

# Appendix C: Draft Statement of Work

## Connell Rail Interchange

CRISI NOFO FRA-CRS-18-004-PKG00243878

### I. BACKGROUND

This cooperative agreement (Agreement) between the Federal Rail Administration (FRA) and the City of Connell (City or Grantee) funds the construction of a new rail interchange 1 mile south of downtown Connell. The new rail interchange will improve the ability of BNSF and CBRW to complete the interchange of longer trains by reducing the time that interchange operations interfere with mainline flow and capacity. The planned improvements will facilitate better service and improve transit times for unit trains.

The current interchange yard at Connell was not built to serve as an interchange between two separate railroads. The rail line that is now owned by CBRW was originally built by Northern Pacific, BNSF's predecessor, as a branch line off their GNC Spokane-Pasco main line. Nor was the interchange constructed with the concept of unit-train volumes in mind. Instead the current yard was intended for staging only 25 to 30 car trains. The inefficiency of this interchange adds about 70 additional miles to each unit train move. The new interchange will alleviate this deficiency and allow efficient moves by unit trains coming from either direction.

The interchange reconfiguration will allow for the simultaneous accommodation of an inbound and an outbound train between BNSF and CBRW, without one blocking the path of the other. The minimum number of tracks required for this type of operation is three, with a clear length of 8,600 feet (7,500 feet minimum) each. This configuration will enable unit trains, with a typical length of 7,400 feet, to arrive or depart from any track, with adequate stopping and clearance distance in each track. The existing Connell railyard configuration is outdated, undersized, inefficient and cannot accommodate today's modern train service requirements. The current yard configuration causes congestion at primary street crossings, bifurcates the city center and the main residential areas from local schools, and emergency services. It also creates a critical "pinch point" in serving both national and regional needs.

The State of Washington has committed to be a funding partner with the Port on this Project. The Washington State legislature has committed \$10 million to the project, which will be administered by the Washington State Department of Transportation (WSDOT).

City of Connell, WSDOT and BNSF Railway will work together to complete the design, environmental and construction of the Connell Rail Interchange Project.

### II. OBJECTIVE

The purpose of the Project is to relocate the rail interchange yard approximately one mile south of the existing interchange in downtown Connell.

The new rail interchange will be operated as a joint facility of the BNSF and CBRW used by both railroads under an operating agreement to be developed upon final project funding. The operating agreement will be structured to improve operating efficiencies and to achieve mutual goals for rail traffic flow and safety. This Project will:

- Allow unit trains (up to 7,500' length) traveling on BNSF line from either direction to enter the new interchange without the need for reverse movements or the need to "break" the trains into smaller segments.
- Allow interchange related operations, such as removing or reconfiguring power, to take place clear of the BNSF mainline track.

- Allow the BNSF or CBRW to stage a train for interchange without blocking arriving or departing trains. This requires at least three parallel tracks.
- Reduces the duration of track congestion/ blockage due to switching operation that currently fouls the mainline and cause interference with freight and intercity rail movements.
- Reduce the duration of train disruptions at the Adams and Clark Street at-grade crossings.

The construction of this Project will result in improved railroad operating efficiencies by increasing train velocities, reducing train delays, increasing the rail network capacity and improving safety at the two affected grade crossing.

Significantly, a reconfigured rail interchange will improve accessibility and safety for citizens and students by reducing conflicts at grade crossings within Connell. The project will deliver improved service, efficiencies and safety on the Great Northern Corridor.

Reconfiguring and expansion of the Connell interchange is needed for CBRW to improve, and modernize, service to growing agricultural producers and manufactures in the region. The reconfiguration will improve reliability and lower operating costs, enhancing the competitiveness of freight rail along the Great Northern Corridor. A primary goal of the project is to enable long trains operating westward on BNSF's Lakeside Subdivision to be interchanged to the CBRW without the need for breaking the train apart, time-consuming switching, or extensive roadway grade-crossing blockages. The interchange reconfiguration will allow for operations such as switching arriving BNSF trains, or repositioning or reconfiguring motive power, to occur without blocking the BNSF Lakeside Subdivision main line.

Once complete, the project will have several public benefits:

- Reduce safety concerns and emergency response times at two grade crossings
- Improve corridor efficiency and reliability by allowing for the simultaneous accommodation of an inbound and an outbound train between BNSF and CBRW without one blocking the path of the other.
- Decrease transportation costs in this rural area of Washington state for both the rail users and the local citizens
- Improves long-term efficiency, reliability and costs in movement of workers and goods
- Helps the United States compete in the global economy by facilitating efficient and reliable freight movements from Grant and Adams County to Washington state deep water Ports
- More efficient rail service will reduce truck movement in the area, reducing emissions of greenhouse gases in the environment

The Connell Rail Interchange will benefit local, regional and, significantly, national freight mobility. It will reduce the risk of accidents, reduce school bus conflicts with rail at crossings, and dramatically improve freight movement at a major "pinch point" on the Great Northern Corridor. It is a well-planned and designed project that leverages state and local investments to bring about greater regional economic development and more efficient movement of important agricultural products from Eastern Washington.

This Project will help USDOT achieve its National Goals, by removing trucks from the highways, therefore improving safety, reducing wear and tear on the highways, reducing congestion,

enhancing the natural environment through reduced emissions and generating economic vitality for the region.

### III. PROJECT LOCATION

The City of Connell is located directly off U.S. Highway 395 in southeastern Washington. The City is 100 miles southwest of Spokane and 199 miles southeast of Seattle. The project is located approximately 1 mile south of Connell, WA in Section 36, Township 14 North, Range 31 East, Willamette Meridian, Franklin County, Washington.

The Project builds a new interchange yard parallel to existing BNSF main track between MP 112.55 and MP 110. on the Lakeside Subdivision of Northwest Division on the BNSF Railway network.

The geospatial data for the site is:

**East (north) end:**

Latitude: 46°39'33"N

Longitude: 118°51'56"W

**West (south) end:**

Latitude: 46°38'14"N

Longitude: 118°53'32"W

## Connell Rail Interchange Project

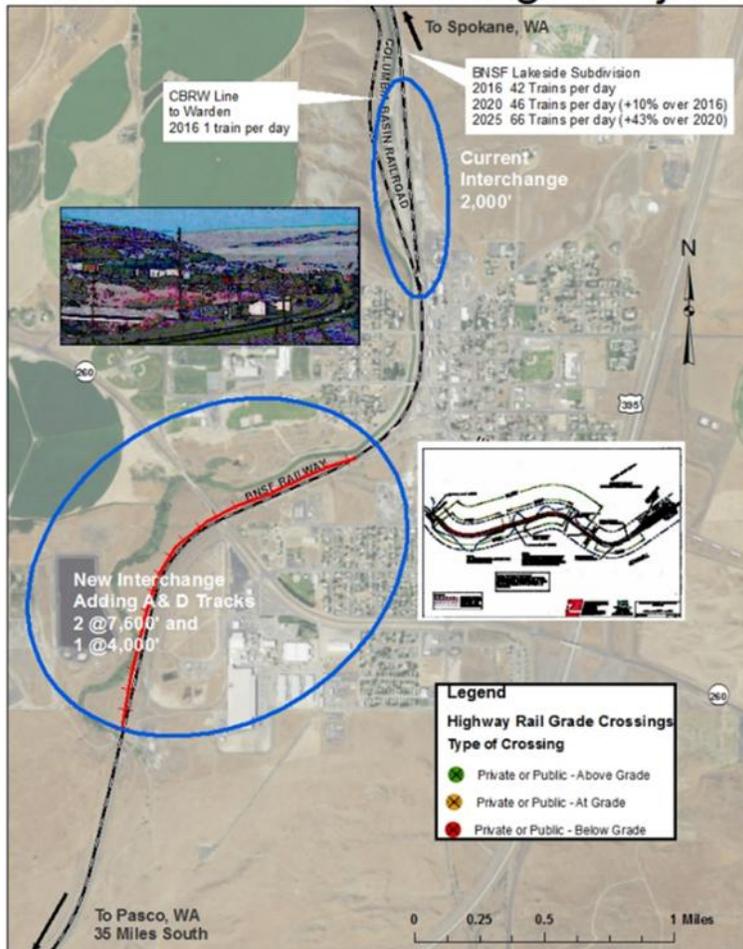


Figure 1: Project Limits

## **IV. DESCRIPTION OF WORK**

### **Task 1: Project Administration**

#### **Task 1.1: Detailed Project Work Plan, Budget, and Schedule**

The Grantee will prepare a Detailed Work Plan (DWP) for the Project. The DWP will describe the activities and steps necessary to complete the tasks outlined in this Statement of Work (SOW). The DWP describes, in detail, the steps to be taken to implement the Project and provides an updated budget and schedule to match the scope of work outlined in this SOW. The detailed schedule should include timeframes for completing major processes, reaching milestones, and finalizing work products/deliverables within each task. The detailed budget should utilize the Federal Railroad Administration's (FRA) Cost Estimating Guidance<sup>1</sup>. As the Project progresses, the initial Detailed Work Plan will be updated as new and more-accurate data related to budget and schedule become available.

The Grantee must submit the DWP, including the Project budget and schedule, to FRA for review and approval prior to starting work on subsequent tasks.

#### **Task 1.2: Project Management Plan**

The Grantee will prepare a Project Management Plan (PMP). A PMP is the Grantee's overarching project implementation plan that spans the entire period of the project. It should describe a Grantee's approved policies, practices, and procedures related to the management, design, and construction of the Project. The PMP will also include information about the project management approach (including team organization, team decision-making, roles and responsibilities and interaction with FRA), and will also address quality assurance and quality control procedures. As the Project progresses, the initial PMP will be updated as new and improved procedures are implemented.

The Grantee will identify any required stakeholder agreements, right of way agreements, and other critical third-party agreements related to engineering, environmental, or construction activities in the PMP. Similarly, agreements governing the maintenance of the Project should also be identified.

#### **Task 1.3 Agreements**

The Grantee will draft and start to negotiate agreements identified in Task 1.2. .

The Grantee must submit the PMP to FRA for review and approval prior to start of construction. The Grantee will transmit final, executed copies of any agreements to FRA.

#### **Task 1 Deliverables:**

- Detailed Project Work Plan, Budget, and Schedule
- Project Management Plan
- Draft Project Agreement(s)

### **Task 2: Preliminary Design**

---

<sup>1</sup> Federal Railroad Administration's (FRA) Cost Estimating Guidance is available here: <https://www.fra.dot.gov/Page/P0926>.

The Grantee will submit the Preliminary Engineering Design (PE) Set(s) for each of the three Project segments to FRA for review and approval. FRA will not reimburse the Grantee for any work completed under this Task 2.

The PE Set will include:

- PE drawings (plan sheets), specifications, studies, reports, plats, maps, and other engineering and surveying work products (as applicable)
- Plan cover sheet signed by all stakeholders
- Basis of Design
- Route and Aspect Chart
- Preliminary construction cost estimate
- Preliminary construction schedule

Pending FRA approval of the Preliminary Engineering Design, the Grantee will be able to enter into the Final Design stage.

**Task 2 Deliverables:**

- PE Design Set signed by Stakeholders

**Task 3: Final Design**

The Grantee will submit the Final Engineering Design (FD) Set(s) for the Project for FRA review and acceptance. The FD Set must be accepted by FRA in writing prior to initiating construction.

The FD Set will include:

- Final (90%) Design Plans, as applicable, but not limited to:
  - A title sheet with a drawing revision number or date; an index identifying various plan sheets comprising the drawing set; a legend of symbols or abbreviations
  - Typical Sections & Cross-sections
  - Track Geometry and Track Work Plans
  - Track Profile
  - Temporary (erosion control) and permanent drainage plans
  - Roadway design plans
  - Lighting plans
  - Communication and Signal Plans
  - Right-of-way acquisitions plans (~~See Task X~~)
- Contract Documents
- Geotechnical Plan / Reports
- Basis of Design
- Traffic Management Plans
- Construction Staging Plans
- Communication & Signal Plan
- Updated Construction Cost Estimate, as a result of Final Engineering Design efforts
- Preliminary Construction Schedule (in an acceptable scheduling software format)

The Grantee will develop an Environmental Mitigation Plan to ensure that commitments identified in the approved environmental decision document are accounted for in the Project

development and final design process and implemented during construction. The Grantee should submit the Environmental Mitigation Plan with the Final Design Set. The Environmental Mitigation Plan may include a tracking and reporting database system that would be used during final design and construction to implement the plan and monitor compliance.

**Task 3 Deliverables:**

- Final Engineering Design Set
- Environmental Mitigation Plan

**Task 4: Environmental Review**

WSDOT/ BNSF will submit the Categorical Exemption Checklist for approval of the FRA

**Task 4 Deliverables:**

- Draft CE Checklist
- Additional Documentation required by FRA.

**Task 5: Right of Way**

The Grantee will submit to FRA an agreement with BNSF demonstrating their in-kind contribution of the Right of Way required to construct the Project

**Task 5 Deliverables:**

- Executed Agreement between City of Connell and BNSF regarding the ROW contribution

**Task 6: Construction**

The Grantee will complete the construction of the three Project segments, in accordance with the FRA-approved environmental documents identified in Task 4 and Final Engineering Design accepted under Task 3. The Grantee will secure all permits and construction clearances necessary to implement this Task.

The Grantee will notify FRA of bid advertisement, contract award and issuance of notice to proceed to any construction contractor performing work under this Agreement. The Grantee shall ensure that all pre-construction requirements identified in Tasks 1 through 5 are met prior to issuing notice to proceed to any construction contractor performing work under this Agreement. The Grantee will provide the final bid package (Plan, Specification, & Estimate documents (PS&E)) to FRA, including special provisions and documentation of required permits, approvals, agreements and special commitments. The Grantee will notify FRA of construction substantial completion and final completion.

The Grantee is responsible for ensuring that any mitigation commitments identified in the FRA-approved final NEPA documentation are implemented during construction. The Grantee is responsible for reporting on progress in implementing environmental commitments to FRA. The Grantee is also responsible for apprising FRA at the earliest possible time of any problems in

implementing the adopted measures and any need for changes. The Environmental Mitigation Plan, as identified in Task 3, will be used to track the Project's environmental commitments.

#### **Task 6.1: Construction of Interchange Yard**

The Grantee will construct approximately 24,500 linear feet of new rail in the new interchange yard built parallel to existing BNSF main track between MP 112.55 and MP 110.45. It connects to the main track at MP 112.55 and 110.65 using #15 turnouts. The new yard includes two 7500-foot tracks and one 4000-foot track. A lead track between MP 110.45 and 110.65 will be used by the CBRW to reach the existing BNSF Auxiliary tracks. This allows for interchange movements to take place clear of BNSF signalized track.

The Grantee will complete the following as part of this Task (based upon the cost estimate at 60%)

#### **Work Element A: Sitework**

- A1. Perform site work on approximately 8 acres of land including excavation of approximately 270,000 cubic yards of soil
- A2. Bridge and Bridge Protection will include building a crash wall at MP 110.88 including excavation of 539 cubic yards, backfill of 420 tons, placing 700 square feet of cast-in place retaining wall and crash wall and footing (139 cubic yards) and building a 550-foot bridge at MP 111.5B.
- A3. Construction of two retaining wall structures 1) at MP 110.47 including 142 tons of backfill and 2970 square feet of precast T-Wall panels. 2) at MP 110.3 including 1647 tons of backfill and 4224 square feet of precast T-Wall panels.

#### **Work Element B: Trackwork**

- B1. Installing 24,500 of track by BNSF crews between MP 109 and MP 1373

#### **Work Element C: Signals**

- C. Install signalization for the Project installing 8 signals between MP 109.9 and MP 112.6 requiring 400 feet of directional boring.

#### **Task 6 Deliverables:**

- Monthly Construction Status Update Reports
- Monthly Project Invoices
- PS&E Documents

#### **Task 7: Construction Management and Project Closeout**

The Grantee is responsible for construction management activities of the Project. The Grantee will use Design Bid Build (DBB) Delivery for the Project. The Project Management Plan will detail the processes, forms, and approvals for DBB projects.

System testing of all crossing equipment and railroad signaling circuitry will take place in accordance with 49 CFR Part 234. The Grantee will coordinate with FRA's Region 8 Safety office to schedule cut-in tests of the locations. The Grantee, in conjunction with State officials

and the Railroad, will update and complete the USDOT Crossing Inventory Form<sup>2</sup> within 30 days of completing the grade crossing enhancements.

The Grantee will perform the close-out process for the Project. This process includes making the final checks on the Contractor’s work, collecting and checking final documentation, and making final payment. The Grantee will submit a Final Performance Report, along with other final reports as required under this Agreement, to the FRA within 90 days of the Period of Performance end date. The Final Performance Report should describe the cumulative activities of the project, including a complete description of the Grantee’s achievements with respect to the project objectives and milestones.

**Task 7 Deliverables**

- Quarterly Performance Reports
- Final Performance Report
- Final Project Invoice

**V. PROJECT SCHEDULE**

The period of performance for all work is approximately 15 months, from October 2018 to January 2020, schedule due dates are dependent on dates of award and obligation of funds. The deliverables associated with this Grant/Cooperative Agreement are listed below. The Grantee must complete these deliverables to FRA’s satisfaction in order to be authorized for funding reimbursement and for the Project to be considered complete.

The followed timelines assume a December 2019 award notification.

Task #	Task Name	Start Date	Due Date
1	Project Administration	1/1/19	2/18/19
1.1	Detailed Project Work Plan, Budget, and Schedule	1/1/19	2/18/19
1.2	Project Management Plan	1/9/19	2/9/18/19
1.3	Draft Project Agreements	1/9/19	2/18/19
2	Preliminary Design (60% completed as of 7/18)		7/30/18
3	Final Design	3/1/19	5/1/19
4	Environmental Review	2/1/19	4/1/19
5	Right of Way	3/1/19	5/1/19

<sup>2</sup> FRA’s Guide for Preparing USDOT Crossing Inventory Forms (revised July 2016): <https://www.fra.dot.gov/eLib/Details/L16201>

6	Construction	7/1/19	3/1/20
7	Construction Management and Project Closeout	7/1/19	6/1/20

## VI. DELIVERABLES

The deliverables required under this Agreement are listed below. Estimated due dates are provided in the table below. The Grantee shall provide FRA with a detailed schedule, as outlined in Task 1, to achieve the deliverables listed below. The Grantee shall complete these deliverables to FRA's satisfaction to be authorized for funding reimbursement and for the Project to be complete.

The followed timelines assume a December 2019 award notification.

Task #	Deliverable	Due Date
1	Detailed Project Work Plan, Budget, and Schedule	2/18/19
1	Project Management Plan	2/18/19
2	Preliminary Engineering Design Set	3/1/19
3	Final Engineering Design Set	5/1/19
3	Environmental Mitigation Plan	5/1/19
4	Environmental Documents – TBD by FRA	5/1/19
5	ROW and Relocation Plans	N/A
6	PS&E Documents	3/30/20
7	Final Performance Report	6/30/20

**Estimated target milestone dates are included in the table below.**

Milestone	Date
Construction Advertisement	5/15/19
Construction Contract Award	6/25/19
Construction Start (NTP)	7/1/19
Construction Substantial Completion	3/1/20
Construction Final Completion Rail Interchange	3/30/20

## VII. PROJECT ESTIMATE/BUDGET

The total estimated cost of the Project is \$28,700,000, for which the FRA grant will contribute up to 58% of the total cost, not to exceed \$16,600,000. Any additional expense required beyond that provided in this grant to complete the project shall be borne by the Grantee.

### Project Estimate by Task

Task #	Task Name	Total Cost
0	Prior Costs Incurred	\$100,000
1	Program Administration	\$100,000
2	Preliminary Design	\$400,000
3	Final Design	\$50,000
4	Environmental	\$40,000
	Right of Way	\$10,000
6	Construction	\$27,000,000
7	Construction Management and Project Closeout	\$900,000
<b>Total Project Cost</b>		<b>\$28,700,000</b>

### **Project Estimate Contributions**

<b>Funding Source</b>	<b>Project Contribution Amount</b>	<b>Percentage of Total Project Cost</b>
FRA Grant	\$16,600,000	57.9%
Grantee (prior cost incurred)	\$100,000	.3%
State of Washington <sup>3</sup>	\$12,000,000	41.8%
<b>Total Project Cost</b>	<b>\$28,700,000</b>	<b>100%</b>

### **VIII. PROJECT COORDINATION`**

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

- Rail Operators- BNSF Railway and CBRW
- Funding Partners- FRA, Washington State Department of Transportation (WSDOT) and Washington State Freight Mobility Strategic Investment Board (FMSIB)
- Project (asset) owner- City of Connell

BNSF personnel are budgeted, assigned, work, and are billed at the Programmatic level; BNSF retains flexibility to safely, efficiently, and appropriately staff and deliver the Project. This approach is consistent with BNSF's demonstrated success in delivery of public agency programs.

### **IX. PROJECT MANAGEMENT**

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

- Participate in a project kickoff meeting with FRA
- Hold regularly scheduled Project meetings with FRA
- Inspect and approve work as it is completed
- Review and approve invoices as appropriate for completed work
- Perform Project close-out audit to ensure contractual compliance and issue close-out report

---

<sup>3</sup> Washington State Connecting WA funds and Freight Mobility Strategic Investment Board

- Submit to FRA all required Project deliverables and documentation on-time and according to schedule, including periodic receipts and invoices
- Comply with all FRA Project reporting requirements, including, but not limited to:
  - a. Status of project by task breakdown and percent complete
  - b. Changes and reason for change in project's scope, schedule and/or budget
  - c. Description of unanticipated problems and any resolution since the immediately preceding progress report
  - d. Summary of work scheduled for the next progress period
  - e. Updated Project schedule

BNSF staff assigned to these projects would perform BNSF's required testing, training, and other internal processes required for the employee's assigned position as is normal and customary with BNSF's operations. This would include, but not be limited to the following activities:

- Safety reviews and audits (both in field and remote from office environment)
- Development/adaptation of applicable safety action plans and processes.
- Field testing/training/audit/qualification of employees
- Site review, design coordination, and constructability review (including field verifications and assessments)
- Safety meetings and trainings
- Rules qualification (i.e. MOW Operating Rules & Safety Rules)
- Development of work plans, scopes, schedules, and budgets for the State Grant Funded projects, as appropriate.
- Coordination of BNSF projects with the State Grant Funded projects to ensure projects are not redundant or mutually exclusive.
- Development/adaptation of internal accounting documents, processes, controls to insure program delivery.
- Resource allocation and procurement (i.e. vehicles, office equipment, etc.)
- Hiring of staff as required to meet Program requirements as determined by BNSF.
- Coordination with internal stakeholders (i.e. Transportation, Signal, Track, Structures) to ensure alignment within BNSF in the delivery of the program.
- Materials selection and purchasing.
- Development of requests for proposals.
- Development of bid documents.
- Management of BNSF-hired consultants and contractors.
- Field verification of construction quantities.
- Applicable verification of compliance with State and/or Federal requirements dictated by the funding and the agreement between BNSF and the applicable agency (BNSF and consultant/contractor).
- Contractor/Consultant invoice review.

- BNSF to agency invoice review and verification.

**X. PERFORMANCE REPORTING**

Rail measures	Unit measured	Temporal	Primary strategic goal	Secondary strategic goal	Description
Track Miles	Miles	One Time	State of Good Repair	Economic Competitive -ness	The number of track miles within the Project area
Gross Tons	Gross Tons	Annual	Economic Competitive -ness	State of Good Repair	Increased Gross tons moved on CBRW after construction of the Project