



Resolution No. R2023-18

Baseline Budget and Schedule for the I-405 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 I-405 Stride Bus Rapid Transit project baseline schedule and budget by (a) increasing the authorized project allocation to-date by \$402,618,123 from \$866,381,877 to \$1,269,000,000, (b) decreasing the annual allocated budget by \$45,806,704 from \$167,827,704 to \$122,021,000, and (c) establishing the project open for service dates of Q3 2028 for the S1 Line and Q2 2029 for the S2 Line.

Key features summary

- The I-405 Stride Bus Rapid Transit project will have a baseline budget of \$1,269,000,000. The combined Stride program will have a total baseline budget of \$2,350,000,000 in year-of-expenditure dollars (YOES).
- 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 I-405 BRT project exceeds the Spring 2023 Financial Plan cost estimate by approximately 7%. 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 can be attributed primarily to the underlying market conditions in the construction industry. This includes bid prices for projects such as the I-405/NE 85th Interchange and I-405 Brickyard to Canyon Park Improvement that have substantially exceeded the engineer's estimate. Additionally, there has been significant inflation affecting the cost of the I-405 bus fleet. Moreover, there are additional scope elements required for the electric bus charging facility at three layover sites, additional scope at the South Renton Transit Center for a 200-stall temporary park & ride, and the need to meet site-specific environmental compliance requirements. The project has also experienced schedule impacts, which have led to additional costs.
- The proposed baseline budget does not include betterment works at the South Renton Transit Center with King County Metro, and with a private developer at the Tukwila International Blvd. Station. Staff will seek approval of the betterment funding agreements from the Board upon completion of the agreement negotiations. Consistent with Sound Transit Policy, these betterments will not have an impact on the Financial Plan.

- The I-405 BRT-related parking projects at South Renton Transit Center, NE 44th, and Kingsgate were put on hold during the pandemic and eventually deferred to future years as Tier 4 projects in Board Resolution No. R2021-05. The sunk costs of these projects, such as environmental assessments but not the future design, construction, right-of-way, and project administration budgets, are included in Stride's Proposed Baseline. However, the South Renton Transit Center baseline scope and budget include a 200-stall surface parking to be utilized as a temporary park & ride until the construction of the structured parking facility begins, as necessary to support a 2034 opening date.
- The current authorized project allocation includes budget to complete the final design, right-of-way acquisitions, and certain joint-construction projects with WSDOT.
- 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 I-405 BRT 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 the I-405 BRT S1 Line could be opened for service in 2027, and S2 Line in 2028, 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 of S1 Line in Q3 2028, and S2 Line in Q2 2029.

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.

The I-405 BRT project will establish a BRT system from the Lynnwood Transit Center to the Burien Transit Center via I-5, I-405, and SR 518. The project consists of several elements, including new and upgraded transit centers, new park-and-ride capacity, freeway BRT stations, and non-motorized access improvements to the stations. Sound Transit components that are within WSDOT's Brickyard to SR 527 Improvement Project are part of the I-405 BRT north line (S2). The I-405 BRT will connect to the regional transit system at three Link light rail stations and the SR 522/NE 145th BRT line.

The I-405 BRT Project establishes BRT service within the I-405 corridor, primarily operating in managed lanes for 37 miles between Lynnwood and Burien. This project builds upon a history of prior transportation planning studies, including the WSDOT I-405 Master Plan, the Regional Transit Long-Range Plan, and the ST3 System Plan. Project development began in 2018 and involved planning, environmental studies, and preliminary design of BRT elements, including routes, 11 pairs of BRT stations, and parking facilities.

At the beginning of the COVID-19 pandemic and the program realignment process, the project activities focused on finalizing the environmental studies, preliminary engineering, and establishing a strategic design/construction partnership with WSDOT. During the realignment process, the Board instructed staff to pursue delivery efficiencies and cost savings. In the fall of 2020, the Board designated the I-405 BRT as a project to advance through near-term actions to prioritize its implementation. Subsequently, Resolution No. R2021-05 identified the I-405 BRT project as a Tier 1 project. The associated parking facilities were identified as Tier 4 projects, with a 10 or more year delay in delivery.

In September 2021 the board adopted Resolution No. R2021-08, selecting the Project to be Built, which confirmed the station locations and identified speed and reliability improvements.

Throughout 2022, Sound Transit advanced the final design of stations and roadway improvements and executed design/build construction funding agreements with WSDOT for the NE 85th Station, Transit Hub, and the Brickyard and Canyon Park Stations.

From February to May 2023, Sound Transit performed cost estimates based on 60 percent design and conducted a quantitative risk assessment of the project. The risk assessment informed the proposed baseline budget and schedule.

Sound Transit issued a State Environmental Policy Act (SEPA) Determination of Nonsignificance (DNS) for the I-405 BRT Project on September 30, 2020. Sound Transit has partnered with WSDOT on the design, environmental review, and delivery for some components of the project. Sound Transit coordinated with the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) to prepare National Environmental Policy Act (NEPA) documentation to inform federal approval and/or grant funding decisions for elements of the project in 2022 and 2023. As final design progresses, Sound Transit will evaluate design refinements to determine if additional environmental review is warranted.

Project status

Project Identification	Project Refinements	Conceptual Engineering/ Environmental Review	Preliminary Engineering	Final Design	Construction
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The proposed Open for Service baseline milestones for the I-405 BRT project: Q3 2028 for the S1 Line and Q2 2029 for the S2 Line.

Project scope, schedule and budget summary are located on page 151 of the May 2023 Agency Progress Report.

Fiscal information

This action establishes the baseline budget and schedule for the I-405 Bus Rapid Transit project. The authorized project allocation is increased by \$402,618,123 from \$866,381,877 to \$1,269,000,000. The annual project budget is decreased by \$45,806,704 from \$167,827,704 to \$122,021,000.

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, construction services, and vehicles.

I-405 Bus Rapid Transit

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	7,770	(1,278)	6,492	24,214	28,006	52,220
Preliminary Engineering	4,044	(529)	3,515	43,458	82	43,540
Final Design	14,087	(1,945)	12,142	21,365	4,765	26,130
Third Party Agreements	835	(432)	403	4,647	1,163	5,810
Right of Way	9,179	(3,358)	5,821	47,103	6,397	53,500
Construction	129,819	(38,094)	91,725	664,779	298,771	963,550
Construction Services	2,094	(171)	\$1,923	2,816	27,374	30,190
Vehicles				58,000	36,060	94,060
Contingency						
Total	\$167,828	(45,807)	\$122,021	\$866,382	\$402,618	\$1,269,000

Notes:

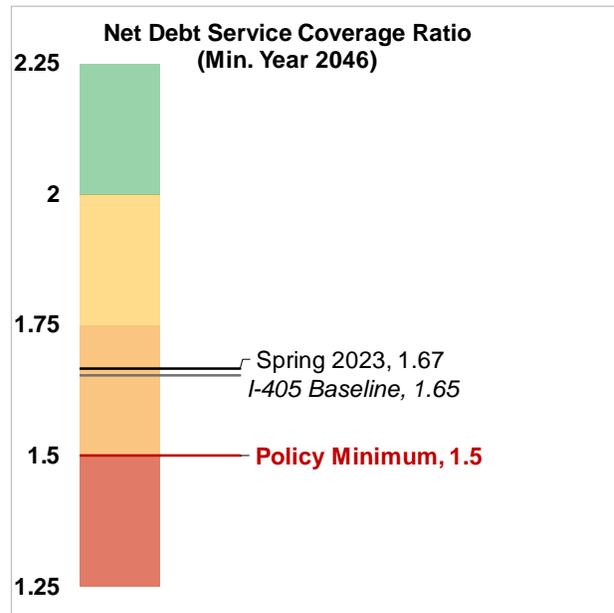
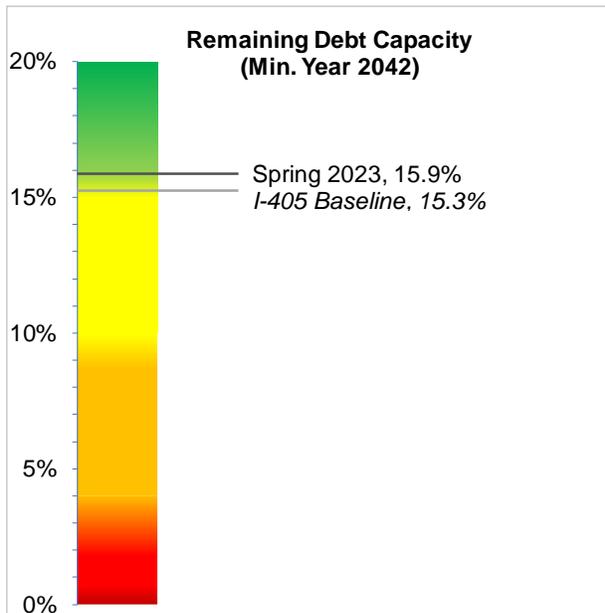
Amounts are expressed in Year of Expenditure \$000s.

Affordability and Impact on Financial Plan

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

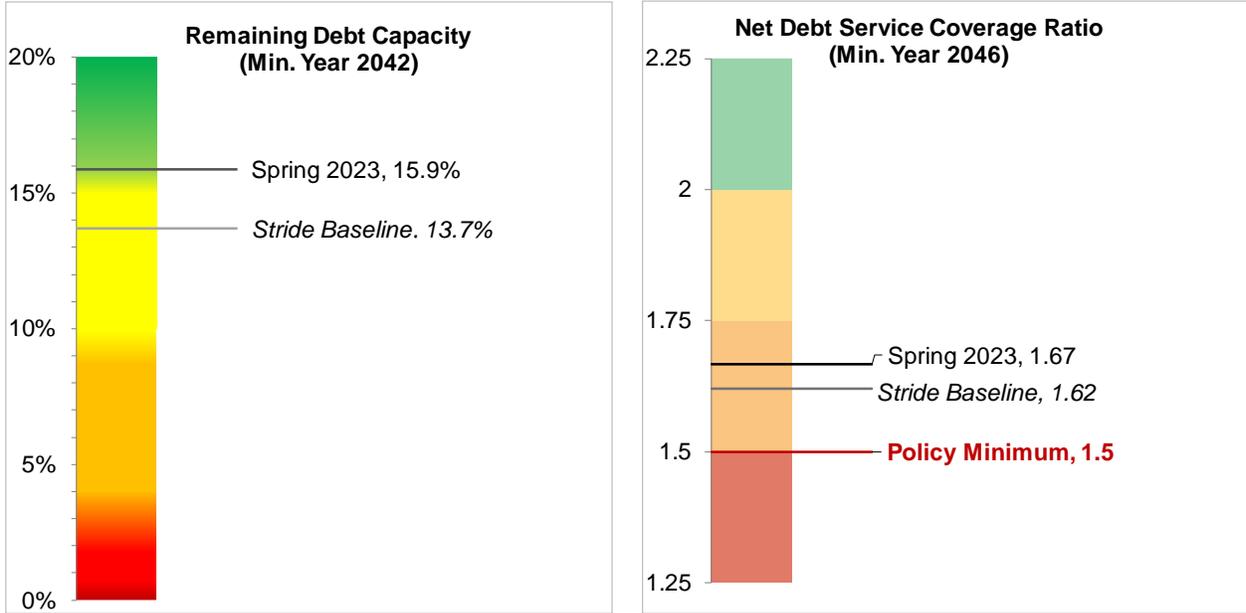
The I-405 BRT project itself exceeds its financial plan assumption by approximately \$82M (7%). The proposed baseline budget for the I-405 Bus Rapid Transit project would decrease the remaining debt capacity by a projected 0.6% and net debt service coverage by 0.01; the resulting debt capacity and coverage ratio would be 15.3% and 1.65, respectively.

I-405 BRT 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



Deferred Parking

The amount currently set aside in the Financial Plan for the combined Stride Parking program is \$386M (2023\$). Of this amount, \$40M (2023\$) is included in the Stride baseline budget. This includes parking costs already spent, as well as the cost for temporary surface parking at South Renton Transit Center. (These costs are converted to 2023\$ using the Spring 2023 Inflation Indices.) As a result, \$346M (2023\$) will remain in the Financial Plan to complete the remainder of the deferred parking.

Stride Parking Summary

All Costs 2023\$ in Millions

Project	Total Stride Parking	Parking Included in Stride Baseline Budget	Remaining Stride Parking Included in Financial Plan
I-405 Parking	\$174	\$34	\$140
SR 522/ NE 145th St Parking	\$211	\$6	\$205
Total	\$386	\$40	\$346

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 I-405, SR 522/NE 145th and 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 could have significant impacts, including potential cost increases, to the project’s proposed baseline budget and schedule. It could require delaying the amendment to the Brickyard design/build funding agreement with WSDOT and the initiation of the I-405 bus fleet procurement. Additionally, the bid price received for the Brickyard project would expire, necessitating WSDOT to issue a new request for proposals. Additionally, bus prices have increased by \$200,000 each (15%) in the month of May. Thus, delaying the procurement process could lead to substantial cost implications due to inflation risks.

Prior Board/Committee actions

Resolution No. R2021-08: Selected the route and station locations for the I-405 Bus Rapid Transit Project.

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. R2023-18

A RESOLUTION of the Board of the Central Puget Sound Regional Transit Authority adopting the I-405 Stride Bus Rapid Transit project baseline schedule and budget by (a) increasing the authorized project allocation to-date by \$402,618,123 from \$866,381,877 to \$1,269,000,000, (b) decreasing the annual allocated budget by \$45,806,704 from \$167,827,704 to \$122,021,000, and (c) establishing the project open for service dates of Q3 2028 for the S1 Line and Q2 2029 for the S2 Line.

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 I-405 Bus Rapid Transit project is one component of the Stride BRT Program; and

WHEREAS, Resolution No. R2021-05 identified the I-405 Bus Rapid Transit project as a Tier 1 project to proceed without funding delay; and

WHEREAS, Resolution No. R2021-08 selected the route and station locations for the I-405 Bus Rapid Transit Project; 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 I-405 Stride Bus Rapid Transit project baseline schedule and budget is adopted by (a) increasing the authorized project allocation to-date by \$402,618,123 from \$866,381,877 to \$1,269,000,000, (b) decreasing the annual allocated budget by \$45,806,704 from \$167,827,704 to \$122,021,000, and (c) establishing the project open for service dates of Q3 2028 for the S1 Line and Q2 2029 for the S2 Line.

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