Historic Property Inventory Report

Location

Field Site No.  1  DAHP No.
Historic Name:  YUTC Naches River Bridge
Common Name:
Property Address:  vicinity of Yakima, WA 98901
Comments:
Tax No./Parcel No.
Plat/Block/Lot
Acreage
Supplemental Map(s)
Sanborn

<table>
<thead>
<tr>
<th>Township/Range/EW</th>
<th>Section</th>
<th>1/4 Sec</th>
<th>1/4 1/4 Sec</th>
<th>County</th>
<th>Quadrangle</th>
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<tbody>
<tr>
<td>T13R18E</td>
<td>12</td>
<td></td>
<td></td>
<td>Yakima</td>
<td>SELAH</td>
</tr>
</tbody>
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Coordinate Reference
Easting:  1635218
Northing:  472232
Projection:  Washington State Plane South
Datum:  HARN (feet)
Identification

Survey Name: Yakima TE  Date Recorded: 03/23/2007
Field Recorder: Spencer Howard
Owner's Name: City of Yakima
Owner Address:
City: Yakima  State: WA  Zip: 98901
Classification: Structure

Resource Status: National Register
Comments:

Comments: State Register
Other (HABS, HAER)

Within a District? Yes
Contributing? Yes
National Register:
Local District:

National Register District/Thematic Nomination Name: Yakima Valley Transportation Company

Eligibility Status: Determined Eligible - SHPO
Determination Date: 1/1/0001
Determination Comments: 010207-42-FHWA

Description

Historic Use: Transportation - Rail-Related  Current Use: Transportation - Rail-Related
Plan: Rectangle  Stories: 1
Structural System: Other
Changes to Plan: Intact
Changes to Interior:
Changes to Original Cladding:
Changes to Windows:
Changes to Other: Intact
Other (specify): Truss System

Style: Other - Utilitarian
Cladding:
Roof Type:
Roof Material: None

Foundation: Concrete - Poured
Form/Type: Other

Narrative

Study Unit
Transportation
Agriculture

Date of Construction: 1912 Built Date
Builder:
Property appears to meet criteria for the National Register of Historic Places: Yes

Property is located in a potential historic district (National and/or local): Yes - Local

Property potentially contributes to a historic district (National and/or local): Yes

Statement of Significance:

Erected ca. 1912, the steel, two-span, through-truss bridge serves a crucial role in spanning the Naches River and providing access to and from Selah. The bridge crosses the river adjacent to and west of the Naches River Union Pacific Railroad Bridge which preceded it. As one of only a handful of Pegram truss bridges still in existence, this bridge is an important example of engineering progress in 1880s Industrial America. Although the top chords of a Pegram bridge vary in length, the bottom chords and the compression post members have uniform lengths. This design minimized manufacturing costs by significantly reducing the stamp tool resetting time (previously the stamp tools would have to be reset to cut each set of chords), and creating interchangeable parts that allowed for a quicker assembly. In Pegram’s design, vertical posts lean toward the center of the bridge, usually at an angle of 60°–75°, with diagonal posts as supports. In practice, Pegram modified the design by using different post lengths, providing a more defined arc to the upper chord. Because these bridges are such a rare resource, a National Register Multiple Property submission for the Pegram Truss Railroad Bridges of Idaho (1997) documents those that remain. Many in Idaho were dismantled following World War I, a few of them making their way between 1913 and 1917 to nearby states where they were reassembled as new bridges. Still in use, the Naches River YVTC Bridge is an excellent example of this unique engineering development. George H. Pegram (1855–1937) was born in Council Bluffs, Iowa, and graduated from Washington University in St. Louis in 1877 with a civil engineering degree. A family friend who worked for the Union Pacific Railroad, General Grenville M. Dodge, arranged for Pegram to work as a member of the survey crew laying out a new route for the Utah & Northern Railroad in Idaho that same year. Three years later, Pegram became the chief engineer of Edge Moor Iron Company, at the time one of the largest bridge manufacturers in the world. In 1885, Pegram designed and patented his truss bridge, naming it after himself. The design was intended to reduce the amount of steel used in bridge construction, and to alleviate problems with bridge assembly and reassembly that had not been addressed by previous designs.

In 1886, Pegram moved to New York and set up his own engineering firm. It was during this time that he published his first extensive article about his truss design (in Engineering News) and also endeavored to build his first Pegram truss bridge. In 1889 he succeeded, building just such a bridge over the Verdigris River in Oklahoma for the Missouri Pacific Railroad Company (MPRC). A year later, Pegram left his private practice to become a bridge engineer for MPRC. While in this position, he constructed over one hundred Pegram truss bridges in Kansas, Missouri, Colorado, and especially in Idaho, where he concentrated most of his time in bridge construction. His rise to fame was completed in 1890 when the 700 ft. x 600 ft. Union Station in St. Louis was constructed using his truss design. From 1890 to 1898, George Pegram was chief engineer at Union Pacific. It was during his tenure as chief engineer at Union Pacific that Pegram was able to make extensive use of his truss design. In his autobiography, he states, “In 1894 it became necessary to replace the wooden bride of the Oregon Short Line (OSL) [a subsidiary of the Union Pacific Railroad] with iron bridges, and I rejoiced at the opportunity to make extensive use of the Pegram truss.” From 1894 to 1896, Pegram constructed bridges throughout Idaho, and for twenty years they were used as OSL main line structures. By World War I, however, most of the bridges had been replaced with more modern structures.
The Naches River Yakima Valley Transportation Company (YVTC) Bridge is listed on and is a contributing resource within the National Register of Historic Places and the Washington Heritage Register Yakima Valley Transportation Company Historic District (1992). The district includes the central facility site (buildings and objects) at South Third Avenue and West Pine Street in Yakima, tracks and overhead lines, the Wide Hollow substation, as well as approximately twenty-one miles of track and associated overhead electrical lines. The YVTC operation consists of several lines providing service between distinct points. The Yakima-Selah line is one of these. Others include the Wiley City line and the Gromore line. Nominated property for the Naches River YVTC Bridge includes the tracks, related structures, and the bridge itself.

The following narrative summarizes material from the National Register of Historic Places historic district nomination for the YVTC.

The Yakima Valley Transportation Company is a rare and intact example of an interurban electric railway system. Construction on the Yakima Valley Transportation Company began in 1907, and the next fifteen years saw an expansion of the track line to various agricultural districts around the city of Yakima. Originally, the Yakima Valley Transportation Company depended on passenger service for its patronage; however, the system was adapted to carry freight from Yakima farms to the rail lines in the city. The growth of the freight system facilitated the planting of large orchards and helped develop Yakima into one of the state’s most productive agricultural regions. Most of the nation’s interurban systems have been dismantled. The Yakima Valley Transportation Company is the only system that survives in Washington State and it has become a unique reminder of a type of transportation system that “bridged the gap between a horse and buggy nation and a modern America that rides on rubber over endless lanes of concrete.” (YVTC National Register Nomination)

The Yakima-Selah line was built out in 1912-1913 as part of the post-1909 expansion financed through capital from the line’s purchase by Oregon Railway & Navigation. This line served as an important freight and worker transport connection between the two cities. The segment runs from South Third Avenue and West Pine Street in downtown Yakima, out along West Pine Street, north along Sixth Avenue beyond the city limits into Yakima County, and over the Naches River YVTC Bridge into Selah.

The first sections of YVTC line were laid on Yakima Avenue in 1907, and by 1920 the system had reached its peak length at forty-eight miles of track. Materials, assemblies, and operation corresponded with a multitude of other interurban lines connecting various municipalities throughout the United States during this same period. Though it did provide passenger transportation, as automobile popularity grew, the YVTC depended upon exporting local produce, capitalizing on the line’s interconnection between fruit orchards, cold storage warehouses, and transcontinental shipping rail lines.

In 1909 Oregon Railway & Navigation, a subsidiary of the Union Pacific Railroad, purchased the Yakima-Selah line. This provided capital to expand the system to its eventual full capacity—including lines, trolley barn, substation, and associated elements—by 1920. Passenger service within the system included regular service to and from the Washington State Fairgrounds (until the 1930s), sight-seeing tours, and general worker and passenger transportation. Interurban passenger service ceased by 1935, then service within Yakima by 1947. Freight service remained the system’s primary role through 1983. Tourist excursions commenced during the 1970s and continue today on a limited basis. A nonprofit group, Yakima Valley Trolleys, has operated the system since 2002. During operation, cars continue to pass over the bridge.

Description of Physical Appearance:
Erected ca. 1912, a steel, two-span, through-truss bridge provides YVTC access over the Naches River at the north end of Yakima City proper. The bridge’s steel beams and stringers are set on concrete piers, one of which stands in the center of the river. The bridge represents an excellent example of the Pegram truss bridge type. This type uses top chords of varying lengths, but the bottom chords and compression post members are all of uniform length for ease in construction. In Pegram’s design, vertical posts of equal length lean toward the center of the bridge, usually at an angle of 60°–75°, with diagonal posts as supports. Multiple paint layers cover the bridge. A steel rail carried on contemporary wood sleepers passes through the bridge. Overhead trolley lines hang from the truss cross-bracing.
Major Bibliographic References:


— — —. Part II. Vol. 9, #2.

— — —. Part II. Vol. 9, #3.

— — —. Part II. Vol. 9, #4.


Photos

Bridge looking North

Bridge looking North

Attachment to southwest foundation

South abutment
Looking east along the Naches River beneath the bridge  

Pedestrian pathway beneath the south end of the bridge