

Resolution No. R2023-17

Baseline Budget and Schedule for the Bus Base North Stride Bus Rapid Transit Project

Meeting:	Date:	Type of action:	Staff contact:
System Expansion Committee Board	07/13/2023 07/27/2023	Recommend to Board Final action	Brooke Belman, Deputy CEO, Chief Expansion Delivery Officer Ron Lewis, DECM Executive Director Bernard Van de Kamp, Program Executive

Proposed action

Adopts the Bus Base North Stride Bus Rapid Transit project baseline schedule and budget by (a) increasing the authorized project allocation to-date by \$216,463,500 from \$283,036,500 to \$499,500,000, (b) decreasing the annual allocated budget by \$2,593,000 from \$23,921,000 to \$21,328,000, and (c) establishing the project open for service date of Q4 2027.

Key features summary

- The Bus Base North Stride Bus Rapid Transit project will have a baseline budget of \$499,500,00. The combined Stride Bus Rapid Transit (BRT) program will have a total baseline budget of \$2,350,000,000 in year-of-expenditure dollars (YOE\$).
- The Stride BRT program is comprised of three projects (I-405 BRT, SR 522/NE 145th Street BRT, and Bus Base North), each of which will be baselined individually. Each project will maintain its own budget and contingency that are not allowed to be shared among the Stride BRT projects without board approval.
- The Bus Base North project exceeds the Spring 2023 Financial Plan cost estimate by approximately 31%. The total proposed program budget exceeds the re-alignment cost estimate as assumed in the financial plan by approximately 14%.
- The increase in project cost is primarily due to significant inflation, especially in electrical and mechanical components, as well as underlying market conditions. Additionally, there are enhanced sustainability measures, aesthetic considerations, and operational requirements that have contributed to the cost increase. These additions to scope include a larger stormwater detention facility, expanded administration and operations buildings, and additional maintenance, command center, communication, and battery electric bus charging equipment. The project has also experienced schedule impacts, which have led to additional costs.
- The current authorized project allocation includes budget to complete the final design, right-of-way acquisitions, and a limited number of construction projects.
- The proposed increase of project allocation will provide the reasonably foreseeable budget for the remaining agency administration, design, acquisition of right-of-way, construction, construction services, and third-party activities to complete all Bus Base North project elements.
- The proposed baseline budget and opening service date for each project are consistent with the Sound Transit Program Control Policy & Procedure, which requires baselining the project budget

and schedule at a minimum 80% confidence level, or P80, based on the Quantitative Risk Assessment (QRA). One of the key factors considered in the QRA is the assumption that inflation and market conditions would stabilize at a more predictable level of up to 4-5% annually, as opposed to the extraordinary inflation experienced in the past two years.

- The program schedule indicates that Bus Base North could be opened for service in 2026, approximately one year later than the Program Realignment Affordable and Target Schedule Milestones. However, due to risks and uncertainties involved, the proposed baseline milestones, based on the QRA P80 dates, forecasts the opening date to be in Q4 2027.

Background

A Bus Rapid Transit (BRT) system is part of Sound Transit's 2016 voter-approved system expansion program ST3. BRT will provide fast, reliable high-capacity transit service every ten minutes at peak for both the I-405, and SR-522/NE 145th Street BRT corridors (and every 15 minutes off-peak for the I-405 BRT), providing connections to light rail service in Bellevue, Tukwila, Shoreline and Lynnwood.

Stride service lines will replace existing ST Express regional bus service currently run by transit partners. The S1 Line: I-405 South will replace Route 560, the S2 Line: I-405 North will replace Route 535, and the S3 Line will replace Route 522. Stride buses will be connecting to light rail and to communities north, east, and south of Lake Washington.

Bus Base North (BBN), the first Sound Transit bus operations and maintenance base, will serve the full Stride BRT fleet and a portion of the ST Express fleet, with a total capacity of 120 buses. The 24/7/365 operating facility will provide storage, maintenance, charging, fueling, washing, repairs and deployment of the bus fleet. The facility will be the reporting location for the bus operators, will include an Operations Control Center, and accommodate training and management functions. It will house staff and supplies for offsite facility maintenance (i.e. station shelters). BBN will be the head-end for many of the BRT bus systems and communications networks.

In 2019, staff was advancing the BBN project using the design-build project delivery method based on the lessons learned and experience from the successful delivery of the Link Operations and Maintenance Facility East. However, in early 2020 at the beginning of the COVID-19 pandemic and the program realignment process, the project activities were placed on hold, except for environmental studies. The delivery method was shifted to design-bid-build to accommodate the program realignment work. In the fall of 2020, the Board identified the Bus Base North as a project to advance through near-term actions to prioritize its implementation. Subsequently, Resolution No. R2021-05 identified the Bus Base North project as a Tier 1 project.

Sound Transit issued a State Environmental Policy Act (SEPA) Determination of Nonsignificance (DNS) for the Bus Rapid Transit Maintenance Base project on August 10, 2020. Sound Transit issued a SEPA Addendum to the DNS on August 5, 2021, to share additional analysis with interested parties related to traffic and roadway conditions. As final design progresses, Sound Transit will evaluate design refinements to determine if additional environmental review is warranted. In August 2021, the preliminary engineering of the bus base resumed after the board adopted Resolution R2021-06 selecting the Project to be Built for the Bus Base North Project.

Since then, the design team has advanced the design to the 60 percent level. In February to May 2023, Sound Transit performed cost estimates based on the 60 percent design and conducted a quantitative risk assessment of the project. The risk assessment informed the proposed baseline budget and schedule. There will be updates to the construction estimates at the 90% and 100% design stages. The project will be brought to 100% design by Q3 2024.

Project status

Project Identification	Project Refinements	Conceptual Engineering/ Environmental Review	Preliminary Engineering	Final Design	Construction
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The proposed Open for Service milestone for the Bus Base North project: Q4 2027.

Project scope, schedule and budget summary are located on page 147 of the May 2023 Agency Progress Report.

Fiscal information

This action establishes the baseline budget and schedule for the Bus Base North project. The authorized project allocation is increased by \$216,463,500 from \$283,036,500 to \$499,500,000. The annual project budget is decreased by \$2,593,000 from \$23,921,000 to \$21,328,000.

The baseline budget will fund the project through revenue service by amending the authorized project allocation in the following phases: agency administration, preliminary engineering, final design, third-party agreements, right-of-way, construction, and construction services.

Bus Base North

(in thousands)

Phase	Annual Project Budget			Authorized Project Allocation		
	Adopted 2023 Annual Allocation	Allocation Change	Revised 2023 Annual Project Allocation	Authorized Project Allocation (Current)	Allocation Change	Authorized Project Allocation (New)
Agency Administration	\$4,378	(535)	\$3,843	10,168	\$31,712	\$41,880
Preliminary Engineering	20	(11)	9	1,885	155	2,040
Final Design	12,507	2,465	14,971	21,426	8,354	29,780
Third Party Agreements	516	(111)	405	696	6,445	7,140
Right of Way	5,950	(4,422)	1,528	47,687	(2,887)	44,800
Construction	300	136	436	199,675	154,665	354,340
Construction Services	250	(114)	136	1,500	18,020	19,520
Vehicles						
Contingency						
Total	\$23,921	(2,593)	\$21,328	\$283,037	\$216,464	\$499,500

Notes:

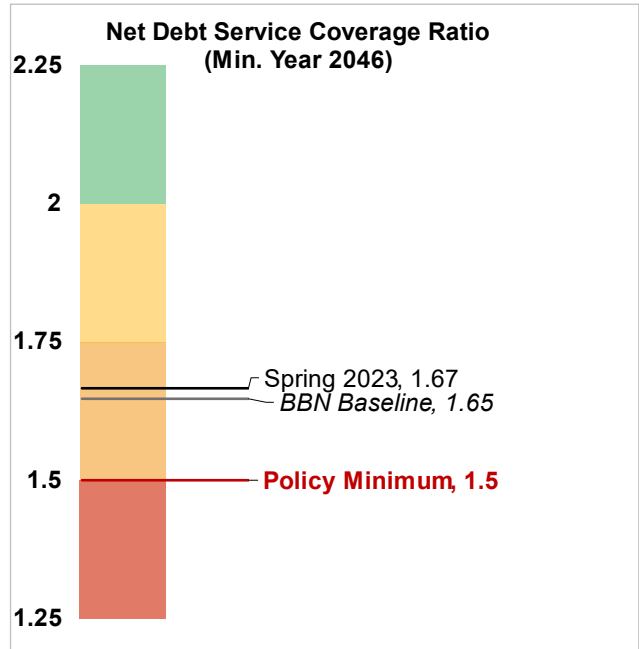
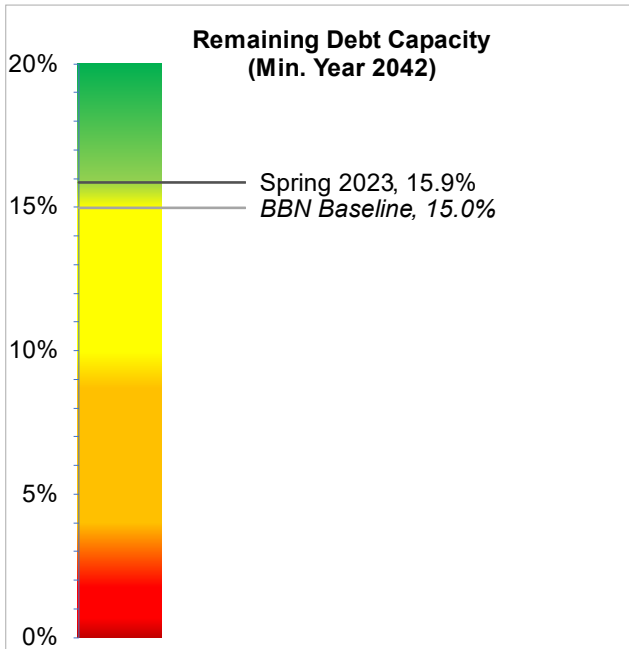
Amounts are expressed in Year of Expenditure.

Affordability and Impact on Financial Plan

The Spring 2023 Financial Plan cost estimate for the combined Stride program is \$2,062M (YOES), while the proposed baseline budget is \$2,350M (YOES). The proposed program baseline budget is \$288M, 14%, higher than the Agency's Financial Plan assumption.

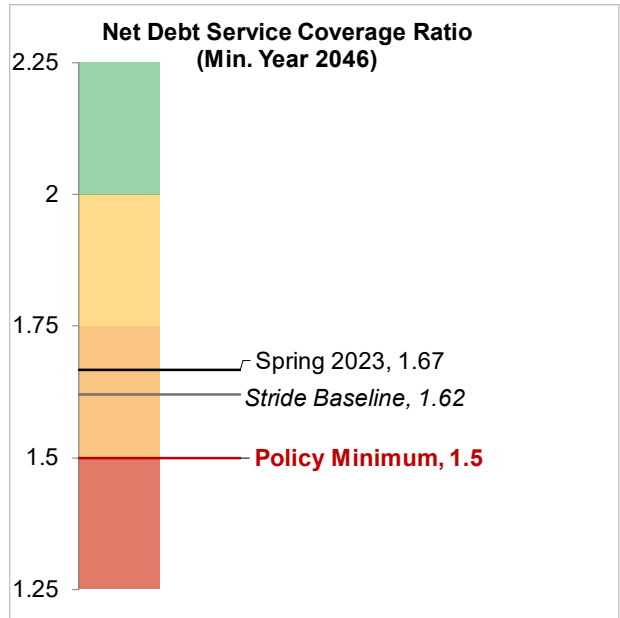
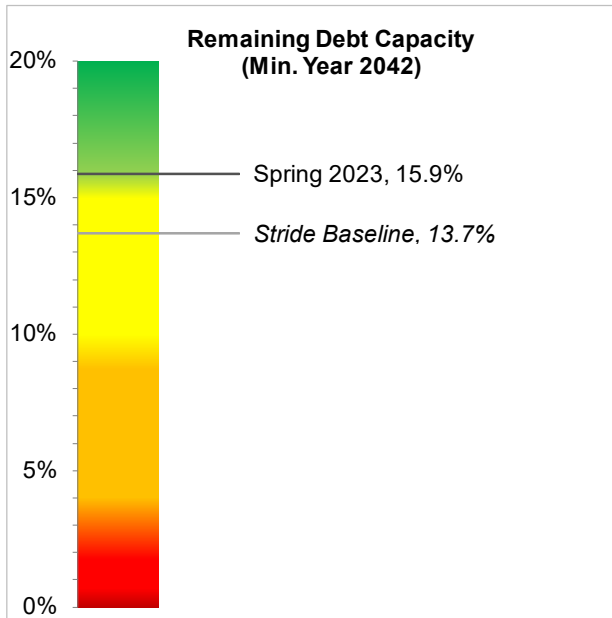
The Bus Base North project itself exceeds its financial plan assumption by approximately \$118M (31%). The proposed baseline budget for the Bus Base North Bus Rapid Transit project would decrease the remaining debt capacity by a projected 0.9% and net debt service coverage by 0.02; the resulting debt capacity and coverage ratio would be 15.0% and 1.65, respectively.

Bus Base North Affordability and Impact on Financial Plan



The proposed baseline budgets for the entire Stride Bus Rapid Transit program would decrease remaining available debt capacity by a projected 2.2% and net debt service coverage by 0.05; the resulting debt capacity and coverage ratio would be 13.7% and 1.62, respectively.

Stride Bus Rapid Transit Program Affordability and Impact on Financial Plan



Sustainability Cost Allocation

As per Resolution No. R2022-21, authorizing a change to the Sustainability Cost Estimates maintained in the Financial Plan, funds from the agency’s Sustainability Cost Allocation (SCA) will be authorized for the Stride BRT project as part of the baseline budget. Project leadership, in coordination with sustainability staff, will determine how these funds will be used on the project.

The following table documents the SCA Fund by subarea in 2023\$ in millions that will be applied to the Stride BRT program by project. Following board approval of this action, the SCA Fund will be reduced in the Financial Plan from \$131.44 million (2023\$) to \$125.72 million (2023\$).

All Costs 2023\$ in Millions		Transfer for Baseline Milestone				Remaining SCA Fund
Subarea	SCA Fund*	I-405 BRT	SR 522/ NE 145th St BRT	Bus Base North	Total	
Snohomish	\$ 30.82	\$ 0.02	\$ -	\$ 0.14	\$ 0.17	\$ 30.65
North King	\$ 38.65	\$ -	\$ 0.41	\$ -	\$ 0.41	\$ 38.24
South King	\$ 12.23	\$ 0.15	\$ -	\$ 0.90	\$ 1.05	\$ 11.18
East King	\$ 22.90	\$ 0.54	\$ 0.31	\$ 3.25	\$ 4.10	\$ 18.80
Pierce	\$ 26.85	\$ -	\$ -	\$ -	\$ -	\$ 26.85
Total	\$ 131.44	\$ 0.71	\$ 0.71	\$ 4.29	\$ 5.72	\$ 125.72

*SCA Fund as of Resolution No. 2022-21 converted to 2023\$ using Spring 2023 Indices.

Disadvantaged and small business participation

Not applicable to this action.

Public involvement

Sound Transit is committed to proactively engaging and empowering communities along the Bus Base North BRT Project corridor. The overarching goals for the stakeholder involvement program are to create public trust and build relationships through transparent communication, meaningful involvement, and responsiveness to comments. Project engagement along the corridor includes local and elected leaders, agency partners, businesses, residents, and other stakeholders to help shape the program. Sound Transit’s open, inclusive, and ongoing stakeholder involvement program includes a variety of tools and techniques to inform and engage the public.

Time constraints

A one-month delay would not create a significant impact to the project’s proposed baseline schedule of Q4 2027. However, it is important to note that the timely completion of the bus base is crucial for receiving the buses and initiating integrated system testing for the I-405 and SR 522 BRT Service Lines, particularly for S3. Any delay in the bus base project could potentially result in schedule implications for other BRT projects. Therefore, it is important to ensure that the bus base project stays on track to avoid any cascading effects on the overall project schedule.

Prior Board/Committee actions

Resolution No. R2021-06: Selected the project to be built for the Stride Bus Rapid Transit Maintenance Base project supporting the I-405 and SR522/145th Bus Rapid Transit projects

Resolution No. R2021-05: Established a flexible and accountable framework to implement ST2 and ST3 projects.

Environmental review – KH 6/29/23

Legal review – MT 7/7/23



Resolution No. R2023-17

A RESOLUTION of the Board of the Central Puget Sound Regional Transit Authority adopting the Bus Base North Stride Bus Rapid Transit project baseline schedule and budget by (a) increasing the authorized project allocation to-date by \$216,463,500 from \$283,036,500 to \$499,500,000, (b) decreasing the annual allocated budget by \$2,593,000 from \$23,921,000 to \$21,328,000, and (c) establishing the project open for service date of Q4 2027.

WHEREAS, the Central Puget Sound Regional Transit Authority, commonly known as Sound Transit, was formed under chapters 81.104 and 81.112 of the Revised Code of Washington (RCW) for the Pierce, King, and Snohomish Counties region by action of their respective county councils pursuant to RCW 81.112.030; and

WHEREAS, Sound Transit is authorized to plan, construct, and permanently operate a high-capacity system of transportation infrastructure and services to meet regional public transportation needs in the Central Puget Sound region; and

WHEREAS, in general elections held within the Sound Transit district on November 5, 1996, November 4, 2008, and November 8, 2016, voters approved local funding to implement a regional high-capacity transportation system for the Central Puget Sound region; and

WHEREAS, in November 2016, the voter approved ST3 Plan included funding to implement a regional high-capacity Bus Rapid Transit system; and

WHEREAS, the Bus Base North project is one component of the Stride BRT Program; and

WHEREAS, Resolution No. R2021-05 identified the Bus Base North project as a Tier 1 project to proceed without funding delay; and

WHEREAS, Resolution No. R2021-06 selected the project to be built for Stride Bus Rapid Transit Maintenance Base supporting the I-405 and SR522/145th Street Bus Rapid Transit projects; and

WHEREAS, in the spring of 2023, Sound Transit performed a quantitative risk assessment of the 60 percent design, and the results validated that Sound Transit's baseline estimate and schedule were reasonably adequate.

NOW, THEREFORE, BE IT RESOLVED by the Board of the Central Puget Sound Regional Transit Authority that the Bus Base North Stride Bus Rapid Transit project baseline schedule and budget is adopted by (a) increasing the authorized project allocation to-date by \$216,463,500 from \$283,036,500 to \$499,500,000, (b) decreasing the annual allocated budget by \$2,593,000 from \$23,921,000 to \$21,328,000, and (c) establishing the project open for service date of Q4 2027.

ADOPTED by a supermajority of the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on July 27, 2023.



Dow Constantine
Board Chair

Attest:



Adam Montee, on behalf of
Kathryn Flores
Board Administrator