United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name **Spokane, Portland & Seattle Railway Company - Box Canyon Viaduct (270.0)**

other names/site number Bridge 270.0

2. Location

street & number Milepost 270.0, former Spokane, Portland & Seattle Railway Co. line. ☐ not for publication

city or town Windust ☒ vicinity

state Washington code WA county Franklin code 021 zip code 99301

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this __X__ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property __X__ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national __X__ statewide __local

Applicable National Register Criteria

__X__ A ___ B __X__ C ___ D

Signature of certifying official/Title Date

WASHINGTON STATE SHPO
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register
___ determined eligible for the National Register
___ determined not eligible for the National Register
___ removed from the National Register
___ other (explain:) _____

Signature of the Keeper Date of Action

SP&S Box Canyon Viaduct
Name of Property

Franklin Co., WA
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [ ] private
- [ ] public - Local
- [X] public - State
- [ ] public - Federal

Category of Property
(Check only **one** box.)

- [ ] building(s)
- [ ] district
- [ ] site
- [X] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		district
		site
1		structure
		object
1		**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

Bridges of the Spokane, Portland & Seattle Railway Company, 1906–1967

Number of contributing resources previously listed in the National Register

n/a

6. Function or Use

Historic Functions
(Enter categories from instructions.)

Transportation/rail-related

Current Functions
(Enter categories from instructions.)

Recreation and Culture/Outdoor Recreation

7. Description

Architectural Classification
(Enter categories from instructions.)

Other: steel tower and deck plate girder viaduct.

Materials
(Enter categories from instructions.)

foundation: Concrete.
walls:
roof:
other: Steel truss tower supports; steel plate girder spans. Concrete abutments.

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

The Box Canyon Viaduct is one of over one hundred bridges built by the Spokane, Portland & Seattle Railway Company (SP&S) along their line between Portland, Oregon and Spokane, Washington. Box Canyon meets the Snake River between the small town of Windust and the Lower Monument Dam in Franklin County, Washington. Over one hundred years ago, SP&S construction crews carved a railroad grade in the Snake River Canyon's steep slopes and bluffs some 400 feet (ft) above the river below. The many lateral canyons, creeks, and coulees made the section along the Snake River one of most challenging sections of the entire line to build. To maintain the desired grade, workers blasted through rock, dug tunnels, and built bridges to span gaps where filling was not possible. On a five-mile stretch the SP&S erected four of the longer bridges on the system to span Burr, Bouvey, Wilson, and Box Canyons.

The bridge type chosen to span each of the four canyons was the steel tower viaduct. The four viaducts were constructed between 1908 and 1909 (some fill and abutment work was carried out in the years after the bridges became operational) and were based on a similar design with deck plate girder (DPG) spans supported by steel towers set on concrete footings or pedestals. When completed in 1909 at a cost of $180,509, the Box Canyon Viaduct reached a peak height of 225 ft above the canyon floor.[1]

The Box Canyon design consists of nine steel towers of variable height supporting varying lengths of DPG: four 60 ft, eight 75 ft, and nine 45 ft DPGs the overall length of the structure between the abutments is 1,245 ft. Each of the nine steel towers are comprised of four-post steel towers rest on concrete pedestals arrayed in a rectangular configuration roughly 45 ft long by a width that varies between 35 and 75 ft — shorter towers located toward each end of the span have shorter widths. The steel posts follow a slope of approximately 16 percent up from footings to the top where they meet the DPGs.[2] The towers are spaced 75 ft apart, following a typical Northern Pacific Railway Company (NP) approach that combined shorter DPGs sized to match the width of the tower with longer DPGs that spanned the gap between towers (usually between 60 and 100 ft long).[3] The box canyon design used two 60 ft length DPGs, supported by a two-post steel bent rather than a four-post tower, for the final two spans on each end. Perhaps to speed construction, original plans showed a temporary wood trestle approach on the west end instead of the permanent concrete abutment at the east end. Nearly two decades passed before the SP&S finally replaced the west end wood approach in 1926, which involved switching out the adjoining 60 ft DPG with a longer 75 ft DPG to reach the new permanent concrete abutment.

The DPGs are based on a standardized NP design composed of riveted web plates, angle iron bracing, and gusset plates that form a rectangular box—two parallel built-up girders connected by top and bottom lateral

[1] Spokane, Portland & Seattle Railway Company (SP&S), "Bridge Records—Farrington-Box Canyon Br 270-0," n.d., Pacific Northwest Railroad Archives, Burien, WA (PNWRR Archives).
[2] Bridge specifications taken from SP&S original drawing set held at PNWRR Archives.
[3] The NP steel tower viaduct at Lawyer's Canyon in Idaho, for example combined 60, 80, and 100 ft DPG spans with 40 ft DPGs at the towers. "Erection of the Lawyer's Canyon Viaduct," *Bridgemen's Magazine* 8 (October 1908): 592. The Hi-Line Viaduct in North Dakota used 45 ft and 75 ft DPGs in combination with three special 101 ft sections. Dakota, "Road Work in the Wheatfields," *Bridgemen's Magazine* 8 (March 1908): 110.

bracing in the form of a Warren truss—approximately 6 ft 10-inches (in) high and 8 ft wide from the centerline of the plate girders. The DPGs are bolted to the top of the steel towers and to cast-iron bridge bearings on the concrete abutments at each end. Railroad ties are affixed directly to the top of the DPGs. Six inch by ten inch, 20 ft long wood guard timbers (rails) bolted to the top of the ties run the length of the bridge on either side. Small wood platforms, 6 ft long by 3 ft wide with wood railings, project out from the southernmost edge of the deck at roughly the center point of each 45 ft span. These platforms originally supported water barrels for use in case of a fire. A single larger wood platform at about midpoint of the overall span, a "refuge bay" 8 ft wide by 12 ft long with a wood railing, originally provided a place for workers on the bridge to place hand cars, tools, and themselves to avoid oncoming trains. The platforms are supported by long rail ties that extend out from the bridge deck.

The steel towers are composed of built-up riveted and laced channels for posts and beams, and X-form bracing in panels of various sizes. Lengthwise bracing uses laced channels, riveted web plates, and a half-vertical post; and widthwise bracing uses "ladder" bracing, also with half-vertical posts.

Each tower post stands on a battered rectangular concrete pedestal 6 ft by 6 ft square in plan at the top and of variable height depending on the terrain. The tallest pedestal is 35 ft high from bedrock to its top, flat surface. The SP&S contracted with the Campbell & Hartman of Portland, Oregon, to furnish materials for and to construct concrete abutments for the bridge.[4] The American Bridge Company fabricated the steel towers and DPGs, which were assembled and erected by the Strobel Steel Company (Strobel) of Chicago.[5]

Notes on the original drawings indicate that the bridge was designed to handle two 188.5-ton locomotives followed by a 5,000-pound (lb) uniform train load, more than sufficient for the 75-ton American and 106.5-ton Baldwin Atlantic locomotives the railroad initially ordered.[6] Other design criteria included a dead load equal to the weight of bridge plus 400 lbs per linear ft, and a wind load of 30 lbs per square ft of exposed surface for train and girders. The design specified medium steel for all materials except where specified otherwise, such as soft steel for rivets and bolts.[7]

In 2018, the viaduct remains remarkably true to the original construction and the 1926 work on the west end approach and abutment. Railroad ties have undergone periodic replacement and the tracks are no longer extant, but the concrete and steel elements appear in relatively good condition and show few signs of alterations.

[4] "Miscellaneous Engineering Construction," *Western Engineering* 3 (September 1913): 241.
[5] M. F. Kinkaid, "Spokane, Portland and Seattle Railway Company; Memoranda of Construction History; Pasco, Washington to Marshall, Washington," n.d., 12, Box 03-09-02-34A, Folder SP&S 303-027, PNWRR Archives.
[6] "Locomotive Equipment Ordered," *Railway Age* 44 (December 27, 1907): 932; and "Locomotive Equipment Ordered," *Railroad Age Gazette* 47 (December 31, 1909): 1298. Later locomotives, such as the E-1 class purchased from Baldwin in the late 1930s, were significantly heavier (220.2 tons) but not run in tandem. John T. Gaertner, *North Bank Road: The Spokane, Portland & Seattle Railway* (Pullman: Washington State University Press, 1990), 211.
[7] SP&S, "Box Canyon Viaduct – Stress Sheet," 1907, PNWRR Archives.

SP&S Box Canyon Viaduct
Name of Property

Franklin Co., WA
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

Transportation
Engineering

Period of Significance

1909–1926

Significant Dates

1909
1926

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation

Architect/Builder

NP Office of Bridge Engineering (architect)
Strobel Steel Company (builder)
American Bridge Company (fabricators)
Campbell & Hartman (builders – abutments)

Narrative Statement of Significance
(Provide at least **one** paragraph for each area of significance.)

The Box Canyon Viaduct is nominated for the National Register of Historic Places (NRHP) under the accompanying Multiple Property Documentation Form (MPD), Bridges of the SP&S, 1906–1967, which provides both a historic context both for the SP&S and its bridge construction efforts, and NRHP registration requirements. As described in MPD Section F.2.5 Viaduct, the Box Canyon Viaduct is individually eligible at a state level under Criterion A, for its association with the history of the railroad industry, both as a unique example of collaboration between two major railway companies and as an exemplar of the role high engineering standards played in the SP&S's fortunes; and at a state level under Criterion C, as an outstanding example of an early twentieth-century steel-tower railroad viaduct, by meeting Requirement 1, for representing prominent bridge engineer Ralph Modjeski's standardized design, and Requirement 4, for representing the high engineering standards set for the line in terms of grade and curvature. The period of significance for the bridge begins in 1909, the year the bridge was completed, and ends in 1926, when a new approach and abutment was added, a period that captures the significant elements of its design, fabrication and construction history, and role within the larger rail road system.

Box Canyon Viaduct Context

The SP&S, formed by the GN and NP in 1905, represented an unusual collaboration by competitors to challenge the Union Pacific interests for rail traffic in the Pacific Northwest. Reputedly the best engineered railroad ever built in the United States when completed in 1909, the SP&S's many bridges reflected a commitment to a low maximum grade and degree of curvature, part of chief executive James J. Hill's strategy for competing with rival lines.[8] Hill was willing to spend more money on a well-engineered line—even a longer or higher line—if it meant a given locomotive could pull more cars faster.

That the line had yet to be fully surveyed when construction began in late 1905 testified to the urgency of completing the project as quickly as possible. Although, in principle, construction moved west and east simultaneously from each terminus (Portland and Spokane), in practice, crews worked on individual sections of the line as conditions permitted.[9] Whereas much of the construction in 1906 focused on the western portion of the track between Vancouver and Kennewick, in 1907, preliminary preparations began on one of the most difficult sections of the entire line: a 40-mile stretch between Burr Canyon and Cow Creek that would require several tunnels, sections of fill, and long bridges. As part of the initial investigations, engineers tested the geology and soils at the Box Canyon site to inform design of the concrete pedestals that would support the bridge planned there.[10]

By summer 1908, after nearly three years of construction, the SP&S project was behind schedule. Track layers working east from Pasco reached Burr Canyon, the first of the four canyon bridge sites along the Snake River, on August 8, 1908. After about four months of work on the first three canyon viaducts, the bridge team turned

[8] William Denison Lyman, *The Columbia River: Its History, Its Myths, Its Scenery, Its Commerce* (New York: G. P. Putnam's Sons, 1909), 263.
[9] S. F. Diether, "Report of Progress Work and Force on Portland & Seattle Ry, from Big Eddy to Vancouver, Wash.," April 25, 1907, Subject Files, 1871–1970, 134.I.8.2F, Box 46, Minnesota Historical Society, St. Paul, MN (MHS).
[10] Office of the Principal Assistant Engineer, "P&S Ry Spokane to Snake River Jct., Map and Profile of Proposed Viaduct Site of Box Canyon," May 1907, PNWRR Archives.

to construction of the last bridge on the entire system: Box Canyon.[11] Now racing against the coming winter, work began on the viaduct on December 10, 1908. The general method of erecting these steel tower viaducts made use of a "traveler," a specially constructed, rail-mounted car with a boom apparatus often powered by a steam hoisting engine. As one engineering manual described it, "this traveler works from one end; it lifts and sets in place the members of the tower just ahead, then lifts the intermediates span to place, and so progresses forward. The simplicity of this erection method is a main reason for the use of the plate-girder type of viaduct."[12] Severe weather set in, slowing progress of crews working high above the canyon floor and exposed to biting winds. Over a foot of snow fell in the area during the last week in December, and temperatures reached 25 below zero in early January.[13] Steam shovels working in the area failed. At SP&S headquarters, operations managers anxiously awaited completion of the bridge so the line up to Marshall could be opened. Finally, on February 4, 1909, Strobel sent word that the last major bridge on the system was ready for track laying.[14] That spring, the SP&S line was fully completed, and trains began running between Portland and Spokane.

The companies involved in the bridge project, from funding and design to concrete work, fabrication, and assembly represented a common pattern emerging in the early twentieth-century railway industry whereby an in-house railroad engineering team produced a design, sometimes with the assistance of expert consultants, for a fabricator, and put out separate bids for concrete work and erection of the steel components. In some cases, the railroad's engineering team worked closely with or even relied on the fabricator's specifications and design. The NP, for example, used a basic tower design developed by the American Bridge Company for many of their steel tower viaducts.[15] Bridge construction contractors faced a decision on whether to use union or "open shop" labor on their jobs. Contractors such as Kelly-Atkinson gained good reputations for using union workers; others, like McCreary & Willard, were reviled by the unions for use of "scabs."[16] Strobel, the Box Canyon Viaduct contractor, put itself in good standing with the unions by signing an agreement with the Bridge and Structural Ironworkers Union that set the terms for furnishing workmen for all the Strobel projects in Oregon, Washington, and Idaho during 1908.[17]

The Box Canyon Viaduct was part of a section of the mainline between Pasco and Spokane known as the "third sub-division," which served a sparsely populated, agricultural area outside of the terminus at Spokane. The SP&S shipped grain and collected passengers from small depots in the vicinity at Snake River Junction, Burr Canyon, and Kahlotus eastbound to Spokane and westbound to Vancouver and Portland.[18]

As noted earlier, the SP&S replaced the wood trestle approach in 1926 with a more permanent concrete abutment and DPG. Aside from some regular maintenance that included tie and rail replacements, the bridge otherwise retained its original design and materials over its years of service.

[11] Kinkaid, "Memoranda of Construction History," 7.
[12] Daniel Coit Gilman, Harry Thurston Peck, and Frank Moore Colby, eds., *New International Encyclopedia*, vol. 3 (New York: Dodd, Mead & Co., 1914), 475.
[13] "Finish Work on North Bank," *Oregon Daily Journal*, January 27, 1909, 16
[14] Kinkaid, "Memoranda of Construction History," 14–15.
[15] "Erection of the Lawyer's Canyon Viaduct," 592.
[16] B. M. Paris, "Local Union No. 86," *Bridgemen's Magazine* 7 (August 1907): 742.
[17] "Opens Way for Many Workmen," *Oregon Daily Journal*, April 28, 1908, 4.
[18] W. W. Judson, "General Description of and Report on the Physical Characteristics, Organization and Operation of the Spokane, Portland and Seattle Railway Company," June 1931, Northern Pacific Railway Company Engineering Department Files, 134.H.4.5B, Box 33, MHS.

In 1970, the Burlington Northern Railroad Company (BN), formed by a merger between the SP&S, GN, NP, and Chicago, Burlington & Quincy, took over all assets of the former SP&S line including the bridge. To consolidate operations, the BN closed the route between Pasco and Spokane (the third sub-division) in 1987, removed the rails, and four years later transferred the alignment to Washington State Parks (WSP) for conversion to a trail under the terms of the 1983 amendment to the National Trails System Act.[19] In the interest of public safety, WSP fenced off the bridge. No longer in use, the bridge to support a railroad alignment carved into steep canyon walls high above the Snake River now stands as a monument to the high standards of grade adopted by the SP&S in the early twentieth century.

Criterion A

The Box Canyon Viaduct has significance under Criterion A as a unique case study in the business strategy of collaboration and engineering that played out over the history of the SP&S.

Hill's commitment to a well-engineered—and expensive—line came with some risk. For many years, the SP&S struggled under the debt of construction, which at more than $57 million far exceeded initial estimates.[20] Joint ownership also presented challenges, as the two parent companies negotiated nearly every aspect of operations, including executive appointments, hiring crews, assignment of rolling stock, and trackage rights. Throughout its existence, the SP&S had to factor NP and GN traffic into scheduling, lease equipment from the parent companies, and rely on their facilities for maintenance.[21] After weathering the Great Depression, the World War II years finally brought profitability to the SP&S. Over the next several decades, the SP&S adapted to and reflected significant developments in the railroad industry, including the nationwide decline in private passenger service, the merger movement and consolidation, the abandonment of many rail alignments, and the conversion of former alignments to trails. Ironically, the maintenance costs of the many steel bridges such as the Box Canyon Viaduct factored in the decision to close the former SP&S line between Pasco and Spokane, originally designed to give the railroad a competitive edge.[22]

Criterion C

The Box Canyon Viaduct has significance under Criterion C as an outstanding example of an early twentieth-century steel-tower railroad viaduct, by meeting Requirement 1, for representing prominent bridge engineer Ralph Modjeski's standardized design; and Requirement 4, for representing the high engineering standards set for the line in terms of grade and curvature.

Although the SP&S had an engineering department, the design of the Box Canyon Viaduct came from NP's Office of Bridge Engineering in St. Paul, Minnesota, a drawing set approved by Chief Bridge Engineer Howard E. Stevens.[23] The design followed a template developed for other similar NP bridges, such as the Hi-Line Bridge over the Cheyenne River in North Dakota and the Lawyer's Canyon Bridge in Lewis County, Idaho—both completed earlier in 1908—that emphasized such standardized components as steel-post towers and

[19] Bruce Beyerl, "Columbia Plateau Trail State Park Management Plan," June 5, 2006, 7, http://parks.state.wa.us/DocumentCenter/View/1206/Columbia-Plateau-Trail-Management-Plan.
[20] Gaetner, *North Bank Road*, 20.
[21] Gaetner, *North Bank Road*, 21–29, 42.
[22] "Capacity between Spokane and Pasco—SP&S Story," April 8, 2014, https://www.trainorders.com/discussion/read.php?11,3374585.
[23] H. E. Stevens, "Box Canyon Viaduct–General Plan, Drawing 047-270.0-270.0," September 1907, PNWRR Archives.

DPG spans.[24] The DPG spans derived from a design developed by Ralph Modjeski at the turn of the twentieth century, as described in more detail in the MPD.

Steel tower viaducts of this basic type, widely built in the United States between 1890 and 1920 by railroad companies such as the Union Pacific, Northern Pacific, Southern Pacific, and many others, represented an era when steel dominated railroad bridge construction in the United States, whether truss, arch, I-beam, or DPG spans.[25] Standardization of bridges by railroad companies reflected efforts to gain economies and efficiencies of scale and to facilitate fabrication and construction in remote locations.

In addition to illustrating national developments in railroad bridge engineering, the Box Canyon Viaduct expresses the SP&S's high standards of grade, which required several bridges, sections of fill, and tunnels to maintain along a route that carried it above the Snake River, through Devil's Canyon, and across the Channeled Scablands toward Spokane.

[24] "Erection of the Lawyer's Canyon Viaduct," 592–95; and Dakota, "Road Work in the Wheatfields," 110–12.
[25] Brian Solomon, *North American Railroad Bridges* (St. Paul, MN: Voyageur Press, 2008), 69; examples include the Union Pacific's Jaso Bridge over the Snake River, completed in 1912 and the Southern Pacific Viaduct across Weber Creek, completed in 1903; Melville Baker Wells, *Steel Bridge Designing* (Chicago: Myron C. Clark Publishing Co., 1913), 210–12.

SP&S Box Canyon Viaduct
Name of Property

Franklin Co., WA
County and State

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Dakota. "Road Work in the Wheatfields." *Bridgemen's Magazine* 8 (March 1908): 110–12.

"Erection of the Lawyer's Canyon Viaduct." *Bridgemen's Magazine* 8 (October 1908): 592–95.

Gaertner, John T. *North Bank Road: The Spokane, Portland & Seattle Railway.* Pullman: Washington State University Press, 1990.

Gilman, Daniel Coit, Harry Thurston Peck, and Frank Moore Colby, eds. *New International Encyclopedia*, vol. 3. New York: Dodd, Mead & Co., 1914.

Lyman, William Denison. *The Columbia River: Its History, Its Myths, Its Scenery, Its Commerce*. New York: G. P. Putnam's Sons, 1909.

"Miscellaneous Engineering Construction." *Western Engineering* 3 (September 1913): 241.

Paris, B. M. "Local Union No. 86." *Bridgemen's Magazine* 7 (August 1907): 742.

Solomon, Brian. *North American Railroad Bridges*. St. Paul, MN: Voyageur Press, 2008.

Sneddon, Matthew. "Bridges of the Spokane, Portland & Seattle Railway Company, 1906–1967." National Register of Historic Places Multiple Property Documentation Form, 2018.

Wells, Melville Baker. *Steel Bridge Designing*. Chicago: Myron C. Clark Publishing Co., 1913.

Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested)
____previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey #_____
____recorded by Historic American Engineering Record # _____
____recorded by Historic American Landscape Survey # _____

Primary location of additional data:

____State Historic Preservation Office
____Other State agency
____Federal agency
____Local government
____University
____Other
Name of repository: _____

Historic Resources Survey Number (if assigned):

SP&S Box Canyon Viaduct
Name of Property

Franklin Co., WA
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10. Geographical Data

Acreage of Property Approximately 2.16
(Do not include previously listed resource acreage.)

UTM References ____NAD 1927 or ____NAD 1983

(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing		Zone	Easting	Northing
1				3			
2				4			

Or Latitude/Longitude Coordinates
(enter coordinates to 6 decimal places)

	Latitude	Longitude		Latitude	Longitude
1	46.548264	-118.558641	3		
2	46.551300	-118.556512	4		

Verbal Boundary Description (Describe the boundaries of the property.)

Beginning at milepost 270.0 at the southernmost concrete abutment on the abandoned BNSF railroad right of way, the former SP&S rail line between Portland, Oregon and Spokane, Washington, now part of the Columbia Plateau Trail State Park, an area 1,255 ft long and as wide as the railroad right of way easement (approximately 75 ft wide) extending to the end of the northernmost abutment of the bridge, near Windust, Franklin County, Washington.

Boundary Justification (Explain why the boundaries were selected.)

Boundaries encompass entire bridge including southern to northern abutment, to capture structural elements integral to conveying the significance of the bridge's design and history.

11. Form Prepared By

name/title Matthew Sneddon
organization Historical Research Associates date May 30, 2018
street & number 1904 3rd Avenue, Suite 240 telephone (206) 343-0226
city or town Seattle state WA zip code 98101
e-mail hra@hrassoc.com

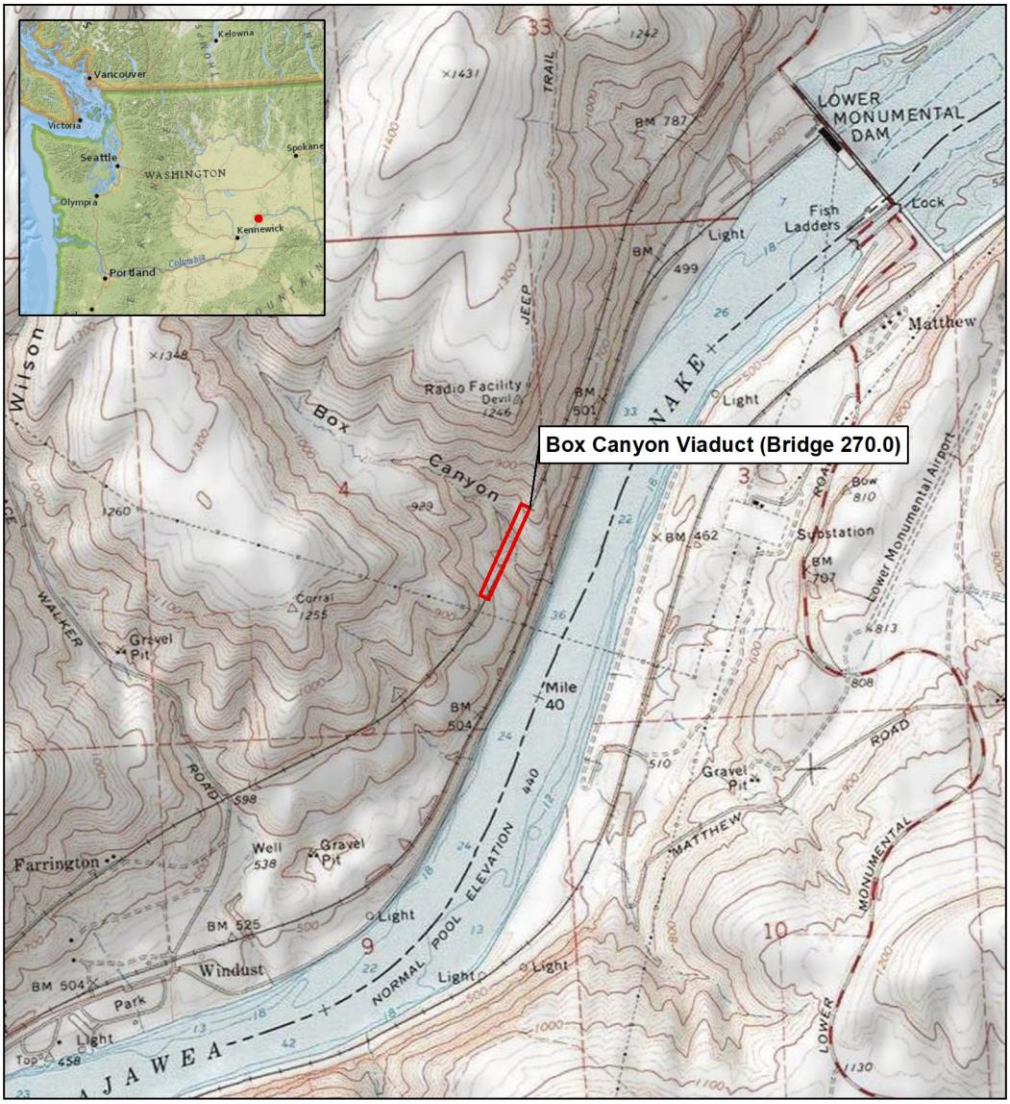
SP&S Box Canyon Viaduct
Name of Property

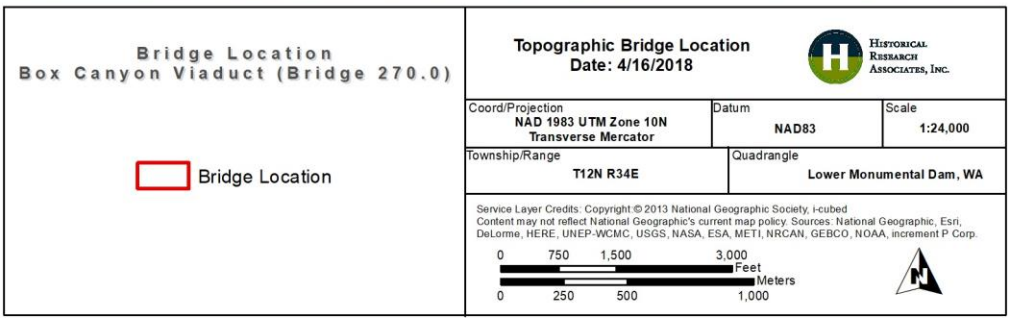
Franklin Co., WA
County and State

Additional Documentation

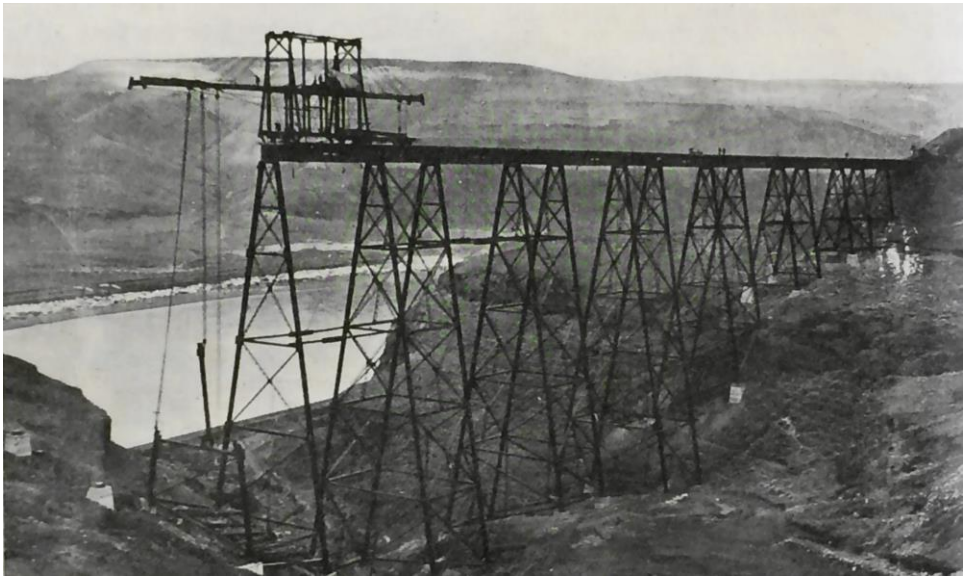
Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.
  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items.)





Additional Items



Description of Photograph: Typical method of erecting a bridge using a traveler, SP&S Box Canyon Viaduct.

Date Photographed: c.1908–1909.

Source: "Construction Work on the Spokane, Portland & Seattle," *Railway and Engineering Review* 49 (September 11, 1909): 872.

Description of Photograph: SP&S Box Canyon Viaduct.

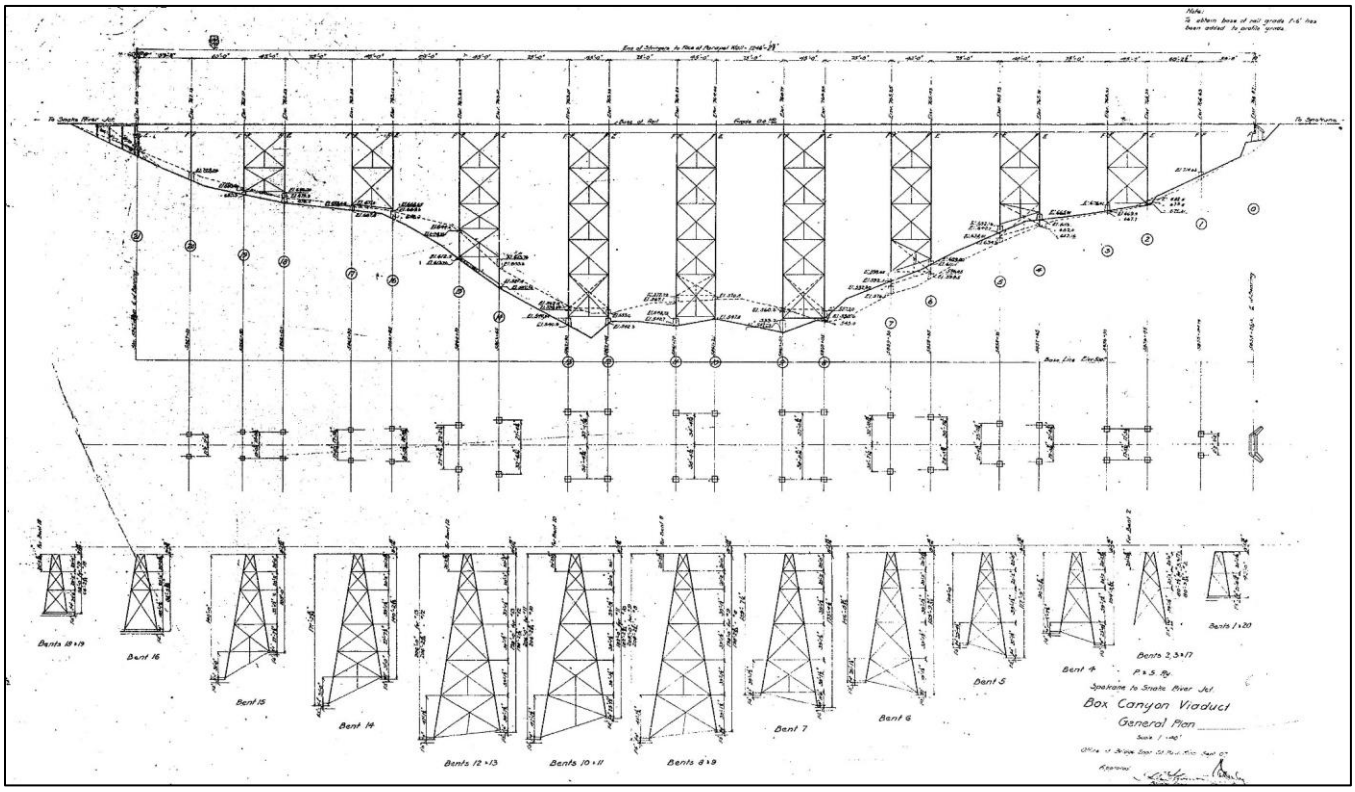
Date Photographed: n.d.

Source: Walt Ainsworth Collection, PNWRR Archives.

Description of Photograph: Replacing railroad ties on the SP&S Box Canyon Viaduct.

Date Photographed: n.d.

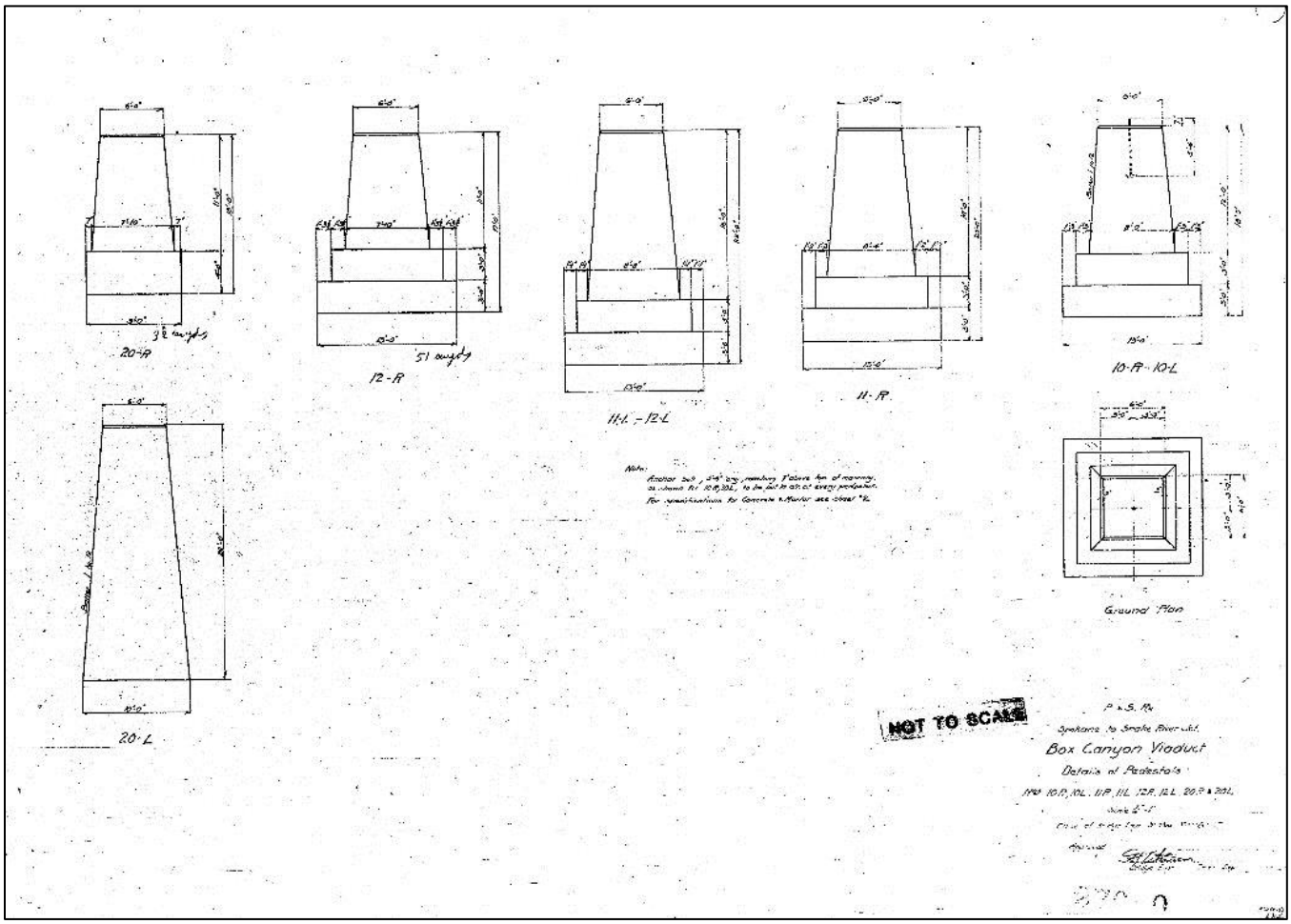
Source: Walt Ainsworth Collection, PNWRR Archives.



Description: Box Canyon Viaduct, general plan.

Drawing Date: 1907

Source: Northern Pacific Railway Company, Office of Bridge Engineering, PNWRR Archives.

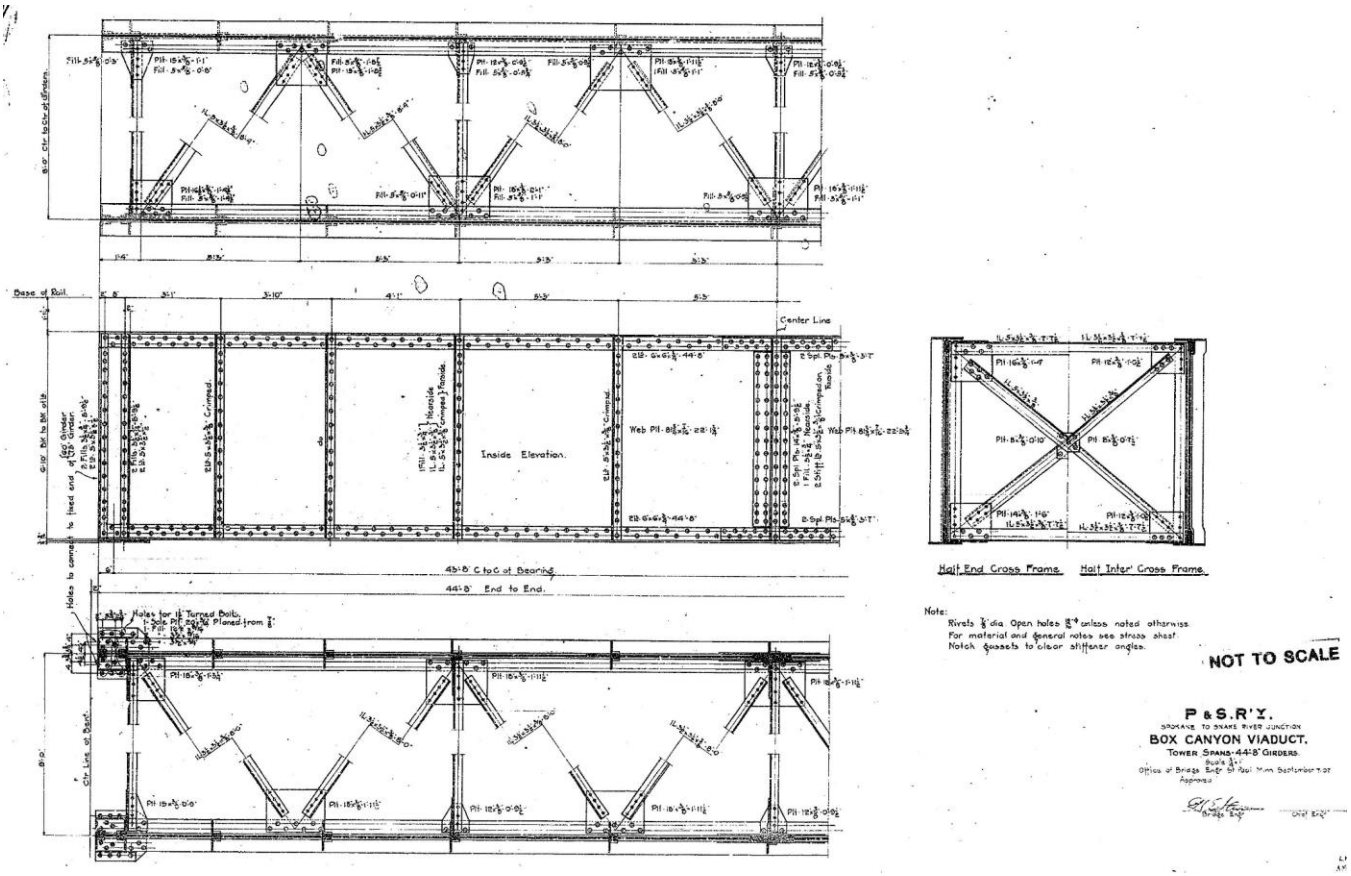


Description: Box Canyon Viaduct, details of pedestals.

Drawing Date: 1907

Source: Northern Pacific Railway Company, Office of Bridge Engineering, PNWRR Archives.

SP&S Box Canyon Viaduct | Franklin Co., WA
Name of Property | County and State



Description: Box Canyon Viaduct, tower span deck plate girders.

Drawing Date: 1907

Source: Northern Pacific Railway Company, Office of Bridge Engineering, PNWRR Archives.

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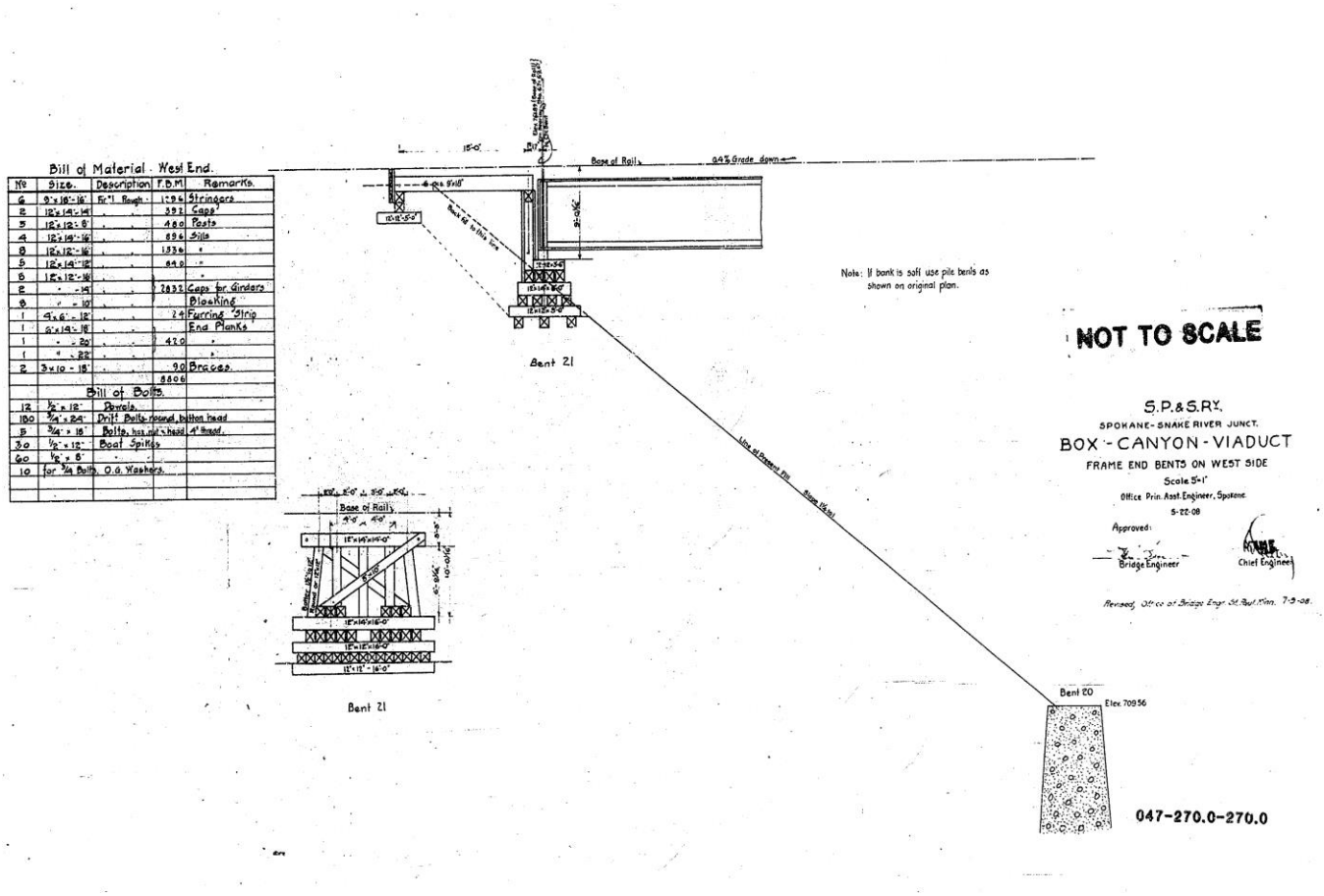

No	Size.	Description	F.B.M	Remarks.
6	9"x 16'-16'	Fir "1 Rough	1296	Stringers
2	12"x 14'-14'	" "	392	Caps
3	12"x 12'-8'	" "	480	Posts
4	12"x 14'-16'	" "	896	Sills
8	12"x 12'-16'	" "	1536	"
5	12"x 14'-12'	" "	840	"
6	12"x 12'-16'	" "		"
2	" - 14'	" "	2832	Caps for Girders
6	" - 10'	" "		Blocking
1	4"x 6" - 12'	" "	24	Furring Strip
1	5"x 14'- 18'	" "		End Planks
1	" - 20'	" "	420	"
1	" - 22'	" "		"
2	3"x 10" - 18'	" "	90	Braces
			8806	

12	1/2" x 12"	Dowels.
180	3/4" x 24"	Drift Bolts rounded, button head
3	3/4" x 18"	Bolts, hex. nut & head 4" thread.
30	1/2" x 12"	Boat Spikes
60	1/2" x 8"	" "
10	for 3/4 Bolts,	O.G. Washers.

Description: Box Canyon Viaduct, frame end bents on west side.

Drawing Date: 1908

Source: Northern Pacific Railway Company, Office of Bridge Engineering, PNWRR Archives.

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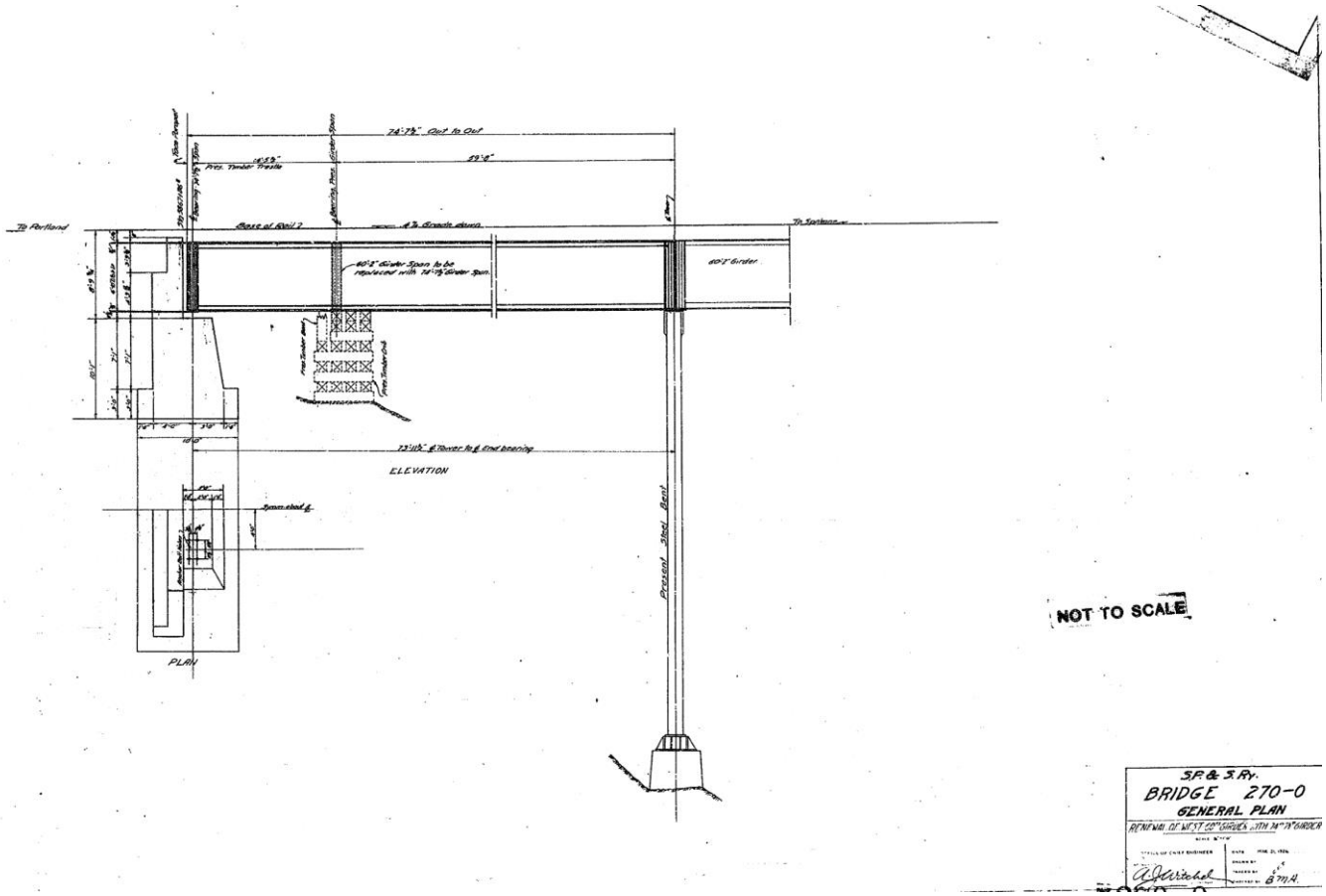

Description: Box Canyon Viaduct, general plan, renewal of west 60 ft girder with 75 ft girder.

Drawing Date: 1926

Source: SP&S, Office of Chief Engineer, PNWRR Archives.

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: SP&S Box Canyon Viaduct (270.0)

City or Vicinity: Windust

County: Franklin **State: Washington**

Photographer: Matthew Sneddon

Date Photographed: 2018

Description of Photograph(s) and number: SP&S Box Canyon Viaduct, view northwest.

1 of 4.

Photographer: Matthew Sneddon

Date Photographed: 2018

Description of Photograph(s) and number: SP&S Box Canyon Viaduct, steel tower detail showing 35 ft and 75 ft DPG spans with barrel platforms and refuge bay, view west.

2 of 4.

Photographer: Matthew Sneddon

Date Photographed: 2018

Description of Photograph(s) and number: SP&S Box Canyon Viaduct, steel tower concrete pier detail, view southeast.

3 of 4.

SP&S Box Canyon Viaduct
Name of Property

Franklin Co., WA
County and State

Photographer: Matthew Sneddon

Date Photographed: 2018

Description of Photograph(s) and number: SP&S Box Canyon Viaduct, showing southernmost abutment and 75 ft DPG from 1926 project that replaced original wood trestle approach, view west.

4 of 4.

Property Owner: (Complete this item at the request of the SHPO or FPO.)

name Washington State Parks and Recreation Commission; contact Alex McMurry

street & number 111 Israel Road S.W. telephone (360) 902-8502

city or town Tumwater state WA zip code 98501

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.