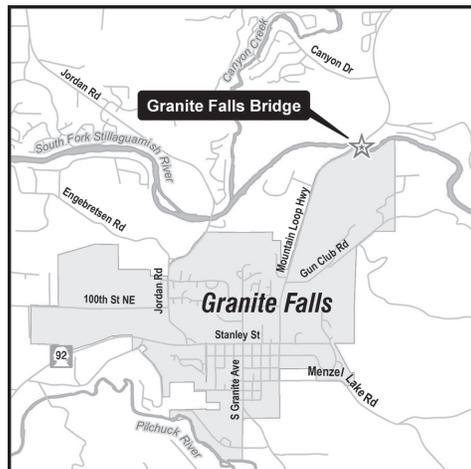


Granite Falls Bridge #102 Replacement

August 2013

Bridge location

Granite Falls Bridge #102 is about 1.5 miles north of downtown Granite Falls, Washington, and carries Mountain Loop Highway traffic over the South Fork Stillaguamish River. This bridge is the primary access for a large geographic area including Verlot, Robe Valley and Silverton. The highway is an important economic and recreational corridor. The road provides access to permanent and vacation residences, sand and gravel quarries, and timber, as well as many square miles of hiking, camping and other outdoor recreation areas. The bridge is part of the 52-mile Mountain Loop Scenic Byway between Granite Falls and Darrington.



What is proposed?

Snohomish County Public Works is planning to replace Granite Falls Bridge #102 when construction funds become available. The project is currently in the early stages of design; a construction timeline has not yet been established.

The proposed plan is to construct a new bridge on the downstream/ west side of the existing bridge. The current bridge will remain in place to maintain traffic flow throughout construction.

It will be removed following construction. The proposal calls for a three span, precast, concrete girder bridge. The new bridge will be wider and longer than the existing structure to meet current bridge standards, and will provide two 15-foot lanes and two sidewalks. Bicycles will share the vehicle lanes.

A narrow strip of Washington State Department of Fish and Wildlife (WDFW) property, adjacent to the project on the downstream side, must be purchased in order to construct the bridge on the proposed new alignment. Access to the WDFW maintenance road and fish ladder will be reconstructed.

Why is a new bridge needed?

The bridge was constructed in 1934 when vehicles were narrower. The 20-foot wide bridge deck does not provide enough room for two large vehicles to pass comfortably in opposing directions. Truck traffic has developed the practice of yielding to any large loads already on the bridge—not an ideal situation. Approximately 1,288 trucks and 2,737 cars use the bridge on a typical summer weekday. The amount of traffic on the bridge varies during the week and by season.

The increasing load weights and traffic volumes that the bridge has repeatedly carried over time are also significant concerns. The normal life span of this type of bridge is 75 years.

This bridge is considered *fracture critical* due to its truss type design. Fracture critical indicates that a failure of certain structural members could result in a bridge failure. If cracks are found in any of these key structural members, a total road closure would



be required. This would result in a 94-mile detour that would only be available during non-winter months. Refurbishing the existing structure is not an option due to its age and design.

Where are we in the process?

The county is in the process of acquiring the needed right-of-way. The next key phase will be to seek funding assistance from Federal, State and local sources to supplement county funds. An environmental review will be conducted later this year for the proposed alignment as required by the State Environmental Policy Act (SEPA). At that time, the public will be invited to comment on the proposed project.

As funding becomes available, the design and additional environmental review can proceed. The timeframe for securing project funding is unknown; it is estimated that the bridge could be constructed approximately two years after funding is secured.

A brief history of the bridge

Beginning in the 1890's, trains provided most of the transportation into the mountains east of Granite Falls. In the early days, a narrow footbridge crossed the river near the existing bridge. Later, in 1903, a one-lane steel bridge was built about 40 feet upstream of the current crossing.

The trains were eventually replaced by cars and trucks, the cheaper and

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more reliable form of transportation at the time. The opening of the 340-foot bridge in 1934 was marked with a grand parade and dedication ceremony held on July 17th of that year. The main span is a "riveted, steel deck, trussed-arch" built 92 feet above the river's mean water level. Construction of the Mountain Loop Highway was started shortly afterward in 1936 when the railroad shut down and the railroad grade was converted to a road. The loop road was completed to Darrington in 1941.

A study was conducted in 2011 and 2012 to evaluate four possible alignments and several alternative bridge designs. The alternatives were evaluated for safety; structural and geotechnical performance; constructibility; initial cost; life cycle cost, including operation and maintenance expenses; transportation impacts during construction; environmental impacts; and other factors. The type, size, and location of the proposed bridge were chosen based on these factors.

For additional information, scan the code with your mobile device or visit



www.snoco.org

and search "Bridge 102."

Select "e-mail notification" on the Web page to receive an email when project information changes.

Questions? Contact:

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**Granite Falls Bridge #102
Replacement**

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The county is currently seeking funding for replacement of Granite Falls Bridge #102.