

Seattle Department of Transportation

SOUTH HOLGATE ST AT-GRADE CROSSING ELIMINATION STUDY

Federal Railroad Administration Rail Crossing Elimination Grant Application



October 2022

PROJECT SUMMARY TABLE

Applicant:	City of Seattle
Federal Funding Requested Under this NOFO	\$2,000,000
Proposed Non-Federal Match	\$500,000
Does some or all of the proposed Non-Federal Match for the total project cost consist of preliminary engineering costs incurred before project selection?	No
Other Sources of Federal Funding	None
Total Project Cost	\$2,500,000
Was a Federal Grant Application Previously Submitted for this Project?	No
City and State Where the Project is Located	Seattle, Washington
Congressional District Where the Project is Located	WA-007
Is this project identified in:	
The freight investment plan component of a State freight plan?	No
A State rail plan prepared in accordance with Chapter 227?	Yes
A State highway-rail grade crossing action plan?	Yes
Is the Project Located in a Rural Area or on Tribal Land?	No
Is the project eligible for a funding set-aside in Section B.1?	Yes
If yes, please specify which one	Planning Projects
U.S. DOT Crossing Number(s)	927461X (S Holgate) 085583Y (S Holgate) 085585M (S Horton) 085586U (S Spokane) 085587B (S Spokane)
Is the Project located on real property owned by someone other than the applicant?	No

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PROJECT SUMMARY

S Holgate St is an arterial roadway within the Duwamish Manufacturing/Industrial Center, the Northwest region’s largest freight hub. Approximately half of all the freight rail traffic in Washington state moves through this very dense and active freight center, in addition to commuter rail and Amtrak services. Due to the intense multimodal activity in this area, S Holgate St and several other nearby crossings rank among the highest-risk at-grade rail crossings in the nation. As Amtrak expands its maintenance facility, adding 5 to 7 new tracks across the roadway alongside 8 existing tracks, S Holgate St will potentially become functionally closed to surface street traffic during peak periods – pushing a heavy burden onto other crossings in the area and producing unknown impacts on freight flow, general-purpose traffic flow, and safety for all modes (including high volumes of people who use these crossings on bikes or on foot). The Seattle Department of Transportation (SDOT) will lead the development of an extensive, multi-agency transportation and mitigation feasibility study including BNSF Railway Company, Amtrak, Sound Transit, the Port of Seattle, and the SODO Business Improvement Association, while centering the objectives of the Railroad Crossing Elimination program with a particular emphasis on multimodal safety.

PROJECT FUNDING

Secured funding from the Levy to Move Seattle and staff time from the Seattle Department of Transportation (SDOT) will provide local funding and in-kind contributions totaling at least \$500,000 over the life of the proposed study. The Levy to Move Seattle is a 9-year, voter-approved property tax levy that provides \$930 million to SDOT capital projects, including planning and design work for these projects. Levy funds are collected through 2024. (Please refer to APPENDIX A: SCOPE OF WORK, Section V, Task 1: Detailed Project Work Plan, Budget, and Schedule for more information.)

Performance measures for this study have not been formalized yet. These measures would be adopted at the time of award. Anticipated measures will generally follow FHWA guidance, modified if necessary to fit FRA’s business templates. These standardized measures include Approve Problem Statements and Opportunities; Approve Goals for the Corridor; Approve Evaluation Criteria, Methods, and Measures; and Approve Range of Solution Sets.

The table below represents our proposed project budget to accomplish the scope of work.

	Funding Amount	Percentage
Federal Funds	\$2,000,000	80%
Local Funds	\$500,000	20%
Total	\$2,500,000	100%

APPLICANT ELIGIBILITY

The City of Seattle, a unit of local government, is an eligible grant applicant for Railroad Crossing Elimination funds. Public and private stakeholders providing input will not be applicants of record.

DETAILED PROJECT DESCRIPTION

The Amtrak Maintenance Facility, including materials storage and office buildings at 187 S Holgate St in the SODO neighborhood of Seattle, provides the capacity, efficiency, and working conditions necessary to maintain and repair Amtrak's Cascades, Coast Starlight, and Empire Builder regional passenger Superliners, as well as Sound Transit's Sounder locomotives. The Amtrak facility is immediately adjacent to BNSF main line tracks, which carry an estimated 50% of all BNSF rail traffic in the state.

BNSF and Amtrak have requested the closure of S Holgate St from Occidental Ave S to 3rd Ave S within the City of Seattle's public right-of-way, with the intent of uniting the disconnected rail yard, improving service and capacity, enhancing safety, and reducing trespassing activities. However, substantial concerns exist over the impacts to the transportation network, multimodal access, operations and safety in the area, including cargo movement through the Port of Seattle's terminals and limitations to east-west mobility across the city for all users – especially during special events at either of the two professional sports stadiums in the vicinity. The S Holgate St grade crossing (DOT# 927461X) is identified as having the highest ranking for Risk Assessment in the Washington Highway-Rail Grade Crossing State Action Plan, produced by the Washington state Utilities and Transportation Commission (WA UTC)¹.

SDOT is now seeking \$2,000,000 in federal aid to advance a study that will gather and analyze critical stakeholder and transportation data, quantify the potential impacts of a S Holgate St closure, incorporate contemporary Sound Transit light rail initiatives², and develop and evaluate the mitigation strategies to maintain multimodal network operations. This study will quantify the potential impacts of closure of the S Holgate St at-grade crossing, from Occidental Ave S to 3rd Ave S, and will assess the feasibility of crossing alternatives. The study will assess area-wide operation and safety enhancements and develop and evaluate what are expected to be multiple mitigation strategies necessary to maintain transportation network operations and increase safety and security in the area of influence of the S Holgate St crossings (DOT# 927461X and DOT# 085583Y).

BNSF and Amtrak have made a formal request of the City of Seattle to relinquish the City's jurisdiction over this public right-of-way. This closure is proposed to increase railyard employee safety with tighter security against theft, vandalism, and terrorism, and to eliminate potential collisions between trains and multimodal users. The Amtrak facility, car shop, yard tracks, and office building also complement regional commuter rail (Sound Transit's Sounder service) and improvements to locomotive and car maintenance, galley storage, and rider experience for Amtrak's passenger rail service. The Amtrak facility is also adjacent to BNSF main line tracks.



¹ Washington Highway-Rail Grade Crossing State Action Plan, <https://www.utc.wa.gov/public-safety/rail-safety/state-action-plan>, 2022

² Sound Transit West Seattle and Ballard Link Extensions Draft Environmental Impact Statement, <https://www.soundtransit.org/sites/default/files/documents/10c-wsble-drafeis-appendixj-drawings-ballard-202201.pdf>

Concerns exist about the multimodal, economic, and equity impacts expected from changes to the S Holgate St crossings that would effectively remove one of the few roadway connections between destinations on the west side of the tracks (West Seattle, Harbor Island, and the city’s industrial lands), and those on the east side (the Chinatown-International District, Sound Transit light rail stations, and the Interstate Freeway system). Two stadiums, BNSF’s SIG Yard, UP’s Argo Yard, multiple intermodal transloading facilities, and Port of Seattle Terminals east and west of the BNSF Rail corridor are all critical parts of Seattle’s economic heartbeat and all require detailed consideration when evaluating the network, economic and equity impacts of changes to the S Holgate St crossings. It is essential to study and identify mitigation strategies and the feasibility of alternative connections in this area which is a busy, urban commercial area and event destination. These strategies and alternatives are essential to meeting multi-modal, economic and equity needs in the immediate vicinity and throughout the influence area of the S Holgate St crossings.

The study will evaluate impacts at several other area grade crossings that would be impacted by traffic diversions. These include grade crossing DOT# 085587B (S Spokane St EB), DOT# 085586U (S Spokane St WB B) and DOT# 085585M (S Horton St), and all are ranked within the State’s action plan among the “Top 58 Priority Higher Risk Crossings” as 2, 12, and 22, respectively.

A 2010 SDOT study³ previously considered the closure of S Holgate St and provided numerous recommendations:

1. The City of Seattle should not close S Holgate St unless:

Action	Status
Post-Viaduct replacement, there is a significant increase in the number and duration of gate-down events at the grade crossing	We expect the new study to determine this
The S Lander Street Grade Separation Project is completed	The S Lander Street bridge was completed in 2020
Amtrak’s willingness to help fund a pedestrian and bicycle overpass over S Holgate Street	This has been expressed informally to SDOT, and concepts were developed to accommodate an early stadium model that did not come to fruition

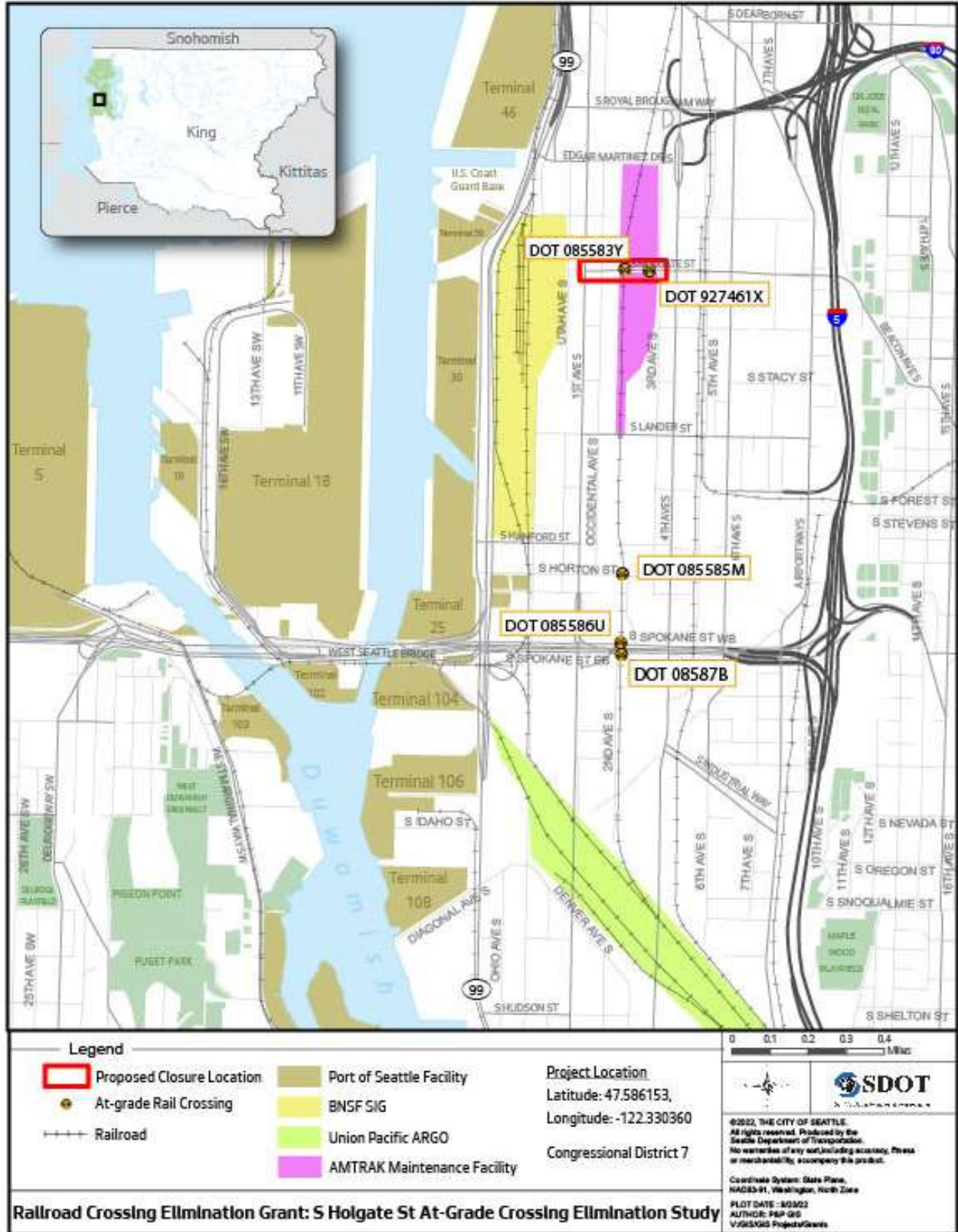
2. The City, in partnership with the railroads, should implement the following safety enhancements as high priority capital improvement projects:

Capital Improvement	Completed?
Consolidate crossing gates to prevent queueing vehicles from backing up onto the adjacent at-grade tracks	No
Install quad-gates to prevent vehicles from driving around the gate arms and encountering live tracks	No
Complete the sidewalk system on S Holgate Street between 1st Ave S and 4th Ave S.	No
Add pedestrian crossing gates to prevent pedestrians from crossing the tracks when a train is approaching.	No
Install a raised median pedestrian refuge to protect the many Amtrak employees that cross S Holgate St daily.	No
Add U-turn routes to allow travelers to make a safe U-turn to choose an alternate route	No
Install Direct Messaging Sign (DMS) boards to provide train arrival/blocked crossing information to travelers to reduce congestion around the grade crossing(s).	Yes

³ City of Seattle, “South Holgate Street Railroad Crossing Study Phase II” by Fehr & Peers, 2010

PROJECT LOCATION

The S Holgate St grade crossings are located within the South Downtown (SODO) neighborhood of the City of Seattle, which includes the Duwamish Manufacturing/Industrial Center (MIC). This urban center hosts a complex mix of uses including major seaport terminals, professional sports stadiums, retail uses, and large rail yards in addition to the typical warehousing, manufacturing, and industrial businesses that thrive in these centers. Operational and multimodal safety concerns are magnified in this highly complex area.



GRADE CROSSING INFORMATION

Crossing incident data gleaned from the Federal Railroad Administration (FRA) Highway-Rail Grade Crossing Accident/Incident Reports, until the time of this grant application, are summarized in the following tables. Incidents within the last six years are highlighted:

DOT# 927461X S HOLGATE STREET:

This crossing experienced four FRA reportable incidents within the last six years, with three fatalities.

Railroad	Date	Time	Weather	Incident Description	Killed	Injured
BNSF	8/11/2019	10:00AM	Clear	Train struck trespasser	Y (1)	N
BNSF	4/27/2018	11:45 PM	Cloudy	Train struck trespasser sitting on crossing	Y (1)	N
BNSF	6/4/2017	9:08 AM	Cloudy	Preceded gates	Y (1)	N
SCR	9/20/2016	4:14 PM	Clear	Highway user stopped on crossing	N	Y (1)

DOT# 085583Y S HOLGATE STREET:

While there are no FRA reportable incidents shown for the last 5 years, this crossing experienced eight incidents since 1979 with two fatalities in the last eleven years.

Railroad	Date	Time	Weather	Incident Description	Killed	Injured
BNSF	12/5/2014	6:10 PM	Clear	Highway user went around the gate	Y (1)	N
BNSF	1/30/2011	2:10 PM	Cloudy	Pedestrian direction unknown	Y (1)	N

DOT# 085585M S HORTON STREET:

This crossing is reported with two incidents since 2014, one of which was an injury.

Railroad	Date	Time	Weather	Incident Description	Killed	Injured
BNSF	5/14/2016	9:57 PM	Clear	Unoccupied vehicle	N	N
SCR	9/10/2014	7:50 PM	Clear	Highway user went around the gate	N	Y (1)

DOT# 085586U S SPOKANE STREET, WB:

While there are no fatality incidents indicated in the FRA reportable documentation and no incidents within the last five years, there have been numerous incidents at this westbound grade crossing since 1978.

Railroad	Date	Time	Weather	Incident Description	Killed	Injured
BNSF	11/20/2016	11:30 PM	Cloudy	Unoccupied vehicle	N	N
BNSF	5/16/2002	6:20 PM	Clear	Highway user did not stop	N	N

DOT# 085587B S SPOKANE STREET, EB:

This eastbound crossing, immediately adjacent to DOT# 085586U, provides access to I-5 and has encountered three reportable incidents in the last five years, one fatality in that time, and fifteen (15) incidents since 1975.

Railroad	Date	Time	Weather	Incident Description	Killed	Injured
BNSF	12/22/2019	7:31 PM	Rain	Highway user stopped on crossing	N	N
BNSF	9/10/2018	3:07 PM	Clear	Highway user went around the gate	Y (1)	1
AMTRAK	2/27/2018	9:38 PM	Rain	Highway user stopped on crossing	N	N
AMTRAK	6/25/2006	4:05 PM	Clear	Pedestrian was struck	N	Y (1)

EVALUATION CRITERIA

Eligible Project Criteria

SDOT will conduct a study of requested closure of the S Holgate St railroad crossings (DOT#s 085583Y and 927461X), the impacts of this closure on the adjacent transportation network, and the identification of mitigation measures and alternatives. The primary intent of this study is to determine capital improvements that will mitigate impacts caused by the potential loss of one of the few east-west connectors within the city's manufacturing/industrial center and near major stadium and event facilities. The outcomes from this study will also provide solutions to improve safety and security at each remaining grade crossing impacted by the proposed closure, as well as the areas adjacent to the rail corridor and the Amtrak Maintenance Facility. This work is eligible for Railroad Crossing Elimination grant funds under the category of "planning, environmental review, and design of an eligible project." Upon completion of the study, SDOT would expect to seek a second Railroad Crossing Elimination grant (along with local funds and partner contributions) to implement the preferred alternative identified in the planning phase.

Evaluation Criteria, Technical Merit

The S Holgate St project advances each of the goals established by the Railroad Crossing Elimination program, including substantial safety benefit, extensive stakeholder engagement, readiness to proceed, and a focus on administration priorities such as climate action and workforce development. The following sections provide a more detailed crosswalk between the proposed study and the various grant selection criteria.

Quality of Statement of work and application materials

See Appendices A – D.

Readiness and completeness of prerequisites

Since the requested federal funds would only be used for planning work, the prerequisites for grant obligation are minimal. Upon notification of an award, our City Council would formally accept the funds while SDOT staff would work with FRA to finalize the statement of work and other required agreements. We expect these administrative steps to take several months, but they don't present a risk to prompt delivery of this project.

Applicant past performance, technical capacity, and financial contributions

SDOT is an experienced and reliable recipient of federal funds, including various grants administered by FRA and FHWA. We have committed local revenues for the project's required non-federal match, and in-kind match (staff time spent on the project) creates an additional buffer to ensure an adequate match rate. We recognize that our staff capacity is not adequate to complete the extensive research and analysis that will be required for this study, and we expect that the traffic modeling and analysis will be led most effectively by specialists in these fields. We will enter into a federally compliant consultant contract to fully deliver the scope of work.

Private sector participation

Numerous freight, rail, and port agencies will be involved in providing data and input for the study. SDOT considers Amtrak and BNSF to be key players in the development of strategies throughout the rail corridor. As we develop mitigation alternatives, seaport and trucking representatives will also provide critical inputs on the impacts to the greater manufacturing/industrial community and its industrial lands.

Qualifications and experience of key personnel and organizations

SDOT has numerous subject matter experts (SMEs) in pedestrian facilities, intelligent transportation systems (ITS), signal operations, capital project and program management, contracting, transportation planning, and federal grant administration. Key SDOT staff for this project include:

- Matt Beaulieu PE, Manager of Design & Engineering, is the Seattle Transportation Network SME
 - Oversight and review of a variety of highway safety projects and programs
 - Safety Risk evaluation, microsimulation, performance monitoring, traffic forecasting
 - Environmental documentation
- Chris Eaves PE, Senior Civil Engineer, is the Freight, Supply Chain, and Goods Movement SME
 - Freight lead support in SDOT

- Developed the City of Seattle’s Freight Master Plan, Final 50-Foot research suite
- Founding partner of the University of Washington’s Urban Freight Lab
- On-going Freight educator: CIVITAS Urban Freight (Brussels, BE); Home World Delivery (Philadelphia, PA); Transportation Research Board; Southern California Association of Governments (SCAG)
- Treysa Tate, Associate Civil Engineer, is the Rail Operations, Safety Design, and Constructability SME
 - Over 10 years of railroad capital project experience – design and construction engineering; materials inspection; constructability and job hazard review
 - Railroad Maintenance of Way (MOW) and Rules familiarity
 - Construction Stormwater General Permit expertise – documentation, review, and implementation

This study will require additional expertise from contracted consultants with expertise in traffic modeling, railroad operations and safety, bridge design and maintenance, construction phasing, goods movement, and ITS.

Consistency with planning documents

This study is in alignment with relevant state and local plans, including:

- Washington State Rail Plan 2019-2040⁴
- Washington Highway-Rail Grade Crossing State Action Plan¹
- WSDOT Amtrak Cascades Fleet Management Plan⁵
- SDOT’s Freight Master Plan⁶

Evaluation Criteria, Project Benefits

Improvements at highway-rail or pathway-rail grade crossings

A primary intent of this study is to determine appropriate upgraded active warning devices necessary at the rail grade crossings within the targeted rail corridor and those elsewhere in the city that may be impacted by the closure of the S Holgate St grade crossing.

The study recommendations may include, but will not be limited to:

- Completion of sidewalk elements, including ADA compliance measures
- Pedestrian and bicycle gate arms and channelization elements
- Improved lighting, fencing, or other security measures along the rail corridor
- Continuous Warning Time (CWT) and radar detection appurtenances at outdated grade crossing locations
- Wayside horns
- Grade crossing surface upgrades and/or replacements
- Transportation signal and network operations enhancements

Proposals to grade separate, eliminate, or close one or more rail grade crossings

The proposed study will determine, through a variety of data and modeling methodologies, the viability of a grade separation at S Holgate St. The resultant study may determine that a grade separation at S Holgate St or elsewhere in the city is the appropriate action to mitigate the impacts of the S Holgate St grade crossings being permanently closed.

Improvements to the mobility of both people and goods

The potential closure of S Holgate St will reverberate throughout the City of Seattle’s transportation network. One of the significant goals of this study is to ensure that SDOT is prepared to take appropriate actions to minimize impacts to goods movements between the east and west portions of the City. Stakeholders such as the Port of Seattle, SODO Business Improvement Association, and numerous local businesses rely on the Holgate crossing, along with commuters and general-purpose traffic.

⁴ Washington State Rail Plan 2019-2040, <https://wsdot.wa.gov/construction-planning/statewide-plans/freight-rail-plans/2019-washington-state-rail-plan>

⁵ WSDOT Amtrak Cascades Fleet Management Plan, <https://wsdot.wa.gov/sites/default/files/2021-10/Rail-FleetManagementPlan-Nov2017.pdf>, 2017

⁶ City of Seattle Freight Master Plan, <https://www.seattle.gov/transportation/document-library/citywide-plans/modal-plans/freight-master-plan>, 2016

Amtrak will be delivering their Seattle Maintenance Facility with the goal of expanding passenger rail service and providing maintenance support to Sound Transit's Sounder locomotives. Well-maintained trainsets will ensure the reliability of passenger rail service into and out of Seattle.

BNSF moves critical cargo through the city, and evaluating the closure of S Holgate St along with additional safety measures at the remaining open grade crossings within the corridor will reduce FRA reportable incidents. This in turn will allow BNSF to maintain customer shipping expectations and reduce rail line congestion caused by these types of incidents. Finally, maintaining surface street operations at Holgate and/or optimizing other crossings in the area will allow our sports stadiums to effectively manage peak crowds during events that draw tens of thousands of visitors to this constrained area during major events.

Reduction in emissions, protects the environment and provides community benefits

Environmental injustice in the City of Seattle is apparent within our most vulnerable communities, which disproportionately experience environmental health risks such as exposure to air pollution. Numerous environmental justice studies conducted within the United States indicate that exposure to air pollution is significantly higher for lower-income and BIPOC communities⁷. More than 140 studies, covering a range of pollutants and U.S. locations, found higher air pollution exposures for lower-income groups and/or for race-ethnicity minority groups.

The project is located within the South Downtown "SODO" District, a part of the Duwamish Manufacturing/Industrial Center. The SODO district is one of the most dynamic and storied areas of Seattle, developed on tidal lands filled in the 1910s. The SODO District History contains the following Land Acknowledgement:

*We acknowledge that this Indigenous land now called SODO District is the ancestral land of the first people of Seattle, specifically the ancestral land of the Co-Salish tribes. We recognize, honor, and respect the Indigenous people connected to this land; past, present, and future.*⁸

SODO houses industries that support Port of Seattle operations, freight rail, passenger and commuter rail, light rail, bus transit, Coast Guard, industrial and maritime manufacturing, retail, and construction and maintenance facilities, all just south of Downtown Seattle. Should the S Holgate St grade crossings be subject to closure, the remaining open grade crossings will absorb the resultant traffic congestion associated with these uses.

Rail industry predictions indicate that railroad operators will be increasing train length and open grade crossings along the rail corridor will be subject to longer closures, which in turn will increase vehicle idling and emissions. A key goal of this study includes determining mitigation options that will reduce traffic congestion around open grade crossings and reduce the associated vehicle delay when trains occupy those crossings.

The study will also be able to address ways to reduce trespassing within the railroad right-of-way. Trespassers within the railroad right-of-way cause locomotive operators to sound train horns more often than required at the grade crossings, which increases noise pollution concerns from our constituents.

Improvements to access for emergency services

S Holgate St is one of the few remaining east/west connectors within the SODO area. Our proposed study will evaluate first responder access to the areas immediately adjacent to the rail corridor, and existing response time through the S Holgate St crossings during various time of day and event parameters (including should S Lander St Grade Separation be unavailable for any reason). Scenarios to be modeled include nearby sporting events, any rail partner emergencies, extreme weather events including snow and ice, the potential derailment of oil trains running through the city, and various combinations of these scenarios.

Improvements to access for communities

The study will evaluate the impact of a S Holgate St closure in light of existing mobility-challenged residents, bicycles, pedestrians, and school buses. The study will inform SDOT's ADA-compliant sidewalk and curb ramp program adjacent to the rail corridor and at each of the remaining rail grade crossings along the corridor or along other impacted corridors based on the potential closure. It will also evaluate the need for additional pedestrian gate arms or other active warning devices for non-motorized network users in support of SDOT's Vision Zero goals to end traffic fatalities and serious injuries. The Holgate St crossing, and the nearby network that would need to support diverted traffic is important to a wide variety of users including commuters, truckers, and event-goers as well

⁷ "Changes in Transportation-Related Air Pollution Exposures by Race-Ethnicity and Socioeconomic Status: Outdoor Nitrogen Dioxide in the United States in 2000 and 2010", Clark, Millet, & Marshall, September, 14 2017

⁸ SODO Business Improvement Area, <https://sodoseattle.org/about/>

as the non-motorized users described above. Additionally, S Holgate St is one of only a few east-west routes that connect neighborhoods within this area. The complex mix of users makes potential detours especially treacherous. People on bikes, on foot, or on mobility devices such as wheelchairs would be required to mix with high-speed, heavy vehicles on various industrial roadways that often lack sidewalks, curb ramps, and other similar amenities.

Economic benefits

Railroads are a vital link in the global supply chain. SDOT recognizes BNSF's contribution to the regional and local economies through the generation of:

- High-paying rail industry jobs
- Additional industry-supported jobs
- Industry and consumer connection to the global market
- Local community growth from sizeable funds infused into the market and government budgets⁹

Further, SDOT understands that these economic contributions are directly connected to the railroad's commitment to reliable and consistent service for their customers and their ability to maintain and build upon existing rail capacity to meet the region's growing demands for safety, efficiency, and sustainability. The challenge throughout the rail industry is realizing a sufficient return on invested capital to enable investments that will meet long-term capacity needs.

This study will support the following economic benefits:

- Support Amtrak's commitment to passenger rail service and their new maintenance facility
- Reduce FRA reportable incidents that cause rail delays
- Reduce theft and vandalism within rail facilities
- Mitigate any impacts to regional seaport goods movement
- Support intermodal movement along the SDOT transportation network
- Support on-time Sound Transit "Sounder" commuter rail service

Contracting incentives to employ local labor, to the extent permissible under Federal Law

The City of Seattle has incorporated guidance from the Federal Disadvantaged Business Enterprise (DBE) Program, established under U.S. DOT CFR 49 Part 26, within its own contracting rules to ensure that local disadvantaged businesses are utilized. Further, the City of Seattle offers a variety of outreach, contracting education, and registration tools for Women and Minority Owned Business Enterprise (WMBE) small businesses to ensure qualified small businesses have access to a variety of contracting opportunities citywide. SDOT's Office of Equity and Economic Inclusion monitors SDOT's WMBE program and other similar initiatives. This office is "responsible for leading the strategic vision and leadership in the planning, promotion and advancement of equity and diversity, and leads SDOT to measurable improvements."

To ensure that WMBEs have equal access to contracting opportunities and that the City's contracting equity and inclusion efforts are legally defensible and administratively successful, the City is conducting a study to assess the availability and utilization of WMBEs. The study will include an evaluation of the City's current procurement policies, procedures, spend analysis, and engagement with the contractors, vendors, and consultants, with an additional scope element to address the impacts of COVID-19 and other market disequilibria. The study is expected to be complete by 2023¹⁰.

Selection Criteria, Departmental Goals

Safety

Safety is the first strategic goal noted within the U.S. Department of Transportation's Strategic Plan FY 2022-2026¹¹. This study, and the capital project(s) that would follow, are intently focused on this goal. Detailed descriptions of these improvements are described in the Safety Benefit section below.

Equitable economic strength and improving core assets

⁹ BNSF's Economic Impact <https://www.bnsf.com/in-the-community/economic-impact.page>

¹⁰ City of Seattle Disparity Study, <http://seattle.disparity-study.com/>

¹¹ U.S. Department of Transportation, Strategic Plan FY 2022-2026, https://www.transportation.gov/sites/dot.gov/files/2022-04/US_DOT_FY2022-26_Strategic_Plan.pdf

The U.S. Department of Transportation’s Strategic Plan FY 2022-2026 notes key economic strategies that are relevant to our proposed study:

- Repair, rebuild, and modernize transportation infrastructure while focusing on climate change mitigation, resilience, equity, and safety for all users.
- Modernize and expand rail networks across the country.
- Support a more just and equitable transportation system by investing in historically underserved communities to connect them with jobs, resources, and opportunities.
- Improve infrastructure at ports (coastal and inland) to strengthen our national supply chain.



Seattle is committed to building a strong and diverse economy by improving our position as a gateway for global trade and increasing family-wage jobs. From the cranes and container terminals that mark the Port of Seattle, to the warehouses and the manufacturing facilities within the Duwamish Manufacturing/Industrial Center, shipping, fishing, and manufacturing have been foundations of the economic success of Seattle. Both the manufacturing and maritime sectors have also been a critical source of middle-wage jobs, one of the cornerstones of a thriving and livable City.

Puget Sound Regional Council’s Regional Economic Study¹² identifies opportunities and strengths in trade, by way of our ports, airports, maritime sites, military installations, and industrial lands. Rail connects these attributes and provides access for exporters to global markets through the Ports of Tacoma and Seattle. Combined as the Northwest Seaport Alliance¹³, these ports form the fourth largest import/export gateway in the U.S.

In 2016, the Seattle Region Partnership¹⁴ was formed as a tri-sector initiative between business, government, and philanthropy to address jobs and opportunity for our region's residents. This cooperative effort is focused on our region's middle-income jobs as an essential element in ensuring inclusive economic success in our region.

Equity barriers to opportunity

In 2004, the City of Seattle established its Race and Social Justice Initiative (RSJI) to eliminate racial disparities and advance social justice through equitable policies, programs, and planning practices. This has led to the creation of several equity initiatives and programs over the years, including the 2017 Transportation Equity Program. In 2019, the Transportation Equity Workgroup (TEW) was created to bring the lived experiences and professional knowledge from Seattle’s Black, Brown, Indigenous and other vulnerable communities (collectively referred to as BIPOC communities) to define the values and strategies for the Transportation Equity Framework (TEF). The [TEF](#) will guide the actions of SDOT employees for years to come.

According to the USDOT’s Transportation Disadvantaged Census Tracts (Historically Disadvantaged Communities) GIS map¹⁵ Seattle has 7 disadvantaged tracts, and 6 of those tracts are within the study area.

	Census Tract 93	Census Tract 81	Census Tract 92	Census Tract 91	Census Tract 85	Census Tract 109
Historically Disadvantaged	Y	Y	Y	Y	Y	Y
Transportation Disadvantage	N	N	N	N	N	Y
Health Disadvantage	Y	Y	Y	Y	Y	N
Economy Disadvantage	N	Y	Y	Y	Y	Y
Equity Disadvantage	Y	Y	Y	Y	Y	Y

¹² Puget Sound Regional Council, Regional Economic Study, https://www.psrc.org/sites/default/files/2022-02/2022-2026_ceds_central_puget_sound_region_-_final_adopted.pdf 2021

¹³ Northwest Seaport Alliance, <https://www.nwseaportalliance.com/>

¹⁴ Seattle Regional Partnership, <https://www.seattlechamber.com/news/policy-advocacy/>

¹⁵ USDOT’s Transportation Disadvantage Census Tracts (Historically Disadvantaged Communities) GIS Map

Resilience Disadvantage	Y	Y	Y	Y	Y	Y
Environmental Disadvantage	Y	Y	Y	Y	Y	Y

As part of Seattle’s Transportation Equity Framework, employers in the industrial area and adjacent neighborhoods such as South Park, Georgetown, Beacon Hill, and Pioneer Square will be included in outreach efforts to ensure impacts to BIPOC business and residential areas are clearly understood. This information will be used to inform the initial impact analysis with a goal of developing a suite of mitigation strategies that meet network user needs and address longstanding transportation inequities.

Climate change and sustainability

Our existing transportation system, powered by fossil fuels, is responsible for 60% of Seattle’s climate pollution. According to the City’s most recent greenhouse gas (GHG) inventory, we must reduce our transportation emissions by 77% to meet our 2030 climate goals and eliminate them entirely to achieve “a city free of climate pollutants,” as called for in the 2019 Green New Deal Resolution. We must fundamentally change the way people, goods, and services move throughout the city. Policies and investments that support changes in transportation methods, as well as safety priorities like Vision Zero, help reduce barriers to economic success and the inequitable health impacts of transportation emissions on historically impacted communities in Seattle. Through this proposed grade crossing closure mitigation study, we have an opportunity to reduce emissions, improve mobility, and strengthen our region’s supply chain.

Transformation of our nation’s transportation infrastructure

Amtrak is presently in the process of a multiphase upgrade of their Seattle Maintenance Facility, which has been designed to improve capacity, efficiency, and employee working conditions¹⁶. Phased work includes construction of an enclosed Maintenance of Equipment (MOE) building over two tracks. The building will be long enough to service a full Talgo trainset, with below-grade inspection pits running nearly the entire facility length, as well as office space and welfare facilities. Extensive work will be performed to reroute utilities, demolish the existing tracks, relocate new tracks, and construct new storm drainage and sanitary sewer, parking, roadways, and at-grade rail crossings^{16, 17}. The new Amtrak Facility will also include the design and construction of additional storage tracks, a new Service and Inspection (S&I) building, and a pedestrian bridge connecting the new staff parking lot with the maintenance facilities.

In 2021, BNSF expected to invest approximately \$2.99 billion in capital expansion and maintenance across its system. The largest component of the plan will be to replace and maintain BNSF’s core network and related assets to ensure BNSF continues to operate a safe and reliable network. In addition, the plan includes investing in expansion and efficiency projects and acquiring new freight cars, locomotives, and other equipment¹⁸.

SDOT’s proposed study aims to understand what additional infrastructure investments are required to maintain transportation east-west network continuity for all modal users, including all of our supply chain partners.

EVALUATION AND SELECTION CRITERIA, PROGRAM PREFERENCE

The proposed study will evaluate options to grade separate S Holgate St in the vicinity of the new Amtrak Maintenance Facility. The study will also inform passive and active grade crossing safety upgrades as well as additional traffic mitigation measures to reduce congestion at the remaining open corridor grade crossings, improve multimodal travel over these crossings, reduce congestion through potential ITS solutions to redirect travelers, and support supply chain movements to ensure the City’s major employers can avoid costly disruptions.

As stated in the Notice of Funding Opportunity (NOFO) for the Railroad Crossing Elimination grant program, SDOT agrees that “The safest rail grade crossing is no crossing, and grade separating or otherwise eliminating crossings is the most direct way to prevent intrusions into the railroad right-of-way.” However, the prospect of a new overpass at S Holgate St presents a very complex engineering puzzle. Constructing a new overpass at this location presents evident conflicts with existing roads (including arterial roadways such as Occidental Ave S and 1st, 4th, and 6th Aves S), many existing land uses (including major employers and rail yards),

¹⁶ All Aboard Washington, “Amtrak dedicates new Seattle maintenance facility”, <https://www.aawa.us/news/posts/amtrak-dedicates-new-seattle-maintenance-facility/>, 2012
¹⁷ TKDA, “Our Work: Amtrak King Street Coach Yard Facilities”, <https://www.tkda.com/projects/amtrak-king-street-coach-yard-facilities/>
¹⁸ BNSF, Railway in Washington, <https://bnsfnorthwest.com/washington/>

and future plans for Sound Transit light rail facilities (including a new commuter rail station proposed nearly adjacent to the BNSF tracks). Specifically, Sound Transit’s West Seattle Ballard Link Rail Extension (WSBLE) included proposed alignments that may either grade separate S Holgate St between 3rd and 6th or grade separate the light rail tracks. In this dense, urbanized environment, the complexity of a new overpass is very high, and various designs will show a massive variation in cost. SDOT’s sense of stewardship for public funds – in addition to our stewardship of the SODO community – requires an extensive, collaborative, and thoughtful planning process to reach a preferred alternative for S Holgate St.

SAFETY BENEFIT

Safety is a key priority for SDOT, one of six adopted “core values” that guide all of our decisions and investment priorities. Major operational changes on S Holgate St are expected to have significant safety impacts not only on our surface streets, but also on rail, port, and industrial operations. The study proposes to review these overlapping networks and determine appropriate mitigation strategies that can minimize crash risk on the City’s right-of-way in addition to supporting our partners in their efforts to improve safety for railroad operations, railroad staff and other warehousing/industrial workers, and the trucking community. SDOT is familiar with the FRA’s emphasis on trespasser reduction efforts - encampment relocation and support outreach, fencing installation, repair, and maintenance. We participated in a 2021 focused inspection with the FRA, Oregon Department of Transportation (ODOT), Washington State Utilities & Transportation Commission (UTC), and BNSF to review rail corridor locations especially impacted by trespassing, vandalism, and theft.



SDOT believes that our proposed study will:

- Better inform rail corridor-wide anti-trespasser efforts through data-driven analysis
- Provide value engineering for the overall cost-of-ownership of any anti-trespassing approach
- Ensure the safety of passengers and railroad employees alike, especially during after-hours maintenance or nighttime passenger disembarking, since railroad operations are 24/7 activities, and the new Amtrak Maintenance Facility will be in service around the clock

Acting on state rail and transportation plans and meeting Vision Zero goals are also key SDOT safety priorities that will be addressed in our proposed study. Seattle’s SODO District has multiple at-grade rail crossings, and four of these nearby crossings within the same rail corridor are ranked within the “Top 58 Higher Risk crossings” list within the Washington State Highway-Rail Grade Crossing State Action Plan. Each of these four crossings will be evaluated using the National Risk Index, FRA’s history of Reportable Incidents, GRADEC, and 49 CFR Appendix D Part 222 (Determining Risk Levels) to provide a thorough understanding of the appropriate safety measure to apply at each crossing. Seattle’s SODO District has multiple at-grade rail crossings, and four of these nearby crossings within the same rail corridor are ranked within the “Top 58 Higher Risk crossings” list within the Washington State Highway-Rail Grade Crossing State Action Plan. Each of these four crossings will be evaluated using the National Risk Index, FRA’s history of Reportable Incidents, GRADEC, and 49 CFR Appendix D Part 222 (Determining Risk Levels) to provide a thorough understanding of the appropriate safety measure to apply at each crossing.

In addition to the safety benefits for surface streets and multimodal users, Amtrak and BNSF will also receive numerous safety benefits from the outcomes of this study:

- Theft, vandalism, and trespasser reduction through railyard and rail corridor security measures
- Reduction in FRA reportable incidents that delay the movement of people and goods
- Connection of Amtrak Yard, increasing safety for Amtrak employees
- Increased safety for Amtrak and Sounder Passengers
- Improved security against terrorism

- Decreased grade crossing surface maintenance costs (upon closure)
- Reduction in material and manpower costs for required maintenance of signal appurtenances within the vacated roadway
- Support of Amtrak’s new Seattle Maintenance Facility

PROJECT IMPLEMENTATION & MANAGEMENT

SDOT will administer the federal grant funds and contract consultant services to deliver the Railroad Crossing Elimination study. In addition to the City of Seattle’s own resources and expertise, we expect substantial collaboration with each our major stakeholders including Amtrak, BNSF, seaport representatives, and our own Freight Advisory Board.

SDOT is responsible for the operation and maintenance of the City’s transportation systems, including roads, bridges and other roadway structures, signals, transit, traffic control, and right-of-way permitting. The agency is funded primarily by general taxes supplemented by fees, partnership funding, and the Levy to Move Seattle (a voter-approved property tax levy). SDOT’s annual budget is approximately \$740 million.

SDOT has a long history of delivering successful capital projects and has continually proven to be a good steward of federal funding. Our staff is well-versed in the regulations and reporting requirements associated with federal grants.

ENVIRONMENTAL READINESS

SDOT’s proposed planning study meets NEPA categorical exclusion criteria under CFR 771.116.c.3: “Planning or design activities that do not commit to a particular course of action affecting the environment.”

While SDOT has not submitted documentation to FRA to gain concurrence that this Planning Study Project meets CE criteria, SDOT expects that no documentation will be required because the study will not result in construction, and the federal funds will not be used for design or construction. Any capital projects that are identified in the planning study would undergo appropriate environmental review, including NEPA if required, during the preliminary engineering (PE) phase.

APPENDIX A – SCOPE OF WORK

The following text constitutes a proposed Scope of Work (SOW) per the requirements of the Railroad Crossing Elimination NOFO. Upon award, SDOT would collaborate closely with FRA staff to ensure that this document is amended and formatted as needed to comply with all relevant requirements of FRA and the Railroad Crossing Elimination program.

STATEMENT OF WORK

City of Seattle

South Holgate St At-Grade Crossing Elimination Study

Railroad Crossing Elimination, FFY2022

I. AUTHORITY

Authorization	49 U.S.C. 22909
Funding Authority/Appropriation	Section 22305 of the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. 117–58, November 15, 2021)
Notice of Funding Opportunity	Railroad Crossing Elimination for Fiscal Year 2022, Federal Register July 6, 2022, FR Document 2022-14344 , Citation 87 FR 40335

II. BACKGROUND

This Agreement funds the Grantee (the Seattle Department of Transportation, or “SDOT”) to support the deployment of the S Holgate St At-Grade Crossing Elimination Study Project. To the extent there is a conflict between Attachment 1 and this Attachment 2, Attachment 1 governs.

III. OBJECTIVE

S Holgate Street is an arterial roadway within the Duwamish Manufacturing/Industrial Center, the Northwest region’s largest freight hub. Approximately half of all the freight rail traffic in Washington state moves through this very dense and active freight center, in addition to commuter rail and Amtrak services. Due to the intense multimodal activity in this area, Holgate St and several other nearby crossings rank among the highest-risk at-grade rail crossings in the nation. As Amtrak expands its maintenance facility, including adding 5 to 7 new tracks across the roadway in addition to the existing 8 tracks, Holgate St will potentially become functionally closed to surface street traffic during peak periods – pushing a heavy burden onto other crossings in the area and producing unknown impacts on freight flow, general-purpose traffic flow, and safety for all modes (including high volumes of people who use these crossings on bikes or on foot). SDOT will lead the development of an extensive, multi-agency transportation and mitigation feasibility study including BNSF, Amtrak, Sound Transit, the Port of Seattle, and the SODO Business Improvement Association, while centering the objectives of the Railroad Crossing Elimination program with a particular emphasis on multimodal safety. SDOT’s proposed study aims to understand what additional infrastructure investments are required to maintain transportation east-west network continuity for all modal users, including all of our supply chain partners.

This study will build off an options analysis completed in 2010 and update it to reflect changes to the area in the last twelve years, including the opening of the Lander Street grade separated crossing, as well as future plans such as those associated with the expansion of light rail transit in the area. The study will review options to improve operations at the existing crossing, close the crossing while improving operations elsewhere in the network, or replace the at-grade roadway with a structure.

We will:

- Talk with people who are using S Holgate St today to understand where they are traveling and how else the transportation network could provide alternatives
- Interview freight providers in the area for insights into their key connections and impacts to their business
- Build off a 2010 preliminary report to further analyze improvements to the at-grade network and/or grade-separated improvements

IV. PROJECT LOCATION

The Holgate crossing lies at latitude 47.586153 and longitude -122.330360, within the City of Seattle. A potential closure of this rail crossing is expected to encompass approximately a 3-block surface street section, from Occidental Ave S to 3rd Ave S. Additional nearby rail crossings and connected transportation networks would be included in the study, ensuring that impacts are fully analyzed for the rail corridor as well as the surface street network.

V. DESCRIPTION OF WORK

Task 1: Detailed Project Work Plan, Budget, and Schedule

The Grantee will prepare a Detailed Project Work Plan, Budget, and Schedule for the following tasks, which may result in amendments to this Agreement. The Detailed Project Budget will be consistent with the Approved Project Budget but will provide a greater level of detail. The Detailed Project Work Plan will describe, in detail, the activities and steps necessary to complete the tasks outlined in this Statement of Work. The Detailed Project Work Plan will also include information about the project management approach (including team organization, team decision-making, roles and responsibilities and interaction with FRA), as well as address quality assurance and quality control procedures. In addition, the Detailed Project Work Plan will include the Project Schedule (with Grantee and agency review durations) and a detailed Project Budget. The Detailed Project Work Plan, Budget, and Schedule will be reviewed and approved by the FRA.

The Grantee acknowledges that work on subsequent tasks will not commence until the Detailed Project Work Plan, Budget, and Schedule has been completed, submitted to FRA, and the Grantee has received approval in writing from FRA, unless such work is permitted by pre-award authority provided by FRA. The FRA will not reimburse the Grantee for costs incurred in contravention of this requirement.

Task 1 deliverables:

- Detailed Project Work Plan, Budget, and Schedule
- Project Agreements (if applicable)

Task 1.1: Grant Administration

The Grantee will complete the following required grant reports and documents: (1) Quarterly Progress Reports to track project activities and progress of the tasks in this statement of work (SOW) to verify the project is on track and within budget; (2) SF-425 Federal Financial Reports; and (3) a Final Performance Report;

Task 1.1 deliverables:

- Detailed Budget and Schedule
- Quarterly Progress Reports
- Federal Financial Reports
- Final Performance Report

The Grantee acknowledges that work on subsequent tasks will not commence until the Detailed Budget and Schedule have been completed, submitted to FRA, and the Grantee has received approval in writing from FRA.

Task 2: Outreach and Engagement

The Grantee and its consultant will develop an engagement plan including media/communications considerations. As well, the Grantee and its consultant will conduct stakeholder outreach and implement the engagement plan. This may include:

- Stakeholder mapping: identify key stakeholders (e.g., agency partners, general community, freight and business, advocacy groups, modal groups, special interest groups, etc.)

- Engage with stakeholders to set goals and understand transportation network needs using inclusive outreach strategies from SDOT’s Transportation Equity Framework
- Use SDOT’s Racial Equity Toolkit to ensure the project addresses benefits or burdens in terms of racial equity
- Work collaboratively with rail carriers and right-of-way owners; the Grantee has established relationships and this study is supported by key rail carriers

Task 2 deliverables:

- Engagement Plan
Engagement Summaries of stakeholder needs that include establishment of project goals and technical recommendations to address community feedback received

Task 3: Technical Analysis

The Grantee and its consultant will conduct an assessment of current (baseline) conditions and an initial needs assessment for safety and mobility in the broader study area. This will include transportation modelling. The baseline conditions will consider, but is not necessarily limited to:

- Rail operations, including freight, passenger, commuter, light rail, and streetcar use and conflicts
- Existing at-grade rail safety appurtenances, condition, and congestion statistics, including impacts related to stadium events
- Motorized and nonmotorized right-of-way users – vehicles, bikes, pedestrians, and transit
- Port and rail intermodal connectivity including access to/from Harbor Island, port terminals, BNSF SIG Yard, UPRR Argo Yard, I-5, State Route 99, the City’s Heavy Haul network, and the various transload locations citywide
- Safety and security at both sports stadiums
- Safety and security at the King Street Station and southern portal of the BNSF-owned Great Northern Tunnel
- Existing passive and active railroad advance warning safety devices
- Existing traffic control systems, signal preemption/interconnect, and traveler alert systems
- First responder access and emergency response
- Existing homeless encampment and trespasser frequency and locations
- Environmental considerations – noise, air, and water quality compliance, rail yard light positioning
- Daily traffic volumes
- Existing levels of service
- Operational analysis
- Network connectivity, including for adjacent communities

The baseline condition may include an analysis of existing rail safety and trespasser reduction elements and the current conditions of the transportation network to establish a baseline condition for transportation and safety modeling from the EB S Spokane St crossing (DOT# 085587B) to the King Street Station and the southern portal of the BNSF-owned Great Northern Tunnel. The Grantee and its consultant will explore initial alternatives and conduct fatal flaw review of initial alternatives.

The Grantee and its consultant will conduct a Risk Assessment.

The Grantee and its consultant will research related projects and initiatives. This includes:

- Alignment with USDOT Strategic Goals, including safety, equitable economic strength and improvement of core assets, equity and barriers to opportunity, climate change and sustainability, elimination of crossings and corridor-wide improvements, and geographic diversity
- Review existing plans

Grantee and its consultant will conduct alternatives exploration. This includes:

- Evaluate future conditions; this may include travel demand and/or operational modeling
- Proposed improvements or system operation changes to be addressed within the study may include but not necessarily be limited to:
 - Projected freight rail capacity increases, including train length and frequency

- Projected passenger and commuter rail increases or changes
- Amtrak Maintenance Yard improvements
- Sound Transit West Seattle to Ballard Light Rail Extension
- WSDOT 'Revive I-5' improvement project
- SDOT East Marginal Way Corridor Improvement Project and other Heavy Haul Corridor Improvements
- SDOT 1st Avenue Safety Corridor surface improvements
- SDOT Spokane Viaduct Rehabilitation Project
- SDOT S Spokane St Reconfiguration
- SDOT Curb Ramp initiatives
- SDOT Airport Way Safety Corridor
- Washington State Ferries Electrification Project – Colman Dock
- WSDOT SR 160 Fauntleroy Terminal Trestle & Transfer Span Replacement
- Terminal 5 Quiet Zone

Other data to be collected may include projected growth in ridership, freight capacity increases, related infrastructure needs, and proposed impacts or new uses required within the transportation network. Additional stakeholders may also include the SODO Business Improvement Area (BIA), United States Coast Guard, and nearby businesses of national or regional importance (including Kinder Morgan, Vigor, United States Department of the Navy, and United States Department of Defense). Seattle Freight Board and the Seattle Maritime Townhall may also be included in the data gathering effort to ensure business and maritime land uses are incorporated into the needs analysis.

The Grantee and its consultant will estimate improvement costs, technical feasibility, and environmental impacts of final alternatives.

Once the data is gathered and modeling is complete, we will be able to develop and analyze the potential S Holgate St closure mitigations to improve safety, security, and network function throughout SODO and the surrounding neighborhoods. Study evaluation may include, but is not limited to, the closure alternatives below:

- S Holgate St vacation / grade crossing closure mitigation strategies
- Full closure between Occidental Ave S and 3rd Ave S
- Pedestrian/bike grade-separation at S Holgate St
- Full multimodal grade-separation at S Holgate St
- Alternative grade-separation over the BNSF corridor on network
- De facto (functional) closure between Occidental Ave S and 3rd Ave S; trains occupying the grade crossings within the Project Study area with such frequency as to render the grade crossings unavailable to multimodal movements over it during peak travel hours
- Time of day closure
- Grade crossing closure time during the periods of highest train activity

Each of the proposed S Holgate grade crossing closure alternatives indicated above will provide the basis within which to evaluate mitigation enhancement options such as:

- Information Technology Systems (ITS) solutions to improve safety and efficiency, reduce congestion, and improve the overall user experience
- Managed lanes, tolling
- Travel information, train arrival predictions
- Transit technologies
- SDOT Transportation Operations Center enhancements – traffic detectors, CCTV cameras, ramp meters, and information service providers
- Construction coordination – phasing funded projects to minimize impacts
- Signal equipment upgrades and/or functionality enhancements
- Signal timing updates
- Railroad preemption/signal interconnection
- Railroad active warning systems – new or enhanced gate arms, flashers, or other rail safety technology
- Existing roadway infrastructure investments
- Grade crossing surface improvements

- Drainage and environmental protection improvements
- ADA compliance enhancements – sidewalks, truncated domes, and curb ramps

The Grantee and its consultant will collect and center community narratives alongside technical studies, this includes consideration for SDOT’s Racial Equity Toolkit and Transportation Equity Framework.

Task 3 deliverables:

- Current conditions and initial needs assessment
- Alternatives assessment and recommendations

Task 4: Project Documentation

The Grantee and its consultant will work to ensure final alternatives reviewed by stakeholders and revised as needed. The Grantee and its consultant will finalize the study, and the Grantee will publish the study.

Task 4 deliverables:

- Final alternatives analysis, including addressing community comments
- Final study

Example outline below illustrates potential components of the study deliverable

Section	Elements
Introduction	Purpose Statement Scope Goals and Objectives Performance Measures
Outreach and Engagement	Engagement plan and media/communications plan Stakeholder outreach and initial needs assessment Collaboration with rail carriers and right-of-way owners (relationships already established and are supported by key rail carriers) Engagement summary Consideration of feedback
Data Analysis	Data highlights and information Overview of project area Crash data and analysis Review of past studies/plans Current Conditions Assessment Future Conditions Assessment Racial Equity Toolkit and Transportation Equity Framework
Risk Assessment	May include, but not limited to, impacts to community, constructability and feasibility of alternatives, economic impacts, and impacts to corridor connections.
Alternatives Study and options	Goals and objectives for addressing challenges Evaluation criteria Program impacts, especially around the USDOT strategic goals on safety, equitable economic strength and improvement of core assets, equity and barriers to opportunity, climate change and sustainability, elimination of crossings and corridor-wide improvements, and geographic diversity Consideration of outreach and engagement

	Process and metrics for measuring progress Challenges to meeting goals and objectives Cost estimates for alternatives Funding Strategy Findings and mitigations
Recommendations	Summary recommendation

V. PROJECT COORDINATION

The Grantee shall perform all tasks required for the Project through a coordinated process, which will involve affected railroad owners, operators, and funding partners, including:

- The Grantee, the Seattle Department of Transportation (SDOT)
- FRA

In addition to these primary partners, the Project will also be informed by and closely coordinated with key stakeholders including:

- Amtrak
- BNSF
- King County Metro
- Northwest Seaport Alliance
- Port of Seattle
- Sound Transit (Sounder Commuter Rail, Link Light Rail)
- Union Pacific Railroad
- Washington State Department of Transportation (WSDOT)
- Washington State Ferries
- City Boards and Commissions
- Seattle community
- Community organizations and advocacy groups
- Other City of Seattle Department Partners (e.g., Seattle City Light, Seattle Public Utilities, Seattle Office of Sustainability and Environment, Seattle Office of Civil Rights, etc.)

VI. PROJECT MANAGEMENT

The Grantee is responsible for facilitating the coordination of all activities necessary for implementation of the Project. Upon award of the Project, the Grantee will monitor and evaluate the Project’s progress through regular meetings scheduled throughout the Project Performance Period. The Applicant/Grantee will:

- Participate in a project kickoff meeting with FRA
- Complete necessary steps to hire a qualified consultant/contractor to perform required project work
- Hold regularly scheduled Project meetings with FRA
- Inspect and approve work as it is completed
- Review and approve invoices as appropriate for completed work
- Perform Project close-out audit to ensure contractual compliance and issue close-out report
- Submit to FRA all required Project deliverables and documentation on-time and according to schedule, including periodic receipts and invoices
- Comply with all FRA Project reporting requirements, including, but not limited to:
 - Status of project by task breakdown and percent complete
 - Changes and reason for changes in and updated versions of Detailed Project Work Plan, Budget, and Schedule
 - Description of unanticipated problems and any resolution since the immediately preceding progress report
 - Summary of work scheduled for the next progress period
- Read and understand the Terms and Conditions of this Agreement (Attachment 1)
- Notify FRA of changes to this Agreement that require written approval or modification to the Agreement
- Manage consultant contracts associated with this project

APPENDIX B – SCHEDULE

DELIVERABLES AND APPROVED PROJECT SCHEDULE

City of Seattle

South Holgate St At-Grade Crossing Elimination Study

Railroad Crossing Elimination, FFY2022

I. DELIVERABLES AND APPROVED PROJECT SCHEDULE

The deliverables associated with this Agreement are listed below. The Grantee must complete these deliverables to FRA’s satisfaction to be authorized for funding reimbursement and for the Project to be considered complete.

Unless otherwise approved, requests for extensions of the Project Performance Period must be submitted not later than 90 days before the end of the Project Performance Period, consistent with Section 4(b) of Attachment 1.

Task #	Deliverable Name	Due Date
1	Detailed Project Work Plan, Budget, and Schedule Project Agreements (if applicable)	Receive notice of award: February 2023 Advertise for consultant team: August 2023 Select consultant team and execute contract: December 2023 Deliverables submitted for FRA review February 2024
1.1	Detailed Budget and Schedule; Quarterly Progress Reports; Federal Financial Reports; and Final Performance Report.	Will be reported quarterly from the time of award and also in accordance with FRA reporting requirements
2	Engagement Plan Stakeholder outreach support Engagement Summaries and technical recommendations to address community feedback received	Engagement Plan completed: May 2024 Engagement Summaries will be prepared consistent with engagement plan strategy and timelines.
3	Current conditions and initial needs assessment Alternatives assessment and recommendations	September 2025
4	Final alternatives analysis, including addressing community comments Final study	June 2026

APPENDIX C – BUDGET

APPROVED PROJECT BUDGET

City of Seattle

South Holgate St At-Grade Crossing Elimination Study

Railroad Crossing Elimination, FFY2022

I. APPROVED PROJECT BUDGET

The total estimated cost of the Project is \$2,500,000, for which the FRA grant will contribute up to 80% of the total Project cost, not to exceed \$2,000,000. The Grantee's Non-Federal Contribution is comprised of a combination of cash contributions and staff time valued at \$500,000. Any additional expense required beyond that provided in this Agreement to complete the Project will be borne by the Grantee.

Project Budget by Task

Task #	Task Name	Federal (FRA) Contribution	Non-Federal Contribution	Total Cost
1	Detailed Project Work Plan, Budget, and Schedule	\$0	\$100,000	\$100,000
2	Outreach and Engagement	\$600,000	\$100,000	\$700,000
3	Technical Analysis	\$1,000,000	\$200,000	\$1,200,000
4	Project Documentation	\$400,000	\$100,000	\$500,000
Total		\$200,000	\$500,000	\$2,500,000

Revisions to the Approved Project Budget shall be made in compliance with Attachment 1 of this Agreement. The Grantee will document expenditures by task, and by Federal and Non-Federal Contributions, when seeking reimbursement from FRA.

Project Budget by Source

Funding Source	Project Contribution Amount	Percentage of Total Project Cost
Federal Contribution (Amount of FRA Grant)	\$2,000,000	80%
Non-Federal Contribution	\$500,000	20%
Total Project Cost	\$2,500,000	100%

APPENDIX D – PERFORMANCE MEASURES

PERFORMANCE MEASURES

City of Seattle

South Holgate St At-Grade Crossing Elimination Study

Railroad Crossing Elimination, FFY2022

I. PERFORMANCE MEASUREMENTS

The table below contains the performance measures that this Project is expected to achieve. These performance measures will enable FRA to assess Grantee’s progress in achieving strategic goals and objectives. The Grantee will report on these performance measures per the frequency and duration specified in the table.

Upon Project completion, Grantee will submit reports comparing the Actual Project Performance of the new and or improved asset(s) against the Pre-Project (Baseline) Performance and Expected Post-Project Performance as described in Table 1 below. Grantee need not include any analysis in addition to the described data; however, Grantee is welcome to provide information explaining the reported data. Grantee will submit the performance measures report to the Regional Manager in accordance with Table 1 below.

Table 1: Performance Measurement Table

Performance measures for this planning study have not been formalized yet. These measures would be adopted at the time of award. Anticipated measures will generally follow FHWA guidance, modified if necessary to fit FRA’s business templates. These standardized measures include Approve Problem Statements and Opportunities; Approve Goals for the Corridor; Approve Evaluation Criteria, Methods, and Measures; and Approve Range of Solution Sets. Below is an example of a measure.

Performance Measure	Description of Measure	Measurement	Reporting
Timeliness of deliverable	Ability to complete each deliverable identified with the SOW in line with the schedule	Comparison of target date identified in the schedule with the actual date the deliverable was completed	Contents: Summary report of actual date of deliverable was completed compared to original deadline established in SOW
			Frequency: Annual
			Duration: This will be measured through project completion.

APPENDIX E – LETTERS OF SUPPORT