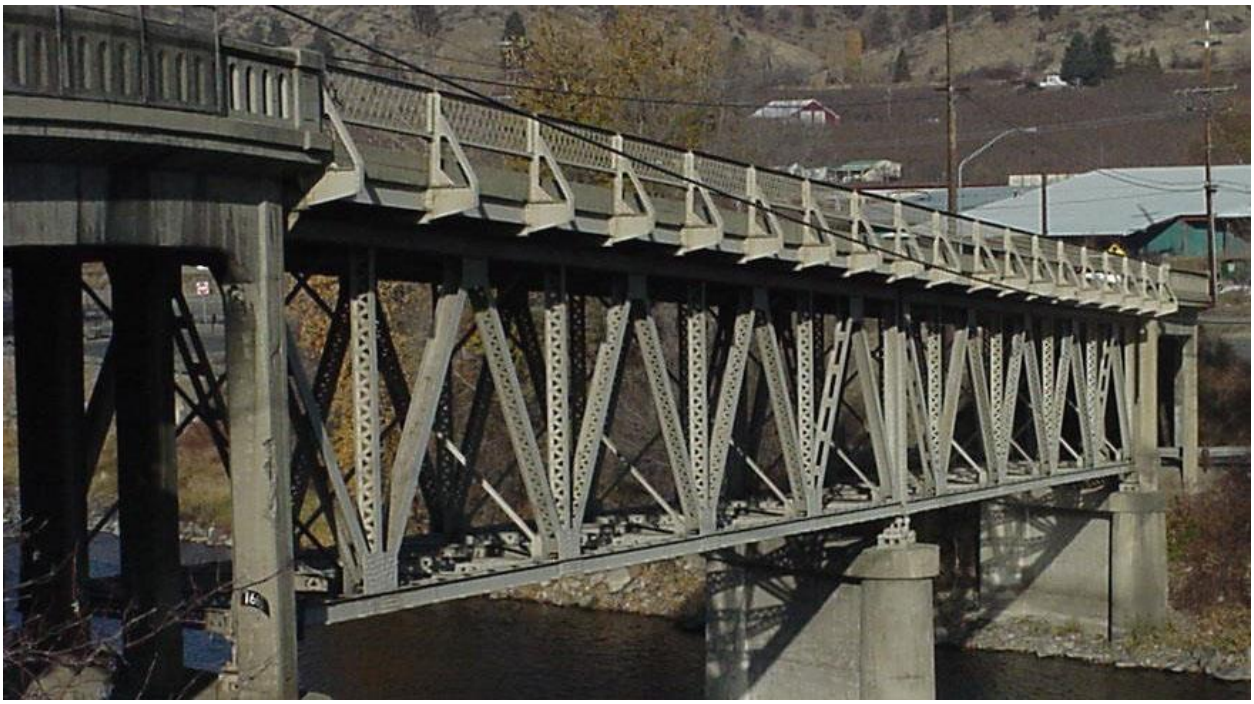
West Cashmere Bridge #401, Chelan County



Bridge Location
County: Chelan
Road: Goodwin Road
Feature Crossed: Wenatchee River
Other Location Information: West of Cashmere with connection to US 2/97
NBIS Structure Identification Number: 08430900

Bridge Information
Owner: Chelan County
Type: Two Warren Trusses
Length: Each Truss is 117 feet long
Width: 20 feet Curb-to-Curb
Year Built: 1929
Designer: Maury M. Caldwell
Builder: Henry Hagman
Current Load Rating: 11 tons Inventory, 19 tons Operating
History of Modifications, Rehabilitations, etc.: None
Other Comments: None

Narrative Description
The West Cashmere Bridge, built in 1929, crosses the Wenatchee River about a third of a mile west of the city limits of Cashmere in Chelan County. Cashmere lies entirely on the south side of the river and has long been a center of processing and shipping for nearby orchards and farms, including those north of the river. The West Cashmere Bridge, known locally as the Goodwin Bridge, carries Goodwin Road northwest from its intersection with Sunset Highway, crossing railroad tracks and the river via a series of connected spans of three different designs.

The West Cashmere Bridge crosses the Wenatchee River on two 117-foot riveted steel deck-truss segments that rest on concrete piers on each river bank and meet on a dumbbell-shaped, reinforced-concrete pier at mid-river.

The supporting frameworks of a steel truss bridge forms a series of interconnected triangles that distribute the forces to which the span is subjected -- tension, compression, torsion and shear. The main span trusses for the West Cashmere Bridge is a deck truss, which has the supporting framework extending below the roadway. The pattern of this bridge's supporting members identifies it as a Warren truss, a design first patented in England in the mid-19th century. A pure Warren truss comprises a series of steel members that form equilateral triangles on either side of a bridge along its length. For additional strength, vertical support members can be added between the apex and center of the base of the triangles, which was done with the West Cashmere span in an alternating pattern. Along the length of the roadway, on both sides, are 42-inch high steel bridge rails with a diamond-shaped lattice pattern, strengthened by steel-angled supports that are attached to the top beam of the deck truss. While a number of Warren pony- and through-truss bridges can still be found in Washington, few that were built before the 1930s have endured, and a surviving deck-truss highway bridge from that era is even more of a rarity.

The West Cashmere Bridge was built to accommodate the trucks and automobiles of its era, most of which were both smaller and considerably lighter than those of later years. By early in the 21st century the span was too narrow, increasingly unsound and structurally deficient.

Because of the historic significance of the two Warren-truss sections, Chelan County is hoping they can be saved. Although offered "for sale," the county will in fact donate the trusses to any governmental, non-profit or responsible private entity for public or private use.

Interested parties must agree, for now and in the future, to assume legal and financial responsibility for the spans and maintain the features that give them historic significance and continued eligibility for the National Register of Historic Places. No construction, alteration, remodeling or other modifications shall be undertaken that would affect the integrity or appearance of the truss' attributes. The county will pay a maximum of $110,000 toward the cost of dismantling the steel trusses, but the new owner will bear additional costs, if any, for the county's contractor to take care in removing the trusses for continued preservation as well as the cost of removal from the site, transportation to a new location and reassembly. The offer remains open until January 2019.