43 at Willamette River Bridge (Oregon City Bridge) PROJECT

Frequently Asked Questions

When was the bridge constructed?

The historic bridge linking Oregon City with West Linn was officially opened on January 1, 1923.

How long did it take to build the bridge?

The contract was awarded on June 29, 1921 to A. Gutherie and took 1-1/2 years to construct.

Is the bridge made of solid concrete?

The main structural portions of the arch section of the bridge are made of steel. The arch ribs are hollow steel boxes riveted together. These, and the steel floor beams and stringers which support the deck, are encased in a 1-1/2 inch coating of sprayed concrete, called Gunite.

The columns and hangers supporting the deck from the arch ribs are steel sections. The X-shaped cross bracing between the arches are steel trusses. Both of these are encased in solid concrete. The lower arch ribs are connected to appear as a solid spandrel.

What is Gunite?

Gunite is concrete that is sprayed onto surfaces with a pneumatic pressure gun. It was a relatively new invention in 1922 when it was used on this bridge to protect the steel from corroding.

Why was it applied to this bridge and not others?

The crossing, due to river depth, navigation requirements and the basalt rock bottom, needed to be clear spanned. The crossing was too narrow to make a suspension bridge economical, which left either a massive steel truss or a steel arch as the remaining choices with materials available at the time. The arch was chosen.

The designer, Conde B. McCullough, was concerned that emissions from the mills and other industrial facilities nearby were more corrosive than a normal paint system could resist, so he elected to use pneumatically sprayed concrete, Gunite, to provide a heavy duty protective layer. This system has worked quite well over the bridge's 84 year life.

Is the bridge a historic landmark?

The bridge is listed on the National Register of Historic Places. It is the only one of this construction type in the state, and one of very few in the country.

What kinds of repairs are allowed?

ODOT follows the requirements for National Register properties closely. Visually, the bridge should look as close as possible to original, while providing safe use by the public. This has resulted in ODOT developing a replacement rail system which provides a level of safety appropriate for vehicles as well as pedestrians, while looking essentially the same as the original. This bridge will receive such a treatment. Similarly, the historic lighting will be restored.

What repairs are needed?

- The Gunite coating is leaching minerals, indicating portions of it have been adversely affected by water and need to be repaired to protect the steel underneath.
- Several stringers supporting the deck have corrosion damage and need to be repaired.
- The ornate pedestrian rails will be replaced with vehicle rails that appear nearly identical, but are composed of structural steel hidden within precast concrete.
- The deck will receive an abrasion and salt resistant concrete overlay.
- The upstream bumpers will be repaired.
- Some utilities will be relocated underneath the bridge.
- Reproductions of historic pedestrian lighting will replace the current lighting. The pedestrian crossing signals for McLoughlin Boulevard, under the bridge in Oregon City, are planned to be replaced with a fixture either attached solidly to the bridge or on a separate pole and arm.
- The bridge will be pressure washed, or if necessary, lightly sand blasted to provide a clean and uniform surface.

Will the bridge be widened?

No. The arch design cannot practically be widened.

When will construction begin?

The bids are scheduled to be opened June 2009. Construction typically would start two to three months later.

Will the bridge be closed for all vehicle traffic?

The plan is to close the bridge to vehicles in order to significantly reduce construction time and impact to the communities. The bridge will remain open to pedestrians and bicycles as much as safely possible.

What is the detour route?

Traffic will use the I-205 Abernethy Bridge to cross the Willamette River between West Linn and Oregon City.

How much longer will it take me to get to downtown Oregon City?

Depending on traffic conditions, the trip should only be a few minutes longer.

Can bikes and pedestrians use the bridge during construction?

Yes. A sheltered path, with protection from work activities will be available almost continuously. The contractor will be required to work on one side at a time to permit this. While placing the concrete overlay on the deck, bicyclists will likely be required to walk their bicycles on the sidewalk.

How long will construction take?

By closing the bridge, construction will completed in approximately one year. If an attempt is made to keep one lane of traffic open during parts of weekdays with closures at night and weekends, the construction would most likely take two years.

Will the bridge look new when completed?

Almost. The sewer line will still be hanging below the downstream edge of the bridge. The Gunite surfaces will be repaired and generally cleaned, as will other concrete portions of the bridge, but will not look like brand new concrete. The bridge deck will receive a new, thin layer of concrete. The restrooms cannot be restored, partially because of the sewer line and partially because of personal safety and security concerns.

Is the bridge safe for the traveling public?

Yes. The bridge has been thoroughly inspected, including a recent special inspection to identify work items which should be included in this project. As part of the Department's Historic Bridge Program, projects like these are scheduled to avoid reaching a point where there is risk to the public.

Will the bridge be replaced in the future?

The bridge is so historic, and so identifiable with the Oregon City and West Linn communities, that it is unlikely that it will be replaced. Instead, a new bridge at a different location would take on additional traffic, potentially leaving this bridge in place for bicycles and pedestrians only. However, funds for bridges are scarce, so this would not occur for many years.

Project web site: http://www.oregon.gov/ODOT/HWY/REGION1/OR43_Willamette_River_Br/index.shtml

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