

Memorandum

Additional Environmental Analysis for South Renton Transit Center at Final Design

Date: June 4, 2024
Project Name: South Renton Transit Center and Roadway Improvements Project
Project No: D3458616
Attention: Lesley Maurer, Sound Transit
Company: Sound Transit
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Introduction

The South Renton Transit Center and Roadway Improvements Project (project) is an element of Sound Transit's Interstate 405 (I-405) Bus Rapid Transit (BRT) program, which will provide BRT service for 37 miles between Lynnwood and Burien, along portions of I-5, I-405, State Route (SR) 518, and some local arterial streets. The project includes a new transit facility that will be developed on an 8.3-acre site to provide operational space for both BRT and other bus transit service. Sound Transit completed State Environmental Policy Act (SEPA) review for the larger I-405 BRT program in 2020. A National Environmental Policy Act (NEPA) Documented Categorical Exclusion checklist for the project was completed in 2022. This memorandum describes the prior environmental review, Sound Transit Board actions deferring certain project elements, and it provides additional environmental analysis of project design refinements.

The project has progressed into final design and is currently at the 90% design milestone. This memorandum evaluates any design refinements not evaluated in the earlier environmental reviews that could affect environmental resources beyond what were previously identified.

Background

SEPA Environmental Checklist

A SEPA Environmental Checklist (2020 SEPA) was completed for the I-405 BRT program and a Determination of Non-Significance was issued by Sound Transit on September 30, 2020 (Sound Transit 2020). The South Renton Transit Center and the associated roadway improvements were components of the I-405 BRT program addressed in the 2020 SEPA, including the following project elements:

- A transit center island with eight 120-foot active bus bays.
 - BRT station in the transit center island with standard elements such as shelter, pylon, and raised platforms for near-level boarding.
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- Ten bus layover bays in the bus loop area.
- A 700-stall, 5-floor park-and-ride garage including areas for security, telecommunications and electrical equipment, operator comfort stations, and storage, with drop-off and pickup stalls on the first floor. Access to the entrance and exit from Rainier Avenue S, located south of the access to the transit center bus loop, as well as from Lake Avenue S. Potential pedestrian bridge connection from the third floor of the garage to the middle of the transit center island.
- A sidewalk along the eastern side of the transit center site (along the frontage of Lake Avenue S); sidewalks within the transit center site along the north and south sides of the bus loop (from Rainier Avenue S/Lake Avenue S to the park-and-ride garage; from S Grady Way north into the transit center site; and between the park-and-ride garage and the bus loop).
- Roadway improvements including a bus-only, bus-on-shoulder lane on northbound Rainier Avenue S starting at the existing southbound I-405 loop ramp and extending north to connect with the existing business access and transit (BAT) lane; a new signalized intersection at Rainier Avenue S and Hardie Avenue SW (within this intersection, removal of existing medians on Rainier would allow for turning movements, and crosswalks would be provided at each of the four roadway crossings).
- Access improvements with the addition of a secondary bus-only access into the transit center's bus loop from Lake Avenue S, and a driveway into the park-and-ride garage from Lake Avenue S.
- Signal-timing improvements (Transit Signal Priority) added at the intersection of S Grady Way and southbound Rainier Avenue S and at Rainier Avenue S and SW 7th Street.
- Demolition of existing onsite structures and remediation prior to construction.

NEPA Documented Categorical Exclusion

Pursuant to 23 *Code of Federal Regulations* Part 771.118(d), Sound Transit completed the *South Renton Transit Center and Roadway Improvements Project NEPA Documented Categorical Exclusion* (2022 DCE), with the Federal Transit Administration (FTA) in the federal lead agency role (Sound Transit 2022b). In June 2022, FTA determined that the project would not result in significant environmental effects and qualified as a DCE under NEPA. A Sole Source Aquifer Checklist (SSA Checklist) was prepared, and the FTA received a determination in May 2021 from the U.S. Environmental Protection Agency (EPA) Region 10 that the project, as described in the submittal, would not have a significant adverse impact on the Cedar Valley Sole Source Aquifer.

The NEPA DCE review was completed in 2022, following a 2021 Sound Transit's Board resolution updating the Sound Transit 3 Plan program schedule, and deferring the construction of the project park--and--ride garage. Therefore, the 2022 DCE included an evaluation of the potential interim condition scenario at the site between the proposed opening year the transit center and the opening of the park-and-ride garage.

The 2022 DCE environmental documentation addressed the same elements as the SEPA documentation, as well as the following:

- Environmental site cleanup work to address contaminated materials onsite prior to construction.
- Thirteen bus layover bays in the transit-only loop area (instead of 10).
- A utility yard to provide charging equipment for battery-electric buses while in the layover area.
- Access to the park-and-ride garage entrance from S Grady Way.
- Interim condition core facilities building (to be constructed for operation of the transit center without the park-and-ride garage), which would include security, telecommunications and electrical equipment, operator comfort stations, and storage.
- Interim condition scenario without parking: kiss-and-ride drop-off loop, traffic and pedestrian circulation, landscaping, and lighting.
- Interim condition scenario with surface parking: up to 350 parking stalls including pickup, drop-off, traffic and pedestrian circulation, landscaping, and lighting.

As part of the 2022 DCE, the *Interim Parking Traffic Analysis* evaluated interim condition surface parking scenarios and the changes in intersection congestion levels for the years between when the transit center opens and the start of construction of the park-and-ride garage. Since the 2022 DCE, a memorandum was prepared to evaluate alternatives to reduce bus delays through a congested section of northbound SR 167 located south of SW Grady Way (i.e., bus-on-shoulder vs. bus-only lane) (Sound Transit 2023).

Other Project Activity

In 2022, Sound Transit elected to implement a full battery-electric bus fleet (BEB) for Stride BRT operations, and specific charging infrastructure has since been included in the final design for the project. In addition, the Sound Transit Board approved the Stride BRT Program schedule and budget when the project was baselined in July 2023, which moved the targeted opening of the project from 2026 to early 2027. The opening of the South Renton Transit Center is required before the beginning of the S1 Line Stride operations anticipated in 2028.

Early borings and design investigations were completed in February 2022. Four existing structures were demolished because of safety and security issues at the site. Prior to demolition, the existing buildings were abated and demolished down to the foundation slab, with no subgrade work. In March 2023, site remediation was completed, which included demolition of the building foundations, excavation of soil and dewatering activities, placement and injection of bio-stimulation material, and offsite disposal of contaminated material. New wells were installed to evaluate contamination and monitor groundwater. No existing wells were encountered during

the remediation activities. Site contamination and cleanup are discussed further under “Environmental Health – Hazardous Materials” in the following section.

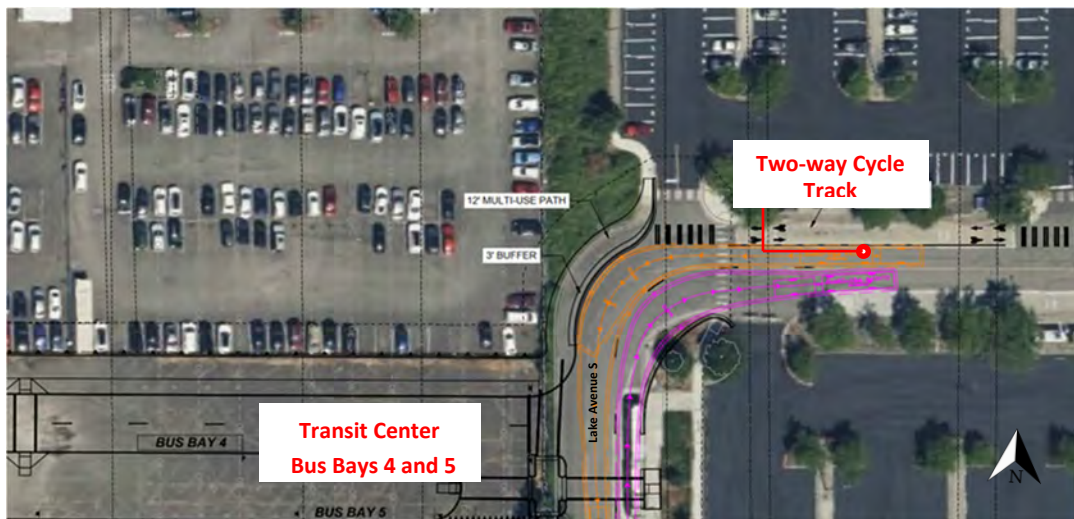
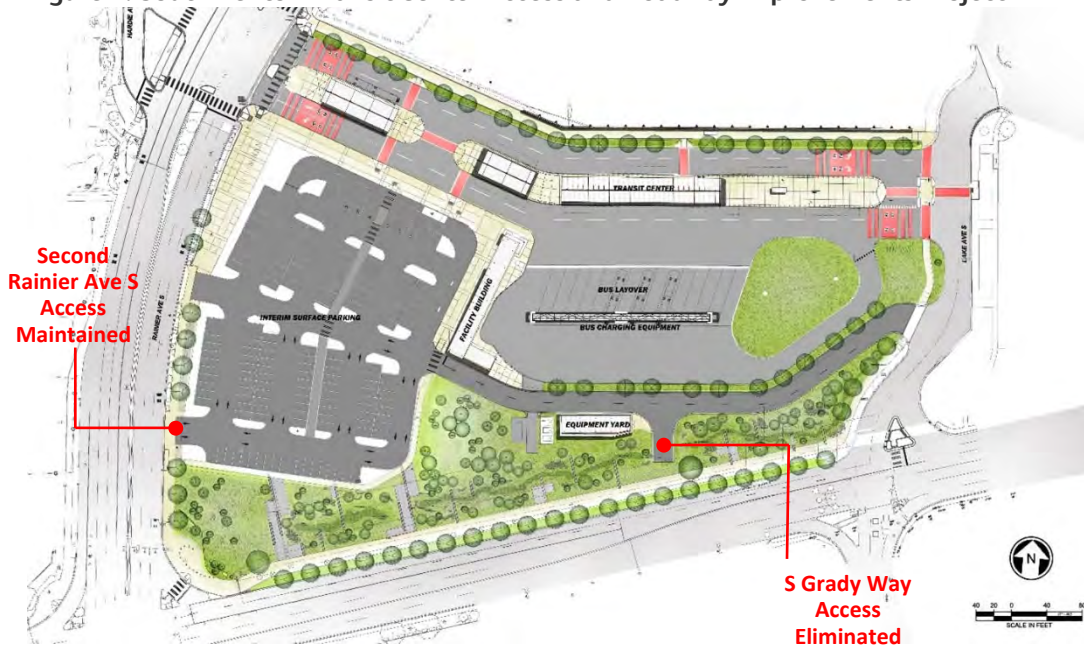
Project Design Refinements

The following describes the onsite and offsite design refinements and other changes included in the 90% design plans. None of the offsite refinements extend the project footprint outside the existing road right-of-way. **Figure 1** provides an overview of the project site plan at 90% design.

Onsite Refinements

- **Overhead battery-electric charging infrastructure.** Conceptual design proposed charging equipment for battery-electric buses to be included in the utility yard so buses can charge while in the layover area. Design refinements include charging equipment and gantry.
- **Foundation design in areas of liquefaction.** Conceptual design proposed deep auger cast foundation piles only for the park-and-ride garage. Geotechnical site investigations have since determined that auger cast piles are necessary in areas of liquefaction soils, including the transit shelter canopies, bus charging gantry, and core facilities building (Sound Transit 2022a).
- **Transit center access and parking configuration.** Construction of the driveway access into the transit center site from Lake Avenue S and S Grady Way that was proposed to occur during the park-and-ride garage construction phase of the project has been removed from design. Traffic that was expected to use the eliminated driveway had been assumed to access the site by Lake Avenue S or Rainier Avenue S. Additional transit center parking configuration and access changes to final design preserve a second driveway accessing the site along Rainier Avenue S. Both driveways along Rainier Avenue S would be right-in-right-out, and traffic volumes exiting the site would be divided between the two. An additional 158 spaces are proposed in the design refinements, plus the existing 385 parking spaces available at the South Renton Park--and-Ride, for a total of 543 spaces that would be provided in the interim between the start of Stride operations and the construction of the parking garage.

Figure 1. South Renton Transit Center Access and Roadway Improvements Project



Offsite Refinements

- **Bus-only lane at I-405/SR 167 off-ramp.** The project would convert the previously designed bus-on-shoulder lane at the I-405/SR 167 off-ramp to a new bus-only lane with new shoulder, which would extend north approximately 200 feet to connect with the existing BAT lane approaching the intersection with S Grady Way. The bus-only roadway segment is within the Washington State Department of Transportation (WSDOT) limited access right-of-way for I-405. The bus-only lane would include additional pavement markings, permanent signing for bus-only use, a new shoulder exceeding 8 feet in width, and new guardrail. A full-depth pavement section is proposed for the 12-foot-wide bus-only lane and adjacent shoulder area measuring between 8 and 12 feet wide. The added shoulder width would allow vehicles to pull off the road without disrupting operations of the dedicated bus lane.
- **Two-way bicycle track along Lake Avenue S.** Design refinements would expand the multiuse path and curb ramps at the corner of Lake Avenue S to provide a new bicycle connection between the transit center and existing and planned bicycle networks. The cycle track would connect to a multiuse path to the transit center at the west end and to the existing two-way cycle track along Shattuck Avenue S on the south end.

Changes in Environmental Effects

The potential environmental impacts resulting from the proposed design refinements are similar to those addressed by the 2020 SEPA and 2022 DCE. None of the project design refinements extend the project footprint evaluated in the NEPA and SEPA environmental review. Changes in environmental effects to earth, water, energy and natural resources, environmental health (hazardous materials and noise), aesthetics, light and glare, and transportation are described in the following section. Resources not affected by the refinements that are not discussed further in this memorandum include air, plants, animals, land and shoreline use, housing, recreation, public services, and utilities.

Earth

Investigations at the site encountered shallow groundwater depths and very loose to medium dense sands and silts. A preliminary liquefaction susceptibility analysis indicates liquefiable soils are present at the site. Based on the preliminary analysis, there is an approximately 20- to 40-foot thickness of liquefiable material underlying the site. The estimated liquefaction-induced settlement varies depending on the boring data used, but it is overall estimated to vary between 1 and 2 feet across the site.

Both on- and offsite, the refinements would add more areas of open space or landscaping than already proposed, reducing the impervious surface area.

Onsite Refinements

No potential adverse impact to soils are anticipated. The charging gantry, bus shelter canopy structures, and core facilities building are proposed for construction on top of potentially liquefiable soils. Final design refinements recommend deep auger cast-in-place piles to construct the foundations to meet seismic structural design standards. Sound Transit's design criteria require that the design of all structures comply with the International Building Code.

This foundation system of auger cast pilings is similar to that of the proposed park-and-ride garage, with a potential depth between 50 and 80 feet below ground surface. Deep piles were analyzed for the parking garage previously in the 2020 SEPA and 2022 DCE. Pilings would require ground disturbance similar to that for the garage foundation.

The estimated quantity of soils that may be removed would increase slightly because of the increased number of deep piles. Modifications in overall excavation or fill because of the refinements would not change the impacts discussed in previous environmental analyses.

Offsite Refinements

The increase in total impervious surfaces because of the roadway improvements estimated in the 2020 SEPA and 2022 DCE would not change because of the proposed refinements. The offsite refinements are in an area that appears to have been subject to widespread and shallow surface grading and paving. Design refinements proposed offsite are within the existing roadway prism. The addition of a bus-only lane between the I-405/SR 167 off-ramp and S Grady Way on SR 167/Rainier Avenue S would require minimal site grading and repaving a portion of the existing ramps to and from the I-405 interchange. A full -depth pavement section is proposed for the bus-only lane and adjacent shoulder area measuring between 8.6 and 12 feet wide.

Water

A Federal Emergency Management Agency (FEMA) flood zone (Zone AH; 100-year floodplain) was identified along S Grady Way. In the study area, the flood zone overlays paved lots, paved roads, and landscaping strips along roads to the south. The project is in the Cedar Valley Sole Source Aquifer Area within the Wellhead Protection Area.

Onsite Refinements

In the existing transit center site, the existing impervious surfaces cover nearly 100 percent of the site. In compliance with the *2017 City of Renton Surface Water Design Manual* (2016), stormwater treatment would be implemented in areas where impervious surfaces would be reduced. Surface water management along adjacent city roads would not require treatment because treatment thresholds are not exceeded. Stormwater retention would be provided, as stated in the 2022 DCE.

Onsite contamination identified within soils and groundwater prior to construction has been characterized and extensive soil excavation and in situ treatment have been completed. An ongoing independent remedial action in general accordance with a Washington State Department of Ecology–conducted cleanup is being performed. See the “Environmental Health – Hazardous Materials” section for details. A stormwater and pollution prevention plan would be prepared identifying best management practices (BMPs) to prevent or minimize the introduction of contaminants into surface waters and groundwater during construction activities.

BMPs for the project could include silt fencing, straw bale barriers, fiber rolls, storm drain inlet protection, hydraulic mulch, street sweeping, and a stabilized construction entrance. The stormwater and pollution prevention plan will also include development of site -specific structural and operational BMPs to prevent and control impacts on runoff quality.

The proposed onsite refinements to the design of the foundations for the transit shelter canopies, gantry, and core buildings are unlikely to affect the quality of the Cedar Valley Sole Source Aquifer Area within the Wellhead Protection Area. Site design would comply with the City of Renton measures specifically aimed at preventing floodplain impacts and protection of the aquifer, per *Revised Municipal Code 4.3.050(D)*. The deep auger cast piles (up to 80 feet) construction methods proposed for the parking garage are the same as those newly proposed with the refined design of the transit shelter canopies, gantry, and core buildings. The construction methods were previously evaluated in the Sole Source Aquifer (SSA) Checklist (2021), which concluded the project would not have a significant adverse impact to the Cedar Valley Sole Source Aquifer. It is not anticipated that the pilings would be a conduit for contaminants to the aquifer because construction methods would include grouting as a sealant around the piles to avoid contamination. For NEPA compliance, an amended SSA Checklist will be prepared for consultation with the EPA to address the change in foundation types at the site.

Offsite Refinements

The refinements to the I-405/SR 167 off-ramp would not further encroach upon the mapped FEMA flood zone. The refinements would not affect the base flood elevation because they do not change the elevation of the roadway. The refinements would not result in new surface water impacts.

Drainage improvements will include the addition of a vegetative filter strip beyond the new impervious surfaces treating runoff water prior to reaching the existing storm drainage conveyance systems. These improvements are within the previously planned area of disturbance. No additional modification to the existing stormwater conveyance system is anticipated.

The refinements would not create new sources of runoff. The bus-only lane refinement proposed within the WSDOT limited access right-of-way for I-405 would comply with the WSDOT *Highway Runoff Manual* (2019). No new measures are proposed to reduce or control surface water, groundwater, and runoff water and drainage pattern impacts.

Energy and Natural Resources

Onsite Refinements

Future fleet electrification and charging stations were proposed in the 2020 SEPA to enhance sustainability and maximize energy and natural resource conservation. To implement a full BEB, the specific charging infrastructure required (i.e., charging equipment, gantry) is proposed as a refinement.

Offsite Refinements

Refinements proposed offsite have no effects on energy and natural resources.

Environmental Health – Hazardous Materials

Onsite Refinements

Early borings and design investigations are complete (February 2022). The demolition of the four structures from previous site use has been completed to address safety and security issues at the site. Existing buildings were first abated (i.e., hazardous materials removed and controlled) and removed down to the foundation slab, with no subgrade work, and in compliance with required permits. Site remediation was completed in March 2023, including demolition of building foundations, excavation of soil and dewatering activities, placement and injection of bio-stimulation material, and offsite disposal of contaminated material. New wells were installed to evaluate contamination and monitor groundwater. No existing wells were encountered during the remediation activities.

Design refinements propose a deep foundation system consisting of auger cast-in-place piles for the charging gantry, bus shelter canopy structures, and core facilities building. A typical stone column ground improvement technique is not considered feasible for remediating the liquefaction--susceptible soil layers because it would not prevent cross-contamination of potential residuals from the contaminated soil to the lower aquifer. Stone columns could serve as a pathway for cross-contamination of the aquifer. These piles will be pre-augered in the upper 10 feet of soil, mitigating the risk of cross-contamination of the lower aquifer (Sound Transit 2022a).

Additional onsite contamination investigation is planned prior to construction. If additional contamination is identified, plans or additional remediation will be developed and implemented to minimize human exposure and promote the proper removal and treatment or disposal of contaminated materials in soils or groundwater.

Offsite Refinements

No long-term adverse impacts are expected to occur as a result of the refinements. During ongoing roadway operations and maintenance, the stormwater treatment facilities constructed for, or existing near, the project components would collect, retain, and provide treatment to

stormwater to remove potential pollutants deposited on roadways from vehicular traffic before releasing the stormwater offsite. This would also be a long-term benefit of the project because it would reduce the risk of hazardous materials in stormwater, groundwater, and soils.

Prior to construction, procedures to identify, characterize, manage, handle, store, and dispose of contaminated soil and groundwater encountered during construction activities would be incorporated into project specifications. BMPs for controlling hazardous materials during project construction, operations, and maintenance would be implemented as part of the project.

Environmental Health – Noise

Onsite Refinements

Noise levels from transit and traffic operations would remain below existing noise levels after the design refinements. The changes to access and parking would not generate noise above that which is typical of a transit center as determined in the 2022 DCE. The 2020 SEPA and 2022 DCE noise analyses assumed piles are needed for construction of the South Renton Park-and-ride garage, and the construction methods included impact pile driving, with maximum noise levels expected to be 96 to 99 A-weighted decibels (dBA) at the closest noise-sensitive receivers. Similarly, the construction noise levels associated with the refinements would be temporary and intermittent. Noise levels would be below FTA's daytime construction noise criteria of 90 dBA and slightly above the nighttime criteria of 80 dBA. Pile driving would generate the highest level of vibration levels and would not exceed the FTA building damage risk criterion.

Although drilling would generate similar levels of temporary and intermittent noise, the timing and duration of the noise would differ from that proposed in the 2022 DCE. It was previously assumed that deep auger cast piles would only be drilled for the construction of the parking garage. However, the proposed refinements would require drilling to construct the foundations of the gantries, transit shelter canopies, and core buildings. Measures to reduce construction noise may be implemented, such as drilled piles in lieu of impact piles, or limiting the time of day the activity could occur.

Offsite Refinements

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

Aesthetics

Onsite Refinements

The 2020 SEPA concluded that no adverse impacts to aesthetic resources are anticipated. The scale, form, materials, and visual character of the onsite design refinements would be similar to those of the park-and-ride garage, which the 2020 SEPA determined aesthetically compatible with the existing cultural order of commercial and retail areas within the project area and would further enhance the existing visual quality. Therefore, no change in impacts is anticipated for the design refinements.

Offsite Refinements

There would be no change in impacts to aesthetics as a result of the offsite refinements.

Light and Glare

The 2020 SEPA determined the South Renton Transit Center would not noticeably increase lighting levels in the surrounding area. Lighting in the five-story park-and-ride garage would be at a greater height than exists today.

Onsite Refinements

The 2022 DCE and 2020 SEPA evaluated the illuminated stairs, elevator, and park--and--ride garage structure, the transit center island, and the pylon. Although lighting from the upper stories of the proposed parking garage was noted to be potentially visible from the nearest residential uses, the existing lighting from I-405, local streetlights, and commercial uses was pervasive, and project lighting was not expected to noticeably increase lighting levels in the surrounding area.

Additional artificial lighting that would be installed for the core buildings, and overhead charging gantry would be at a greater height than exists today, but not as tall as the future five--story park--and--ride garage that was evaluated in the 2022 DCE and 2020 SEPA. Lighting and lighting levels would comply with Sound Transit's safety and security and design requirements, which include a requirement to eliminate light trespass onto nearby windows and adjacent properties. Downcast lighting would minimize the light spilling into adjacent areas and shield exterior lighting so light sources do not shine directly toward offsite areas. Therefore, no change in impacts is anticipated for the design refinements.

Offsite Refinements

There would be no change in impacts to light and glare as a result of the offsite refinements.

Historic and Cultural Preservation

The 2020 SEPA defined the cultural and historic resources study area, or area of potential impact (API), as a 0.25-mile buffer from the project footprint. The 2022 DCE defined the study

area, or area of potential effect (APE), as the four parcels of the South Renton Transit Center and the extent of the roadway improvements, plus a 200-foot buffer that includes an adjacent parcel and its building. An inadvertent discovery plan has been prepared for the project.

Onsite Refinements

Archaeological monitoring during four geotechnical borings at the South Renton Transit Center was conducted in 2019. The 2020 SEPA determined that this geological unit has a high potential for deeply buried intact archaeological sites. Archaeological sites, if present, may be at depths not previously excavated. The project elements proposed as part of the onsite refinements do not extend beyond the API or APE. No additional historic or cultural resources were identified onsite, and no additional impacts are anticipated.

Offsite Refinements

Refinements offsite propose the addition of the two-way bicycle track along Lake Avenue S, which expanded the area of ground disturbance west of the project area defined in the 2020 SEPA; however, the bicycle track as well as the other offsite design refinements are fully within the API and APE for cultural and historic resources and no additional impacts are anticipated.

Transportation

Onsite Refinements

No new impact traffic operations are anticipated due to the design refinements because in the interim, fewer cars would be accessing the site for parking prior to garage construction. The following analysis of the design refinements concluded impacts would be less than or equal to those of the 2022 DCE and 2020 SEPA:

- Refinements to surface parking configurations would improve vehicle circulation and access in the interim period before park-and-ride construction.
- The addition of a second general-purpose vehicle driveway accessing Rainier Avenue S between S Grady Way and Hardie Avenue SW would reduce the likelihood of delay when vehicles enter and exit the transit center and would result in gaps in the northbound traffic flow.
- The removal of the general-purpose vehicle driveway from S Grady Way would result in no new impacts or deficiencies. The Rainier Avenue S/S Grady Way intersection would experience little to no increase in delay because of the elimination of the S Grady Way driveway. The change is expected to result in vehicles being rerouted to other access points.

No adverse effects to parking are anticipated because of the deferral of the 752-space parking garage previously evaluated in the 2020 SEPA. An additional 158 spaces are proposed in the design refinements, plus the existing 385 parking spaces available at the South Renton Park -and Ride, for a total 543 spaces that would be provided in the interim between the start of

Stride operations and the construction of the parking garage. Refer to **Attachment A** for additional information about changes in parking.

A decrease in parking supply at this location is assumed to result in a decrease in ridership in the near term; therefore, the demand is likely to be accommodated within the 543 parking spaces that would be available. Therefore, adequate parking would be provided by the project in the interim scenario prior to garage construction. If parking demand were to approach or exceed projected available parking in the interim, the nearest available on-street parking spaces for spillover parking are already signed as time limited. Sound Transit and local agencies will continue to monitor parking demand as new bus services and additional parking spaces are introduced.

Offsite Refinements

The proposed two-way bicycle track along Lake Avenue S would improve bicycle connections and maintain traffic flow and would not result in any new impacts. No new impacts to nonmotorized facilities are anticipated because of the proposed refinements. The proposed bus--only transit center access for I-405 BRT northbound and southbound lanes would improve BRT travel times for northbound BRT vehicles. Minimal queueing is likely where vehicles yield to general traffic entering Rainier Avenue S from the southbound I-405/SR 167 off-ramp. No new impacts to transit operations are anticipated because of the proposed refinements (**Attachment A**).

Conclusion

As the lead agency for the project under SEPA, Sound Transit has evaluated the South Renton Transit Center and Roadway Improvements Project 90% design submittal and has determined that no further environmental analysis is required. The proposed project design refinements would not substantially change the analysis of impacts in the 2020 SEPA Checklist or the 2022 NEPA DCE. Construction is anticipated to start in 2025 and be completed as early as 2027. The proposed construction duration would be the same as described in the 2020 SEPA, which was anticipated to be approximately 24 months.

References

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Sound Transit. 2023. *Memorandum, Task Order 29-BT102*. March.

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**ATTACHMENT A. SOUTH RENTON TRANSIT CENTER AND
ROADWAY IMPROVEMENTS ADDITIONAL TRANSPORTATION
ANALYSIS MEMORANDUM**