

South Annex Base

2023 RAISE Grant Proposal King County Metro: South Annex Base Project Project Description Section



South Annex Base

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South Annex Base

01 - Project Description

a) Project Summary

The South Annex Base (SAB) project will rehabilitate and redevelop an existing Metro owned property at its South Campus in Tukwila, WA, to create a new transit base. Redevelopment of the SAB site involves demolition of the existing structures, rehabilitating or otherwise repairing the existing pavements, and then building the new transit base that provides the capacity to support a fleet of ~250 new 100% battery electric buses (BEB). The new SAB allows Metro to:

- Address social equity through prioritized deployment of zero-emission buses to South King County, which has a higher proportion of Black and Indigenous people of color (BIPOC) and low-income populations than the rest of the County.
- Provide additional base capacity that will allow Metro to provide additional transit service as all of its existing bases are at or beyond capacity and unable to accommodate additional buses to increase service.
- Create base capacity that will allow Metro to upgrade its other six operating bases to support a fully electric bus fleet of over approximately 1,394 buses by 2035 while maintain transit service that operates out of these bases. Without the SAB Metro cannot sustain its current service levels and reach its goal to fully electrify its bus fleet by 2035. Without this additional capacity to operate and maintain buses Metro would need to reduce service to enable conversion of existing bases to support BEB maintenance and operations.
- Daylight two branches of Riverton Creek and adding signalization and frontage improvements that will enhance safety for pedestrians and bicyclists in the project vicinity.

After construction, SAB will function as a stand-alone bus base with maintenance and operations to support its fleet. The SAB project's strategic location on existing Metro property in South King County helps serve one of the region's most vulnerable areas, which is dense with employment centers, public amenities, and elementary schools that serve an ethnically and racially diverse local population.

Metro is leading the nation in creating a fully electric bus fleet and the development of the SAB is a major step toward achieving the goal of full electrification and zero-emissions by 2035. The zero-emission buses will provide meaningful contributions to the physical, environmental, and economic health of the county and region.

Metro has been working on the redevelopment of SAB since 2018 and is scheduled for groundbreaking in 2025. Since 2018 Metro has made significant progress on several critical fronts, including:

- Acquired nearby building and land to relocate the existing construction management offices and some storage from the South Annex site.
- Initiated and continued to engage with the community on the development of SAB.
- Obtained approval of the project charter in 2019 and Project Management Plan in 2020.
- Engaged with the FTA Region 10 office on the SAB project and received NEPA approval as a Documented Categorical Exclusion on March 23, 2021.

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- 30% Design package was completed in November 2022.
- Secured \$10M and recommended for an additional \$9M in State funds.
- Completed multiple feasibility studies for the SAB project:
- Selected Living Building Challenge (LBC) Core + Energy Petal

The SAB project has received broad local and regional support from various stakeholders including elected officials, state agencies, and community-based organizations. See Attachment A for Letters of Support.

b) Background: King County Metro

King County Metro is the local public transit agency for King County, Washington, which includes the City of Seattle. The Metro service area includes 2.3 million people and approximately 2,134 square miles. It consists of the entire area of King County, including 39 jurisdictions, portions of Snohomish County to the north, and Pierce County to the south. Metro’s current revenue fleet of over 1,394 buses operate out of seven bases. Metro is the seventh largest transit bus agency in the U.S., and prepandemic carried an average of 399,600 passengers each weekday on 227 routes. In 2022, Metro’s approximately 2,495 full-time and part-time operators transported 65 million riders.

King County Metro Transit provides bus, trolley, streetcar, passenger-only ferry, vanpools, demand response, and para-transit service. In addition, Metro is contracted to operate and maintain Sound Transit’s (ST) Express bus service, ST “Link” light rail, and the City of Seattle’s South Lake Union and First Hill streetcar lines. Metro operates six Bus Rapid Transit (BRT) routes branded as RapidRide, with four additional lines under development and more planned. Metro operates 121 park and ride lots with over 18,500 stalls. Metro’s VanPool program is one of the largest publicly owned program in the nation, with 730 customer-operated vans.

The areas serviced by routes that will operate from SAB support customers who rely on public transportation for their essential trips—people and neighborhoods that have been historically underserved and are more racially diverse than King County as a whole. These riders disproportionately came from communities that are lower-income and with higher percentages of people of color (see Figure 1).

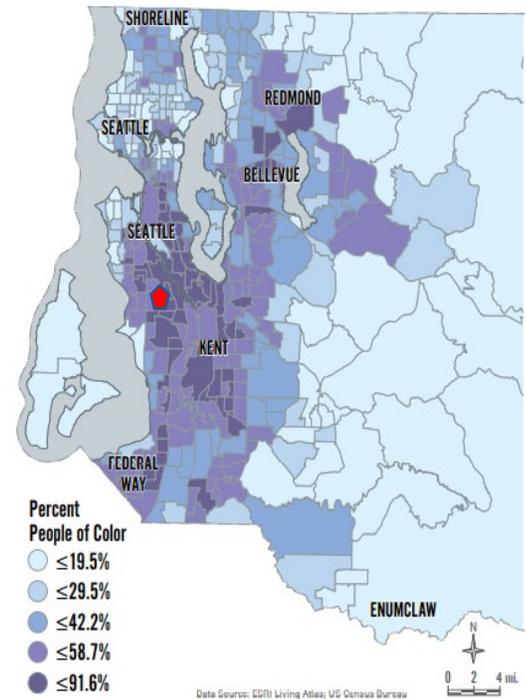


Figure 1: Percent People of Color in King County

c) Transportation Challenges

King County and the Central Puget Sound region are facing multiple challenges due to rapid growth in population and employment, emissions from the transportation sector, social justice impacts from past decisions on transportation investments, regional topography, and increasing demand for transit and mobility services especially in working-class and low-income regions of the county with higher BIPOC populations.

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d) Problem: Insufficient Bus Storage, Maintenance, & Operations Capacity

With more than 4 million people (5.8 million by 2050) and 2 million jobs (3.4 million by 2050), the region is experiencing transportation challenges associated with the projected exponential population and job growth. Because of this trend, Metro anticipates service increasing by approximately 31% by 2039 and 71% by 2050. To meet this demand, its vehicle fleet must grow by more than 40% by 2040, supported by two to three additional bus bases. Metro facilities also need vital upgrades to support the agency’s goal of a 100% zero-emission bus fleet by 2035. The SAB project will allow Metro to accelerate the transition to all-electric buses, as the project’s will create base capacity which will allow Metro to upgrade its other operating bases to support a zero-emission bus fleet without disrupting current transit service.

All of Metro bases are operating at 13% over capacity ([Operational Capacity Growth Report](#)). To address this issue, Metro developed a Facilities Master Plan in 2019. The Master Plan shows that the South Base facility is operating over its optimal operating capacity by 5%—in 2019 approximately 273 buses from the facility served 18 million riders annually—while the demand for transit service, particularly in South King County, continues to rise. South Campus is nearing the point of unstable operations—which means higher costs, deteriorating service quality, and increased safety risks. Currently, Metro is unable to add new service that requires more buses, simply because the necessary infrastructure and space does not exist to park or maintain additional buses. This limitation negatively affects Metro’s ability to meet growing ridership and to address service quality issues (e.g., fewer routes, overcrowded trips, etc.).

e) Solution: South Annex Base (SAB)

Metro proposes to redevelop an underutilized Metro-owned site that is part of Metro’s South Campus (see Figure 2). The SAB project will be a self-contained maintenance and operations base that will accommodate ~ 250 BEBs, allowing for and accelerating the transition to an all-electric fleet by 2035. The project will meet the purpose and need described below:

- Metro’s base facilities are at or over capacity while long-term demand for transit service continues to rise, particularly in South King County. A new base will be able to meet the projected demand by accommodating approximately 250 buses by 2027.
- Because of limited base capacity, it is not possible to build all-electric infrastructure without curtailing transit service during construction. Even if demand for expansion were zero. The new SAB will incorporate electric charging infrastructure and allow seamless future conversion to an all-electric fleet at all of Metro’s operating bases
- King County goals, policies, and plans prioritize the reduction of greenhouse gas emissions (e.g., [Strategic Climate Action Plan](#)) and the redress of inequities and social injustice within our communities. The SAB project will meet the needs expressed in the County’s climate



Figure 2: Existing South Base Campus

South Annex Base

goals by building, maintaining, and operating with the highest green building and sustainable development practices consistent with King County's Green Building Ordinance ([Ordinance No. 17709](#)). The design goal is to achieve LBC Core + Energy Petal certification. Daylighting of two branches of Riverton Creek will also enhance the natural environment for the adjacent neighborhood and contribute to the City of Tukwila's [goals for the Duwamish River](#).

The SAB concept plan includes up to 22 bus bays for maintenance, washing and steaming, inspection, and fueling; electric charging infrastructure; 128,000 square feet (SF) of maintenance and administration office spaces; 7,500 SF of parts storage; 16,500 SF of operator spaces (break, locker, restroom, dispatch, chief, superintendent); and miscellaneous other business functions required for base operations (safety, health, and wellness, etc.). The largest occupied structure will be the new maintenance and operations building with the bus bays able to accommodate double-height vehicles, office space, outdoor storage, and a basement maintenance area for access to the underside of buses.

The project also includes daylighting the west and east branches of Riverton Creek and installing three fish-passable culverts to improve fish passage of resident cutthroat trout and coho salmon. Approximately 940 linear feet (LF) of Riverton Creek is expected to be daylighted, including 328 LF of the West Branch and 612 LF of the East Branch. The West Branch is planned to be restored in its current alignment, and the East Branch will be realigned east of its current underground location which will add approximately 63 LF of stream habitat. The stream sections will be restored within confined corridors to be compatible with the long-term operations and use of the site. Approximately 0.5 acres of riparian vegetation will be restored.

f) Long Term Vision & Master Plan: Benefits to Community

King County goals, policies, and plans prioritize the reduction of greenhouse gas emissions (see [Strategic Climate Action Plan](#)) and the redress of inequities and social injustice within our communities. Consistent with Metro's commitment to innovation, sustainability, equity, and social justice in all its endeavors, the SAB project will meet or exceed expectations in these areas.

e) Equity and Social Justice

The project proactively addresses racial equity and barriers to opportunity by directly addressing disparities in access to transit service and in environmental health experienced by people of color, people with low income, older adults, people with disabilities, youth, people with Limited English Proficiency, populations located in highly impacted communities, areas experiencing high levels of unemployment or chronic underemployment, immigrants and refugees, and transit-dependent populations in South King County. The project will also meet the needs embodied by equity and social justice by creating construction and transit jobs in South King County and opportunities for the community to participate in apprenticeship programs.

As a part of the Puget Sound region's collaborative efforts to sustainably increase and improve quality service for transit users, the SAB project will provide critical transit services to some of its most vulnerable residents located in South King County. Moreover, the SAB project will provide meaningful benefits to the physical, environmental, and economic health of the county.

g) Environmental and Social Justice

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The SAB project will meet the needs expressed in the County’s climate goals by building, maintaining, and operating with the highest green building and sustainable development practices consistent with King County’s Green Building Ordinance (Ord. no. 17709).

- Full electrification at this base is a major step toward 2035 environmental and emissions goals in the King County [Strategic Climate Action Plan](#).
- The emission-free, BEB fleet and third party certified green building facilities (LBC Core + Energy Petal) will help improve air quality in South King County where residents experience disproportionate air pollution and higher rates of respiratory illnesses.
- The project is adjacent to one of the focus areas designated by the Puget Sound Clean Air Agency for environmental justice. The Agency defines these areas as geographic locations characterized by degraded air quality and either economic or historic barriers to residents’ participation in clean air decisions and solutions. The SAB project will improve air quality in the City of Tukwila, in King County, and throughout the Puget Sound region, through reduced diesel pollution and greenhouse gas emissions.
- Daylighting two branches of Riverton Creek will enhance the natural environment for the neighborhood and contribute to Tukwila’s goals for the Duwamish River.

Service

- Supports growth in South King County, where there is ongoing and growing demand for transit services.
- Supports communities like the City of Tukwila, among the hardest hit during the COVID-19 pandemic and is home to a sizeable, transit-dependent ethnic and working-class population.
- A new base at the South Campus will allow for more efficient service near current and future routes. Approximately 26 routes already operate out of the existing base in Tukwila.
- Construction of a new South Campus base will neither disrupt maintenance nor decrease parking availability for the existing fleet operating out of existing transit bases which are collectively over capacity during a time of increasing demand for transit service.

Jobs

- Creates hundreds of new jobs, providing job training and continued community workforce agreements through SAB construction and operations.
- The new base will also support current and future service that will improve access to transit and connections to regional employment centers.



Figure 3: Project Vicinity Map

02 - Project Location

SAB is located at Metro’s South Base Campus located in Tukwila, Washington, at [11911 East Marginal Way South in Tukwila](#). The project is in an Area of Persistent Poverty and is in a Historically Disadvantaged Community, including the relevant census tract(s). The Census-designated urbanized area in which the project is located is 272.

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2023 RAISE Grant Proposal King County Metro: South Annex Base Project Budget Section



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01 - Project Budget

a) Description of Project Budget

- The project is included in Metro's adopted 23/24 biennial budget and included in the adopted six-year capital improvement program.

b) Project Scope

- Project scope includes rehabilitation and redevelopment of an existing Metro owned property at its South Campus in Tukwila to create a new transit base that will support an 100% battery electric buses (BEB) fleet.
 - Redevelopment of the SAB site involves demolition of the existing structures and then building the new transit base that provides the infrastructure to support a fleet of approximately 250 new BEB's.
 - The SAB plan includes up to 22 bus bays for maintenance, washing and steaming, inspection, electric charging infrastructure; 128,000 square feet (SF) of maintenance and administration office spaces; 7,500 SF of parts storage; 16,500 SF of operator spaces (break, locker, restroom, dispatch, chief, superintendent); and miscellaneous other business functions required for base operations (safety, health, and wellness, etc.). The largest occupied structure will be the new maintenance and operations building with the bus bays able to accommodate double-height vehicles, office space, outdoor storage, and a basement maintenance area for access to the underside of buses.
- The project also includes daylighting the west and east branches of Riverton Creek and installing three fish-passable culverts to improve fish passage of resident cutthroat trout and coho salmon. Approximately 940 linear feet (LF) of Riverton Creek is expected be daylighted, including 328 LF of the West Branch and 612 LF of the East Branch. The West Branch is planned to be restored in its current alignment, and the East Branch will be realigned east of its current underground location which will add approximately 63 LF of stream habitat. The stream sections will be restored within confined corridors to be compatible with the long-term operations and use of the site. Approximately 0.5 acres of riparian vegetation will be restored.

c) Project Costs – Revenue Sources and Amount

The estimated project cost is based on the 30% project design level completed 4Q 2022. It is funded by multiple sources including Metro local source (sales tax and fare box revenue, bonds), State of Washington (2022 Move Ahead Washington Transportation Package, Green Infrastructure grant program (pending) and Federal Highway Administration (Congestion Mitigation and Air Quality) funding awarded from the regional Metropolitan Planning Organization (Puget Sound Regional Council) in 2022 and requested 2023 RAISE grant funding. See Table 1 for details.

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Table 1: Project Funding Summary

Project Funding Summary			
Federal Sources	Amount	Status	Notes
RAISE Grant Funding	\$25.0M (7.3%)	Unsecured	2023 RAISE grant program request.
Federal Highway Administration – Congestion Mitigation and Air Quality grant Program	\$8.2M (2.4%)	Secured	Allocation of funding approved by Puget Sound Regional Council in October 2022. Funding is scheduled to obligate in FFY 2025.
State Sources	Amount	Status	Notes
State Move Ahead Washington	\$10.0M (2.9%)	Secured	Allocation of funding approved in 2022 State Legislative session transportation revenue package Move Ahead Washington Funding is split between two State budget biennium’s: <ul style="list-style-type: none"> • 23/25 biennium - \$5M must be expended by 6/30/25 • 25/27 (\$5M) must be expended by 6/30/27.
State Green Transportation Grant Program	\$9.0M (2.6%)	Recommended and pending approval by State Legislature. Approval expected by April 2023.	Recommended for funding by Washington State Department of Transportation. Funding is for the 23/25 biennium and must be expended by 6/30/25.
Local Sources	Amount	Status	Notes
Metro Local Match – Cash	\$289.4M (84.7%)	Mixture of secured and future biennium budget.	Sales Tax dedicated to Metro Transit, fare box revenue and Limited Tax General Obligation (LTGO) bonds issued by Metro, backed by existing revenue sources
Total Project Funding	\$341.6M		

d) Funding Commitment

Metro identifies funding needs for its capital projects through its six-year Capital Improvement Program process, and funding is appropriated on a biennial basis. The Capital Improvement Program identifies the total project cost, cash flow (spending plan by year), and revenue sources for proposed projects. The appropriation authority for unspent funds each biennium is re-appropriated into the subsequent biennial budget.

- Metro Local Match: [Ordinance 19546](#) that adopts the 2023-2024 Biennial Budget and makes appropriations for the operation of county agencies and departments and capital

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improvements for the fiscal biennium beginning January 1, 2023, and ending December 31, 2024, and budget commitments aligning with the County’s six-year plan.

- Project 1134223 – TDC South Annex Base (see Ordinance Attachment A, page 24)
- State Source: Link to documentation of State funding sources.
 - 2022 Move Ahead Washington Transportation package, see 2022 Enacted Documents, Transit Projects List 2022 NL-3 Transit, project #15 at [ctLEAPDocument2022NL-3-030922.pdf \(wa.gov\)](https://www.ctLEAPDocument2022NL-3-030922.pdf).
 - 2023 Green Transportation Program, 2023-2025 Transportation Plan, All Transportation Projects List, page #25, project #GT23250B at [2023-25 transportation plan | Office of Financial Management \(wa.gov\)](#).
- See Funding Commitment Section for supporting documentation for the local and state financial commitment to the project.

e) Project Budget – Use of Funding

In addition to the requested RAISE Grant funding, the SAB project is funded by voter approved Sales Tax dedicated to Metro Transit, fare box revenues, and State funding. Metro will also use Limited Tax General Obligation (LTGO) bonds (low-interest, long-term bonds issued through council action and backed by existing revenue sources).

In May 2021, the King County Council adopted the King County 2020 Strategic Climate Action Plan (SCAP). The SCAP provides policy direction for King County and Metro Transit for the electrification of its entire bus fleet by 2035. The adoption of the SCAP and its policies and goals show King County is committed to securing the funding needed to implement the project. Table 2 below outlines the eligible estimated project costs by phases.

Table 2: Project Estimate and Funding

Project Phase	Cost Estimate	Fund Source(s)
Prior Expenses (Not eligible)	\$27.1M	Metro Local Sources
Estimated Expenses between Award and Obligation (Not eligible)	\$28.1M	Metro Local Sources
Project Management - Ineligible Overhead Costs (Not eligible)	\$18.4	Metro Local Sources
Project Phase	Cost Estimate	Fund Source(s)
Final Design (eligible expense)	\$61.6M	Metro Local Match, State funding
Construction (eligible expense)	\$280.0M	RAISE, FHWA-CMAQ, Metro Local Match, State funding
Eligible 2023 RAISE Project Cost	\$341.6M	

The RAISE grant funding being requested (\$25M) will leverage significant investments by Metro and Washington state (\$308.4M) in the SAB project that demonstrates broad community support for the project, strong political backing, and Metro’s commitment to its completion. As of December

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2022, the project has expended approximately \$27.1 million. It is estimated that between proposal submission and obligation an additional \$28.1 million will be expended on the project.

The SAB project includes multiple components including electrification infrastructure to support the operations and maintenance of the BEB fleet that will operate out of the facility. Table Three provides information on the estimate of cost for the electrification and non-electrification components of the project and how the RAISE funding would be applied. Table 4 provides information on the census tract of where the funding will be expended.

Table 3: Project Components

Funding Source	Electrification Components Funding Amount	Total Funding
RAISE Funds:	\$25M (7%)	\$25M (7%)
Other Federal Funds:	\$8.2M (2%)	\$8.2M (2%)
Non-Federal Funds:	\$308.4M (90%)	\$308.4M (90%)
Total:	\$341.6	\$341.6

Table 4: Estimated Cost per Census Tract

Census Tract(s)g Source	Project Cost per Census Tract
027200	\$341.6
Total:	\$341.6

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2023 RAISE Grant Proposal King County Metro: South Annex Base Project Funding Commitments Section



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01 – King County Metro Funding Documentation

1.1 Funding Ordinance 19546

01 – King County Metro Funding Documentation

1.1 Funding Ordinance 19546

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KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

Ordinance 19546

Proposed No. 2022-0374.3

Sponsors McDermott

1 AN ORDINANCE that adopts the 2023-2024 Biennial
2 Budget and makes appropriations for the operation of
3 county agencies and departments and capital improvements
4 for the fiscal biennium beginning January 1, 2023, and
5 ending December 31, 2024; and establishing an effective
6 date.

7 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

8 **SECTION 1. Findings:**

9 A. The council finds that the music and film industries in King County have
10 contributed to the economic vitality of the county and the cultural vibrancy of our
11 communities. The local production of music, digital, television, video and film ("local
12 production") increases tourism, provides family-wage jobs and generates tax revenues for
13 the county from the sale of local goods and services associated with that local production.
14 The council also finds the inherent value of promoting arts and culture associated with
15 local production and the educational benefits a viable local production presence provides
16 by increasing opportunities for training of local production and other creative economy
17 professionals, who in turn will contribute to building a vibrant local production presence
18 in the county. In recent years, the county has realized a drastic decline in local
19 production. That has been exacerbated by the declining state tax credits for television
20 and film production and the coronavirus disease 2019 ("COVID-19") pandemic. As a

ATTACHMENT A CAPITAL IMPROVEMENT PROGRAM DATED NOVEMBER 8, 2022
2023-2024 Biennial - Council Adopted

Project Number	Project Name Class Code	2023-2024 Appropriation \$	2025-2026 Planned \$	2027-2028 Planned \$	Total 6-Year Budget \$
1129636	Sound Transit Station Integration STANDALONE	\$73,775	\$0	\$0	\$73,775
1129747	Metro Connects RapidRide Expansion PROGRAMMATIC	\$564,108	\$590,000	\$460,000	\$1,614,108
1131378	Comfort Station 2 SODO (south of downtown) STANDALONE	\$0	\$82,870	\$922,789	\$1,005,659
1132324	Madison RapidRide Line (G) STANDALONE	\$1,070,353	\$0	\$0	\$1,070,353
1132325	Delridge to Burien RapidRide Line (H) STANDALONE	\$5,430,262	\$0	\$0	\$5,430,262
1132326	Rainier Ave. Mount Baker RapidRide Line (R) STANDALONE	\$21,932,277	\$103,110,878	\$0	\$125,043,155
1132327	Roosevelt RapidRide Line (J) STANDALONE	\$605,996	\$1,340,000	\$151,335	\$2,097,330
1134100	Technology Program Management PROGRAMMATIC	\$0	\$759,760	\$798,804	\$1,558,564
1134193	Facility Improvements Planning PROGRAMMATIC	\$1,191,156	\$1,700,000	\$1,700,000	\$4,591,156
1134197	Safe Routes to Transit Investment Program PROGRAMMATIC	\$818,755	\$380,000	\$380,000	\$1,578,755
1134201	Kent Comfort Station STANDALONE	\$0	\$0	\$198,253	\$198,253
1134205	Aloha Street Comfort Station STANDALONE	\$0	\$0	\$189,068	\$189,068
1134206	Bus Layover Facility at Eastlake STANDALONE	\$4,216,051	\$0	\$0	\$4,216,051
1134223	South Annex Base STANDALONE	\$0	\$82,534,100	\$264,934,398	\$347,468,498
1134228	Non-Fixed Route Program Management PROGRAMMATIC	\$218,376	\$306,598	\$305,987	\$830,961
1134230	Living Building Certified	\$582,751	\$62,000	\$0	\$644,751

1.2 King County Metro – Adopted Capital Improvement Program Form

Capital Appropriation Proposal

Budget: 2023-2024 Biennial, Scenario: Agency Proposed, Agency: Transit, Fund: All, Project: All, Cap Status:All, Is IT Proj? Both Yes and No

TDC SOUTH ANNEX BASE

1134223

IT Project, Baseline Required, Green Building Reporting, Art Eligible

Department	METRO TRANSIT DEPARTMENT
Council District(s)	8
Fund	3641 PUBLIC TRANS CONST-UNREST
Class Code	STANDALONE
Portfolio	Fixed Assets
Sub Portfolio	Facility Improvements
Substantial Completion	10/09/2027
Location	11911 E MARGINAL WY S, Tukwila 98,168: South Base Annex
Cap Status	Approved

BUDGET (Appropriation)

Capital Phase	ITD Budget thru 05/2022	FY23-24	FY25-26	FY27-28	Total Budget
1 Planning 06/04/18 - 04/29/20	\$1,637,783	\$0	\$549,101	\$0	\$2,186,884
2 Preliminary Design 02/24/20 - 01/21/23	\$11,715,197	\$0	\$2,209,815	\$0	\$13,925,012
3 Final Design 11/02/22 - 07/17/25	\$44,519,027	\$0	(\$24,029,151)	\$0	\$20,489,876
4 Implementation 10/15/24 - 10/09/27	\$8,693,626	\$0	\$93,365,804	\$148,290,804	\$250,350,233
5 Closeout 04/08/27 - 07/28/28	\$1,000,000	\$0	(\$1,000,000)	\$116,643,594	\$116,643,594
6 Acquisition 02/01/21 - 02/02/21	\$0	\$0	\$11,438,532	\$0	\$11,438,532
Total Budget	\$67,565,633	\$0	\$82,534,100	\$264,934,398	\$415,034,131

ART	FY23-24	FY25-26	FY27-28	Total 6-Year Art Budget
Art	\$0	\$825,341	\$2,649,344	\$3,474,685

REVENUE

Account	FY23-24	FY25-26	FY27-28	Total 6-Year Revenue
30800 - BUDGETED FUND BALANCE	\$0	\$39,309,100	\$264,934,398	\$304,243,498
33118 - FED TRANSIT CAP INVEST	\$0	\$33,225,000	\$0	\$33,225,000
33436 - WA ST DEPT TRANSPORTATION	\$0	\$10,000,000	\$0	\$10,000,000
Total Revenue	\$0	\$82,534,100	\$264,934,398	\$347,468,498

Capital Appropriation Proposal

Budget: 2023-2024 Biennial, Scenario: Agency Proposed, Agency: Transit, Fund: All, Project: All, Cap Status:All, Is IT Proj? Both Yes and No

TDC SOUTH ANNEX BASE

1134223

IT Project, Baseline Required, Green Building Reporting, Art Eligible

Department	METRO TRANSIT DEPARTMENT
Council District(s)	8
Fund	3641 PUBLIC TRANS CONST-UNREST
Class Code	STANDALONE
Portfolio	Fixed Assets
Sub Portfolio	Facility Improvements
Substantial Completion	10/09/2027
Location	11911 E MARGINAL WY S, Tukwila 98,168: South Base Annex
Cap Status	Approved

BUDGET (Appropriation)

Capital Phase	ITD Budget thru 05/2022	FY23-24	FY25-26	FY27-28	Total Budget
1 Planning 06/04/18 - 04/29/20	\$1,637,783	\$0	\$549,101	\$0	\$2,186,884
2 Preliminary Design 02/24/20 - 01/21/23	\$11,715,197	\$0	\$2,209,815	\$0	\$13,925,012
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REVENUE

Account	FY23-24	FY25-26	FY27-28	Total 6-Year Revenue
30800 - BUDGETED FUND BALANCE	\$0	\$39,309,100	\$264,934,398	\$304,243,498
33118 - FED TRANSIT CAP INVEST	\$0	\$33,225,000	\$0	\$33,225,000
33436 - WA ST DEPT TRANSPORTATION	\$0	\$10,000,000	\$0	\$10,000,000
Total Revenue	\$0	\$82,534,100	\$264,934,398	\$347,468,498

Capital Appropriation Proposal

Budget: 2023-2024 Biennial, Scenario: Agency Proposed, Agency: Transit, Fund: All, Project: All, Cap Status:All, Is IT Proj? Both Yes and No

EXPENSE		TDC SOUTH ANNEX BASE					1134223
Capital Phase	ITD Actuals thru 12/2021	2022 Projected YE	FY 23-24	FY 25-26	FY 27-28	Total Expense	
1 Planning	\$1,798,990	\$51,610	\$236,285	\$100,000	\$0	\$2,186,884	
2 Prelim Design	\$4,549,415	\$8,876,801	\$498,795	\$0	\$0	\$13,925,012	
3 Final Design	\$132,178	\$765,230	\$19,546,276	\$46,193	\$0	\$20,489,876	
4 Implementation	\$554,666		\$3,368,071	\$98,136,692	\$148,290,804	\$250,350,233	
5 Closeout	\$0		\$0	\$0	\$116,643,594	\$116,643,594	
6 Acquisition	\$11,438,532	\$0	\$0	\$0	\$0	\$11,438,532	
Total Expense	\$18,473,781	\$9,693,641	\$23,649,427	\$98,282,884	\$264,934,398	\$415,034,131	

BUDGET ANALYSIS

Capital Phase	Baseline	Estimate At Completion	ITD Actuals thru 05/2022	ITD Budget thru 05/2022	ITD Actuals thru 12/2021 + 2022 Projected YE
1 Planning	\$0	\$2,186,884	\$1,799,912	\$1,637,783	\$1,850,599
2 Preliminary Design	\$0	\$13,925,012	\$6,717,159	\$11,715,197	\$13,426,217
3 Final Design	\$0	\$20,489,876	\$163,012	\$44,519,027	\$897,408
4 Implementation	\$0	\$250,350,233	\$556,877	\$8,693,626	\$554,666
5 Closeout	\$0	\$116,643,594	\$0	\$1,000,000	\$0
6 Acquisition	\$0	\$11,438,532	\$11,438,532	\$0	\$11,438,532
Total	\$0	\$415,034,131	\$20,675,492	\$67,565,633	\$28,167,422

Capital Phase	2023 Starting Balance	2023-2024 Budget Request	2023-2024 Expense	2024 Ending Balance
1 Planning	(\$212,816)	\$0	\$236,285	(\$449,101)
2 Preliminary Design	(\$1,711,020)	\$0	\$498,795	(\$2,209,815)
3 Final Design	\$43,621,619	\$0	\$19,546,276	\$24,075,344
4 Implementation	\$8,138,959	\$0	\$3,368,071	\$4,770,888
5 Closeout	\$1,000,000	\$0	\$0	\$1,000,000
6 Acquisition	(\$11,438,532)	\$0	\$0	(\$11,438,532)
Total	\$39,398,210	\$0	\$23,649,427	\$15,748,784

NARRATIVES TDC SOUTH ANNEX BASE 1134223

SCOPE

South Annex Base - Construction of a permanent 250 bus transit base on Metro owned property called the South Annex. Transit base will include vehicle maintenance bays (est. 14 bays), steam bay, inspection bay, bus exterior wash bays, bus interior wash bays, bus fueling, underground infrastructure to enable future conversion to battery electric bus operation, operator spaces (break, locker, restroom, dispatch, chief, superintendent), and miscellaneous other business functions required for base operations (safety, health and wellness, etc.). Project will include development of full scope definition, contracting of design consultant, and contracting of construction contractor.

Capital Appropriation Proposal

Budget: 2023-2024 Biennial, Scenario: Agency Proposed, Agency: Transit, Fund: All, Project: All, Cap Status:All, Is IT Proj? Both Yes and No

NARRATIVES

TDC SOUTH ANNEX BASE

1134223

BACKGROUND & BENEFITS

Upon comparing the trajectory between 2017 and 2040 of Metro Connects, Metro Fleet Plan, and base capacity (LOS C and LOS D) studies conducted by Metro Strategy & Performance, significant constraints in operational capacity from 2019 to 2025 that would not be met with the existing Base Expansion and New Metro Base (2030) projects were identified in Q4 2017. Also in Q4 2017, leadership directed Metro to build a base in 5 years. Therefore, the existing base expansion projects were amended to include the interim base and the South Annex Base.

The Puget Sound region is expected to grow by approximately 1 million people and 850,000 jobs in the next 25 years. For the region to meet future transportation demand, the Puget Sound Regional Council's Transportation 2040 Plan identifies the need for all transit agencies to double their ridership. According to the Metro Long Range Plan, that means adding 70% more service hours than currently provided with an expanded bus fleet. To support the expanded fleet, Metro needs to site and construct at least two new bases. High levels of growth are currently centered in the urban areas, particularly Seattle, but are forecasted to extend into more affordable suburban areas—something that is already beginning to occur, especially in south King County. Thus, the significant increases in service projected in south King County result in this area being the target for the next new base.

The current modeling of system-wide base capacity reflects that the current fleet surpasses optimal base capacity levels. Transit would continue to be over-capacity even when additional parking is made available at Atlantic-Central bases by 2018. 1) A permanent and fully operational electric-bus ready transit base of 250 buses which directly supports the capacity needed for the 70% service increase described in Metro Connects

2) Supports the expansion of Metro's fleet size from roughly 1500 to its goal of about 2150 (an increase of 650)

3) Support of Equity and Social Justice by providing much needed affordable transit service to diverse communities living and, in some cases, working in more affordable, but growing, suburban areas; and by removing transportation barriers that directly affect equal service access to higher compensating jobs, higher education, housing, advanced medical care, commerce and recreation

4) Support of Strategic Climate Action Plan by providing mass transit to growing communities; thereby reducing carbon pollution footprint and maintaining sustainable transportation choices, as well as advancing Metro's zero-emission fleet goal

5) Support of economic growth by bringing new jobs to a diverse community

DESCRIPTION OF BUDGET REQUEST

The requested appropriation will support the alternatives analysis and design phase of the projects with out years funding supporting construction and transition to operations.

ALTERNATIVES ANALYSIS

Upon comparing the trajectory between 2017 and 2040 of Metro Connects, Metro Fleet Plan, and base capacity (LOS C and LOS D) studies conducted by Metro Strategy & Performance, significant constraints in operational capacity from 2019 to 2025 that would not be met with the existing Base Expansion and New Metro Base (2030) projects were identified in Q4 2017. Also in Q4 2017, leadership directed Metro to build a base in 5 years. Alternatives considered were to do nothing, possible expansion at other existing Metro bases, and lease of available properties for bus parking and maintenance. Review of these alternatives showed fatal flaws, therefore, the existing base expansion projects were amended to include the interim base and the South Annex Base. The project will conduct design alternative analysis for building systems and other major equipment components.

STRATEGIC CLIMATE ACTION PLAN ALIGNMENT

This project will comply with the Green Building Ordinance by achieving LEED Platinum certification with USGBC or Living Building Certification with ILFI. Project has completed feasibility assessments of net zero energy certification. Determination on certification scheme and rating level targeted will be based on further cost assessments in 21-22 biennium.

Priority for facility improvement projects to advance 2020 SCAP goals include:

-No new natural gas installation (where feasible based on LCCA alternatives analysis of all-electric option and including cost of carbon emissions);

-Pursue all system energy efficiency measures that pay back over equipment life;

-Maximize on-site solar energy when cost-effective over the warrantied life of the system

-Use the Embodied Carbon in Construction Calculator (EC3) tool to identify low embodied emissions materials that meet construction specifications

Capital Appropriation Proposal

Budget: 2023-2024 Biennial, Scenario: Agency Proposed, Agency: Transit, Fund: All, Project: All, Cap Status:All, Is IT Proj? Both Yes and No

NARRATIVES

TDC SOUTH ANNEX BASE

1134223

EQUITY AND SOCIAL JUSTICE IMPACT

This project will enable Transit to improve service to a growing minority and/or low-income population in south King County; and will remove transportation barriers that directly affect equal access to higher compensating jobs, higher education, housing, advanced medical care, commerce and recreation. The project will have a robust project specific ESJ plan that will positively impact the surrounding area.

OPERATING BUDGET AND OTHER IMPACTS

With the completion of South Annex Base sometime in the next 5-7 years, there will be added operational costs for additional staff of operators, vehicle maintenance, facilities maintenance, power distribution (battery-electric infrastructure for battery-electric coaches), training, and administration. These additional assets will also increase utility bills, asset insurance, and other associated costs for capital assets.

OTHER AGENCY INVOLVEMENT

Sound Transit (ST): Metro currently operates and services an excess of 100 ST coaches. While Metro's current expansion plan does not take in consideration an increase in ST coaches that Metro will operate and service, it allows Metro to continue servicing the current number of ST coaches in Metro's care.

The Federal Transportation Agency (FTA) to provide concurrence prior to 30% design milestone for grant eligibility

City of Tukwila: The expansion of existing bases and the construction of new bases will impact Tukwila's traffic, as well as their economy, sustainability, and equity & social justice.

Army Corps Of Engineers: Riverton Creek Impacts

Washington State Department Of Ecology: Water Quality and Stormwater Permits

Other agencies as defined in the projects permit matrix required for misc construction, demolition, and operating permits.

FUNDING AND REVENUE DISCUSSION

The project will be funded by a combination of Public Transportation Fund, capital sub fund and grant funds where applicable.

ART ELIGIBILITY

Eligible

OTHER CONSIDERATIONS (OPTIONAL)

This project is part of the Operational Capacity Growth program plan. The plan includes: 1) Construction of a 125-bus capacity interim base on the King County Tukwila Extension site; 2) A parking expansion at Central Base, the accompanying body shop-to-vehicle maintenance bay conversion, and the design/construction of a designated body shop to increase Central Base capacity by 90 buses; 3) Construction of a permanent 250-bus capacity base on the existing King County Metro South Annex site, including temporary relocation of Safety and Training facilities to leased space; and 4) Construction of a permanent 250-bus capacity base on yet-to-be acquired land at South King County.

IT PROJECT STATUS

Ongoing Standalone - Design consultant procurement underway

STRATEGIC IT PLAN ALIGNMENT

IT PROJECT COMPLEXITY

CAPACITY TO IMPLEMENT THE IT PROJECT

IT PROJECT RISKS

Capital Appropriation Proposal

Budget: 2023-2024 Biennial, Scenario: Agency Proposed, Agency: Transit, Fund: All, Project: All, Cap Status:All, Is IT Proj? Both Yes and No

TDC NON FIXED RT PR MGMT

1134228

Master Project

Department	METRO TRANSIT DEPARTMENT
Council District(s)	1, 2, 3, 4, 5, 6, 7, 8, 9
Fund	3641 PUBLIC TRANS CONST-UNREST
Class Code	TDC NON FIXED RT PR MGMT
Portfolio	Fleet
Sub Portfolio	Non Fixed Route Vehicles
Substantial Completion	11/18/2032
Location	Countywide
Cap Status	Approved

BUDGET (Appropriation)

Capital Phase	ITD Budget thru 05/2022	FY23-24	FY25-26	FY27-28	Total Budget
1 Planning 01/01/19 - 12/31/22	\$85,216	\$269,289	\$0	\$0	\$354,506
2 Preliminary Design 12/31/22 - 11/18/32	\$532,018	(\$50,914)	\$306,598	\$305,987	\$1,093,689
3 Final Design	\$0	\$0	\$0	\$0	\$0
4 Implementation	\$0	\$0	\$0	\$0	\$0
5 Closeout 11/18/32 - 12/30/32	\$0	\$0	\$0	\$0	\$0
6 Acquisition	\$0	\$0	\$0	\$0	\$0
Total Budget	\$617,234	\$218,376	\$306,598	\$305,987	\$1,448,195

ART	FY23-24	FY25-26	FY27-28	Total 6-Year Art Budget
Art	\$0	\$0	\$0	\$0

REVENUE

Account	FY23-24	FY25-26	FY27-28	Total 6-Year Revenue
30800 - BUDGETED FUND BALANCE	\$218,376	\$306,598	\$305,987	\$830,960
Total Revenue	\$218,376	\$306,598	\$305,987	\$830,960

South Annex Base

02 – State Funding Documentation

2.1 Move Ahead Washington Documentation

LEAP Transportation Document 2022 NL-3 as developed March 9, 2022

Move Ahead WA Transit Projects

(Dollars In Thousands)

Project Title	Leg Districts	16 Year Total
Public Transportation Program (V)		243,757
1. All-Electric Passenger Ferry (Kitsap Transit)	26	6,500
2. Island Transit Zero-Emission Fleet Transition	10	7,000
3. Division Street Bus Rapid Transit - Spokane Transit Authority	03, 06, 07	50,000
4. Island Transit's Terry's Corner Staff Support Facility	10	310
5. Intercity Transit Maintenance Facility Renovation	22	5,046
6. Tacoma Dome Light Rail Access, South Federal Way	30	20,000
7. Bellingham Station Expansion (Whatcom Transportation Authority)	42	5,000
8. King County Metro RapidRide I Line (Auburn Segment)	47	8,000
9. Swift Bus Rapid Transit - Green Line Extension (Community Transit)	01, 38	10,000
10. Terrace Heights Transit Extension (Yakima Transit)	14, 15	191
11. Pierce Transit High-Capacity Transit Service Expansion	27, 28, 29	10,000
12. Fleet Electrification (Ben Franklin Transit)	08, 16	10,560
13. Long Range Service Corridor Engineering (Ben Franklin Transit)	08, 16	4,250
14. Mobility Hubs (Ben Franklin Transit)	08, 16	8,400
15. South Base Campus Electrification (King County Metro)	11	5,000
16. South Annex Base – Electrification Elements (King County Metro)	11	10,000
17. Base Refurbish & Expansion for Growth/Columbia County Public Transportation	16	1,500
18. Swift Bus Rapid Transit - Silver Line (Community Transit)	21, 38, 44	10,000
19. Swift Bus Rapid Transit - Gold Line (Community Transit)	38	10,000
20. Skagit Transit Maintenance Operations and Administration Facility	40	5,000
21. Burien & KC Metro: Ambaum Blvd & H Line Transit Improvements	34	7,000
22. C-TRAN Highway 99 Bus Rapid Transit	17, 49	5,000
23. City of Seattle/Seattle Center Monorail Station Improvements	36	5,000
24. Tacoma Dome Link Light Rail Access, Fife to Tacoma	25, 27	20,000
25. I-5/164th St SW Lynnwood Link Improvements (WSDOT)	21	20,000

**OFM Transportation Document 2023-1: Proposed Transportation Project List
as developed December 14, 2022
Public Transportation Program (V)
(Dollars In Thousands)**

Project	Project Title	Funding Source				2021-23	2023-25	2025-27	2027-29	2029-31	2031-33	2033-35	2035-37	2037-39	Future	Total (Incl Prior)
		TPA	Nic	CW	Oth											
L4000069	Swift Bus Rapid Transit - Green Line Extension (Community Transit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1,000	3,000	6,000	0	0	0	0	0	0	10,000
L4000070	Terrace Heights Transit Extension (Yakima Transit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	191	0	0	0	0	0	0	0	0	191
L4000071	Pierce Transit High-Capacity Transit Service Expansion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	5,000	5,000	0	0	0	0	0	0	0	10,000
L4000168	Fleet Electrification (Ben Franklin Transit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	0	1,267	9,293	0	0	0	0	0	0	10,560
L4000169	Long Range Service Corridor Engineering (Ben Franklin Transit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	850	850	850	850	850	0	0	0	0	4,250
L4000170	Mobility Hubs (Ben Franklin Transit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1,008	7,392	0	0	0	0	0	0	0	8,400
L4000173	South Base Campus Electrification (King County Metro)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	5,000	0	0	0	0	0	0	0	0	5,000
L4000174	South Annex Base - Electrification Elements (King County Metro)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	5,000	5,000	0	0	0	0	0	0	0	10,000
L4000182	Base Refurbish & Expansion for Growth/Columbia County Public Transportat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1,000	500	0	0	0	0	0	0	0	1,500
L4000190	Swift Bus Rapid Transit - Silver Line (Community Transit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	0	0	1,200	8,800	0	0	0	0	0	10,000
L4000209	Swift Bus Rapid Transit - Gold Line (Community Transit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	3,333	3,333	3,333	0	0	0	0	0	0	10,000
L4000212	Skagit Transit Maintenance Operations and Administration Facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	5,000	0	0	0	0	0	0	0	0	5,000
L4000222	City of Burien/King County Metro: Ambaum Blvd & H Line Transit Improve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	7,000	0	0	0	0	0	0	0	0	7,000

South Annex Base

2.2 Washington State Department of Transportation -Green Transportation Program Documentation

**OFM Transportation Document 2023-1: Proposed Transportation Project List
as developed December 14, 2022
Public Transportation Program (V)
(Dollars In Thousands)**

Project	Project Title	Funding Source				2021-23	2023-25	2025-27	2027-29	2029-31	2031-33	2033-35	2035-37	2037-39	Future	Total (Incl Prior)
		TPA	Nic	CW	Oth											
GT232508	Kitsap Transit - Inductive Charging Infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	3,840	0	0	0	0	0	0	0	0	3,840
GT232509	Valley Transit - Zero-Emission Bus Transition Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	80	0	0	0	0	0	0	0	0	80
GT23250A	Jefferson Transit - Electric Bus Replacement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	2,000	0	0	0	0	0	0	0	0	2,000
GT23250B	King County Metro - South Annex Base Electrification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	9,000	0	0	0	0	0	0	0	0	9,000
GT23250C	Pacific Transit - Electrification of the Paratransit fleet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1,023	0	0	0	0	0	0	0	0	1,023
GT23250D	C-TRAN - Hydrogen Fueling Station Infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	3,795	0	0	0	0	0	0	0	0	3,795
GT23250F	Twin Transit - Build Morton e-Transit Station at Hwy 12 and Hwy 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	396	0	0	0	0	0	0	0	0	396
GT23250G	Twin Transit - Main St. e-Transit Station (Exit 77)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	2,217	0	0	0	0	0	0	0	0	2,217
GT23250H	Twin Transit - Lewis County EV Charging Stations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	708	0	0	0	0	0	0	0	0	708

South Annex Base

03 – Puget Sound Regional Council Funding Documentation

3.1 Puget Sound Regional Council Award Letter



Puget Sound Regional Council

1011 WESTERN AVENUE, SUITE 500 SEATTLE, WA 98104-1035 psrc.org 206-464-7090

November 10, 2022

The Honorable Dow Constantine
King County
401 5th Avenue, Suite 800
Seattle, WA 98104

Dow.

Dear Executive Constantine:

Congratulations! I'm pleased to let you know that King County is receiving \$13,277,458 in PSRC funding for the following projects:

PROJECT	AWARD AMOUNT	FUNDING SOURCE	FUNDING DEADLINE
12th and Jackson Transit Hubs Project	\$1,000,000	FHWA	June 1, 2025
	\$1,000,000	FHWA	June 1, 2026
King County Post Pandemic TDM	\$1,000,000	FHWA	June 1, 2025
	\$1,000,000	FHWA	June 1, 2026
South Annex Base Expansion and Electrification	\$8,225,000	FHWA	June 1, 2025
NE Big Rock Road Overlay	\$1,052,458	FHWA	June 1, 2026

The projects are part of a \$5.4 billion Regional Transportation Improvement Program for 2023-2026 that was adopted by PSRC's Executive Board in October. Final approval by the Governor and federal funding agencies is expected in early 2023. This program includes a wide variety of investments over the next four years, addressing the needs of transit, state and local roadways, bicycle and pedestrian facilities, maintenance and preservation, and others.

Your projects performed well in PSRC's merit-based project selection process, which identifies priority projects that will improve local and regional mobility and help achieve our long-range Regional Transportation Plan. Kudos to you and your staff for securing this funding.

Thank you and your team for continuing to provide essential services to your community throughout the pandemic. I look forward to continuing to partner with you on efforts to help the region thrive for the long term.

Sincerely,

Josh Brown
Executive Director, Puget Sound Regional Council

cc: Terry White, General Manager, Metro Transit Department
Tricia Davis, Director, King County Roads

South Annex Base

3.2 Puget Sound Regional Council Regional Transportation Improvement Program



Overview of the 2023-2026 Regional Transportation Improvement Program

October 27, 2022

Jurisdiction: King County Department of Transportation (Transit)

Project Number: MET-258 **County:** King **Title:** South Annex Base Expansion and Electrification

Phase	Programmed Year	Oblig. Date	Funding Source	Federal Funds	State Funds	Local Funds	Phase Total
CN	2025	6/1/25	Local	\$0	\$0	\$348,914,931	\$348,914,931
CN	2025	6/1/25	CMAQ	\$8,225,000	\$0	\$0	\$8,225,000

WSDOT PIN: **Totals:** \$8,225,000 \$0 \$348,914,931 \$357,139,931

Federal Aid/FTA Grant Number(s):

Functional Class: Not applicable (transit, enhancements, Etc.)

Improvement Type: Other -- Transit

Location: 11911 East Marginal Way South

From: N/A

To: N/A

Total Cost: \$415,252,873

Regionally Significant: No

Environmental Status: DCE

Year of Expenditure for Total Cost: 2022

Expected Year of Completion: 2028

MTP Status: Exempt

MTP Reference(s): N/A

Description:

Upgrade South Campus in Tukwila by acquiring and installing electric charging infrastructure to support 250 new 100% electric buses; adding 14 vehicle maintenance bays, steam bay, inspection bay, bus exterior and interior wash bays, bus fueling, underground electric infrastructure and, operator spaces; daylight two branches of Riverton Creek, and add signalization and frontage improvements to support pedestrian and bicycle travel in the vicinity.

South Annex Base

Washington State S. T. I. P.

2023 to 2026

(Project Funds to Nearest Dollar)

MPO/RTPO: PSRC

Y Inside

N Outside

February 16, 2023

County: King

Agency: King Co. DOT - Transit

Func Cls	Project Number	PIN	STIP ID	Imp Type	Total Project Length	Environmental Type	RW Required	Begin Termini	End Termini	Total Est. Cost of Project	STIP Amend. No.
00			MET-258	23	0.000	DCE	No	N/A	N/A	415,252,873	

South Annex Base Expansion and Electrification

Upgrade South Campus in Tukwila by acquiring and installing electric charging infrastructure to support 250 new 100% electric buses; adding 14 vehicle maintenance bays, steam bay, inspection bay, bus exterior and interior wash bays, bus fueling, underground electric infrastructure and, operator spaces; daylight two branches of Riverton Creek, and add signalization and frontage improvements to support pedestrian and bicycle travel in the vicinity.

Funding

Phase	Start Date	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total
CN	2025	CMAQ	8,225,000		0	348,914,931	357,139,931
Project Totals			8,225,000		0	348,914,931	357,139,931

Expenditure Schedule

Phase	1st	2nd	3rd	4th	5th & 6th
ALL	0	0	357,139,931	0	0
Totals	0	0	357,139,931	0	0

South Annex Base

2023 RAISE Grant Proposal King County Metro: South Annex Base Project Merit Criteria Narrative



South Annex Base

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South Annex Base

01 – Merit Criteria

King County shares the Biden Administration's commitment and sense of urgency to address climate change and social equity. Since 2015 King County has been aggressively advancing policies and goals county-wide to address the biggest environmental and social justice issues of our time.

Metro's South Annex Base (SAB) project is a cornerstone project for King County in our efforts to reduce greenhouse gas emissions and redress inequities suffered by communities that have been historically underrepresented, underserved and suffer from the highest rates of air and environmental pollution in the region. The project is foundational to the County's ability to build the capacity necessary to expand service, fully electrify its bus fleet and prioritize the deployment of zero-emission buses to South King County, which has a higher proportion of Black and Indigenous people of color (BIPOC) and low-income populations than other parts the County.

King County Metro (Metro) serves as the local transit agency for King County, Washington, the largest metropolitan county in the Pacific Northwest. As of 2022, King County's population of 2.3 million makes it the 13th most populous county in the nation. Its employment of nearly 1.4 million makes King County the economic engine for the central Puget Sound region and Washington state.

To assist with implementation of this critical project, Metro is requesting \$25M in Rebuilding American Infrastructure with Sustainability and Equity (RAISE) funding. Metro is committed to the implementation of this project and has budgeted funding to complete the transit base and charging infrastructure for approximately 250 battery electric buses (BEBs) supporting its commitment to environmental sustainability, conversion to a zero-emission fleet, addressing social equity issues, and a sustainable transit facility.

With RAISE funding, Metro will construct a new bus base that will support Metro's current and future transportation services which connect residents to jobs, healthcare, education, and other critical destinations. The SAB project will enable Metro to respond to the King County area's long-term trends of population growth and rising ridership demand, especially in historically marginalized communities located in south King County, as well as their consequential traffic, safety, and sustainability challenges. Further, it will help Metro reach its goals of addressing eliminating emissions from its bus fleet by transitioning to a 100% zero-emissions electric bus fleet by 2035, while simultaneously addressing historic equity and social justice in under-served areas like South King County. The SAB will be built to Green Building Ordinance 17709 and Living Building Challenge (LBC) standards.

SAB will proactively address racial equity and barriers to opportunity by directly addressing disparities in access to transit service for the residence in South King County. Over the past decade, many people of color and low-income individuals have been displaced by gentrification to South King County, increasing the cost and commute times and reducing their access to opportunity.

Metro has made significant progress toward implementing the project including gathering community input, NEPA approval by the FTA, securing \$19M in funding from Washington State Legislature, and completing 30% level of design. The project is scheduled to break ground in 2025.

South Annex Base

Criteria	Compliance
Safety	Facility design improvements and bus operation efficiencies foster a safe transportation system for the movement of goods and people and reduce the number, rate, and consequences of bus accidents, fatalities, and injuries.
Environmental Sustainability	Reduces deadheading and idling, improves energy efficiency, reduces fleet emissions (goal of net zero emissions by 2035), and increases facility sustainability (Targeting Living Building Challenge (LBC) Energy Petal Certification).
Quality of Life	Addresses racial equity and barriers to opportunity by directly addressing disparities in access to transit service and in environmental health experienced by people of color in South King County including air quality, noise reduction, water quality, and environmental justice issues.
Mobility & Community Connectivity	Improves the accessibility and mobility for residents within and from areas with low income and low vehicle ownership. With increased freedom of choice regarding transportation options and improved connectivity to jobs, health care, education, retail, trail systems, airports, and other critical destinations.
Economic Competitiveness	Job Creation: The project will result in at least 3,235 jobs during the years of construction and 200 new full-time jobs during base operations, estimated to generate about \$177.4M in benefits over the life of the project.
State of Good Repair	Improves resilience and conditions of Metro’s transit system, addresses over-capacity conditions and challenges related to rapid population growth, and protects transit state of good repair through needed improvements and increased corrective maintenance.
Innovative Technologies	Incorporates innovative technology needed for the successful operations and maintenance of approximately 250 BEBs, including load management of electrical grid and charge management during the scaling-up phase of the project, software/IT solutions that resolve data transfer technologies, storage, access, and integration with Machine Learning and Artificial Intelligence.
Other	<p>Equity & Social Justice: Provides increased service to diverse, underserved populations and connects more ethnically diverse and working-class people who rely heavily on transit to utilize economically critical services. Facilitates long-term job creation and other economic opportunities in South King County, which has a higher concentration of working-class, lower-income and BIPOC populations. Supports transit connections within one Federally designated Qualified Opportunity Zone (QOZ), as well as to or from 13 adjacent QOZs.</p> <p>Significant Local Match: Metro has committed \$289.4M in local matching funds (84.7%), ensuring completion of this critical project.</p>

South Annex Base

01 - Selection Criteria

1.1 Safety

Safety is Metro's foremost goal, and METRO CONNECTS identifies the infrastructure and resources needed in order to make our system safe for our customers and our employees. All of Metro's seven bases, including South Base, are currently operating beyond optimal capacity, and are nearing the point of unstable operations—which means higher costs, deteriorating service quality, and increased safety risks.

The existing South Base facility was designed and constructed to store, maintain, and fuel 260 buses. Metro currently operates 263 buses at the existing facility. Prior to COVID-19, Metro operated 273 buses at the existing South Base facility. Metro expects that as we recover from COVID, the number will continue to increase. This has resulted in a very congested site with little room to maneuver buses. The crowded conditions increase safety concerns as drivers walk around the buses to conduct pre- and post-trip inspections. The facility is becoming increasingly unsafe and inefficient, and the congested, over-capacity site conditions escalate the potential for major incidents to an unacceptably high level.

The SAB project will improve safety outcomes at Metro's South Campus facility for employees and improve system operations by providing needed additional operational base capacity (approximately 250 buses) to accommodate the current and planned bus fleet that will operate out of SAB.

The project will improve employee safety by establishing a new, state-of-the-art, and sustainably designed facility. The existing South Base facility is aging and is currently at or exceeding capacity for operations. The new SAB will provide a safer environment for employees by providing modernized driver and maintenance facilities and by avoiding overcrowded bus storage, operations, and maintenance spaces.

Specifically, SAB will improve site and near-site safety measures including, but not limited to:

- 270-degree view from dispatch
- Secured perimeter and access-controlled buildings
- Secure employee parking
- Separate visitor parking and employee drop-off
- Safe and sufficient radius for sweeping from service to bus wash
- Consolidated delivery point
- Water detention used as buffer zone
- Improvements to nearby traffic signals and pedestrian walks.
- Pedestrian improvements along the street frontage

The implementation of the SAB project will also help reduce congestion and accidents in the regional transportation network. It will do so by creating the ability to maintain and store additional buses, allowing for increased transit service as called for in METRO CONNECTS and the Metropolitan Planning Organization's long-range plan. Increased service will induce a mode shift to public transportation, resulting in less congestion and accidents on the regional transportation network.

South Annex Base

In order to upgrade Metro’s other six operating bases to support the 100% conversion to a zero-emission fleet of battery electric buses by 2035, additional base capacity is needed. To support ongoing operations operated at these bases Metro must construct SAB to provide the needed capacity to maintain these current operations. The redevelopment of the other bases will provide Metro the opportunity to make safety improvements for operators, other employees working at the bases and the public that interacts with buses as they leave and enter the bases.

1.2 Environmental Sustainability

Environmental sustainability is one of the primary purposes of the SAB. The SAB project is the critical link in Metro’s goal of achieving a 100% zero emission bus fleet of over 1,394 buses by 2035.

In addition to enabling Metro to convert its fleet to zero emission vehicles the SAB project will redevelop existing infrastructure, will design and build new infrastructure to achieve LBC Energy Petal Certification, will mitigate the effects of climate change through reduced emissions from decreased automobile use and increased use of BEBs (zero emissions by 2035), and will promote equity and social justice by prioritizing zero-emission bus service to communities that have historically been most affected by air pollution.

Improved Sustainability

SAB is targeting LBC Energy Petal Certification, and will be designed, built, operated, and maintained with sustainable practices. Moreover, the SAB project will support the County’s 2020 Strategic Climate Action Plan (SCAP) Goals:

- No new natural gas use
- On-site renewable energy
- Increased energy efficiency
- Fleet electrification

Mitigating the Effects of Climate Change

Metro already operates the nation’s second-largest fleet of zero-emission electric buses; this project will help meet Metro’s goal for a zero-emission fleet by 2035. One full bus carries the same number of people as 60+ cars and Metro transit takes 175,000 cars off the road each weekday—significantly reducing harmful gas emissions.

King County Metro – an Industry Leader

The SAB project and its services will place Metro at the forefront of developing large-scale battery-electric bus bases in North America. This effort requires significant coordination and collaboration with utility partners and local stakeholders to achieve an on-schedule and on-budget completion by 2027. The lessons learned from this capital project will inform requirements for charging standards, safety, and design-and-construction methods. The lessons learned will facilitate 100% electric bus (battery/trolley) operations before 2040 and inform future projects nationally.

Redevelop Existing Infrastructure

The redevelopment of the existing SAB site is part of the planned South Campus expansion in Tukwila, Washington, which is set to house and maintain up to 250 BEBs by 2027, a major step toward the Metro goal of full electrification and zero-emissions by 2035. The project will comply

South Annex Base

with King County’s Green Building Ordinance (GBO) and SCAP, including the highest green building and sustainable development practices.

Social Justice and Sustainability

The [King County Equity and Social Justice Strategic Plan 2016-2022](#) prioritizes the redress of inequities and social injustice within our communities.

The new base at SAB will support an all-electric bus fleet serving South King County, an area with some of the lowest air quality in the Puget Sound region as determined by the Washington Tracking Network (WTN), a Washington State Department of Health program. In alignment with King County’s Equity and Social Justice (ESJ) Plan (2016) and King County’s equity impact review process, Metro completed analyses to prioritize deployment of zero-emissions buses to bus base facilities that serve communities which have historically been most affected by air pollution. Deploying the all-electric fleet at SAB will reduce transit vehicle air pollution, including carbon emissions and benefiting several vulnerable, highly ranked WTN Diesel and Disproportionately Impacted Communities affected by degraded air quality.

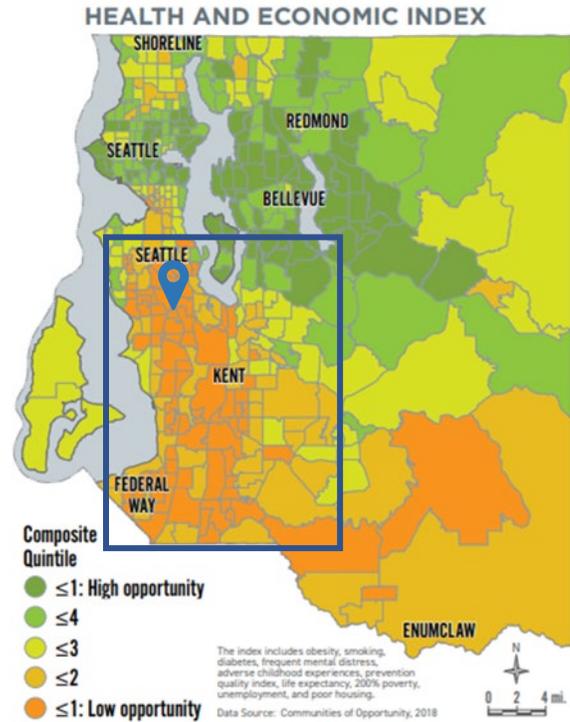


Figure 1: King County Health and Economic Index

SAB will also meet the needs embodied by equity and social justice by creating construction and transit jobs in South King County, and by creating opportunities for the adjacent community to participate in apprenticeship programs. Daylighting of two branches of Riverton Creek will also enhance the natural environment for the adjacent neighborhood and contribute to Tukwila’s goals for the Duwamish River. The SAB project will also reduce the noise impacts of both the operation of the base and the potential noise impacts of the buses on route in the South King County community.

Vehicle Emissions

The conversion to an all-electric fleet of buses will result in no additional operational greenhouse emissions. Electricity for SAB is provided by Seattle City Light who produces 100% carbon neutral power. Reduction in emissions would translate to increased quality of life for people living in the region due to the improvement of air quality.

Facility Sustainability

The SAB project will be designed and built to achieve LBC standards, which will decrease the impact of the building on its environment compared to a conventional facility. The building will have less negative impacts associated with construction and operations.

Building Emissions

The goal is to achieve LBC Energy Petal certification, resulting in significantly reduced building operation GHG emissions compared to a conventional building). Reduction in emissions would meet the requirements expressed in the County’s climate goals by designing, building, operating and

South Annex Base

maintaining with the highest green building and sustainable development practices consistent with King County’s GBO.

Energy Efficiency

The SAB project includes developing LBC Certified facilities which will help improve air quality.

Increased Resiliency

The SAB project improves the ecological function of the site by daylighting two branches of Riverton Creek, which results in improved habitat, water quality, and fish passage. Future Sea Level Rise has been considered in the design of the facility and designing for resiliency is being considered as part of the LBC.

1.3 Quality of Life

SAB will provide Metro the capacity to fully electrify its fleet without impacts to service. This will improve service and the environment, providing county-wide quality of life benefits. This project, however, specifically targets improvements to the quality of life for the residents of South King County who have been historically negatively impacted by transportation infrastructure decisions and resulting public health impacts. With the development of the SAB, Metro is proactively addressing racial equity and social justice within our communities by increasing transportation choices, affordability for residents, visitors, and public health in South King County. Metro is committed to providing additional transit service in areas with unmet need, defined as areas with: high density; a high proportion of low-income people, people of color, people with disabilities, and members of limited-English speaking communities; and limited mid-day and evening service.

Demographics of South King County

Many census tracts in South King County have a higher proportion of people who identify as black, indigenous, or people of color than the rest of King County. South King County also includes census tracts with a higher percentage of people with limited English proficiency, and lower income individuals. Table 1 and maps below illustrate the concentrations of these priority populations in South King County. According to the “Equity Priority Score”, a King County-specific blended metric that combines income, race, and language proficiency.

Table 1: South King County Demographics:			
House Holds (2020) – 272,577,183 and expected to add 90,070 more by 2044		Jobs (2020) - 351,441 and expected to add 154,070 more by 2044	
South King County Population – 704,029	BIPOC Population – 409,995 (58%)	Population with Disabilities – 76,695 (11%)	Limited English-Speaking Population – 103,895 (16%)
Population Below 200% Federal Poverty Level – 186,028 (26%)	Youth population – 166,801 (24%)	Senior population – 83,623 (12%)	

South Annex Base

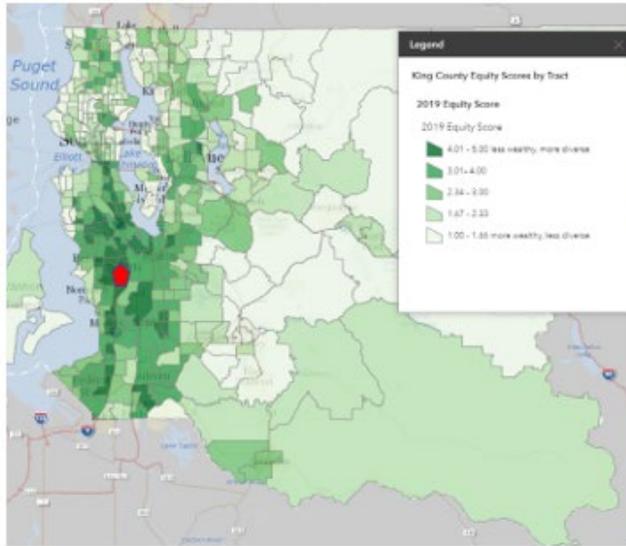


Figure 2: King County Equity Score by Census Tract

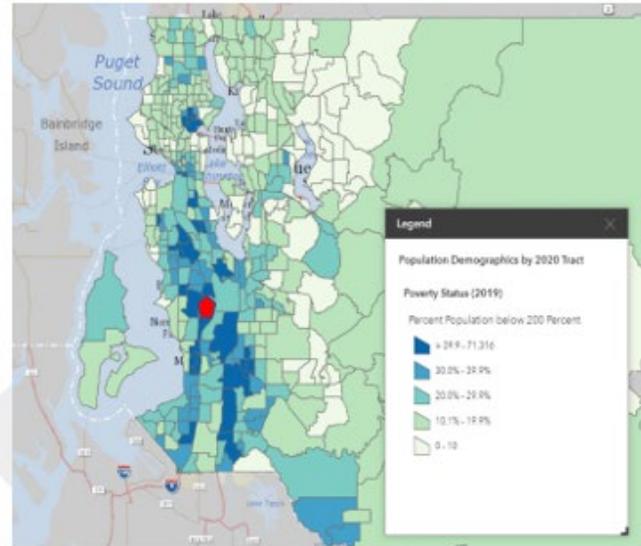


Figure 3: King County Poverty Status by Census Tract

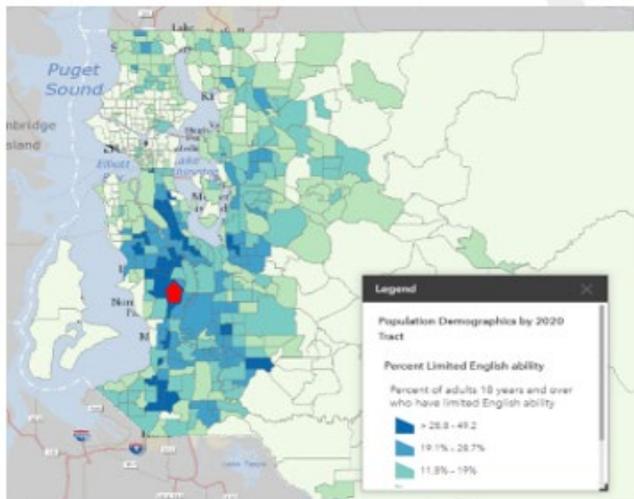


Figure 4: King County Percent Limited English Ability

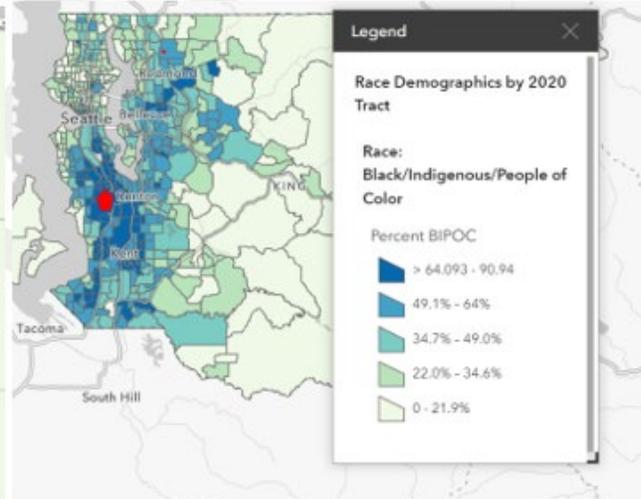


Figure 5: King County Black/Indigenous/People of Color

The construction of the South Annex Base is part of Metro’s planned expansion of service to South King County, to support the unmet need in that area and the equity-informed expansion of transit service identified in King County’s “[Mobility Framework](#).” The Mobility Framework was co-created with an Equity Cabinet of community stakeholders, including organizations focused on people of color, low-income individuals, people with limited English proficiency, and people with disabilities.

The project proactively addresses racial equity and barriers to opportunity by directly addressing disparities in access to transit service and in environmental health experienced by people of color in South King County. The analysis conducted as part of the Mobility Framework project recognized that South King County has been historically provided with less transit service (see Figure 9). In addition, in the past decade, many people of color and low-income individuals have been displaced

South Annex Base

by gentrification to areas in South King County, increasing the cost and time of their commutes and reducing their access to opportunity.

Noise Reduction

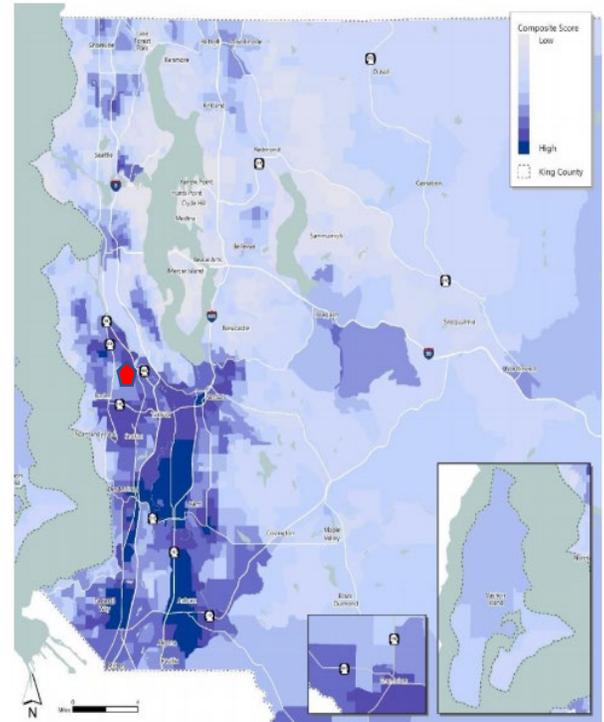
The SAB project will reduce the noise impacts of both the operation of the base and the potential noise impacts of the buses on route. Noise from the SAB bus fleet is expected to blend into background noise associated with existing roadways, and the use of battery-electric vehicles will reduce noise in neighborhoods served by bus routes compared to the use of hybrid diesel-electric vehicles. A 2018 German study reported up to a 14-decibel reduction for electric vs. diesel buses traveling at low speeds.¹ While actual impact depends on model of bus chosen and surrounding traffic, reducing noise impacts to any degree will benefit livability by minimizing the impact of bus routes on neighborhoods while on route.

Environmental Enhancement Benefits

The SAB project will significantly improve air and water quality in South King County. It will improve water quality in Riverton Creek and directly benefit the Duwamish River. Approximately 940 LF of creek will be daylight and restored, along with approximately 0.5 acres of riparian habitat. Environmental enhancement would augment livability and quality of life by improving stream temperature through riparian habitat plant selection, stream channel design, and floodplain connectivity; increasing dissolved oxygen for the benefit of fish and stream macroinvertebrates through natural aeration processes by creating varied in-stream habitat features (riffles, pools, and similar); and decreasing pollutant loading downstream through nutrient uptake and filtration from increased interspersed with vegetated riparian buffers on site. The project will also act as a catalyst for future daylighting of Riverton Creek upstream of the SAB site as future land use applications are received by the City of Tukwila. Methodologies for calculating benefits could include estimating the long-term benefits of stream restoration, both water quality and habit.

Social Justice and Quality of Life

South King County – the part of the county with disproportionately high percentages of people of color and people with limited English proficiency – also has the highest environmental health disparities. The project will address some of this environmental disparity by helping pilot Metro’s transition to an electrified fleet.



Source: American Community Survey (ACS) 2017 5-Year Estimate. King County Metro 2019.
 Figure 6: Low Access to Transit (darker shades indicate lower access to transit)

¹ “Modelling noise reductions using electric buses in urban traffic: A case study from Stuttgart, Germany, 21st EURO Working Group on Transportation Meeting, EWGT 2018, 17th-19th Sept 2018, Braunschweig, Germany.

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The project team has completed an environmental justice analysis as required by the FTA and it concluded that the SAB project will not result in any disproportionately high and adverse effects on minority and low-income populations, in accordance with Executive Order 12898 and USDOT Order 5610.2. Demographic analysis shows that the project area includes a high percentage of people of color, low-income individuals, and people with limited English proficiency (see Figure 7).

However, under the requirements of King County’s “Fair and Just” Ordinance ([No. 16948](#)), the county is required not to merely avoid or mitigate negative impacts on communities of color, but to actively seek opportunities to reduce inequities through our projects and investments. As described above, the investment in additional transit service in South King County will connect people of color and low-income individuals with jobs, educational opportunities, and access to health care and other community assets. The installation of electrified buses will reduce Metro’s impact on air quality in the area. Riders who use the new transit service instead of driving will also reduce emissions in the area.

Social Justice & Economic Opportunities

The project team conducted a community roundtable with community organizations and nearby residents to identify other potential opportunities, including job fairs, local economic development, and educational opportunities. In the next few months, the project team is planning to re-engage the community to determine how community needs and priorities may have changed after the experience of the COVID-19 pandemic.

In the procurement process, the consultants selected to design the project established a Small Business Enterprise (SBE) goal of 15% and committed to strategies for inclusion of businesses owned by women and people of color. SBE participants include FSi Consulting Engineers, HWA GeoSciences, Lin & Associates, and Triunity (a black-owned business).

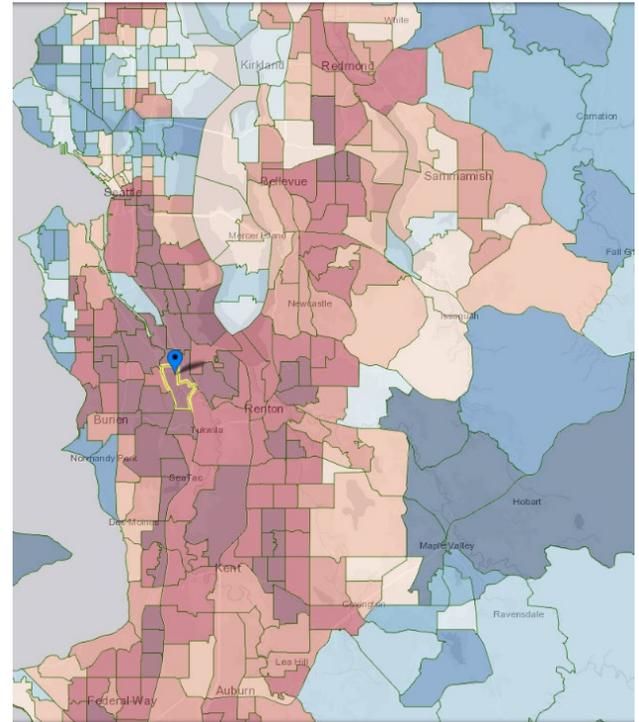


Figure 7: King County Census Tracts with Highest Percentages of People of Color and People with Limited English Proficiency

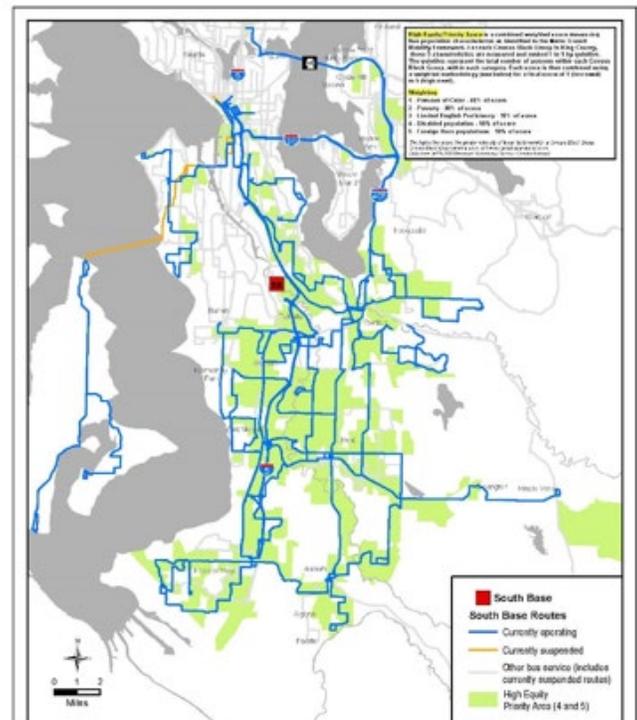


Figure 8: SAB Routes Intersection with High Equity Priority Areas

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Workforce Training & Job Opportunities

The project will be subject to King County’s apprenticeship requirements, which require 5-15% of labor hours be offered to apprentices and journey-level workers, in order to support individuals obtaining training for family-wage jobs. The project is also subject to a [community workforce agreement](#) that will encourage the participation of King County residents from areas with a higher percentage of people living under 200% of the poverty line, with high unemployment, and with many residents under 25 who do not have a college degree. The project is anticipated to create 100 to 150 jobs during constructions, and 400 to 500 family-wage jobs once in operation. Due to union seniority rules, which allow existing employees to “bid” for their preferred shifts and routes, not all of these new jobs will be available to area residents, but new and existing jobs in the South Base area will continue to support local economic activity, with employees purchasing food and otherwise patronizing local businesses.

In addition to consideration of equity in the procurement for the project, King County will implement equity and social justice requirements in the delivery of all aspects. The project is subject to King County’s Green Building Ordinance Scorecard and will conduct activities in response to the nine Equity and Social Justice (ESJ) credits reflected in the scorecard, including stakeholder communication, seeking opportunities to reduce inequity through design and construction, opportunities for advancing economic justice, and development of a project specific ESJ plan. As part of the design contract on the project, the selected design consultant (Jacobs), will develop this ESJ action plan in collaboration with community, and it will identify the actions the county can take through the project to reduce inequity. Jacobs will also help the county fulfill ESJ requirements linked to whatever sustainability rating system is adopted by the project (e.g., LEED, Living Building Challenge). The construction and construction management contracts will contain similar provisions and continue to carry out the ESJ requirements identified.

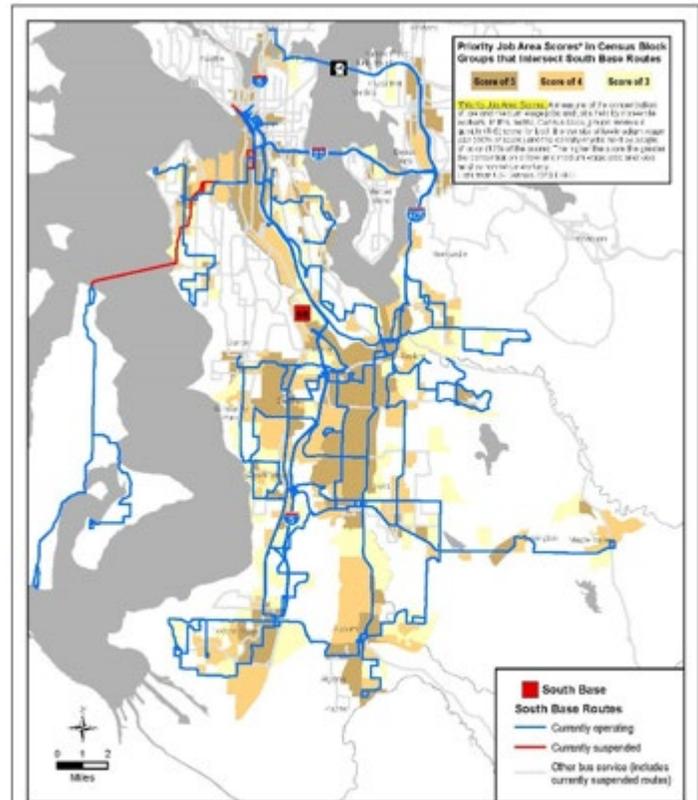


Figure 9: Transit Routes Operating out of SAB and Priority job Area Scores

1.4 Mobility & Community Connectivity

The SAB project will increase Metro’s bus capacity in the region and will help Metro serve a larger and more diverse population in South King County. Increasing bus capacity will allow Metro to run more routes and increase transit vehicles per capita. More transit in the area will directly increase ridership and will support first-mile-last-mile solutions for other modes of transportation. Both benefits help divert trips away from single occupancy vehicles. Modal Diversion would improve quality of life for residents in the region by giving riders more options to complete trips. Modal

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diversion can also improve quality of life by improving time travel reliability and reducing the impacts of other modes of transportation.

Improved Access to Essential Services

Areas with low income and low vehicle ownership in South King County also have low access to transit. This combination is a significant barrier to opportunities accessing jobs, education, and other critical services. During the COVID-19 pandemic, while many routes experienced lower ridership, many of the routes serving populations in South King County, such as RapidRide's A Line from Federal Way to Tukwila, exceeded capacity limits. The continued use of transit – during a time when many riders in other areas of the county were able to work from home or make alternative arrangements – further supports the existence of a transit-dependent population who rely on transit to commute and for other needs.

Completion of the SAB project will help Metro serve the growing, increasingly diverse population in South King County. Metro currently operates 26 routes out of the existing facilities at South Campus, serving over 30 communities. With approximately 250 additional buses (nearly doubling the existing base's capacity), SAB will allow for more efficient transit service to area cities and neighborhoods.

Reduced Auto Use

The project will decrease auto use in the service area. Increased bus usage brought on by transit growth in the area will decrease the amount of single occupancy vehicles on the road by improving modal diversion. Reduced auto use will eliminate greenhouse gas emissions that would have resulted from those trips.

1.5 Economic Competitiveness and Opportunity

The Benefit-Cost calculation for the Economic Competitiveness Criterion is focused primarily on jobs created by construction of the renovation and expansion, and on the new personnel that will be stationed at the project for new operations, maintenance, and administrative functions. The project will result in at least 3,235 job years during construction and 200 new full-time jobs during base operations, estimated to generate about \$932M in benefits over the life of the project.

Beyond these quantifiable job creation benefits, this project will contribute to the functioning and growth of the economy by improving the movement of goods and people and promoting the expansion of private economic development in Washington state through:

1. Reducing operating costs.
2. Decreasing the need for deadheading.
3. Improving social justice through economic competitiveness.
4. Saving passengers time and cost due to reduced travel.
5. Decreasing transportation costs and improving reliable and timely access to employment centers and job opportunities, especially for diverse communities in southern King County.
6. Helping reduce single-occupant automobile use, thereby reducing automobile congestion and preserving limited highway capacity, particularly during peak periods.
7. Improving long-term efficiency and reliability associated with the movement of workers.
8. Facilitating long-term job creation and other economic opportunities.
9. Leveraging one Federally designated Qualified Opportunity Zone (QOZ) with transit access.

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Operating Cost Savings

The evaluated project will reduce the operating cost of the SAB bus fleet by reducing fuel use in comparison to current fleet operations. SAB will be built to support an all-electric fleet of buses. In the short term, the fleet operating out of SAB is expected to be a combination of hybrid diesel-electric buses and BEBs, with a phased conversion to an all-BEB fleet in the future. A reduction in operating cost translates to a lower annual operating budget for a LBC Core + Energy Petal facility compared to a conventional hybrid facility. The project will realize immediate gains from the initial fleet combination and increased savings are expected as additional battery-electric vehicles are phased into the SAB fleet.

Value of Operation Cost Savings

In the Benefit-Cost Analysis, Operational Cost Savings are calculated by comparing the average vehicle maintenance cost and average fuel costs/charging costs for both a hybrid bus and a battery electric bus and subtracting the difference. Vehicle maintenance costs for both Diesel Hybrid Buses and BEBs are provided in 2020 dollars per mile. The average annual Vehicle Miles Travelled (VMT) for a transit bus in the United States is 43,647 miles. The total cost savings for vehicle maintenance is \$231M over the 20-year time period.

Fuel and charging costs are calculated off an assumed Year of Expenditure (YOE) cost. Diesel Hybrid buses are measured in YOE dollars per gallon, with an assumed 4 gallons per mile for a Diesel Hybrid Bus. BEBs are measured in YOE dollars per kilowatt hour. The total savings in fuel costs over the 20-year time period are more than \$525,000.

Job Creation

The project will increase the number of well-paying jobs in the area, both short-term for construction of the facility and long-term for the maintenance and operation of the expanded fleet. An increase in jobs will benefit the local economy. Current forecasts estimate that construction of SAB will generate 500-700 temporary construction employees during the three to four years of construction. Once the base opens for operation in late 2027, approximately 200 full-time employees will work at or out of SAB. To estimate the value of the jobs created by this project, the average annual wage for King County employees was multiplied by the new jobs generated by the facility construction and operation.

In addition to the jobs created for the direct construction and maintenance of SAB, SAB will positively impact the economy of South King County. The Council of Economic Advisors (CEA) within the Executive Office of the President released the most recent official estimate of the impacts of infrastructure investment on employment in 2011. This report estimated that every \$1 billion in spending would support 13,000 jobs for one year, the equivalent of one job-year per \$76,923 spent in capital funds. These jobs include direct, indirect, and induced jobs impacted by capital spending.

The final benefit value for job creation is a combination of the jobs created by the increased operations and temporary construction jobs, as well as the value of jobs created by infrastructure spending, with a total value of over \$1.1 billion.

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Deadheading

The project will decrease the need for deadheading (completing a trip without passengers) as Metro expands their fleet. A 2016 study determined that when left unconstrained, South Base, the location of SAB, is the closest base for new routes proposed for South King County. Expanding capacity at South Base has the impact of reducing deadheading costs for route expansion. In the BCA, the value of deadheading savings was calculated at nearly \$179M over the 20-year analysis period.

Social Justice and Economic Competitiveness

The project will increase Metro's bus capacity in the region and help Metro serve a larger and more diverse population in South King County. Increased service will help connect more people in these areas to employment and job opportunities. With a more ethnically diverse and working-class population than other areas, South King County relies heavily on transit. Metro currently operates 26 routes out of the existing facilities at South Campus, serving over 30 communities. SAB will allow for more efficient transit service to area cities and neighborhoods.

Travel Time Savings & Reliability

The SAB project supports improved speed and reliability for transit service in South King County. SAB allows the expansion of the bus fleet at South Campus, thus supporting more direct and more frequent service envisioned in METRO CONNECTS and translating to shortened travel time for Metro's typical transit rider. The expanded bus fleet will allow Metro to plan routes, expand service to support high ridership routes, and respond to delays or emergencies such as traffic or breakdowns more efficiently. A reduction in travel time translates into more time available for work, leisure, or other activities.

Job Creation, Economic Development, and Qualified Opportunity Zone (QOZ)

A Qualified Opportunity Zone (QOZ) is a tool designed to advance economic development and job creation in economically distressed communities. Metro's South Campus, including the SAB project, is located in QOZ no. 53033027200. While the QOZ benefits are tax incentives focused primarily on private investment, the SAB project supports the intent of the QOZ by creating temporary construction jobs, long-term jobs working at SAB, and providing increased transit service to, within, and around the QOZ and approximately 13 adjacent QOZs (10 of them contiguous). Job creation and the increased economic opportunities and activity associated with expanded transit access are central to the purpose for QOZs and will be supported by Metro's SAB project, even if Metro will not realize any monetary benefits.

Benefits in Contrast to No Build

The SAB project will have more benefits than a no-build scenario. The existing South Base facility is at or nearing capacity. A no-build scenario would negatively impact Metro's ability to supply reliable transit, respond to growth, and create a safe working environment for employees. Compared to a no-build scenario, increased transit service will improve speed and reliability throughout South King County, while also comparatively reducing operating costs to achieve these improvements. Metro's South Base is currently operating beyond optimal capacity and is nearing the point of unstable operations—meaning higher costs, deteriorating service quality, and increased safety risks.

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1.6 State of Good Repair

Metro has an urgent need to increase operational and bus base capacity. More capacity is needed to efficiently support near-term service demand, to accommodate the growth and enhancement of service envisioned in the [METRO CONNECTS](#) long-term plan, to accommodate the battery-electric buses and charging infrastructure coming in the near future, and to keep fleet and capital assets in a state of good repair.

The SAB project will improve resilience and conditions of Metro's transit system, the seventh largest transit bus agency in the US, carrying an average of 399,600 passengers each weekday on 227 routes prior to the pandemic (128 million total rides in 2019). It will address the current over-capacity condition of Metro's South Base and its challenges in sustaining and growing a sophisticated, diverse, modern transit fleet, as well as be a significant step towards Metro's climate goal of transitioning to a 100% zero-emission fleet by 2035. Major facility systems such as electrical, plumbing, HVAC, driving surfaces, staging areas, vehicle maintenance areas, and office spaces are being utilized at or beyond operational capacity. By continuing to operate at or exceeding planned capacities systemwide, this causes increased wear and tear, reducing anticipated lifespans and leading to reduced asset reliability. If left unimproved, these systems will deteriorate more rapidly than what they are designed for and will require more funding to support increased corrective maintenance. Metro will manage these systems using an Enterprise Asset Management System. This modern and dynamic management system ensures Metro's assets are properly maintained and work as designed throughout their useful lives.

Although the building footprint will be expanded, O&M costs will be moderated by modern, efficient, and sustainable building systems and designs. The SAB project will be designed and constructed per LBC Core + Energy Petal standards.

The SAB project is the foundation for current and future transit and transportation in this urban region, and as such, will contribute to maintaining Metro's system in a state of good repair and economic growth in this urban area. This project will allow Metro to expand its operations and maintenance functions, accommodate future transportation demands within its service area, and new demands based on the substantial projected growth in the greater Seattle area – all while utilizing existing Metro-owned property and redeveloping it to modern needs and standards.

1.7 Partnership and Collaboration

Metro has developed strong local and regional partnerships to help plan, design, and implement the SAB project. This is demonstrated by the broad range of [letters of support](#) from community-based organizations, broad-based political support, regional agencies, and other significant stakeholders.

Metro began the planning process for the SAB project in 2018 and immediately began outreach to stakeholders, seeking their input. In August 2019, Metro kicked off the SAB community engagement with a site walk and roundtable discussion with representatives from local communities and organizations. This outreach has included representatives from minority communities and other under representative organizations not typically included in transportation project outreach. Since then, Metro has continued to work with local community members and organizations on the project design and will continue to do so during construction of the project. To encourage participation from

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under representative communities and organizations, in 2020, Metro instituted a policy to compensate participants on advisory boards and oversight committees.

For 40 years, Metro has been working with the City of Tukwila on bus operations, where the South Campus facilities are located. As such, Metro has a strong, collaborative relationship with the City. Additionally, Metro and Seattle City Light, the local electric utility provider, have been engaged in cooperative and collaborate discussion on the process, methods, and capital investments that will be needed to be able to operate approximately 250 BEBs from this facility.

1.8 Innovation

Innovative Technologies

The elements of the SAB project that will utilize innovative technology are those needed for the successful operations of approximately 250 BEBs. These key areas include load management of the electrical grid and charge management during the scaling up phase of the project and software/IT solutions that resolve data transfer technologies (wi-fi/cellular/other), storage, access, and integration with Machine Learning and Artificial Intelligence.

The SAB project includes technologies that will enable the faster movement of buses from end to end, during the charging process. This will improve efficiency, reduce energy needs, and minimize infrastructure and fleet size investments. BEBs also benefit from advanced telematics that allow data from vehicles to support decisions that improve headway management and schedule adherence.

Innovative Project Delivery

SAB will support one of the largest deployments of BEBs in the country, and it will require an innovative approach to delivering the technology and project requirements. Similar to progressive delivery methods and lean principals, the project team will utilize Target Value Design as a means to drive to solutions that meet project requirements (scope, schedule, and budget). Shoulder-to-shoulder reviews will be utilized as a regular occurrence on the project. This method ensures tight alignment between Designer and Owner, where decisions are made and documented in real-time, which elevates the milestone reviews to validation of past decisions and removes the surprise factor and potential for re-work. This requires close collaboration between parties and consistent teamwork and key personnel participation. The project will utilize a phased design-bid-build procurement method comprised of separate construction packages, all sequenced to expedite the work, minimize construction risk, and provide greater transparency and certainty to project costs and quality.

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2023 RAISE Grant Proposal King County Metro: South Annex Base Project Project Readiness Section



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01 – Project Readiness

1.1) Technical Capacity

Metro has demonstrated the capacity to execute large and complicated capital projects with FTA funding such as the Capital Investment Grant program. Projects include implementation of six bus rapid transit lines and our Interim Base at the South Campus facility. King County has experienced capital project teams with highly qualified project managers leading this project. King County Metro transit engineers will provide review and oversight to the consultant teams.

The Design phases of the project will include programming the transit needs, performing Alternatives Analysis, public outreach, environmental review/documentation, schematic design, selecting the preferred alternative, full design process to create construction drawings for the new transit base and include the following: daylighting of the stream(s), maintenance and operations building, wash building, site layout for approximately 250 BEBs and the bus charging system for these buses. It will also include the resolution of the Value Engineering process, along with the reviews at the 60%, 90%, and 100% design milestones prior to issuing the drawings and specifications for construction. Metro’s engineering and consultant team will support the construction effort, including the submittal reviews, responding to requests for information / design clarifications, and inspections. The project will also include employee training, maintenance and operations documentation, commissioning, the start of BEB revenue service operations, and the closeout of contracts and the project.

In the most recent single audit [Single audit 2021](#) there were no findings and the 2022 Triennial Review conducted by the FTA, Metro was found to be compliant with FTA legal requirements to implement projects.

1.2) Project Schedule

The project schedule is summarized by milestones in Table 1 and Figure 1, with reference and alignment to the RAISE obligation and funding deadlines. The groundbreaking for the SAB project is scheduled for Q3 2025. These summaries are based on a mature, detailed project that includes major project milestones and activities to achieve these milestones, including all permitting approvals and procurement process.

Project Milestones	
Project Planning	COMPLETE
FTA NEPA Concurrence	3/21/21
Preliminary Design	2022 Q4
Final Design	2023 Q4
Notice to Proceed	2025 Q3
Operationally Complete	2027 Q3
Final Acceptance	2028 Q2

Table 1: Schedule Milestones

- All necessary activities to obligate the funding will be complete before September 30, 2027.
- NEPA was completed on 3/21/2021 and No right-of-way acquisition is required.
- Groundbreaking scheduled to occur in Q3 of 2025, with all funds expended by Q4 2028.

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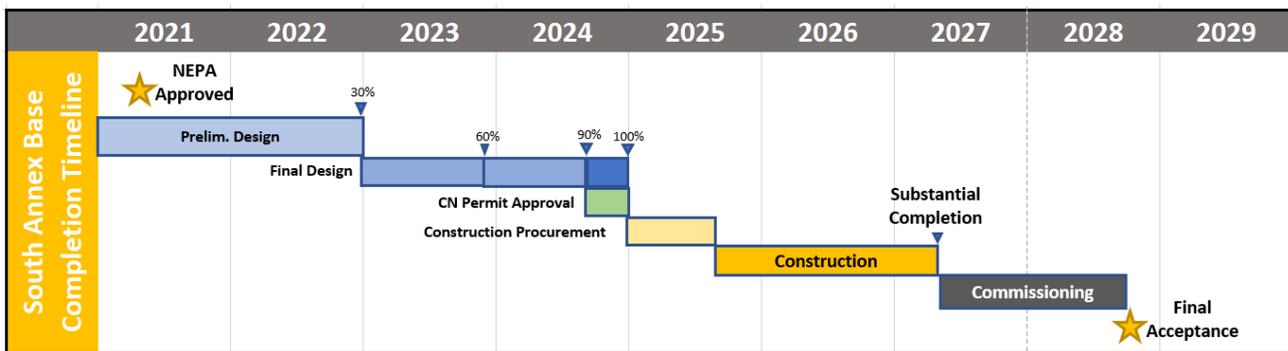


Figure 1: Project Timeline

1.3) Environmental Risks

1.3.1 NEPA Status

Metro’s SAB project qualifies for a Documented Categorical Exclusion (DCE) under the National Environmental Policy Act (NEPA) pursuant to 23 CFR Part 771.118(d)(6). Concurrence from the FTA was received on March 23, 2021. The project will not significantly impact the natural, cultural, social, or economic environment. The project provides adequate mitigation for potential minor and de minimis impacts to air quality, noise and vibration, and wetlands related to construction activities and long-term operation of the project. The project will provide a net benefit for transit speed and reliability, environmental justice, biological resources, and water quality. No other environmental impacts are anticipated. No further NEPA review is required. See supporting documentation for detailed information.

1.3.2 Reviews, Permits, Approvals

Information on Reviews, Approvals, and Permits by Other Agencies

FTA is the lead agency for the NEPA process and initiated consultation with the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS). Documentation for all environmental permits, reviews, and reports referenced in this section is included in the attached supporting documentation.

1.3.3 Environmental Studies

As part of the technical feasibility phase of work for SAB, the following environmental studies were prepared to evaluate potential project impacts and recommend appropriate mitigation:

- **Air Quality Analysis.** Project construction may result in short-term increases in fugitive dust and pollutants. Construction activities will implement appropriate best management practices to control and minimize air emissions consistent with Puget Sound Clean Air Agency standards. Diesel-engine or hybrid diesel-electric vehicles will have required emission control systems and will eventually be replaced with a battery-electric bus fleet. The project is below the threshold for a quantitative air quality analysis and is not predicted to result in new air quality impacts.
- **Biological Assessment with ESA Checklist.** Potentially occurring ESA-listed fish, bird, and mammal species are identified on and in the vicinity of the site, but no individuals of these species or suitable habitat for these species were identified or mapped on the project site or vicinity. Two branches of Riverton Creek flow across the site in underground pipes and confined

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channels. Riparian conditions are degraded due to existing development and infrastructure. The system lacks habitat elements necessary to support listed species.

- **Critical Areas Report.** Existing critical areas on and in the vicinity of the site include the East Branch of Riverton Creek, the West Branch of Riverton Creek, and Wetland A. All three features are tidally influenced by the Duwamish River. Impacts to these features are unavoidable due to Riverton Creek restoration efforts. Impacts will be minimized by limiting development to within the existing footprint of the facilities. All temporary impacts will be restored following construction.
- **Cultural Resources Analysis.** The project will not impact recreational properties that would trigger a Section 4(f) evaluation. A cultural resources inventory was conducted to support a Section 106 consultation. The archaeological survey performed found no significant archaeological resources and no further studies are recommended. No buildings over 45 years of age will be physically or visually impacted by the project and an architectural inventory was not required.
- **Daylighting Feasibility Report.** The project includes daylighting the East and West Branches of Riverton Creek and installing three fish-passable culverts to improve fish passage in the Riverton Creek system. Daylighting results in improved instream habitat, water quality, and fish passage.
- **Environmental Justice Analysis.** Environmental Justice (EJ) populations, including minority populations and low-income populations. The project is anticipated to result in a net benefit to the community, including the EJ populations, by supporting Metro's existing and planned transit service, supporting construction jobs and other multiplier economic benefits during construction, providing family-wage jobs, other providing environmental enhancements. The project will not result in any disproportionately high and adverse effects on EJ populations. Any impacts will be de minimis, blending into existing background traffic, air quality, and ambient noise in the vicinity.
- **Geotechnical Engineering Report.** The site soils have a moderate to high liquefaction susceptibility. A shallow groundwater table indicates a moderate to high risk of structural damage from soil settling due to an earthquake. Foundation alternatives and soil amendments or other stabilization features will mitigate liquefaction potential and geotechnical hazards.
- **Noise and Vibration Analysis.** There are no FTA Category 1, 2, or 3 properties (sensitive receivers) within the recommended screening distance for a maintenance base. The project will comply with applicable noise standards, including the City of Tukwila noise ordinance. Noise levels will not exceed FTA criteria or City of Tukwila limits. Mitigation includes project design features, best management practices, and other mitigation commitments and no noise impacts are anticipated. Vibration levels are not predicted to result in any impacts. Best management practices will be implemented during construction to manage any potential temporary impacts related to the project.
- **Phase 1 and Phase 2 Environmental Site Assessments.** Contamination on the site from a leaking underground storage tank on Metro's neighboring South Facilities site was remediated in the mid-1990s. Metro is pursuing a No Further Action (NFA) decision from the Department of Ecology for this site. No contaminant concentrations in soil borings exceeding cleanup criteria were identified on the site and no further investigation or cleanup of the project area is required. Construction and operations will be managed to ensure regulatory compliance for any hazardous

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materials, including the use of appropriate best management practices, a spill prevention, control, and countermeasures plan, and a stormwater pollution protection plan.

- **Stormwater Technical Memo.** The project site consists of approximately 13 acres of pollution-generating impervious and pervious surfaces. The redevelopment includes upgrading site stormwater and runoff treatment facilities to comply with the 2016 King County Surface Water Design Manual, including managing stormwater flow control and water quality. Following construction, the project site will have a net reduction of approximately 3,000 SF of pollution-generating impervious and pervious surfaces.
- **Traffic Study.** SAB is expected to generate approximately 1,630 daily vehicle trips to and from the site. Approximately 110 trips will occur during the AM peak hour and approximately 82 will occur during the PM peak hour. Peak bus movements will occur outside of peak commute hours. Traffic operations are expected to meet City of Tukwila standards for intersection levels of service (LOS). Proposed signalization and frontage improvements will enhance safety for pedestrians and bicyclists in the project vicinity. The proposal incorporates all applicable recommendations for mitigation and design to ensure impacts and risks are minimized.

1.4) DOT Communication

The project is not on a state right-of-way and does not impact state DOT-managed routes. No right-of-way acquisition is required. Some project elements, however, extend into WSDOT and City of Tukwila rights-of-way. WSDOT will issue a permit for restoration of Wetland A. Frontage improvements and signalization will occur in the City of Tukwila's E Marginal Way right-of-way. Metro will acquire a temporary construction easement. Upgrades to pavement and culverts in South 120th Place, a private roadway access easement, are proposed and will be coordinated with the property owner.

1.5) Public Engagement and Integration into Project Design

Metro conducted a community outreach meeting with stakeholder organizations in the region, including a roundtable meeting and site visit to initiate. The meeting focused on equity and social justice measures that could be implemented as part of the project design and construction, in compliance with King County's internal policies. These equity and social justice measures provide discrete benefits tailored to community preferences and are largely related to environmental improvements. Community comments are being integrated into the project design. A plan for additional public outreach has been developed for the project. The plan will be implemented during subsequent stages of design, from 30% through construction. The plan outlines outreach activities, including virtual community and stakeholder meetings, interactive online open houses, community mailers, and informational signage and an information booth at Metro's South Campus.

1.6) State and Local Approvals

A permitting strategy and estimated schedule have been prepared for the project to provide an efficient review process for the duration of the permitting efforts. These have been integrated into the project schedule to minimize or eliminate delays associated with state and local permitting processes. The current project schedule estimates entitlement and permit submittal when 90% design level project plans and technical studies are complete.

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- **State Approvals.** In addition to Federal reviews, and approvals, the proposal will trigger State permits and approvals under multiple agencies prior to beginning construction work, including: Washington Department of Ecology will issue a Section 401 Water Quality Certification, a Construction Stormwater General Permit, and a Coastal Zone Management (CZM) Determination of Consistency prior to construction activities beginning on site. Washington Department of Fish and Wildlife will issue a Hydraulic Project Approval for work in Riverton Creek and Wetland A. Washington State Department of Transportation will issue a permit for work in Wetland A.
- **King County Approvals.** King County will act as Lead Agency to perform State Environmental Policy Act (SEPA) review. Specific permits and approvals are customarily initiated by contractors performing work in King County when preparing to mobilize on the site. SEPA review will be completed when project design has advanced further.
- **City of Tukwila Approvals.** The project is consistent with Tukwila's Comprehensive Plan and zoning code and will be designed to be consistent with applicable design, dimensional, parking, access, stormwater, and environmental regulations in effect at the time of permit submittal. City of Tukwila entitlements and construction permits will be required for the work, including an Unclassified Use Permit to approve the proposed land use and several administrative entitlements to approve various project components.

1.7) Assessment of Project Risks and Mitigation Strategies

Project risks are minimal, based on the technical feasibility and environmental studies and the NEPA process being complete.

- **Local Permit for Daylighting Riverton Creek.** Daylighting Riverton Creek is an aspect of the project for which permitting requirements are not clearly defined by the City of Tukwila. This is a high-priority project component for the City and mitigation includes close coordination with City staff to verify applicable code requirements and permit processes.
- **High Water Groundwater Table and Stormwater Requirements.** The high water table and compliance with the City of Tukwila's adopted Stormwater Management Manual could impact stormwater management strategies and result in increased costs. Initial stormwater review occurs the UUP, followed by a second review with construction permits. Approval is not vested through the UUP review and delays in submitting construction permits could trigger last-minute design changes if stormwater requirements are changed by the City of Tukwila. Mitigation includes discussion with the Tukwila Department of Public Works to remain updated of potential changes to stormwater regulations and timely submittal of construction permits after approval of the UUP.
- **Construction Price Escalation.** Escalation and contingency costs are incorporated into King County Metro's budget for this project.
- **Property Owner Agreements.** Culvert upgrades and roadway upgrades along the S 120th Place private road will require coordination with the adjacent property owner(s). Reaching an agreement could be a lengthy process and the property owner may desire design changes that could impact project costs. To mitigate this risk, Metro has already engaged the adjacent property owner in discussions about the project.