



Spokane International Airport



Prepared For:

U.S. Department of Transportation

Office of the Secretary of Transportation

Rail-Truck Transload Facility Project

BUILD FY 2019 Grant Application Spokane, Washington

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Location: Spokane International Airport
Spokane, Washington
Area: Rural
Total Project Cost: \$16,960,402
BUILD Grant Request: \$11,900,000
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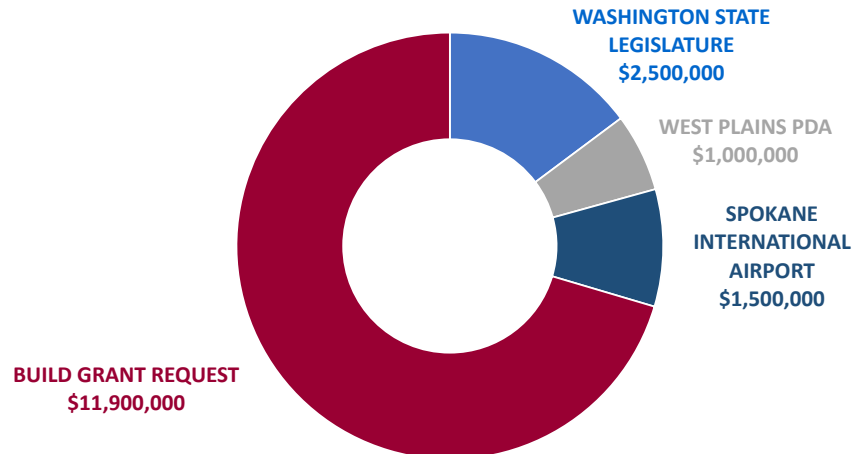
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Executive Summary

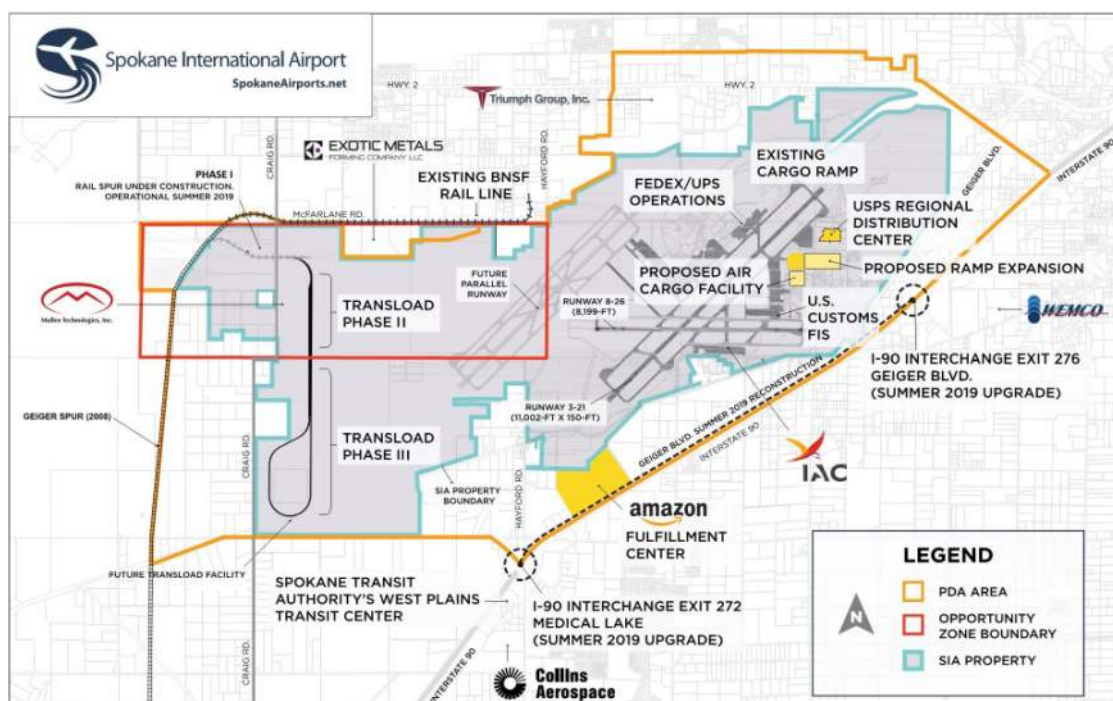
Rail-Truck Transload Facility Project at a Glance

The Spokane International Airport is requesting \$11.9 million to contribute to the total cost of \$16.9 million to complete Phase 2 of the Rail-Truck Transload Facility Project. The Rail-Truck Transload Facility would provide more efficient freight movement, aid in decongesting the interstate system, enhance economic competitiveness, support contiguous land use intensification, and strengthen local employment opportunities. The Rail-Truck Transload Facility Project is a rural project located outside the Urbanized Area as designated by the U.S. Census Bureau.



The \$16.9 Million Rail-Truck Transload Facility project includes over 4 miles of rail construction to serve a 200,000 square foot freight loading and circulation station. Phase 1 of the project saw construction of the first mile of rail, connecting the existing Geiger Spur Railroad to Spokane International Airport property. The work was recently completed in July 2019. Phase 2 of the project will continue the rail spur line to a new Rail-Truck transload circulation area where railcars will be transferred onto truck trailers, and vice-versa. This phase also includes construction of a 0.2-mile vehicle access road to provide vehicle freight access to the paved transload circulation area. Phase 3 will add a second transload facility and an arrivals/departures track to enhance cargo loading/unloading capabilities.

Figure 1-1 West Plains/Airport Area Public Development Authority



The facility would be strategically placed in the West Plains area near four Interstate 90 interchanges, Class 1 rail lines and the Airport's commercial and cargo freight offerings. It would also be in close proximity to existing aerospace, technology and manufacturing industries. Additionally, the proposed site is located in a rural undeveloped location providing the capability to expand to meet the future demands of industrial and manufacturing firms looking to locate or expand in the Spokane area.

This project is the result of a collaborative effort between multiple state and local agencies, as well as private sector land owners and developers that have identified the need for this key facility to provide commerce connectivity between the regions businesses and the multiple transportation corridors that converge in Spokane. It would complement recently completed projects, such as the Spokane Transit Authority West Plains Transit Center; projects in progress like Amazon, Inc.'s fulfillment center, improvements to the Geiger Boulevard and Medical Lake interchanges off Interstate 90, and Exotic Metals' expansion; and the announcement of Mullen Technologies and Selkirk Pharma building new manufacturing locations in the area.

In 2017, the Spokane Airport Board, City of Spokane and Spokane County formed the West Plains/Airport Area Public Development Authority (West Plains PDA). PDAs are economic development organizations created by the Washington State Legislature to assist communities with their economic development initiatives. The West Plains PDA was the State's first City/County collaboration. The West Plains PDA is located six miles west of the City of Spokane's downtown and occupies approximately 9,000 acres of land, and Spokane International Airport encompasses two-thirds of the West Plains PDA acreage. Since the West Plains PDA's formation, the West Plains has become an emerging industrial and commercial epicenter for Spokane County.

The expanding growth of the West Plains PDA is a result of a strong development and economic partnership between the public and private sectors, all working together to promote economic growth and improved job opportunities in the Spokane area. As this area continues to develop, a cornerstone component of the international multimodal transportation system serving the West Plains PDA will be the ability to efficiently ship and receive freight. The Rail-Truck Transload Facility is a strategic transportation and logistics investment that will allow for the realization of the region's industrial potential and maximize return on investment from the significant private, local government and state resources that have been invested over just the last five years.

Local, State, National Agency and Private Project Sponsors Include:



1.0 Project Description

The West Plains is one of the fastest growing areas in Washington state, and growth of the industrial and commercial sectors in the area have led to increased demand for a larger transportation and logistics network. The Rail-Truck Transload Facility Project will address this need by serving as an international, multimodal system that would improve freight capacity and reduce costs and truck freight traffic on the increasingly congested Interstate 90 (I-90). The strategic facility placement in the West Plains adjacent to the interstate, a Class 1 rail line and Spokane International Airport, as well as existing and future industrial and manufacturing companies, would allow the Rail-Truck Transload Facility to play a significant role in enhancing the economic development of the region.

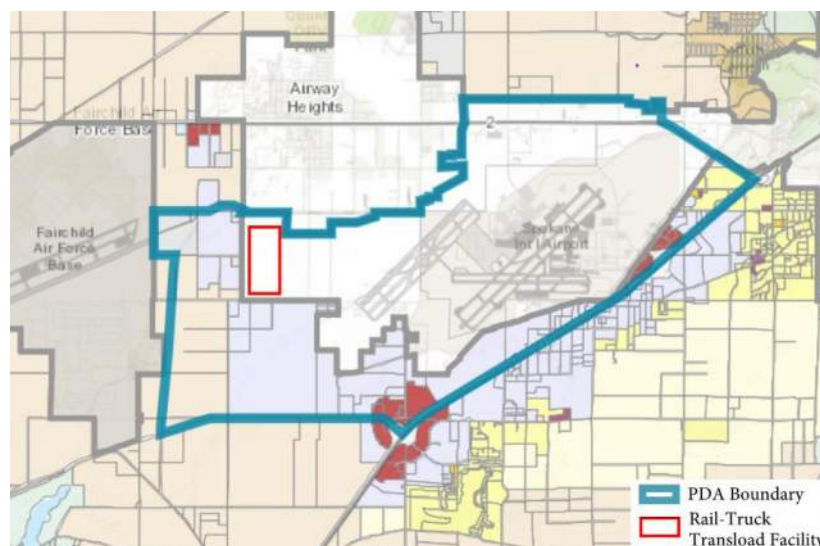
1.1 Project Background

Currently all rail freight in and out of the Spokane area is delivered to, Yardley, a rail yard facility located in the City of Spokane Valley. This location requires large, commercial freight trucks to exit Interstate 90 and use city roads to deliver and receive freight. Freight traffic operating on these local roadways is not desirable for both safety issues and traffic delays. This, combined with the growth the Spokane region has seen over the last few years, has led to significant increases in freight traffic as well as passenger traffic on the region's corridors. In addition to the inefficient access to the existing rail yard, it is completely landlocked by development in Spokane Valley, with limited potential for expansion to meet the growing freight needs of the region.

Land use planning efforts in the West Plains PDA have resulted in attracting new industrial, commercial and residential development. As planning continues for the West Plains PDA, a key strategy to attract industrial development is to build infrastructure that provides efficient day-to-day operational capabilities for these businesses. One of the ways to accomplish this is by providing a multimodal transload resource that will not only serve the transportation needs of the region, but also connect the region to the national and international transportation systems that come together in Spokane by providing a direct line of access from Washington's west coast seaports to the Inland Northwest.

The West Plains PDA contains prime property for the development of this transload facility thanks to existing rail lines, the availability of high-capacity utilities, and large amounts of open land for infrastructure development. The location of the Rail-Truck Transload Facility within the West Plains PDA is shown in Figure 1-2.

Figure 1-2 Rail-Truck Transload Facility in the West Plains PDA



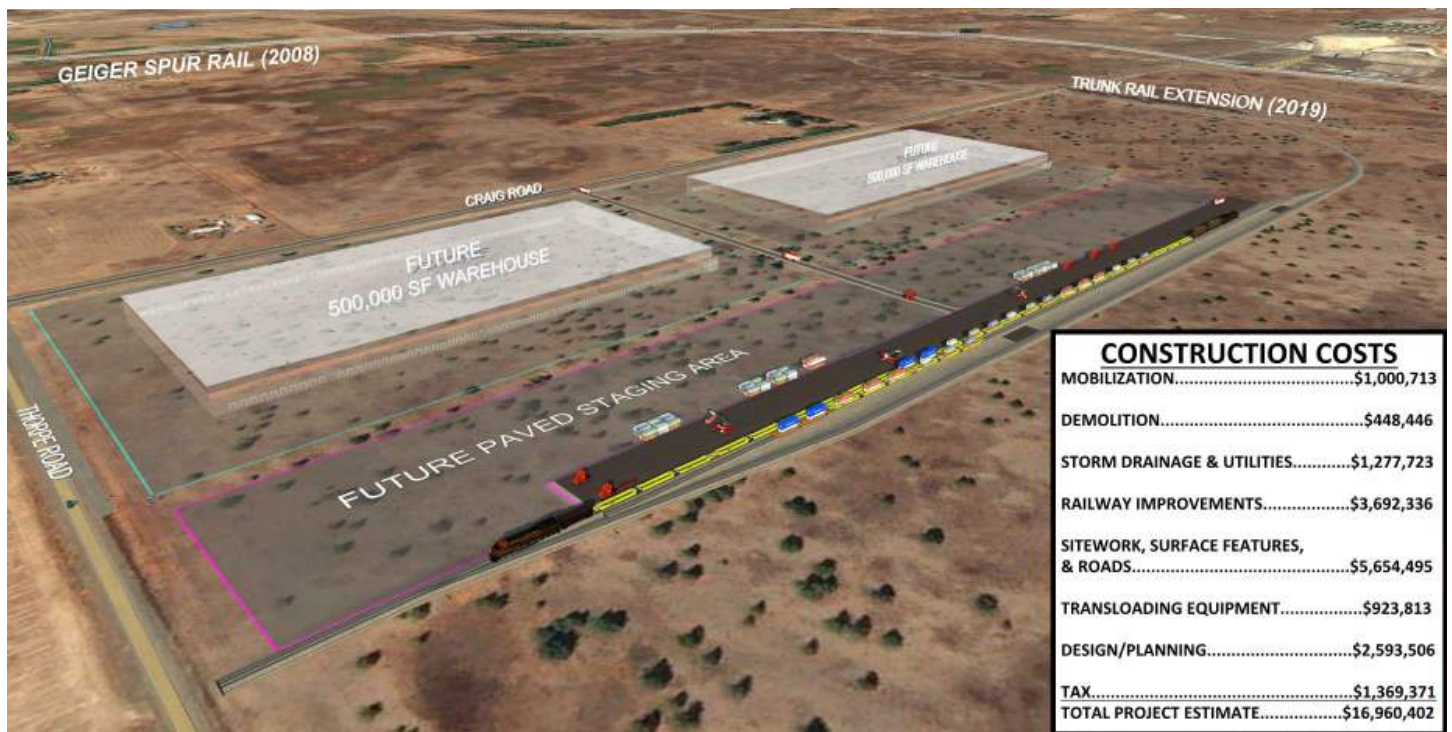
The Rail-Truck Transload Facility (see Figure 1-3 for an overview of the facility) would be the latest in a series of investments into the West Plains PDA. In addition to the rail spur expansion, new transit center, interchange improvements and manufacturer buildings and expansions already mentioned; a new water main and chlorine station, the Northern Lights substation providing power redundancy, and enhanced water service with a new water tower at Spokane International Airport are scheduled for installation later this year. Additionally, Geiger Boulevard infrastructure is being upgraded with a \$14.3 million BUILD grant awarded to Spokane County in December 2018.

Planning for the Rail-Truck Transload facility began in 2006 when the Washington State Legislature appropriated \$60,000 to fund a site study for the facility in anticipation of construction of the 3.5 mile Geiger Rail Spur from the Palouse River-Coulee City (PRCC) line near Medical Lake to McFarlane Road. The 2007 Geiger Spur Transload Facility Study and the 2008 Supplement to the study identified the regional need for rail freight shipments and analyzed multiple locations for the facility's development. The \$2.5 million Phase 1 rail spur construction was the initial step towards development of the Rail-Truck Transload Facility. Completed in July 2019, it added a mile-long extension from the Geiger Spur to Spokane International Airport property. The project was completely funded by state and local agencies.



Recent Phase 1 Rail Testing

Figure 1-3 Rail-Truck Transload Facility Overview



Phase 2 of the Rail-Truck Transload Facility Project would extend the rail line to the south, adding an additional 3.2 miles of rail, to a paved transload circulation area providing an expansive area for freight delivery. An 0.2-mile access road would also be built to facilitate vehicle access to the circulation area. Figure 1-4 illustrates the preliminary design of Phase 2.

Figure 1-4 Phase 2 - Rail-Truck Transload Facility Design



Figure 1-5 details the preliminary design of the full build out of the Rail-Truck Transload Facility, showing the potential for a future Phase 3 extending the rail line across Thorpe Road. Preliminary cost estimates for Phase 3 construction is \$87 million and will be designed at a later date.

Figure 1-5 Phase 3 - Full Build Rail-Truck Transload Facility



The existing and future industrial and commercial development in this area will lead to an increase in demand for freight rail capabilities. Facility design considerations included potential users of the Rail-Truck Transload Facility and the size and requirements of their freight shipments. Due to the facility's proximity to the Airport and potential utilization by aerospace firms the rail spur and Rail-Truck Transload Facility are designed to accommodate the necessary freight capabilities of Boeing aircraft fuselages, which require rail track with a wider turning radius to accommodate safe movement. Boeing currently has facilities in Renton and Everett, Washington.

The Rail-Truck Transload Facility Project not only has backing from local, state, and national government agencies, it also has support from several private companies such as Mullen Technologies, a California-based company with the intent to begin operations in the West Plains PDA. Mullen's initial plans include the assembly of their existing electric sports car and research and development for lithium-ion batteries. The company is expected to bring 860 jobs to the area within seven years of start of operations. Mullen plans for immediate use of the Rail-Truck Transload Facility through a lease providing development of one of the 28.63-acre warehouse sites shown in Figure 1-4. The warehouse will be located immediately adjacent to the Rail-Truck Transload Facility and will provide direct access to the freight delivery system.

In addition to Mullen Technologies, the West Plains PDA is already home to numerous large-scale manufacturing and industrial businesses such as Amazon, Inc., Exotic Metals Forming Company, WEMCO, Seaport Steel, Zak Designs, Collins Aerospace, Triumph Composite, and Waste Management, all of which could potentially benefit from the immediate advantage of the Rail-Truck Transload Facility.

The Rail-Truck Transload Facility is expected to create over 400 jobs in the short-term, and long-term future business development resulting from the completion of the Rail-Truck Transload Facility Project is expected to create over 5,000 jobs in the Spokane region.

1.2 Rural Community Benefits

The Rail-Truck Transload Facility Project is a rural project located outside the Urbanized Area as designated by the U.S. Census Bureau (as shown in in Figure 2-2 in Section 2). The improvements for this project will support the continued growth in new jobs and attract additional industrial and commercial activities to this rural, industrializing area of Spokane County. This topic will be discussed further in Section 2 (Project Location) and Section 4 (Selection Criteria).

The project aims to lower the unemployment rate through the creation of sustainable livable family wage jobs consistent with industrial and manufacturing operations. It is also anticipated that new employers attracted to this corridor will generate the need for additional residential units nearby. This is already being realized by Spokane County through recent pre-application meetings for residential units proposed south of I-90.



Phase 1 Rail Crossing at Craig Road

1.3 Infrastructure Challenges

It is essential to have infrastructure to efficiently and effectively move product from one place to another. A majority of the goods imported and exported comes through the nation's seaports. However, commercial, industrial and residential development along the coasts continues to grow and the ability of these ports to expand to meet demand is becoming more and more restricted by this surrounding development. Availability of land is limited, leading to higher development costs. As a result, inland ports are needed to act as supporting facilities.

Washington state has the largest locally-controlled public port system in the world and understands these challenges. The state's seaport facilities along the West Coast have limited opportunity for expansion as the neighboring cities and municipalities expand. The state is also at the forefront of aerospace development, an industry that relies heavily on rail freight. Businesses such as Aviation Technical Services, Zodiac Aerospace and Boeing in particular rely on the rail network to ship and receive aircraft fuselages during manufacturing. The availability of land is an issue also faced by Spokane's only existing transload facility in Spokane Valley. The Rail-Truck Transload Facility, on the other hand, provides spacious amounts of undeveloped land at more affordable prices to develop a facility for moving and storing freight.

The Rail-Truck Transload Facility is located on property owned by Spokane International Airport. Although the project's boundaries are surrounded by available infrastructure (e.g., water, sanitary sewer, data and communication lines, natural gas, and electricity) utilities will need to be extended to the transload site in order to attract the corresponding manufacturing and industrial users. This demand and need was identified in a 2014 West Plains Transportation Plan. With this influx of industry potential, infrastructure must be constructed to accommodate, support, and attract organizations. The need for this future infrastructure to serve the multimodal transportation network helped lead to the creation of the West Plains PDA.



Phase 1 Rail Spur at Craig Road

The West Plains PDA was created with the intent of providing focused physical infrastructure and financing mechanisms to support a world-class transportation, logistics and advanced manufacturing center with an emphasis on the aerospace industry sector. On top of an innovative revenue sharing agreement between the Spokane International Airport, the City of Spokane, and Spokane County, the West Plains PDA has bonding authority, can own or lease property, and is able to participate in public-private partnerships. The West Plains PDA additionally offers incentives to businesses including cost-efficient and renewable utilities, and a fast-track permitting process that accelerates completion of new brick-and-mortar facilities.

Since the inception of the West Plains PDA, organizations such as Amazon, Inc., Selkirk Pharma and Mullen Technologies have acted on this development opportunity, and several other industrial and manufacturing organizations are considering development. The West Plains PDA also worked with Spokane County to obtain the Geiger Boulevard Improvement Project BUILD grant in December 2018. These improvements will directly support the anticipated traffic increase in the area over the next several years.

The Rail-Truck Transload Facility is designed to make the West Plains PDA more accessible for large freight and the specifications of a variety of industries. With the completion of Phase 1 rail spur extension, the Rail-Truck Transload Facility will connect directly to the Geiger Spur rail by the trunk-rail extension. Access to this extension and the paved transload circulation area will be available via the project's access road off Craig Road. The two future 500,000 square foot warehouses and a future paved staging area will be built with private funding and leased through the West Plains PDA.

2.0 Project Location

The Rail-Truck Transload Facility Project is located within the boundaries of Spokane County on the eastern side of Washington state, as shown in Figure 2-1. Spokane County forms the 100th largest Metropolitan Statistical Area by population. Spokane County has a long history as a logistics center for the region.

2.1 Rural Context

The Spokane-Coeur d'Alene Metropolitan Statistical Area is home to over 700,000 people and serves as a hub for business, industry, transportation, medicine, education, and military (Fairchild Air Force Base is one mile west of the proposed transload facility). The Rail-Truck Transload Facility Project lies west of the City of Spokane at the Spokane International Airport. Figure 2-2 displays the 2010 Census Urban Area Map with the proposed transload facility location indicated in red and the urban area boundary shown with a thick green line. This project is completely contained within a designated rural area.

2.2 Within the Public Development Authority Boundary

Spokane is uniquely positioned to offer attractive rail and air transportation options for shippers and manufacturers desiring an intermodal transportation facility. The Rail-Truck Transload Facility Project would directly connect to existing rail lines and is conveniently located next to Spokane International Airport and its commercial and cargo freight options.

The project also lies within the boundaries of the West Plains PDA; a governing organization aimed at supporting economic development in the area. Figure 2-3 details the West Plains PDA boundaries and the planned Rail-Truck Transload Facility Project location.

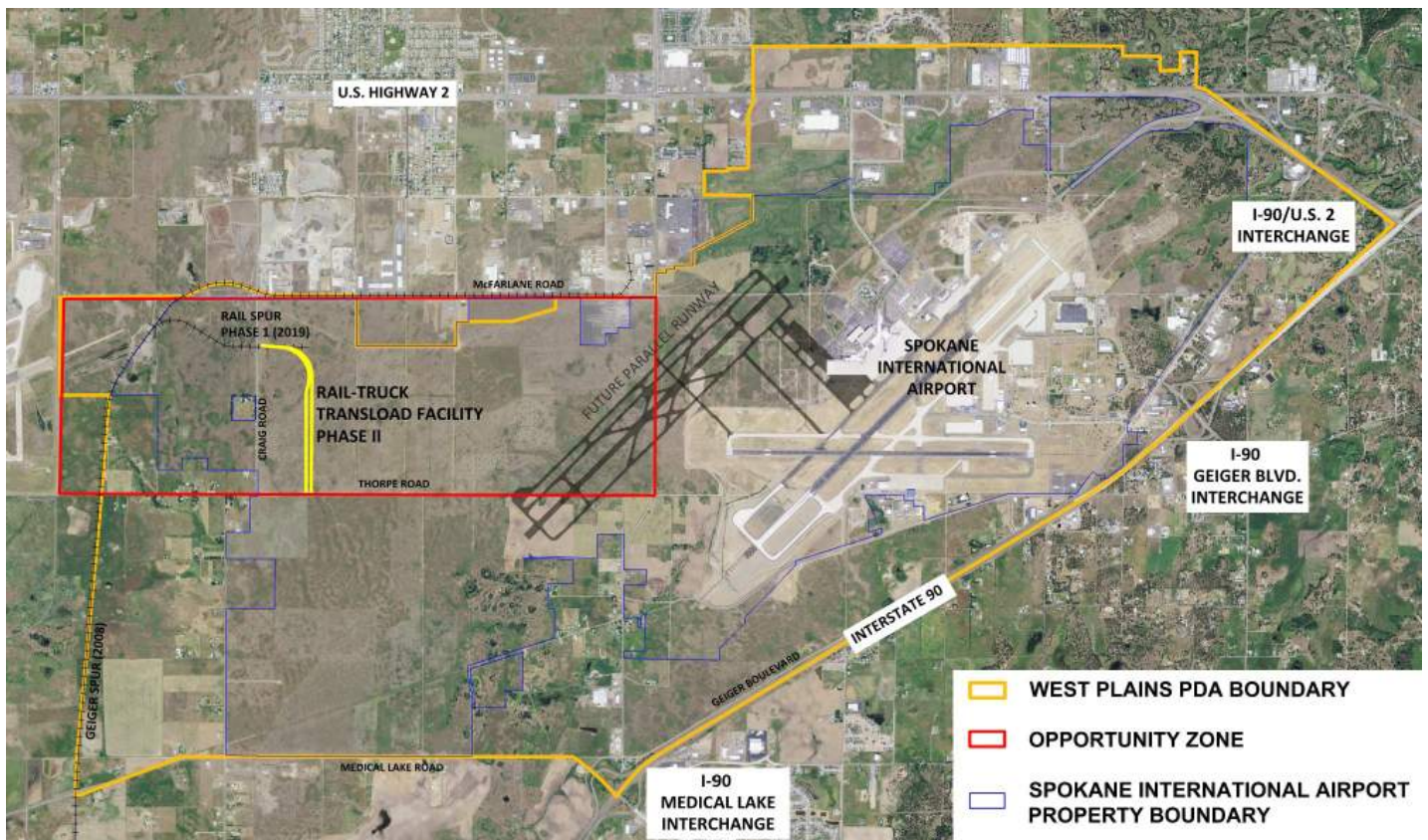


Figure 2-1 Spokane County Location in Washington State



Figure 2-2 Rural Project Exhibit (2010 Census Map)

Figure 2-3 West Plains / Airport Area Public Development Area



2.3 Proximity to I-90 and Major Highways

Another benefit of the Rail-Truck Transload Facility is its proximity to Interstate 90. I-90, situated four miles south of the facility, is the northernmost east-to-west interstate in the United States, and links Spokane to the Port of Seattle-Tacoma in the west and the City of Boston in the east. The full length of I-90 is illustrated in Figure 2-4. In addition to I-90, U.S. highways 195, 395, and 2 also converge in Spokane, making the area a transportation hub for the region.

Figure 2-4 Nation extent of Interstate 90



3.0 Grant, Funds, Sources, and Uses of Project Funds

The Spokane International Airport and its cooperating partners are committed to delivering the Rail-Truck Transload Facility project and are contributing \$5.0 million towards the project's \$16.9 million cost. Half of this local investment (\$2.5 million) has already been provided to construct the recently completed Phase 1 rail spur extension. Committed non-federal project partner contributions are detailed in Table 3-1. Funding commitment letters from the non-federal partners are provided in Appendix A. Table 3-2 summarizes the uses of project funds, broken down by the project's major components, and Table 3-3 breaks down the uses of project funds based on the major project components. In the event of unexpected cost increases, the construction cost estimate includes a 20% contingency in the funding request.

The \$11.9 million request for Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant funding would provide the remaining portion of the funding capital to complete Phase 2 of the project.

TABLE 3-1: Funding Sources and Contributions

CATEGORY	STATUS	FUNDING PARTNER	SOURCE	PROJECT PHASE		TOTAL (MILLIONS)	SHARE OF TOTAL
				1	2		
Public/Private	Committed	West Plains/ Airport Area Public Development Authority	Interlocal Tax Redistribution	\$0	\$1.0	\$1.0	6%
Public		Spokane International Airport		\$0.5	\$1.0	\$1.5	9%
Public		Washington State Legislature		\$2.0	\$0.5	\$2.5	15%
			Sub-Total	\$2.5	\$2.5	\$5.0	30%
Federal	Requested		BUILD FY 2019	\$0	\$11.9	\$11.9	70%
			Total	\$2.5	\$14.4	\$16.9	100%

TABLE 3-2: Overview of Project Components and Costs

PROJECT COMPONENT	DESCRIPTION	FUNDS ALLOCATED	SHARE OF TOTAL
Mobilization and Demobilization		\$982,608	6%
Demolition	18.4 acres of clearing and grubbing	\$448,446	3%
Storm Drainage and Utilities	Stormwater treatment and flow control for paved areas; lighting; water service; sanitary sewer service	\$1,277,723	8%
Railway and Associated Improvements	4.3 miles of new trackwork (2 loading tracks with 2,000-foot clear length, 1 running track with tail track); 5 new turnouts; signalization at Craig Road	\$3,692,336	22%
Sitework, Surface Features, and Roads	4.4 acres of heavy-duty concrete pavement; 1200-foot long access road; fencing; minor landscaping	\$5,654,495	33%
Transloading Equipment	Equipment for loading and unloading rail cars and freight trucks	\$923,813	5%
Design Contingency	20%	\$2,593,506	15%
Tax	8.8%	\$1,369,371	8%
	Total	\$16,942,297	100%

TABLE 3-3: Funding by Project Phase

PROJECT COMPONENT	PHASE 1	PHASE 2		TOTAL (MILLIONS)
	NON-FEDERAL FUNDS (MILLIONS)	NON-FEDERAL FUNDS COMMITTED (MILLIONS)	BUILD FUNDS REQUESTED (MILLIONS)	
Mobilization and Demobilization	\$0.3	\$0.5	\$0.2	\$1.0
Demolition	\$0.1	\$0.2	\$0.1	\$0.4
Storm Drainage and Utilities	\$0.2	\$0.7	\$0.4	\$1.3
Railway and Associated Improvements	\$0.6	\$2.0	\$1.1	\$3.7
Sitework, Surface Features, and Roads	\$0.7	\$3.2	\$1.7	\$5.6
Transloading Equipment	\$0.0	\$0.6	\$0.3	\$0.9
Design Contingency	\$0.3	\$1.8	\$0.8	\$2.6
Tax	\$0.3	\$0.7	\$0.4	\$1.4

4.0 Selection Criteria

The Rail-Truck Transload Facility Project is expected to provide several benefits to the area, including:

Safety – The project will reduce the amount of freight traffic on local roads around the Spokane Valley transload facility as well as downtown Spokane on Interstate 90 and transfer it to the West Plains. Congestion during business hours will decrease, which will also help to mitigate the potential for accidents.

State of Good Repair – Reducing freight traffic on Interstate 90 and local roads will help to reduce maintenance costs on these corridors. Rail construction around the transload facility will utilize concrete rails to increase the life of the rail track and lessen rail upkeep maintenance costs.

Economic Competitiveness – The Rail-Truck Transload Facility Project is one piece of the West Plains PDA long-term development plan. Project planning, over the past 13 years, has set the stage for the project's immediate construction to leverage the current economic momentum to support national and regional movement of goods to manufacturers and stimulate economic development for the region. These efforts have been articulated with the West Plains PDA and in the City of Spokane Comprehensive Plan and the Spokane County Comprehensive Plan.

Environmental Sustainability – As a result of reduced traffic congestion and a more efficient multimodal facility, the project will reduce congestion-related emissions and noise. Additionally, by utilizing an existing rail line and large tracts of undeveloped land, the Rail-Truck Transload Facility is providing a large economic benefit to area businesses with a small impact to the surrounding environment.

Quality of Life – The Rail-Truck Transload Facility will provide an attractive resource for businesses considering relocating to the West Plains area. The project is expected to increase opportunities for living wage jobs, and employees would have convenient access to Interstate 90 as well as a Spokane Transit Authority transit center. Also, with the anticipated reduction in traffic congestion employees would enjoy a shorter commute to and from work.

Innovation – The project is being funded through an innovative and collaborative effort in the West Plains (PDA) which provides an avenue for local communities to support themselves and ensure the long-term future development of this rural location.

Increased Regional Collaboration –The Rail-Truck Transload Facility is strongly supported by a broad range of partners, including: Washington State Legislature, Washington State Department of Transportation (WSDOT), Spokane County, City of Spokane, Spokane International Airport, the West Plains PDA; and several manufacturers in the area.

An analysis of these key benefits is provided in this section. A summary of the results from the Benefit-Cost Analysis (BCA) are presented in Section 6.0 and Appendix B.

4.1 Safety

A 2018 Operational Study completed on Interstate 90 in Spokane noted that crashes on the corridor rose by 22% from 2012 to 2015 due to significant increases in traffic volume. Over 100,000 vehicles travel daily along I-90 in the Spokane Region, causing significant congestion during business hours. Movement of large freight and congested traffic also creates increased potential for collisions on roadways.

The Rail-Truck Transload Facility will reduce the amount of interstate freight traffic on I-90, thus decreasing the potential for accidents and providing a less congested and safer transportation system. Freight will be delivered to the Rail-Truck Transload Facility via the rail line, providing a local area to transport freight to and from the businesses located in the West Plains. Improvements to the Geiger Boulevard and Medical Lake interchanges and Geiger Boulevard will also help to facilitate ease of use and accessibility to commercial and industrial users of the facility.

4.2 State of Good Repair

This project has the potential to reduce damage to state and local highway infrastructure by shipping freight by rail instead of roadways. Currently all freight transported by rail to Spokane is received and shipped at the downtown transload facility requiring freight trucks to operate on local interior roadways and downtown sections of I-90 to receive and deliver shipments. The rerouting of truck traffic away from downtown Spokane and Spokane Valley will reduce the impacts of heavy freight traffic on Interstate 90 as well as local interior roadways within each respective city's downtown areas. This will ultimately lead to decreased damage and maintenance costs associated with these transportation corridors. To compound this benefit, this project has the potential to reduce additional damage to State of Washington transportation system, primarily associated with the Interstate 90 corridor, as a result of the increased shipment of freight by rail from seaports on the west coast of the state instead of by truck.

Construction of the Rail-Truck transload facility will utilize concrete rails for the rail lines accessing the site. Concrete rails last longer than traditional wooden rails, thereby reducing long-term maintenance costs associated with the facility.

As evidenced by the completion of Phase 1 of the project using only state and local funds, along with the investment of local and private funding for multiple projects underway within the West Plains PDA; the project is appropriately capitalized for both construction and long-term maintenance costs.

4.3 Economic Competitiveness

The Rail-Truck Transload Facility will serve as an inland port for the Spokane region, serving the intermodal transportation network of the region; in anticipation of the continued and encouraged economic growth associated with the world class logistics and advanced manufacturing center. The Rail-Truck Transload Facility Project promotes the attractiveness of the area by providing an alternative means of goods transportation. The facility will allow businesses to efficiently and economically transport goods to and from the West Plains area.

The 2007 Geiger Spur Transload Facility Study estimated that the rail improvements have the potential economic impact of \$773 million per year in local economic impacts, up to 7,000 manufacturing jobs; and \$77 million in local and state tax revenue per year. These regional economic impacts are apparent by the aerospace, logistics, and technology growth taking place within the West Plains PDA; such as construction of the new 2.6 million square foot Amazon Fulfillment Distribution Center. The construction of 1.3 million square foot Mullen Technologies manufacturing facility is expected to initially bring 55 jobs increasing to over 860 jobs by 2027 to the area. Construction of 65,000 square foot, \$30 million Selkirk Pharma manufacturing facility is anticipated by end of 2020. Waste Management, the largest environmental service provider in North America, recently won a contract to process recyclables for 5,100 Walmart stores nationwide and intends to ship the processed material by rail from their SMaRT (Spokane Material and Recycling Technology) Center located approximately two miles from the Rail-Truck Transload Facility. Two expansions are planned by Exotic Metals and another expansion by Collins Aerospace has been announced.



Spokane is the largest metropolitan freight hub between Seattle and Minneapolis. The City of Spokane is less than 100 miles from the international border with Canada to the north and therefore is a hub of converging international trade including rail freight. Over 250 trucking companies deliver freight east to west on I-90. More than 100 major motor freight lines and contract carriers serve the Spokane region. In addition to I-90, U.S. Highways 195, 395, and 2 converge in Spokane. The Rail-Truck Transload Facility will provide direct access to seaports on the west coast as well as freight moving east from Spokane removing freight traffic on I-90 and providing easy access to industrial and commercial businesses in the region.

With a multitude of new developments ongoing and planned for the West Plains PDA, the area is currently experiencing a high level of business development. The Rail-Truck Transload Facility will not only benefit the existing regional businesses but will serve to attract new commercial and industrial development to the region by providing efficient freight transportation functions, and provide support to the community through jobs, goods movement, and continued economic development in the region.

The Spokane region offers a number of advantages to these commercial developments including affordable cost of living, renewable low utility costs, a fast-track permitting process, large tracts of undeveloped land with lower real estate costs, and a large population base. Within the West Plains PDA lies in an 1,800-acre qualified

Opportunity Zone. Companies locating here can invest in the area and defer or eliminate Federal capital gains taxes. The airport property is also included in Foreign-Trade Zone No. 224, which allows for the deferral of duties for companies that import foreign materials or component parts, providing an additional federal economic incentive for warehousing and logistics companies as well as manufacturers who utilize foreign sourced material. U.S. Customs and Border Protection services are available for clearing corporate flights and processing international cargo. The City of Spokane is less than 100 miles from the international border with Canada to the north and therefore is a converging hub of international trade from the region including rail freight.

The goal of the West Plains PDA is to grow economic investment and jobs strategically next to one of the area's major international transportation facilities, Spokane International Airport. The location offers the advantages of an international airport for travel and cargo. Spokane International Airport is served by six major airlines and two integrated air cargo carriers. The airport has 60 daily departures to 16 nonstop destinations, including over 20 daily one-hour flights to Seattle. The airport handled nearly four million passengers in 2018. Spokane International Airport has experienced a 24% increase in passenger enplanements and recently completed more than \$70 million in upgrades and construction projects. The airport handled over 70,000 tons of cargo in 2018 and is the second largest passenger service airport in the State of Washington.

The Geiger Spur rail is part of a regional rail system known as the Palouse River and Coulee Rail System. A 2015 study of the Palouse River and Coulee Rail System completed by WSDOT identified \$58 million in infrastructure projects planned for the future to increase capacity of the rail system, rehabilitate existing sections of the track, and improve economic development of the system. These planned investments will ensure that the rail system serving the new Rail-Truck Transload Facility is developed to meet the future demand and growth and speaks to the partnership with WSDOT to promote the state's rail system development.

4.3.1 Continued Economic Development

Businesses seek environments where transportation systems allow integrated supply chain strategies to succeed - namely transportation networks that support reliability, fluidity, and redundancy, to meet expectations in the commercial, industrial and retail sectors of the economy. The emphasis on reliability and supply chain management is a crucial business strategy for companies who seek to extract value and competitive advantage through distribution. Efficient local, regional, national, and international goods movement is economically imperative. According to regional business interviews carried out for the Inland Pacific Hub Transportation Study, traffic congestion on highways has been identified by many growth industries nationally as a significant transportation problem affecting economic growth and development.

The greater Spokane Metropolitan region currently relies mainly on truck transport for the delivery of goods and freight. Rail service across the Cascade Mountains, located between Seattle and Spokane, is much more reliable than truck transport during the winter months. A 2008 Freight Transportation Economic Impact Assessment Report concluded that lack of reliability and closures to I-90 due to mountain passes and winter weather resulted in nearly \$28 million lost revenue to the state's economy over one winter. In short; congestion and reliability in the project area affects the entire region's ability to foster reliable and cost-effective transportation services for potential businesses.

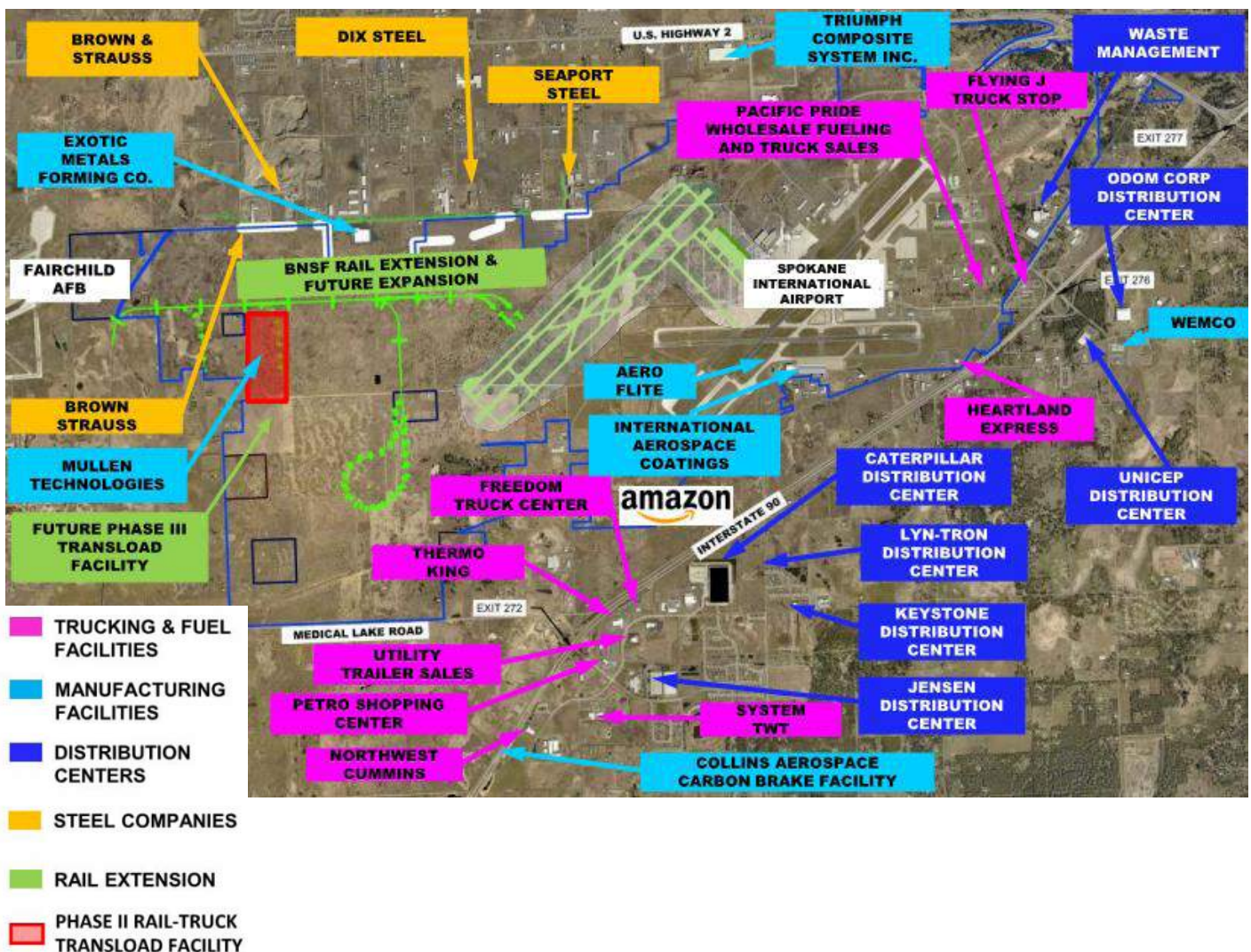
Some of the selling points for attracting valuable business to this area of Spokane County are the knowledge that business costs are 18% below the national average and the lowest among U.S. aerospace clusters, Washington offers the lowest industrial energy costs in the nation, and real estate near uncongested multi-modal transportation networks is plentiful and far less expensive than in larger metro areas. Maintaining that

momentum, the industrial and commercial growth capabilities of the area will be accelerated by the Rail-Truck Transload Facility operation; making the area an attractive place to do business by providing economic means for goods transportation.

Over 120 aerospace firms are situated in the area, with capabilities that include sheet metal fabrication, composite manufacturing and assembly, program integration, CNC machining, tooling, injection molding and one of only three aerospace-grade aluminum rolling mills in the U.S. The Department of Commerce has financially supported location and expansion of firms including Exotic Metals, PyroTek, AccraFab, and Precision Cutting Tools, with economic development strategic reserve account and workforce training initiatives. Over 100,000 students from the area's 25 higher education institutions are earning technical certifications and advanced degrees, providing a well-trained and job-ready workforce.

Within and adjacent to the West Plains PDA boundary and the Rail-Truck Transload Facility are several businesses that intend to use the Rail-Truck Transload Facility. Included in Figure 4-1 are manufacturing, logistics, and distribution businesses in close proximity to the Rail-Truck Transload Facility including; the new Amazon Fulfillment Center, the future Mullen Technologies, Waste Management, and Exotic Metals.

Figure 4-1 West Plains PDA Industry Exhibit



The Rail-Truck Transload Facility Project complements the recently awarded 2018 BUILD grant project, the Geiger Boulevard Infrastructure Improvements. This project will encourage commercial and industrial development to the area by increasing ease and accessibility of freight movement. placement adjacent to an existing rail line, close proximity to I-90, proximity to existing and future industrial development, and easy access to the Spokane International Airport, aligns the Rail-Truck Transload Facility to be a vital component to the regional economic growth.

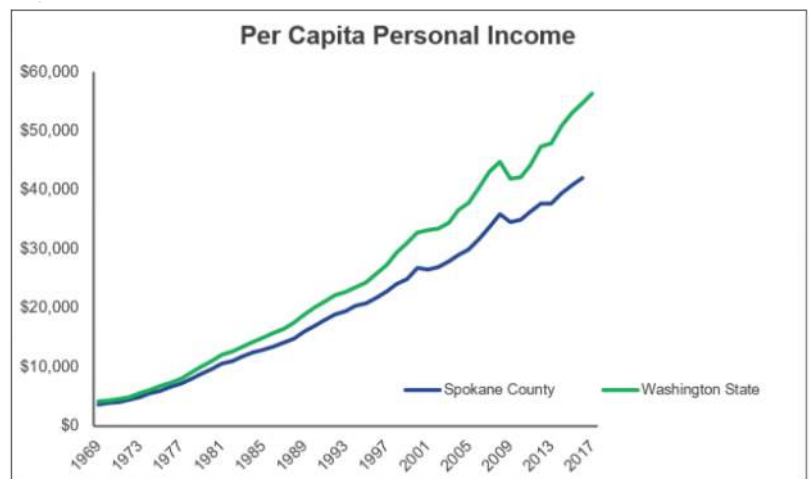
4.3.2 Decreased Transportation Costs

Today's average train has an efficiency of 400 ton-miles per gallon whereas freight trucks currently hover around 130 ton-miles per gallon providing a more efficient and cheaper alternative for the shipment of goods. In addition, the routine delivery of goods to and from West Plains area businesses via semitruck to the existing rail facility located in downtown Spokane Valley has increased costs associated with extended travel times due to traffic within the city. Vehicle operating cost savings can be attributed to factors such as reduced fuel consumption of semitrucks traveling from the Spokane Valley transload facility to the businesses in the West Plains.

4.3.3 Improved Access to Family Wage Jobs

As shown in Figure 4-2, compared to statewide averages, personal incomes have been historically lower in Spokane County. In 1977, the gap between County and State annual incomes was \$525, and in 2016, the gap increased to \$12,604. Without economic development initiatives, such as the Rail-Truck Transload Facility, to attract new family wage businesses to Spokane County, the income gap will continue to widen. The Rail-Truck Transload Facility Project will create opportunities to reduce this wage gap between the County and State and an increase in the number of full-time family wage jobs will contribute to a higher quality of life as well as increased spending in the County.

Figure 4-2 Per Capital Personal Income. Source: US Census Bureau



In 2010 there were an estimated 10,400 jobs in the West Plains area, with large concentrations in the fields of warehousing and manufacturing. Spokane County received four pre-application requests from potential developers in the area in 2018. Currently, Amazon is expected begin operations in the West Plains area in Fall 2019 with the opening of its distribution warehouse, generating an additional 2,900 jobs in the area. Mullen Technologies intends to develop their manufacturing facility directly adjacent to the Rail-Truck Transload Facility with projections for 863 jobs by 2027; with many of these positions associated with high paying engineering positions. The new \$30 million Selkirk Pharma manufacturing facility requires positions in engineering, science, manufacturing, information technology and project management also provided above average wages for local residents. In addition to these developments Collins Aerospace and Exotic Metals have all officially announced facility expansions of their own to further increase jobs within the West Plains PDA. Immediate construction of the Rail-Truck Transload Facility is necessary at this time to leverage this economic growth and attract additional employers increasing aerospace industry sector, logistics, and advanced manufacturing development in the West Plains area.

4.3.4 Land Value Uplift

In addition to the Rail-Truck Transload Facility and business developments, improvements to infrastructure and new development within the West Plains PDA are expected to result in property value increases. As a result of a 2010 Route Development Plan, WSDOT is planning a series of improvements to Highway 2 through Airway Heights commercial sector to reduce traffic congestion associated with growth in the region. These overall improvements will encourage economic development and revitalization of nearby Airway Heights, resulting in significant property value uplift with increases in residential sales and the median sale price of homes. Commercial real estate sales are anticipated to experience even greater increases in sale prices and value as development of the West Plains PDA continues. The Rail-Truck Transload Facility Project is a strategic element of a plan to create an area that is efficient and business-smart to attract development that is beneficial County-wide.

4.4 Environmental Sustainability

On average, trains are four times more fuel efficient than trucks. The benefits to the environment can be captured in terms of fewer truck miles traveled resulting in lower greenhouse gas emissions. A single freight train can replace several hundred trucks. Upon completion of construction, the Rail-Truck Transload Facility will have capacity to accommodate and process two freight trains daily. With double stack well cars, the trains will be able to carry 50 rail containers each.

Movement of freight and goods by rail is considered the most green means of transporting freight over land because of the following benefits:

- One rail freight car can carry the equivalent of four truckloads
- One train can remove more than 20 trucks from local highways
- Railroads consume almost one-third less fuel than trucks per ton-mile moved
- One rail car can carry a ton of cargo 400 miles on one gallon of fuel

The U.S. Environmental Protection Agency estimates that for every ton-mile, a typical freight truck emits roughly three times more nitrogen oxides and particulates than a locomotive. Related studies suggest that trucks emit six to 12 times more pollutants per ton-mile than do railroads, depending on the pollutant measured. According to the American Society of Mechanical Engineers, 2.5 million fewer tons of carbon dioxide would be emitted into the air annually if 10% of intercity freight now moving by highway were shifted to rail. As greenhouse gas, emissions are directly related to fuel consumption. Moving freight by rail instead of truck lowers greenhouse gas emissions by 75%.

In the past, Spokane County was designated a non-attainment area for both carbon monoxide (CO) and particulate matter (PM-10). As a requirement of the Federal Clean Air Act states must protect and maintain air quality through the development of State Implementation Plans (SIPs). Spokane County's SIP is based on control strategies focused on a reduction in vehicle emissions. The efficient shipment of freight by rail will support the County's continuing efforts to control and reduce emissions associated with vehicle traffic in the region. The Spokane International Airport recognizes the importance of utilizing sustainable practices during the development of transportation infrastructure that will protect the environment and ecosystems impacted by

Phase 1 Construction Rail Spur



the project. These improvements will reduce traffic congestion along the regions critical transportation corridors improving air quality and reducing greenhouse gas emissions. The improvements will also reduce travel time along these corridors. Construction of the infrastructure will utilize design standards and low impact practices that protect and enhance environmental sustainability through the use of recycled materials and stormwater collection systems. The project will incorporate large open landscaped areas that utilize native grasses and plant species that mirrors the surrounding ecosystem.

4.4.1 Reduced Emissions

Supporting the need to improve the current vehicle congestion in Spokane County, the Rail-Truck Transload Facility Project will reduce semitruck traffic along I-90 and more importantly, at the freeway exits and local commuter roads in downtown Spokane due to the current need to ship all freight traffic from the downtown transload facility. Operations on congested local roads are typically associated with idle or slow moving traffic creating additional emissions per mile of freight moved. With Amazon, and other planned developments that include the potential for increased personal vehicle volume, the need to reduce unnecessary traffic in the area is critical to maintaining an attractive location for further development and providing an efficient operational structure for current businesses. By reducing unnecessary vehicles, the Rail-Truck Transload Facility Project will reduce unnecessary idling emissions that are often a result of traffic congestion.

- Trucks emit 6 to 12 times more pollutants per ton-mile than RRs, and 3 times more NOx and PM. (http://nationalatlas.gov/articles/transportation/a_freightrr.html)
- Rail produces 70% less CO2 than trucks per ton-mile <http://www.freightonrail.org.uk/FactsFigures-environmental.htm>
- Moving freight by rail reduces greenhouse gas emissions by 75% <http://www.aar.org/~media/aar/Background-Papers/Freight-RR-Help-Reduce-Emissions.ashx>

Avoided travel time delays also contribute to a reduction in emissions produced while vehicles are idling in queues or congested areas along the corridor. The project is estimated to reduce nearly 70,000 short tons of emissions over the project life cycle, including 65,604 short tons of carbon dioxide emissions, and 322 short tons of criteria air contaminants (including fine particulate matter, sulfur oxides, nitrogen oxides, and volatile organic compounds).

4.4.2 Contiguous Development

The development of the West Plains industrial and commercial lands, of which the Rail-Truck Transload Facility Project supports, are the result of a concerted, regional, sustainable, planning effort to avoid leap frogging development into arable lands outside the metropolitan area, maximize the proximity of new developments to urban centers, and provide a transition from city to farmland. The area the Rail-Truck Transload Facility is expected to support is immediately west of the City of Spokane and the Spokane International Airport. Recently, the Amazon Fulfillment Center was built in the West Plains Area, strongly supporting the West Plains Development Area as an attractive business community. Several other businesses exist in the West Plains area that have operations that will benefit from the Rail-Truck Transload Facility, as shown in Figure 4-1.

Amazon Fulfillment Center



4.5 Quality of Life

The Rail-Truck Transload Facility Project, along with other transportation improvements in the West Plains area, is central to the expansion of industrial and commercial employment in the region. Due to the proximity to the Spokane International Airport, multiple cities, and Interstate 90, area is recognized as a freight-focused regional employment activity center and currently home to over 10,000 employees.

Industrial and commercial developments planned for the West Plains PDA are expected to add 7,000 jobs, drawing on labor pools in the unincorporated areas of the County, as well as the City of Spokane, Airway Heights, Medical Lake, and Cheney. The development of the West Plains PDA is focused on the development of a world class aerospace industry sector, logistics, and advanced manufacturing epicenter thereby providing above average paying wages improving the quality of life for the region.

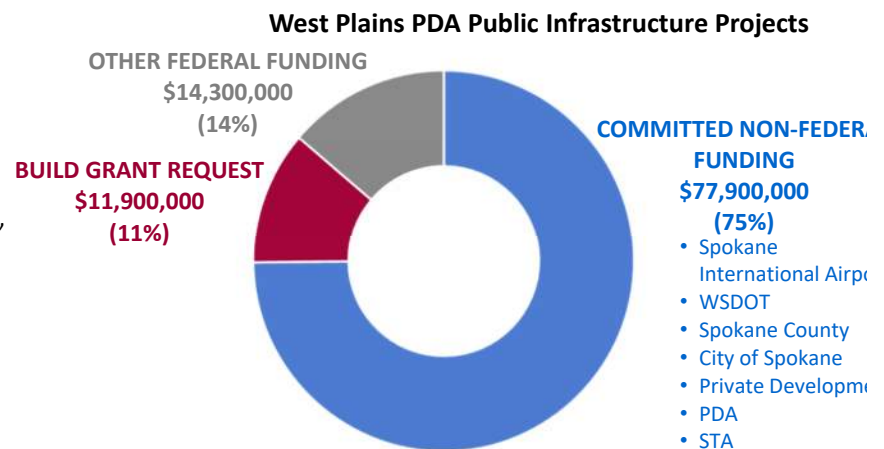
The project also provides potential to reduce congestion on local and state roadways converging on the region, by converting truck freight traffic to rail, improving connectivity of the region.

4.6 Innovation

This project is based on an innovative partnership of stakeholders in the West Plains PDA. The West Plains PDA is the State's first City/County structured PDA and includes an innovative revenue sharing agreement providing a long-term revenue stream to support regional economic investments with an emphasis on delivery of strategic infrastructure. Thanks to this innovative partnership, the West Plains PDA developed a new tax code that allocates 75% of increases in tax revenue from property, sales, leases, utility, and use back into infrastructure development to attract new business and drive economic development. This funding is used for acquisition, construction, and the development of publicly beneficial projects within the West Plains PDA borders. The agreement creating the West Plains PDA also provides bonding authority, the ability to own or lease property, and participate in public-private partnerships expanding its ability to drive development.

4.7 Partnership

To promote the development of this key location the Spokane International Airport, City of Spokane, and Spokane County have partnered to create the West Plains PDA with the sole purpose to undertake, assist with and otherwise facilitate the acquisition, construction, development equipping, leasing, operation and maintenance of public benefit projects within the West Plains PDA boundaries. Thanks to this partnership and a multitude of new developments ongoing and planned for the West Plains PDA, the area is currently experiencing a high level of business development.



These other public infrastructure projects include the following: The Medical Lake Interchange is an \$18.6 million project funded by the State of Washington and scheduled to finish construction in Summer 2020.

Geiger Interchange is estimated at \$8.6 million, funded by the State of Washington, and is in design phases and scheduled for completion in Fall of 2021. West Plains transit center is a public transit hub located just off I-90 at the Medical Lake Interchange. Project costs totaled \$9.2 million funded in part by a State Regional Mobility Grant and Federal Congestion Mitigation Grant. Phase 1 has been completed with Phase 2 scheduled for 2020. The \$44.7 million Geiger Boulevard Project is a 2018 BUILD Grant recipient and is scheduled for completion in 2020. These projects combine to form a program of infrastructure development currently being supported by the West Plains PDA to benefit the long-term economic benefit of the region.

The Rail-Truck Transload Facility Project is strongly supported by a broad range of public and private partners as the project is located on the Spokane International Airport, in an area identified for prime regional economic development with interstate connections, and is within a defined public development authority area. Partners include: the State of Washington, City of Spokane, Spokane County, Spokane International Airport, and the West Plains PDA. Table 4-2 provides a description of all project partners. The Spokane International Airport has been coordinating with the BNSF's regional and corporate headquarters' as well as the shortline operator Washington Eastern Railroad regarding development and operation of the facility.

Letters of support from project partners summarized in Table 4-1 and are located in Appendix A. The broad spectrum of partners in both the public and private sectors documents the strong local, regional and state support for the project, as well as to the demand for the immediate development of this key facility. Committed funding partner contributions equal 30% of the total project capital improvement costs. The contribution of funds by State and local partners highlights the regional significance of this infrastructure project. Additionally, the Rail-Truck Transload Facility will support the collaborative efforts of the West Plains PDA to promote commercial and industrial development of the region.

TABLE 4-1: National, State, Local, and Private Letters of Support

LEGISLATIVE
US Senator Patty Murray US Senator Maria Cantwell US Congresswoman Cathy McMorris Rogers Washington State Senators Jeff Holy, Andy Billig, Mark Schoesler, Mike Padden, Shelly Short, Judy Warnick
LOCAL
City of Spokane – City Council President Ben Stuckart City of Spokane – Mayor David Condon Greater Spokane Incorporated – CEO Todd Mielke Spokane Regional Transportation Council (MPO) – Executive Director Sabrina Minshall Spokane County – County Commissioners Mary Kuney, Al French and Josh Kerns West Plains Airport Area Public Development Authority – Executive Director Todd Coleman
STATE
WSDOT - Secretary of Transportation Roger Millar
PRIVATE PARTNERS
Exotic Metals Forming Company, LLC Far West Agribusiness Association Inland Empire Distribution Systems Logistics, Inc. Mullen Technologies, Inc. Seaport Steal Washington Equipment Manufacturing Company, Inc. Washington Eastern Railroad, LLC Waste Management, Inc. Zak! Designs, Inc. Avista Utilities

TABLE 4-2: List and Description of Rail-Truck Transload Facility Project Partners

PARTNER	DESCRIPTION
State of Washington	Washington has the largest locally-controlled public port system in the world with 75 port districts. Washington represents 2% of the U.S. population, and Washington ports handle 7% of U.S. exports and 6% of all imports. The Port of Seattle and Port of Tacoma combined (the Northwest Seaport Alliance) are the third largest container complex in North America importing and exporting goods throughout the world.
Spokane County	One of four eastern Washington State counties set along the Washington-Idaho border, and is the fourth most populous county. Spokane County now has a total population of half a million. Spokane County is recognized as a business, trade, and cultural center for the Inland Northwest. Spokane County's transportation and engineering services are responsible for roads in the County, exclusive of WSDOT highways and roads within the incorporated areas. The Rail-Truck Transload Facility Project is within the County's unincorporated area.
City of Spokane	The largest city and the seat of Spokane County with a population of 216,000. The Rail-Truck Transload Facility Project is within City Limits.
Spokane International Airport (SIA)	A commercial airport approximately five miles west of downtown Spokane and immediately east of the Rail-Truck Transload Facility. The SIA is the second-largest airport in Washington, is served by six airlines and two cargo carriers (UPS and FedEx). The proposed facility will be located within the SIA property boundary and provide key delivery mechanisms for business operating around and within the airport.
West Plains Public Development Authority (PDA)	An interlocal agreement between the Spokane International Airport, City of Spokane, and Spokane County. The purpose of the PDA is to provide a legal entity that will undertake, assist, and facilitate the acquisition, construction, development, leasing, operation and maintenance of publicly beneficial projects consistent with local area planning and ultimately improve the economic conditions in and around the City and County of Spokane. The PDA Board of Directors is made up of the Spokane International Airport CEO, the City of Spokane City Administrator, a County Executive, one City Airport Board designate, one County Airport Board designate, and two Business At-large representatives as selected by the aforementioned Board members. The Rail-Truck Transload Facility falls within the PDA boundaries and is considered a key part to the future development of the area.

4.7.1 Roles and Responsibilities

Spokane International Airport is the applicant for this project and will manage any grant funding awarded. The design and construction of major project components will be coordinated and managed by Spokane International Airport as well as providing for the Rail-Truck Transload Facility's long-term maintenance. Upon completion of construction, the site will be leased to the West Plains PDA for managing the sites operation and further development.

5.0 Project Readiness

Phase 2 of the project to construct the Rail-Truck Transload Facility is ready to proceed immediately thanks to the 13 years of planning, development and construction by multiple partners leading up to the project; as well as the economic growth currently underway in the West Plains PDA. The project is scheduled to complete final design and bidding by the Spring 2020, with construction beginning immediately upon project award. Initial planning for the facility began in 2006 and was followed shortly thereafter by the Geiger Spur construction in 2008. Phase 1 of the Rail-Truck Transload Facility project to construct a 1-mile rail spur providing access to the site location was recently completed in July 2019 setting the stage for the immediate advancement of Phase 2. Initial planning and environmental documentation were completed during Phase 1 to allow for the expedited design of Phase 2. As the project is located on the Spokane International Airport, no acquisition or right of way is required during the project. With the help of BUILD funding, the Phase 2 Rail-Truck Transload Facility will be built and ready for operation early November 2021.

5.1 Technical Feasibility

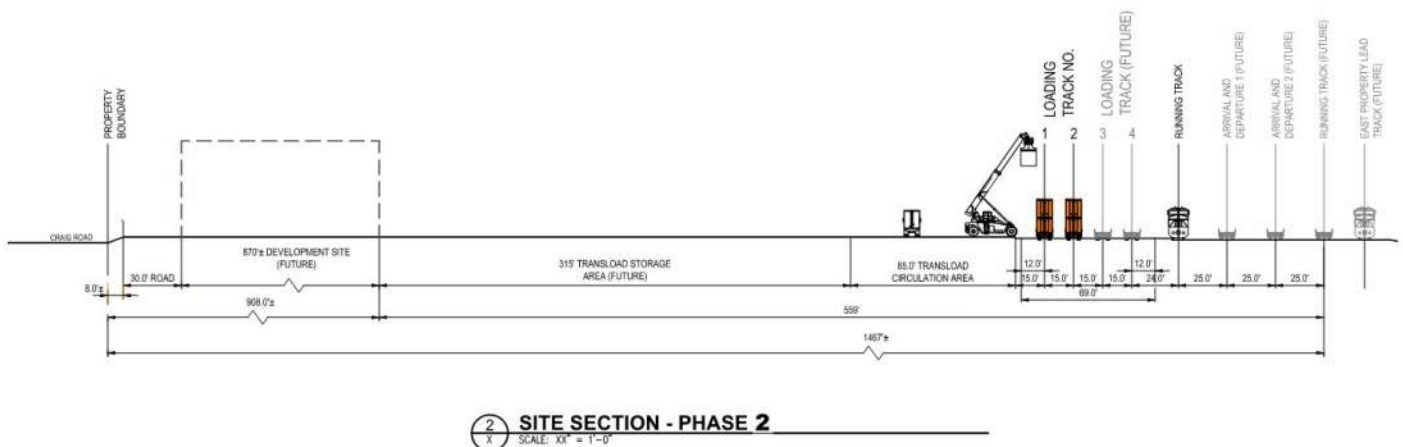
The Spokane International Airport will continue to complete the final design, with intent to have final plans completed by early 2020 for the complete construction of the Rail-Truck Transload Facility. Environmental review, including the wetland investigation and cultural resource assessment, were completed for Phase 1 of the project and this documentation will be utilized to expedite the Phase 2 planning phases. As outlined in Section 3, Federal and non-Federal funds will be used to begin the detailed engineering design of the project in the Spring of 2020.

The technical feasibility of the proposed improvements has been thoroughly established through previous planning and preliminary engineering efforts. The Rail-Truck Transload Facility is located on a spur that was recently completed in Spring of 2019; thus, conducting local permitting and design efforts to determine the technical feasibility of location with focus on intent of the spur and its function within the overall project plans. Table 5-1 provides the detailed project scope of work pertaining to how the design and construction will be achieved for the project.

TABLE 5-1: Project Scope of Work

ENGINEERING TASKS	PROCUREMENT & CONSTRUCTION TASKS
<p>Ongoing Tasks:</p> <ul style="list-style-type: none"> Public Engagement Project Management Quality Management Project Team Meetings <p>Sequenced Tasks:</p> <ol style="list-style-type: none"> Surveying and Mapping Utility Coordination 90% Design Final Design Local Agency Permits 	<ol style="list-style-type: none"> Final Design Review by Spokane County Project Advertisement Procurement of Contractor Notice to Proceed Shop Drawings and Submittal Reviews Mobilization and Erosion Control Temporary Traffic Control Utility Demarcation Rail Construction Roadway Construction Site Visits and Inspection Record (As Constructed) Drawings Meetings

FIGURE 5-1 Section View



5.2 Project Schedule

With BUILD funding, the project will be fully constructed and operational by November of 2021. The project schedule shown in Table 5-2 includes the major project milestones for planning, permitting, engineering, and construction. The schedule demonstrates that the project satisfies the funding obligation and construction deadlines required by the BUILD grant program.

FIGURE 5-2 Phasing

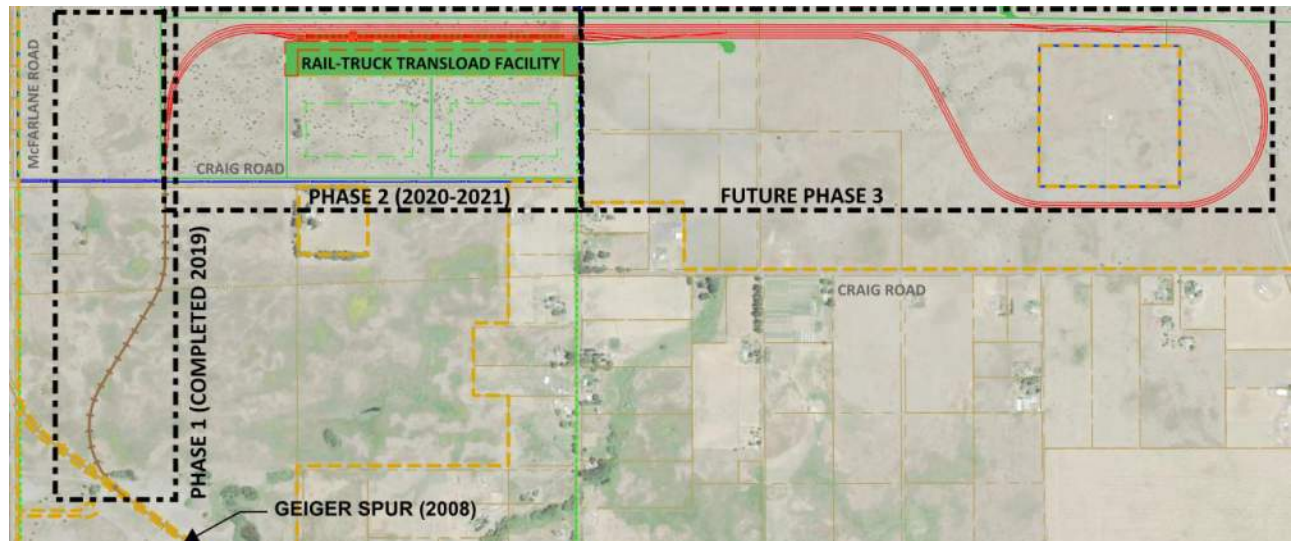


TABLE 5-2: Project Schedule

	2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Transload Planning Study	Completed 2007											
Geiger Spur Construction	Completed 2008											
Phase 1 - Rail Spur Extension												
Project Kickoff	August 2017											
Environmental Documentation												
Design												
Bidding & Contracting												
Construction												
Phase 2 - Transload Facility												
Project Kickoff												
Environmental Documentation												
Final Design												
Bidding & Contracting												
Construction												
Completion	Fall 2021											

5.3 Required Approvals

5.3.1 State Environmental Policy Act (SEPA)

The SEPA checklist will be submitted to Spokane County for review after the wetland investigation is complete and the Cultural Resource Survey will be submitted to the Department of Archaeology and Historic Preservation (DAHP).

5.3.2 Reviews, Approvals, and Permits by other Agencies

Based on planning studies and documentation during preliminary phases of the project, the transload facility is not anticipated to impact any wetlands, underground storage tanks, cultural sensitive areas or other developments. Therefore, no additional permitting or approvals are anticipated for the project.

5.3.3 Environmental Studies and Other Documents

Environmental Studies including a wetland investigation and an Archaeological Cultural Resource Survey to support the development of the required SEPA checklist where completed for Phase 1 of the project. These documents will be reviewed during Phase 2 of the project to include the construction of the Rail-Truck Transload Facility.

5.3.4 Public Engagement

Preliminary public engagement was completed during planning and design of Phase 1-Rail Spur extension of the project. Formal public engagement for Phase 2 of the project will be completed during preliminary phases of design. Public meetings/notifications will occur as the project secures the full required funds and moves forward with planning and permitting. The site consists of vacant previously undeveloped land owned by the Spokane International Airport. No public concerns are anticipated for the project.

5.3.5 State and Local Approvals

The Rail-Truck Transload Facility Project is included in the Spokane County Comprehensive Plan. Engineering and construction approvals will be obtained from Spokane County and the City of Spokane. This project has received letters of support from local agencies and entities, including the City of Spokane, SIA, and the West Plains PDA. These letters are included within the appendix.

5.3.6 Federal Transportation Requirements Affecting State and Local Planning

Projects using Federal or State funding are required to be included within the local agency's TIP and the STIP. Local agencies like Spokane County have direct control over their TIP's. As such, Spokane County will include this project within the Amended 2019 TIP and carry the project through the development of the 2019-2023 six-year Transportation Improvement Program.

In order for the project to be included within the STIP, the local agency must submit the project through the local Metropolitan Planning Organization, which is SRTC for the Spokane County region. This project has already been processed with SRTC, is included within the regional TIP, and will be included within the STIP in August 2019.

5.4 Assessment of Project Risks and Mitigation Strategies

The scope, schedule, and budget risks for this project are moderate to low. Due to the preliminary and detailed design to date, the project has already been subjected to several reviews. Additionally, project details have been vetted through numerous planning and design efforts. The level of detailed design has allowed for an understanding of issues and design risks, along with the identification of mitigation approaches. Both Spokane County and the City of Spokane have proven design standards and project delivery procedures in place. A list of risks and mitigation strategies is shown in Table 5-3.

TABLE 5-3: Benefit Estimates by Long-Term Outcome of the Full Program of the Rail-Truck Transload Facility

RISK CATEGORY	RISK NAME	DESCRIPTION	IMPACT	LIKELIHOOD	MITIGATION STRATEGIES
Financial	Loss of Private Funding	Loss of funding from private entities due to unforeseen circumstances	Low	Low	No private funding
	Loss of Public Funding	Loss of Federal, State, or Municipal funding due to unforeseen circumstances	High	Low	Letters of Support have been secured to clearly outline the expectations of project partners
Contract & Procurement	Coordination	Spokane International Airport would manage the Rail-Truck Transload Facility Project.	Moderate	Low	Spokane International Airport has a track record of successfully administering large development contracts using Federal funding.
Right-of-Way	Land Acquisition	Land is already acquired	Low	Low	Rail-Truck Transload Facility will be built in an area already designated for its use. No acquisition is involved.
Environmental	SEPA	Historic, archaeological, or cultural resources may be discovered	Moderate	Low	Phase 1 SEPA completed. Project is located on undeveloped land with not anticipated environmental impacts.
Construction - Financial	Delivery Schedule	Meeting project schedule.	Moderate	Low	Spokane International Airport has a track record of successfully completing large development projects on time.

6.0 Benefit Cost Analysis

A Benefit-Cost Analysis (BCA) was completed for the Rail-Truck Transload Facility Project and is based on the 2018 Benefit-Cost Analysis Guidance for Discretionary Grant Programs. To the maximum extent possible given available data, the formal BCA prepared in connection with this Rail-Truck Transload Facility grant application reflects quantifiable economic benefits. Economic value was estimated for the proposed transportation improvement project in terms of improvements to safety, economic competitiveness, environmental sustainability, decreased truck traffic, and reduced pollution benefits.

Results of the benefit cost analysis show that for every dollar of investment in the Trunk-Rail Transload Facility project, it will yield a discounted benefit of \$2.39, as shown in Table 6-1.

TABLE 6-1: Benefit Cost Analysis Summary

PROJECT EVALUATION METRIC	BENEFIT AT 7% DISCOUNT RATE
Total Discounted Benefits	\$40.6M
Total Discounted Costs	\$16.9M
Net Present Value	\$23.3M
Benefit / Cost Ratio	2.39

TABLE 6-2: Benefit Estimates by Long-Term Outcome of the Full Program of Improvements

PRIMARY SELECTION CRITERIA	BENEFIT CATEGORIES	7% DISCOUNT RATE
Improved Safety	Reduction in vehicle accidents	\$3,788,929
State of Good Repair	Reduced highway maintenance	\$5,138,480
Enhanced economic competitiveness	More Efficient shipment of freight. Reduction in Truck Travel Time. Reduction in fuel usage	\$29,629,033
Increase Environmental Sustainability	Reduce CO, VOC, NOx emissions	\$2,082,625
Total Estimated Benefits		\$40,639,068

6.1 Safety

This project has the potential to improve safety by diverting freight traffic from local and state highways to the rail transportation corridor. In addition, the project will capture truck traffic prior to it entering congested urban corridors. Reducing collisions, injuries and damage to personal property is one benefit of the Rail-Truck Transload Facility Project. The Rail-Truck Transload Facility will provide a reduction in freight traffic along I-90 from seaports on the west coast of Washington to downtown Spokane resulting in the safe movement of goods and a reduction in vehicle crashes and injuries. The over-sized loads will stay off the I-90 corridor and exits, providing a less congested and safer transportation system. Proposed safety improvements were calculated based on a direct correlation to the number of trucks removed by the use of rail. Injury and vehicle crash data used for this calculation were drawn from the 2018 I-90 Operations Study.

The reduction in injuries and fatalities benefit is estimated to be \$7,214,681 in present day value and \$3,788,929 at a 7% discount rate. Calculations can be found in the “Accident Savings” tab of the supporting Excel spreadsheet.

6.2 Travel Costs

Benefits from a reduction in travel costs are primarily associated with travel time and fuel savings for daily truck traffic. The Rail-Truck Transload Facility will provide more efficient access and delivery of freight to this area. Travel on I-90 from downtown Spokane to the West Plains PDA will be eliminated by the new facility. Other benefits not monetized for the analysis is the reduction in freight shipping costs from seaports on the west coast to Spokane redirected to the rail line.

Average one-way distance from downtown Spokane to the West Plains PDA is 13 miles. With impacted truck traffic from development of the site, this benefit results in saving nearly 45,000 hours of truck travel annually. Over the 20-year project life, the Rail-Truck Transload Facility will reduce truck travel, with a daily impacted truck traffic total of 400 trucks, providing a total 20-year travel time cost savings of \$34,232,203 or \$19,402,120 at a 7% discount rate.

At an average price of \$3.04 per gallon of gasoline, the Rail-Truck Transload Facility will save an estimated \$17,773,056 in fuel over the 20-year project life, \$9,414,400 at a 7% discount rate. Calculations can be found in the “Travel Time” and “Fuel Savings” tabs of the supporting Excel spreadsheet.

6.3 Emissions Reductions

The 54 million truck miles removed from the road over the 20-year project life would remove a substantial volume of pollutants from the air as well, an estimated 65,000 tons of CO, CO₂, NO_x, SO_x, volatile organic compounds, and particulate matter. Overall emissions reductions have been calculated for nitrogen oxides (NO_x), Carbon dioxide (CO₂), and Volatile Organic Compounds (VOCs).

Approximately 20 Metric Tons of VOCs, 429 Short Tons of NO_x, and 65,600 Short Tons of CO will be removed from the environment over the life of the project. These reductions equal \$3,682,755 in present worth dollars or \$2,082,625 at a 7% discount rate. These calculations are based on data showing that rail produces approximately 75% less emissions per ton mile than truck freight operations.

6.4 State of Good Repair

Estimated reduced highway maintenance costs, presented as deferred damage to the roadway due to a decrease of freight truck traffic, is \$9,066,096 over the 20-year project life, at a 7% discount rate this equates to \$5,138,480. This number was derived from the 1997 Federal Highway Cost Allocation Study Final Report, May 2000, which estimates high damage from freight trucks at \$0.167 per mile. The calculation is based on a 26-mile round trip distance from West Plains PDA to the existing transload facility in downtown Spokane Valley.

6.5 Unquantified Benefits

Quality of Life

- Economic development of the region provides jobs and growth to the region resulting in better jobs, improving quality of life for residents.
- Reductions in truck traffic on local roadways improves the connectivity of the region's transportation system.

Enhanced Property Values

- Studies have shown that the commercial and industrial parks in and around the Spokane International Airport are seeing increased growth and development over the last decade. Commercial development within the West Plains PDA will continue to raise both residential and commercial property value.

Increase Resiliency of Trade Corridors

- The continued development of the state's rail freight system will support the state and regional multimodal transportation networks vital to the economic sustainability and growth of the region.