

## Bridge Program Works With Many Partners To Design Sandy River Bridges By ODOT Staff

The Sandy River flows from the Reid Glacier on Mount Hood for 50 miles before it joins the most important river in the Northwest, the Columbia. The confluence of these two waterways is important to many stakeholders—the nearby residents of Troutdale; artists, naturalists and historians; as well as cyclists, bird-watchers and fishing enthusiasts.

Because of its work to replace two highway bridges over the Sandy River, ODOT has the opportunity to meld these varied interests and help some dreams become realities.

The Sandy River Bridges span the river as part of Interstate 84. The eastbound bridge serves as the gateway to the Columbia River Gorge National Scenic Area and traverses a site that is rapidly becoming a destination for locals and visitors alike. In redesigning these bridges, ODOT is working with many groups involved in adjacent projects.

“The Forest Service acquired the land around the Sandy delta 10 years ago,” said Greg Cox, assistant manager for recreation resource and administration for the USDA Forest Service. “We’re interested in its long-term recreational development, to serve everyone from dog-walkers to horseback riders.”

In turn, the Forest Service is working with the Confluence Project, an initiative to mark at seven sites along the Columbia River Basin the passage of Lewis and Clark’s Corps of Discovery. Artist and architect Maya Lin is designing permanent art installations for the project. At the Sandy delta site, Lin will create a bird blind whose slats will be inscribed with the names of species observed by the expedition.

Up river, the city of Troutdale wants to ensure that its redevelopment plans for hiking trails along the Sandy will connect hikers with the scenic attractions in the delta and that the bridge’s design will appeal to those using the trails. And just west of the river, the 40-Mile Loop Land Trust advocacy group wants access for cyclists to a segment of trail that encircles more than 40 miles of the greater Portland area.

So what is ODOT’s role in these projects?

“First of all, we’re designing the new bridge to accommodate greater access to this area,” said Steve Narkiewicz, construction project manager for ODOT’s Bridge Delivery Unit. “So that means wider shoulders and upgraded acceleration and deceleration lanes in each direction. In addition, we want the design of the bridge to be in keeping with the multiple historic

and recreational purposes of the Gorge.”

To elicit stakeholder feedback on its preliminary designs, ODOT hosted an open house Feb. 12. The event drew 36 participants who came to learn about the project and review four possible designs.

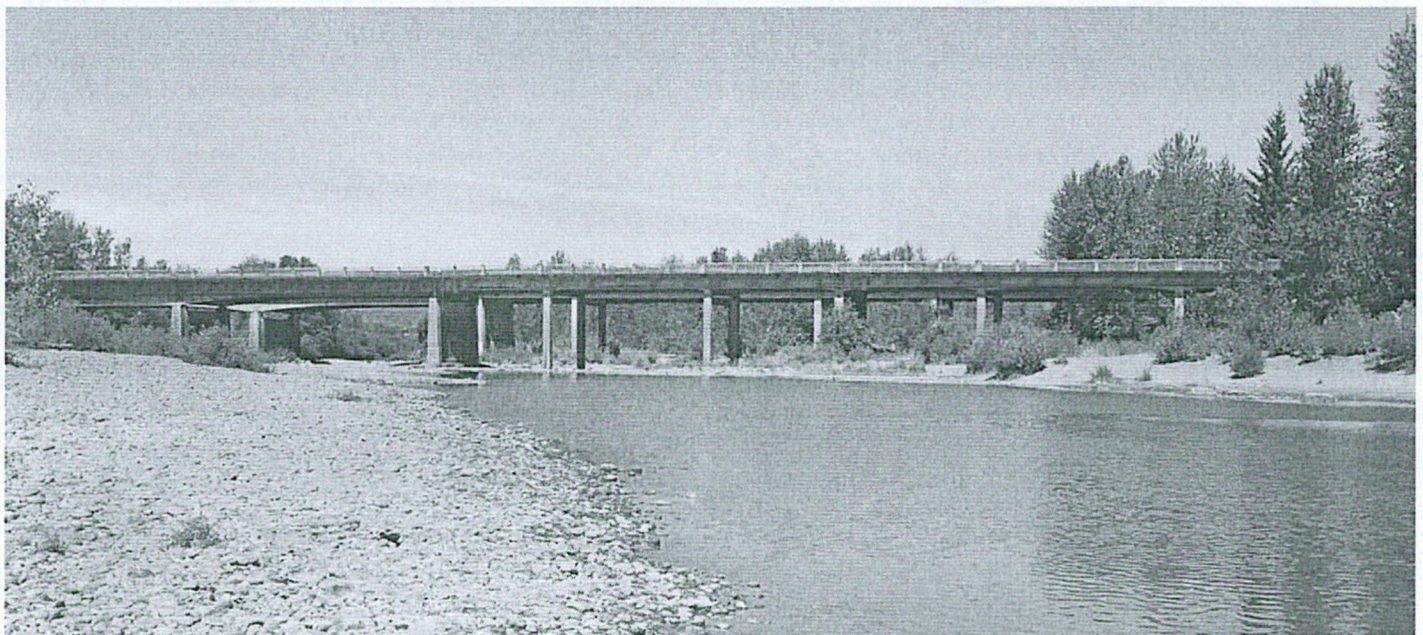
In addition to the usual considerations of cost, construction methods and staging, and traffic flow, engineers from ODOT and its architectural and engineering firm, David Evans and Associates, paid extra attention to aesthetics. The aesthetic elements will be in keeping with the design guidelines outlined in the I-84 Corridor Strategy, which was developed through stakeholder and citizen input for the bridges in the National Scenic Area. Whether it uses steel or concrete, the selected design will meet new seismic standards, will withstand the sort of floods that are expected once every 100 years, and should last at least 75 years (50 percent longer than the lifespan of current structures).

At the open house, participants’ comments echoed the considerations of the designers: “Decision of which bridge design is chosen should be based on maximum long-term usage, not short-term cost,” and “‘Fake rock’ look should mimic columnar basalt, as used on the Columbia River Scenic Highway.”

Besides taking into account the opinions of local residents and multiple stakeholders, the bridge designers are working with sensitivity to the local environment. “To avoid disturbing fish, we never work in a river when they might be migrating,” said Doug Johnson, senior bridge engineer and project manager at DEA. “Because the Sandy is such a popular river for fishing, one plan we are studying would reduce the need to work in the river—we’d start at the pier and build out over the water in 15-foot segments.”

Like the site of the confluence itself, where two bodies of water come together and create turbulence and fertile habitats, the process of achieving consensus is both challenging and rewarding.

“Right now we’re investigating the feasibility of making the pedestrian and bike crossing part of a separate structure,” said Wayman Bolly, a design coordinator with the bridge program’s management consultant, Oregon Bridge Delivery Partners. “In accordance with the bridge program’s emphasis on sustainability, cost-effectiveness and community responsiveness, we’re aiming for the best long-term solution that works for the largest number of people, including taxpayers, which means all of us.”



ODOT worked with local organizations on the design for the Sandy River Bridge, slated for replacement under the OTIA III State Bridge Delivery Program.