximately 1,900 feet eastbound and 2,800 feet westbound) to allow BRT vehicles to safely decelerate to pick up/drop off at the station platform and accelerate from the station platforms and merge back onto SR 518 with general-purpose traffic. The addition of these bus-only lanes would require realigning the center jersey barrier, regrading, and repaving a portion of the existing SR 518 travel lanes and ramps to and from the interchange of SR 518 with Tukwila International Boulevard. In the westbound direction, the bus-only lane would also require widening the existing westbound SR 518 bridge that passes over the SR 518 off-ramp heading south to Airport Expressway.

A stormwater detention facility would be constructed inside the westbound SR 518 off-ramp loop. The detention pond would include an adjacent retaining wall with a maximum height of 11 feet. Stormwater would be collected underground and detention would be provided as required. An access road would be constructed in order to access the detention facility.

A new retaining wall for fill would be constructed along the west side of the eastbound bus-only deceleration lane for approximately 900 feet, with a maximum height of 6 feet. On the south side of SR 518, adjacent to eastbound SR 518, there would be a new retaining wall for a length of approximately 730 feet, with a maximum height between 10 and 15 feet.

For this project component, the contractor would be expected to stage the necessary construction equipment and materials within the existing right-of-way for SR 518, likely in the area between westbound SR 518 and the existing Tukwila International Boulevard Link light rail station, outside of the active travel lanes and the on- and off-ramps.

South Renton Transit Center and Roadway Improvements

See Attachment A, Figure A-4, for a figure of this project component. The South Renton Transit Center would be located on the north side of I-405, in the northeast corner of the intersection of S Grady Way and Rainier Avenue S (SR 167). This new transit facility would be developed on an 8.3-acre site. Facilities at the South Renton Transit Center would include the following:

- A new transit center island with eight 120-foot active bus bays with operational space provided for both BRT and other bus transit service (operated by King County Metro, with the assumption that they will use 6 active bays) using this facility. In addition to the standard elements, the BRT station in the transit center island could include a branded BRT shelter (if the entire transit center island is covered by a single, large shelter there would only be the pylon) and 9-inch raised platforms for near-level passenger boarding.
- Ten bus layover bays in the bus loop area.
- A 700-stall, 5-floor park-and-ride garage with drop-off and pick-up stalls on the first floor. Access to the park-and-ride garage would be from a separate right-turn-only entrance and exit from Rainier Avenue S, located south of the access to the transit center bus loop. A second access to the park-and-ride garage would be from Lake Avenue S; this access would not be restricted to right-in/right-out turns.
- From the third floor of the park-and-ride garage, a pedestrian bridge would potentially connect the garage to a staircase and elevator connecting to the middle of the transit center island.
- Pedestrian access to the transit center site would be from the existing and reconstructed sidewalks along Rainier Avenue S and S Grady Way. A new sidewalk would be constructed along the eastern side of the transit center, along the frontage of Lake Avenue S. Pedestrian sidewalks would also be constructed within the transit center site along the north and south sides of the bus loop, from Rainier Avenue S

and Lake Avenue S to the park-and-ride garage, from S Grady Way north into the site, and between the park-and-ride garage and the bus loop.

To access the South Renton Transit Center from I-405, BRT vehicles heading in a westerly direction (southbound) on I-405 would use the exit onto Rainier Avenue S into an existing northbound, curbside business access and transit (BAT) lane. BRT buses would stay in the existing BAT lane across S Grady Way along Rainier Avenue S. BRT vehicles heading in an easterly direction (northbound) on I-405 would access the South Renton Transit Center using the existing exit onto Rainier Avenue S. To improve transit speed and reliability, northbound BRT vehicles would use a new short section of a bus-only, bus-on-shoulder lane on northbound Rainier Avenue S. that would be constructed starting at the existing southbound I-405 loop ramp and extending north approximately 200 feet to connect with the existing BAT lane.

Once across S Grady Way, BRT vehicles heading northbound would turn right into the transit center's bus loop from a new signalized intersection at Rainier Avenue S and Hardie Avenue SW. This new intersection would also be the exit point for buses leaving the transit center and would be the primary ingress and egress location for the buses. Within this intersection, the existing raised, landscaped median in Rainier Avenue S would be removed to allow for turning movements, and crosswalks would be provided at each of the four roadway crossings. North of this intersection, the existing center median within Rainier Avenue S would be removed for a new southbound bus-only left-turn pocket that would allow buses to turn left into the transit center; a small section of a center median may remain at the southern end of the bus-only left-turn pocket. At the connection to Rainier Avenue S, Hardie Avenue SW would be reconstructed to realign the southbound lane adjacent to the northbound lane. This shift would require removing the northern portion of an existing raised, landscaped island. In place of the existing southbound lane on Hardie Avenue SW, a landscaped curb would be constructed, connecting with the remaining portion of the existing island. For general-purpose traffic, the southbound lane on Hardie Avenue SW would be right-turn only. Buses on Hardie Avenue SW would be able to travel through the intersection into the transit center.

A secondary bus access into the transit center's bus loop would be from the east side of the site from Lake Avenue S. This secondary access would also provide connectivity to the bus bays and layover spaces at the existing South Renton Park-and-Ride located just east of the South Renton Transit Center. Access from Lake Avenue S provides bus circulation and access from S Grady Way, Shattuck Avenue S, and S 7th Street. Parking for operation and maintenance vehicles would be located parallel to the Lake Avenue S access to the bus loop.

In the southern portion (adjacent to S Grady Way) and the eastern portion of the site (adjacent to Lake Avenue S) there is an existing Bonneville Power Administration power line easement. Along the south boundary, the easement is approximately 100 feet wide. In the eastern portion of the site the easement is approximately 200 feet wide. Prior to the start of construction, Sound Transit would coordinate with the Bonneville Power Administration, and utility providers as needed, to ensure construction activities would not interfere with their facilities and service. Once constructed, the transit facilities would not alter, affect, or interfere with this existing 240 kilovolt transmission line across the site. The easement area under the transmission lines would primarily be green space (where existing pavement would be removed) or would consist of ground-level

improvements, such as the driveway into the park-and-ride garage off of Lake Avenue S and the eastern portion of the transit loop. In addition, the existing sculpture located at the northeast corner of the intersection of Rainier Avenue S and S Grady Way, adjacent to the southwest corner of the transit center site, would remain.

BRT vehicles leaving the South Renton Transit Center would turn left onto Rainier Avenue S into an existing, southbound curbside BAT lane and then onto either northbound or southbound I-405 using existing on-ramps. Signal-timing improvements would be made, including adding TSP to the traffic signal at the intersection of S Grady Way and southbound Rainier Avenue S and at Rainier Avenue S and SW 7th Street.

For construction of the South Renton Transit Center, the contractor would likely stage the necessary equipment and materials on the site. For construction of the bus-on-shoulder lane along Rainier Avenue S, the contractor may stage equipment and materials in the area to the east of Rainier Avenue S, within the existing, unpaved right-of-way for I-405. Prior to construction, the existing buildings on-site would be removed and properly disposed of and on-site remediation would be completed as identified in the Phase II Environmental Site Assessment (Shannon & Wilson 2018) as discussed in Attachment D. The site would be cleared and graded as needed for the proposed transit center features and to provide adequate drainage. During construction, pile driving may be required to construct the foundation of the park-and-ride garage.

Bellevue Transit Center and Off-site Layover

See Attachment A, Figure A-5, for a figure of this project component. At the Bellevue Transit Center, two existing bus bays would be modified with the standard station elements for the BRT service. The existing height of the transit center island would remain, as would the shelter over the transit center island; a BRT-branded pylon would be installed to identify the bays used for the BRT service. On the north side of the transit center island, two existing crosswalks across NE 6th Street would be relocated (shifted slightly west from their current locations). To maintain Americans with Disability Act accessibility at these relocated crosswalks, the existing curb ramps on the transit center island and on the north side of NE 6th Street would be re-graded. This regrading would be coordinated with the City of Bellevue's Downtown Bellevue Exceptional Intermodal Connections project to raise the intersections east and west of the transit center (City of Bellevue 2020).

The BRT vehicles would have on-street layover along 110th Avenue NE in front of the Bellevue Library, which is less than one-half mile north of the transit center. To access the layover space from the transit center, BRT vehicles would be anticipated to turn right onto 108th Avenue NE, then right onto NE 12th Street, and then right onto 110th Avenue NE.

In the northern portion of 110th Avenue NE, the roadway cross-section would be modified. On the west side of 110th Avenue NE the existing on-street parking would be removed to provide additional bus layover capacity north and south of the existing driveway into the library parking garage. The one existing southbound through lane would remain. In the northbound direction, the rechannelization includes shifting the right-turn-only lane slightly west to provide on-street parking spaces along the east side of the street to replace what was removed along the west side of the street. Through re-striping, the existing painted median would be replaced with a left-turn-only pocket from 110th Avenue NE to NE 12th Street. No changes to the existing sidewalks are

proposed. The existing raised island in the middle of the intersection of 110th Ave NE and NE 12th Street would be removed. In the southern portion of 110th Avenue NE, the existing bus layover space just north of NE 10th Street would remain.

From the layover space, BRT vehicles would be anticipated to access the Bellevue Transit Center by heading south on 110th Avenue NE, turning right onto NE 8th Street, left onto 108th Avenue NE, and then left onto NE 6th Street into the transit center.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

See Attachment A, Figure A-6, for a figure of this project component. The existing Totem Lake Freeway Station is located on the in-line direct access ramps that extend from the center of I-405 up to the NE 128th Street overcrossing of I-405 (on the north side of NE 128th Street). For the Totem Lake/Kingsgate BRT Station, one bay of each existing station pair would be transformed into a BRT station with the standard station elements. TVMs may be installed at the station platform or they may just be located at the Kingsgate Park-and-Ride Garage. At this station, the existing 6-inch height of the platforms and the existing shelter over the station platforms would remain. TSP would be added at the intersection of the in-line ramp terminal and NE 128th Street.

The existing Kingsgate Park-and-Ride lot is located west of the Totem Lake/Kingsgate Station along 116th Avenue NE. The Kingsgate Park-and-Ride site is approximately 8 acres in size and consists of 502 surface park-and-ride spaces and an existing bus transit loop currently used by Sound Transit express routes, several King County Metro routes, and one Community Transit route. The site is owned by WSDOT, considered to be right-of-way for I-405, and is operated and maintained by King County Metro.

This project component includes adding 400 park-and-ride spaces at the Kingsgate site by constructing a garage structure in the southern portion of the existing surface park-and-ride lot to create a total of approximately 900 park-and-ride spaces on the site. Sound Transit would construct a 5-story park-and-ride garage with approximately 566 park-and-ride stalls. The 566 park-and-ride stalls would replace 166 surface park-and-ride spaces that would be displaced by the garage and would provide an additional 400 park-and-ride spaces. The park-and-ride garage would be equipped with lighting to support operations and as needed for safety and security. Landscaping would be provided in designated areas in accordance with City of Kirkland and Sound Transit requirements, including maintenance and irrigation. Security cameras are anticipated to be used in the vicinity of the garage structure.

Stormwater would be collected underground and detention would be provided either above grade or below grade as required. Stormwater management facilities would include modifications to the existing detention pond in the southeast corner of the site, a bioretention swale along the south side of the garage, and a detention vault that would be located underground, below the surface park-and-ride stalls.

Access to the Kingsgate site would continue to be through two driveways from 116th Avenue NE, and the existing on-site circulation would not change. The northern driveway along 116th Avenue NE would remain as is and would continue to be the only entrance to the park-and-ride lot, with vehicles southbound on 116th Avenue NE turning right and vehicles northbound on 116th Avenue NE turning left. To access the park-and-ride garage, vehicles from 116th Avenue NE would use this northern driveway and then circulate through

the surface park-and-ride aisles to the main garage entrance/exit on the northwest corner of the structure or the secondary access on the southwest corner of the structure.

Vehicles exiting the garage would turn right immediately past the proposed single row of park-and-ride stalls located along the northern side of the garage, drive along the aisle, and exit the site using the southern driveway to 116th Avenue NE. The existing southern driveway would be shifted slightly north to accommodate the garage structure. This shift in the driveway location would result in a slight modification to the existing bus loop, located just north, that uses this driveway. The existing bus loop would remain on-site. The two lanes of this driveway would continue to be one right-turn-only and one left-turn-only to exit the site. Concrete paving would be used for all driveways and bus and large maintenance vehicle parking areas. Asphalt paving would be provided in areas trafficked by personal vehicles. Additional work within the Kingsgate site includes providing sidewalks for pedestrian access from 116th Avenue NE along the north side of the garage to the main entrance. This sidewalk would connect to the existing crosswalk across 116th Avenue NE to the covered walkway along the east side that continues south and then east to connect to the Totem Lake/Kingsgate Station.

For the work at the Totem Lake/Kingsgate Station and the Kingsgate Park-and-Ride Garage, the contractor would likely stage the necessary equipment and materials on the Kingsgate site. The Kingsgate Park-and-Ride lot was constructed with Federal Highway Administration (FHWA) funds. A requirement of this funding is to maintain the existing 502 park-and-ride stalls associated with the lot. During construction of the Kingsgate Park-and-Ride Garage, a number of the existing surface stalls within the footprint of the garage and areas needed for construction staging would be inaccessible. Prior to construction, temporary measures would be taken to maintain the current level of access to the park-and-ride lot, such as providing temporary parking spaces nearby or additional shuttle service to the site. Temporary parking spaces would be anticipated to be from existing, nearby properties with underused parking that could be leased through temporary construction easements.

Brickyard Station and Roadway Improvements

See Attachment A, Figure A-7, for a figure of this project component. The proposed new BRT station (northbound and southbound station platforms) would be located at-grade within the center of the I-405 roadway and right-of-way. A bus-only lane would be added in both the northbound and southbound direction (for a total length of approximately 4,000 feet southbound and 3,000 feet northbound), to allow BRT vehicles to safely decelerate to pick up/drop off at the BRT station platform and to accelerate from the station platforms and merge into I-405 traffic. The addition of these northbound and southbound bus-only lanes and the BRT station platforms would require realigning and widening the existing I-405 roadway to the east and west. The BRT station would include a branded shelter, benches, and raised platforms for level or near-level passenger boarding, in addition to the standard elements.

A pedestrian bridge over I-405 would connect the two BRT station platforms and would connect the BRT station to the Brickyard Park-and-Ride lot to the west. Between the I-405 roadway surface and the bottom of the pedestrian bridge, the proposed vertical clearance would be approximately 17.5 feet. From each BRT station platform, access to the pedestrian bridge would be provided by stairs and at least one elevator. Stairs and an elevator would be provided from the pedestrian bridge to access the Brickyard

Park-and-Ride lot. Although funding is not currently available, WSDOT, Bothell, Kirkland, and Sound Transit are currently considering an extension of this pedestrian bridge to the east side of I-405, with a stairway and ramp, and possibly an elevator, connecting to 116th Avenue NE; review of this east extension is included in this checklist.

New retaining walls would be constructed along the east and west sides of I-405 for approximately 1,110 feet in the northbound direction and 465 feet in the southbound direction, with a maximum height of 6 feet.

For this project component, the contractor would be expected to stage the necessary construction equipment and materials within the existing right-of-way for I-405 and, potentially, the Brickyard Park-and-Ride lot.

Lynnwood City Center Transit Station BRT and Roadway Improvements

See Attachment A, Figure A-8 and Figure A-9, for a figure of this project component. BRT buses would access the Lynnwood City Center transit station by using the existing Alderwood Mall Boulevard exit from I-5 south, traveling along 196th Street SW, turning left at 44th Avenue W, right at 200th Street SW, left onto 46th Avenue W, and then into the transit center. Along this routing, TSP would be added to existing traffic signals. To improve access to and from the transit center, modifications would be made at two intersections along 46th Avenue W. The first intersection, just north of the transit center, would include two northbound and two southbound lanes with stop signs controlling the east and west legs of the intersection. The second intersection, at the entrance to the transit center, would be modified to include a new traffic signal and to include crosswalks.

At the existing transit center, one bay in the northeast portion of the transit center loop would be modified to accommodate the BRT station as a drop-off bay with a 6 to 9-inch curb height. In the southwest portion of the transit center loop, one bay would be modified to accommodate BRT pick up and one bay would be converted to a layover space. At the BRT pick-up bay, in addition to the standard station elements, the platform and adjacent area would be re-graded for near-level passenger boarding. The existing shelters over the bays would remain.

Leaving the transit center, BRT vehicles would follow the same routing to 196th Street SW and then would use the Poplar Way on-ramp to access I-5 north and then I-405 south. Along Poplar Way (south of 196th Street SW) and the I-5 northbound on-ramp, the roadway and ramp would be widened for a bus-only bus-on-shoulder lane for BRT vehicles to use to bypass congestion.

For construction at the Lynnwood City Center transit station, the contractor would likely stage the necessary equipment and materials within the transit center. For construction of the bus-only lane along Poplar Way and the I-5 on-ramp, the contractor may stage equipment and materials in the existing, unpaved right-of-way within the center of the Poplar Way loop ramp onto I-5.

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 I-405 BRT Project involves construction and use of a number of infrastructure components along a corridor starting in the south in the City of Burien at the Burien Transit Center (along SW 148th Street), continuing to the east along SR 518, and then following I-405 from the City of Tukwila in King County to its connection with I-5 in the north. At the intersection with I-5, the project corridor then heads south on I-5 to the Lynnwood City Center transit center in the City of Lynnwood in Snohomish County. For each project component, **Table 2** provides the existing address, if applicable, and the Section, Township, and Range.

All specific project component locations are described in response to Question A.11 and are shown on the I-405 BRT Project map (Attachment A, **Figure A-1**).

Table 2 I-405 BRT project components: Address and Section/Township/Range

Project component	Address (road improvements are nearby)	Section/Township/Range
1. Burien Transit Center and Roadway Improvements	14900 4th Avenue SW, Burien	Sections 19 and 20, Township 23N, Range 4E
2. Tukwila International Boulevard BRT Station and Roadway Improvements	Tukwila International Boulevard Light Rail Station: 15426 25th Avenue S, Tukwila	Sections 21 and 22, Township 23N, Range 4E
3. South Renton Transit Center and Roadway Improvements	750 Rainier Avenue S	Section 19, Township 23N, Range 5E
4. Bellevue Transit Center and Off-site Layover	Bellevue Transit Center: 10903 NE 6th Street, Bellevue Layover: 1111 110th Avenue NE, Bellevue	Bellevue Transit Center: Section 32, Township 25N, Range 5E Layover: Section 29, Township 25N, Range 5E
5. Totem Lake Station/Kingsgate Park-and-Ride Garage	12837 116th Avenue NE, Kirkland	Section 28, Township 26N, Range 5E
6. Brickyard Station and Roadway Improvements	15530 Juanita Woodinville Way NE, Bothell	Section 17, Township 26N, Range 5E
7. Lynnwood City Center Transit Station BRT and Roadway Improvements	Lynnwood City Center: 20100 48th Avenue West, Lynnwood Roadway Improvements: Poplar Way/I-5 Interchange	Lynnwood City Center: Section 21, Township 27N, Range 4E Roadway Improvements: Sections 15 and 22, Township 27N, Range 4E

SOURCE: Sound Transit 2020

B ENVIRONMENTAL ELEMENTS

In response to all of the questions of Section B below, where specific project components are not referenced, the answer provided is intended to refer to all project components.

1. Earth

a. General description of the site: (underline one): flat, rolling, hilly, steep slopes, mountainous, other

The project component locations include a range of grades, from flat to steep. **Table 3** provides details for each project component.

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

For each project component, **Table 3** provides a general description of the existing topography and a description of slopes that are more than flat.

Table 3 I-405 BRT project components: Slopes

Project component	Topography	Description (% slope, location)
Burien Transit Center and Roadway Improvements	Flat; no steep slopes	
Tukwila International Boulevard BRT Station and Roadway Improvements	Steep slopes in areas	Approximately 33% slopes west of SR 99, between SR 99 Bridge and North Airport Expressway
South Renton Transit Center and Roadway Improvements	Flat; no steep slopes	
Bellevue Transit Center and Off-site Layover	Slight slopes in areas	<ul style="list-style-type: none"> • Bellevue Transit Center: Slopes approximately 5% to the east • Off-site layover: Slopes range from 2% to 3.5% to the east
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	Slight slopes in areas	<ul style="list-style-type: none"> • Totem Lake/Kingsgate Station: Slopes range from 1.5% to 3% • Kingsgate Park-and-Ride Garage: Flat
Brickyard Station and Roadway Improvements	Slight slopes in areas	Slopes range from approximately 2% to 3%
Lynnwood City Center Transit Station BRT and Roadway Improvements	BRT station improvements: Flat; no steep slopes	
	Roadway improvements: Steep slopes	Poplar Way roadway improvements: Approximately 15% to 50% slopes along roadway ditch, sloping northwest toward I-5

SOURCE: Sound Transit 2020

- 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 agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.**

The general geologic characteristics within the project corridor include Alluvium (Qa) and Pleistocene Continental Glacial Drift (Qgd), which encompass a wide range of deposits from soft organic-rich clayey silt, to very stiff sandy silt, to loose to dense sand and gravel, to dense to very dense silty sand to sandy gravel and may be interbedded with laminated clayey silt and silt (WSDOT 2018). Areas of Tertiary sedimentary rocks are also expected to exist in the study area.

There are no known agricultural lands or soils of long-term commercial significance in the project corridor (also see B.8).

For each project component, **Table 4** provides a description of the types of soils anticipated to exist at the sites.

Table 4 I-405 BRT project components: Types of soils

Project component	Types of soils
Burien Transit Center and Roadway Improvements	Younger glacial deposits of the Vashon till and Vashon recessional outwash deposits (Booth and Waldron 2004)
Tukwila International Boulevard BRT Station and Roadway Improvements	Younger glacial deposits of the Vashon till and Vashon recessional outwash deposits (Booth and Waldron 2004)
South Renton Transit Center and Roadway Improvements	Alluvium consisting of sand and gravel deposited by the Cedar River (Mullineaux 1965) Subsurface testing at the South Renton Transit Center site found loose to loose fill soils over alluvial soils primarily comprised of soft silts and loose sands (Sound Transit 2020f)
Bellevue Transit Center and Off-site Layover	Younger glacial deposits of the Vashon till deposits (Yount, Minard, and Dembroff 1993)
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	Vashon recessional outwash deposits (Yount, Minard, and Dembroff 1993) Subsurface testing at the Kingsgate Park-and-Ride site found medium dense to dense fill soils over dense to very dense advance outwash deposits (sand and gravel) over very stiff to hard fine-grained soils (glaciolacustrine) (Sound Transit 2020f)
Brickyard Station and Roadway Improvements	Vashon advanced outwash deposits (Yount, Minard, and Dembroff 1993)
Lynnwood City Center Transit Station BRT and Roadway Improvements	Primarily Vashon till deposits with a portion characterized by Vashon recessional outwash deposits (Smith 1974)

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

Burien Transit Center and Roadway Improvements

Geologically hazardous areas are defined in Burien Municipal Code 19.40.290 as areas that, because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to siting development due to public health and safety concerns. These areas include, but are not limited to, erosion hazard areas, landslide hazard areas, and seismic hazard areas.

No geologically hazardous areas are located within or in the immediate vicinity of the project component.

Tukwila International Boulevard BRT Station and Roadway Improvements

Areas of potential geologic instability are defined in Tukwila Municipal Code 18.45.100 as areas of potential erosion and landslide hazards.

Areas of potential geologic instability were mapped as occurring within the project component area with a moderate-to-high potential for landslide. These areas are located just north and south of the proposed location of the BRT station platforms along the edges of the SR 518 right-of-way, where the topography has a 33 percent slope.

South Renton Transit Center and Roadway Improvements

Geologically hazardous areas are defined in Renton Municipal Code 4.3.050 as areas with sensitive and protected slopes; medium, high, or very high landslide hazards; high erosion hazards; high seismic hazards; and medium or high coal mine hazards.

According to the City of Renton's mapping system, the site contains a potential high seismic hazard. Recent geotechnical borings conducted for the project indicate that liquefiable soils are present at this site. Denser soils were encountered below soils that are subject to liquefaction that are anticipated to provide adequate foundation support (Sound Transit 2020f).

Bellevue Transit Center and Off-site Layover

Geologically hazardous areas are defined in Bellevue Municipal Code 20.25H.120 as areas with landslide hazards, steep slopes, coal mine hazards, and seismic hazards.

No geologically hazardous areas are located within or in the immediate vicinity of the project component.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

Geologically hazardous areas are defined in Kirkland Zoning Code Chapter 85 as areas with landslide hazards, erosion hazards, and seismic hazards.

Geologically hazardous areas were mapped as occurring within the project component area with a medium or mixed liquefaction potential and moderate-to-high susceptibility for landslides. These areas are located within the footprint of the proposed Kingsgate Park-and-Ride Garage structure and I-405.

Although the City of Kirkland has mapped this project component in an area with a medium or mixed liquefaction potential, based on information from recent geotechnical borings conducted for the project, liquefaction at this site is unlikely (Sound Transit 2020f).

Brickyard Station and Roadway Improvements

Geologically hazardous areas are defined in Bothell Municipal Code 14.04.800 as areas susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard.

No geologically hazardous areas are located within or in the immediate vicinity of the project component.

Lynnwood City Center Transit Station BRT and Roadway Improvements

Geologically hazardous areas are defined in Lynnwood Municipal Code 17.10.100 as those areas that are naturally susceptible to geologic events such as landslides, seismic activity, and severe erosion.

No geologically hazardous areas are located within or in the immediate vicinity of the project component.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

For each project component, the sources of backfill materials are currently unknown and may include concrete, imported fill materials (e.g., for pavement subbase), and possibly excavated site materials if they are found suitable for backfilling purposes.

Burien Transit Center and Roadway Improvements

The estimated total construction area is approximately 152,000 square feet. The estimated net excavation and removal of soils, most of which is associated with the roadway improvements, is approximately 11,000 cubic yards. The work for this project component includes removal and reconstruction of concrete panels and pedestrian platforms at the transit center; asphalt overlay, new sidewalk, and removal of median islands within SW 148th Street; and new full-depth asphalt pavement and concrete median islands on SR 518. Other than materials for paving and pavement subbase, no fill is anticipated for this project component.

Tukwila International Boulevard BRT Station and Roadway Improvements

The estimated total construction area is approximately 225,000 square feet. The estimated quantity of soils that may be removed (for construction of the BRT station, pedestrian bridge stairs and elevator, stormwater detention facilities, and roadwork) is

approximately 66,000 cubic yards. Estimated fill amount is approximately 7,000 cubic yards, for a net excavation of approximate 59,000 cubic yards.

South Renton Transit Center and Roadway Improvements

The estimated total construction area is approximately 312,000 square feet. The estimated quantity of soils that may be removed (for construction of the transit loop facilities, park-and-ride garage structure, stormwater detention facilities, and roadwork) is approximately 42,000 cubic yards. Estimated fill amount is approximately 38,000 cubic yards, for a net excavation of 4,000 cubic yards.

Bellevue Transit Center and Off-site Layover

The estimated total construction area is approximately 5,000 square feet. The estimated quantity of soils that may be removed for new pavement and crosswalks is approximately 400 cubic yards. Other than materials for paving and pavement subbase, no fill is anticipated for this project component.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

No earthwork or ground disturbance would occur for the minor changes at the Totem Lake Station platforms.

The estimated construction area for the Kingsgate Park-and-Ride features is approximately 157,000 square feet. The estimated excavation/cut quantity for the Kingsgate Park-and-Ride Garage structure and stormwater detention facilities is approximately 45,000 cubic yards of soil, with an estimated fill amount of approximately 8,000 cubic yards, for a net excavation of 37,000 cubic yards.

Brickyard Station and Roadway Improvements

The estimated total construction area is approximately 1,500,000 square feet. The estimated quantity of soils that may be excavated/cut quantity for this project component is approximately 30,000 cubic yards of soil, with an estimated fill amount of approximately 8,500 cubic yards, for a net excavation of approximately 21,500 cubic yards. Other than materials for paving and pavement subbase, no fill is anticipated for this project component.

Lynnwood City Center Transit Station BRT and Roadway Improvements

The estimated total construction area is approximately 108,000 square feet. The estimated grading quantity for the roadwork (including stormwater drainage and ditches) is approximately 17,000 cubic yards of soil, with an estimated fill amount of approximately 1,000 cubic yards, for a total net excavation of 16,000 cubic yards.

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

During construction of each of the project components, minor and temporary soil erosion could occur as a result of clearing and grading, particularly during precipitation events. The Tukwila International Boulevard BRT Station and Roadway Improvements, South Renton Transit Center and Roadway Improvements, Totem Lake/Kingsgate Station and

Kingsgate Park-and-Ride Garage, Brickyard Station and Roadway Improvements, and Lynnwood City Center Transit Station BRT and Roadway Improvements project components would be subject to NPDES permit requirements, which would include measures to reduce potential erosion from open soils. All applicable regulations associated with the NPDES permits would be adhered to for these project components.

To reduce the potential for erosion, a Temporary Erosion and Sediment Control Plan would be prepared, implemented, and kept on-site for each project component. The potential for erosion would be further minimized by adherence to best management practices (BMPs) approved by the Washington State Department of Ecology (Ecology) and the appropriate city municipal code.

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

Burien Transit Center and Roadway Improvements

The majority of the area (approximately 90 percent) is already covered with impervious surfaces for the existing transit center, SW 148th Street roadway and sidewalks, and the SR 518 roadway. This project component would increase the impervious surfaces total by approximately 2,000 square feet for changes at the transit center and roadway widening along SW 148th Street. There would be no new impervious surfaces within the SR 518 right-of-way associated with this project component.

Tukwila International Boulevard BRT Station and Roadway Improvements

The majority of the area (approximately 90 percent) is already covered with impervious surfaces for the existing SR 518 roadway and ramps. This project component would add a total of approximately 72,000 square feet of new impervious surfaces.

South Renton Transit Center and Roadway Improvements

For the South Renton Transit Center site, the existing impervious surfaces total approximately 363,000 square feet, nearly 100 percent of the site. The proposed transit center design would add areas of open space and landscaping that would reduce the impervious surface areas on-site to approximately 287,000 square feet, a decrease of approximately 76,000 square feet.

For the roadway improvements, approximately 90 percent of the area is existing impervious surfaces. Along Rainier Avenue S, north of Grady Way SW, the roadway improvements would add approximately 9,000 square feet of new impervious surface, primarily through the removal of the center, vegetated median. Within the Grady Way SW right-of-way, which includes a strip of land north of the existing sidewalk that is currently paved, the existing condition has approximately 12,000 square feet of impervious surfaces. The project component would reduce the existing impervious surfaces to approximately 9,000 square feet by adding green space within the right-of-way north of the existing sidewalk, for a decrease of approximately 3,000 square feet. South of Grady Way SW, along Rainier Avenue S, the project component would not add new impervious surfaces. Therefore, the total net increase in impervious surfaces for the roadway improvements is approximately 6,000 square feet.

Bellevue Transit Center and Off-site Layover

For this project component (including the layover location), nearly 100 percent of the area is existing impervious surfaces. Small areas of pervious surfaces are associated with tree wells at the transit center and street trees along 110th Avenue NE in front of the off-site layover area. This project component would increase the existing impervious surfaces by approximately 100 square feet at the Bellevue Transit Center for re-angling and lengthening the existing transit center island. The off-site layover area would not add impervious surfaces.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

For the Totem Lake/Kingsgate Station, all of the existing area of the Totem Lake Freeway Station is comprised of impervious surfaces and there would be no increase in impervious surface at that location. Approximately 67 percent of the Kingsgate Park-and-Ride site is comprised of existing impervious surfaces, approximately 80,000 square feet. The site modifications for the Kingsgate Park-and-Ride Garage would replace approximately 7,000 square feet of impervious with pervious surface and remove the existing pervious landscaping (internal to the site in the vicinity of the new garage) and replace it with approximately 12,000 square feet of new impervious surface, for a net total of approximately 5,000 square feet of new impervious surface at the park-and-ride site.

Brickyard Station and Roadway Improvements

For this project component, most of the area (more than approximately 90 percent) is existing impervious surfaces for the I-405 roadway. This project component would increase the existing impervious surfaces total by approximately 170,000 square feet for roadway widening and new pavement on I-405 to accommodate the BRT station and bus-only lanes approaching and leaving the BRT station.

Lynnwood City Center Transit Station BRT and Roadway Improvements

For this project component, over 90 percent of the existing area is comprised of impervious surfaces. There would be no new impervious surfaces at the Lynnwood City Center transit station. For roadway widening to add the bus-only lane on Poplar Way and the Poplar Way on-ramp, the project component would add approximately 18,000 square feet of new impervious surfaces.

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

The following measures would be incorporated into the project during construction to minimize the potential for erosion:

- Implement a temporary erosion and sedimentation control plan with BMPs to prevent or minimize erosion and the potential for discharge of silt-laden runoff to nearby bodies of water. The plan would outline additional actions to achieve the intended environmental performance should any BMP not function as intended.
- Develop appropriate construction procedures to maintain or enhance slope stability in areas underlain by landslides or with landslide-prone geology (i.e. Tukwila

International Boulevard BRT Station and Roadway Improvements). The design through these areas would include suitable wall types, such as soldier piles with tiebacks, possibly supplemented with enhanced drainage, such as improved surface drainage or horizontal drains.

- If needed, and in accordance with applicable regulations, drain suspected or observed seepage (i.e. Tukwila International Boulevard BRT Station and Roadway Improvements) to reduce the risk of landslide and surface sloughing by using gravel drainage blankets, French drains, horizontal drains, placement of a surface rock facing, or other appropriate methods.

2. Air

The following discussion is presented for the project as a whole because air emissions are a regional concern, and the emissions are similar for all of the proposed project components.

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction of each project component is expected to last between 12 to 24 months, depending on the component.

Construction-related activities would result in short-term emissions of air pollutants from worker and construction vehicle exhaust (carbon monoxide, nitrogen oxides, volatile organic carbon, particulate matter, and a set of pollutants referred to as Mobile Source Air Toxics (MSATs). MSATs include the following nine compounds: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. Particulate matter could also be generated where soil would be disturbed with ground clearing and preparation, stockpiling of materials, and in the event that construction vehicles might track soil from sites onto area streets where other vehicles could stir up and release fugitive dust.

Construction activities are also likely to require temporary diesel-fired generators to provide power for electric equipment. Such generators would emit nitrogen oxides, carbon monoxide, particulate matter, and volatile organic carbon. If emergency generators are required at any facility during construction, the Puget Sound Clean Air Agency (PSCAA) would be consulted for the appropriate permit action. Disruption of traffic during construction (such as a temporary reduction of roadway capacity and increased queue lengths) could result in short-term, elevated concentrations of pollutants from slowed or idling vehicles.

During project operation, exhaust from buses and from personal vehicles accessing transit facilities would be a source of air pollutant emissions. As with vehicles used during construction, common air pollutants from vehicle exhaust are carbon monoxide, nitrogen oxides, volatile organic carbon, particulate matter, and MSATs. The project may increase localized air pollutant emissions at new transit facilities from vehicle trips generated by park-and-ride users, vehicles that pick up or drop off transit passengers, maintenance staff, and coach drivers. Regionally, the project would increase the number of daily bus trips by up to 192 per day. The project should also decrease the vehicle

miles traveled (VMT) due to passenger vehicles by attracting new riders to transit. The increased VMT associated with bus trips and decrease due to fewer personal vehicles on the roads would be a small percentage of the regional total VMT and was not quantified.

All of the project components are located in an area that is designated by the U.S. Environmental Protection Agency (EPA) as in attainment for all criteria pollutants. Due to this area's air quality status, a transportation conformity analysis is not required to demonstrate compliance with the EPA's National Ambient Air Quality Standards. The localized increases in vehicle activity from buses are not likely to cause or contribute to a potential exceedance of the National Ambient Air Quality Standards since the project is located in an area that is in attainment for all criteria air pollutants.

If emergency generators are required at any facility once in operation, PSCAA would be consulted for the appropriate permit action. Emergency combustion engines rated less than 500 hp are assumed to have a negligible contribution to pollutant emissions.

Greenhouse gas (GHG) emissions from construction of the new park-and-ride facilities were estimated using the Federal Transit Administration (FTA) Transit GHG Emissions Estimator (FTA 2018). The FTA tool was used to prepare a simplified estimate for the facilities associated with each of the proposed project components. Based on the total size of all new facilities and park-and-ride garages, 23,216 metric tons of carbon dioxide equivalent are expected to be emitted during construction of the project. GHG emissions from the facilities during operations would be negligible and limited to the energy required for lighting, electronic signage, and other electronic features.

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

There are no known off-site sources of emissions or odor that would affect the proposed project.

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

The PSCAA is responsible for enforcing air quality regulations in the Puget Sound region. The agency has developed fugitive dust regulations contained in Section 9.15 of Regulation 1 that would be followed during construction.

Sound Transit would prepare an Environmental Compliance Strategy Plan to track regulatory compliance and address air quality during construction activities. To reduce air emissions during construction, the project is anticipated to use a suite of best practices, including some of the following as appropriate:

- Spray exposed soil with water or other dust palliatives to reduce emissions and deposition of particulate matter.
- Cover all trucks transporting materials, wet materials in trucks, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce or avoid windblown deposition of particulate matter during transportation.

- Provide wheel washers to remove particulate matter that vehicles would otherwise carry off-site to decrease deposition of particulate matter on area roadways.
- Remove particulate matter deposited on paved, public roads to reduce mud and resultant windblown dust on area roadways.
- Route and schedule construction trucks to reduce delays to traffic during peak travel times to reduce secondary air quality impacts caused by a reduction in traffic speeds while waiting for construction trucks.
- Place quarry spall aprons where trucks enter public roads to reduce mud track-out.
- Require appropriate emission-control devices on all construction equipment powered by gasoline or diesel fuel to reduce carbon monoxide and nitrogen oxide emissions in vehicular exhaust.
- Use relatively new, well-maintained equipment to reduce carbon monoxide and nitrogen oxide emissions, and prohibit prolonged construction vehicle idling.
- Plant vegetative cover as soon as possible after grading to reduce windblown particulates in the area.

Implementation of the type of best practices above would reduce construction air emissions, and no further actions would be needed to address air emissions. Operation of the project would not result in negative impacts to air quality, and operational mitigation is not proposed.

3. Water

a. Surface Water:

- 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, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Based on critical area mapping available from local jurisdictions and fieldwork, surface-water bodies are present near a number of the project components, as shown in **Table 5**. The study areas for this analysis include locations where the ground would be disturbed (project footprint), either permanently or temporarily, as a result of one of the project components, as well as an area of 500-feet from the project footprint. Some of the surface-water features listed in **Table 5** are found outside of the study area and are included for context only.

Table 5 Nearest surface waters to project components

Project component	Nearest surface waters	Location	Fish Passage Barriers	Source
Burien Transit Center and Roadway Improvements	Lake Burien	South of SW 152nd Street, approximately 0.7 mile to the southwest	N/A	King County 2020
	Unnamed piped stream	SW 152nd Street and 1st Avenue S intersection, approximately 0.25 mile to the south	None	King County 2020
Tukwila International Boulevard BRT Station and Roadway Improvements	Gilliam Creek system	Gilliam Creek originates on the south side of the SR 518 eastbound on-ramp, is piped under SR 518, and flows east. Two Gilliam Creek tributaries (STU-1 and STU-2) were observed in the field and detailed below	WDFW #992651 (STU-1) WDFW #998886 (unnamed stream)	King County 2020; City of Tukwila 2013
South Renton Transit Center and Roadway Improvements	Rolling Hills Creek	400 feet southeast of the southern extent of the project footprint	None	City of Renton 2019
	Panther Creek wetland complex	South of the project footprint along the east side of Rainier Avenue S	N/A	City of Renton 2019
Bellevue Transit Center and Off-site Layover	Sturtevant Creek	East of I-405, approximately 0.3 mile east of the project footprint	None	King County 2020
	Unnamed wetland	Northwest corner of Main Street and 116th Avenue SE, approximately 0.8 mile southeast of the project footprint	N/A	King County 2020
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	North Juanita Creek tributary	116th Way NE and NE 132nd Street intersection, approximately 380 feet north of the project footprint	None	City of Kirkland 2019; King County 2019
	Wetlands associated with south Juanita Creek tributary	Along the unnamed tributaries to Juanita Creek, approximately 0.2 mile both to the north and to the south of the project footprint	N/A	U.S. Fish and Wildlife Service 2019

Project component	Nearest surface waters	Location	Fish Passage Barriers	Source
Brickyard Station and Roadway Improvements	Sammamish River	Flows east to west in the northern portion of the project footprint near the I-405/SR 522 interchange within the study area	None	City of Bothell 2020; City of Kirkland 2020; King County 2020
	Sammamish River tributaries	One begins near the NE 168th Street dead end and flows northwest under I-405, and the other begins between Cedar Park Church and I-405 flowing northwest; both are in the study area	None	City of Bothell 2020
	Juanita Creek	Flows east to west within the study area crossing under I-405 approximately 0.65 mile south of the Juanita Woodinville Way NE overpass	WDFW #998602	City of Bothell 2020; City of Kirkland 2020; King County 2020
	Juanita Creek tributary and associated wetlands	West of the Juanita Woodinville Way NE overpass; tributary flows south entering Juanita Creek just south of the 110th Avenue NE and NE 143rd Street intersection in the City of Kirkland	None	City of Kirkland 2020
	Isolated wetlands	East of I-405 near the Juanita Woodinville Way NE overpass	N/A	City of Bothell 2020
Lynnwood City Center Transit Station BRT and Roadway Improvements	Scriber Creek and associated wetlands	Immediately southwest of the Lynnwood City Center transit center parking area and Interurban Trail	None	City of Lynnwood 2016; Snohomish County 2019
	Scriber Creek left bank tributary and associated wetland	West side of the Lynnwood City Center parking area	None	City of Lynnwood 2016; Snohomish County 2019
	Poplar Creek	Piped under the residential area to the southwest near Birch Way	None	City of Lynnwood 2016; Snohomish County 2019
	Golde Creek	North to east of the project area	None	City of Lynnwood 2016; Snohomish County 2019

SOURCE: Environmental Science Associates, 2020

In the immediate vicinity of the project, surface-water bodies were found at only two project components. Additional information on these surface-water bodies is provided below.

Tukwila International Boulevard BRT Station and Roadway Improvements

Four wetlands and three streams were observed in the vicinity of the footprint⁵ of this project component.

Streams

Several streams occur in the Tukwila International Boulevard BRT Station and Roadway Improvements vicinity and form the headwaters of Gilliam Creek (Water Resource Inventory Area (WRIA) 09.0032), a tributary to the Duwamish/Green River (WDFW 2020). Several branches of Gilliam Creek occur to the south of the eastbound SR 518 on-ramp from Tukwila International Boulevard, where they combine and flow parallel to the ramp for approximately 350 feet before entering a 36-inch-diameter culvert. This culvert extends approximately 900 feet downstream (northeast) under the lower end of the SR 518 on-ramp and both the east and westbound lanes of SR 518 before discharging to a riparian corridor adjacent to SR 518 near 40th Avenue S (City of Tukwila 2013). Gilliam Creek then flows primarily through open stream channels on the north side of SR 518 for approximately 0.9 mile before entering a 54-inch-diameter culvert near 52nd Avenue S. This culvert flows for approximately 0.5 mile under the I-5/I-405 interchange and discharges to an area between the northbound I-5 off-ramp to eastbound I-405 and Tukwila Parkway. The creek then flows an additional 0.5 mile to the Green River. While these portions of Gilliam Creek are believed to contain suitable habitat for some anadromous salmonid species (particularly coho salmon, steelhead, and sea-run cutthroat trout), the lengthy culverts in the lower reaches, particularly the 0.5-mile-long culvert under the I-5/I-405 interchange, are considered complete barriers to fish passage (WDFW 2020). However, resident fish species (including resident trout) are likely to occur in the upstream portions of Gilliam Creek, and therefore are considered Type 2 (F) waters with a corresponding 100-foot buffer requirement per Tukwila Municipal Code (TMC) 18.45.100.C.

Two unnamed tributary streams to Gilliam Creek were found and surveyed in the Tukwila International Boulevard BRT Station and Roadway Improvements vicinity. These streams are located immediately south of SR 518, near 42nd Avenue S (Attachment A, Figure A-11). Both of these streams (STU-1 and STU-2) are located east of 42nd Avenue S. These tributary streams appear to originate from groundwater seeps from the hillside south of SR 518 and generally flow parallel to the highway to reach culverts. While the culvert outlets could not be determined, it is expected that they extend under the highway and eventually discharge to Gilliam Creek, which parallels the north side of the highway. The culverts are not fish passable, and no fish were observed in any of the surveyed reaches. However, both streams are conservatively assumed to be potential

⁵ For purposes of assessing impacts to surface water, the project component “footprint” includes the construction grading and disturbance limits.

fish-bearing waters (Type F) due to the apparent perennial flows and overall habitat characteristics and are allotted a 100-foot buffer per TMC 18.45.100.C.

Wetlands

Biologists identified, delineated, and estimated the boundaries of four wetlands (WTU-1, WTU-2, WTU-3, and WTU-4) within the vicinity of this project component footprint. The project clearing and grading limits were estimated after the wetlands were delineated. The clearing and grading limits showed that all wetlands, streams, and buffers were located outside of the project footprint and would not be impacted, so no formal survey of the delineations were completed. For this reason, the wetland boundaries are considered to be estimates. A conservative approach was taken to estimate wetland boundaries; no formal data plots were established.

Wetland characteristics, ratings, and applicable buffer distances for the four identified features are summarized in **Table 6**. The locations of these wetlands are shown in Attachment A, Figure A-11. Additional information on wetland characteristics (i.e., hydrology, soils, vegetation, and functions) is provided in the *I-405 BRT Corridor Ecosystems Resources and Wetland Delineation Technical Memorandum* (Attachment C).

Table 6 Wetland characteristics, rating, and applicable buffer distances in the Tukwila International Boulevard BRT Station and Roadway Improvements vicinity

Wetland name	Estimated wetland area in the project component vicinity (acres)	Hydro-geomorphic classification	Cowardin class ¹	Wetland location	Wetland category (2004) ²	Wetland category (2014) ³	Habitat score ³	Tukwila Municipal Code required standard buffer distances (feet)
WTU-1	0.02	Slope	PEM	West of 42nd Avenue S	IV	III	5	80
WTU-2	0.02	Depressional	PEM/PSS/PFO	East of 42nd Avenue S	III	III	5	80
WTU-3	2.0	Slope	PEM/PSS/PFO	East of 42nd Avenue S	IV	IV	6	50
WTU-4	0.01	Depressional	PEM	East of 42nd Avenue S	IV	IV	3	50

SOURCE: Environmental Science Associates, 2020

NOTES:

¹ PEM = palustrine emergent, PSS = palustrine scrub-shrub, PFO = palustrine forested.

² Based on 2004 Wetland Rating System for Western Washington (Hruby 2004) per TMC 18.45.080.B.

³ Based on 2014 Wetland Rating System for Western Washington (Hruby 2014) per revised TMC (currently under review by the City's Department of Community Development).

Brickyard Station and Roadway Improvements

WSDOT field data for critical areas in the vicinity of this component was relied on to determine likely impacts. Three wetlands and one stream (Juanita Creek) are located in the vicinity of the footprint of this project component. The locations of these wetlands are shown in Attachment A, Figure A-12. Additional information on wetland characteristics (i.e., hydrology, soils, vegetation, and functions) is provided in the *I-405 BRT Corridor Ecosystems Resources and Wetland Delineation Technical Memorandum* (Attachment C).

Streams

Juanita Creek is mapped flowing east to west within the study area crossing under I-405 approximately 0.65-mile south of the Juanita Woodinville Way NE overpass and into the north end of Lake Washington (City of Bothell 2020; City of Kirkland 2020; King County 2020). A tributary to Juanita Creek begins within the wetland complex west of the Juanita Woodinville Way NE overpass (described below). The tributary flows south entering Juanita Creek just south of the 110th Avenue NE and NE 143rd Street intersection in the City of Kirkland (City of Kirkland 2020).

Wetlands

Three Category III wetlands, totaling 0.45 acre, have been delineated (**Table 7**). Wetland 21.94R is located along Juanita Creek, east of where the stream crosses underneath I-405 and along the northbound lanes of I-405. Wetland 22.11R is approximately 850 feet north of Wetland 21.94R, adjacent to the northbound lanes of I-405. Wetland 22.24L is located west of I-405 and approximately 500 feet south of the Brickyard Park-and Ride. The locations of these wetlands are shown in Attachment A, Figure A-12.

Table 7 Wetland characteristics, rating, and applicable buffer distances in the Brickyard Station and Roadway Improvements vicinity

Wetland	Wetland classification/rating					Total wetland size (acres)	Wetland size in the project component vicinity (acres)	Buffer distance (feet) ⁴
	Cowardin ¹	Hydrogeomorphic classification	Ecology rating ²	Local jurisdiction	Local jurisdiction rating ³			
21.94R	PSS/PFO	Riverine	III	Kirkland	III	0.32	0.30	105
22.11R	PSS	Depressional	III	Kirkland	III	0.07	0.00	60
22.24L	PSS/PFO	Depressional	III	Bothell	III	4.88	0.15	75
Total						5.27	0.45	–

SOURCE: WSDOT, 2020a

NOTES:

¹ PEM = palustrine emergent, PSS = palustrine scrub-shrub, PFO = palustrine forested.

² Based on 2014 Wetland Rating System for Western Washington (Hruby 2014) per Kirkland Wetlands Ordinance described in Kirkland Zoning Code (KZC) Table 90.551 and City of Bothell Wetlands Ordinance described in Bothell Municipal Code (BMC) 14.04.500.B

³ Wetlands rated according to City of Kirkland Wetlands Ordinance described in KZC 90.55 and City of Bothell Wetlands Ordinance described in BMC 14.04.500.

⁴ Wetland buffer width according to City of Kirkland Wetlands Ordinance described in KZC 90.55 and City of Bothell Wetlands Ordinance described in BMC 14.04.530(F)1.

Two of the wetlands (Wetland 22.11R and Wetland 22.24L) have hydrogeomorphic (HGM) classifications of depressional; the third (Wetland 21.94R) has a riverine HGM classification. All three wetlands are regulated by the U.S. Army Corps of Engineers and Ecology. **Table 7** identifies the total wetland size and provides a summary of the wetland classification/rating by system: HGM, Ecology, and local jurisdiction.

- 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.**

The project would require work within 200 feet of the wetland and stream features at the Tukwila International Boulevard BRT Station and Roadway Improvements and the Brickyard Station and Roadway Improvements project components (see **Table 6** and **Table 7**). No in-water or over-water work is proposed, and thus, no direct impacts are expected at either location.

- 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 temporary or permanent fill of wetlands or streams is anticipated as a result of the project.

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

No temporary or permanent withdrawals or diversions of streams are anticipated as a result of the project.

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

The only project component that intersects with a 100-year floodplain is the South Renton Transit Center and Roadway Improvements. A portion of the 100-year floodplain is mapped by King County as occurring on the south side of S Grady Way, immediately south of the proposed South Renton Transit Center. This area was likely historically associated with Panther Creek and the Black River floodplain. It is within the planned paving extent for the new bus-on-shoulder lane and is currently developed with commercial buildings and associated parking lots.

- 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.**

Other than potential contaminants in stormwater runoff discussed in response to Sections B.3.c and d below, the project would not involve discharges of waste materials to surface waters at any location.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

No, the project would not withdraw groundwater from a well for drinking water or another purpose at any project component.

Water, which may be used for the purposes of maintenance or landscaping at any facility (from a standpipe or related outdoor water supply point) would drain into the storm drain systems with appropriate treatment as required by the adopted stormwater management code and manual for the jurisdiction where the feature is located. See **The stormwater** management for the different project components would be implemented and designed per the adopted stormwater management code and manual for the jurisdiction where the feature is located. These requirements cover drainage design for sites that require flow control and water quality treatment facilities and sites that do not. For project components that impact runoff from both the local jurisdiction and from WSDOT areas, the portion of the area within WSDOT would be subject to the requirements in WSDOT's Highway Runoff Manual (2019), whereas other portions would be subject to the local jurisdiction's manual. See **Table 9** for a summary of where water quality treatment and flow control facilities are required, as well as the applicable stormwater manual. In addition to these facilities, flow control BMPs would be implemented such as amending planting material per the stormwater management requirements. For all project components, the drainage system downstream would be assessed for handling the project drainage with a Downstream Analysis meeting the applicable manual(s).

Table 9 for a summary of stormwater manuals referenced for the project components.

Water used "indoors" (for utility sinks, bathroom sinks, or toilets, if provided at any of the project components) would drain into the sanitary sewer system.

At the South Renton Transit Center, which is located within the Cedar Valley Sole Source Aquifer, water not discharged to a sanitary sewer would comply with City of Renton's measures specifically aimed at protecting the aquifer.

- 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.**

Other than potential stormwater infiltration described above, no waste material would be discharged into the ground from septic tanks or other sources. No septic tanks would be installed as part of the project.

The Phase II Environmental Site Assessment conducted at the South Renton Transit Center site (Shannon & Wilson, Inc. 2018) noted chemical contamination on-site, primarily petroleum, within soils and groundwater. Prior to construction, Sound Transit

would develop procedures for all project areas at the South Renton Transit Center to identify, characterize, manage, handle, store, and dispose of contaminated soil and groundwater that could be encountered during construction activities. Sound Transit would continue the ongoing coordination with Ecology for site cleanup and construction at the site. See Section B.7.a for additional information.

c. Water runoff (including stormwater):

1) Describe the 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.

Burien Transit Center and Roadway Improvements

Sources of runoff for this project component would be the same as currently occurs on this developed site with stormwater runoff occurring from sidewalks, roadways, and landscaped areas at the transit center and along SW 148th Street and SR 518. Currently, stormwater from the transit center is collected in catch basins and the piped conveyance network flows south through the transit center site to SW 150th Street. Runoff from SW 148th Street is collected and conveyed in a piped system that flows through the parcels south of SW 148th Street to SW 150th Street and converges within a quarter mile of the flows leaving the transit center. Runoff from SR 518 flows south within the WSDOT SR 509 right-of-way through both roadside ditches and a piped conveyance network. Runoff from the proposed project improvement areas would continue to be collected through catch basins and roadside ditches that tie into the existing storm drainage conveyance systems.

This project component is located in WRIA 9: Duwamish – Green within the Miller Creek drainage basin and eventually all stormwater discharge goes to Miller Creek.

Tukwila International Boulevard BRT Station and Roadway Improvements

Sources of runoff related to this project component include SR 518 and associated ramps, a pedestrian bridge crossing SR 518, and a new BRT station, along with the associated pedestrian access improvements. Runoff through the corridor sheet flows to catch basins and roadside ditches and is collected in a piped conveyance network. Runoff from the proposed project component would be conveyed to existing piped storm drainage and conveyance systems. To minimize the number of flow control facilities, a detention pond would be located adjacent to the SR 518 off-ramp. An existing conveyance system along the north side of SR 518 would be modified and directed to the proposed stormwater detention pond to meet flow control requirements.

After routing stormwater runoff through the detention facility, stormwater would be reconnected to the existing conveyance system along the north side of SR 518. This system extends east from the intersection about 1,700 feet before discharging to a short section of rock-lined channel that connects to Gilliam Creek. The Gilliam Creek Basin is a tributary of the Green River and is within WRIA 9 – Green/Duwamish Watershed.

South Renton Transit Center and Roadway Improvements

Sources of runoff for this project component include the proposed new transit center, which includes a multi-story park-and-ride garage, sidewalk improvements, and roadway improvements. Sidewalk and roadway improvements would be made to Lake Avenue S, Rainier Avenue S, and S Grady Way. Runoff from the transit center parcels is currently collected and conveyed to a storm system within Rainier Avenue S. This system crosses Rainier Avenue S north of S Grady Way and conveys flow to Springbrook Creek. Runoff from the proposed project component would be conveyed to existing piped storm drainage and conveyance systems.

Runoff from S Grady Way is collected and conveyed south to Rolling Hills Creek through privately owned parcels south of S Grady Way. Rainier Avenue S has two drainage basins. North of S Grady Way, runoff from Rainier Avenue S is directed to Springbrook Creek and south of S Grady Way runoff is directed to Rolling Hills Creek. This project component is located in the Green River subwatershed within WRIA 9: Duwamish – Green.

Bellevue Transit Center and Off-site Layover

Sources of runoff for this project component would include flows from the same areas as currently occurs—sidewalk and roadway areas in the transit center and layover areas. Existing runoff is collected via catch basins and flows to a piped conveyance system and would continue to be conveyed to existing storm drainage conveyance systems. Runoff from the proposed project component would be conveyed to existing piped storm drainage and conveyance systems. Runoff in this area flows to the Sturtevant Creek drainage basin. This project component is located in the Lake Washington-Sammamish River subwatershed within WRIA 8: Cedar – Sammamish.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

Sources of runoff for this project component would include the proposed park-and-ride garage, driveway, and sidewalk areas at the existing Kingsgate Park-and-Ride site and the existing Totem Lake bus stops on the direct access ramps.

The existing Kingsgate Park-and-Ride surface lot has a WSDOT stormwater detention pond in the southeast corner of the site. The pond outlets to a piped conveyance network that collects runoff from the park-and-ride lot and directs it north to a storm drain system within NE 132nd Street, which eventually discharges to Juanita Creek. Runoff from the proposed park-and-ride garage, driveway, and sidewalk would be detained in a new stormwater detention pond, constructed in the southeast corner of the site in the location of the existing detention pond, and directed north within a pipe system along 116th Avenue NE. The existing WSDOT detention pond would be removed and replaced with a new underground detention vault located north of the garage, within a portion of the surface park-and-ride lot. The new detention vault would drain to the existing pipe system within the park-and-ride lot.

The runoff from the proposed BRT station on the existing direct access ramps is collected and conveyed within a piped system that flows within I-405 WSDOT right-of-way to the south and leaves the WSDOT right-of-way near NE 124th Street. The project component improvements at the BRT station do not trigger detention. This

system also feeds into Juanita Creek. This project component is located within the Lake Washington-Sammamish River subwatershed within WRIA 8: Cedar – Sammamish.

Brickyard Station and Roadway Improvements

Sources of runoff related to the project would include I-405 and associated ramps, a pedestrian bridge crossing the highway, and a new BRT station, along with the associated pedestrian access improvements. Portions of the stormwater runoff would be drained to existing conveyance systems located on both sides of I-405. Other portions, such as roof runoff from the pedestrian bridge, would be collected and piped to these existing conveyance systems. Flow control and water quality treatment would be provided as required by WSDOT's *Highway Runoff Manual* (WSDOT 2019), and stormwater facilities would ultimately tie into the existing conveyance systems. Runoff in this area flows to Juanita Creek. This project component is located within the Lake Washington-Sammamish River subwatershed within WRIA 8: Cedar – Sammamish.

Lynnwood City Center Transit Station BRT and Roadway Improvements

Sources of runoff associated with these improvements would include roadway modifications along Poplar Way and the on-ramp to the I-5 northbound lanes and paved pedestrian areas at the transit center. Runoff from the proposed project component would be conveyed to existing piped storm drainage and conveyance systems. Drainage flow paths for the Poplar Way on-ramp and Poplar Way primarily flows to the southwest and eventually to Golde Creek. The transit center is within the Scriber Creek drainage basin. This project component is located within the Swamp Creek subwatershed within WRIA 8: Cedar – Sammamish.

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

For all of the project components, waste material associated with vehicular traffic (i.e. tire dust and oil) could be picked up and transported by stormwater. Such wastes would be treated as required by local stormwater management codes for water quality treatment. If infiltration is incorporated as a stormwater management element, treatment would be provided as required by local current adopted codes prior to discharge to groundwater. During construction, temporary erosion control and dewatering measures, where needed, would be implemented to manage runoff and groundwater so as to not have sediment-laden water entering the stormwater system downstream of the limits of disturbance. See also response to Section B.7.a for information on management of on-site contamination.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

As noted in Section B.1.g and shown in **Table 8**, each project component would include some increase or decrease to the existing amount of impervious surfaces. However, for each project component, the existing drainage patterns from stormwater runoff would remain within the same drainage basin and would use the same drainage patterns, including connecting to the existing drainage system, unless upgrades are required for capacity and/or to lower the existing drainage system to provide positive gravity flow.

Table 8 Summary of new or reduced impervious surface area by project component

Project component	Approximate new or reduced impervious surface area (in square feet (sf))
Burien Transit Center and Roadway Improvements	2,000 sf increase
Tukwila International Boulevard BRT Station and Roadway Improvements	72,000 sf increase
South Renton Transit Center and Roadway Improvements	Transit center site: 76,000 sf decrease Roadway improvements: 6,000 sf increase
Bellevue Transit Center and Off-site Layover	100 sf increase
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	5,000 sf increase
Brickyard Station and Roadway Improvements	170,000 sf increase
Lynnwood City Center Transit Station BRT and Roadway Improvements	18,000 sf increase

SOURCE: Sound Transit 2020

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

Project construction activities would be subject to construction-related stormwater permit requirements of the Clean Water Act's National Pollutant Discharge Elimination System program. Specific regulatory requirements for this type of project are provided in the Western Washington Phase II Municipal Stormwater Permit, the Construction Stormwater General Permit, and the various city and county adopted surface water design manuals. A stormwater and pollution prevention plan would be prepared identifying BMPs to prevent or minimize the introduction of contaminants into surface waters and groundwater during construction activities. BMPs for the project could include, but not be limited to, silt fencing, straw bale barriers, fiber rolls, storm drain inlet protection, hydraulic mulch, street sweeping, and a stabilized construction entrance. The stormwater and pollution prevention plan will also include development of site-specific structural and operational BMPs to prevent and control impacts on runoff quality, measures to be implemented before each storm event, inspection and maintenance of BMPs, and monitoring of runoff quality by visual and/or analytical means. As noted in Section B.2.c, Sound Transit would also prepare an Environmental Compliance Strategy Plan to help track regulatory compliance through project construction. With implementation of best practices to prevent or minimize the introduction of contaminants into surface waters during construction activities, impacts would not be adverse.

The stormwater management for the different project components would be implemented and designed per the adopted stormwater management code and manual for the jurisdiction where the feature is located. These requirements cover drainage design for sites that require flow control and water quality treatment facilities and sites that do not. For project components that impact runoff from both the local jurisdiction and from WSDOT areas, the portion of the area within WSDOT would be subject to the requirements in WSDOT's Highway Runoff Manual (2019), whereas other portions would be subject to the local jurisdiction's manual. See **Table 9** for a summary of where water quality treatment and flow control facilities are required, as well as the applicable stormwater manual. In addition to these facilities, flow control BMPs would be implemented such as amending planting material per the stormwater management requirements. For all project components, the drainage system downstream would be assessed for handling the project drainage with a Downstream Analysis meeting the applicable manual(s).

Table 9 Stormwater management facilities summary

Project component	Stormwater manual	Water quality treatment facility proposed	Flow control facility proposed
Burien Transit Center and Roadway Improvements	King County Surface Water Design Manual ¹	No ²	No ²
Tukwila International Boulevard BRT Station and Roadway Improvements	WSDOT Highway Runoff Manual	Yes	Yes
South Renton Transit Center and Roadway Improvements	Renton Stormwater Design Manual ¹	Yes	Yes
Bellevue Transit Center and Off-site Layover	Department of Ecology's Stormwater Management Manual for Western Washington ³	No ²	No ²
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	Kirkland Amendment to King County Surface Water Design Manual ¹	Yes	Yes
Brickyard Station and Roadway Improvements	WSDOT Highway Runoff Manual	Yes	Yes
Lynnwood City Center Transit Station BRT and Roadway Improvements	Department of Ecology's Stormwater Management Manual for Western Washington ¹	Yes	Yes

SOURCE: Sound Transit 2020

NOTES:

¹ WSDOT Highway Runoff Manual applies to segment in WSDOT right-of-way

² Existing facilities are sufficiently sized

³ As amended by the City of Bellevue Storm and Surface Water Standards (2019)

4. Plants

Trees at project component locations were evaluated. For areas outside of WSDOT right-of-way, trees were classified based on the local jurisdiction's definitions, if applicable. Trees identified within WSDOT right-of-way were classified per the WSDOT *Roadside Policy Manual* (2015) as:

- **Category 1:** Mature, old-growth, large specimen, or heritage trees greater than 30 inches in diameter
- **Category 2:** Moderate-sized trees (excluding alder [*Alnus rubra*] and cottonwood [*Populus balsamifera*]) between 4 and 30 inches in diameter

Category 3 trees, as defined by WSDOT, were not part of this assessment.

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

Burien Transit Center and Roadway Improvements

- ☒ deciduous tree: red alder, bigleaf maple, red maple
- ☒ evergreen tree: Douglas fir
- ☒ shrubs: landscape shrubs
- ☒ grass
- ☐ pasture: N/A
- ☐ crop or grain: N/A
- ☐ orchards, vineyards or other permanent crops.: N/A
- ☐ wet soil plants: N/A
- ☐ water plants: N/A
- ☒ other types of vegetation: Himalayan blackberry

This project component is located in a highly developed urban environment that is primarily buildings and roads. West of 1st Avenue S, little vegetation is present and is limited to street trees and commercial landscaping along SW 148th Street to the Burien Transit Center. East of 1st Avenue S, forested areas occur at the SW 148th Street and SR 509 on- and off-ramp intersection east and west of SR 509. These forested areas consist of bigleaf maple, Douglas fir, and various street trees with an understory dominated by Himalayan blackberry.

Burien Municipal Code 19.10.493 defines an existing tree to be "significant" if it is healthy and with a diameter at breast height of at least 6 inches. No trees meeting this definition were observed in the Burien Transit Center and Roadway Improvements project component area in City of Burien right-of-way. Within WSDOT right-of-way, no trees were identified that meet WSDOT's Category 1 or 2 standards.

Tukwila International Boulevard BRT Station and Roadway Improvements

- ☒ deciduous tree: bigleaf maple, willow, red alder, vine maple, Oregon ash, black cottonwood
- ☒ evergreen tree: Douglas fir, western red cedar
- ☒ shrubs: salmonberry, Pacific ninebark, cherry laurel
- ☒ grass: reed canarygrass, velvet grass
- ☐ pasture: N/A
- ☐ crop or grain: N/A
- ☐ orchards, vineyards or other permanent crops.: N/A
- ☒ wet soil plants: cattail, soft rush, giant horsetail
- ☐ water plants: N/A
- ☒ other types of vegetation: Himalayan blackberry, English holly

Most of this project component is located in a highly developed urban environment that is primarily commercial and residential buildings and roads. There is a relatively undisturbed vegetated corridor at the eastern end of the project component area that is approximately 42 acres in area, located upslope to the south of SR 518, from 42nd Avenue S to just west of the 51st Avenue S/Klickitat Drive merge. This forested area contains bigleaf maple, Douglas fir, various willow species, and an understory of a mix of native and non-native shrubs and herbaceous vegetation. The vegetated corridor contains multiple streams and wetlands, as discussed in Section B.3.a.

Using WSDOT's standards, eight Category 2 trees (between 4 and 30 inches in diameter) were observed within WSDOT right-of-way. Based on aerial imagery, an estimated two additional Category 2 trees appear to be present within the project component area, also within WSDOT right-of-way.

South Renton Transit Center and Roadway Improvements

- ☒ deciduous tree: red maple
- ☐ evergreen tree: N/A
- ☒ shrubs: landscape shrubs
- ☒ grass:
- ☐ pasture: N/A
- ☐ crop or grain: N/A
- ☐ orchards, vineyards or other permanent crops.: N/A
- ☐ wet soil plants: N/A
- ☐ water plants: N/A
- ☒ other types of vegetation: Himalayan blackberry

This project component is located in a highly developed urban environment that is primarily buildings and roads. Little vegetation is present and is limited to street trees and landscaping along Rainier Avenue S and S Grady Way.

While the City of Renton currently does not have a tree protection code or a definition of what the City considers to be a “significant” tree, trees 4 inches or greater in diameter were identified, consistent with WSDOT’s definition of a Category 2 tree. A total of 14 trees with a diameter greater than 4 inches were observed within the city’s right-of-way. Based on aerial imagery, an additional estimated 20 Category 2 trees appear to be present within the project component study area within WSDOT right-of-way.

Bellevue Transit Center and Off-site Layover

- ☒ deciduous tree: Alder
- ☐ evergreen tree: N/A
- ☐ shrubs: N/A
- ☐ grass: N/A
- ☐ pasture: N/A
- ☐ crop or grain: N/A
- ☐ orchards, vineyards or other permanent crops.: N/A
- ☐ wet soil plants: N/A
- ☐ water plants: N/A
- ☒ other types of vegetation: N/A

This project component is located in a highly developed urban environment that primarily consists of buildings and roads. Little vegetation is present and is limited to street trees and landscaping along the Bellevue Transit Center access road and along both sides of 110th Avenue NE at the off-site layover area. Bellevue Municipal Code Section 20.50.046 defines a “significant” tree as being at least 8 inches in diameter, measured 4 feet above the existing grade. No trees meeting this definition were observed.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

- ☒ deciduous tree: bigleaf maple
- ☒ evergreen tree: Douglas fir
- ☒ shrubs: landscape shrubs
- ☒ grass:
- ☐ pasture: N/A
- ☐ crop or grain: N/A
- ☐ orchards, vineyards or other permanent crops.: N/A
- ☐ wet soil plants: N/A
- ☐ water plants: N/A
- ☐ other types of vegetation: N/A

This project component is located in a highly developed urban environment that is primarily buildings, roads, and the existing Kingsgate Park-and-Ride lot. Vegetation is limited to street trees and landscaping along 116th Avenue NE. Within and surrounding the park-and-ride, large, established coniferous trees, such as Douglas fir, are also present.

Using the City of Kirkland's "significant" tree code (Kirkland Zoning Code 95.10.14), a total of 15 "significant" trees were observed in the Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage project component area. Using WSDOT's standards, all 15 of these trees are Category 2 trees (between 4 and 30 inches in diameter). Based on aerial imagery, an additional estimated two significant/Category 2 trees appear to be present within the project component area.

Brickyard Station and Roadway Improvements

- ☒ deciduous tree: alder, maple, aspen, other
- ☒ evergreen tree: fir, cedar, pine, other
- ☒ shrubs: landscape shrubs
- ☒ grass:
- ☐ pasture: N/A
- ☐ crop or grain: N/A
- ☐ orchards, vineyards or other permanent crops.: N/A
- ☒ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- ☐ water plants: water lily, eelgrass, milfoil, other
- ☐ other types of vegetation: N/A

This project component area is primarily located in a highly developed urban environment that consists primarily of buildings and roads. As noted below, some portions include forested habitat, based on aerial imagery.

Aerial imagery shows that two forested habitat patches exist on each side of I-405 on the north end of the study area, from the I-405/SR 522 interchange south to the NE 160th Street exit. These forested patches appear to contain Category 2 trees, as defined by WSDOT, primarily large deciduous and coniferous trees, such as Douglas fir and bigleaf maple.

Lynnwood City Center Transit Station BRT and Roadway Improvements

- ☒ deciduous tree: bigleaf maple, poplar, red alder
- ☐ evergreen tree: N/A
- ☒ shrubs: landscape shrubs, Scotch broom
- ☒ grass:
- ☐ pasture: N/A
- ☐ crop or grain: N/A
- ☐ orchards, vineyards or other permanent crops.: N/A
- ☐ wet soil plants: N/A
- ☐ water plants: N/A
- ☐ other types of vegetation: Himalayan blackberry

This project component is located in a highly developed urban environment that consists primarily of buildings and roads. Little vegetation is present and is limited to street trees and landscaping. Within the project footprint of the Poplar Way roadway improvements, the existing vegetation is primarily grass interspersed with native and non-native grasses and shrubs. Based on aerial imagery, and using WSDOT standards, an estimated 15 Category 2 trees (between 4 and 30 inches in diameter) may be present within WSDOT right-of-way within this area of the project component in a location that would likely be used for construction staging.

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

Vegetation impacts for each project component are discussed below and summarized in **Table 10**.

Burien Transit Center and Roadway Improvements

No trees are planned to be removed for construction of this project component. However, within the City of Burien's jurisdiction, approximately 0.3-acre of some grasses and shrubs would be removed or altered from within the Burien Transit Center and to accommodate road improvements, such as the vegetated raised island within the median of SW 148th Street. Some vegetation has been estimated to be altered temporarily for construction staging areas. These temporarily disturbed areas would be restored once construction is complete.

Tukwila International Boulevard BRT Station and Roadway Improvements

It is currently estimated that all 10 Category 2 trees identified within WSDOT right-of-way would be removed for this project component. Approximately 2 acres of vegetation would be cleared and grubbed in front of the existing Link light rail station for pedestrian bridge construction and construction staging. Vegetation in this area is a mix of trees, shrubs, and grasses. Areas temporarily disturbed for construction staging would be restored once construction is complete.

Additional clearing of vegetation would occur along the roadside of SR 518 to accommodate the eastbound bus-only lane in areas that are predominantly grasses interspersed with some trees and shrubs. All vegetation removal would occur in the WSDOT right-of-way.

South Renton Transit Center and Roadway Improvements

It is currently estimated that the 34 trees identified would be removed for this project component. Fourteen of the trees anticipated for removal are landscaped street trees along S Grady Way and Rainier Avenue S, within the City of Renton's right-of-way. Twenty trees are Category 2 trees within WSDOT's right-of-way for Rainier Avenue S (SR 167). Additionally, approximately 0.3-acre of vegetation removal could occur within a proposed construction staging area near the I-405 on- and off-ramps for construction of the bus-on-shoulder along Rainier Avenue S. These temporarily disturbed areas would be restored once construction is complete. This area is located within the WSDOT right-of-way and is primarily grasses and Himalayan blackberry.

Bellevue Transit Center and Off-site Layover

No vegetation removal is proposed for this project component as all proposed work would be within already paved areas.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

It is currently estimated that all 17 trees defined as "significant" by Kirkland's code, that are also Category 2 trees as defined by WSDOT, would be removed for this project component. All trees anticipated for removal are Category 2 Douglas firs located in interior planting strips or on the perimeter of the existing Kingsgate Park-and-Ride lot. Four additional trees may be removed from the northern portion of the park-and-ride lot for construction staging. An additional 0.3-acre of grasses would be cleared for construction staging and improvements to the existing stormwater detention pond. Since this site is considered to be WSDOT right-of-way, all vegetation removal at this site would occur in WSDOT right-of-way; although City of Kirkland requirements may also be applied at the Kingsgate site, if WSDOT agrees. Vegetation disturbed for staging areas during construction would be restored once construction is complete.

Brickyard Station and Roadway Improvements

Vegetation removal would occur where the I-405 roadway would be widened and the pedestrian bridge would be constructed, as well as areas used for construction staging. All vegetation removal would occur in WSDOT right-of-way. These areas are a mixture of grasses, trees, and shrubs. Exact areas are not known at this time, but vegetation

removed would be expected to include some mature and newly planted native trees, including Douglas fir and bigleaf maple. Vegetation disturbed for staging areas during construction would be restored once construction is complete.

Lynnwood City Center Transit Station BRT and Roadway Improvements

Work within the transit center would be done within existing paved areas and would not remove existing vegetation.

Along Poplar Way approximately 0.7 acre of grasses and shrubs would be removed within City of Lynnwood right-of-way for road improvements. Along the I-5 ramp, within WSDOT right-of-way, approximately 0.6-acre of grasses and shrubs and an estimated 15 Category 2 trees would be removed for construction staging. Vegetation disturbed for staging areas during construction would be restored once construction is complete and trees would be replaced in compliance with WSDOT's *Roadside Policy Manual* (2015).

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

No threatened or endangered plant species are known to be on or near project components.

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

For each project component, **Table 10** summarizes the vegetation and trees that would be removed. The majority of trees and vegetation that would be removed are within WSDOT right-of-way for SR 518, Rainier Avenue S (SR 167), I-405, and I-5. Trees removed within WSDOT right-of-way would be replaced in compliance with WSDOT's *Roadside Policy Manual* (WSDOT 2015). For Category 2 trees, WSDOT's manual requires a 1-gallon replacement tree for each 1 inch of trunk diameter that is removed. Other landscaping within WSDOT right-of-way would be replaced as needed, in compliance with the *WSDOT Roadside Policy Manual* (WSDOT 2015).

Mitigation for trees that would be removed within local jurisdictions would be provided in compliance with the requirements of the jurisdiction in which the removal occurs (Renton and Kirkland). In addition, at the transit centers and Kingsgate Park-and-Ride Garage, improvements would include landscaping as appropriate and as required by the individual jurisdictions in which they are located.

Table 10 Estimated vegetation and tree removal by project component

Project component	Vegetation removed	Estimated number of trees removed (locally significant or WSDOT standards)	Jurisdiction	Jurisdictional tree protection regulations ¹
Burien Transit Center and Roadway Improvements	Grasses, shrubs	0	N/A	N/A
Tukwila International Boulevard BRT Station and Roadway Improvements	Grasses, shrubs, Category 2 trees	10	WSDOT	WSDOT Roadside Policy Manual
South Renton Transit Center and Roadway Improvements	Grasses, shrubs, Category 2 street trees	34	City of Renton and WSDOT	Renton ² WSDOT Roadside Policy Manual
Bellevue Transit Center and Off-site Layover	None	0	N/A	N/A
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	Grasses, shrubs, significant Douglas fir trees	17	City of Kirkland and WSDOT	KZC 95.10.14 and WSDOT Roadside Policy Manual
Brickyard Station and Roadway Improvements	Grasses, shrubs, Category 2 trees ³	Unknown ³	WSDOT	WSDOT Roadside Policy Manual
Lynnwood City Center Transit Station BRT and Roadway Improvements	Grasses, shrubs, Category 2 trees	15	City of Lynnwood and WSDOT	LMC 17.15.080 and WSDOT Roadside Policy Manual

SOURCE: Sound Transit 2020

NOTES:

¹ Specific tree replacement requirements for local jurisdictions can be found in Attachment C, *I-405 BRT Corridor Ecosystems Resources and Wetland Delineation Technical Memorandum*.

²The City of Renton currently does not have a tree protection code or a definition of what the city considers to be a “significant” tree. Prior to removing a tree, coordination with the City of Renton’s Urban Forestry and Natural Resource Manager is required. During field efforts in Renton, trees 4 inches or greater in diameter at breast height were identified, consistent with WSDOT’s definition of a Category 2 tree.

³Clearing and grading limits have not been provided by WSDOT, so exact areas are not yet known. As clearing and grading limits are provided, vegetation impacts in these areas will be re-evaluated.

e. List all noxious weeds and invasive species known to be on or near the site.

Burien Transit Center and Roadway Improvements

According to King County Interactive Mapping (iMap) noxious weed survey data, giant hogweed (*Heracleum mantegazzianum*), Dalmatian toadflax (*Linaria dalmatica*), spotted knapweed (*Centaurea stoebe*), and diffuse knapweed (*Centaurea diffusa*) are mapped as occurring near this project component. Additional noxious weeds including Himalayan blackberry (*Rubus armeniacus*) and reed canarygrass (*Phalaris arundinacea*) were observed during site visits.

Tukwila International Boulevard BRT Station and Roadway Improvements

King County iMap noxious weed survey data shows tansy ragwort (*Senecio jacobaea*) and spotted knapweed as occurring within this project component area. Additional noxious weeds observed during site visits include reed canarygrass and Himalayan blackberry.

South Renton Transit Center and Roadway Improvements

King County iMap noxious weed survey data shows meadow knapweed (*Centaurea jacea*), purple loosestrife (*Lythrium salicaria*), diffuse knapweed, and spotted knapweed as occurring within this project component area. Scotch broom (*Cytisus scoparius*) and Himalayan blackberry were observed during site visits.

Bellevue Transit Center and Off-site Layover

This project component is largely in the built environment with little vegetation outside of landscape trees. No invasive or noxious species are mapped as occurring within this project component area nor were any observed.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

No invasive or noxious species are mapped as occurring within this project component area, nor were any observed.

Brickyard Station and Roadway Improvements

King County iMap noxious weed survey data shows tansy ragwort (*Senecio jacobaea*), meadow knapweed, spotted knapweed, and diffuse knapweed as occurring within the project component area.

Lynnwood City Center Transit Station BRT and Roadway Improvements

The transit center portion of this project component is largely in the built environment with little vegetation outside of landscape trees. No invasive or noxious species were observed within the project area. Within the Poplar Way portion of the study area, Scotch broom, Himalayan blackberry, and reed canarygrass were observed.

5. Animals

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

Wildlife species at all of the project component locations likely include birds (e.g., American robin, American crow, and common pigeon) and small mammals (e.g., Virginia opossum, eastern cottontail, and eastern gray squirrel) that are well adapted to living in a highly altered landscape and can tolerate or benefit from human disturbance. Habitat features, including snags and/or large woody debris, were limited throughout the corridor; however, some were observed within the wetland areas near the Tukwila International Boulevard BRT Station and Roadway Improvements project component.

As noted in response to B.3.a above, streams occur within or near two project component areas: the Tukwila International Boulevard BRT Station and Roadway Improvements and the Brickyard Station and Roadway Improvements. For the Tukwila International Boulevard BRT Station and Roadway Improvements component, no fish were observed within the three streams delineated within the footprint. However, these streams may support resident non-salmonids at some point in their lifecycle. Additionally, while portions of Gilliam Creek within the vicinity of the project are believed to contain suitable habitat for some anadromous salmonid species (particularly coho salmon, steelhead, and sea-run cutthroat trout), the lengthy culverts in the lower reaches, particularly the 0.5-mile-long culvert under the I-5/I-405 interchange, are considered complete barriers to fish passage (WDFW 2020).

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

According to the WDFW Priority Habitat and Species (PHS) data, no listed threatened or endangered species are mapped as occurring on or near any of the project components. For each project component, **Table 11** provides information on the nearest federally listed or state protected species.

Table 11 Nearest federally listed and state protected species to project components

Project component	Nearest feature	Location	Federally listed species	State protected species
Burien Transit Center and Roadway Improvements	Miller Creek	Approximately 0.7 mile south	Chinook salmon (<i>Oncorhynchus tshawytscha</i>), steelhead trout (<i>O. mykiss</i>)	Cutthroat trout (<i>O. clarkii</i>), Coho salmon (<i>O. kisutch</i>), Chum salmon (<i>O. keta</i>)
Tukwila International Boulevard BRT Station and Roadway Improvements	Gilliam Creek ¹	Approximately 0.6 mile east	None	Cutthroat trout, coho salmon
South Renton Transit Center and Roadway Improvements	Springbrook Creek	Approximately 0.5 mile south along Rainier Avenue S	Chinook salmon, steelhead trout ²	Cutthroat trout, coho salmon, chum salmon
Bellevue Transit Center and Off-site Layover	Sturtevant Creek	Approximately 0.3 mile to the east on the east side of I-405	Chinook salmon, steelhead trout ²	Coho salmon, sockeye salmon (<i>Oncorhynchus nerka</i>)
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	North Juanita Creek tributary	Approximately 0.3 mile to the northwest, north of NE 132nd Street	None	Coho salmon, resident coastal cutthroat

Project component	Nearest feature	Location	Federally listed species	State protected species
Brickyard Station and Roadway Improvements	Sammamish River	Near the I-405/SR 522 interchange	Steelhead trout, Chinook salmon	Cutthroat trout, sockeye salmon, coho salmon
	Juanita Creek	Approximately 0.65 mile south of the Juanita Woodinville Way NE overpass	Steelhead trout, Chinook salmon	Cutthroat trout, sockeye salmon, coho salmon
Lynnwood City Center Transit Station BRT and Roadway Improvements	Scriber Creek	Approximately 0.3 mile to the west	None	Resident coastal cutthroat

SOURCE: WDFW 2020

NOTES:

¹Listed species are mapped as occurring outside of the project component area and are further separated by several culverts that act as barriers to fish passage along the north side of SR 518 (WDFW 2020)

²Presence of listed species at these reaches of Springbrook and Sturtevant Creeks are only modeled. Documented presence within these streams are farther downstream and away from the project component area.

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

The entire project corridor is within the Pacific Flyway, which is a flight corridor for migrating waterfowl and other avian fauna. The Pacific Flyway extends south from Alaska to South America.

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

At all project component locations, wildlife habitat is limited by the highly disturbed and developed nature of the environment and the lack of habitat features. Therefore, impacts to wildlife as a result of the project are not anticipated. The project would not impact the Pacific Flyway, and Sound Transit would perform Migratory Bird Treaty Act nest surveys prior to vegetation removal, as needed. Although project construction does not require any in-water work, BMPs, such as stormwater inlet protection, would be put in place to isolate and protect waters downstream of project components, including those that may be fish-bearing. With the implementation of stormwater management measures, no impacts to fish species are anticipated during either construction or operation.

e. List any invasive animal species known to be on or near the site.

Rodents (Old World rats and mice, eastern gray squirrel) are likely present at each project component.

6. Energy and Natural Resources

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

All project components (stand-alone transit stations and transit centers/park-and-ride garages) would require electricity to provide lighting and power for electronics such as signage, TVMs, and security cameras.

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

No, the project is not anticipated to affect the potential use of solar energy by adjacent properties. The structures with the greatest potential to block any nearby solar energy sources would be the five-story park-and-ride garages proposed at the South Renton Transit Center and the Kingsgate Park-and-Ride. For each garage, the proposed elevator bay on the fifth floor of the garage structure is anticipated to be approximately 55 to 60 feet tall. The location and height of these structures would not block any known current use of solar energy on adjacent properties.

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

Specific features to enhance sustainability and maximize energy conservation for the project components would be determined as design progresses. Sound Transit follows the Seattle Energy Code and employs a sustainability checklist to evaluate each individual component in the search for feasible sustainability measures. For project components where building permits from local jurisdictions are required, Sound Transit would also comply with required building codes, including those related to energy conservation. For park-and-ride garages, such as the proposed Kingsgate Park-and-Ride Garage at the South Renton Transit Center, additional features may include design and construction for future photovoltaics and electric vehicle charging infrastructure.

Project construction would require the use of equipment and energy, such as diesel fuel. All efforts to minimize air pollutants and GHG emissions during construction have the benefit of reducing energy use. In addition, once constructed, the project would improve transit speed and reliability in the I-405 corridor, which is anticipated to increase transit ridership and reduce single-occupancy vehicles in the corridor. This would be expected to reduce energy consumption.

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.**

Attachment D, *I-405 BRT Corridor Hazardous Materials Technical Memorandum*, documents potentially contaminated sites on or near (within 0.125 mile) the project components where contaminated materials may be encountered in soils or ground water

that is disturbed during construction. This technical memorandum also provides a discussion about hazardous materials likely to be used and generated during project construction or operation.

1) Describe any known or possible contamination at the site from present or past uses.

Regionally, more than 1,000 square miles of the Puget Sound Basin have been affected by arsenic, lead, and other heavy metals that settled on the surface of soils from air pollution from the historic operations of the Asarco Company copper smelter that was in Tacoma (Ecology 2020b). The Model Toxics Control Act (MCTA) cleanup regulation for arsenic is 20 parts per million (ppm). Areas where these levels may be exceeded pose a risk to human health and the environment and would be subject to cleanup requirements. According to Ecology's mapping of predicted concentrations of arsenic in soils as a result of the Tacoma Smelter Plume, three project components are located in areas mapped as having predicted arsenic concentrations of 20 to 40 ppm. These project components are the Burien Transit Center and Roadway Improvements, the Tukwila International Boulevard BRT Station and Roadway Improvements, and a portion of the South Renton Transit Center and Roadway Improvements. The remaining project components are in areas mapped as having predicted arsenic concentrations of under 20 ppm, with limited data.

Burien Transit Center and Roadway Improvements

Contamination, in addition to potential surface soil contamination from the Tacoma Smelter Plume, is known to exist at the Burien Transit Center. This site is listed with Ecology (Facility Site Id number 11133, Cleanup Site Id number 12380) as awaiting cleanup. According to Ecology records dating from 2011, contaminated soil was discovered on the northwest corner of the Burien Transit Center property during construction of a stormwater detention system associated with a new parking structure. On-site soils were contaminated with petroleum hydrocarbons as gasoline, diesel, and benzene. According to reports, a leaky joint from a former drain line associated with the adjacent gas station (USA Station 116) was the cause of the contamination. The drain line was sealed by the contractor approximately 20 feet south of the northern property boundary between the Burien Transit Center and USA Station 116. The remaining piping and approximately 50 cubic yards of contaminated soil were removed and sent off-site for disposal. Soil samples were collected from the sidewalls and bottom of the excavation and analytical results indicated soils contaminated with petroleum hydrocarbons as gasoline and benzene remain at the bottom and east wall of the excavation. The report noted that during the excavation, the design limits of the stormwater detention system had been reached before all contaminated soil was removed and King County elected not to excavate further. An impermeable barrier was placed in the stormwater detention system to isolate contaminated soil in that area. Groundwater was not encountered during the excavation and it is not known whether groundwater beneath the site is contaminated. No other reports of excavation or remediation at the site were available for review in the Ecology database. Construction at the Burien Transit Center, particularly the northwestern portion of the site, would likely encounter petroleum hydrocarbons as gasoline and benzene contaminants in the soils. There is a potential for groundwater beneath the site to be impacted with petroleum hydrocarbons and benzene.

Seven other sites within 0.125 mile from the nearest project improvement (see Attachment D, Figure 4-1) are identified as hazardous material release sites. According to regional groundwater data, groundwater flow is to the west. Therefore, sites that have reported releases and are located adjacent to and/or hydraulically upgradient (east) of a project improvement have the potential to impact subsurface conditions. Based on this criteria, the sites that have the potential to be a source of contamination encountered during construction include the Exxon 76969, BBC Dodge, and USA Station 116. These sites have reported releases to soil, soil vapor and groundwater from leaking underground storage tanks (LUST) and are undergoing cleanup or remediation. The contaminants of concern that may be encountered during construction of the Burien Transit Center and Roadway Improvements include petroleum hydrocarbons as gasoline and diesel; benzene, toluene, ethylbenzene, and total xylenes (BTEX); non-halogenated solvents such as naphthalene; and lead.

One of the seven sites, Burien Honda Midas located 750 feet southeast of the transit center, is listed as having on-site soils impacted with petroleum. Voluntary cleanup was completed and the site received a “no further action” letter from Ecology. A “no further action” letter indicates no contamination remains above the applicable cleanup levels outlined in the state’s law, the Model Toxics Control Act. Based on the case closure status, the distance and direction of this site to the Burien Transit Center and Roadway Improvements, and the fact that petroleum contamination impacted on-site soils only, the Burien Honda Midas site is unlikely to be a source of contamination encountered during project construction.

Tukwila International Boulevard BRT Station and Roadway Improvements

Other than possible surface soil contamination from the Tacoma Smelter Plume, no contamination is known to exist at this project component. One site identified as WSP (Washington State Patrol) Tukwila, is located approximately 400 feet south of the nearest project improvement (see Attachment D, Figure 4-2). The WSP Tukwila site (Ecology Facility Id number 42844447, Cleanup site Id number 9148) is listed as reportedly cleaned up but has not received case closure from Ecology. According to the Ecology database, a LUST case was reported in 1992 with spills to on-site soils only. The most recent information indicates petroleum hydrocarbons as gasoline are confirmed above state cleanup levels in soil only. Petroleum hydrocarbons as diesel have been remediated to below cleanup levels, and benzene and other petroleum constituents are only suspected in soils at the property. Based on the current status of cleanup at the WSP Tukwila site, there is a low to moderate probability of this site being a source of hazardous materials in soil vapors encountered during construction of Sound Transit’s project. The potential contaminants of concern that may be encountered during construction include petroleum hydrocarbons and benzene.

South Renton Transit Center and Roadway Improvements

Contamination, in addition to potential surface soil contamination from the Tacoma Smelter Plume, is known to exist at this project component. Shannon & Wilson completed a Phase I ESA for Sound Transit for the South Renton Transit Center property in the fall of 2017 (Shannon & Wilson 2017). The Phase I ESA identified 10 recognized environmental conditions for the property. As a result of the Phase I findings, Shannon & Wilson also then completed a Phase II ESA for Sound Transit in the spring of 2018 (Shannon & Wilson 2018).

The Phase II investigation identified petroleum impacts within soils and groundwater at the western half of the transit center site. The contamination is likely associated with numerous former aboveground storage tanks and underground storage tanks. Evidence of petroleum contamination was encountered in the eastern half of the transit center site within “hotspots” but was not associated with specific historical features. Five soil samples and 12 groundwater samples collected had one or more chemical constituents (metals, petroleum products, and volatile organic compounds) that exceeded Model Toxics Control Act Method A cleanup levels⁶. A single sample location for soil collected along the former rail corridor near S. Grady Way detected polycyclic aromatic hydrocarbons associated with creosote-preserved railroad ties. Based on the analytical data and field observations, the Phase II ESA identified the following constituents that would likely be in soil, soil vapor, and groundwater encountered during construction activities on the transit center site: petroleum hydrocarbons as diesel, gasoline, and motor oil; BTEX; polycyclic aromatic hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); vinyl chloride; and metals including arsenic, chromium, and lead. This site has been assigned an Ecology Cleanup Site identification number 6342 and is labeled as undergoing cleanup.

Six additional sites have been identified in the vicinity of this project component, between 100 to 800 feet from the transit center. Two of the six sites, Renton Lincoln Mercury and Les Schwab Tires Renton, both 200 feet from the proposed transit center, have received a “no further action” letter from Ecology following cleanup activities. Even with completed cleanup activities, contaminants may have migrated away from these sites and low levels of contamination below applicable cleanup levels may still be present. The remaining four sites are between 100 and 800 feet from the transit center and are undergoing remedial actions. All four sites are identified as having known groundwater contamination. These sites were assessed as having a Low to Moderate Risk of being a source for encountering hazardous materials during construction because of their proximity to areas where construction activities would likely occur and the fact that contamination could have migrated toward the project component, either in groundwater or vapor (see Attachment D, Figure 4-3). The chemicals of concern listed at these sites were benzene, lead, metals-other, petroleum-other, PAHs, metals priority pollutants, non-halogenated solvents, petroleum-gasoline, and/or petroleum products-unspecified.

Bellevue Transit Center and Off-site Layover

No contamination is known to exist at this project component. Two LUST sites and/or hazardous material release sites have been identified in proximity to this project component (see Attachment D, Figure 4-4). Both of the sites, Quest Corp (660 feet southeast) and Bravern Phase II (500 feet northeast) received a “no further action” letter from Ecology following mandatory cleanup. In addition, according to Ecology’s “What’s In My Neighborhood” database, two additional sites with identified releases are located west of the proposed bus layover area. They include the PSE Spill site at 1116 108th Avenue NE, which was granted “no further action” for PCBs and petroleum in soil only.

⁶ Method A may be used to establish cleanup levels at sites that have few hazardous substances and that meet the following criteria: Sites undergoing a routine cleanup action as defined in WAC 173-340-200.

The second site, 1020 Tower at 1020 108th Avenue NE, was granted “no further action” for unspecified petroleum products in soil only.

Because of completed cleanup operations and their proximity to areas where construction activities would occur, all four of these sites were assessed as having a low risk of being a source for encountering hazardous materials during project construction. Even with completed cleanup at these sites, contaminants may have migrated away from the sites, either in groundwater or vapor, and low levels of contamination below applicable cleanup levels may still be present. The chemicals of concern listed at these sites were arsenic, lead, mercury, metals-other, petroleum-other, PAHs, metals priority pollutants, non-halogenated solvents, PCBs, and/or petroleum products-unspecified.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

No contamination is known to exist at this project component. No documentation has been found of any LUST sites and/or hazardous material release sites near this project component.

Brickyard Station and Roadway Improvements

No contamination is known to exist at this project component. No known LUST sites and/or hazardous material release sites have been identified near this project component.

Lynnwood City Center Transit Station BRT and Roadway Improvements

No contamination is known to exist at this project component. Four LUST sites and/or hazardous material release sites have been documented near this project component (see Attachment D, Figure 4-7 and 4-8). Three of the four sites received a “no further action” letter from Ecology following cleanup activities for petroleum products, metals, and non-halogenated organics in soil and groundwater. Even with completed cleanup at these three sites, they were assessed as having a low risk for being a source of contaminated materials encountered during construction as low levels of contamination below applicable cleanup levels may still be present and because contamination could have migrated toward the project component, either in groundwater or vapor.

The one site still undergoing cleanup, Chevron 94953 (Ecology facility Id number 58434551, Cleanup site Id number 6340), is approximately 450 feet northeast of the transit center. In a letter to Chevron from Ecology, dated May 2007, the site has known soil and groundwater impacts from historical releases. In the 2007 letter, Ecology determined that based on the quarterly groundwater monitoring results from 2000 to 2007, the site is required to continue remedial actions. Based on the status of this site, it was assessed as having a moderate risk of being a source of hazardous materials during construction. The chemicals of concern listed at these sites include BTEX, lead, metals-others, non-halogenated solvents, other non-halogenated organics, and total petroleum hydrocarbons as diesel, gasoline, and/or other unspecified products.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

As noted above, construction at five of the project component sites has some potential to encounter prior contamination during construction. At all project components, Sound Transit would appropriately identify, characterize, manage, handle, store, and dispose of contaminated soil and groundwater encountered during construction activities in accordance with state and federal regulations (see Section B.7.a.5 below).

According to the National Pipeline Mapping System (NPMS) public viewer, hazardous liquid/gas transmission pipelines are located near only one project component – the South Renton Transit Center:

- A natural gas distribution line is located approximately 5,500 feet southeast of the transit center site (NPMS 2020).
- A hazardous liquid pipeline is located approximately 2,000 feet south of the proposed transit center.

While the NPMS does not specify the hazardous liquid being carried in this pipeline, the Revised Code of Washington 81.88.010 defines a hazardous liquid to be petroleum, petroleum products, or a hydrous ammonia.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

During construction, relatively small quantities of fuels (including diesel, gasoline, and propane) for various pieces of small equipment would likely be stored at each project component site. If petroleum products are stored in quantities greater than 1,320 gallons, in containers with a capacity of 55-gallons or more, and a release could reasonably contact navigable waters, a written Spill Prevention Control and Countermeasures Plan would be prepared. The plan would also include inspections. Heavy equipment fueling would likely occur at each project component using an on-site fuel delivery provider. Other construction-related materials likely at each project component would include solvents and adhesives used in relatively small quantities.

After construction, none of the BRT stations, park-and-rides, or transit centers would store, use, or generate hazardous materials during operations. Accidental small-scale spills or drips from vehicles parked in the parking garages at the transit centers could occur. For these instances, emergency spill cleanup kits would either be staged at these locations or Sound Transit maintenance staff would have these materials with them for use where needed. Potential pollutants released on the ground at the BRT facilities as a result of routine bus operations, such as engine leaks or heavy metals from brake dust during driving or layover parking, would either stay on the site on the ground or could be washed by rain into stormwater that would be collected in the on-site stormwater treatment facilities. The stormwater treatment facilities would collect, retain, and provide treatment to stormwater to remove potential pollutants before releasing the stormwater off-site. Pollutants that may be deposited on existing roadways as a result of routine BRT operations/travel between stations, again such as from engine leaks or heavy

metals from brake dust, would be managed by existing roadway stormwater treatment facilities unless, as noted in Section B.3.c, upgrades are required for capacity and/or to lower the existing drainage system to provide positive gravity flow.

4) Describe special emergency services that might be required.

No special emergency services are expected to be required as a result of operations of BRT facilities or during project construction. None of the sites would have security fencing or other infrastructure that would complicate emergency service access, and no hazardous materials would be stored that might require specialized fire response. In accordance with National Fire Protection Association 13 2013, 2018 International Fire Code 903, and current local municipal codes, the park-and-ride garage structures at the South Renton Transit Center and Kingsgate would be fully installed with sprinklers and standpipes for firefighting purposes, and a minimum of one standpipe is required for use during construction of the project.

Sound Transit has an established program for responding to emergencies at its facilities, including a spill response and hazardous materials handling plan, and a spill response contractor on call 24/7 for spills to which Sound Transit staff might be unable to respond. Therefore, the potential of long-term recurring releases of hazardous materials from BRT facilities or operations would be low. Accidental spills or drips from vehicles parked in the park-and-ride garages could occur. For these instances, emergency spill cleanup kits would be staged at these locations. Wastes generated from cleanup activities would be removed and disposed of in accordance with state and federal regulations for the removal, treatment, or disposal of contaminated material.

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

The project is subject to Sound Transit's safety and security certification process, which includes an evaluation of hazardous materials used during construction, testing, and commissioning of facilities, as well as ongoing operations. Sound Transit has a policy to meet or exceed federal safety and security process requirements on all projects, which includes measures for controlling hazardous material usage during construction as well as operation and maintenance of the project.

During construction, all potentially hazardous construction materials used would be handled and stored in accordance with state and federal hazardous materials handling requirements. For all project components, procedures to identify, characterize, manage, handle, store, and dispose of contaminated soil and groundwater encountered during construction would be implemented. If unanticipated soil or groundwater contamination were encountered during construction activities, remediation of those materials would occur as needed. In compliance with the Model Toxics Control Act Cleanup Regulation (Washington Administrative Code (WAC) 173-340), a cleanup plan would be developed and implemented to minimize human exposure and for the proper removal and treatment or disposal of contaminated materials in soils or groundwater. This elimination of hazardous or contaminated materials would reduce future potential adverse effects to human health and the environment from exposure at those locations or from potential migration.

Operational risks related to the use, storage, generation, or disposal of hazardous materials would be integrated into a safety and security program or plan specific to the I-405 BRT Project. The project incorporates BMPs, including commitments to adhere to applicable regulations and measures for controlling hazardous materials planned for use within the context of constructing, operating, and maintaining the project.

The Burien Transit Center and Roadway Improvements, the Tukwila International Boulevard BRT Station and Roadway Improvements, and a portion of the South Renton Transit Center and Roadway Improvements project components are mapped as having predicted arsenic concentrations of 20 to 40 ppm from the Tacoma Smelter Plume. Most of the land at these project components is urban or developed with surface soils that have been previously disturbed. For these three project components, soils would be sampled and analyzed in accordance with Ecology's 2019 *Tacoma Smelter Plume Model Remedies Guidance* (Ecology 2020c) prior to initiation of clearing and grading activities. If arsenic or lead above Model Toxics Control Act (MTCA) cleanup levels were encountered, cleanup would be coordinated with Ecology and remediation of those materials would occur as needed. A soil remediation plan would be prepared to minimize human exposure and for the proper removal and treatment or disposal of contaminated materials in soils or groundwater. The proposed soil remediation plan would be sent to Ecology for its concurrence that the plan would likely result in no further action, per MTCA cleanup levels. Construction workers would be required to be trained in lead awareness, according to 29 CFR 1926.62(l) and also trained according to 29 CFR 1910.1018(o) for arsenic awareness during excavation activities. In addition, extra precautions would be taken to avoid dust, soil erosion, and water erosion during construction.

South Renton Transit Center and Roadway Improvements

Sound Transit would complete cleanup of identified contaminated soil and groundwater during property redevelopment in coordination with Ecology; the site is designated by Ecology as Cleanup Site 6342.

Prior to construction, Sound Transit would conduct pre-demolition asbestos and lead surveys of the existing structures to be removed at the South Renton Transit Center site. Sound Transit would also evaluate electrical components for the presence of electrical equipment containing polychlorinated biphenyls or mercury. If these materials are identified prior to demolition, Sound Transit would remove and dispose of them in accordance with regulations.

In consideration of the information above, no mitigation measures are needed.

b. Noise

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

Noise generated from existing surrounding land uses near the project would not affect any project component, with the possible exception of the freeway stations at the Tukwila International Boulevard BRT Station, the Totem Lake/Kingsgate BRT Station, and the Brickyard BRT Station as described below. These proposed BRT stations are located in a highway environment where existing traffic noise levels are high, and

Section B.7.b.3 below describes how Sound Transit is assessing and addressing noise levels that passengers would experience at BRT stations in highway environments.

Existing noise measurements, taken at representative locations along the project corridor, as described in Attachment E *I-405 BRT Noise and Vibration Technical Memorandum* Table 4-1 and Table 4-2, provide information about existing noise levels. The existing measurements for each of the project components are provided below in terms of peak or highest one-hour equivalent sound level (L_{eq}), and the 24-hour day/night (L_{dn}) level.

Burien Transit Center and Roadway Improvements

Land use around the Burien Transit Center is mostly parking lots and retail shops. Land use around the roadway improvements on SR 518 is residential. For this project component, existing noise measurements were taken from a residence located on the north side of SW 148th Street, across from the Burien Transit Center, and at residences adjacent to the north and south of SR 518, just east of SR 509 (see Attachment E, Figure 4-1).

Existing noise levels were measured in the range of L_{dn} 60 dBA to 62 dBA near the transit center and 69 dBA near SR 518, with a one-hour peak L_{eq} of 62 dBA to 69 dBA. These existing noise levels primarily reflect existing traffic noise on SW 148th Street and SR 518.

Tukwila International Boulevard BRT Station and Roadway Improvements

Outside of the SR 518 right-of-way, land use in the area between 32nd Avenue S and 29th Avenue S, north of SR 518 is residential. Between 38th Lane S and 24th Avenue S, the land use is industrial, retail, and airport-related. Between 42nd Avenue S and 38th Lane S, residential land use is located within 100 to 120 feet of SR 518 with noise barriers on both sides of SR 518. From 51st Avenue S to 42nd Avenue S, residential land uses are located on both sides. Between 51st Avenue S and 42nd Avenue S the residences to the north of SR 518 are below grade and Southcenter Boulevard is located between the residences and SR 518.

For this project component, existing noise measurements were taken at a nearby residence on the north side of SR 518 and west of Tukwila International Boulevard and at four residential locations north and south of SR 518, east of the Tukwila International Boulevard Link light rail station (see Attachment E, Figure 4-2). Existing noise levels at these locations were measured in the range of L_{dn} 66 dBA to 71 dBA with a one-hour peak L_{eq} of 61 dBA to 66 dBA. These noise levels primarily reflect traffic noise levels from SR 518.

Because the proposed BRT stations would be located at-grade within the SR 518 roadway, these higher noise levels generated from traffic on SR 518 may have an effect on passengers waiting at the BRT station platform and Sound Transit's design would provide passenger shielding as appropriate.

South Renton Transit Center and Roadway Improvements

Land use around the South Renton Transit Center site is primarily roadways and commercial retail uses. I-405 is located approximately 0.5 mile south of the transit center site. For this project component, an existing noise measurement was taken at the Holiday Inn Seattle-Renton, which is located south of the proposed transit center site

and just north of I-405 (see Attachment E, Figure 4-3). Existing noise levels at this location were measured at an L_{dn} of 72 dBA with a one-hour peak L_{eq} of 68 dBA. This noise level primarily reflects traffic noise levels from I-405.

Bellevue Transit Center and Off-site Layover

The Bellevue Transit Center is an existing facility in a downtown urban area. The off-site layover area is adjacent to the downtown library and a residential apartment building with retail on the ground floor. For this project component, an existing noise measurement was taken at the Liberty Square Apartments, the closest residential land use to the off-site layover area (see Attachment E, Figure 4-4). Noise levels at this location were measured at an L_{dn} of 72 dBA and a one-hour peak L_{eq} of 74 dBA.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The future BRT station pair is in the center of I-405 at the existing Totem Lake Freeway Station; land use east of I-405 is office and retail. Residential land uses are located north, south, and west of the proposed Kingsgate Park-and-Ride Garage structure, and the I-405 roadway is located to the east. An existing noise measurement was taken at the southeast corner of the Kingsgate site, close to the Country Trace Condominiums to the south (see Attachment E, Figure 4-5). Noise levels at this location were measured at an L_{dn} of 68 dBA and a one-hour peak L_{eq} of 65 dBA.

The current shelters at the Totem Lake in-line bus stop provide some reduction in highway noise levels so as to reduce the noise levels experienced by people waiting for transit service, and the project would ensure this type of shielding remains in place with the project.

Brickyard Station and Roadway Improvements

Outside of the I-405 right-of-way, both east and west of I-405, the area adjacent to this project component consists primarily of residential land uses. North of Juanita Woodinville Way NE there are some commercial uses along the east side of I-405. On the west side of I-405 there is a church with an associated school and recreation field.

An existing noise measurement was taken at Braewood Condos, which is the closest residential land use, located just west of the Brickyard Park-and-Ride lot (see Attachment E, Figure 4-6). At this location, the existing noise levels were measured at an L_{dn} of 75 dBA and a one-hour peak L_{eq} of 74 dBA. These noise levels primarily reflect traffic noise levels from I-405.

Because the proposed BRT stations would be located at-grade within the I-405 roadway, noise levels generated from the highway may have an effect on the experience of people waiting at the BRT station platform, and Sound Transit's design would provide passenger shielding as appropriate.

Lynnwood City Center Transit Station BRT and Roadway Improvements

The existing Lynnwood City Center transit center is located in a mixed-use urban area with commercial, retail, and residential uses. The Poplar Way road improvements are located in an area with I-5 to the west, commercial uses to the north and east, and

residential uses to the south. An existing noise measurement was taken on the west side of the transit center and south of the Poplar Way loop ramp (see Attachment E, Figure 4-7 and Figure 4-8). Existing noise levels at the transit center were measured at an L_{dn} of 67 dBA and a one-hour peak L_{eq} of 66 dBA. Temporarily, the BRT station at the Lynnwood City Center transit center may experience noise from construction of the Lynnwood Link light rail extension.

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.

The potential for operational transit-related noise and vibration impacts was determined based on application of the FTA General Noise and Vibration Assessment used to predict noise and vibration levels from BRT transit-related project components, such as stations, park-and-ride lots, and transit centers. The FHWA Noise Abatement Criteria were used to predict traffic noise locations where roadway modifications would substantially change traffic volumes and/or distances from the traffic to existing sensitive land uses. Based on WSDOT guidance for applying the FHWA criteria, none of the project roadway modifications would result in a substantial change and FHWA's traffic noise abatement analysis is not required. Typical construction noise and vibration levels were predicted at the different project components using the FTA reference levels.

The State of Washington has a noise control ordinance that applies (together with local noise regulations) to construction, industrial, commercial, and residential noise sources. In the absence of local noise control ordinances, the state noise control ordinance applies. State law exempts mobile noise sources, including freight rail, aircraft in flight, and vehicles traveling in public right-of-way, as well as safety warning devices (e.g., bells). For stationary land uses with noises originating from outside public roadways and rights-of-way, the Washington State Noise Control Ordinance defines three different Environmental Designations for Noise Abatement (EDNAs) based on land use, which can be summarized as residential, commercial, and industrial. The WAC noise regulations are taken from Chapter 173-60, WAC, Maximum Environmental Noise Levels, 2000. The ordinance is then written to define the maximum allowable noise level from one EDNA to another EDNA.

The WAC property line noise standards, adopted by local agency noise ordinances, are used to assess potential noise impacts from park-and-ride garage and transit center operations. The FTA noise criteria and FHWA Noise Abatement Criteria are used for the bus and traffic operation noise.

Maximum permissible sound levels for haul trucks on public roadways are limited to 86 dBA for speeds of 35 miles per hour or less, and 90 dBA for speeds over 35 miles per hour, when measured at 50 feet (Chapter 173-62, WAC).

Sounds created by backup alarms are exempt, except between 10 p.m. and 7 a.m. when "beep-beep" backup alarms are essentially prohibited by the WAC and local agency noise ordinances in urban areas and would be replaced with smart backup alarms, which automatically adjust the alarm level based on the background level or switch off backup alarms and replace with spotters. This criterion is included because, just like noise from construction activities, noise from backup beepers would exceed the WAC nighttime criteria, even with the allowable exceedance, at large distances from the construction site.

Although construction activities would vary between each project component, construction of each project component would create noise from heavy equipment that generates relatively high noise levels. The most constant noise source at construction sites is usually engine noise. Mobile equipment generally operates intermittently or in cycles of operation, while stationary equipment, such as generators and compressors, generally operates at constant sound levels. Trucks would be present during most phases of construction, including travel to and from the project sites.

The construction of each project component would increase noise levels in a way that would be temporary and intermittent, and that would cease once construction is complete. As an example of the effects of construction, the maximum noise levels of construction equipment are expected to range from 67 dBA at the Braewood Condominiums near the Brickyard BRT Station to 84 dBA at the Country Trace Condominiums, the closest noise-sensitive receivers to the Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage project component. If piles are needed for construction of the Kingsgate and South Renton Park-and-Ride garages, and the construction methods include impact pile driving, maximum noise levels are expected to be 96 to 99 dBA at the closest noise-sensitive receivers. Working hours of construction would vary to meet the type of work being performed, and construction activities for each project component would adhere to local regulations to control construction noise. Although each city has specified construction hours during the daytime, construction outside of those hours may be necessary depending on site conditions, construction activities, and scheduling. Construction outside of the allowable hours, such as nighttime weekdays and Saturdays, Sundays, and legal holidays, would need to meet the EDNA noise limits or would require an approved variance from the appropriate city.

Burien Transit Center and Roadway Improvements

Operations at this project component would generate transit-related noise from buses at the proposed BRT station and layover area at the existing Burien Transit Center, and traveling in the bus-only lanes along SW 148th Street. Typical noise from buses entering and leaving the transit center would include noise from tires, propulsion motors, and other auxiliary equipment on the vehicles which would be predicted to be an L_{dn} of 57 dBA. The noise levels generated by the BRT vehicles operating at the Burien Transit Center would not exceed the FTA L_{dn} noise impact criteria (58 dBA for a moderate impact and 64 dBA for a severe impact) and would be below the existing noise level of L_{dn} 60 dBA at 14654 3rd Avenue SW, the closest noise-sensitive receiver. The transit center noise levels are predicted to be below the WAC EDNA for commercial noise sources adjoining a residential use of a L_{eq} of 57 dBA for daytime and a L_{eq} of 47 dBA for nighttime.

Roadway improvements would improve transit speed and reliability, including a bus-only lane for eastbound buses along SW 148th Street, across the SR 509/SR 518 interchange and along SR 518 for approximately 400 feet. For westbound buses, a bus-only left-turn pocket would be added along SW 148th Street between 1st Avenue S and the Burien Transit Center. These bus-only lanes would not add to the capacity of the general-purpose lanes or substantially change the vertical or horizontal roadway alignment. The changes would result in minimal to no change to overall traffic volumes on the roadway; therefore, no change to overall traffic noise levels is expected.

Tukwila International Boulevard BRT Station and Roadway Improvements

Operations at this project component would generate transit-related noise from buses at the BRT freeway station platforms and buses traveling in the bus-only lanes on SR 518. Typical noise from buses entering and leaving the BRT freeway station platforms would include noise from tires, propulsion motors, and other auxiliary equipment on the vehicles which are predicted to be an L_{dn} of 54 dBA. The noise levels generated by the BRT vehicles would not exceed the existing L_{dn} noise level of 71 dBA at 15603 42nd Avenue S, the closest residential noise-sensitive receiver, and would not exceed the FTA L_{dn} noise impact criteria (66 dBA for a moderate impact and 71 dBA for a severe impact). Additionally, from this project component there are no noise-sensitive land uses within FTA's screening distance; the nearest residence is 200 feet from any planned roadway improvements. On the south side, the residences are at an elevation above SR 518, and the closest residence is 260 feet from the proposed roadway improvements.

Roadway improvements at the Tukwila International Boulevard BRT Station would add bus-only lanes to the inside of both eastbound and westbound SR 518, providing for pull-out stops in both directions at the station. The bus-only lanes would not add to the capacity of the general-purpose lanes or substantially change the vertical or horizontal roadway alignment. The changes would result in minimal to no change to overall traffic volumes on the roadway; therefore, no change to overall traffic noise levels is expected.

South Renton Transit Center and Roadway Improvements

Operations at this project component would generate typical noise from vehicles using the proposed park-and-ride garage and from buses at the transit center and traveling in the bus-only lanes. With regard to the proposed park-and-ride garage, typical parking lot sources of noise would include vehicle engine noise, opening and closing of car doors, and people talking. Typical noise from buses entering and leaving the transit center or traveling in the bus-only lanes would include noise from tires, propulsion motors, and other auxiliary equipment on the vehicles, which is predicted to be an L_{dn} of 57 dBA at 1 S Grady Way, the nearest noise-sensitive receiver. This is well below the existing measured noise level of an L_{dn} of 72 dBA and would not exceed the FTA L_{dn} noise impact criteria (66 dBA for a moderate impact and 72 dBA for a severe impact). The park-and-ride garage noise levels are also predicted to be below the WAC EDNA for commercial noise sources adjoining a residential use of a L_{eq} of 57 dBA for daytime and a L_{eq} of 47 dBA for nighttime.

Roadway improvements at the South Renton Transit Center would not increase capacity or substantially change the vertical or horizontal roadway alignment. The improvements would result in minimal to no change to overall traffic volumes on the roadway; therefore, no change to the overall traffic noise levels is expected.

Bellevue Transit Center and Off-site Layover

Operations at this project component would generate transit-related noise from buses at the proposed BRT station at the existing Bellevue Transit Center and at the proposed off-site layover location along the east side of the Bellevue Library. Typical noise from buses entering and leaving the transit center and layover area would include noise from tires, propulsion motors, air conditioning, and other auxiliary equipment on the vehicles, which is predicted to be an L_{dn} of 56 dBA at the Liberty Square Apartments and Bravern Condos, the nearest noise-sensitive receivers. This is well below the existing noise level

at the Bellevue Transit Center and Off-site Layover area of an L_{dn} of 72 dBA, and would not exceed the FTA L_{dn} noise impact criteria (66 dBA for a moderate impact and 72 dBA for a severe impact). The transit center and off-site layover noise levels are also predicted to be below the WAC EDNA for commercial noise sources adjoining a residential use of a L_{eq} of 57 dBA for daytime and a L_{eq} of 47 dBA for nighttime.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

Operations at this project component, both the BRT station and Kingsgate Park-and-Ride Garage, would generate typical noise from buses entering and leaving the BRT station (including noise from tires, propulsion motors, and other auxiliary equipment on the vehicles) and parking lot sources of noise (such as vehicle engine noise, opening and closing of car doors, and people talking). The predicted project noise level of the BRT station and park-and-ride garage is an L_{dn} of 57 dBA. This is well below the existing L_{dn} of 68 dBA at the Country Trace Condominiums, the nearest noise-sensitive receiver, and would not exceed FTA's L_{dn} noise impact criteria (63 dBA for a moderate impact and 69 dBA for a severe impact). The park-and-ride garage noise levels are also predicted to be below the WAC EDNA for commercial noise sources adjoining a residential use of a L_{eq} of 57 dBA for daytime and a L_{eq} of 47 dBA for nighttime.

Brickyard Station and Roadway Improvements

Operations at this project component would generate transit-related noise from buses at the BRT freeway station platforms and traveling in the bus-only lanes. Typical noise from buses entering and leaving the BRT freeway station platforms would include noise from tires, propulsion motors, and other auxiliary equipment on the vehicles, which are predicted to be an L_{dn} of 44 dBA. The noise levels generated by the BRT vehicles would not exceed the existing noise level of an L_{dn} of 75 dBA at the Braewood Condominiums, the nearest noise-sensitive receiver, and would not exceed the FTA L_{dn} noise impact criteria (66 dBA for a moderate impact and 74 dBA for a severe impact).

Roadway improvements would not increase capacity or substantially change the vertical or horizontal roadway alignment. The improvements would result in minimal to no change to overall traffic volumes on the roadway; therefore, no change to traffic noise levels is expected.

Lynnwood City Center Transit Station BRT and Roadway Improvements

Operations at this project component would generate transit-related noise from buses at the proposed BRT station at the existing Lynnwood City Center transit center and the bus-only lanes along the Poplar Way loop ramp. Typical noise from buses entering and leaving the transit center would include noise from tires, propulsion motors, and other auxiliary equipment on the vehicles, which are predicted to be an L_{dn} of 60 dBA, which would not exceed the measured existing noise level of L_{dn} of 67 dBA at 20100 48th Avenue, the nearest noise-sensitive receiver, and would not exceed the FTA L_{dn} noise impact criteria (63 dBA for a moderate impact and 68 dBA for a severe impact). The noise levels from the BRT station in the transit center are predicted to be below the WAC EDNA for commercial noise sources adjoining a residential use of a L_{eq} of 57 dBA for daytime and a L_{eq} of 47 dBA for nighttime.

For this project component, the roadway improvements along Poplar Way would allow bus-only traffic on the inside shoulder of the loop on-ramp. While these improvements add an outside lane, it is for buses only and the bus traffic that would be added is farther away from noise-sensitive receivers and would be traveling at reduced speeds of 35 mph to make the turn on the loop ramp. This improvement does not add to the capacity of the loop ramp and would not lead to an increase in overall traffic on the ramp. The noise levels of the bus-only lanes are not expected to increase traffic noise levels.

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

Noise levels during construction of each project component are not expected to exceed state or local thresholds. Therefore, mitigation measures would not be required. Noise variances from local agencies would be obtained, as needed, if construction activities occurred outside of specified daytime hours.

Prior to construction, the noise analysis would be revised for each project component with updated design and construction information. The revised analysis would be presented as part of an updated Noise Analysis and Control Plan. If the updated analysis indicates a potential impact, mitigation measures and best practices would be identified in the updated Noise Analysis and Control Plan which would specify methods that the contractor would implement to minimize construction equipment noise levels at sensitive receivers as necessary. The Noise Control Plan would be approved by Sound Transit and may require additional approval by WSDOT prior to initiating construction. These measures could include, but would not be limited to, the following:

- Use low-noise emission equipment
- Use broadband backup warning devices on all vehicles
- Implement noise-deadening measures for truck loading and operations
- Monitor and maintain equipment to meet noise limits
- Use acoustic enclosures, shields, or shrouds for equipment and facilities
- Install high-grade engine exhaust silencers and engine-casing sound insulation
- Minimize the use of generators
- Use movable noise barriers at the source of the construction activity
- Use drilled piles in lieu of impact piles or limit the time of day the activity could occur for potential pile driving for the foundations of the South Renton Transit Center and Kingsgate Park-and-Ride Garage.

Based on the FTA General Noise Assessment, predicted future BRT operational noise levels at the noise-sensitive land uses near each project component are not expected to increase existing noise levels and would not result in a noise impact. Park-and-ride garage and transit center noise levels are predicted to be below the WAC EDNA for commercial noise sources adjoining a residential use. Therefore, mitigation measures would not be required.

As design continues for the Tukwila International Boulevard BRT Station, the Totem Lake/Kingsgate BRT Station, and the Brickyard BRT Station, which would be located in or directly above the SR 518 or I-405 roadway, noise levels at the BRT station platforms would be evaluated for compliance with Sound Transit's criteria of a 1-hour L_{eq} noise limit of 72 dBA for traffic noise exposure for patrons at the station platform and design would incorporate noise-minimization features as needed.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Except for the South Renton Transit Center, all of the project components are on land currently used for transportation; these land uses would not change. The land at the South Renton Transit Center has been, and still is, in commercial use. Sound Transit is in the process of completing the purchase of this site, which would convert these approximately 8.3 acres of land from commercial to transportation use. Upon completion of construction, a portion of the South Renton Transit Center site may then be deemed as surplus property, which could be sold and used by the City of Renton, or others, for TOD with affordable housing.

During construction, some properties adjacent to project components may be affected by temporary construction easements; the existing land uses on these properties would remain. Other than these temporary uses during construction and the property being purchased for the South Renton Transit Center, no other uses of land on adjacent properties would be altered by the project.

Once the project is constructed, land uses adjacent to all of the project components would benefit from access to the BRT service that would provide increased regional mobility and improved transit speed and reliability.

Table 12 identifies the current uses of land where project components would be developed, as well as land uses on properties adjacent to each element of the components. **Table 13** identifies the current ownership of the project component land (including right-of-way ownership), whether the project component would require the long-term acquisition or lease of land from WSDOT, King County Metro, or other jurisdictions, and whether temporary use of WSDOT right-of-way may be needed during construction. The locations of long-term leases or property acquisition are shown in the Conceptual Engineering plans in Attachment B.

Temporary construction easements may also be needed from adjacent properties during construction, with locations to be determined as design progresses. Sound Transit would work with property owners to determine the agency's ability to use such areas, provide appropriate compensation for the use, and restore all areas after construction.

Table 12 Current and adjacent land uses by project component

Project component	Current land use	Adjacent land uses
Burien Transit Center and Roadway Improvements	Transportation (transit center, arterial roadway, and SR 518)	<u>Transit center and SW 148th Street</u> <ul style="list-style-type: none"> Northwest: Residential North, south, east, and west: Commercial retail <u>SR 518</u> <ul style="list-style-type: none"> North and south: Residential East and west: Transportation (SR 518)
Tukwila International Boulevard BRT Station and Roadway Improvements	Transportation (SR 518)	<u>BRT station</u> <ul style="list-style-type: none"> North: Transportation (Link light rail station) South: Commercial East and west: Transportation (SR 518) <u>Roadway improvements</u> <ul style="list-style-type: none"> North and south: Residential East and west: Transportation (SR 518)
South Renton Transit Center and Roadway Improvements	<u>Transit Center</u> <ul style="list-style-type: none"> Commercial retail (currently mostly vacant, some auto-oriented uses continue on-site) Bonneville Power Administration transmission line easement, along south and east site boundary <u>Roadway improvements</u> <ul style="list-style-type: none"> Transportation 	<ul style="list-style-type: none"> North and west: Transportation (roadways) and commercial (auto dealerships and large-scale retail) East: Transportation (roadways and existing park-and-ride lot) South: Transportation (roadways) and commercial (retail and hotel)
Bellevue Transit Center and Off-site Layover	Transportation	<u>Transit center</u> <ul style="list-style-type: none"> North, south, east, and west: Transportation (roadways), Commercial (office and retail towers with associated parking), Residential East: City Hall Park and site of Bellevue Downtown Link light rail station <u>Layover</u> <ul style="list-style-type: none"> West: Bellevue Library East and south: Multi-family residential North: Transportation (roadway) and single-family residential

Project component	Current land use	Adjacent land uses
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	Transportation	<u>BRT station</u> <ul style="list-style-type: none"> Immediately north, south, east, and west: Transportation (I-405) East: Commercial (medical facilities) <u>Kingsgate Park-and-Ride</u> <ul style="list-style-type: none"> North, west, and south: Single and multi-family residential East: Transportation (arterial roadway and I-405)
Brickyard Station and Roadway Improvements	Transportation	<ul style="list-style-type: none"> North, west, and south: Transportation (I-405 and Brickyard Park-and-Ride lot) Northwest: Church with associated school and recreation field East: Single and multi-family residential
Lynnwood City Center Transit Station BRT and Roadway Improvements	Transportation	<u>BRT station</u> <ul style="list-style-type: none"> North, east, and south: Transportation (park-and-ride and site of Lynnwood Link light rail station) West: Multi-family residential <u>Roadway improvements</u> <ul style="list-style-type: none"> North and west: Transportation (I-5) East: Commercial South: Commercial and single-family residential

SOURCE: Sound Transit 2020

Table 13 Current land ownership, long-term land use and temporary use of WSDOT right-of-way by project component

Project component	Current land ownership	Long-term land use	Potential temporary use of WSDOT right-of-way
Burien Transit Center and Roadway Improvements	<u>Transit center</u> King County Metro <u>Roadway improvements</u> <ul style="list-style-type: none"> City of Burien public right-of-way for SW 148th Street WSDOT public right-of-way for SR 518 	<u>Transit center</u> Use agreement with King County Metro <u>Roadway improvements</u> <ul style="list-style-type: none"> Burien retains right-of-way for SW 148th Street Air space lease (ASL) from WSDOT for transit-only improvements on SR 518, WSDOT retains right-of-way 	Temporary construction air space lease (TCAL) for work in SR 518 right-of-way

Project component	Current land ownership	Long-term land use	Potential temporary use of WSDOT right-of-way
Tukwila International Boulevard BRT Station and Roadway Improvements	WSDOT public right-of-way for SR 518	ASL from WSDOT for transit-only improvements on SR 518, WSDOT retains right-of-way	TCAL for work in SR 518 right-of-way
South Renton Transit Center and Roadway Improvements	<u>Transit center</u> Sound Transit is in the process of acquiring four privately owned parcels <u>Roadway improvements</u> <ul style="list-style-type: none"> City of Renton public right-of-way for local streets WSDOT public right-of-way for Rainier Avenue S (SR 167) and I-405 	<u>Transit center</u> Sound Transit ownership <u>Roadway improvements</u> ASL from WSDOT for transit-only improvements on Rainier Avenue S (SR 167), WSDOT retains right-of-way	TCAL for work in Rainier Avenue S (SR 167) right-of-way
Bellevue Transit Center and Off-site Layover	<u>Transit center</u> King County Metro operates and maintains. Improvements all within City of Bellevue right-of-way. <u>Off-site layover</u> City of Bellevue right-of-way	<u>Transit center</u> Use agreements with King County Metro and City of Bellevue <u>Off-site layover</u> No change from existing	None
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	<u>Totem Lake/Kingsgate Station</u> WSDOT right-of-way for I-405. Sound Transit has an ASL for existing bus stops <u>Kingsgate Park-and-Ride site</u> <ul style="list-style-type: none"> WSDOT right-of-way Operated and maintained by King County Metro 	<u>Totem Lake/Kingsgate Station</u> Existing ASL may need to be modified for BRT station improvements <u>Kingsgate Park-and-Ride site</u> Sound Transit to determine whether to purchase or lease the land associated with the park-and-ride garage	<u>Totem Lake/Kingsgate Station</u> Temporary construction agreement under existing ASL <u>Kingsgate Park-and-Ride site</u> Construction agreement

Project component	Current land ownership	Long-term land use	Potential temporary use of WSDOT right-of-way
Brickyard Station and Roadway Improvements	<u>BRT station and pedestrian bridge</u> <ul style="list-style-type: none"> WSDOT right-of-way for I-405 and Brickyard Park-and-Ride Bothell right-of-way for (NE 115th Street) <u>Roadway improvements</u> WSDOT right-of-way for I-405	ASL from WSDOT for transit-only improvements on I-405 and Brickyard Park-and-Ride, WSDOT retains right-of-way	None, construction led by WSDOT
Lynnwood City Center Transit Station BRT and Roadway Improvements	<u>Transit center</u> Property owned by Sound Transit <u>Roadway improvements</u> <ul style="list-style-type: none"> 46th Avenue W: City of Lynnwood right-of-way and WSDOT limited access right-of-way Poplar Way and loop ramp: 10 parcels owned by City of Lynnwood, 1 parcel privately owned¹ I-5: WSDOT right-of-way 	<u>Transit center</u> No change <u>Roadway improvements</u> <ul style="list-style-type: none"> 46th Avenue W: No change, improvements are not transit-only Poplar Way and loop ramp: Partial acquisition from 5 of the parcels owned by City of Lynnwood and the 1 privately owned parcel I-5: ASL for transit-only improvements, WSDOT retains right-of-way 	TCAL within 46th Avenue W and I-5 limited access right-of-way

SOURCE: Sound Transit 2020

NOTES:

¹ Based on Snohomish County Assessor's information. However, these parcels may be owned by WSDOT as part of the right-of-way for I-5. Sound Transit will continue coordination with both the city and WSDOT to determine the ownership of these parcels.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

The area surrounding the I-405 corridor and some of the project components may have been used as farmland in the past; however, the highway has existed since the 1960s and the land around the highway was previously developed and has continued to develop since that time, and there are currently no farms operating at the project components and no known farms operating adjacent to the project components.

No agricultural or forest land of commercial significance would be converted as a result of this project.

- 1) **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:**

No, there are no nearby working farms or forest land businesses that the project components would affect or be affected by.

- c. **Describe any structures on the site.**

Burien Transit Center and Roadway Improvements

Two structures are on the Burien Transit Center site:

- On the main transit center island, a large structural steel and glass shelter (approximately 200 feet long by 20 feet wide) covers the platform, as well as a restroom facility for transit drivers. The maximum height of this shelter appears to be approximately 20 feet.
- On the west transit center island is a smaller steel and glass station shelter, approximately 40 feet long by 12 feet wide. The height of this shelter appears to be approximately 10 feet.

For the roadway improvements, one bridge structure in the east end of the project component conveys SR 518 over SR 509. This bridge structure is approximately 300 feet long by 100 feet wide.

Tukwila International Boulevard BRT Station and Roadway Improvements

Four bridge structures cross over SR 518 in this project area:

- S 154th Street bridge, which is approximately 650 feet long and 50 feet wide
- Airport Expressway bridge, which is approximately 600 feet long and 50 feet wide
- Link light rail guideway bridge, which is approximately 500 feet long extending from the light rail station to the edge of the SR 518 right-of-way (the elevated guideway continues south to Sea-Tac Airport) and 30 feet wide
- Tukwila International Boulevard bridge, which is approximately 300 feet long and 90 feet wide

In addition, the site includes a portion of the Tukwila International Boulevard Link light rail station. This light rail station is comprised of three levels: a street level, a mezzanine level that includes TVMs and rider information, and a station level with platforms. The station structure is approximately 250 feet long and 100 feet wide. The top station level is approximately 50 feet above ground level.

South Renton Transit Center and Roadway Improvements

Table 14 identifies the existing structures on the parcels of the South Renton Transit Center site and describes previous uses and approximate sizes. Within the roadway improvements area there is one bridge, conveying I-405 over Rainier Avenue S, that is approximately 250 feet long and 100 feet wide.

Table 14 Existing structures on the South Renton Transit Center site

Parcel No.	Previous use	Building size (square feet)
192305-9068	Office space and repair garage	3,710 and 480
192305-9035	Auto showroom and lot	46,980
192305-9063	Auto service building	12,260

SOURCE: Sound Transit 2020

In addition, within the Bonneville Power Administration easements on the site there are three transmission poles along the east side of the property and two along the southern portion of the property. Each of these transmission poles appears to be approximately between 40 and 50 feet in height.

Bellevue Transit Center and Off-site Layover

The Bellevue Transit Center site contains an existing bus transit facility with three covered shelter structures. In the western portion, the shelter structure is approximately 90 feet long by 35 feet wide, and appears to be approximately 18 feet high at the peak, and includes a restroom for transit drivers. In the center there is a large covered shelter structure that is approximately 360 feet long and 40 feet wide, and appears to be approximately 18 to 24 feet high, over the platform. In the eastern portion, the shelter structure is approximately 60 feet long by 35 feet wide, and appears to be approximately 18 feet high at the peak, and includes a rider information center. There are no structures on the off-site layover site.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The site of the proposed Totem Lake/Kingsgate Station is an existing freeway transit station pair located on an elevated structure in the center of I-405. The existing transit station platforms are approximately 70 feet wide by 320 feet long. Structures at the transit stations include shelters with seating. On the east side of the platform there are two transit shelter structures, each approximately 70 feet long by 8 feet wide and with staggered steel awning heights of approximately 8 to 12 feet. On the west side of the platform there is one continuous shelter structure that is approximately 280 feet long and 8 feet wide, with varying steel awning heights of approximately 8 to 12 feet.

The only existing structures on the Kingsgate Park-and-Ride site are located at the bus loop and include two bus shelters, each approximately 8 feet long and 6 feet wide, and a small restroom for transit drivers that is approximately 8 feet long by 8 feet wide that appears to be approximately 8 feet high.

Brickyard Station and Roadway Improvements

Structures on this project component site include the bridge for the Juanita Woodinville Way NE overcrossing of I-405, which is approximately 650 feet long and 80 feet wide, as well as two bus shelters (approximately 16 feet long, 6 feet wide, and 8 to 10 feet high), one at each of the existing bus stops on the I-405 on- and off-ramps.

Lynnwood City Center Transit Station BRT and Roadway Improvements

At the existing transit center, to the north and south of the transit loop, there are approximately 10 separate covered shelters, each approximately 50 to 70 feet long and 12 feet wide. On the center transit island there are approximately three groupings of staggered shelters. The groupings at the west and east ends include five shelters, four transit shelters that are approximately 30 feet long and 20 feet wide and one walkway shelter that is approximately 20 feet long and 12 feet wide. The grouping in the center includes two transit shelters, each approximately 30 feet long by 20 feet wide. All shelters appear to be approximately 10 to 12 feet high. In the northeast portion of the transit center site there is an existing single-story building (approximately 65 feet long and 25 feet wide) used for a rider information kiosk and space for commercial business. In the southwest portion of the transit center site there is an art sculpture and a single-story building (approximately 35 feet long and 15 feet wide) for a restroom for transit drivers.

Within the Poplar Way road improvements area is the 196th Street SW bridge overcrossing of I-5. This bridge structure is approximately 600 feet long by 70 feet wide and includes a nonmotorized crossing (separated from motorized traffic by a jersey barrier) with a ramp on the west end that connects to the Interurban Trail. A cellular tower is located in the center of the Poplar Way loop ramp where project construction staging would likely occur.

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

The existing buildings on the proposed South Renton Transit Center site would be demolished. No other project components would require removal of structures.

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

Burien Transit Center and Roadway Improvements

The current zoning of the Burien Transit Center is Downtown Commercial (DC) (see Attachment A, Figure A-13). SW 148th Street and SR 518 are public right-of-way.

Tukwila International Boulevard BRT Station and Roadway Improvements

The project component is located within the SR 518 right-of-way. Zoning to the north and south of SR 518 is Regional Commercial (RC) by the City of Tukwila (see Attachment A, Figure A-14).

South Renton Transit Center and Roadway Improvements

The current zoning of the South Renton Transit Center site is Commercial Arterial (CA) (see Attachment A, Figure A-15). The existing roadways are public right-of-way, which have not been zoned by Renton.

Bellevue Transit Center and Off-site Layover

The transit center is located within the Downtown Office 1 (DT-O-1) zone and the off-site bus layover area is within an area zoned Downtown – Residential (DT-R) (see Attachment A, Figure A-16).

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The Totem Lake/Kingsgate Station is located within the WSDOT right-of-way and has no zoning designation. The Kingsgate Park-and-Ride is WSDOT right-of-way and is within the City of Kirkland's jurisdiction and is zoned Professional Office Residential, Transit Oriented Development (PR 1.8) (see Attachment A, Figure A-17).

Brickyard Station and Roadway Improvements

Most of this project component is within public right-of-way for I-405 and has no zoning designation. The portions of this project component that are located in the City of Bothell jurisdiction have the following zoning designations: Residential – Activity Center (R-AC), Office-Professional (OP), and Neighborhood Business (NB). Those portions within the City of Kirkland are zoned low density residential (RSA 6) (see Attachment A, Figure A-18).

Lynnwood City Center Transit Station BRT and Roadway Improvements

The Lynnwood City Center transit station is located within Lynnwood's City Center West (CC-W) zoning designation (see Attachment A, Figure A-19). The roadway improvements are within public right-of-way, which have not been zoned by Lynnwood.

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

Table 15 provides the existing comprehensive plan designation for each project component.

Table 15 Comprehensive Plan designation for each project component

Project component	Agency with Jurisdiction	Comprehensive Plan designation
Burien Transit Center and Roadway Improvements	Transit Center and SW 148th Street: Burien SR 518: WSDOT	Transit Center and SW 148th Street: Downtown Commercial SR 518: No land use designation assigned, within WSDOT right-of-way
Tukwila International Boulevard BRT Station and Roadway Improvements	WSDOT	No land use designation assigned, within WSDOT right-of-way
South Renton Transit Center and Roadway Improvements	Transit Center and local roadways: Renton Rainier Avenue S (SR 167): WSDOT	Transit Center and local roadways: Commercial-Mixed Use Rainier Avenue S (SR 167): No land use designation assigned, within WSDOT right-of-way
Bellevue Transit Center and Off-site Layover	Bellevue	Transit Center: Mixed Use-Downtown Off-site layover: Downtown-Ashwood
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	Totem Lake/Kingsgate Station: WSDOT Kingsgate Park-and-Ride Garage: WSDOT and Kirkland	Totem Lake/Kingsgate Station: No land use designation assigned, within WSDOT right-of-way Kingsgate Park-and-Ride Garage: Transit-oriented development
Brickyard Station and Roadway Improvements	Station and roadway improvements: WSDOT East pedestrian bridge landing: Bothell	Station and roadway improvements: No land use designation assigned within WSDOT right-of-way East pedestrian bridge landing: R-AC, OP, and NB (Waynita/Simonds/Norway Hill Comprehensive Plan Subarea)
Lynnwood City Center Transit Station BRT and Roadway Improvements	Transit Station: Lynnwood Roadway Improvements: WSDOT	Transit Station: City Center Roadway Improvements: No land use designation assigned, within WSDOT right-of-way

SOURCE: Sound Transit 2020

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

None of the I-405 BRT project components are located within a designated shoreline management zone.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No critical areas have been identified at the Burien Transit Center and Roadway Improvements, Bellevue Transit Center and Off-site Layover, or the Lynnwood City Center Transit Station BRT and Roadway Improvements project components.

Tukwila International Boulevard BRT Station and Roadway Improvements

City of Tukwila mapped wetlands are within the study area (see Section B.3.a for additional information). In addition, Tukwila has mapped moderate and high landslide hazard areas within the study area (see Section B.1.d). As design progresses, geotechnical borings would be completed at this location to identify existing soil conditions and provide recommendations for construction and structures.

South Renton Transit Center and Roadway Improvements

This project component is located within a City of Renton designated wellhead protection zone and a high seismic hazard (see Section B.1.d). As stated in Section B.3.b the area is also within a federally designated Sole Source Aquifer area. The project component would not discharge untreated water to groundwater and, therefore, would not impact the wellhead protection area. The roadway improvements along Rainier Avenue S, south of S Grady Way, intersect with a mapped Federal Emergency Management Agency flood zone (zone AH), which is defined as an area of shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. In this area, the roadway improvements include some additional paving and re-striping for a new bus-on-shoulder lane. The roadway improvements would not change the elevation of the roadway, and stormwater detention would be provided.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

This project component is located in an area with a medium or mixed liquefaction potential. However, as discussed in Section B.1.d, preliminary evaluation of existing soils from geotechnical borings on site suggest that liquefaction at this site is unlikely (Sound Transit 2020f). The eastern edge of the Kingsgate Park-and-Ride site is also mapped as having moderate-to-high susceptibility for landslides.

Brickyard Station and Roadway Improvements

King County has mapped wetlands and creeks within the study area for this project component (see Section B.3.a for additional information). Juanita Creek flows under I-405 where the interstate would be widened to allow room for bus access to the proposed new transit station.

King County landslide, erosion, and liquefaction hazard areas are mapped near the north end of the I-405 roadway improvements, along the slope just south of the Sammamish River and I-405/SR 522 interchange. Kirkland has mapped high and moderate susceptibility landslide hazard areas throughout the south portion of the project area. As WSDOT progresses with design, geotechnical analysis would be completed to identify existing soil conditions and provide recommendations for construction and structures.

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

None of the completed project components would have people residing or working at them. However, agency maintenance and security staff would visit the sites regularly. Bus drivers would also stay with their vehicles during layovers at the Lynnwood City

Center transit station, the Bellevue layover area, and the Burien Transit Center and would use the driver restroom facilities provided at these locations.

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

None of the project components would displace any existing residences.

The only project component where businesses and their employees would be displaced is at the South Renton Transit Center. At the South Renton Transit Center, there are three existing businesses under two ownerships: Sound Ford and Sound Collision under one ownership and Walkers Renton Mazda under another. Sound Transit has leases in place with these businesses and is currently in the process of relocating them. Sound Ford is no longer operating on the site. Sound Collision is still operating on-site until able to complete the relocation to its new site, which is expected in summer 2020. Walkers Renton Mazda is still operating on-site and relocation efforts are beginning in preparation for its move, which will occur once its new location is finished being built. All three businesses would be completely relocated in advance of the start of project construction.

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

Sound Transit is complying with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Act (1970) and Sound Transit's *Revising Real Property Acquisition and Relocation Policy, Procedures and Guidelines* (Sound Transit 2002), under which any displaced party is eligible for relocation benefits, and with the terms of its leases with the business owners on the South Renton Transit Center site.

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

Sound Transit strives to locate its major transit facilities where they would also be compatible with projected land uses and plans. As a regional transit authority facility, project components are recognized as an Essential Public Facility per the Washington State Growth Management Act (Revised Code of Washington 36.70A.200) for consideration by local governments and compliance with their development plans and policies.

As noted below, the project components are consistent with the existing and projected land uses, as identified in local jurisdictions' comprehensive plans and zoning designations. In addition, all project components are planned to be in compliance with the development standards of each jurisdiction's zoning code (including setbacks, height, landscaping, and other dimensional standards). If compliance is not possible, Sound Transit would coordinate with local jurisdictions, such as to seek variances or development agreements.

The following comprehensive plans were evaluated to determine project consistency:

- Burien Transit Center and Roadway Improvements: Burien Comprehensive Plan (December 2018), Conceptual Framework for the Town Square, the Downtown Master Plan and the downtown policies. Transit center improvements are considered to be a government facility use, which is a permitted use within the Downtown

Commercial zone. Roadway improvements in SW 148th Street are consistent with the existing roadway land use. Roadway improvements in SR 518 do not have a land use designation assigned as they are within WSDOT right-of-way.

- Tukwila International Boulevard BRT Station and Roadway Improvements: Tukwila Comprehensive Plan (2015) and SeaTac Comprehensive Plan (November 2019) were reviewed. No land use designation is assigned within WSDOT right-of-way. The Link light rail station is on the parcel owned by Sound Transit that is zoned “Regional Commercial” (RC) by the City of Tukwila. An Unclassified Use Permit would be required from the City of Tukwila to demonstrate compliance with its land use policies. City of SeaTac land use and zoning standards generally do not apply in WSDOT right-of-way.
- South Renton Transit Center and Roadway Improvements: Renton 2015 Comprehensive Plan. A transit center is a conditional use within the “Commercial Arterial” (CA) zone, which also has an overlay of “Automall Overlay, District B.” Conditional use permit approval would ensure the project component’s land use compatibility.
- Bellevue Transit Center and Off-site Layover: Bellevue Comprehensive Plan (2016) designates the existing transit center as “Mixed Use – Downtown.” Bellevue’s zoning code designates the site as “Downtown Office 1 District” (DT-O-1). The transit center and off-site layover would obtain land use exemption approvals, which would ensure the project component’s land use compatibility.
- Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage:
 - Kingsgate Park-and-Ride Garage: Kirkland Comprehensive Plan (2016) designates the Kingsgate site as TOD within the Totem Lake Business District & Urban Center. While the Kingsgate Park-and-Ride site is considered WSDOT right-of-way, WSDOT will apply the City of Kirkland’s development standards of the Professional Office Residential, Transit Oriented Development zone to the proposed park-and-ride garage. The park-and-ride garage would be a government facility use, which is a permitted use. The City of Kirkland is currently in the process of amending the design standards of this zone; the park-and-ride garage would comply with the amended zoning code.
 - Totem Lake/Kingsgate Station: No land use designation assigned as the station is within WSDOT right-of-way.
- Brickyard Station and Roadway Improvements: Kirkland Comprehensive Plan (2016) and *Imagine Bothell... Comprehensive Plan* (2015) were reviewed. No land use designation is assigned as the project component is within WSDOT right-of-way.
- Lynnwood City Center Transit Station BRT and Roadway Improvements:
 - Transit Center: 2015 Lynnwood Comprehensive Plan. The zoning designation of the transit center is “City Center West” or (CC-W) with a “PSRC Regional Growth Center” overlay. In this zone, transit centers are considered an Essential Public Facility use, which are permitted with approval of a development agreement. This project component would be considered a minor modification to the existing

transit center and would not need to modify the existing development agreement. Therefore, it is compatible with existing and proposed land uses.

- Roadway Improvements: Although the Poplar Way loop ramp is comprised of 11 parcels, the City of Lynnwood has not assigned a land use designation to them as they are also within WSDOT's limited access right-of-way for I-5.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

No measures are required. The project would not affect agricultural or forest lands of long-term commercial significance.

9. Housing

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

The proposed project would not provide any housing units.

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

The project would not eliminate any housing units.

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

No measures to control housing impacts are warranted.

10. Aesthetics

For more detailed information on visual and aesthetic resources at the project components, see Attachment F, *I-405 BRT Corridor Visual and Aesthetic Resources Technical Memorandum*. Figures 4-1 through 4-7 of the attachment provide existing aerial and street view photographs of the project components. Figure 5-1 through 5-9 of Attachment F provide existing photographs and photosimulations, at key viewpoints, for project components that were identified as having a greater change to the visual environment, such as the Kingsgate Park-and-Ride Garage, and at the Lynnwood City Center transit center as a representative example of a BRT station at an existing transit center.

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

At each BRT station the proposed pylons are anticipated to be approximately 17 feet tall and would likely be the tallest feature. Although the architectural materials for the pylons would be determined during final design, it is anticipated that they would be constructed of a durable and relatively easily cleanable surface such as glass and/or steel, designed to fit the aesthetic of the rest of the BRT station elements. Other station elements include the TVMs which are typically boxes that are 4 feet in height and the real-time information signs that are currently anticipated to be attached underneath the station shelter

structure, either the existing shelter or the proposed new shelter. TVMs and real-time information signs are typically made of steel.

At the Burien Transit Center, the Tukwila International Boulevard BRT Station, and the Brickyard Station, the BRT-branded station shelters are anticipated to be approximately 11 feet tall and approximately 48 feet long. At the South Renton Transit Center, either a similarly sized BRT station shelter would be added or the entire transit center island may be covered by a single, large shelter with a height that may be around 17 feet.

Although the architectural materials for the station shelters at all locations would be determined during project final design, as with the pylons, it is anticipated that the principal exterior material would likely be steel and glass; the materials and design of the shelters would be coordinated with that of the pylons.

The South Renton Transit Center and Roadway Improvements and the Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage are the only two project components with buildings proposed. Both of these buildings are five-story park-and-ride garages, approximately 55 to 60 feet tall.

In addition to the pylons, TVMs, and real-time information signs that were described above, **Table 16** identifies the likely tallest heights and principal exterior building materials of proposed structures for each project component.

Table 16 Proposed structure heights and building materials

Project component	Structure(s)	Approx. maximum height	Potential building materials
BRT station elements – all locations	BRT-branded pylon	17 feet	Steel and glass
	Ticket vending machine	4 feet	
	Real-time info signs	1 foot, attached underneath the station shelter	
Burien Transit Center and Roadway Improvements	BRT-branded station shelter	11 feet	Steel and glass
Tukwila International Boulevard BRT Station and Roadway Improvements	BRT-branded station shelter	11 feet	Steel and glass
	Pedestrian bridge, staircase, and elevator	40 feet (height over SR 518 roadway, which is below adjacent elevations)	Reinforced concrete
	Retaining walls	Ranging from 6 to 13 feet	Reinforced concrete

Project component	Structure(s)	Approx. maximum height	Potential building materials
South Renton Transit Center and Roadway Improvements	Park-and-ride garage	55 to 60 feet	Reinforced concrete and steel
	Pedestrian bridge, staircase, and elevator (third floor of garage)	33 feet	Reinforced concrete and steel
	Shelter over the transit center island	17 feet	Steel and glass
	Retaining wall	6 feet	Reinforced concrete
	Traffic signal pole/mast arm	35 feet	Steel
Bellevue Transit Center and Off-site Layover	See all project components		
Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage	Park-and-ride garage	55 to 60 feet	Reinforced concrete and steel
Brickyard Station and Roadway Improvements	Pedestrian bridge, staircase, and elevator	33 feet (height over I-405 roadway, which is below adjacent elevations)	Reinforced concrete and steel
	BRT-branded station shelter	11 feet	Steel and glass
Lynnwood City Center Transit Station BRT and Roadway Improvements	Transit center: Traffic signal pole/mast arm	35 feet	Steel
	Poplar Way: Ramp meter signal	22 feet	Steel

SOURCE: Sound Transit 2020

b. What views in the immediate vicinity would be altered or obstructed?

Overall, the project components are not expected to result in a notable change in the physical characteristics of the existing environment and would be expected to be compatible with the existing visual character. Attachment F provides more detail on the assessment of potential changes to views and visual quality from the project components, following FHWA's Guidelines for the Visual Impact Assessment of Highway Projects.

Burien Transit Center and Roadway Improvements

There are no designated scenic or protected views in the vicinity of this project component.

The revisions to the transit center itself (transit islands and BRT shelter) would be constructed within the existing facility and would be consistent with the type, scale, size, shape, and form of the transit center. The roadway improvements on SW 148th Street, SR 509, and SR 518 would not be visually discernable over time from the existing conditions and would be compatible within the context of an existing four-lane road in a suburban environment and a state route. The roadway improvements would have similar

visual characteristics such as materials, colors, form, height, and shape to the existing roadway features.

The project would not degrade views of sensitive natural visual resources such as mature trees at Dottie Harper Park, would not substantially change landform, and would not obstruct desired views. Roadway improvements and signal modifications would be minor and within the existing paved right-of-way. Overall, this project component would not affect existing views or visual quality, and it would be visually consistent and compatible with the existing visual environment. No adverse impacts are anticipated.

Tukwila International Boulevard BRT Station and Roadway Improvements

There are no designated scenic or protected views in the vicinity of this project component.

The proposed BRT station shelter would be consistent with the scale and visual character of the existing SR 518 roadway, which is a major transportation facility. The pedestrian bridge, stairs, and elevators would be consistent with the scale, materials, and visual character of the adjacent, large light rail station structure and elevated guideway and overpasses over SR 518. Changes to visual resources associated with this project component would mainly be viewed by travelers along SR 518, the interchange with Tukwila International Boulevard, and Airport Expressway. The Tukwila International Boulevard Station area is highly developed. The light rail station and track guideway rise nearly 100 feet over SR 518 and are currently visually dominant for many viewers. This project component would include similar materials and character as the existing light rail infrastructure and the nearby Tukwila International Boulevard freeway overpass.

Existing vegetation is primarily located along SR 518 and in the residential areas northeast and southeast of SR 518, obscuring views from adjacent residential, retail, and commercial viewers. For this project component, mostly lower growing and immature roadside vegetation along SR 518 would be removed for roadway widening. As noted in Section B.5.a, approximately 10 trees with a trunk diameter between 4 and 30 inches would be removed. This is not anticipated to alter the existing natural visual character.

Proposed roadway modifications, bus-only lanes, lighting, signage, and utilities would add visual elements similar to the existing visual character. Large numbers of travelers and viewers from the commercial/retail areas would see the changes in visual resources. However, once constructed, both travelers and commercial/retail neighbors would have low sensitivity to the change. Directional and roadway signage, traffic lights, street lighting, parking lot lighting, retail/commercial advertising and signage, and utilities are also ubiquitous in the existing visual environment. Therefore, the overall impacts to visual quality would be neutral. No adverse impacts are anticipated.

South Renton Transit Center and Roadway Improvements

There are no designated scenic or protected views in the vicinity of this project component.

This project component, including the park-and-ride garage and the transit center facilities, would be compatible with the scale, form, materials, and visual character of the existing commercial/retail area and the existing electrical transmission lines on-site and

in the area. The architectural elements of the park-and-ride garage remain to be finalized as design progresses; the facility would comply with the applicable City of Renton development standards. Proposed site lighting, signage, pedestrian connections, roadway elements, and utilities would be similar to existing conditions in the commercial/retail area. While the project component would introduce new visual elements for residential viewers, the transit center would be located within an existing retail/commercial area and would replace existing commercial structures of similar scale and form.

The current location of the proposed South Renton Transit Center is highly developed. Although, Section B.5.a states that there are approximately 34 trees with a diameter between 4 and 30 inches in this area, most of which are existing street trees that have been identified as needing to be removed for the project. Otherwise, there is very little vegetation on and around the site and almost no natural visual character exists. With this project component, the extensive green space, stormwater treatment, parking islands, and other landscaping required by the City of Renton would substantially increase natural elements and benefit the overall natural character.

To improve transit speed and reliability, eastbound BRT vehicles would use a new short section of a bus-only lane on Rainier Avenue S. Other local roads would have only minor changes with this project such as a traffic light along Rainier Avenue S at Hardie Avenue S. The visual character of the roadway improvements would be compatible with the existing roadway and the nearby area.

Large numbers of travelers along surface streets would see visual changes with the project. Similarly, there may be large numbers of viewers from the commercial/retail areas; however, both the travelers and commercial/retail neighbors would have low sensitivity to the visual changes from the project component. The project component would be visible to a small number of residential viewers; however, with the existing visual context, residential viewers would likely have low sensitivity.

The visual character of this project component would be visually consistent and compatible with the existing visual environment. Therefore, the overall impacts of the South Renton Transit Center project component would be to enhance the existing visual quality. No adverse impacts are anticipated.

Bellevue Transit Center and Off-site Layover

There are no designated scenic or protected views in the vicinity of this project component.

At this location, the BRT station elements within the transit center would be consistent with the type, scale, size, shape, and form of the existing transit center. Existing vegetation, such as ornamental landscaping in the right-of-way or fronting residential and commercial high-rise buildings, would remain.

Roadway improvements associated with the layover area adjacent to the Bellevue Library would consist of re-striping the roadway along 110th Avenue NE to move existing on-street parking from the west side of the street to the east side and create additional bus layover spaces along the west side of the roadway. A center painted island and a right-turn-only lane would be removed to maintain one northbound and one southbound

travel lane. These roadway improvements would not move vehicles closer to the adjacent library and would not expand the existing paved roadway. The visual character of this project component would be visually consistent and compatible with the existing visual environment. Therefore, the overall impact of this project component to visual quality would be neutral. No adverse impacts are anticipated.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

There are no designated scenic or protected views in the vicinity of this project component.

The proposed BRT station elements would be consistent with the scale, form, materials, and visual character of the existing Totem Lake Freeway Station. These changes would occur within the existing I-405 visual context and the overall impact to visual quality from the proposed BRT stations would be neutral.

The Kingsgate Park-and-Ride Garage would be a new structure on an existing paved park-and-ride lot. The new structure would be compatible with the scale and materials of existing commercial and retail buildings on the east side of I-405. Proposed site lighting, signage, pedestrian connections, and utilities would be similar to existing conditions in commercial/retail areas and along 166th Avenue NE and I-405.

The Kingsgate Park-and-Ride Garage structure would contrast in scale, form, materials, and character to adjacent residential structures. While the park-and-ride garage structure would contrast in scale and form with these residential structures, it would not be visible from the majority of residences. It would not be visible to residences located to the west of the Kingsgate site as these views are limited by the existing vegetation and land form, which includes a raised berm, along the western boundary of the site. It would not be visible to residences to the north of the site because these residences would be approximately 1,600 feet from the park-and-ride garage and their views are screened by existing mature trees. Therefore, for most residential viewers, the park-and-ride garage would have a neutral effect on views and visual quality.

However, moving west to east along the southern boundary of the Kingsgate site the existing vegetation of tall, mature evergreen trees thins and the existing berm diminishes, resulting in minimal existing visual screening between the Kingsgate site and the residential neighbors directly adjacent to the south (see the photosimulation in Attachment F, Figure 5-8). To address this potential compatibility issue, landscape enhancements would be provided along the southern boundary of the site between the park-and-ride garage and the residences to provide additional visual screening and help to maintain natural visual elements. Enhancements would be in keeping with crime prevention through environmental design (CPTED) and Sound Transit security standards. This additional landscaping would help soften and screen the visual contrast and massing of the park-and-ride garage structure as viewed by the residences to the south; however, from the perspective of these few residential viewers there would still be an adverse effect to visual quality.

Aesthetic treatments would be included in the park-and-ride structure, which would provide visual interest and increase the visual compatibility of the park-and-ride garage with the adjacent residences. Aesthetic treatments may include architectural screening, colors and finishes such as stainless steel, glazing, brick, stone, or concrete that would

provide long-lasting, low-maintenance visual elements that would abate the adverse effect to visual quality.

Approximately 17 mature trees in existing parking islands within the interior of the WSDOT-owned Kingsgate site and along the perimeter would need to be removed for construction of the garage. WSDOT's *Roadside Policy Manual* requires that trees removed be replaced, and such replacement is expected to be required on the Kingsgate site. This would be accomplished as part of the proposed additional landscaping along the southern site boundary. The development of the park-and-ride garage structure and stormwater treatment infrastructure would comply with City of Kirkland landscaping requirements and would add natural elements.

Brickyard Station and Roadway Improvements

There are no designated scenic or protected views in the vicinity of this project component.

The proposed BRT station shelter, pedestrian bridge, and roadway improvements would be consistent with the scale, form, materials, and visual character of I-405. The roadway improvements would be compatible with the surrounding roadway. Large numbers of travelers along I-405 would experience changes to their visual environment; however, all changes would be within the existing visual context of I-405 which includes overpass structures, retaining walls, sound walls, traffic-control barriers, and extensive pavement. Vegetation removal would occur where the I-405 roadway would be widened and the pedestrian bridge would be constructed, as well as areas used for construction staging. All vegetation removal would occur in WSDOT right-of-way. This is not anticipated to alter the existing natural visual character of vegetation alongside the I-405 roadway. Further, the removal of trees would require replacement planting in compliance with WSDOT's *Roadside Policy Manual*.

A few residential neighbors would be able to see the potential extension of the pedestrian bridge to the east, where it would connect to an existing local street. While this would introduce a new element into the view, the structure would be consistent with the scale of the surrounding two story residential structures and would not be visible to many residences.

In addition, this project component would be implemented in coordination with WSDOT's Context Sensitive Solutions approach. Therefore, no adverse impacts to views are anticipated.

Lynnwood City Center Transit Station BRT and Roadway Improvements

There are no designated scenic or protected views in the vicinity of this project component.

At the transit center, the BRT station elements would be consistent with the existing materials, colors, form, height, and shape. The roadway improvements would be compatible with the surrounding existing road right-of-way. There would be no adverse impacts to resources of the natural environment at Scriber Creek, Scriber Creek Park, or Sprague Pond Mini Park. Road improvements along Poplar Way would add a bus-only bypass lane for buses heading southbound on Poplar Way and continuing along the

Alderwood Mall Parkway I-5 northbound on-ramp. These road improvements would only slightly expand paved surfaces and would be visually consistent with the existing road network. Approximately 15 Category 2 trees, with a trunk diameter of between 4 and 30 inches, would be removed for the roadway improvements. This is not anticipated to alter the existing natural visual character of vegetation alongside the I-5 roadway. Further, the removal of trees would require replacement planting in compliance with WSDOT's *Roadside Policy Manual*.

This project component would not degrade sensitive natural visual resources, and roadway improvements would be minor and visually coherent with the transportation network of a developed suburban area. Therefore, the overall impacts to visual quality would be neutral. No adverse impacts are anticipated.

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

During the construction phase, the following actions would minimize temporary impacts on visual quality and aesthetics:

- Preserve existing vegetation and minimize the clearing of mature trees where possible. Use existing hard/paved areas for staging materials and equipment where practical.
- Limit construction to daylight hours, as practical. Include directional work and safety lighting to direct lights toward work areas and away from residential areas where nighttime construction is necessary. Shield light sources to avoid light spillover.
- Screen views of construction equipment and materials from pedestrians and residential areas, as practical.
- Restore landscaping disturbed by construction-related activities after completion of work.

No long-term visual quality and aesthetic impacts are anticipated as a result of the proposed project components, with the exception of the long-term impacts for one set of viewers from the new Kingsgate Park-and-Ride Garage. At this location, a limited number of residential neighbors immediately south of the proposed park-and-ride garage would perceive the scale of the garage structure as being larger and contrasting with their residential area. To address this potential compatibility issue, landscape enhancements would be provided along the southern boundary of the site between the park-and-ride garage and the residences to provide additional visual screening and help to maintain natural visual elements. Also addressing the visual impact at the Kingsgate Park-and-Ride location, the proposed garage would include aesthetic treatments that may include architectural screening, colors and finishes such as stainless steel, glazing, brick, stone, or concrete that would provide long-lasting, low-maintenance visual elements. This type of aesthetic treatment would also be used in the design of the South Renton Transit Center garage.

To further avoid the potential for long-term adverse impacts at any project component, design features include the following:

- Plant suitable vegetation where appropriate within each component site and in adjoining rights-of-way, per local landscape codes, to provide visual screening.
- Incorporate CPTED strategies during subsequent design phases to confirm that security and visual quality are complementary.

11. Light and Glare

For additional details on light and glare within the project corridor, see Attachment F, *I-405 BRT Corridor Visual and Aesthetic Resources Technical Memorandum*.

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

At all project components, potential construction during evening/nighttime hours would likely require lighting (including flashing lights). This lighting would be temporary and would be required for the safety of construction workers and the traveling public.

At all project components, lighting would be provided for safety and security. Lighting levels would comply with the requirements of Sound Transit's Design Criteria Manual, which includes a requirement to eliminate light trespass onto nearby windows and adjacent properties (Sound Transit 2020e). In addition, at all project components the project would comply with Sound Transit's Design Criteria Manual requirement to provide street and highway lighting that conforms to the criteria and standards of the city or WSDOT.

Burien Transit Center and Roadway Improvements

This project component would include new sources of light within the existing transit center at the proposed BRT station, such as the BRT-branded pylon that may be lit and visible during hours of lower natural light and in the evening/nighttime. The lighting at the transit station itself would remain similar to today. Because this project component is in a highly developed urban area with many existing sources of light, the lighting at the BRT station would not be expected to increase visible or artificial light or glare at the site or on adjacent parcels. No new lighting is anticipated with the proposed roadway improvements.

Tukwila International Boulevard BRT Station and Roadway Improvements

Additional, new lighting of the roadway improvements to SR 518 is not anticipated.

At the BRT station, there would be a slight increase in overall visible artificial lighting from lights to safely illuminate the stairs, elevators, pedestrian bridge, and station platforms, along with the BRT-branded pylon that may be lit. The new lighting would operate during hours of lower natural light and throughout the evening/night. The lighting level would be coordinated with WSDOT to ensure it would not cause a safety hazard to drivers.

The new lighting of the BRT station and pedestrian bridge would be visible to drivers along SR 518 as they approach from the east or west. Because drivers are traveling at high freeway speeds, this new lighting would only be visible for a brief amount of time along their trip. In addition, the lighting would be consistent with existing lighting sources along SR 518 and a driver's expectation of lighting features of the roadway and signage for safety and driver information.

Because the BRT station is at the level of the SR 518 roadway, which is lower than the adjacent uses, lighting at the station and of the stairs leading down to the station is not expected to be visible to commercial and residential uses adjacent to the highway to the north and south. The pedestrian bridge would be at a height similar to the Tukwila International Boulevard overcrossing of SR 518, which includes street lights, and lower than the top level of the light rail station that currently has lighting. Additional lighting from the pedestrian bridge is not expected to be visible from the uses adjacent to SR 518, which include a commercial parking lot and a rental car facility to the south and the light rail station to the north. Lighting from the pedestrian bridge is not expected to be visible from the distant residential areas, to the east and west, that are on either side of SR 518.

South Renton Transit Center and Roadway Improvements

There would be a slight increase in visible artificial lighting at this project component where lights would be used to safely illuminate the stairs, elevator, and park-and-ride garage structure; the transit center island; and the potentially illuminated BRT-branded pylon. Lights would also be used to illuminate the site following CPTED standards to help create a safer environment. This increased lighting would occur in low levels of natural light and in the evening and night but would not be expected to noticeably increase lighting levels in the surrounding area.

The nearest residential uses are approximately 1,000 feet northeast of the proposed park-and-ride garage structure. Lighting of the five-story park-and-ride garage would be at a greater height than exists today. While lighting from the upper stories of the garage may be visible from some of these residences, existing lighting from I-405, local road street lights, and adjacent commercial uses is already pervasive, and the lighting associated with the project component is not expected to noticeably increase lighting levels in the surrounding area.

Bellevue Transit Center and Off-site Layover

As with the Burien Transit Center, the lighting at the existing Bellevue Transit Center would not be expected to change. The BRT-branded pylon, likely lit for visibility, would be an additional source of light during times of low natural light, evening, and night, but this minimal lighting would not be expected to increase existing nighttime light levels.

At the off-site layover area, no new street lighting is proposed. There would be an increase in the number of bus layover bays from two to four, and an associated 12 additional buses per hour during service hours (19 hours on weekdays and Saturday and 17 hours on Sunday) that would have headlights on during times of low natural light while traveling to and from the layover site on 110th Avenue NE. While there are residential uses along the east side of 110th Avenue NE, across from the layover area, the ground floors of these buildings are commercial or parking garage uses. Headlights from the buses would not be expected to be visible from the floors above ground level.

Therefore, this project component would not increase visible or artificial light or glare at the site or on adjacent parcels.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

Lighting levels are expected to increase at the Kingsgate Park-and-Ride with the addition of a five-story park-and-ride garage structure compared to the existing surface lot condition. Lights would be used to safely illuminate the stairs, elevator, and floors of the proposed parking garage structure. Lights would also be used to illuminate the site following CPTED standards to help create a safer environment. This increased lighting would occur during low levels of natural light and in the evening and throughout the night. Ambient light conditions currently include light spilling from I-405, local roads, and retail/commercial areas. The additional lighting of the park-and-ride garage would be shielded by the existing dense, mature trees and berm along the west property line and would not be visible from the residences to the west. Lighting of the park-and-ride garage would be visible to the residences to the south. As noted in Section 11.a, the park-and-ride garage would be designed to provide effective screening, including screening of light to minimize the increase in light to these residences.

At the Totem Lake Station, the BRT-branded pylon would likely be lit and would be visible during times of low natural light, evening, and night. This minimal lighting would not be expected to increase existing nighttime light levels, which already includes lighting from the transit station and of I-405 that would not change.

Brickyard Station and Roadway Improvements

Additional, new lighting of the roadway improvements to I-405 is not anticipated.

At the BRT station, there would be a slight increase in visible artificial lighting from lights to safely illuminate the stairs, elevators, pedestrian bridge, and station platforms that would be at the same level as I-405. These lights would be on during hours of lower natural light and throughout the evening/night. The lighting levels would be coordinated with WSDOT to ensure they would not cause a safety hazard to drivers.

This new lighting of the BRT station and pedestrian bridge would be visible to drivers along I-405 as they are approaching the station from the north or south. Because drivers are traveling at high freeway speeds, this new lighting would only be visible for a brief amount of time along their trip. In addition, the lighting would be consistent with existing lighting sources along I-405 and a driver's expectation of lighting features of the roadway and signage for safety and driver information. Because the station is at the roadway level, which is lower than the adjacent uses, lighting at the station and the stairs leading down to the station is not expected to be visible to the residential areas to the east and west of I-405.

The pedestrian bridge would be at a similar elevation to Juanita Woodinville Way NE which includes some street lights. At the location of the pedestrian bridge, the use adjacent to the west of I-405 is the Brickyard Park-and-Ride lot; lighting of the pedestrian bridge would not be expected to increase existing levels of light at the park-and-ride lot, which is already lit for safety. To the east of I-405, the pedestrian bridge may be extended with a stairway and ramp (and possibly an elevator) to connect to NE 155th Street. Between NE 155th Street and the nearest residential homes, which are oriented perpendicular/away from I-405 and NE 155th Street, there are existing rows of dense

mature evergreen trees that would provide a visual screen, including for light or glare. Therefore, additional lighting from the pedestrian bridge is not expected to be visible from those residential uses.

Lynnwood City Center Transit Station BRT and Roadway Improvements

At the Lynnwood City Center station, the BRT-branded pylon may be lit for visibility, during times of low natural light, evening, and night. This light would be consistent with other lighting at the transit center. The proposed road improvements would not involve new streetlights or changes to street lighting. This project component would not increase visible or artificial light or glare at the site or on adjacent parcels

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

As discussed in Section B.11.a, light or glare from the project components is not anticipated to be a safety hazard or interfere with views. Exterior lighting on the new pedestrian bridges at the Tukwila International Boulevard and Brickyard stations and the two new park-and-ride garages would be screened or shielded to ensure that light sources do not shine directly toward off-site areas. The new structures would be composed of materials that would not create glare that would be a safety hazard or interfere with views.

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

There are no existing off-site sources of light or glare that may affect the proposed project.

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

Lights used for nighttime construction would be directed inward toward the sites and away from adjacent uses, including residential areas.

Several design features and actions would be incorporated into the design of each project component, including the following:

- Direct lighting for the BRT stations, park-and-ride garages, transit centers, and pedestrian walkways downward to avoid light spilling into adjacent areas, and shield exterior lighting to ensure that light sources do not shine directly toward off-site areas.
- Provide light screening within the park-and-ride garage structures to reduce headlight glare.
- Use materials with low sheen and non-reflective treatments.
- Where applicable, add small trees, shrubs, and other vegetation to provide a visual screen for adjacent neighbors.
- Since there would be no adverse light or glare impacts from construction or operation of the project components, no mitigation measures are required.

12. Recreation

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

Burien Transit Center and Roadway Improvements

As shown in Figure A-20, four recreational resources are located within the immediate vicinity of this project component: Community Center Annex (The Annex) Park, 4th Avenue Trail, Dottie Harper Park, and Mathison Park. The Annex Park, approximately 1,000 feet northwest of the Burien Transit Center, occupies the former Burien Community Center building and includes a skate park, basketball court, picnic tables, and open grassy spaces. The 4th Avenue Trail is a 1.3-mile trail on public streets, connecting The Annex to Hazel Valley Park to the north. Dottie Harper Park, located approximately 500 feet northwest of the Burien Transit Center, is a 3.5-acre wooded park that also includes a remodeled playground, picnic space, amphitheater, and walking trails. Mathison Park is a 5.3-acre recreational park with a playground and trails, located approximately 200 feet north of SR 518 in the City of Burien.

Tukwila International Boulevard BRT Station and Roadway Improvements

As shown in Figure A-21, the South 156th Way Trail is in the immediate vicinity of the Tukwila International Boulevard Station, along S 154th Street, approximately 600 feet north of the proposed BRT station. It is a 1.9-mile segment of the Lake to Sound Trail, a regional multi-purpose recreational trail that, once complete, will be a 16-mile recreational trail from the south end of Lake Washington in Renton to the shoreline of Puget Sound in Des Moines.

South Renton Transit Center and Roadway Improvements

There are no designated or informal recreational opportunities in the immediate vicinity of this project component.

Bellevue Transit Center and Off-site Layover

As shown in Figure A-22, there are three recreational facilities in the immediate vicinity of this project component. City Hall Park is located at Bellevue's City Hall (450 110th Avenue NE) just east of the Bellevue Transit Center, across 110th Avenue NE. On the west side of the Bellevue Library, just west of the off-site layover area, is the Ashwood Playfield. On the north side of NE 12th Street, approximately 400 feet northwest of the off-site layover area, is Robert E. McCormick Park, a 2.83-acre park with a sitting area, flower gardens, and trails.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

As shown in Figure A-23, Josten Park, featuring natural green space, is located approximately 600 feet west of the Kingsgate Park-and-Ride site at NE 129th Street and 112th Place NE.

Brickyard Station and Roadway Improvements

As shown in Figure A-24, the Tolt Pipeline Trail is in the immediate vicinity of the Brickyard Park-and-Ride lot (along NE 160th Street) and is on the east side of I-405 along NE 155th Street, in the immediate vicinity (approximately 80 feet east) of the potential pedestrian bridge landing east of I-405. It is a 14.8-mile regional multi-purpose recreational trail.

Lynnwood City Center Transit Station BRT and Roadway Improvements

As shown in Figure A-25, there are four recreational facilities in the immediate vicinity of this project component. The Interurban Trail, a 24-mile regional trail from Shoreline to Everett, is located approximately 900 feet south of the Lynnwood City Center transit station. Scriber Creek Park is located approximately 500 feet west of the Lynnwood City Center transit station; this park extends diagonally to the southeast and includes forested wetlands, wildlife habitats, and nature trails. Scriber Creek Trail, on the south side of Scriber Creek Park, links the park with the Interurban Trail.

Lynnwood Heritage Park is located approximately 400 feet southwest of the roadway improvements at Poplar Way. Lynnwood Heritage Park includes five historic structures that have been renovated and repurposed as community resource facilities.

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

None of the project components would displace any existing recreational uses.

There may be a need to provide a temporary detour of a short segment of the Tolt Pipeline Trail along NE 155th Street for construction of the pedestrian bridge overpass that may connect the neighborhood on the east side of I-405 to the BRT stations and over to the Brickyard Park-and-Ride lot on the west side of the freeway.

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

During construction of the Brickyard Station and Roadway Improvements project component, if it is determined that construction staging or activities would need to temporarily detour the Tolt Pipeline Trail, maintenance of trail traffic, appropriate signage, and access would be provided for the duration. Once construction is complete, the trail would be returned to its existing condition or improved as needed.

There are no other anticipated impacts to recreational resources or opportunities resulting from the project components; therefore, no measures to reduce or control impacts are proposed.

13. Historic and Cultural Preservation

For additional information on historic and cultural resources see Attachment G, I-405 Bus Rapid Transit Technical Memorandum: Historic and Archaeological Resources.

- a. **Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

Burien Transit Center and Roadway Improvements

Ten aboveground buildings, structures, or sites 45 years or older (historic-aged built environment resources), have been identified in the vicinity of this project component (see Attachment G, Page A-1). None of the identified buildings, structures, or sites are located within the project component area.

- One single-family residence, built in 1954, is adjacent to the roadway improvements and was recommended eligible for the National Register of Historic Places (NRHP) in 2005. The historic property inventory conducted for this project in 2019 concurs with this recommendation.
- One building, the City of Burien Community Center (built in 1970), is approximately 0.25 mile from the transit center and was previously Determined Eligible for listing in the NRHP.
- Eight other aboveground historic-aged built environment resources are located adjacent to the transit center and roadway improvements. These resources include six commercial buildings and three single-family residences; all are being recommended as not eligible for listing in the NRHP.

No local register-listed (either Determined Eligible or recommended for listing) aboveground historic-aged built environment resources are within 0.25 mile of the project component.

Tukwila International Boulevard BRT Station and Roadway Improvements

One commercial historic-aged built environment resource was identified adjacent to the pedestrian bridge and roadway improvements; none were identified within the project component area (see Attachment G, Page A-2). This resource is recommended not eligible for listing in the NRHP.

No local or national register-listed⁷ aboveground historic-aged built environment resources were identified within 0.25 mile of the project component.

⁷ "Register listed" refers to resources that are either Determined Eligible for listing or previously recommended for listing by others.

South Renton Transit Center and Roadway Improvements

The following six historic-aged built environment resources were identified within or adjacent to this project component (see Attachment G, Page A-3):

- Two commercial historic-aged built environment resources are located on the proposed South Renton Transit Center site. Both are recommended not eligible for listing in the NRHP.
- Four commercial historic-aged built environment resources are located adjacent to the South Renton Transit Center and associated roadway improvements. None of these buildings are recommended eligible for listing in the NRHP.

No local or national register-listed aboveground historic-aged built environment resources were identified within 0.25 mile of the proposed project component.

Bellevue Transit Center and Off-site Layover

- No historic-aged built environment resources are adjacent to or within the Bellevue Transit Center and Off-site Layover. No local or national register-listed resources were identified on or within 0.25 mile of this project component.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

- No historic-aged built environment resources are adjacent to or within this project component. No local or national register-listed aboveground historic-aged built environment resources were identified within 0.25 mile of this project component.

Brickyard Station and Roadway Improvements

- No historic-aged built environment resources are adjacent to or within the BRT station.
- As of December 2019, the Washington Information System for Architectural and Archaeological Records Data contained a record of the Henry and Bell Miller residence, located northeast of the BRT station and adjacent to roadway improvements at the corner of the I-405 northbound on-ramp and NE 160th Street. This historic-aged built environment resource was recorded in 1988 and 2004 and had been Determined Eligible for listing in the NRHP in 2005. However, the building has since been demolished, and a commercial building, built in 2008, now exists within this parcel.
- No local or national register-listed aboveground historic-aged built environment resources were identified within 0.25 mile of the project component.

Lynnwood City Center Transit Station BRT and Roadway Improvements

- No resources were identified within or adjacent to this project component.
- One building, the Wickers Building (built in 1919), is located within 0.25 mile of roadway improvements and is listed on the Washington Heritage Register. This

building was moved from its original location in 2003 to its current location within Lynnwood Heritage Park. In addition to the Wickers Building, three aboveground historic-aged resources and one historic-aged rail car are located within Heritage Park. One of the resources has been determined not eligible for listing in a historic register.

- No local register-listed properties were identified on or within the vicinity of the project component.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

The I-405 BRT Project's study area is located within the traditional territory of the Southern Coast Salish cultural group, which includes but is not limited to: Duwamish *dx^wdəwʔabš* (people of the inside), Skopamish *sq^wəpábš* (Green River [White River] people), Snoqualmie *sduk^walbix^w* (people of the moon), Suquamish *dx^wsəq^wəb* (place of clear water), and Snohomish *sduhúbs* (Haeberlin and Gunther 1930; Spier 1936; Suttles and Lane 1990; Tweddell 1974). Southern Coast Salish have used the study area since time immemorial for various levels of habitation and resource gathering (Haeberlin and Gunther 1930; Spier 1936; Suttles and Lane 1990; Tweddell 1974). No known ethnographic place names were identified within the project component areas of impact. However, several recorded place names are located within the vicinity of four of the project components, as discussed below. The place names identified are associated with village sites and waterways. These place names indicate use of these areas by Native Americans.

Burien Transit Center and Roadway Improvements

No previously recorded archaeological sites, cemeteries, traditional cultural properties, or known ethnographic place names are on or within 0.25 mile of this project component. Six professional studies have been conducted for areas within 0.25 mile of this project component (CH2MHILL 2014; Iversen et al. 2000; Larson Anthropological Archaeological Services 2007; Rooke 2010; and Tingwall and Naoi Goetz 2006a, 2006b; see Attachment G, Table 5-2). None of the assessments identified cultural resources on or within 0.25 mile of the project component.

The planned improvements are located in an area that appears to have been subject to widespread and shallow surface grading and paving. The Statewide Predictive Model for encountering precontact-era sites classifies this location as Moderately Low to Moderate Risk (Department of Archaeology and Historic Preservation [DAHP] 2010). This model does not take into account potential impacts from previous development. Due to the probable lack of significant natural depositions during the Holocene epoch, this area is unlikely to have contained deeply buried archaeological resources prior to urbanization.

Tukwila International Boulevard BRT Station and Roadway Improvements

No previously recorded archaeological sites, cemeteries, traditional cultural properties, or known ethnographic place names are on or within 0.25 mile of this project component. Three professional studies have been conducted for areas within 0.25 mile of the project

component (Curtois et al. 1999; Elder and Sparks 2010; and Rooke 2010; see Attachment G, Table 5-3). None of the assessments identified cultural resources on or within 0.25 mile of the project component.

The planned improvements are located in an area that appears to have been subject to widespread cutting, grading, and paving. The Statewide Predictive Model for encountering precontact-era sites classifies this location as Moderately Low to Moderate Risk (DAHP 2010). This model does not take into account potential impacts from previous development. Due to the probable lack of significant natural depositions during the Holocene epoch, this area is unlikely to have contained deeply buried archaeological resources prior to urbanization. Archaeological sites, if present, are expected to have been located at or near the ground surface, and are unlikely to have remained intact with cutting and grading.

South Renton Transit Center and Roadway Improvements

No previously recorded cemeteries or traditional cultural properties are on or within 0.25 mile of this project component. Three archaeological sites are within 0.25 mile of the project component; all are historic in age and none are within or adjacent to the project component (see Attachment G, Table 5-4). However, pre-contact archaeological sites have been recorded just beyond 0.25 mile of the project component. Seven known ethnographic place names were identified within the vicinity of the South Renton Transit Center and Roadway Improvements project component, as shown in **Table 17**.

Table 17 Recorded place names within the vicinity of the South Renton Transit Center and Roadway Improvements project component

Approximate location	Lushootseed name	Lushootseed translation	Waterman name	Description	Citation ¹
Lake Washington	<i>ṣaču?</i>	Lake (Washington)	--	Lake Washington	Hilbert et al. 2001:40
Black River	<i>spapṭṣad</i>	Marshes, bogs, wetlands	<i>Spa'pLxad</i>	"marshes" for marshes at the south end of Lake Washington to the east of Black River	Hilbert et al. 2001:94 (119)
Black River	--	--	<i>Pa'pxwEtsūt</i>	Riffle, "place where water is swift," for a place in the Black River where a creek enters from the east	Hilbert et al. 2001:148 (235)
Black River	<i>dəxʷudidəw</i>	Place of little cedar river	<i>Tuxudidū³</i>	Black River, for a spring in Renton site of an important town	Hilbert et al. 2001:148 (235a)
Cedar River	<i>Dəxʷəbqʷu?</i>	Place where fresh water thrown	<i>TuwE'b-qo</i>	A village at the confluence of the Cedar River and the Black River (Cedar River)	Hilbert et al. 2001:148 (237)

Approximate location	Lushootseed name	Lushootseed translation	Waterman name	Description	Citation ¹
May Creek	<i>š(a)baɫʔtx^w</i>	Dry house	<i>Cbaɫʔt^u</i>	May Creek – “a place where things are dried” great quantities of red fish were taken here	Hilbert et al. 2001:94 (116)
Coal Creek	--	--	<i>SqEʔbEqslɔ</i>	Coal Creek	Hilbert et al. 2001:94 (114)

SOURCE: Hilbert et al., 2001

NOTES: ¹ Parenthetical numbers are map locations used in the publication.

Ten professional studies have been conducted for areas within 0.25 mile of the project component (Berger 2007; Berger and Hartmann 2009; Bowden and Dampf 2005; Bundy 2008; Juell 2001; Kaehler 2007; Rooke 2010, 2012; Smith and Hoffman 2007; and Smith et al. 2014; see Attachment G, Table 5-5). None of the assessments identified cultural resources on or within 0.25 mile of the proposed transit center and roadway improvements.

The planned improvements are located in an area that appears to have been subject to widespread and shallow surface grading and paving. The Statewide Predictive Model for encountering precontact-era sites classifies this location as High to Very High Risk (DAHP 2010). This model does not take into account potential impacts from previous development. Due to the significant natural deposition during the Holocene epoch, this area has the potential to contain deeply buried archaeological resources prior to urbanization. Archaeological sites, if present, may be present at depths deeper than previous grading.

Bellevue Transit Center and Off-site Layover

No previously recorded archaeological sites, cemeteries, or traditional cultural properties are on or within 0.25 mile of the project component. Two known ethnographic place names were identified within the vicinity of this project component, as shown in **Table 18**.

Table 18 Recorded place names within the vicinity of the Bellevue Transit Center and Off-site Layover project component

Approximate location	Lushootseed name	Lushootseed translation	Waterman name	Description	Citation ¹
Lake Washington	<i>šačuʔ</i>	Lake (Washington)	--	Lake Washington	Hilbert et al. 2001:40
Mercer Slough	--	--	<i>SaʔtsakaL</i>	Mercer Slough “water at head of Bay” and old village site	Hilbert et al. 2001:89 (115)

SOURCE: Hilbert et al., 2001

NOTES: ¹ Parenthetical numbers are map locations used in the publication.

Two professional studies have been conducted for areas within 0.25 mile of the project component (Schultz and Jongsma 2006; and Unknown 2005a.; see Attachment G, Table 5-6). None of the assessments identified cultural resources on or within 0.25 mile of the project component.

The planned improvements are located in an area that appears to have been subject to widespread surface grading and paving. The Statewide Predictive Model for encountering precontact-era sites classifies this location as Moderately Low to Moderate Risk (DAHP 2010). This model does not take into account potential impacts from previous development. Due to the probable lack of significant natural deposition during the Holocene epoch, this area is unlikely to have contained deeply buried archaeological resources prior to urbanization. Archaeological sites, if present, are expected to have been located at or near the ground surface and are unlikely to have remained intact with grading.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

No previously recorded archaeological sites, cemeteries, or traditional cultural properties are on or within 0.25 mile of this project component. Two known ethnographic place names were identified within the vicinity of this project component, as shown in **Table 19**.

Table 19 Recorded place names within the vicinity of the Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage project component

Approximate location	Lushootseed name	Lushootseed translation	Waterman name	Description	Citation ¹
Northup Creek Mouth	--	--	<i>Tc!utsid</i>	Mouth of Northup Creek	Hilbert et al. 2001:90 (103)
Northup Creek	--	--	<i>Tc!u</i>	Northup Creek	Hilbert et al. 2001:90 (104)

SOURCE: Hilbert et al., 2001

NOTES: ¹ Parenthetical numbers are map locations used in the publication.

Three professional studies have been conducted for areas within 0.25 mile of the project component (Bundy 2009; Robbins and Dugas 2000; and Cooper and Jenks 2019; see Attachment G, Table 5-7). None of the assessments identified cultural resources on or within 0.25 mile of the project component.

The planned improvements are located in an area that appears to have been subject to widespread surface grading and paving. The Statewide Predictive Model for encountering precontact-era sites classifies this location as Moderately Low to Moderate (DAHP 2010). This model does not take into account potential impacts from previous development. Due to the probable lack of significant natural deposition during the Holocene epoch, this area is unlikely to have contained deeply buried archaeological resources prior to urbanization. Archaeological sites, if present, are expected to have been located at or near the ground surface, and are unlikely to have remained intact with grading.

Brickyard Station and Roadway Improvements

No previously recorded archaeological sites, cemeteries, or traditional cultural properties are on or within 0.25 mile of this project component. Three known ethnographic place names were identified within the vicinity of this project component, as shown in **Table 20**.

Table 20 Recorded place names within the Brickyard Station and Roadway Improvements project component

Approximate location	Lushootseed name	Lushootseed translation	Waterman name	Description	Citation ¹
Juanita Creek	<i>təb(ʔ)tubix^w</i>	Red marked land/people	<i>TE'btubī^u</i>	Juanita Creek "loamy place"	Hilbert et al. 2001:82 (98)
Sammamish River	<i>scəp</i>	Deep water hole	<i>Sts!ap</i>	Sammamish River for Squak Slough "crooked"	Hilbert et al. 2001:82 (91a)
North Creek	--	--	<i>Ctcel</i>	North Creek	Hilbert et al. 2001:110 (148)

SOURCE: Hilbert et al., 2001

NOTES:¹ Parenthetical numbers are map locations used in the publication.

Six professional studies have been conducted for areas within 0.25 mile of the project component (Bundy 2009; Gilpin et al. 2012; Knapp 1995; Naoi Goetz and Warner 1997; Rooke and Gantz 2008; and Unknown 2005b; see Attachment G, Table 5-8). None of the assessments identified cultural resources on or within 0.25 mile of the project component.

The planned improvements are located in an area that appears to have been subject to widespread surface grading and paving. The Statewide Predictive Model for encountering precontact-era sites classifies this location as Moderately Low to Moderate Risk (DAHP 2010). This model does not take into account potential impacts from previous development. Due to the probable lack of significant natural deposition during the Holocene epoch, this area is unlikely to have contained deeply buried archaeological resources prior to urbanization. Archaeological sites, if present, are expected to have been located at or near the ground surface, and are unlikely to have remained intact with grading.

Lynnwood City Center Transit Station BRT and Roadway Improvements

No previously recorded cemeteries or traditional cultural properties are on or within 0.25 mile of the project component. Two archaeological sites are within 0.25 mile of the project component; both are historic in age and neither is within or adjacent to the facility (see Attachment G, Table 5-9). One known ethnographic place name is identified within the vicinity of the facility, *dx^w(ə)qab*, for Swamp Creek, meaning "a wide place" (Hilbert et al. 2001).

Six professional studies have been conducted for areas within 0.25 mile of the project component (Berger 2016; Childley 2008; Damp and Gilpin 2008; Early and Shantray 2014; Hartmann 2008; and Robbins and Johnson 1999.; see Attachment G, Table 5-10). Two of the assessments (Early and Shantray 2014 and Chidley 2008) identified cultural resources within 0.25 mile of the project component; none were identified within the project component. These resources consist of a historic-aged railroad site and historic-aged aboveground built environment resources.

The planned improvements are located in an area that appears to have been subject to widespread surface grading and paving. The Statewide Predictive Model for encountering precontact-era sites classifies this location as Low to Moderate Risk (DAHP 2010). This

model does not take into account potential impacts from previous development. Due to the probable lack of significant natural deposition during the Holocene epoch, this area is unlikely to have contained deeply buried archaeological resources prior to urbanization. Archaeological sites, if present, are expected to have been located at or near the ground surface, and are unlikely to have remained intact with grading.

- c. **Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

The following types of documents were reviewed to identify potential cultural resources in the vicinity of the project components: the DAHP's Statewide Predictive Model and the Washington Information System for Architectural and Archaeological Records Data maintained by DAHP, previously conducted cultural resources surveys, geotechnical reports, historic maps, aerial photographs, published ethnographies and local histories, and geological maps.

Archaeological monitoring during geotechnical borings at the South Renton Transit Center was conducted in October of 2019 (Appendix G, Section 5.4.4). Preliminary results indicate mixed fill deposits from the surface to approximately 8 feet, followed by bedded alluvial deposits ranging from silt/fine sand to gravels. Occasional organic-rich peat layers were also observed bedded within the alluvium. This stratigraphic sequence is consistent with geological mapping.

Local historic registers and tax assessor records were also reviewed, including King and Snohomish Counties. Under an Interlocal Agreement with the King County Historic Preservation Program, municipalities within King County use the King County Landmarks Register for listing historic properties (DAHP 2020).

Buildings and structures, within and adjacent to the Area of Impacts for the project components, that will be older than 45 years in 2021 were inventoried, recorded on Historic Property Inventory forms, and recommendations made regarding their Register-eligibility.

- d. **Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

Construction of all components would proceed under the terms of an Archaeological Resources Inadvertent Discovery Plan, which would set forth the procedures and protocols to be followed in the event that archaeological resources are inadvertently discovered during construction. If cultural resources were inadvertently discovered during construction of any project component, Sound Transit would comply with all laws requiring the protection of cultural resources and human remains. Sound Transit would temporarily halt work in the immediate vicinity of the identified resources and notify the DAHP and Affected Tribes to determine appropriate mitigation and/or avoidance measures.

Due to the proximity to previously recorded ethnographic place names, the Statewide Predictive Model (DAHP 2010), and observation of Holocene-aged alluvial soils during archaeological monitoring of geotechnical borings within the South Renton Transit

Center site, Sound Transit proposes to conduct subsurface surveys via a drilling rig, prior to construction at this particular component. No other locations on this project warrant additional pre-construction survey work such as this.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

For additional information on transportation, see Attachment B, I-405 BRT Conceptual Engineering Plans and Attachment H, I-405 BRT Corridor Transportation Technical Report.

Burien Transit Center and Roadway Improvements

Site access for buses is currently via a dedicated transit-only driveway to/from SW 148th Street. General traffic currently accesses the park-and-ride facility from the south and west. No changes to the transit center site access would be included with this project component. However, the three driveways on SW 148th Street between the transit center and 1st Avenue S would be restricted to right-only access due to the proposed center-running bus-only lanes.

As described in Section 14.d, to improve transit speed and reliability, a bus-only lane would be added past the transit center entrance for eastbound buses along SW 148th Street that would extend east across the SR 509/SR 518 interchange and along SR 518 for approximately 400 feet. For westbound buses a bus-only left-turn lane would be provided along SW 148th Street between 1st Avenue S and the Burien Transit Center. Between 1st Avenue S and the Burien Transit Center, the two bus-only lanes on SW 148th Street would be accommodated by converting the center two-way turn lane and slightly widening the existing roadway. To accommodate the eastbound bus-only lane on the SR 518 bridge over SR 509, the existing lane striping would be rechannelized. TSP would be added to the existing traffic signals at the intersection of SW 148th Street and 1st Avenue S, at the intersection of SW 148th Street and the SR 509 southbound on- and off-ramps, and at the intersection of SR 518. To allow for implementation of the bus-only lanes on SW 148th Street, turning-movement restrictions would be imposed at key driveways (up to three locations) to prohibit left turns.

Tukwila International Boulevard BRT Station and Roadway Improvements

For this project component the BRT stations would be located at-grade within the SR 518 right-of-way in an existing area between the SR 518 travel lanes and the on- and off-ramps to SR 518, see Attachment A, Figure A-3. SR 518 is the primary highway and roadway serving the site or affected geographic area.

The BRT service would operate on SR 518 to access the BRT stations within the SR 99 interchange area. The SR 518 mainline consists of two lanes in each direction plus auxiliary lanes to/from SR 99 and the North Airport Expressway. On-/off-ramps are currently provided in the eastbound direction to S 154th Street and the North Airport Expressway, while westbound ramps connect to SR 99, S 154th Street, and the North Airport Expressway.

South Renton Transit Center and Roadway Improvements

The proposed new transit center would be constructed near the existing South Renton Park-and-Ride lots northeast of the Rainier Avenue S/Grady Way intersection and would serve as a major regional transit hub for BRT routes (existing and future), as well as several local connecting bus routes. A park-and-ride garage would also be constructed with a capacity of 700 stalls along with a new signalized intersection at Rainier Avenue S/Hardie Avenue, as described in Question 14.d. The South Renton Transit Center is shown in Attachment A, Figure A-4.

Public streets and highways serving the site or affected geographic area include:

- I-405/Northbound and Southbound on- and off-ramps
- Rainier Avenue S
- SW/S 7th Street
- Hardie Avenue SW
- Lake Avenue S
- SW/S Grady Way

The proposed BRT routing and parking garage access is shown in Attachment A, Figure A-26. BRT buses would access the transit center via Rainier Avenue S. Transit center visitors may access the parking garage via the Rainier Avenue S entrance on the west side of the garage or the Lake Avenue S entrance on the east side of the garage.

Based on information provided in the 2025 Metro Connect Service Plan, the other Sound Transit and King County Metro routes would access the site via Rainier Avenue S and the Rainier Avenue S entrance on the west side of the garage or the Lake Avenue S entrance on the east side of the garage and via Hardie Avenue SW. From the eastside these routes access the transit center via S Grady Way/Shattuck Avenue S/Lake Avenue. All bus routes would converge in the transit center.

Bellevue Transit Center and Off-site Layover

The proposed BRT station would be located at the existing Bellevue Transit Center station in Bellevue, as shown in Attachment A, Figure A-5. The bus layover area is located on 110th Avenue NE in front the Bellevue Public Library. Public streets and highways serving the site or affected geographic area include:

- NE 6th Street
- 112th Avenue NE
- 108th Avenue NE
- NE 8th Street

- 110th Avenue NE
- NE 10th Street
- NE 12th Street

The proposed BRT routing and bus layover area is shown in Attachment A, Figure A-5. BRT buses would access the existing transit center to/from I-405 via NE 6th Street from I-405 and would travel to the bus layover area via NE 6th Street/108th Avenue NE/NE 12th Street and back to the station from the layover area via 110th Avenue/NE 8th Street/108th Avenue NE/NE 6th Street.

Layover for the BRT routes are proposed along the west side of 110th Avenue NE, south of NE 12th Street. This would expand the existing bus layover area on 110th Avenue NE near the Bellevue Library by removing existing street parking south of the library driveway. Approximately 120 feet of curb space would be added to the existing layover area. Half of this curb space would be north of the Bellevue Library garage entrance. The existing layover serves Route 550. This location could serve other routes after East Link light rail opens for service in 2023. This location is approximately 0.5 mile from the Bellevue Transit Center, and buses would be provided convenient access to the Bellevue Transit Center by using 110th Avenue NE. As described in Section 14.d, channelization, signage, and signal detection work would be required to modify lane configurations and add parking on the east side of the street; however, these changes are not expected to adversely affect traffic operations in the area.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The proposed Totem Lake/Kingsgate Station would be located at the existing Totem Lake Freeway Station and the Kingsgate Park-and-Ride Garage would be located on the existing Kingsgate Park-and-Ride site. See Attachment A, Figure A-6. Public streets and highways serving the site or affected geographic area include:

- I-405/I-405 direct access (center) ramps/ETLs
- NE 128th Street
- Totem Lake Boulevard
- 116th Street NE
- NE 132nd Street

The BRT service would operate on I-405 and access the freeway flyer stops at Kingsgate via the I-405 ETLs, as shown in Attachment A, Figure A-6. Park-and-ride lot access is provided via 116th Avenue NE and NE 128th Street or NE 132nd Street. The only planned change for park-and-ride site access is an approximately 25-foot shift of the south driveway to the north.

Brickyard Station and Roadway Improvements

For this project component, the BRT stations would be located at-grade within the center of the existing I-405 roadway, see Attachment A, Figure A-7. I-405 is the primary highway and roadway serving the site or affected geographic area.

The BRT service would operate on I-405 to access the BRT station. The I-405 mainline currently consists of four general-purpose traffic lanes and one ETL in each direction. The station would be located just south of the I-405 interchange with NE 160th Street. As described in Section 14.d, the project component would add a bus-only lane in each direction for decelerating to approach the station and accelerating back into traffic.

Lynnwood City Center Transit Station BRT and Roadway Improvements

The proposed BRT station would be located at the existing Lynnwood City Center transit center in Lynnwood, as shown in Attachment A, Figure A-8. Public streets and highways serving the site or affected geographic area include:

- I-5/I-5 Poplar Way on-ramp
- Poplar Way
- 196th Street SW
- 44th Avenue W
- 46th Avenue W
- 48th Avenue W
- 200th Street SW
- 202nd Street SW

The BRT buses would access the Lynnwood Transit Center by using the Alderwood Mall Boulevard exit from I-5 south, traveling west along 196th Street SW, turning south on 44th Avenue W, west on 200th Street SW, and south onto 46th Avenue W. Access to the transit center is provided by a BAT lane on 46th Avenue W, and access to the drop-off/pick-up area is provided via 202nd Street NW, as shown in Attachment A, Figure A-8.

- b. **Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

Burien Transit Center and Roadway Improvements

The existing facility primarily serves King County Metro bus routes but also accommodates regional Sound Transit service, providing connections to ST Express 560 and King County Metro F Line and King Country Metro routes 120, 121/122, 123, 131, 132, 166, 180, and 631.

Tukwila International Boulevard BRT Station and Roadway Improvements

There is no existing transit service at the proposed station location on SR 518. However, frequent Link light rail service is provided at the Tukwila International Boulevard light rail transit station.

South Renton Transit Center and Roadway Improvements

Immediately adjacent to the east of the proposed South Renton Transit Center site, there is an existing South Renton Park-and-Ride that is owned by WSDOT and served by transit, currently Sound Transit Routes 560 and 566 and King County Metro buses, including RapidRide F Line and routes 101, 102, 148, 153, 167, and 169.

Bellevue Transit Center and Off-site Layover

The Bellevue Transit Center is currently an active transit center with transit service from Sound Transit and King County Metro, including Metro routes 226/241, 232, 234, 235, 237, 240, 241, 246, 249, 271, 342, and RapidRide B Line, and ST Express routes 532, 535, 550, 555, 556, 560, and 567. To the east of the Bellevue Transit Center, Sound Transit's Bellevue Downtown Link light rail station will open in 2023. ST Express routes currently use the layover area along 110th Avenue NE.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The existing Totem Lake Freeway Station is served by Sound Transit routes 532 and 535. King County Metro bus routes 234/235, 238, 244, 252/257, 255, 277, and 930 provide service at the nearby Kingsgate Park-and-Ride lot off of 116th Avenue NE. Community Transit Route 424 also serves the Kingsgate Park-and-Ride lot.

Brickyard Station and Roadway Improvements

King County Metro currently provides transit service to the existing Brickyard Park-and-Ride station, which is located on the west side of I-405. King County Metro service includes routes 236, 237, 255, 311, 342, and 952 and ST Express 532 and 535 routes at the ramp stops. The proposed BRT station would connect to this park-and-ride lot with a pedestrian bridge.

Lynnwood City Center Transit Station BRT and Roadway Improvements

The Lynnwood Transit Center offers direct connections to the local and express bus system and to future Sound Transit Lynnwood Link light rail service. Three Sound Transit routes (routes 511, 512 and 535) and 17 Community Transit routes (routes 107, 112, 113, 115/116, 120, 130, 196, 201, 202, 402, 421/422, 425, 810, 821, and 855) serve the transit center.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Burien Transit Center and Roadway Improvements

Parking would not be added or eliminated at this project component. The existing park-and-ride garage and lot would remain. There is currently no on-street parking along SW 148th Street.

Tukwila International Boulevard BRT Station and Roadway Improvements

Parking would not be added or eliminated at this project component. The existing park-and-ride lot with the Link light rail station would remain.

South Renton Transit Center and Roadway Improvements

This project component adds a new 700-stall, 5-floor park-and-ride garage with pick-up and drop-off spaces provided. The existing 373 spaces at the South Renton Park-and-Ride lot adjacent to the east would remain.

Bellevue Transit Center and Off-site Layover

Parking would not be added or eliminated at the existing Bellevue Transit Center.

Layover for the I-405 BRT vehicles is proposed on 110th Avenue NE in front of the Bellevue Public Library. On the west side of the street, 110th Avenue NE would be modified to remove existing on-street automobile parking and provide two new bus layover bays, one north and one south of the existing driveway into the library parking garage. On the east side of the street, the existing right-turn lane would be modified to accommodate on-street parking spaces. A total of 5 parking spaces (approximately 93 feet) on the west side of the street would become 11 parking spaces (approximately 206 feet) on the east side of 110th Avenue N, resulting in a net gain of 6 parking spaces.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The existing Kingsgate Park-and-Ride lot consists of 502 surface parking stalls for general-purpose vehicles. The project component would add a net of 400 park-and-ride stalls on the Kingsgate site. The proposed project includes adding a new five-story park-and-ride garage structure in the southern portion of the existing Kingsgate surface park-and-ride lot. The garage would temporarily displace approximately 166 surface lot parking spaces during construction and, upon completion, would provide a net 400 new spaces for a total of approximately 566 park-and-ride stalls; 336 surface park-and-ride stalls would remain, for a total of 902 park-and-ride spaces on the site.

Brickyard Station and Roadway Improvements

Parking would not be added or eliminated at this project component.

Lynnwood City Center Transit Station BRT and Roadway Improvements

Parking would not be added or eliminated at this project component.

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

The project proposes to construct BRT stations and roadway improvements in support of new BRT service within the I-5, I-405, and SR 518 corridors. As described in Section A.12, the proposed project includes the following public roadway improvements. Proposed improvements to existing transportation facilities are shown in Attachment B, Conceptual Engineering plans.

Burien Transit Center and Roadway Improvements

To accommodate the eastbound bus-only lane on the SR 518 bridge over SR 509, the existing lane striping would be rechannelized. TSP would be added to the existing traffic signals at the intersection of SW 148th Street and 1st Avenue S, at the intersection of SW 148th Street and the SR 509 southbound on- and off-ramps, and at the intersection of SR 518.

Tukwila International Boulevard BRT Station and Roadway Improvements

The total bus-only ramp lengths, including tapers for merging, are approximately 1,900 feet (eastbound) and 2,800 feet (westbound). In both the east and westbound directions, the addition of these bus-only lanes would require realigning the center jersey barrier, regrading, and repaving a portion of the existing SR 518 travel lanes and ramps. In the westbound direction, the bus-only lane would also require widening the existing westbound SR 518 bridge that passes over the SR 518 off-ramp heading south to Airport Expressway.

A pedestrian bridge over SR 518 would connect the two BRT stations and would connect the BRT stations to the mezzanine level of the Link light rail station to the north. The surface of the pedestrian bridge would be approximately 25 feet above the level of SR 518, roughly level with the mezzanine level of the Link station and the existing Tukwila International Boulevard bridge over SR 518. From the BRT stations, access to the pedestrian bridge would be provided by stairs and an elevator. If funding is available, the pedestrian bridge would also extend to the south and would connect at-grade to a new sidewalk on the eastbound on-ramp to SR 518, which would connect to sidewalks on Tukwila International Boulevard.

South Renton Transit Center and Roadway Improvements

Signal-timing improvements would be made to all signals along Rainier Avenue S. In addition, TSP would be implemented at the intersections of Rainier Avenue S/S Grady Way, Rainier Avenue S/S 7th Street, and at a new signalized transit center intersection at Rainier Avenue S/Hardie Avenue, which would include a southbound bus-only lane into the transit center from Rainier Avenue S for King County Metro buses.

Bellevue Transit Center and Off-site Layover

The existing on-street parking (approximately 197 feet) and the existing ST Route 550 bus stop would be removed to provide additional layover space. On the east side of the street, the existing right-turn lane would be modified to accommodate on-street parking

spaces. The existing painted median on 110th Avenue NE would be replaced with a left-turn pocket.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

No change is proposed to the Totem Lake Freeway Station. TSP is proposed at the intersection of the in-line ramp terminal and NE 128th Street. At the Kingsgate Park-and-Ride, a new crosswalk is proposed at the south driveway entrance off of 116th Way NE. No other transportation facility improvements are proposed.

Brickyard Station and Roadway Improvements

The BRT stations would be located at-grade within the center of the I-405 right-of-way. A pedestrian bridge over I-405 would provide access to both BRT stations and would connect the stations to the existing Brickyard Park-and-Ride lot. From the BRT stations and the Brickyard Park-and-Ride lot, access to the pedestrian bridge would be provided by stairs and an elevator. The pedestrian bridge may also extend to the east side of I-405, with a stairway connecting to 116th Avenue NE.

Roadway improvements include bus-only lanes within I-405 that would connect the northbound and southbound stations to the ETL. The bus-only lane lengths are approximately 700 feet in both the northbound and southbound directions. The addition of these bus-only lanes and the BRT station platforms would require widening the existing I-405 roadway to the east and west.

Lynnwood City Center Transit Station BRT and Roadway Improvements

Within the vicinity of the Lynnwood Transit Center, roadway improvements are being designed and constructed as part of the Sound Transit Lynnwood Link Extension light rail project either by the City of Lynnwood or Sound Transit.

Improvements to existing transportation facilities under the proposed I-405 BRT Project include TSP at existing signals at 200th Street SW/46th Avenue W as well as improvements at the Poplar Way/I-5 on-ramp.

As part of the Lynnwood Link Extension project, to improve access to and from the transit center for all bus routes, a traffic signal is proposed along 46th Avenue W. The signal would be located at the entrance to the transit center. A second intersection, just north of the transit center entrance, would be modified with stop control (stop signs) for the east/west street connections. Additionally, the channelization is proposed to be modified from three southbound lanes/one northbound lane to two southbound lanes/two northbound lanes.

Along Poplar Way (south of 196th Street SW) and the I-5 northbound on-ramp, the roadway and ramp would be widened for bus-on-shoulder for BRT vehicles to use to bypass congestion. Additional modifications in the area inside the Poplar Way loop ramp include relocating and modifying the existing ramp meter mast, and modifications to the existing retaining wall for the proposed roadway widening, as well as modification to the northbound I-5 ramp to end the bus lane and begin/end the merge lane onto I-5.

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

None of the project components would use or occur within 0.25 mile of water, commuter rail, or air transportation.

The proposed BRT station at Tukwila International Boulevard would connect to the Tukwila International Boulevard Link light rail station. While Sea-Tac Airport is located approximately 1 mile from the proposed station, it is not in the immediate vicinity and the proposal would not use air transportation.

The proposed South Renton Transit Center would be located approximately 1.2 miles from the Renton Municipal Airport; it is not in the immediate vicinity and the proposal would not use air transportation.

The proposed BRT station at the Bellevue Transit Center will be near the Link light rail Bellevue Downtown station when it opens in 2023. The Lynnwood Transit Center BRT station also occurs in the immediate vicinity of the future Link light rail station.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Trip generation resulting from the I-405 BRT Project was based on Sound Transit's I-405 BRT service plan of 10-minute headways during peak periods (6 buses per hour). Trip generation during the hours of operation between 4:00 a.m. and 12:00 a.m. assumed that the system would operate 6 buses per hour at most, which would generate up to 192 bus trips daily on the corridor. The project should also decrease VMT by passenger vehicles by attracting new riders to transit. The decrease in VMT is a small percentage of the regional total and was not quantified.

Site-specific traffic operations for each station and trip generation at the South Renton Transit Center and Kingsgate Park-and-Ride are described below. More details on how estimated trips were calculated are provided in Attachment H, *I-405 Corridor Transportation Technical Report* and the *I-405 Corridor Transportation Methods and Assumptions Report*. Additionally, construction impacts are briefly described below. Overall, these impacts would be minimal at each location. Required street closures and/or detours would be developed in coordination with each city prior to construction.

If for a particular project component, the No Build condition already results in a level-of-service (LOS) that exceeds the governing standard, then the project would address the impact based on the following:

- Based on agreed methodology, if the authority with jurisdiction does not have an adopted policy on how to address this situation, Sound Transit would provide proportionate mitigation if the project resulted in an additional 15 seconds or more of delay to a given intersection or corridor that is projected to exceed the established standard under the No Build conditions. The mitigation contribution will be based on the proportionate amount of delay that will be added by the project.

- For the City of Kirkland, mitigation is required if the LOS is E and the project would add a 15 percent proportional impact to the intersection, or LOS is at F and the project would add a 5 percent proportional share impact. The WSDOT freeway threshold for I-405 is LOS D.

Burien Transit Center and Roadway Improvements

Six BRT trips per hour in each direction would access the Burien Transit Center.

A study was conducted to assess the potential impacts of traffic redistributing to these alternative paths. The volume shifts show very modest changes in traffic flow or delays at study area intersections. As such, no changes in the roadway infrastructure or signal systems would be needed to address the effects of volume shifts due to bus-only lanes along SW 148th Street.

Existing entrances and exits to surrounding retail businesses would be maintained. While some driveways would be converted to right-in/right-out only, there are minor detour routes that would maintain access to surrounding uses.

Bus trips and roadway improvements would not adversely affect long-term traffic operations and LOS along the BRT pathway in Burien.

During the anticipated 12 months of construction, beginning in 2022, lane closures would be necessary for the roadway modifications on SW 148th Street and SR 509. Short-term full street closures on SW 148th Street may also be required. In some cases, short-term full closures might be substituted for extended partial closures to reduce overall impacts. To minimize disruption to the traveling public, street closures for construction may be limited to nighttime, weekend, and off-peak travel hours. Detours for vehicular, transit, or nonmotorized traffic could also be required. Street closures would be coordinated with the City of Burien.

Tukwila International Boulevard BRT Station and Roadway Improvements

Six BRT trips per hour in each direction would operate on SR 518 to access the BRT stations within the SR 99 interchange area.

Construction of this project component is anticipated to begin in 2022. The duration of construction is anticipated to be approximately 24 months. On SR 518, temporary lane closures in both the eastbound and westbound directions would be necessary during construction. For SR 518, the contractor would be expected to develop a construction traffic control plan and a maintenance of traffic plan that would require approval by WSDOT. Full closures could also be required depending on the construction methods and sequencing. In some cases, short-term full closures might be substituted for extended partial closures to reduce the overall duration. To minimize the disruption to the traveling public, SR 518 construction closures would be expected to be limited to nighttime, weekend, and off-peak travel hours. Detours for vehicular and freight traffic and transit service could also be required. Any necessary transit detours would be coordinated with the transit agencies.

South Renton Transit Center and Roadway Improvements

At the transit center, 6 BRT coaches per direction (12 BRT coaches in total) would be entering and exiting the site per hour in the AM and PM peak. Additionally, King County Metro service would account for an additional 34 trips per hour in the AM peak and 26 trips per hour in the PM peak with ST Express Route 566 adding another 4 trips in each direction per hour in the AM and PM peaks. Total peak trips, per hour, in and out of the transit center, including BRT service, would equate to 44 in the AM peak and 36 in the PM peak.

The proposed 700-stall park-and-ride garage would be located adjacent to the existing South Renton Park-and-Ride, owned by WSDOT. The existing park-and-ride has approximately 385 parking spaces. The existing park-and-ride is full on a typical weekday. By 2042, it is assumed that the 700-stall park-and-ride garage would reach full capacity. Each park-and-ride stall would generate one vehicle trip. The park-and-ride is assumed to fill within a three-hour AM peak period and empty within a three-hour PM peak period, consistent with other large park-and-rides in the Sound Transit service area. With the BRT frequency and span of service, there would be some arrivals to the park-and-ride during the PM peak period.

The AM and PM peak hour general-purpose vehicle volumes generated from the new park-and-ride garage were estimated from observed peak-hour/peak-period data gathered at the Northgate and Kenmore Park-and-Rides, and from the existing South Renton Park-and-Ride. Based on the assumption that the expanded park-and-ride would be full, vehicle trips into and out of the facility throughout a day were estimated by using the existing traffic increased at the same proportion as the increase in parking spaces. The AM peak hour is expected to be 7:30 a.m. to 8:30 a.m. and the PM peak hour is 4:30 p.m. to 5:30 p.m. In the AM peak hour, this resulted in 268 entering vehicles, or 38 percent of the 700 entering vehicles. There were an estimated 40 vehicles exiting during the AM peak hour. The PM peak-hour trip generation resulted in 273 exiting vehicles, or 39 percent of the 700 exiting vehicles. There were an estimated 56 entering vehicles during the PM peak hour. Additionally, based on observations at other park-and-ride facilities, the pick-up/drop-off area was estimated to have 30 vehicles entering and existing in the AM peak and 32 vehicles entering and leaving the site in the PM peak.

A detailed traffic analysis of this area is included in Attachment H. The LOS standard for the intersections in the project study area is LOS E mitigated, indicating that congestion should be mitigated when peak-hour LOS falls below LOS E. Twelve study intersections were analyzed to assess potential impacts for the year 2024 and 2042 AM and PM peak hours. Of those 12, only 1 was expected to exceed the LOS standard in 2024—Rainier Avenue S and SW Grady Way is expected to operate at LOS F in the PM peak hour in both the No Build and Build conditions, with an increase in delay of 3 seconds in the Build condition. In 2042, 5 of the 12 intersections are expected to operate at LOS F in either the AM or PM peak hours in the No Build and Build conditions. The Build condition does not cause any intersection to drop from an LOS that meets the standard to one that does not meet the standard. However, the project does affect the expected average vehicle delay by 15 seconds or more at 3 of these 5 intersections predicted to operate below the standard:

- Rainier Avenue S and Grady Way (delay increase of 16 seconds in AM peak hour)
- Grady Way and Talbot Road (delay increase of 15 seconds in AM peak hour)

- Talbot Road and I-405 southbound off-ramp (delay increase of 52 seconds in AM peak hour)

In 2021, 24 months of construction is anticipated to begin with no planned full street closures. To minimize the disruption to the traveling public, lane closures for construction staging activity may be limited to nighttime, weekend, and off-peak travel hours. Detours for vehicular, transit, or nonmotorized traffic could also be required. Any necessary transit detours would be coordinated with the transit agencies.

Bellevue Transit Center and Off-site Layover

Currently 46 Sound Transit buses access the Bellevue Transit Center per direction per hour. In 2024 and 2042, 12 BRT vehicles are anticipated to access the facility per direction per hour, replacing the current volumes from ST 535 and ST 550. This one-for-one replacement of traffic volumes would result in no traffic impacts. To re-stripe the BRT layover area on 110th Avenue NE, temporary lane closures would likely be necessary. Full street closures are not anticipated. To minimize the disruption to the traveling public, lane closures for construction may be limited to nighttime, weekend, and off-peak travel hours. Detours for vehicular, transit, or nonmotorized traffic could also be required. Lane closures are not anticipated to construct improvements at the Bellevue Transit Center. Disturbance of bus bays within the transit center would be coordinated with King County Metro to ensure adequate customer signage and information.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The proposed 566-stall Kingsgate Park-and-Ride Garage would be located at the existing park-and-ride surface lot which replaces approximately 166 of the existing 502 parking stalls and adds an additional 400 new spaces, for a total of 902 park-and-ride spaces on the site. Based on the assumption that the expanded park-and-ride would be full, vehicle trips into and out of the facility over the course of a day were estimated by using the existing traffic increased at the same proportion as the increase in parking spaces. The AM and PM peak-hour general-purpose vehicle volumes generated from the new park-and-ride garage were estimated from peak-hour/peak-period data. The AM peak hour is 6:45 a.m. to 7:45 a.m. and the PM peak hour is 5:15 p.m. to 6:15 p.m. In the AM peak hour, this resulted in an additional 220 entering vehicles, and an estimated additional 50 vehicles exiting during the AM peak hour. The PM peak-hour trip generation resulted in 160 additional exiting vehicles. There were an estimated additional 50 entering vehicles during the PM peak hour.

A traffic analysis was conducted to assess potential effects at three intersections near this project component—NE 128th Street/Totem Lake Boulevard, NE 128th Street/116th Street NE, and NE 128th Street/I-405 direct access ramps. The results show there would be minimal changes to intersection delay, with the only LOS change at the NE 128th Street/116th Avenue NE intersection in the 2024 AM peak period. In 2024, the NE 128th Street/116th Avenue NE intersection would change from LOS D in the No Build condition to LOS E in the Build condition. However, this LOS change represents only 5 seconds of added delay (an 8 percent increase in delay). Compared to the No Build condition, the maximum increase in delay for the Build condition at the NE 128th Street/116th Avenue NE intersection would be 6 seconds in the 2042 PM peak period (a 10 percent increase) and 6 seconds in the 2024 and 2042 AM peak period (a 9 percent increase). Even with this additional delay, the impact would result in less than a 15 percent increase, and both

the No Build and Build conditions would be LOS E. These levels-of-service impacts do not exceed the LOS standard for the City of Kirkland.

Construction of the Kingsgate Park-and-Ride Garage would be expected to occur on the existing park-and-ride site. Street and lane closures on 116th Avenue NE are not anticipated. King County Metro and Community Transit bus operations at the Kingsgate Park-and-Ride are not anticipated to be relocated. During construction, the number of park-and-ride stalls temporarily displaced during construction would be mitigated to provide a comparable level of access. Construction of improvements at the Totem Lake/Kingsgate Station would be minimal. Traffic disruptions would be coordinated with and approved by WSDOT.

Brickyard Station and Roadway Improvements

The six additional BRT trips per hour in each direction would operate on I-405 to access the BRT station within the I-405 mainline. Because the station would be accessed by new bus-only lanes and general-purpose lanes would remain, no traffic impacts would occur on the I-405 mainline. In this location, at the interchange of I-405 and NE 160th Street, the existing bus stops on the northbound off-ramp and the southbound on-ramp to I-405 would be removed and replaced by the BRT station. The removal of these bus stops would be expected to improve traffic operations on the ramps as buses would no longer be pulling in and out of traffic to serve the stops.

Construction of this project component is anticipated to begin in 2022. The duration of construction is anticipated to be approximately 24 months. On I-405, temporary lane closures in both the southbound and northbound directions would be necessary during construction. The contractor would be expected to develop a construction traffic control plan and a maintenance of traffic plan that would require approval by WSDOT. Full closures could also be required depending on the construction methods and sequencing. In some cases, short-term full closures might be substituted for extended partial closures to reduce the overall duration. To minimize the disruption to the traveling public, I-405 construction closures would be expected to be limited to nighttime, weekend, and off-peak travel hours. Detours for vehicular and freight traffic and transit service could also be required. Any necessary transit detours would be coordinated with the transit agencies.

Lynnwood City Center Transit Station BRT and Roadway Improvements

Traffic analysis was conducted to assess the potential effects of six BRT buses per direction per hour on intersections along the BRT pathway. All intersections operate at LOS D or better under the 2024 Build conditions. The 44th Avenue W and 196th Street SW intersection and 44th Avenue W and 200th Street SW intersection both show LOS E in No Build and Build conditions in 2042 due to forecasted future volume growth with a maximum delay increase of 2 seconds between No Build and Build conditions.

During 12 months of construction beginning in 2022, a temporary lane closure would be expected in order to construct the new bus-only lane along Poplar Way. Full street closure of Poplar Way would not be expected. To minimize the disruption to the traveling public, lane closures may be limited to nighttime, weekend, and off-peak travel hours.

Construction of the new traffic signal at the Lynnwood City Center transit center driveway and rechannelization of 46th Avenue W may require temporary lane closures and temporary rerouting of buses to 48th Avenue W.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No. The proposed project is not expected to affect or be affected by the movement of agricultural and forest products on roads or streets in the area. WSDOT's Freight System Plan defines those corridors that are critical to the movement of goods in the state. The *2017 Washington State Freight System Plan* identifies Critical Urban Freight Corridors that are designated by WSDOT or the region's Metropolitan Planning Organization, Puget Sound Regional Council. Critical Urban Freight Corridors are those public roads within urbanized areas (with populations greater than 50,000) that meet one of the following criteria: connects intermodal facilities to the primary highway freight system, interstate highway system or intermodal facility; located within a corridor of a route on the primary highway freight system and providing an alternate highway option important to the movement of goods; or important to freight movement as determined by the Metropolitan Planning Organization or state. The I-405 corridor is a primary highway freight network corridor and interstate; however, there are no Critical Urban Freight Corridors identified in the vicinity of the following project components:

- Burien Transit Center and Roadway Improvements
- South Renton Transit Center and Roadway Improvements
- Bellevue Transit Center and Off-site Layover
- Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage
- Brickyard Station and roadway improvements
- Lynnwood City Center transit station BRT and roadway improvements

S 154th Street in the City of Tukwila is designated by the Puget Sound Regional Council as a Critical Urban Freight Corridor between the SR 518 off-ramp and 24th Avenue S. This corridor segment is approximately 0.12 mile northeast of the proposed Tukwila International Boulevard BRT Station. The proposed project component would not impact the designated corridor and therefore is not expected to affect or be affected by the movement of agricultural and forest products in the area.

h. Proposed measures to reduce or control transportation impacts, if any:

The project has been designed to minimize changes to general-purpose traffic and to optimize transit speed and reliability. Further, no adverse impacts to traffic safety, nonmotorized facilities, parking, or site access for other facilities are anticipated as a result of the I-405 BRT Project.

The following provides a brief summary of design measures to avoid impacts for each project component.

Burien Transit Center and Roadway Improvements

No mitigation measures would be needed for this project component. A beneficial impact for transit could occur with the inclusion of TSP. TSP at all signals along the roadway would allow for the BRT service and other bus service to bypass traffic and left turns from oncoming traffic.

Tukwila International Boulevard BRT Station and Roadway Improvements

No mitigation measures would be needed for this project component.

South Renton Transit Center and Roadway Improvements

The project would not have adverse impacts in the 2024 year of opening but would contribute to the expected delay at three intersections in the 2042 forecast year:

- Rainier Avenue S and Grady Way (delay increase of 16 seconds in AM peak hour)
- Grady Way and Talbot Road (delay increase of 15 seconds in AM peak hour)
- Talbot Road and I-405 southbound off-ramp (delay increase of 52 seconds in AM peak hour)

Analysis indicates that optimizing signal phasing and timing at these intersections would mitigate the expected impacts. Sound Transit will coordinate with the City of Renton and WSDOT to identify an appropriate and proportionate contribution to improvements at these locations should the city and state determine that they would implement improvements other than optimized signal phasing.

Four intersections would require mitigation in the South Renton study area; however, minor changes to the signal-timing plans would be able to achieve compliance with LOS standards.

- For the 2042 AM peak period at Rainier Avenue S and S Grady Way, changing the intersection signal offset from 86 seconds to 76 seconds could decrease Build delays to 115 seconds, which again is within the 15-second impact window between Build and No Build scenarios.
- For the 2042 PM peak at Lake Avenue S and Grady Way, the eastbound and westbound left phases could be removed because of their relatively low volumes. Additional offset optimization could reduce the delay to 49 seconds, which is 13 seconds higher than the No Build delay.
- For the 2042 AM peak at Grady Way and Talbot Road, a shift of two seconds of green time from the east-west phase to the north-south phase could reduce overall delay to 134 seconds, which is 11 seconds higher than the No Build delay.
- For the 2042 AM peak period at the SR 515 and the Renton Village/I-405 southbound off-ramp, shortening the westbound through/left and eastbound left phase to allow more green time for northbound through and northbound left could

reduce the delay below 127 seconds, or about 14 seconds higher than the No Build condition.

Bellevue Transit Center and Off-site Layover

No mitigation measures would be necessary at this project component.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

No mitigation measures would be necessary at this project component.

Brickyard Station and Roadway Improvements

No mitigation measures would be necessary at this project component.

Lynnwood City Center Transit Station BRT and Roadway Improvements

No mitigation would be necessary at this project component.

15. Public Services

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

The project would provide increased and improved public transit service and connections within the I-5, I-405, and SR 518 corridors and in the Puget Sound region. None of the project components are expected to increase the need for fire, police, health care, or schools because the project would not result in any unplanned or induced increases in population. In addition, Sound Transit has examined the potential for crime to increase at transit facilities such as transit stations, park-and-ride lots and garages, and transit centers, and has found that crime at these facilities generally reflects the conditions in the surrounding neighborhoods. A majority of these crimes are quality-of-life crimes (e.g., vandalism, drunkenness, panhandling) and property crimes; a small percentage of these crimes are violent crimes. As described in Section 15.b, Sound Transit addresses crime by contracting with local law enforcement and security contractors to provide security services at its facilities.

The potential for fires associated with the transit stations and park-and-ride garages has also been examined and determined to be unlikely because of the limited activities that would occur within the stations or garages, the likely building materials (primarily steel, concrete, and glass), and the fact that these features would be constructed in compliance with applicable fire codes. For the park-and-ride garages, in addition to the use of fire-resistant building materials, the fire code requirements include the installation of a fire-suppression system and fire truck/apparatus access to all sides of the structure.

During construction of all project components, traffic rerouting, lane closures, and construction traffic may affect emergency response times and the travel times or routes for public service vehicles. Section 15.b describes how Sound Transit would address the issue of proximity and potential impacts to emergency services to avoid impacts.

For the purpose of this checklist, major public service facilities include the following:

- Emergency services such as fire, safety, and police. These emergency services are provided by cities, counties, and special purpose districts and by Washington State Patrol throughout the project area.
- Primary, urgent, and special care clinics.

Burien Transit Center and Roadway Improvements

The following major public service facilities are within approximately one-half mile of this project component:

- Kaiser Permanente Burien – 140 SW 146th Street
- Burien Police Department – 14905 6th Avenue SW

Tukwila International Boulevard BRT Station and Roadway Improvements

The following major public service facilities are within approximately one-half mile of this project component:

- Washington State Patrol District 2 Seattle S Detach – 15666 International Boulevard
- Tukwila Police Department Neighborhood Resource Center – 14661 International Boulevard
- City of SeaTac Fire Station 47– 3215 S 152nd Street

South Renton Transit Center and Roadway Improvements

The following major public service facilities are within approximately one-half mile of this project component:

- Renton Police Department – 1055 S Grady Way

Bellevue Transit Center and Off-site Layover

The following major public service facilities are within approximately one-half mile of this project component:

- Virginia Mason Clinic – Bellevue – 222 112th Avenue NE
- Kaiser Permanente Bellevue – 11511 NE 10th Street
- Blood Bank Bellevue – 1021 112th Avenue NE
- Overlake Hospital Medical Center – 1035 116th Avenue NE
- Bellevue Police Department – 450 110th Avenue NE

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

The following major public service facilities are within approximately one-half mile of this project component:

- Fire Station 27 – 11210 NE 132nd Street
- Virginia Mason Clinic Kirkland – 13014 120th Avenue NE
- Pacific Medical Totem Lake – 12910 Totem Lake Boulevard
- Evergreen Health Medical Center – 12040 NE 128th Street
- Kirkland Police Department – 11750 NE 118th Street

Brickyard Station and Roadway Improvements

There are no major public service facilities located within approximately one-half mile of this project component.

Lynnwood City Center Transit Station BRT and Roadway Improvements

The following major public service facilities are within approximately one-half mile of this project component:

- Lynnwood Police Department – 19321 44th Avenue W
- Community Health Center of SNO CO-LYNN – 4111 194th Street SW
- Group Health Cooperative – 20200 54th Avenue W

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

Some disruption to the transportation network would occur during construction, which could impact the ability for emergency service vehicles to move through the area. Sound Transit would work with contractors, service providers, and the appropriate jurisdiction to minimize disruption and ensure that appropriate access through or around construction areas is retained. As part of construction planning and permitting, Sound Transit would work with each municipality to minimize the duration and impact of lane closures that may affect public services by: (a) maintaining through- traffic, where practical, except for temporary lane closures that would typically be limited to nighttime, weekend, and off-peak travel hours; (b) establishing detour routes on nearby arterials for temporary lane closures; and (c) maintaining traffic management systems. These measures would be included in a maintenance of traffic plan that would address all travel modes, which would be prepared prior to construction and would require approval by each municipality.

Sound Transit contracts with local law enforcement and security contractors to provide security services at its facilities. The project's design will incorporate CPTED principles. Sound Transit also conducts threat and vulnerability assessments for all new projects to identify and address potential security concerns. In addition, cameras connected to a security camera system would be installed at each BRT station and park-and-ride

garage. Camera systems have been found to deter and detect crime, public disorder, unlawful behavior, and inappropriate conduct.

At the South Renton Transit Center and Kingsgate Park-and-Ride Garage structures, standpipes would be installed for firefighting purposes and fire extinguishers would be provided according to design criteria and local authority requirements. Sound Transit design criteria require fire alarm systems installed at parking garages and passenger stations to include automatic fire detection, alarm, and controls to allow emergency response personnel to formulate proper responses and alleviate pressure on emergency services in case of an emergency.

16. Utilities

a. Underline utilities currently available at the site.

The following is based on as-built drawings provided by local jurisdictions and utility providers.

Burien Transit Center and Roadway Improvements

electricity, natural gas, water, refuse service, telephone/communications, sanitary sewer, septic system, other.

Tukwila International Boulevard BRT Station and Roadway Improvements

electricity, natural gas, water, refuse service, telephone/communications, sanitary sewer, septic system, other.

South Renton Transit Center and Roadway Improvements

electricity, natural gas, water, refuse service, telephone/communications, sanitary sewer, septic system, other.

Bellevue Transit Center and Off-site Layover

electricity, natural gas, water, refuse service, telephone/communications, sanitary sewer, septic system, other.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

electricity, natural gas, water, refuse service, telephone/communications, sanitary sewer, septic system, other.

Brickyard Station and Roadway Improvements

electricity, natural gas, water, refuse service, telephone/communications, sanitary sewer, septic system, other.

Lynnwood City Center Transit Station BRT and Roadway Improvements

electricity, natural gas, water, refuse service, telephone/communications, 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.**

No utility services would be needed for project construction. Temporary connection to electrical utilities may be proposed in specific instances, for example, where nighttime construction requires the use of lighting. However, it is anticipated that the contractor would be equipped with their own generator for nighttime work and would not require temporary connection to electrical utilities.

Operation of the two proposed park-and-ride garages is anticipated to require utility services typical for the operation of a parking garage structure of this approximate size, which would generally require the following:

- Electrical service for providing lighting to the stairways and throughout the garage floors, and lighting and power to the elevators
- Stormwater tie-ins or upgrades to existing connections where new impervious surface are added
- Communication tie-ins connections for real-time information systems and TVMs
- Water for site maintenance and fire protection
- Water and sanitary sewer service for restrooms for transit drivers, where provided

The BRT stations along the corridor would require the following:

- Electrical and communications services as described for the park-and-ride garages
- Water access, possibly, for site maintenance

Some roadway improvements may require the following:

- Electrical service, new or changed, for proposed or required streetlights or traffic signals

The following describes the project's specific operational utility needs, as well as construction work that may occur around utilities in the vicinity of each project component.

Burien Transit Center and Roadway Improvements

- Electricity: Puget Sound Energy (PSE) and Seattle City Light (SCL) are the service providers in the area. Although it is known that there is electricity on-site, it is not currently known which of the two utilities provides that service here. This will be explored further with survey and coordination with each utility franchise. Because there is electricity to the existing transit center, it is anticipated that service to the new BRT station elements at the transit center could be provided via on-site interconnection to the existing line. No electrical needs, such as from new street lighting, are anticipated for the roadway improvements.

- Communications: It is anticipated that this project component would tie into the WSDOT communication line that currently serves the Burien Transit Center, located on the south side of SW 148th Street.

The following utilities are in the project vicinity but would not be required for operation of this project component or be impacted during construction:

- Sanitary sewer: The Southwest Suburban Sewer District has a sewer main crossing 1st Avenue S between the Burien Transit Center and 1st Avenue S, as well as sewer mains running north-south on 1st Avenue S. There are no apparent potential impacts to these facilities.
- Water: King County Water District (KCWD) 49 has a 2-inch irrigation line running along the north side of SW 148th Street and along the middle of 1st Avenue S. There are no apparent potential impacts to these facilities.
- Storm drainage: A City of Burien 6-inch storm drainage pipe crosses SW 148th Street in the vicinity of the Burien Transit Center, connected to a main line running east-west on the north side of SW 148th Street. There are no apparent impacts to these facilities.
- Communications: Additional communication utilities nearby that would not serve this project component include the following:
 - CenturyLink – South side of SW 148th Street serving the Burien Transit Center and east side of 1st Avenue S
 - Comcast – West side of 1st Avenue S
 - Verizon – Within 1st Avenue S running north-south

Tukwila International Boulevard BRT Station and Roadway Improvements

- Electricity: PSE and SCL are the service providers in the area, and although it is known that there is electricity on-site, specific power facilities and their provider have not been identified in the vicinity of the proposed improvements. This will be explored further with the survey and coordination with each utility franchise. The project would require electricity to illuminate the stairs, pedestrian bridge, station platforms, and operate and illuminate the elevators. Because there is electricity to the existing light rail station and SR 518 highway lighting, it is anticipated that new service to the new BRT station elements, elevator, and pedestrian bridge would be able to extend access, as needed, from the existing line. No new lighting is proposed along SR 518 that would require electricity.
- Storm drainage: In the vicinity of this project component, WSDOT has storm drainage piping on the north and south sides of SR 518 that the BRT station would connect to. The City of SeaTac owns a 12-inch storm drain line on the east and west sides of Tukwila International Boulevard; the City of SeaTac line on the west side may need to be relocated as a result of a proposed retaining wall.

- Communications: This project component would require fiber service and would tie into WSDOT's existing underground fiber line along SR 518. On-site service would be routed from the tie-in point at the existing control vault to the necessary locations on the site, requiring some trenching. CenturyLink owns telecommunication facilities on the west side of the Tukwila International Boulevard overpass over SR 518. Service would be routed from this tie-in point to the necessary locations on the site.
- The following utilities are in the project vicinity but would not affect operation of this project component or be impacted during construction:
- Water: KCWD 125 has an existing 10-inch water main on the east side of the Tukwila International Boulevard overpass over SR 518. There are no apparent potential impacts to this facility.
- Sanitary sewer: This area is within the Valley View Sewer District's service area. There are no apparent facilities in the vicinity of proposed improvements.

South Renton Transit Center and Roadway Improvements

- Electricity: It is anticipated that new service connections would be established for the proposed transit center and park-and-ride garage; the specific connection and utility service has not yet been identified. The following existing utilities are available:
 - SCL owns overhead transmission lines running north-south on the east portion of the project site. These lines would be maintained, and setbacks would be coordinated with SCL.
 - PSE owns both underground and overhead lines running northwest-southeast along the north side of S Grady Way, underground lines on the west side of Rainier Avenue S, and underground lines within the site, with one line in direct conflict with the proposed garage.
 - The City of Renton owns underground power along both the west and east sides of Rainier Avenue S powering the illumination system.
- Water: The City of Renton owns 8-inch water lines running through where the new park-and-ride garage is proposed. These lines would need to be relocated. It is anticipated that new service connections to existing water lines in Rainier Avenue S or S Grady Way would be established for the proposed transit center and park-and-ride garage.
- Sanitary sewer: The City of Renton owns 8-inch sewer lines running through where the new park-and-ride garage is proposed. These lines would need to be relocated. In addition, if a restroom facility is provided, it could connect to this relocated line.
- Storm drainage: The City of Renton owns an 8-inch storm drainage line that runs through where the new park-and-ride garage is proposed. These lines would need to be relocated. There is also a 12-inch storm drainage line in the southwest corner of the proposed transit center site and along the east side of Rainier Avenue S that may conflict with the new storm drainage system. This will be further evaluated as project

design progresses. It is anticipated that new service connections would be established for this project component.

- Communications: This project component would tie into WSDOT's existing fiber communication line that currently runs underground near this project component. Service would be connected from the nearest tie-in point to the necessary locations on the site.

The following utilities are in the project vicinity and would not be required for operation of this project component; however, they would be impacted during construction:

- Communications:
 - CenturyLink owns a communication line on the west side of Rainier Avenue S and within the western portion of the site that would likely conflict with the project component's proposed storm drainage system and would need to be relocated.
 - Comcast owns a line along the east side of Rainier Avenue S that would conflict with the proposed park-and-ride garage and would need to be relocated.

Bellevue Transit Center and Off-site Layover

- Electricity: Both PSE and City of Bellevue underground conduits are in the vicinity of the proposed BRT station at the transit center. Relocating the curb ramps could impact these existing conduits. At the Bellevue Transit Center, the BRT-branded pylon may require electricity if it is lighted. The off-site layover area does not require new electrical connections.
- Communications: This project component would connect to WSDOT's communication line. Service would be routed from the tie-in point to the necessary locations on the site; construction is anticipated to require a horizontal directional bore.
- The following utilities are in the project vicinity but would not affect operation of this project component or be impacted during construction:
- Water/sanitary sewer/storm drainage: The Bellevue Transit Center is currently served by utilities owned by the City of Bellevue. Service will be maintained and protected during construction.
- Communications: Comcast and CenturyLink own communication lines that run along the north, east, and west edges of the Bellevue Transit Center, but do not appear to conflict with the proposed improvements. This will be explored further with survey.

Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

- Electricity: This project component would be served by electricity from PSE. PSE owns underground power running north-south along 116th Avenue NE. New service connections would be established for the proposed park-and-ride garage and possibly the BRT-branded pylon at the station if it is lighted.

- **Water:** The Northshore Utility District provides water service in this area. A 12-inch water main runs along the west side of 116th Avenue NE that shifts to within the roadway toward the south section of the site. In addition, a 10-inch water main under the proposed park-and-ride garage would need to be relocated. Water for the new fire-suppression system would be routed on-site to serve the proposed park-and-ride garage.
- **Sanitary sewer:** An 8-inch sanitary sewer line owned by the Northshore Utility District runs along the west side of 116th Avenue NE with an existing connection routed to the existing Kingsgate site. If a restroom facility is provided, it would connect to this line.
- **Storm drainage:** The City of Kirkland owns an 8- and 12-inch storm collection system within the existing Kingsgate site, routed to NE 132nd Street, that would be modified by the project component. There is also a 12-inch stormwater line under the proposed park-and-ride garage and a stormwater facility that would need to be relocated. New connections to the storm sewer system would be established for the proposed park-and-ride garage.
- **Communications:** This project component would require fiber service and would tie into WSDOT's existing fiber line along I-405. The required on-site service would be routed from the tie-in point to the necessary locations on the site.

The following utilities are in the project vicinity but would not be required for operation of this project component or be impacted during construction:

- **Communications:** Additional communication utilities nearby that will not serve this project component include the following:
 - **Comcast:** A conduit runs along the south side of the site that does not appear to be impacted.
 - **Level 3:** A conduit runs north-south on the east side of 116th Avenue NE.
 - **Zayo:** A conduit runs north-south on the west side of 116th Avenue NE that appears to conflict with the new storm drainage system.

Brickyard Station and Roadway Improvements

- **Electricity:** It is anticipated that new electrical service connections would be established for the proposed BRT station, pedestrian bridge, stairs, and elevator. Electrical service would tie into existing connections at the Brickyard Park-and-Ride lot. PSE owns overhead power lines that run north-south along I-405, north-south along Juanita Woodinville Way NE, east-west near NE 155th Street, and buried power east-west along NE Woodinville Drive.
- **Water:** It is anticipated that new water service would connect to the existing water line at the Brickyard Park-and-Ride lot.
- **Storm drainage:** WSDOT has storm drainage piping on the east and west sides of I-405 that the BRT station would connect to. There is a storm connection located

near the Sonoma Villero Condominiums with a culvert conveyance system that runs north-south along I-405. Stormwater facilities would ultimately tie into existing conveyance systems, and there are no anticipated impacts to these facilities.

- Communications: This project component would tie into WSDOT's existing fiber communications line in I-405. On-site service would be routed from the nearest tie-in point to the necessary locations on the site.

The following utilities are in the project vicinity but would not affect operation of this project component or be impacted during construction:

- Sanitary sewer: The Northshore Utility District owns the sanitary sewer main that runs north-south near Juanita Woodinville Way NE, north-south along 116th Avenue NE, and north-south along I-405. The City of Bothell owns the sanitary sewer main that runs east-west along NE Woodinville Drive and east-west along SR 522.
- Water: Seattle Public Utilities and the Northshore Utility District both own water lines that run east-west near NE 155th Street and water lines that run east-west near Juanita Creek. The Northshore Utility District also owns water lines that run north-south on Juanita Woodinville Way NE. The City of Bothell and WSDOT own water lines that run east-west along NE Woodinville Drive.
- Communications: Additional communication utilities nearby that would not serve this project component include the following:
 - Northshore School District: Owns buried fiber that run east-west along NE Woodinville Drive. Frontier and Comcast both own buried communication lines that run east-west along NE Woodinville Drive.
 - Frontier: Owns buried communication lines that run east-west near NE 155th Street and north-south along 160th Avenue NE.
 - Unknown: Buried communication line that runs east-west near NE 155th Street.

Lynnwood City Center Transit Station BRT and Roadway Improvements

- Electricity: This project component is currently served by electricity from the Snohomish Public Utility District. Underground power is primarily along 46th Avenue W. At the transit center, the BRT-branded pylon may require electricity if it is lighted. The roadway improvements at Poplar Way do not require new lighting or electrical needs.
- Storm drainage: At Poplar Way the project improvements would connect to WSDOT's storm drainage piping in I-5. The Lynnwood City Center transit center is currently served by the culvert conveyance system operated by the City of Lynnwood. These storm pipes run east-west under the proposed improvements and may be impacted by the excavation.
- Communications: This project component would tie into Sound Transit's existing fiber communications line at 44th Avenue W and 200th Street SW. On-site service would be routed from the tie-in point to the necessary locations on the site.

- The following utilities are in the project vicinity but would not affect operation of this project component or be impacted during construction:
- Water: No apparent Alderwood Water & Wastewater District facilities are in the vicinity of this project component. This project component is currently served by water from the City of Lynnwood and ties into the existing district main water distribution line along the west, south, and east sides of the site.
- Sanitary sewer: This project component is currently served by the existing sanitary sewer main that runs north-south along the west side of 48th Avenue W. This line is operated by the City of Lynnwood. Additionally, an unknown-sized pipe runs along the east side of the Lynnwood City Center transit center.
- Communications: Additional communication utilities nearby that would not serve this project component include the following:
 - Comcast, Level 3-Verizon, and WAVE have communication lines underground along the perimeter of the transit center.
 - Level-3 Verizon, Comcast, WAVE, and Zayo have conduit near the Poplar Way improvements.

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: Kathy Fendt

Name of Signee: Kathy Fendt

Position and Agency/Organization: Corridor Environmental Mgr, Sound Transit

Date Submitted: 9/25/20

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GLOSSARY OF TERMS

Archaeological resource: Pre-contact archaeological resources are places on the landscape that contain the physical remnants of activities carried out by Native Americans during the pre-contact period (as late as AD 1769). Historical archaeological resources are post-European contact resources that may include remnants of early settlements. *See also* **Cultural resource**.

Best management practice (BMP): Methods designed to minimize adverse effects on the environment, such as practices for erosion and sedimentation controls, watering for dust control, silt fences, rice straw bales, and sediment basins.

Borings: A technique used to explore the underground surface, typically used to determine if it is capable of holding up a building by making or enlarging a hole to survey fragments.

Contaminants: Hazardous materials (e.g., solid, liquid, or gaseous vapor) that physically remains on a person, animal, or object.

Cultural resource: A resource related to the tangible and intangible aspects of cultural systems, living and dead, that is valued by a given culture or contains information about the culture. Cultural resources include historical and archaeological resources such as sites, structures, buildings, districts, and objects associated with or representative of people, cultures, and human activities and events.

dBA: A-weighted decibels which account for human perception of sound and unwanted noise.

Dewatering: The process of draining or removing water (typically ground water) from sediment.

Ecosystem: An interconnected network of living organisms, including people, and their local physical environment; often considered as an ecological unit.

Effect: A change in the condition or function of an environmental resource or environmental value as a result of human activity.

Emergency services: Emergency response by fire, law enforcement, and emergency services to fire, seismic events, or other emergency situations.

Endangered species: Any species listed under the federal Endangered Species Act as being in danger of or threatened with extinction throughout all or most of its range.

Greenhouse gas (GHG): A class of air pollutants believed to contribute to the global warming effect, including CO₂, hydrocarbons, and NO_x.

Groundwater: Water contained and transmitted through open spaces within rock and sediment below the ground surface.

Habitat: An environment where plants or animals occur; an ecological setting used by animals for a particular purpose, (e.g., roosting habitat, breeding habitat).

Hazardous material: Any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment if released.

Impact: A change in the condition or function of an environmental resource or environmental value as a result of human activity.

Impervious surface: Surface covered by impenetrable materials, such as pavement and buildings, that increases the potential for water runoff and reduces the potential for groundwater recharge.

Level-of-service (LOS): A rating that uses qualitative measures to characterize operational conditions within a traffic stream and the perception by motorists and passengers.

Mitigation: Action or measure to minimize, reduce, eliminate, or rectify the adverse impacts of a project, practice, action, or activity.

National Pollutant Discharge Elimination System (NPDES): Under Section 402 of the Clean Water Act, the NPDES Program regulates all point source discharges, including construction-related runoff discharges to surface waters and some post-development discharges.

National Register of Historic Places (NRHP): An official list of historic properties eligible for federal protection under Section 106 of the National Historic Preservation Act.

Noise-sensitive receivers: Premises used for purposes sensitive to noise and require protection, such as domestic premises, hotels, educational institutions, and hospitals.

Runoff: The flow of water over land from rain, snowmelt, or other sources.

Sediment: Fragments of ground material originating from the physical or chemical weathering of rocks and minerals, decomposition of organic matter, and atmospheric fallout. Clay, mud, and sand are all types of sediment.

Visual quality: An assessment of what viewers like and dislike about visual resources that compose the visual character.

Visual resources: The natural and artificial features of a landscape that characterize its form, line, texture, and color.

Wetlands: An area of land with soil that is saturated with moisture, either permanently or seasonally. According to the *U.S. Army Corps of Engineers Wetlands Delineation Manual*, three criteria must be satisfied to classify an area as a jurisdictional wetland: hydrophytic vegetation, hydric soils, and wetland hydrology. Types of wetlands include the following:

Palustrine emergent (PEM) – Palustrine emergent systems include all nontidal wetlands dominated by persistent emergent species and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand.

Palustrine scrub-shrub (PSS) – Palustrine scrub-shrub systems include all nontidal wetlands dominated by shrub species and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand.

Palustrine forested (PFO) – Palustrine forested systems include all nontidal wetlands dominated by trees and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand.

ATTACHMENT A

Figures

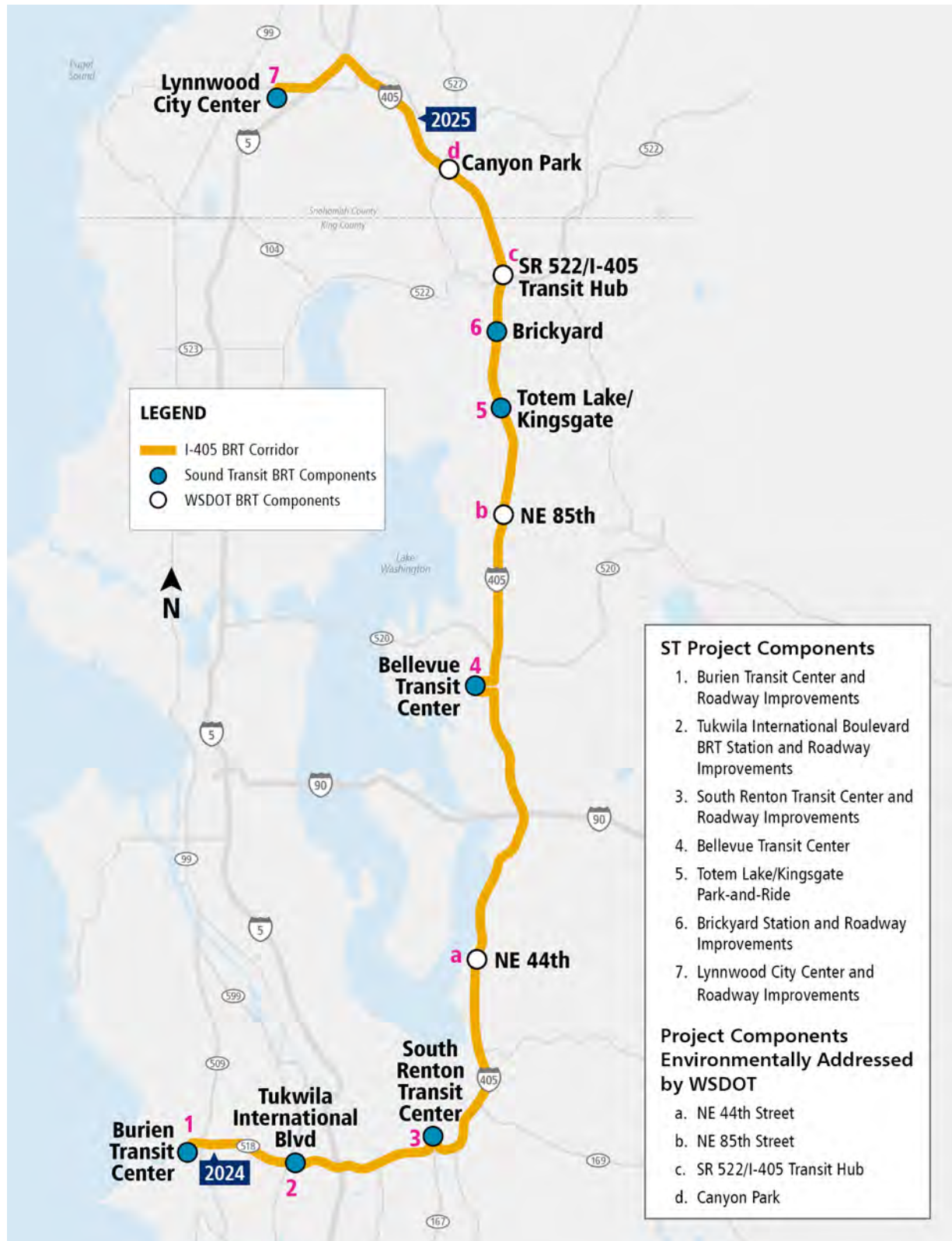


Figure A-1 I-405 BRT Project map

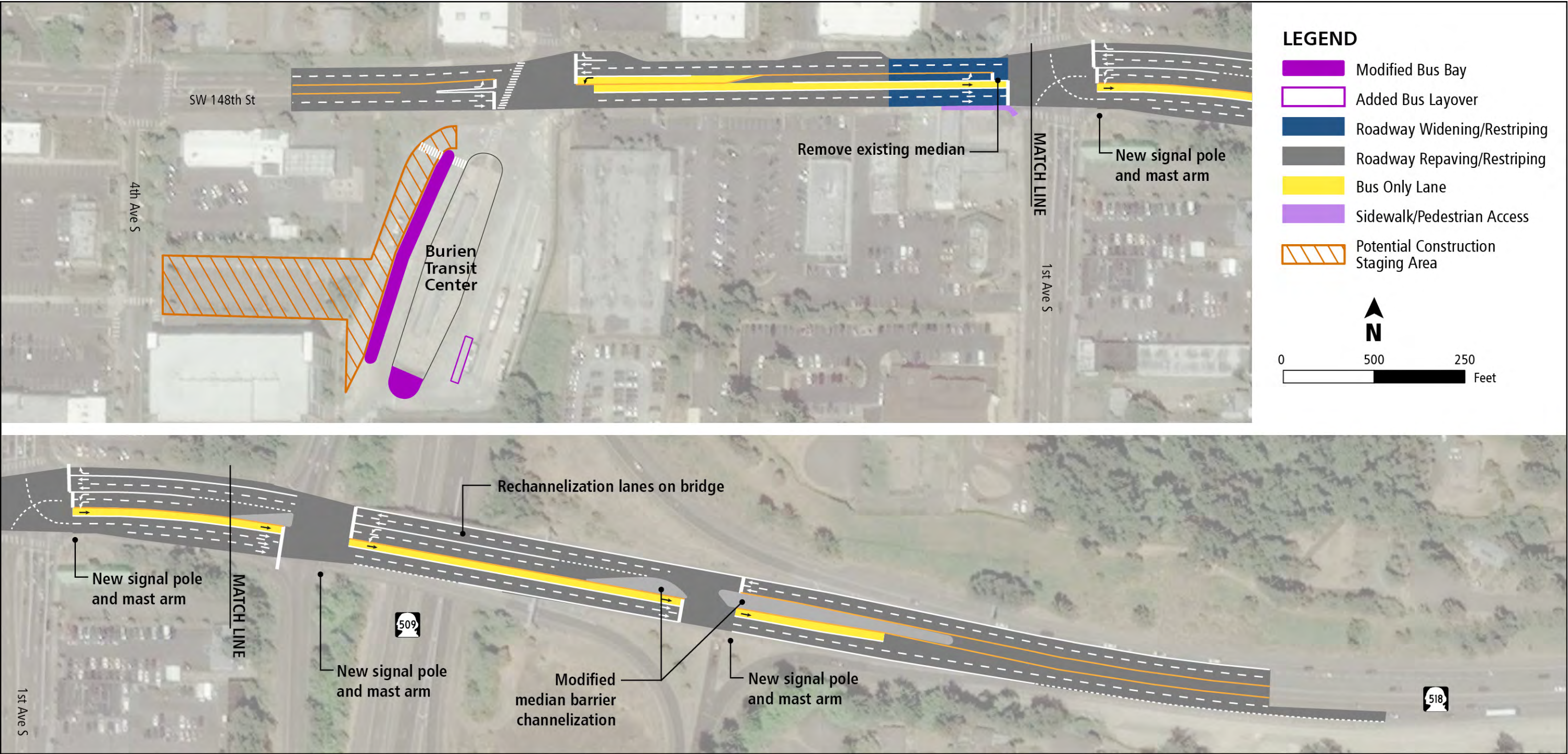


Figure A-2 Burien Transit Center and Roadway Improvements

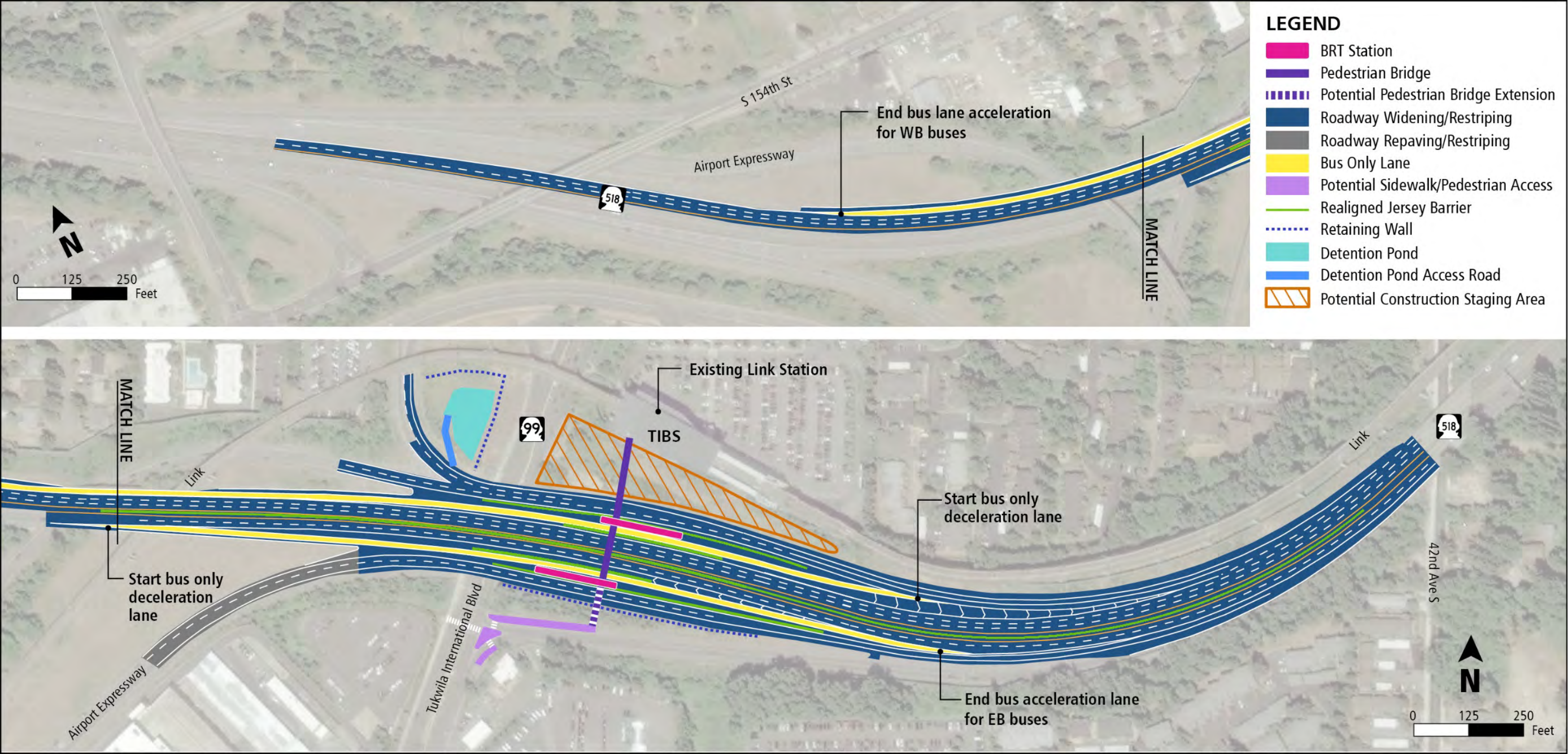


Figure A-3 Tukwila International Boulevard BRT Station and Roadway Improvements

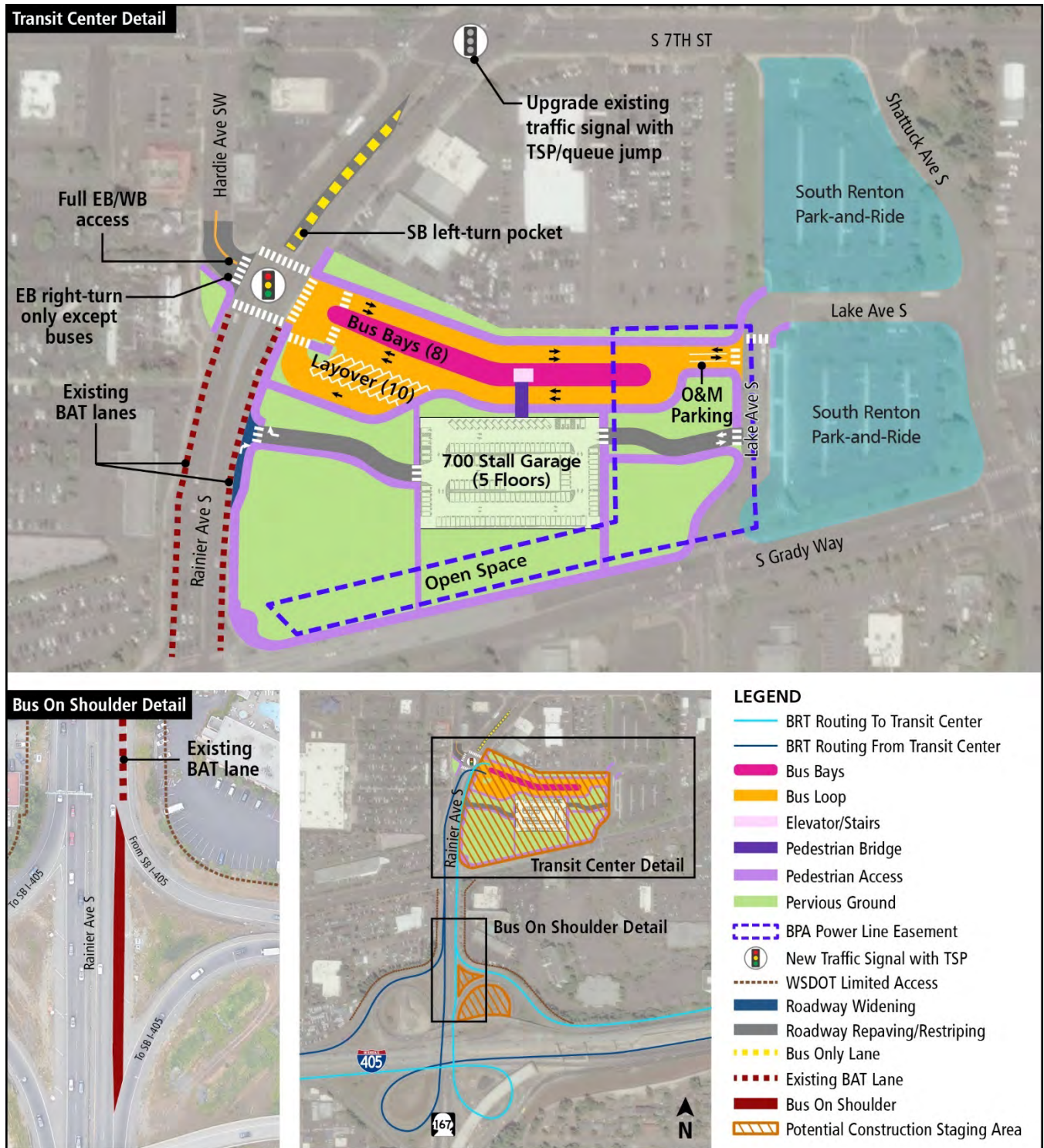


Figure A-4 South Renton Transit Center and Roadway Improvements

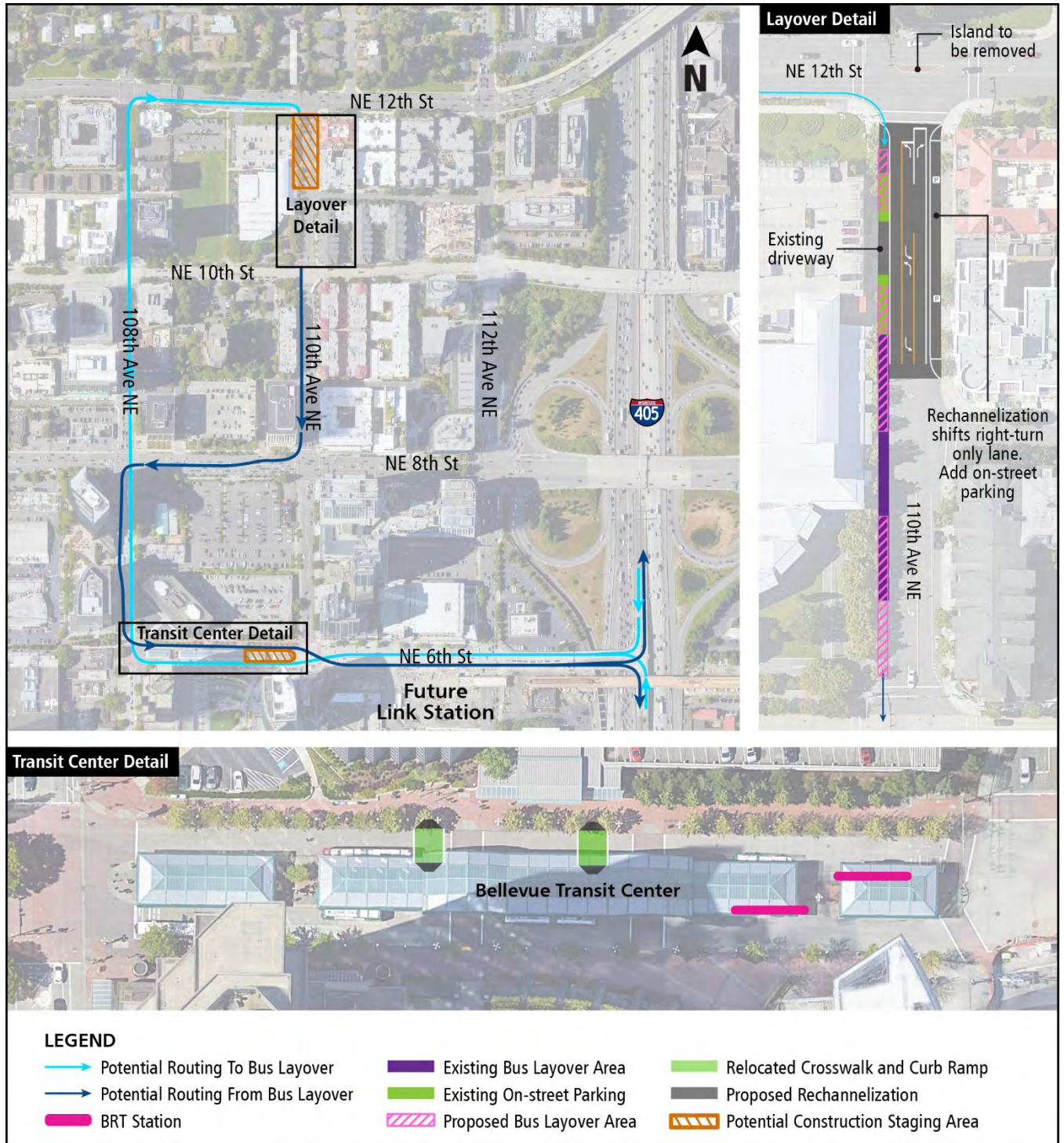


Figure A-5 Bellevue Transit Center and Off-site Layover

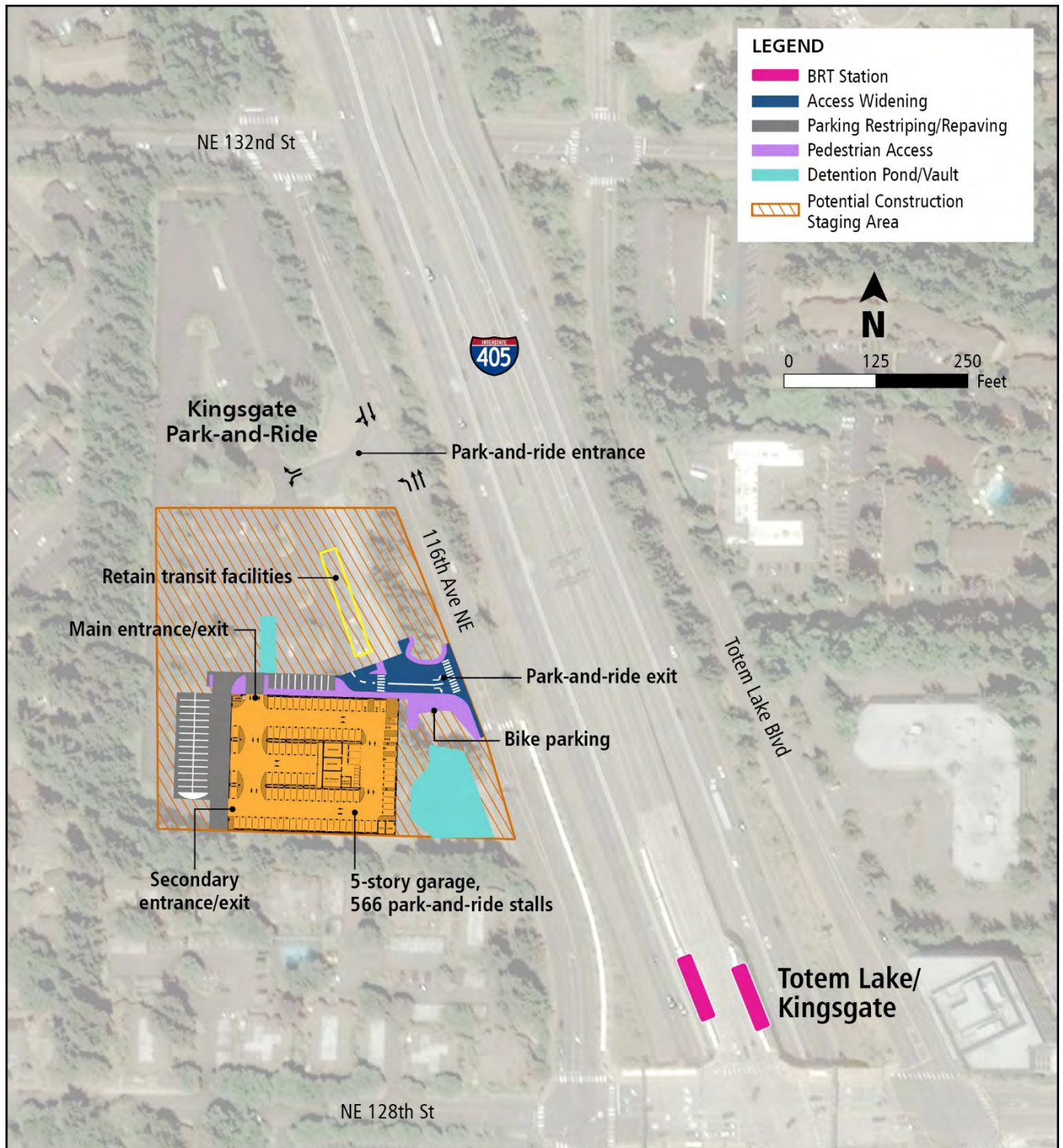


Figure A-6 Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

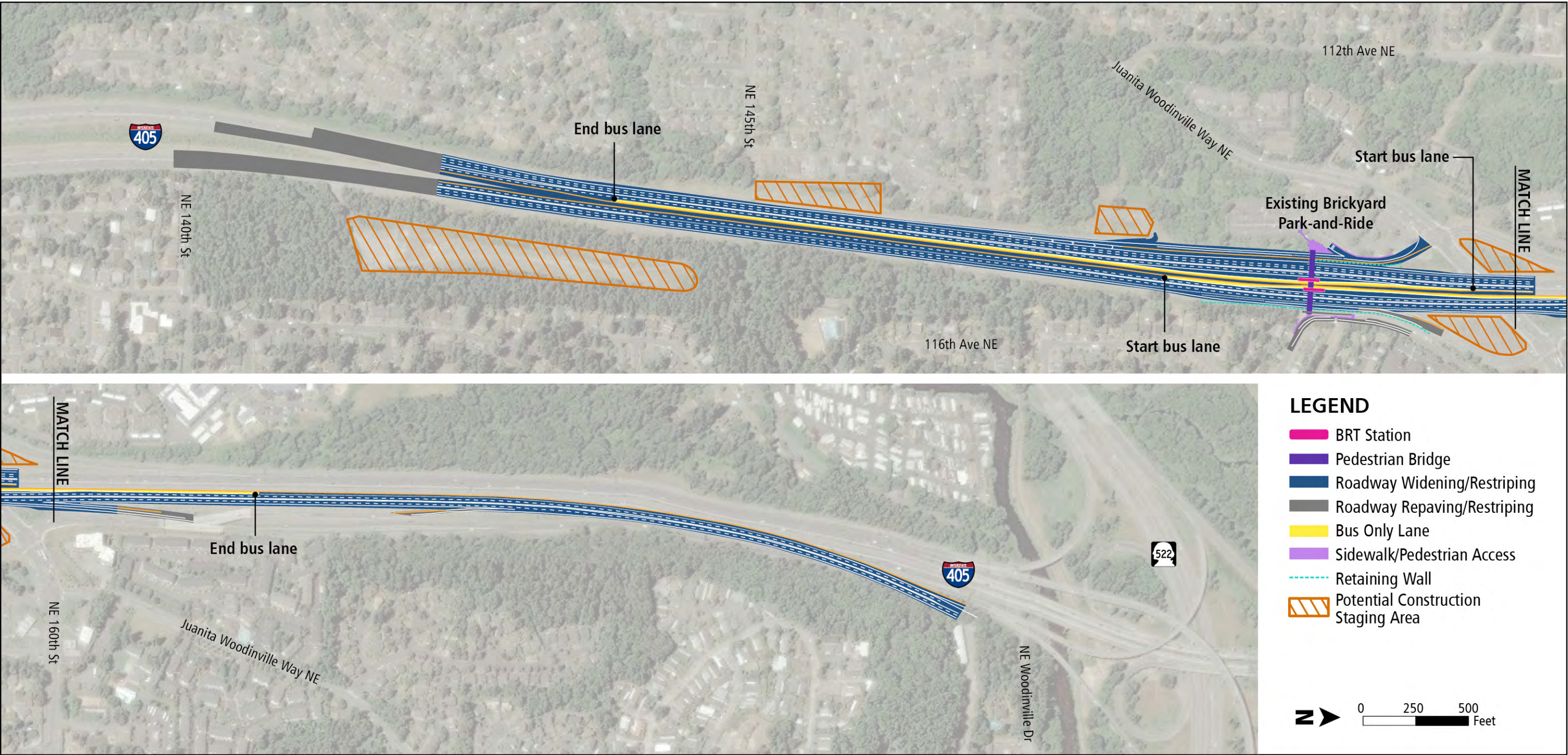


Figure A-7 Brickyard Station and Roadway Improvements

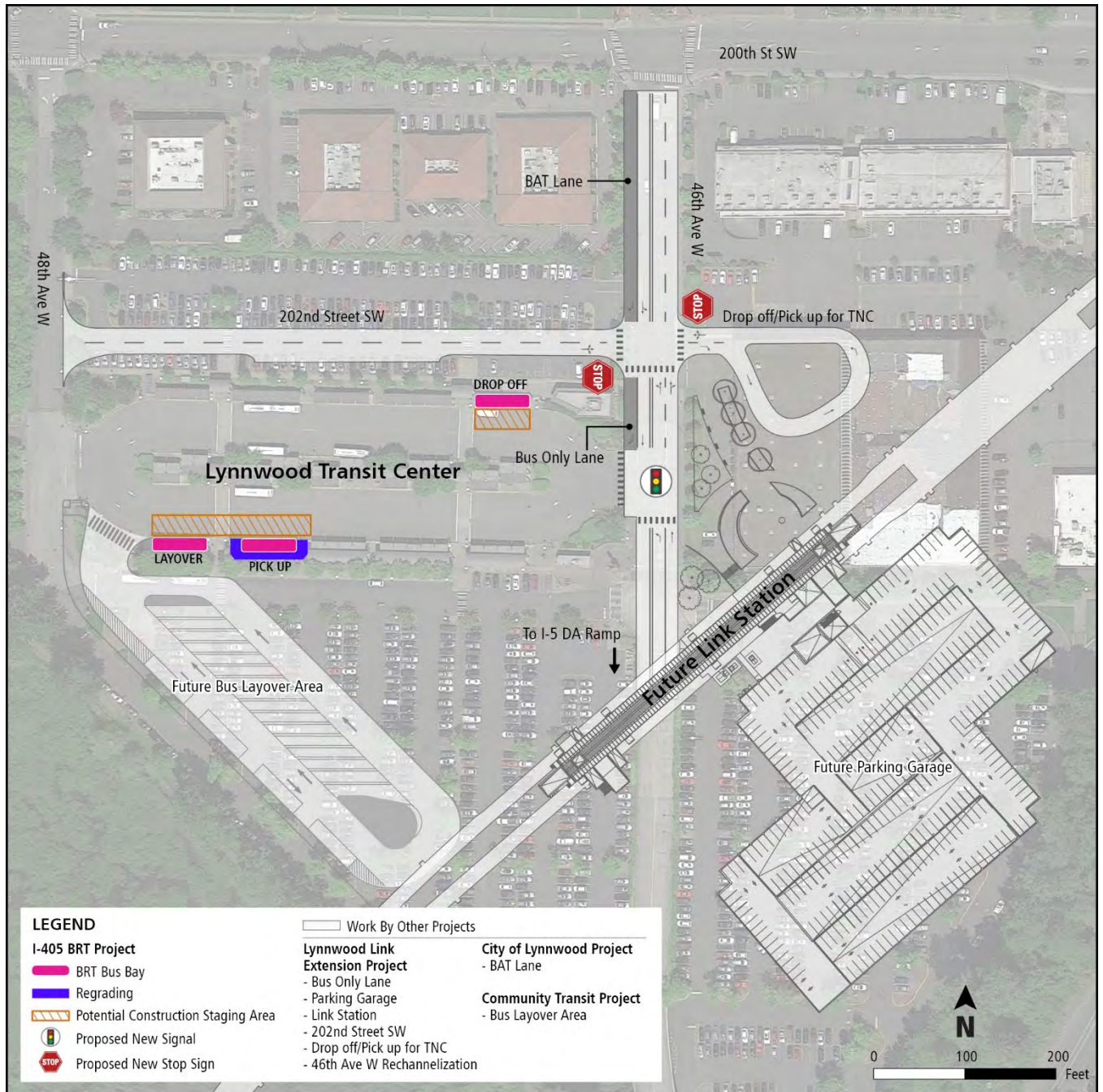


Figure A-8 Lynnwood City Center Transit Station BRT and Roadway Improvements

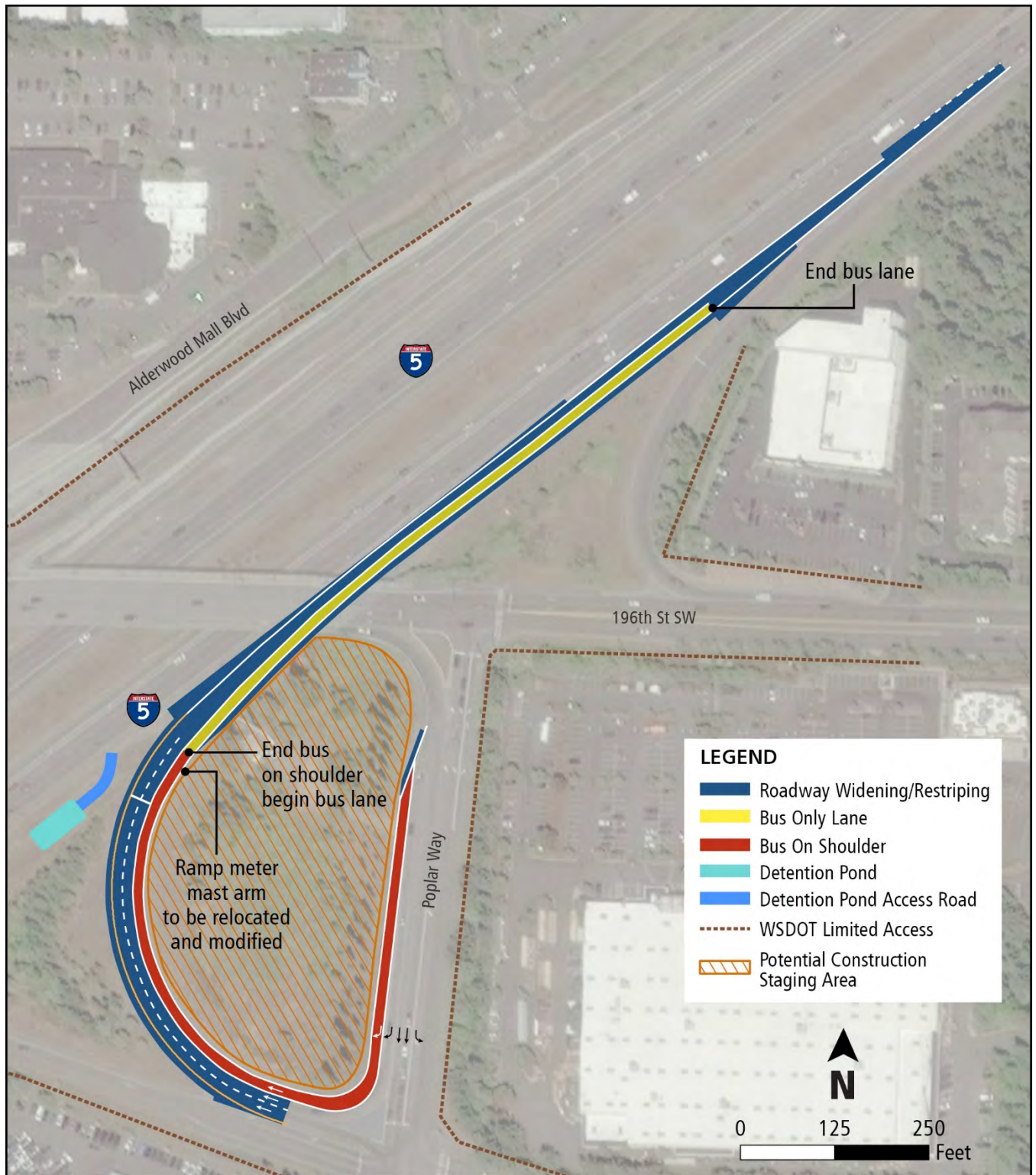


Figure A-9 Lynnwood City Center Transit Station BRT and Roadway Improvements: Poplar Way Roadway Improvements

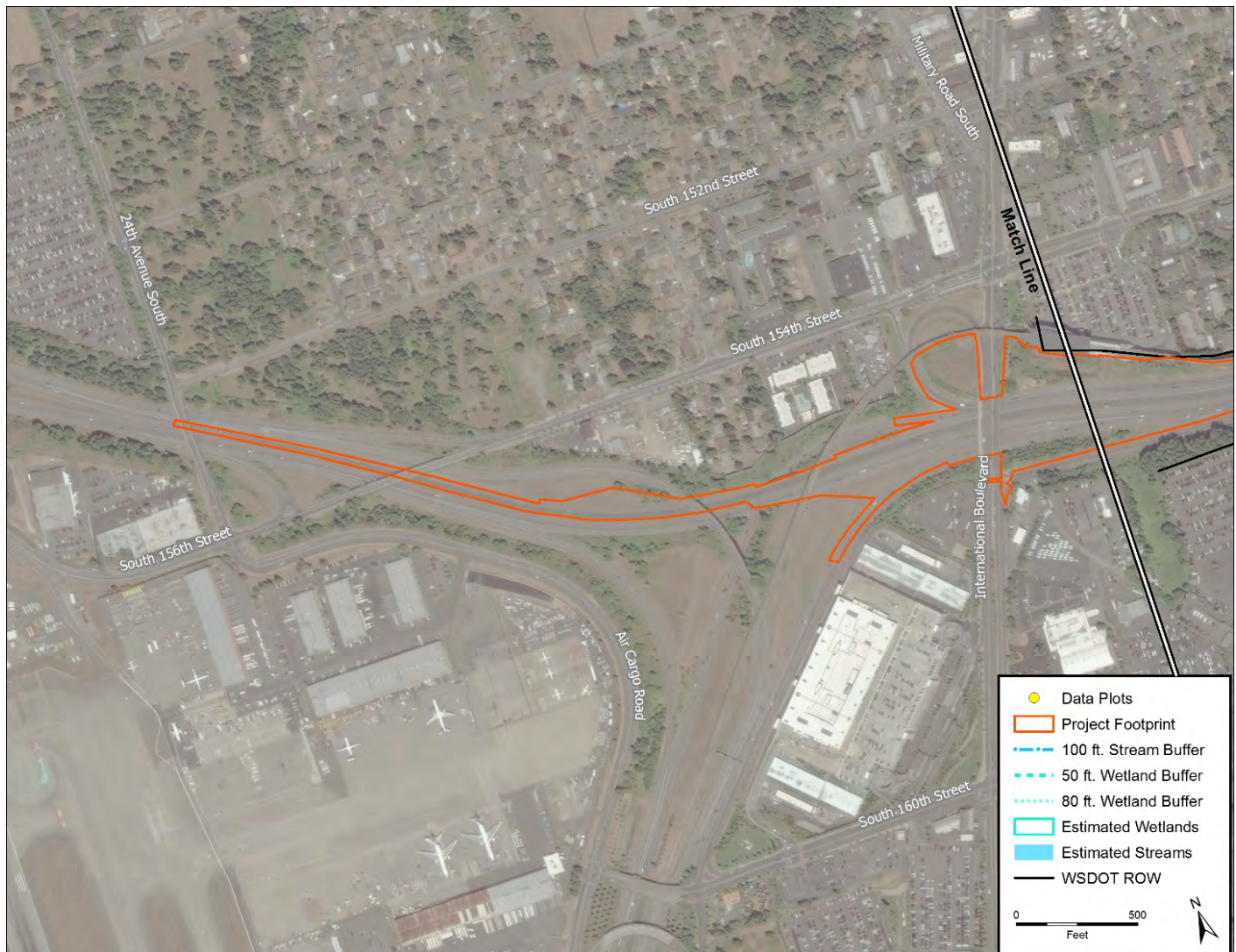


Figure A-10 Wetlands and streams within the west end of the Tukwila International Boulevard BRT Station and Roadway Improvements study area

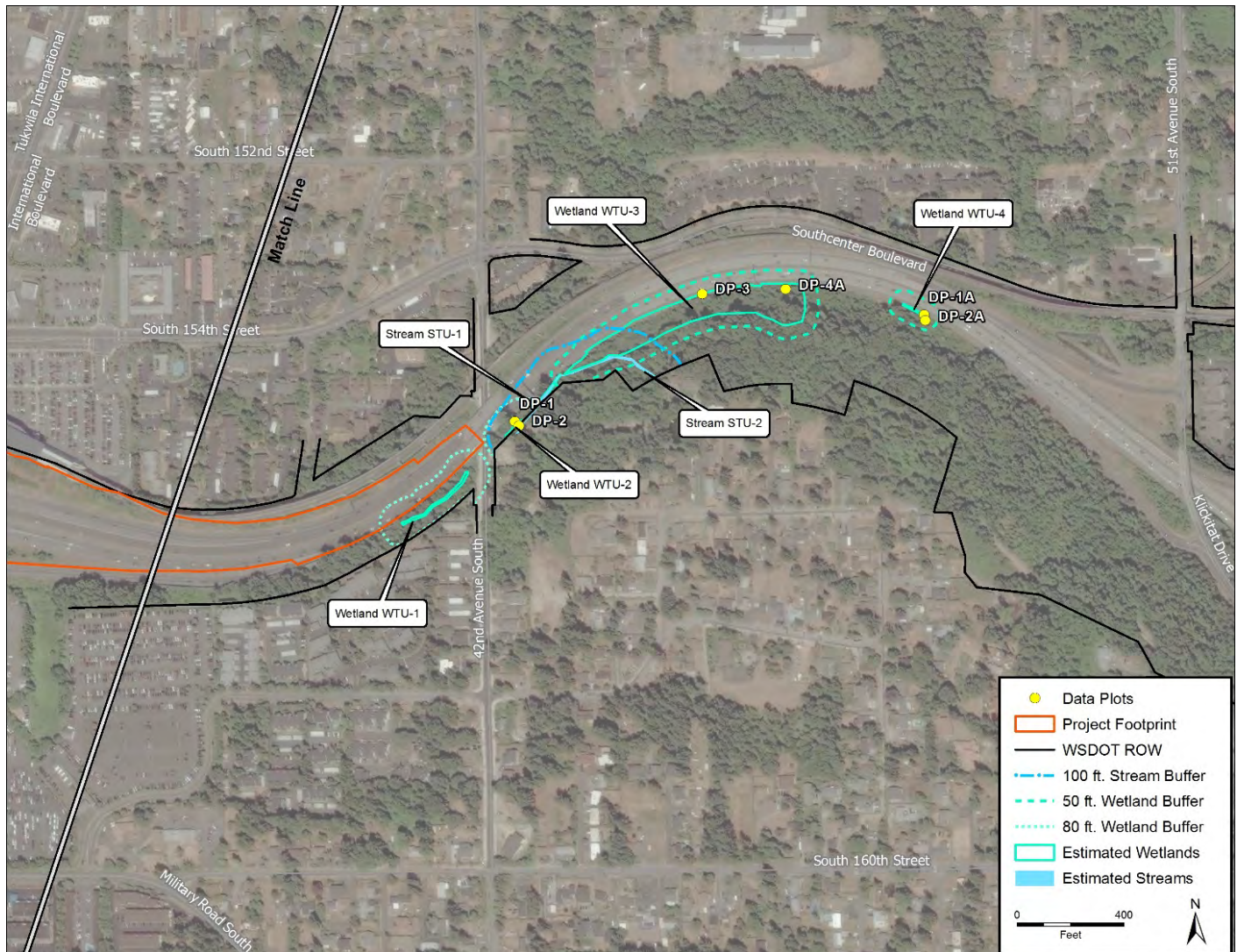
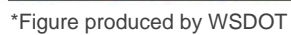


Figure A-11 Wetlands and streams within the east end of the Tukwila International Boulevard BRT Station and Roadway Improvements study area



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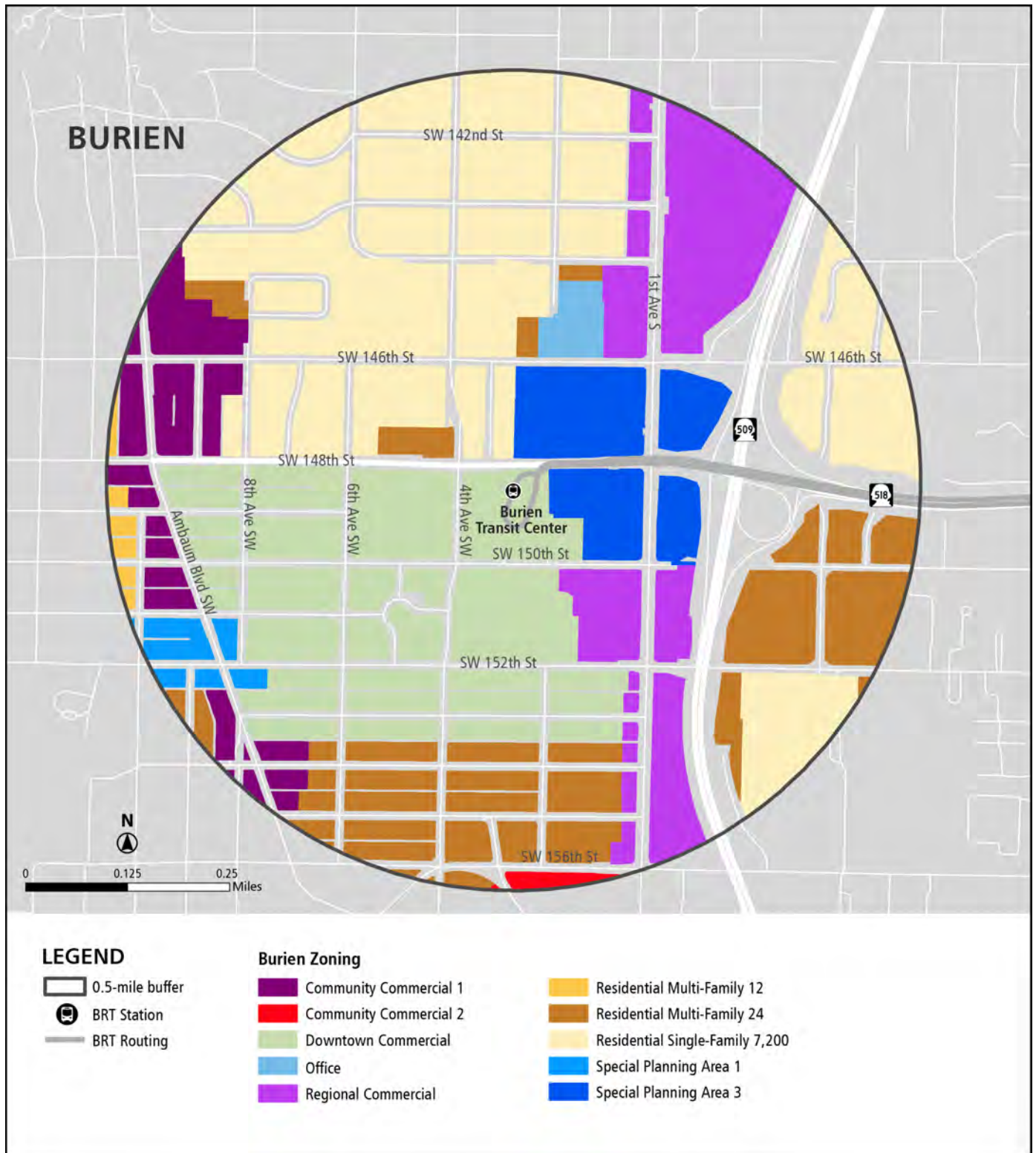


Figure A-13 Burien Transit Center and Roadway Improvements zoning map

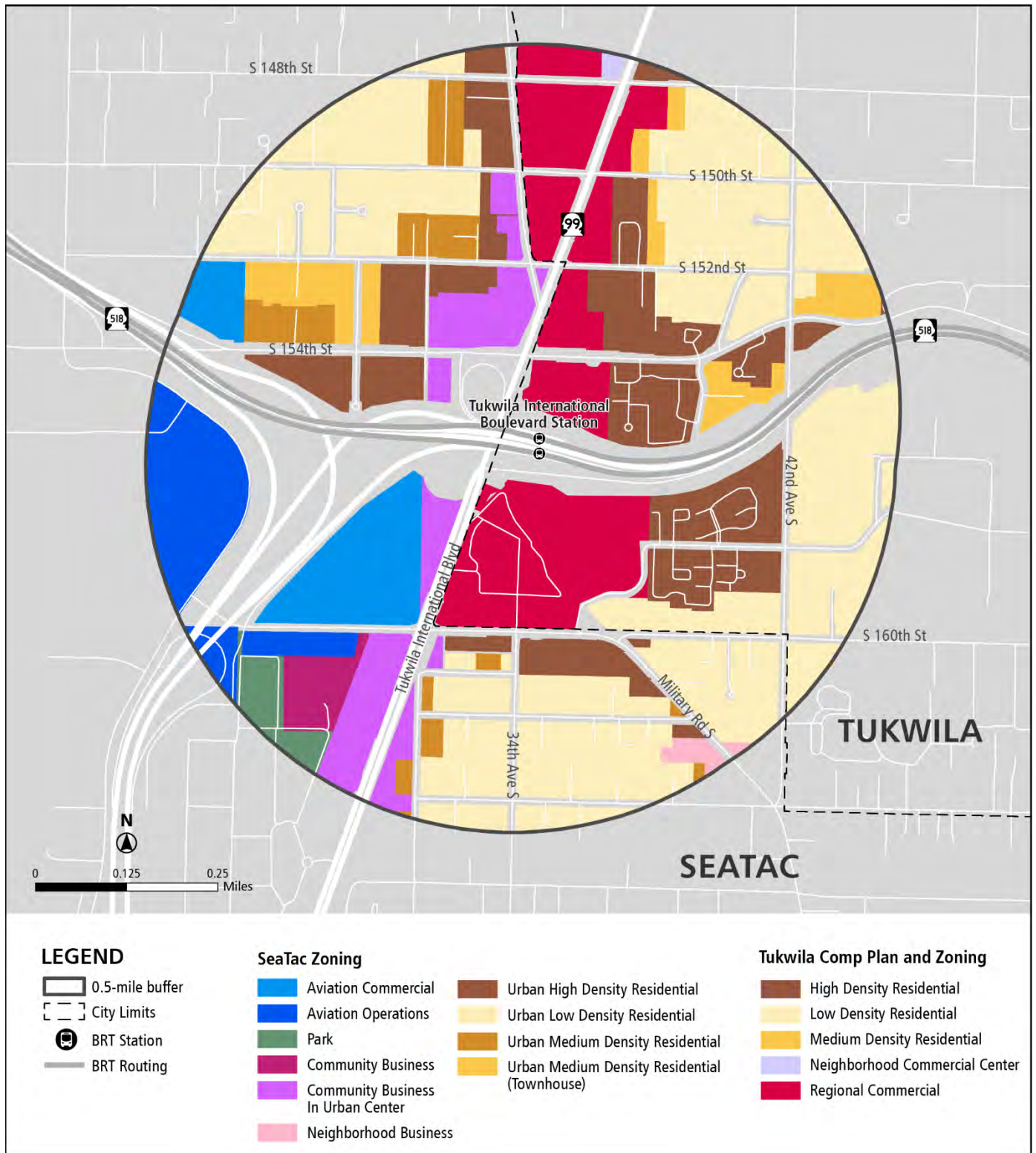


Figure A-14 Tukwila International Boulevard BRT Station and Roadway Improvements zoning map

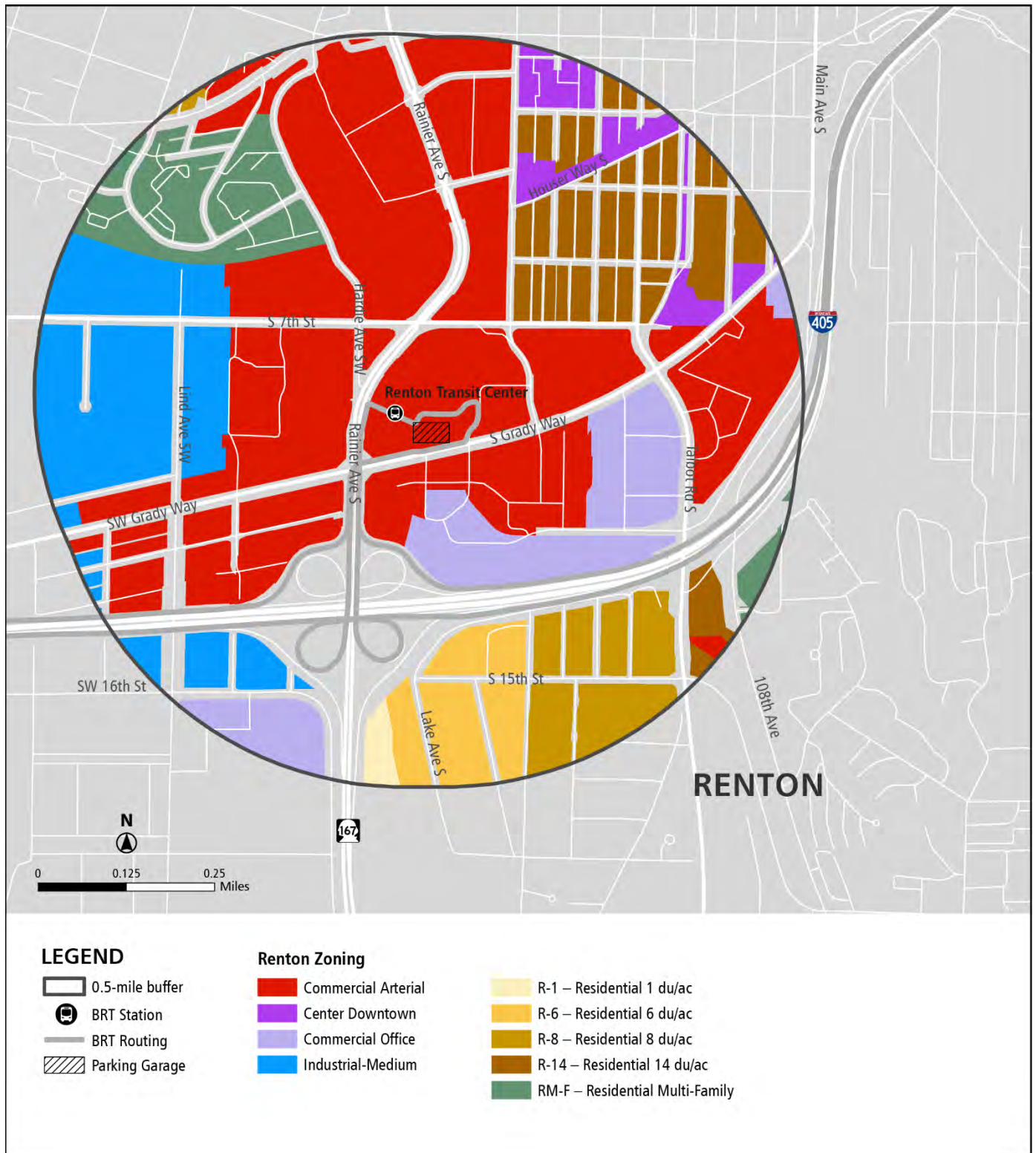


Figure A-15 South Renton Transit Center and Roadway Improvements zoning map

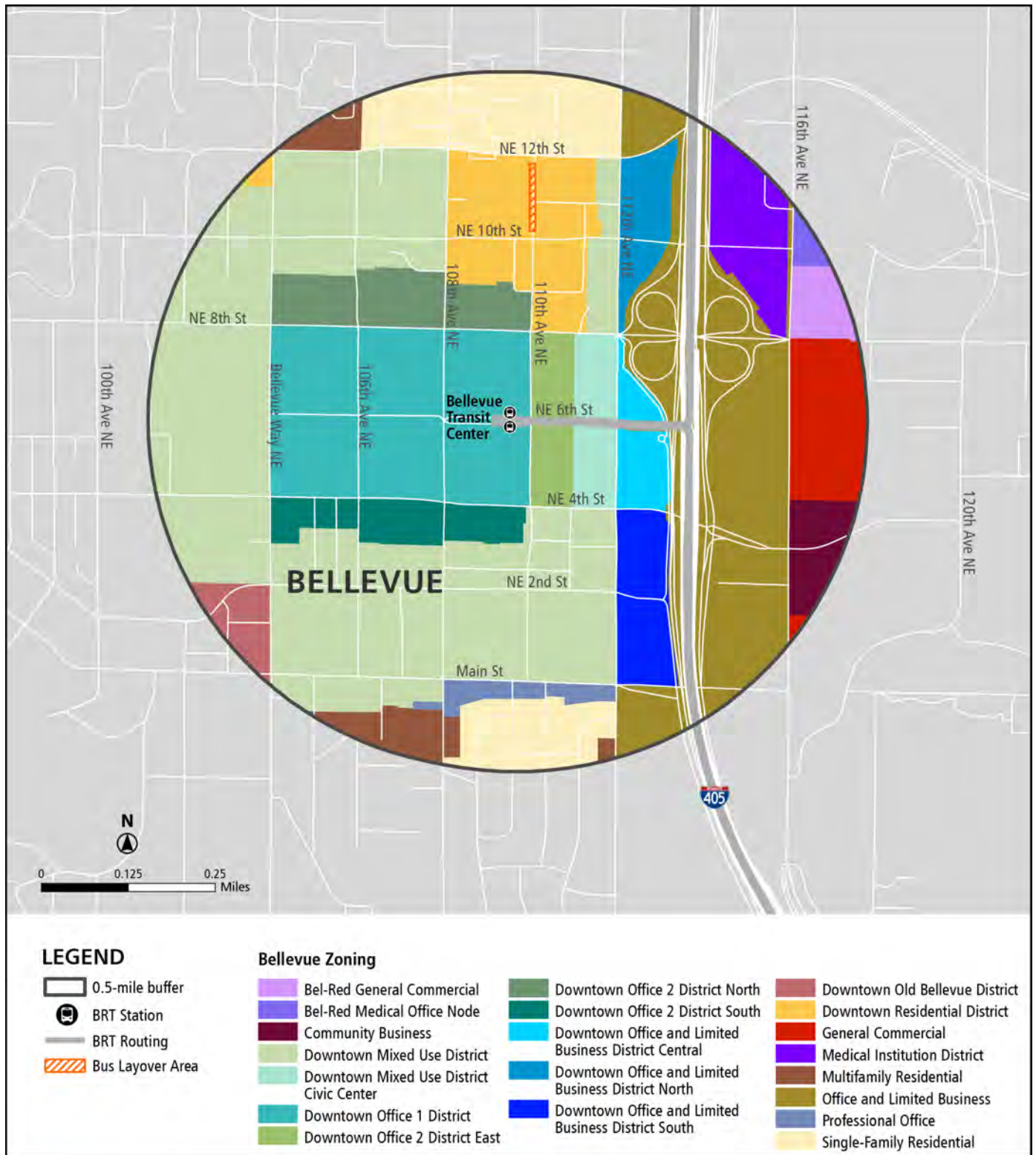


Figure A-16 Bellevue Transit Center and Off-site Layover zoning map

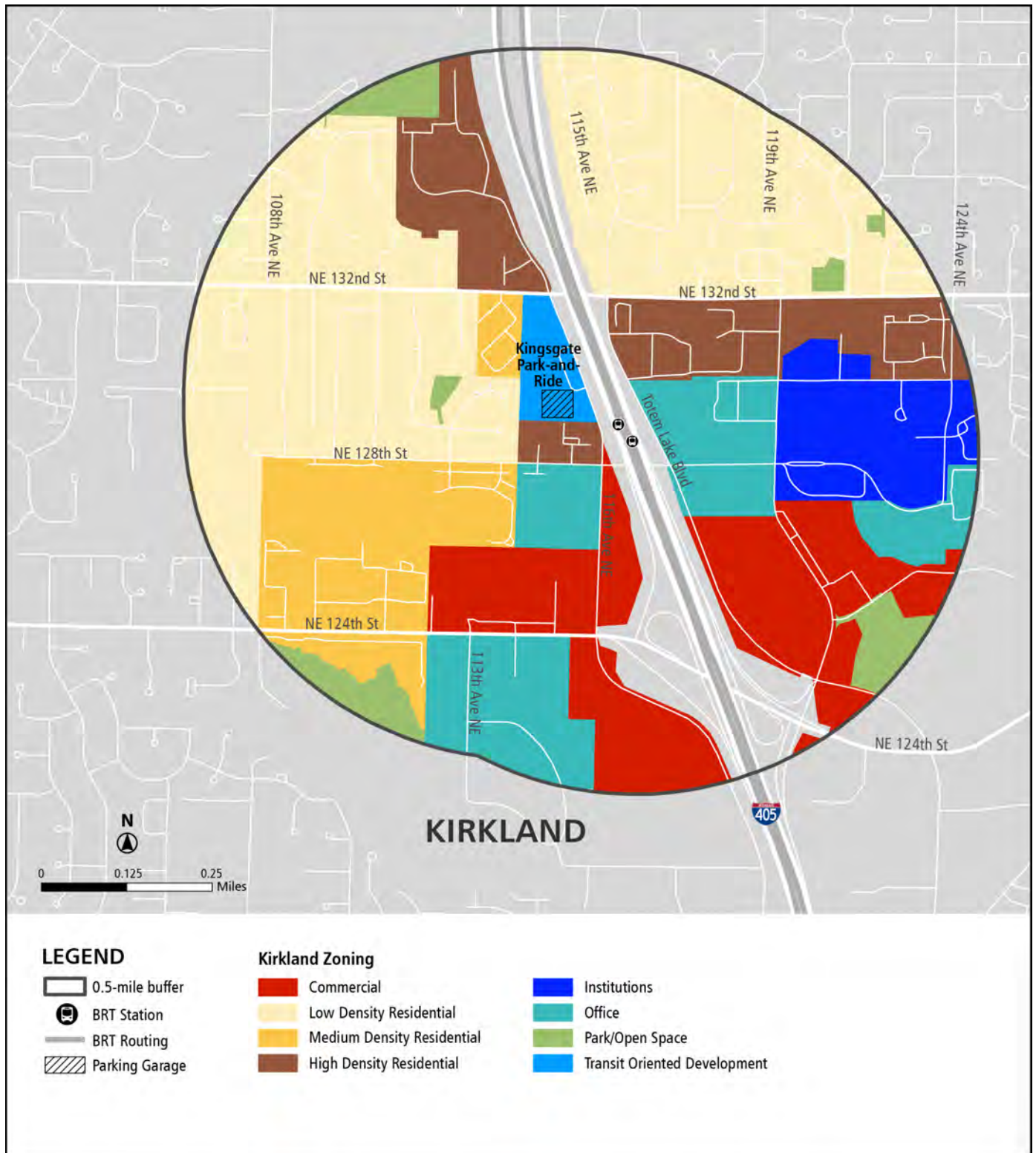


Figure A-17 Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage zoning map

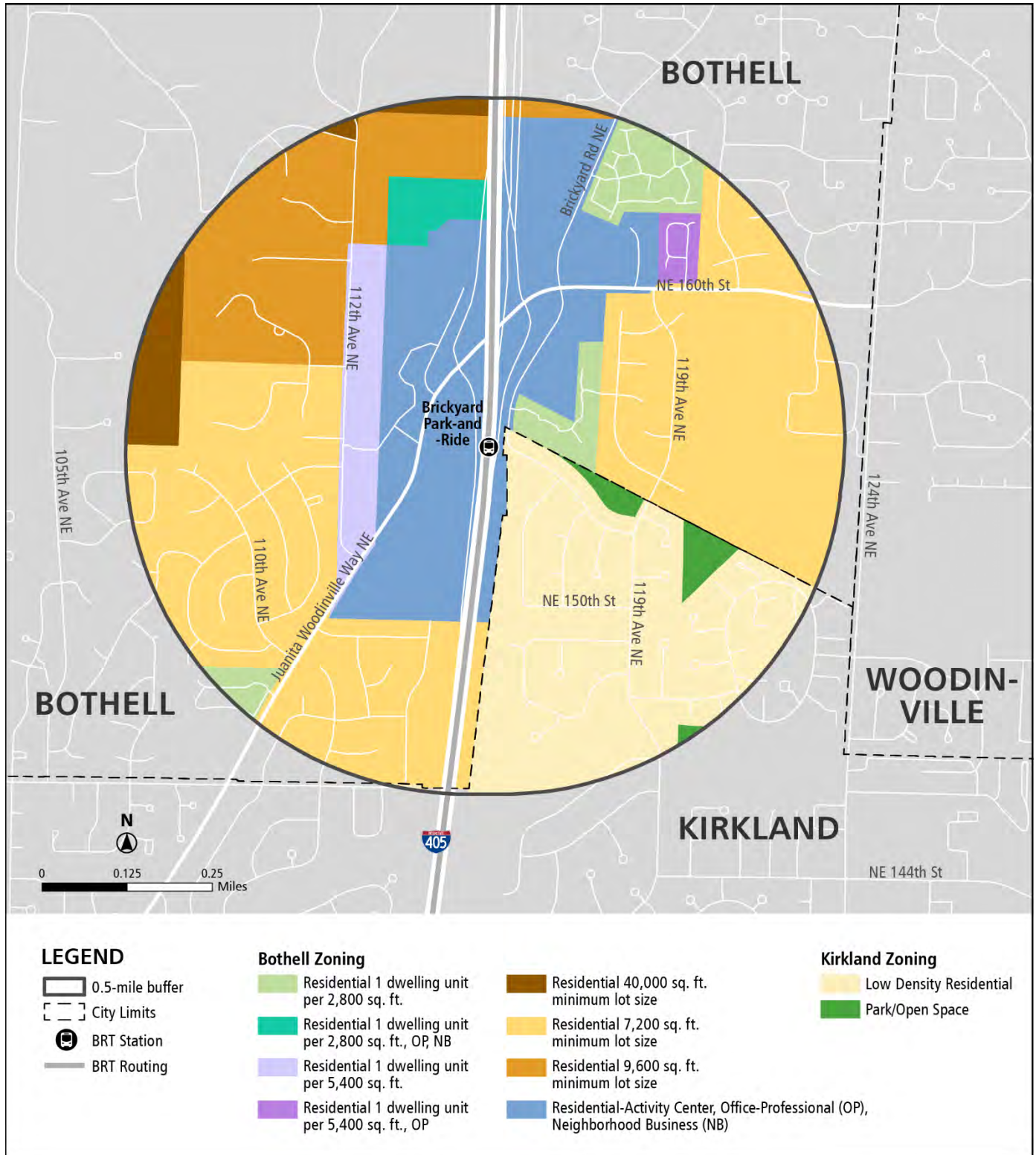


Figure A-18 Brickyard Station and Roadway Improvements zoning map

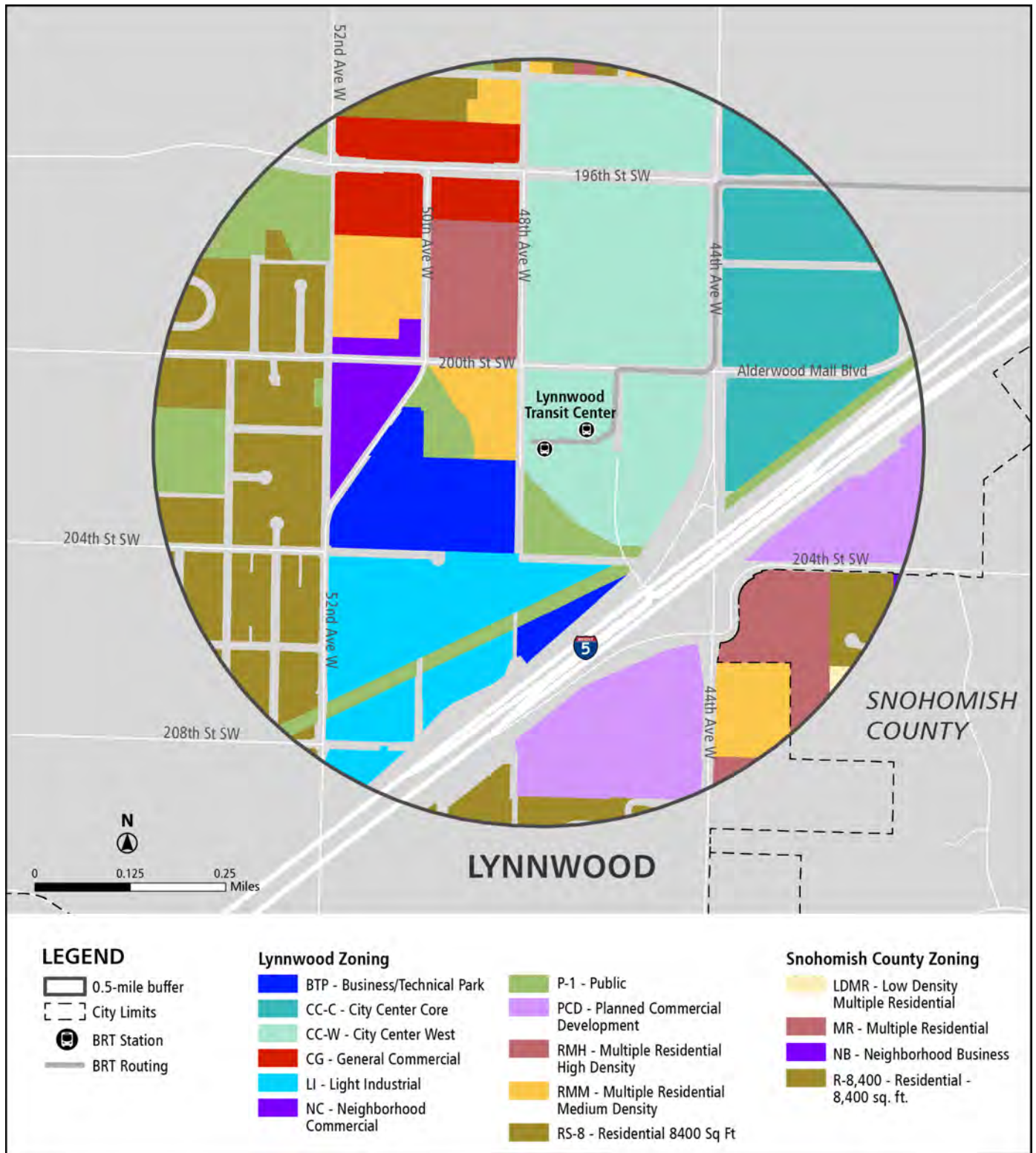


Figure A-19 Lynnwood City Center Transit Station BRT and Roadway Improvements zoning map



Figure A-20 Recreational facilities in the vicinity of Burien Transit Center and Roadway Improvements



Figure A-21 Recreational facilities in the vicinity of Tukwila International Boulevard BRT Station and Roadway Improvements



Figure A-22 Recreational facilities in the vicinity of Bellevue Transit Center and Off-site Layover



Figure A-23 Recreational facilities in the vicinity of Totem Lake/Kingsgate Station and Kingsgate Park-and-Ride Garage

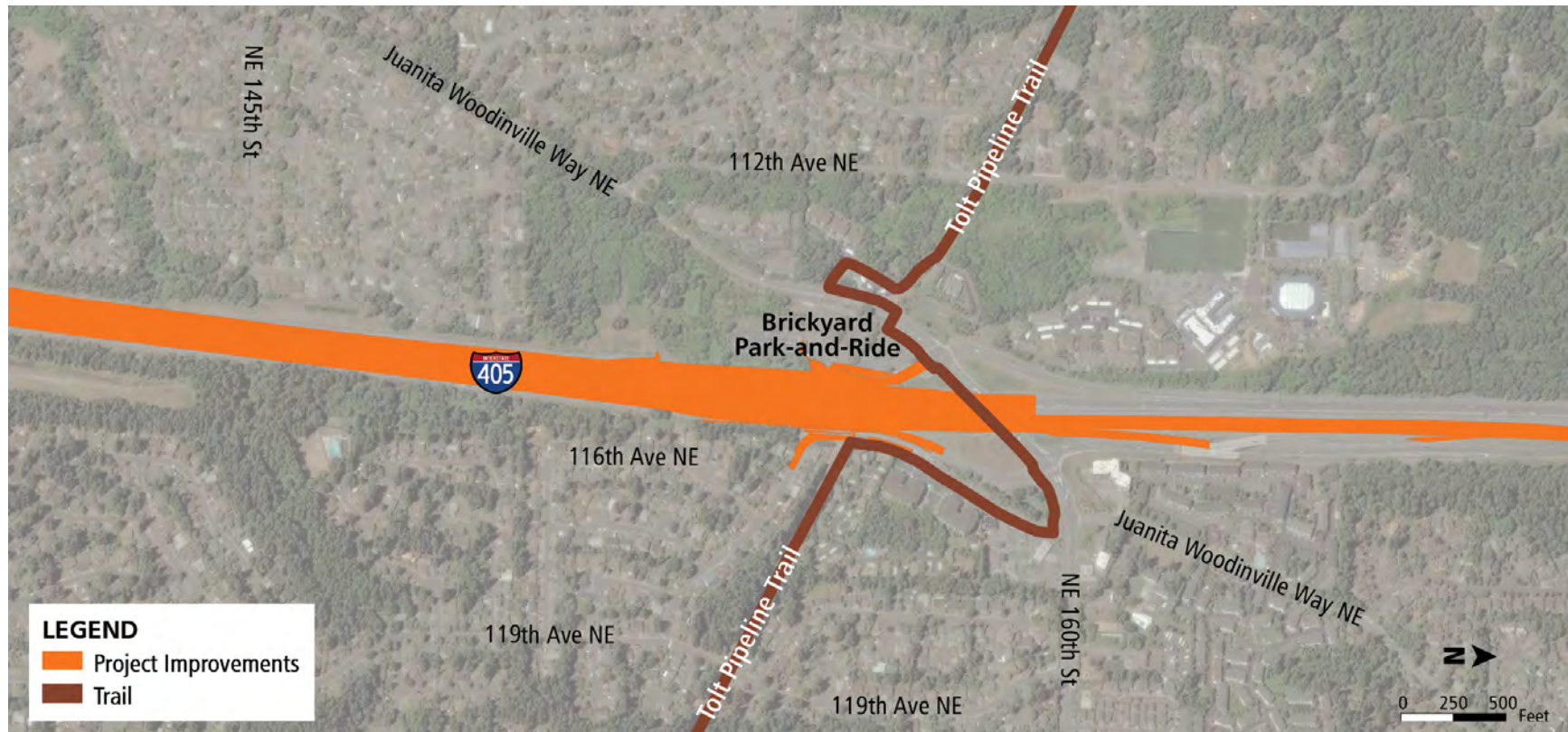


Figure A-24 Recreational facilities in the vicinity of Brickyard Station and Roadway Improvements



Figure A-25 Recreational facilities in the vicinity of Lynnwood City Center Transit Station BRT and Roadway Improvements

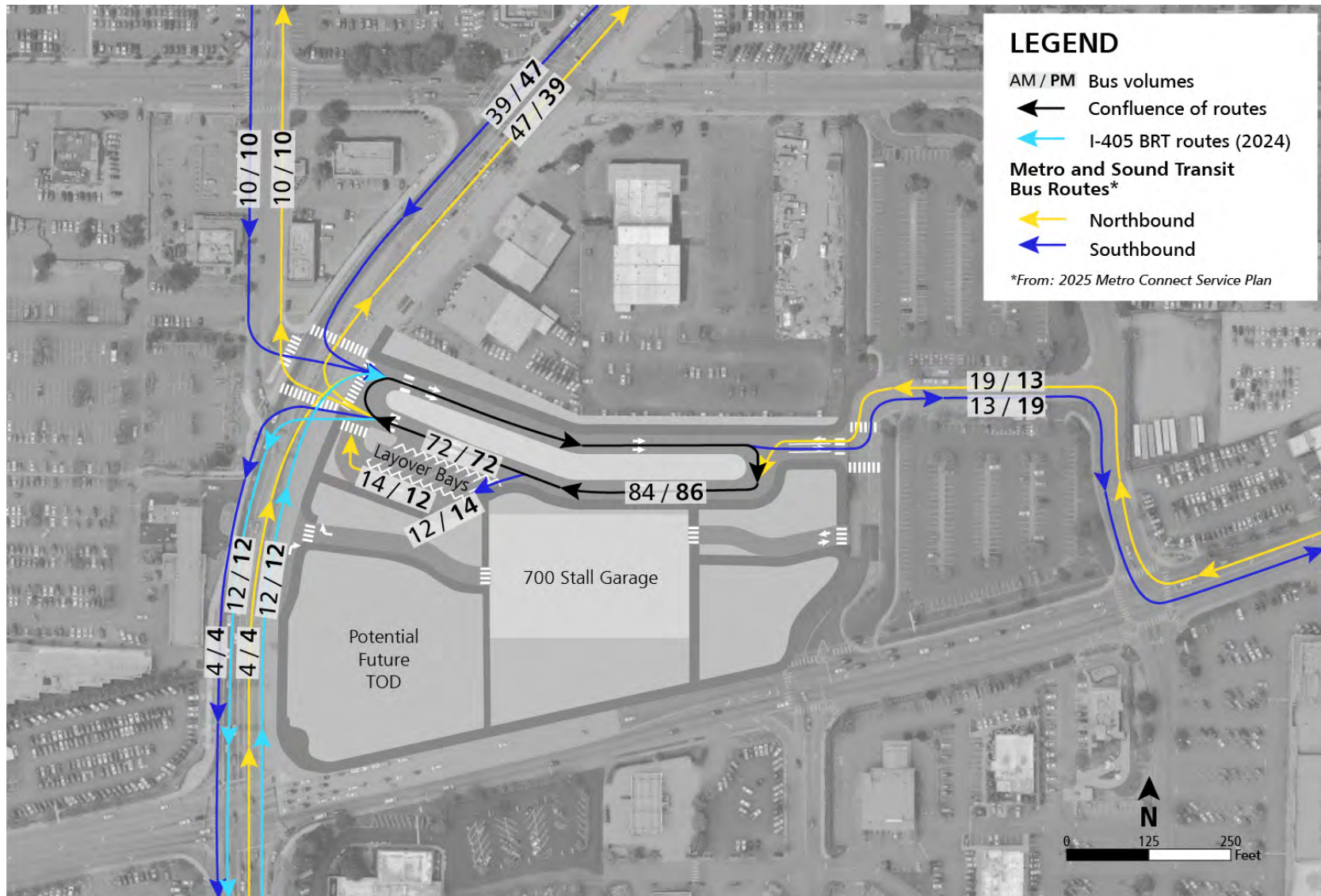


Figure A-26 Bus routing at South Renton Transit Center and Roadway Improvements



ATTACHMENT B

I-405 BRT Project Conceptual Engineering Plans – Excerpted Design Sheets



ATTACHMENT C

I-405 BRT Corridor Ecosystem Resources and Wetland Delineation Technical Memorandum



ATTACHMENT D

I-405 BRT Corridor Hazardous Materials Technical Memorandum



ATTACHMENT E

I-405 BRT Corridor Noise and Vibration Technical Memorandum



ATTACHMENT F

I-405 BRT Corridor Visual and Aesthetic Resources Technical Memorandum



ATTACHMENT G

I-405 BRT Corridor Historic and Archaeological Resources Technical Memorandum



I-405 Bus Rapid Transit

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ATTACHMENT H

I-405 BRT Corridor Transportation Technical Report

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