March 2019

Tacoma Dome Link Extension

Level 2 Alternatives Evaluation Report

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Tacoma Dome Link Extension

Level 2 Alternatives Evaluation Report

Prepared for:
Sound Transit

Prepared by:
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March 29, 2018

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Contents

Exhibits

Acronyms and Abbreviations

ADA	Americans with Disabilities Act
BNSF	Burlington Northern Santa Fe
BPA	Bonneville Power Administration
EIS	Environmental Impact Statement
ELG	Elected Leadership Group
ESA	Endangered Species Act
FTA	Federal Transit Administration
FWLE	Federal Way Link Extension
HCT	high-capacity transit
I-5	Interstate 5
IAG	Interagency Group
LOS	level of service
mph	miles per hour
NEPA	National Environmental Policy Act
OMF South	Operations and Maintenance Facility South
PSRC	Puget Sound Regional Council
SEPA	State Environmental Policy Act
SF	South Federal Way
Sound Transit	Central Puget Sound Regional Transit Authority
SR 99	State Route 99
ST3 Plan	Sound Transit 3 Plan
TDLE	Tacoma Dome Link Extension
TOD	transit oriented development
WDFW	Washington Department of Fish and Wildlife

Executive Summary

Purpose of the Report

Central Puget Sound Regional Transit Authority (Sound Transit) and the Federal Transit Administration (FTA) are conducting an alternatives evaluation to start the public planning and environmental processes for the Tacoma Dome Link Extension (TDLE). The proposed project, included in the evaluation as the Representative Project, is part of the Sound Transit 3 (ST3) Plan approved by voters in 2016. The project starts where the Federal Way Link Extension (FWLE) ends at the Federal Way Transit Center in the city of Federal Way in south King County and continues to the Tacoma Dome area in the city of Tacoma in Pierce County, following along I-5 for most of the alignment. Exhibit E-1 shows where the TDLE is located. The TDLE is an element of the regional Metropolitan Transportation Plan (the Puget Sound Regional Council [PSRC] 2040 Transportation Plan), and Sound Transit's Long-Range Transit Plan.

As part of the ST3 Plan, two new light rail maintenance facilities, one in the north and one in the south service area, were identified to support the expansion of light rail. The operations and maintenance facility to serve overall regional system expansion, particularly for service in South King and Pierce counties, is called the Operations and Maintenance Facility South (OMF South) and is evaluated in a separate report.

The public planning and environmental processes began with development of the Pre-Screening and Level 1 Alternatives Evaluation, which sought to define a reasonable range of options that meet the project Purpose and Need, can be implemented at a reasonable cost, and would not result in unacceptable effects on the environment or community. In September 2018, the Level 1 evaluation and findings were reviewed by the Elected Leadership Group (ELG), the Interagency Group (IAG), the Stakeholder Group, and the public. The TDLE ELG then selected the alternatives from Level 1 to be advanced for further study in Level 2.

The Level 2 evaluation further developed the alternatives that were advanced and then applied more rigorous criteria and analysis to the remaining, smaller set of alternatives. This evaluation compares each alternative's strengths and weaknesses relative to the other Level 2 alternatives within the same station area. The technical analysis of this Level 2 screening, along with the results of the scoping process, will be presented to the Sound Transit Board and ELG for identification of a preferred alternative as well as other alternatives that should be advanced for more detailed analysis in the Draft Environmental Impact Statement (Draft EIS).

This report is organized into seven primary chapters:

- Chapter 1—Introduction
- Chapter 2—Pre-Screening and Level 1 Alternatives Evaluation

- Chapter 3—Level 2 Evaluation Criteria
- Chapter 4—Level 2 Alternatives
- Chapter 5—Level 2 Analysis
- Chapter 6—Level 2 Summary

Draft Purpose and Need

The purpose of the Tacoma Dome Link Extension is to expand the Link light rail system from the Federal Way Transit Center to the Tacoma Dome Station area in order to:

- Provide high-quality rapid, reliable, accessible, and efficient light rail transit service connecting to communities in the project corridor, as defined through the local planning process and reflected in the ST3 Plan (Sound Transit 2016).
- Improve regional mobility by increasing connectivity and capacity in the TDLE corridor from the Federal Way Transit Center to the Tacoma Dome Station area to meet projected transit demand.
- Connect communities of Federal Way, Milton, Fife, Tacoma, and the Puyallup Tribe of Indians to regional centers and destinations on the regional high-capacity transit (HCT) system as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a).
- Implement a system that is technically and financially feasible to build, operate, and maintain.
- Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.
- Encourage equitable and sustainable urban growth in station areas through support of transit oriented development and multimodal integration in a manner that is consistent with local land use plans and policies, including Sound Transit's Transit Oriented Development and Sustainability policies.
- Encourage convenient and safe nonmotorized access to stations such as bicycle and pedestrian connections consistent with Sound Transit's System Access Policy.
- Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments.

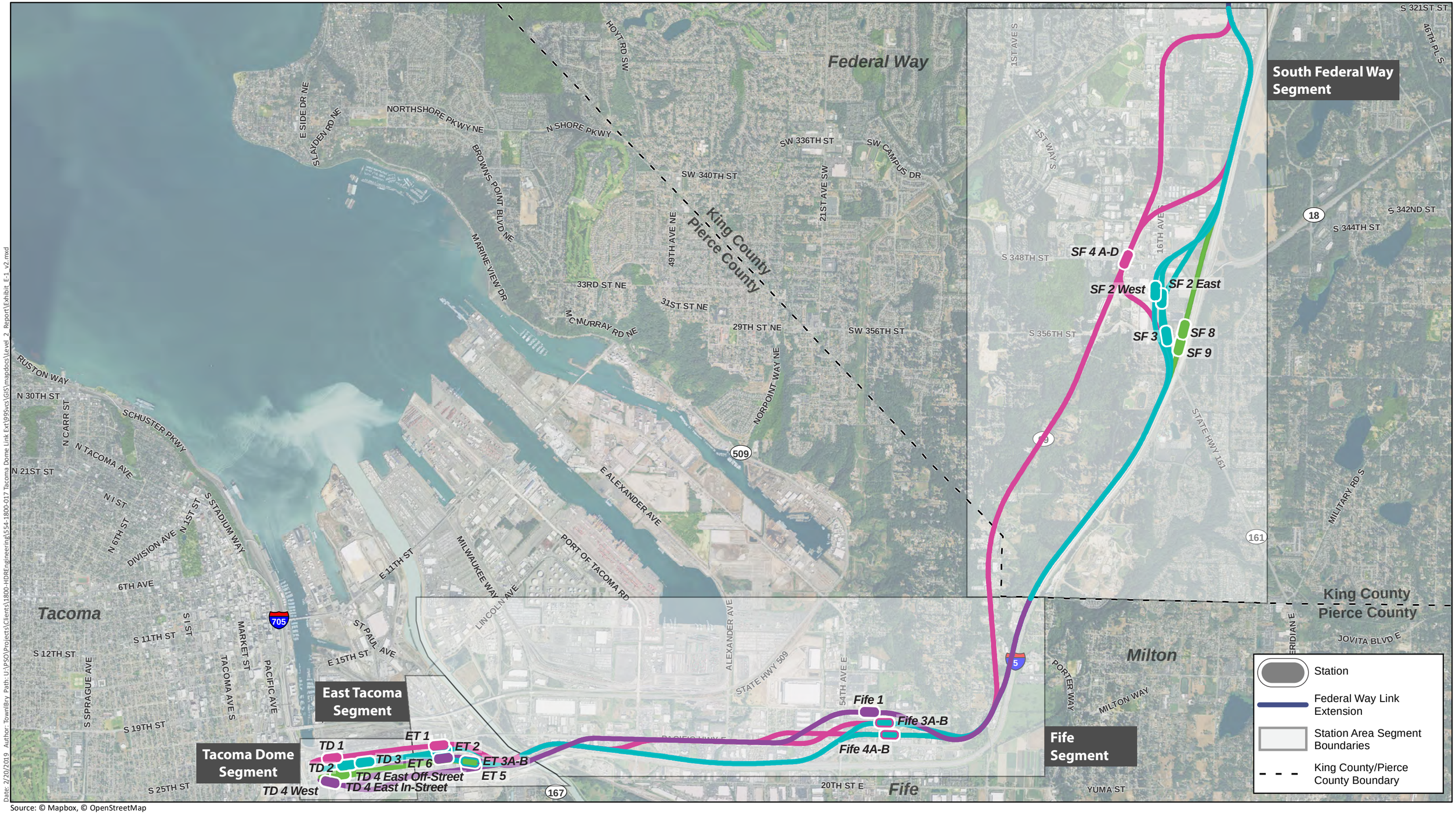

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EXHIBIT E-1
LEVEL 2 ALTERNATIVES
ALL STATION AREAS

TACOMA DOME LINK EXTENSION

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The project is needed because:

- Chronic roadway congestion on Interstate 5 (I-5) and State Route 99 (SR 99)—two primary highways connecting communities along the corridor—delays today's travelers, including those using transit, and degrades the reliability of bus service traversing the corridor, particularly during commute periods.
- These chronic, degraded conditions are expected to continue and worsen as the region's population and employment grows.
- Puget Sound Regional Council (PSRC), the regional metropolitan planning organization, and local plans call for HCT in the corridor consistent with VISION 2040 (PSRC 2009) and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a).
- South King and Pierce counties citizens and communities, including transit-dependent residents and low-income or minority populations, need long-term regional mobility and multimodal connectivity as called for in the Washington State Growth Management Act.
- Regional and local plans call for increased residential and/or employment density at and around HCT stations, and increased options for multimodal access.
- Environmental and sustainability goals of the state and region, as established in Washington state law and embodied in PSRC's VISION 2040 and 2018 Regional Transportation Plan, include reducing greenhouse gas emissions by decreasing vehicle miles traveled.

Overview of the Alternatives Analysis Process

The purpose of the alternatives analysis process is to evaluate the alternatives according to the designated criteria and provide the evaluation to tribes, agencies, advisory groups, and the public. To refine the alternatives, input from these groups was considered throughout the process. In collaboration with FTA, the Sound Transit Board will consider the analysis and input received during the alternative analysis process to identify the range of alternatives to study in the EIS. The Sound Transit Board may identify a preferred alternative in the Draft EIS.

Because the project will seek federal funding, FTA's general guidance for conducting alternatives analysis was incorporated into the study process. This process included initiating the study, developing and refining alternatives and methodologies, analyzing and evaluating alternatives, and (in the future) identifying a preferred alternative, as shown on Exhibit E-2.

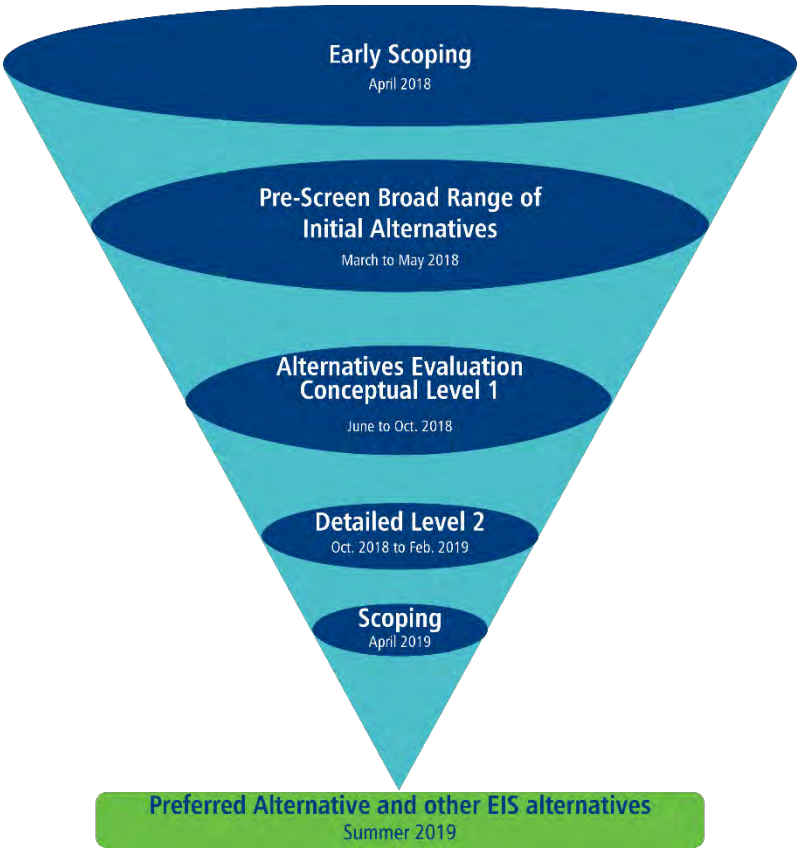

EXHIBIT E-2
Alternatives Evaluation Process

Information from the regional and local plans and projects, as well as previous work from the ST3 Plan, was reviewed as part of initiating the TDLE project, and a draft Purpose and Need of the project was developed. The draft Purpose and Need established the objectives that were used to develop the evaluation criteria and measures for the Level 1 analysis.

The next step, which was pre-screening alternatives to identify those that do not meet the Purpose and Need, helped to refine the alternatives that were analyzed in the Level 1 screening. The initial pre-screening process involved two steps: 1) considering if the alternatives being studied satisfy the Purpose and Need statement, and 2) evaluating the alternatives for consistency with the ST3 Plan, which is the basis for the proposed project.

The initial alignments and station concepts were then developed into potential alternatives for the Level 1 evaluation process. The Level 1 evaluation assessed the performance of the alternatives using evaluation measures based on the Purpose and Need. At this early stage in the process, the Level 1 analysis applied both qualitative and quantitative criteria to evaluate the alternatives based on early conceptual design. The representative project from ST3 was included in the Level 1 alternatives.

After the Level 1 evaluation and findings were reviewed by the ELG, IAG, Stakeholder Group, FTA, and the public, the ELG selected the Level 1 alternatives that were refined and advanced into the Level 2 analysis. The draft Purpose and Need also established the objectives that were used to develop the evaluation criteria and measures for the Level 2 analysis. The Level 2 evaluation applied additional, more quantitative criteria compared to the Level 1 evaluation. The Level 2 analysis, along with the results of the scoping process, will be presented to the ELG and the Sound Transit Board to help them identify a preferred alternative to be evaluated in the EIS.

Summary of Early Scoping Process

A 30-day early scoping period was completed between April 2 and May 3, 2018 to collect input on potential alternatives to be studied as part of the TDLE. The early scoping period included three public open houses (in Federal Way, Fife, and Tacoma). The public open houses provided several interactive opportunities for attendees to provide input and draw alignment and station location suggestions on a large map of the project corridor. An online open house also provided opportunities to learn about the project and provide comments. During the early scoping process, people could provide comments via an online open house survey, email, mail, or community open houses.

In addition to the public meetings, an early scoping meeting was also held in Tacoma on the afternoon of April 17, 2018, for tribes, agencies, and jurisdictions. Jurisdictional participants could learn about the project, ask questions, and provide informal comments on interactive roll plot maps of the corridor in advance of providing their formal early scoping comment letters.

Early scoping comments were received from one tribal government, 11 agencies, and over 550 written comments from members of the public. Common project-wide themes included:

- Support for the light rail system
- Concern about taxes and project costs
- Provide adequate parking at stations
- Evaluate economic tradeoffs: increased access to local and regional job opportunities and potential impacts to businesses along the route
- Interest in transit oriented development (TOD)

The Early Scoping Summary Report contains further information about the comments received during early scoping (Sound Transit 2018).

Summary of Pre-Screening Process

The initial pre-screening process involved two steps: 1) considering if the alternatives being studied satisfy the Purpose and Need statement, and 2) evaluating the alternatives for

consistency with the project scope defined in the ST3 Plan, which is the basis for the proposed project.

The process to develop concepts began with reviewing previous work done in regional planning studies, including Sound Move—The Ten-Year Regional Transit System Plan (Sound Transit 1996), the Regional Transit Long-Range Plan (Sound Transit 2005), Sound Transit 2: A Mass Transit Guide—The Regional Transit System Plan for Central Puget Sound (Sound Transit 2008), Sound Transit 3: The Regional Transit System Plan for Central Puget Sound (Sound Transit 2016), and the Federal Way to Tacoma HCT Corridor Study (Sound Transit 2014b). Local planning studies were also reviewed. The existing transit network and plans for the Federal Way Transit Extension were also considered. In addition to the concepts developed from past studies, comments received during the early scoping period were used to identify potential alternatives.

Based on previous studies and public involvement completed for the adoption of the Long-Range Plan and the EIS, and on the results of the Federal Way to Tacoma HCT Corridor Study and related ST3 planning and outreach, the Sound Transit Board adopted light rail transit as the mode to serve the South Corridor connecting Seattle to Tacoma. Therefore, only regional light rail transit alternatives are being considered for TDLE.

Alternatives considered during pre-screening included different alignment and station concepts. The alignment refers to the horizontal location on the ground within a corridor and the vertical elevation of the aerial guideway. The initial range of alternatives is generally located within the SR 99 or I-5 corridors as shown in Exhibit E-1. The pre-screening of alternatives was undertaken to identify and screen out alignment and station concepts that did not warrant further consideration in the Level 1 evaluation.

A few alignment concepts outside of the SR 99 and I-5 corridors were considered in the pre-screening, such as an alignment along the Interurban Trail corridor, and extending Tacoma Link west of the Tacoma Dome to East Tacoma. These concepts were not brought forward into the Level 1 evaluation because of inconsistency with the Purpose and Need statement, inconsistency with the ST3 Plan, circuitous routing that would add travel time to the HCT service, and environmental constraints. The SR 99 and I-5 corridors are the only practicable options to meet the project Purpose and Need to extend the HCT system between the Federal Way City Center and the Tacoma Dome station area, providing direct connections with Sounder commuter rail, Tacoma Link light rail, Greyhound, and Amtrak passenger rail (future), as well as the Sound Transit Express, Pierce Transit, and King County Metro bus transit systems.

There were station concepts in each of the station areas that were not brought forward into the Level 1 evaluation because of inconsistency with the Purpose and Need, and/or the proposed

station location was outside of the study area. For more detailed information on pre-screening, see the TDLE Pre-Screening and Level 1 Alternatives Evaluation Report.

Summary of Level 1 Alternatives Evaluation Process

The Level 1 evaluation included an analysis of the Level 1 alternatives advanced beyond pre-screening. The Level 1 alternatives were evaluated based on evaluation criteria that were developed based on the draft Purpose and Need for the TDLE project. The Level 1 evaluation criteria are summarized in Exhibit E-3.

EXHIBIT E-3
Level 1 Evaluation Criteria

Evaluation Criteria	Measures
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs Purpose and Need: • Provide high-quality rapid, reliable, and efficient light rail transit service to communities in the project corridor, as defined through the local planning process and reflected in the ST3 Plan (Sound Transit 2016). • Improve regional mobility by increasing connectivity and capacity in the TDLE corridor from the Federal Way Transit Center to the Tacoma Dome Station area to meet projected transit demand. • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.	
Ridership Potential	L1.1: Travel time L1.2: Total population and employment (2035) within 1/2 mile of stations L1.3: Proximity to existing/future population and employment centers/activity centers and major destinations within 1/2 mile of stations
Objective: Support Sustainable Land Use Plans, Economic Development, and Transit Oriented Development Purpose and Need: • Connect communities of Federal Way, Milton, Fife, Tacoma, and the Puyallup Tribe of Indians to regional centers and destinations on the regional high-capacity transit (HCT) system as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a). • Encourage equitable and sustainable urban growth in station areas through support of transit oriented development (TOD) and multimodal integration in a manner that is consistent with local land use plans and policies, including Sound Transit's Transit Oriented Development and Sustainability policies. • Encourage convenient and safe nonmotorized access to stations such as bicycle and pedestrian connections consistent with Sound Transit's System Access Policy.	
Supports future TOD opportunities	L1.4: Consistency with local and tribal economic development goals, planned development, current and anticipated zoning, and/or comprehensive plans L1.5: Barriers that limit the development potential, walkshed, and range and safety of bicycling around the station such as topography, wide roads, highways, bodies of water, and railways L1.6: Presence of amenities to catalyze complete neighborhoods, such as shops, services, schools, recreational facilities, civic or character amenities, or views/access to nature
Promotes multimodal access and connections	L1.7: Qualitative assessment of bicycle and pedestrian accessibility and potential for improvement L1.8: Qualitative assessment of transit connections and potential for improvement within station areas
Objective: Preserve the Environment Purpose and Need: • Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments.	
Effects on the natural environment	L1.9: Proximity to major wetlands, streams, floodplains, steep slopes, Endangered Species Act (ESA) species, fisheries, or other natural habitat areas within 100 feet of an alternative (in acres of resources)

EXHIBIT E-3
Level 1 Evaluation Criteria

Evaluation Criteria	Measures
Effects on the built environment	L1.10: Estimated levels of property impacts (residential, commercial, other) and number of large tax-generating properties affected L1.11: Estimated number of tribal parcels affected L1.12: Presence of known Section 4(f), park, historic, culturally-significant tribal properties, or other protected areas L1.13: Presence of a viewshed or proximity to view-dependent businesses L1.14: Potential for impacts from vibration and noise L1.15: Potential for affecting areas with existing traffic congestion L1.16: Potential for affecting parking supply and demand and spillover parking effects L1.17: Potential avoidance of hazardous waste
Objective: Support Equitable Mobility Purpose and Need: • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.	
Provide equitable transit service to low-income, minority, and transit-dependent populations	L1.18: Qualitative demographic differences among the option census data (households with no car, low-income, and minority populations) in station areas L1.19: Potential for impacts on low-income and minority populations
Objective: Provide a Financially Sustainable and Constructible Project Purpose and Need: • Implement a system that is technically and financially feasible to build, operate, and maintain.	
Financial considerations	L1.20: Major cost elements beyond the representative project description
Constructability and engineering considerations	L1.21: Potential risks (major utilities or structures) L1.22: Availability and potential to use publicly owned right-of-way L1.23: Capability to accommodate future expansion included in the Sound Transit Long-Range Plan
Operational considerations	L1.24 Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome, number of at-grade crossings, if any)
Schedule considerations	L1.25: Overall schedule risk

Alternatives Evaluated and Advanced in Level 1

A total of 51 station and alignment alternatives across the four station areas were evaluated in Level 1. The ELG recommended the alternatives to advance to Level 2 based on the Level 1 evaluation and input from tribes, agencies, advisory groups, and the public, which are summarized below. For more detail on the Level 1 evaluation, refer to the TDLE Pre-Screening and Level 1 Alternatives Evaluation Report (Sound Transit 2019).

South Federal Way

There were 17 alternatives in South Federal Way that could generally be categorized into four alignment families: Enchanted Parkway, SR 99, I-5 West/Representative, and I-5 Median/I-5 East.

EXHIBIT E-4
South Federal Way Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
Enchanted Parkway	SF 1 Enchanted/348th SF 2 Enchanted/352nd SF 3 Enchanted/356th	SF 2 Enchanted/352nd SF 3 Enchanted/356th
SR 99	SF 4A 99 North (SR 99 to I-5) SF 4B 99 North (SR 99) SF 4C 99 North (I-5 to SR 99) SF 4D 99 North (I-5 to SR 99 to I-5) SF 5A 99 South (SR 99) SF 5B 99 South (I-5 to SR 99)	SF 4A 99 North (SR 99 to I-5) SF 4B 99 North (SR 99) SF 4C 99 North (I-5 to SR 99) SF 4D 99 North (I-5 to SR 99 to I-5)
I-5 West/Representative	SF 6 I-5/344th SF 7 I-5/352nd (Representative) SF 8 I-5/356th SF 9 I-5/Jet SF 10 I-5/359th	SF 8 I-5/356th SF 9 I-5/Jet
I-5 Median/I-5 East	SF 11 I-5 Median SF 12 I-5 East/Enchanted SF 13 I-5 East/Wild Waves	None

Fife

There were 16 alternatives in Fife that could generally be categorized into five alignment families: I-5 West to 12th Street, Pacific Highway/15th Street, Pacific Highway East/South, I-5 West/Representative, and I-5 Median/I-5 South.

EXHIBIT E-5
Fife Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
I-5 West to 12th Street	Fife 1 12th Street	Fife 1 12th Street
Pacific Highway/15th Street	Fife 2A Pacific Highway West Fife 2B Pacific Highway West Fife 3A 15th Street Fife 3B 15th Street	Fife 3A 15th Street Fife 3B 15th Street
Pacific Highway East/South	Fife 4A Pacific Highway East Fife 4B Pacific Highway East Fife 4C Pacific Highway East Fife 5A Pacific Highway South Fife 5B Pacific Highway South Fife 5C Pacific Highway South	Fife 4A Pacific Highway East Fife 4B Pacific Highway East Fife 4C Pacific Highway East

EXHIBIT E-5
Fife Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
I-5 West/Representative	Fife 6 I-5 West Fife 7 I-5 West (Representative)	None
I-5 Median/I-5 South	Fife 8 I-5 Median Fife 9A 20th Street Fife 9B 20th Street	None

East Tacoma

There were 11 alternatives in East Tacoma that could generally be categorized into four alignment families: Puyallup Avenue, East 25th Street, East 26th Street/Representative, and East 26th/27th Street.

EXHIBIT E-6
East Tacoma Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
Puyallup Avenue	ET 1A Puyallup Avenue (I-5 West to Puyallup) ET 1B Puyallup Avenue (SR 99 to Puyallup)	ET 1A Puyallup Avenue (I-5 West to Puyallup)
East 25th Street	ET 2 25th Street	ET 2 25th Street
East 26th Street/Representative	ET 3 26th Street – East ET 4A 27th Street – North ET 4B 27th Street – North (Representative) ET 4C 27th Street – North ET 6 26th Street – West	ET 3 26th Street – East ET 4A 27th Street – North ET 4B 27th Street – North (Representative) ET 4C 27th Street – North ET 6 26th Street – West
East 26th/27th Street	ET 5 27th Street – South ET 7 29th Street ET 8 34th Street	ET 5 27th Street – South

Tacoma Dome

There were seven alternatives at the Tacoma Dome that could generally be categorized into four alignment families: Puyallup Avenue, East 25th Street, East 26th Street/Representative, and East 26th/27th Street.

EXHIBIT E-7
Tacoma Dome Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
Puyallup Avenue	TD 1 Puyallup Avenue	TD 1 Puyallup Avenue
East 25th Street	TD 2 25th Street – East TD 3 25th Street – West	TD 2 25th Street – East TD 3 25th Street – West

EXHIBIT E-7
Tacoma Dome Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
East 26th Street/Representative	TD 4A 26th Street TD 4B 26th Street (Representative)	TD 4A 26th Street TD 4B 26th Street (Representative)
East 26th/27th Street	TD 5A 27th Street TD 5B 27th Street	None

Level 2 Alternatives

A total of 27 station and alignment alternatives across the four station areas were evaluated in Level 2. Alternatives advanced from Level 1 were refined between the Level 1 and Level 2 evaluation processes. There were also some "hybrid" alternatives developed to capture the best performing parts of other alternatives or to reduce potential impacts from alternatives. In some instances, alternatives were renamed for clarity in the Level 2 evaluation. Also, there were several variations on Level 1 alternatives developed and included in the Level 2 evaluation.

South Federal Way

There are nine alternatives in South Federal Way that can generally be categorized into three alignment families: Enchanted Parkway, SR 99, and I-5 West, as shown on Exhibit E-8.

Enchanted Parkway

The Enchanted Parkway alternatives include SF 2 West Enchanted/352nd (variation of SF 2 in Level 1), SF 2 East Enchanted/352nd (SF 2 in Level 1), and SF 3 Enchanted/356th, as depicted on Exhibit E-8. For a detailed description of the Enchanted Parkway alternatives, see Section 4.1.1.

SR 99

The SR 99 alternatives include SF 4A 99 North (SR 99 to I-5), SF 4B 99 North (SR 99), SF 4C 99 North (I-5 to SR 99), SF 4D 99 North (I-5 to SR 99 to I-5), as depicted on Exhibit E-8. For a detailed description of the SR 99 alternatives, see Section 4.1.2.

I-5 West

The I-5 West alternatives include SF 8 I-5/356th and SF 9 I-5/Jet, as depicted on Exhibit E-8. For a detailed description of the I-5 West alternatives, see Section 4.1.3.

Fife

There are five alternatives in Fife that can generally be categorized into three alignment families: I-5 West to 12th Street, North of 15th Street, and South of 15th Street, as shown on Exhibit E-9.

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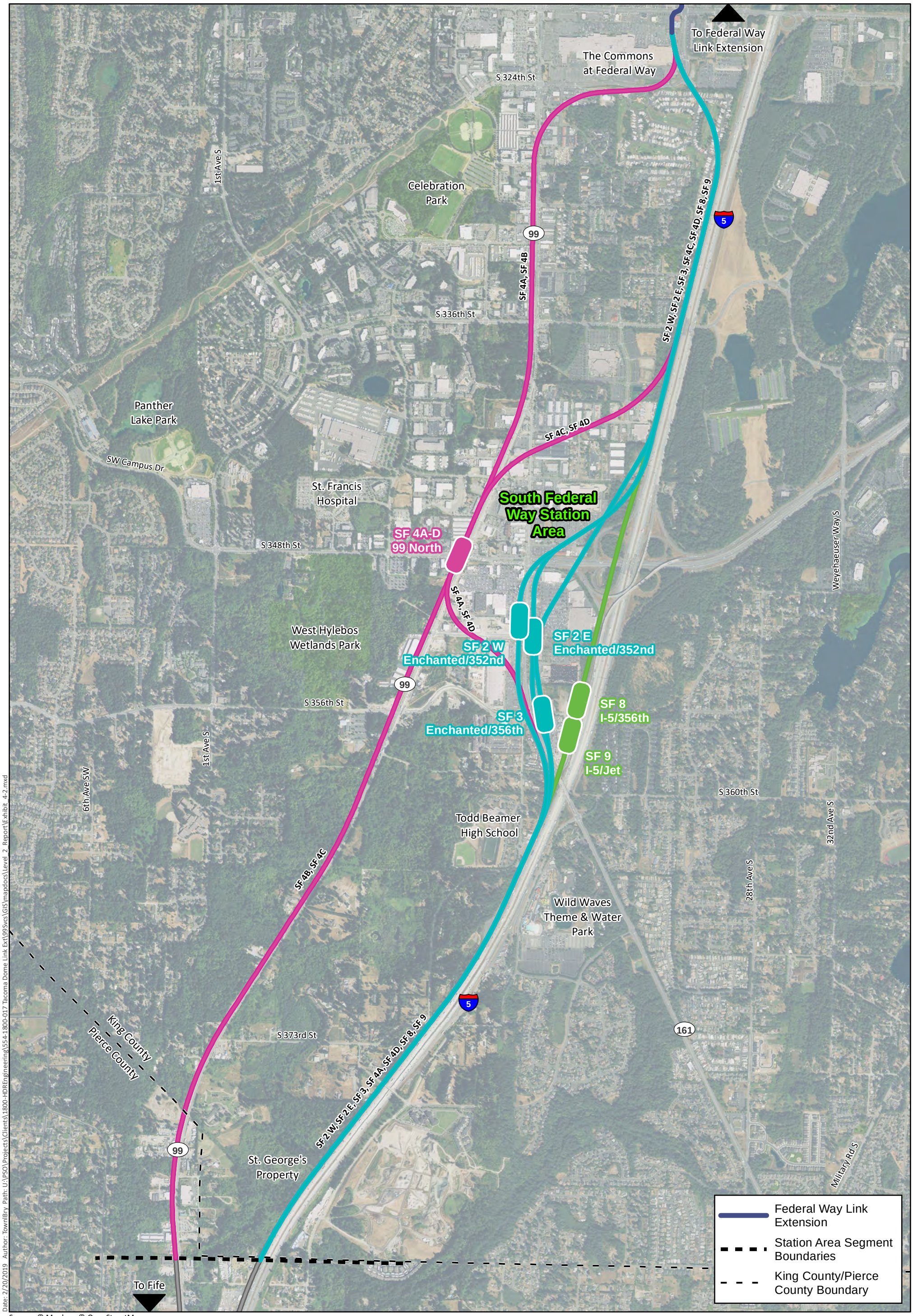

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South Federal Way Alternatives

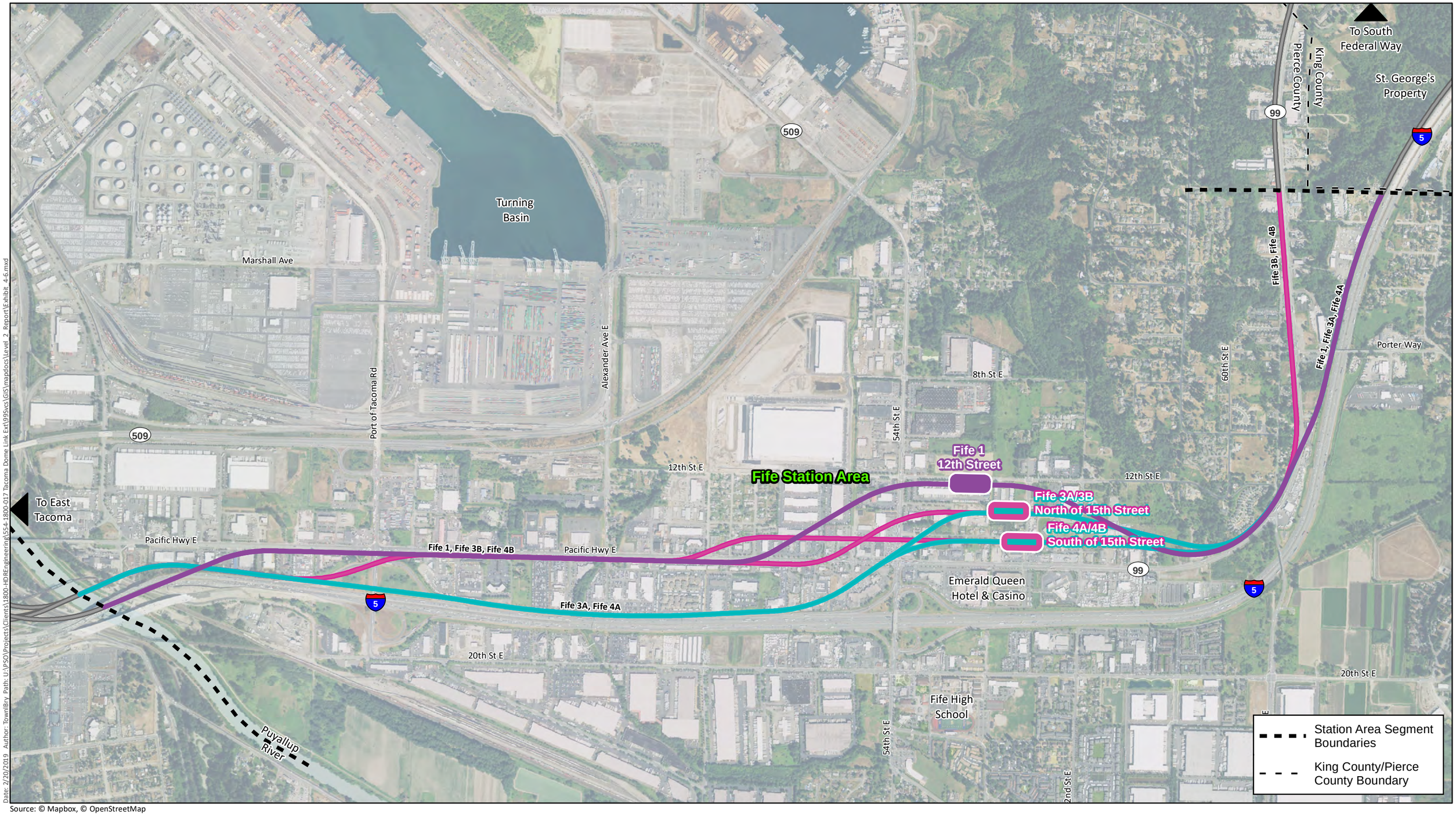
Enchanted Parkway Alignment Family
- SF 2 East: Enchanted/S 352nd Street
- SF 2 West: Enchanted/S 352nd Street
- SF 3: Enchanted/S 356th Street

SR 99 Alignment Family
- SF 4A: 99 North (SR 99 to I-5)
- SF 4B: 99 North (SR 99)
- SF 4C: 99 North (I-5 to SR 99)
- SF 4D: 99 North (I-5 to SR 99 to I-5)

I-5 West Alignment Family
- SF 8: I-5/S 356th Street
- SF 9: I-5/Jet

EXHIBIT E-8
LEVEL 2 ALTERNATIVES
SOUTH FEDERAL WAY

TACOMA DOME LINK EXTENSION



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Fife Alternatives

12th Street Alignment Family

- Fife 1: 12th Street E

North of 15th Street Alignment Family

- Fife 3A: North of 15th Street E
- Fife 3B: North of 15th Street E

South of 15th Street Alignment Family

- Fife 4A: South of 15th Street E
- Fife 4B: South of 15th Street E

EXHIBIT E-9
LEVEL 2 ALTERNATIVES
FIFE

TACOMA DOME LINK EXTENSION

12th Street

The 12th Street alternative includes Fife 1 12th Street, as depicted on Exhibit E-9. For a detailed description of the 12th Street alternative, see Section 4.2.1.

North of 15th Street

The North of 15th Street alternatives include Fife 3A 15th Street and Fife 3B 15th Street, as depicted on Exhibit E-9. For a detailed description of the North of 15th Street alternatives, see Section 4.2.2.

South of 15th Street

The South of 15th Street alternatives include Fife 4A South of 15th Street (I-5) and Fife 4B South of 15th Street (SR 99), as depicted on Exhibit E-9. For a detailed description of the South of 15th Street alternatives, see Section 4.2.3.

East Tacoma

There are six alternatives in East Tacoma that can generally be categorized into four alignment families: Puyallup Avenue, East 25th Street, East 26th Street, and East 27th Street, as shown on Exhibit E-10.

Puyallup Avenue

The Puyallup Avenue alternative includes ET 1 Puyallup Avenue (ET 1A in Level 1), as depicted on Exhibit E-10. For a detailed description of the Puyallup Avenue alternative, see Section 4.3.1.

East 25th Street

The East 25th Street alternative includes ET 2 E 25th Street, as depicted on Exhibit E-10. For a detailed description of the East 25th Street alternative, see Section 4.3.2.

East 26th Street

The East 26th Street alternatives include ET 3A E 26th Street to E 25th Street (variation of ET 3 in Level 1), ET 3B 26th Street East, and ET 6 26th Street West, as depicted on Exhibit E-10. For a detailed description of the East 26th Street alternatives, see Section 4.3.3.

East 27th Street

The East 27th Street alternative includes ET 5 E 27th Street, as depicted on Exhibit E-10. For a detailed description of the East 27th Street alternative, see Section 4.3.4.

Tacoma Dome

There are seven alternatives in Tacoma Dome that can generally be categorized into four alignment families: Puyallup Avenue, East 25th Street, East 26th Street, and East 26th Street to East 27th Street, as shown on Exhibit E-10.

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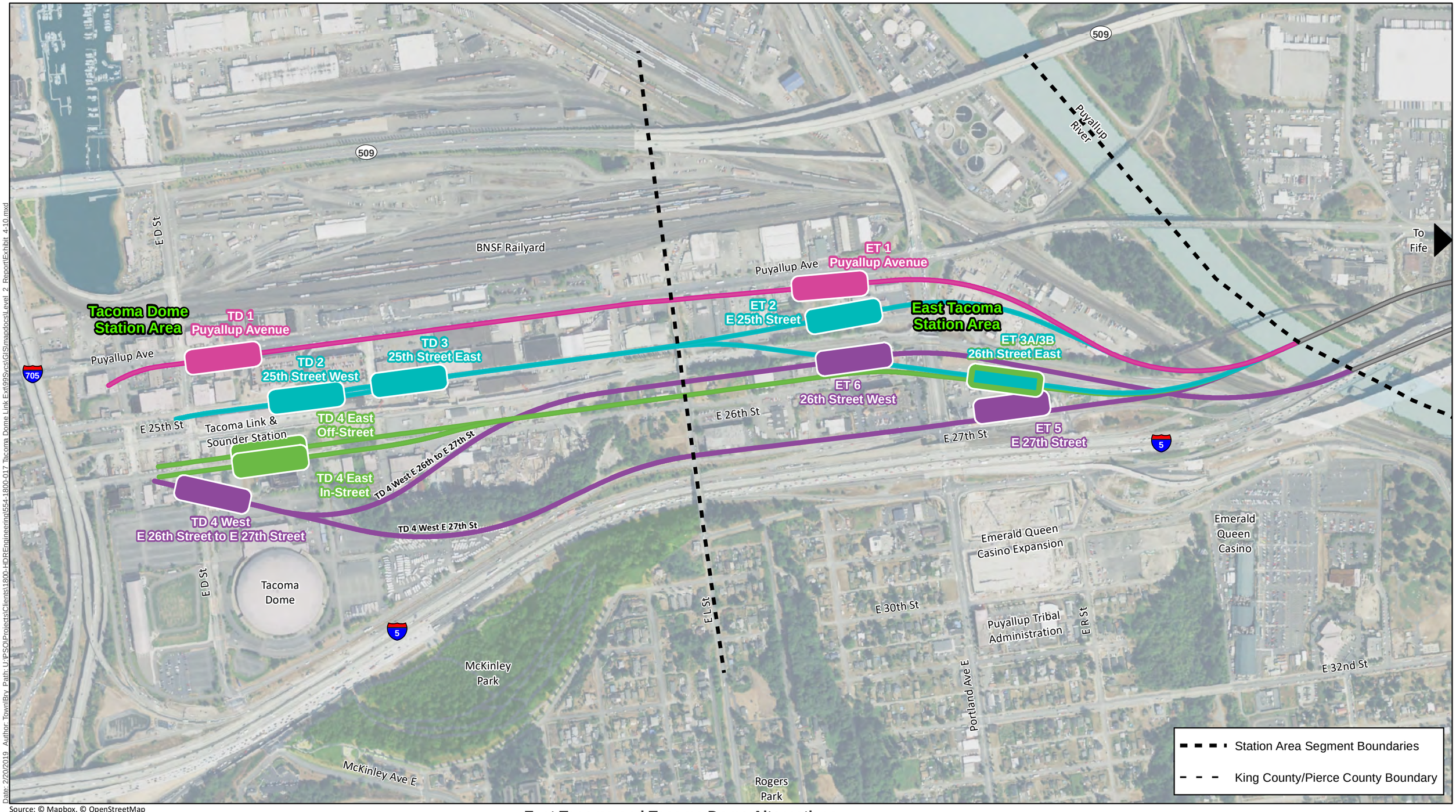

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Source: © Mapbox, © OpenStreetMap

0 250 500 1,000 Feet

East Tacoma and Tacoma Dome Alternatives

Puyallup Avenue Alignment Family
- ET1: Puyallup Ave
- TD1: Puyallup Ave

East 25th Street Alignment Family
- ET2: E 25th Street
- TD2: 25th Street West
- TD3: 25th Street East

East 26th Street Alignment Family
- ET3A: E 26th St to E 25th St
- ET3B: 26th Street East
- ET6: 26th Street West
- TD4 East: E 26th Street Off-Street / In-Street

E 26th St to E 27th St Alignment Family
- ET5: E 27th Street
- TD 4 West E 26th St to E 27th St / E 27th St

SOUNDTRANSIT

EXHIBIT E-10
LEVEL 2 ALTERNATIVES
EAST TACOMA & TACOMA DOME

TACOMA DOME LINK EXTENSION

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Puyallup Avenue

The Puyallup Avenue alternative includes TD 1 Puyallup Avenue, as depicted on Exhibit E-10. For a detailed description of the Puyallup Avenue alternative, see Section 4.4.1.

East 25th Street

The East 25th Street alternatives include TD 2 25th Street West and TD 3 25th Street East, as depicted on Exhibit E-10. For a detailed description of the East 25th Street alternatives, see Section 4.4.2.

East 26th Street

The East 26th Street alternative includes TD 4 East Off-Street (variation of TD 4A-B in Level 1) and TD 4 East In-Street (variation of TD 4A-B in Level 1), as depicted on Exhibit E-10. For a detailed description of the East 26th Street alternatives, see Section 4.4.3.

East 26th Street to East 27th Street

The East 26th Street to East 27th Street alternatives include TD 4 West East 26th Street to East 27th Street (variation of TD 4A-B in Level 1) and TD 4 West East 27th Street (variation of TD 4A-B in Level 1), as depicted on Exhibit E-10. For a detailed description of the East 26th Street to East 27th Street alternatives, see Section 4.4.4.

Level 2 Evaluation Criteria and Measures

The criteria used to evaluate the Level 2 alternatives originated from objectives derived from the project's Purpose and Need. These objectives are to:

- Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs;
- Support Sustainable Land Use Plans, Economic Development, and Transit Oriented Development;
- Preserve the Environment;
- Support Equitable Mobility; and
- Provide a Financially Sustainable and Constructible Project

Exhibit E-11 lists the objectives and evaluation criteria, which were used to develop measures to assess the differences among the alternatives as well as how the Level 2 measures compare to the Level 1 measures. The qualitative and quantitative measures were intended to differentiate among alternatives in terms of project performance and potential impacts. The Level 2 evaluation will be used by the ELG to form an alternatives recommendation to the Sound Transit Board. In collaboration with FTA, the Sound Transit Board will identify the range of alternatives to be evaluated in the EIS process. The Sound Transit Board may identify a preferred alternative in the Draft EIS

EXHIBIT E-11
Level 1 and 2 Evaluation Criteria

Evaluation Criteria	Level 1 Measures	Level 2 Measures
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs Purpose and Need: • Provide high-quality rapid, reliable, and efficient light rail transit service to communities in the project corridor, as defined through the local planning process and reflected in the ST3 Plan (Sound Transit 2016). • Improve regional mobility by increasing connectivity and capacity in the TDLE corridor from the Federal Way Transit Center to the Tacoma Dome Station area to meet projected transit demand. • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.		
Ridership Potential	L1.1: Travel time L1.2: Total population and employment (2035) within 1/2 mile of stations L1.3: Proximity to existing/future population and employment centers/activity centers and major destinations within 1/2 mile of stations	L2.1: Travel time L2.2: Daily and annual projected project ridership (2042) L2.3: Projected station boardings L2.4: Proximity to PSRC growth centers and manufacturing/industrial centers L2.5: Population (persons/acre) and job (jobs/acre) densities
Objective: Support Sustainable Land Use Plans, Economic Development, and Transit Oriented Development Purpose and Need: • Connect communities of Federal Way, Milton, Fife, Tacoma, and the Puyallup Tribe of Indians to regional centers and destinations on the regional high-capacity transit (HCT) system as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a). • Encourage equitable and sustainable urban growth in station areas through support of transit oriented development (TOD) and multimodal integration in a manner that is consistent with local land use plans and policies, including Sound Transit's Transit Oriented Development and Sustainability policies. • Encourage convenient and safe nonmotorized access to stations such as bicycle and pedestrian connections consistent with Sound Transit's System Access Policy.		
Supports future TOD opportunities	L1.4: Consistency with local and tribal economic development goals, planned development, current and anticipated zoning, and/or comprehensive plans L1.5: Barriers that limit the development potential, walkshed, and range and safety of bicycling around the station such as topography, wide roads, highways, bodies of water, and railways L1.6: Presence of amenities to catalyze complete neighborhoods, such as shops, services, schools, recreational facilities, civic or character amenities, or views/access to nature	L2.6: Consistency with civic and community planning and land use, evaluating elements such as: local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans L2.7: Likelihood of station area redevelopment into TOD neighborhood L2.8: Detailed evaluation of nonmotorized barriers within a ½-mile of the station L2.9: Presence of amenities that can catalyze development of TOD neighborhoods
Promotes multimodal access and connections	L1.7: Qualitative assessment of bicycle and pedestrian accessibility and potential for improvement L1.8: Qualitative assessment of transit connections and potential for improvement within station areas	L2.10: Proximity to existing transit service and level of transit service diversion required L2.11: Ease of vehicular pick-up/drop-off for a variety of users L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations

EXHIBIT E-11
Level 1 and 2 Evaluation Criteria

Evaluation Criteria	Level 1 Measures	Level 2 Measures
Objective: Preserve the Environment Purpose and Need: • Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments.		
Effects on the natural environment	L1.9: Proximity to major wetlands, streams, floodplains, steep slopes, ESA species, fisheries, or other natural habitat areas within 100 feet of an alternative (in acres of resources)	L2.14: Potential effects on wetlands L2.15: Potential effects on streams/stream crossings L2.16: Potential to affect protected species and habitats L2.17: Potential effects on vegetated areas L2.18: Potential effects on floodplains L2.19: Presence of geologic hazard areas (steep slopes, erosion, or landslide hazard areas)
Effects on the built environment	L1.10: Estimated levels of property impacts (residential, commercial, other) and number of large tax generating properties affected L1.11: Estimated number of tribal parcels affected L1.12: Presence of known Section 4(f), park, historic, culturally-significant tribal properties, or other protected areas L1.13: Presence of a viewshed or proximity to view-dependent businesses L1.14: Potential for impacts from vibration and noise L1.15: Potential for affecting areas with existing traffic congestion L1.16: Potential for affecting parking supply and demand and spillover parking effects L1.17: Potential avoidance of hazardous waste	L2.20: Estimated number of affected parcels and total acreage by property type L2.21: Estimated number of affected parcels with major economic activity generators L2.22: Estimated number of displacements by property type; impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating L2.23: Estimated number of tribal parcels potentially affected L2.24: Potential effects on Section 4(f) parks and recreational resources L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places (NRHP) L2.26: Potential effects on Section 4(f) cultural and archaeological resources L2.27: Potential effects on viewsheds along the alignment and potential for impacts to view-dependent businesses L2.28: Potential effects on sensitive noise and vibration receptors L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network L2.30: Potential effects on freight movement L2.31: Potential avoidance of hazardous waste L2.32: Potential effects on parking demand and supply

EXHIBIT E-11
Level 1 and 2 Evaluation Criteria

Evaluation Criteria	Level 1 Measures	Level 2 Measures
Objective: Support Equitable Mobility Purpose and Need: • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.		
Provide equitable transit service to low-income, minority, and transit-dependent populations	L1.18: Qualitative demographic differences among the option census data (households with no car, low-income, and minority populations) in station areas L1.19: Potential for impacts on low-income and minority populations	L2.33: Potential benefits to low-income or minority populations L2.34: Potential for impacts on low-income and/or minority populations
Objective: Provide a Financially Sustainable and Constructible Project Purpose and Need: • Implement a system that is technically and financially feasible to build, operate, and maintain.		
Financial considerations	L1.20: Major cost elements beyond the representative project description	L2.35: Preliminary conceptual estimate* L2.36: Operating estimate
Constructibility and engineering considerations	L1.21: Potential risks (major utilities or structures) L1.22: Availability and potential to use publicly-owned right-of-way L1.23: Capability to accommodate future expansion included in the Sound Transit Long-Range Plan	L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure L2.38: Number of sites requiring environmental remediation within the project footprint of an alternative L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects) L2.40: Availability and potential to use publicly owned right-of-way and publicly owned property L2.41: Capability to accommodate future expansion included in the Sound Transit Long-Range Plan
Operational considerations	L1.24 Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome, number of at-grade crossings, if any)	L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks, and pocket track at Tacoma Dome, number of at-grade crossings, if any)
Schedule considerations	L1.25: Overall schedule risk	L2.43: Overall schedule risk

*Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.

The proposed methodologies for assessing the measures outlined in Exhibit E-11 are described in Chapter 3, Evaluation Criteria.

Level 2 Evaluation Summary

A total of 27 alternatives across the four station areas were evaluated for Level 2 analysis between the terminus of the FWLE at the Federal Way Transit Center and Tacoma Dome District station area. These alternatives are further described in Chapter 4, Level 2 Alternatives. Exhibit E-12 summarizes the full range of alternatives reviewed in Level 2 and the notable advantages and disadvantages for each alternative.

EXHIBIT E-12
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
SOUTH FEDERAL WAY	
Alternatives with MORE POTENTIAL	
SF 2 **West** **Enchanted/352nd**	**Notable Advantages:** • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities. • Better multimodal station access (good pedestrian infrastructure). **Notable Disadvantages:** • Greater construction challenges due to crossing spans over both 348th Street and Enchanted Parkway.
SF 8/9 **I-5/356th and I-5/Jet**	**Notable Advantages:** • Lower potential property impacts. • Lowest preliminary estimate[1] based on alignment and station location. **Notable Disadvantages:** • Lower ridership potential than SF 4 alternatives. • Lower potential for development opportunities near station due to proximity to I-5, topographic and other barriers, and fewer nearby amenities. • Farther from bus service. • Higher potential impacts to ecosystems.
SF 4C **SR 99 North (I-5 to SR 99 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential. • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities. • Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • More difficult car access. • Higher potential property impacts (though less than SF 4A/4B). • Higher potential impacts to ecosystems.
SF 4D **SR 99 North (I-5 to SR 99 to I-5 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential (shares station location with other SF 4 alternatives). • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • More difficult car access. • Higher potential property impacts (though less than other SF 4 alternatives). • Greater construction challenges due to two crossings of SR 99, including a wide crossing.

EXHIBIT E-12
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
Alternatives with GREATER CHALLENGES	
SF 2 East **Enchanted/352nd**	**Notable Advantages:** • Moderate ridership potential. • Fewer potential property impacts than SF 4 alternatives. **Notable Disadvantages:** • Potential impacts to businesses and properties on east side of Enchanted Parkway.. • Moderately less potential for development opportunities near the station compared to SF 2 West due to proximity to I-5.
SF 3 **Enchanted/356th**	**Notable Advantages:** • Similar to SF 2 West, but like SF 2 East, runs on east side of Enchanted Parkway with potential property impacts. • Better car access. • Fewer property acquisitions than SF 4 alternatives. **Notable Disadvantages:** • Lower rating for pedestrian and bike access. • Lower potential for development opportunities near the station due to proximity to I-5, topographic and other barriers, and fewer nearby amenities.
SF 4A **SR 99 North (SR 99 to I-5 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential (shares station location with other SF 4 alternatives). • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • Highest potential property impacts. • More difficult car access. • Greater construction challenges due to guideway parallel to high voltage transmission lines and wide crossing over SR 99 at 327th.
SF 4B **SR 99 North (SR 99 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential (shares station location with other SF 4 alternatives). • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • Highest potential property impacts. • More difficult car access. • Greater construction challenges due to guideway parallel to high-voltage transmission lines and wide crossing over SR 99 at 327th. • Highest preliminary estimate[1] based on alignment and station location.

EXHIBIT E-12
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
FIFE	
Alternatives with MORE POTENTIAL	
Fife 3A **North of 15th Street (I-5 route alignment)** *Shares station location with Fife 3B*	**Notable Advantages:** • Location in planned City Center offers greater potential for development opportunities near station. • Lower potential impacts to natural environment. • Lower potential property impacts than Fife 3B; lower potential residential displacements than Fife 4A/4B. • Lowest preliminary estimate[1] based on alignment. **Notable Disadvantages:** • More potential for impacts to view-dependent businesses.
Fife 3B **North of 15th Street (SR 99 route alignment)** *Shares station location with Fife 3A*	**Notable Advantages:** • Location in planned City Center offers greater potential for development opportunities near station. • Lower potential impacts to natural environment. • Lower potential residential displacements than Fife 4A/4B. **Notable Disadvantages:** • Higher potential property impacts due to alignment on Pacific Highway. • Higher preliminary estimate[1] based on alignment.
Alternatives with GREATER CHALLENGES	
Fife 1 **12th Street**	**Notable Advantages:** • Better car access. **Notable Disadvantages:** • Lower ridership potential. • Zoning and a limited road network north of station show less potential for development opportunities near station. • Higher potential ecosystem impacts. • Higher potential impacts to major economic activity generators. • Highest preliminary estimate[1] based on alignment and station location.
Fife 4A **South of 15th Street (I-5 route alignment)** *Shares station location with Fife 4B*	**Notable Advantages:** • Location in planned City Center indicates greater potential for development opportunities near station. • Lowest preliminary estimate[1] based on alignment. **Notable Disadvantages:** • Greatest potential residential property impacts (including Rainier View Senior Apartments). • More difficult car access. • Higher potential impacts to freight movement.
Fife 4B **South of 15th Street (SR 99 route alignment)** *Shares station location with Fife 4A*	**Notable Advantages:** • Location in planned City Center indicates greater potential for development opportunities near station. **Notable Disadvantages:** • Higher potential property impacts due to alignment on Pacific Highway; higher potential residential property impacts (including Rainier View Senior Apartments). • Higher potential effects on freight movement. • Higher preliminary estimate[1] based on alignment.

EXHIBIT E-12
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
EAST TACOMA	
Alternatives with MORE POTENTIAL	
ET 3A **E 26th Street to E 25th Street** *Shares station location with ET 3B*	**Notable Advantages:** • Close to destinations and neighborhood south of I-5. • Fewer non-motorized barriers to access; better access to multimodal connections. • More existing and potential development opportunity south of I-5 within walking distance. • Alignment connects to more potential Tacoma Dome stations alternatives TD 2 and TD 3. **Notable Disadvantages:** • Highest preliminary estimate[1] based on alignment and station location.
Alternatives with GREATER CHALLENGES	
ET 1 **Puyallup Avenue**	**Notable Advantages:** • Closest to existing transit connections (bus). **Notable Disadvantages:** • Lower ridership potential. • Farther from destinations south of I-5; more non-motorized barriers and more difficult car access. • Highest potential property impacts. • Higher potential for additional freight delay.
ET 2 **E 25th Street**	**Notable Advantages:** • Alignment connects to more potential Tacoma Dome station alternatives TD 2 and TD 3. **Notable Disadvantages:** • Lower ridership potential. • More barriers for pedestrians and bicyclists. • Farther from destinations south of I-5. • More difficult car access. • Higher potential for additional freight delay.
ET 3B **26th Street East** *Shares station location with ET 3A*	**Notable Advantages:** • Close to destinations and neighborhood south of I-5. • Fewer non-motorized barriers to access; better access to multimodal connections. • More existing and potential development opportunity south of I-5 within walking distance. • Lowest preliminary estimate[1] based on alignment and station location. **Notable Disadvantages:** • Alignment connects to more challenging Tacoma Dome station alternative TD 4.
ET 5 **E 27th Street**	**Notable Advantages:** • Fewest businesses potentially impacted. • Closest to destinations and neighborhood south of I-5. • Fewer non-motorized barriers to access; better access to multimodal connections. • More existing and potential development opportunity south of I-5 within walking distance. **Notable Disadvantages:** • Alignment connects to more challenging Tacoma Dome station alternative TD 4. • Greater potential impacts to tribal properties.
ET 6 **26th Street West**	**Notable Advantages:** • No potential to affect historic resources. **Notable Disadvantages:** • More difficult car access. • Higher potential for additional freight delay. • Farther from destinations and neighborhood south of I-5.

EXHIBIT E-12
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
TACOMA DOME	
Alternatives with MORE POTENTIAL	
TD 2 **25th Street West**	**Notable Advantages:** • Highest station access for people walking, biking, taking transit or driving. • Close to other transit modes for ease of transfer (closest proximity to Tacoma Link). • Zoning and nearby amenities offer greater potential for housing and business development near station. • Higher ridership potential. **Notable Disadvantages:** • Higher potential impacts to businesses that are major economic activity generators along 25th Street. • Highest preliminary estimate[1] based on alignment and station location.
TD 3 **25th Street East**	**Notable Advantages:** • Higher ridership potential than TD 4 alternatives. • Fewer potential property impacts. • Moderate rating for multimodal access (closer to buses, but farther from Tacoma Link). **Notable Disadvantages:** • Lower potential for development opportunities near station due to location in a light industrial zoning district.
Alternatives with GREATER CHALLENGES	
TD 1 **Puyallup Avenue**	**Notable Advantages:** • Higher ridership potential. • Close to other transit modes for ease of transfer. • Zoning and nearby amenities offer greater potential for housing and business development near station. **Notable Disadvantages:** • Higher potential impacts to businesses that are major economic activity generators along Puyallup Avenue. • Long-term, future extension to Tacoma Mall is most difficult.
TD 4 **East off-street** **E 26th Street**	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. • Lowest preliminary estimate[1] based on alignment and station location. **Notable Disadvantages:** • Farther from multimodal connections (majority of buses). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and associated parking. • Likely impacts to tribal properties.
TD 4 **East in-street** **E 26th Street**	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. • Fewer potential property impacts. **Notable Disadvantages:** • Farthest from multimodal connections (Tacoma Link and bus). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and associated parking.

EXHIBIT E-12
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
TD 4 West **E 26th Street to E 27th Street** *Both TD 4 West alternatives share same station location*	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. **Notable Disadvantages:** • Farther from multimodal connection points (Tacoma Link). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and associated parking. • Higher number of potential property impacts.
TD 4 West **E 27th Street** *Both TD 4 West alternatives share same station location*	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. **Notable Disadvantages:** • Farther from multimodal connection points (Tacoma Link). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and parking.

[1]Preliminary estimates are not the project's budget. They are for use as comparisons among alternatives.

1 Introduction

Sound Transit and the Federal Transit Administration (FTA) are conducting an alternatives evaluation to start the public planning and environmental processes for the Tacoma Dome Link Extension (TDLE). The proposed project, included in the evaluation as the Representative Project, is part of the Sound Transit 3 (ST3) Plan approved by voters in 2016. The project starts where the Federal Way Link Extension (FWLE) ends at the Federal Way Transit Center in the city of Federal Way in south King County and continues to the Tacoma Dome area in the city of Tacoma in Pierce County, following along I-5 for most of the alignment. Exhibit 1-1 shows where the TDLE is located. The TDLE is an element of the regional Metropolitan Transportation Plan (the Puget Sound Regional Council [PSRC] 2040 Transportation Plan), and Sound Transit's Long-Range Transit Plan.

As part of the ST3 Plan, two new light rail maintenance facilities, one in the north and one in the south service area, were identified to support the expansion of light rail. The operations and maintenance facility to serve overall regional system expansion, particularly for service in South King and Pierce counties, is called the Operations and Maintenance Facility South (OMF South) and is evaluated in a separate report.

The public planning and environmental processes began with development of the Pre-Screening and Level 1 Alternatives Evaluation, which sought to define a reasonable range of options that meet the project Purpose and Need, can be implemented at a reasonable cost, and would not result in unacceptable effects on the environment or community. In September 2018, the Level 1 evaluation and findings were reviewed by the Elected Leadership Group (ELG), the Interagency Group (IAG), the Stakeholder Group, and the public. The TDLE ELG then selected the alternatives from Level 1 to be advanced for further study in Level 2. The Level 2 evaluation process and analysis are included in this report.

1.1 Relationship of this Study to Project Development

This report summarizes the portion of the alternatives evaluation process that has been completed to identify and evaluate viable alternatives for further study in the EIS.

The alternatives that best meet the project Purpose and Need will be analyzed in a Draft EIS under the National Environmental Policy Act (NEPA) and under the Washington State Environmental Policy Act (SEPA). The study has identified an initial range of potential alternatives (based on previous plans and studies and input from the public, tribes, and

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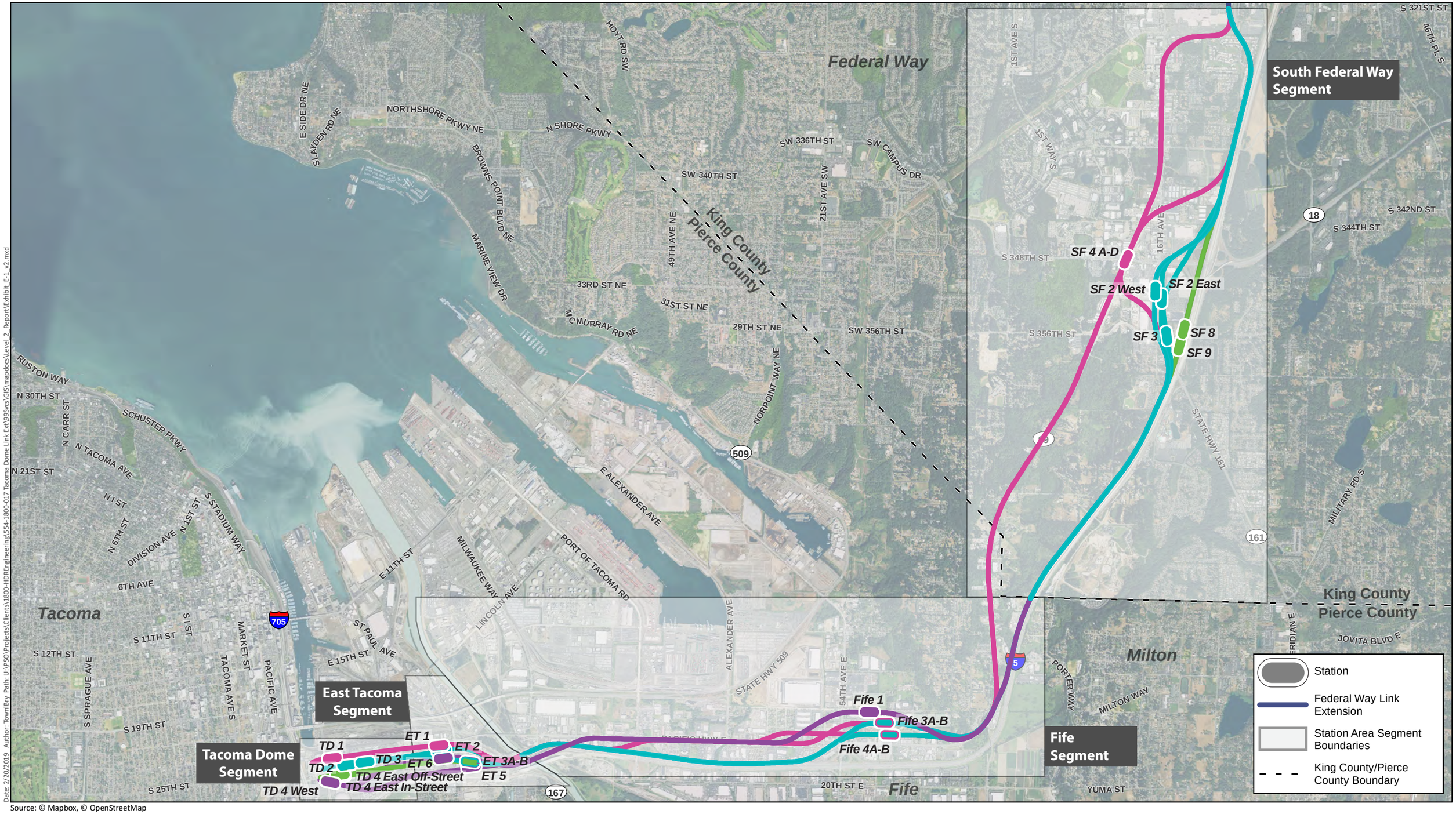

Source: © Mapbox, © OpenStreetMap

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SOUNDTRANSIT

EXHIBIT 1-1
LEVEL 2 ALTERNATIVES
ALL STATION AREAS

TACOMA DOME LINK EXTENSION

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agencies) and evaluated the alternatives to determine which have promise and should undergo further study and design during the EIS process. At the end of the project development process, the preferred project will be selected by the Sound Transit Board and moved forward into further design, construction, and eventual operations.

The Level 1 evaluation applied both qualitative and quantitative criteria to measure the benefits, effects, and costs of the Level 1 alternatives. The ELG selected the Level 1 alternatives to be advanced for further study in Level 2.

The Level 2 evaluation further developed the alternatives that were advanced and then applied more rigorous criteria and analyses to the remaining, smaller set of alternatives. This evaluation compares each alternative's strengths and weaknesses relative to the other Level 2 alternatives. The technical analysis of this Level 2 screening, along with the results of the scoping process, will be presented to the ELG and the Sound Transit Board for identification of the preferred alternative, as well as other alternatives that should be advanced for more detailed analysis in the Draft Environmental Impact Statement (Draft EIS).

1.2 TDLE Corridor Background

Sound Transit is building on previous studies and plans that led to the proposed extension of light rail to the Tacoma Dome. These studies include:

- Federal Way to Tacoma HCT Study. In 2013-2014, Sound Transit conducted a high-capacity transit (HCT) study covering the south corridor, including South King and Pierce counties. The study evaluated multiple corridors and transit modes for extending HCT from Federal Way to Tacoma.
- Regional Transit Long-Range Plan. Also in 2013 to 2014, Sound Transit updated its Long-Range Plan and prepared a SEPA EIS. The Plan confirmed regional light rail as the preferred mode for the extended corridor to Tacoma.
- Sound Transit 3 System Plan. During ST3 system planning in 2015 and 2016, Sound Transit evaluated representative projects for inclusion in the November 2016 ballot measure, which voters approved.

1.3 Draft Purpose and Need

The purpose of the Tacoma Dome Link Extension is to expand the Link light rail system from the Federal Way Transit Center to the Tacoma Dome Station area in order to:

- Provide high-quality rapid, reliable, and efficient light rail transit service to communities in the project corridor, as defined through the local planning process and reflected in the ST3 Plan (Sound Transit 2016).

- Improve regional mobility by increasing connectivity and capacity in the TDLE corridor from the Federal Way Transit Center to the Tacoma Dome Station area to meet projected transit demand.
- Connect communities of Federal Way, Milton, Fife, Tacoma, and the Puyallup Tribe of Indians to regional centers and destinations on the regional high-capacity transit (HCT) system as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a).
- Implement a system that is technically and financially feasible to build, operate, and maintain.
- Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.
- Encourage equitable and sustainable urban growth in station areas through support of transit oriented development and multimodal integration in a manner that is consistent with local land use plans and policies, including Sound Transit's Transit Oriented Development and Sustainability policies.
- Encourage convenient and safe nonmotorized access to stations such as bicycle and pedestrian connections consistent with Sound Transit's System Access Policy.
- Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments.

The project is needed because:

- Chronic roadway congestion on Interstate 5 (I-5) and State Route 99 (SR 99)—two primary highways connecting communities along the corridor—delays today's travelers, including those using transit, and degrades the reliability of bus service traversing the corridor, particularly during commute periods.
- These chronic, degraded conditions are expected to continue and worsen as the region's population and employment grows.
- Puget Sound Regional Council (PSRC), the regional metropolitan planning organization, and local plans call for HCT in the corridor consistent with VISION 2040 (PSRC 2009) and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a).
- South King and Pierce counties citizens and communities, including transit-dependent residents and low-income or minority populations, need long-term regional mobility and multimodal connectivity as called for in the Washington State Growth Management Act.
- Regional and local plans call for increased residential and/or employment density at and around HCT stations, and increased options for multimodal access.

- Environmental and sustainability goals of the state and region, as established in Washington state law and embodied in PSRC's VISION 2040 and 2018 Regional Transportation Plan, include reducing greenhouse gas emissions by decreasing vehicle miles traveled.

1.4 Overview of Alternatives Analysis Process

The purpose of the alternatives analysis process is to evaluate the alternatives according to the designated criteria and provide the evaluation to the public, local agencies, advisory groups including the ELG, and the Sound Transit Board to identify the preferred alternative and other alternatives to advance to the EIS. To refine the alternatives, input from the tribes, agencies, and the public was considered throughout the process. Because the resulting project will seek federal funding, the FTA's general guidance for conducting alternatives analysis was incorporated into the study process. This process included initiating the study, developing and refining alternatives and methodologies, analyzing and evaluating alternatives, and (in the future) identifying a preferred alternative, as shown on Exhibit 1-2.

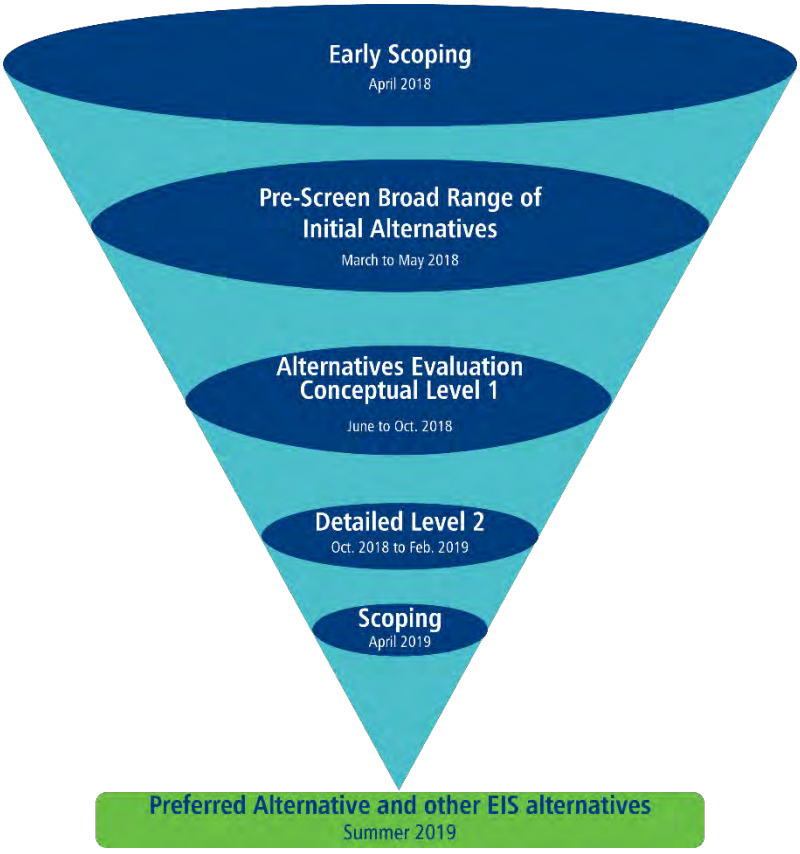

EXHIBIT 1-2
Alternatives Evaluation Process

Information from the regional and local plans and projects, as well as previous work from the ST3 Plan, was reviewed as part of initiating of the TDLE project, and a draft Purpose and Need of the project was developed. The draft Purpose and Need established the objectives that were used to develop the evaluation criteria and measures for the Level 1 analysis.

The next step, which was pre-screening alternatives to identify those that do not meet the Purpose and Need, helped to refine the alternatives that were analyzed in the Level 1 screening. The initial pre-screening process involved two steps: 1) considering if the alternatives being studied satisfy the Purpose and Need statement, and 2) evaluating the alternatives for consistency with the ST3 Plan, which is the basis for the proposed project.

The initial alignments and station concepts were then developed into potential alternatives for the Level 1 evaluation process. The Level 1 evaluation assessed the performance of the alternatives based on early conceptual design using evaluation measures based on the Purpose and Need. The representative project from ST3 was included in the Level 1 alternatives.

After the Level 1 evaluation and findings were reviewed by the ELG, IAG, Stakeholder Group, FTA, and the public, the ELG selected the Level 1 alternatives that were refined and advanced into the Level 2 analysis. The draft Purpose and Need also established the objectives that were used to develop the evaluation criteria and measures for the Level 2 analysis. The Level 2 evaluation applied additional, more quantitative criteria compared to the Level 1 evaluation. The Level 2 analysis, along with the results of the scoping process, will be presented to the ELG and the Sound Transit Board to help them identify a preferred alternative to be evaluated in the EIS.

1.5 Organization of this Report

This report is organized into the following primary chapters:

1. Chapter 1—Introduction: This chapter introduces the alternatives evaluation phase of the TDLE, describes the background of the project, explains the alternatives evaluation process, and outlines project Purpose and Need.
2. Chapter 2—Pre-Screening and Level 1 Alternatives Evaluation: This chapter summarizes the process of the pre-screening and level 1 alternatives evaluation.
3. Chapter 3—Level 2 Evaluation Criteria: This chapter presents the evaluation criteria used to examine and compare the alternatives advanced from Level 1. These criteria relate directly to the Purpose and Need and goals and objectives of the project.
4. Chapter 4—Level 2 Alternatives: This chapter discusses the alternatives evaluated in Level 2 of the alternatives evaluation. These alternatives were selected for further study in Level 2 based on the outcomes of the pre-screening and Level 1 analysis summarized in Chapter 2.

5. Chapter 5—Level 2 Analysis: This chapter provides the analysis of how each Level 2 alternative described in Chapter 4 performs under each criterion described in Chapter 3. Analysis is organized by criteria and provides a comparison among alternatives for each criterion.
6. Chapter 6—Level 2 Summary: This chapter summarizes the key findings of each alternative related to the evaluation criteria for Level 2.

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2 Pre-Screening and Level 1 Alternatives Evaluation

Previous work completed as part of the TDLE alternatives evaluation process consisted of several steps. These steps included an analysis of comments received during the early scoping period, development of an initial list of mode and alignment alternatives, a pre-screening of alternatives that did not meet the objectives identified in the Purpose and Need for the TDLE project, and an analysis of the Level 1 alternatives based on evaluation criteria established for the Level 1 evaluation. For more details, refer to the TDLE Pre-Screening and Level 1 Alternatives Evaluation Report (Sound Transit 2019).

2.1 Summary of Early Scoping Process

A 30-day early scoping period was completed between April 2 and May 3, 2018 to collect input on potential alternatives to be studied as part of the TDLE. The early scoping period included three public open houses in Federal Way, Fife, and Tacoma. The public open houses provided several interactive opportunities for attendees to provide input and draw alignment and station location suggestions on a large map of the project corridor. An online open house also provided opportunities to learn about the project and provide comments. During the early scoping process, people could provide comments via an online open house survey, email, mail, or community open houses.

In addition to the public meetings, an early scoping meeting was also held in Tacoma on the afternoon of April 17, 2018, for tribes, agencies, and jurisdictions. Jurisdictional participants could learn about the project, ask questions, and provide informal comments on interactive roll plot maps of the corridor in advance of providing their formal early scoping comment letters.

Early scoping comments were received from one tribal government, 11 agencies, and over 550 written comments from members of the public. Common project-wide themes included:

- Support for the light rail system
- Concern about taxes and project costs
- Providing adequate parking at stations
- Evaluating economic tradeoffs: increased access to local and regional job opportunities and potential impacts to businesses along the route
- Interest in TOD

The Early Scoping Summary Report contains further information about the comments received during early scoping (Sound Transit 2018).

2.2 Summary of Pre-Screening Process

The initial pre-screening process involved two steps: 1) considering if the alternatives being studied satisfy the Purpose and Need statement, and 2) evaluating the alternatives for consistency with the project scope defined in the ST3 Plan, which is the basis for the proposed project.

The process to develop concepts began with reviewing previous work done in regional planning studies, including Sound Move—The Ten-Year Regional Transit System Plan (Sound Transit 1996), the Regional Transit Long-Range Plan (Sound Transit 2005), Sound Transit 2: A Mass Transit Guide—The Regional Transit System Plan for Central Puget Sound (Sound Transit 2008), Sound Transit 3: The Regional Transit System Plan for Central Puget Sound (Sound Transit 2016), and the Federal Way to Tacoma HCT Corridor Study (Sound Transit 2014b). Local planning studies were also reviewed. The existing transit network and plans for the Federal Way Transit Extension were also considered. In addition to the concepts developed from past studies, comments received during the early scoping period were used to identify potential alternatives.

Based on previous studies and public involvement completed for the adoption of the Long-Range Plan and the EIS, and on the results of the Federal Way to Tacoma HCT Corridor Study and related ST3 planning and outreach, the Sound Transit Board adopted light rail transit as the mode to serve the South Corridor connecting Seattle to Tacoma. Therefore, only regional light rail transit alternatives are being considered for the TDLE.

Alternatives considered during pre-screening included different alignment and station concepts. The alignment refers to the horizontal location on the ground within a corridor and the vertical elevation of the aerial guideway. The initial range of alternatives are generally located within the SR 99 or I-5 corridors as shown in Exhibit 1-1. The pre-screening of alternatives was undertaken to identify and screen out alignment and station concepts that did not warrant further consideration in the Level 1 evaluation.

A few alignment concepts outside of the SR 99 and I-5 corridors were considered in the pre-screening, such as an alignment along the Interurban Trail corridor and extending Tacoma Link west of the Tacoma Dome to East Tacoma. These concepts were not brought forward into the Level 1 evaluation because of inconsistency with the Purpose and Need, inconsistency with the ST3 Plan, circuitous routing that would add travel time to the HCT service, and environmental constraints. The SR 99 and I-5 corridors are the only practicable options to meet the project Purpose and Need to extend the HCT system between the Federal Way City Center and the Tacoma Dome station area, providing direct connections with Sounder commuter rail, Tacoma Link light rail, Greyhound, and Amtrak passenger rail, as well as the Sound Transit Express, Pierce Transit, and King County Metro bus transit systems.

Station concepts that were not brought forward into the Level 1 evaluation are shown on Exhibits 2-2, 2-3, and 2-4. These station concepts included:

- A station located to the northwest of the I-5/SR 18 interchange in the Weyerhaeuser property.
- A station located in Milton just north of 70th Avenue E between I-5 and Pacific Highway East.
- A station located in Tacoma in the SR 509 right-of-way in the Burlington Northern Santa Fe (BNSF) Railyard.
- A series of stations located in McKinley Park in Tacoma.
- A series of stations located to the west of I-705 in Tacoma.

2.3 Summary of Level 1 Alternatives Evaluation Process

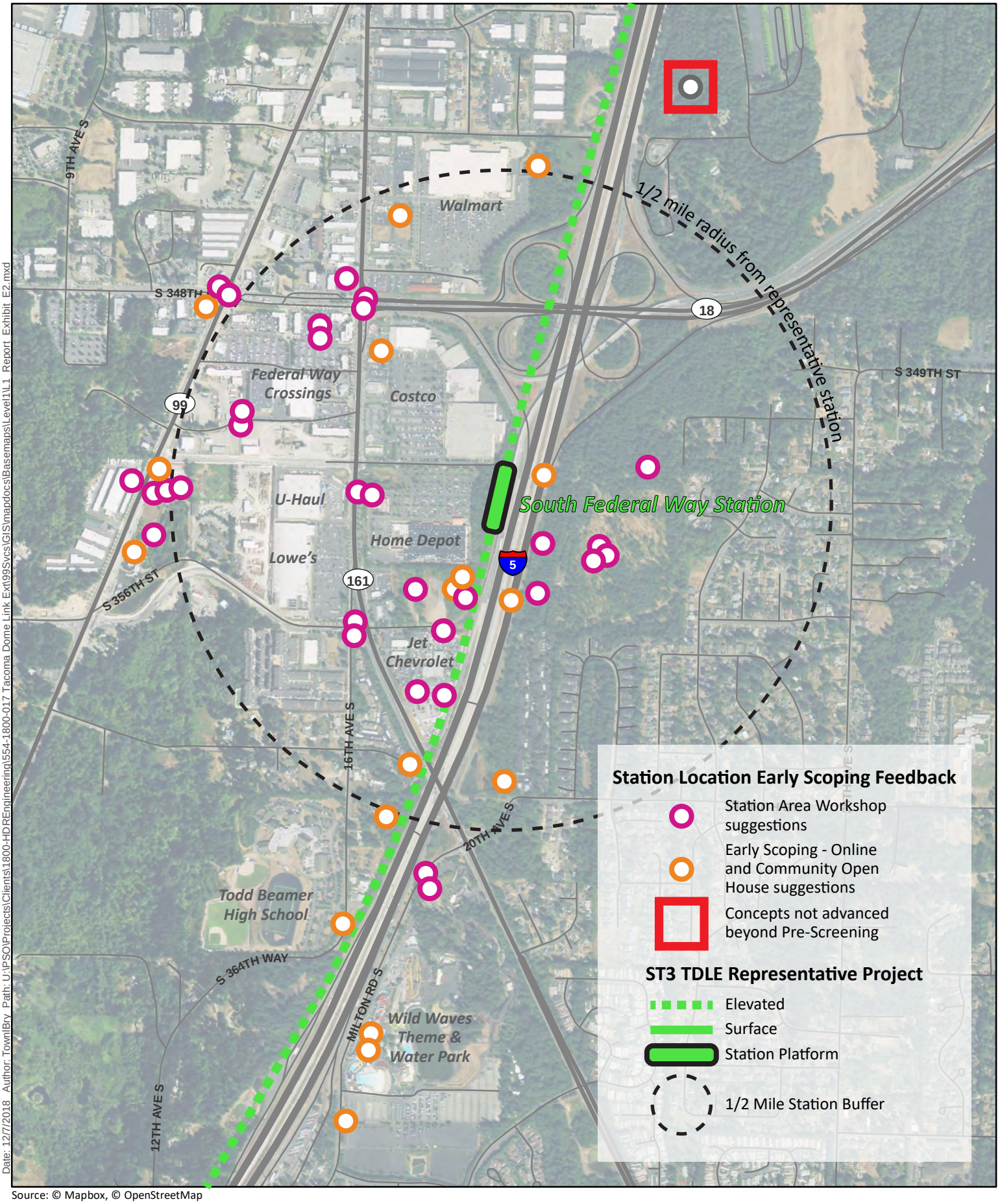
The Level 1 evaluation included an analysis of the Level 1 alternatives advanced beyond pre-screening. The Level 1 alternatives were evaluated using evaluation criteria that were developed based on the preliminary Purpose and Need for the TDLE project. The Level 1 evaluation criteria are summarized in Exhibit 2-1.

EXHIBIT 2-1
Level 1 Evaluation Criteria

Evaluation Criteria	Measures
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs Purpose and Need: • Provide high-quality rapid, reliable, and efficient light rail transit service to communities in the project corridor, as defined through the local planning process and reflected in the ST3 Plan (Sound Transit 2016). • Improve regional mobility by increasing connectivity and capacity in the TDLE corridor from the Federal Way Transit Center to the Tacoma Dome Station area to meet projected transit demand. • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.	
Ridership Potential	L1.1: Travel time L1.2: Total population and employment (2035) within 1/2 mile of stations L1.3: Proximity to existing/future population and employment centers/activity centers and major destinations within 1/2 mile of stations
Objective: Support Sustainable Land Use Plans, Economic Development, and Transit Oriented Development Purpose and Need: • Connect communities of Federal Way, Milton, Fife, Tacoma, and the Puyallup Tribe of Indians to regional centers and destinations on the regional high-capacity transit (HCT) system as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a). • Encourage equitable and sustainable urban growth in station areas through support of transit oriented development (TOD) and multimodal integration in a manner that is consistent with local land use plans and policies, including Sound Transit's Transit Oriented Development and Sustainability policies. • Encourage convenient and safe nonmotorized access to stations such as bicycle and pedestrian connections consistent with Sound Transit's System Access Policy.	

EXHIBIT 2-1
Level 1 Evaluation Criteria

Evaluation Criteria	Measures
Supports future TOD opportunities	L1.4: Consistency with local and tribal economic development goals, planned development, current and anticipated zoning, and/or comprehensive plans L1.5: Barriers that limit the development potential, walkshed, and range and safety of bicycling around the station such as topography, wide roads, highways, bodies of water, and railways L1.6: Presence of amenities to catalyze complete neighborhoods, such as shops, services, schools, recreational facilities, civic or character amenities, or views/access to nature
Promotes multimodal access and connections	L1.7: Qualitative assessment of bicycle and pedestrian accessibility and potential for improvement L1.8: Qualitative assessment of transit connections and potential for improvement within station areas
Objective: Preserve the Environment Purpose and Need: • Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments.	
Effects on the natural environment	L1.9: Proximity to major wetlands, streams, floodplains, steep slopes, Endangered Species Act (ESA) species, fisheries, or other natural habitat areas within 100 feet of an alternative (in acres of resources)
Effects on the built environment	L1.10: Estimated levels of property impacts (residential, commercial, other) and number of large tax-generating properties affected L1.11: Estimated number of tribal parcels affected L1.12: Presence of known Section 4(f), park, historic, culturally significant tribal properties, or other protected areas L1.13: Presence of a viewshed or proximity to view-dependent businesses L1.14: Potential for impacts from vibration and noise L1.15: Potential for affecting areas with existing traffic congestion L1.16: Potential for affecting parking supply and demand and spillover parking effects L1.17: Potential avoidance of hazardous waste
Objective: Support Equitable Mobility Purpose and Need: • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.	
Provide equitable transit service to low-income, minority, and transit-dependent populations	L1.18: Qualitative demographic differences among the option census data (households with no car, low-income, and minority populations) in station areas L1.19: Potential for impacts on low-income and minority populations
Objective: Provide a Financially Sustainable and Constructible Project Purpose and Need: • Implement a system that is technically and financially feasible to build, operate, and maintain.	
Financial considerations	L1.20: Major cost elements beyond the representative project description
Constructibility and engineering considerations	L1.21: Potential risks (major utilities or structures) L1.22: Availability and potential to use publicly owned right-of-way L1.23: Capability to accommodate future expansion included in the Sound Transit Long-Range Plan
Operational considerations	L1.24 Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome, number of at-grade crossings, if any)
Schedule considerations	L1.25: Overall schedule risk



Date: 12/7/2018 Author: TownlBry Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Basemaps\Level1\L1_Report_Exhibit_E2.mxd

Source: © Mapbox, © OpenStreetMap

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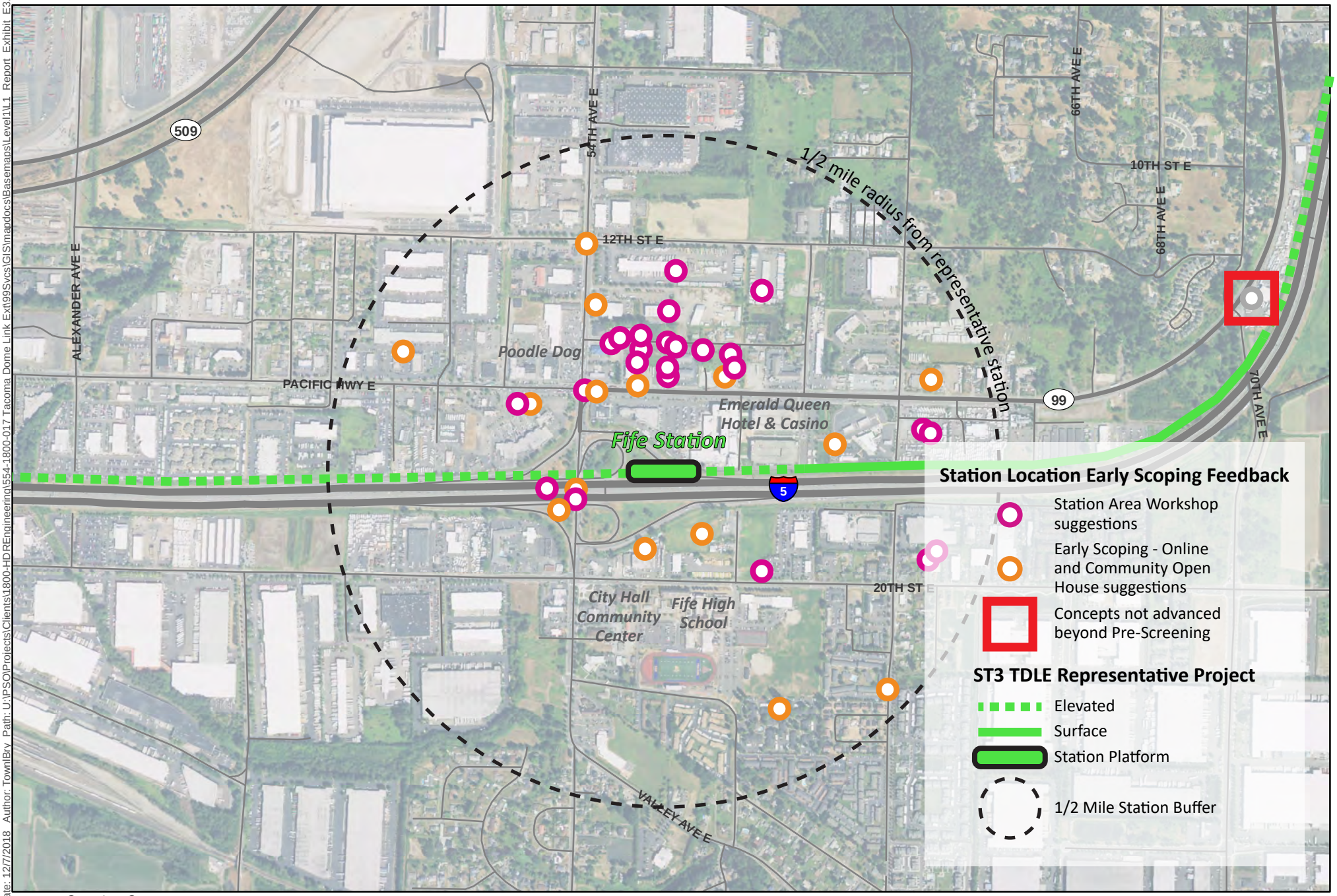
SOUNDTRANSIT

Exhibit 2-2
TDLE Station Location Feedback
South Federal Way



Source: © Mapbox, © OpenStreetMap

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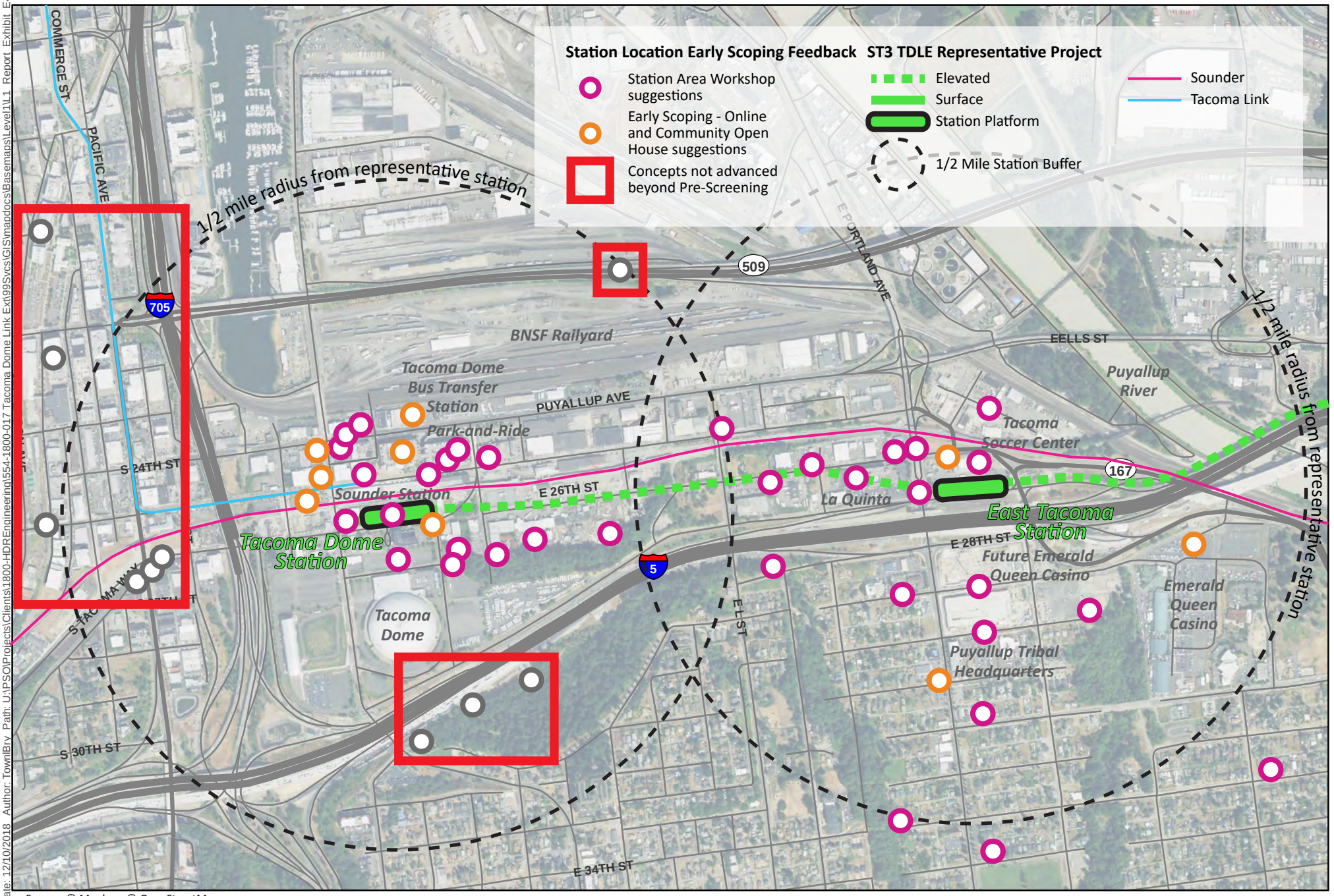
SOUNDTRANSIT

Exhibit 2-3
TDLE Station Location Feedback
Fife

Date: 12/7/2018 Author: TownlBry Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Basemaps\Level1\L1 Report Exhibit E3.mxd



Date: 12/10/2018 Author: TownBry Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Basemaps\Level1\L1 Report Exhibit E4.mxd

Source: © Mapbox, © OpenStreetMap

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SOUNDTRANSIT

Exhibit 2-4
TDLE Station Location Feedback
East Tacoma and Tacoma Dome

2.3.1 Alternatives Evaluated and Advanced in Level 1

A total of 51 station and alignment alternatives across the four station areas were evaluated in Level 1. The vertical profile of all TDLE alternatives was assumed to be elevated except for relatively short at-grade alignment sections in locations where elevated street crossings are not required. The initial range of alternatives is generally located within the SR 99 or I-5 corridors as shown in Exhibit 2-5.

The ELG recommended the alternatives to advance to Level 2 based on the Level 1 evaluation and input from tribes, agencies, advisory groups, and the public, which are summarized below. For more detail on the Level 1 evaluation, refer to the TDLE Pre-Screening and Level 1 Alternatives Evaluation Report (Sound Transit 2019). The Level 1 alternatives that were advanced for further study in Level 2 are shown on Exhibit 2-6.

South Federal Way Alternative Alignments

- SF 1 Enchanted/348th
- SF 2 Enchanted/352nd
- SF 3 Enchanted/356th
- SF 4A SR 99 to I-5
- SF 4B SR 99
- SF 4C I-5 to SR 99
- SF 4D I-5 to SR 99 to I-5
- SF 5A SR 99
- SF 5B I-5 to SR 99
- SF 6 I-5/344th
- SF 7 I-5/352nd/Representative
- SF 8 I-5/356th
- SF 9 I-5/Jet
- SF 10 I-5/359th
- SF 11 I-5 Median
- SF 12 I-5 East/Enchanted
- SF 13 I-5 East/Wild Waves

Fife Alternative Alignments

- Fife 1 12th Street
- Fife 2A Pacific Hwy West
- Fife 2B Pacific Hwy West
- Fife 3A 15th Street
- Fife 3B 15th Street
- Fife 4A Pacific Hwy East
- Fife 4B Pacific Hwy East
- Fife 4C Pacific Hwy East
- Fife 5A Pacific Hwy South
- Fife 5B Pacific Hwy South
- Fife 5C Pacific Hwy South
- Fife 6 I-5 West/Representative
- Fife 7 I-5 East
- Fife 8 I-5 Median
- Fife 9A 20th Street
- Fife 9B 20th Street

East Tacoma Alternative Alignments

- ET 1A Puyallup Avenue
- ET 1B Puyallup Avenue
- ET 2 25th Street
- ET 3 26th Street East
- ET 4A 27th Street North
- ET 4B 27th Street North/Representative
- ET 4C 27th Street North
- ET 5 27th Street South
- ET 6 26th Street West
- ET 7 29th Street
- ET 8 34th Street

Tacoma Dome Alternative Alignments

- TD 1 Puyallup Avenue
- TD 2 25th Street West
- TD 3 25th Street East
- TD 4A 26th Street
- TD 4B 26th Street/Representative
- TD 5A 27th Street
- TD 5B 27th Street

South Federal Way Segment

East Tacoma Segment

Tacoma Dome Segment

Fife Segment

Federal Way

Tacoma

Milton

Fife

King County
Pierce County

- Station
- Federal Way Link Extension
- Station Area Segment Boundaries
- King County/Pierce County Boundary

Source: © Mapbox, © OpenStreetMap

0 0.25 0.5 1 Miles

SOUNDTRANSIT

EXHIBIT 2-5
LEVEL 1 ALTERNATIVES
ALL STATION AREAS

TACOMA DOME LINK EXTENSION

Date: 2/21/2019 Author: TownBry Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99\Svcs\GIS\mapdocs\Level 2 Report\Exhibit E-4.mxd

South Federal Way Alternative Alignments - Advancing to Level 2

- SF 2 Enchanted/352nd
- SF 3 Enchanted/356th
- SF 4A SR 99 to I-5
- SF 4B SR 99
- SF 4C I-5 to SR 99
- SF 4D I-5 to SR 99 to I-5
- SF 8 I-5/356th
- SF 9 I-5/Jet

Fife Alternative Alignments - Advancing to Level 2

- Fife 1 12th Street
- Fife 3A 15th Street
- Fife 3B 15th Street
- Fife 4A Pacific Hwy East
- Fife 4B Pacific Hwy East

East Tacoma Alternative Alignments - Advancing to Level 2

- ET 1A Puyallup Avenue
- ET 2 25th Street
- ET 3 26th Street East
- ET 4A 27th Street North
- ET 4B 27th Street North/Representative
- ET 4C 27th Street North
- ET 5 27th Street South
- ET 6 26th Street West

Tacoma Dome Alternative Alignments - Advancing to Level 2

- TD 1 Puyallup Avenue
- TD 2 25th Street West
- TD 3 25th Street East
- TD 4A 26th Street
- TD 4B 26th Street/Representative

Federal Way
South Federal Way Segment
East Tacoma Segment
Tacoma Dome Segment
Fife Segment
Tacoma
Milton
Fife
King County
Pierce County

- Alternatives with Greater Challenges
- Federal Way Link Extension
- Station Area Segment Boundaries
- King County/Pierce County Boundary

Date: 2/22/2019 Author: TownBry Path: U:\PSO\Projects\Client\s\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Level_2_Report\Exhibit_2-4.mxd

Source: © Mapbox, © OpenStreetMap

0 0.25 0.5 1 Miles

SOUNDTRANSIT

EXHIBIT 2-6
LEVEL 1 ALTERNATIVES ADVANCING TO LEVEL 2
ALL STATION AREAS

TACOMA DOME LINK EXTENSION

2.3.1.1 South Federal Way

There were 17 alternatives in South Federal Way that could generally be categorized into four alignment families (Exhibit 2-7): Enchanted Parkway, SR 99, I-5 West/Representative, and I-5 Median/I-5 East.

EXHIBIT 2-7
South Federal Way Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
Enchanted Parkway	SF 1 Enchanted/348th SF 2 Enchanted/352nd SF 3 Enchanted/356th	SF 2 Enchanted/352nd SF 3 Enchanted/356th
SR 99	SF 4A 99 North (SR 99 to I-5) SF 4B 99 North (SR 99) SF 4C 99 North (I-5 to SR 99) SF 4D 99 North (I-5 to SR 99 to I-5) SF 5A 99 South (SR 99) SF 5B 99 South (I-5 to SR 99)	SF 4A 99 North (SR 99 to I-5) SF 4B 99 North (SR 99) SF 4C 99 North (I-5 to SR 99) SF 4D 99 North (I-5 to SR 99 to I-5)
I-5 West/Representative	SF 6 I-5/344th SF 7 I-5/352nd (Representative) SF 8 I-5/356th SF 9 I-5/Jet SF 10 I-5/359th	SF 8 I-5/356th SF 9 I-5/Jet
I-5 Median/I-5 East	SF 11 I-5 Median SF 12 I-5 East/Enchanted SF 13 I-5 East/Wild Waves	None

The Level 1 alternatives considered in the South Federal Way segment are shown on Exhibit 2-8.

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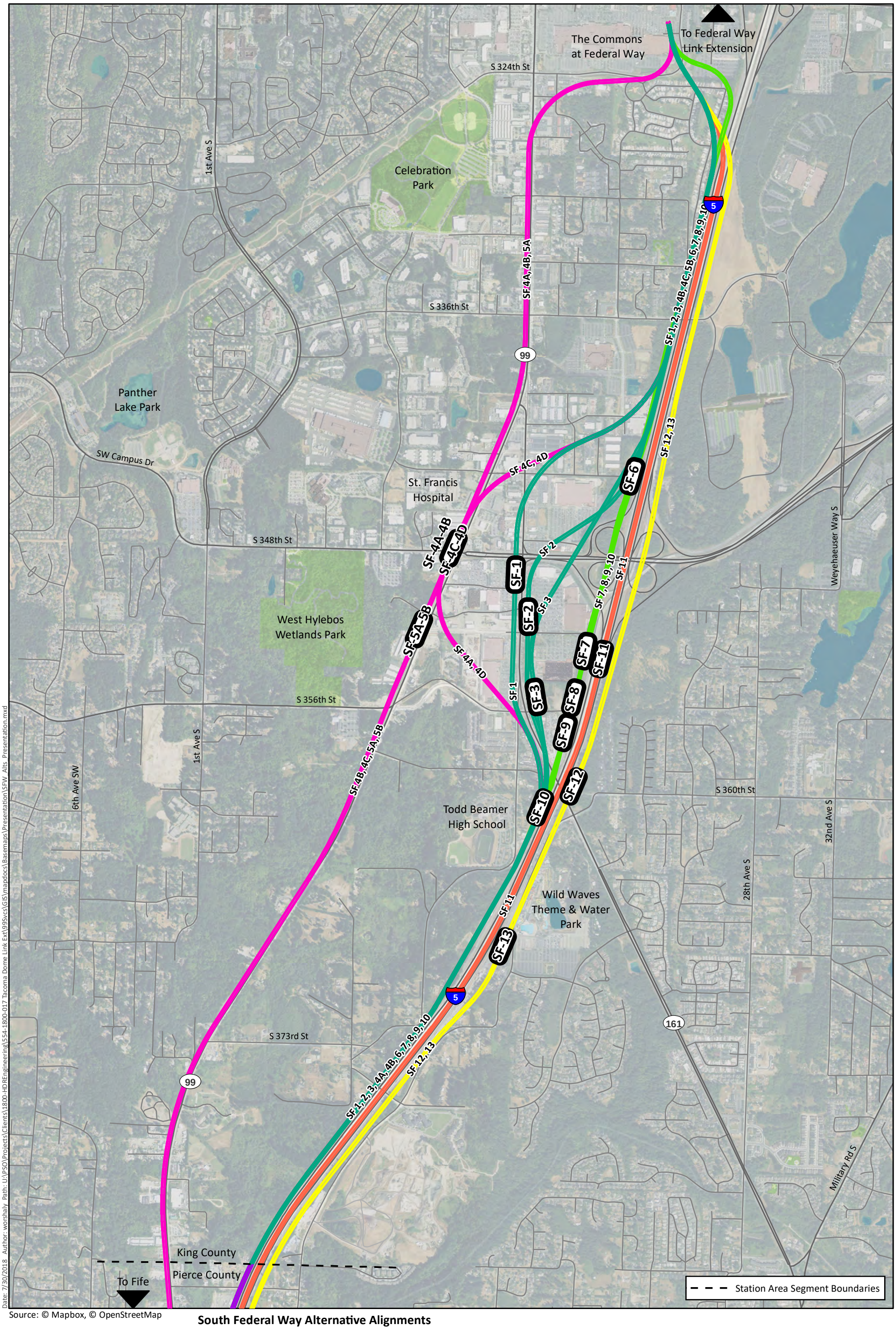

Source: © Mapbox, © OpenStreetMap

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SOUNDTRANSIT

South Federal Way Alternative Alignments

- SF 1 Enchanted/348th
- SF 2 Enchanted/352nd
- SF 3 Enchanted/356th
- SF 4A SR 99 to I-5
- SF 4B SR 99
- SF 4C I-5 to SR 99
- SF 4D I-5 to SR 99 to I-5
- SF 5A SR 99
- SF 5B I-5 to SR 99
- SF 6 I-5/344th
- SF 7 I-5/352nd/Representative
- SF 8 I-5/356th
- SF 9 I-5/Jet
- SF 10 I-5/359th
- SF 11 I-5 Median
- SF 12 I-5 East/Enchanted
- SF 13 I-5 East/Wild Waves

Exhibit 2-8

Level 1 Alternatives - South Federal Way

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2.3.1.2 Fife

There were 16 alternatives in Fife that could generally be categorized into five alignment families (Exhibit 2-9): I-5 West to 12th Street, Pacific Highway/15th Street, Pacific Highway East/South, I-5 West/Representative, and I-5 Median/I-5 South.

EXHIBIT 2-9
Fife Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
I-5 West to 12th Street	Fife 1 12th Street	Fife 1 12th Street
Pacific Highway/15th Street	Fife 2A Pacific Highway West Fife 2B Pacific Highway West Fife 3A 15th Street Fife 3B 15th Street	Fife 3A 15th Street Fife 3B 15th Street
Pacific Highway East/South	Fife 4A Pacific Highway East Fife 4B Pacific Highway East Fife 4C Pacific Highway East Fife 5A Pacific Highway South Fife 5B Pacific Highway South Fife 5C Pacific Highway South	Fife 4A Pacific Highway East Fife 4B Pacific Highway East Fife 4C Pacific Highway East
I-5 West/Representative	Fife 6 I-5 West Fife 7 I-5 West (Representative)	None
I-5 Median/I-5 South	Fife 8 I-5 Median Fife 9A 20th Street Fife 9B 20th Street	None

The Level 1 alternatives considered in the Fife segment are shown on Exhibit 2-10.

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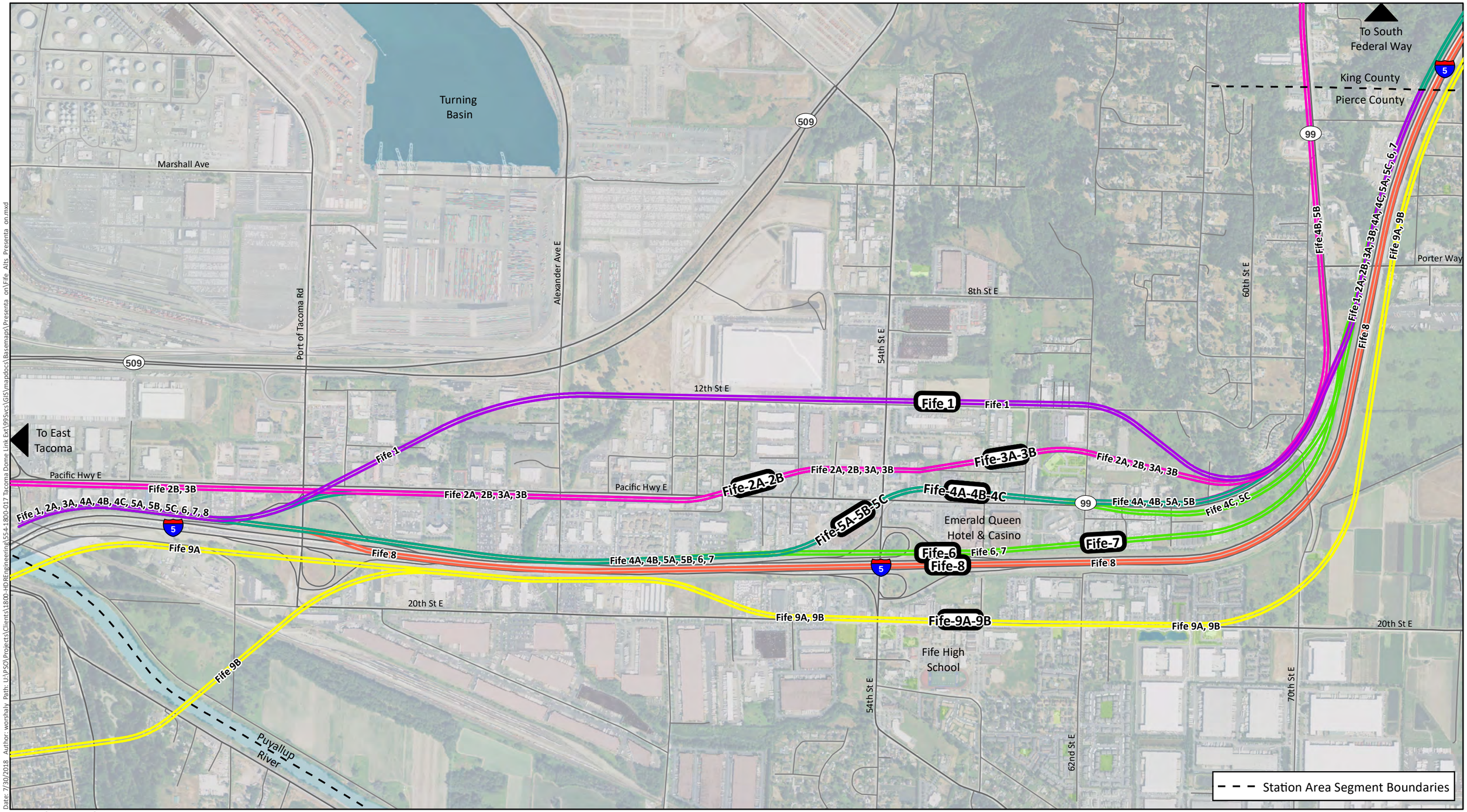

Date: 7/30/2018 Author: worshaly Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Basemaps\Presenta on\Fife Alts Presenta on.mxd

Source: © Mapbox, © OpenStreetMap

0 500 1,000 2,000 Feet

SOUNDTRANSIT

Fife Alternative Alignments

- Fife 1 12th Street
- Fife 2A Pacific Hwy West
- Fife 2B Pacific Hwy West
- Fife 3A 15th Street
- Fife 3B 15th Street
- Fife 4A Pacific Hwy East
- Fife 4B Pacific Hwy East
- Fife 4C Pacific Hwy East
- Fife 5A Pacific Hwy South
- Fife 5B Pacific Hwy South
- Fife 5C Pacific Hwy South
- Fife 6 I-5 West/Representative
- Fife 7 I-5 East
- Fife 8 I-5 Median
- Fife 9A 20th Street
- Fife 9B 20th Street

Exhibit 2-10
Level 1 Alternatives - Fife

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2.3.1.3 East Tacoma

There were 11 alternatives in East Tacoma that could generally be categorized into four alignment families (Exhibit 2-11): Puyallup Avenue, East 25th Street, East 26th Street/Representative, and East 26th/27th Street.

EXHIBIT 2-11
East Tacoma Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
Puyallup Avenue	ET 1A Puyallup Avenue (I-5 West to Puyallup) ET 1B Puyallup Avenue (SR 99 to Puyallup)	ET 1A Puyallup Avenue (I-5 West to Puyallup)
East 25th Street	ET 2 25th Street	ET 2 25th Street
East 26th Street/Representative	ET 3 26th Street – East ET 4A 27th Street – North ET 4B 27th Street – North (Representative) ET 4C 27th Street – North ET 6 26th Street – West	ET 3 26th Street – East ET 4A 27th Street – North ET 4B 27th Street – North (Representative) ET 4C 27th Street – North ET 6 26th Street – West
East 26th/27th Street	ET 5 27th Street – South ET 7 29th Street ET 8 34th Street	ET 5 27th Street – South

The Level 1 alternatives considered in the East Tacoma segment are shown on Exhibit 2-12.

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Puyallup Ave
E D St
Ells St
Puyallup River
E 25th St
E 26th St
E 27th St
E 30th St
E 32nd St
E L St
E R St
Portland Ave E
McKinley Ave E
Tacoma Link & Sounder Station
Tacoma Dome
McKinley Park
Rogers Park
Puyallup Tribal Administration
Emerald Queen Casino Expansion
Emerald Queen Casino
To Fife
509
705
5

TD-1
TD-2
TD-3
TD-4A-4B
TD-5A-5B
TD 1
TD 2, TD 3
TD 4A
TD 4B
TD 5A
TD 5B

ET-1A-1B
ET-2
ET-3
ET-4A-4B-4C
ET-5
ET-6
ET-7
ET-8
ET 1A
ET 1B
ET 2
ET 3
ET 4A, 4B, 4C
ET 4B
ET 5
ET 6
ET 7
ET 8
ET 1A, ET 2, ET 3, ET 5, ET 6

Station Area Segment Boundaries

Source: © Mapbox, © OpenStreetMap

0 250 500 1,000 Feet

SoundTransit

Tacoma Dome Alternative Alignments

- TD 1 Puyallup Avenue
- TD 2 25th Street West
- TD 3 25th Street East
- TD 4A 26th Street
- TD 4B 26th Street/Representative
- TD 5A 27th Street
- TD 5B 27th Street

East Tacoma Alternative Alignments

- ET 1A Puyallup Avenue
- ET 1B Puyallup Avenue
- ET 2 25th Street
- ET 3 26th Street East
- ET 4A 27th Street North
- ET 4B 27th Street North/Representative
- ET 4C 27th Street North
- ET 5 27th Street South
- ET 6 26th Street West
- ET 7 29th Street
- ET 8 34th Street

Exhibit 2-12

Level 1 Alternatives - East Tacoma and Tacoma Dome

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2.3.1.4 Tacoma Dome

There were seven alternatives at the Tacoma Dome that could generally be categorized into four alignment families (Exhibit 2-13): Puyallup Avenue, East 25th Street, East 26th Street/Representative, and East 26th/27th Street.

EXHIBIT 2-13
Tacoma Dome Level 1 Alternatives

Alignment Family	Level 1 Alternatives	Level 1 Alternatives Advanced to Level 2
Puyallup Avenue	TD 1 Puyallup Avenue	TD 1 Puyallup Avenue
East 25th Street	TD 2 25th Street – East TD 3 25th Street – West	TD 2 25th Street – East TD 3 25th Street – West
East 26th Street/Representative	TD 4A 26th Street TD 4B 26th Street (Representative)	TD 4A 26th Street TD 4B 26th Street (Representative)
East 26th/27th Street	TD 5A 27th Street TD 5B 27th Street	None

The Level 1 alternatives considered in the Tacoma Dome segment are shown on Exhibit 2-12.

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3 Level 2 Evaluation Criteria

The criteria used to evaluate the Level 2 alternatives originated from the objectives developed from the project's Purpose and Need, described in Chapter 1. These objectives are to:

- Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs;
- Support Sustainable Land Use Plans, Economic Development, and Transit Oriented Development;
- Preserve the Environment;
- Support Equitable Mobility; and
- Provide a Financially Sustainable and Constructible Project.

Exhibit 3-1 presents the evaluation criteria established for the Level 2 evaluation. It shows how each relates to Level 1 measures and the objectives with which they correspond. Each criterion has one or more quantitative or qualitative measures that are listed below and further described later in this chapter. They are intended to differentiate between alternatives in terms of project performance and potential effects. For the Level 2 evaluation, additional measures that provide more detail compared to the Level 1 evaluation were developed.

EXHIBIT 3-1
Level 1 and 2 Evaluation Criteria

Evaluation Criteria	Level 1 Measures	Level 2 Measures
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs Purpose and Need: • Provide high-quality rapid, reliable, and efficient light rail transit service to communities in the project corridor, as defined through the local planning process and reflected in the ST3 Plan (Sound Transit 2016). • Improve regional mobility by increasing connectivity and capacity in the TDLE corridor from the Federal Way Transit Center to the Tacoma Dome Station area to meet projected transit demand. • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.		
Ridership Potential	L1.1: Travel time L1.2: Total population and employment (2035) within 1/2 mile of stations L1.3: Proximity to existing/future population and employment centers/activity centers and major destinations within 1/2 mile of stations	L2.1: Travel time L2.2: Daily and annual projected project ridership (2042) L2.3: Projected station boardings L2.4: Proximity to Puget Sound Regional Council (PSRC) growth centers and manufacturing/industrial centers L2.5: Population (persons/acre) and job (jobs/acre) densities

EXHIBIT 3-1
Level 1 and 2 Evaluation Criteria

Evaluation Criteria	Level 1 Measures	Level 2 Measures
Objective: Support Sustainable Land Use Plans, Economic Development, and Transit Oriented Development Purpose and Need: • Connect communities of Federal Way, Milton, Fife, Tacoma, and the Puyallup Tribe of Indians to regional centers and destinations on the regional high-capacity transit (HCT) system as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's Regional Transit Long-Range Plan (Sound Transit 2014a). • Encourage equitable and sustainable urban growth in station areas through support of transit oriented development (TOD) and multimodal integration in a manner that is consistent with local land use plans and policies, including Sound Transit's Transit Oriented Development and Sustainability policies. • Encourage convenient and safe nonmotorized access to stations such as bicycle and pedestrian connections consistent with Sound Transit's System Access Policy.		
Supports future TOD opportunities	L1.4: Consistency with local and tribal economic development goals, planned development, current and anticipated zoning, and/or comprehensive plans L1.5: Barriers that limit the development potential, walkshed, and range and safety of bicycling around the station such as topography, wide roads, highways, bodies of water, and railways L1.6: Presence of amenities to catalyze complete neighborhoods, such as shops, services, schools, recreational facilities, civic or character amenities, or views/access to nature	L2.6: Consistency with civic and community planning and land use, evaluating elements such as local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans L2.7: Likelihood of station area redevelopment into TOD neighborhood L2.8: Detailed evaluation of nonmotorized barriers within a ½-mile of the station L2.9: Presence of amenities that can catalyze development of TOD neighborhoods
Promotes multimodal access and connections	L1.7: Qualitative assessment of bicycle and pedestrian accessibility and potential for improvement L1.8: Qualitative assessment of transit connections and potential for improvement within station areas	L2.10: Proximity to existing transit service and level of transit service diversion required L2.11: Ease of vehicular pick-up/drop-off for a variety of users L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations
Objective: Preserve the Environment Purpose and Need: • Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments.		
Effects on the natural environment	L1.9: Proximity to major wetlands, streams, floodplains, steep slopes, Endangered Species Act (ESA) species, fisheries, or other natural habitat areas within 100 feet of an alternative (in acres of resources)	L2.14: Potential effects on wetlands L2.15: Potential effects on streams/stream crossings L2.16: Potential to affect protected species and habitats L2.17: Potential effects on vegetated areas L2.18: Potential effects on floodplains L2.19: Presence of geologic hazard areas (steep slopes, erosion, or landslide hazard areas)

EXHIBIT 3-1
Level 1 and 2 Evaluation Criteria

Evaluation Criteria	Level 1 Measures	Level 2 Measures
Effects on the built environment	L1.10: Estimated levels of property impacts (residential, commercial, other) and number of large tax-generating properties affected L1.11: Estimated number of tribal parcels affected L1.12: Presence of known Section 4(f), park, historic, culturally significant tribal properties, or other protected areas L1.13: Presence of a viewshed or proximity to view-dependent businesses L1.14: Potential for impacts from vibration and noise L1.15: Potential for affecting areas with existing traffic congestion L1.16: Potential for affecting parking supply and demand and spillover parking effects L1.17: Potential avoidance of hazardous waste	L2.20: Estimated number of affected parcels and total acreage by property type L2.21: Estimated number of affected parcels with major economic activity generators L2.22: Estimated number of displacements by property type; impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating L2.23: Estimated number of tribal parcels potentially affected L2.24: Potential effects on Section 4(f) parks and recreational resources L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places (NRHP) L2.26: Potential effects on Section 4(f) cultural and archaeological resources L2.27: Potential effects on viewsheds along the alignment and potential for impacts to view-dependent businesses L2.28: Potential effects on sensitive noise and vibration receptors L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network L2.30: Potential effects on freight movement L2.31: Potential avoidance of hazardous waste L2.32: Potential effects on parking demand and supply
Objective: Support Equitable Mobility Purpose and Need: • Expand mobility for the corridor and region's residents, which include transit dependent, low-income, and minority populations.		
Provide equitable transit service to low-income, minority, and transit-dependent populations	L1.18: Qualitative demographic differences among the option census data (households with no car, low-income, and minority populations) in station areas L1.19: Potential for impacts on low-income and minority populations	L2.33: Potential benefits to low-income or minority populations L2.34: Potential for impacts on low-income and/or minority populations
Objective: Provide a Financially Sustainable and Constructible Project Purpose and Need: • Implement a system that is technically and financially feasible to build, operate, and maintain.		
Financial considerations	L1.20: Major cost elements beyond the representative project description	L2.35: Preliminary conceptual estimate* L2.36: Operating estimate

EXHIBIT 3-1
Level 1 and 2 Evaluation Criteria

Evaluation Criteria	Level 1 Measures	Level 2 Measures
Constructibility and engineering considerations	L1.21: Potential risks (major utilities or structures) L1.22: Availability and potential to use publicly owned right-of-way L1.23: Capability to accommodate future expansion included in the Sound Transit Long-Range Plan	L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure L2.38: Number of sites requiring environmental remediation within the project footprint of an alternative L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects) L2.40: Availability and potential to use publicly owned right-of-way and publicly owned property L2.41: Capability to accommodate future expansion included in the Sound Transit Long-Range Plan
Operational considerations	L1.24 Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome, number of at-grade crossings, if any)	L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks and pocket track at Tacoma Dome, number of at-grade crossings, if any)
Schedule considerations	L1.25: Overall schedule risk	L2.43: Overall schedule risk

*Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.

3.1 Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs

The criterion used to evaluate this objective was ridership potential. This criterion was evaluated using the five measures described below.

3.1.1 Ridership Potential

Ridership potential was quantitatively and qualitatively assessed; Exhibit 3-2 summarizes the methodology used for each measure.

EXHIBIT 3-2
Methodology for Assessing Ridership Potential

Evaluation Measure	Methodology
L2.1: Travel time	Estimated travel times based on alignment length and percent of alignment with horizontal speeds below 55 miles per hour (mph).
L2.2: Daily projected project ridership (2042)	Average daily projected riders (baseline estimate will be provided for each TDLE station area, with qualitative differences noted for station/alignment alternatives).
L2.3: Projected station boardings	Projected station boardings (baseline estimate will be provided for each TDLE station area, with qualitative differences noted for station/alignment alternatives).
L2.4: Proximity to PSRC growth centers and manufacturing/industrial centers	Percent of PSRC growth center and/or manufacturing/industrial center land area within 10-minute walkshed of stations.
L2.5: Population (persons/acre) and job (jobs/acre) densities	Existing and future population and employment densities within a 10-minute walkshed of stations (reflecting PSRC Land Use Vision Dataset)

3.2 Support Sustainable Land Use Plans, Equitable Access, and Economic Development

The two criteria used to evaluate this objective were 1) Supports Future Transit Oriented Development Opportunities, and 2) Promotes Multimodal Access and Integration. The criteria were evaluated using the eight measures described below.

3.2.1 Supports Future Transit Oriented Development Opportunities

Support of future TOD opportunities was quantitatively and qualitatively assessed; Exhibit 3-3 summarizes the methodology used for each measure.

EXHIBIT 3-3
Methodology for Assessing Future TOD Opportunities

Evaluation Measure	Methodology
L2.6: Consistency with civic and community planning and land use, evaluating elements such as local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans	Assessment of the civic and land use documents that are relevant and up to date in each station area. Evaluate each station location against the relevant documents/civic plans, rating each plan as "consistent with TOD around alternative location" (+), "neutral", or "inconsistent with TOD around alternative location" (-).
L2.7: Likelihood of station area redevelopment into TOD neighborhood	Assessment of the degree to which the station area has land available to support development into a TOD neighborhood, as measured by the amount of land within a ¼-mile walkshed of each station that has a relatively greater likelihood to redevelop into transit-supportive uses. Land in the walkshed will be classified as follows: (a) Not available for development, e.g., water, roadways, (b) tribal land, (c) Less likely to redevelop (industrial or equivalent zoning, low-density residential at less than 5 units/acre), and (d) Greater likelihood to redevelop zoning that currently allows residential or a mix of uses, including residential (TOD-supportive or has potential to evolve to TOD- supportive uses)]. Higher scores will be associated with a larger amount of land in category (d). If the amount of type (d) land for all station options is low, then type (c) may also be considered to make a distinction between alternatives.
L2.8: Detailed evaluation of nonmotorized barriers within a ½-mile of the station	Assessment of barriers within a half-mile of TDLE station areas (barriers list: (1) Topography (hills) that limit the walkshed, (2) Wide roads, (3) Highways, (4) Bodies of water, (5) Railways). This analysis will consider detailed information available on guideway locations, conceptual station designs, station locations and entrances, and connectivity to surrounding streets. This may influence the ability to overcome barriers for non-motorized or ADA access, such as topography or wide roads.
L2.9: Presence of amenities that can catalyze development of transit oriented neighborhoods	Assessment of amenities that can catalyze complete transit oriented neighborhoods in the station area. Amenities include housing options, public schools, public open spaces and recreational facilities, civic amenities, views, stores, and other commercial services such as (grocery stores, department stores, restaurants, hardware stores, drug stores, dry cleaners/laundry, pet supply/pet care, apparel or sporting goods stores and after school programs). This analysis will consider detailed information available on guideway locations, conceptual station designs, and station locations, which in turn influences what amenities are likely to be preserved, enhanced or disrupted.

3.2.2 Promotes Multimodal Access and Integration

Promoting multimodal access and integration was quantitatively and qualitatively assessed; Exhibit 3-4 summarizes the methodology used for each measure.

EXHIBIT 3-4
Methodology for Assessing Multimodal Access and Integration

Evaluation Measure	Methodology
L2.10: Proximity to existing transit service and level of transit service diversion required	Distance to nearest existing bus stop (served by routes with at least 30-minute headways during the peak) and rail platform from station (Tacoma Dome station location only), measuring the level of diversion that could be required.
L2.11: Ease of vehicular pick-up/drop-off for a variety of users	Assessment of ease of access to pick-up/drop-off at stations due to nearby street network and congestion.
L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations	Ratio of existing and funded bicycle facility miles (greenways, lanes, protected lanes, trails) to total roadway miles within a 10-minute bikeshed of stations.
L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations	Ratio of existing and funded pedestrian facility miles (trails, sidewalks) to total roadway miles within a 10-minute walkshed of stations.

3.3 Preserve the Environment

The criteria used to evaluate this objective are Effects on the Natural Environment and Effects on the Built Environment. The criteria were evaluated using the 19 measures described below.

3.3.1 Effects on the Natural Environment

Effects on the natural environment were quantitatively assessed; Exhibit 3-5 summarizes the methodology used for each measure.

EXHIBIT 3-5
Methodology Assessing the Effects on the Natural Environment

Evaluation Measure	Methodology
L2.14: Potential effects to wetlands	Extent of impacts to wetlands within a 100-foot-buffer of each alternative.
L2.15: Potential effects to streams/stream crossings	Number of impacts to streams and stream crossings within a 100-foot-buffer of each alternative.
L2.16: Potential to affect protected species and habitats	Number of impacts to habitats or areas where endangered, threatened, or sensitive species have a primary association (based on Priority Habitats and Species data from Washington Department of Fish and Wildlife (WDFW), within a 100-foot buffer of each alternative.
L2.17: Potential effects to vegetated areas	Estimated area of vegetation removal.
L2.18: Potential effects to floodplains	Number of impacts to or floodplains/floodways (additive) within a 100-foot buffer of each alternative.
L2.19: Presence of geologic hazard areas (steep slopes, erosion, or landslide hazard areas)	Number of geologic hazard areas (such as steep slopes, erosion, or landslide hazard areas) within a 100-foot buffer of each alternative.

3.3.2 Effects on the Built Environment

Effects on the built environment were qualitatively and quantitatively assessed; Exhibit 3-6 summarizes the methodology used for each measure.

EXHIBIT 3-6
Methodology for Assessing Effects on the Built Environment

Evaluation Measure	Methodology
L2.20: Estimated number of affected parcels and total acreage by property type	Assessment of potential property impacts from alignment and station and general estimate of acreage of land converted from other land uses to a transportation use.
L2.21: Estimated number of affected parcels with major economic activity generators	Assessment of potential property impacts from alignment and station that have a major economic activity generator (such as Costco, Home Depot, Port of Tacoma property, strip malls).
L2.22: Estimated number of displacements by property type; impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating	Number of potential property impacts from alignment and station by property type; range may vary by segment due to length of alignment.
L2.23: Estimated number of tribal parcels potentially affected	Number of tribal-owned parcels affected by each alternative.
L2.24: Potential effects on Section 4(f) parks and recreational resources	Number of impacts and estimated area of potential permanent impacts to parks and recreational resources within a 100-foot buffer of each alternative.
L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places (NRHP)	Number of impacts to Section 4(f) resources and properties listed in or eligible for the NRHP within a 100-foot buffer of each alternative.
L2.26: Potential effects on Section 4(f) cultural and archaeological resources	Number of potential impacts and probability to encounter Section 4(f) cultural and/or archaeological resources within a 100-foot-buffer of each alternative.
L2.27: Potential effects on viewsheds along the alignment and potential for impacts to view-dependent businesses	Assessment of impacts to protected views and view-dependent businesses.
L2.28: Potential effects on sensitive noise and vibration receptors	Number of potentially affected sensitive receptors within a 350-foot-buffer of each alternative; sensitive receptors include residences and “others” (schools, churches, parks, hotels, hospitals, libraries, cemeteries, etc.).
L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network	Assessment of intersection level of service (LOS), and effects on traffic circulation and access for both automobiles and freight, including potential number of lane restrictions, turn restrictions, and driveways impacted.
L2.30: Potential effects on freight movement	Assessment of impacts to LOS on freight corridors.
L2.31: Potential avoidance of hazardous waste	Number of hazardous materials sites within 1/8 mile of each alternative.
L2.32: Potential effects on parking demand and supply	Assessment of impacts on parking supply (review of impacts to parcels with parking).

3.4 Support Equitable Mobility

The criterion used to develop this objective was Provide Equitable Transit Service to Low-Income, Minority, and Transit-Dependent Populations. The criterion was evaluated using the two measures described below.

3.4.1 Provide Equitable Transit Service to Low-Income, Minority, and Transit-Dependent Populations

Equitable transit service was quantitatively and qualitatively; Exhibit 3-7 summarizes the methodology used for each measure.

EXHIBIT 3-7
Methodology for Assessing Equitable Transit Service

Evaluation Measure	Methodology
L2.33: Potential benefits to low-income or minority populations	Assessment of how well stations serve low-income/minority and traditionally underserved or transit-dependent populations (e.g., population with no car, and population younger than 18 and older than 65) compared to baseline. The baseline is the percentage of minority or low-income population and transit-dependent populations in each city that the station area serves.
L2.34: Potential for impacts on low-income and/or minority populations	This measure compares the potential for residential and business displacements, visual, noise, and construction impacts with the presence of environmental justice populations (minority and low-income) along the corridor segment. If there is a higher number of displacements estimated, in addition to higher than baseline environmental justice populations, that would result in higher potential impacts. If there is a lower number of displacements estimated, in addition to lower than baseline environmental justice populations, that would result in lower potential impacts. A scoring matrix was built around these two end-points to determine the rating.

Due to the limited information available at this phase of analysis, not all low-income and/or minority residential areas and businesses may be captured. In addition, overall estimates of low-income and/or minority populations may be subject to margins of error and will be analyzed further in later phases.

3.5 Provide a Financially Sustainable and Constructible Project

The criteria used to evaluate this objective are Financial Considerations, Constructibility and Engineering Considerations, Operational Considerations, and Schedule Considerations. The criteria were evaluated using the nine measures described below.

3.5.1 Financial Considerations

Financial considerations were quantitatively assessed; Exhibit 3-8 summarizes the methodology used for each measure.

EXHIBIT 3-8
Methodology for Assessing Financial Considerations

Evaluation Measure	Methodology
L2.35: Preliminary conceptual estimate*	Assessment of major cost elements compared to ST3 representative project and preliminary conceptual estimate based on conceptual design quantities and current Sound Transit unit pricing.
L2.36: Operating estimate	Assessment of potential magnitude of operations and maintenance estimates based on travel time.

*Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.

3.5.2 Constructibility and Engineering Considerations

Constructibility and engineering considerations were quantitatively and qualitatively assessed; Exhibit 3-9 summarizes the methodology used for each measure.

EXHIBIT 3-9
Methodology for Assessing Constructibility and Engineering Considerations

Evaluation Measure	Methodology
L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure	Potential impacts on known major utilities or structures (e.g., power lines, transportation infrastructure).
L2.38: Number of sites requiring environmental remediation within the project footprint of an alternative	Assessment of the number of sites requiring environmental remediation within the project footprint of an alternative.
L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects)	Assessment of temporary construction impacts to the community, including the potential for transportation, noise, vibration, and visual effects that could disrupt the community.
L2.40: Availability and potential to use publicly owned right-of-way and publicly owned property	Amount of publicly owned right-of-way and publicly owned property (individual parcels in public ownership) available per conceptual design of an alignment.
L2.41: Capability to accommodate future expansion included in the Sound Transit Long Range Plan	Capability of station location and alignment to accommodate future expansion included in the Sound Transit Long-Range Plan.

3.5.3 Operational Considerations

Operational considerations were qualitatively assessed; Exhibit 3-10 summarizes the methodology used for each measure.

EXHIBIT 3-10
Methodology for Assessing Operational Considerations

Evaluation Measure	Methodology
L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks and pocket track at Tacoma Dome, number of at-grade crossings, if any)	Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome and South Federal Way station areas, number of at-grade crossings, if any).

3.5.4 Schedule Considerations

Schedule considerations were qualitatively assessed; Exhibit 3-11 summarizes the methodology used for each measure.

EXHIBIT 3-11
Methodology for Assessing Schedule Considerations

Evaluation Measure	Methodology
L2.43: Overall schedule risk	Consideration of potential risks to project schedule (i.e., potential to increase schedule).

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4 Level 2 Alternatives

This chapter describes the alternatives analyzed in the Level 2 evaluation of the TDLE project. Many of the alternatives evaluated in Level 2 were identified as higher performing during the Level 1 evaluation and advanced for further analysis in Level 2 by the ELG. Alternatives advanced from Level 1 were refined between the Level 1 and Level 2 evaluation processes. There were also some "hybrid" alternatives developed to capture the best-performing parts of other alternatives or to reduce potential impacts from alternatives. In some instances, alternatives were renamed for clarity in the Level 2 evaluation. Also, there were several variations on Level 1 alternatives developed and included in the Level 2 evaluation. Each alternative is also supported by early conceptual station plans, which were refined using feedback from the Station Area Workshop #2.

A total of 27 station and alignment alternatives across the South Federal Way, Fife, East Tacoma, and Tacoma Dome station areas were evaluated in Level 2, shown on Exhibit 4-1.

4.1 South Federal Way

There are nine alternatives in South Federal Way that can generally be categorized into three alignment families: Enchanted Parkway, SR 99, and I-5 West, as shown on Exhibit 4-2. All of the South Federal Way alternatives include a parking facility at the station.

4.1.1 Enchanted Parkway

The Enchanted Parkway alternatives include SF 2 West Enchanted/352nd (variation of SF 2 in Level 1), SF 2 East Enchanted/352nd (SF 2 in Level 1), and SF 3 Enchanted/356th.

SF 2 West Enchanted/352nd; SF 2 East Enchanted/352nd

Both SF 2 alternatives travel south-southeast from the terminus of the FWLE to align along the west side of I-5 until South 344th Street, where the alignments begin to travel southwest towards 16th Avenue South/Enchanted Parkway South. SF 2 West travels along the west side of Enchanted Parkway South until I-5, where the alignment continues south along the west side of I-5. SF 2 East travels along the east side of Enchanted Parkway South until I-5, where the alignment continues along the west side of I-5 through the South Federal Way segment. The SF 2 West station is located on the northwest corner of the intersection at Enchanted Parkway South and South 352nd Street, while the SF 2 East station is located on the east side of Enchanted Parkway South, straddling South 352nd Street.

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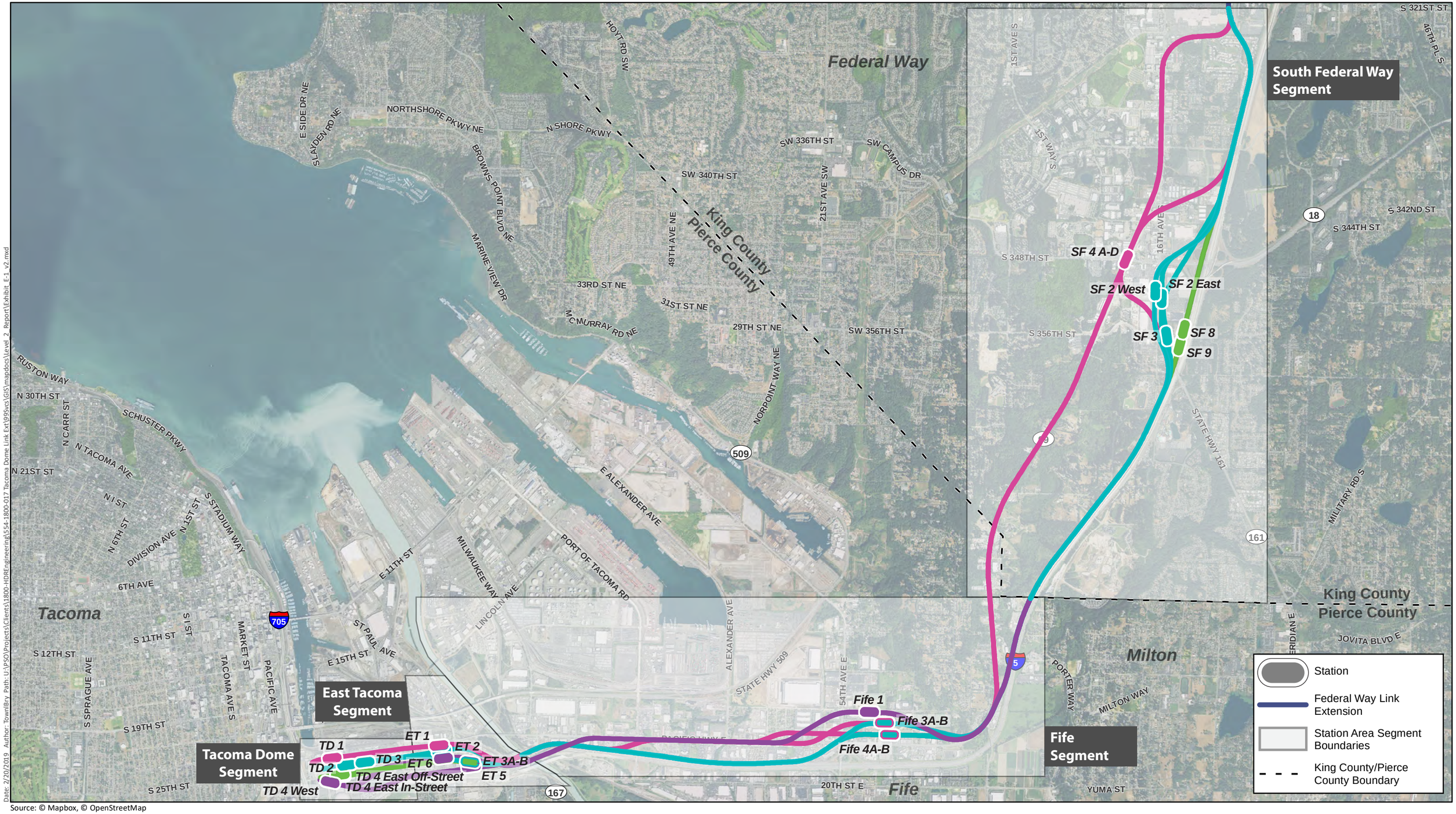

Source: © Mapbox, © OpenStreetMap

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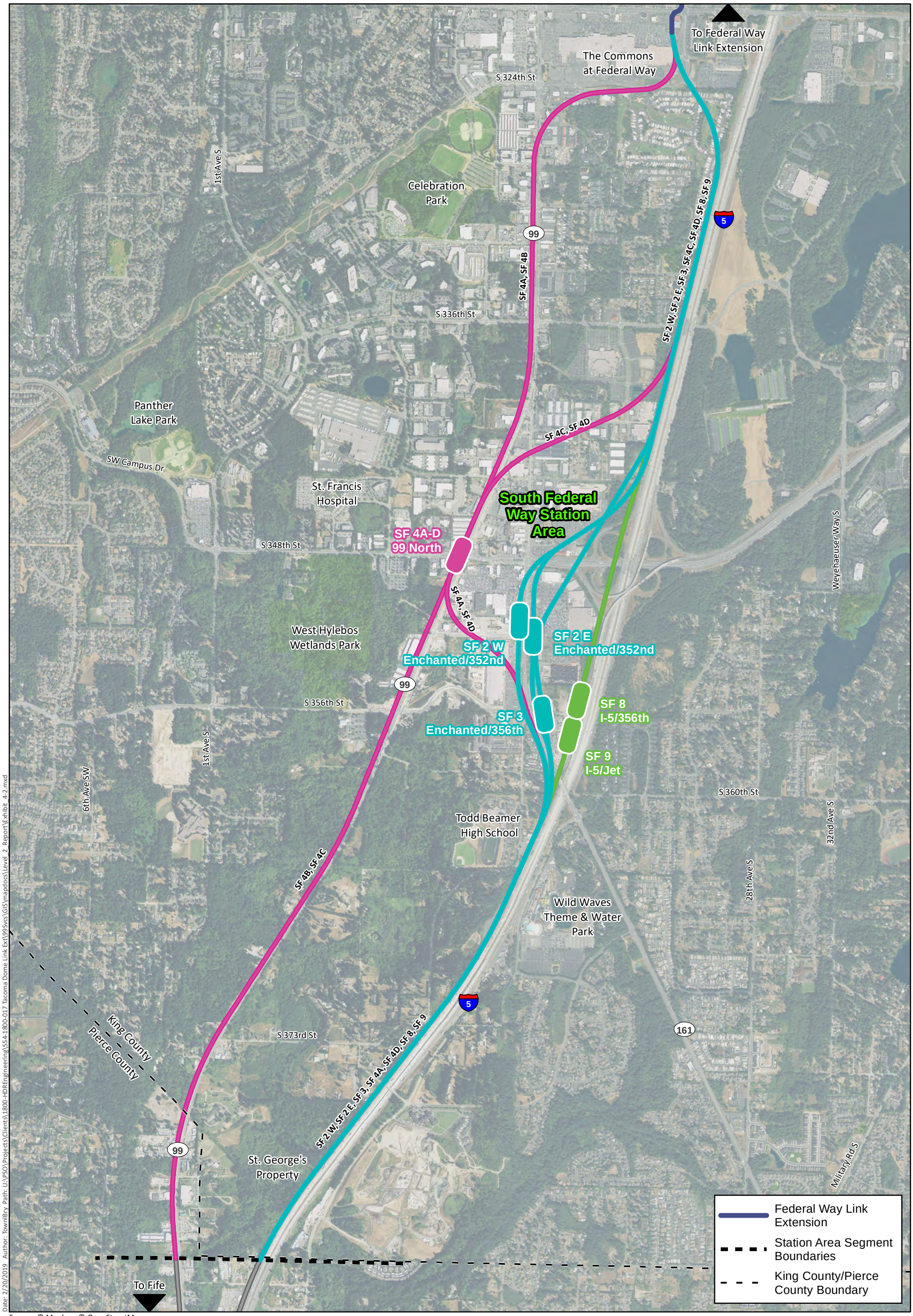
SOUNDTRANSIT

EXHIBIT 4-1
LEVEL 2 ALTERNATIVES
ALL STATION AREAS

TACOMA DOME LINK EXTENSION

Date: 2/20/2019 Author: TownBry Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Level_2_Report\Exhibit_E-1_v2.mxd



Date: 2/20/2019 Author: TownlBry Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Level_2_Report\Exhibit_4-2.mxd

Source: © Mapbox, © OpenStreetMap

0 625 1,250 2,500 Feet

SOUNDTRANSIT

South Federal Way Alternatives

Enchanted Parkway Alignment Family
- SF 2 East: Enchanted/S 352nd Street
- SF 2 West: Enchanted/S 352nd Street
- SF 3: Enchanted/S 356th Street

SR 99 Alignment Family
- SF 4A: 99 North (SR 99 to I-5)
- SF 4B: 99 North (SR 99)
- SF 4C: 99 North (I-5 to SR 99)
- SF 4D: 99 North (I-5 to SR 99 to I-5)

I-5 West Alignment Family
- SF 8: I-5/S 356th Street
- SF 9: I-5/Jet

EXHIBIT 4-2
LEVEL 2 ALTERNATIVES
SOUTH FEDERAL WAY

TACOMA DOME LINK EXTENSION

SF 3 Enchanted/352nd

SF 3 travels south-southeast from the terminus of the FWLE to align along the west side of I-5 until just north of South 344th Street, where the alignment begins to travel southwest towards 16th Avenue South/Enchanted Parkway South. SF 3 then continues to travel along the east side of Enchanted Parkway South until I-5, where the alignment continues along the west side of I-5 through South Federal Way. The station is located on the east side of Enchanted Parkway South, straddling South 356th Street.

4.1.2 SR 99

The SR 99 alternatives include SF 4A 99 North (SR 99 to I-5), SF 4B 99 North (SR 99), SF 4C 99 North (I-5 to SR 99), and SF 4D 99 North (I-5 to SR 99 to I-5).

SF 4A 99 North (SR 99 to I-5)

SF 4A travels southwest from the terminus of the FWLE along South 324th Street until SR 99, where it continues south along the west side of SR 99. Just north of South 352nd Street, SF 4A begins to travel southeast until it reaches the west side of I-5 at Enchanted Parkway South. SF 4A continues along the west side of I-5 through the remainder of South Federal Way. The station is located at South 348th Street and SR 99.

SF 4B 99 North (SR 99)

SF 4B travels southwest from the terminus of the FWLE along South 324th Street until SR 99, where it continues south along the west side of SR 99 through South Federal Way. The station is located at South 348th Street and SR 99.

SF 4C 99 North (I-5 to SR 99)

SF 4C travels south-southeast from the terminus of the FWLE to align along the west side of I-5 until just south of South 336th Street, where the alignment begins to travel southwest towards SR 99. SF 4C continues along the west side of SR 99 through South Federal Way. The station is located at South 348th Street and SR 99.

SF 4D 99 North (I-5 to SR 99 to I-5)

SF 4D travels south-southeast from the terminus of the FWLE to align along the west side of I-5 until just south of South 336th Street, where the alignment begins to travel southwest towards SR 99. SF 4C continues along the west side of SR 99 until just north of South 352nd Street, where the alignment begins to travel southeast until it reaches the west side of I-5 at Enchanted Parkway South. The station is located at South 348th Street and SR 99.

4.1.3 I-5 West

The I-5 West alternatives include SF 8 I-5/356th and SF 9 I-5/Jet.

SF 8 I-5/356th

SF 8 travels south-southeast from the terminus of the FWLE to align along the west side of I-5 through South Federal Way. The station is located just north of South 356th Street and I-5.

SF 9 I-5/Jet

SF 9 travels south-southeast from the terminus of the FWLE to align along the west side of I-5 through South Federal Way. The station is located just south of South 356th Street and I-5.

4.2 Fife

There are five alternatives in Fife that can generally be categorized into three alignment families: 12th Street, North of 15th Street, and South of 15th Street, as shown on Exhibit 4-3. All of the Fife alternatives include a parking facility at the station.

4.2.1 12th Street

The 12th Street alternative includes Fife 1 12th Street.

Fife 1 12th Street

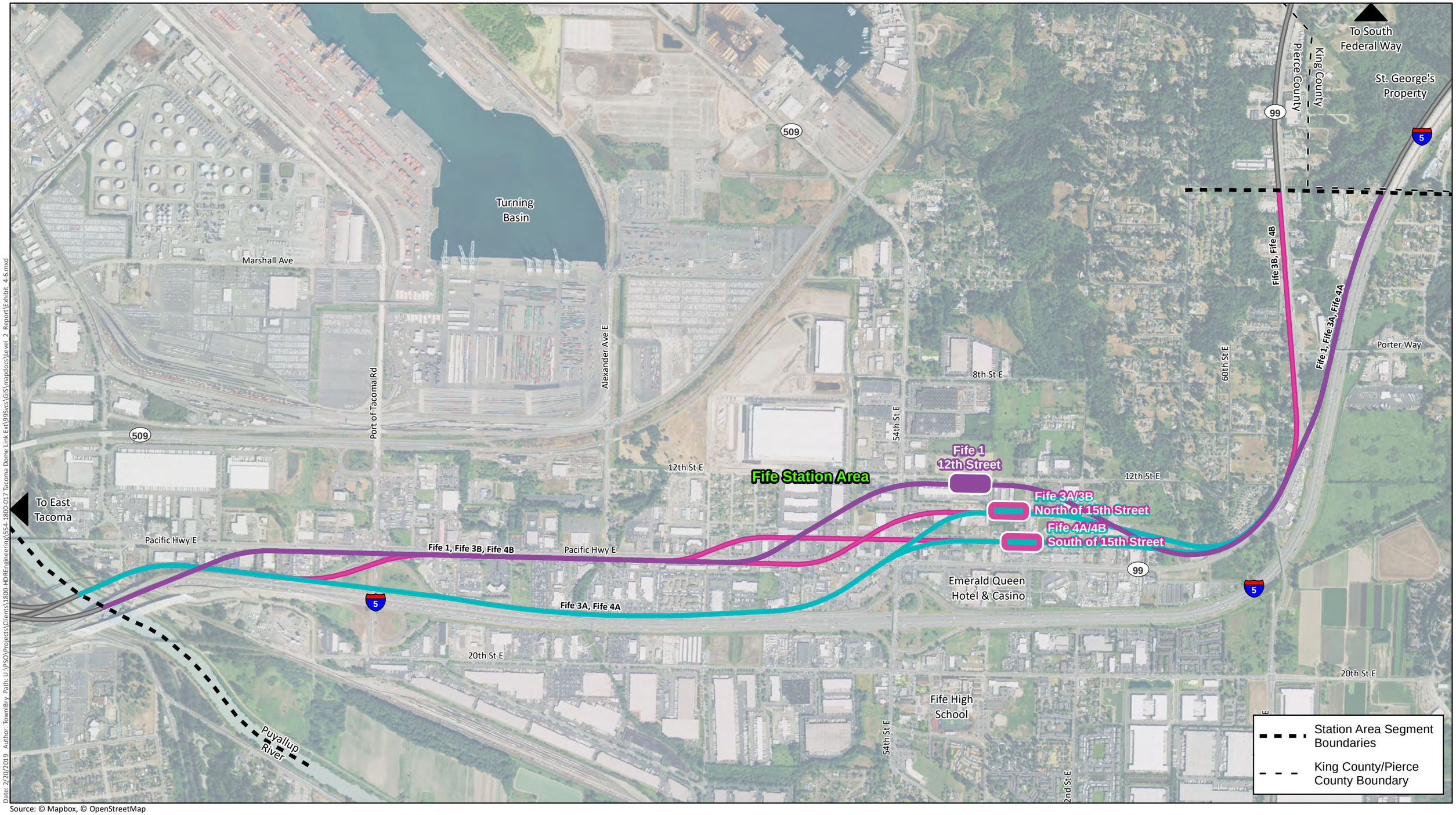
Fife 1 travels along the west side of I-5 from the King/Pierce County boundary until just south of Porter Way, where the alignment begins to travel southwest towards Pacific Highway East and northwest around the Fife ridge. Fife 1 then continues west along the south side of 12th Street East until just west of 54th Street East, where the alignment travels southwest towards the south side of Pacific Highway East. The alignment continues along the south side of Pacific Highway East until just east of East 26th Avenue, where the alignment travels southwest to the north side of I-5 through the remainder of Fife. The station is located between 54th Avenue East and 59th Avenue East on the south side of 12th Street East.

4.2.2 North of 15th Street

The North of 15th Street alternatives include Fife 3A 15th Street (I-5) and Fife 3B 15th Street (S 99).

Fife 3A 15th Street (I-5)

Fife 3A travels along the west side of I-5 from the King/Pierce County boundary until just south of Porter Way, where the alignment begins to travel southwest towards Pacific Highway East and northwest around the Fife ridge. Fife 3A then continues west along 15th Street East until just east of 54th Street East, where it continues southwest along the north side of I-5 through the remainder of Fife. The station is located just west of 59th Avenue East at 15th Street East.



Date: 2/20/2019 Author: TownIBry Path: U:\PSQ\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Level 2 Report\Exhibit 4-6.mxd

Source: © Mapbox, © OpenStreetMap

0 625 1,250 2,500 Feet

SOUNDTRANSIT

Fife Alternatives

12th Street Alignment Family
- Fife 1: 12th Street E

North of 15th Street Alignment Family
- Fife 3A: North of 15th Street E
- Fife 3B: North of 15th Street E

South of 15th Street Alignment Family
- Fife 4A: South of 15th Street E
- Fife 4B: South of 15th Street E

EXHIBIT 4-3
LEVEL 2 ALTERNATIVES
FIFE

TACOMA DOME LINK EXTENSION

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Fife 3B 15th Street (SR 99)

Fife 3B travels along the west side of Pacific Highway East from the King/Pierce County boundary until just south of Porter Way, where the alignment begins to travel southwest and then northwest around the Fife ridge. Fife 3B then continues west along 15th Street East until just east of 54th Avenue East, where it continues southwest to travel along the south side of Pacific Highway East. At the Port of Tacoma Road, Fife 3B travels southwest along the westbound on-ramp to the north side of I-5, where it continues through Fife. The station is located just west of 59th Avenue East at 15th Street East.

4.2.3 South of 15th Street

The South of 15th Street alternatives include Fife 4A South of 15th Street (I-5) and Fife 4B South of 15th Street (SR 99).

Fife 4A South of 15th Street (I-5)

Fife 4A travels along the west side of I-5 from the King/Pierce County boundary until just south of Porter Way, where the alignment begins to travel southwest to continue along the north side of Pacific Highway East. At 54th Street East and Pacific Highway East, Fife 4A continues southwest to travel along the north side of I-5 through the remainder of Fife. The station is located just west of 59th Avenue East between 15th Street East and Pacific Highway East.

Fife 4B South of 15th Street (SR 99)

Fife 4B travels along the west side of Pacific Highway East from the King/Pierce County boundary until just south of Porter Way, where the alignment begins to travel southwest to continue along the north side of Pacific Highway East. Fife 4B then continues west along the north side of Pacific Highway East until just east of Willow Road East, where it continues southwest to travel along the south side of Pacific Highway East. At the Port of Tacoma Road, Fife 4B travels southwest along the westbound on-ramp to the north side of I-5, where it continues through Fife. The station is located just west of 59th Avenue East between 15th Street East and Pacific Highway East.

4.3 East Tacoma

There are six alternatives in East Tacoma that can generally be categorized into four alignment families: Puyallup Avenue, East 25th Street, East 26th Street, and East 27th Street, as shown on Exhibit 4-4.

4.3.1 Puyallup Avenue

The Puyallup Avenue alternative includes ET 1 Puyallup Avenue (ET 1A in Level 1).

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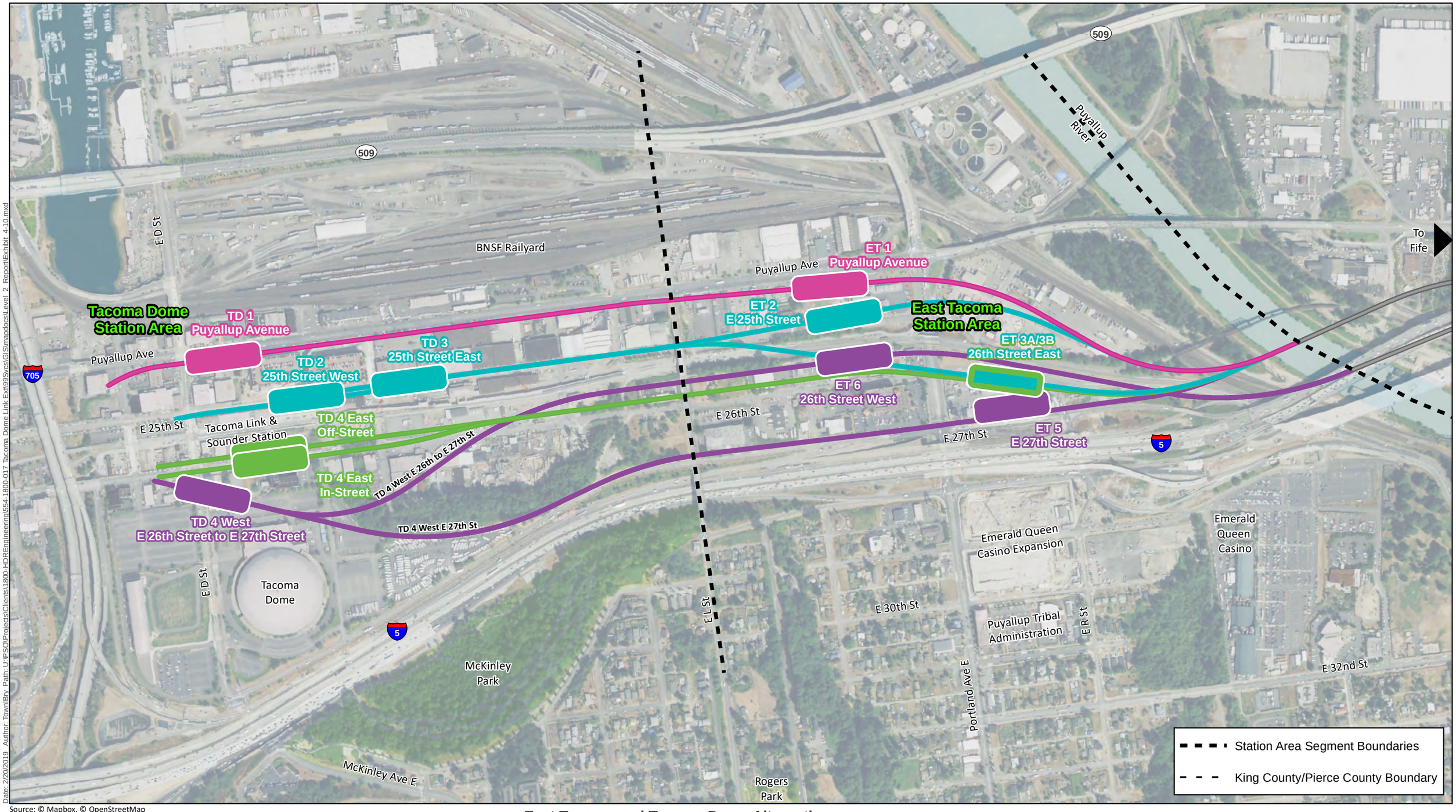

Date: 2/20/2019 Author: TownlBry Path: U:\PSO\Projects\Clients\1800-HDREngineering\554-1800-017 Tacoma Dome Link Ext\99Svcs\GIS\mapdocs\Level 2 Report\Exhibit 4-10.mxd

Source: © Mapbox, © OpenStreetMap

0 250 500 1,000 Feet

SOUNDTRANSIT

East Tacoma and Tacoma Dome Alternatives

Puyallup Avenue Alignment Family
- ET1: Puyallup Ave
- TD1: Puyallup Ave

East 25th Street Alignment Family
- ET2: E 25th Street
- TD2: 25th Street West
- TD3: 25th Street East

East 26th Street Alignment Family
- ET3A: E 26th St to E 25th St
- ET3B: 26th Street East
- ET6: 26th Street West
- TD4 East: E 26th Street Off-Street / In-Street

E 26th St to E 27th St Alignment Family
- ET5: E 27th Street
- TD 4 West E 26th St to E 27th St / E 27th St

EXHIBIT 4-4
LEVEL 2 ALTERNATIVES
EAST TACOMA & TACOMA DOME

TACOMA DOME LINK EXTENSION

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ET 1 Puyallup Avenue

ET 1 crosses the Puyallup River along the north side of I-5. At East Bay Street, ET 1 travels northwest to the south side of Puyallup Avenue where it continues through East Tacoma. The station is located at East M Street and Puyallup Avenue.

4.3.2 East 25th Street

The East 25th Street alternative includes ET 2 East 25th Street.

ET 2 East 25th Street

ET 2 crosses the Puyallup River along the north side of I-5. At East Bay Street, ET 2 travels northwest to the north side of East 25th Street where it continues through East Tacoma. The station is located at East M Street and East 25th Street.

4.3.3 East 26th Street

The East 26th Street alternatives include ET 3A East 26th Street to East 25th Street (variation of ET 3 in Level 1), ET 3B 26th Street East, and ET 6 26th Street West.

ET 3A East 26th Street to Eat 25th Street

ET 3A crosses the Puyallup River north of I-5. At East Bay Street, ET 3A travels northwest to the north side of East 25th Street through the remainder of East Tacoma. The station is located at East 26th Street and East Bay Street.

ET 3B 26th Street East

ET 3B crosses the Puyallup River north of I-5. At East Bay Street, ET 3B travels northwest to the north side of East 26th Street through the remainder of East Tacoma. The station is located at East 26th Street and East Bay Street.

ET 6 26th Street West

ET 6 crosses the Puyallup River north of I-5. At East Bay Street, ET 6 travels northwest to the north side of East 26th Street through the remainder of East Tacoma. The station is located at East 26th Street and East N Street.

4.3.4 East 27th Street

The East 27th Street alternative includes ET 5 East 27th Street.

ET 5 East 27th Street

ET 5 crosses the Puyallup River north of I-5 and continues west along the north side of East 27th Street through East Tacoma. The station is located at East 27th Street and East Bay Street.

4.4 Tacoma Dome

There are seven alternatives in Tacoma Dome that can generally be categorized into four alignment families: Puyallup Avenue, East 25th Street, East 26th Street, and East 26th Street to East 27th Street, as shown on Exhibit 4-4.

4.4.1 Puyallup Avenue

The Puyallup Avenue alternative includes TD 1 Puyallup Avenue.

TD 1 Puyallup Avenue

TD 1 travels along the south side of Puyallup Avenue until just east of I-705. The station is located at Puyallup Avenue and East D Street.

4.4.2 East 25th Street

The East 25th Street alternatives include TD 2 25th Street West and TD 3 25th Street East.

TD 2 25th Street West

TD 2 travels along the center of East 25th Street until just west of East D Street. The station is located east of East D Street along East 25th Street.

TD 3 25th Street East

TD 3 travels along the center of East 25th Street until just west of East D Street. The station is located at East G Street and East 25th Street.

4.4.3 East 26th Street

The East 26th Street alternative includes TD 4 East Off-Street (variation of TD 4A-B in Level 1) and TD 4 East In-Street (variation of TD 4A-B in Level 1).

TD 4 East Off-Street

TD 4 East Off-Street travels along the north side of East 26th Street until just west of East D Street. The station is located on East 26th Street just east of East D Street.

TD 4 East In-Street

TD 4 East In-Street travels along the center of East 26th Street until just west of East D Street with the station located on East 26th Street just east of East D Street.

4.4.4 East 26th Street to East 27th Street

The East 26th Street to East 27th Street alternatives include TD 4 West East 26th Street to East 27th Street (variation of TD 4A-B in Level 1) and TD 4 West East 27th Street (variation of TD 4A-B in Level 1).

TD 4 West East 26th Street to East 27th Street

TD 4 West travels along the north side of East 26th Street and continues southwest just east of East J Street, then northwest until just west of East D Street. The station is located south of East 26th Street at East D Street.

TD 4 West East 27th Street

TD 4 West travels along the north side of I-5 and continues northwest just east of East G Street until just west of East D Street. The station is located south of East 26th Street at East D Street.

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5 Level 2 Analysis

This section summarizes the Level 2 analysis by criteria for each of the alternatives in the South Federal Way, Fife, East Tacoma, and Tacoma Dome segments. The TDLE corridor segments are shown on Exhibit 4-1. It should be noted that in some station areas, the station alternatives are within proximity of each other, which results in less differentiation in the analysis. Appendix A contains the full Level 2 Analysis matrix.

5.1 South Federal Way

The South Federal Way segment begins at the Federal Way Transit Center and extends south to the King/Pierce County boundary line. Exhibit 5-1 summarizes the performance of each alternative when evaluated against the differentiating measures.

5.1.1 Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs

5.1.1.1 Ridership Potential

SF 8 and SF 9 performed the highest on this criterion because the stations are located in areas with higher existing population and job densities and would have shorter travel times. SF 4A and SF 4D were the lowest performing because they would have longer travel times and lower existing population densities. All other South Federal Way alternatives performed similarly.

5.1.2 Support Sustainable Land Use Plans, Equitable Access, and Economic Development

5.1.2.1 Supports Future Transit Oriented Development Opportunities

SF 4A-D performed the highest on this criterion because these alternatives are located nearest to areas with TOD-compatible zoning and with higher likelihoods of redevelopment into TOD neighborhoods. These alternatives would also have fewer nonmotorized barriers and more access to amenities. The remaining alternatives are located in areas with zoning that is not compatible with mixed-use TOD. SF 8 and SF 9 performed the lowest of all South Federal Way alternatives because they have the lowest likelihood of redevelopment and would have the most nonmotorized barriers within a ½ mile of the station.

5.1.2.2 Promotes Multimodal Access and Integration

SF 2 East and SF 2 West performed the highest on this criterion compared to all other alternatives in South Federal Way because of ease of vehicular pick-up/drop-off and better connections with bicycle and pedestrian facilities. All South Federal Way alternatives performed relatively high in terms of connections with local existing and planned pedestrian facilities, except for SF 3, SF 8, and SF 9, which were the lowest performing alternatives due to having the lowest ratio of streets with sidewalks in the station vicinity. SF 8 and SF 9 were also the farthest from existing local bus and other transit facilities. The remaining alternatives, including SF 4A-D,

performed similarly on this criterion. SF 4A-D would be the closest to existing bus facilities, but they did not perform well for ease of vehicular pick-up/drop-off and connections with bicycle facilities.

5.1.3 Preserve the Environment

5.1.3.1 Effects on the Natural Environment

SF 4A performed the highest on this criterion compared to all other South Federal Way alternatives because it would have the fewest impacts to streams, stream crossings, and vegetated areas. The remaining South Federal Way alternatives performed similarly. All South Federal Way alternatives would have similar impacts to protected species and habitats, floodplains, and geologic hazard areas. Additionally, all alternatives would have small, isolated impacts to wetlands along I-5, except for SF 4B and SF 4C, which would affect large, high-quality wetlands along SR 99 and would have the most impacts to vegetated areas.

5.1.3.2 Effects on the Built Environment

SF 8 and SF 9 performed the highest on this criterion because they would have the fewest impacts to parcels with economic activity generators, effects on parking supply and demand, and residential, commercial, and community facility displacements. SF 4A-D performed the lowest because these alternatives would have the most property impacts, including to economic activity generators, and effects on existing and planned traffic and freight movement. Additionally, SF 4A-C would have the most effects on parking supply and demand. All South Federal Way alternatives performed similarly low for potential effects on Section 4(f) cultural and archaeological resources.

5.1.4 Support Equitable Mobility

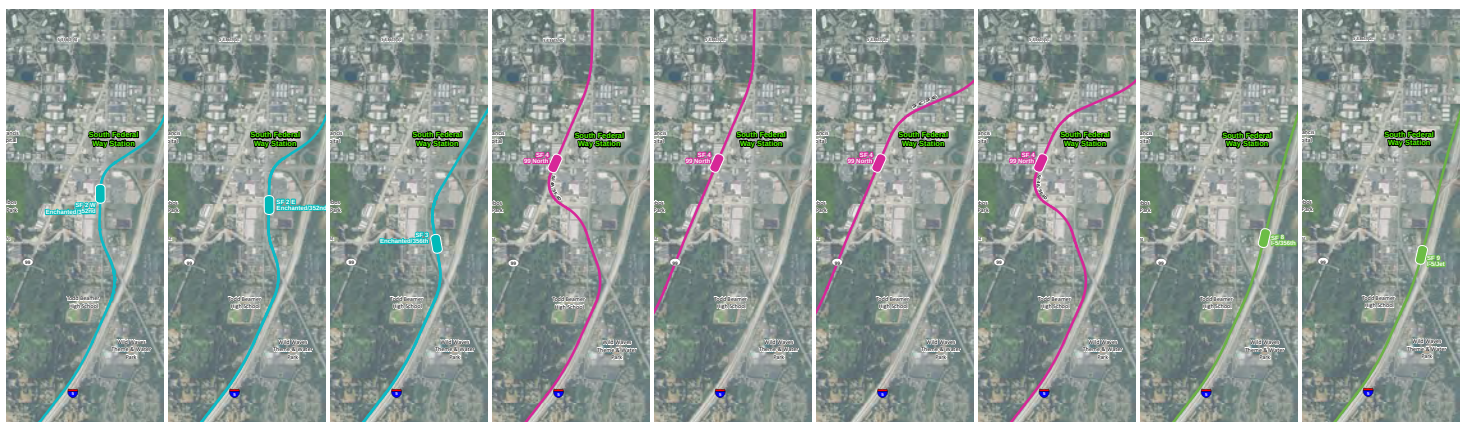
5.1.4.1 Provide Equitable Transit Service to Low-Income, Minority, and Transit-Dependent Populations

SF 4A and SF 4B performed the highest on this criterion because they would have the most potential benefits to low-income or minority populations. These alternatives have some of the highest numbers of total displacements but would involve less displacements of known low-income residential buildings. SF 4C and SF 4D would also serve a high percentage of minority and/or low-income populations, but these alternatives would have more potential impacts to environmental justice populations due to potential property impacts along the alignment. SF 2 East and SF 3 performed the lowest of all the South Federal Way alternatives. SF 2 East would serve more environmental justice populations but would cause more displacements, and SF 3 would serve fewer environmental justice populations but would cause fewer displacements. The remaining South Federal Way alternatives performed similarly to each other on this criterion.

EXHIBIT 5-1
SOUTH FEDERAL WAY
Preliminary Draft Level 2 Summary

KEY TO RATING
LOWER PERFORMING — HIGHER PERFORMING

This sheet summarizes the performance of each of the alternatives on key measures that highlight the differences between the alternatives. The ratings are a comparison of each alternative against all other alternatives in the station area. The evaluation is based on an early conceptual level of design; design is subject to revisions.

Measures	Enchanted Parkway			SR 99 to I-5	SR 99	I-5 to SR 99	I-5 to SR 99 to I-5	I-5 West	
	SF 2 West Enchanted/ 352nd	**SF 2 East** Enchanted/ 352nd	**SF 3** Enchanted/ 356th	**SF 4A** SR 99 North	**SF 4B** SR 99 North	**SF 4C** SR 99 North	**SF 4D** SR 99 North	**SF 8** I-5/356th	**SF 9** I-5/Jet
									
Objective: Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs									
L2.2, L2.3 Relative ridership comparison	**Moderate**	**Moderate**	**Moderate**	**High**	**High**	**High**	**High**	**Moderate**	**Moderate**
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access									
L2.7 Likelihood of station redevelopment into transit-oriented neighborhood	**Greater**	**Moderate**	**Moderate**	**Greater**	**Greater**	**Greater**	**Greater**	**Lower**	**Lower**
L2.9 Presence of amenities that can catalyze development of transit-oriented neighborhoods	**Greatest** amenities	**Greater** amenities	**Moderate** amenities	**Greatest** amenities	**Greatest** amenities	**Greatest** amenities	**Greatest** amenities	**Moderate** amenities	**Fewer** amenities
L2.10 Proximity to other transit facilities and services	**445 ft** to nearest bus stop	**270 ft** to nearest bus stop	**385 ft** to nearest bus stop	**200 ft** to nearest bus stop	**200 ft** to nearest bus stop	**200 ft** to nearest bus stop	**200 ft** to nearest bus stop	**975 ft** to nearest bus stop	**1,070 ft** to nearest bus stop
L2.11 Ease of vehicular pick-up/drop-off for a variety of users	**Moderate** access	**Moderate** access	**Higher** access	**Lower** access	**Lower** access	**Lower** access	**Lower** access	**Higher** access	**Higher** access
L2.12, L2.13 Pedestrian and bicycle accessibility	**Moderate** (bike) **High** (ped)	**Moderate** (bike) **High** (ped)	**Moderate** (bike) **Moderate** (ped)	**Low** (bike) **High** (ped)	**Low** (bike) **High** (ped)	**Low** (bike) **High** (ped)	**Low** (bike) **High** (ped)	**Moderate** (bike) **Moderate** (ped)	**Moderate** (bike) **Moderate** (ped)
Objective: Preserve the Environment									
L2.14, L2.15, L2.17 Potential impacts to ecosystems	**Moderate**	**Moderate**	**Moderate**	**Lower**	**Higher**	**Higher**	**Moderate**	**Higher**	**Higher**
L2.20 Estimated number of potential affected parcels	**35-40** acquisitions	**30-35** acquisitions	**40-45** acquisitions	**80-85** acquisitions	**95-100** acquisitions	**70-75** acquisitions	**55-60** acquisitions	**25-30** acquisitions	**25-30** acquisitions
L2.21 Estimated number of potential affected parcels with major economic activity generators	**Moderate**	**Moderate**	**Moderate**	**Highest**	**Highest**	**Higher**	**Higher**	**Lower**	**Lower**
L2.22 Estimated number of potential displacements by property type	**100-115** residences **20-25** businesses	**90-95** residences **20-25** businesses	**90-95** residences **20-25** businesses	**120-125** residences **45-50** businesses	**110-115** residences **45-50** businesses	**100-105** residences **35-40** businesses	**110-115** residences **35-40** businesses	**85-90** residences **0-5** businesses	**85-90** residences **0-5** businesses
L2.25, L2.26 Potential impacts to historic, cultural, or archaeological resources	**0 known, 4 potential** historic resources **1 known** cultural resource	**0 known, 5 potential** historic resources **1 known** cultural resource	**0 known, 5 potential** historic resources **1 known** cultural resource	**0 known, 14 potential** historic resources **1 known** cultural resource	**0 known, 13 potential** historic resources **3 known** cultural resources	**0 known, 7 potential** historic resources **3 known** cultural resources	**0 known, 8 potential** historic resources **1 known** cultural resource	**0 known, 5 potential** historic resources **1 known** cultural resource	**0 known, 5 potential** historic resources **1 known** cultural resource
Objective: Provide a Financially Sustainable and Constructible Project									
L2.35 Preliminary conceptual estimate*	**$1.0B**	**$1.05B**	**$1.0B**	**$1.35B**	**$1.55B**	**$1.35B**	**$1.15B**	**$0.95B**	**$0.95B**
L2.39 Unique construction challenges	**Greater** potential challenges	**Moderate** potential challenges	**Moderate** potential challenges	**Greatest** potential challenges	**Greatest** potential challenges	**Moderate** potential challenges	**Greater** potential challenges	**Fewer** potential challenges	**Fewer** potential challenges

PRELIMINARY; SUBJECT TO REVISIONS; DRAFT 02/21/2019

*Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.

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5.1.5 Provide a Financially Sustainable and Constructible Project

5.1.5.1 Financial Considerations

SF 8 and SF 9 performed the highest on this criterion because they would have the lowest preliminary conceptual estimate to build and operating estimates of all the South Federal Way alternatives. SF 2 West, SF 2 East, and SF 3 were also higher performing because of lower preliminary conceptual estimates to build, but these alternatives would have slightly longer alignments and would therefore have higher operating estimates. SF 4A and SF 4B performed the lowest on this criterion because they would have a combination of high preliminary conceptual estimates to build and operating estimates.

5.1.5.2 Constructibility and Engineering Considerations

SF 8 and SF 9 performed the highest on this criterion because they would have the fewest conflicts with major utilities and structures, number of sites requiring environmental remediation, and unique construction challenges. These alternatives also have the most availability and potential to use publicly owned right-of-way. Alternatives SF 2 East, SF 2 West, and SF 3 performed similarly high although they have slightly more construction challenges, including utility and street crossings. SF 4A and SF 4B performed the lowest on this criterion because they would have the most unique construction challenges. These alternatives would be parallel to a water main along SR 99 and they would cross and travel parallel to the Bonneville Power Administration (BPA) high-voltage transmission lines along South 324th Street. SF 4C and SF 4D performed similarly for this criterion and performed in the middle compared to the other South Federal Way alternatives.

5.1.5.3 Operational Considerations

SF 4C, SF 8, and SF 9 performed the highest on this criterion because they would have the fewest potentially challenging operational elements. SF 8 and SF 9 are adjacent to I-5 for the entire alignment and maintain 55 mph speeds throughout, which make them higher performing alternatives. SF 4C diverges from I-5 to Pacific Highway but it maintains 55-mph curves throughout the alignment. SF 2 West, SF 2 East, and SF 3 performed relatively high because their alignments run for 55 mph for most of the length with a short reduced speed area approaching each station. SF 4B performed relatively low because of slow speeds near the terminus of FWLE, although it improves to 55 mph for most of the alignment along SR 99. SF 4A performed lowest because of speed restrictions as low as 30 mph in the northern half of the alignment in the Federal Way segment.

5.1.5.4 Schedule Considerations

Most South Federal Way alternatives performed similarly in terms of overall schedule risk that could include potential relocation of multi-family units and senior housing units. SF 8 and SF 9 performed relatively lower because of additional coordination with SR 18 off-ramp construction.

5.2 Fife

The Fife Segment begins at the King/Pierce County line and extends west to the Fife-Tacoma city boundary just east of the Puyallup River. Exhibit 5-2 summarizes the performance of each alternative when evaluated against the differentiating measures.

5.2.1 Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs

5.2.1.1 Ridership Potential

Fife 4A performed the highest on this criterion compared to all other Fife alternatives because it would have shortest travel time and the station is located in an area with higher existing and future population and employment densities. Fife 4B performed similarly in terms of population densities but would have a longer travel time. Fife 3B would have lower population and job densities than Fife 4B, but otherwise performed similarly. Fife 1 and Fife 3A performed the lowest of the Fife alternatives. Fife 1 would have lower projected ridership potential and station boardings than other alternatives, and Fife 3A would have the longest travel times. All Fife alternatives performed similarly in terms of low proximity to PSRC growth centers and manufacturing/industrial centers.

5.2.2 Support Sustainable Land Use Plans, Equitable Access, and Economic Development

5.2.2.1 Supports Future Transit Oriented Development Opportunities

Fife 3A and Fife 3B performed the highest on this criterion because these alternatives would have the fewest nonmotorized barriers. Most Fife alternatives are located in areas with planned TOD-compatible zoning and with high likelihoods of redevelopment into TOD neighborhoods, with the exception of Fife 1. Fife 1 is located adjacent to an industrial area and has the lowest likelihood of redevelopment into a TOD neighborhood, although it is the least likely to affect surrounding businesses and amenities; therefore, Fife 1 performed moderately. Fife 4A also performed moderately compared to all other Fife alternatives. Fife 4B performed the lowest because the station is located farther from amenities and the alignment is the most likely to remove several amenities.

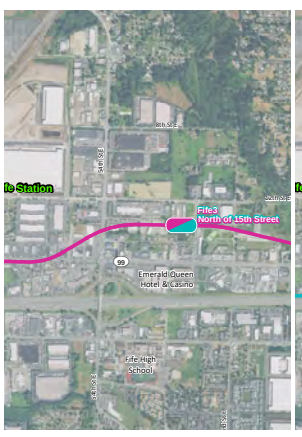
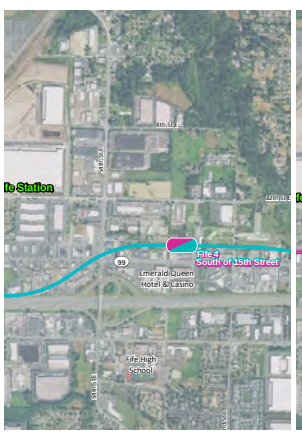
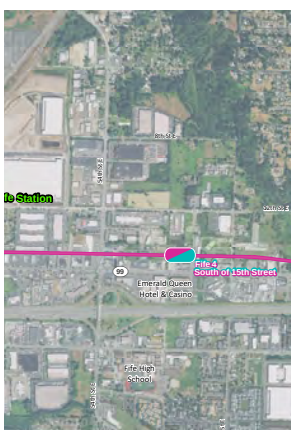
5.2.2.2 Promotes Multimodal Access and Integration

Fife 4A and Fife 4B performed the highest on this criterion because they would be the closest to existing local bus and other transit facilities, and they would have more connections with local existing and planned pedestrian facilities. The remaining alternatives performed similarly in terms of pedestrian facility connections. Fife 1 performed moderately because it would be the farthest from existing local bus and other transit facilities but would have the most accessible vehicular pick-up/drop-off. Fife 3A and Fife 3B performed the lowest on this criterion because they would have the fewest connections with existing and planned bicycle facilities.

EXHIBIT 5-2
FIFE
Preliminary Draft Level 2 Summary

KEY TO RATING
LOWER PERFORMING — HIGHER PERFORMING

This sheet summarizes the performance of each of the alternatives on key measures that highlight the differences between the alternatives. The ratings are a comparison of each alternative against all other alternatives in the station area. The evaluation is based on an early conceptual level of design; design is subject to revisions.

Measures	SR 99	I-5	SR 99	I-5	SR 99
	Fife 1 12th Street	**Fife 3A** North of 15th Street	**Fife 3B** North of 15th Street	**Fife 4A** South of 15th Street	**Fife 4B** South of 15th Street
					
Objective: Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs					
L2.2, L2.3 Relative ridership comparison	**Lower**	**Moderate**	**Moderate**	**Moderate**	**Moderate**
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access					
L2.7 Likelihood of station redevelopment into transit-oriented neighborhood	**Lower**	**Greater**	**Greater**	**Greater**	**Greater**
L2.10 Proximity to other transit facilities and services	**1,705 ft** to nearest bus stop	**1,225 ft** to nearest bus stop	**1,225 ft** to nearest bus stop	**705 ft** to nearest bus stop	**705 ft** to nearest bus stop
L2.11 Ease of vehicular pick-up/drop-off for a variety of users	**Higher** access	**Moderate** access	**Moderate** access	**Lower** access	**Lower** access
L2.12, L2.13 Pedestrian and bicycle accessibility	**High** (bike) **Moderate** (ped)	**Moderate** (bike) **Moderate** (ped)	**Moderate** (bike) **Moderate** (ped)	**High** (bike) **High** (ped)	**High** (bike) **High** (ped)
Objective: Preserve the Environment					
L2.15, L2.17 Potential impacts to ecosystems	**Higher**	**Moderate**	**Lower**	**Lower**	**Lower**
L2.20 Estimated number of potential affected parcels	**95-100** acquisitions	**90-95** acquisitions	**110-115** acquisitions	**100-105** acquisitions	**130-135** acquisitions *Rated similar to other Fife alternatives because number of acres potentially impacted is similar
L2.21 Estimated number of potential affected parcels with major economic activity generators	**Highest**	**Lower**	**Higher**	**Lower**	**Moderate**
L2.22 Estimated number of potential displacements by property type	**5-10** residences **60-65** businesses	**5-10** residences **20-25** businesses	**10-15** residences **55-60** businesses	**60-65** residences **25-30** businesses	**70-75** residences **45-50** businesses
L2.25, L2.26 Potential impacts to historic, cultural, or archaeological resources	**1 known, 9 potential** historic resources **2 known** cultural resources	**0 known, 11 potential** historic resources **1 known** cultural resource	**1 known, 23 potential** historic resources **2 known** cultural resources	**1 known, 18 potential** historic resources **1 known** cultural resource	**1 known, 37 potential** historic resources **2 known** cultural resources
L2.30 Potential effects on freight movement	**Some potential**	**Some potential**	**Some potential**	**Higher potential**	**Higher potential**
Objective: Provide a Financially Sustainable and Constructible Project					
L2.35 Preliminary conceptual estimate*	**$850M**	**$700M**	**$800M**	**$700M**	**$800M**

PRELIMINARY SUBJECT TO REVISIONS; DRAFT 02/21/2019

*Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.

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5.2.3 Preserve the Environment

5.2.3.1 Effects on the Natural Environment

All Fife alternatives would have similar potential impacts to wetlands and protected species and habitats associated with Hylebos Creek. Additionally, all Fife alternatives would have similar effects on floodplains and geologic hazard areas. Fife 4B performed the highest on this criterion because it would have fewer stream crossings and less vegetation removal than most other alternatives. Fife 4A would also have less effects on vegetated areas but would have an additional stream crossing; therefore, Fife 4A performed moderately. The remaining Fife alternatives would have slightly higher vegetation removal effects. Fife 1 performed the lowest on this criterion because it would have the most stream crossings of all the Fife alternatives.

5.2.3.2 Effects on the Built Environment

Fife 3A performed the highest on this criterion compared to all other Fife alternatives because it would have the fewest parking impacts and property displacements, including to economic activity generators, and it has less potential to affect historic resources. Fife 4B performed the lowest on this criterion because it would have higher property displacements and parking impacts, and it has more potential to affect tribal parcels and historic resources. The remaining Fife alternatives performed similarly.

5.2.4 Support Equitable Mobility

5.2.4.1 Provide Equitable Transit Service to Low-Income, Minority, and Transit-Dependent Populations

Fife 3A performed the highest on this criterion compared to all other Fife alternatives because it would have the fewest potential impacts on low-income and/or minority populations. Fife 4A and Fife 4B would have the most potential benefits to environmental justice populations of all the Fife alternatives, but they would also have the most substantial impacts on known low-income residences; therefore, Fife 4A and Fife 4B performed lower on this criterion. Fife 1 also performed lower because it would have fewer potential benefits to environmental justice populations. Fife 3B performed relatively moderately.

5.2.5 Provide a Financially Sustainable and Constructible Project

5.2.5.1 Financial Considerations

Fife 4A performed the highest on this criterion compared to all other Fife alternatives because it would have a lower preliminary conceptual estimate to build due to the at-grade guideway along I-5, and a lower operating estimate due to fewer curves that reduce operating speeds below 55 mph. Fife 3A would have a similarly low preliminary conceptual estimate to build, but it would have a slightly higher operating estimate due to its longer alignment and a 40-mph curve that would increase travel times. Fife 1 had the lowest performance on this criterion due to having the highest preliminary conceptual estimate to build compared to the other Fife alternatives.

5.2.5.2 Constructibility and Engineering Considerations

Fife 3A and Fife 4A performed the highest on this criterion because they would have the fewest conflicts with major utilities and structures, and they would have the most availability and potential to use publicly owned right-of-way. Fife 1 and Fife 4B performed the lowest on this criterion because they would each have more unique construction challenges, including greater potential impacts to structures. Fife 3B performed moderately for this criterion compared to the other Fife alternatives.

5.2.5.3 Operational Considerations

Fife 4A performed the highest on this criterion compared to all other Fife alternatives because it would maintain a speed of 45 mph or above, with only one area where speed is reduced to 45 mph. The remaining alternatives performed similarly in terms of alignment speeds.

5.2.5.4 Schedule Considerations

Fife 4A and Fife 4B performed relatively low in terms of overall schedule risk associated with potential relocation of senior housing units and coordination with the SR 167 project and Port of Tacoma Road interchange project. The remaining Fife alternatives performed slightly higher because they would not involve relocation of senior housing units.

5.3 East Tacoma

The East Tacoma Segment begins at the Fife-Tacoma city limits, crossing the Puyallup River to East L Street. Exhibit 5-3 summarizes the performance of each alternative when evaluated against the differentiating measures.

5.3.1 Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs

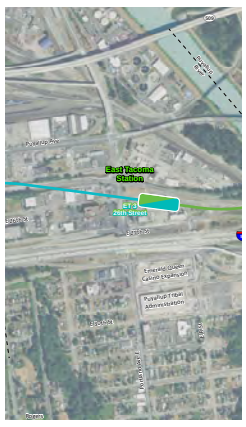
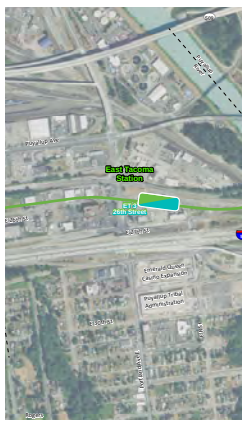
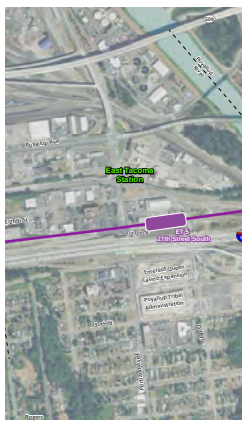
5.3.1.1 Ridership Potential

ET 5 performed the highest on this criterion compared to all other East Tacoma alternatives because it would have a shorter travel time and the station is located in an area with higher existing and future population densities; however, it performed relatively poorly in terms of proximity to PSRC growth centers and manufacturing/industrial centers. ET 3A and ET 3B performed similarly to ET 5, although they had slightly lower population densities. ET 6 performed moderately across all measures. ET 1 and ET 2 performed the lowest on this criterion because they would have higher travel times, lower ridership potential, and lower project station boardings. However, these alternatives performed the highest in terms of proximity to PSRC growth centers and manufacturing/industrial centers.

EXHIBIT 5-3
EAST TACOMA
Preliminary Draft Level 2 Summary

KEY TO RATING
LOWER PERFORMING — HIGHER PERFORMING

This sheet summarizes the performance of each of the alternatives on key measures that highlight the differences between the alternatives. The ratings are a comparison of each alternative against all other alternatives in the station area. The evaluation is based on an early conceptual level of design; design is subject to revisions.

Measures	Puyallup Avenue	E 25th Street	E 26th Street		E 27th Street	E 26th Street
	ET 1 Puyallup Avenue (Connects to TD 1)	**ET 2** E 25th Street (Connects to TD 2, TD 3)	**ET 3A** E 26th St to E 25th St (Connects to TD 2, TD 3)	**ET 3B** 26th Street East (Connects to TD 4 East)	**ET 5** E 27th Street (Connects to TD 4 West)	**ET 6** 26th Street West (Connects to TD 4 West)
						
Objective: Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs						
L2.2, L2.3 Relative ridership comparison	**Lower**	**Lower**	**Moderate**	**Moderate**	**Moderate**	**Moderate**
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access						
L2.7 Likelihood of station redevelopment into transit-oriented neighborhood	**Lower**	**Lower**	**Greater**	**Greater**	**Greater**	**Lowest**
L2.8 Nonmotorized barriers within 1/2 mile of the station	**Greater** barriers	**Greater** barriers	**Fewer** barriers	**Fewer** barriers	**Fewer** barriers	**Moderate** barriers
L2.10 Proximity to other transit facilities and services	**255 ft** to nearest bus stop	**430 ft** to nearest bus stop	**395 ft** to nearest bus stop	**395 ft** to nearest bus stop	**610 ft** to nearest bus stop	**500 ft** to nearest bus stop
L2.11 Ease of vehicular pick-up/drop-off for a variety of users	**Lower** access	**Lower** access	**Moderate** access	**Moderate** access	**Higher** access	**Lower** access
Objective: Preserve the Environment						
L2.20 Estimated number of potential affected parcels	**20-25** acquisitions	**20-25** acquisitions	**15-20** acquisitions	**15-20** acquisitions *Rated higher than ET 3A because number of acres potentially impacted is lower	**10-15** acquisitions	**15-20** acquisitions
L2.21 Estimated number of potential affected parcels with major economic activity generators	**Highest**	**Moderate**	**Moderate**	**Moderate**	**Lower**	**Moderate**
L2.22 Estimated number of potential displacements by property type	**0-5** residences **10-15** businesses	**0-5** residences **5-10** businesses	**0-5** residences **5-10** businesses	**0-5** residences **5-10** businesses	**0-5** residences **0-5** businesses	**0-5** residences **5-10** businesses
L2.25, L2.26 Potential impacts to historic, cultural, or archaeological resources	**0 known, 5 potential** historic resources **0 known** cultural resources	**0 known, 6 potential** historic resources **0 known** cultural resources	**0 known, 1 potential** historic resource **0 known** cultural resources	**0 known, 1 potential** historic resource **0 known** cultural resources	**0 known, 2 potential** historic resources **0 known** cultural resources	**0 known, 0 potential** historic resources **0 known** cultural resources
L2.30 Potential effects on freight movement	**Higher potential** for additional freight delay	**Higher potential** for additional freight delay	**Some potential** for additional freight delay	**Some potential** for additional freight delay	**Some potential** for additional freight delay	**Higher potential** for additional freight delay
Objective: Support Equitable Mobility						
L2.33 Potential benefits to low-income or minority populations	**Highest potential** benefits	**Highest potential** benefits	**Highest potential** benefits	**Highest potential** benefits	**Higher potential** benefits	**Higher potential** benefits
L2.34 Potential for impacts on low-income and/or minority populations	**Higher potential** for impacts	**Some potential** for impacts	**Some potential** for impacts	**Some potential** for impacts	**Lower potential** for impacts	**Lower potential** for impacts
Objective: Provide a Financially Sustainable and Constructible Project						
L2.35 Preliminary conceptual estimate*	**$700M**	**$700M**	**$750M**	**$650M**	**$700M**	**$700M**

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*Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.

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5.3.2 Support Sustainable Land Use Plans, Equitable Access, and Economic Development

5.3.2.1 Supports Future Transit Oriented Development Opportunities

ET 3A and ET 3B performed the highest on this criterion because their stations would be located closest to TOD opportunities that exist in the neighborhood south of I-5. ET 3A and ET 3B would also have fewer nonmotorized barriers. ET 5 was also relatively higher performing but would potentially impact a convenience store that is one of the only existing amenities near the East Tacoma stations. ET 6 performed relatively moderately because the station would be located in an area that is currently zoned as industrial and is unlikely to redevelop into a TOD neighborhood. ET 1 and ET 2 performed the lowest on this criterion because their stations are also located in industrial-zoned areas that are unlikely to be redeveloped. Also, nonmotorized connectivity for these alternatives is reduced because of barriers such as truck traffic and railroad infrastructure. These alternatives are also farther from the tribal headquarters and casino located south of I-5.

5.3.2.2 Promotes Multimodal Access and Integration

Most East Tacoma alternatives performed similarly on this criterion, except ET 2 and ET 6, which performed lower. ET 2 and ET 6 would have poor vehicular pick-up/drop-off access and fewer connections to existing and planned pedestrian and bicycle facilities. ET 1 also performed lower on these measures, but performed the highest in terms of proximity to existing local bus and other transit facilities. ET 5 performed the highest in terms of vehicular pick-up/drop-off access, but would be farther from existing local bus and other transit facilities.

5.3.3 Preserve the Environment

5.3.3.1 Effects on the Natural Environment

All East Tacoma alternatives would cross the Puyallup River and would have similar effects to wetlands, floodplains, and protected species and habitats associated with the river crossing. ET 2 performed slightly higher because it avoids most vegetated areas.

5.3.3.2 Effects on the Built Environment

All East Tacoma alternatives performed similarly high in terms of few potential effects on viewsheds and view-dependent businesses, with few potential impacts to parks and other recreational resources. ET 5 performed the highest on this criterion because it would have the fewest number of displacements; however, ET 5 would have potential impacts to tribal properties. ET 6 also performed higher because it would have no potential to impact historic-period resources and it would have fewer effects on parking demand and supply, although it would have more impacts on traffic delays and freight corridors. ET 1 and ET 2 performed the lowest on this criterion because they would affect the most parcels and potential historic-period resources, and they would also have more impacts on existing and

planned traffic in terms of potential intersection delays. Additionally, ET 1 would have the most impacts to properties with major economic activity generators.

5.3.4 Support Equitable Mobility

5.3.4.1 Provide Equitable Transit Service to Low-Income, Minority, and Transit-Dependent Populations

Most East Tacoma alternatives performed similarly on this criterion, except for ET 1, which performed lower. ET 1 would have more potential impacts on low-income and/or minority populations compared to other alternatives.

5.3.5 Provide a Financially Sustainable and Constructible Project

5.3.5.1 Financial Considerations

ET 3B performed the highest on this criterion. ET 3B would have the lowest preliminary conceptual estimate to build and a lower operating estimate due to a shorter alignment and no curves that reduce operating speeds below 55 mph. ET 1 and ET 2 performed the lowest because they would have the higher preliminary conceptual estimates and operating estimates due to 45- and 50-mph curves. All other East Tacoma alternatives performed similarly.

5.3.5.2 Constructibility and Engineering Considerations

ET 5 performed the highest on this criterion of all the East Tacoma alternatives because it would impact the fewest structures and it has higher potential to use publicly owned right-of-way. ET 1 performed the lowest on this criterion because it has the most sites that would require remediation within the project footprint. The remaining East Tacoma alternatives performed similarly.

5.3.5.3 Operational Considerations

Most East Tacoma alternatives were higher performing on this criterion. ET 1 and ET 2 performed lower because of slower horizontal curve speeds as low as 45 mph.

5.3.5.4 Schedule Considerations

All East Tacoma alternatives were higher performing because they would not have major schedule risks.

5.4 Tacoma Dome

The Tacoma Dome Segment extends from East L Street to the terminus near East D Street. Exhibit 5-4 summarizes the performance of each alternative when evaluated against the differentiating measures.

EXHIBIT 5-4
TACOMA DOME
Preliminary Draft Level 2 Summary

KEY TO RATING

LOWER PERFORMING — HIGHER PERFORMING

This sheet summarizes the performance of each of the alternatives on key measures that highlight the differences between the alternatives. The ratings are a comparison of each alternative against all other alternatives in the station area. The evaluation is based on an early conceptual level of design; design is subject to revisions.

Measures	Puyallup Avenue	E 25th Street	E 25th Street	E 26th Street	E 26th Street	E 26th Street to E 27th Street	
	TD 1 Puyallup Avenue (Connects to ET 1)	**TD 2** 25th Street West (Connects to ET 2, ET 3A)	**TD 3** 25th Street East (Connects to ET 2, ET 3A)	**TD 4 East** Off-Street (Connects to ET 3B)	**TD 4 East** In-Street (Connects to ET 3B)	**TD 4 West** E 26th St to E 27th St (Connects to ET 3B, ET 6)	**TD 4 West** E 27th St (Connects to ET 5)
							
Objective: Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs							
L2.2, L2.3 Relative ridership comparison	**Higher**	**Higher**	**Higher**	**Moderate**	**Moderate**	**Moderate**	**Moderate**
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access							
L2.7 Likelihood of station redevelopment into transit-oriented neighborhood	**Higher**	**Higher**	**Lower**	**High**	**High**	**Moderate**	**Moderate**
L2.9 Presence of amenities that can catalyze development of transit-oriented neighborhoods	**Greater** amenities	**Greater** amenities	**Fewer** amenities	**Fewer** amenities	**Fewer** amenities	**Fewer** amenities	**Fewer** amenities
L2.10 Proximity to other transit facilities and services	**280 ft** to nearest bus stop **430 ft** to Tacoma Link	**390 ft** to nearest bus stop **445 ft** to Tacoma Link	**285 ft** to nearest bus stop **1,080 ft** to Tacoma Link	**410 ft** to nearest bus stop **795 ft** to Tacoma Link	**430 ft** to nearest bus stop **970 ft** to Tacoma Link	**370 ft** to nearest bus stop **970 ft** to Tacoma Link	**370 ft** to nearest bus stop **970 ft** to Tacoma Link
L2.11 Ease of vehicular pick-up/drop-off for a variety of users	**Higher** access	**Higher** access	**Moderate** access	**Lower** access	**Lower** access	**Lower** access	**Lower** access
L2.8, L2.13 Evaluation of nonmotorized barriers and pedestrian accessibility	**Fewer** barriers **Higher** access	**Fewer** barriers **Higher** access	**Greater** barriers **Moderate** access	**Moderate** barriers **Moderate** access	**Moderate** barriers **Moderate** access	**Moderate** barriers **Moderate** access	**Moderate** barriers **Moderate** access
Objective: Preserve the Environment							
L2.20 Estimated number of potential affected parcels	**20-25** acquisitions	**20-25** acquisitions	**10-15** acquisitions	**25-30** acquisitions	**10-15** acquisitions	**30-35** acquisitions	**20-25** acquisitions *Rated lower than TD 1 and TD 2 because number of acres potentially impacted is higher
L2.21 Estimated number of potential affected parcels with major economic activity generators	**Higher**	**Higher**	**Lower**	**Higher**	**Lower**	**Higher**	**Lower**
L2.22 Estimated number of potential displacements by property type	**0-5** residences **15-20** businesses	**0-5** residences **10-15** businesses	**0-5** residences **5-10** businesses	**0-5** residences **10-15** businesses	**0-5** residences **5-10** businesses	**0-5** residences **10-15** businesses	**0-5** residences **5-10** businesses
L2.23 Estimated number of tribal parcels potentially impacted	**0** tribal parcels impacted	**0** tribal parcels impacted	**0** tribal parcels impacted	**4** tribal parcels impacted	**0** tribal parcels impacted	**1** tribal parcel impacted	**2** tribal parcels impacted
L2.25, L2.26 Potential impacts to historic, cultural, or archaeological resources	**0 known, 9 potential** historic resources **0 known** cultural resources	**1 known, 9 potential** historic resources **1 known** cultural resource	**1 known, 0 potential** historic resources **0 known** cultural resources	**0 known, 2 potential** historic resources **2 known** cultural resources	**0 known, 2 potential** historic resources **0 known** cultural resources	**1 known, 4 potential** historic resources **2 known** cultural resources	**0 known, 2 potential** historic resources **0 known** cultural resources
Objective: Support Equitable Mobility							
L2.33 Potential benefits to low-income or minority populations	**Highest potential** benefits	**Higher potential** benefits	**Moderate potential** benefits	**Higher potential** benefits	**Higher potential** benefits	**Higher potential** benefits	**Higher potential** benefits
L2.34 Potential for impacts on low-income and/or minority populations	**Some potential** for impacts	**Some potential** for impacts	**Lower potential** for impacts	**Some potential** for impacts	**Some potential** for impacts	**Some potential** for impacts	**Lower potential** for impacts
Objective: Provide a Financially Sustainable and Constructible Project							
L2.35 Preliminary conceptual estimate*	**$300M**	**$400M**	**$350M**	**$250M**	**$250M**	**$350M**	**$300M**
L2.41 Capability to accommodate future expansion included in the Sound Transit Long Range Plan	**Lowest** expansion capability	**Moderate** expansion capability	**Moderate** expansion capability	**Greatest** expansion capability	**Greatest** expansion capability	**Greatest** expansion capability	**Greatest** expansion capability

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*Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.

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5.4.1 Provide Effective Transportation Solutions to Meet Mobility, Access, and Capacity Needs

5.4.1.1 Ridership Potential

TD 3 performed the highest on this criterion compared to all other Tacoma Dome alternatives because it would have lower travel times and the station is located in an area with higher future population and employment densities. TD 2 also performed higher because of lower travel times but would have slightly lower existing and future employment densities. TD 4 West E 26th Street to E 27th Street and TD 4 West E 27th Street performed the lowest on this criterion because of low existing and future job densities and low potential to support PSRC growth centers and manufacturing/industrial centers. The remaining Tacoma Dome alternatives performed similarly.

5.4.2 Support Sustainable Land Use Plans, Equitable Access, and Economic Development

5.4.2.1 Supports Future Transit Oriented Development Opportunities

TD 1 and TD 2 performed the highest on this criterion because they are located in areas with TOD-compatible zoning and land use plans, and with greater likelihood of redevelopment into TOD neighborhoods. These alternatives would also have more amenities and fewer nonmotorized barriers than other alternatives. TD 1 and TD 2 also have the most intuitive access beneath I-705 to access toward downtown Tacoma and other residential neighborhoods. The remaining Tacoma Dome alternatives performed similarly low due to minimal amenities near the stations and potential to remove existing amenities.

5.4.2.2 Promotes Multimodal Access and Integration

TD 1 performed the highest on this criterion compared to all other Tacoma Dome alternatives because it would be the closest to both existing local bus and transit facilities and therefore would require the least amount of transit diversion. This alternative would also have more accessible vehicular pick-up/drop-off and more connections with existing and planned pedestrian facilities. All Tacoma Dome alternatives performed similarly in terms of relatively low connections with existing and planned bicycle facilities. Both sets of TD 4 East and TD 4 West alternatives performed lower on this criterion because they are the farthest from existing transit facilities as well as existing and planned bicycle and pedestrian facilities, and there is a relatively steep grade between these stations and the other transit connections in the area.

5.4.3 Preserve the Environment

5.4.3.1 Effects on the Natural Environment

Most Tacoma Dome alternatives performed similarly high on this criterion. TD 4 West E 27th Street performed the lowest because it would have more impacts on vegetated areas and the possibility of wetlands present along the alignment.

5.4.3.2 Effects on the Built Environment

TD 3 performed the highest on this criterion of all the Tacoma Dome alternatives because it would have the fewest property impacts, including those with economic activity generators, and effects on parking supply and demand. TD 4 West E 26th Street to E 27th Street performed the lowest on this criterion because it would have the most parking impacts and effects on historic-period resources, including one determined to be nationally significant. The remaining Tacoma Dome alternatives performed similarly.

5.4.4 Support Equitable Mobility

5.4.4.1 Provide Equitable Transit Service to Low-Income, Minority, and Transit-Dependent Populations

TD 1 and TD 4 West E 27th Street performed the highest on this criterion. TD 1 would have the most potential benefits to low-income and/or minority populations, but would have more potential business displacement that would impact environmental justice populations. TD 4 West E 27th Street would benefit slightly fewer environmental justice populations but would also have fewer business displacements. The remaining Tacoma Dome alternatives performed similarly on this criterion.

5.4.5 Provide a Financially Sustainable and Constructible Project

5.4.5.1 Financial Considerations

TD 3, TD 4 East Off-Street, and TD 4 East In-Street would perform the highest for this criterion. TD 4 East Off-Street and TD 4 East In-Street would have lower preliminary conceptual estimates to build as well as lower operating estimates because there would be no curves that reduce operating speeds. TD 3 would have a higher preliminary conceptual estimate to build but would have lower operating estimates due to not having curves below 55 mph and a shorter alignment length. TD 4 West E 27th Street would perform the lowest on this criterion because it would have a higher preliminary conceptual estimate to build and a slightly longer alignment length that increases the operating estimate. The remaining Tacoma Dome alternatives performed similarly.

5.4.5.2 Constructibility and Engineering Considerations

TD 4 West E 27th Street performed the highest on this criterion of all the Tacoma Dome alternatives because it would impact fewer utility structures and sites that require remediation. This alternative is also more capable of accommodating future light rail expansion to Tacoma Mall without impacting the Sounder commuter rail or heavy rail. TD 1 was higher performing overall, but it would have the lowest compatibility with the Sound Transit Long-Range Plan. The remaining Tacoma Dome alternatives performed similarly.

5.4.5.3 Operational Considerations

TD 2, TD 3, and TD 4 East performed the highest on this criterion because they would maintain speeds of 55 mph for most of the alignment. The remaining Tacoma Dome alternatives performed lower. TD 1 has a 30-mph curve near the end of the alignment that would not affect TDLE operations, but it would be less efficient for potential future extensions. TD 4 West E 27th Street and TD 4 West E 27th Street have meandering alignments with curves as low as 40 mph.

5.4.5.4 Schedule Considerations

All Tacoma Dome alternatives performed similarly in terms of schedule risks due to potential archaeological impacts that could arise during construction.

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6 Level 2 Summary

The Level 2 evaluation reflects the potential of each alternative to meet the Purpose and Need of the project and related goals. Exhibit 6-1 and Exhibit 6-2 summarize the full range of alternatives reviewed in Level 2. This section summarizes the key data and analyses from the earlier chapters of this report, and presents the relevant findings and conclusions related to each of the Level 2 alternatives.

EXHIBIT 6-1
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
SOUTH FEDERAL WAY	
Alternatives with MORE POTENTIAL	
SF 2 **West** **Enchanted/352nd**	**Notable Advantages:** • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities. • Better multimodal station access (good pedestrian infrastructure). **Notable Disadvantages:** • Greater construction challenges due to crossing spans over both 348th Street and Enchanted Parkway.
SF 8/9 **I-5/356th and I-5/Jet**	**Notable Advantages:** • Lower potential property impacts. • Lowest preliminary estimate[1] based on alignment and station location. **Notable Disadvantages:** • Lower ridership potential than SF 4 alternatives. • Lower potential for development opportunities near station due to proximity to I-5, topographic and other barriers, and fewer nearby amenities. • Farther from bus service. • Higher potential impacts to ecosystems.
SF 4C **SR 99 North (I-5 to SR 99 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential. • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities. • Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • More difficult car access. • Higher potential property impacts (though less than SF 4A/4B). • Higher potential impacts to ecosystems.
SF 4D **SR 99 North (I-5 to SR 99 to I-5 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential (shares station location with other SF 4 alternatives). • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • More difficult car access. • Higher potential property impacts (though less than other SF 4 alternatives). • Greater construction challenges due to two crossings of SR 99, including a wide crossing.
Alternatives with GREATER CHALLENGES	

EXHIBIT 6-1
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
SF 2 East **Enchanted/352nd**	**Notable Advantages:** • Moderate ridership potential. • Fewer potential property impacts than SF 4 alternatives. **Notable Disadvantages:** • Potential impacts to businesses and properties on east side of Enchanted Parkway.. • Moderately less potential for development opportunities near the station compared to SF 2 West due to proximity to I-5.
SF 3 **Enchanted/356th**	**Notable Advantages:** • Similar to SF 2 West, but like SF 2 East, runs on east side of Enchanted Parkway with potential property impacts. • Better car access. • Fewer property acquisitions than SF 4 alternatives. **Notable Disadvantages:** • Lower rating for pedestrian and bike access. • Lower potential for development opportunities near the station due to proximity to I-5, topographic and other barriers, and fewer nearby amenities.
SF 4A **SR 99 North (SR 99 to I-5 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential (shares station location with other SF 4 alternatives). • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • Highest potential property impacts. • More difficult car access. • Greater construction challenges due to guideway parallel to high voltage transmission lines and wide crossing over SR 99 at 327th.
SF 4B **SR 99 North (SR 99 route alignment)** *All SF 4 alternatives share same station location*	**Notable Advantages:** • Higher ridership potential (shares station location with other SF 4 alternatives). • Greater potential for development opportunities near station due to having more land for redevelopment and more nearby amenities Closest to bus service and existing underutilized Park & Ride at 348th Street (could provide additional parking for Link riders). **Notable Disadvantages:** • Highest potential property impacts. • More difficult car access. • Greater construction challenges due to guideway parallel to high-voltage transmission lines and wide crossing over SR 99 at 327th. • Highest preliminary estimate[1] based on alignment and station location.

EXHIBIT 6-1
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
FIFE	
Alternatives with MORE POTENTIAL	
Fife 3A **North of 15th Street (I-5 route alignment)** *Shares station location with Fife 3B*	**Notable Advantages:** • Location in planned City Center offers greater potential for development opportunities near station. • Lower potential impacts to natural environment. • Lower potential property impacts than Fife 3B; lower potential residential displacements than Fife 4A/4B. • Lowest preliminary estimate[1] based on alignment. **Notable Disadvantages:** • More potential for impacts to view-dependent businesses.
Fife 3B **North of 15th Street (SR 99 route alignment)** *Shares station location with Fife 3A*	**Notable Advantages:** • Location in planned City Center offers greater potential for development opportunities near station. • Lower potential impacts to natural environment. • Lower potential residential displacements than Fife 4A/4B. **Notable Disadvantages:** • Higher potential property impacts due to alignment on Pacific Highway. • Higher preliminary estimate[1] based on alignment.
Alternatives with GREATER CHALLENGES	
Fife 1 **12th Street**	**Notable Advantages:** • Better car access. **Notable Disadvantages:** • Lower ridership potential. • Zoning and a limited road network north of station show less potential for development opportunities near station. • Higher potential ecosystem impacts. • Higher potential impacts to major economic activity generators. • Highest preliminary estimate[1] based on alignment and station location.
Fife 4A **South of 15th Street (I-5 route alignment)** *Shares station location with Fife 4B*	**Notable Advantages:** • Location in planned City Center indicates greater potential for development opportunities near station. • Lowest preliminary estimate[1] based on alignment. **Notable Disadvantages:** • Greatest potential residential property impacts (including Rainier View Senior Apartments). • More difficult car access. • Higher potential impacts to freight movement.
Fife 4B **South of 15th Street (SR 99 route alignment)** *Shares station location with Fife 4A*	**Notable Advantages:** • Location in planned City Center indicates greater potential for development opportunities near station. **Notable Disadvantages:** • Higher potential property impacts due to alignment on Pacific Highway; higher potential residential property impacts (including Rainier View Senior Apartments). • Higher potential effects on freight movement. • Higher preliminary estimate[1] based on alignment.

EXHIBIT 6-1
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
EAST TACOMA	
Alternatives with MORE POTENTIAL	
ET 3A **E 26th Street to E 25th Street** *Shares station location with ET 3B*	**Notable Advantages:** • Close to destinations and neighborhood south of I-5. • Fewer non-motorized barriers to access; better access to multimodal connections. • More existing and potential development opportunity south of I-5 within walking distance. • Alignment connects to more potential Tacoma Dome stations alternatives TD 2 and TD 3. **Notable Disadvantages:** • Highest preliminary estimate[1] based on alignment and station location.
Alternatives with GREATER CHALLENGES	
ET 1 **Puyallup Avenue**	**Notable Advantages:** • Closest to existing transit connections (bus). **Notable Disadvantages:** • Lower ridership potential. • Farther from destinations south of I-5; more non-motorized barriers and more difficult car access. • Highest potential property impacts. • Higher potential for additional freight delay.
ET 2 **E 25th Street**	**Notable Advantages:** • Alignment connects to more potential Tacoma Dome station alternatives TD 2 and TD 3. **Notable Disadvantages:** • Lower ridership potential. • More barriers for pedestrians and bicyclists. • Farther from destinations south of I-5. • More difficult car access. • Higher potential for additional freight delay.
ET 3B **26th Street East** *Shares station location with ET 3A*	**Notable Advantages:** • Close to destinations and neighborhood south of I-5. • Fewer non-motorized barriers to access; better access to multimodal connections. • More existing and potential development opportunity south of I-5 within walking distance. • Lowest preliminary estimate[1] based on alignment and station location. **Notable Disadvantages:** • Alignment connects to more challenging Tacoma Dome station alternative TD 4.
ET 5 **E 27th Street**	**Notable Advantages:** • Fewest businesses potentially impacted. • Closest to destinations and neighborhood south of I-5. • Fewer non-motorized barriers to access; better access to multimodal connections. • More existing and potential development opportunity south of I-5 within walking distance. **Notable Disadvantages:** • Alignment connects to more challenging Tacoma Dome station alternative TD 4. • Greater potential impacts to tribal properties.
ET 6 **26th Street West**	**Notable Advantages:** • No potential to affect historic resources. **Notable Disadvantages:** • More difficult car access. • Higher potential for additional freight delay. • Farther from destinations and neighborhood south of I-5.

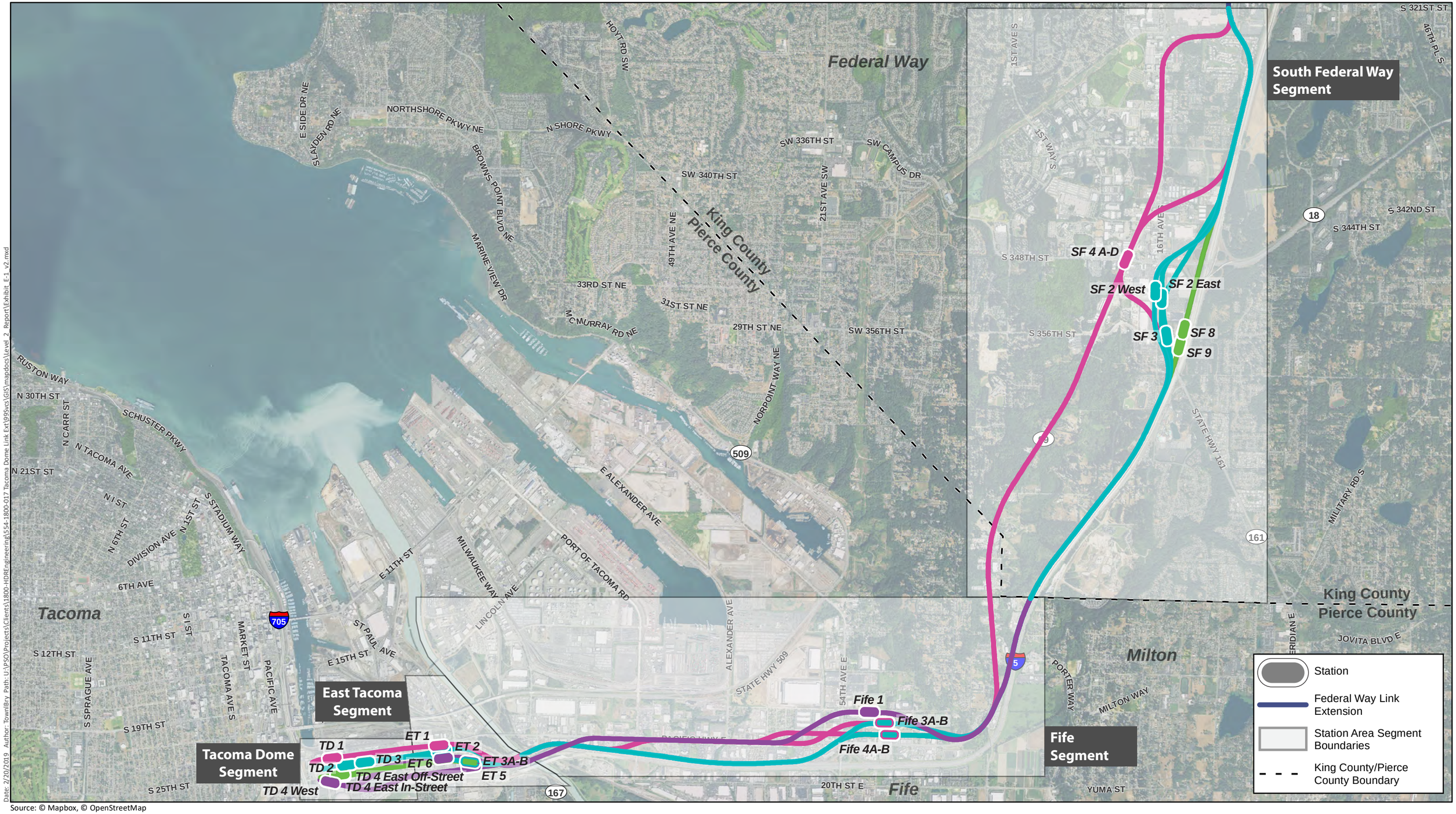
EXHIBIT 6-1
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
TACOMA DOME	
Alternatives with MORE POTENTIAL	
TD 2 **25th Street West**	**Notable Advantages:** • Highest station access for people walking, biking, taking transit or driving. • Close to other transit modes for ease of transfer (closest proximity to Tacoma Link). • Zoning and nearby amenities offer greater potential for housing and business development near station. • Higher ridership potential. **Notable Disadvantages:** • Higher potential impacts to businesses that are major economic activity generators along 25th Street. • Highest preliminary estimate[1] based on alignment and station location.
TD 3 **25th Street East**	**Notable Advantages:** • Higher ridership potential than TD 4 alternatives. • Fewer potential property impacts. • Moderate rating for multimodal access (closer to buses, but farther from Tacoma Link). **Notable Disadvantages:** • Lower potential for development opportunities near station due to location in a light industrial zoning district.
Alternatives with GREATER CHALLENGES	
TD 1 **Puyallup Avenue**	**Notable Advantages:** • Higher ridership potential. • Close to other transit modes for ease of transfer. • Zoning and nearby amenities offer greater potential for housing and business development near station. **Notable Disadvantages:** • Higher potential impacts to businesses that are major economic activity generators along Puyallup Avenue. • Long-term, future extension to Tacoma Mall is most difficult.
TD 4 **East off-street** **E 26th Street**	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. • Lowest preliminary estimate[1] based on alignment and station location. **Notable Disadvantages:** • Farther from multimodal connections (majority of buses). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and associated parking. • Likely impacts to tribal properties.
TD 4 **East in-street** **E 26th Street**	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. • Fewer potential property impacts. **Notable Disadvantages:** • Farthest from multimodal connections (Tacoma Link and bus). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and associated parking.

EXHIBIT 6-1
Level 2 Technical Evaluation: Notable Advantages and Disadvantages

Alternatives	Technical Analysis
TD 4 West **E 26th Street to E 27th Street** *Both TD 4 West alternatives share same station location*	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. **Notable Disadvantages:** • Farther from multimodal connection points (Tacoma Link). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and associated parking. • Higher number of potential property impacts.
TD 4 West **E 27th Street** *Both TD 4 West alternatives share same station location*	**Notable Advantages:** • Long-term, future extension to Tacoma Mall is easier. **Notable Disadvantages:** • Farther from multimodal connection points (Tacoma Link). • More difficult car access. • Lower potential for development opportunities near station due to surrounding land uses, fewer nearby amenities, and proximity to civic amenities and parking.

[1]Preliminary estimates are not the project's budget. They are for use as comparisons among alternatives.



Source: © Mapbox, © OpenStreetMap

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SOUNDTRANSIT

EXHIBIT 6-2
LEVEL 2 ALTERNATIVES
ALL STATION AREAS

TACOMA DOME LINK EXTENSION

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6.1 Relative Performance of Level 2 Alternatives by Segment

The following describes the relative performance of each Level 2 alternative by segment. It focuses primarily on the highest and lowest performing alternatives by segment.

6.1.1 South Federal Way

All of the South Federal Way alternatives feature one station with a parking facility and are 4.3 to 4.7 miles in length from the terminus of the Federal Way Link Extension and the end of this segment at the King/Pierce County line.

6.1.1.1 Enchanted Parkway

SF 2 West Enchanted/352nd, SF 2 East Enchanted/352nd, SF 3 Enchanted/356th

This family of three alternatives is mostly I-5-based. These alternatives leave the Federal Way Link Extension terminus and turn southwest to align along the west side of I-5, then curve toward Enchanted Parkway for a station near South 352nd Street or at South 356th Street before returning to the west side of I-5 to continue south to the King/Pierce County line. The alternatives vary primarily on the station site on Enchanted Parkway and how the alignment curves to the station and then back to I-5. A summary of the evaluation for these alternatives include:

- Moderate performance in ridership and TOD measures for SF 2 East and SF 3 due to the station location on Enchanted Parkway, in a larger commercial area with residential uses to the south and farther to the west. The station for SF 3 is farthest south, away from more of the amenities in the area. SF 2 West performs higher than SF 2 East and SF 3 on TOD measures primarily because the station is located on the west side of the street, which reduces the number of crossings required to access the commercial and residential areas to the west.
- The alternatives perform moderately for vehicular connections to the stations with some added vehicle delay at intersections and moderate ease of access to the stations for vehicles.
- Moderate multimodal access to the stations is due to large block sizes, topography, and busy arterials; however, these alternatives perform higher than other South Federal Way alternatives for multimodal access. SF 3 performs lower than SF 2 East and SF 2 West because of a planned roundabout at the entrance to the station that may create an impediment to pedestrian and bicycle travel.
- There is moderate level of property-related impacts, with some potential displacements of economic activity generators and residential and business displacements.
- Most built and natural environment impacts are reduced because most of the alignment is along I-5.

- Potential archaeological impacts, including to cemeteries in the southern part of the alignment but more of the area along I-5 and the Enchanted Parkway, have been previously disturbed.
- These three alternatives are the same for most of the length except for the specific station site on Enchanted Parkway and nearby alignment sections. Station-centric measures such as TOD potential, multimodal access, and localized property impacts were the primary differentiators among the alternatives.

6.1.1.2 SR 99

SF 4A SR 99 North (SR 99 to I-5), SF 4B SR 99 North (SR 99), SF 4C SR 99 North (I-5 to SR 99), SF 4D SR 99 North (I-5 to SR 99 to I-5)

This family of alternatives is focused around a station on SR 99 at South 348th Street. There are different sub-alignment choices to the station from the north and to the south, which affects the level of impacts, travel times, constructibility, and financial performance. From the terminus of the Federal Way Link Extension, the alternatives turn west to SR 99 or curve in from I-5. To the south, the alternatives either continue south along SR 99 or turn back toward I-5 to continue south to the King/Pierce County line. A summary of the evaluation for these alternatives include:

- Higher performance for ridership potential to the station at South 348th Street, but slower travel times due to a longer alignment and more curves getting to SR 99.
- Higher performance in TOD measures with the station location on SR 99 in the center of a larger area with a good mix of land uses and amenities nearby.
- Lower multimodal access to the station due to a congested street network and turn restrictions for ingress and egress to the station, and lower amount of nearby existing and future bicycle facilities.
- Moderate to high level of property-related impacts, partly due to a longer alignment in areas with existing development compared to other alternatives.
- Potential for higher natural resource and archaeological impacts in the southern parts of the SR 99 portions of the alignments, with a larger wetland complex potentially impacted along SR 99.
- The I-5 to SR 99 alignments (SF 4C and SF 4D) and the SR 99 alignments (SF 4A and SF 4B) have potential tribal property and archaeological impacts, although the full-length SR 99 alignment (SF 4B) crosses through more areas with a higher probability of containing archaeological resources.
- All four alternatives serve the same station with higher TOD and ridership potential but feature an array of sub-alignments connecting to the station to and from I-5 or SR 99.

6.1.1.3 I-5 West

SF 8 I-5/356th, SF 9 I-5/Jet

These I-5 alternatives are based on the representative alternative from ST3, located adjacent to the west side of I-5 after leaving the terminus of the Federal Way Link Extension. These alternatives feature similar station siting options adjacent to the freeway, with the stations either north or south of South 356th Street. A summary of the evaluation for these alternatives include:

- Faster travel times due to shorter overall alignment and no curves under 55 mph compared to other South Federal Way alternatives.
- I-5 West alternatives have a lower to moderate performance for ridership, multimodal access, and TOD potential due to access and development barriers presented by I-5 and larger commercial parcels near to the stations.
- Higher performance for potential property impacts, largely due to the alignment being located along the west side of I-5 for the entire South Federal Way segment.
- Having the alignment along I-5 helps reduce both built and natural environmental impacts.

6.1.2 Fife

The Fife alternatives begin at the King/Pierce County line, are approximately 4.0 miles long, and have one station with a parking facility located in Fife near 54th Avenue East.

6.1.2.1 I-5 to 12th Street

Fife 1 12th Street

For analysis, this alternative assumes a pairing with alternatives on the west side of I-5 from Federal Way but could be matched with SR 99 alternatives. After leaving I-5 near the Fife curve, the alternative crosses southwest to northwest to align with 12th Street East to reach a station east of 54th Avenue East. The alternative then continues westbound on 12th Street East to 54th Avenue East, then curves south toward Pacific Highway East, crossing over near Willow Road East. Fife 1 continues along the south side of Pacific Highway East until just west of the Port of Tacoma Road interchange, where it continues southwest to align with the north side of I-5. A summary of the evaluation for this alternative includes:

- Station was lower to moderate performing for ridership potential and TOD measures due to mostly industrial zoning, lower likelihood of redevelopment, and lower projected ridership due to the station being located farthest to the north from the planned Fife City Center Vision area.
- Higher environmental impacts, particularly to streams throughout the Fife segment.
- Property impacts are in the higher mid-range of alternatives and include the highest number of potential displacements of economic activity generators as well as impacts to tribal parcels.

6.1.2.2 North of 15th Street

Fife 3A North of 15th Street (I-5), Fife 3B North of 15th Street (SR 99)

Fife 3A assumes a pairing with the alternatives on the west side of I-5 from Federal Way and Fife 3B assumes a pairing with the alternative on SR 99. After leaving either I-5 or SR 99, the alternatives curve to the west of SR 99 and extend between 12th Street East and 15th Street East with a station located just west of 59th Avenue East. After leaving the station, Fife 3A curves back toward I-5 just past 54th Avenue East and continues along the north side of I-5 to the Puyallup River. After leaving the station, Fife 3B curves south toward Pacific Highway East and continues along the south side of Pacific Highway East until the Port of Tacoma Road interchange, where it extends to the southwest along the north side of I-5 across the Puyallup River. A summary of the evaluation for these alternatives include:

- Station is higher performing for TOD potential due to its location within the City of Fife's planned City Center Vision area, higher redevelopment potential, lower barriers, and amenities.
- Moderate performance for multimodal access with access for people walking, biking, taking transit, or driving.
- Fife 3A performs the highest of all Fife alternatives for property impacts measures due to lower levels of potential parcel impacts, economic activity generator displacements, and residential and commercial displacements.
- Highest preliminary conceptual estimate to build.

6.1.2.3 South of 15th Street

Fife 4A South of 15th Street (I-5), Fife 4B South of 15th Street (SR 99)

Fife 4A assumes a pairing with the alternatives on the west side of I-5 from Federal Way and Fife 4B assumes a pairing with the alternative on SR 99. After leaving either I-5 or SR 99, the alternatives curve to the west of SR 99 and continue along the south side of 15th Street East with a station at 59th Avenue East. After leaving the station, Fife 4A curves southwest to realign with the north side of I-5 just west of 54th Avenue East where it continues across the Puyallup River. After leaving the station, Fife 4B continues west along the south side of 15th Avenue East until 46th Avenue East, where it extends southwest to realign with the south side of Pacific Highway East. Fife 4B continues along the south side of Pacific Highway East until it reaches the Port of Tacoma interchange, where it extends southwest to realign with the north side of I-5 across the Puyallup River. A summary of the evaluation for these alternatives include:

- Higher performance on TOD measures due to its location within the City of Fife's planned City Center Vision area, higher redevelopment potential, and moderate barriers.

- Higher performance for multimodal access with access for people walking, biking, or taking transit. Ease of vehicular access is lower performing due to the station being located near Pacific Highway East, which is congested.
- Moderate to lower performing for potential property impacts, particularly for residential and commercial displacements.
- Lower performing for potential general purpose and freight traffic impacts due to proximity to Pacific Highway East.
- Higher preliminary conceptual estimate to build.

6.1.3 East Tacoma

The East Tacoma alternatives include the bridge crossing of the Puyallup River, along with a station near Portland Avenue. Based on preliminary information from the U.S. Coast Guard, vertical navigational requirements are minimal and set by existing bridges over the river. All alternatives assume a similar bridge height, and do not preclude a given bridge type or the potential for a multimodal bridge.

6.1.3.1 Puyallup Avenue

ET 1 Puyallup Avenue

ET 1 includes a station at Portland Avenue and Puyallup Avenue. ET 1 crosses the Puyallup River north of I-5. At East Bay Street, ET 1 extends northwest to align with the south side of Puyallup Avenue where it continues through East Tacoma to the station at Portland Avenue and Puyallup Avenue. A summary of the evaluation for this alternative includes:

- Lower performance for TOD potential due to location in a light industrial area and on a busy street with higher levels of freight movement, and with proximity to railyards and major municipal infrastructure. This station location also has limited amenities nearby and a lower likelihood for station redevelopment.
- Lower performance for multimodal access, including for vehicles, bicycles, and pedestrians.
- Station is farthest away from residential neighborhoods and Puyallup Tribe of Indians facilities to the south of I-5.
- Lowest performing of the East Tacoma alternatives for potential displacements of economic activity generators.
- Lower performing for potential impacts to general purpose and freight traffic.

6.1.3.2 East 25th Street

ET 2 E 25th Street

ET 2 crosses the Puyallup River north of I-5. At East Bay Street, ET 2 extends northwest to the north side of East 25th Street where it continues through East Tacoma. The station is located at

Portland Avenue and East 25th Street. A summary of the evaluation for this alternative includes:

- Lower performance for TOD potential due to location in a light industrial area and on a busy street with higher levels of freight movement, and with proximity to railyards and major municipal infrastructure. This station location also has limited amenities nearby and a lower likelihood for station redevelopment.
- Lower performance for multimodal access, including for vehicles, bicycles, and pedestrians.
- Moderate performance for potential property impacts.
- Station is located north of the Sounder tracks, which is farther from the residential neighborhoods and Puyallup Tribe of Indians facilities to the south of I-5.
- Lower performing for potential impacts to general purpose and freight traffic.

6.1.3.3 East 26th Street

ET 3A E 26th Street to E 25th Street, ET 3B 26th Street East

The East 26th Street alternatives include ET 3A and ET 3B. Both alternatives cross the Puyallup River north of I-5 and continue northwest at East Bay Street to the south side of East 26th Street. The station is located at East 26th Street and East Bay Street. West of the station, ET 3A continues northwest to cross over the Sounder tracks and align with the north side of East 25th Street. ET 3B continues along the north side of East 26th Street west of the station. A summary of the evaluation for these alternatives include:

- Higher performance for TOD measures due to higher redevelopment potential, lower barriers, and moderate amenities nearby because the station is located closer to the more populated areas and Puyallup Tribe of Indians facilities to the south of I-5.
- Moderate performance for multimodal station access due to a low to moderate amount of existing and planned bicycle and pedestrian facilities, and moderate ease of access to the station for vehicles.
- ET 3A would have a higher preliminary conceptual estimate to build and potential construction challenges because the alignment crosses the Sounder tracks.
- Higher performance for operating estimate due to shorter alignment and no curves that reduce operating speeds.

6.1.3.4 East 27th Street

ET 5 E 27th Street

ET 5 crosses the Puyallup River north of I-5 and continues along the north side of East 27th Street through the remainder of East Tacoma. The station is located at East Bay Street and East 27th Street. A summary of the evaluation for this alternative includes:

- Moderate to higher performance for TOD measures due to greater likelihood of redevelopment and lower barriers because the station is being located closer to the more populated areas and Puyallup Tribe of Indians facilities to the south of I-5.
- Moderate performance for multimodal station access due to a low to moderate amount of existing and planned bicycle and pedestrian facilities, and good ease of access to the station for vehicles.
- Lowest preliminary conceptual estimate to build.

6.1.3.5 East 26th Street

ET 6 26th Street West

ET 6 crosses the Puyallup River north of I-5 and continues northwest at East Bay Street to align with the south side of the Sounder tracks through East Tacoma. The station is located at Portland Avenue between the Sounder tracks and East 26th Street. A summary of the evaluation for this alternative includes:

- Lower to moderate performance for TOD potential due to location in a light industrial area and on a busy street with higher levels of freight movement, and with proximity to railyards and major municipal infrastructure. This station location also has limited amenities nearby and a lower likelihood for station redevelopment.
- Lower performance for multimodal station access due to a low amount of existing and planned bicycle and pedestrian facilities, and lower ease of access to the station for vehicles.
- Lower performing for potential impacts to general purpose and freight traffic.
- Lowest preliminary conceptual estimate to build.

6.1.4 Tacoma Dome

The Tacoma Dome alternatives are located in proximity to each other, resulting in similar evaluation performance for many of the measures. Differences in performance largely relate to the tradeoffs between property impacts in the different alignments, all of which are in constrained areas. Each Tacoma Dome alternative is located within proximity of the multi-block intermodal transit hub (Pierce Transit and Sound Transit buses, Tacoma Link, Sounder commuter rail, Greyhound, and Amtrak).

6.1.4.1 Puyallup Avenue

TD 1 Puyallup Avenue

TD 1 extends along the south side of Puyallup Avenue until just east of I-705 with a station at Puyallup Avenue and East D Street. A summary of the evaluation for this alternative includes:

- TD 1 has potential conflicts with City of Tacoma plans for multimodal complete street improvements on Puyallup Avenue.

- Higher performance for TOD measures due to consistency with land use goals and plans, higher redevelopment potential, lower barriers, and good mix of nearby amenities.
- Higher performance for multimodal access to the station due to higher ease of access for vehicles, higher presence of existing and planned pedestrian facilities, and higher integration with Tacoma Link.
- Higher performance for impacts to general purpose and freight traffic due to minor delay at intersections compared to other alternatives.
- TD 1 has potential impacts to the highest number of economic activity generators.
- TD 1 presents more challenges for future extensions of light rail under I-705 due to a less direct connection to East 25th Street that would require additional property impacts and a crossing of Tacoma Link.

6.1.4.2 East 25th Street

TD 2 25th Street West, TD 3 25th Street East

TD 2 and TD 3 extend along the center of East 25th Street until west of East D Street, with the TD 2 station east of East D Street and the TD 3 station at East G Street. A summary of the evaluation for these alternatives include:

- Higher performance for ridership measures due to close transfers to other transit modes, proximity to existing residential and commercial uses, and station location within proximity to the PSRC-designated Tacoma Dome regional growth center.
- TD 2 performs higher for TOD measures due to consistency with land use goals and zoning, greater likelihood for redevelopment, fewer barriers, and a good mix of amenities nearby.
- Higher performance for TD 2 on multimodal station access due to higher ease of access for vehicles, higher presence of existing and planned pedestrian facilities, and higher integration with Tacoma Link.
- Higher performance for TD 3 on potential property impacts due to lower potential impacts to parcels, displacements of economic activity generators, and displacements of residential and commercial uses.
- Lower performance for impacts to general purpose and freight traffic due to additional delay at intersections compared to other alternatives.
- Lower performance for preliminary conceptual estimate to build; TD 2 and TD 3 have the highest preliminary conceptual estimate to build of all Tacoma Dome alternatives.

6.1.4.3 East 26th Street

TD 4 East Off-Street, TD 4 East In-Street

TD 4 East Off-Street extends along the north side of East 26th Street to a station east of East D Street, while TD 4 East In-Street is located in the center of East 26th Street just south of the TD 4 East Off-Street station. A summary of the evaluation for these alternatives include:

- Lower to moderate performance on TOD measures due to proximity to existing uses that are not likely to redevelop (civic uses associated with the Tacoma Dome and tribal trust land), lower likelihood for redevelopment, moderate barriers, and minimal amenities nearby.
- Moderate performance on multimodal station access due to lower ease of access for vehicles, moderate presence of existing and planned pedestrian facilities, and moderate integration with Tacoma Link.
- TD 4 East Off-Street would have the greatest potential to impact tribal properties.
- Lower potential to affect historic resources compared to other Tacoma Dome alternatives.
- Lower preliminary conceptual estimate to build.

6.1.4.4 East 26th Street to East 27th Street

TD 4 West E 26th Street to E 27th Street, TD 4 West E 27th Street

TD 4 West E 26th Street to E 27th Street extends north of East 26th Street until just west of East J Street where it continues southwest towards East 27th Street. At East F Street, the alignment extends northwest to serve a station straddling East D Street. TD 4 West E 27th Street extends along the north side of East 27th Street until East G Street, where it continues northwest to serve the same station as TD 4 West E 26th Street to E 27th Street. A summary of the evaluation for these alternatives include:

- Lower performance for TOD measures due to proximity to existing uses that are not likely to redevelop (civic uses associated with the Tacoma Dome and tribal trust land), moderate redevelopment potential, moderate barriers, and minimal amenities.
- Lower performance on multimodal station access due to lower ease of access for vehicles, moderate presence of existing and planned pedestrian facilities, and lowest integration with Tacoma Link.
- TD 4 West E 26th Street to E 27th Street would have the highest potential impacts to historic resources.
- Lower preliminary conceptual estimate to build.

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Appendix A

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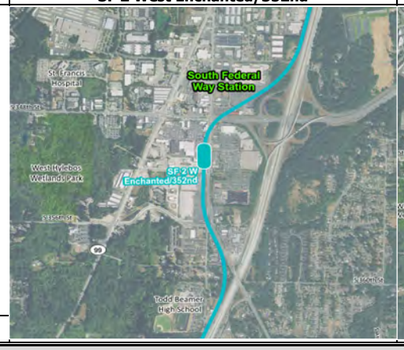
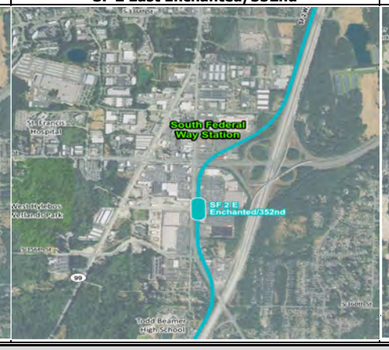
Lower Performing

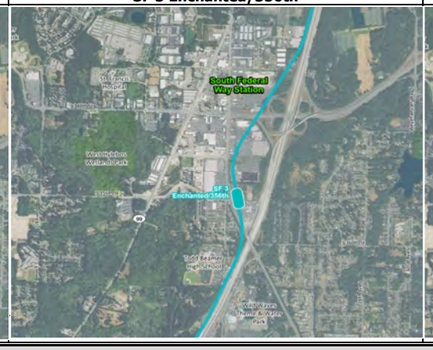
Higher Performing

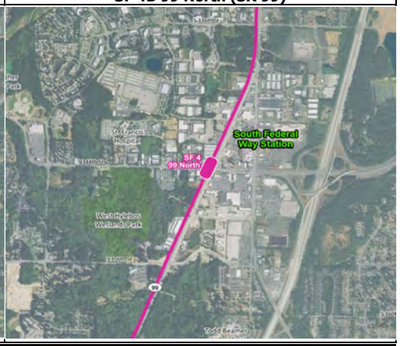
Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA









Measure	Methodology	SF 2 West Enchanted/352nd	SF 2 East Enchanted/352nd	SF 3 Enchanted/356th	SF 4A 99 North (SR 99 to I-5)	SF 4B 99 North (SR 99)
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs						
L2.1: Travel time	Estimated based on alignment length, percent of alignment with horizontal speeds below 55 MPH	Moderate percentage of alignment below 55 mph (16.3%); mid-alignment length; 0.15 miles longer than the shortest SF alternative	Moderate percentage of alignment below 55 mph (15.6%); mid-alignment length; 0.12 miles longer than the shortest SF alternative	Low percentage of alignment below 55 mph (10.5%); shorter alignment length; 0.05 miles longer than the shortest SF alternative	Highest percentage of alignment below 55 mph (29.7%); longer alignment length; 0.35 miles longer than the shortest SF alternative	Moderate percentage of alignment below 55 mph (17.6%); longer alignment length; 0.17 miles longer than the shortest SF alternative
L2.2: Daily and annual projected project ridership (2042)	Average daily projected riders (baseline estimate provided for South Federal Way station area, with qualitative differences noted for station/alignment alternatives) **South Federal Way: 12,730 Daily NB; 12,730 Daily SB**	Moderate ridership potential due to relative potential for transit-oriented development growth and multimodal station access (abundance of existing big-box retail and proximity to I-5).	Moderate ridership potential due to relative potential for transit-oriented development growth and multimodal station access (abundance of existing big-box retail and proximity to I-5).	Moderate ridership potential due to relative potential for transit-oriented development growth and multimodal station access (abundance of existing big-box retail and proximity to I-5).	Higher ridership potential due to relative potential for transit-oriented development growth and multimodal station access.	Higher ridership potential due to relative potential for transit-oriented development growth and multimodal station access.
L2.3: Projected station boardings (2042)	Projected station boardings (baseline estimate provided for South Federal Way station area, with qualitative differences noted for station/alignment alternatives) **South Federal Way: 1,100 daily NB boardings; 330 daily SB boardings**	Moderate level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access (abundance of big-box retail and proximity to I-5).	Moderate level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access (abundance of big-box retail and proximity to I-5).	Moderate level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access (abundance of big-box retail and proximity to I-5).	Higher level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access.	Higher level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access.
L2.4: Proximity to Puget Sound Regional Council growth centers and manufacturing/industrial Centers	% Puget Sound Regional Council Growth Center and/or manufacturing/industrial center within 10-minute walkshed	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.
L2.5: Population (persons/acre) and job (jobs/acre) densities	Existing and future (2040) pop and employment densities within 10-minute walkshed (PSRC Land Use Vision Dataset)	Population densities (existing 236/future 259) and employment densities (existing 66/ future 85). High population density, high population growth. Medium job density, high job growth.	Population densities (existing 236/ future 259) and Employment densities (existing 66/future 85). High population density, high population growth. Medium job density, high job growth.	Population densities (existing 235/future 250) and employment densities (existing 52/future 62). High population density, medium population growth. Low job density, low job growth.	Population densities: existing 128/future 161 Employment densities: existing 65/future 95 Lowest population density, high population growth. Medium job density, high job growth.	Population densities: existing 128/future 161 Employment densities: existing 65/ future 95 Lowest population density, high population growth. Medium job density, high job growth.
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access						
L2.6: Consistency with civic and community planning and land use, evaluating elements such as: local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans	Assessment of the civic and land use documents that are relevant and up to date in each station area. Evaluate each station location against the relevant documents/civic plans rating each plan as "consistent with TOD around alternative location"(+), "neutral", or "inconsistent with TOD around alternative location"(-)	Land use, zoning not compatible with mixed-use transit-oriented development with mixed residential and commercial uses in proximity to transit.	Land use, zoning not compatible with mixed-use transit-oriented development with mixed residential and commercial uses in proximity to transit.	Land use, zoning not compatible with mixed-use transit-oriented development with mixed residential and commercial uses in proximity to transit. Small amount of land zoned for multifamily nearby; however, it is not a material amount and is recently built-out so unlikely to increase in the near future.	Close to zoning that allows for a range of amenities and land to the west that is zoned for residential development.	Close to zoning that allows for a range of amenities and land to the west that is zoned for residential development.
L2.7: Likelihood of station area redevelopment into transit-oriented neighborhood	Assessment of degree to which the station area has land available to support development into a transit-oriented neighborhood, as measured by the amount of land within a ¼ mile walking distance of station that has a relatively greater likelihood to redevelop into transit-supportive uses	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop' . This alternative has a greater amount of total land within the 1/4 mile walking distance compared to other alternatives. This station is farther from I-5, which results in more land overall that could redevelop. (4,753,000 SF total land, 100% classified as lower likelihood to redevelop)	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop'. This alternative has a moderate amount of total land within the 1/4 mile walking distance compared to other alternatives. (4,440,000 SF total land, 100% classified as lower likelihood to redevelop)	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop' . This alternative has a moderate amount of total land within the 1/4 mile walking distance compared to other alternatives. (4,372,000 SF total land; 221,000 SF of land with a greater likelihood to redevelop; 4,152,000 SF of land lower likelihood to redevelop)	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop'. This alternative has a greater amount of total land within the 1/4 mile walking distance compared to other alternatives. This station is farther from I-5, which results in more land overall that could redevelop. (4,622,000 SF total land, 100% classified as lower likelihood to redevelop)	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop'. This alternative has a greater amount of total land within the 1/4 mile walking distance compared to other alternatives. This station is farther from I-5, which results in more land overall that could redevelop. (4,622,000 SF total land, 100% classified as lower likelihood to redevelop)
L2.8: Detailed evaluation of nonmotorized barriers within a ½ mile of the station	Assessment of barriers within half-mile of TDLE station areas (barriers list: (1) Topography (hills) that limit the walkshed, (2) Wide roads, (3) Highways, (4) Bodies of water, (5) Railways)	Station is one of the best from a barriers point of view. Even though it has many large roads surrounding it (Enchanted Parkway, SR 99, 348th Street to the north,) it is on the same block as all the amenities at Federal Way Crossings, and the crossing over 352nd Street is relatively less difficult compared to other alternatives.	Station has good connectivity because it spans 352nd Street; however, it is impacted by the barrier of I-5 to the east, and is not as proximal (across Enchanted Parkway) from the majority of the amenities (at Federal Way Crossings). There is also a relatively steep grade between the sidewalk on Enchanted Parkway and the station ground level.	This station has lower connectivity because it is bounded by I-5 with one nearby overpass with sidewalks that end on the other side. Enchanted Parkway to the west is a wide crossing. The Washington State Department of Transportation's planned exit ramps and roundabout will create additional nonmotorized barriers. There is a substantial grade change to the west that limits the potential for future connectivity across Enchanted Parkway. Barriers will be difficult to overcome even with infrastructure investments.	This station has access challenges as the pedestrian crossing across SR 99/Pacific Highway is challenging (seven lanes of traffic) and the crossing lights are slow and infrequent. To the west, the Hylebos Wetland Park creates a barrier for development, but also an amenity. The connection west along 348th Street toward the residential neighborhoods is excellent and has little topography challenges. The station currently spans 348th Street and this is a significant asset from a "barriers" point of view since the difficult at-grade crossing is mitigated for people arriving or departing by light rail.	This station has access challenges as the pedestrian crossing across SR 99 is challenging (seven lanes of traffic) and the crossing lights are slow and infrequent. To the west, the Hylebos Wetland Park creates a barrier for development, but also an amenity. The connection west along 348th Street toward the residential neighborhoods is excellent and has little topography challenges. The station currently spans 348th Street and this is a significant asset from a "barriers" point of view since the difficult at-grade crossing is mitigated for people arriving or departing by light rail.

Lower Performing

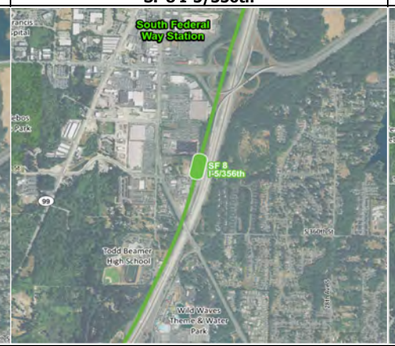
Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

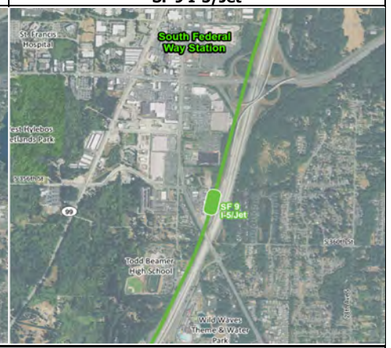
SOUTH FEDERAL WAY STATION AREA

SF 4C 99 North (I-5 to SR 99)

SF 4D 99 North (I-5 to SR 99 to I-5)



SF 8 I-5/356th



SF 9 I-5/Jet

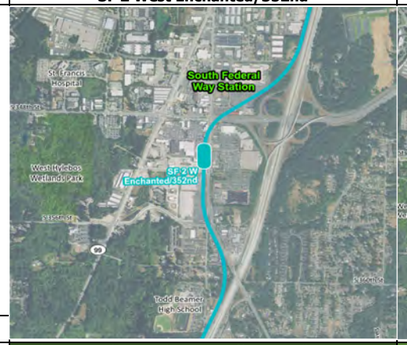
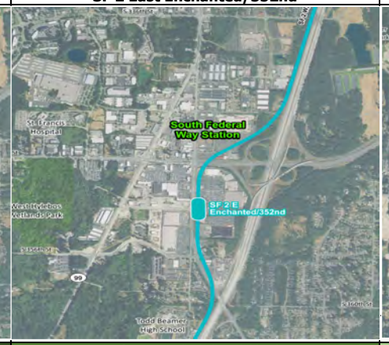
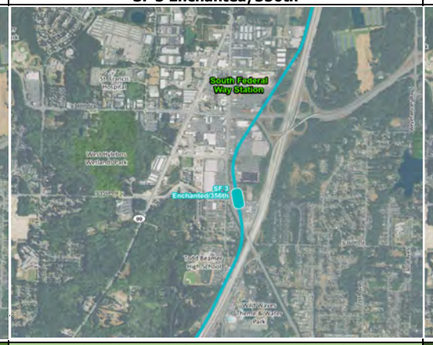
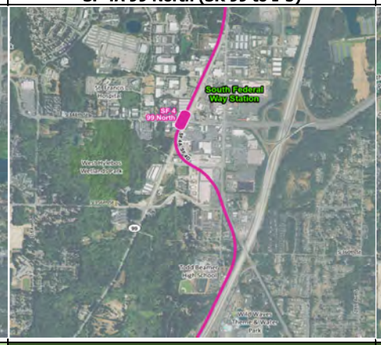
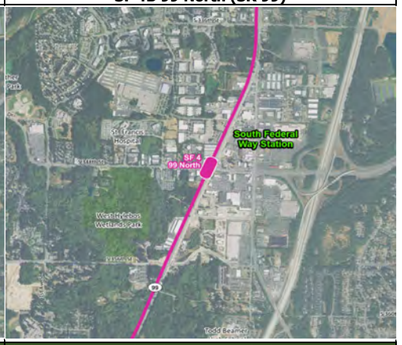
Measure	Methodology	SF 4C 99 North (I-5 to SR 99)	SF 4D 99 North (I-5 to SR 99 to I-5)	SF 8 I-5/356th	SF 9 I-5/Jet
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs					
L2.1: Travel time	Estimated based on alignment length, percent of alignment with horizontal speeds below 55 MPH	Lower percentage of alignment below 55 mph (0.0%); longer alignment length; 0.29 miles longer than the shortest SF alternative	Moderate percentage of alignment below 55 mph (12.7%); longer alignment length; 0.39 miles longer than the shortest SF alternative	Lower percentage of alignment below 55mph (0.0%); shorter alignment length (4.29 miles).	Lower percentage of alignment below 55 mph (0.0%); shorter alignment length (4.29 miles).
L2.2: Daily and annual projected project ridership (2042)	Average daily projected riders (baseline estimate provided for South Federal Way station area, with qualitative differences noted for station/alignment alternatives) **South Federal Way: 12,730 Daily NB; 12,730 Daily SB**	Higher ridership potential due to relative potential for transit-oriented development growth and multimodal station access.	Higher ridership potential due to relative potential for transit-oriented development growth and multimodal station access.	Moderate ridership potential due to relative potential for transit-oriented development growth and multimodal station access (abundance of existing big-box retail and proximity to I-5).	Moderate ridership potential due to relative potential for transit-oriented development growth and multimodal station access (abundance of existing big-box retail and proximity to I-5).
L2.3: Projected station boardings (2042)	Projected station boardings (baseline estimate provided for South Federal Way station area, with qualitative differences noted for station/alignment alternatives) **South Federal Way: 1,100 daily NB boardings; 330 daily SB boardings**	Higher level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access.	Higher level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access.	Moderate level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access (abundance of big-box retail and proximity to I-5).	Moderate level of projected station boardings due to relative potential for transit-oriented development growth and multimodal station access (abundance of big-box retail and proximity to I-5).
L2.4: Proximity to Puget Sound Regional Council growth centers and manufacturing/industrial Centers	% Puget Sound Regional Council Growth Center and/or manufacturing/industrial center within 10-minute walkshed	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.
L2.5: Population (persons/acre) and job (jobs/acre) densities	Existing and future (2040) pop and employment densities within 10-minute walkshed (PSRC Land Use Vision Dataset)	Population densities: existing 128/future 161 Employment densities: existing 65/future 95 Lowest population density, high population growth. Medium job density, high job growth.	Population densities: existing 128/future 161 Employment densities: existing 65/future 95 Lowest population density, high population growth. Medium job density, high job growth.	Population densities: existing 326/future 344 Employment densities: existing 70/future 82 Highest population density, lowest population growth. Highest job density, lowest job growth.	Population densities: existing 326/future 344 Employment densities: existing 70/future 82 Highest population density, lowest population growth. Highest job density, lowest job growth.
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access					
L2.6: Consistency with civic and community planning and land use, evaluating elements such as: local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans	Assessment of the civic and land use documents that are relevant and up to date in each station area. Evaluate each station location against the relevant documents/civic plans rating each plan as "consistent with TOD around alternative location"(+), "neutral", or "inconsistent with TOD around alternative location"(-)	Close to zoning that allows for a range of amenities and land to the west that is zoned for residential development.	Close to zoning that allows for a range of amenities and land to the west that is zoned for residential development.	Land use, zoning not compatible with mixed-use transit-oriented development. Small amount of land zoned for multifamily nearby; however, it is not a material amount and is recently built-out so unlikely to increase in the near future.	Land use, zoning not compatible with mixed-use transit-oriented development. Small amount of land zoned for multifamily nearby; however, it is not a material amount and is recently built-out so unlikely to increase in the near future.
L2.7: Likelihood of station area redevelopment into transit-oriented neighborhood	Assessment of degree to which the station area has land available to support development into a transit-oriented neighborhood, as measured by the amount of land within a ¼ mile walking distance of station that has a relatively greater likelihood to redevelop into transit-supportive uses	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop'. This alternative has a greater amount of total land within the 1/4 mile walking distance compared to other alternatives. This station is farther from I-5, which results in more land overall that could redevelop. (4,622,000 SF total land, 100% classified as lower likelihood to redevelop)	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop'. This alternative has a greater amount of total land within the 1/4 mile walking distance compared to other alternatives. This station is farther from I-5, which results in more land overall that could redevelop. (4,622,000 SF total land, 100% classified as lower likelihood to redevelop)	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop'. This alternative has a lower amount of total land within the 1/4 mile walking distance compared to other alternatives. This station is adjacent to I-5, which results in less land overall that is available for redevelopment. (3,031,000 SF total land; 221,000 SF of land with a greater likelihood to redevelop; 2,811,000 SF of land with lower likelihood to redevelop)	Most land in the South Federal Way station area is classified as 'land with a lower likelihood to redevelop'. This alternative has a lower amount of total land within the 1/4 mile walking distance compared to other alternatives. This station is adjacent to I-5, which results in less land overall that is available for redevelopment. (3,031,000 SF total land; 221,000 SF of land with a greater likelihood to redevelop; 2,811,000 SF of land with lower likelihood to redevelop)
L2.8: Detailed evaluation of nonmotorized barriers within a ½ mile of the station	Assessment of barriers within half-mile of TDLE station areas (barriers list: (1) Topography (hills) that limit the walkshed, (2) Wide roads, (3) Highways, (4) Bodies of water, (5) Railways)	This station has access challenges as the pedestrian crossing across SR 99 is challenging (seven lanes of traffic) and the crossing lights are slow and infrequent. To the west, the Hylebos Wetland Park creates a barrier for development, but also an amenity. The connection west along 348th Street toward the residential neighborhoods is excellent and has little topography challenges. The station currently spans 348th Street and this is a significant asset from a "barriers" point of view since the difficult at-grade crossing is mitigated for people arriving or departing by light rail.	This station has access challenges as the pedestrian crossing across SR 99 is challenging (seven lanes of traffic) and the crossing lights are slow and infrequent. To the west, the Hylebos Wetland Park creates a barrier for development, but also an amenity. The connection west along 348th Street toward the residential neighborhoods is excellent and has little topography challenges. The station currently spans 348th Street and this is a significant asset from a "barriers" point of view since the difficult at-grade crossing is mitigated for people arriving or departing by light rail.	This station has lower connectivity. The station is bounded by I-5 with one nearby overpass with sidewalks that end on the other side. Enchanted Parkway to the west is a wide crossing. The Washington State Department of Transportation's planned exit ramps and roundabout will create additional nonmotorized barriers. There is a substantial grade change to the west that limits the potential for future connectivity across Enchanted Parkway. This location is also located at the top of a steep grade from Enchanted Parkway.	This station has lower connectivity. The station is bounded by I-5 with one nearby overpass with sidewalks that end on the other side. Enchanted Parkway to the west is a wide crossing. The Washington State Department of Transportation's planned exit ramps and roundabout will create additional nonmotorized barriers. There is a substantial grade change to the west that limits the potential for future connectivity across Enchanted Parkway. This location is bounded by I-5 and Enchanted Parkway to the south and is most impacted by the steep grade west of Enchanted Parkway.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

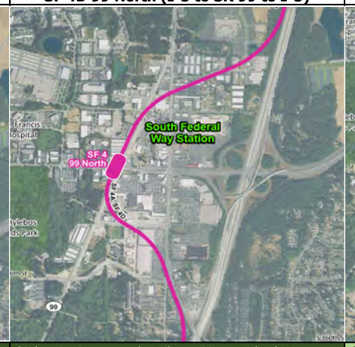
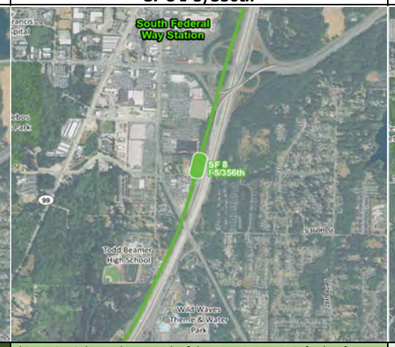
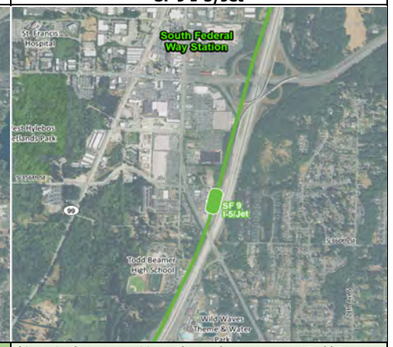
		SF 2 West Enchanted/352nd	SF 2 East Enchanted/352nd	SF 3 Enchanted/356th	SF 4A 99 North (SR 99 to I-5)	SF 4B 99 North (SR 99)
						
Measure	**Methodology**					
L2.9: Presence of amenities that can catalyze development of transit-oriented neighborhoods	Assessment of amenities that can catalyze complete transit-oriented neighborhoods in station area.	This alternative could impact the Biscuits Café, Puerto Vallarta Mexican Restaurant, and the BECU, but mostly leaves Federal Way Crossings intact. It also could impact the gravel pit, which is incompatible as a transit-oriented development amenity. Better connectivity to retail for purchases, but fewer service amenities than SF-4.	There is a good mix of amenities (including Children's Hospital Clinic), including a connection to the Federal Way Crossings retail area. However, there is more limited retail on the same side of the road. Costco and Home Depot are nearby, but both of these retailers sell products (or quantities) that are difficult to move without a car. Since these retailers are large and profitable, it may slow the turnover of these large parcels into a more transit-oriented development urban land pattern.	This station is located just south of the Home Depot. It is farther from Federal Way Crossings, and has no amenities that would characterize complete walkable neighborhoods to the south or east of the station. To the southwest is Todd Beamer High School.	This location is near good retail amenities at Federal Way Crossings across the street as well as many retail amenities on the west side of SR 99, including a medical office, social services, after-school programs, child care/pre-school, yoga, etc. This station also has good access to the Hylebos Wetlands Park, which could serve as a good recreational amenity.	This location is near good retail amenities at Federal Way Crossings across the street as well as many retail amenities on the west side of SR 99, including a medical office, social services, after-school programs, child care/pre-school, yoga, etc. This station also has good access to the Hylebos Wetlands Park, which could serve as a good recreational amenity.
L2.10: Proximity to existing transit service and level of transit service diversion required	Distance to nearest existing bus stop with at least 30-minute headways; measure of the level of diversion that could be required.	Moderate distance (445 feet) from the southbound bus stop at Enchanted Parkway and S 352nd St Moderate amount of transit diversion	Shorter distance (270 feet) from the northbound bus stop at Enchanted Parkway and S 352nd St Lower amount of transit diversion	Moderate distance (385 feet) from the northbound bus stop at Enchanted Parkway and S 356th St Moderate amount of transit diversion	Shortest distance (200 feet) from the southbound bus stop at Pacific Highway and S 348th St Least amount of transit diversion	Shortest distance (200 feet) from the southbound bus stop at Pacific Highway and S 348th St Least amount of transit diversion
	Distance to nearest rail platform based on proposed station concepts (TACOMA DOME)	N/A	N/A	N/A	N/A	N/A
L2.11: Ease of vehicular pick-up/drop-off for a variety of users	Assessment of ease of access to pick-up/drop-off at stations due to nearby street network and congestion using proposed station concepts.	•Drivers from all directions would be able to access the pick-up/drop-off area and then continue in any direction •Left-turn access out of the lot possible at west driveway •Left turns out of the lot may incur more delay than SF 3, SF 8, and SF 9	•Drivers from all directions would be able to access the off-street lot and then continue in any direction •Left turns out of the lot may incur more delay than SF 3, SF 8, and SF 9 •Left-turn access in and out of the lot currently permitted; may not be maintained due to proximity to S 352nd Street/ Enchanted Parkway S signal and increased garage volumes	•Due to the presence of the roundabouts, drivers from all directions would be able to access the pickup/drop-off area and then continue in any direction except directly eastbound on SR 18 or southbound on I-5 •Some routes would be more circuitous than SF 8 and SF 9	•Left-turn ingress and egress to and from the off-street lot is prohibited at S 348th Street and Pacific Highway S •Access would be very limited for many drivers •The limitations on left turns make this the most difficult station for ingress and egress	•Left-turn ingress and egress to and from the off-street lot is prohibited at S 348th Street and Pacific Highway S •Access would be very limited for many drivers •The limitations on left turns make this the most difficult station for ingress and egress
L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations	Ratio of existing and funded bicycle facility miles (greenway, lanes, protected lanes, trails) to total roadway miles within a 10-minute bikeshed	Moderate ratio of existing and funded bike facility miles to roadway miles. Existing: 0.22 Funded: 0.22	Moderate ratio of existing and funded bike facility miles to roadway miles. Existing: 0.21 Funded: 0.21	Moderate ratio of existing and funded bike facility miles to roadway miles. Existing: 0.22 Funded: 0.22 The planned roundabout on Enchanted Parkway and S 356th Street will create a large impediment to bicycle access directly adjacent to the station.	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.14 Funded: 0.14	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.14 Funded: 0.14
L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations	Ratio of existing and funded pedestrian facility miles (trails, sidewalks) to total roadway miles within a 10-minute walkshed of stations	High ratio of existing and funded pedestrian facility miles to roadway miles, low topographical challenges. Existing: 0.82 Funded: 0.86	High ratio of existing and funded pedestrian facility miles to roadway miles, low topographical challenges. Existing: 0.82 Funded: 0.86	Moderate ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.65 Funded: 0.69 The planned roundabout on Enchanted Parkway and S 356th Street will create a large impediment to pedestrian access directly adjacent to the station.	High ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.82 Funded: 0.84	High ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.82 Funded: 0.84
		Objective: Preserve the Environment				
L2.14: Potential effects to wetlands	Extent and quality of wetlands within 100-foot buffer of each alternative	Small, isolated wetlands along I-5	Small, isolated wetlands along I-5	Small, isolated wetlands along I-5	Small, isolated wetlands along I-5	Large, high-quality wetlands near WF Hylebos Creek crossing
L2.15: Potential effects to streams/stream crossings	Number of impacts to streams and stream crossings within 100-foot buffer of each alternative	Long, parallel impacts to East Fork Hylebos tributary, impacts to lower West Fork Hylebos riparian area	Long, parallel impacts to East Fork Hylebos tributary, impacts to lower West Fork Hylebos riparian area	Long, parallel impacts to East Fork Hylebos tributary, impacts to lower West Fork Hylebos riparian area	Impacts lower West Fork Hylebos riparian area	Crosses open, high-quality reach of West Fork Hylebos Creek
L2.16: Potential to affect protected species and habitats	Number of impacts to habitats or areas where endangered, threatened, or sensitive species have a primary association (based on Priority Habitats and Species data from the Washington Department of Fish and Wildlife within 100-foot buffer of each alternative)	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary
L2.17: Potential effects to vegetated areas	Estimated area of vegetation removal	Impacts mainly along a disturbed strip of vegetation along I-5; includes substantial number of trees removed	Impacts mainly along a disturbed strip of vegetation along I-5; includes substantial number of trees removed	Impacts mainly along a disturbed strip of vegetation along I-5	Minor impacts northern half	Moderate impacts to high-quality habitat along West Fork Hylebos Creek
L2.18: Potential effects to floodplains	Number of impacts to or floodplains/floodways (additive) within 100-foot buffer	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

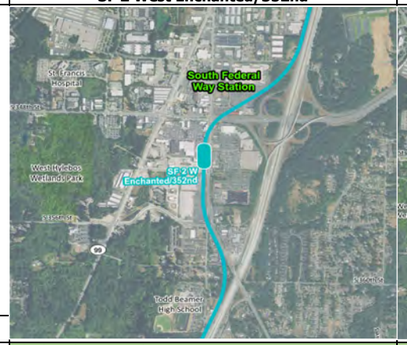
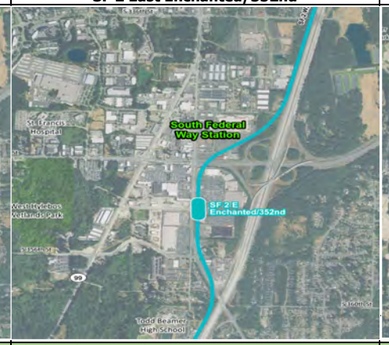
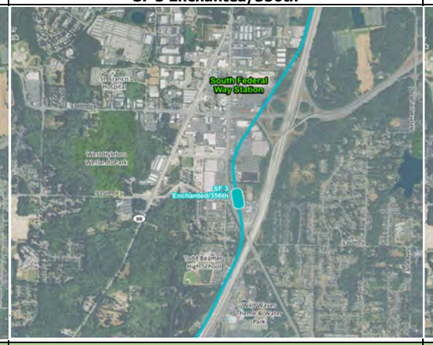
Measure	Methodology	SF 4C 99 North (I-5 to SR 99)	SF 4D 99 North (I-5 to SR 99 to I-5)	SF 8 I-5/356th	SF 9 I-5/Jet
					
L2.9: Presence of amenities that can catalyze development of transit-oriented neighborhoods	Assessment of amenities that can catalyze complete transit-oriented neighborhoods in station area.	This location is near good retail amenities at Federal Way Crossings across the street as well as many retail amenities on the west side of SR 99, including a medical office, social services, after-school programs, child care/pre-school, yoga, etc. This station also has good access to the Hylebos Wetlands Park, which could serve as a good recreational amenity.	This location is near good retail amenities at Federal Way Crossings across the street as well as many retail amenities on the west side of SR 99, including a medical office, social services, after-school programs, child care/pre-school, yoga, etc. This station also has good access to the Hylebos Wetlands Park, which could serve as a good recreational amenity.	This station is located just south of the Home Depot. It is farther from Federal Way Crossings, and has no amenities that would characterize complete walkable neighborhoods to the south or east of the station. To the southwest is Todd Beamer High School.	This station has no amenities to the south or east, except Todd Beamer High School to the southwest. Retail amenities clustered around 348th Street can be accessed to north via a several minute walk.
L2.10: Proximity to existing transit service and level of transit service diversion required	Distance to nearest existing bus stop with at least 30-minute headways; measure of the level of diversion that could be required.	Shortest distance (200 feet) from the southbound bus stop at Pacific Highway and S 348th St Least amount of transit diversion	Shortest distance (200 feet) from the southbound bus stop at Pacific Highway and S 348th St Least amount of transit diversion	Further distance (975 feet) from the northbound bus stop at Enchanted Parkway and S 356th St Higher amount of transit diversion	Further distance (1,070 feet) from the northbound bus stop at Enchanted Parkway and S 356th St Highest amount of transit diversion
	Distance to nearest rail platform based on proposed station concepts (TACOMA DOME)	N/A	N/A	N/A	N/A
L2.11: Ease of vehicular pick-up/drop-off for a variety of users	Assessment of ease of access to pick-up/drop-off at stations due to nearby street network and congestion using proposed station concepts.	•Left-turn ingress and egress to and from the off-street lot is prohibited at S 348th Street and Pacific Highway S •Access would be very limited for many drivers •The limitations on left turns make this the most difficult station for ingress and egress	•Left-turn ingress and egress to and from the off-street lot is prohibited at S 348th Street and Pacific Highway S •Access would be very limited for many drivers •The limitations on left turns make this the most difficult station for ingress and egress	•Due to the presence of the roundabouts, drivers from all directions would be able to access the pickup/drop-off area and then continue in any direction except eastbound on SR 18 or southbound on I-5	•Due to the presence of the roundabouts, drivers from all directions would be able to access the pickup/drop-off area and then continue in any direction except directly eastbound on SR 18 or southbound on I-5
L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations	Ratio of existing and funded bicycle facility miles (greenway, lanes, protected lanes, trails) to total roadway miles within a 10-minute bikeshed	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.14 Funded: 0.14	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.14 Funded: 0.14	Moderate ratio of existing and funded bike facility miles to roadway miles. Existing: 0.27 Funded: 0.27 The planned roundabout on Enchanted Parkway and S 356th Street will create a large impediment to bicycle access directly adjacent to the station.	Moderate ratio of existing and funded bike facility miles to roadway miles. Existing: 0.24 Funded: 0.24 The planned roundabout on Enchanted Parkway and S 356th Street will create a large impediment to bicycle access directly adjacent to the station.
L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations	Ratio of existing and funded pedestrian facility miles (trails, sidewalks) to total roadway miles within a 10-minute walkshed of stations	High ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.82 Funded: 0.84	High ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.82 Funded: 0.84	Moderate ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.66 Funded: 0.70 The planned roundabout on Enchanted Parkway and S 356th Street will create a large impediment to pedestrian access directly adjacent to the station.	Moderate ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.66 Funded: 0.70 The planned roundabout on Enchanted Parkway and S 356th Street will create a large impediment to pedestrian access directly adjacent to the station.
		Objective: Preserve the Environment			
L2.14: Potential effects to wetlands	Extent and quality of wetlands within 100-foot buffer of each alternative	Large, high-quality wetlands near WF Hylebos Creek crossing	Small, isolated wetlands along I-5	Small, isolated wetlands along I-5	Small, isolated wetlands along I-5
L2.15: Potential effects to streams/stream crossings	Number of impacts to streams and stream crossings within 100-foot buffer of each alternative	Brief parallel impact to East Fork Hylebos tributary, crosses open, high-quality reach of West Fork Hylebos Creek	Brief parallel impact to East Fork Hylebos tributary, impacts lower West Fork Hylebos riparian area	Long parallel impact to East Fork Hylebos tributary, impacts to lower West Fork Hylebos riparian area	Long parallel impact to East Fork Hylebos tributary, impacts to lower West Fork Hylebos riparian area
L2.16: Potential to affect protected species and habitats	Number of impacts to habitats or areas where endangered, threatened, or sensitive species have a primary association (based on Priority Habitats and Species data from the Washington Department of Fish and Wildlife within 100-foot buffer of each alternative)	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary	Salmonids in West Fork Hylebos Creek and East Fork Hylebos Creek tributary
L2.17: Potential effects to vegetated areas	Estimated area of vegetation removal	Moderate impacts to high-quality habitat along West Fork Hylebos Creek	Impacts mainly along a disturbed strip of vegetation along I-5	Long, parallel impacts, primarily to disturbed strip of vegetation along I-5	Long, parallel impacts, primarily to disturbed strip of vegetation along I-5
L2.18: Potential effects to floodplains	Number of impacts to or floodplains/floodways (additive) within 100-foot buffer	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

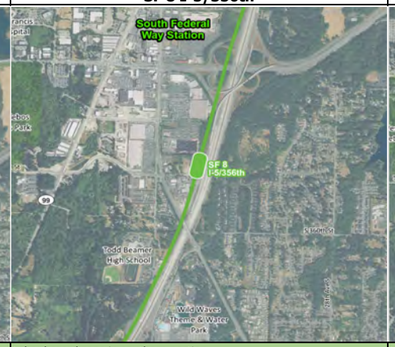
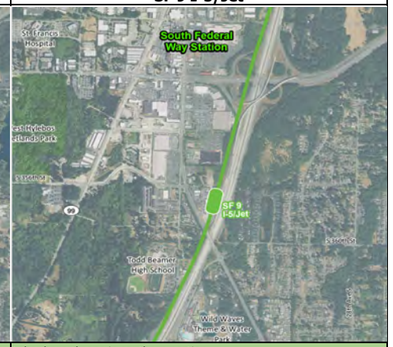
Measure	Methodology	SF 2 West Enchanted/352nd	SF 2 East Enchanted/352nd	SF 3 Enchanted/356th	SF 4A 99 North (SR 99 to I-5)	SF 4B 99 North (SR 99)
						
L2.19: Presence of geologic hazard areas (steep slopes, erosion, or landslide hazard areas)	Number of geologic hazard areas (steep slope, erosion, landslide hazard areas)	Lahar hazard zone in southern portion Generally low liquefaction susceptibility	Lahar hazard zone in southern portion Generally low liquefaction susceptibility	Lahar hazard zone in southern portion Generally low liquefaction susceptibility	Lahar hazard zone in southern portion Generally low liquefaction susceptibility	Lahar hazard zone in southern portion Generally low liquefaction susceptibility
L2.20: Estimated number of affected parcels and total acreage by property type	Assessment of potential property impacts and general estimate of acreage of land converted from other land uses to a transportation use	Total potential parcels: 35-40 Total Potential Acre Impact: 15-20 Total Acres of Potential Parcels Impacted: 240-245	Total potential parcels: 30-35 Total Potential Acre Impact: 15-20 Total Acres of Potential Parcels Impacted: 230-235	Total potential parcels: 40-45 Total Potential Acre Impact: 20-25 Total Acres of Potential Parcels Impacted: 245-250	Total potential parcels: 80-85 Total Potential Acre Impact: 20-25 Total Acres of Potential Parcels Impacted: 305-310	Total potential parcels: 95-100 Total Potential Acre Impact: 25-30 Total Acres of Potential Parcels Impacted: 405-410
L2.21: Estimated number of affected parcels with major economic activity generators	Assessment of potential property impacts that have a major economic activity generator (such as Costco, Home Depot, Port of Tacoma property, strip malls)	Approximately 20-25 businesses displaced, including up to 1 hotel, 1 commercial retail center, and 1 industrial business.	Approximately 20-25 businesses displaced, including up to 1 hotel, 2 commercial retail centers, 1 auto dealer or major auto service provider, and 2 industrial businesses.	Approximately 20-25 businesses displaced, including up to 1 hotel, 2 commercial retail centers, 1 auto dealer or major auto service provider, and 2 industrial businesses.	Approximately 45-50 businesses displaced, including up to 1 hotel, 2 commercial retail centers, 18 medical offices, and 6 industrial businesses.	Approximately 45-50 businesses displaced, including up to 1 hotel, 2 commercial retail centers, 18 medical offices, and 7 industrial businesses.
L2.22: Estimated number of displacements by property type; impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating	Number of potential property impacts from alignment and station by property type; range may vary by segment due to length of alignment	Residential Displacements: 110-115 Commercial Displacements: 20-25 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 90-95 Commercial Displacements: 20-25 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 90-95 Commercial Displacements: 20-25 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 120-125 Commercial Displacements: 45-50 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 1 (Montessori)	Residential Displacements: 110-115 Commercial Displacements: 45-50 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 1 (Montessori)
L2.23: Estimated number of tribal parcels potentially affected	Number tribal-owned parcels affected by each alternative	Potential effects on one tribal property	Potential effects on one tribal property	Potential effects on one tribal property	Potential effects on one tribal property	Potential effects on one tribal property
L2.24: Potential effects on Section 4(f) parks and recreational resources	Number of impacts and estimated area of potential permanent impacts to parks and recreational resources within 100-foot buffer of each alternative	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks
L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places	Number of impacts to Section 4(f) resources and properties listed in or eligible for the National Register of Historic Places within 100-foot buffer of each alternative	Four historic-period resources with undetermined significance. Based on the resource types and ages, potential for eligibility is low.	Five historic-period resources with undetermined significance. Based on the resource types and ages, potential for eligibility is low.	Five historic-period resources with undetermined significance. Based on the resource types and ages, potential for eligibility is low.	14 historic-period resources with undetermined significance. Based on the resource types and ages, potential for eligibility is moderate.	13 historic-period resources with undetermined significance. Based on the resource types and ages, potential for eligibility is moderate.
L2.26: Potential effects on Section 4(f) cultural and archaeological resources	Number of potential impacts and probability to encounter Section 4(f) cultural and/or archaeological resources within 100-foot buffer of each alternative	One known archaeological resource site. Alignment sections along I-5 have fewer undisturbed areas with the potential to contain intact archaeological sites.	One known archaeological resource site. Alignment sections along I-5 have fewer undisturbed areas with the potential to contain intact archaeological sites.	One known archaeological resource site. Alignment sections along I-5 have fewer undisturbed areas with the potential to contain intact archaeological sites.	One known archaeological resource site. Alignment turning to I-5 to go south have fewer undisturbed areas with the potential to contain intact archaeological sites.	Three known archaeological resource sites. Alignment along south SR 99 with a higher probability to encounter intact archaeological sites.
L2.27: Potential effects to view sheds along the alignment and potential for impacts to view-dependent businesses	Assessment of impacts to protected views and view-dependent businesses	No effects to protected viewsheds or to parcels with view-dependent businesses.	No effects to protected viewshed and affects lower number of view-dependent businesses.	No effects to protected viewshed and affects lower number of view-dependent businesses.	No effects to protected viewsheds or to parcels with view-dependent businesses.	No effects to protected viewsheds or to parcels with view-dependent businesses.
L2.28: Potential effects on sensitive noise and vibration receptors	Number of potentially affected sensitive receptors within 350-foot buffer of each alternative; sensitive receptors include residences and "others" (schools, churches, parks, hotels, hospitals, libraries, cemeteries, etc.)	Travels through Belmor Mobile Home Park and Crosspoint Apartments. Also travels in close proximity to single-family residences along I-5 corridor.	Travels through Belmor Mobile Home Park and Crosspoint Apartments. Also travels in close proximity to single-family residences along I-5 corridor.	Travels through Belmor Mobile Home Park and Crosspoint Apartments. Also travels in close proximity to single-family residences along I-5 corridor.	Travels adjacent to Belmor Mobile Home Park, the Celebration Senior Living facility, Crosspoint Apartments; also travels in close proximity to hotels and churches along Pacific Highway.	Travels adjacent to Belmor Mobile Home Park and the Celebration Senior Living facility; also travels in close proximity to hotels, churches, two recreational vehicle communities and some single-family residences along Pacific Highway.
L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network	Assessment of intersection level of service, and effects on traffic circulation and access for both automobiles and freight, including potential number of lane restrictions, turn restrictions, and driveways impacted	Some added delay (up to 10 total additional seconds) at intersections compared to without the project (S 352nd Street/Enchanted Parkway). Traffic impacts similar to SF 3, 8, and 9 alternatives.	Some added delay (up to 10 total additional seconds) at intersections compared to without the project (S 352nd Street/Enchanted Parkway). Traffic impacts similar to SF 3, 8, and 9 alternatives.	Some added delay (up to 20 total additional seconds) at intersections compared to without the project (S 348th Street/Enchanted Parkway, S 356th/SR 99). Traffic impacts similar to SF 2, 8, and 9 alternatives.	More delay (up to 40 total additional seconds) at S 348th Street and SR 99 intersection compared to without the project and SF alternatives 2, 3, 8, and 9.	More delay (up to 40 total additional seconds) at S 348th Street and SR 99 intersection compared to without the project and SF alternatives 2, 3, 8, and 9.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

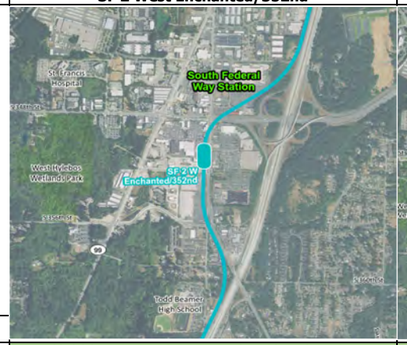
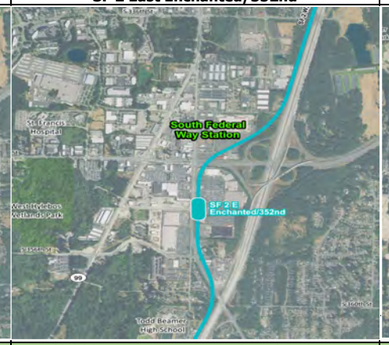
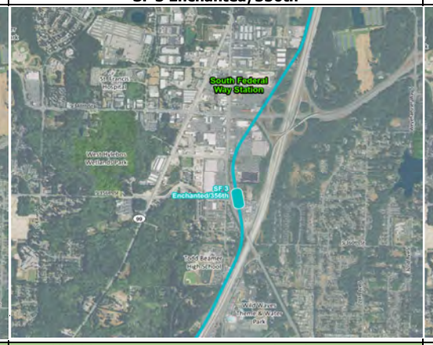
Measure	Methodology	SF 4C 99 North (I-5 to SR 99)	SF 4D 99 North (I-5 to SR 99 to I-5)	SF 8 I-5/356th	SF 9 I-5/Jet
					
L2.19: Presence of geologic hazard areas (steep slopes, erosion, or landslide hazard areas)	Number of geologic hazard areas (steep slope, erosion, landslide hazard areas)	Lahar hazard zone in southern portion Generally low liquefaction susceptibility	Lahar hazard zone in southern portion Generally low liquefaction susceptibility	Lahar hazard zone in southern portion Generally low liquefaction susceptibility	Lahar hazard zone in southern portion Generally low liquefaction susceptibility
L2.20: Estimated number of affected parcels and total acreage by property type	Assessment of potential property impacts and general estimate of acreage of land converted from other land uses to a transportation use	Total potential parcels: 70-75 Total Potential Acre Impact: 25-30 Total Acre of Parcels Impacted: 365-370	Total potential parcels: 55-60 Total Potential Acre Impact: 20-25 Total Acres of Potential Parcels Impacted: 270-275	Total potential parcels: 25-30 Total Potential Acre Impact: 15-20 Total Acres of Potential Parcels Impacted: 195-200	Total potential parcels: 25-30 Total Potential Acre Impact: 15-20 Total Acres of Potential Parcels Impacted: 195-200
L2.21: Estimated number of affected parcels with major economic activity generators	Assessment of potential property impacts that have a major economic activity generator (such as Costco, Home Depot, Port of Tacoma property, strip malls)	Approximately 35-40 businesses displaced, including up to 1 hotel, 1 commercial retail center, 8 medical offices, and 6 industrial businesses.	Approximately 35-40 businesses displaced, including up to 1 hotel, 2 retail commercial centers, 8 medical offices, and 5 industrial businesses.	Approximately 0-5 businesses displaced, including up to 1 auto dealer or major auto service provider and 2 industrial businesses.	Approximately 0-5 businesses displaced, including up to 1 auto dealer or major auto service provider and 2 industrial businesses.
L2.22: Estimated number of displacements by property type; impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating	Number of potential property impacts from alignment and station by property type; range may vary by segment due to length of alignment	Residential Displacements: 100-105 Commercial Displacements: 35-40 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 110-115 Commercial Displacements: 35-40 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 85-90 Commercial Displacements: 0-5 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 85-90 Commercial Displacements: 0-5 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0
L2.23: Estimated number of tribal parcels potentially affected	Number tribal-owned parcels affected by each alternative	Potential effects on one tribal property	Potential effects on one tribal property	Potential effects on one tribal property	Potential effects on one tribal property
L2.24: Potential effects on Section 4(f) parks and recreational resources	Number of impacts and estimated area of potential permanent impacts to parks and recreational resources within 100-foot buffer of each alternative	Potential impacts to two parks: Hylebos Wetlands and West Hylebos Osaka Property	Potential impacts to two parks: Hylebos Wetlands and West Hylebos Osaka Property	No impacts to parks	No impacts to parks
L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places	Number of impacts to Section 4(f) resources and properties listed in or eligible for the National Register of Historic Places within 100-foot buffer of each alternative	Seven historic-period resources with undetermined significance. Based on the resource types and ages, potential for eligibility is low to moderate.	Eight historic-period resources of undetermined significance. Based on the resource types and ages, potential for eligibility is low to moderate.	Five historic-period resources of undetermined significance. Based on the resource types and ages, potential for eligibility is low.	Five historic-period resources of undetermined significance. Based on the resource types and ages, potential for eligibility is low.
L2.26: Potential effects on Section 4(f) cultural and archaeological resources	Number of potential impacts and probability to encounter Section 4(f) cultural and/or archaeological resources within 100-foot buffer of each alternative	Three known archaeological resource sites. Alignment along south SR 99 with a higher probability to encounter intact archaeological sites.	One known archaeological resource site. Alignment sections along I-5 have fewer undisturbed areas with the potential to contain intact archaeological sites.	One known archaeological resource site. Alignment on I-5 has fewer undisturbed areas with the potential to contain intact archaeological sites.	One known archaeological resource site. Alignment along I-5 has fewer undisturbed areas with the potential to contain intact archaeological sites.
L2.27: Potential effects to view sheds along the alignment and potential for impacts to view-dependent businesses	Assessment of impacts to protected views and view-dependent businesses	No effects to protected viewsheds or to parcels with view-dependent businesses.	No effects to protected viewsheds or to parcels with view-dependent businesses.	No effects to protected viewsheds or to parcels with view-dependent businesses.	No effects to protected viewsheds or to parcels with view-dependent businesses.
L2.28: Potential effects on sensitive noise and vibration receptors	Number of potentially affected sensitive receptors within 350-foot buffer of each alternative; sensitive receptors include residences and "others" (schools, churches, parks, hotels, hospitals, libraries, cemeteries, etc.)	Travels through the Belmor Mobile Home Park, and in close proximity to a church, a school, two recreational vehicle communities, and single-family residences along Pacific Highway.	Travels through the Belmor Mobile Home Park and the Crosspoint Apartments; also travels in close proximity to single-family residences along I-5 corridor.	Travels through the Belmor Mobile Home Park.	Travels through the Belmor Mobile Home Park.
L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network	Assessment of intersection level of service, and effects on traffic circulation and access for both automobiles and freight, including potential number of lane restrictions, turn restrictions, and driveways impacted	More delay (up to 40 total additional seconds) at S 348th Street and SR 99 intersection compared to without the project and SF alternatives 2, 3, 8, and 9.	More delay (up to 40 total additional seconds) at S 348th Street and SR 99 intersection compared to without the project and SF alternatives 2, 3, 8, and 9.	Some added delay (up to 20 total additional seconds) at intersections compared to without the project (S 348th Street/Enchanted Parkway, S 356th/SR 99). Traffic impacts similar to SF 2, 3, and 9 alternatives.	Some added delay (up to 20 total additional seconds) at intersections compared to without the project (S 348th Street/Enchanted Parkway, S 356th Street/SR 99). Traffic impacts similar to SF 2, 3, and 8 alternatives.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

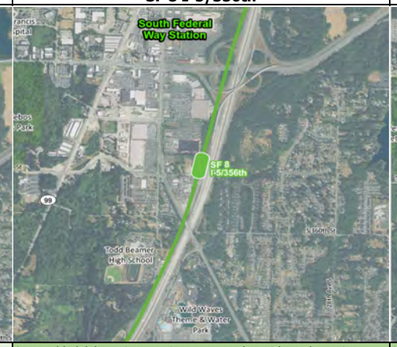
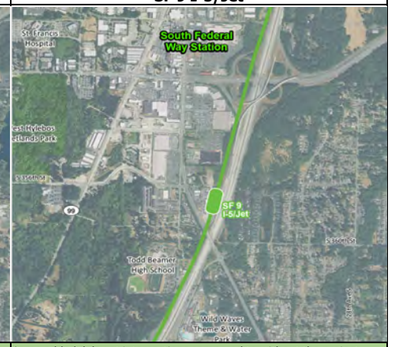
Measure	Methodology	SF 2 West Enchanted/352nd	SF 2 East Enchanted/352nd	SF 3 Enchanted/356th	SF 4A 99 North (SR 99 to I-5)	SF 4B 99 North (SR 99)
						
L2.30: Potential effects on freight movement	Assessment of impacts to level of service on freight corridors	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to SF 3, 8, and 9 alternatives.	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to SF 3, 8, and 9 alternatives.	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to SF 2, 8, and 9 alternatives.	More freight impacts compared to SF alternatives 2, 3, 8, and 9 due to additional congestion at the study intersections.	More freight impacts compared to SF alternatives 2, 3, 8, and 9 due to additional congestion at the study intersections.
L2.31: Potential avoidance of hazardous waste	Number of hazardous materials sites within 1/8 mile of each alternative	12 total hazardous materials sites	14 total hazardous materials sites.	14 total hazardous materials sites.	35 total hazardous materials sites.	30 total hazardous materials sites.
L2.32: Potential effects on parking demand and supply	Assessment of impacts on parking supply (review of impacts to parcels with parking)	Count of parcels with parking that are potentially impacted: 3 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 3.28	Count of parcels with parking that are potentially impacted: 6 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 3.39	Count of parcels with parking that are potentially impacted: 6 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 2.38	Count of parcels with parking that are potentially impacted: 23 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 2.41	Count of parcels with parking that are potentially impacted: 30 Count of parcels with more than 50% of parking potentially impacted: 2 Parking Acreage Potentially Impacted: 2.84
		Objective: Support Equitable Mobility				
L2.33: Potential benefits to low-income or minority populations	Assessment of how well station serves low-income/minority and traditionally underserved or transit-dependent populations (e.g., population with no car, population younger than 18 and older than 65) compared to baseline; the baseline is the percentage of minority or low-income population and transit-dependent populations in each city that the station area serves	Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 36.3% minority and 34.6% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Federal Way as a whole.	Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 38.1% minority and 35.7% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Federal Way as a whole.	Federal Way is comprised of 35.9% minority and 35.0% low-income populations. This station area has a 32.5% minority and 31.9% low-income population; therefore, the station would serve slightly fewer minority low-income populations compared to Federal Way as a whole.	Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 56.6% minority and 43.6% low-income population; therefore, the station would serve more minority low-income populations compared to Federal Way as a whole.	Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 56.6% minority and 43.6% low-income population; therefore, the station would serve more minority low-income populations compared to Federal Way as a whole.
L2.34: Potential for impacts on low-income and/or minority populations	Potential for displacement to affect Environmental Justice populations (minority and low-income)	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 110-115 residential displacements anticipated and approximately 20-25 business displacements. Therefore, it is possible there could be moderate potential impacts to environmental justice populations. As with almost all South Federal Way alternatives, displacements could involve known low-income residential buildings.	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 90-95 residential displacements anticipated and approximately 20-25 business displacements. Therefore it is possible there could be higher potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residential buildings.	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 90-95 residential displacements anticipated and approximately 20-25 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residential buildings.	This alternative has a higher percentages of minority and low-income populations compared to Federal Way. There are 120-125 residential displacements anticipated and approximately 45-50 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residences, but this alternative would involve substantially fewer. Although this alternative has one of the highest numbers of displacements, it would involved less displacement of known low-income residential buildings.	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 110-115 residential displacements anticipated and approximately 45-50 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residences, but this alternative would involve substantially fewer. Although this alternative has one of the highest numbers of displacements, it would involve less displacement of known low-income residential buildings.
		Objective: Provide a Financially Sustainable and Constructible Project				
L2.35: Preliminary conceptual estimate	Preliminary conceptual estimates based on conceptual design quantities and current Sound Transit unit pricing. *Preliminary conceptual estimates are not the project's budget. They are to be used for*	$1.0B (lower estimate to build)	$1.05B (lower estimate to build)	$1.0B (lower estimate to build)	$1.35B (higher estimate to build)	$1.55B (highest estimate to build)
L2.36: Operating estimate	Assessment of potential magnitude of O&M estimates based on travel time	Curve with 40 mph operating speed and slightly longer alignment (4.44 miles) would result in moderate operating estimates.	Curve with 40 mph operating speed and slightly longer alignment (4.41 miles) would result in moderate operating estimates.	Shorter alignment length (4.34 miles) and one curve with faster operating speed (50 mph) would result in lower operating estimates.	Longer alignment length (4.64 miles) and slowest curves that reduce operating speeds to 30, 35, 45, and 50 mph would result in the highest operating estimates.	Longer alignment length (4.46 miles) and slower curves that reduce speeds to 30 and 45 mph would result in higher operating estimates.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

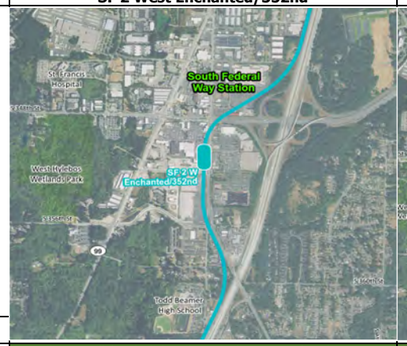
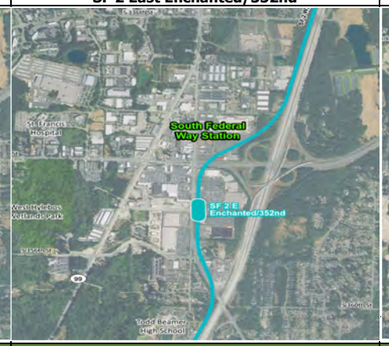
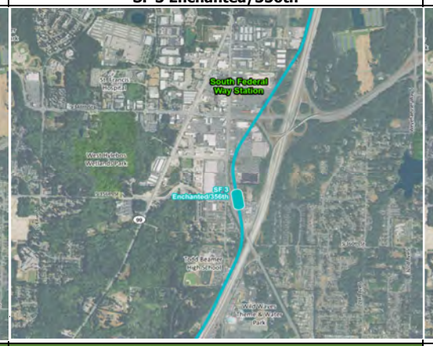
Measure	Methodology	SF 4C 99 North (I-5 to SR 99)	SF 4D 99 North (I-5 to SR 99 to I-5)	SF 8 I-5/356th	SF 9 I-5/Jet
					
L2.30: Potential effects on freight movement	Assessment of impacts to level of service on freight corridors	More freight impacts compared to SF alternatives 2, 3, 8, and 9 due to additional congestion at the study intersections.	More freight impacts compared to SF alternatives 2, 3, 8, and 9 due to additional congestion at the study intersections.	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to SF 2, 3, and 9 alternatives.	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to SF 2, 3, and 8 alternatives.
L2.31: Potential avoidance of hazardous waste	Number of hazardous materials sites within 1/8 mile of each alternative	20 total hazardous materials sites.	25 total hazardous materials sites.	13 total hazardous materials sites.	13 total hazardous materials sites.
L2.32: Potential effects on parking demand and supply	Assessment of impacts on parking supply (review of impacts to parcels with parking)	Count of parcels with parking that are potentially impacted: 16 Count of parcels with more than 50% of parking potentially impacted: 2 Parking Acreage Potentially Impacted: 1.57	Count of parcels with parking that are potentially impacted: 9 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 1.14	Count of parcels with parking that are potentially impacted: 3 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 1.01	Count of parcels with parking that are potentially impacted: 3 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 1.01
		Objective: Support Equitable Mobility			
L2.33: Potential benefits to low-income or minority populations	Assessment of how well station serves low-income/minority and traditionally underserved or transit-dependent populations (e.g., population with no car, population younger than 18 and older than 65) compared to baseline; the baseline is the percentage of minority or low-income population and transit-dependent populations in each city that the station area serves	Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 56.6% minority and 43.6% low-income population; therefore, the station would serve more minority low-income populations compared to Federal Way as a whole.	5Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 56.6% minority and 43.6% low-income population; therefore, the station would serve more minority low-income populations compared to Federal Way as a whole.	Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 30.5% minority and 29.8% low-income population; therefore, the station would serve slightly fewer minority low-income populations compared to Federal Way as a whole.	Federal Way is composed of 35.9% minority and 35.0% low-income populations. This station area has a 31.3% minority and 29.5% low-income population; therefore, the station would serve slightly fewer minority low-income populations compared to Federal Way as a whole.
L2.34: Potential for impacts on low-income and/or minority populations	Potential for displacement to affect Environmental Justice populations (minority and low-income)	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 100-105 residential displacements anticipated and approximately 35-40 business displacements. Therefore it is possible there could be higher potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residential buildings. Since environmental justice populations are similar across all alternatives and this alternative would have one of the highest numbers of displacements in South Federal Way, this would be the lowest performing of the South Federal Way alternatives.	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 110-115 residential displacements anticipated and approximately 35-40 business displacements. Therefore it is possible there could be higher potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residential buildings. Since environmental justice populations are similar across all alternatives and this alternative would have one of the highest numbers of displacements in South Federal Way, this would be the lowest performing of the South Federal Way alternatives.	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 85-90 residential displacements anticipated and approximately 0-5 business displacements. Therefore it is possible there could be some potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residential buildings. Since environmental justice populations are similar across all alternatives and this alternative would have the lowest number of displacements in South Federal Way, this would be the highest performing of the South Federal Way alternatives.	This alternative has higher percentages of minority and low-income populations compared to Federal Way. There are 85-90 residential displacements anticipated and approximately 0-5 business displacements. Therefore it is possible there could be some potential impacts to environmental justice populations. As with all South Federal Way alternatives, displacements could involve known low-income residential buildings. Since environmental justice populations are similar across all alternatives and this alternative would have the lowest number of displacements in South Federal Way, this would be the highest performing of the South Federal Way alternatives.
		Objective: Provide a Financially Sustainable and Constructible Project			
L2.35: Preliminary conceptual estimate	Preliminary conceptual estimates based on conceptual design quantities and current Sound Transit unit pricing. *Preliminary conceptual estimates are not the project's budget. They are to be used for*	$1.35B (higher estimate to build)	$1.15B (lower estimate to build compared to other SF 4 SR 99 North alternatives)	$0.95B (lowest estimate to build)	$0.95B (lowest estimate to build)
L2.36: Operating estimate	Assessment of potential magnitude of O&M estimates based on travel time	No curves below 55 mph and longer alignment length (4.5 miles) compared to other alternatives would result in moderate operating estimates.	Longest alignment length (4.68 miles) and moderate curves that reduce operating speeds to 35 and 55 mph would result in higher operating estimates.	No curves below 55 mph and shortest alignment length (4.29 miles) would result in the lowest operating estimates.	No curves below 55 mph and shortest alignment length (4.29 miles) would result in the lowest operating estimates.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

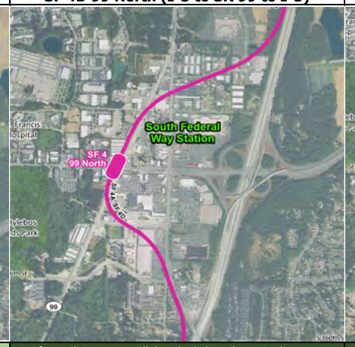
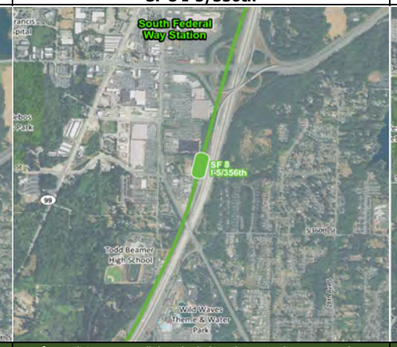
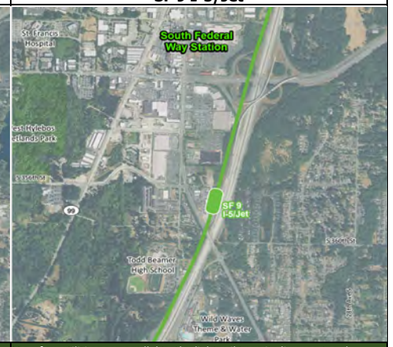
Measure	Methodology	SF 2 West Enchanted/352nd	SF 2 East Enchanted/352nd	SF 3 Enchanted/356th	SF 4A 99 North (SR 99 to I-5)	SF 4B 99 North (SR 99)
						
L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure	Potential impacts on known major utilities or structures (e.g. power lines, transportation infrastructure)	Few utilities parallel to the light rail transit alignment and moderate crossing of utilities. Impacts are concentrated on 16th Avenue S. Crosses the Bonneville Power Administration High Voltage Transmission line along S 324th Street.	Few utilities parallel to the light rail transit alignment and moderate crossing of utilities. Impacts are concentrated on 16th Ave S. Crosses the Bonneville Power Administration High Voltage Transmission line along S 324th Street.	Few utilities parallel to the light rail transit alignment and moderate crossing of utilities. Impacts are concentrated on 16th Avenue S. Crosses the Bonneville Power Administration High Voltage Transmission line along S 324th Street.	Water main is parallel to the light rail transit alignment for northernmost mile of Pacific Highway S. Crosses and runs parallel to the Bonneville Power Administration High Voltage Transmission line along S 324th Street.	Water main is parallel to the light rail transit alignment for northernmost mile of Pacific Highway S. Crosses and runs parallel to the Bonneville Power Administration High Voltage Transmission line along S 324th Street.
L2.38: Number of sites requiring environmental remediation within the project footprint of an alternative	Assessment of the number of sites requiring environmental remediation within the project footprint of an alternative	0 Sites requiring remediation.	0 Sites requiring remediation.	0 Sites requiring remediation.	Four sites requiring remediation.	Three sites requiring remediation.
L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects)	Assessment of temporary construction impacts to community, including potential for transportation, noise, vibration, and visual effects that could disrupt the community	The crossing span and configuration of S 348th Street and Enchanted Parkway could create considerations for construction impacts to traffic. This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.	The crossing span of S 348th Street is moderately wide, and would create traffic impacts during construction.	This alternative traverses a large parking lot, which could impact construction sequencing and access to businesses. Special sequencing would likely be required to maintain access to businesses under the guideway during construction.	This alternative crosses and travels parallel to the Bonneville Power Administration High Voltage Transmission Lines along S 324th Street. The crossing span of the alignment over SR 99 near S 327th Street is very wide, leading to construction considerations of traffic impacts and potential structure needs. This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.	This alternative crosses and travels parallel to the Bonneville Power Administration High Voltage Transmission Lines along S 324th Street. The crossing span of the alignment over SR 99 near S 327th Street is very wide, leading to construction considerations of traffic impacts and potential structure needs. This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.
L2.40: Availability and potential to use publicly-owned right-of-way and publicly-owned property	Amount of publicly-owned ROW and publicly owned property (individual parcels in public ownership) available per conceptual design of alignment	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 70.9% Parcels: 1	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 68.9% Parcels: 1	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 69.1% Parcels: 1	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 60.5% Parcels: 2	Lower potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 38.9% Parcels: 2
L2.41: Capability to accommodate future expansion included in the Sound Transit Long Range Plan	Capability of station location and alignment to accommodate future expansion included in the ST Long Range Plan	N/A	N/A	N/A	N/A	N/A
L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks and pocket track at Tacoma Dome, number of at grade crossings, if any)	Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome and South Federal Way, number of at grade crossings, if any)	This alignment runs for 55 mph much of the length, with a short 40 mph slowdown near the station platform. Horizontal curve speeds: 55, 55, 40, 55	This alignment runs for 55 mph much of the length, with a short 40 mph slowdown near the station platform. Horizontal curve speeds: 55, 55, 40, 55	This alignment runs for 55 mph much of the length, with a short 50 mph slowdown near the station platform. Horizontal curve speeds: 55, 55, 40, 55	The first half of this alignment will not be able to run as efficiently as the others due to speed restrictions in 30, 35, and 45 mph curves. Once it reaches Enchanted Parkway, speeds improve to 55 mph. Horizontal curve speeds: 30, 45, 35, 50, 55	This alignment starts slow with 30 and 45 mph speeds, but the majority of the alignment is adjacent to Pacific Highway S and is 55 mph. Horizontal curve speeds: 30, 45, 55
L2.43: Overall schedule risk	Consideration of potential risks to schedule (i.e. potential to increase schedule)	Schedule risks associated with potential relocation of multifamily units.	Schedule risks associated with potential relocation of multifamily units.	Schedule risks associated with potential relocation of multifamily units.	Schedule risks associated with potential relocation of multifamily units and senior housing units.	Schedule risks associated with potential relocation of multifamily units and senior housing units.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

SOUTH FEDERAL WAY STATION AREA

Measure	Methodology	SF 4C 99 North (I-5 to SR 99)	SF 4D 99 North (I-5 to SR 99 to I-5)	SF 8 I-5/356th	SF 9 I-5/Jet
					
L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure	Potential impacts on known major utilities or structures (e.g. power lines, transportation infrastructure)	Water main is parallel to the light rail transit alignment for southernmost half-mile of Pacific Highway S; moderate crossing of utilities. Crosses the Bonneville Power Administration High Voltage Transmission line along S 324th Street.	Very few utilities are parallel to the light rail transit alignment and moderate crossing of utilities. Crosses the Bonneville Power Administration High Voltage Transmission line along S 324th Street.	Very few utilities are parallel to the light rail transit alignment and moderate crossing of utilities. Crosses the Bonneville Power Administration High Voltage Transmission line along S 324th Street.	Very few utilities are parallel to the light rail transit alignment and moderate crossing of utilities. Crosses the Bonneville Power Administration High Voltage Transmission line along S 324th Street.
L2.38: Number of sites requiring environmental remediation within the project footprint of an alternative	Assessment of the number of sites requiring environmental remediation within the project footprint of an alternative	Four sites requiring remediation.	Five sites requiring remediation.	0 sites requiring remediation.	0 sites requiring remediation.
L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects)	Assessment of temporary construction impacts to community, including potential for transportation, noise, vibration, and visual effects that could disrupt the community	The crossing span over SR 99 near S 344th Street is wide. This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.	This alternative requires two crossings of SR 99, which creates additional construction considerations for traffic management. The crossing span over SR 99 near S 344th Street is also wide. This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.	Lower potential for major construction traffic impacts due to fewest crossings of major roadways.	Lower potential for major construction traffic impacts due to fewest crossings of major roadways.
L2.40: Availability and potential to use publicly-owned right-of-way and publicly-owned property	Amount of publicly-owned ROW and publicly-owned property (individual parcels in public ownership) available per conceptual design of alignment	Lower potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). ROW: 40.2% Parcels: 2	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 61.5% Parcels: 2	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 80.1% Parcels: 1	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 80.1% Parcels: 1
L2.41: Capability to accommodate future expansion included in the Sound Transit Long Range Plan	Capability of station location and alignment to accommodate future expansion included in the ST Long Range Plan	N/A	N/A	N/A	N/A
L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks and pocket track at Tacoma Dome, number of at grade crossings, if any)	Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome and South Federal Way, number of at grade crossings, if any)	Though this alignment does diverge from I-5 adjacent to Pacific Highway S adjacent, all curves maintain a 55 mph speed. Horizontal curve speed: 55	This alternative swings from I-5 to Pacific Highway S then back to I-5, creating a longer alignment and introducing 35 mph and 50 mph curves, reducing efficiency. Horizontal curve speeds: 55, 35, 50, 55	This alignment is adjacent to I-5 for the entire length and maintains 55 mph speeds throughout, making it a top performing alternative. Horizontal curve speeds: 55	This alignment is adjacent to I-5 for the entire length and maintains 55 mph speeds throughout, making it a top performing alternative. Horizontal curve speed: 55
L2.43: Overall schedule risk	Consideration of potential risks to schedule (i.e. potential to increase schedule)	Schedule risks associated with potential relocation of multifamily units.	Schedule risks associated with potential relocation of multifamily units.	Schedule risks associated with potential relocation of multifamily units. Coordination with SR 18 off-ramp.	Schedule risks associated with potential relocation of multifamily units. Coordination with SR 18 off-ramp.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

Fife Station Area

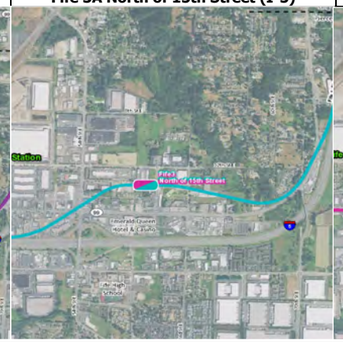
Measure	Methodology	Fife 1 12th Street	Fife 3A North of 15th Street (I-5)	Fife 3B North of 15th Street (SR 99)	Fife 4A South of 15th Street (I-5)	Fife 4B South of 15th Street (SR 99)
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs						
L2.1: Travel time	Estimated based on alignment length, percent of alignment with horizontal speeds below 55 MPH	Moderate percentage of alignment below 55 mph (19.5%); middle alignment length compared to other alternatives; 0.05 miles longer than the shortest Fife alternative	High percentage of alignment below 55 mph (29.7%); longer alignment length; 0.09 miles longer than the shortest Fife alternative	High percentage of alignment below 55 mph (24.4%); shorter alignment length; 0.02 miles longer than the shortest Fife alternative	Low percentage of alignment below 55 mph (13.1%); middle alignment length compared to other alternatives; 0.06 miles longer than the shortest SF alternative	Moderate percentage of alignment below 55 mph (22.3%); shortest alignment length (3.99 miles).
L2.2: Daily and annual projected project ridership (2042)	Average daily projected riders (baseline estimate provided for Fife station area, with qualitative differences noted for station/alignment alternatives) **Fife: 11,930 Daily NB; 11,930 Daily SB**	Lower ridership potential due to distance from existing Fife primary commercial/entertainment corridor.	Moderate ridership potential due to proximity to existing Fife primary commercial/entertainment corridor.	Moderate ridership potential due to proximity to existing Fife primary commercial/entertainment corridor.	Moderate ridership potential due to proximity to existing Fife primary commercial/entertainment corridor.	Moderate ridership potential due to proximity to existing Fife primary commercial/entertainment corridor.
L2.3: Projected station boardings (2042)	Projected station boardings (baseline estimate provided for Fife station area, with qualitative differences noted for station/alignment alternatives) **Fife: 1,400 daily NB boardings; 630 daily SB boardings**	Lower level of projected station boardings due to distance from existing Fife primary commercial/entertainment corridor.	Moderate level of projected station boardings due to proximity to existing Fife primary commercial/entertainment corridor.	Moderate level of projected station boardings due to proximity to existing Fife primary commercial/entertainment corridor.	Moderate level of projected station boardings due to proximity to existing Fife primary commercial/entertainment corridor.	Moderate level of projected station boardings due to proximity to existing Fife primary commercial/entertainment corridor.
L2.4: Proximity to Puget Sound Regional Council growth centers and manufacturing/industrial Centers	% Puget Sound Regional Council Growth Center and/or manufacturing/industrial center within 10-minute walkshed	4% Station near Port of Tacoma. 4% of 10-minute walkshed is in Puget Sound Regional Council manufacturing/industrial center area.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.	0% No Puget Sound Regional Council regional growth center or manufacturing/industrial center. No potential to support growth centers.
L2.5: Population (persons/acre) and job (jobs/acre) densities	Existing and future (2040) pop and employment densities within 10-minute walkshed	Population densities: existing 61/future 78 Employment densities: existing 72/future 115 Low population density, low job density.	Population densities: existing 59/future 76 Employment densities: existing 70/future 111 Lower population density, lower job density.	Population densities: existing 59/future 76 Employment densities: existing 70/future 111 Lower population density, lower job density.	Population densities: existing 64/future 82 Employment densities: existing 76/future 121 Moderate population density. Moderate job density.	Population densities: existing 64/future 82 Employment densities: existing 76/future 121 Highest population density. Moderate job density.
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access						
L2.6: Consistency with civic and community planning and land use, evaluating elements such as: local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans	Assessment of the civic and land use documents that are relevant and up to date in each station area. Evaluate each station location against the relevant documents/civic plans rating each plan as "consistent with TOD around alternative location"(+), "neutral" or "inconsistent with TOD	Station is located in the future Fife City Center Vision area; Zoning is currently industrial but will be changed to a more mixed-use, transit-oriented development-compatible zoning based on the new Fife City Center Vision . The area adjacent to it is likely to remain industrial.	This station location is consistent with local land use and plans. Based on the zoning today, this station location would be in an industrial zone. However, zoning will be changed to a more mixed-use, transit-oriented development-compatible zoning based on the new Fife City Center Vision. This location is also close to the tribal casino.	This station location is consistent with local land use and plans. Based on the zoning today, this station location would be in an industrial zone. However, zoning will be changed to a more mixed-use, transit-oriented development-compatible zoning based on the new Fife City Center Vision. This location is also close to the tribal casino.	This station location is consistent with local land use and plans. Based on the zoning today, this station location would be adjacent to an industrial zone. However, zoning will be changed to a more mixed-use, transit-oriented development-compatible zoning based on the new Fife City Center Vision. This location is also close to the tribal casino.	This station location is consistent with local land use and plans. Based on the zoning today, this station location would be adjacent to an industrial zone. However, zoning will be changed to a more mixed-use, transit-oriented development-compatible zoning based on the new Fife City Center Vision. This location is also close to the tribal casino.
L2.7: Likelihood of station area redevelopment into transit-oriented neighborhood	Assessment of degree to which the station area has land available to support development into a transit-oriented neighborhood, as measured by the amount of land within a ¼ mile walking distance of station that has a relatively greater likelihood to redevelop into transit-supportive uses	Fife 1 has much less land that would have a greater likelihood to redevelop compared to other alternatives , and less total land than the other alternatives. (2,731,000 SF total land; 371,000 SF of land with a greater likelihood to redevelop; 2,360,000 SF of land with lower likelihood to redevelop)	This alternative has more total land to redevelop compared to the other alternatives and a greater percentage of land that would have a greater likelihood to redevelop. (3,893,000 SF total land; 827,000 SF of land with a greater likelihood to redevelop; 2,179,000 SF of land with lower likelihood to redevelop; 887,000 SF tribal land) Fife plans to substantially rezone the area to become a downtown neighborhood, which would be expected to create more land availability for development.	This alternative has more total land to redevelop compared to the other alternatives and a greater percentage of land that would have a greater likelihood to redevelop. (3,893,000 SF total land; 827,000 SF of land with a greater likelihood to redevelop; 2,179,000 SF of land with lower likelihood to redevelop; 887,000 SF tribal land) Fife plans to substantially rezone the area to become a downtown neighborhood, which would be expected to create more land availability for development.	This alternative has the most land with a greater likelihood of redeveloping within a 1/4 mile walking distance compared to other alternatives. (3,408,000 SF total land; 1,009,000 SF of land with a greater likelihood to redevelop; 1,480,000 SF of land with lower likelihood to redevelop; 919,000 SF tribal land)	This alternative has the most land with a greater likelihood of redeveloping within a 1/4 mile walking distance compared to other alternatives. (3,408,000 SF total land; 1,009,000 SF of land with a greater likelihood to redevelop; 1,480,000 SF of land with lower likelihood to redevelop; 919,000 SF tribal land)
L2.8: Detailed evaluation of nonmotorized barriers within a ½ mile of the station	Assessment of barriers within half-mile of TDLE station areas (barriers list: (1) Topography (hills) that limit the walkshed, (2) Wide roads, (3) Highways, (4) Bodies of water, (5) Railways)	This station location is closer to 54th Avenue, which is a wide (5-lane) street with a high volume of truck traffic. However, the station can provide the beginning of a new, smaller-scale street grid south of 12th Street.	This station location is relatively farther from the pedestrian barriers of SR 99 and 54th Avenue. This station location also is likely to break up some large parcels and large blocks, which are currently an obstacle to pedestrian connections and effectively reduce the size of the walkshed from what it could be with smaller blocks.	This station location is relatively farther from the pedestrian barriers of SR 99 and 54th Avenue. This station location also is likely to break up some large parcels and large blocks, which are currently an obstacle to pedestrian connections and effectively reduce the size of the walkshed from what it could be with smaller blocks.	This station is closer to SR 99 (which has seven lanes of traffic and is difficult to cross). It also can be built with the existing street network and so will not provide the beginning of a new, smaller-scale street grid. However, this station is relatively farther from 54th Avenue (which is a five-lane street with many trucks turning onto it from SR 99).	This station is closer to SR 99 (which has seven lanes of traffic and is difficult to cross). It also can be built with the existing street network and so will not provide the beginning of a new, smaller-scale street grid. However, this station is relatively farther from 54th Avenue (which is a five-lane street with many trucks turning onto it from SR 99).
L2.9: Presence of amenities that can catalyze development of transit-oriented neighborhoods	Assessment of amenities that can catalyze complete transit-oriented neighborhoods in station area.	The alignment associated with this alternative is least likely to impact the businesses and amenities that are concentrated west of 54th Avenue. It is also closer to these amenities, which include restaurants, retail, and some services.	This station location is not particularly closer to the amenities located west of 54th Avenue, and the alignment is likely to have less of an impact to amenities on Pacific Highway west of 54th Avenue.	This station location is farther from the amenities located west of 54th Avenue, and the alignment is likely to remove some of these amenities.	This station location is farther from the amenities located west of 54th Avenue, and the alignment is the most likely of any of the Fife alternatives to remove several amenities.	This station location is further from the amenities located west of 54th Avenue, and the alignment is the most likely of any of the Fife alternatives to remove several amenities.
L2.10: Proximity to existing transit service and level of transit service diversion required	Distance to nearest existing bus stop with at least 30-minute headways; measure of the level of diversion that could be required.	Furthest distance (1,705 feet) from the westbound bus stop at Pacific Highway and 54th Avenue E Greatest amount of transit diversion	Moderate distance (1,225 feet) from the westbound bus stop at Pacific Highway and 59th Avenue E Moderate amount of transit diversion	Moderate distance (1,225 feet) from the westbound bus stop at Pacific Highway and 59th Avenue E Moderate amount of transit diversion	Shortest distance (705 feet) from the westbound bus stop at Pacific Highway and 59th Avenue E Least amount of transit diversion	Shortest distance (705 feet) from the westbound bus stop at Pacific Highway and 59th Avenue E Least amount of transit diversion

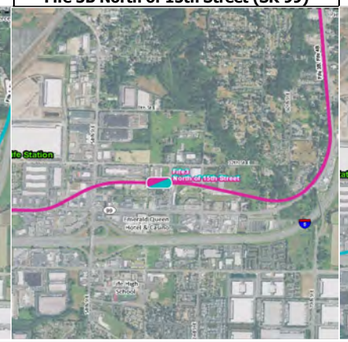
Lower Performing

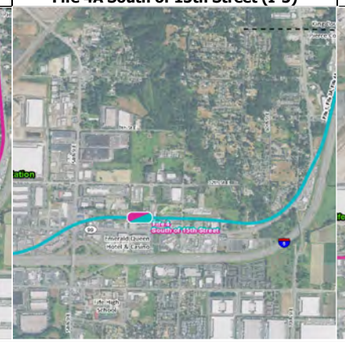
Higher Performing

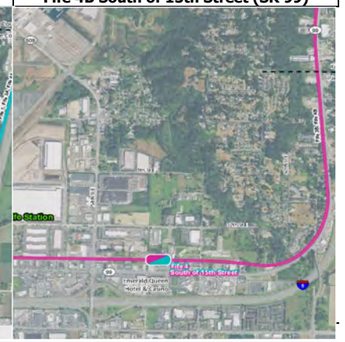
Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

Fife Station Area









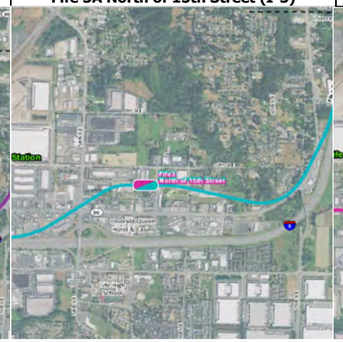
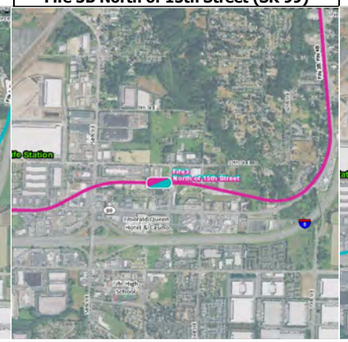
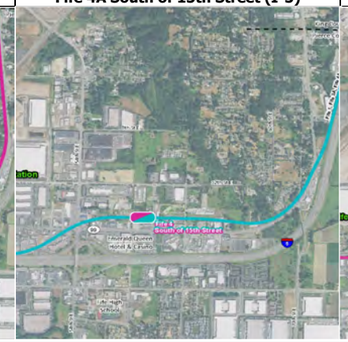
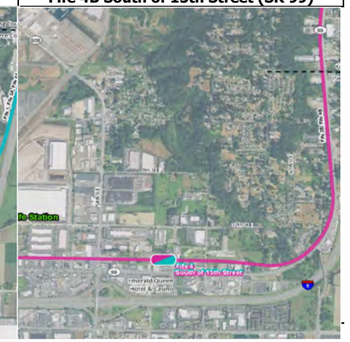
Measure	Methodology	Fife 1 12th Street	Fife 3A North of 15th Street (I-5)	Fife 3B North of 15th Street (SR 99)	Fife 4A South of 15th Street (I-5)	Fife 4B South of 15th Street (SR 99)
	Distance to nearest rail platform based on proposed station concepts (TACOMA DOME)	N/A	N/A	N/A	N/A	N/A
L2.11: Ease of vehicular pickup/drop-off for a variety of users	Assessment of ease of access to pick-up/drop-off at stations due to nearby street network and congestion using proposed station concepts.	•Two ingress/egress points on 12th Street E; shared with the proposed parking garage •Left-turn access onto 12th Street E from either access point may be a possibility •Left turn access onto 54th Avenue E for drivers continuing south of I-5 would be less challenging than Fife 4 station areas	•Left-turn access onto 12th Street E may be a possibility •Left turn access onto 54th Avenue E for drivers continuing south of I-5 would be less challenging than Fife 4 station areas •Ingress and egress would require the greatest number of left turns, as the pickup/drop-off areas are in new internal streets	•Left-turn access onto 12th Street E may be a possibility •Left turn access onto 54th Avenue E for drivers continuing south of I-5 would be less challenging than Fife 4 station areas •Ingress and egress would require the greatest number of left turns, as the pickup/drop-off areas are in new internal streets	•Left-turn access onto 59th Avenue E currently permitted; a signal may be needed at this intersection to manage driveway traffic •Left turn access onto Pacific Highway south from 59th Avenue E permitted via the existing signal •Left turn access onto 59th Avenue E or 54th Avenue E could be challenging due to proximity to Pacific Highway S	•Left-turn access onto 59th Avenue E currently permitted; a signal may be needed at this intersection to manage driveway traffic •Left turn access onto Pacific Highway south from 59th Avenue E permitted via the existing signal •Left turn access onto 59th Avenue E or 54th Avenue E could be challenging due to proximity to Pacific Highway S
L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations	Ratio of existing and funded bicycle facility miles (greenway, lanes, protected lanes, trails) to total roadway miles within a 10-minute bikeshed	Higher existing and funded bike facility miles to roadway miles. Existing: 0.04 Funded: 0.35	Moderate ratio of existing and funded bike facility miles to roadway miles. Existing: 0.03 Funded: 0.32	Moderate ratio of existing and funded bike facility miles to roadway miles. Existing: 0.03 Funded: 0.32	Higher existing and funded bike facility miles to roadway miles. Existing: 0.04 Funded: 0.35	Higher existing and funded bike facility miles to roadway miles. Existing: 0.04 Funded: 0.35
L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations	Ratio of existing and funded pedestrian facility miles (trails, sidewalks) to total roadway miles within a 10-minute walkshed of stations	Moderate ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.53 Funded: 0.66	Moderate ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.52 Funded: 0.69	Moderate ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.52 Funded: 0.69	Higher ratio of existing and funded pedestrian facility miles to roadway miles, low topographical challenges. Existing: 0.60 Funded: 0.77	Higher ratio of existing and funded pedestrian facility miles to roadway miles, low topographical challenges. Existing: 0.60 Funded: 0.77
		Objective: Preserve the Environment				
L2.14: Potential effects to wetlands	Extent and quality of wetlands within 100-foot buffer of each alternative	Minor impacts to relatively small wetlands associated with West Fork Hylebos Creek and Lower Hylebos Creek	Minor impacts to relatively small wetlands associated with West Fork Hylebos Creek and Lower Hylebos Creek	Minor impacts to relatively small wetlands associated with Lower Hylebos Creek	Minor impacts to relatively small wetlands associated with West Fork Hylebos Creek and Lower Hylebos Creek	Minor impacts to relatively small wetlands associated with Lower Hylebos Creek
L2.15: Potential effects to streams/stream crossings	Number of impacts to streams and stream crossings within 100-foot buffer of each alternative	5 perpendicular crossings: West Fork Hylebos Creek, Lower Hylebos Creek, Wapato Creek, Wapato Creek tributary, and an unnamed stream	4 perpendicular crossings: West Fork Hylebos Creek, Lower Hylebos Creek, Wapato Creek, and an unnamed stream	3 perpendicular crossings: Lower Hylebos Creek, Wapato Creek, and an unnamed stream	4 perpendicular crossings: West Fork Hylebos Creek, Lower Hylebos Creek, Wapato Creek, and an unnamed stream	3 perpendicular crossings: Lower Hylebos Creek, Wapato Creek, and an unnamed stream
L2.16: Potential to affect protected species and habitats	Number of impacts to habitats or areas where endangered, threatened, or sensitive species have a primary association (based on Priority Habitats and Species data from the Washington Department of Fish and Wildlife within 100-foot buffer of each alternative)	Fish in Hylebos and Wapato	Fish in Hylebos and Wapato	Fish in Hylebos and Wapato	Fish in Hylebos and Wapato	Fish in Hylebos and Wapato
L2.17: Potential effects to vegetated areas	Estimated area of vegetation removal	Clearing in stream/wetland areas and disturbed vegetation along I-5	Clearing in stream/wetland areas and disturbed vegetation along I-5	Clearing in stream/wetland areas and disturbed vegetation along I-5	Clearing only in stream/wetland areas noted above [avoids vegetated patch] and disturbed vegetation along I-5	Clearing only in stream/wetland areas noted above [avoids vegetated patch] and disturbed vegetation along I-5
L2.18: Potential effects to floodplains	Number of impacts to or floodplains/floodways (additive) within 100-foot buffer	Crossings: West Hylebos Creek - 80-foot floodplain and floodway (both mapped) Hylebos Creek - 130-foot floodplain and floodway (both mapped) Wapato Creek tributary - 2,100-foot mapped floodplain and unmapped floodway; station would be located in middle of mapped floodplain, possibly floodway Wapato Creek - 60-foot floodplain and floodway (both mapped) Puyallup River - Assumed to make use of existing I-5 bridge to cross floodplain and floodway (both mapped)	Crossings: West Hylebos Creek - 80-foot floodplain and floodway (both mapped) Hylebos Creek - 330-foot floodplain and floodway (both mapped) Wapato Creek tributary - 1,900-foot mapped floodplain and unmapped floodway; station would be located in middle of mapped floodplain, possibly floodway Wapato Creek - 40-foot floodplain and floodway (both mapped) Puyallup River - new 430-foot crossing of floodplain and floodway (both mapped)	Crossings: West Hylebos Creek - none Hylebos Creek - 330-foot floodplain and floodway (both mapped) Wapato Creek tributary - 2,000-foot mapped floodplain and unmapped floodway; station would be located in middle of mapped floodplain, possibly floodway Wapato Creek - 60-foot floodplain and floodway (both mapped) Puyallup River - new 430-foot crossing of floodplain and floodway (both mapped)	Crossings: West Hylebos Creek - 80-foot floodplain and floodway (both mapped) Hylebos Creek - 170-foot floodplain and floodway (both mapped) Wapato Creek tributary - 1,700-foot mapped floodplain and unmapped floodway; station would be located in middle of mapped floodplain, possibly floodway Wapato Creek - 40-foot floodplain and floodway (both mapped) Puyallup River - new 430-foot crossing of floodplain and floodway (both mapped)	Crossings: West Hylebos Creek - none Hylebos Creek - 170-foot floodplain and floodway (both mapped) Wapato Creek tributary - 1,700-foot mapped floodplain and unmapped floodway; station would be located in middle of mapped floodplain, possibly floodway Wapato Creek - 60-foot floodplain and floodway (both mapped) Puyallup River - new 430-foot crossing of floodplain and floodway (both mapped)
L2.19: Presence of geologic hazard areas (steep slopes, erosion, or landslide hazard areas)	Number of geologic hazard areas (steep slope, erosion, landslide hazard areas)	Steep slopes along I-5 curve Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent	Steep slopes along I-5 curve Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent	Steep slopes along I-5 curve Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent	Steep slopes along I-5 curve Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent	Steep slopes along I-5 curve Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent
L2.20: Estimated number of affected parcels and total acreage by property type	Assessment of potential property impacts and general estimate of acreage of land converted from other land uses to a transportation use	Total potential parcels: 95-100 Total Potential Acre Impact: 20-25 Total Acres of Potential Parcels Impacted: 130-135	Total potential parcels: 90-95 Total Potential Acre Impact: 15-20 Total Acres of Potential Parcels Impacted: 150-155	Total potential parcels: 110-115 Total Potential Acre Impact: 15-20 Total Acres of Potential Parcels Impacted: 130-135	Total potential parcels: 100-105 Total Potential Acre Impact: 15-20 Total Acres of Potential Parcels Impacted: 145-150	Total potential parcels: 130-135 Total Potential Acre Impact: 20-25 Total Acres of Potential Parcels Impacted: 125-130

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

Fife Station Area

Measure	Methodology	Fife 1 12th Street	Fife 3A North of 15th Street (I-5)	Fife 3B North of 15th Street (SR 99)	Fife 4A South of 15th Street (I-5)	Fife 4B South of 15th Street (SR 99)
						
L2.21: Estimated number of affected parcels with major economic activity generators	Assessment of potential property impacts that have a major economic activity generator (such as Costco, Home Depot, Port of Tacoma property, strip malls)	Approximately 60-65 businesses displaced, including up to 2 hotels, 3 commercial retail centers, 4 auto dealers or major auto service providers, 2 business parks, 1 medical office, and 11 industrial businesses.	Approximately 20-25 businesses displaced, including up to 1 commercial retail center, 6 auto dealers or major auto service providers, and 11 industrial businesses.	Approximately 55-60 businesses displaced, including up to 1 hotel, 5 commercial retail centers, 5 auto dealers or major auto service providers, 1 business park, and 10 industrial businesses.	Approximately 25-30 businesses displaced, including up to 2 hotels, 1 commercial retail center, 9 auto dealers or major auto service providers, and 9 industrial businesses.	Approximately 45-50 businesses displaced, including up to 5 hotels, 2 commercial retail centers, 7 auto dealers or major auto service providers, 1 business park, and 8 industrial businesses.
L2.22: Estimated number of displacements by property type; impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating	Number of potential property impacts from alignment and station by property type; range may vary by segment due to length of alignment	Residential Displacements: 5-10 Commercial Displacements: 60-65 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 5-10 Commercial Displacements: 20-25 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0 Religious Services = 1	Residential Displacements: 10-15 Commercial Displacements: 55-60 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0 Religious Services = 1	Residential Displacements: 60-65 Commercial Displacements: 25-30 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 70-75 Commercial Displacements: 45-50 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0
L2.23: Estimated number of tribal parcels potentially affected	Number tribal-owned parcels affected by each alternative	Potential effects on five tribal properties at three addresses; Puyallup River accounted for in East Tacoma ratings	Potential effects on four tribal properties at four addresses; Puyallup River accounted for in East Tacoma ratings	Potential effects on seven tribal properties at four addresses; Puyallup River accounted for in East Tacoma ratings	Potential effects on five tribal properties at five addresses; Puyallup River accounted for in East Tacoma ratings	Potential effects on eight tribal properties at five addresses; Puyallup River accounted for in East Tacoma ratings
L2.24: Potential effects on Section 4(f) parks and recreational resources	Number of impacts and estimated area of potential permanent impacts to parks and recreational resources within 100-foot buffer of each alternative	No impacts to parks	No impacts to parks	Potential impacts to one park: West Hylebos Osaka Property	No impacts to parks	Potential impacts to one park: West Hylebos Osaka Property
L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places	Number of impacts to Section 4(f) resources and properties listed in or eligible for the National Register of Historic Places within 100-foot buffer of each alternative	10 total historic period resource, including one known historic resource of local significance and potential for national significance, and nine historic-period resources with undetermined eligibility. Based on the resource types and ages, potential for eligibility is moderate to high.	Potential to affect 11 historic-period resources with undetermined significance. Based on the resource types and ages, potential for significance is moderate.	Potential to affect 24 historic-period resources: one has been determined locally significant, and may be nationally significant, and the other 23 have undetermined significance. Based on the resource types and ages, potential for historic significance is moderate to high.	Potential to affect 18 historic-period resources of undetermined significance. Based on the resource types and ages, potential for historic significance is moderate to high.	Potential to affect 37 historic-period resources of undetermined significance. Based on the resource types and ages, potential for historic significance is moderate to high.
L2.26: Potential effects on Section 4(f) cultural and archaeological resources	Number of potential impacts and probability to encounter Section 4(f) cultural and/or archaeological resources within 100-foot buffer of each alternative	Potential to affect two cultural/archaeological resources.	Potential to affect one cultural/archaeological resource.	Potential to affect two cultural and archaeological resources.	Potential to affect one cultural/archaeological resource.	Potential to affect two cultural and archaeological resources.
L2.27: Potential effects to view sheds along the alignment and potential for impacts to view-dependent businesses	Assessment of impacts to protected views and view-dependent businesses	Moderate number of parcels with view-dependent businesses.	More parcels with view-dependent businesses.	Moderate number of parcels with view-dependent businesses.	Moderate number of parcels with view-dependent businesses.	Moderate number of parcels with view-dependent businesses.
L2.28: Potential effects on sensitive noise and vibration receptors	Number of potentially affected sensitive receptors within 350-foot buffer of each alternative; sensitive receptors include residences and "others" (schools, churches, parks, hotels, hospitals, libraries, cemeteries, etc.)	Passes in close proximity to the large single-family residential development on 69th Avenue, Chateau Rainier apartments, eight hotels, and other single-family residences.	Passes in close proximity to the large single-family residential development on 69th Avenue, Chateau Rainier Apartments, Rainier View Senior Apartments, three hotels, and other single-family residences.	Passes in close proximity to the large single-family residential development on 69th Avenue, Rainier View Senior Apartments, Chateau Rainier Apartments, Sunridge Apartments, nine hotels, and other single-family residences.	Passes in close proximity to the large single-family residential development on 69th Avenue, Chateau Rainier Apartments, three hotels, and other single-family residences.	Passes in close proximity to the large single-family residential development on 69th Avenue, Chateau Rainier Apartments, Sunridge Apartments, 10 hotels, and other single-family residences.
L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network	Assessment of intersection level of service, and effects on traffic circulation and access for both automobiles and freight, including potential number of lane restrictions, turn restrictions, and driveways impacted	Some added delay (up to 75 total additional seconds) at intersections compared to without the project (I-5 Northbound ramps/54th Avenue E, Pacific Highway/59th Avenue E). Traffic impacts similar to Fife 3 alternatives.	Some added delay (up to 75 total additional seconds) at intersections compared to without the project (I-5 Northbound ramps/54th Avenue E, Pacific Highway/59th Avenue E). Traffic impacts similar to Fife 1 alternative.	Some added delay (up to 75 total additional seconds) at intersections compared to without the project (I-5 Northbound ramps/54th Avenue E, Pacific Highway/59th Avenue E). Traffic impacts similar to Fife 1 alternative.	More delay (up to 90 total additional seconds) at study intersections (I-5 Northbound ramps/54th Avenue E, Pacific Highway/54th Avenue E, Pacific Highway/59th Avenue E) compared to without the project and Fife alternatives 1 and 3.	More delay (up to 90 total additional seconds) at study intersections (I-5 Northbound ramps/54th Avenue E, Pacific Highway/54th Avenue E, Pacific Highway/59th Avenue E) compared to without the project and Fife alternatives 1 and 3.
L2.30: Potential effects on freight movement	Assessment of impacts to level of service on freight corridors	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to Fife 3 alternatives.	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to Fife 1 alternative.	Some added delay at intersections compared to without the project. Freight impacts due to intersection congestion similar to Fife 1 alternative.	More freight impacts compared to Fife alternatives 1 and 3 due to additional congestion at the study intersection.	More freight impacts compared to Fife alternatives 1 and 3 due to additional congestion at the study intersection.
L2.31: Potential avoidance of hazardous waste	Number of hazardous materials sites within 1/8 mile of each alternative	27 total hazardous materials sites	17 total hazardous materials sites	22 total hazardous materials sites	18 total hazardous materials sites	22 total hazardous materials sites

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

Fife Station Area

Measure	Methodology	Fife 1 12th Street	Fife 3A North of 15th Street (I-5)	Fife 3B North of 15th Street (SR 99)	Fife 4A South of 15th Street (I-5)	Fife 4B South of 15th Street (SR 99)
L2.32: Potential effects on parking demand and supply and spillover parking effects	Assessment of impacts on parking supply (review of impacts to parcels with parking)	Count of parcels with parking that are potentially impacted: 25 Count of parcels with more than 50% of parking potentially impacted: 4 Parking Acreage Potentially Impacted: 2.41	Count of parcels with parking that are potentially impacted: 24 Count of parcels with more than 50% of parking potentially impacted: 2 Parking Acreage Potentially Impacted: 3.11	Count of parcels with parking that are potentially impacted: 27 Count of parcels with more than 50% of parking potentially impacted: 4 Parking Acreage Potentially Impacted: 2.26	Count of parcels with parking that are potentially impacted: 29 Count of parcels with more than 50% of parking potentially impacted: 3 Parking Acreage Potentially Impacted: 2.92	Count of parcels with parking that are potentially impacted: 35 Count of parcels with more than 50% of parking potentially impacted: 6 Parking Acreage Potentially Impacted: 2.40
Objective: Support Equitable Mobility						
L2.33: Potential benefits to low-income or minority populations	Assessment of how well station serves low-income/minority and traditionally underserved or transit-dependent populations (e.g., population with no car, population younger than 18 and older than 65) compared to baseline; the baseline is the percentage of minority or low-income population and transit-dependent populations in each city that the station area serves	Fife is composed of 34.3% minority and 31.0% low-income populations. This station area has a 31.1% minority and 26.4% low-income population; therefore, the station would serve slightly less minority low-income populations compared to Fife as a whole.	Fife is composed of 34.3% minority and 31.0% low-income populations. This station area has a 38.1% minority and 32.0% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Fife as a whole.	Fife is composed of 34.3% minority and 31.0% low-income populations. This station area has a 38.1% minority and 32.0% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Fife as a whole.	Fife is composed of 34.3% minority and 31.0% low-income populations. This station area has a 43.8% minority and 36.2% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Fife as a whole.	Fife is composed of 34.3% minority and 31.0% low-income populations. This station area has a 43.8% minority and 36.2% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Fife as a whole.
L2.34: Potential for impacts on low-income and/or minority populations	Potential for displacement to affect Environmental Justice populations (minority and low-income)	This alternative has either lower or approximately the same percentages of minority and low-income populations compared to Fife. There are 5-10 residential displacements anticipated and approximately 60-65 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations.	This alternative has either lower or approximately the same percentages of minority and low-income populations compared to Fife. There are 5-10 residential displacements anticipated and approximately 20-25 business displacements. Therefore it is possible there could be some potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have the lowest number of displacements in Fife, this would be the highest performing of the Fife alternatives.	This alternative has either lower or approximately the same percentages of minority and low-income populations compared to Fife. There are 10-15 residential displacements anticipated and approximately 55-60 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations.	This alternative has either lower or approximately the same percentages of minority and low-income populations compared to Fife. There are 60-65 residential displacements anticipated and approximately 25-30 business displacements. This alternative could involve displacement of known low-income residences. Therefore it is possible there could be substantial potential impacts to environmental justice populations.	This alternative has either lower or approximately the same percentages of minority and low-income populations compared to Fife. There are 70-75 residential displacements anticipated and approximately 45-50 business displacements. This alternative could involve displacement of known low-income residences. Therefore it is possible there could be substantial potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the highest numbers of displacements in Fife, including displacement of known low-income residences, this would be the lowest performing of the Fife alternatives.
Objective: Provide a Financially Sustainable and Constructible Project						
L2.35: Preliminary conceptual estimate	Preliminary conceptual estimates based on conceptual design quantities and current Sound Transit unit pricing. *Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among*	$850M (highest estimate to build)	$700M (lower estimate to build)	$800M (higher estimate to build)	$700M (lower estimate to build)	$800M (higher estimate to build)
L2.36: Operating estimate	Assessment of potential magnitude of O&M estimates based on travel time	Two curves below 55 mph (45 mph and 45 mph); middle alignment length (4.04 miles) compared to most alternatives would result in moderate operating estimates.	One curve that reduces operating speeds to 40 mph and slightly longer alignment length (4.08 miles) would result in moderate operating estimates.	Two curves that reduce operating speeds to 40 mph and 45 mph and slightly shorter alignment length (4.01 miles) would result in moderate operating estimates.	One curve below 55 mph (45 mph); middle alignment length (4.05 miles) compared to most alternatives would result in moderate operating estimates.	Three curves below 55 mph (45, 45, 50 mph) and slightly shorter alignment length (3.99 miles) compared to other alternatives would result in moderate operating estimates.
L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure	Potential impacts on known major utilities or structures (e.g. power lines, transportation infrastructure)	Many utilities running parallel on Pacific Highway E, though many may be outside limits of work, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Many utilities running parallel on Pacific Highway E, though many may be outside limits of work, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Many utilities running parallel on Pacific Highway E, though many may be outside limits of work, moderate crossing of utilities.
L2.38: Number of sites requiring environmental remediation within the project-footprint of an alternative	Assessment of the number of sites requiring environmental remediation within the project footprint of an alternative	One site requiring remediation	Five sites requiring remediation	Two sites requiring remediation	Five sites requiring remediation	Four sites requiring remediation
L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects)	Assessment of temporary construction impacts to community, including potential for transportation, noise, vibration, and visual effects that could disrupt the community	This alternative requires a crossing of SR 99 that could create construction traffic impacts. This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.	This alternative impacts some structures, which could lead to additional considerations that could arise during construction. Impacts fewer structures compared to other alternatives west of 54th Avenue E. This alternative requires a crossing of SR 99 that could create construction traffic impacts.	This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.	This alternative impacts some structures, which could lead to additional considerations that could arise during construction. Impacts fewer structures compared to other alternatives west of 54th Avenue E. This alternative requires a crossing of SR 99 that could create construction traffic impacts.	This alternative also impacts many structures, which could lead to additional considerations that could arise during construction.

Lower Performing

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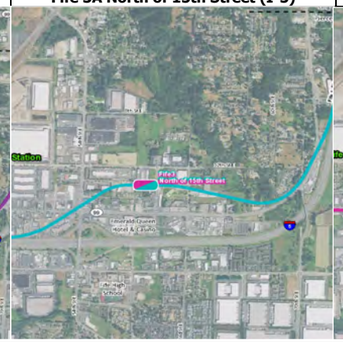
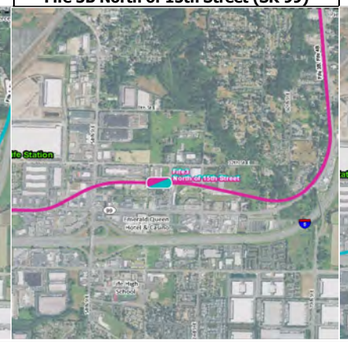
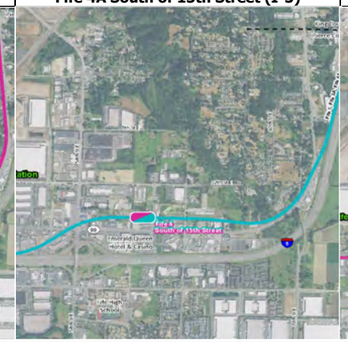
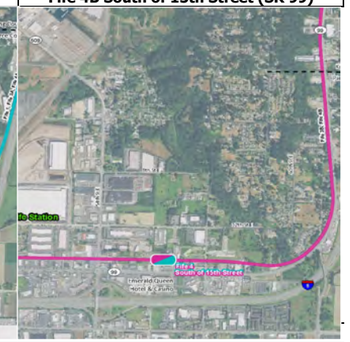
Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

Fife Station Area

Measure	Methodology	Fife 1 12th Street	Fife 3A North of 15th Street (I-5)	Fife 3B North of 15th Street (SR 99)	Fife 4A South of 15th Street (I-5)	Fife 4B South of 15th Street (SR 99)
						
L2.40: Availability and potential to use publicly-owned right-of-way and publicly-owned property	Amount of publicly-owned ROW and publicly-owned property (individual parcels in public ownership) available per conceptual design of alignment	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 28.3% Parcels: 2	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 54.5% Parcels: 2	Moderate potential to use publicly-owned right-of-way, higher potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 26.2% Parcels: 5	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 54.8% Parcels: 2	Moderate potential to use publicly-owned right-of-way, moderate potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 27.3% Parcels: 4
L2.41: Capability to accommodate future expansion included in the Sound Transit Long Range Plan	Capability of station location and alignment to accommodate future expansion included in the ST Long Range Plan	N/A	N/A	N/A	N/A	N/A
L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks and pocket track at Tacoma Dome, number of at grade crossings, if any)	Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome and South Federal Way, number of at grade crossings, if any)	This alignment varies in speed, so the train will be slowing down and speeding up through this area. All speeds are 45 mph and above despite a meandering alignment. Horizontal curve speeds: 50, 55, 45, 55, 45	This alignment meanders and has low speeds of 40 mph in the center. Horizontal curve speeds: 50, 55, 40, 40, 40, 55	This alignment meanders and has varying speeds as low as 40 mph. Horizontal curve speeds: 50, 55, 40, 40, 55, 45	Though this alignment meanders, it maintains speeds 45 mph and above, with the 45 mph restriction localized in one area, maximizing the efficiency of an urban alignment. Horizontal curve speeds: 50, 55, 45, 55	This alignment varies in speed on either end, but has a stretch of higher speed tangent in the center. All speeds are 45 mph and above. Horizontal curve speeds: 55, 45, 50, 45
L2.43: Overall schedule risk	Consideration of potential risks to schedule (i.e. potential to increase schedule)	Schedule risks associated with coordination with SR 167 project and Port of Tacoma Road interchange project.	Schedule risks associated with coordination with SR 167 project and Port of Tacoma Road interchange project.	Schedule risks associated with coordination with SR 167 project and Port of Tacoma Road interchange project.	Schedule risks associated with potential relocation of senior housing units. Coordination with SR 167 project. Coordination with SR 167 project and Port of Tacoma Road interchange project.	Schedule risks associated with potential relocation of senior housing units. Coordination with SR 167 project and Port of Tacoma Road interchange project.

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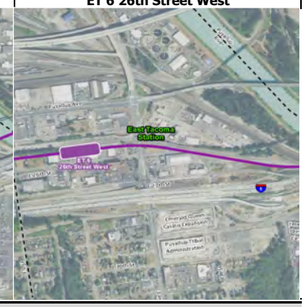
Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

East Tacoma Station Area

Measure	Methodology	ET 1 Puyallup Avenue	ET 2 E 25th Street	ET 3A E 26th Street to E 25th Street	ET 3B 26th Street East	ET 5 E 27th Street	ET 6 26th Street West
							
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs							
L2.1: Travel time	Estimated based on alignment length, percent of alignment with horizontal speeds below 55 MPH	High percentage of alignment below 55 mph (100.0%); middle alignment length; 0.04 miles longer than the shortest East Tacoma alternative	High percentage of alignment below 55 mph (100.0%); middle alignment length; 0.03 miles longer than the shortest East Tacoma alternative	Low percentage of alignment below 55 mph (0.0%); slightly shorter alignment length; 0.02 miles longer than the shortest East Tacoma alternative	Low percentage of alignment below 55 mph (0.0%); slightly shorter alignment length; 0.01 miles longer than the shortest East Tacoma alternative	Low percentage of alignment below 55 mph (0.0%); shortest alignment length (0.72 miles).	Low percentage of alignment below 55 mph (0.0%); longer alignment length; 0.07 miles longer than the shortest East Tacoma alternative
L2.2: Daily and annual projected project ridership (2042)	Average daily projected riders (baseline estimate provided for East Tacoma station area, with qualitative differences noted for station/alignment alternatives) **East Tacoma: 11,240 Daily NB; 11,240 Daily SB**	Lower ridership potential due to distance from existing residential, commercial, and entertainment uses.	Lower ridership potential due to distance from existing residential, commercial, and entertainment uses.	Moderate ridership potential due to proximity to existing residential, commercial, and entertainment uses south of I-5.	Moderate ridership potential due to proximity to existing residential, commercial, and entertainment uses south of I-5.	Moderate ridership potential due to proximity to existing residential, commercial, and entertainment uses south of I-5.	Moderate ridership potential due to proximity to existing residential, commercial, and entertainment uses south of I-5.
L2.3: Projected station boardings (2042)	Projected station boardings (baseline estimate provided for East Tacoma station area, with qualitative differences noted for station/alignment alternatives) **East Tacoma: 830 daily NB boardings; 60 daily SB boardings**	Lower level of projected station boardings due to distance from existing residential, commercial, and entertainment uses.	Lower level of projected station boardings due to distance from existing residential, commercial, and entertainment uses.	Moderate level of projected station boardings due to proximity to existing residential, commercial, and entertainment uses south of I-5.	Moderate level of projected station boardings due to proximity to existing residential, commercial, and entertainment uses south of I-5.	Moderate level of projected station boardings due to proximity to existing residential, commercial, and entertainment uses south of I-5.	Moderate level of projected station boardings due to proximity to existing residential, commercial, and entertainment uses south of I-5.
L2.4: Proximity to Puget Sound Regional Council growth centers and manufacturing/industrial centers	% Puget Sound Regional Council Growth Center and/or manufacturing/industrial center within 10-minute walkshed	85.8% Station in proximity to Port of Tacoma and Tacoma Downtown. Highest potential to support growth centers. Center for industrial activities. Some opportunities for economic development. 18.5% of 10-minute walkshed is in Puget Sound Regional Council regional growth center area and 67.5% is in Puget Sound Regional Council manufacturing/industrial center area.	79.5% Station in proximity to Port of Tacoma and Tacoma Downtown. High potential to support growth centers. Center for industrial activities. Some opportunities for economic development. 18.1% of 10-minute walkshed is in Puget Sound Regional Council regional growth center area and 61.4% is in Puget Sound Regional Council manufacturing/industrial center area.	57% Station near Port of Tacoma and Tacoma Downtown. Low potential to support growth centers. Some industrial activities. Minimal opportunities for economic development. 5.8 % of 10-minute walkshed is in Puget Sound Regional Council regional growth center area and 51.2% is in Puget Sound Regional Council manufacturing/industrial center area.	57% Station near Port of Tacoma and Tacoma Downtown. Low potential to support growth centers. Some industrial activities. Minimal opportunities for economic development. 5.8 % of 10-minute walkshed is in Puget Sound Regional Council regional growth center area and 51.2% is in Puget Sound Regional Council manufacturing/industrial center area.	44.4% Station near Port of Tacoma and Tacoma Downtown. Lowest potential to support growth centers. Fewer industrial activities. Minimal opportunities for economic development. 2.1 % of 10-minute walkshed is in Puget Sound Regional Council regional growth center area and 42.3% is in Puget Sound Regional Council manufacturing/industrial center area.	65.4% Station in proximity to Port of Tacoma and near Tacoma Downtown. Medium potential to support growth centers. Many industrial activities. Some opportunities for economic development. 19.3 % of 10-minute walkshed is in Puget Sound Regional Council regional growth center area and 46.1% is in Puget Sound Regional Council manufacturing/industrial center area.
L2.5: Population (persons/acre) and job (jobs/acre) densities	Existing and future (2040) pop and employment densities within 10-minute walkshed	Population densities: existing 23/future 36 Employment densities: existing 56/future 78 Lowest population density. High job density, high job growth.	Population densities: existing 29/future 43 Employment densities: existing 51/future 72 Lowest population density. High job density, high job growth.	Population densities: existing 47/future 61 Employment densities: existing 39/future 55 High population density, low job density.	Population densities: existing 47/future 61 Employment densities: existing 39/future 55 High population density, low job density.	Population densities: existing 56/future 70 Employment densities: existing 34/future 48 High population density, lowest job density.	Population densities: existing 36/future 49 Employment densities: existing 41/future 57 Medium population density. Low job density, medium job growth.
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access							
L2.6: Consistency with civic and community planning and land use, evaluating elements such as: local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans	Assessment of the civic and land use documents that are relevant and up to date in each station area. Evaluate each station location against the relevant documents/civic plans rating each plan as "consistent with TOD around alternative location"(+), "neutral", or "inconsistent with TOD around alternative location"(-)	This station is located in an industrial-zoned area, which is inconsistent with transit-oriented development. Based on current zoning, the best opportunities for transit-oriented development are located south of I-5. The location of ET 1 creates a dependency on the connection along Portland Avenue, which is highly congested and has high truck traffic volumes. The Port of Tacoma has economic development plans to preserve truck access and mobility along Portland Avenue, which is inconsistent with the siting of a station here.	This station is located in an industrial-zoned area, which is inconsistent with transit-oriented development. Based on current zoning, the best opportunities for transit-oriented development are located south of I-5. The location of ET 2 creates a dependency on the connection along Portland Avenue, which is highly congested and has high truck traffic volumes. The Port of Tacoma has economic development plans to preserve truck access and mobility along Portland Avenue, which is inconsistent with the siting of a station here.	This station is located in an industrial-zoned area, which is inconsistent with transit-oriented development. Based on current zoning, the best opportunities for transit-oriented development are located south of I-5. This station location has more opportunity to connect to areas south of I-5, which would support transit-oriented development and the Tribe's goals with respect to the casino's economic success. This station location is more proximal to multiple connections under I-5 (Portland Avenue and Bay Street).	This station is located in an industrial-zoned area, which is inconsistent with transit-oriented development. Based on current zoning, the best opportunities for transit-oriented development are located south of I-5. This station location has more opportunity to connect to areas south of I-5, which would support transit-oriented development and the Tribe's goals with respect to the casino's economic success. This station location is more proximal to multiple connections under I-5 (Portland Avenue and Bay Street).	This station is located in an industrial-zoned area, which is inconsistent with transit-oriented development. Based on current zoning, the best opportunities for transit-oriented development are located south of I-5. This station location has more opportunity to connect to areas south of I-5, which would support transit-oriented development and the Tribe's goals with respect to the casino's economic success. This station location is more proximal to multiple connections under I-5 (Portland Avenue and Bay Street).	This station is located in an industrial-zoned area, which is inconsistent with transit-oriented development. Based on current zoning, the best opportunities for transit-oriented development are located south of I-5. The location of ET 6 creates a dependency on the connection along Portland Avenue, which is highly congested and has high truck traffic volumes. The Port of Tacoma has economic development plans to preserve truck access and mobility along Portland Avenue, which is inconsistent with the siting of a station here.
L2.7: Likelihood of station area redevelopment into transit-oriented neighborhood	Assessment of degree to which the station area has land available to support development into a transit-oriented neighborhood, as measured by the amount of land within a ¼ mile walking distance of station that has a relatively greater likelihood to redevelop into transit-supportive uses	ET 1 has more total land compared to the other alternatives, primarily because nearby parcels are large (some parcels are included within the 1/4 mile walking distance even though just a small portion is within the walking distance). ET 1 has no land that would have a greater likelihood to redevelop; most of the land nearby is industrial and would have a lower likelihood to redevelop. (2,477,000 SF total land; 100% classified as lower likelihood to redevelop)	ET 2 has more total land compared to the other alternatives, primarily because nearby parcels are large (some parcels are included within the 1/4 mile walking distance even though just a small portion is within the walk distance). ET 2 has no land that would have a greater likelihood to redevelop; most of the land nearby is industrial and would have a lower likelihood to redevelop. (2,786,000 SF total land; 2,777,000 SF of land with lower likelihood to redevelop; 9,000 SF tribal land)	ET 3A has more land that has a greater likelihood to redevelop within the 1/4 mile walking distance. None of the other alternatives except ET 5 have any of this type of land within the 1/4 mile walking distance. (1,857,000 SF total land; 13,000 SF of land with a greater likelihood to redevelop; 1,633,000 SF of land with lower likelihood to redevelop; 211,000 SF tribal land)	ET 3A has more land that has a greater likelihood to redevelop within the 1/4 mile walking distance. None of the other alternatives except ET 5 have any of this type of land within the 1/4 mile walking distance. (1,857,000 SF total land; 13,000 SF of land with a greater likelihood to redevelop; 1,633,000 SF of land with lower likelihood to redevelop; 211,000 SF tribal land)	ET 5 has more land that has a greater likelihood to redevelop within the 1/4 mile walking distance. None of the other alternatives except ET 3 have any of this type of land within the 1/4 mile walking distance. (1,457,000 SF total land; 13,000 SF of land with a greater likelihood to redevelop; 1,023,000 SF of land with lower likelihood to redevelop; 421,000 SF tribal land)	ET 6 has a lower amount of total land compared to most other alternatives. ET 6 has no land that would have a greater likelihood to redevelop; most of the land nearby is industrial and would have a lower likelihood to redevelop. (1,691,000 SF total land; 1,683,000 SF of land with lower likelihood to redevelop; 9,000 SF tribal land)

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Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

East Tacoma Station Area

Measure	Methodology	ET 1 Puyallup Avenue	ET 2 E 25th Street	ET 3A E 26th Street to E 25th Street	ET 3B 26th Street East	ET 5 E 27th Street	ET 6 26th Street West
							
L2.8: Detailed evaluation of nonmotorized barriers within ½ mile of the station	Assessment of barriers within half-mile of TDLE station areas (barriers list: (1) Topography (hills) that limit the walkshed, (2) Wide roads, (3) Highways, (4) Bodies of water, (5) Railways)	This station location has minimal connectivity to the north because of the rail lines. Portland Avenue provides connections to the north but has grade changes, high volumes of faster moving truck traffic, and difficult pedestrian connectivity due to multiple ramp connections. The Puyallup River and rail yards are barriers to the east of the station. To the south, the Sounder trestle and I-5 are barriers. The primary connection to areas south of I-5 for this station is Portland Avenue, which is congested and has a lot of fast-moving trucks and turning traffic.	This station location has minimal connectivity to the north because of the rail lines. Portland Avenue provides connections to the north but has grade changes, high volumes of faster moving truck traffic, and difficult pedestrian connectivity due to multiple ramp connections. The Puyallup River and rail yards are barriers to the east of the station. To the south, the Sounder trestle and I-5 are barriers. The primary connection to areas south of I-5 for this station is Portland Avenue, which is congested and has a lot of fast-moving trucks and turning traffic.	This station location is more proximal to multiple connections under I-5 (Portland Avenue and Bay Street) for both vehicles and nonmotorized users. Bay Street and Portland Avenue could be improved into more pedestrian-friendly crossings (the Portland Avenue undercrossing is also congested and has fast-moving trucks and turning traffic). On the south side of Bay Street, the grade is less steep compared to Portland Avenue, and Bay Street currently has a wider sidewalk, an existing barrier between the sidewalk and vehicle traffic, fewer truck traffic and crossings, and a direct connection to the landscaped path through the casino grounds.	This station location is more proximal to multiple connections under I-5 (Portland Avenue and Bay Street) for both vehicles and nonmotorized users. Bay Street and Portland Avenue could be improved into more pedestrian-friendly crossings (the Portland Avenue undercrossing is also congested and has fast-moving trucks and turning traffic). On the south side of Bay Street, the grade is less steep compared to Portland Avenue, and Bay Street currently has a wider sidewalk, an existing barrier between the sidewalk and vehicle traffic, fewer truck traffic and crossings, and a direct connection to the landscaped path through the casino grounds.	This station location is more proximal to multiple connections under I-5 (Portland Avenue and Bay Street) for both vehicles and nonmotorized users. Bay Street and Portland Avenue could be improved into more pedestrian-friendly crossings (the Portland Avenue undercrossing is also congested and has fast-moving trucks and turning traffic). On the south side of Bay Street, the grade is less steep compared to Portland Avenue, and Bay Street currently has a wider sidewalk, an existing barrier between the sidewalk and vehicle traffic, fewer truck traffic and crossings, and a direct connection to the landscaped path through the casino grounds.	This station location has minimal connectivity to the north because of the rail lines. Portland Avenue provides connections to the north but has grade changes, high volumes of faster moving truck traffic, and difficult pedestrian connectivity due to multiple ramp connections. The Puyallup River and rail yards are barriers to the east of the station. To the south, I-5 is a barrier. The primary connection to areas south of I-5 for this station is Portland Avenue, which is congested and has a lot of fast-moving trucks and turning traffic. This station is closer to neighborhoods to the south.
L2.9: Presence of amenities that can catalyze development of transit-oriented neighborhoods	Assessment of amenities that can catalyze complete transit-oriented neighborhoods in station area.	There are minimal to no amenities near the station.	There are minimal to no amenities near the station.	There are minimal to no amenities near the station; however, this station is close to a convenience store, which could be a useful amenity for riders. This station is also closer to the tribal headquarters and casino to the south of I-5.	There are minimal to no amenities near the station; however, this station is close to a convenience store, which could be a useful amenity for riders. This station is also closer to the tribal headquarters and casino to the south of I-5.	There are minimal to no amenities near the station. This station would also potentially impact a convenience store, possibly removing a useful amenity for riders. This station is also closest to the tribal headquarters and casino to the south of I-5.	There are minimal to no amenities near the station with the exception of a convenience store. This station is closer to the tribal headquarters and casino to the south of I-5.
L2.10: Proximity to existing transit service and level of transit service diversion required	Distance to nearest existing bus stop with at least 30-minute headways; measure of the level of diversion that could be required.	Shortest distance (255 feet) from the eastbound bus stop at Puyallup Avenue and Portland Avenue E Least amount of transit diversion	Moderate distance (430 feet) from the eastbound bus stop at Puyallup Avenue and Portland Avenue E Moderate amount of transit diversion	Shorter distance (395 feet) from the northbound bus stop at Portland Avenue E and East 26th Street Lower amount of transit diversion	Shorter distance (395 feet) from the northbound bus stop at Portland Avenue E and East 26th Street Lower amount of transit diversion	Further distance (610 feet) from the northbound bus stop at Portland Avenue E and East 26th Street Greater amount of transit diversion	Moderate distance (500 feet) from the southbound bus stop at Portland Avenue E and East 26th Street Moderate amount of transit diversion
	Distance to nearest rail platform based on proposed station concepts (TACOMA DOME)	N/A	N/A	N/A	N/A	N/A	N/A
L2.11: Ease of vehicular pickup/drop-off for a variety of users	Assessment of ease of access to pick-up/drop-off at stations due to nearby street network and congestion using proposed station concepts.	•Left-turn access onto Puyallup Avenue would not be permitted from new "East O Street" •Most drivers are expected to access the station via East Portland Avenue and Puyallup Avenue; access would be most difficult for northbound drivers on East Portland Avenue and westbound drivers on Puyallup Avenue	•Left-turn access onto Puyallup Avenue would not be permitted from new "East O Street" •Most drivers are expected to access the station via East Portland Avenue and Puyallup Avenue; access would be most difficult for northbound drivers on East Portland Avenue and westbound drivers on Puyallup Avenue	•Two ingress/egress points from off-street lot on East Portland Avenue and new internal street •Southbound left turn access via East Portland Avenue would require drivers to circulate around the station	•Two ingress/egress points from off-street lot on East Portland Avenue and new internal street •Southbound left turn access via East Portland Avenue would require drivers to circulate around the station	•On-street area located on new internal streets would be accessible from East Portland Avenue, East Bay Street, and East 26th Street •Left turn access would not be available to or from East Bay Street; southbound left turn access via East Portland Avenue would require drivers to circulate around the station	•Single ingress/egress point from off-street lot on East 26th Street •Most drivers are expected to access the station via East Portland Avenue; access would be most difficult for northbound drivers on East Portland Avenue •Internal left turns on/off redeveloped East 26th Street and East 27th Street are not expected to be difficult
L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations	Ratio of existing and funded bicycle facility miles (greenway, lanes, protected lanes, trails) to total roadway miles within a 10-minute bikeshed	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.08 Funded: 0.13	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.08 Funded: 0.12	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.05 Funded: 0.10	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.05 Funded: 0.10	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.04 Funded: 0.10	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.07 Funded: 0.12
L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations	Ratio of existing and funded pedestrian facility miles (trails, sidewalks) to total roadway miles within a 10-minute walkshed of stations	Low ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.67 Funded: 0.67	Low ratio of existing and funded pedestrian facilities to roadway miles, low topographical challenges. Existing: 0.67 Funded: 0.67	Moderate ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.72 Funded: 0.72	Moderate ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.72 Funded: 0.72	Moderate ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.73 Funded: 0.73	Low ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.63 Funded: 0.63
Objective: Preserve the Environment							
L2.14: Potential effects to wetlands	Extent and quality of wetlands within 100-foot buffer of each alternative	May be minor impacts to wetlands along river	May be minor impacts to wetlands along river	May be minor impacts to wetlands along river	May be minor impacts to wetlands along river	May be minor impacts to wetlands along river	May be minor impacts to wetlands along river
L2.15: Potential effects to streams/stream crossings	Number of impacts to streams and stream crossings within 100-foot buffer of each alternative	Crossing Puyallup River	May be minor impacts to wetlands along river	Crossing Puyallup River	Crossing Puyallup River	Crossing Puyallup River	Crossing Puyallup River
L2.16: Potential to affect protected species and habitats	Number of impacts to habitats or areas where endangered, threatened, or sensitive species have a primary association (based on Priority Habitats and Species data from the Washington Department of Fish and Wildlife within 100-foot buffer of each alternative)	Crossing Puyallup River	Crossing Puyallup River	Crossing Puyallup River	Crossing Puyallup River	Crossing Puyallup River	Crossing Puyallup River
L2.17: Potential effects to vegetated areas	Estimated area of vegetation removal	Small area of Riparian Forest along River	Small area of Riparian Forest along River	Small area of Riparian Forest along River	Small area of Riparian Forest along River	Small area of Riparian Forest along River	Avoids most vegetated areas
L2.18: Potential effects to floodplains	Number of impacts to or floodplains/floodways (additive) within 100-foot buffer	Would require new 430-foot crossing of Puyallup River floodplain and floodway (both mapped)	Would require new 430-foot crossing of Puyallup River floodplain and floodway (both mapped)	Would require new 430-foot crossing of Puyallup River floodplain and floodway (both mapped)	Would require new 430-foot crossing of Puyallup River floodplain and floodway (both mapped)	Would require new 430-foot crossing of Puyallup River floodplain and floodway (both mapped)	Would require new 430-foot crossing of Puyallup River floodplain and floodway (both mapped)

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

East Tacoma Station Area

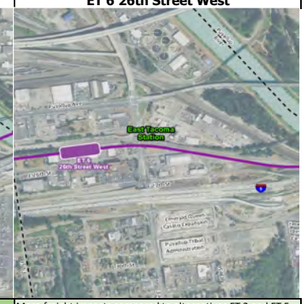
Measure	Methodology	ET 1 Puyallup Avenue	ET 2 E 25th Street	ET 3A E 26th Street to E 25th Street	ET 3B 26th Street East	ET 5 E 27th Street	ET 6 26th Street West
							
L2.19: Presence of geologic hazard areas (steep slopes, erosion or landslide hazard areas)	Number of geologic hazard areas (steep slope, erosion, landslide hazard areas)	Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent	Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent	Lahar hazard zone along entire extent High liquefaction susceptibility along entire extent	Lahar hazard zone along half of extent High liquefaction susceptibility along 2/3 of extent	Lahar hazard zone along half of extent High liquefaction susceptibility along half of extent	Lahar hazard zone along half of extent High liquefaction susceptibility along 3/4 of extent
L2.20: Estimated number of affected parcels and total acreage by property type	Assessment of potential property impacts and general estimate of acreage of land converted from other land uses to a transportation use	Total potential parcels: 20-25 Total Potential Acre Impact: 5-10 Total Acres of Potential Parcels Impacted: 15-20	Total potential parcels: 20-25 Total Potential Acre Impact: 5-10 Total Acres of Potential Parcels Impacted: 15-20	Total potential parcels: 15-20 Total Potential Acre Impact: 5-10 Total Acres of Potential Parcels Impacted: 10-15	Total potential parcels: 15-20 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 5-10	Total potential parcels: 10-15 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 10-15	Total potential parcels: 15-20 Total Potential Acre Impact: 0-5 Total Acre of Parcels Impacted: 10-15
L2.21: Estimated number of affected parcels with major economic activity generators	Assessment of potential property impacts that have a major economic activity generator (such as Costco, Home Depot, Port of Tacoma property, strip malls)	Approximately 10-15 businesses displaced, including up to 1 hotel, 2 auto dealers or major auto service providers, and 3 industrial businesses.	Approximately 5-10 businesses displaced, including up to 1 hotel, 1 auto dealer or major auto service provider, and 3 industrial businesses.	Approximately 5-10 businesses displaced, including up to 4 auto dealers or major auto service providers and 2 industrial businesses.	Approximately 5-10 businesses displaced, including up to 2 auto dealers or major auto service providers and 5 industrial businesses.	Approximately 1-5 businesses displaced, including up to 2 auto dealers or major auto service providers, 1 medical office, and 1 industrial business.	Approximately 5-10 businesses displaced, including up to 3 auto dealers or major auto service providers and 4 industrial businesses.
L2.22: Estimated number of displacements by property type; Impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating	Number of potential property impacts from alignment and station by property type; range may vary by segment due to length of alignment	Residential Displacements: 0-5 Commercial Displacements: 10-15 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0 -5 Commercial Displacements: 5-10 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0 -5 Commercial Displacements: 5-10 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0-5 Commercial Displacements: 5-10 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0-5 Commercial Displacements: 0-5 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0-5 Commercial Displacements: 5-10 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0
L2.23: Estimated number of tribal parcels potentially affected	Number tribal-owned parcels affected by each alternative	Potential effects on two tribal properties including Puyallup River	Potential effects on two tribal properties including Puyallup River	Potential effects on two tribal properties including Puyallup River	Potential effects on two tribal properties including Puyallup River	Potential effects on four tribal properties including Puyallup River	Potential effects on two tribal properties including Puyallup River
L2.24: Potential effects on Section 4(f) parks and recreational resources	Number of impacts and estimated area of potential permanent impacts to parks and recreational resources within 100-foot buffer of each alternative	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks
L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places	Number of impacts to Section 4(f) resources and properties listed in or eligible for the National Register of Historic Places within 100-foot buffer of each alternative	Potential to affect five historic-period resources with undetermined significance. Based on the resource types and ages, potential for historic significance is low to moderate.	Potential to affect six historic-period resources with undetermined significance. Based on the resource types and ages, potential for historic significance is low to moderate.	Potential to affect one historic-period resource with undetermined significance. Based on the resource type and age, potential for historic significance is low.	Potential to affect one historic-period resource with undetermined significance. Based on the resource type and age, potential for historic significance is low.	Potential to affect two historic-period resources with undetermined significance. Based on the resource type and age, potential for eligibility is low.	No potential to affect historic resources.
L2.26: Potential effects on Section 4(f) cultural and archaeological resources	Number of potential impacts and probability to encounter Section 4(f) cultural and/or archaeological resources within 100-foot buffer of each alternative	No recorded cultural and archaeological resources, but moderate potential to encounter unrecorded resources.	No recorded cultural and archaeological resources, but moderate potential to encounter unrecorded resources.	No recorded cultural and archaeological resources, but moderate potential to encounter unrecorded resources.	No recorded cultural and archaeological resources, but moderate potential to encounter unrecorded resources.	No recorded cultural and archaeological resources, but moderate potential to encounter unrecorded resources.	No recorded cultural and archaeological resources, but moderate potential to encounter unrecorded resources.
L2.27: Potential effects to view sheds along the alignment and potential for impacts to view-dependent businesses	Assessment of impacts to protected views and view-dependent businesses	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.
L2.28: Potential effects on sensitive noise and vibration receptors	Number of potentially affected sensitive receptors within 350-foot buffer of each alternative; sensitive receptors include residences and "others" (schools, churches, parks, hotels, hospitals, libraries, cemeteries, etc.)	No sensitive receivers within 350-foot buffer	One single-family residence within 350-foot buffer	Two single-family residences and one hotel within 350-foot buffer	Two single-family residences and one hotel within 350-foot buffer	Two single-family residences and one hotel within 350-foot buffer	One hotel within 350-foot buffer
L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network	Assessment of intersection level of service, and effects on traffic circulation and access for both automobiles and freight, including potential number of lane restrictions, turn restrictions, and driveways impacted	More delay (up to 500 total additional seconds) at study intersections (northbound left at E Portland Avenue/E 25th Street, eastbound left at E Portland Avenue/E 26th Street) compared to without the project and alternatives ET 3 and ET 5.	More delay (up to 500 total additional seconds) at study intersections (northbound left at E Portland Avenue/E 25th Street, eastbound left at E Portland Avenue/E 26th Street) compared to without the project and alternatives ET 3 and ET 5.	Some added delay (up to 300 total additional seconds) at intersections (eastbound left at E Portland Avenue/E 26th Street, E Bay Street/I-5 NB on-ramp) compared to without the project. Traffic impacts similar to ET 5 alternative.	Some added delay (up to 300 total additional seconds) at intersections (eastbound left at E Portland Avenue/E 26th Street, E Bay Street/I-5 NB on-ramp) compared to without the project. Traffic impacts similar to ET 5 alternative.	Some added delay (up to 300 total additional seconds) at intersections (eastbound left at E Portland Avenue/E 26th Street, E Bay Street/I-5 NB on-ramp) compared to without the project.. Traffic impacts similar to ET 3 alternative.	More delay (up to 500 total additional seconds) at study intersections (northbound left at E Portland Avenue/E 25th Street, westbound left at E Portland Avenue/E 26th Street) compared to without the project and alternatives ET 3 and ET 5.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

East Tacoma Station Area

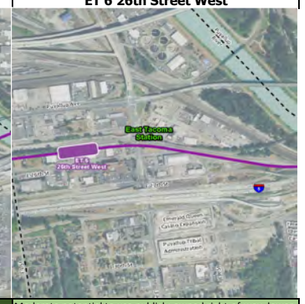
Measure	Methodology	ET 1 Puyallup Avenue	ET 2 E 25th Street	ET 3A E 26th Street to E 25th Street	ET 3B 26th Street East	ET 5 E 27th Street	ET 6 26th Street West
							
L2.30: Potential effects on freight movement	Assessment of impacts to level of service on freight corridors	More freight impacts compared to alternatives ET 3 and ET 5 due to additional congestion at the study intersections.	More freight impacts compared to alternatives ET 3 and ET 5 due to additional congestion at the study intersections.	Some added delay at intersections compared to without the project alternative. Freight impacts due to intersection congestion similar to ET 5 alternative.	Some added delay at intersections compared to without the project alternative. Freight impacts due to intersection congestion similar to ET 5 alternative.	Some added delay at intersections compared to without the project alternative. Freight impacts due to intersection congestion similar to ET 3 alternatives.	More freight impacts compared to alternatives ET 3 and ET 5 due to additional congestion at the study intersections.
L2.31: Potential avoidance of hazardous waste	Number of hazardous materials sites within 1/8 mile of each alternative	16 total hazardous materials sites	16 total hazardous materials sites	2 total hazardous materials sites	3 total hazardous materials sites	3 total hazardous materials sites	1 total hazardous materials site
L2.32: Potential effects on parking demand and supply and spillover parking effects	Assessment of impacts on parking supply (review of impacts to parcels with parking)	Count of parcels with parking that are potentially impacted: 2 Count of parcels with more than 50% of parking potentially impacted: 1 Parking Acreage Potentially Impacted: 0.34	Count of parcels with parking that are potentially impacted: 6 Count of parcels with more than 50% of parking potentially impacted: 1 Parking Acreage Potentially Impacted: 0.35	Count of parcels with parking that are potentially impacted: 2 Count of parcels with more than 50% of parking potentially impacted: 1 Parking Acreage Potentially Impacted: 0.50	Count of parcels with parking that are potentially impacted: 2 Count of parcels with more than 50% of parking potentially impacted: 1 Parking Acreage Potentially Impacted: 0.49	Count of parcels with parking that are potentially impacted: 2 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 0.39	Count of parcels with parking that are potentially impacted: 0 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 0.00
Objective: Support Equitable Mobility							
L2.33: Potential benefits to low-income or minority populations	Assessment of how well station serves low-income/minority and traditionally underserved or transit-dependent populations (e.g., population with no car, population younger than 18 and older than 65) compared to baseline; the baseline is the percentage of minority or low-income population and transit-dependent populations in each city that the station area serves	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 48.9% minority and 44.3% low-income population; therefore, the station would serve more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 48.6% minority and 43.9% low-income population; therefore, the station would serve more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 55.0% minority and 45.8% low-income population; therefore, the station would serve more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 55.0% minority and 45.8% low-income population; therefore, the station would serve more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 46.6% minority and 42.6% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 47.3% minority and 42.8% low-income population; therefore, the station would serve more slightly more minority low-income populations compared to Tacoma as a whole.
L2.34: Potential for impacts on low-income and/or minority populations	Potential for displacement to affect Environmental Justice populations (minority and low-income)	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 10-15 business displacements. Therefore it is possible there could be limited potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the highest numbers of displacements in East Tacoma, this would be the lowest performing of the East Tacoma alternatives.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 5-10 business displacements. Therefore it is possible there could be limited potential impacts to environmental justice populations.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 5-10 business displacements. Therefore it is possible there could be limited potential impacts to environmental justice populations.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are 0-5 residential displacements anticipated and approximately 5-10 business displacements. Therefore it is possible there could be limited potential impacts to environmental justice populations.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 0-5 business displacements. Therefore it is possible there could be limited potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the lowest numbers of displacements in East Tacoma, this would be the highest performing of the East Tacoma alternatives.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are 0-5 residential displacements anticipated and approximately 5-10 business displacements. Therefore it is possible there could be some potential impacts to environmental justice populations.
Objective: Provide a Financially Sustainable and Constructible Project							
L2.35: Preliminary conceptual estimate	Preliminary conceptual estimates based on conceptual design quantities and current Sound Transit unit pricing. *Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.*	$700M (higher estimate to build)	$700M (higher estimate to build)	$750M (highest estimate to build)	$650M (moderate estimate to build)	$700M (higher estimate to build)	$700M (higher estimate to build)
L2.36: Operating estimate	Assessment of potential magnitude of O&M estimates based on travel time	Curves operate at 45 and 50 mph; middle alignment length (0.76 miles) compared to most alternatives would result in slightly higher operating estimates.	Curves operate at 45 and 50 mph; middle alignment length (0.75 miles) compared to most alternatives would result in slightly higher operating estimates.	No curves below 55 mph and slightly shorter alignment length (0.74 miles) would result in lower operating estimates.	No curves below 55 mph and slightly shorter alignment length (0.73 miles) would result in lower operating estimates.	No curves below 55 mph and slightly shorter alignment length (0.72 miles) would result in lower operating estimates.	No curves below 55 mph; longer alignment length (0.79 miles) compared to most alternatives would result in moderate operating estimates.
L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure	Potential impacts on known major utilities or structures (e.g. power lines, transportation infrastructure)	Very few utilities running parallel, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Impacts parallel water main in Bay Street median, moderate crossing of utilities.
L2.38: Number of sites requiring environmental remediation within the project footprint of an alternative	Assessment of the number of sites requiring environmental remediation within the project footprint of an alternative	10 sites requiring remediation	Seven sites requiring remediation	Zero sites requiring remediation	Zero sites requiring remediation	One site requiring remediation	Zero sites requiring remediation
L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects)	Assessment of temporary construction impacts to community, including potential for transportation, noise, vibration, and visual effects that could disrupt the community	This alternative impacts some structures, which could lead to additional considerations that could arise during construction.	This alternative impacts some structures, which could lead to additional considerations that could arise during construction.	This alternative requires a crossing of the active Sounder tracks, which would create additional construction considerations. This alternative impacts some structures, which could lead to additional considerations that could arise during construction.	This alternative impacts some structures, which could lead to additional considerations that could arise during construction.	This alternative impacts the fewest structures, which could minimize potential construction considerations that may arise during construction.	This alternative impacts some structures, which could lead to additional considerations that could arise during construction.

Lower Performing

Higher Performing

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Results

East Tacoma Station Area

Measure	Methodology	ET 1 Puyallup Avenue	ET 2 E 25th Street	ET 3A E 26th Street to E 25th Street	ET 3B 26th Street East	ET 5 E 27th Street	ET 6 26th Street West
							
L2.40: Availability and potential to use publicly-owned right-of-way and publicly-owned property	Amount of publicly-owned ROW and publicly-owned property (individual parcels in public ownership) available per conceptual design of alignment	Lower potential to use publicly-owned right-of-way, moderate potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 31.2% Parcels: 2	Moderate potential to use publicly-owned right-of-way, moderate potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 46.7% Parcels: 2	3 Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 55.5% Parcels: 1	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 47.8% Parcels: 1	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 92.3% Parcels: 1	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 58.2% Parcels: 0
L2.41: Capability to accommodate future expansion included in the Sound Transit Long Range Plan	Capability of station location and alignment to accommodate future expansion included in the ST Long Range Plan	N/A	N/A	N/A	N/A	N/A	N/A
L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks and pocket track at Tacoma Dome, number of at-grade crossings, if any)	Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome and South Federal Way, number of at grade crossings, if any)	This alignment meanders, but maintains speeds 45 mph and above. Horizontal curve speeds: 45, 50	This alignment meanders, but maintains speeds 45 mph and above. Horizontal curve speeds: 45, 50	This alignment meanders, but maintains 55 mph speeds through horizontal curvature. Horizontal curve speed: 55	This alignment meanders, but maintains 55 mph speeds through horizontal curvature. Horizontal curve speed: 55	This alignment is mostly tangent and maintains 55 mph speeds through horizontal curvature. Horizontal curve speed: 55	This alignment meanders, but maintains 55 mph speeds through horizontal curvature. Horizontal curve speed: 55
L2.43: Overall schedule risk	Consideration of potential risks to schedule (i.e. potential to increase schedule)	No major schedule risks	No major schedule risks	No major schedule risks	No major schedule risks	No major schedule risks	No major schedule risks

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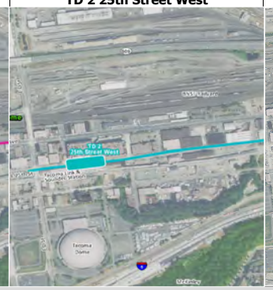
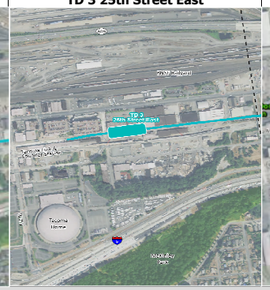
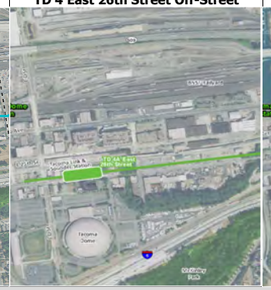
Tacoma Dome Preliminary Draft Level 2 Evaluation Results

Tacoma Dome Station Area

Measure	Methodology	TD 1 Puyallup Ave	TD 2 25th Street West	TD 3 25th Street East	TD 4 East 26th Street Off-Street	TD 4 East 26th Street In-Street	TD 4 West E 26th Street to E 27th Street (E 26th St to E 27th St)	TD 4 West E 26th Street to E 27th Street (E 27th St)
								
Objective: Provide Effective Transportation Solutions to meet Mobility, Access, and Capacity Needs								
L2.1: Travel time	Estimated based on alignment length, percent of alignment with horizontal speeds below 55 MPH	Moderate percentage of alignment below 55 mph (14.4%); middle alignment length; 0.08 miles longer than the shortest Tacoma Dome alternative	Low percentage of alignment below 55 mph (0.0%); shorter alignment length (0.59 miles)	Low percentage of alignment below 55 mph (0.0%); shorter alignment length (0.59 miles)	Low percentage of alignment below 55 mph (0.0%); middle alignment length; 0.03 miles longer than the shortest Tacoma Dome alternative	Low percentage of alignment below 55 mph (0.0%); middle alignment length; 0.03 miles longer than the shortest Tacoma Dome alternative	High percentage of alignment below 55 mph (63.2%); longer alignment length; 0.19 miles longer than the shortest Tacoma Dome alternative	High percentage of alignment below 55 mph (31.6%); middle alignment length; 0.06 miles longer than the shortest Tacoma Dome alternative
L2.2: Daily and annual projected project ridership (2042)	Average daily projected riders (baseline estimate provided for Tacoma Dome station area, with qualitative differences noted for station/alignment alternatives) **Tacoma Dome: 10,530 Daily NB; 10,530 Daily SB**	Higher ridership potential due to proximity to existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and potential for transit-oriented development growth.	Higher ridership potential due to proximity to existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and potential for transit-oriented development growth.	Higher ridership potential due to proximity to existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and potential for transit-oriented development growth.	Moderate ridership potential due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers.	Moderate ridership potential due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers.	Moderate ridership potential due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers.	Moderate ridership potential due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers.
L2.3: Projected station boardings (2042)	Projected station boardings (baseline estimate provided for Tacoma Dome station area, with qualitative differences noted for station/alignment alternatives) **Tacoma Dome: 10,370 daily NB boardings; 0 daily SB boardings**	Higher level of projected station boardings due to proximity to existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and potential for transit-oriented development growth.	Higher level of projected station boardings due to proximity to existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and potential for transit-oriented development growth.	Higher level of projected station boardings due to proximity to existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and potential for transit-oriented development growth.	Moderate level of projected station boardings due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers	Moderate level of projected station boardings due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers	Moderate level of projected station boardings due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers	Moderate level of projected station boardings due to distance from existing commercial and residential uses, existing rail transfer opportunities, existing park-and-ride facilities, and presence of topographical barriers
L2.4: Proximity to Puget Sound Regional Council growth centers and manufacturing/industrial Centers	% Puget Sound Regional Council Growth Center and/or manufacturing/industrial center within 10-minute walkshed	98.5% Station located within Tacoma Dome and near Port of Tacoma. Highest potential to support growth centers. Center for economic development. Some industrial activities. 82.3% of 10-minute walkshed in Puget Sound	98.4% Station located within Tacoma Dome and near Port of Tacoma. Highest potential to support growth centers. Center for economic development. Some industrial activities. 87.1% of 10-minute walkshed in Puget Sound	99.5% Station located within Tacoma Dome and near Port of Tacoma. Highest potential to support growth centers. Center for economic development. Some industrial activities. 80.5% of 10-minute walkshed in Puget Sound	93.4% Station located within Tacoma Dome and near Port of Tacoma. Medium potential to support growth centers. Center for economic development. Less industrial activities. 85.2% of 10-minute walkshed in Puget Sound	93.4% Station located within Tacoma Dome and near Port of Tacoma. Medium potential to support growth centers. Center for economic development. Less industrial activities. 85.2% of 10-minute walkshed in Puget Sound	85.3% Station located within Tacoma Dome and near Port of Tacoma. Lowest potential to support growth centers. Some opportunities for economic development. Fewer industrial activities. 76.0% of 10-minute walkshed is in	85.3% Station located within Tacoma Dome and near Port of Tacoma. Lowest potential to support growth centers. Some opportunities for economic development. Fewer industrial activities. 76.0% of 10-minute walkshed in
L2.5: Population (persons/acre) and job (jobs/acre) densities	Existing and future (2040) pop and employment densities within 10-minute walkshed	Population densities: existing 10/future 35 Employment densities: existing 46/future 66 Lower population density, high population growth. moderate job density, moderate job growth.	Population densities: existing 11/future 35 Employment densities: existing 54/future 78 Lower population density, high population growth. Higher job density, higher job growth.	Population densities: existing 11/future 27 Employment densities: existing 64/future 91 Low population density, high population growth. Highest job density, highest job growth.	Population densities: existing 15/future 41 Employment densities: existing 52/future 75 Higher population density, higher population growth. Moderate job density, high job growth.	Population densities: existing 15/future 41 Employment densities: existing 52/future 75 Higher population density, higher population growth. Moderate job density, high job growth.	Population densities: existing 20/future 46 Employment densities: existing 43/future 63 High population density, high population growth. Lower job density, low job growth.	Population densities: existing 20/future 46 Employment densities: existing 43/future 63 High population density, high population growth. Lower job density, low job growth.
Objective: Support Sustainable Land Use Plans, Transit-Oriented Development, and Multimodal Station Access								
L2.6: Consistency with civic and community planning and land use, evaluating elements such as: local and tribal development goals, current and planned development, current and anticipated zoning, and/or comprehensive plans	Assessment of the civic and land use documents that are relevant and up to date in each station area. Evaluate each station location against the relevant documents/civic plans rating each plan as "consistent with TOD around alternative location"(+), "neutral", or "inconsistent with TOD around alternative location"(-)	Station is located in the Downtown Mixed Use zone, which is most compatible with the City's transit connectivity goals because it is closest to the transit hub. This station is also close to several new/planned transit-oriented developments. This station (as well as TD 2) also has the most intuitive and easy access under I-705 toward downtown and other residential neighborhoods where transit-oriented development could occur.	Station is located in the Downtown Mixed Use zone, which is most compatible with the City's transit connectivity goals because it is closest to the transit hub. This station is also close to several new/planned transit-oriented developments. This station (as well as TD 1) also has the most intuitive and easy access under I-705 toward downtown and other residential neighborhoods where transit-oriented development could occur.	This station is located in a light industrial zone that does not allow residential and is adjacent to a heavy industrial zone, which is not compatible with transit-oriented development. The area to the west of the station is a Downtown Mixed Use zone, but may be difficult to develop in the 1-2 blocks immediately adjacent because of the existing infrastructure that limits the supply of developable land.	This station is very close to the Tacoma Dome. While the station is located in the Downtown Mixed Use zone, there are important civic amenities (and associated parking) that are unlikely to be redeveloped into mixed use TOD. This station is also adjacent to a tribal trust property for which the tribe has economic development plans, which further limits the compatibility of this station.	This station is very close to the Tacoma Dome. While the station is located in the Downtown Mixed Use zone, there are important civic amenities (and associated parking) that are unlikely to be redeveloped into mixed use TOD. This station is also adjacent to a tribal trust property for which the tribe has economic development plans, which further limits the compatibility of this station.	This station is very close to the Tacoma Dome. While the station is located in the Downtown Mixed Use zone, there are important civic amenities (and associated parking) that are unlikely to be redeveloped into mixed use TOD.	This station is very close to the Tacoma Dome. While the station is located in the Downtown Mixed Use zone, there are important civic amenities (and associated parking) that are unlikely to be redeveloped into mixed use TOD.
L2.7: Likelihood of station area redevelopment into transit-oriented neighborhood	Assessment of degree to which the station area has land available to support development into a transit-oriented neighborhood, as measured by the amount of land within a ¼ mile walking distance of station that has a relatively greater likelihood to redevelop into transit-supportive uses	This alternative has a greater amount of land with a greater likelihood to redevelop within the 1/4 mile walking distance. This alternative also has a greater amount of total land within the 1/4 mile walking distance. (3,566,000 SF total land; 2,908,000 SF of land with a greater likelihood to redevelop; 580,000 SF of land with lower likelihood to redevelop; 78,000 SF tribal land)	This alternative has a greater amount of land with a greater likelihood to redevelop within the 1/4 mile walking distance. This alternative also has a greater amount of total land within the 1/4 mile walking distance. (3,673,000 SF total land; 2,893,000 SF of land with a greater likelihood to redevelop; 702,000 SF of land with lower likelihood to redevelop; 78,000 SF tribal land)	This alternative has the least amount of land with a greater likelihood to redevelop within the 1/4 mile walking distance but has a large amount of total land within the 1/4 mile walking distance. (3,615,000 SF total land; 2,181,000 SF of land with a greater likelihood to redevelop; 1,360,000 SF of land with lower likelihood to redevelop; 74,000 SF tribal land)	This alternative has a greater amount of land with a greater likelihood to redevelop within the 1/4 mile walking distance compared to other alternatives, but has less total land. (3,359,000 SF total land; 2,968,000 SF of land with a greater likelihood to redevelop; 313,000 SF of land with lower likelihood to redevelop; 78,000 SF tribal land)	This alternative has a greater amount of land with a greater likelihood to redevelop within the 1/4 mile walking distance compared to other alternatives, but has less total land. (3,359,000 SF total land; 2,968,000 SF of land with a greater likelihood to redevelop; 313,000 SF of land with lower likelihood to redevelop; 78,000 SF tribal land)	This alternative has slightly less land with a greater likelihood to redevelop within the 1/4 mile walking distance compared to other alternatives. This alternative also has less total land within the walkshed. (2,926,000 SF total land; 2,761,000 SF of land with a greater likelihood to redevelop; 87,000 SF of land with lower likelihood to redevelop; 78,000 SF tribal land)	This alternative has slightly less land with a greater likelihood to redevelop within the 1/4 mile walking distance compared to other alternatives. This alternative also has less total land within the walkshed. (2,926,000 SF total land; 2,761,000 SF of land with a greater likelihood to redevelop; 87,000 SF of land with lower likelihood to redevelop; 78,000 SF tribal land)
L2.8: Detailed evaluation of nonmotorized barriers within ½ mile of the station	Assessment of barriers within half-mile of TDLE station areas (barriers list: (1) Topography (hills) that limit the walkshed, (2) Wide roads, (3) Highways, (4) Bodies of water, (5) Railways)	TD 1 has fewer barriers due to a flatter grade nearby and easy connections to the transit hub via the multi-level station, which minimizes pedestrian/vehicle conflicts. This station has the best visual connection to the water and to downtown for wayfinding; although the railroad to the north is a barrier, there is a good pedestrian connection on the bridge that spans it. Connections to the west where there is more transit-oriented development potential are good at this station.	TD 2 has fewer barriers due to a flatter grade nearby and easy connections to the transit hub via the multi-level station, which minimizes pedestrian/vehicle conflicts. This station has good visual connection to the water and to downtown for wayfinding; although the railroad to the north is a barrier, there is a good pedestrian connection on the bridge that spans it. Connections to the west where there is more transit-oriented development potential are good at this station.	TD 3 is downhill from, and an approximately 2-3 minute walk from, the transit hub. The grade to the station development area to the west is potentially a barrier. The BNSF railyard and I-5 create barriers to the north and south of the station. The grade change immediately south of the Sounder trestle is also a barrier.	There is a grade change from the station to the transit hub. Access to the transit hub is also less intuitive because the Sounder tracks are a barrier to access. There are grade challenges and fewer visual connections between downtown to the west and the station. The civic amenities at the Tacoma Dome, the Sounder Tracks, and I-5 limit the points of connectivity to the rest of the Tacoma Dome neighborhood and to areas to the south. BNSF lines to the north further limit connectivity.	There is a grade change from the station to the transit hub. Access to the transit hub is also less intuitive because the Sounder tracks are a barrier to access. There are grade challenges and fewer visual connections between downtown to the west and the station. The civic amenities at the Tacoma Dome, the Sounder Tracks, and I-5 limit the points of connectivity to the rest of the Tacoma Dome neighborhood and to areas to the south. BNSF lines to the north further limit connectivity.	There is a grade change from the station to the transit hub. Access to the transit hub is also less intuitive because the Sounder tracks are a barrier to access. There are grade challenges and fewer visual connections between downtown to the west and the station. The civic amenities at the Tacoma Dome, the Sounder Tracks, and I-5 limit the points of connectivity to the rest of the Tacoma Dome neighborhood and to areas to the south. BNSF lines to the north further limit connectivity.	There is a grade change from the station to the transit hub. Access to the transit hub is also less intuitive because the Sounder tracks are a barrier to access. There are grade challenges and fewer visual connections between downtown to the west and the station. The civic amenities at the Tacoma Dome, the Sounder Tracks, and I-5 limit the points of connectivity to the rest of the Tacoma Dome neighborhood and to areas to the south. BNSF lines to the north further limit connectivity.
L2.9: Presence of amenities that can catalyze development of transit-oriented neighborhoods	Assessment of amenities that can catalyze complete transit-oriented neighborhoods in station area.	The station is near the largest cluster of businesses on Puyallup Avenue and the transit amenities in Freighthouse Square. This alternative would impact a restaurant but does not impact many other transit-oriented development anchor-businesses.	The station is near the largest cluster of businesses on Puyallup Avenue and the transit amenities in Freighthouse Square. This alternative would likely preserve Freighthouse Square, including many food retailers and convenience/service retailers.	There are minimal amenities near the station. All of the amenities are located to the west of the station. The adjacent zoning and existing uses to the north, south, and east further limit the development likelihood of new amenities.	There are minimal amenities near the station. This alternative would impact a restaurant, which is one of the few existing amenities nearby. There is some potential for future amenities to develop due to nearby planned developments.	There are minimal amenities near the station. This alternative would impact a restaurant, which is one of the few existing amenities nearby. There is some potential for future amenities to develop due to nearby planned developments.	There are minimal amenities near the station. This alternative would impact a retail bookstore, which is one of the few existing amenities nearby. There is some potential for future amenities to develop due to nearby planned developments.	There are minimal amenities near the station. This alternative would impact a retail bookstore, which is one of the few existing amenities nearby. There is some potential for future amenities to develop due to nearby planned developments.

Lower Performing
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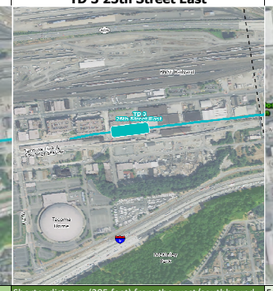
Tacoma Dome Preliminary Draft Level 2 Evaluation Results

Tacoma Dome Station Area

Measure	Methodology	TD 1 Puyallup Ave	TD 2 25th Street West	TD 3 25th Street East	TD 4 East 26th Street Off-Street	TD 4 East 26th Street In-Street	TD 4 West E 26th Street to E 27th Street (E 26th St to E 27th St)	TD 4 West E 26th Street to E 27th Street (E 27th St)
								
L2.10: Proximity to existing transit service and level of transit service diversion required	Distance to nearest existing bus stop with at least 30-minute headways; measure of the level of diversion that could be required.	Shortest distance (280 feet) from the west/southbound bus stop at Puyallup Avenue and East D Street Least amount of transit diversion	Moderate distance (390 feet) from the west/southbound bus stop at Tacoma Dome Station - Zone H Moderate amount of transit diversion	Shorter distance (285 feet) from the west/southbound bus stop at Tacoma Dome Station - Zone H Lower amount of transit diversion	Furthest distance (410 feet) from the west/southbound bus stop at 26th Street East and East D Street Greatest amount of transit diversion	Furthest distance (430 feet) from the west/southbound bus stop at 26th Street East and East D Street Greatest amount of transit diversion	Moderate distance (370 feet) from the west/southbound bus stop at 26th Street East and East D Street Moderate amount of transit diversion	Moderate distance (370 feet) from the west/southbound bus stop at 26th Street East and East D Street Moderate amount of transit diversion
	Distance to nearest rail platform based on proposed station concepts (TACOMA DOME)	Shorter distance (430 feet) from the Tacoma Link platform (measured from the center of the station polygon; no direct connection to the Tacoma Link platform)	Shorter distance (445 feet) from the Tacoma Link platform (measured from the center of the station polygon; no direct connection to the Tacoma Link platform)	Further distance (1,080 feet) from the Tacoma Link platform (measured from the center of the station polygon; no direct connection to the Tacoma Link platform)	Moderate distance (795 feet) from the Tacoma Link platform (measured from the center of the station polygon - assumed use of the pedestrian bridge shown in the schematic design with a direct connection to the Sounder platform); no direct connection to the Tacoma Link platform	Further distance (970 feet) from the Tacoma Link platform (measured from the center of the station polygon - assumed use of the pedestrian bridge shown in the schematic design with a direct connection to the Sounder Platform); no direct connection to the Tacoma Link platform	Further distance (970 feet) from the Tacoma Link platform (measured from the center of the station polygon; no direct connection to the Tacoma Link platform)	Further distance (970 feet) from the Tacoma Link platform (measured from the center of the station polygon; no direct connection to the Tacoma Link platform)
L2.11: Ease of vehicular pickup/drop-off for a variety of users	Assessment of ease of access to pick-up/drop-off at stations due to nearby street network and congestion using proposed station concepts.	•Two ingress/egress points from off-street lot to Puyallup Avenue •Left-turn access to and from Puyallup Avenue is currently permitted; if left turns were restricted or difficult due to volumes, drivers could circulate around the station to make a left turn at the signalized intersection	•Two ingress/egress points from off-street lot to Puyallup Avenue •Left-turn access to and from Puyallup Avenue is currently permitted; if left turns were restricted or difficult due to volumes, drivers could circulate around the station to make a left turn at the signalized intersection	•No pickup/drop-off area designated •Informal pickup/drop-off areas available on all two-way streets surrounding the station area	•Access would be challenging for eastbound drivers on East 26th Street •Left turns are likely to be less complicated on East D Street, East 26th Street, and East E Street than those onto Puyallup Avenue •Left turn access to Puyallup available at East D Street and East G Street (both signalized)	•Access would be challenging for eastbound drivers on East 26th Street •Left turns are likely to be less complicated on East D Street, East 26th Street, and East E Street than those onto Puyallup Avenue •Left turn access to Puyallup available at East D Street and East G Street (both signalized)	•Pickup/drop-off area farthest from primary east-west arterial (Puyallup Avenue) •Left turns are likely to be less complicated on East D Street, East 26th Street, East E Street, and East 27th Street than those onto Puyallup Avenue •Left-turn access to Puyallup available at East D Street and East G Street(both signalized)	•Pickup/drop-off area farthest from primary east-west arterial (Puyallup Avenue) •Left turns are likely to be less complicated on East D Street, East 26th Street, East E Street, and East 27th Street than those onto Puyallup Avenue •Left-turn access to Puyallup available at East D Street and East G Street(both signalized)
L2.12: Connections with local and regional bicycle facilities (existing and planned) and access to stations	Ratio of existing and funded bicycle facility miles (greenway, lanes, protected lanes, trails) to total roadway miles within a 10-minute bikeshed	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.14 Funded: 0.17	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.14 Funded: 0.17	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.12 Funded: 0.17	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.13 Funded: 0.16	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.13 Funded: 0.16	Low ratio of existing and funded bike facility miles to roadway miles. Existing: 0.13 Funded: 0.16	Low ratio of existing and funded bike facility miles to roadway miles Existing: 0.13 Funded: 0.16
L2.13: Connections with local pedestrian facilities (existing and planned) and pedestrian access to stations	Ratio of existing and funded pedestrian facility miles (trails, sidewalks) to total roadway miles within a 10-minute walkshed of stations	High ratio of existing and funded pedestrian facility miles to roadway miles, moderate topographical challenges. Existing: 0.83 Funded: 0.85	High ratio of existing and funded pedestrian facilities to roadway miles, moderate topographical challenges. Existing: 0.79 Funded: 0.80	Moderate ratio of existing and funded pedestrian facility miles to roadway miles, low topographical challenges. Existing: 0.71 Funded: 0.71	High ratio of existing and funded pedestrian facilities to roadway miles, significant topographical challenges. Existing: 0.78 Funded: 0.80	High ratio of existing and funded pedestrian facilities to roadway miles, significant topographical challenges. Existing: 0.78 Funded: 0.80	High ratio of existing and funded pedestrian facility miles to roadway miles, significant topographical challenges. Existing: 0.82 Funded: 0.84	High ratio of existing and funded pedestrian facility miles to roadway miles, significant topographical challenges. Existing: 0.82 Funded: 0.84
	Objective: Preserve the Environment							
L2.14: Potential effects to wetlands	Extent and quality of wetlands within 100-foot buffer of each alternative	No wetlands present	No wetlands present	No wetlands present	No wetlands present	No wetlands present	No wetlands present	Unlikely that wetlands are present
L2.15: Potential effects to streams/stream crossings	Number of impacts to streams and stream crossings within 100-foot buffer of each alternative	No stream crossings	No stream crossings	No stream crossings	No stream crossings	No stream crossings	No stream crossings	No stream crossings
L2.16: Potential to affect protected species and habitats	Number of impacts to habitats or areas where endangered, threatened, or sensitive species have a primary association (based on Priority Habitats and Species data from the Washington Department of Fish and Wildlife within 100-foot buffer of each alternative)	No protected species or habitat	No protected species or habitat	No protected species or habitat	No protected species or habitat	No protected species or habitat	No protected species or habitat	No protected species or habitat
L2.17: Potential effects to vegetated areas	Estimated area of vegetation removal	Largely unvegetated	Largely unvegetated	Largely unvegetated	Largely unvegetated	Largely unvegetated	Clears small area of upland forest	Alignment would clear upland forest
L2.18: Potential effects to floodplains	Number of impacts to or floodplains/floodways (additive) within 100-foot buffer	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.	No mapped floodplains/floodways present.
L2.19: Presence of geologic hazard areas (steep slopes, erosion or landslide hazard areas)	Number of geologic hazard areas (steep slope, erosion, landslide hazard areas)	Lahar hazard zone along majority of extent High liquefaction susceptibility along majority of extent	Lahar hazard zone along majority of extent High liquefaction susceptibility along majority of extent	Lahar hazard zone along majority of extent High liquefaction susceptibility along majority of extent	Lahar hazard zone along 1/2 of extent High liquefaction susceptibility along 1/2 of extent	Lahar hazard zone along 1/2 of extent High liquefaction susceptibility along 1/2 of extent	Lahar hazard zone along 1/2 of extent High liquefaction susceptibility along 1/2 of extent	Steep slope east of Tacoma Dome High liquefaction susceptibility along 1/2 of extent
L2.20: Estimated number of affected parcels and total acreage by property type	Assessment of potential property impacts and general estimate of acreage of land converted from other land uses to a transportation use	Total potential parcels: 20-25 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 10-15 Potential to impact new development that is under construction	Total potential parcels: 20-25 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 10-15	Total potential parcels: 10-15 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 10-15	Total potential parcels: 25-30 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 5-10	Total potential parcels: 10-15 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 5-10	Total potential parcels: 30-35 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 35-40	Total potential parcels: 20-25 Total Potential Acre Impact: 0-5 Total Acres of Potential Parcels Impacted: 30-35
L2.21: Estimated number of affected parcels with major economic activity generators	Assessment of potential property impacts that have a major economic activity generator (such as Costco, Home Depot, Port of Tacoma property, strip malls)	Approximately 15-20 businesses displaced, including up to 1 auto dealer or major auto service provider and 4 industrial businesses.	Approximately 10-15 businesses displaced, including up to 5 industrial businesses.	Approximately 5-10 businesses displaced, including up to 3 industrial businesses.	Approximately 10-15 businesses displaced, including up to 7 industrial businesses.	Approximately 5-10 businesses displaced, including up to 5 industrial businesses.	Approximately 10-15 businesses displaced, including up to 1 commercial retail center, 1 medical office, and 6 industrial businesses.	Approximately 5-10 businesses displaced, including up to 1 hotel, 1 commercial retail center, and 1 medical office.
L2.22: Estimated number of displacements by property type; impacts to important community facilities (such as churches, hospitals, and community centers) will also be factored into this rating	Number of potential property impacts from alignment and station by property type; range may vary by segment due to length of alignment	Residential Displacements: 0 Commercial Displacements: 15-20 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0 Commercial Displacements: 10-15 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0 Commercial Displacements: 5-10 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0-5 Commercial Displacements: 10-15 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0-5 Commercial Displacements: 5-10 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0-5 Commercial Displacements: 10-15 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0	Residential Displacements: 0 Commercial Displacements: 5-10 Hospitals = 0 Libraries = 0 Police + Fire = 0 Community Centers = 0 Schools = 0
L2.23: Estimated number of tribal parcels potentially affected	Number tribal-owned parcels affected by each alternative	No tribal properties affected	No tribal properties affected	No tribal properties affected	Potential effects on four tribal properties	No tribal properties affected	Potential effects on one tribal property	Potential effects on two tribal properties

Lower Performing

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Tacoma Dome Station Area

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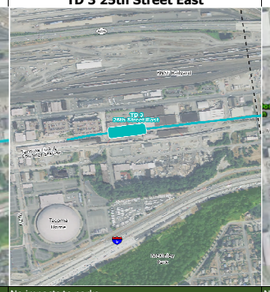
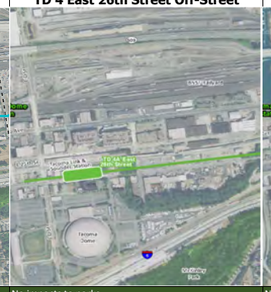
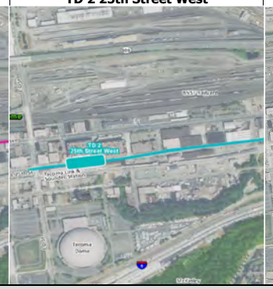
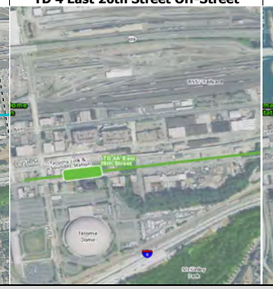
								
L2.24: Potential effects on Section 4(f) parks and recreational resources	Number of impacts and estimated area of potential permanent impacts to parks and recreational resources within 100-foot buffer of each alternative	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks	No impacts to parks
L2.25: Potential effects on Section 4(f) historic resources and properties that are listed in or eligible for the National Register of Historic Places	Number of impacts to Section 4(f) resources and properties listed in or eligible for the National Register of Historic Places within 100-foot buffer of each alternative	Potential to impact seven historic-period resources with undetermined significance. Based on the resource types and ages, potential for significance is moderate to high.	Potential to affect five historic-period resources: including one of local significance but not meeting standards for national significance, and four resources with undetermined significance. Based on the resource types and ages, potential for eligibility is moderate.	Potential to affect one historic resource of local significance but not meeting standards for national significance.	Potential to impact two historic-period resources with undetermined significance. Based on the resource types and ages, potential for significance is low.	Potential to impact two historic-period resources with undetermined significance. Based on the resource types and ages, potential for significance is low.	Potential to impact five historic-period resources, including one determined nationally significant, and four buildings with undetermined significance.	Potential to impact two historic-period resources with undetermined significance. Based on the resource types and ages, potential for eligibility is low.
L2.26: Potential effects on Section 4(f) cultural and archaeological resources	Number of potential impacts and probability to encounter Section 4(f) cultural and/or archaeological resources within 100-foot buffer of each alternative	No recorded cultural and archaeological resources, but moderate to high probability to encounter unrecorded historic archaeological resources.	One recorded cultural and archaeological resource, and moderate to high probability to encounter unrecorded historic archaeological resources.	No recorded cultural and archaeological resources, but moderate to high probability to encounter unrecorded historic archaeological resources.	Two recorded cultural and archaeological resources, and moderate to high probability to encounter unrecorded historic archaeological resources.	No recorded cultural and archaeological resources, but moderate to high probability to encounter unrecorded historic archaeological resources.	Two recorded cultural and archaeological resources, and moderate to high probability to encounter unrecorded historic archaeological resources.	No recorded cultural and archaeological resources, but moderate to high probability to encounter unrecorded historic archaeological resources.
L2.27: Potential effects to view sheds along the alignment and potential for impacts to view-dependent businesses	Assessment of impacts to protected views and view-dependent businesses	No effects to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.	No effects to protected views or to parcels with view-dependent businesses.
L2.28: Potential effects on sensitive noise and vibration receptors	Number of potentially affected sensitive receptors within 350-foot buffer of each alternative; sensitive receptors include residences and "others" (schools, churches, parks, hotels, hospitals, libraries, cemeteries, etc.)	One school within 350-foot buffer (Summit Public School)	Two single-family residences within 350-foot buffer	Two single-family residences within 350-foot buffer	Four single-family residences and one hotel within 350-foot buffer	Four single-family residences and one hotel within 350-foot buffer	Four single-family residences and one hotel within 350-foot buffer	Four single-family residences within 350-foot buffer (assuming hotel is a full property take)
L2.29: Potential effects on existing and planned traffic (general purpose and freight traffic) on local network	Assessment of intersection level of service, and effects on traffic circulation and access for both automobiles and freight, including potential number of lane restrictions, turn restrictions, and driveways impacted	Minimal added delay (up to 5 additional seconds) at one study intersection (E D Street/E 26th Street) compared to without the project.	More delay (up to 70 additional seconds) at study intersections (E D Street/E 26th Street) compared to without the project and TD 1 and TD 4 alternatives.	More delay (up to 50 total additional seconds) at study intersections (E D Street/E 26th Street, E G Street/E 25th Street) compared to without the project and TD 1 and TD 4 alternatives.	Some added delay (up to 25 additional seconds) at intersections (E D Street/E 26th Street) compared to without the project. Traffic impacts more than TD 1 but less than TD 2 and TD 3 alternatives.	Some added delay (up to 25 additional seconds) at intersections (E D Street/E 26th Street) compared to without the project. Traffic impacts more than TD 1 but less than TD 2 and TD 3 alternatives.	Some added delay (up to 20 additional seconds) at intersections (E D Street/E 26th Street) compared to without the project. Traffic impacts more than TD 1 but less than TD 2 and TD 3 alternatives.	Some added delay (up to 20 additional seconds) at intersections (E D Street/E 26th Street) compared to without the project. Traffic impacts more than TD 1 but less than TD 2 and TD 3 alternatives.
L2.30: Potential effects on freight movement	Assessment of impacts to level of service on freight corridors	Minor freight impacts compared to alternatives TD 2, TD 3, and TD 4 due to minimal additional congestion at one study intersection.	More freight impacts compared to alternatives TD 1 and TD 4 due to additional congestion at the study intersections.	More freight impacts compared to alternatives TD 1 and TD 4 due to additional congestion at the study intersections.	Some added delay at intersections compared to without the project alternative.	Some added delay at intersections compared to without the project alternative.	Some added delay at intersections compared to without the project alternative.	Some added delay at intersections compared to without the project alternative.
L2.31: Potential avoidance of hazardous waste	Number of hazardous materials sites within 1/8 mile of each alternative	11 total hazardous materials sites	Nine total hazardous materials sites	Eight total hazardous materials sites	Five total hazardous materials sites	Five total hazardous materials sites	11 total hazardous materials sites	Three total hazardous materials sites
L2.32: Potential effects on parking demand and supply and spillover parking effects	Assessment of impacts on parking supply (review of impacts to parcels with parking)	Count of parcels with parking that are potentially impacted: 6 Count of parcels with more than 50% of parking potentially impacted: 1 Parking Acreage Potentially Impacted: 0.67	Count of parcels with parking that are potentially impacted: 3 Count of parcels with more than 50% of parking potentially impacted: 1 Parking Acreage Potentially Impacted: 0.13	Count of parcels with parking that are potentially impacted: 2 Count of parcels with more than 50% of parking potentially impacted: 0 Parking Acreage Potentially Impacted: 0.02	Count of parcels with parking that are potentially impacted: 7 Count of parcels with more than 50% of parking potentially impacted: 2 Parking Acreage Potentially Impacted: 0.68	Count of parcels with parking that are potentially impacted: 6 Count of parcels with more than 50% of parking potentially impacted: 3 Parking Acreage Potentially Impacted: 0.94	Count of parcels with parking that are potentially impacted: 6 Count of parcels with more than 50% of parking potentially impacted: 4 Parking Acreage Potentially Impacted: 1.21	Count of parcels with parking that are potentially impacted: 4 Count of parcels with more than 50% of parking potentially impacted: 3 Parking Acreage Potentially Impacted: 1.60
	Objective: Support Equitable Mobility							
L2.33: Potential benefits to low-income or minority populations	Assessment of how well station serves low-income/minority and traditionally underserved or transit-dependent populations (e.g., population with no car, population younger than 18 and older than 65) compared to baseline; the baseline is the percentage of minority or low-income population and transit-dependent populations in each city that the station area serves	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 43.5% minority and 48.0% low-income population; therefore, the station would serve more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 39.4% minority and 43.2% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 36.2% minority and 38.7% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 39.1% minority and 43.3% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 39.1% minority and 43.3% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 39.1% minority and 43.3% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Tacoma as a whole.	Tacoma is composed of 27.3% minority and 36.0% low-income populations. This station area has a 41.0% minority and 45.9% low-income population; therefore, the station would serve slightly more minority low-income populations compared to Tacoma as a whole.
L2.34: Potential for impacts on low-income and/or minority populations	Potential for displacement to affect Environmental Justice populations (minority and low-income)	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 15-20 business displacements. Therefore it is possible there could be limited potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the highest numbers of displacements in the Tacoma Dome segment, this would be the lowest performing of the alternatives.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 10-15 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the highest number of displacements in the Tacoma Dome segment, this would be the lowest performing of the alternatives.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 5-10 business displacements. Therefore it is possible there could be some potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the lowest number of displacements in the Tacoma Dome segment, this would be the highest performing of the alternatives.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are 0-5 residential displacements anticipated and approximately 10-15 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are 0-5 residential displacements anticipated and approximately 5-10 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are 0-5 residential displacements anticipated and approximately 10-15 business displacements. Therefore it is possible there could be moderate potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the highest number of displacements in the Tacoma Dome segment, this would be the lowest performing of the alternatives.	This alternative has higher percentages of minority and low-income populations compared to Tacoma. There are no residential displacements anticipated and approximately 5-10 business displacements. Therefore it is possible there could be some potential impacts to environmental justice populations. Since environmental justice populations are similar across all alternatives and this alternative would have one of the lowest numbers of displacements in the Tacoma Dome segment, this would be the highest performing of the alternatives.

Lower Performing
Higher Performing

Tacoma Dome Preliminary Draft Level 2 Evaluation Results

Tacoma Dome Station Area





Measure	Methodology	TD 1 Puyallup Ave	TD 2 25th Street West	TD 3 25th Street East	TD 4 East 26th Street Off-Street	TD 4 East 26th Street In-Street	TD 4 West E 26th Street to E 27th Street (E 26th St to E 27th St)	TD 4 West E 26th Street to E 27th Street (E 27th St)
Objective: Provide a Financially Sustainable and Constructible Project								
L2.35: Preliminary conceptual estimate	Preliminary conceptual estimates based on conceptual design quantities and current Sound Transit unit pricing. *Preliminary conceptual estimates are not the project's budget. They are to be used for comparisons among alternatives.*	$300M (moderate estimate to build)	$400M (highest estimate to build)	$350M (higher estimate to build)	$250M (lower estimate to build)	$250M (lower estimate to build)	$350M (higher estimate to build)	$300M (moderate estimate to build)
L2.36: Operating estimate	Assessment of potential magnitude of O&M estimates based on travel time	One 30 mph curve (tail track) and middle length alignment length (0.67 miles) would result in moderate operating estimates.	Shorter alignment length (0.59 miles) and no curves below 55 mph would result in lower operating estimates.	Shorter alignment length (0.59 miles) and no curves below 55 mph would result in lower operating estimates.	No curves and middle length alignment (0.62 miles) would result in slightly lower operating estimates.	No curves and middle length alignment (0.62 miles) would result in slightly lower operating estimates.	One curve at 40 mph and slightly longer alignment (0.78 miles) would result in higher operating estimates.	One curve at 40 mph and middle length alignment (0.65 miles) would result in moderate operating estimates.
L2.37: Potential conflicts with major utilities and structures, such as existing or planned transportation infrastructure	Potential impacts on known major utilities or structures (e.g. power lines, transportation infrastructure)	Very few utilities running parallel, moderate crossing of utilities.	Water and sewer mains running parallel/beneath alignment on 25th Street, moderate crossing of utilities.	Water and sewer mains running parallel/beneath alignment on 25th Street, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	Very few utilities running parallel, moderate crossing of utilities.	No utilities running parallel, low crossing of utilities.
L2.38: Number of sites requiring environmental remediation within the project footprint of an alternative	Assessment of the number of sites requiring environmental remediation within the project footprint of an alternative	Six sites requiring remediation	Five sites requiring remediation	Seven sites requiring remediation	Zero sites requiring remediation	Zero sites requiring remediation	Two sites requiring remediation	Zero sites requiring remediation
L2.39: Unique construction challenges (potential for transportation, noise, vibration, and visual effects)	Assessment of temporary construction impacts to community, including potential for transportation, noise, vibration, and visual effects that could disrupt the community	This alternative impacts some structures, which could lead to additional considerations that could arise during construction.	Would require construction in narrow right-of-way near Freighthouse Square. Could have impacts to Tacoma Link operations during construction.	Tail tracks could have impacts to Tacoma Link operations during construction.	This alternative would require construction scheduling and coordination with events at the Tacoma Dome.	This alternative would require construction scheduling and coordination with events at the Tacoma Dome. Construction of the station spanning the street would require additional coordination for potential construction traffic impacts.	This alternative would require construction scheduling and coordination with events at the Tacoma Dome. Construction of the station spanning the street would require additional coordination for potential construction traffic impacts.	This alternative would require construction scheduling and coordination with events at the Tacoma Dome. Construction of the station spanning the street would require additional coordination for potential construction traffic impacts.
L2.40: Availability and potential to use publicly-owned right-of-way and publicly-owned property	Amount of publicly-owned ROW and publicly-owned property (individual parcels in public ownership) available per conceptual design of alignment	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 89.4% Parcels: 0	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 100.0% Parcels: 0	Higher potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 100.0% Parcels: 0	Lower potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 16.5% Parcels: 1	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 36.8% Parcels: 1	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 36.8% Parcels: 1	Moderate potential to use publicly-owned right-of-way, lower potential to use publicly-owned property (individual parcels in public ownership). Right-of-way: 46.4% Parcels: 0
L2.41: Capability to accommodate future expansion included in the Sound Transit Long Range Plan	Capability of station location and alignment to accommodate future expansion included in the ST Long Range Plan	This alternative on Puyallup Avenue offers a less direct connection with more property impacts for a potential extension of the light rail line to Tacoma Mall, compared to TD 4 West or TD 4 East. This alternative would also require crossing over the Sounder/Amtrak rail line.	This alternative on E 25th Street offers a less direct connection with more property impacts for a potential extension of the light rail line to Tacoma Mall, compared to TD 4 West and TD 4 East. This alternative would also require crossing over the Sounder/Amtrak rail line and an extension at this location would need to avoid Tacoma Link.	This alternative on E 25th Street offers a less direct connection with more property impacts for a potential extension of the light rail line to Tacoma Mall, compared to TD 4 West and TD 4 East. This alternative would also require crossing over the Sounder/Amtrak rail line and an extension at this location would need to avoid Tacoma Link.	This location on E 26th Street offers a more direct connection with less property impacts for a potential extension of the light rail line to Tacoma Mall. This alternative also creates no conflicts with Sounder/heavy rail.	This location on E 26th Street offers a more direct connection with less property impacts for a potential extension of the light rail line to Tacoma Mall. This alternative also creates no conflicts with Sounder/heavy rail.	This location on E 26th Street offers a more direct connection with less property impacts for a potential extension of the light rail line to Tacoma Mall. This alternative also creates no conflicts with Sounder/heavy rail.	This location on E 26th Street offers a more direct connection with less property impacts for a potential extension of the light rail line to Tacoma Mall. This alternative also creates no conflicts with Sounder/heavy rail.
L2.42: Assessment of operational elements (e.g., reliability based on track alignment, tail tracks and pocket track at Tacoma Dome, number of at grade crossings, if any)	Consideration of operational elements (e.g., potential reliability, track alignment, tail tracks and pocket track at Tacoma Dome and South Federal Way, number of at grade crossings, if any)	This alignment is mostly tangent with a small 30 mph curve at the end of the alignment. This would be less efficient for future extensions, but unlikely to affect operations of the Tacoma Dome Link Extension as vehicles will already be moving slowly at the end of the line. Horizontal curve speeds: mostly 55, small 30 at end	This alignment is mostly tangent with 55 mph speeds throughout. Horizontal curve speed: 55	This alignment is mostly tangent with 55 mph speeds throughout. Horizontal curve speed: 55	This alignment is mostly tangent with 55 mph speeds throughout. Horizontal curve speed: 55	This alignment is mostly tangent with 55 mph speeds throughout. Horizontal curve speed: 55	This alignment meanders, causing a slowdown at a 40 mph curve prior to the station platform. Horizontal curve speeds: 55, 55, 40	This alignment meanders, causing a slowdown at a 40 mph curve prior to the station platform. Horizontal curve speeds: 55, 40
L2.43: Overall schedule risk	Consideration of potential risks to schedule (i.e. potential to increase schedule)	Potential schedule risks due to archaeological impacts that could arise during construction	Potential schedule risks due to archaeological impacts that could arise during construction	Potential schedule risks due to archaeological impacts that could arise during construction	Potential schedule risks due to archaeological impacts that could arise during construction	Potential schedule risks due to archaeological impacts that could arise during construction	Potential schedule risks due to archaeological impacts that could arise during construction	Potential schedule risks due to archaeological impacts that could arise during construction

Tacoma Dome Link Extension - Preliminary Draft Level 2 Evaluation Potential Property Impacts Summary

		Alternative																								
		South Federal Way								Fife					East Tacoma						Tacoma Dome					
Property Impacts		**SF 2 West**	**SF 2 East**	**SF 3**	**SF 4A**	**SF 4B**	**SF 4C**	**SF 4D**	**SF 8 & SF 9**	**Fife 1**	**Fife 3A**	**Fife 3B**	**Fife 4A**	**Fife 4B**	**ET 1**	**ET 2**	**ET 3A**	**ET 3B**	**ET 5**	**ET 6**	**TD 1**	**TD 2**	**TD 3**	**TD 4A East**	**TD 4B East**	**TD 4A West**	**TD 4B West**
Total Acreage of Affected Parcels	Commercial	101.81	97.07	96.56	128.20	111.47	48.54	63.62	62.89	81.28	92.17	77.20	82.54	68.48	12.01	10.02	4.07	3.86	6.13	2.59	9.40	10.65	8.90	1.49		3.28	2.09
	Industrial	4.39	1.88	8.72	28.87	39.48	38.14	30.15	4.49	18.85	16.49	15.32	17.73	16.56	0.34	2.30	0.45	1.32	1.84	0.87	1.28	1.89	1.93	4.90		6.33	
	Other	52.10	55.84	60.52	49.53	143.56	172.81	78.78	47.75	19.59	24.40	24.32	24.08	25.01	3.37	3.81	8.31	4.69	2.80	8.32	0.94	0.37		2.86		26.86	29.15
	Residential	82.12	79.57	80.63	98.06	110.01	109.39	97.44	79.57	13.96	21.44	15.04	21.29	16.84				0.15		0.15				0.30		0.30	
	Total	**240.42**	**234.36**	**246.44**	**304.66**	**404.52**	**368.89**	**270.00**	**194.71**	**133.68**	**154.50**	**131.87**	**145.64**	**126.89**	**15.72**	**16.14**	**12.83**	**10.02**	**10.77**	**11.92**	**11.62**	**12.90**	**10.83**	**9.55**		**36.77**	**31.24**
Acreage of Affected Portion of Parcels	Commercial	7.58	8.35	7.75	12.76	11.83	8.22	9.15	9.95	11.43	8.54	9.83	10.35	9.25	5.44	4.59	2.06	2.18	0.60	2.59	1.92	1.23	0.18	0.61		1.76	1.19
	Industrial	4.37	0.19	0.30	4.39	5.60	6.65	9.15	1.92	6.04	1.57	1.18	2.38	1.99	0.23	0.40	0.45	0.85	0.45	0.39	0.50	1.03	0.26	1.56		1.57	
	Other	1.41	4.00	6.22	3.52	7.06	7.45	3.91	1.05	3.27	3.96	4.14	3.33	3.70	1.19	1.30	4.00	2.25	0.43	0.80	0.22	0.00		1.32		1.15	3.74
	Residential	5.79	4.73	5.54	3.43	3.41	5.25	5.27	4.34	1.66	2.01	3.00	3.92	5.45				0.07		0.07				0.13		0.11	
	Total	**19.16**	**17.27**	**19.81**	**24.11**	**27.89**	**27.56**	**23.78**	**17.26**	**22.40**	**16.08**	**18.15**	**19.98**	**20.39**	**6.87**	**6.28**	**6.51**	**5.35**	**1.48**	**3.85**	**2.64**	**2.27**	**0.44**	**3.62**		**4.59**	**4.93**
Affected Parcel Count	Commercial	16	14	13	42	43	21	18	8	53	41	51	51	57	13	9	9	7	6	4	16	14	9	7		15	6
	Industrial	1	2	4	10	14	13	10	3	6	8	7	9	8	1	5	1	4	4	3	3	5	3	8		9	
	Other	9	9	14	18	30	29	17	7	19	22	27	20	26	9	10	8	7	3	8	2	1		9		7	14
	Residential	9	7	9	10	10	10	10	7	16	22	29	24	40				1		1				2		2	
	Total	**35**	**32**	**40**	**80**	**97**	**73**	**55**	**25**	**94**	**93**	**114**	**104**	**131**	**23**	**24**	**18**	**19**	**13**	**16**	**21**	**20**	**12**	**26**		**33**	**20**
Acquisitions	Full	7	8	12	25	24	18	18	5	49	33	52	40	61	21	16	13	16	5	12	16	7	2	19		25	9
	Partial	29	24	28	57	73	55	37	20	46	60	62	64	70	2	8	5	3	8	4	6	13	10	7		8	11
	Total	**36**	**32**	**40**	**82**	**97**	**73**	**55**	**25**	**95**	**93**	**114**	**104**	**131**	**23**	**24**	**18**	**19**	**13**	**16**	**22**	**20**	**12**	**26**		**33**	**20**
Impacted Structures	Commercial	9	8	6	24	27	17	14	3	21	12	13	12	15	13	10	7	6	3	5	9	7	4	4		3	4
	Industrial	2	1	1	10	17	19	12	2	8	1		3	2	1	2	1	2	1	1	4	5	3			3	
	Other		1	1							2	2			1	1	3	3	1	1							1
	Residential	91	88	88	7	18	102	91	87	4	9	14	13	28				1		1				2			
	Total	**102**	**98**	**96**	**4**	**62**	**138**	**117**	**92**	**33**	**24**	**29**	**28**	**45**	**15**	**13**	**11**	**12**	**5**	**8**	**13**	**12**	**7**	**6**		**6**	**5**
Estimated Displacements	Single Family	87	86	86	2	1	86	87	86	8	6	12	10	23	0	0	0	1	0	1	0	0	0	2		0	0
	Multi Family	24	8	8	119	111	16	24	0	0	2	0	50	50	0	0	0	0	0	0	0	0	0	0		0	0
	Total Residential Units	111	94	94	121	112	102	111	86	8	8	12	60	73	0	0	0	1	0	1	0	0	0	2		1	0
	Businesses	24	21	20	48	49	38	37	4	63	24	58	27	48	13	9	8	9	4	7	16	13	7	11		13	7

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