

# Northwest Construction

## Transportation

### Design-Build Innovation In Oregon

By ODOT Staff

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**Design-build contracts are becoming** increasingly common because they can help save projects time and money. For the Oregon Department of Transportation, these design-build projects are also creating more innovative solutions to design and mobility challenges.

On the OTIA III State Bridge Delivery Program, a \$1.3 billion program to repair and replace hundreds of aging bridges in Oregon, the agency has capitalized on the advantages of this delivery method with a highly focused team, the Design-Build Unit. DBU is responsible for managing the factors that make the design-build method of procurement so effective.

"Design-builder innovation is a very exciting part of reviewing design-build contracts," said Jim Cox, the interim manager of the DBU. "When the same team designs the bridges they will construct, they can work to the strengths and skills of their team members."

Time is critical in construction. Contractors bidding on design-build projects need to devise solutions that avoid mobility challenges and shorten the construction schedule. As ODOT staff prepared the request for proposals to replace two aging bridges along Highway 38 at Elk Creek, they realized the project's unique challenges were well-suited to the design-build delivery method.

Highway 38 is part of a coastal road network built in the 1930s. The highway connects large population centers in Portland, Salem and Eugene with the Oregon coast. When the highway was built, bridges such as the two at Elk Creek served to open the state's scenic coastal regions to commerce and tourism.



Oregon and Washington are both using design build contracts to help speed up construction.

The purpose of the bridges hasn't changed much in the ensuing 70 years, but their usage has. Oregon's population has increased, and the highway is now crowded with tourists and weekend visitors, putting extra stress on the aging bridges.

Replacing the Elk Creek bridges demands innovative solutions. There is virtually no possibility of using a detour structure, because the bridge decks border both the northern and southern ends of a tunnel. The road is a vital link between Interstate 5, the coast and the communities in between. It cannot be shut down for long periods of time, yet the topography dictates full closure since there is little room for temporary

lane closures or detours.

To solve this problem, ODOT is developing a contract that focuses on communication among all stakeholders, including ODOT, the contractor and the public. The agency has developed an innovative public involvement program that will be used before the request for proposal is issued. Two different options for road closures have been prepared: closing the roadway completely for approximately one month using rapid replacement techniques, or creating a one-lane bridge detour—which would push the construction schedule to approximately six months.

After presenting these possibilities >>

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to the public for consideration, the agency will include the final decision in the RFP, thereby attracting the most suitable and qualified contractor for the project.

The high level of public involvement prior to the RFP is a system the agency tries to incorporate into many of its projects. ODOT views the public as partners in the program and incorporates their ideas into the work as a way to create efficiency. The result is a program that meets the requirements of many different stakeholders.

In addition to the extensive public involvement on this particular project, ODOT is also helping potential contractors by incorporating design exceptions into the RFP. Design exceptions are made when it is impossible to complete a project to full design standards. The RFP for the Elk Creek bridges will be slightly different in that all the design exceptions will be approved beforehand and incorporated in the RFP before it is sent out. This gives potential firms early knowledge of the exceptions approved for the project, making it easier for them to evaluate whether they can meet the particular requirements. ODOT believes this innovation will result in stronger bids and more qualified contractors.

Through a detailed design-build contract that incorporates public feedback and features a reasonable set of goals for the finished project, these bridges will be rebuilt to serve tourists and commerce heading to Oregon's coastal region far into the future. <<