SOUND TRANSIT Adjacent Construction Handbook



Sound Transit – Real Property May 2025



Summary

Purpose

Sound Transit intended these materials to provide information and outline coordination for projects adjacent to, above, or below Sound Transit's property, infrastructure, facilities, and operations (e.g., aerial guideways, tunnels, right-of-way, stations, operations & maintenance facilities, bus stops, unused property, etc.).

Sound Transit review of adjacent construction projects

- While this guide summarizes key concerns and best practices, Sound Transit reviews projects near its transit system on a case-by-case basis.
- Developers, agencies, contractors, or any others who are working on or planning projects near Sound Transit's property, infrastructure, facilities, or operations should submit an online inquiry form using the following link:
- <u>Request to use Sound Transit property (soundtransit.org/help-contacts/business-information/request-to-use-sound-transit-property)</u>.
- **Rule of thumb is 100 feet:** Requesters should submit an inquiry if their project or Adjacent Construction is within 100 feet of Sound Transit's property, infrastructure, facilities, or operations.

Contact us:

Email: propertymanagement@soundtransit.org

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Sound Transit future service



January 2025

Table of contents

1	INTRODUCTION				
	1.1	Overview	5		
	1.2	Purpose of Guide	6		
		1.2.1 Case-by-Case Review and Approval	7		
		1.2.2 Guide Does Not Apply to Sound Transit Community Development Offic Projects			
	1.3	Sound Transit Property, Infrastructure, Facilities, and Operations	7		
2	PROPOSALS, REVIEW, AND APPROVAL9				
	2.1	Stakeholder Review	.10		
		2.1.1 Engineering Review	.10		
	2.2	Negotiation and Approval			
		2.2.1 Concurrence from Other Individuals, Organizations, or Authorities			
	0.0	2.2.2 Insurance			
	2.3	Coordination with Authorities Having Jurisdiction			
	2.4	Post-Approval Conditions, Compliance, and Monitoring 2.4.1 Link Track Access			
		2.4.1 Link Hack Access 2.4.2 Tacoma Link Right-of-Way Work Request			
		2.4.3 Railroad Flagging and Protection			
		2.4.4 General Post-Approval Requirements			
3	PROPERTY RIGHTS AND RIGHT-OF-WAY14				
	3.1	Rule of thumb: 100 Feet	.14		
	3.2	Sound Transit-Owned Property	.14		
	3.3	Active Sound Transit Construction and Capital Projects	.15		
	3.4	Infrastructure Within the Public Right-of-Way and Transitway Areas	.15		
	3.5	Infrastructure, Facilities, or Operations Located on Property Not Wholly Owned by Sound Transit			
4	CRANE OVERSWINGS16				
	4.1	Documentation	.16		
	4.2	Plans	.16		
	4.3	After Obtaining Written Approval for Crane Overswing	.16		
5	UTILITY CROSSINGS				
	5.1	Aerial Utilities	.18		

	5.2	Subsurface Utilities		
6	EXCA	VATION, SHORING, & DEWATERING19		
7	SETTLEMENT MONITORING19			
8	CONSTRUCTION NEAR UNDERGROUND RIGHT-OF-WAY21			
9	CONSTRUCTION NEAR AERIAL RIGHT-OF-WAY21			
10	ANTENNAS & WIRELESS TELECOMMUNICATIONS EQUIPMENT			
11	LAYDOWN, CONSTRUCTION STAGING, & TEMPORARY USES OF SOUND TRANSIT- OWNED PROPERTY			
12	INSTALLATION OF PERMANENT IMPROVEMENTS & LONG-TERM USES OF SOUND TRANSIT-OWNED PROPERTY			
13	3 RESOURCES			
	13.1	Sound Transit As-Built Library22		
14	REFERENCES			
	14.1	Sound Transit Board Resolution No. R2013-30: Real Property Excess, Surplus, and Disposition Policy23		
	14.2	Sound Transit Board Resolution No. R2018-10: Equitable Transit-Oriented Development Policy		
	14.3	Sound Transit Board Resolution No. R2023-30: Procurement, Agreements, and Delegated Authority Policy		
	14.4	FTA Circular 5010.1F – Revised November 1, 2024: Award Management Requirements		



1 INTRODUCTION

The Central Puget Sound Regional Transit Authority, commonly known as Sound Transit ("ST"), 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 the action of their respective county councils pursuant to RCW 81.112.030.

In general elections held within ST's 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.

With voter approval, ST is in the process of planning and building the most ambitious transit expansion in the country.

ST's primary responsibility is to complete, expand, and operate a high-capacity transit system to deliver transit service that connects the region's urban centers.

However, in 2015, ST's Board of Directors established core priorities, including, but not limited to, promoting transit-friendly land use and supporting transit-oriented development.

1.1 Overview

Accordingly, ST prepared this guide ("Guide") to assist those who may want to perform non-ST construction on, adjacent to, or over ST's property, infrastructure, facilities, operations, or including any use of ST-owned property ("Adjacent Construction").

Developers, agencies, contractors, or any others who are considering performing Adjacent Construction ("Requesters"), should submit an online inquiry form using the following link: <u>Request to use Sound Transit property</u> (https://www.soundtransit.org/help-contacts/business-information/request-to-use-sound-transit-property), a program by ST's Real Property division.

Once this inquiry form is submitted, an ST Real Property representative will contact the Requester to obtain more information and determine the next steps. ST Real Property uses these inquiry forms for tracking purposes and to gather preliminary information. Requesters do not need to provide finalized information to answer the questions in the inquiry form.

For the purposes of this Guide, Adjacent Construction may include work such as excavation, demolition, restoration, installation of new improvements, surveying, site assessments, crane overswings, geotechnical testing, boring, utility crossings, staging, equipment storage, construction of temporary facilities, vehicle ingress/egress, shoring, tiebacks/soil nails, settlement monitoring, dewatering, maintenance of existing non-ST facilities, access, etc.



1.2 Purpose of Guide

The primary goal of this Guide is to encourage transit-oriented development, including public and private projects at and around ST's regional transit system through early involvement in project planning, design, and the realization of other objectives as appropriate while maximizing benefits to ST, such as:

- Increasing transit ridership.
- Supporting local and regional economic development.
- Preventing unplanned service interruptions.
- Protecting ST's sensitive public transit infrastructure and service delivery.
- Protecting access to transit and ST's transit operations.
- Supporting growth plans, policies, and strategies.

- Fostering relationships with local jurisdictions, regional agencies, private developers, residents, businesses, community groups, and other stakeholders.
- Encouraging convenient, safe multimodal access to the transit system, with an emphasis on non-motorized access.
- Encouraging the creation of housing options, including market-rate and affordable units.

The intended audience for this Guide includes multiple stakeholder groups engaged in the development process, such as:

- Local jurisdictions that review, entitle, and permit development projects.
- Real estate developers and property owners.
- Architects, engineers, and other technical consultants.
- Project managers and construction managers.
- Builders, designers, contractors, entitlement consultants, environmental consultants.
- Utility companies, power companies, communications companies.
- Other third parties.

1.2.1 Case-by-Case Review and Approval

Although this guide may reference specific standards and criteria, ST will review all adjacent construction plans and projects on a case-by-case basis.

Any criteria provided herein are general and for the sole purpose of providing a broad overview of ST's review and approval process for adjacent construction. Developers and Requesters are responsible for obtaining original designs, plans, and computations from ST to thoroughly understand the design intent and accurately assess the effects of their proposed construction on ST's property, infrastructure, facilities, and operations.

1.2.2 Guide Does Not Apply to Sound Transit Community Development Office Projects

This Guide does not apply to joint development or other transit-oriented development projects in partnership with ST's Community Development Office ("ST TOD"). Developers working with ST TOD should coordinate with their assigned ST TOD project manager.

1.3 Sound Transit Property, Infrastructure, Facilities, and Operations

ST builds and operates regional transit services throughout the urban areas of Pierce, King, and Snohomish Counties.

ST's services include Link light rail, Sounder trains, ST Express Bus, Tacoma Link light rail, and soon, Bus Rapid Transit.

The table below compares some basic types of ST property, infrastructure, facilities, and operations with common concerns associated with Adjacent Construction.

SOUND TRANSIT ASSET	COMMON CONCERNS (non-exhaustive)		
UNDERGROUND RIGHT-OF-WAY ST operates below ground in tunnels.	 Excavation near tunnels and infrastructure. Clearance from support structures, e.g., tiebacks, shoring, etc. Utility coordination. Clearance from ventilation shafts, surface penetration, e.g., emergency exits. Surcharge loading of adjacent construction. Explosions. Noise and vibration/ground movement. Storm water drainage. 		
AERIAL RIGHT-OF-WAY ST operates on elevated guideways, typically supported by columns.	 Excavation near columns and support structures. Column foundations. Clearance from OCS. Overhead protection and crane swings. Setbacks from the property line for maintenance activities to occur without entering right-of-way. Utility coordination. Informing passengers and operators. Noise reduction, e.g., double-paned windows. 		
AT-GRADE RIGHT-OF-WAY ST operates in dedicated ROW at street level. In some areas, tracks are separated from adjacent property by a fence or wall.	 Pedestrian and bicycle movements and safety. Operator site distance/cone of visibility. Clearance from OCS. Crane swings and overhead protection. Track bed stability. Storm water drainage. Noise and vibration. Driveways near rail crossings. Setbacks from the property line for maintenance to occur without entering right-of-way. Utility coordination. 		
STATIONS AND BUS STOPS ST operates facilities and services on city streets and properties. Some ST stations are located on city right-of-way, and bus stops can be found on public sidewalks. Stations may be elevated or underground.	 Closures and re-routing service during construction. Temporary relocation of service. Impacts on passenger and vehicle accessibility near entrances. Ingress and egress. Utility coordination. 		

NON-REVENUE AND OPERATIONAL ST owns and maintains property, infrastructure, and facilities to support operations. e.g., rail and bus maintenance facilities, transit plazas, traction power substations, park-and- rides, parking lots, parking garages, etc.	 Excavation and clearance from support structures, e.g., tiebacks, shoring, etc. Ground movement. Drainage. Utility coordination. Access to property.
UNUSED PROPERTY ST may own property that is not currently used for transit purposes. Under some circumstances, unused property can accommodate non-transit uses. ST often has long-term plans for transit-oriented development on its unused property.	 Conflicts with planned future uses or redevelopment. Existing improvements. Compliance with environmental regulations. Utility coordination. Unauthorized uses, e.g., parking.

2 PROPOSALS, REVIEW, AND APPROVAL

Once ST Real Property has completed a preliminary review of a Requester's initial inquiry, the ST Real Property representative will typically provide the Requester with a standardized application and assist the Requester with compiling and generating a complete Adjacent Construction proposal.



Depending on the circumstances and scope of the Adjacent Construction, proposals may need to include:

- Summaries, narratives, descriptions, scopes of work.
- Surveys, plans, drawings prepared by architects or engineers, maps, diagrams, aerial photos.
- Draft deeds, easements, construction licenses, leases, and legal descriptions.

- Existing agreements, such as development agreements, easements, deeds, dedications, intergovernmental agreements, interagency agreements, or leases.
- Estimated construction timelines and work schedules.
- Letters of authorization, proof of insurance, signing authority delegations.
- Property information, environmental reports, geotechnical reports.
- Access requirements, equipment specifications, vehicle specifications, personnel requirements, and traffic control plans.
- Any other documents, information, and materials specified by ST stakeholders.

Once the Requester and the ST Real Property representative are satisfied with the information and materials included in the proposal, the ST Real Property representative will route the proposal and supporting materials to ST stakeholders, staff, and subject matter experts for review.

Requesters should know that ST's review process can last for 8-12 weeks or longer depending on the scope of the proposed Adjacent Construction. This duration also depends on the Requester providing the necessary information, plans, documents, and other materials to receive ST approval in a timely manner.

2.1 Stakeholder Review

Stakeholder review is the process ST uses to determine whether the proposed Adjacent Construction, use, or transfer of ST's property conflicts with ST's uses and operations.

During the stakeholder review process, various ST departments, divisions, teams, and individual subject matter experts have the opportunity to review proposals and provide comments, questions, or concerns.

2.1.1 Engineering Review

ST Engineering subject matter experts will review all Adjacent Construction proposals based on the complexity and potential impacts of the proposed activities on ST's property, infrastructure, facilities, and operations.

2.2 Negotiation and Approval

Depending on the comments or conflicts identified by ST stakeholders, Requesters may need to modify the scope of work for the proposed Adjacent Construction.

During the review process, ST stakeholders may ask Requesters to clarify certain aspects of their proposed Adjacent Construction or provide additional materials.

Once all comments and conflicts have been addressed or resolved, the ST Real Property representative will work with ST Legal to draft and generate a final written agreement to approve the Adjacent Construction, including any agreed-upon terms and subject to any conditions

specified by ST stakeholders.

Depending on the scope of the proposed Adjacent Construction, the ST Real Property representative may need to obtain high-level approvals from ST leadership, executives, committees, or the Board of directors.

2.2.1 Concurrence from Other Individuals, Organizations, or Authorities

ST may need to notify or obtain concurrence from the Federal Transit Administration or other interested parties depending on the scope of the proposed Adjacent Construction and the affected property, facilities, infrastructure, or operations.

2.2.2 Insurance

Requesters typically must provide ST with written proof of insurance before commencing Adjacent Construction.

ST may require Requesters to add third-party organizations as insured parties or obtain special coverage for Adjacent Construction near particularly sensitive ST property, infrastructure, facilities, or operations.

Requesters who represent self-insured organizations typically may provide ST with an official letter indicating that the organization is self-insured to satisfy ST's proof of insurance requirement.

2.3 Coordination with Authorities Having Jurisdiction

Requesters must provide ST with permit authorizations from local authorities that have jurisdiction ("AHJ") over the proposed Adjacent Construction. This includes approved permit(s), AHJ-approved plans, final inspection, and related final reports, as necessary.

ST may also request to participate in the local permitting process if significant impacts are projected or expected to affect service, operations, or safety of ST infrastructure or facilities.

Requesters should assume that written approval, such as a statement of conflict or no-conflict from ST, is required in addition to receipt of approved permits from the local AHJ before proceeding with any proposed Adjacent Construction. Once Requesters submit their proposal, the assigned ST Real Property representative will outline the process and assist with the next steps.

2.4 Post-Approval Conditions, Compliance, and Monitoring

Depending-on the proposed Adjacent Construction, Requesters may need to continue coordinating with ST after approval.

If proposed Adjacent Construction entails the installation of improvements or facilities, Requesters will likely need to provide ST with as-built drawings of the improvements once construction is complete.

ST staff may periodically inspect Adjacent Construction sites to confirm compliance with approval conditions.

2.4.1 Link Track Access

If Adjacent Construction is proposed near ST's active Link light rail right-of-way, the Requester may need to notify King County Rail Division's Link Track Access team about the proposed activities and/or obtain a Link Track Access Permit.

Generally, Link right-of-way is defined as any area and property that extends 10 feet from the nearest rail and/or property that is dedicated to light rail operations.

Before performing Adjacent Construction within ST's Link right-of-way, Requesters may need to apply for a Link Track Access Permit. Requesters can obtain a permit request form by contacting <u>LinkTrackAccess@soundtransit.org</u>. Additional information can be found on the King County Metro Rail Division website at <u>kcmetroraildivision.com/track-access</u>.

Once Requesters submit a permit request form, King County may determine that Adjacent Construction does not require a Link Track Access Permit but should be identified as Permit Exempt Logged Activity, which notifies ST Operations and King County personnel about the work.

King County has sole discretion to determine whether Adjacent Construction or any other activities should be noted as a Permit Exempt Logged Activity or require a Link Track Access Permit.

Requesters must submit their Link Track Access Permit request by Monday at 8 a.m. at least two weeks before the scheduled start date of the work.

Requesters who plan to occupy ST's Link light rail right-of-way must obtain and maintain updated right-of-way certification.

2.4.2 Tacoma Link Right-of-Way Work Request

Requesters proposing Adjacent Construction near ST's active right-of-way in Tacoma, Washington, may need different work permits.

Requesters can obtain more information and a permit request form by contacting ST Tacoma Link Operations at <u>TLROWWorkPermit@soundtransit.org</u>.

2.4.3 Railroad Flagging and Protection

If Adjacent Construction is proposed near ST's heavy rail right-of-way, the Requester may need to obtain railroad flagging services and/or assume responsibility for other protective measures.

Generally, Requesters need to take these protective measures before performing Adjacent Construction when:

- Work area is located over, under, and/or within 25 feet measured horizontally from the center line of the nearest track.
- Cranes or similar equipment are positioned outside of 25 feet measured horizontally from the center line of the track and could foul the track in the event of tip-over or other catastrophic occurrences.

- Excavation is performed below the bottom of the tie elevation, track, or any other portion of existing improvements may be subject to movement or settlement.
- Work in any way interferes with the safe operation of trains at timetable speeds.
- A hazard is presented to the System, including, but not limited to, the track, communications, signal, electrical, or other facilities either due to persons, material, equipment, or blasting in the vicinity.
- ST determines that protective measures are necessary.

2.4.4 General Post-Approval Requirements

Once ST enters into an agreement with the Requester or otherwise provides approval for Adjacent Construction, Requesters are generally responsible for:

- Compliance with any terms or conditions specified in ST's approval or agreement by its contractors or representatives performing the Adjacent Construction.
- The proper removal and disposal of any debris and trash resulting from its or its Contractors' activities.
- Compliance with all federal, state, and local laws and all ST rules and regulations.
- Ensuring any ST fire safety systems, emergency exits, security cameras, maintenance access points, ticket vending machines, information boards, or emergency call boxes remain unblocked.
- Ensuring adjacent construction is a minimum of 15 feet from any ST stairway, escalator, elevator, entrance, or customer service counter.
- Maintaining passenger and pedestrian safety and accessibility and remaining in compliance with the Americans with Disabilities Act of 1990 (ADA) accessibility standards.
- Remaining in compliance with the "Manual on Recommended Traffic Control Devices" (MUTCD 2023/11th Ed) standards throughout work, specifically Part 6C.01-03.
- Securing the work site and preventing anyone besides the Requester's contractors or authorized representatives from accessing the work site.
- Any damage to ST property, facilities, infrastructure, or operations.

Depending on the proposed Adjacent Construction, Requesters may need to:

- Coordinate the proposed work schedule with ST Property Management at propertymanagement@soundtransit.org and/or ST's Link Control Center at LinkTrackAccess@soundtransit.org or 206.205.8177.
- Prohibit contractors from parking any vehicles, placing any equipment, or storing any materials in certain areas without first obtaining prior written approval from ST.

- Contact the applicable one-number locator services and/or ST facilities at 206.553.3789 or <u>LinkFacilitiesST@soundtransit.org</u> to locate existing underground utilities, transmission lines, and private fiber optics communications lines.
- Prohibit its contractors from parking any vehicles, placing any equipment, or storing any materials within 10 feet of ST's heavy rail or light rail tracks.
- Prohibit any other party, except the Requester's contractors performing Adjacent Construction.
- If Adjacent Construction entails temporary uses of property owned by ST, restoring the property to the condition that existed before the use.

3 PROPERTY RIGHTS AND RIGHT-OF-WAY

Requesters should assume Adjacent Construction require written approval from ST before commencing work.

Once ST Real Property completes a preliminary review of initial inquiries, Requesters should typically expect to pay non-refundable application and processing fees to compensate ST for time spent by staff and subject matter experts reviewing Adjacent Construction proposals.

3.1 Rule of thumb: 100 Feet

Generally, Requesters should submit an inquiry when their project or Adjacent Construction is within 100 feet of ST's property, infrastructure, facilities, or operations.

ST is particularly interested in reviewing development, construction, and utility projects within 100 feet of ST property, infrastructure, facilities, and operations as measured from the edge of the right-of-way outward, both to ensure the structural safety of existing or planned transit infrastructure and to maximize integration opportunities with adjacent development.

3.2 Sound Transit–Owned Property

If Requesters want to perform Adjacent Construction on property owned by ST, the Requester will need to enter into a written agreement with ST before commencing work.

If ST determines that ST's property, facility, infrastructure, or operations are not significantly affected by proposed Adjacent Construction, ST is typically willing to provide the Requester with a license to perform a broad range of activities.

Typically, ST strongly prefers to provide Requesters with licenses to use property owned by ST for Adjacent Construction.

However, ST will consider leasing, conveying, granting easements, or otherwise transferring control of ST owned property to Requesters for Adjacent Construction under some circumstances.

Generally, Requesters must provide ST with fair market compensation in exchange for uses of property owned by ST.

If Adjacent Construction entails any temporary or permanent uses of ST-owned property, the Requester may need an independent appraisal to determine fair market compensation or rent.

3.3 Active Sound Transit Construction and Capital Projects

ST typically has multiple ongoing transit infrastructure development projects across King, Pierce, and Snohomish counties.

Once construction for these projects is underway, ST's contractors are typically responsible for the construction sites, and ST does not have direct control of the area. However, Requesters should still submit an inquiry for coordination and review.

If Requesters are planning permanent improvements, ST's full review, coordination, and approval practices for Adjacent Construction still apply.

Requesters may need to obtain separate written approval from ST's contractor before performing Adjacent Construction near ST's active infrastructure construction sites.

Requesters should not assume that trains are running or not running based on whether passengers are allowed to use a particular segment of right-of-way. ST may operate trains on a segment of right-of-way that is not open for service for testing purposes.

3.4 Infrastructure Within the Public Right-of-Way and Transitway Areas

ST infrastructure within the public right-of-way owned by the local government is generally surrounded and protected by designated transitway areas.

If a Requester wants to perform Adjacent Construction within the boundaries of ST's designated transitway areas, the Requester will likely need a letter of agreement, approval, or no-conflict from ST before commencing work.

When issuing these letters, ST often includes requirements that Requesters must satisfy before, during, or after the Adjacent Construction is complete.

3.5 Infrastructure, Facilities, or Operations Located on Property Not Wholly Owned by Sound Transit

ST may not own the underlying property where ST infrastructure, facilities, or operations are located.

If ST has infrastructure, facilities, or operations on property that ST does not wholly own, ST typically has an easement, lease, right-of-way, permit, or other agreement with the underlying fee property owner.

If Adjacent Construction is proposed near ST infrastructure, facilities, or operations on property owned by others, the Requester may need to comply with unique requirements set by the underlying fee owner, ST, or other applicable agreements between the underlying property owners.

4 CRANE OVERSWINGS

Requesters should assume that written approval from ST is required before commencing Adjacent Construction involving cranes and submit an inquiry as outlined in Section 1.1 of this Guide.

Requesters may be subject to different requirements depending on their proposed use of mobile or tower cranes for Adjacent Construction.

Once submitted, an ST Real Property representative will help the Requester determine whether ST approval is necessary and outline the next steps.

Before obtaining final approval from ST for Adjacent Construction involving cranes, Requesters will likely need to submit the documentation, plans, and information listed in Sections 4.1 and 4.2 directly below.

4.1 Documentation

- Crane specifications from the crane manufacturer.
- Crane limiting device specifications.
- Operator certifications.
- L&I compliance documentation.
- Primary and Emergency contacts.

4.2 Plans

- Crane assembly & disassembly plan.
- Crane radius depicted/overlayed on-site.
- Distance between crane jib and ST property, facilities, infrastructure, or operations.

4.3 After Obtaining Written Approval for Crane Overswing

Generally, ST prohibits cranes carrying live loads from swinging in the airspace above ST property, infrastructure, facilities, or operations.

However, if ST has provided written approval, ST may allow cranes operating in such areas to swing freely, or "weathervane," over ST property, infrastructure, facilities, or operations when the crane is not actively in use.

Before operating any crane, but after the erection of any crane, the Requester should obtain all inspections and certifications of the crane and/or the crane operator required by applicable laws (including the Revised Code of Washington ("RCW"), the Washington Administrative Code ("WAC") and the rules and regulations promulgated by the Washington State Department of Labor & Industries ("L&I") and deliver a copy of any such written inspections or certifications to

all parties.

Once ST provides written approval, Requesters are typically required to:

- Not carry any crane loads over ST property, infrastructure, facilities, or operations.
- Submit a crane operation plan to ST that:
 - Specifies the days and times the crane will operate.
 - Confirms that no loads lifted by the crane will be directed or carried by the crane over ST property, facilities, infrastructure, or operations.
 - Names the company supplying and erecting the crane.
 - Contains the crane's base design.
- Obtain and maintain, or cause its general contractor or the owner or operator of the crane to obtain and maintain, all necessary federal, state, and municipal permits, licenses, and approvals in connection with the use and operation of the crane.
- Comply, or cause its general contractor or the owner or operator of the crane to comply, in all material respects, with all applicable federal, state, and local laws, regulations, and ordinances and with the terms and conditions of all permits and approvals applicable thereto in connection with the use and operation of the crane.
- Immediately correct any identified or known violations of applicable laws (including the RCW, the WAC, and the rules and regulations promulgated by L&I).
- Maintain, or cause its general contractor or the owner or operator of the crane to maintain, workmen's compensation insurance in form and amount as is required by law in connection with the use and operation of the crane and to maintain any required insurance coverage.
- Not cause or allow any live load to traverse the airspace above ST property, infrastructure, facilities, or operations.
- Not cause or allow the crane boom or any crane equipment to extend lower than thirty (30) feet above the designated areas or any permanent improvements thereon.
- Not park or cause a crane to rest within the airspace above designated areas except for temporary stoppage incidental to the active performance of work (provided the crane will be allowed to weathervane above the ST property, infrastructure, facilities, or operations when not in use).
- Assemble, install, disassemble, remove, maintain, repair, and replace all crane equipment in accordance with prudent engineering standards.
- Keep ST property, facilities, infrastructure, and operations free and clear of all liens, charges, and other monetary encumbrances arising out of the use of ST property, infrastructure, facilities, or operations.

5 UTILITY CROSSINGS

The following is a non-exhaustive list of information and materials Requesters may need to provide to ST to receive approval for Adjacent Construction involving utilities.

- Voltage of any proposed wires.
- Plans, profiles, and poles lines across the rail, including the following:
 - Top of rail elevation.
 - Civil and structural plans.
 - Site restoration plan, including approximate final elevations.

5.1 Aerial Utilities

Additional requirements for aerial utilities may include the following:

- Pole-loading analysis verifying that the poles and foundations will support the additional structural loading due to new wires.
- BESC-defined constructions Grade B for medium loading zone and/or approval from AHJ and owner of utility poles.
- Location of poles with elevations at the wire connection.
- Conditions used to calculate sag conditions and either calculations or show inputs used to calculate sag if programs are used.
- Wires at worst-case sag condition.
- Proposed overhead wire shall comply with the following references:
 - Structural per: NESC C2-2012, ASCE7, ANSI 05.1.
 - Wire sag calculations: NESC rule 233A.
 - Monitoring shall cover the entire length of the work zone or area of the ST property, facility, infrastructure, or operations affected by the development.
 - o Clearances per: OSHA, NESC, Sound Transit Requirements Manual.

5.2 Subsurface Utilities

Additional requirements for underground utility crossings may include the following:

• Soil corrosion and stray current corrosion control plans.

6 EXCAVATION, SHORING, & DEWATERING

Provided in future updates

7 SETTLEMENT MONITORING

The following is a non-exhaustive list of information and materials Requesters may need to provide to ST to receive approval for Adjacent Construction involving settlement monitoring:

- Plans, profiles, and details of development near ST property, facilities, infrastructure, or operations.
- Location and elevations of any tracks.
- Civil plans.
- Structural plans.
- Utility plans with all existing utilities identified.
- Site restoration plan including approximate final elevations.
- Geotechnical report, including modeling for expected movement.
- Temporary measures.
- Erosion control plan.
- Dewatering plan.
- Plan for monitoring equipment to be installed and/or monitoring points to be surveyed in relation to ST facilities and/or infrastructure.
- Procedures or installation of monitoring equipment and restoration of ST facilities, including:
 - Procedure for collecting baseline monitoring data. Monitoring shall be performed for a period long enough to establish baseline monitoring data for reference during construction. Such as baseline data will be analyzed to confirm the validity of monitoring thresholds for analysis reporting.
 - Monitoring shall include an optical survey in all cases. Crack monitoring is required for embedded tracks.
 - Monitoring shall cover the entire length of the work zone or area of the ST facility affected by the development.
 - Mitigation plan in case of movement greater than the tolerable threshold.

- Monitoring equipment shall be installed while trains are not running. Please coordinate with Link Track Access <u>LinkTrackAccess@soundtransit.org</u>.
 Measurements within the track right-of-way should preferably be automated so that regular access to tracks is not required.
- Monitoring shall be performed while trains are running for a certain amount of time. Long enough to establish baseline monitoring data for reference during construction. Such baseline data will be analyzed to confirm the validity of monitoring thresholds for analysis reporting.
- Monitoring of the tunnel shall be performed on the closest wall and ceiling inside the tunnel. The developer or monitoring consultant shall consult with ST to determine the placement of equipment, monitoring targets, quantity, and spacing.
- Optical surveys should have an accuracy of at least 0.005 feet in both vertical and horizontal directions.
- Monitoring will be in place for the duration of construction.
- Monitoring Analysis Reporting Flow, including:
 - Final Threshold limits shall be established specific to the existing ST structure's material properties, ability to deform, and baseline data. First alarm threshold of approximately .125 inches. Second alarm threshold of approximately 0.188 inches displacement, or 0.1 inches relative crack movement for embedded track. Tracks may not move more than ½ inch between tracks and every 20 feet.
 - Should the first alarm threshold be exceeded, an internal member of the team (monitoring contractor and geotechnical engineer) and ST shall receive notification. The developer's geotechnical engineer and monitoring contractor shall evaluate whether the prism in the same array is showing similar behavior. Consider the contractor's construction.
 - Should the second alarm threshold be exceeded, the internal team must receive notification; the developer's geotechnical engineer and monitoring contractor shall evaluate whether prisms in the same array are showing similar behavior and consider the contractor's construction.
 - If the daily average shows a second alarm threshold exceedance, ST and the contractor shall be notified. The developer's geotechnical engineer and monitoring contractor shall evaluate whether prisms in the same array are showing similar behavior. Internal team shall discuss with ST and the contractor whether the monitoring data is representative of structure performance and if the reported movement is substantiated. If the reported movement is agreed upon as being representative, this will prompt increased frequency of data reporting and visual survey. The internal team shall coordinate access to the track right-of-way.
 - If the reported movement is determined to be substantial, the internal team shall then assess the measured deformation in an attempt to identify the cause of movement. The internal team shall then recommend any required actions, such as change in the foundation design, foundation construction, or other mitigation measures.

 If there were any substantive changes to the permit drawings as they pertain to ST structures, as-builts shall be submitted at the end of movement construction.

8 CONSTRUCTION NEAR UNDERGROUND RIGHT-OF-WAY

Provided in future updates

9 CONSTRUCTION NEAR AERIAL RIGHT-OF-WAY

Provided in future updates

10 ANTENNAS & WIRELESS TELECOMMUNICATIONS EQUIPMENT

The following is a non-exhaustive list of information and materials Requesters may need to provide to ST to receive approval for Adjacent Construction involving antennas & wireless telecommunications equipment.

- Plans, profiles, and details for proposed installation, including:
 - Adjacent ST facilities.
 - o All utilities.
 - o Civil plans.
 - Structural plans.
 - Mechanical plans.
 - Electrical plans.
 - o Architectural plans.
- Plan and profile of equipment and proposed location:
 - Adjacent ST facilities.
 - Manufacturer product data sheets for proposed equipment.
- Structural review calculations for additional weight added to the structure, including:
 - Risk category and code analysis.
 - Vertical and lateral load analysis.
- Intermodulation study (formerly Radio Frequency Analysis Report) to include information on radiation patterns and software programs used to generate it, including:

- Cut sheets/manufacturer's product data sheets of all equipment to be installed.
- Equipment FCC ID.
- Equipment configuration and installation raiser diagrams (elevations).
- Area to be irradiated by the antenna system around the site.
- If an additional generator or power source is proposed, please include:
 - Location and storage of combustible material.
 - Volume of combustible material.
 - Distance from combustible storage to tracks and other ST facilities or equipment.

11 LAYDOWN, CONSTRUCTION STAGING, & TEMPORARY USES OF SOUND TRANSIT-OWNED PROPERTY

Provided in future updates

12 INSTALLATION OF PERMANENT IMPROVEMENTS & LONG-TERM USES OF SOUND TRANSIT-OWNED PROPERTY

Provided in future updates

13 RESOURCES

13.1 Sound Transit As-Built Library

ST maintains as-built drawings in its Engineering, Planning, & Development (EP&D) Library. To obtain copies of any of the drawings ST has on file, please contact ST Document Control at (telephone: (786) 469-5268) for an appointment to review the drawings and to order prepaid copies as required.

Half-size copies of any of the drawings on file are available at printing costs. The full-size drawings on file are available at printing costs. The full-size drawings are normally in archival storage and may be obtained by special request.

More resources provided in future updates

14 REFERENCES

- 14.1 Sound Transit Board Resolution No. R2013-30: Real Property Excess, Surplus, and Disposition Policy
- 14.2 Sound Transit Board Resolution No. R2018-10: Equitable Transit-Oriented Development Policy
- 14.3 Sound Transit Board Resolution No. R2023-30: Procurement, Agreements, and Delegated Authority Policy
- 14.4FTA Circular 5010.1F Revised November 1, 2024: Award Management Requirements

