Aberdeen US 12 Highway-Rail Separation

city of Aberdeen application
Consolidated Rail Infrastructure And Safety Improvements (CRISI) FY 2019

CRISI FY19 funding request: $1.4 million project, $700,000 CRISI request
Primary project type: track 2, rural
Point of contact: Kris Koski, City Engineer, kkoski@aberdeenwa.gov; 360-537-3218
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I. **Cover Page**

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Aberdeen US 12 Highway-Rail Separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant</td>
<td>City of Aberdeen, Washington Kris Koski, PE City Engineer</td>
</tr>
<tr>
<td>Project Track</td>
<td>2</td>
</tr>
<tr>
<td>Was a Federal grant application previously submitted for this project?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, state the name of the Federal grant program and title of the project in the previous application.</td>
<td>BUILD FY19 Aberdeen US 12 Highway-Rail Separation</td>
</tr>
<tr>
<td>Is this a Rural Project? What percentage of the project cost is based in a Rural Area?</td>
<td>Yes, 100%</td>
</tr>
<tr>
<td>City(ies), State(s) where the project is located</td>
<td>Aberdeen, Grays Harbor County, WA</td>
</tr>
<tr>
<td>Is the project currently programmed in the:</td>
<td>Yes, as listed below.</td>
</tr>
<tr>
<td>State rail plan, State Freight Plan, TIP, STIP, MPO Long Range Transportation Plan, State Long Range Transportation Plan?</td>
<td>• WA State Freight Rail Plan (unfunded project list), • WA State Freight Mobility Plan (unfunded project list) • Local TIP • Regional TIP • WA Statewide Transportation Improvement Program (STIP), • Southwest Regional Transportation Planning Organization 5-County 2045 Regional Transportation Plan, • Freight Mobility Strategic Investment Board At-Grade Rail Crossing Inventory</td>
</tr>
</tbody>
</table>
II. PROJECT SUMMARY

The Aberdeen US 12 Highway-Rail Separation Project proposes to construct a grade separation that will improve the flow of freight and people in a rural community in Washington State. The half mile section of US Highway 12 at the eastern entrance of Aberdeen, Washington experiences frequent congestion, accidents and restricted emergency access to the region’s primary commercial area due to conflicts created by heavy vehicular traffic and freight trains that pass through the area blocking all seven at-grade vehicle-rail crossings between US 12 and the region’s commercial and recreational area. Known as “the gauntlet”, today the seven at-grade crossings cause serious conflicts between vehicles, pedestrians, and rail traffic, creating unsafe and inefficient conditions for all parties. Furthermore, the conflicts have the potential to limit future growth on the short line railroad, including a $400 million potash export facility proposed on the rail line in conjunction with the development of BHP’s Jansen Potash Project in Saskatchewan, Canada.

The City of Aberdeen (City), in partnership with the Port of Grays Harbor (Port) and with the support of Washington State Department of Transportation (WSDOT), seeks a CRISI FY19 Track 2 Grant of $700,000 to complete preliminary design and environmental documentation for highway improvements and an overpass over the rail line to allow for the closure of three at-grade crossings and provide safe, unimpeded, rail-separated access between US 12 and the commercial district, significantly decreasing existing conflicts and risks for the railroad and allowing for planned growth on the line.

III. PROJECT FUNDING

Federal funding of $700,000 will enable the Project Stakeholders to move this Project forward toward construction. Exhibit 1 shows the funding for this proposed project. The City of Aberdeen, with its stakeholders will match 50% for CRISI Track 2 Preliminary Engineering and NEPA elements of the Project totaling $1,400,000. The State provided funding to the City and Project Stakeholders for the initial planning efforts. Once the Project is built, the City and WSDOT will cover the life-cycle costs of the overpass and the US 12 improvements. The estimated cost of the Project is $36.4 million for all phases including design, permitting, right of way and construction.

Exhibit 1: Project Funding Matrix

<table>
<thead>
<tr>
<th>Task #</th>
<th>Task Name/Project Component</th>
<th>Cost</th>
<th>Percentage of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Detailed Project Work Plan, Budget and Schedule</td>
<td>$25,000</td>
<td>2%</td>
</tr>
<tr>
<td>2</td>
<td>Conceptual Engineering to define NEPA</td>
<td>$100,000</td>
<td>7%</td>
</tr>
<tr>
<td>3</td>
<td>NEPA</td>
<td>$625,000</td>
<td>45%</td>
</tr>
<tr>
<td>4</td>
<td>Preliminary Engineering*</td>
<td>$630,000</td>
<td>45%</td>
</tr>
<tr>
<td>5</td>
<td>Project Close-out</td>
<td>$20,000</td>
<td>1%</td>
</tr>
</tbody>
</table>

| Total Project Cost                                                                 | $1,400,000 | 100%        |
Exhibit 1- continued

<table>
<thead>
<tr>
<th>Project Funding</th>
<th>Source</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>Federal Funds Received from Previous Grant</td>
<td>$0</td>
<td>0%</td>
</tr>
<tr>
<td>CRISI Federal Funding Request</td>
<td>$700,000</td>
<td>50%</td>
</tr>
<tr>
<td>Non-Federal Funding/Match</td>
<td>Cash Total: $700,000</td>
<td>50%</td>
</tr>
<tr>
<td>Sources:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Aberdeen</td>
<td>$200,000</td>
<td>14.5%</td>
</tr>
<tr>
<td>Port of Grays Harbor</td>
<td>$200,000</td>
<td>14.5%</td>
</tr>
<tr>
<td>Grays Harbor County</td>
<td>$300,000</td>
<td>21%</td>
</tr>
<tr>
<td>In-Kind:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portion of Non-Federal Funding from the Private Sector</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Portion of Total Project Costs Spent in a Rural Area</td>
<td>$1,400,000</td>
<td>100%</td>
</tr>
<tr>
<td>Pending Federal Funding Requests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUILD FY19 Application</td>
<td>$3,514,000</td>
<td></td>
</tr>
</tbody>
</table>

IV. APPLICANT ELIGIBILITY

The City of Aberdeen, the applicant, is a political subdivision of the State of Washington. Aberdeen is located in Grays Harbor County, Washington on the southern edge of the Olympic Peninsula at the convergence of the Wishkah and Chehalis Rivers. The city is the economic center of Grays Harbor County, bordering the cities of Hoquiam and Cosmopolis. Aberdeen is occasionally referred to as the "Gateway to the Olympic Peninsula". The history of this area has been driven by the logging and fishing industries, although in the last few years there has been a concerted effort to replace these with an emphasis on tourism and designating Aberdeen as the largest retail center on the Washington Coast. Emphasis has also been placed on utilizing Aberdeen’s strategic location, deep water port, and underutilized short line railroad.

Aberdeen was incorporated on May 12, 1890. It is a one of six cities in Washington state that are classified as a "Mayor-Council First Class City". First class cities, as defined by RCW 35.01.010, are cities that have a population of 10,000 or more at the time of organization or reorganization and have adopted a charter under Article XI, section 10 of the state constitution.

The form of government is determined by the charter and varies from city to city. The general powers of first-class cities are laid out in chapter 35.22 RCW. The majority of first-class cities have amended their charters in recent years, but no cities have organized or reorganized as first class since 1973.

As a Mayor-Council form of government, the People elect the Mayor and 12 councilmembers (two each from six wards with staggered 4-year terms). The Mayor appoints the Department heads, finance director (ex officio city clerk), boards, and commissions subject to confirmation by the council. [Aberdeen City Charter](1929, last amended 1985)
V. PROJECT ELIGIBILITY

This Project will improve the safety, efficiency, and reliability of a freight rail transportation system, and corresponds with C.3.a. v. in the Notice of Funding Opportunity.

1. A Highway-rail Grade Crossing Improvement Project (v). The Project will install a grade separation over the Puget Sound and Pacific (PSAP) Railway Company’s Elma Subdivision of the Western Division mainline at MP 68.36 to reduce the conflict between rail and road users between Mile Posts 68.20-68.5.

VI. DETAILED PROJECT DESCRIPTION

The half mile section of US Highway 12 at the eastern entrance of Aberdeen, Washington experiences frequent congestion, accidents and restricted emergency access to the region’s primary commercial area due to conflicts created by heavy vehicular traffic and freight trains that pass through the area blocking all seven at-grade crossings between US 12 and the region’s commercial and recreational area. The City, in partnership with the Port, the County and with the support of WSDOT, seeks a CRISI FY19 Track 2 Grant of $700,000 to complete preliminary design and environmental documentation for highway improvements and an overpass over the rail line to allow for the closure of three at-grade crossings and provide unimpeded, rail-separated access between US 12 and the commercial district. The constructed project will achieve multiple major benefits for the State highway and for the growing short line railroad.

A. Project Overview

The westernmost terminus of US Highway 12 in Aberdeen, Washington, a Critical Rural Freight Corridor, experiences frequent congestion which impacts local residents, visitors to the region, emergency responders and freight operations of the Port of Grays Harbor and surrounding industries. Genesee & Wyoming’s Puget Sound and Pacific (PSAP) short line railroad tracks are located south of and immediately adjacent to US 12 and separate the highway from the Gateway Plaza and Morrison Riverfront Park (Mall). Vehicular congestion is compounded when freight trains block access into and out of the Mall, thereby backing up idling traffic in both directions onto US 12. The impacts of train traffic to vehicle and pedestrian movements is a limiting factor for growth on the rail line.

Planning efforts have determined that construction of a grade separation from US 12 over the adjacent rail line into the Mall will result in increased public safety, unimpeded access for emergency response, improved flow of freight trains and vehicles, safe new bike and pedestrian access to the commercial center and reduced environmental impacts from vehicle idling and wait times. Public involvement and pre-engineering analysis have determined the preferred alternative would be located at the intersection of Chehalis Street and US12/Wishkah Street and over USDOT rail crossing number 0966198.

1. Mobility components of the Project

Design, environmental documentation and preliminary engineering will further define the following construction components of this project:

- Access ramps from Eastbound and Westbound US 12,
- Grade-separation at Chehalis Street with overpass of US12 and adjacent PSAP rail line,
- Roundabout at US12 – Newell Street intersection,
- Roundabout at base of overpass (Mall entrance),
- Removal of highway traffic signal at US 12 and Chehalis St.,
- Closure of three at-grade vehicular/rail crossings, and
- Grade-separated pedestrian and bicycle lanes.

Solving this transportation problem directly impacts the primary economic sectors of Aberdeen (population 16,7401) and Grays Harbor County (population 72,970) of retail activities, international trade through the Port and tourism throughout the region as well as serving the natural resource based domestic freight movements of commercial seafood and forest products.

B. Project Background

US Highway 12 is the major arterial into Aberdeen, Washington, serving an average of 28,000 local residents, freight trucks and tourists’ vehicles each day. Adjacent to US12 runs the rail line that annually handles 28,0002 rail cars transporting cargo for export through the deep-water Port of Grays Harbor. The properties in the project area surrounding this 0.36-mile segment of US12 comprise Aberdeen’s largest retail and commercial center generating over $161 million in sales each year (74 percent of County’s annual retail sales) and employing approximately 1,000 people. The steady flow of vehicles, freight, and rail is critical to the region’s existing economy and future growth.

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1 State of Washington 2017 Data Book, Page 188
2 Rail car data provided by G&W Puget Sound and Pacific Railroad
1. Project Need, Planning and Public Outreach

Addressing the at-grade conflicts and congestion of US12 in East Aberdeen has been a top priority of Washington State and regional transportation, economic development and elected officials since 2006. Below is the history of the project, the outcome or findings of the planning process and funding expended to date.

The proposal for grade separation in East Aberdeen is currently laid out at a concept level with the core components of a roundabout, overpass, and associated ramping identified. With early planning completed in 2006 by WSDOT and an alternatives analysis completed in 2015 through the federally funded Surface Transportation Program, the scope of the project has been identified and additional pre-engineering planning is underway utilizing $300,000 provided by a grant from WSDOT’s Rail Office.

Exhibit 3: Project Need: Prior Planning and Project Development

<table>
<thead>
<tr>
<th>Planning Document</th>
<th>Finding</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 US 101 Regional Circulation Project, Lead Agency: WSDOT ³</td>
<td>One of six top priorities to improve regional mobility (AKA Wishkah Mall Access Improvements)</td>
<td>$500,000 Total Washington State Legislative Appropriation</td>
</tr>
<tr>
<td>East Aberdeen Mobility Project Preferred Alternative Report 2015⁴, Lead Agency: GHCOG</td>
<td>Preliminary concept designs with stakeholder and public outreach, selection of this project (Chehalis Street Overcrossing) as preferred alternative. (Shown in Exhibit 3 and 8)</td>
<td>$285,307 Total $246,790 Surface Trans. Program STP federal funds $ 38,517 Port local funds</td>
</tr>
<tr>
<td>Aberdeen US 12 Highway-Rail Separation Project Preliminary Design &amp; Engineering 2019, Lead Agency: City of Aberdeen⁵</td>
<td>Complete pre-engineering of the project. (Formerly titled East Aberdeen Mobility Project)</td>
<td>$300,000 Total Washington State Freight Rail Assistance Program</td>
</tr>
<tr>
<td>Total Funds Spent To Date</td>
<td>Federal: $247,790</td>
<td>State: $800,000. Local: $38,517</td>
</tr>
</tbody>
</table>

⁵ 10% preliminary design and engineering is currently underway and expected to be completed September 2019.
The current scope underway is to continue to gather data, refine the concept design, identify right-of-way needs, update cost estimates, perform public outreach and develop high level scopes of work and schedules required for each element to complete the project. Through this work, the City has identified $1.4 million needed to complete preliminary design and environmental documentation for highway improvements and an overpass over the rail line. Completing these phases of work will position the City to be more competitive toward securing future funding for ROW acquisition, final design, and construction.

C. Transportation Challenges this Project Addresses

Exhibit 5: Current traffic map of project area, US12 in Aberdeen
1. **Unique rural challenge of achieving project readiness**

While this project has been a top priority in the region for thirteen years, the limited resource capacity (staffing and financial) of local stakeholders has prevented the community from developing the project to a “Project Readiness” level sufficient to be competitive when applying for federal funds. With six intersections currently operating at a deficient Level of Service⁶ the need for this project continues to grow as highway traffic and rail volumes increase.

Rural communities face a unique challenge in project development due to the lack of dedicated, on-staff transportation planners and engineers to focus on pre-construction, project development. Aberdeen now has a City Engineer on staff who can manage the consulting team and deliver this next stage of the project. Efforts are also underway with WSDOT to formalize the State’s role in this critical freight mobility issue.

Initially, the Project Team’s intent was to apply for full Design/Build funding. After careful consideration, the Project Team determined the most responsible use of public resources, and the best strategy for advancing this critical project forward, is to submit a completed application requesting funding for Track 2 PE and NEPA documentation completion to compete for the necessary funding needed for final design and construction.

2. **Transportation Challenges: Emergency Access, Public Safety and Crossing Closures**

All at-grade crossings have the potential for fatalities and injuries, but the blockage of the seven crossings along US12 and the Gateway Plaza pose an additional health-safety risk due to the lack of emergency responder access during train blockages. Extremely long unit trains limited to 5 MPH or slower block off the area for up to 30 minutes during which time police and fire access is limited to a single access point between a narrow opening in the wooden piling support structure of a railroad bridge. This opening only has the horizontal and vertical clearance to allow a standard SUV-sized vehicle and does not fit an ambulance or fire apparatus. To access the opening, a responder must pass through a private hotel parking lot and drive along a riverfront pedestrian path, stopping to unlock two bollards along the way.

a) **Improved Traffic Safety and Mobility**

Under the no-build scenario, it is anticipated that freight traveling on the PSAP rail line adjacent to US 12 will block the entrance to the Mall approximately 8-10 times per day with delays ranging from 10 to 30 minutes. Currently, US 12 carries 28,000 vehicles per day. Congestion occurs on US 12 as vehicles use the eastbound right lane as turn lane storage. Mall traffic backs up throughout the area waiting for trains to pass. This backup of traffic onto US 12 impedes and can cause a complete stop in traffic movement on US 12 altogether; interrupting the free flow of traffic, interrupting

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⁶ 2015 East Aberdeen Mobility Study, Page 12

“One of my greatest fears is our department’s inability to access the site due to a train blockage that results in a preventable death or serious loss of property.”

~Aberdeen Fire Chief Tom Hubbard
access to and from area businesses, slowing or halting the efficient movement of freight traffic, and virtually eliminating all pedestrian and bicycle access.

**Exhibit 6: Existing Conditions US 12/PSAP Rail Line/Aberdeen Gateway Plaza Shopping Area**

The photo above looks north and shows road and rail conditions during non-peak hours at the Chehalis Street intersection with a train present.

Exhibit 7 to the right shows traffic is parked in the right lane of US12 waiting for the train to pass. The close proximity of the highway, rail and commercial buildings add to the complexity of solving this transportation conflict. The proposed project would provide grade separated access, eliminating the in-lane parking along the highway during train movements.

**Exhibit 7: Traffic congestion US12 eastbound**
Exhibit 8 shows how traffic queues along the shoulder and then into the lane on eastbound US12/Heron Street, with traffic backing up five blocks to the US101 bridge in downtown Aberdeen.

Construction of this project will close this at-grade crossing into the Mall off Heron Street and provide unimpeded access via a ramp starting in this location, therefore eliminating the in-lane parking on US12. Eastbound US12 traffic will continue to flow through the new roundabout at Newell Street.

**Project Build Conditions**

The proposed grade-separated access will provide unimpeded multi-modal access into and out of the commercial area. The new vehicle overcrossing at the PSAP rail line will eliminate vehicle delays on US12 caused by motorists waiting in the travel lanes for the train to clear.

Exhibit 9: Improved Traffic Safety and Mobility Project Built Birdseye View: US12 Couplet with Roundabout, Closed Crossings and Grade Separation

b) **Improved Traffic Flow, Reduced Delays**

Traffic analysis comparing the existing baseline condition to the proposed overcrossing ‘built’ condition results in a significant improvement to intersection Level of Service (LOS) and reduced vehicle delays along US12 in the study area, as noted in Exhibit 10 below. Note that these significant improvements in LOS apply to free-flow conditions when no trains are present. This is evidence of the multi-benefit nature
of the project. Exhibit 11 below is a map of the locations of the three intersections upon which the Traffic Analysis was completed.

**Exhibit 10: Intersection Traffic Analysis**

<table>
<thead>
<tr>
<th>No.</th>
<th>Intersection</th>
<th>Level of Service (LOS)</th>
<th>Delay (seconds/vehicle)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Existing Condition</td>
<td>Built Condition*</td>
</tr>
<tr>
<td>1</td>
<td>US12/S. Newell St.</td>
<td>F</td>
<td>C</td>
</tr>
<tr>
<td>2</td>
<td>US12/Tyler St.</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>US12/S. Fleet St.</td>
<td>E</td>
<td>B</td>
</tr>
</tbody>
</table>

*Note: ‘Built’ condition analysis includes overcrossing structure at Chehalis Street but does not yet account for auxiliary eastbound ramp from Heron Street. Construction of the Heron Street ramp will reduce conflicting movements at the roundabout and improve mobility along the US12 corridor. Source: Table I-C Traffic Analysis Study

**Exhibit 11: Map of three Intersections tested for Level of Service Improvements**

D. **Project users and beneficiaries: US exporters, a short-line railroad, a rural commercial zone and three Opportunity Zones**

Aberdeen, Washington, a rural community with a population of 16,740, serves as the commercial and trade hub of Grays Harbor County (population 72,790) and Washington’s Pacific Coast. With the nearest urban area more than 50 miles to the east (Olympia, WA), Aberdeen must provide the retail, professional and medical services needed by citizens along the Coast.
The US Highway 12 entrance into Aberdeen is the sole eastern entrance to the City (which is limited by steep hills and water) and is the primary eastern entrance for regional residents’ travel into and out of the area. Approximately 1.6 million tourists travel this route and stay in Grays Harbor County annually. The Pacific Coast communities of Ocean Shores, Westport and Seabrook, as well as the Olympic National Park all rely upon the US12 connection to I-5 as the primary transportation route to their destinations. Tourism and hospitality related investments have been a leading economic driver of these communities with Direct Travel Spending up $93.8 million from 2010 through 2016. 

**Exhibit 12: Washington Coast Freight Corridor & Pacific Coast Scenic Byways**

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**a) Beneficiaries: Washington Coast Freight Corridor Users**

Construction of this transportation project directly impacts freight mobility, employment and trade related private investment opportunities in rural America.

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_In their letter of support for this critical project, Keith Spackler, CEO of AGP, the largest soybean meal cooperative in the United States, stresses, “AGP feels strongly that America’s export infrastructure capability offers US agriculture a competitive advantage over its global competitors. This investment and others like it are critical today, as the U.S. agricultural sector faces continuing headwinds from the market and other trade disruptions.”_

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8 AGP Letter of Support dated October 14, 2019 Appendix D, aberdeenwa.gov/crisi2019
A Port of National Significance: Improved Mobility of Washington Coast Freight Corridor

Once the leading log export port in the country, over the past fifteen years, the Port of Grays Harbor in partnership with the privately-owned short line railroad, has redefined itself as a major export hub for American products destined for international markets. The Washington Coast Freight Corridor is equipped with class one rail access via the Genesee & Wyoming’s Puget Sound and Pacific Railroad (PSAP), and an US Army Corps of Engineers (USACE) maintained navigation channel, and US Highway 12, the four-lane highway connection. Since 2007 this rural public port district has successfully attracted hundreds of millions of dollars of private investments and grown annual export volumes to over 3 million metric tons. Ninety percent of this cargo arrives via rail car, primarily from the US Midwest, for loading and shipment aboard the 125 vessels calling the Port’s marine terminals each year.

Since 2008, cargo moving by rail cars through the Washington Coast Freight Corridor has increased from 10,457 rail cars to 32,511 rail cars. During this same time period deep water vessel traffic has grown 247% from 36 vessels to 125 in 2018. Exports account for 94% of the cargo shipped through Grays Harbor. Seventy percent of the rail traffic is export bound agriculture products from farms in the US Midwest.

Exhibit 13: Port of Grays Harbor Vessel and Rail Volumes

With strategic public infrastructure, the Port of Grays Harbor and City of Aberdeen are positioned to continue to increase trade and strengthen this rural economy. An economic impact analysis in 2013 found that 1,524 jobs were related to the marine cargo shipments through Grays Harbor, with a personal income impact total of $130.8 million, averaging $85,826 per job well above the per capita personal income of $38,406. The Port of Grays Harbor Commissioners and local leaders have identified growth of the shipping activity through the Port as a strategy to develop and strengthen the economic base of this struggling rural community.

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9 Appendix F, Martin Associates, The 2013 Economic Impacts of the Port of Grays Harbor, Page 10
Strategic Public Investment Attracts Private Investments, Increases International Trade

The Port’s strategic investments in public infrastructure have leveraged more than $300 million in private investment within the Marine Terminal complex. Not only do these private shippers have a stake in the success of this rural port, their continued operations and success are dependent upon the efficient freight mobility through the region.

Competition with Canada for Private Investment in Port Facilities

The Port is currently in direct competition with Vancouver, British Columbia, the two sites being considered for a $400 million private investment in a potash export facility. Marine Terminal 3, a deep-water shipping terminal with over 150 acres of adjacent uplands is being permitted by BHP BILLITON CANADA, INC. for the construction of their North American potash export facility. BHP has been working with the Port exploring the potential for the Terminal 3 site as its potash export facility for the Jansen Potash Project in Saskatchewan, Canada. BHP has, and continues to actively engage local stakeholders, the Quinault Indian Nation, regulators and businesses. The proposal received a Mitigated Determination of Non-Significance by the City of Hoquiam on September 12, 2019, and the hearing on the project’s shorelines application is October 24, 2019. BHP is anticipated to make a final decision on the mine and export facility in 2020, and local stakeholders including the City of Aberdeen and the Port of Grays Harbor are committed to beginning implementation of the US 12 Highway-Rail Separation Project so that it can be constructed in time for potash shipments to begin. Potash, or potassium chloride, is a naturally occurring non-flammable and non-combustible mineral which is a key ingredient used in agricultural fertilizers worldwide.

b) Project benefits three Opportunity Zones

The project is located in Aberdeen Opportunity Zone Census Tract: 53027001000. Transportation improvements resulting from the completion of this Project will also benefit two additional Opportunity Zones in Grays Harbor County; the Hoquiam Opportunity Zone (Census Tract 53027001500) will benefit from proposed port development and growth of the Port of Grays Harbor Marine Terminal 3 and the Pacific Coast Opportunity Zone (Census Tract: 53027000200) will benefit from the improved flow of tourism traffic arriving from the population centers of Portland, Oregon and Seattle, Washington.

Exhibit 14: BHP Proposed Terminal Layout

10 https://www.bhp.com/environment/regulatory-information/potash-export-facility-at-grays-harbor
 Exhibit 15: Grays Harbor County Opportunity Zones

Source: Bureau of Land Management, Esri, HERE, Garmin NGA, USGS

**Required Mobility Improvements**

This Project will improve the flow of freight and people in a rural community in Washington State. The half mile section of US Highway 12 at the eastern entrance of Aberdeen, WA experiences frequent congestion, accidents and restricted emergency access to the region’s primary commercial area due to conflicts created by heavy vehicular traffic and freight trains that pass through the area blocking all seven at-grade vehicle-rail crossings between US 12 and the region’s commercial and recreational area.

**Specific Components and Elements of the Project**

Specifics of this Project are noted above as outlined in Section 6 A above.

**Types of Rail Service on this Subdivision**

This Rail Subdivision only carries Freight. The PSAP railroad provides service between their Class 1 interchanges (BNSF & UP) in Centralia, WA and the Port of Grays Harbor, Aberdeen, WA.

**Proposed Performance Measures**

**Exhibit 16: Proposed Performance Measure Metrics for the Project**

<table>
<thead>
<tr>
<th>Rail Measure</th>
<th>Unit measured</th>
<th>Temporal</th>
<th>Primary strategic goal</th>
<th>Secondary strategic goal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail Track/Road Grade Separation</td>
<td>Count</td>
<td>Annual</td>
<td>Economic Competitiveness</td>
<td>Safety</td>
<td>The number of Annual vehicle crossings that are eliminated from an at-grade crossing as the</td>
</tr>
</tbody>
</table>
VII.  Project Location: City of Aberdeen, Grays Harbor County, Washington State

The Construction Project will be located in Washington’s Sixth Congressional District near FRA Crossing # 096691B at MP 68.36 in the City of Aberdeen, Grays Harbor County, Washington. The project area stretches approximately 0.36 miles along US 12, and is bounded by Morrison Riverfront Park on the east, the Wishkah River on the west, the Chehalis River and the commercial area that includes the Olympic Gateway Plaza shopping mall and Walmart (this area to be referred to as “Mall”) on the south, and the steep hillside of ‘Think-of-me-hill’ on the north.

The geospatial data for the Project site is approximately between the Wishkah River lat. 46.976672 long. -123.811449 and to Fleet Street lat. 46.977379 long. -123.801680 along US 12 in Aberdeen, Washington.

Exhibit 17: Vicinity Map & Regional Transportation Connections
Strategic rail connections to domestic and North American markets is a primary economic driver of the region’s economy.

Broad Support for CRISI Funding of Aberdeen US12 Highway-Rail Separation Project


<table>
<thead>
<tr>
<th>Public Letters of Support:</th>
<th>Private Letters of Support:</th>
<th>Congressional &amp; Legislative Letter of Support:</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Aberdeen Fire Dept</td>
<td>AGP: Omaha, NE</td>
<td>US Senator Maria Cantwell</td>
</tr>
<tr>
<td>City of Aberdeen, Police Dept</td>
<td>BHP ~ Saskatchewan, Canada</td>
<td>US Senator Patty Murray</td>
</tr>
<tr>
<td>City of Cosmopolis</td>
<td>Brusco Tug &amp; Barge: Longview, WA</td>
<td>US Congressman Derek Kilmer</td>
</tr>
<tr>
<td>Grays Harbor (GH) Council of Governments</td>
<td>Contanda: Houston, TX</td>
<td>WA Senator Kevin VanDeWege</td>
</tr>
<tr>
<td>Grays Harbor County Transit</td>
<td>Greater Grays Harbor Inc., WA</td>
<td>WA Representative Brian Blake</td>
</tr>
<tr>
<td>City of Hoquiam</td>
<td>Ocean Companies: Westport, WA</td>
<td>WA Representative Mike Chapman</td>
</tr>
<tr>
<td>City of Ocean Shores</td>
<td>Pasha Automotive Services: San Diego, CA</td>
<td>WA Representative Steve Tharinger</td>
</tr>
<tr>
<td>Quinault Indian Nation</td>
<td>Puget Sound and Pacific Railroad: Centralia, WA</td>
<td>WA Presentative Dean Takko</td>
</tr>
<tr>
<td>City of Westport</td>
<td>Renewable Energy Group: Ames, IA</td>
<td>GH Commissioner Vickie Raines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GH Commissioner Randy Ross</td>
</tr>
</tbody>
</table>
VIII. Evaluation and Selection Criteria

A. Evaluation Criteria

(i) Project Benefits

Specific Benefits for the Proposed Project as shown in the results of the Benefit Cost Analysis;

Appendix A Benefit Cost Analysis for the complete Aberdeen US12 Highway-Rail Separation Project demonstrates the cost effectiveness of the project for which the project sponsor is seeking Federal support, measured in terms of a benefit-cost ratio (BCR) and net present value (NPV). The Project has independent utility with benefits exceeding cost.

Based upon the BCA presented in the remainder of this document, the project at a 7% discounted rate is expected to generate $41.0 million in discounted net benefits and $23.8 million in discounted capital costs. Therefore, the project generates a Net Present Value (NPV) of $17.2 million and a Benefit/Cost Ratio of 1.72:1 at 7%. Exhibit 19 and Exhibit 20 below summarize the Long-term Outcomes calculated in this BCA.

These results indicate that this Project is a good investment of public funds as it generates $1.72 in social benefits for each $1.00 invested.

Exhibit 19: Benefit Cost Analysis Results

<table>
<thead>
<tr>
<th>WA Coast Freight Corridor – Aberdeen US12 Highway- Rail Separation Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present Value of Capital Costs</td>
</tr>
<tr>
<td>Discounted at 7%</td>
</tr>
</tbody>
</table>

The monetized Benefits and Costs of the Project are displayed in the Summary below.

Safety - The closure of three at-grade crossings and the implementation of a roundabout in replacement of the signal at Chehalis St intersection is estimated to save 0.34 fatalities, reduce 234 non-fatal accidents and reduce delay to 60 EMS calls to the Mall over the 20-year period post construction. This will potentially save $2.7 million in safety related events.

Economic Competitiveness - The reduction of idling within the Project area has been the measurement used for Economic Competitiveness for this Project. As estimated 3.7 million gallons of fuel is projected to be saved in the 20-year period post construction, for a monetized savings of $3.8 million in vehicle operating costs.

Environmental Sustainability - The reduction of vehicle idling has been monetized into estimated savings of pollutants generated by the idling of the vehicles in the Project area. It is estimated based upon the reduction of idling, over 37,000 MT of CO₂ will be saved over the analysis period post construction for a total estimated monetized value of $0.1 million.
Quality of Life—Travel Time Value Saved has been the unit of measure for Quality of Life benefits of this Project. It is estimated that the reduced delay of a total of 3.7 million hours equaling a monetized savings of $30.4 million will be achieved with the completion of this Project.

**Exhibit 20: Summary of the Benefit Cost Analysis for Completion of the Total Project**

<table>
<thead>
<tr>
<th>Wa Coast Freight Corridor: Aberdeen US12 Highway- Rail Separation</th>
<th>Long-term Outcomes</th>
<th>Social Benefit</th>
<th>Inputs</th>
<th>Value</th>
<th>Monetized Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Reduced fatalities and non-fatalities from closing 3 RR Crossings and installing a roundabout on US 12</td>
<td>Fatality cost savings of 0.34 fatalities + reduction in 239 non-fatal accidents and potential reduction of 60 EMS calls delayed to Mall</td>
<td>$8 million saved</td>
<td>$ 2,704,261</td>
<td></td>
</tr>
<tr>
<td>Economic Competiveness</td>
<td>Fuel savings due to reduced idling time</td>
<td>Savings of delay at crossing</td>
<td>3.7 million gallons of fuel saved by reduced idling</td>
<td>$ 3,793,419</td>
<td></td>
</tr>
<tr>
<td>Environmental Sustainability</td>
<td>Environmental Benefits from New Overpass</td>
<td>Gallons of Fuel Saved</td>
<td>37,013 MT of CO2 saved</td>
<td>$ 101,847</td>
<td></td>
</tr>
<tr>
<td>Quality of Life</td>
<td>Travel Time Saved</td>
<td>Reduced Delay</td>
<td>3.7 million hours saved by reduced delay</td>
<td>$ 30,375,167</td>
<td></td>
</tr>
<tr>
<td>Total Benefits before Maint. And Residual</td>
<td></td>
<td></td>
<td></td>
<td>$ 36,974,694</td>
<td></td>
</tr>
<tr>
<td>Maint Cost and Residual of Project</td>
<td>Change in Maint costs reduced by Residual Value in Yr. 20</td>
<td>Maintenance and Initial Capital Cost</td>
<td></td>
<td>$ 4,062,578</td>
<td></td>
</tr>
<tr>
<td>Total Benefits</td>
<td></td>
<td></td>
<td></td>
<td>$ 41,037,272</td>
<td></td>
</tr>
<tr>
<td>Total Cost</td>
<td></td>
<td></td>
<td></td>
<td>($23,814,136)</td>
<td></td>
</tr>
<tr>
<td>Net Present Value</td>
<td></td>
<td></td>
<td></td>
<td>$ 17,223,136</td>
<td></td>
</tr>
<tr>
<td>Benefit to Cost Ratio</td>
<td></td>
<td></td>
<td></td>
<td>1.72:1</td>
<td></td>
</tr>
</tbody>
</table>

The full BCA Narrative and BCA Spreadsheet can be found in Appendix A of the Application.

**Effects on system and service performance:**

Removing the potential for road/rail conflicts will enhance the rail system’s service performance throughout Grays Harbor County. Since the section of the rail line is single tracked, any disruptions at this location will affect the whole subdivision and possibly the rail system back to the I-5 Corridor.

**Effects on safety, competitiveness, reliability, trip or transit time, and resilience:**

The Project is projected to improve safety and vehicle reliability through this section of Aberdeen, specifically due to the reduction of potential vehicle/ train conflicts. The construction of the Project will provide unimpeded emergency service access across the PSAP tracks which will also add resilience to the local road network.
**Efficiencies from improved integration with other modes;**

This Project will improve freight mobility east-west through this rural county by improving both road and rail efficiency. These improvement will support the Port of Grays Harbor growth plans.

**Ability to meet existing or anticipated demand**

This Project will help provide transportation infrastructure improvements along US 12 that will improve the vehicular and pedestrian/non-motorized vehicle flow through this regionally significant commercial area.

**(ii) Technical Merit:**

**SOW is Appropriate to achieve Expected Outcomes**

The tasks that are outlined in the SOW are appropriate and will achieve the proposed Project's expected outcomes. The SOW outlines the anticipated outcomes and can be found in Appendix B.

**Detailed Statement of Work**

Exhibit 4 and Exhibit 9 above show proposed schematics of the Project.

**SOW Deliverables and Proposed CRISI Project Schedule and Detailed Budget**

Exhibit 21: Summary of SOW as (Attachments 2 - 4))

<table>
<thead>
<tr>
<th>Task #</th>
<th>Deliverable Name</th>
<th>Due Date</th>
<th>FRA (federal) Contribution</th>
<th>Non-Federal Contribution</th>
<th>% of Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Detailed Work Plan, Budget, and Schedule</td>
<td>September 1, 2020</td>
<td>$12,500</td>
<td>$12,500</td>
<td>2%</td>
</tr>
<tr>
<td>2</td>
<td>Conceptual Design Drawings</td>
<td>December 30, 2020</td>
<td>$50,000</td>
<td>$50,000</td>
<td>7%</td>
</tr>
<tr>
<td>3</td>
<td>Environmental Review Documents</td>
<td>March 30, 2022</td>
<td>$312,500</td>
<td>$312,500</td>
<td>45%</td>
</tr>
<tr>
<td>4</td>
<td>Preliminary Engineering (30%)</td>
<td>April 30, 2022</td>
<td>$315,000</td>
<td>$315,000</td>
<td>45%</td>
</tr>
</tbody>
</table>
Construction Project Implementation Schedule
- Construction Project Benefits Estimate
- Construction Project Management Documentation

<table>
<thead>
<tr>
<th>Year</th>
<th>Project Closeout</th>
<th>July 30, 2022</th>
<th>$10,000</th>
<th>$10,000</th>
<th>1%</th>
</tr>
</thead>
</table>

CRISI Track 2 Project Total: $1,400,000
- $700,000
- $700,000
- 100%

Exhibit 22: Full Project Schedule

Strong Project Readiness to proceed with Design and Environmental Documentation

The City has prepared initial schematics of the Project required to prepare the estimated Project costs and schedule used to develop the SOW and Benefit Cost Analysis. Based upon the initial work, the City is prepared to move forward with Track 2: PE/NEPA tasks in preparation for future final design, right of way acquisition and construction of the Project.

City’s Consideration of Private Participation in the Project

The City and partners believe it is premature to involve private dollars in the Track 2 stage of this Project. However private stakeholders are involved in the process and will be part of the funding strategy for Final Design and Construction.

Qualified to Deliver

The City staff and their consultants have personnel with the technical qualifications, skills and experience to lead/perform the technical requirements to successfully execute the Track 2: PE/NEPA tasks as identified in the Project’s SOW within the proposed schedule and budget.

Capacity to Deliver

The City has the legal, financial, and technical capacity to carry out the proposed project in coordination with WSDOT with satisfactorily continuing control over the proposed Project when completed; and have the capability and willingness to maintain the Project on completion.

Reporting

The City’s Public Works and Finance departments are well prepared to administer the federal grant reporting requirements of the Project, including the necessary rigid internal processes and controls. The City is a Certified Acceptance Agency in the eyes of WSDOT, which allows them to manage federally
funded projects. As such, the City is performance audited by WSDOT to maintain the Certified Acceptance status. The City will comply with audit requirements to be performed pursuant to the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards found in 2 CRF part 200, as well as other applicable federal regulations and requirements. CRISI Project audit requirements will be the responsibility of the City as the Grantee. See Appendix G.

**Full Life Cycle Costs**

The City’s engineers have estimated life-cycle costs based upon the City’s Asset Management Policies and Procedures averaging $35,000 annually. This estimate is reflected in the BCA and will be added to the City’s and WSDOT budget as appropriate upon completion of the Project.

**Consistent with US Department of Transportation Planning Guidance and Documents**

As listed on the Coversheet, the Project has been identified in multitude of planning documents, including state and local planning documents as listed below:

- WA State Freight Rail Plan (unfunded project list),
- WA State Freight Mobility Plan (unfunded project list)
- Local TIP
- Regional TIP
- WA Statewide Transportation Improvement Program (STIP),
- Southwest Regional Transportation Planning Organization 5-County 2045 Regional Transportation Plan,
- Freight Mobility Strategic Investment Board At-Grade Rail Crossing Inventory

**B. Selection Criteria**

This application demonstrates applicant eligibility in Section IV, and the project eligibility in Section V of this application. As outlined below, the proposed Project also fulfills FRA’s preferences and meets key DOT objectives

**Qualifies as Preference Project**

- Projected Federal share of total proposed Project is 50 percent.

The grant request seeks 50 percent funding from the Federal government and provides 50 percent from the Project’s stakeholders. This is detailed in Section III of this application.

- Net benefits of grant funds will be maximized.
- The Benefit Cost Analysis summarized above and described in more detail in Appendix A, demonstrates that the societal benefits accrued from this Project exceed the costs.

**Fulfills key Departmental objectives:**

**Supports economic vitality at the national and regional level**

- As outlined in Section VI. above, once constructed this Project improves safety and efficiency of freight movement via a short line rail way carrying freight to a rural public port district. This Project benefits three Opportunity Zones and encourages additional private investment in a rural community.
Leverages State and Federal funding to attract other, non-Federal sources of infrastructure investment

- Grays Harbor is in competition with Vancouver, British Columbia, Canada for the siting of a $400 million potash export facility (See Section VI. above) Rail congestion through the East Aberdeen commercial district is the Company’s second major siting concern after permitting. This project addresses that concern with the grade separation project. Receiving Federal funding at this stage will demonstrate to this customer and the other private users of the rail line that private investment in rural infrastructure that keeps industry and attracts jobs and investment is a priority of the community and the United States of America.

Leverages private local investments

- Focusing public dollars on this phase of the project, PE and NEPA documents, is resulting in private investment along the rail line and in the Port infrastructure. PSAP is investing $1.5 million in additional capacity on the Grays Harbor branch of their rail line.
- In additional, FRA support in addressing this transportation bottleneck in East Aberdeen, demonstrates to private investors at the Port and within the impacted commercial district that this issue is being addressed, encouraging them to make investments in the area.

Uses innovative approaches to improve safety and expedite delivery

- Due to the closeness of all the elements of this project (highway, rail, shopping center, residential area and natural geography) the City, in consultation with WSDOT prefers a Design and Build approach to this project. Additional planning, environmental documentation and pre-engineering is required prior to the Design/Build process.

Innovative Technologies

- The City will evaluate innovative construction techniques to reduce the impact on the community and existing traffic. This may include constructing portions of the structures offsite (if possible, practical and cost effective) before staging for construction. Intelligent Transportation Systems (ITS) will be used whenever possible to communicate traveler information about the construction activities and expected delays throughout the Project. Other ITS technologies, such as work zone queue management and speed management systems, will be evaluated for applicability during Project’s engineering and construction management phases.

Innovative Project Delivery

The City would like to consider a Design Build process for this Project. Once the Preliminary Engineering is complete, the City and WSDOT will review Project Delivery options based upon findings in the Preliminary Engineering phase.

City and stakeholders are prepared for future operations and maintenance costs associated with the Project’s life-cycle.

This is as demonstrated by the City’s use of their Asset Management Process which is a credible planning tool used by the City to maintain assets without having to rely on Federal funding for future operating and maintenance costs. It is estimated that the City is committed to an average operations/maintenance cost for this Project of approximately 1-2 percent of the capital investment or approximately $35,000 per year.
Grant recipient is accountable for their performance and achieving specific measurable outcomes.

As presented in Section VI above, the City is committed to be held accountable for their performance as demonstrated in achieving specific measurable outcomes listed in Exhibit 19 on page 19.

**IX. Project Implementation and Management**

**A. Proposed project implementation and project management arrangements**

Through this planning phase, the City will partner with WSDOT to define project roles to ensure successful delivery of the project. This Phase of the Washington Coast Freight Corridor is a stand-alone planning project. This project is necessary for the predictable, reliable and safe movement of both people and freight through Aberdeen. The City is ready to advance the design of the Project and expects to complete the pre-NEPA design work pending funding. Oversight of the project design and construction will be led by the City, in partnership with WSDOT. Design criteria will include national, City, AASHTO, and BNSF standards. The requested funding from CRISI’s Track 2 aligns with the scope of work outlined in the Project’s Statement of Work provided in Appendix B.

Process will follow WSDOT’s project development and delivery procedures and standards supplemented with City procedures and standards applicable to the project. Procedures and design criteria from the BNSF Railway Guidelines for Road Grade Separation Projects and AREMA Manual for Railway Engineering will also guide the project.

**B. Past experience in managing and overseeing similar projects**

The City successfully manages approximately two to four million in grants (federal and non-federal) on an annual basis and documents this in the annual budget. The scope of this Track 2 PE & NEPA documentation work is within the City’s project management and contract management capacity.

**X. Planning Readiness for Track 2 (PE/NEPA)**

**A. Planning and Design Work Completed to Date:**

The following work has been completed or is substantively complete to date:

- Public involvement with property owners, businesses, and general public
- Desktop review of archaeological and historical significance
- Desktop review of existing geotechnical conditions
- Desktop review and site visits for critical areas and environmental concerns
- Partial topographic survey and base mapping of project limits
- Conceptual design of three grade-separated design alternatives
- Conceptual level cost estimates of three design alternatives
- Conceptual level evaluation of right of way impacts for three design alternatives
- Evaluation criteria developed
- Preferred design alternative has been selected
a) **Substantive Findings**

The following list of findings from the work completed to date that had a significant impact on the development of the alternatives for the project includes:

- Community and stakeholder interest in the project continue to be strong and has influenced the development of the evaluation criteria and conceptual designs.
- Economic vitality of area businesses must be considered as a priority in evaluating the impacts of the conceptual designs.
- Federal funding on the project will trigger the requirement for NEPA documentation and approval, which necessitates that environmental values are integrated into the decision-making processes for the alternative analysis.
- The PSAP rail line will most likely not be relocated and therefore the design concepts must allow for a grade-separated crossing at the rail line, into the Mall.
- An overcrossing structure is more desirable than an undercrossing due to high groundwater and the proximity to the rivers that are tidal influenced.
- Geometry of the roadway facility and overcrossing must accommodate the turning radii of emergency vehicles, recreational vehicles, and delivery vehicles as large as an AASHTO WB-67 semi-truck.
- Vertical alignment of the overcrossing structure must meet the Genesee and Wyoming, Inc.’s., (PSAP Railroad’s owner) vertical clearance requirement.
- Poor subsurface conditions and bearing capacity will control the type of overcrossing design options.

### XI. Environmental Readiness

#### A. Environmental Studies and Documents

To date, the Environmental Studies completed as part of the East Aberdeen Mobility Project April 2015 Report includes a high-level review of the following Environmental Considerations:

- Wetlands and Streams
- Water Resources
- Land Use and Acquisition
- Noise
- Visual Quality
- Cultural and Archaeological Resources
- Hazardous Materials

[http://www.ghcoq.org/aberdeenmobility.html](http://www.ghcoq.org/aberdeenmobility.html)
XII. Appendices: Supporting Documents

Appendix A-C have been Submitted with the Application.

Appendix A-1: BCA Narrative
Appendix A-2: BCA Spreadsheet
Appendix B: Statement of Work Attachment 2-4
Appendix C: Partner Commitment Authorizing Documents:

The Aberdeen City Council authorized the Mayor and staff to apply for USDOT CRISI funding at their meeting September 30, 2019\(^\text{12}\).

The Port of Grays Harbor Commissioners have been publicly briefed on this project no less than five times and took-action in support of the City’s application with adoption of Resolution No. 2986 on October 8, 2019\(^\text{13}\), dedicating port staff and consulting resources to the project.

On Tuesday, October 15, 2019, the Grays Harbor County Board of County Commissioners approved the City of Aberdeen’s request for Distressed Area Capital Funds through the .09 application process\(^\text{14}\).

Washington State Department of Transportation has provided a support letter for this Project\(^\text{15}\).

Appendix D-G can be found on the Project website: aberdeenwa.gov/crisi2019

Appendix D: Letters of Support
With broad support from local governments, private companies and elected officials, letters in support of the Aberdeen US12 Highway-Rail Separation project and CRISI Grant funding are found at our website aberdeenwa.gov/crisi2019.

Additional Supporting Documents:

Appendix E: Washington State County Travel Impacts and Visitor Volume 2000 – 2016, Dean Runyon Associates, April 2017

Appendix F: The 2013 Economic Impacts of the Port of Grays Harbor, Martin Associates, October 2014

Appendix G: City of Aberdeen CA certification

\(^{12}\) Appendix C Legislative Action City of Aberdeen, WA, September 30, 2019
\(^{13}\) Appendix C Port of Grays Harbor Resolution 2986, October 8, 2019
\(^{14}\) Appendix C Grays Harbor County, October 17, 2019
\(^{15}\) Appendix C WSDOT, October 15, 2019